FusionServer 2288H V6

User Guide

Issue 17

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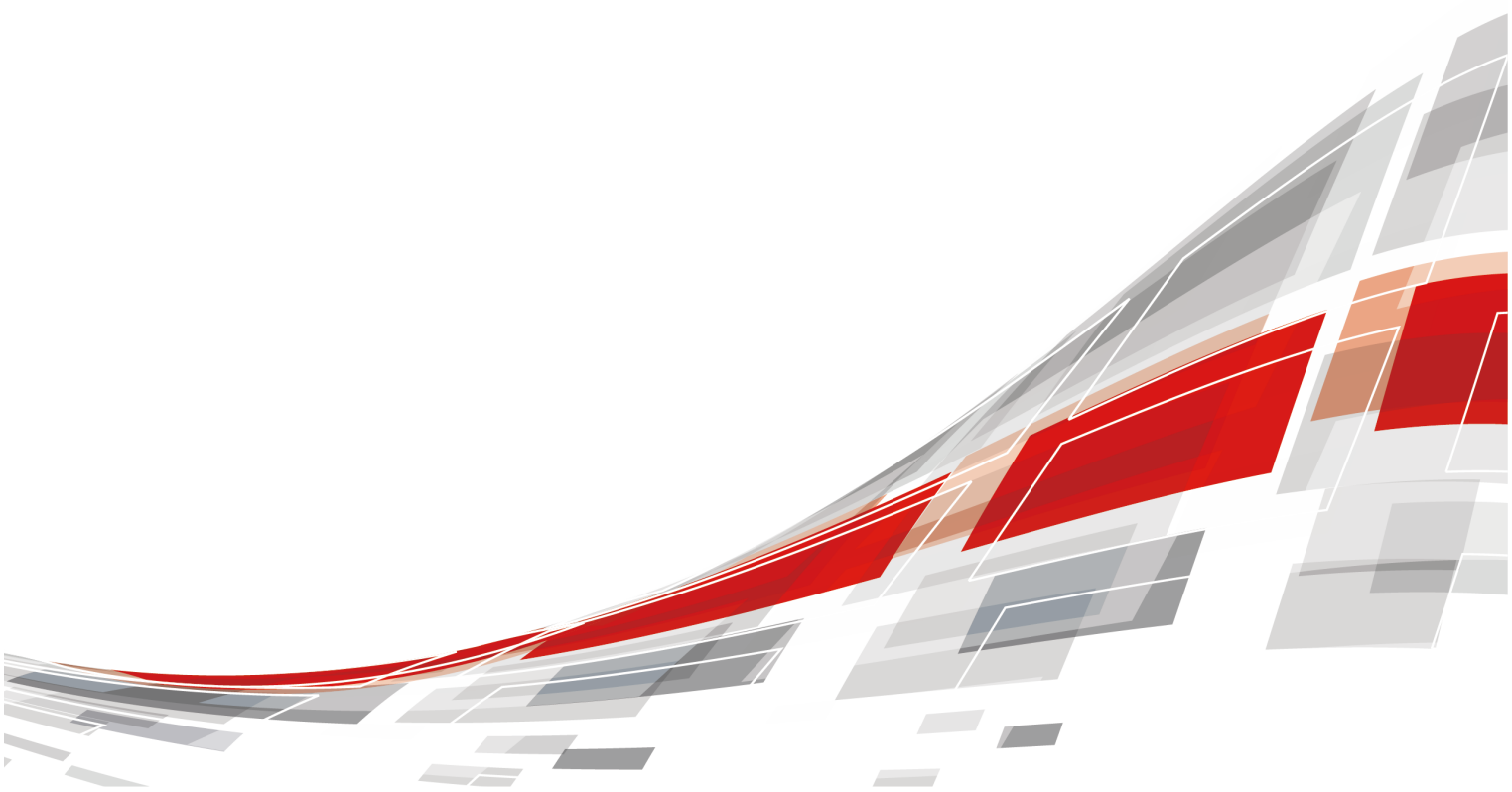

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xFusion Digital Technologies Co., Ltd.

Address: 9th Floor, Building 1, Zensun Boya Square, Longzihu Wisdom Island
Zhengdong New District 450046
Zhengzhou, Henan Province
People's Republic of China

Website: https://www.xfusion.com

About This Document

Purpose

This document describes the FusionServer 2288H V6 in terms of its appearance, functions, structure, hardware installation, basic configuration, OS installation methods, and troubleshooting.

Intended Audience

This document is intended for:

- Enterprise administrators
- Enterprise end users

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
DANGER	Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
NOTE	Supplements the important information in the main text. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

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Change History

Issue	Release Date	Change Description
17	2024-05-11	• Updated **2288H V6-32DIMM Indicators and Buttons** and **2288H V6-32DIMM Drive Backplane**. • Updated **I2288H V6-16DIMM ndicators and Buttons** and **2288H V6-32DIMM Drive Backplane**.
16	2024-03-29	• Updated **1.1.5.1.5 12 x 3.5" Drive EXP Configuration** and **1.1.11.2 Drive Backplane**. • Updated **2.1.1 Technical Specifications**. • Updated **6.3.7.1.1 Connecting the AC PSU Cable** .
15	2023-10-17	• Updated **8.6 Managing VMD**. • Updated **A.4 Nameplate**.
14	2023-04-30	• Updated**•2288H V6-32DIMM Technical Specifications** and**•2288H V6-16DIMM Technical Specifications**,. • Updated **2288H V6-32DIMM VMD Affiliation** and **2288H V6-16DIMM VMD Affiliation**. • Added 8 x 2.5" drive pass through NVMe hardware RAID configuration 1 (8 x NVMe), 8 x 3.5" drive pass-through configuration, and 16 x 2.5" drive pass-through configuration.
13	2023-03-31	• Updated **1.1.5.1 Drive Configurations**. • Updated **6.2.4.2 Installing the Adjustable L-shaped Guide Rail** and **6.2.4.3 Installing the Ball Bearing Rail Kit**.
12	2023-02-28	• Updated **1.1.5.1.1 8 x 2.5" Drive Pass-through Configuration**. • Updated **6.2.5 Installing a Server**.
11	2023-02-08	Added **6.2.2.2 Collective Packaging**.
10	2023-01-18	Updated **1.1.11.1 Mainboard** and **1.2.11.1 Mainboard**.
09	2022-12-30	• Updated **8.1 Querying the iBMC IP Address**. • Updated **A.6 Sensor List** .

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Issue	Release Date	Change Description
08	2022-12-08	Updated **8.7 Accessing the BIOS**.
07	2022-10-27	• Updated **1.1.5.1 Drive Configurations** and **1.2.5.1 Drive Configurations**. • Updated **1.1.7.2 PCIe Slots**. • Updated **1.1.11.2 Drive Backplane** and **1.2.11.2 Drive Backplane**. • Updated **4.1 Security**. • Updated **6.7 Initial Configuration**. • Updated **A.7 FAQs About Optical Modules**.
06	2022-09-22	• Updated **1.1.11.2 Drive Backplane** and **1.2.11.2 Drive Backplane**. • Updated **•2288H V6-32DIMM Physical Specifications** and **•2288H V6-16DIMM Physical Specifications** .
05	2022-08-12	• Updated **1.1.5.1.4 12 x 3.5" Drive Pass-through Configuration**、**1.1.5.1.5 12 x 3.5" Drive EXP Configuration** and **1.1.5.1.9 24 x 2.5" Drive Configuration**. • Updated **1.1.11.2 Drive Backplane**. • Updated **•2288H V6-32DIMM Physical Specifications** and**•2288H V6-16DIMM Physical Specifications** .
04	2022-06-25	• Added a figure that shows how to measure dimensions. • Updated **A.3 Operating Temperature Limitations**. • Added **A.1 Chassis Label**.
03	2022-05-06	• Updated **1.1.4.2 PMem**. • Updated **1.1.4.1.6 Memory Protection Technologies**. • Updated **A.3 Operating Temperature Limitations**. • Updated**•2288H V6-32DIMM Technical Specifications** and**•2288H V6-16DIMM Technical Specifications**, claimed support for U.2 drives. • Optimized 12 x 3.5-inch drive pass-through configuration 2, 12 x 3.5-inch drive pass-through configuration 2 (4 x NVMe), and 12 x 3.5-inch drive EXP configuration 1.

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Issue	Release Date	Change Description
02	2022-03-02	• Updated **1.1.5.1.4 12 x 3.5" Drive Pass-through Configuration** and **1.1.5.1.5 12 x 3.5" Drive EXP Configuration**. • Added 12 x 3.5-inch drive pass-through configuration 4.
01	2022-01-27	This issue is the first official release.

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1 Hardware Description

1.1 2288H V6-32DIMM
1.2 2288H V6-16DIMM

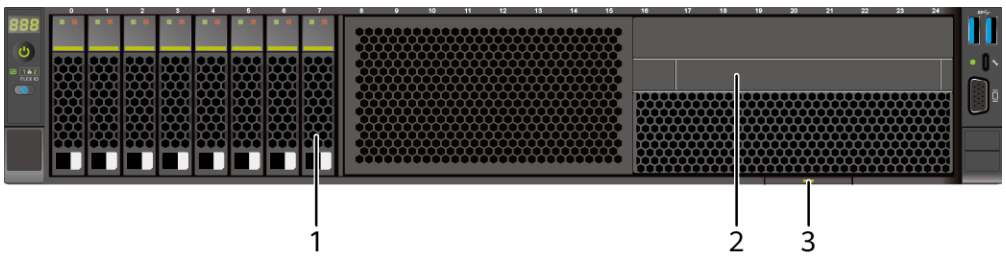
1.1 2288H V6-32DIMM

1.1.1 Front Panel

1.1.1.1 Appearance

- 8 x 2.5" Drive Configuration

Figure 1-1 Front view



1	Drive	2	(Optional) Built-in DVD drive (or LCD module)
3	Slide-out label plate (with an SN label)	-	-

- 8 x 2.5" drive pass-through NVMe hardware RAID configuration

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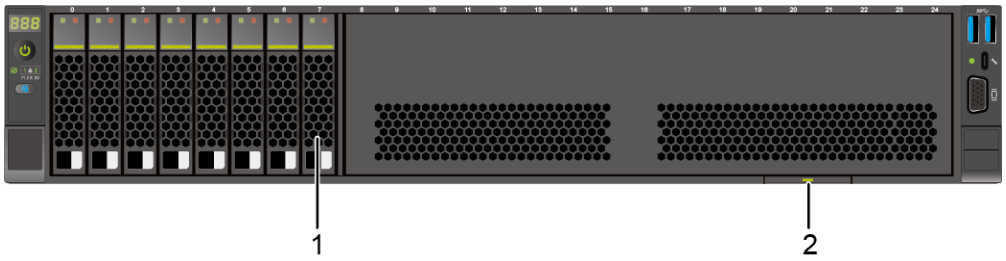
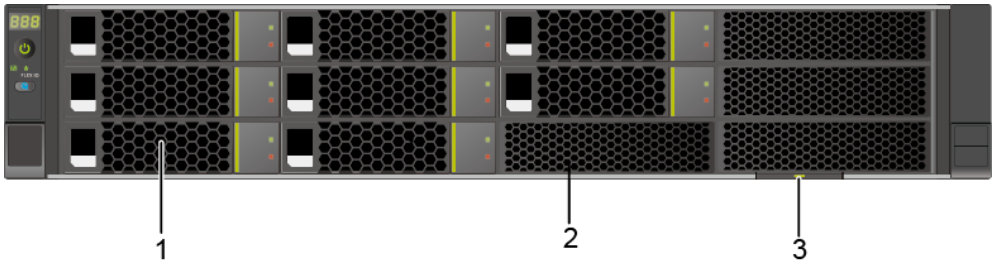
Figure 1-2 Front view



1	Drive	2	Slide-out label plate (with an SN label)

- 8 x 3.5" Drive Configuration

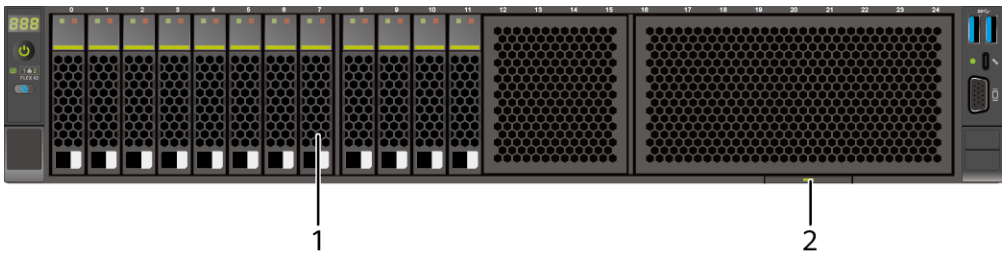
Figure 1-3 Front view



1	Drive	2	Filler panel in drive slot **NOTE** The slot cannot hold drives.
3	Slide-out label plate (with an SN label)	-	-

- 12 x 2.5" drive configuration (4 x SAS/SATA + 8 x NVMe)

Figure 1-4 Front view



1	Drive	2	Slide-out label plate (with an SN label)

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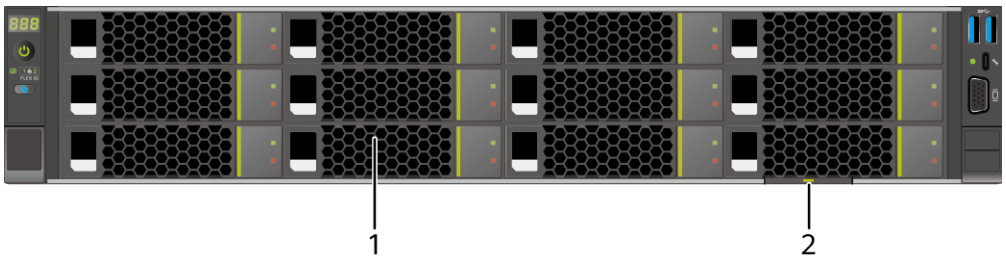
- 12 x 3.5" drive configuration

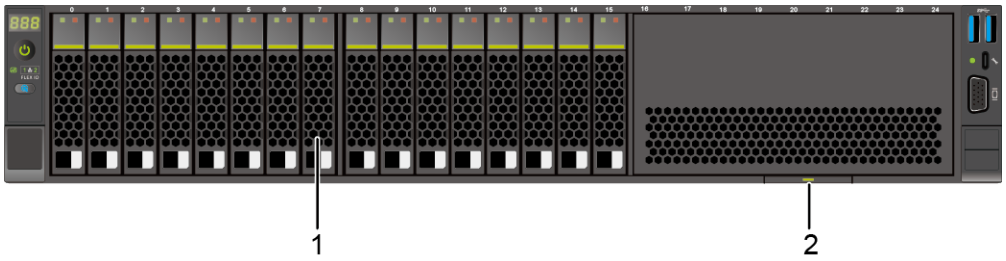
Figure 1-5 Front view



1	Drive	2	Slide-out label plate (with an SN label)

- 16 x 2.5" drive pass-through NVMe hardware RAID configuration

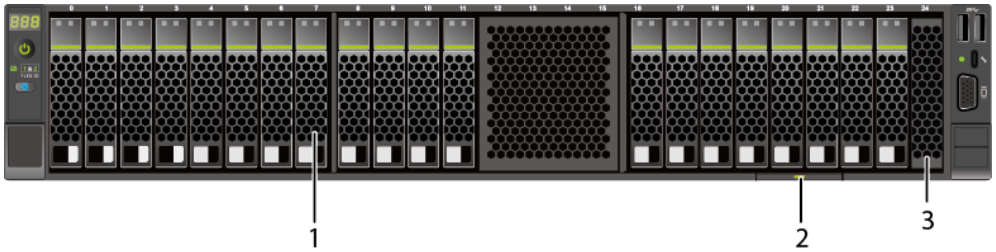
Figure 1-6 Front view



1	Drive	2	Slide-out label plate (with an SN label)

- 20 x 2.5" drive configuration (4 x SAS/SATA + 16 x NVMe)

Figure 1-7 Front view



1	Drive	2	Slide-out label plate (with an SN label)

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3	Filler panel in drive slot **NOTE** The slot cannot hold drives.	-	-

- 24 x 2.5" drive configuration

Figure 1-8 Front view

1	Drive	2	Slide-out label plate (with an SN label)
3	Filler panel in drive slot **NOTE** The slot cannot hold drives.	-	-

- 25 x 2.5" drive configuration

Figure 1-9 Front view

1	Drive	2	Slide-out label plate (with an SN label)

1.1.1.2 Indicators and Buttons

Indicator and Button Positions

- 8 x 2.5" drive configuration

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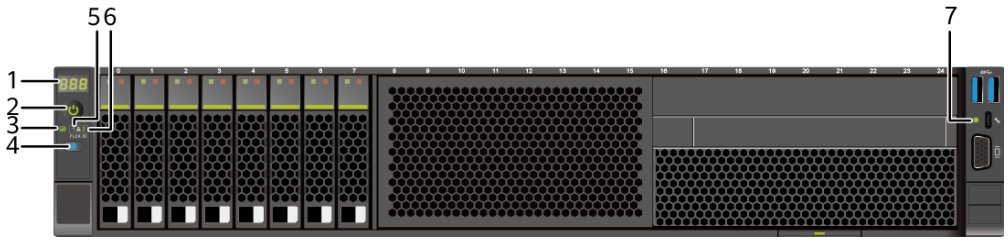
Figure 1-10 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 8 x 2.5" drive pass-through NVMe hardware RAID configuration

Figure 1-11 Indicators and buttons on the front panel

1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 8 x 3.5" Drive Configuration

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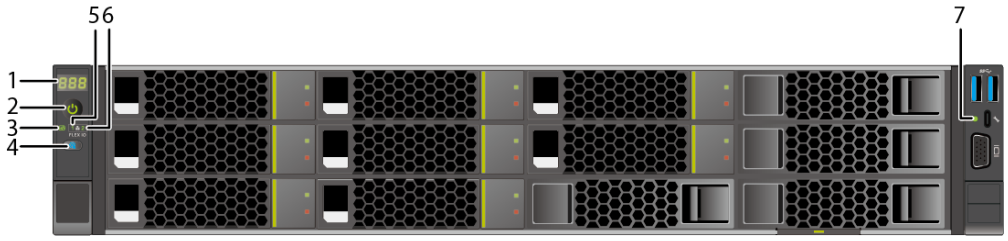
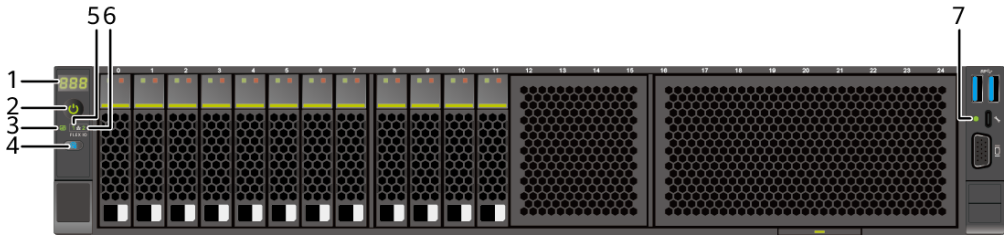
Figure 1-12 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 12 x 2.5" drive configuration (4 x SAS/SATA + 8 x NVMe)

Figure 1-13 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 12 x 3.5" drive configuration

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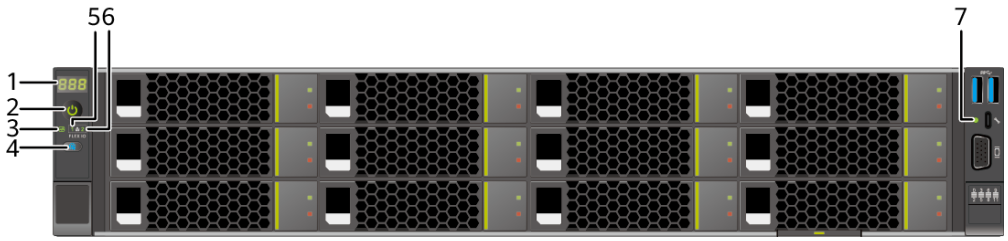
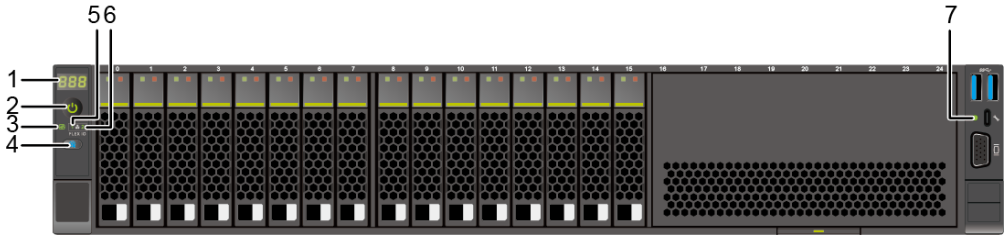
Figure 1-14 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 16 x 2.5" drive pass-through NVMe hardware RAID configuration

Figure 1-15 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 20 x 2.5" drive configuration (4 x SAS/SATA + 16 x NVMe)

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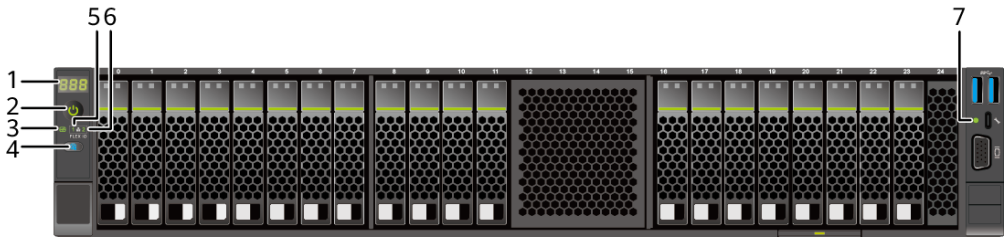
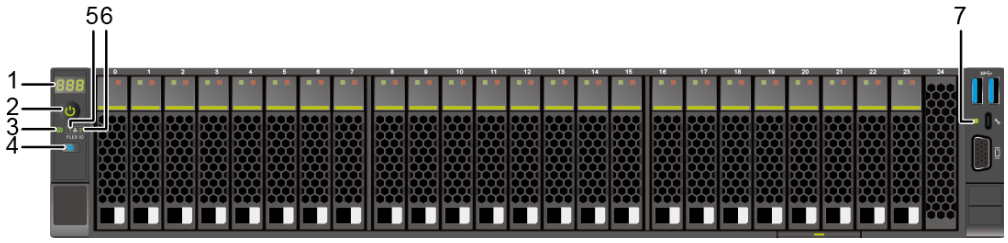
Figure 1-16 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 24 x 2.5" drive configuration

Figure 1-17 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

- 25 x 2.5" drive configuration

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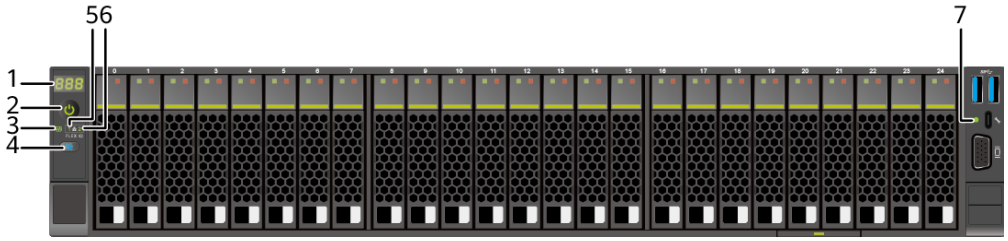
Figure 1-18 Indicators and buttons on the front panel



1	Fault diagnosis LED	2	Power button/indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card 1 presence indicator	6	FlexIO card 2 presence indicator
7	iBMC direct connect management port indicator	-	-

Indicator and Button Descriptions

Table 1-1 Description of indicators and buttons on the front panel

Silkscreen	Indicator and Button	Description
888	Fault diagnosis LED	• ---: The device is operating properly. • Error code: A component is faulty. For details about error codes, see the *iBMC Alarm Handling*. **NOTE** If multiple error codes are generated at the same time, the error codes are displayed in a loop. Each error code is displayed for 5 seconds.

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Silkscreen	Indicator and Button	Description
	Power button/ indicator	Power indicator: ● Off: The device is not powered on. ● Steady green: The device is powered on. ● Blinking yellow: The iBMC is starting. The power button is locked and cannot be pressed. The iBMC is started in about 1 minute, and then the power indicator is steady yellow. ● Steady yellow: The device is standby. Power button: ● When the device is powered on, you can press this button to gracefully shut down the OS. **NOTE** For different OSs, you may need to shut down the OS as prompted. ● When the device is powered on, you can hold down this button for 6 seconds to forcibly power off the device. ● When the power indicator is steady yellow, you can press this button to power on the device.
	Health status indicator	● Off: The device is powered off or is faulty. ● Blinking red at 1 Hz: A major alarm has been generated on the system. ● Blinking red at 5 Hz: A critical alarm has been generated on the system. ● Steady green: The device is operating properly.
	UID button/ indicator	The UID button/indicator helps identify and locate a device. UID indicator: ● Off: The device is not being located. ● Blinking or steady blue: The device is being located. UID button: ● You can control the UID indicator status by pressing the UID button or using the iBMC. ● You can press this button to turn on or off the UID indicator. ● You can press and hold down this button for 4 to 6 seconds to reset the iBMC.

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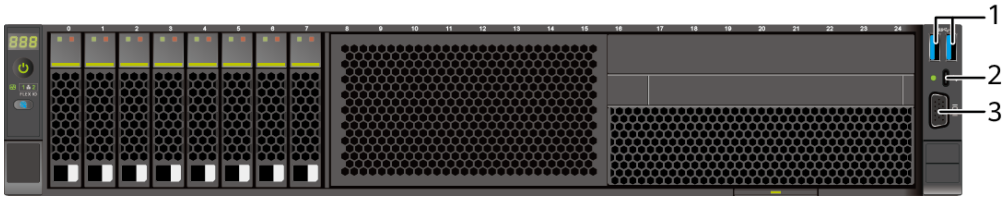
Silkscreen	Indicator and Button	Description
	FlexIO card presence indicator	Indicates whether the FlexIO card is detected. ● Off: The FlexIO card is not detected. ● Blinking green at 0.5 Hz: The FlexIO card is detected but is not powered on. ● Blinking green at 2 Hz: The FlexIO card is detected and has just been inserted. ● Steady green: The FlexIO card is detected and the power supply is normal.
	iBMC direct connect management port indicator	Indicates the status when the iBMC direct connect management port connects to a terminal (local PC or Android mobile phone): ● Off: No terminal is connected. ● Blinking green at short intervals for 3 seconds and then off: The port is disabled. ● Steady green: The terminal is connected. Indicates the status when the iBMC direct connect management port connects to a USB device: ● Blinking red at long intervals: The job fails or an error is reported when the job is complete. ● Blinking green at short intervals: The job is being executed. ● Blinking green at short intervals for 3 seconds and then off: The port is disabled. ● Steady green: The server configuration file is being copied from the USB device or the job is successfully completed.

1.1.1.3 Ports

Port Positions

- 8 x 2.5" drive configuration

Figure 1-19 Ports on the front panel



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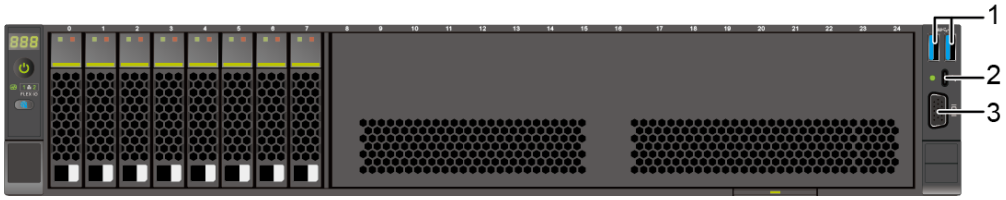
1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 8 x 2.5" drive pass-through NVMe hardware RAID configuration

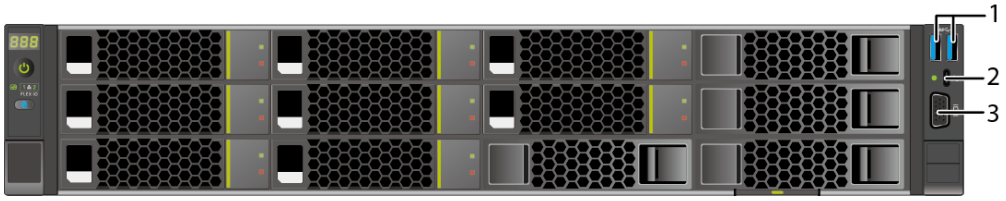
Figure 1-20 Ports on the front panel



1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 8 x 3.5" drive configuration

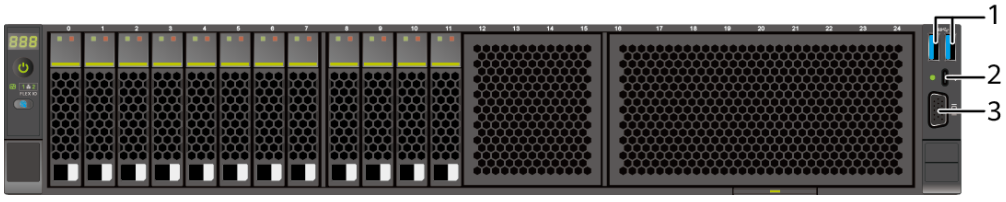
Figure 1-21 Ports on the front panel



1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 12 x 2.5" drive configuration (4 x SAS/SATA + 8 x NVMe)

Figure 1-22 Ports on the front panel



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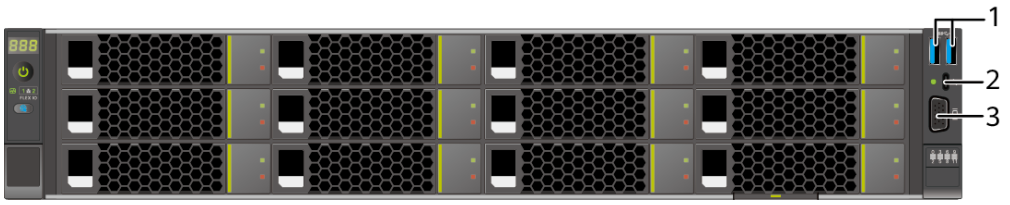
1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 12 x 3.5" drive configuration

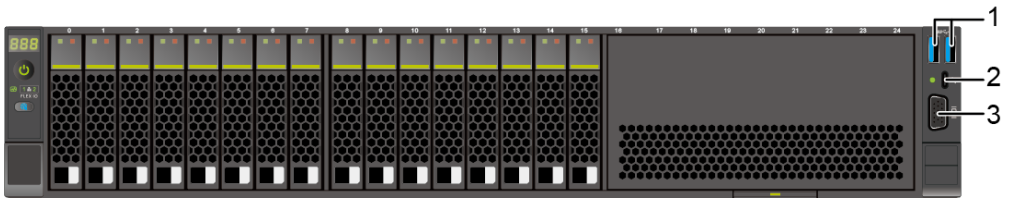
Figure 1-23 Ports on the front panel



1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 16 x 2.5" drive pass-through NVMe hardware RAID configuration

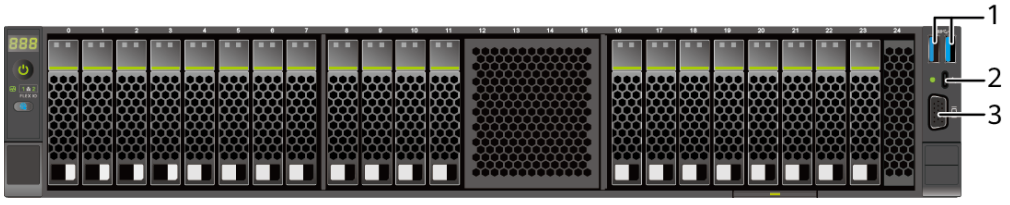
Figure 1-24 Ports on the front panel



1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 20 x 2.5" drive configuration (4 x SAS/SATA + 16 x NVMe)

Figure 1-25 Ports on the front panel



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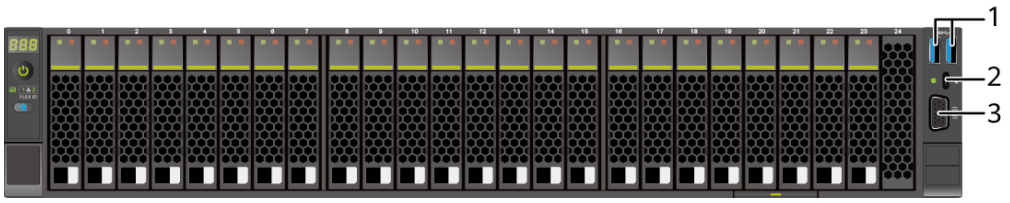
1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 24 x 2.5" drive configuration

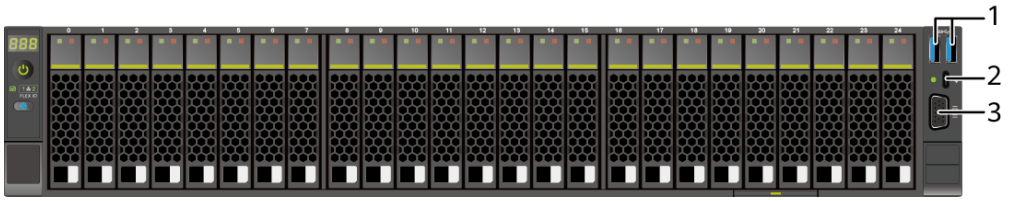
Figure 1-26 Ports on the front panel



1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

- 25 x 2.5" drive configuration

Figure 1-27 Ports on the front panel



1	USB 3.0 port	2	iBMC direct connect management port
3	VGA port	-	-

Port Description

Table 1-2 Ports on the front panel

Port	Type	Quantity	Description
VGA port[Note]	DB15	1	Used to connect a display terminal, such as a monitor or KVM.

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Port	Type	Quantity	Description
iBMC direct connect management port[Note]	USB Type-C **NOTE** The USB 2.0 protocol is supported.	1	Used to connect to a local PC or mobile phone through a USB Type-C cable to monitor and manage the system. **NOTE** Only local PCs running Windows 10 and mobile phones running Android are supported. ● To log in to the iBMC from the local PC, enter **https:**//*IP address of the iBMC management network port* in the address box of the browser on the local PC. ● When accessing the iBMC through a mobile phone, you need to use the mobile application FusionMobile to access the iBMC. For details, see the *FusionMobile User Guide*.
USB port	USB 3.0	2	Used to connect to a USB 3.0 device. **NOTICE** ● Before connecting an external USB device, ensure that the USB device functions properly. Otherwise, it may adversely impact the server. ● The USB 3.0 port can be used to supply power to low-power peripherals. However, the USB 3.0 port must comply with the USB specifications. To run advanced peripherals, such as external CD/DVD drives, an external power supply is required.
Note: The VGA port and iBMC direct connect management port cannot be used at the same time.			

1.1.2 Rear Panel

1.1.2.1 Appearance

- Server with a drive module or PCIe riser module on the rear panel

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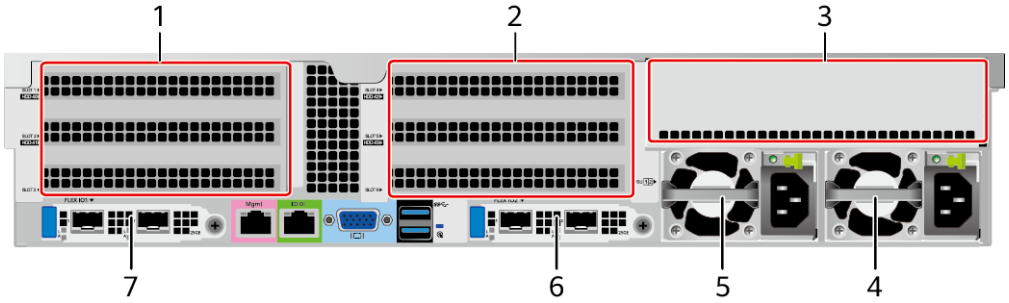
Figure 1-28 Rear view



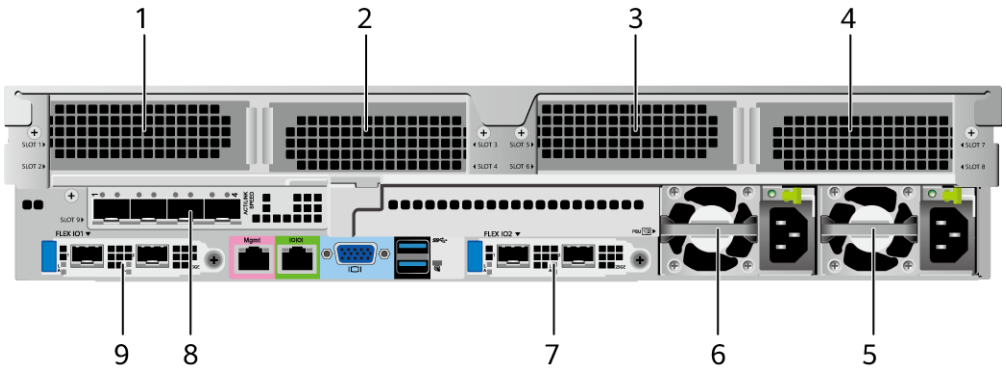
1	I/O module 1	2	I/O module 2
3	I/O module 3	4	Power supply 2
5	PSU 1	6	(Optional) FlexIO card 2 **NOTE** The FlexIO card slot supports only OCP 3.0 network adapters.
7	(Optional) FlexIO card 1 **NOTE** The FlexIO card slot supports only OCP 3.0 network adapters.	-	-

NOTE

- I/O module 1 and I/O module 2 each support a PCIe riser module, 2 x 3.5" rear-drive module, or module with 2 x 2.5" rear drives and one PCIe riser module.
- I/O module 3 supports a PCIe riser module or 4 x 2.5" rear-drive module.
- For details about the OCP 3.0 network adapter, see **1.1.6.1 OCP 3.0 Network Adapters** .
- The figure is for reference only. The actual configuration may vary.

- Server with four GPUs on the rear panel

Figure 1-29 Rear view



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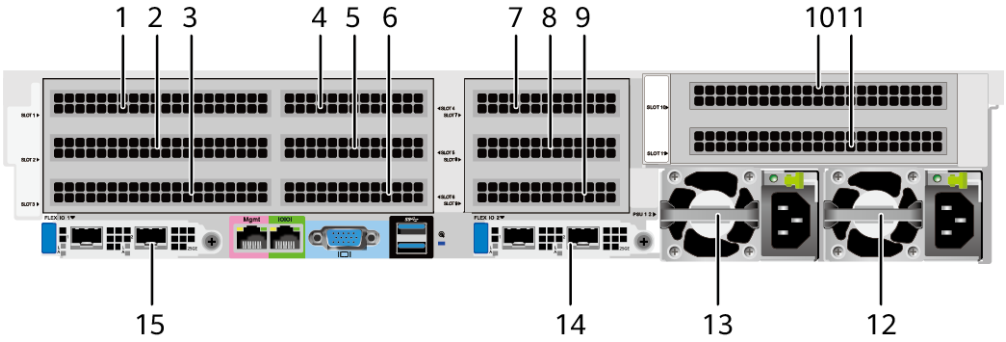
1	Slot2	2	Slot3
3	Slot6	4	Slot7
5	PSU 2	6	Power supply unit (PSU) 1
7	(Optional) FlexIO card 2 **NOTE** The FlexIO card slot supports only OCP 3.0 network adapters.	8	(Optional) Slot 9
9	(Optional) FlexIO card 1 **NOTE** The FlexIO card slot supports only OCP 3.0 network adapters.	-	-

NOTE

- For details about the OCP 3.0 network adapter, see **1.1.6.1 OCP 3.0 Network Adapters** .
- The figure is for reference only. The actual configuration may vary.

- Server with 11 Standard PCIe Cards on the Rear Panel



1	Slot1	2	Slot2
3	Slot3	4	Slot4
5	Slot5	6	Slot6
7	Slot7	8	Slot8
9	Slot9	10	Slot10
11	Slot11	12	Power supply 2
13	Power supply unit (PSU) 1	14	(Optional) FlexIO card 2 **NOTE** The FlexIO card slot supports only OCP 3.0 network adapters.

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15	(Optional) FlexIO card 1 **NOTE** The FlexIO card slot supports only OCP 3.0 network adapters.	-	-

NOTE

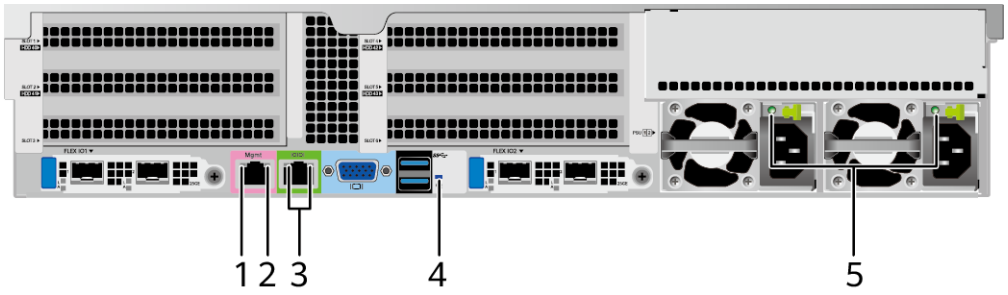
- For details about the OCP 3.0 network adapter, see **1.1.6.1 OCP 3.0 Network Adapters** .
- The figure is for reference only. The actual configuration may vary.

1.1.2.2 Indicators and Buttons

Indicator Positions

- Server with a drive module or PRM on the rear panel

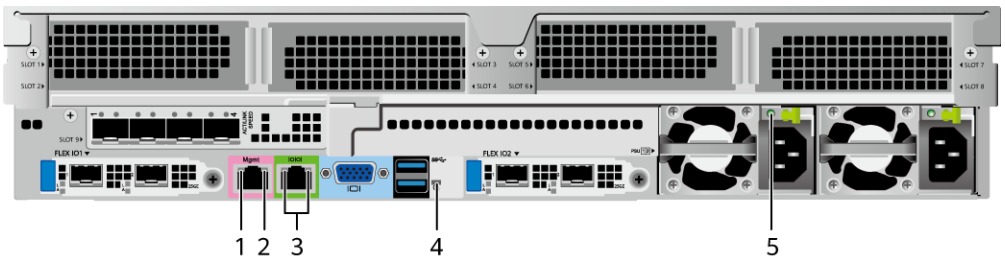
Figure 1-30 Indicators on the rear panel



1	Data transmission status indicator of the management network port	2	Connection status indicator of the management network port
3	Serial port indicator **NOTE** Reserved and unavailable currently.	4	UID indicator
5	PSU indicator	-	-

- Server with four GPUs on the rear panel

Figure 1-31 Indicators on the rear panel



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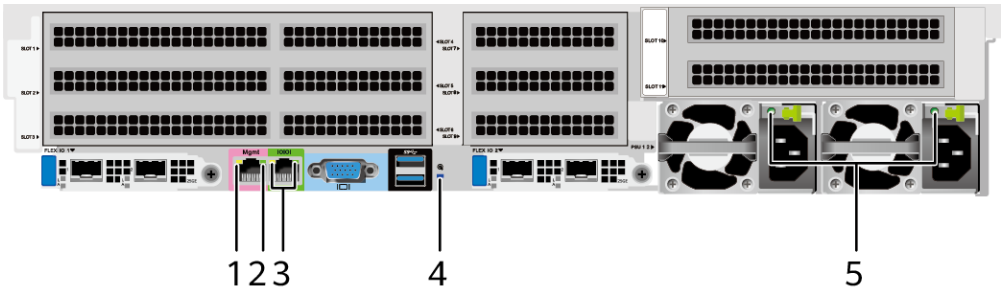
1	Data transmission status indicator of the management network port	2	Connection status indicator of the management network port
3	Serial port indicator **NOTE** Reserved and unavailable currently.	4	UID indicator
5	PSU indicator	-	-

- Server with 11 standard PCIe cards on the rear panel

Figure 1-32 Indicators on the rear panel



1	Data transmission status indicator of the management network port	2	Connection status indicator of the management network port
3	Serial port indicator **NOTE** Reserved and unavailable currently.	4	UID indicator
5	PSU indicator	-	-

Indicator Description

Table 1-3 Indicators on the rear panel

Silkscreen	Indicator	Description
-	Data transmission status indicator for the management network port	• Off: No data is being transmitted. • Blinking yellow: Data is being transmitted.

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Silkscreen	Indicator	Description
-	Connection status indicator for the management network port	● Off: The network port is not connected. ● Steady green: The network port is connected properly.
	UID indicator	The UID indicator helps identify and locate a device. ● Off: The device is not being located. ● Blinking or steady blue: The device is being located. **NOTE** You can control the UID indicator status by pressing the UID button or using the iBMC.
-	PSU indicator	● Off: No power is supplied. ● Blinking green at 1 Hz: – The input is normal, and the server is standby. – The input is overvoltage or undervoltage. – The PSU is in deep hibernation mode. ● Blinking green at 4 Hz: The firmware is being upgraded online. ● Steady green: The power input and output are normal. ● Steady orange: The input is normal but there is no output. **NOTE** The possible causes of no power output are as follows: ● Power supply overtemperature protection ● Power output overcurrent or short-circuit ● Output overvoltage ● Short-circuit protection ● Device failure (excluding failure of all devices)

1.1.2.3 Interface

Port Positions

- Server with a drive module or PRM on the rear panel

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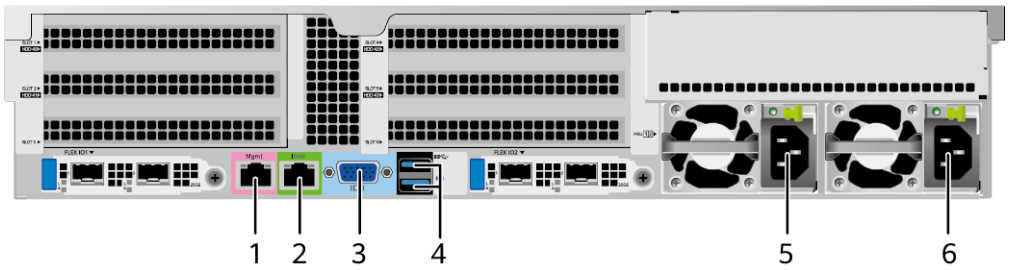
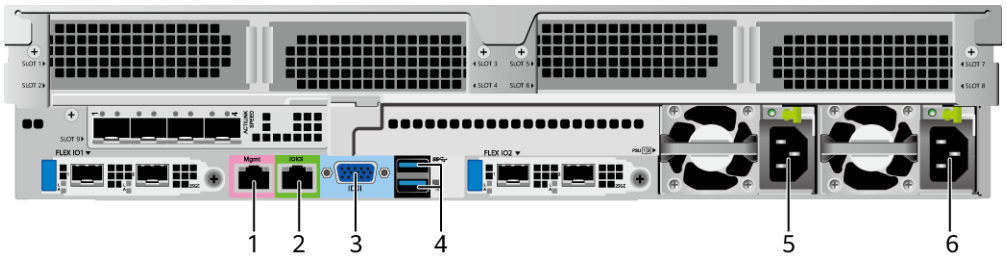
Figure 1-33 Ports on the rear panel



1	Management network port	2	Serial port
3	VGA port	4	USB 3.0 port
5	Socket for PSU 1	6	Socket for PSU 2

- Server with four GPUs on the rear panel

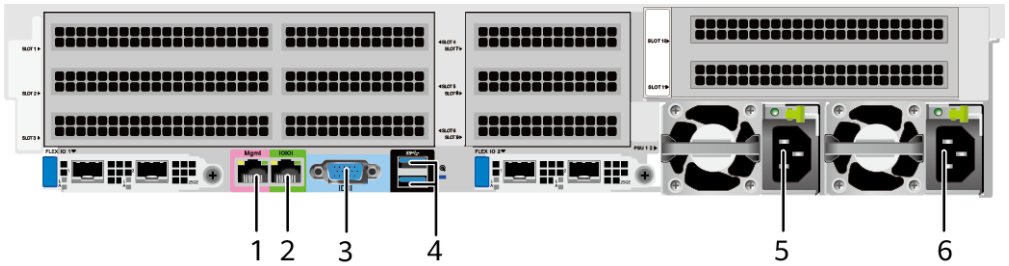
Figure 1-34 Ports on the rear panel



1	Management network port	2	Serial port
3	VGA port	4	USB 3.0 port
5	Socket for PSU 1	6	Socket for PSU 2

- Server with 11 standard PCIe cards on the rear panel

Figure 1-35 Ports on the rear panel



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1	Management network port	2	Serial port
3	VGA port	4	USB 3.0 port
5	Socket for PSU 1	6	Socket for PSU 2

Port Description

Table 1-4 Ports on the rear panel

Port	Type	Quantity	Description
Management network port	RJ45	1	iBMC management network port, which is used to manage the server. **NOTE** ● The management network port is a GE port that supports 100 Mbit/s and 1000 Mbit/s auto-negotiation. ● The iBMC management network ports cannot be connected to power over Ethernet (PoE) devices (such as a switch with PoE enabled). Connecting a LOM port to a PoE device may cause link communication failure or even damage the NIC.
Serial port	RJ45	1	Default operating system serial port used for debugging. You can also set it as the iBMC serial port by using the iBMC command. **NOTE** The port uses 3-wire serial communication interface, and the default baud rate is 115,200 bit/s.
VGA port	DB15	1	Used to connect a display terminal, such as a monitor or KVM.

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Port	Type	Quantity	Description
USB port	USB 3.0	2	Used to connect to a USB 3.0 device. **NOTICE** ● The maximum current is 1.3 A for an external USB device. ● Before connecting an external USB device, ensure that the USB device functions properly. Otherwise, it may adversely impact the server. ● The USB 3.0 port can be used to supply power to low-power peripherals. However, the USB 3.0 port must comply with the USB specifications. To run advanced peripherals, such as external CD/DVD drives, an external power supply is required.
PSU socket	-	2	Used to connect to a power distribution unit (PDU) through a power cable. You can select the PSUs as required. **NOTE** When determining the PSUs, ensure that the rated power of the PSUs is greater than that of the server.

1.1.3 Processors

- The server supports one or two processors.
- If only one processor is required, install it in socket CPU1.
- Processors of the same model must be used in a server.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

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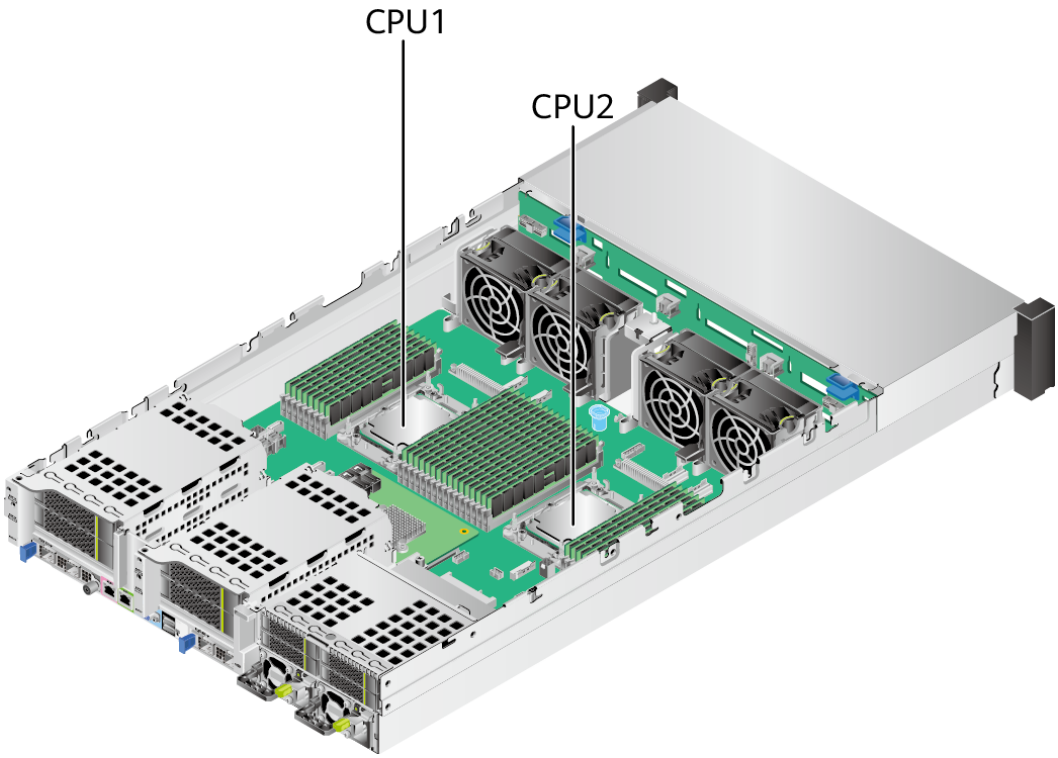
Figure 1-36 Processor positions



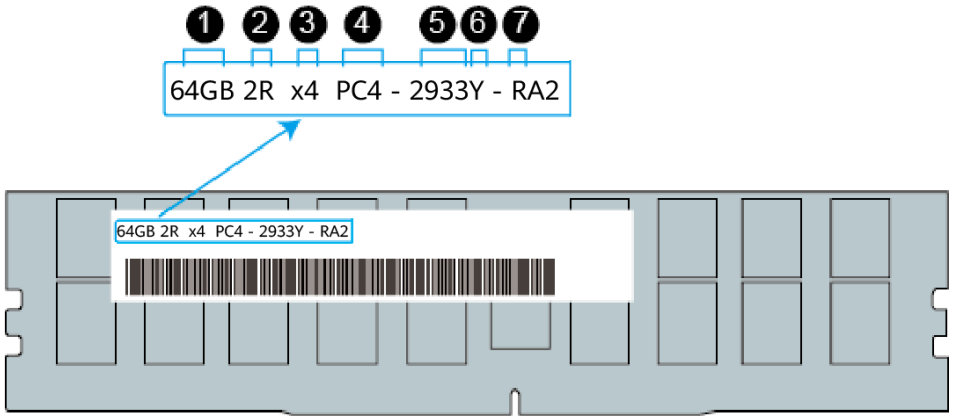
1.1.4 Memory

1.1.4.1 DDR4 Memory

1.1.4.1.1 Memory ID

You can determine the memory module properties based on the label attached to the memory module.

Figure 1-37 Memory identifier



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No.	Description	Example
1	Capacity	• 16 GB • 32 GB • 64 GB • 128 GB • 256 GB
2	Number of ranks	• 1R: single-rank • 2R: dual-rank • 4R: quad-rank • 8R: octal-rank
3	Data width on the DRAM	• x4: 4-bit • x8: 8-bit
4	Type of the memory interface	• PC4: DDR4
5	Maximum memory speed	• 2933 MT/s • 3200 MT/s
6	Memory latency parameters (CL-tRCD-tRP)	• W = 20-20-20 • Y = 21-21-21 • AA = 22-22-22
7	DIMM type	• R = RDIMM • L = LRDIMM

1.1.4.1.2 Memory Subsystem Architecture

A server provides 32 memory slots. Each processor integrates eight memory channels.

Install the memory modules in the primary memory channels first. If the primary memory channel is not populated, the memory modules in secondary memory channels cannot be used.

Table 1-5 Memory channels

CPU	Channel	Memory Slot
CPU 1	A (primary)	DIMM000(A)
	A	DIMM001(I)
	B (primary)	DIMM010(B)
	B	DIMM011(J)
	C (primary)	DIMM020(C)

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CPU	Channel	Memory Slot
	C	DIMM021(K)
	D (primary)	DIMM030(D)
	D	DIMM031(L)
	E (primary)	DIMM040(E)
	E	DIMM041(M)
	F (primary)	DIMM050(F)
	F	DIMM051(N)
	G (primary)	DIMM060(G)
	G	DIMM061(O)
	H (primary)	DIMM070(H)
	H	DIMM071(P)
CPU2	A (primary)	DIMM100(A)
	A	DIMM101(I)
	B (primary)	DIMM110(B)
	B	DIMM111(J)
	C (primary)	DIMM120(C)
	C	DIMM121(K)
	D (primary)	DIMM130(D)
	D	DIMM131(L)
	E (primary)	DIMM140(E)
	E	DIMM141(M)
	F (primary)	DIMM150(F)
	F	DIMM151(N)
	G (primary)	DIMM160(G)
	G	DIMM161(O)
	H (primary)	DIMM170(H)
	H	DIMM171(P)

1.1.4.1.3 Memory Compatibility

Observe the following rules when configuring DDR4 memory modules:

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NOTICE

- A server must use DDR4 memory modules of the same part number (P/N code), and the memory speed is the minimum value of the following items:
  - Memory speed supported by a CPU
  - Maximum operating speed of a memory module
- The DDR4 DIMMs of different types (RDIMM and LRDIMM) and specifications (capacity, bit width, rank, and height) cannot be used together.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

- The memory can be used with the third-generation Intel® Xeon® Scalable Ice Lake processors. The maximum memory capacity supported by all processor models is the same.
- The total memory capacity is the sum of the capacity of all DDR4 DIMMs.

NOTICE

The total memory capacity refers to the capacity when DDR4 memory modules are fully configured. For details about the memory capacity when PMem modules are used together with DDR4 memory modules, see **1.1.4.2.3 Memory Compatibility**.

- For details about the capacity type of a single memory module, see "Search Parts" in the compatibility list on the technical support website.
- The maximum number of memory modules supported depends on the memory type and rank quantity.

NOTE

Each memory channel supports a maximum of 8 ranks. The number of memory modules supported by each channel varies depending on the number of ranks supported by each channel:

Number of memory modules supported by each channel ≤ Number of ranks supported by each memory channel/Number of ranks supported by each memory module

- A memory channel supports more than eight ranks for LRDIMMs.

NOTE

A quad-rank LRDIMM generates the same electrical load as a single-rank RDIMM on a memory bus.

Table 1-6 DDR4 memory specifications

Parameter	Specifications				
Capacity per DDR4 memory module (GB)	16	32	64	128	256
Type	RDIMM	RDIMM	RDIMM	LRDIMM	RDIMM

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Parameter		Specifications				
Rated speed (MT/s)		3200	3200	3200	3200	2933
Operating voltage (V)		1.2	1.2	1.2	1.2	1.2
Maximum number of DDR4 DIMMs in a server[a]		32	32	32	32	32
Maximum DDR4 memory capacity of the server (GB)		512	1024	2048	4096	8192
Actual rate (MT/s)	1DPC[b]	3200	3200	3200	3200	2933
	2DPC	3200	3200	3200	3200	2933

- a: The maximum number of DDR4 memory modules is based on dual-processor configuration. The value is halved for a server with only one processor.
- b: DPC (DIMM per channel) indicates the number of memory modules per channel.
- The information listed in this table is for reference only. For details, consult the local sales representative.

1.1.4.1.4 DIMM Installation Rules

NOTE

This section applies to a server fully configured with DDR4 memory modules. If PMem modules are used together, see **1.1.4.2.4 DIMM Installation Rules**.

Observe the following when configuring DDR4 memory modules:

- Install memory modules only when corresponding processors are installed.
- Do not install LRDIMMs and RDIMMs in the same server.
- Install filler memory modules in vacant slots.

Observe the following when configuring DDR4 memory modules in specific operating mode:

- Rank sparing mode
  - Comply with the general installation guidelines.
  - At least two ranks must be configured for each channel.
  - A maximum of two standby ranks can be configured for each channel.
  - The capacity of a standby rank must be greater than or equal to that of other ranks in the same channel.
- Memory mirroring mode
  - Comply with the general installation guidelines.

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  - Each processor supports four integrated memory controllers (IMCs), and each IMC has two channels for installing memory modules. The installed memory modules must be identical in size and organization.
  - For a multi-processor configuration, each processor must have a valid memory mirroring configuration.
- Memory scrubbing mode
  - Comply with the general installation guidelines.

1.1.4.1.5 Memory Installation Positions

A server supports a maximum of 32 DDR4 memory modules. To maximize performance, balance the total memory capacity between the installed processors and to load the channels similarly whenever possible.

Observe the memory module installation rules when configuring memory modules. For details, see the *Memory Configuration Guide* of the server on the technical support website.

NOTICE

At least one DDR4 memory module must be installed in the primary memory channels corresponding to CPU 1.

Figure 1-38 Memory slots

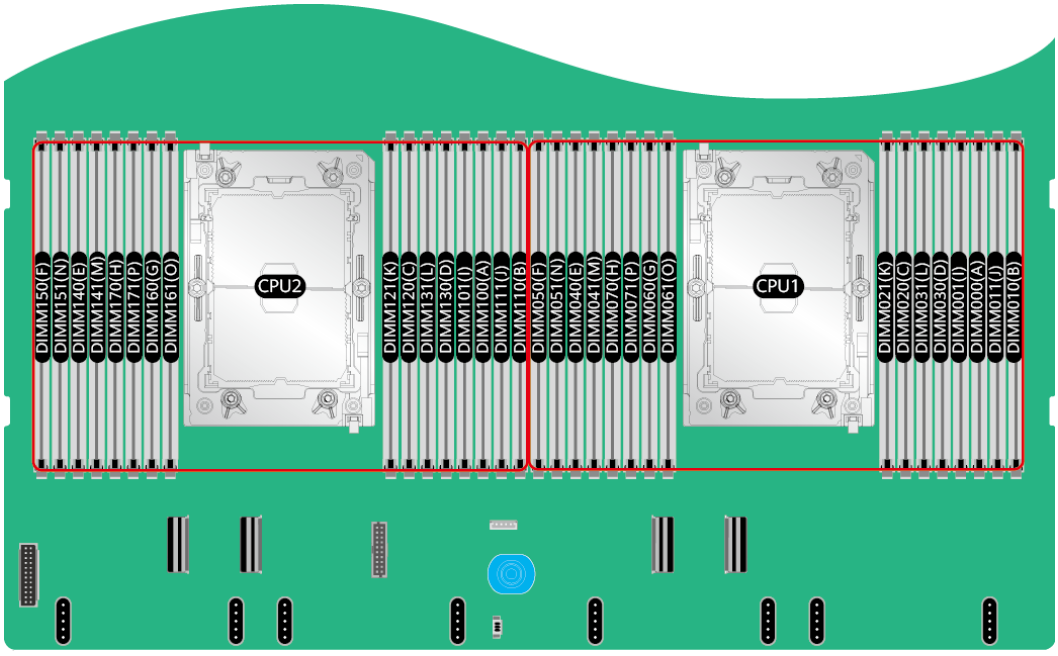

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Figure 1-39 DDR4 memory module installation guidelines (1 processor)

CPU	Channel	DIMM Slot	Number of DIMMs (✓: recommended ○: not recommended)							
			✓	✓	✓	✓	✓	✓	○	✓
			1	2	4	6	8	12	12	16
CPU1	A	DIMM000(A)	●	●	●	●	●	●	●	●
		DIMM001(I)						●	●	●
	B	DIMM010(B)				●	●	●	●	●
		DIMM011(J)						●		●
	C	DIMM020(C)			●	●	●	●	●	●
		DIMM021(K)						●	●	●
	D	DIMM030(D)					●		●	●
		DIMM031(L)								●
	E	DIMM040(E)		●	●	●	●	●	●	●
		DIMM041(M)						●	●	●
	F	DIMM050(F)				●	●	●	●	●
		DIMM051(N)						●		●
	G	DIMM060(G)			●	●	●	●	●	●
		DIMM061(O)						●	●	●
	H	DIMM070(H)					●		●	●
		DIMM071(P)								●
Note	When 12 DIMMs are configured, the recommended installation (marked with ✓) achieves better performance than the installation that is not recommended (marked with ○). However, only the installation that is not recommended (marked with ○) supports SNC2, Hemi, SGX, and UMA X-skt.									

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Figure 1-40 DDR4 memory module installation guidelines (2 processors)

CPU	Channel	DIMM Slot	Number of DIMMs (✓: recommended ○: not recommended)							
			✓	✓	✓	✓	✓	✓	○	✓
			2	4	8	12	16	24	24	32
CPU1	A	DIMM000(A)	●	●	●	●	●	●	●	●
		DIMM001(I)						●	●	●
	B	DIMM010(B)				●	●	●	●	●
		DIMM011(J)						●		●
	C	DIMM020(C)			●	●	●	●	●	●
		DIMM021(K)						●	●	●
	D	DIMM030(D)					●		●	●
		DIMM031(L)								●
	E	DIMM040(E)		●	●	●	●	●	●	●
		DIMM041(M)						●	●	●
	F	DIMM050(F)				●	●	●	●	●
		DIMM051(N)						●		●
	G	DIMM060(G)			●	●	●	●	●	●
		DIMM061(O)						●	●	●
	H	DIMM070(H)					●		●	●
		DIMM071(P)								●
CPU2	A	DIMM100(A)	●	●	●	●	●	●	●	●
		DIMM101(I)						●	●	●
	B	DIMM110(B)				●	●	●	●	●
		DIMM111(J)						●		●
	C	DIMM120(C)			●	●	●	●	●	●
		DIMM121(K)						●	●	●
	D	DIMM130(D)					●		●	●
		DIMM131(L)								●
	E	DIMM140(E)		●	●	●	●	●	●	●
		DIMM141(M)						●	●	●
	F	DIMM150(F)				●	●	●	●	●
		DIMM151(N)						●		●
	G	DIMM160(G)			●	●	●	●	●	●
		DIMM161(O)						●	●	●
	H	DIMM170(H)					●		●	●
		DIMM171(P)								●
Note	When 24 DIMMs are configured, the recommended installation (marked with ✓) achieves better performance than the installation that is not recommended (marked with ○). However, only the installation that is not recommended (marked with ○) supports SNC2, Hemi, SGX, and UMA X-skt.									

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1.1.4.1.6 Memory Protection Technologies

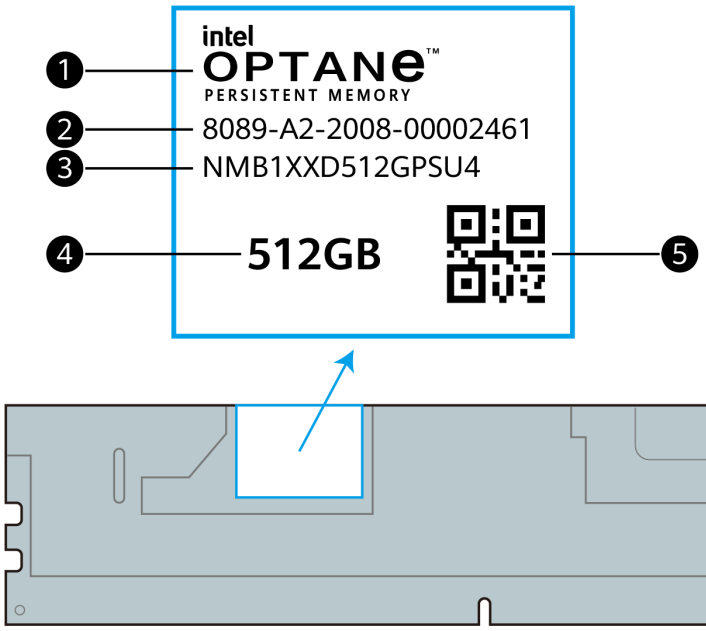
The following memory protection technologies are supported:

- ECC
- Memory Mirroring
- Memory Single Device Data Correction (SDDC)
- Failed DIMM Isolation
- Memory Thermal Throttling
- Command/Address Parity Check and Retry
- Memory Demand/Patrol Scrubbing
- Memory Data Scrambling
- Post Package Repair (PPR)
- Write Data CRC Protection
- Adaptive Data Correction - Single Region (ADC-SR)
- Adaptive Double Device Data Correction - Multiple Region (ADDDC-MR)
- Partial Cache Line Sparing (PCLS)

1.1.4.2 PMem

1.1.4.2.1 Memory Identifier

Figure 1-41 Memory identifier



No.	Description	Example
1	Component	Intel Optane™ Persistent Memory

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No.	Description	Example
2	SN	8089-A2-2008-00002461
3	Model	NMB1XXD512GPSU4
4	Capacity (GB)	• 128 • 256 • 512
5	SN QR code	8089-A2-2008-00002461

1.1.4.2.2 Memory Subsystem Architecture

The server provides 32 memory slots. Each processor integrates eight memory channels, and each memory channel supports only one PMem module.

PMem modules must be used with DDR4 memory modules.

Table 1-7 Memory channels

CPU	Channel	Memory Slot
CPU 1	A (primary)	DIMM000(A)
	A	DIMM001(I)
	B (primary)	DIMM010(B)
	B	DIMM011(J)
	C (primary)	DIMM020(C)
	C	DIMM021(K)
	D (primary)	DIMM030(D)
	D	DIMM031(L)
	E (primary)	DIMM040(E)
	E	DIMM041(M)
	F (primary)	DIMM050(F)
	F	DIMM051(N)
	G (primary)	DIMM060(G)
	G	DIMM061(O)
	H (primary)	DIMM070(H)
	H	DIMM071(P)
CPU2	A (primary)	DIMM100(A)

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CPU	Channel	Memory Slot
	A	DIMM101(I)
	B (primary)	DIMM110(B)
	B	DIMM111(J)
	C (primary)	DIMM120(C)
	C	DIMM121(K)
	D (primary)	DIMM130(D)
	D	DIMM131(L)
	E (primary)	DIMM140(E)
	E	DIMM141(M)
	F (primary)	DIMM150(F)
	F	DIMM151(N)
	G (primary)	DIMM160(G)
	G	DIMM161(O)
	H (primary)	DIMM170(H)
	H	DIMM171(P)

1.1.4.2.3 Memory Compatibility

Observe the following rules when configuring PMem modules:

NOTICE

- The PMem modules must be used with the DDR4 memory modules. For details, see *PMem 200-Barlow pass User Guide*.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

- The memory must be used with the third-generation Intel® Xeon® Scalable Ice Lake processors. The maximum memory capacity supported by all processor models is the same.
- The PMem module can work only in App Direct Mode (AD) and Memory Mode (MM). The total supported memory capacity is calculated as follows:
  - PMem module in AD mode

    Total memory capacity = Total capacity of all PMem modules+ Total capacity of all DDR4 memory modules
  - PMem module in MM mode

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Total memory capacity = Total capacity of all PMem modules (The DDR4 memory modules are used as the cache and therefore are not calculated as memory capacity.)

NOTICE

For details about the AD and MM modes, see *PMem 200-Barlow pass User Guide*.

- For details about the capacity type of a single memory module, see "Search Parts" in the compatibility list on the technical support website.
- The maximum number of memory modules supported depends on the memory type and rank quantity.

  NOTE

  Each memory channel supports a maximum of 8 ranks. The number of memory modules supported by each channel varies depending on the number of ranks supported by each channel:

  Number of memory modules supported by each channel ≤ Number of ranks supported by each memory channel/Number of ranks supported by each memory module

Table 1-8 PMem specifications

Parameter	Specifications	
Capacity per PMem module (GB)	128	256
Rated speed (MT/s)	3200	3200
Operating voltage (V)	1.2	1.2
Maximum number of PMem modules in a server[a]	16	16
Maximum PMem capacity of the server (GB)[b]	2048	4096
Actual rate (MT/s)	3200	3200
• a: The maximum number of PMem modules is based on dual-processor configuration. The value is halved for a server with only one processor. • b: The maximum PMem capacity varies depending on the PMem working mode. • The information listed in this table is for reference only. For details, consult the local sales representative.		

1.1.4.2.4 DIMM Installation Rules

- Observe the following when configuring PMem modules:
  - The DDR4 memory modules used with the PMem modules include RDIMMs and LRDIMMs.

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  - The PMem modules used in a server must have the same P/N code.
  - The DDR4 memory modules used with the PMem modules in a server must have the same P/N code.
- Observe the following when configuring PMem modules in MM mode:

  On the same server, it is recommended that the ratio of the DDR4 memory capacity to the PMem capacity be 1:4 to 1:16.

1.1.4.2.5 Memory Installation Positions

A server supports a maximum of 16 PMem modules. The PMem modules must be used with the DDR4 memory modules.

Observe the memory module installation rules when configuring memory modules. For details, see the *Memory Configuration Guide* of the server on the technical support website.

Figure 1-42 Memory slots

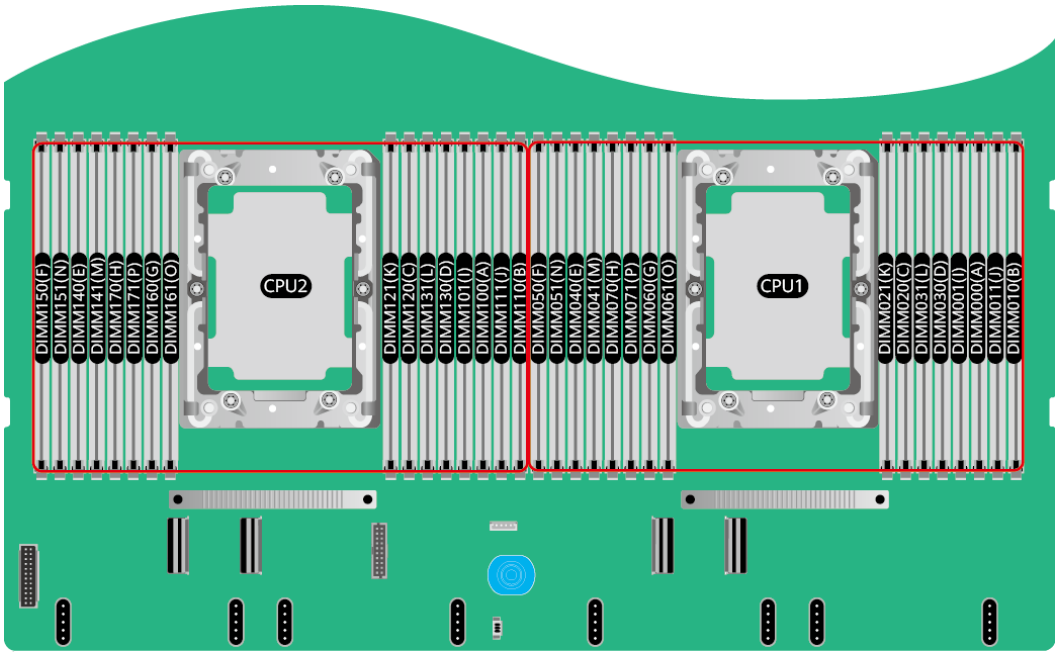

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Figure 1-43 PMem module installation guidelines (1 processor)

CPU	Channel		DIMM Slot	Installation Guideline (●: DDR4 ○: PMem)											
				AD	MM	AD	AD	AD	MM	AD	MM	AD			
				4+4		6+1	8+1	8+4		8+8		12+2			
CPU1	IMC0	A	DIMM000(A)	●		●	●	●		●		●			
			DIMM001(I)				○	○		○		●			
		B	DIMM010(B)	○		●	●	●		●		○			
			DIMM011(J)							○					
	IMC1	C	DIMM020(C)	●		●	●	●		●		●			
			DIMM021(K)					○		○		●			
		D	DIMM030(D)	○		○	●	●		●		●			
			DIMM031(L)							○		●			
	IMC2	E	DIMM040(E)	●		●	●	●		●		●			
			DIMM041(M)					○		○		●			
		F	DIMM050(F)	○		●	●	●		●		○			
			DIMM051(N)							○					
	IMC3	G	DIMM060(G)	●		●	●	●		●		●			
			DIMM061(O)					○		○		●			
		H	DIMM070(H)	○			●	●		●		●			
			DIMM071(P)							○		●			

Figure 1-44 PMem module installation guidelines (2 processors)

CPU	Channel		DIMM Slot	Installation Guideline (●: DDR4 ○: PMem)											
				AD	MM	AD	AD	AD	MM	AD	MM	AD			
				8+8		12+2	16+2	16+8		16+16		24+4			
CPU1	IMC0	A	DIMM000(A)	●		●	●	●		●		●			
			DIMM001(I)				○	○		○		●			
		B	DIMM010(B)	○		●	●	●		●		○			
			DIMM011(J)							○					
	IMC1	C	DIMM020(C)	●		●	●	●		●		●			
			DIMM021(K)					○		○		●			
		D	DIMM030(D)	○		○	●	●		●		●			
			DIMM031(L)							○		●			
	IMC2	E	DIMM040(E)	●		●	●	●		●		●			
			DIMM041(M)					○		○		●			
		F	DIMM050(F)	○		●	●	●		●		○			
			DIMM051(N)							○					
	IMC3	G	DIMM060(G)	●		●	●	●		●		●			
			DIMM061(O)					○		○		●			
		H	DIMM070(H)	○			●	●		●		●			
			DIMM071(P)							○		●			
CPU2	IMC0	A	DIMM000(A)	●		●	●	●		●		●			
			DIMM001(I)				○	○		○		●			
		B	DIMM010(B)	○		●	●	●		●		○			
			DIMM011(J)							○					
	IMC1	C	DIMM020(C)	●		●	●	●		●		●			
			DIMM021(K)					○		○		●			
		D	DIMM030(D)	○		○	●	●		●		●			
			DIMM031(L)							○		●			
	IMC2	E	DIMM040(E)	●		●	●	●		●		●			
			DIMM041(M)					○		○		●			
		F	DIMM050(F)	○		●	●	●		●		○			
			DIMM051(N)							○					
	IMC3	G	DIMM060(G)	●		●	●	●		●		●			
			DIMM061(O)					○		○		●			
		H	DIMM070(H)	○			●	●		●		●			
			DIMM071(P)							○		●			

1.1.4.2.6 Memory Protection Technologies

The following memory protection technologies are supported:

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- PMem module Error Detection and Correction
- PMem module Device Failure Recovery (SDDC)
- PMem module Package Sparing (DDDC)
- PMem module Patrol Scrubbing
- PMem module Address Error Detection
- PMem module Data Poisoning (Corrupt Data Containment)
- PMem module Viral
- PMem module Address Range Scrub (ARS)
- PMem module Error Injection
- DDR-T Command and Address Parity Check and Retry
- DDR-T Read Write Data ECC Check and Retry
- PMem module Faulty DIMM Isolation
- PMem module Error Reporting

1.1.5 Storage

1.1.5.1 Drive Configurations

1.1.5.1.1 8 x 2.5" Drive Pass-through Configuration

Drive configuration

Table 1-9 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 2.5" drive pass-through configuration 1	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SATA drive: PCH • NVMe drive: CPU
8 x 2.5" drive pass-through configuration 2	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card[b] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 2.5" drive pass-through configuration 3	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c/d] • NVMe drive: CPU
8 x 2.5" drive pass-through + 11 x PCIe card configuration 1	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SATA drives.	-	-	• PCH passthrough
8 x 2.5" drive pass-through + 11 x PCIe card configuration 2	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	-	-	• 1 x screw-in RAID controller card[e]
8 x 2.5" drive pass-through + 11 x PCIe card configuration 3	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	-	-	• 1 x PCIe RAID controller card[d/f]
8 x 2.5" drive + 4 x GPU configuration 1	• Front drive: 8 x 2.5" – Slots 0 to 7 support only SATA drives.	-	-	• PCH passthrough

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 2.5" drive + 4 x GPU configuration 2	● Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	-	-	● 1 x screw-in RAID controller card[e]
8 x 2.5" drive (4 x SAS/ SATA + 4 x SAS/SATA/ NVMe) + 4 x GPU configuration	● Front drive: 8 x 2.5" – Slots 0 to 3 support only SAS/ SATA drives. – Slots 4 to 7 support SAS/ SATA/ NVMe drives[a].	-	-	● SAS/SATA drive: 1 x screw-in RAID controller card[e] ● NVMe drive: CPU
8 x 2.5" drive pass-through NVMe hardware RAID configuration 1 (8 x NVMe)	● Front drive: 8 x 2.5" – Slots 0 to 7 support only NVMe drives.	-	-	● 1 x PCIe RAID controller card[d/g]

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 2.5" drive pass-through NVMe hardware RAID configuration 2 (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 4 x NVMe)	• Front drive: 8 x 2.5" – Slots 0 to 1 support only SAS/SATA drives. – Slots 2 to 3 support SAS/SATA/NVMe drives. – Slots 4 to 7 support only NVMe drives.	-	-	• 1 x PCIe RAID controller card[d/g]

- a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives.
- b: For now, this configuration supports only the XR150-M (3408iMR), XR450C-MX (3508), XR370-M-8i (3808IT), XR170-M-8i (3808iMR) and XR470C-M (3908) screw-in RAID controller cards.
- c: For now, this configuration supports only the 9460-8i (3508), 9440-8i (3408iMR), 9560-8i (3908), 9540-8i (3808iMR) and 9500-8i (3808IT) PCIe plug-in RAID controller cards.
- d: The PCIe RAID controller card must be installed in slot 3.
- e: For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards.
- f: For now, this configuration supports only the 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards.
- g: For now, this configuration supports only the 9560-16i (3916) PCIe plug-in RAID controller card. The PCIe RAID controller card can manage SAS, SATA, and NVMe drives.
- Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.

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Slot numbers

- Drive slot numbers of 8 x 2.5" drive pass-through configuration 1 in **Table 1-9**

Figure 1-45 Drive slot numbers

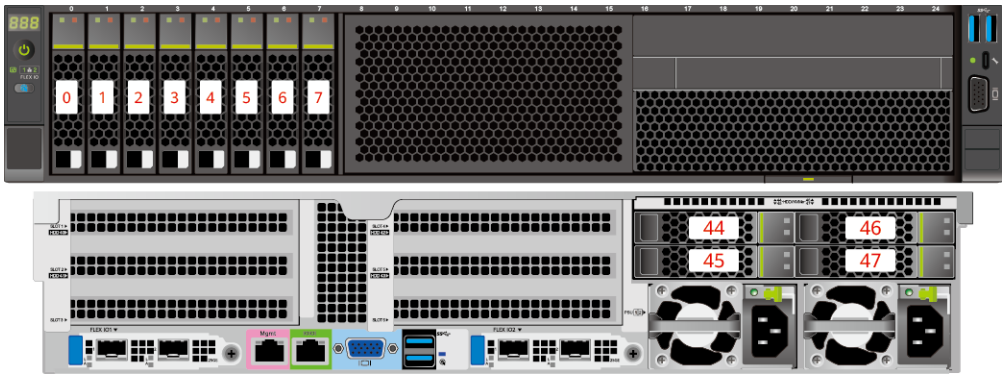

Table 1-10 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
44	44
45	45
46	46
47	47

- Drive slot numbers of 8 x 2.5" drive pass-through configuration 2 and 8 x 2.5" drive pass-through configuration 3 in **Table 1-9**

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Figure 1-46 Drive slot numbers

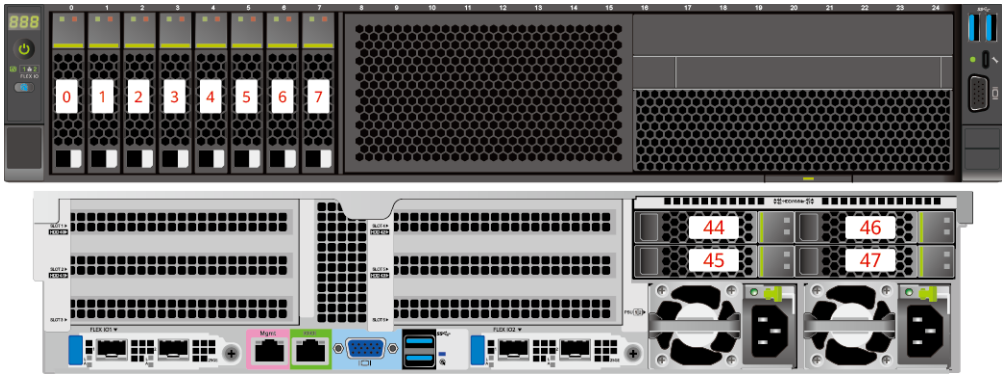

Table 1-11 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 8 x 2.5" drive pass-through + 11 x PCIe card configuration 1, and 8 x 2.5" drive + 4 x GPU configuration 1 in **Table 1-9**

Figure 1-47 Drive slot numbers

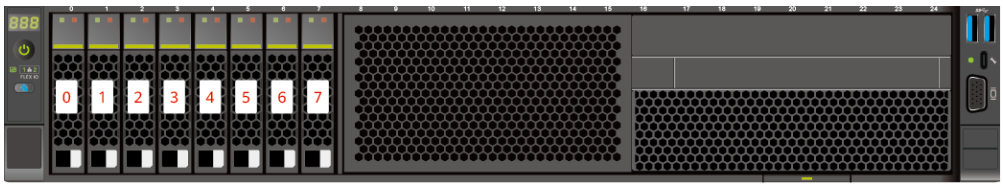

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Table 1-12 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7

- Drive slot numbers of 8 x 2.5" drive pass-through + 11 x PCIe card configuration 2, 8 x 2.5" drive pass-through + 11 x PCIe card configuration 3, 8 x 2.5" drive + 4 x GPU configuration 2, and

  8 x 2.5" drive (4 x SAS/SATA + 4 x SAS/SATA/NVMe) + 4 x GPU configuration in Table 1-9

Figure 1-48 Drive slot numbers

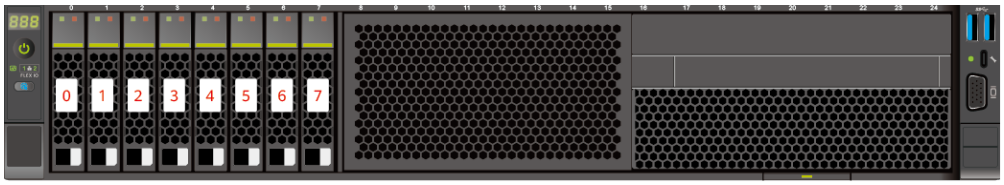

Table 1-13 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4[Note]
5	5	5[Note]
6	6	6[Note]
7	7	7[Note]

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller Card
Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.		

- Drive slot numbers of 8 x 2.5" drive pass-through NVMe hardware RAID configuration 1 (8 x NVMe), and 8 x 2.5" drive pass-through NVMe hardware RAID configuration 2 (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 4 x NVMe) in **Table 1-9**

Figure 1-49 Drive slot numbers

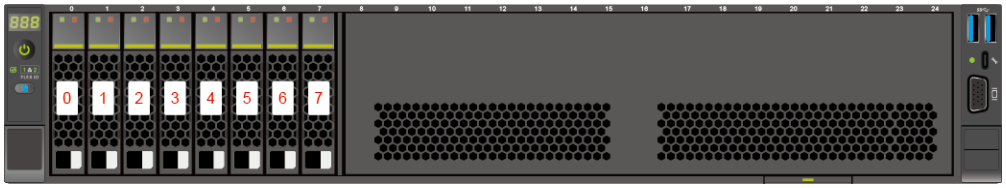

Table 1-14 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7

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1.1.5.1.2 8 x 3.5" Drive Pass-through Configuration

Drive configuration

Table 1-15 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 3.5" drive pass-through configuration 1	• Front drive: 8 x 3.5" – Slots 0 to 7 support only SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SATA drive: PCH • NVMe drive: CPU
8 x 3.5" drive pass-through configuration 2	• Front drive: 8 x 3.5" – Slots 0 to 7 support only SAS/SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card • NVMe drive: CPU
8 x 3.5" drive pass-through configuration 3	• Front drive: 8 x 3.5" – Slots 0 to 7 support only SAS/SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[b/c] • NVMe drive: CPU

- a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives.
- b: For now, this configuration supports only the 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards.
- c: The PCIe RAID controller card must be installed in slot 3.
- Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.

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Drive slot numbers

- Drive slot numbers of 8 x 3.5" drive pass-through configuration 1 in **Table 1-15**

Figure 1-50 Drive slot numbers

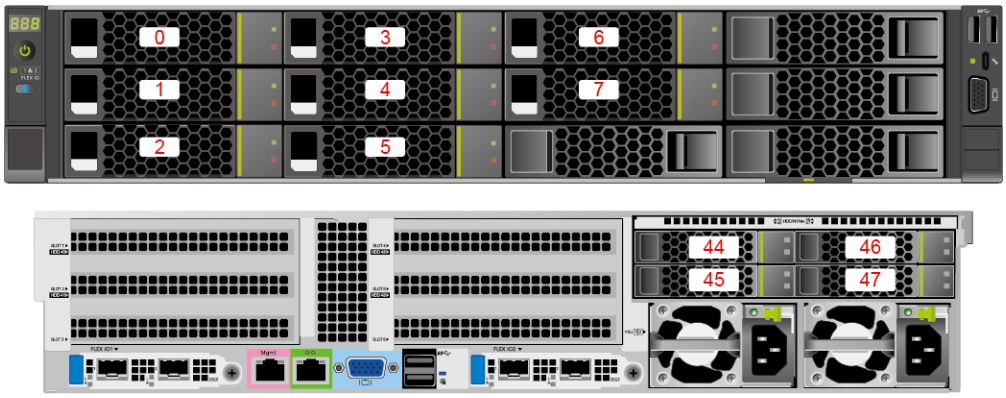

Table 1-16 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
44	44
45	45
46	46
47	47

- Drive slot numbers of 8 x 3.5" drive pass-through configuration 2 and 8 x 3.5" drive pass-through configuration 3 in **Table 1-15**

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Figure 1-51 Drive slot numbers

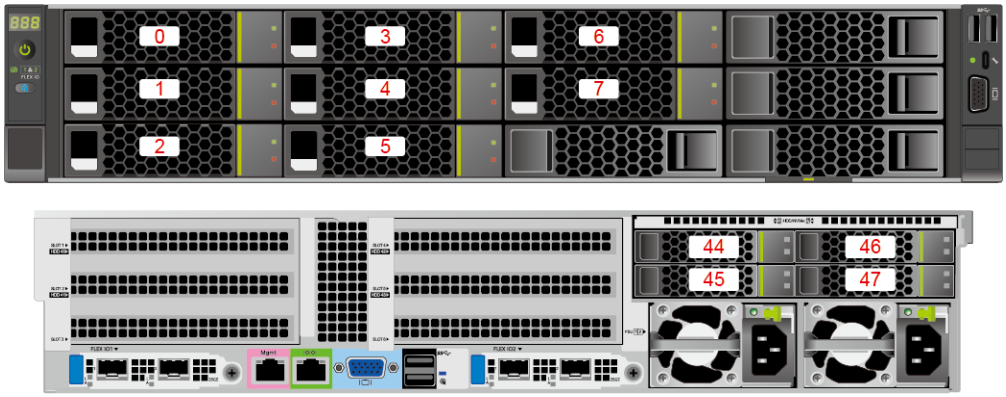

Table 1-17 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
44	44	-
45	45	-
46	46	-
47	47	-

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1.1.5.1.3 12 x 2.5" Drive Pass-through Configuration

Drive configuration

Table 1-18 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 2.5" drive pass-through configuration 1 (4 x SATA + 8 x NVMe)	● Front drive: 12 x 2.5" – Slots 0 to 3 support only SATA drives. – Slots 4 to 11 support only NVMe drives.[a]	-	-	● SATA drive: PCH ● NVMe drive: CPU
12 x 2.5" drive pass-through configuration 2 (4 x SAS/ SATA + 8 x NVMe)	● Front drive: 12 x 2.5" – Slots 0 to 3 support only SAS/ SATA drives. – Slots 4 to 11 support only NVMe drives.[a]	-	-	● SAS/SATA drive: 1 x screw-in RAID controller card[b] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 8 x NVMe)	● Front drive: 12 x 2.5" – Slots 0 to 3 support only SAS/SATA drives. – Slots 4 to 11 support only NVMe drives.[a]	-	-	● SAS/SATA drive: 1 x PCIe RAID controller card[c/d] ● NVMe drive: CPU
12 x 2.5" drive (4 x SATA + 8 x NVMe) + 4 x GPU configuration 1	● Front drive: 12 x 2.5" – Slots 0 to 3 support only SATA drives. – Slots 4 to 11 support only NVMe drives.[a]	-	-	● SATA drive: PCH ● NVMe drive: CPU
12 x 2.5" drive (4 x SAS/SATA + 8 x NVMe) + 4 x GPU configuration 2	● Front drive: 12 x 2.5" – Slots 0 to 3 support only SAS/SATA drives. – Slots 4 to 11 support only NVMe drives.[a]	-	-	● SAS/SATA drive: 1 x screw-in RAID controller card[b] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards. • c: For now, this configuration supports only the 9460-8i (3508), 9440-8i (3408iMR) and 9540-8i (3808iMR) PCIe plug-in RAID controller cards. • d: The PCIe RAID controller card must be installed in slot 3. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.				

Drive slot numbers

- Drive slot numbers of 12 x 2.5" drive pass-through configuration 1 (4 x SATA + 8 x NVMe) and 12 x 2.5" drive (4 x SATA + 8 x NVMe) + 4 x GPU configuration 1 in **Table 1-18**.

Figure 1-52 Drive slot numbers

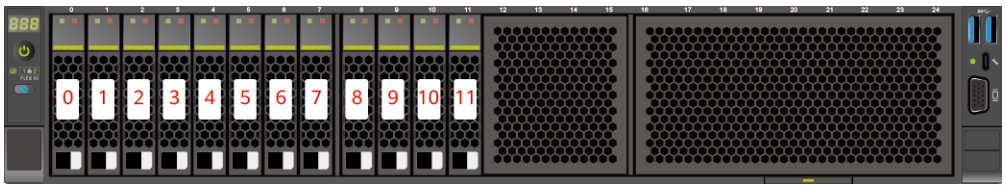

Table 1-19 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7

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Drive No.	Drive Number Identified by the iBMC
8	8
9	9
10	10
11	11

- Drive slot numbers of 12 x 2.5" drive pass-through configuration 2 (4 x SAS/SATA + 8 x NVMe), and 12 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 8 x NVMe), and 12 x 2.5" drive (4 x SAS/SATA + 8 x NVMe) + 4 x GPU configuration 2 in **Table 1-18**.

Figure 1-53 Drive slot numbers

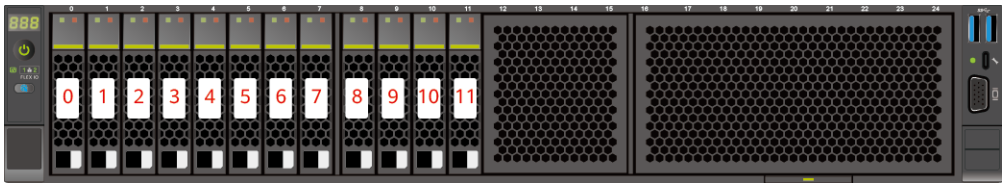

Table 1-20 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	-
5	5	-
6	6	-
7	7	-
8	8	-
9	9	-
10	10	-
11	11	-

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1.1.5.1.4 12 x 3.5" Drive Pass-through Configuration

Drive configuration

Table 1-21 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 1	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SATA drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SATA drive: PCH ● NVMe drive: CPU
12 x 3.5" drive pass-through configuration 2	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 2.5"/2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 2: 2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[b] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 3	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c/d] • NVMe drive: CPU
12 x 3.5" drive pass-through configuration 4	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 2: 2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card[e] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 5 (dual RAID controller cards)	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[d/f] – One screw-in RAID controller card manages the drives in Slots 40 to 41. – One PCIe RAID controller card manages the drives in Slots 0 to 11. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 6 (dual RAID controller cards)	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 2: 2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[d/g] – One screw-in RAID controller card manages the drives in Slots 0 to 11. – One PCIe RAID controller card manages the drives in Slots 42 to 43. ● NVMe drive: CPU
12 x 3.5" drive pass-through configuration 1 (4 x NVMe)	● Front drive: 12 x 3.5" – Slots 0 to 7 support only SATA drives. – Slots 8 to 11 support only SATA/ NVMe drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SATA drive: PCH ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 2 (4 x NVMe)	● Front drive: 12 x 3.5" – Slots 0 to 7 support only SAS/ SATA drives. – Slots 8 to 11 support SAS/ SATA/ NVMe drives.	● I/O module 1: 2 x 2.5"/2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 2: 2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[h] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 3 (4 x NVMe)	● Front drive: 12 x 3.5" – Slots 0 to 7 support only SAS/ SATA drives. – Slots 8 to 11 support SAS/ SATA/ NVMe drives.	● I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x PCIe RAID controller card[d/i] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only the XR760-M (3416iMR) screw-in RAID controller card. • c: For now, this configuration supports only the 9460-16i (3516), 9560-16i (3916), 9500-16i (3816IT) and 9540-16i (3816iMR) PCIe plug-in RAID controller cards. • d: The PCIe RAID controller card must be installed in slot 3. • e: For now, this configuration supports only the XR760IT-M (3416IT) screw-in RAID controller card. • f: For now, this configuration supports only the XR150-M (3408iMR), XR450C-MX (3508), XR170-M-8i (3808iMR) and XR470C-M (3908) screw-in RAID controller cards, and 9460-16i (3516), 9560-16i (3916), 9540-16i (3816iMR) and 9500-16i (3816IT) PCIe plug-in RAID controller cards. • g: For now, this configuration supports only the XR760-M (3416iMR) and XR760IT-M (3416IT) screw-in RAID controller cards, and 9440-8i (3408iMR) and 9460-8i (3508) PCIe plug-in RAID controller cards. • h: For now, this configuration supports only the XR150-M (3408iMR), XR450C-MX (3508), XR760-M (3416iMR) and XR760IT-M (3416IT) screw-in RAID controller cards. • i: For now, this configuration supports only the 9460-16i (3516), 9560-16i (3916) and 9540-16i (3816iMR) PCIe plug-in RAID controller cards. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.				

Drive slot numbers

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 1 in **Table 1-21**

Figure 1-54 Drive slot numbers

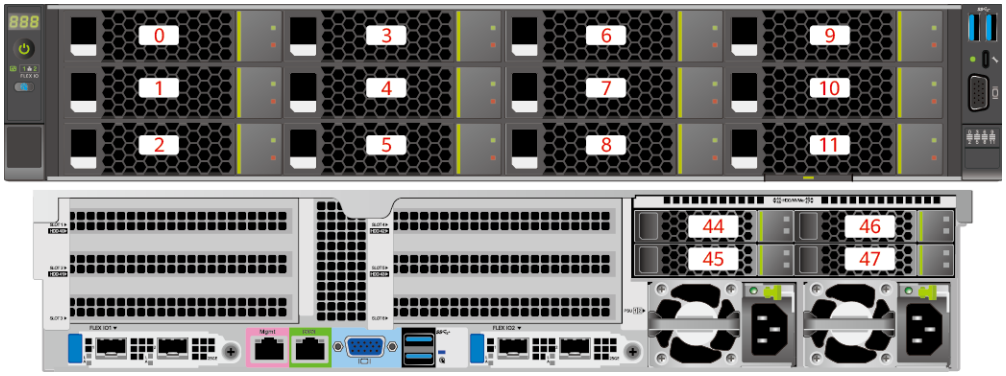

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Table 1-22 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
44	44
45	45
46	46
47	47

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 2 in **Table 1-21**

Figure 1-55 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

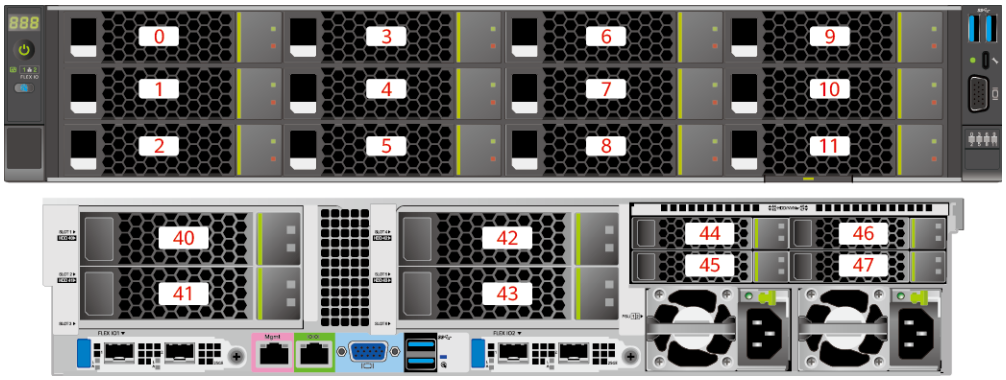

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Figure 1-56 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

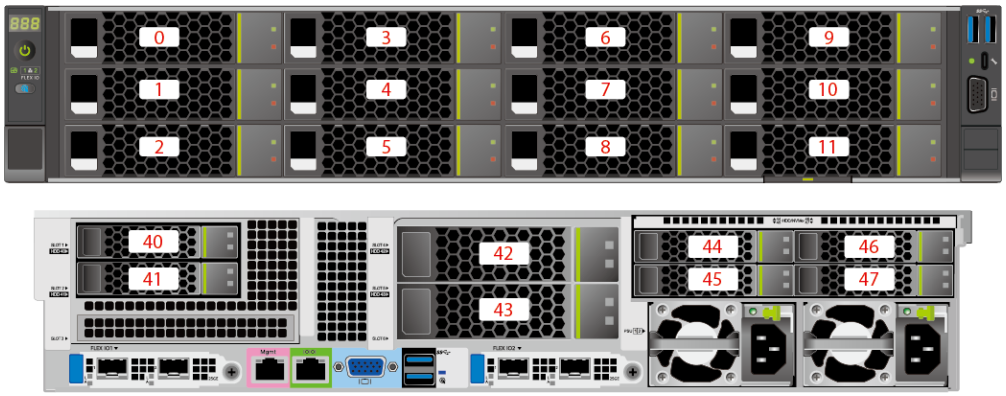

Table 1-23 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 3 in **Table 1-21**

Figure 1-57 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

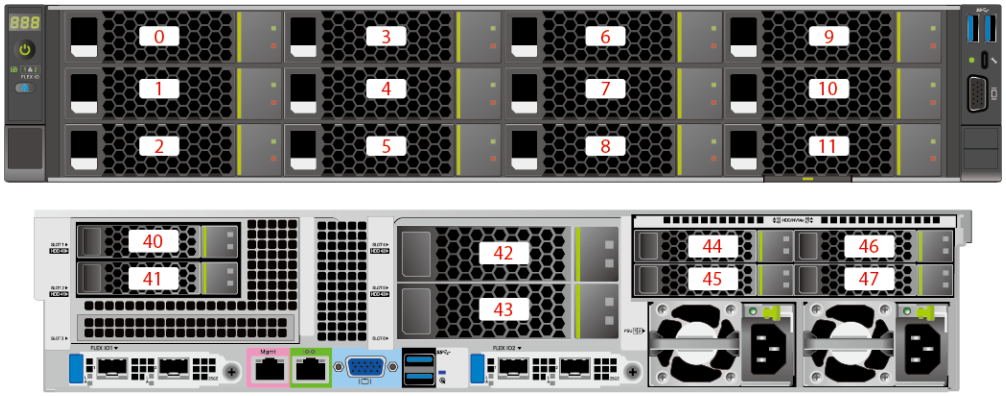

Figure 1-58 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

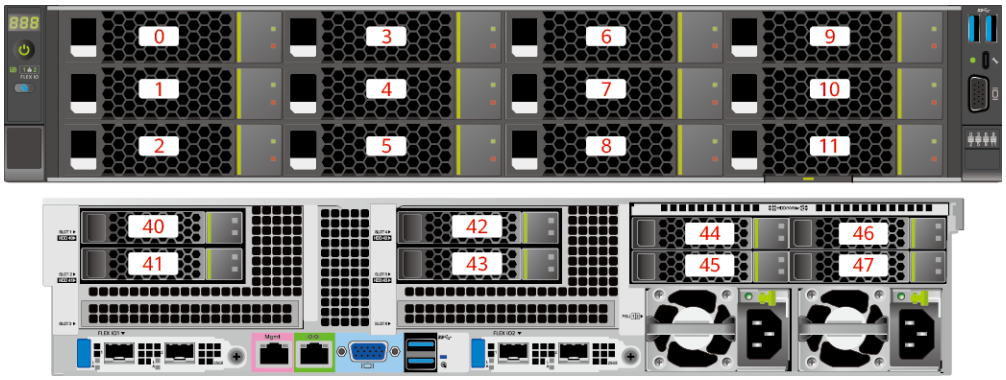

Table 1-24 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 4 in **Table 1-21**

Figure 1-59 Drive slot numbers

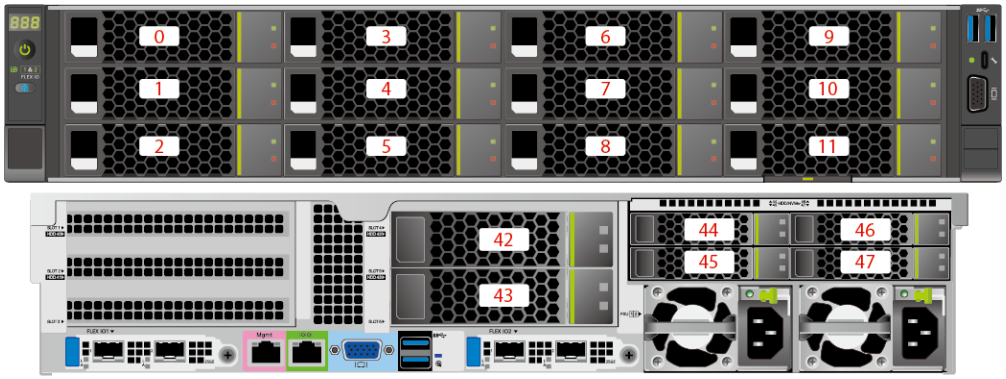

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Table 1-25 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
42	42	12
43	43	13
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 5 (dual RAID controller cards) in **Table 1-21**

Figure 1-60 Drive slot numbers

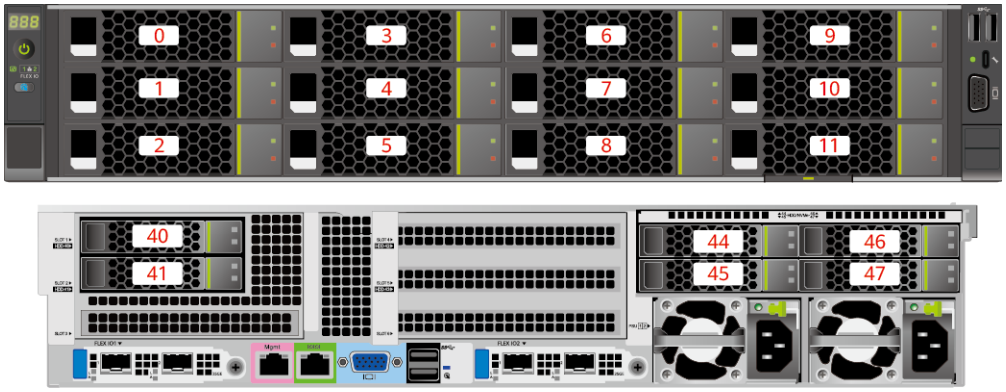

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Table 1-26 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	0
41	41	1
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 6 (dual RAID controller cards) in **Table 1-21**

Figure 1-61 Drive slot numbers

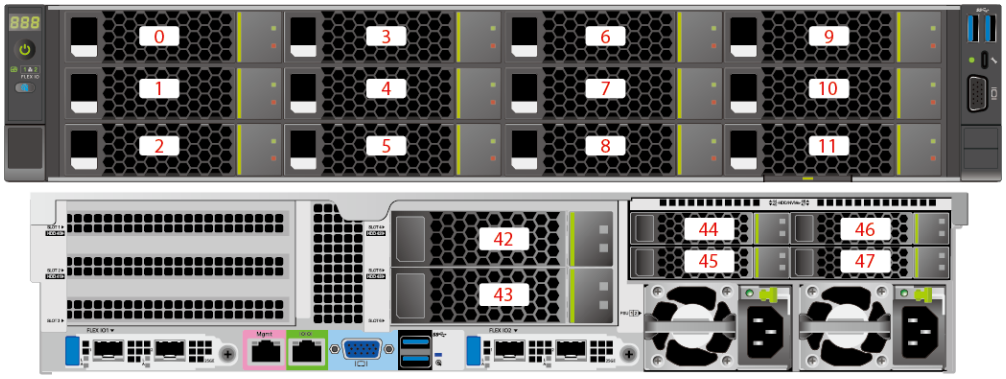

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Table 1-27 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
42	42	0
43	43	1
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 1 (4 x NVMe) in **Table 1-21**

Figure 1-62 Drive slot numbers

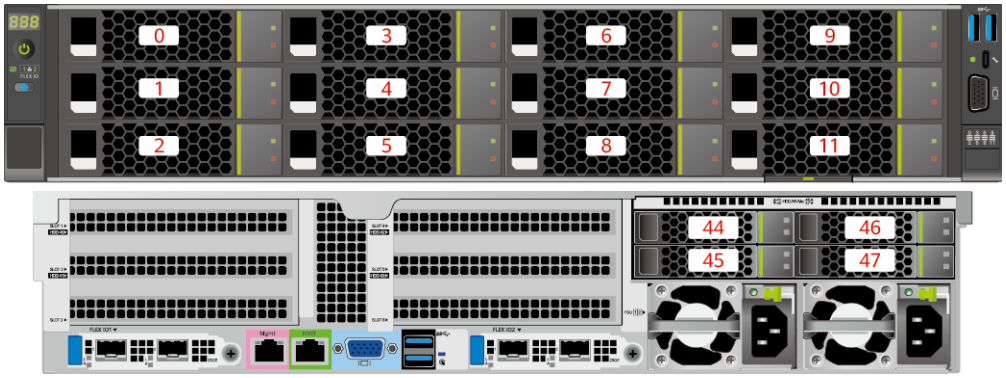

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Table 1-28 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
44	44
45	45
46	46
47	47

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 2 (4 x NVMe) in **Table 1-21**

Figure 1-63 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

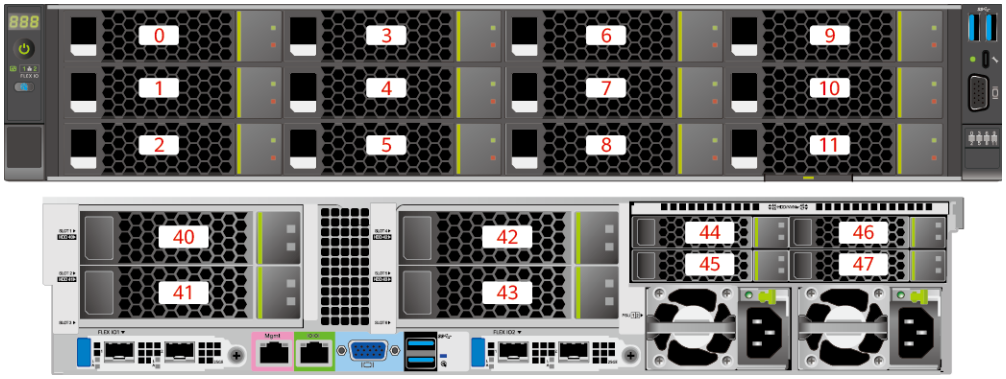

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Figure 1-64 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

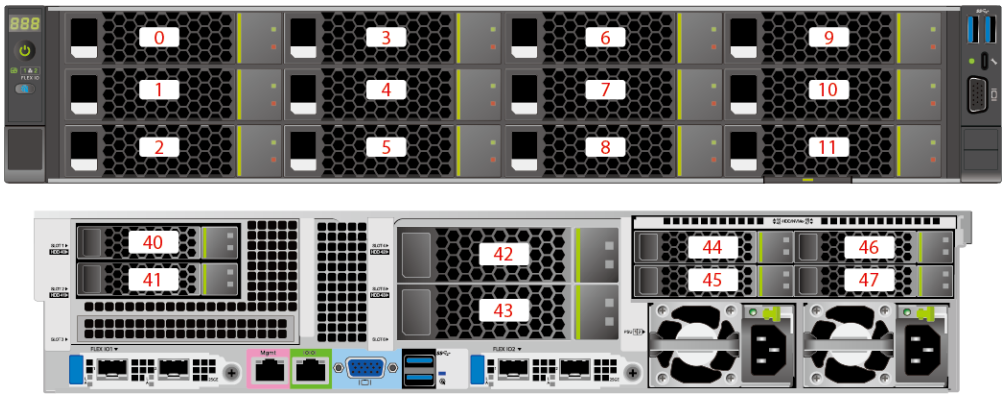

Table 1-29 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8[Note]
9	9	9[Note]
10	10	10[Note]
11	11	11[Note]
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
47	47	-
Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.		

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 3 (4 x NVMe) in Table 1-21

Figure 1-65 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

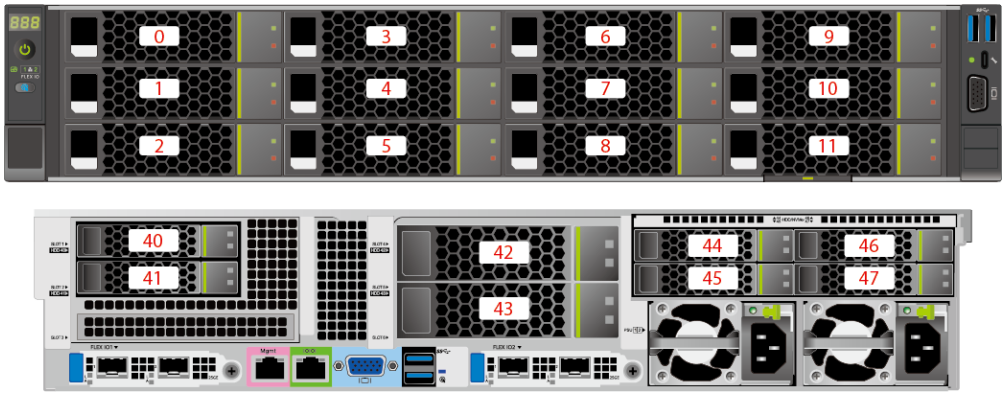

Figure 1-66 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

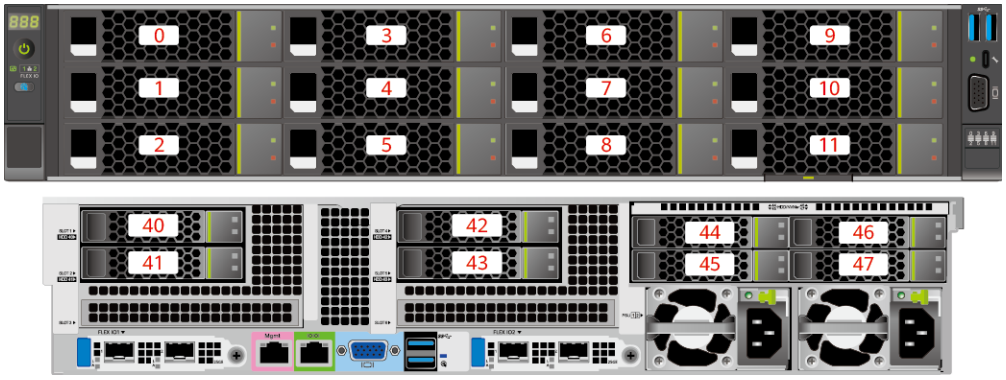

Table 1-30 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8Note
9	9	9Note
10	10	10Note
11	11	11Note
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-
47	47	-
Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.		

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1.1.5.1.5 12 x 3.5" Drive EXP Configuration

Drive configuration

Table 1-31 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 1	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5"/2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card[b] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 2	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c/d] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 3 (dual RAID controller cards)	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[c/e] – One screw-in RAID controller card manages the drives in Slots 40 to 41. – One PCIe RAID controller card manages the drives in Slots 0 to 11. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 4	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c/f] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards. • c: The PCIe RAID controller card must be installed in slot 3. • d: For now, this configuration supports only the 9460-8i (3508), 9440-8i (3408iMR), and 9560-8i (3908) PCIe plug-in RAID controller cards. The 9560-8i (3908) PCIe plug-in RAID controller card is used only for 12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255). • e: For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards, and 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards. • f: For now, this configuration supports only the 9560-8i (3908) and 9500-8i (3808IT) PCIe plug-in RAID controller cards. • h: All slots support mixed installation of SAS/SATA/NVMe drives. • Note1: Contact your local sales representative or see "Search Parts" in the **Compatibility List** to determine the components to be used. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.				

Drive slot numbers

- Drive slot numbers of 12 x 3.5" drive EXP configuration 1 in **Table 1-31**

Figure 1-67 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

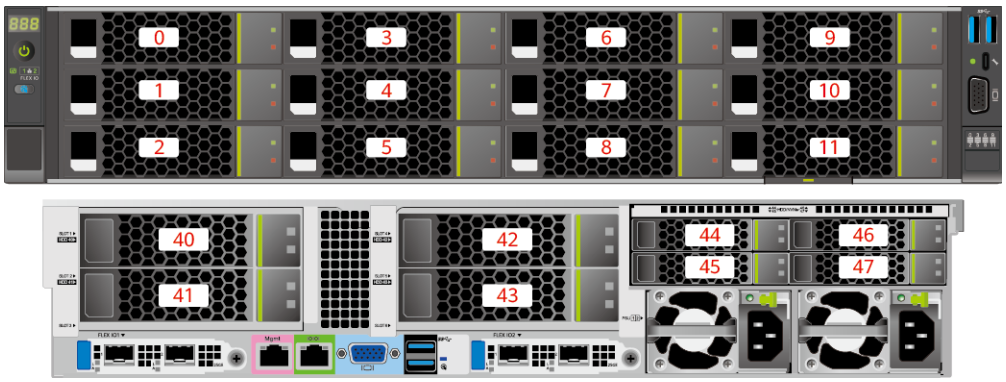

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Figure 1-68 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

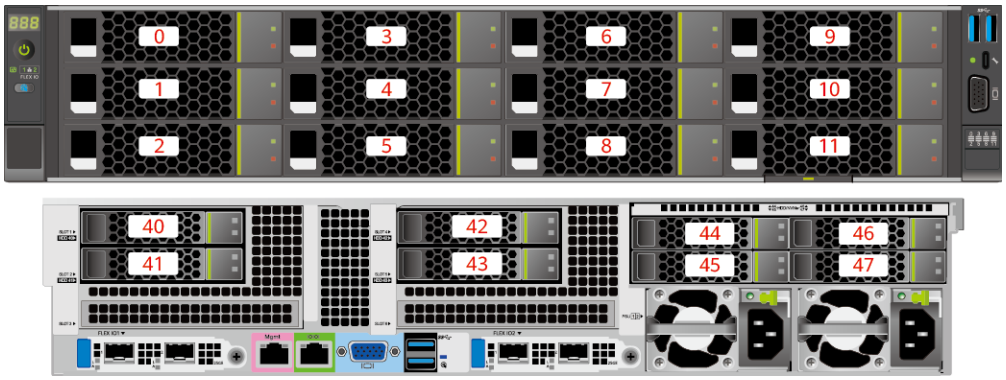

Figure 1-69 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

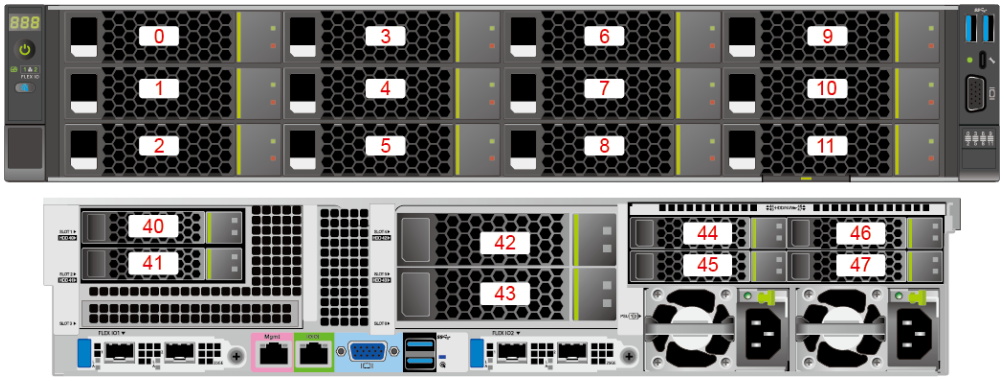

Figure 1-70 Drive slot numbers (3.5" drives in I/O module 1 and 2.5" drives in I/O module 2)

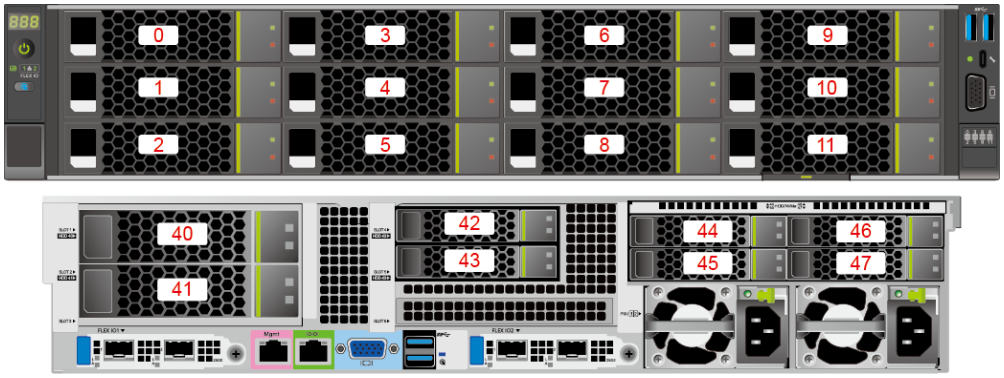

Table 1-32 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive EXP configuration 2 in **Table 1-31**

Figure 1-71 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

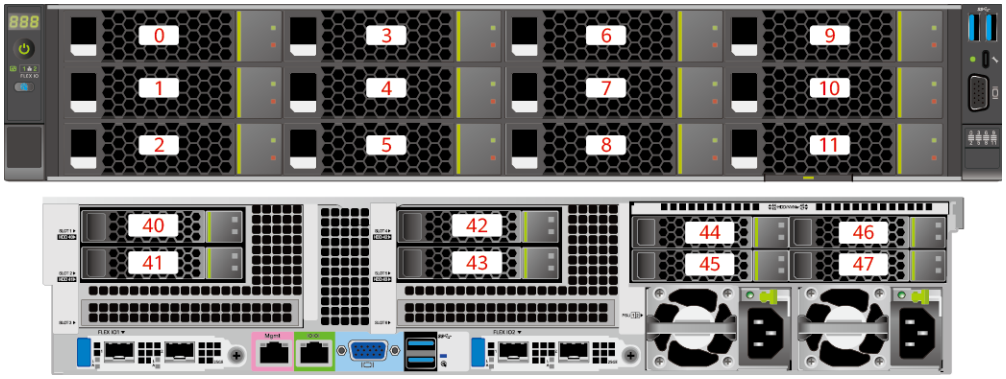

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Figure 1-72 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

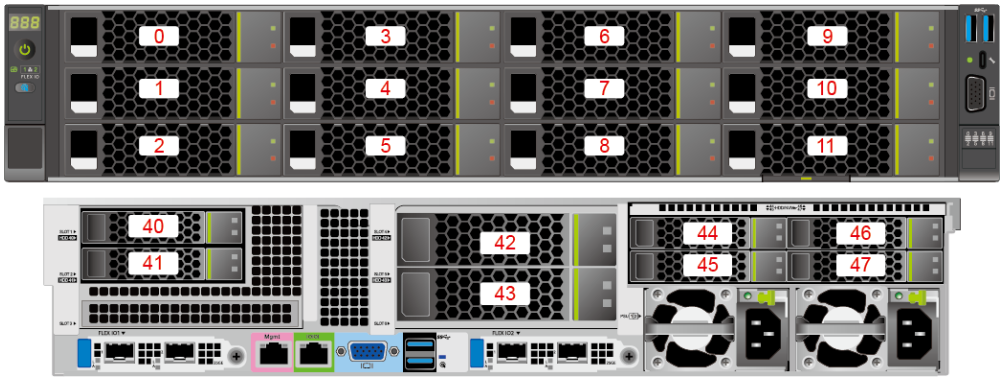

Table 1-33 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
47	47	-

- Drive slot numbers of 12 x 3.5" drive EXP configuration 3 (dual RAID controller cards) in **Table 1-31**

Figure 1-73 Drive slot numbers

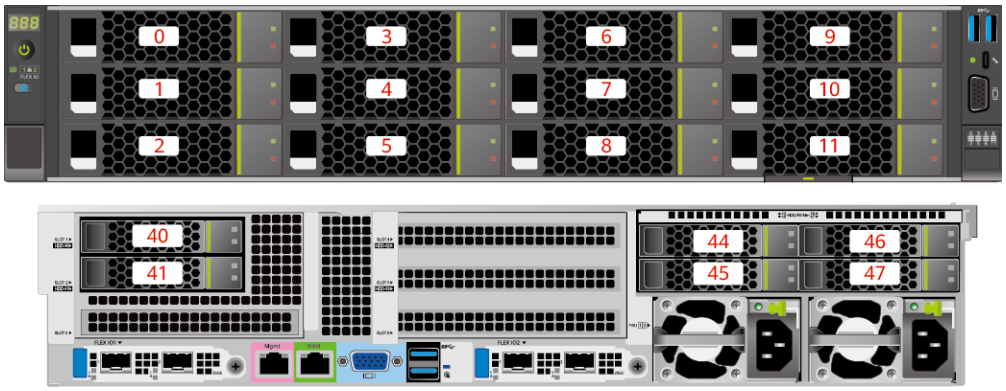

Table 1-34 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	0
41	41	1

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive EXP configuration 4 in **Table 1-31**

Figure 1-74 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

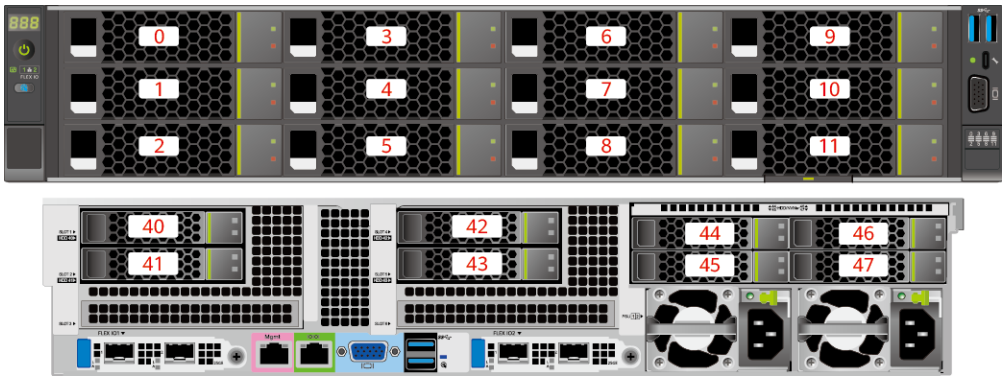

Figure 1-75 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

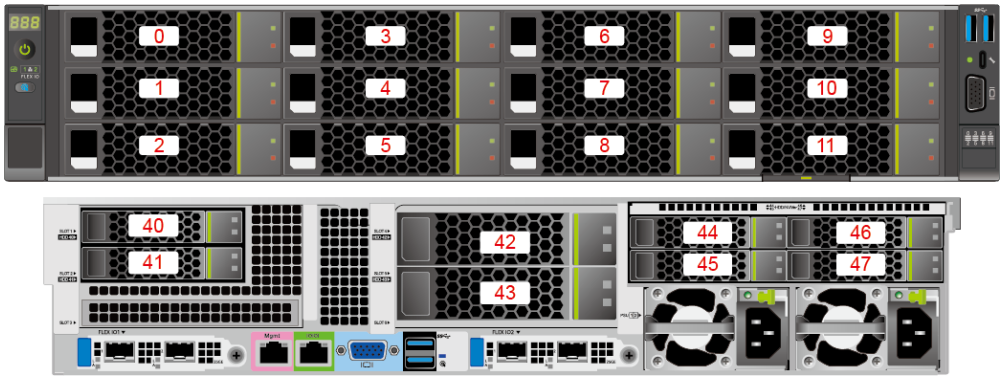

Table 1-35 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	-
45	45	-
46	46	-
47	47	-

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1.1.5.1.6 16 x 2.5" Drive Pass-through Configuration

Drive configuration

Table 1-36 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
16 x 2.5" drive pass-through NVMe hardware RAID configuration 1 (16 x NVMe)	• Front drive: 16 x 2.5 – Slots 0 to 15 support only NVMe drives.	-	-	• 2 x PCIe RAID controller card[a/b]
16 x 2.5" drive pass-through NVMe hardware RAID configuration 2 (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 12 x NVMe)	• Front drive: 16 x 2.5" – Slots 0 to 1 support only SAS/SATA drives. – Slots 2 to 3 support SAS/SATA/NVMe drives. – Slots 4 to 15 support only NVMe drives.	-	-	• 2 x PCIe RAID controller card[a/b]

- a: For now, this configuration supports only the 9560-16i (3916) PCIe plug-in RAID controller card. The PCIe RAID controller card can manage SAS, SATA, and NVMe drives.
- b: The PCIe RAID controller card must be installed in slot 3 and slot 5.
- Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.

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Slot numbers

- Drive slot numbers of 16 x 2.5" drive pass-through NVMe hardware RAID configuration 1 (16 x NVMe), and 16 x 2.5" drive pass-through NVMe hardware RAID configuration 2 (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 12 x NVMe) in **Table 1-36**

Figure 1-76 Drive slot numbers

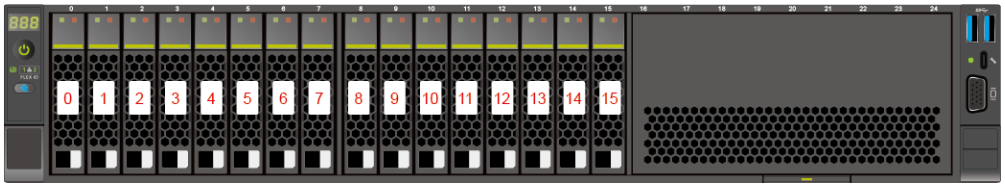

Table 1-37 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	0
9	9	1
10	10	2
11	11	3
12	12	4
13	13	5
14	14	6
15	15	7

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1.1.5.1.7 16 x 3.5" Drive EXP Configuration

Drive configuration

Table 1-38 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
16 x 3.5" drive EXP configuration 1	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5"/2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/b].	• Built-in drive: 4 x 3.5" – Slots 36 to 39 support only SAS/ SATA drives.	• SAS/SATA drive: 1 x screw-in RAID controller card[c] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
16 x 3.5" drive EXP configuration 2	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/SATA/NVMe drives[a/b].	• Built-in drive: 4 x 3.5" – Slots 36 to 39 support only SAS/SATA drives.	• SAS/SATA drive: 1 x PCIe RAID controller card[d/e] • NVMe drive: CPU

- a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives.
- b: All slots support mixed installation of SAS/SATA/NVMe drives.
- c: For now, this configuration supports only the XR760-M (3416iMR) screw-in RAID controller card.
- d: For now, this configuration supports only the 9460-16i (3516) PCIe plug-in RAID controller card.
- e: The PCIe RAID controller card must be installed in slot 3.
- Note1: Contact your local sales representative or see "Search Parts" in the **Compatibility List** to determine the components to be used.
- Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.

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Drive slot numbers

- Drive slot numbers of 16 x 3.5" drive EXP configuration 1 in **Table 1-38**

Figure 1-77 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

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Figure 1-78 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

Table 1-39 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
9	9	9
10	10	10
11	11	11
36	36	8
37	37	9
38	38	10
39	39	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	12Note
45	45	13Note
46	46	14Note
47	47	15Note
• Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive. • If duplicate drive slot numbers are displayed on a RAID controller card, you are advised to locate the drive based on the EID.		

- Drive slot numbers of 16 x 3.5" drive EXP configuration 2 in **Table 1-38**

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Figure 1-79 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

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Figure 1-80 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

Table 1-40 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
9	9	9
10	10	10
11	11	11
36	36	8
37	37	9
38	38	10
39	39	11
40	40	12
41	41	13
42	42	14
43	43	15
44	44	12[Note]
45	45	13[Note]
46	46	14[Note]
47	47	15[Note]

- Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.
- If duplicate drive slot numbers are displayed on a RAID controller card, you are advised to locate the drive based on the EID.

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1.1.5.1.8 20 x 2.5" Drive Pass-through Configuration

Drive configuration

Table 1-41 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
20 x 2.5" drive pass-through configuration 1 (4 x SATA + 16 x NVMe)	● Front drive: 20 x 2.5" – Slots 0 to 3 support only SATA drives. – Slots 4 to 11 and slots 16 to 23 support only NVMe drives.	-	-	● SATA drive: PCH ● NVMe drive: CPU
20 x 2.5" drive pass-through configuration 2 (4 x SAS/ SATA + 16 x NVMe)	● Front drive: 20 x 2.5" – Slots 0 to 3 support only SAS/ SATA drives. – Slots 4 to 11 and slots 16 to 23 support only NVMe drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only SAS/ SATA drives.	-	● SAS/SATA drive: 1 x screw-in RAID controller card[a] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
20 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 16 x NVMe)	• Front drive: 20 x 2.5" – Slots 0 to 3 support only SAS/SATA drives. – Slots 4 to 11 and slots 16 to 23 support only NVMe drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only SAS/SATA drives.	-	• SAS/SATA drive: 1 x PCIe RAID controller card[b/c] • NVMe drive: CPU
• a: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards. • b: For now, this configuration supports only the 9460-8i (3508), 9440-8i (3408iMR) and 9540-8i (3808iMR) PCIe plug-in RAID controller cards. • c: The PCIe RAID controller card must be installed in slot 3 and slot 5. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.				

Drive slot numbers

- Drive slot numbers of 20 x 2.5" drive pass-through configuration 1 (4 x SATA + 16 x NVMe) in **Table 1-41**

Figure 1-81 Drive slot numbers

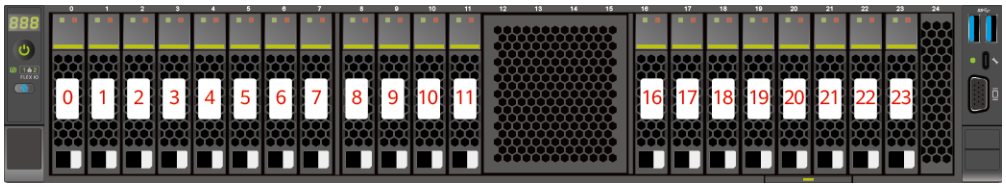

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Table 1-42 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23

- Drive slot numbers of 20 x 2.5" drive pass-through configuration 2 (4 x SAS/SATA + 16 x NVMe) and 20 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 16 x NVMe) in **Table 1-41**.

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Figure 1-82 Drive slot numbers

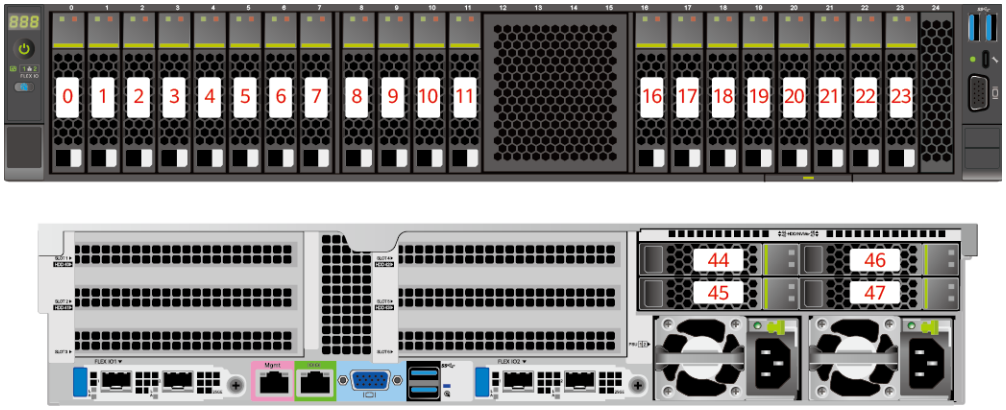

Table 1-43 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	-
5	5	-
6	6	-
7	7	-
8	8	-
9	9	-
10	10	-
11	11	-
16	16	-
17	17	-
18	18	-
19	19	-
20	20	-
21	21	-
22	22	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
23	23	-
44	44	4
45	45	5
46	46	6
47	47	7

1.1.5.1.9 24 x 2.5" Drive Configuration

Drive configuration

Table 1-44 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
24 x 2.5" drive NVMe configuration 1	● Front drive: 24 x 2.5" – Slots 0 to 3 support only SATA/ NVMe drives. – Slots 4 to 23 support only NVMe drives.	-	-	● SATA drive: PCH ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
24 x 2.5" drive NVMe configuration 2	• Front drive: 24 x 2.5" – Slots 0 to 3 support SAS/ SATA/ NVMe drives. – Slots 4 to 23 support only NVMe drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only SAS/ SATA drives.	-	• SAS/SATA drive: 1 x screw-in RAID controller card[a] • NVMe drive: CPU
24 x 2.5" drive NVMe configuration 3	• Front drive: 24 x 2.5" – Slots 0 to 3 support only SATA/ NVMe drives. – Slots 4 to 23 support only NVMe drives.	-	-	• SATA drive: PCH • NVMe drive: CPU[b]
24 x 2.5" drive NVMe configuration 4	• Front drive: 24 x 2.5" – Slots 0 to 3 support SAS/ SATA/ NVMe drives. – Slots 4 to 23 support only NVMe drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only SAS/ SATA drives.	-	• SAS/SATA drive: 1 x screw-in RAID controller card[a] • NVMe drive: CPU[b]

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
24 x 2.5" drive NVMe configuration 5	● Front drive: 24 x 2.5" – Slots 0 to 3 support SAS/ SATA/ NVMe drives. – Slots 4 to 23 support only NVMe drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only SAS/ SATA drives.	-	● SAS/SATA drive: 1 x PCIe RAID controller card[c/d] ● NVMe drive: CPU[b]

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
24 x 2.5" drive pass-through configuration (three RAID controller cards)	● Front drive: 24 x 2.5" – Slots 0 to 23 support only SAS/ SATA drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives.	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 2 x PCIe RAID controller cards[f/g] – One screw-in RAID controller card manages drives in Slots 0 to 7. – One PCIe RAID controller card manages drives in Slots 8 to 15. – One PCIe RAID controller card manages drives in Slots 16 to 23. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards. • b: The PCIe4.0 x16 signals directly output by CPU1 and CPU2 are sent to PCIe switch chip 1/PCIe switch chip 2 on the drive backplane, and the 12 PCIe 4.0 x4 signals output by PCIe switch chip 1/PCIe switch chip 2 on the drive backplane are respectively sent to the 12 NVMe drives (one signal to each drive). • c: For now, this configuration supports only the 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards. • d: The PCIe RAID controller card must be installed in slot 3. • e: The PCIe RAID controller card must be installed in slot 1. • f: The model of the screw-in RAID controller card must be the same as that of the PCIe RAID controller card. For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards, and 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards. • g: You are advised to install the two PCIe RAID controller cards in slots 3 and 5. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.				

Drive slot numbers

- Drive slot numbers of 24 x 2.5" NVMe configuration 1 in **Table 1-44**

Figure 1-83 Drive slot numbers

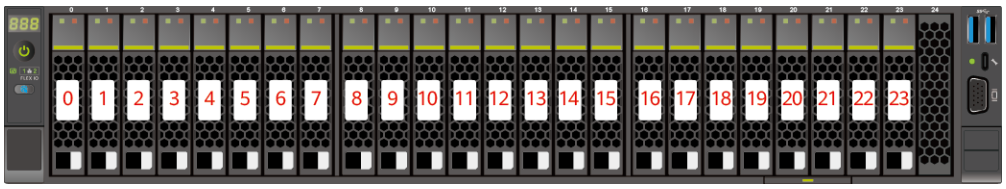

Table 1-45 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2

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Drive No.	Drive Number Identified by the iBMC
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23

- Drive slot numbers of 24 x 2.5" NVMe configuration 2 in **Table 1-44**

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Figure 1-84 Drive slot numbers

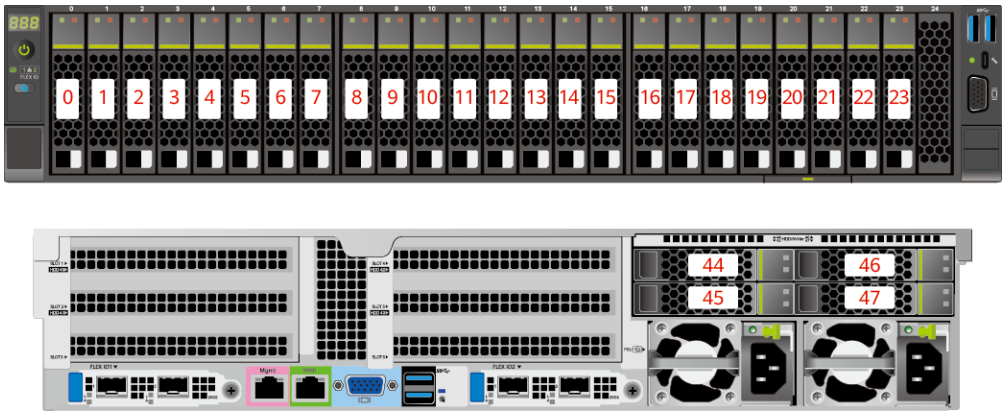

Table 1-46 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0[Note]
1	1	1[Note]
2	2	2[Note]
3	3	3[Note]
4	4	-
5	5	-
6	6	-
7	7	-
8	8	-
9	9	-
10	10	-
11	11	-
12	12	-
13	13	-
14	14	-
15	15	-
16	16	-
17	17	-
18	18	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
19	19	-
20	20	-
21	21	-
22	22	-
23	23	-
44	44	4
45	45	5
46	46	6
47	47	7
Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.		

- Drive slot numbers of 24 x 2.5" NVMe configuration 3 in **Table 1-44**

Figure 1-85 Drive slot numbers

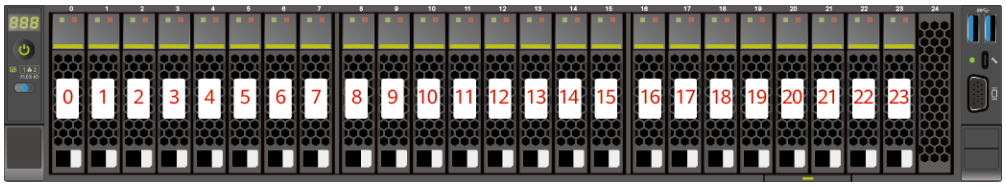

Table 1-47 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

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Drive No.	Drive Number Identified by the iBMC
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
44	44
45	45
46	46
47	47

- Drive slot numbers of 24 x 2.5" NVMe configuration 4 and 24 x 2.5" NVMe configuration 5 in **Table 1-44**

Figure 1-86 Drive slot numbers

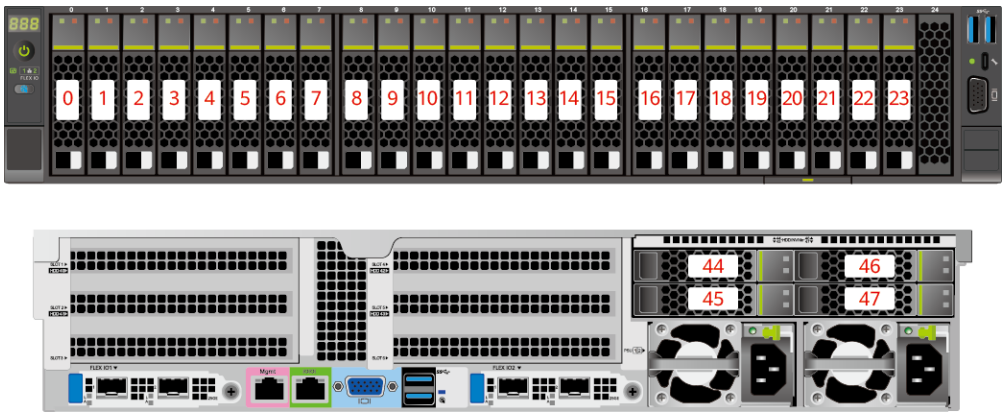

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Table 1-48 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0[Note]
1	1	1[Note]
2	2	2[Note]
3	3	3[Note]
4	4	-
5	5	-
6	6	-
7	7	-
8	8	-
9	9	-
10	10	-
11	11	-
12	12	-
13	13	-
14	14	-
15	15	-
16	16	-
17	17	-
18	18	-
19	19	-
20	20	-
21	21	-
22	22	-
23	23	-
44	44	4
45	45	5
46	46	6
47	47	7

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.		

- Drive slot numbers of 24 x 2.5" drive pass-through configuration (three RAID controller cards) in **Table 1-44**

Figure 1-87 Drive slot numbers

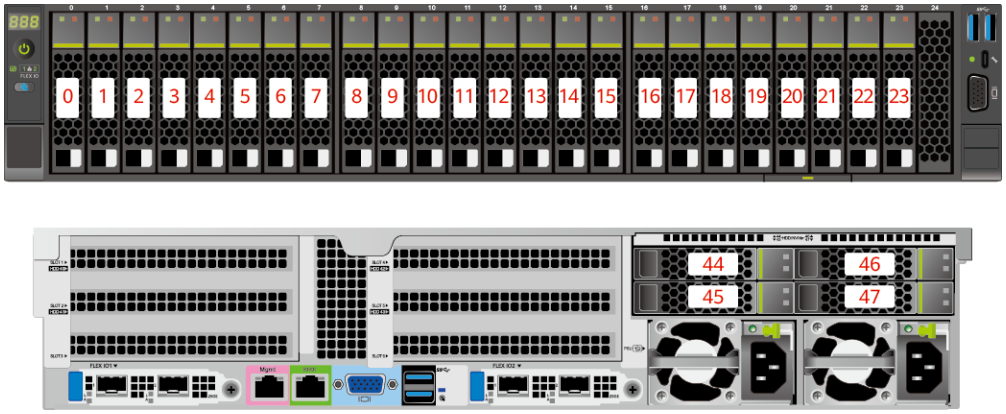

Table 1-49 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	0
9	9	1
10	10	2
11	11	3
12	12	4

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
13	13	5
14	14	6
15	15	7
16	16	0
17	17	1
18	18	2
19	19	3
20	20	4
21	21	5
22	22	6
23	23	7
44	44	-
45	45	-
46	46	-
47	47	-

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1.1.5.1.10 25 x 2.5" Drive EXP Configuration

Drive configuration

Table 1-50 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 1	• Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5"/2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card[b] • NVMe drive: CPU
25 x 2.5" drive EXP configuration 2	• Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c/d] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 3	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 2.5"/2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/e].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[f] ● NVMe drive: CPU
25 x 2.5" drive EXP configuration 4	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/e].	-	● SAS/SATA drive: 1 x PCIe RAID controller card[d/g] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 5 (dual RAID controller cards)	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[d/h] – One screw-in RAID controller card manages the drives in Slots 40 to 41. – One PCIe RAID controller card manages the drives in Slots 0 to 24. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 6	• Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[d/i] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 7	• Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	• I/O module 1: 2 x 2.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 2: 2 x 2.5"/2 x 3.5" – Slots 42 and 43 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/e].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[d/j] • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards. • c: For now, this configuration supports the 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards. • d: The PCIe RAID controller card must be installed in slot 3. • e: All slots support mixed installation of SAS/SATA/NVMe drives. • f: For now, this configuration supports only the XR760-M (3416iMR) screw-in RAID controller card. • g: For now, this configuration supports only the 9460-16i (3516) PCIe plug-in RAID controller card. • h: For now, this configuration supports only the XR150-M (3408iMR) and XR450C-MX (3508) screw-in RAID controller cards, and 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards. • i: For now, this configuration supports only the 9560-8i (3908) and 9540-8i (3808iMR) PCIe plug-in RAID controller cards. • j: For now, this configuration supports only the 9560-16i (3916) PCIe plug-in RAID controller card. • Note1: Contact your local sales representative or see "Search Parts" in the compatibility list on the technical support website to determine the components to be used. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.1.11.2 Drive Backplane**.				

Drive slot numbers

- Drive slot numbers of 25 x 2.5" drive EXP configuration 1 in **Table 1-50**

Figure 1-88 Drive slot numbers (2.5" drives in I/O module 1)

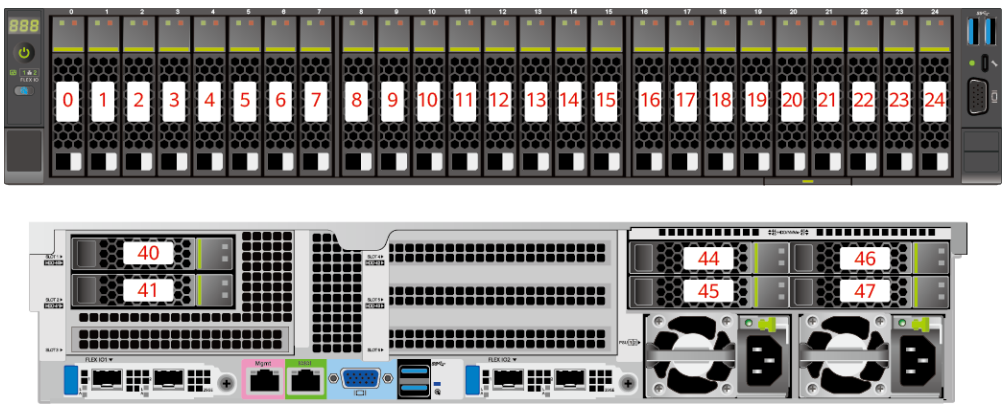

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Figure 1-89 Drive slot numbers (3.5" drives in I/O module 1)

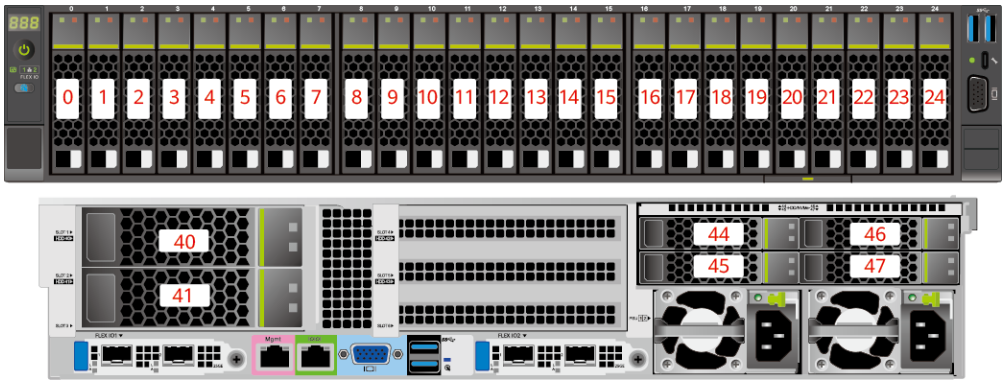

Table 1-51 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 25 x 2.5" drive EXP configuration 2 in **Table 1-50**

Figure 1-90 Drive slot numbers (2.5" drives in I/O module 1)

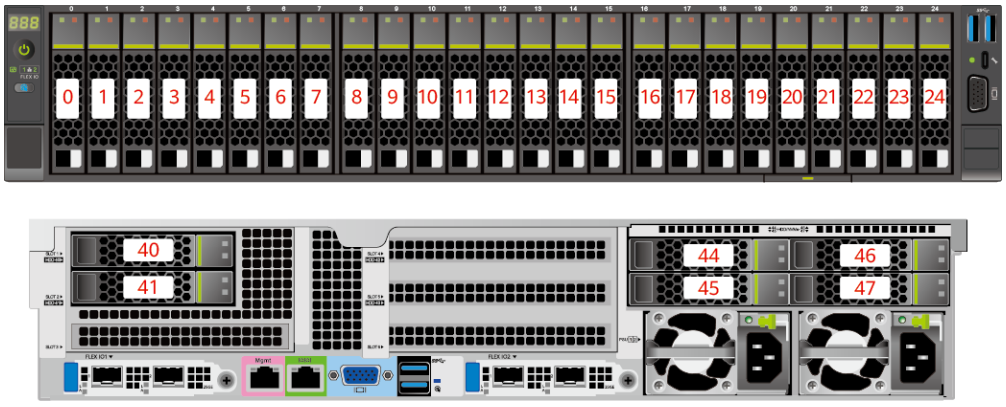

Table 1-52 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 25 x 2.5" drive EXP configuration 3 in **Table 1-50**

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Figure 1-91 Drive slot numbers (2.5" drives in I/O module 1)

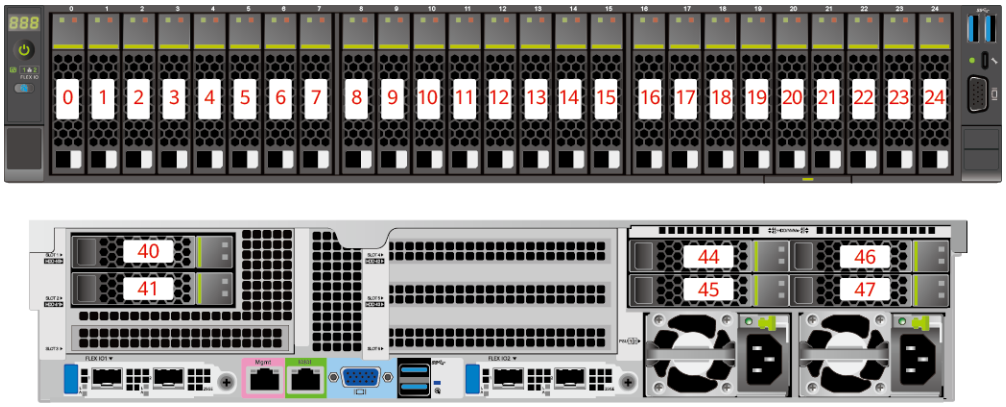

Figure 1-92 Drive slot numbers (3.5" drives in I/O module 1)

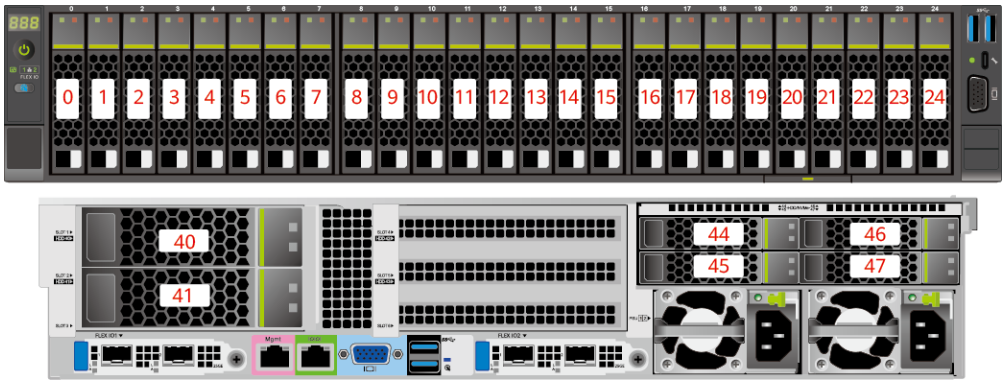

Table 1-53 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	8Note
45	45	9Note
46	46	10Note
47	47	11Note
• Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive. • If duplicate drive slot numbers are displayed on a RAID controller card, you are advised to locate the drive based on the EID.		

- Drive slot numbers of 25 x 2.5" drive EXP configuration 4 in **Table 1-50**

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Figure 1-93 Drive slot numbers (2.5" drives in I/O module 1)

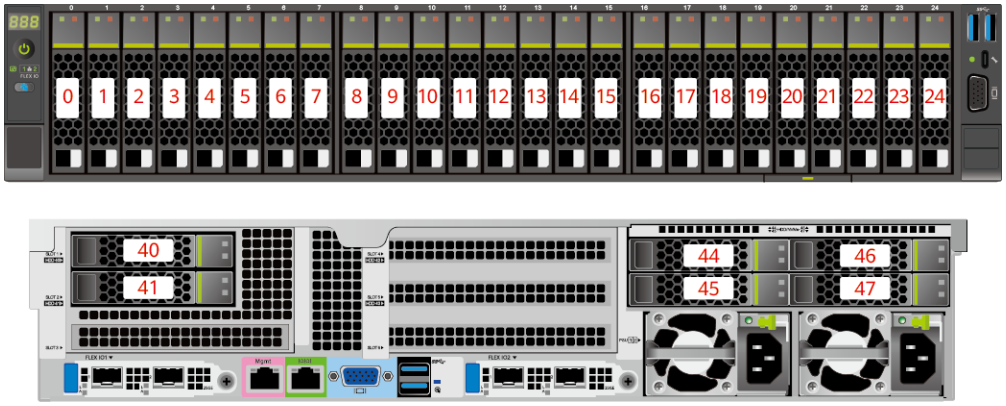

Table 1-54 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	8[Note]
45	45	9[Note]
46	46	10[Note]
47	47	11[Note]
• Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive. • If duplicate drive slot numbers are displayed on a RAID controller card, you are advised to locate the drive based on the EID.		

- Drive slot numbers of 25 x 2.5" drive EXP configuration 5 (dual RAID controller cards) in **Table 1-50**

Figure 1-94 Drive slot numbers

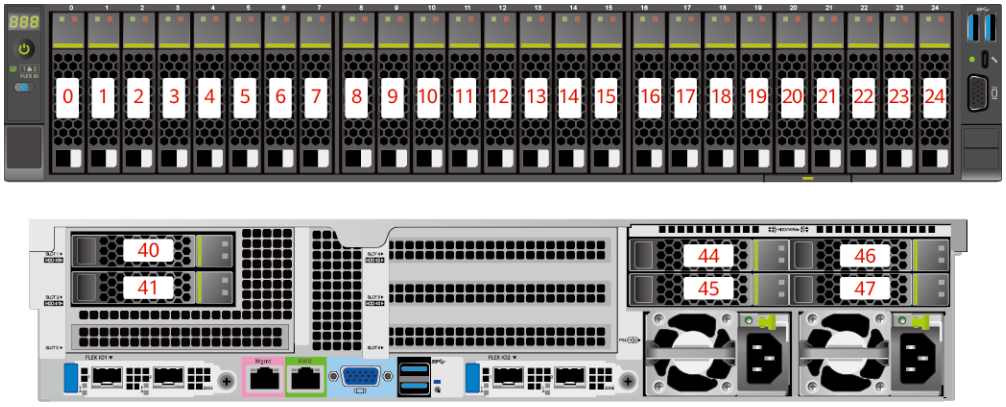

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Table 1-55 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	0
41	41	1
44	44	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 25 x 2.5" drive EXP configuration 6 in **Table 1-50**

Figure 1-95 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

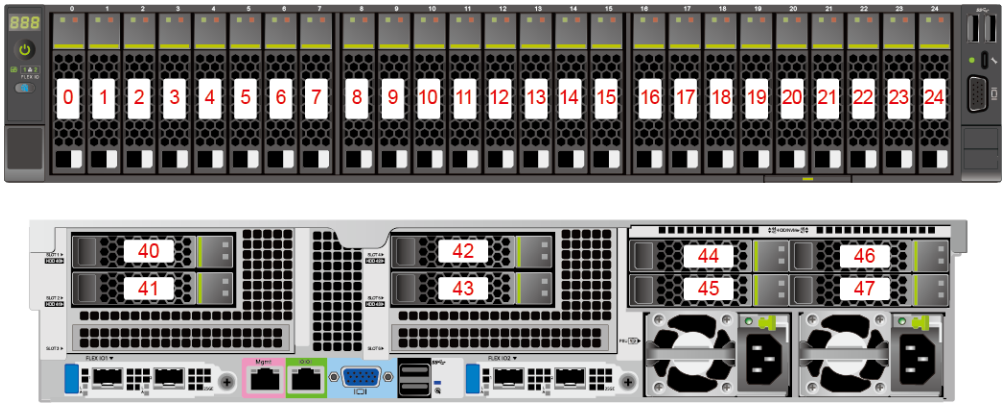

Figure 1-96 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

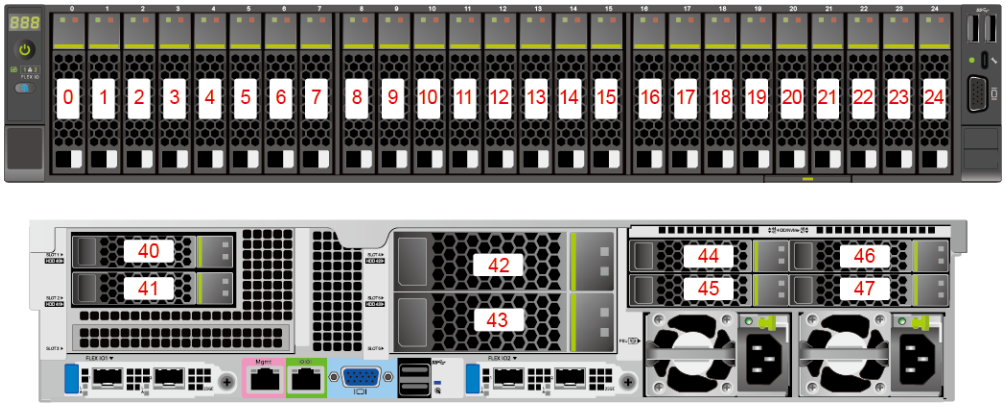

Table 1-56 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
42	42	27
43	43	28
44	44	-
45	45	-
46	46	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
47	47	-

- Drive slot numbers of 25 x 2.5" drive EXP configuration 7 in **Table 1-50**

Figure 1-97 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

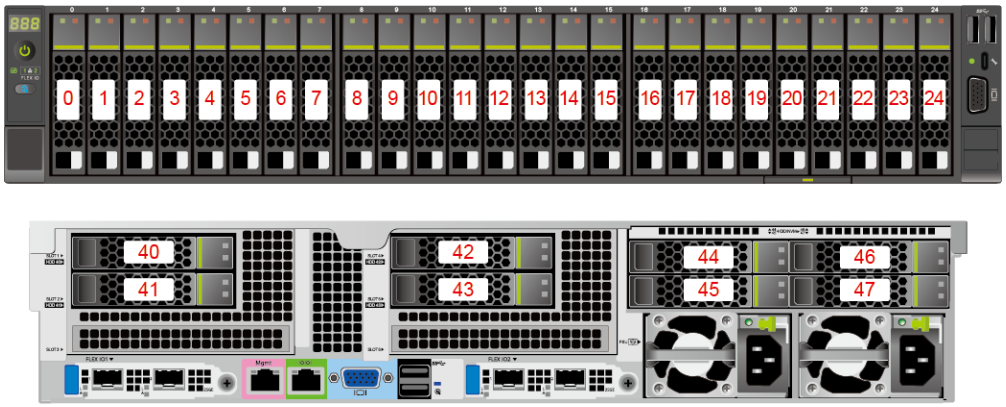

Figure 1-98 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

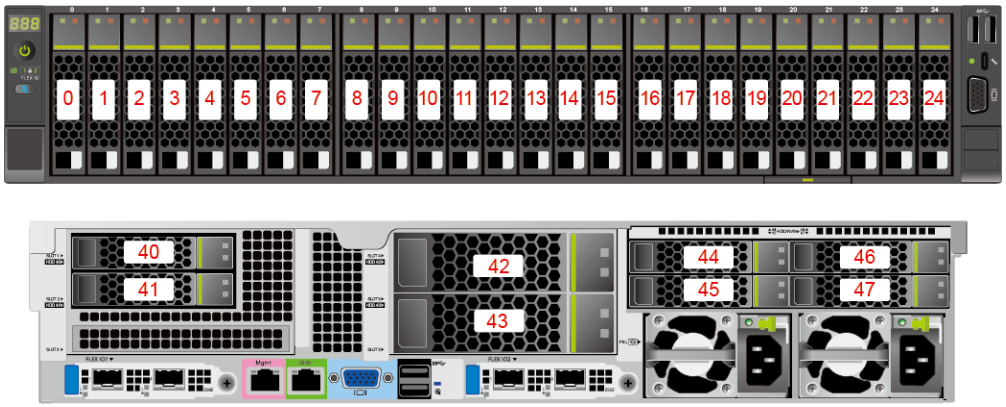

Table 1-57 Drive slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
42	42	27
43	43	28
44	44	8[Note]
45	45	9[Note]
46	46	10[Note]
47	47	11[Note]

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
• Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive. • If duplicate drive slot numbers are displayed on a RAID controller card, you are advised to locate the drive based on the EID.		

1.1.5.2 Drive Indicators

SAS/SATA Drive Indicators

Figure 1-99 SAS/SATA drive indicators

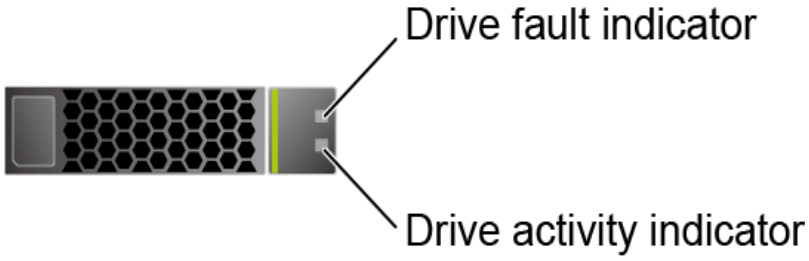

Table 1-58 SAS/SATA drive indicators

Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Off	The drive is not in position.
Steady on	Off	The drive is detected.
Blinking at 4 Hz	Off	Data is being read or written properly, or data on the primary drive is being rebuilt.
Steady on	Blinking at 1 Hz	The drive is being located.
Blinking at 1 Hz	Blinking at 1 Hz	Data on the secondary drive is being rebuilt.
Off	Steady on	A drive in a RAID array is removed.
Steady on	Steady on	The drive is faulty.

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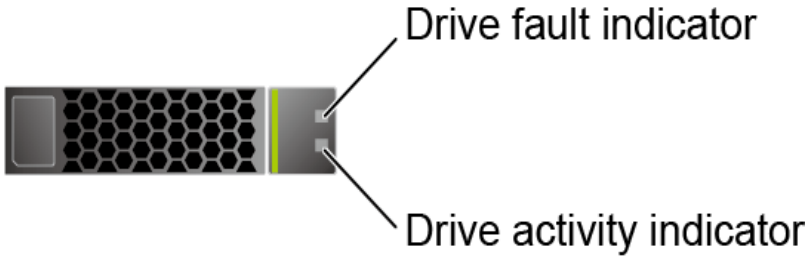
NVMe Drive Indicators

Figure 1-100 NVMe drive indicators



- If the VMD function is enabled and the latest VMD driver is installed, the NVMe drives support surprise hot swap.

  Table 1-59 NVMe drive indicators (VMD enabled)

Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Off	The NVMe drive is not detected.
Steady on	Off	The NVMe drive is detected and operating properly.
Blinking at 2 Hz	Off	Data is being read from or written to the NVMe drive.
Steady on	Blinking at 2 Hz	The NVMe drive is being located.
Off	Blinking at 8 Hz	The data on the secondary NVMe drive is being rebuilt.
Steady on/Off	Steady on	The NVMe drive is faulty.

- If the VMD function is disabled, NVMe drives support only orderly hot swap.

  Table 1-60 NVMe drive indicators (VMD disabled)

Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Off	The NVMe drive is not detected.
Steady on	Off	The NVMe drive is detected and operating properly.
Blinking at 2 Hz	Off	Data is being read from or written to the NVMe drive.
Off	Blinking at 2 Hz	The NVMe drive is being located or hot-swapped.

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Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Blinking at 0.5 Hz	The NVMe drive has completed the hot swap process and is removable.
Steady on/Off	Steady on	The NVMe drive is faulty.

M.2 FRU Indicators

The server supports the Avago SAS3004iMR RAID controller card, which supports two M.2 FRUs.

Figure 1-101 M.2 FRU indicators

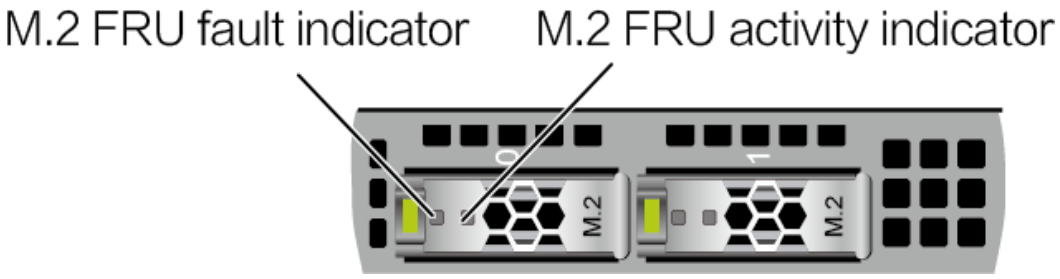

Table 1-61 M.2 FRU indicators

M.2 FRU Active Indicator (Green or Light Green)	M.2 FRU Fault Indicator (Yellow)	Description
Off	Off	The M.2 FRU is not detected.
Steady on	Off	The M.2 FRU is inactive.
Blink	Off	The M.2 FRU is in the read/write or synchronization state.
Steady on	Blink	The M.2 FRU is being located.
Blink	Blink	The RAID array is being rebuilt.
Off	Steady on	The M.2 FRU cannot be detected or is faulty.
Steady on	Steady on	The M.2 FRU RAID status is abnormal.

1.1.5.3 RAID Controller Card

The RAID controller card supports RAID configuration, RAID level migration, and drive roaming.

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- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- For details about the RAID controller card, see server *RAID Controller Card User Guide*.

1.1.6 Network

1.1.6.1 OCP 3.0 Network Adapters

OCP 3.0 network adapters provide network expansion capabilities.

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).
- The FlexIO slot supports the OCP 3.0 network adapter, which can be configured as required.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- For details about OCP 3.0 NICs, see OCP 3.0 *NIC User Guide*.

1.1.7 I/O Expansion

1.1.7.1 PCIe Cards

PCIe cards provide ease of expandability and connection.

- The server with 11 standard PCIe cards on the rear panel supports up to 11 standard PCIe 4.0 expansion slots. Other server models support up to eight standard PCIe 4.0 expansion slots.
- The server with four GPU cards on the rear panel supports up to five standard PCIe 4.0 expansion slots (four FHFL dual-slot GPU cards and one FHHL standard PCIe 4.0 card).
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- When IB cards are used to build an IB network, ensure that the IPoIB modes of the IB cards at both ends of the network are the same. For details, contact technical support.

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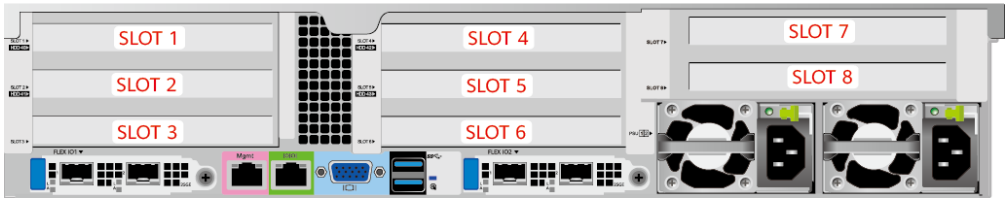
1.1.7.2 PCIe Slots

PCIe Slots

- Server with a drive module or PRM on the rear panel

Figure 1-102 PCIe slots



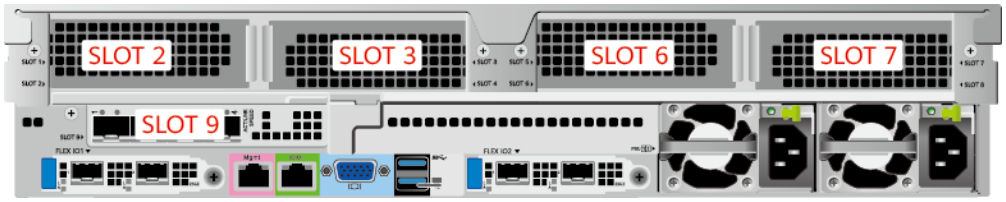
  - I/O module 1 provides slots 1, 2, and 3. If a two-slot PCIe riser module is used, slot 1 is unavailable. If a module with 2 x 2.5" drives and one PCIe card is used, slots 1 and 2 are unavailable.
  - I/O module 2 provides slots 4, 5, and 6. If a two-slot PCIe riser module is used, slot 4 is unavailable. If a module with 2 x 2.5" drives and one PCIe card is used, slots 4 and 5 are unavailable.
  - I/O module 3 provides slots 7 and 8. If a one-slot PCIe riser module is used, slot 7 is unavailable.

  NOTE

  Observe the following rules when configuring GPU cards:
  - When one to five x16 T4 GPU cards are configured:
    - I/O module 1 supports two HHHL PCIe x16 GPU cards.
    - I/O module 2 supports two HHHL PCIe x16 GPU cards.
    - I/O module 3 supports one HHHL PCIe x16 GPU card (in slot 8).
  - When six to eight T4 GPU cards (six x8 + two x16) are configured:
    - I/O module 1 supports two HHHL PCIe x8 and one HHHL x16 GPU cards.
    - I/O module 2 supports two HHHL PCIe x8 and one HHHL x16 GPU cards.
    - I/O module 3 supports two HHHL PCIe x8 GPU cards.

- Server with four GPU cards on the rear panel

Figure 1-103 PCIe slots



  - PCIe riser module 1 provides slots 2 and 3.
  - PCIe riser module 2 provides slots 6 and 7.
  - PCIe riser module 3 provides slot 9.

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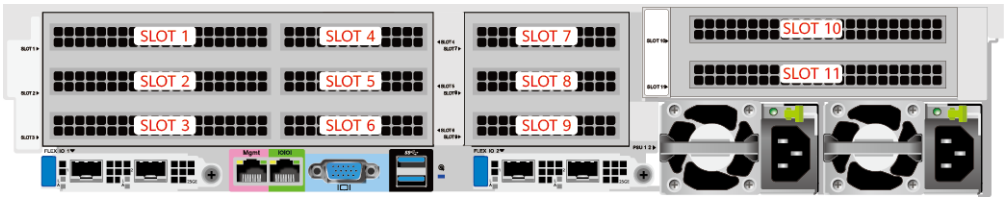
NOTE

- Select this model when three or four FHFL dual-slot x16 GPU cards are required.
- GPU cards are installed in slots 2, 3, 6, and 7 in sequence.

- Server with 11 standard PCIe cards on the rear panel

Figure 1-104 PCIe slots

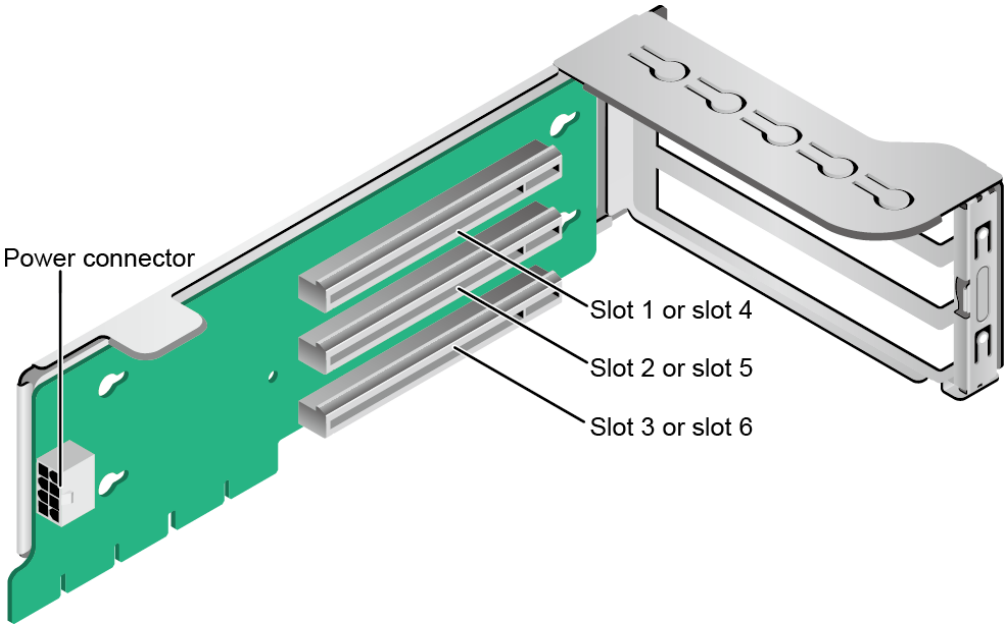


  - PCIe riser module 1 provides slots 1, 2, 3, 4, 5 and 6.
  - PCIe riser module 2 provides slots 7, 8, and 9.
  - PCIe riser module 3 provides slots 10 and 11.

PCIe Riser Modules (Applicable to the Server with a Drive Module or PCIe Riser Module on the Rear Panel)

- PCIe riser module 1 (universal)
  - Provides PCIe slots 1, 2, and 3 when installed in I/O module 1.
  - Provides PCIe slots 4, 5, and 6 when installed in I/O module 2.

Figure 1-105 PCIe riser module 1



- PCIe riser module 2 (for T4 GPU cards only)
  - It provides PCIe slots 1, 2, and 3 when being installed in I/O module 1.
  - It provides PCIe slots 4, 5, and 6 when being installed in I/O module 2.

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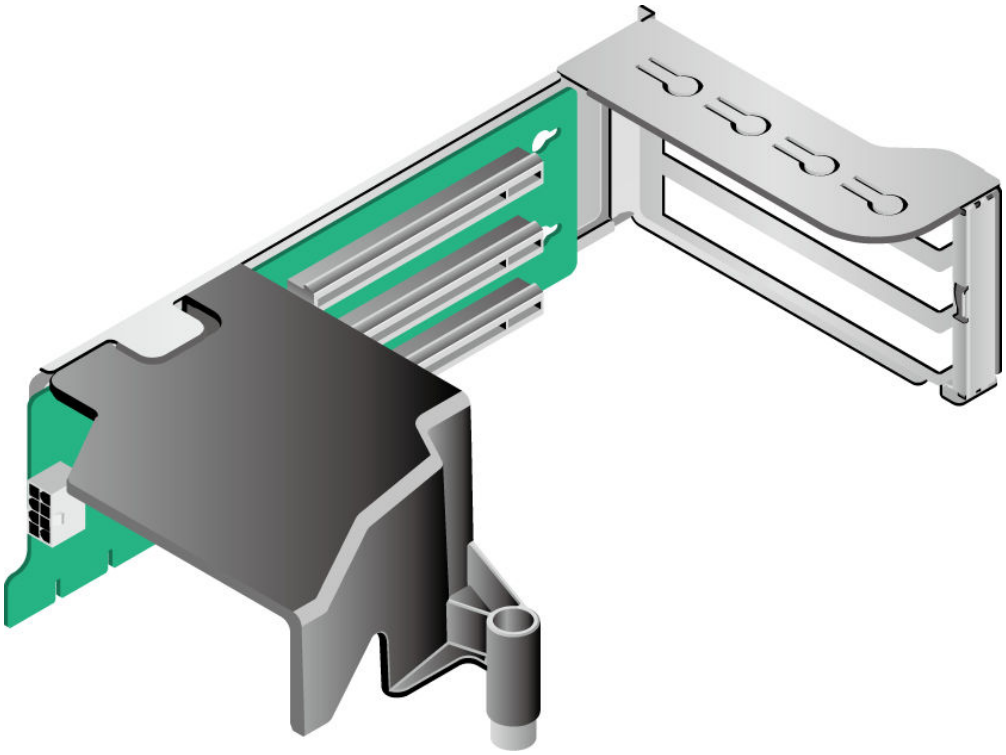
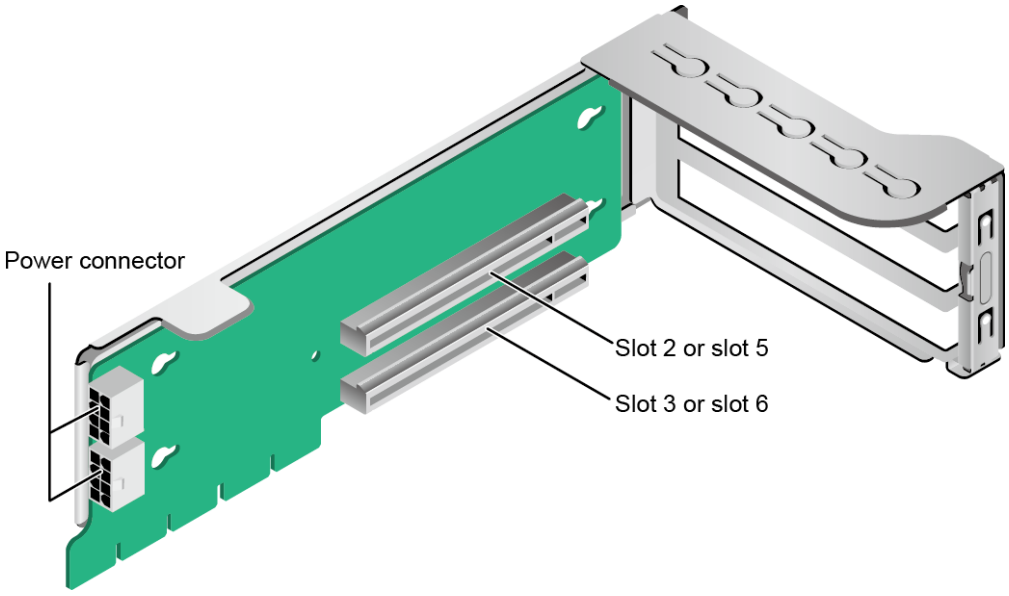
Figure 1-106 PCIe riser module 2



- PCIe riser module 3 (universal)
  - Provides PCIe slots 2 and 3 when installed in I/O module 1.
  - Provides PCIe slots 5 and 6 when installed in I/O module 2.

Figure 1-107 PCIe riser module 3



- PCIe riser module 4 (for T4 GPU cards only)
  - Provides PCIe slots 2 and 3 when installed in I/O module 1.
  - Provides PCIe slots 5 and 6 when installed in I/O module 2.

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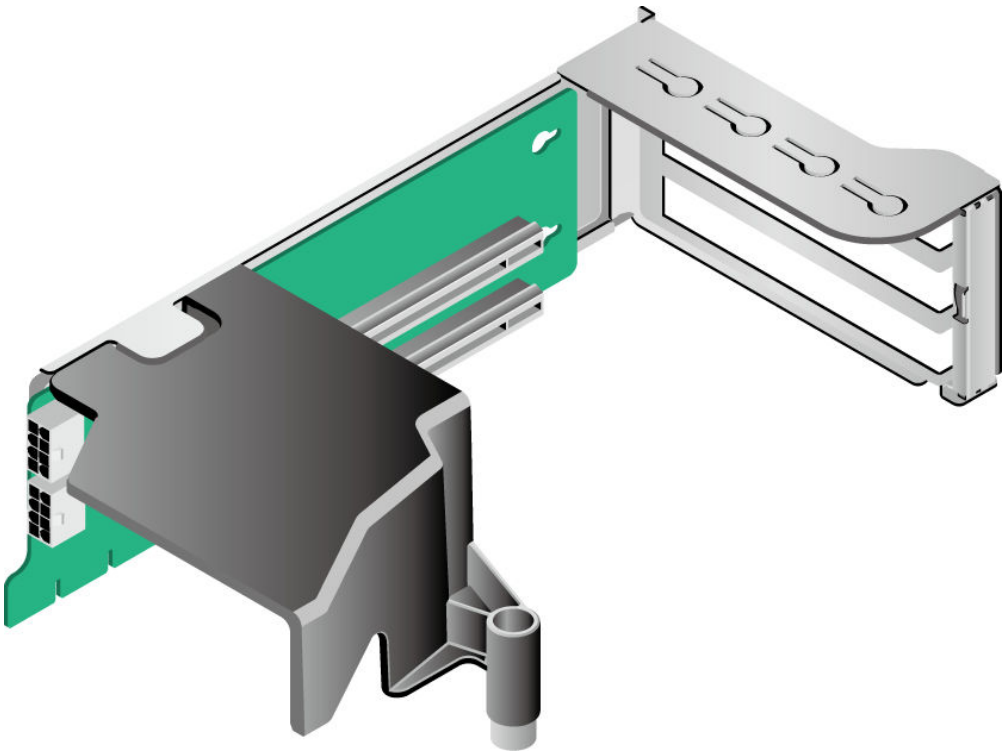
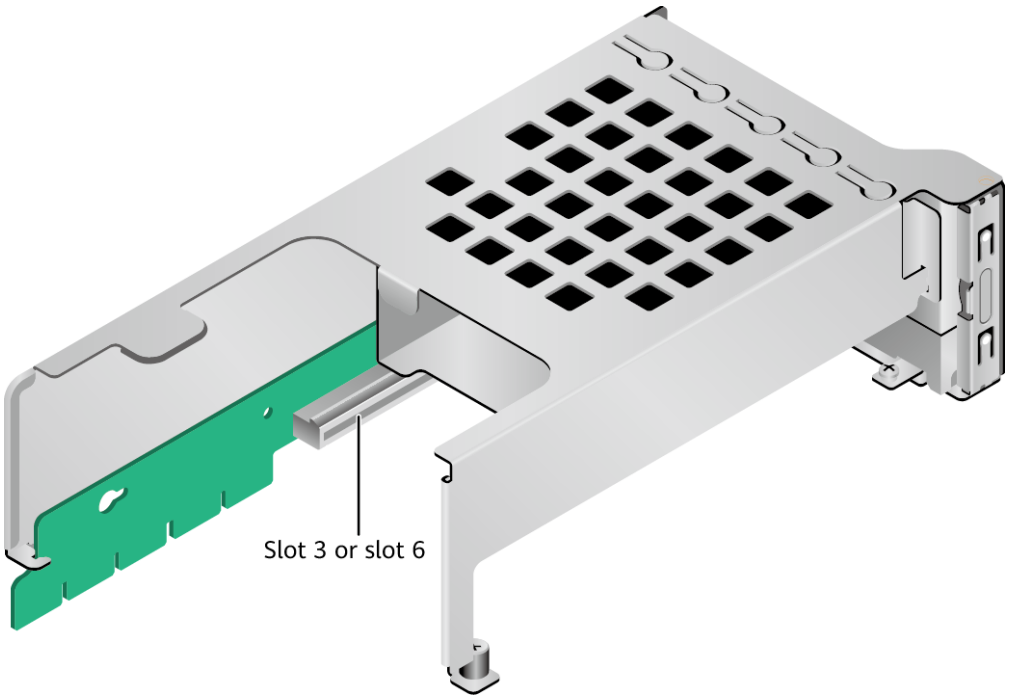
Figure 1-108 PCIe riser module 4



- 2 x 2.5" drives + PCIe riser module
  - Provides PCIe slot 3 when installed in I/O module 1.
  - Provides PCIe slot 6 when installed in I/O module 2.

Figure 1-109 2 x 2.5" drives + PCIe riser module



- PCIe riser module 6 (applicable to the 20 x 2.5" drive pass-through configuration)

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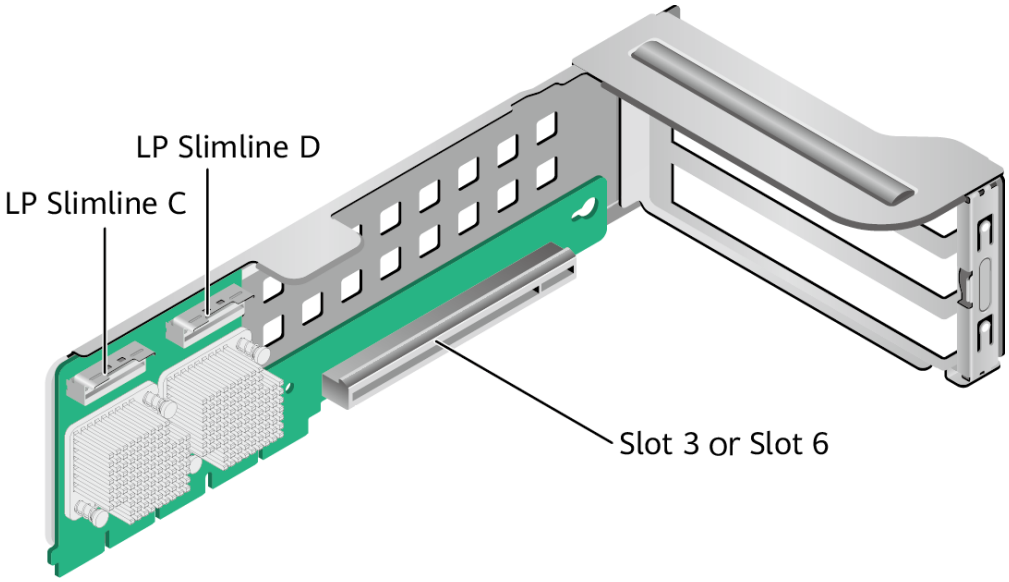
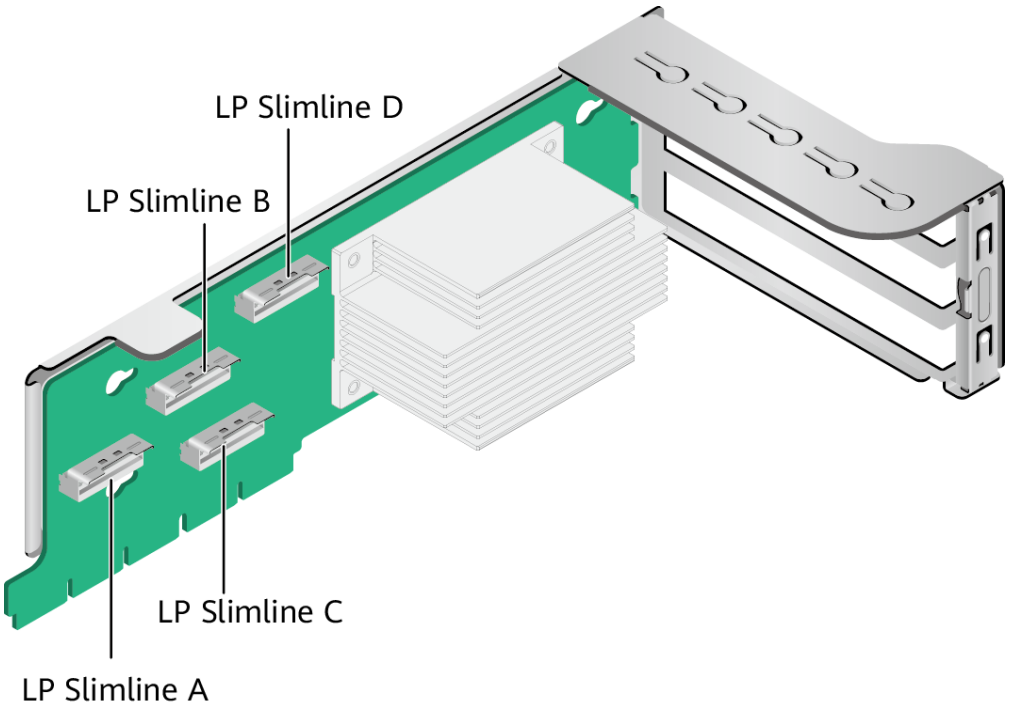
– Provides PCIe slot 3 when installed in I/O module 1.
– Provides PCIe slot 6 when installed in I/O module 2.

Figure 1-110 PCIe riser module 6



- PCIe riser module 7 (applicable to the 24 x 2.5" drive pass-through model 1/2)
  Installed in I/O module 1 or 2.

Figure 1-111 PCIe riser module 7



- PCIe riser module 8
  It provides PCIe slots 7 and 8 when being installed in I/O module 3.

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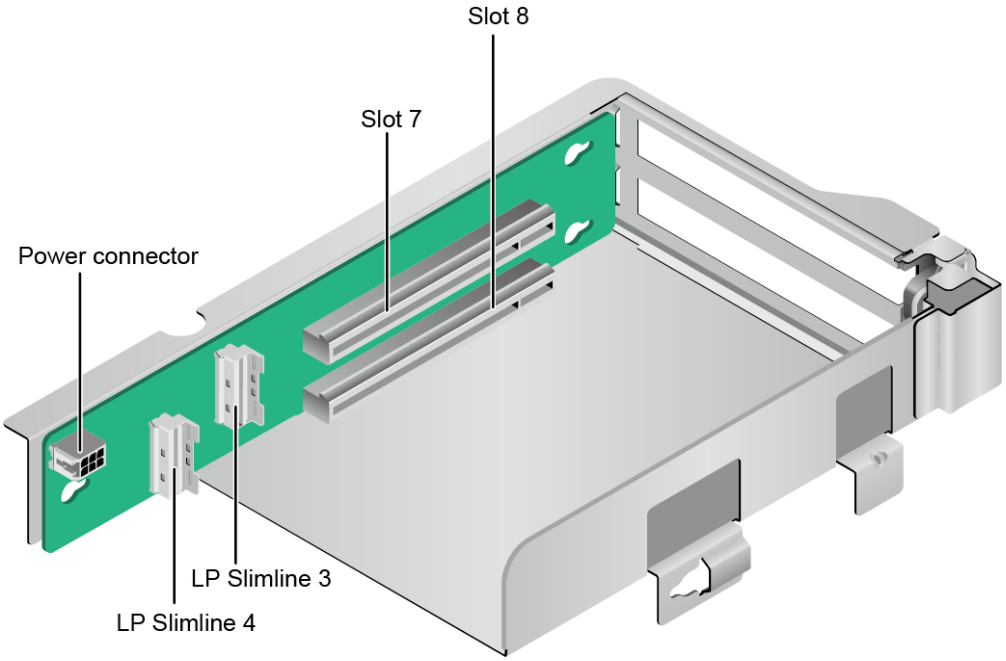
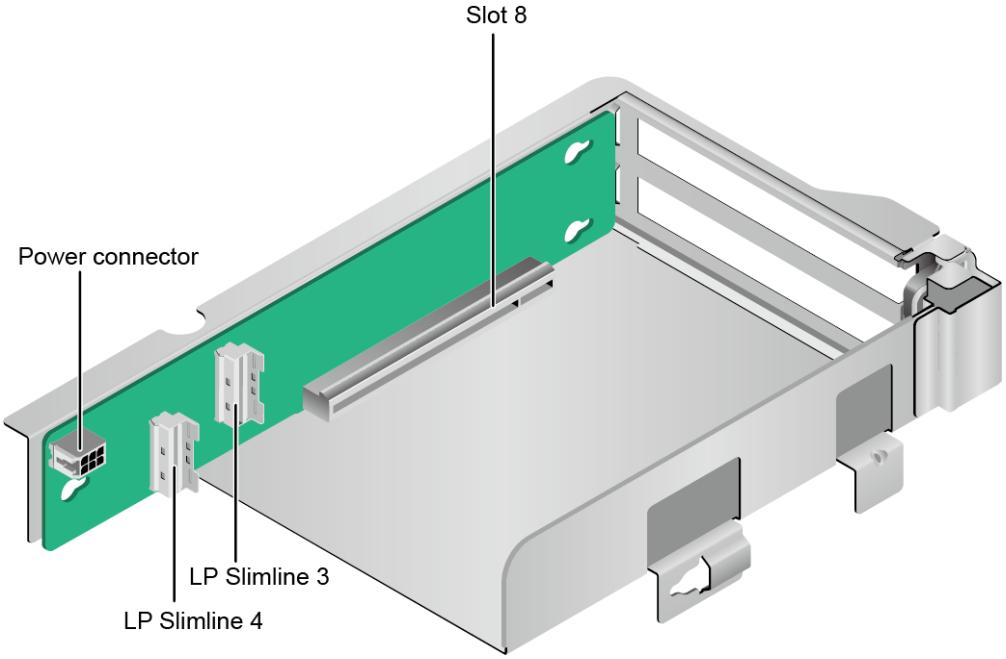
Figure 1-112 PCIe riser module 8



- PCIe riser module 9
  Provides PCIe slot 8 when installed in I/O module 3.

Figure 1-113 PCIe riser module 9



- PCIe riser module 10 (applicable to full-height full-length single-slot riser cards)
  – Provides PCIe slots 1 and 2 when installed in I/O module 1.
  – Provides PCIe slots 4 and 5 when installed in I/O module 2.

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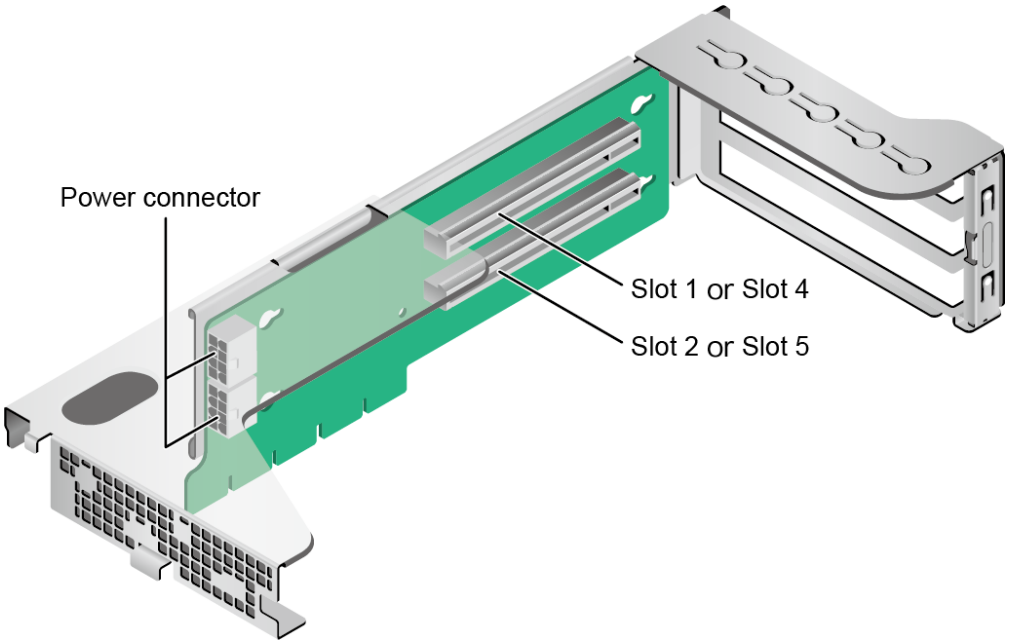
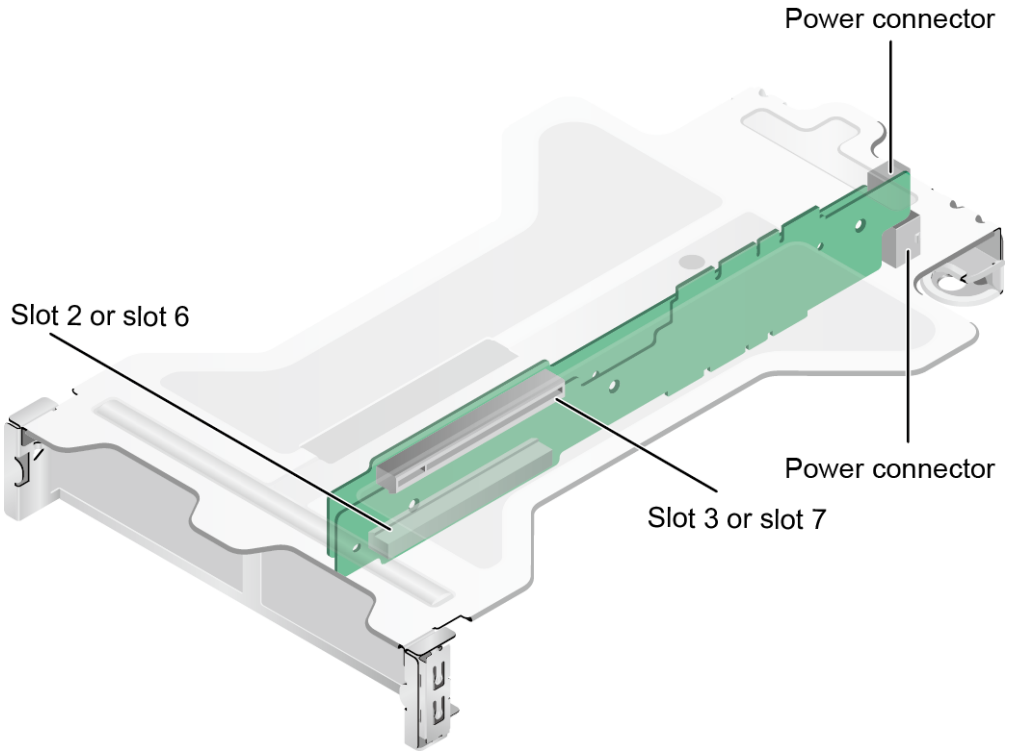
Figure 1-114 PCIe riser module 10



PCIe Riser Modules (Applicable to the Server with Four GPU Cards on the Rear Panel)

- PCIe riser module 1 or PCIe riser module 2
  - PCIe riser module 1 provides slots 2 and 3.
  - PCIe riser module 2 provides slots 6 and 7.

Figure 1-115 PCIe riser module of the GPU card



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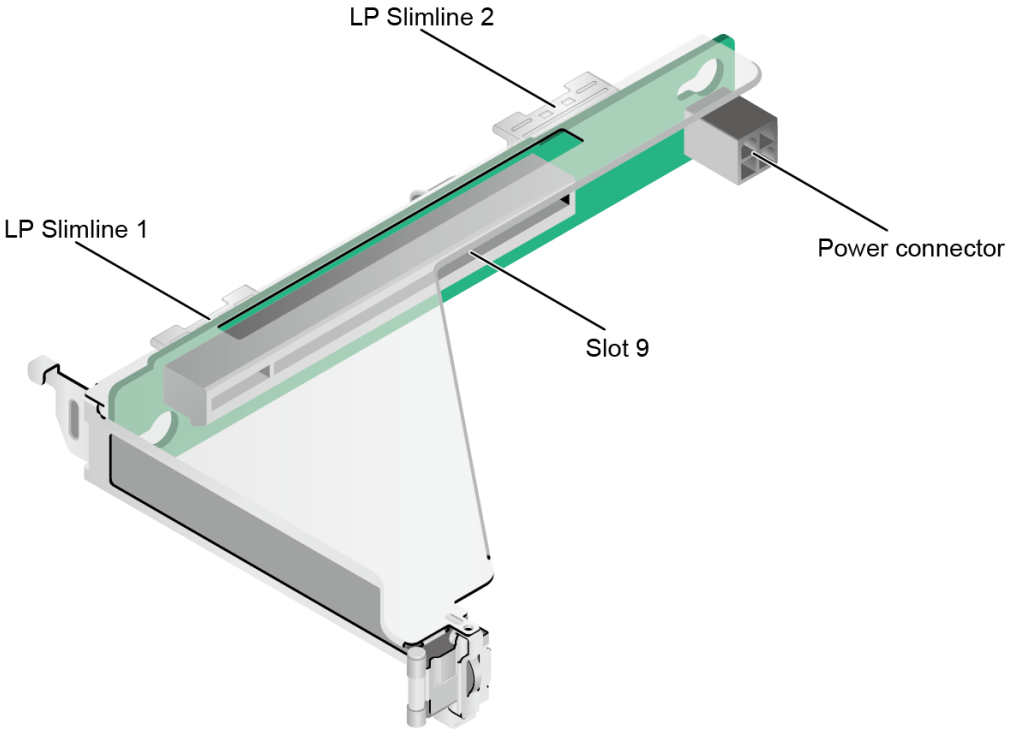
- PCIe riser module 3

  PCIe riser module 3 provides slot 9.

  Figure 1-116 PCIe riser module



- Adapter board 1 between layer 1 and layer 2

  Installed next to CPU 1 to provide slots for PCIe riser module 1 at the upper layer.

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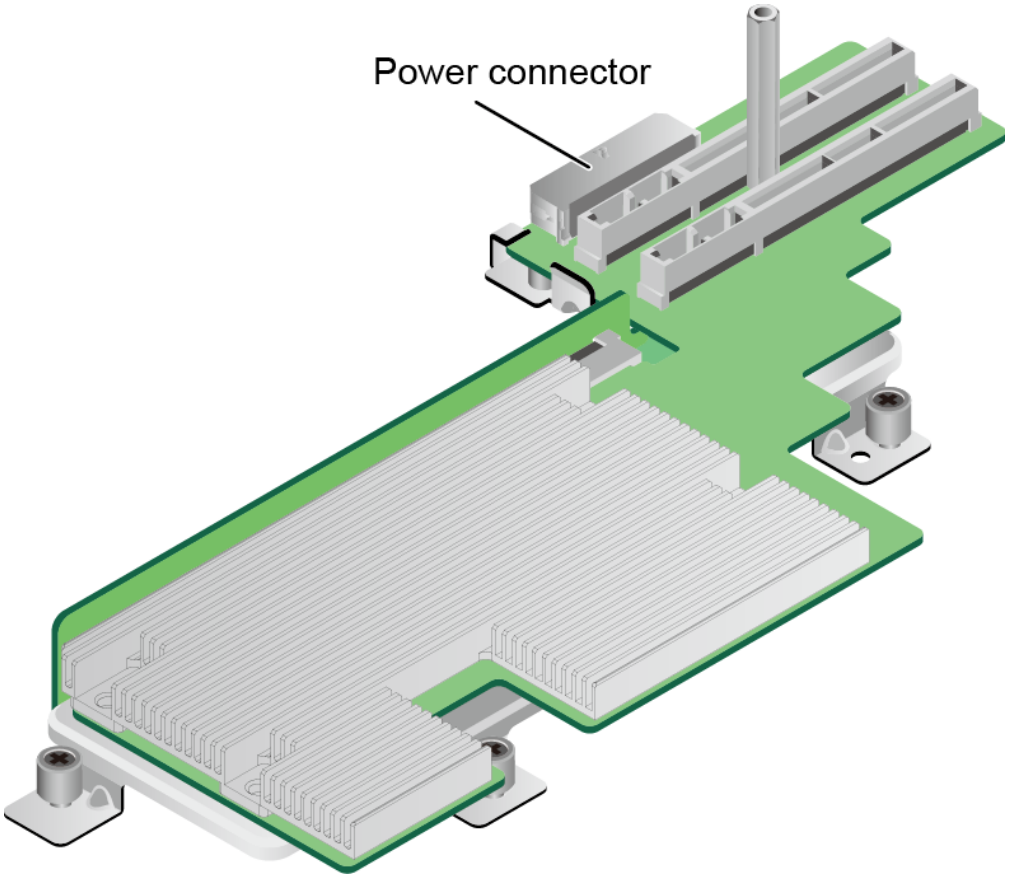
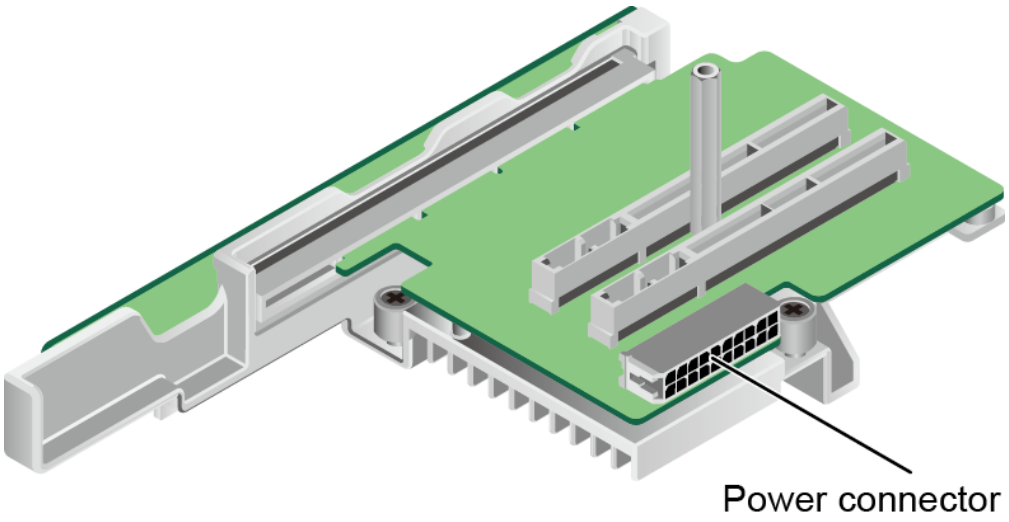
Figure 1-117 Adapter board 1 between layer 1 and layer 2



- Adapter board 2 between layer 1 and layer 2

  Installed next to CPU 2 to provide slots for PCIe riser module 2 at the upper layer.

Figure 1-118 Adapter board 2 between layer 1 and layer 2



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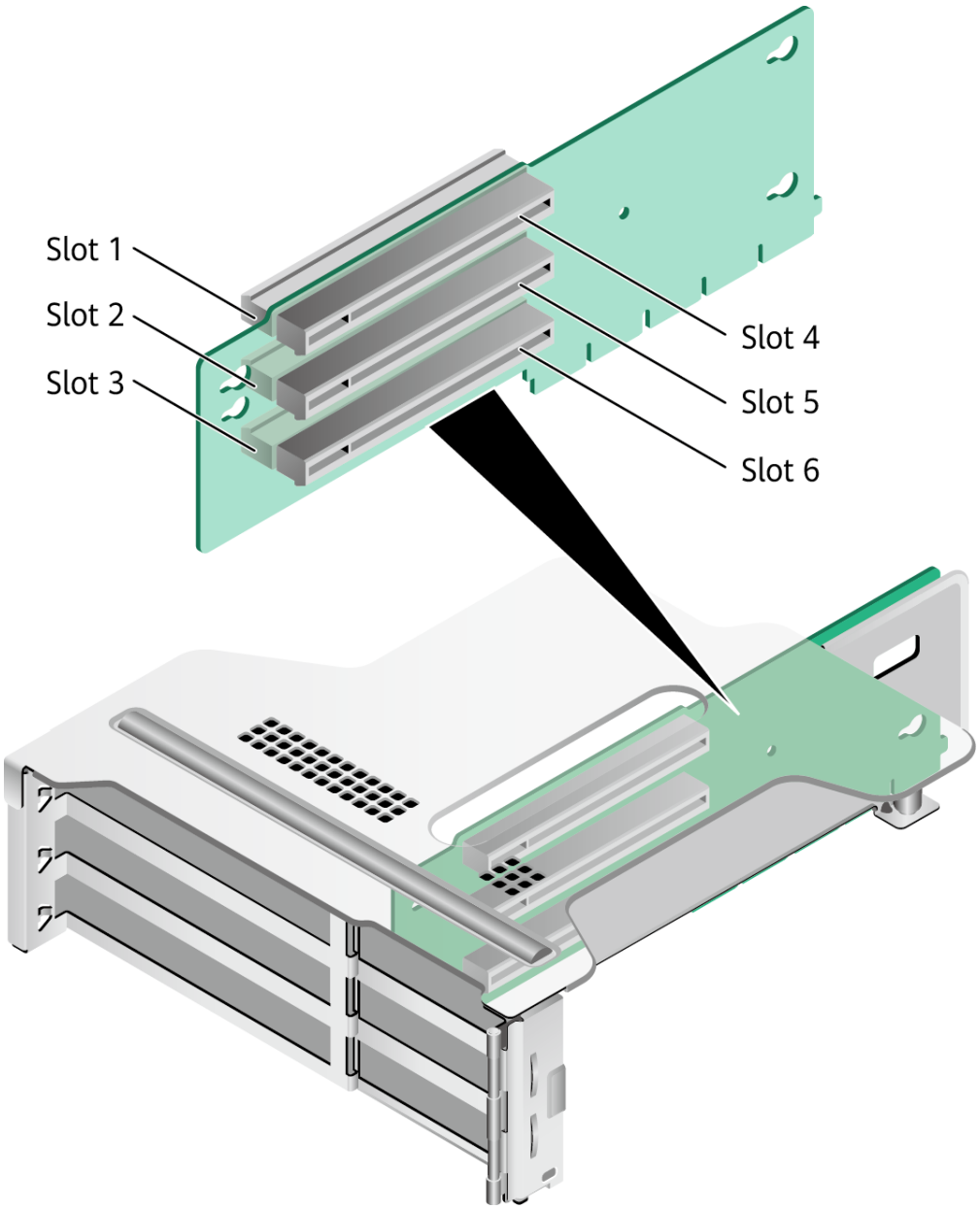
PCIe Riser Modules (Applicable to the Server with 11 Standard PCIe cards on the Rear Panel)

- PCIe riser module 1

  Provides PCIe slots 1, 2, 3, 4, 5, and 6 when installed in PCIe riser module 1.

  Figure 1-119 PCIe riser module 1



- PCIe riser module 2

  Provides PCIe slots 7, 8, and 9 when installed in PCIe riser module 2.

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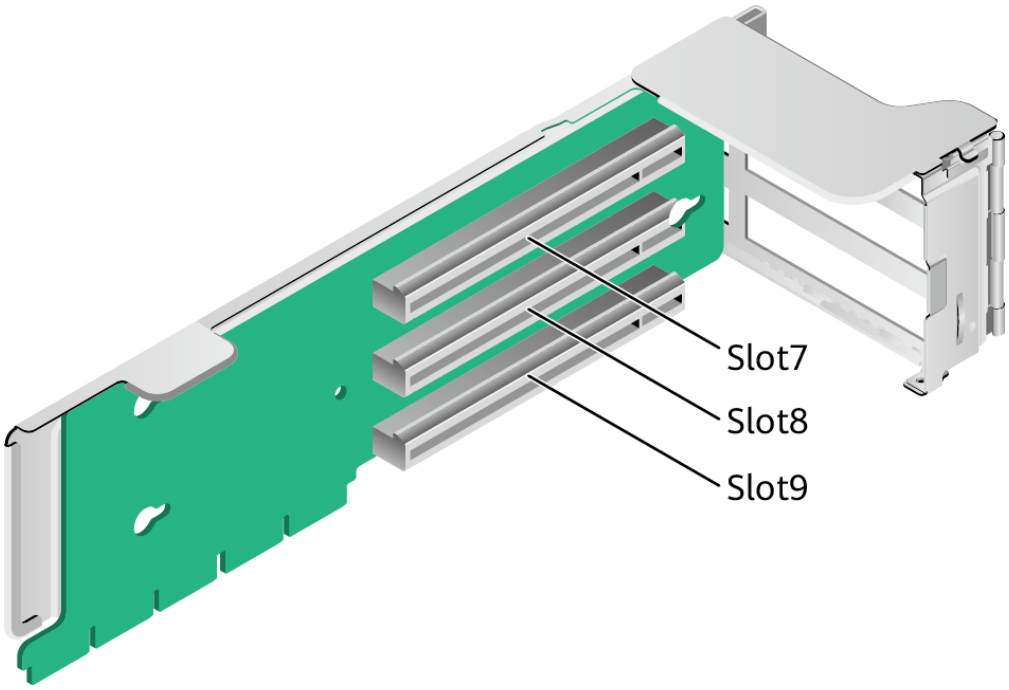
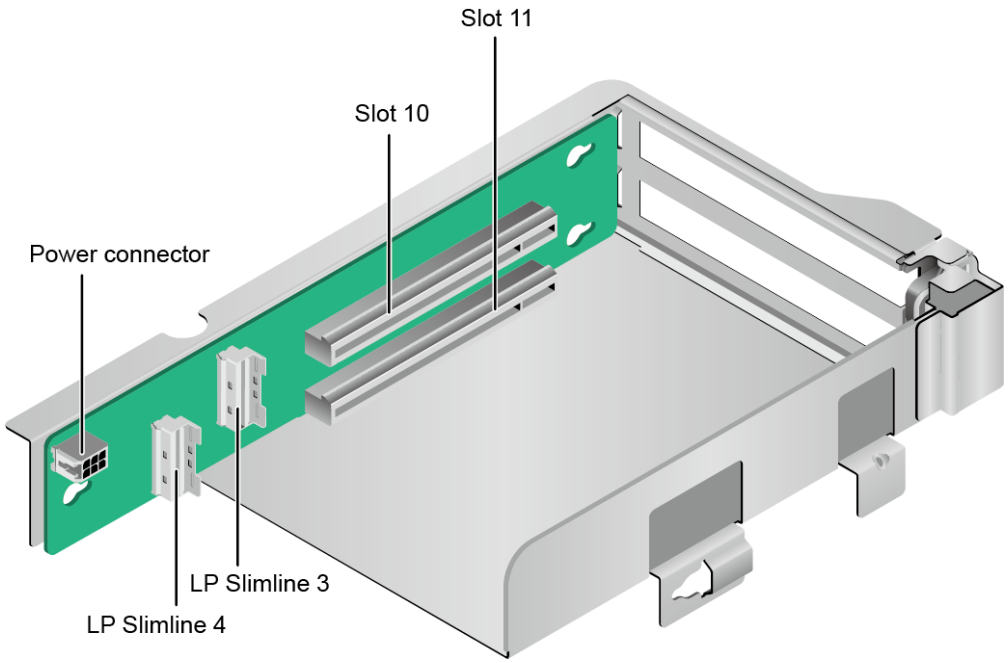
Figure 1-120 PCIe riser module 2



- PCIe riser module 3

  Provides PCIe slots 10, and 11 when installed in PCIe riser module 3.

Figure 1-121 PCIe riser module 3



1.1.7.3 PCIe Slot Description

NOTE

The PCIe slots mapping to a vacant CPU socket are unavailable.

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Server with Drive Modules or PCIe Riser Modules on the Rear Panel

Table 1-62 PCIe slot description

PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Screw-in RAID controller card	CPU1	PCIe 4.0	x8	x8	Port0A	16/02/0	17/00/0	-
FlexIO card 1	CPU1	PCIe 4.0	x16	x8 Expansion cables used by the mainboard: x8 + x8[a]	Port0C	16/04/0	18/00/0	OCP 3.0 specifications
FlexIO card 2	CPU2	PCIe 4.0	x16	x8 Expansion cable used by the mainboard: x16	Port2A	C9/02/0	CA/00/0	OCP 3.0 specifications

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot 1	CPU1	PCIe 4.0	x16	• 3-slot PCIe riser module (PRM): x16 • 2-slot PRM: N/A • Module with 2 x 2.5" drives and one PCIe card: N/A	Port1A	30/02/0	31/00/0	FHFL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot 2	CPU1	PCIe 4.0	x16	• 3-slot PRM: x8 • 2-slot PRM: x16 • Module with 2 x 2.5" drives and one PCIe card: N/A	Port2A	4A/02/0	4B/00/0	FHFL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot 3	CPU1	PCIe 4.0	x16	• 3-slot PRM: x8 • 2-slot PRM: x16 • Module with 2 x 2.5" drives and one PCIe card: x16	Port2C	4A/04/0	4C/00/0	FHHL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot4	CPU2	PCIe 4.0	x16	• 3-slot PCIe riser module (PRM): x16 • 2-slot PRM: N/A • Module with 2 x 2.5" drives and one PCIe card: N/A	Port0A	97/02/0	98/00/0	FHFL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot 5	CPU2	PCIe 4.0	x16	• 3-slot PRM: x8 • 2-slot PRM: x16 • Module with 2 x 2.5" drives and one PCIe card: N/A	Port1A	B0/02/0	B1/00/0	FHFL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot 6	CPU2	PCIe 4.0	x16	• 3-slot PRM: x8 • 2-slot PRM: x16 • Module with 2 x 2.5" drives and one PCIe card: x16	Port1C	B0/04/0	B2/00/0	FHHL
Slot 7	CPU2	PCIe 4.0	x16	• 2-slot PRM: x8 • 1-slot PRM: N/A	Port3A	E2/02/0	E3/00/0	FHHL
Slot 8	CPU2	PCIe 4.0	x16	• 2-slot PRM: x8 • 1-slot PRM: x16	Port3C	E2/04/0	E4/00/0	FHHL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
• a: When CPU1 and CPU2 use x8 signals, the socket-direct function is supported. FlexIO cards 1 and 2 are not supported to expand the PCIe bandwidth at the same time. • The B/D/F (Bus/Device/Function Number) is the default value when the server is fully configured with PCIe cards. The value may differ if the server is not fully configured with PCIe cards or if a PCIe card with a PCI bridge is configured. • Root Port (B/D/F) indicates the B/D/F of an internal PCIe root port of the processor. • Device (B/D/F) indicates the B/D/F (bus address displayed on the OS) of an onboard or extended PCIe device. • The PCIe x16 slots are compatible with PCIe x16, PCIe x8, PCIe x4, and PCIe x1 cards. The PCIe cards are not forward compatible. That is, the PCIe slot width cannot be smaller than the PCIe card link width. • The full-height full-length (FHFL) PCIe slots are compatible with FHFL PCIe cards, full-height half-length (FHHL) PCIe cards, and half-height half-length (HHHL) PCIe cards. • The full-height half-length (FHHL) PCIe slots are compatible with FHHL PCIe cards and half-height half-length (HHHL) PCIe cards. • The maximum power supply of each PCIe slot is 75 W.								

Server with Four GPU Cards on the Rear Panel

Table 1-63 PCIe slot description

PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Screw-in RAID controller card	CPU1	PCIe 4.0	x8	x8	Port0A	16/02/0	17/00/0	-

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
FlexIO card 1	CPU1	PCIe 4.0	x16	x8 Expansion cables used by the mainboard: x8 + x8	Port0C	16/04/0	18/00/0	OCP 3.0 specifications
FlexIO card 2	CPU2	PCIe 4.0	x16	x8 Expansion cable used by the mainboard: x16	Port2A	C9/02/0	CA/00/0	OCP 3.0 specifications
Slot2	CPU1	PCIe 4.0	x16	x16	Port1A	30/02/0	31/00/0	FHFL
Slot 3	CPU1	PCIe 4.0	x16	x16	Port2A	4A/02/0	4B/00/0	FHFL
Slot 6	CPU2	PCIe 4.0	x16	x16	Port0A	97/02/0	98/00/0	FHFL
Slot7	CPU2	PCIe 4.0	x16	x16	Port1A	B0/02/0	B1/00/0	FHFL
Slot9	CPU1	PCIe 4.0	x16	x16	Port3A	64/02/0	65/00/0	HHHL

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
• The B/D/F (Bus/Device/Function Number) is the default value when the server is fully configured with PCIe cards. The value may differ if the server is not fully configured with PCIe cards or if a PCIe card with a PCI bridge is configured. • Root Port (B/D/F) indicates the B/D/F of an internal PCIe root port of the processor. • Device (B/D/F) indicates the B/D/F (bus address displayed on the OS) of an onboard or extended PCIe device. • The PCIe x16 slots are compatible with PCIe x16, PCIe x8, PCIe x4, and PCIe x1 cards. The PCIe cards are not forward compatible. That is, the PCIe slot width cannot be smaller than the PCIe card link width. • The full-height full-length (FHFL) PCIe slots are compatible with FHFL PCIe cards, full-height half-length (FHHL) PCIe cards, and half-height half-length (HHHL) PCIe cards. • FlexIO cards 1 and 2 are not supported to expand the PCIe bandwidth at the same time.								

Server with Eleven Standard PCIe Cards on the Rear Panel

Table 1-64 PCIe slot description

PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Screw-in RAID controller card	CPU1	PCIe 3.0	x8	x8	Port0A	16/02/0	17/00/0	-
FlexIO card 1	CPU1	PCIe 4.0	x16	x8 Expansion cables used by the mainboard: x8 + x8	Port0C	16/04/0	18/00/0	OCP 3.0 specifications

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PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
FlexIO card 2	CPU2	PCIe 4.0	x16	x8 Expansion cable used by the mainboard: x16	Port2A	C9/02/0	CA/00/0	OCP 3.0 specifications
Slot 1	CPU1	PCIe 4.0	x16	x8	Port1A	30/02/0	31/00/0	FHHL
Slot2	CPU1	PCIe 4.0	x16	x8	Port1C	30/04/0	32/00/0	FHHL
Slot3	CPU1	PCIe 4.0	x16	x8	Port2A	4A/02/0	4B/00/0	FHHL
Slot4	CPU1	PCIe 4.0	x16	x8	Port2C	4A/04/0	4C/00/0	HHHL
Slot5	CPU1	PCIe 4.0	x16	x8	Port3A	64/02/0	65/00/0	HHHL
Slot6	CPU1	PCIe 4.0	x16	x8	Port3C	64/04/0	66/00/0	HHHL
Slot7	CPU2	PCIe 4.0	x16	x16	Port0A	97/02/0	98/00/0	HHHL
Slot8	CPU2	PCIe 4.0	x16	x8	Port1A	B0/02/0	B1/00/0	HHHL
Slot9	CPU2	PCIe 4.0	x16	x8	Port1C	B0/04/0	B2/00/0	HHHL
Slot10	CPU2	PCIe 4.0	x16	x8	Port3A	E2/02/0	E3/00/0	FHHL
Slot11	CPU2	PCIe 4.0	x16	x8	Port3C	E2/04/0	E4/00/0	FHHL

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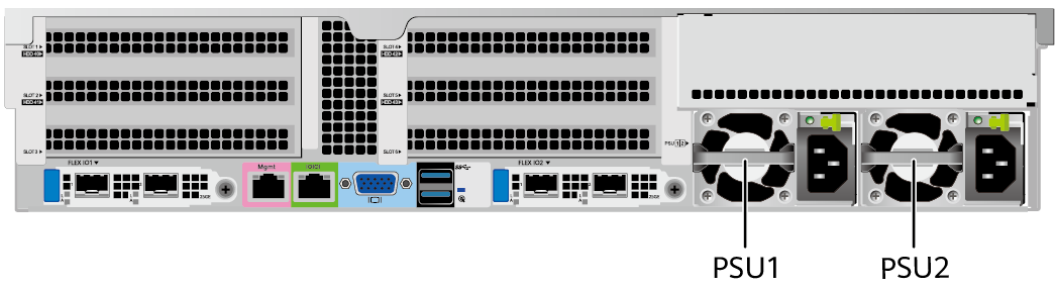
PCIe Slot	CPU	PCIe Standards	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
• The B/D/F (Bus/Device/Function Number) is the default value when the server is fully configured with PCIe cards. The value may differ if the server is not fully configured with PCIe cards or if a PCIe card with a PCI bridge is configured. • Root Port (B/D/F) indicates the B/D/F of an internal PCIe root port of the processor. • Device (B/D/F) indicates the B/D/F (bus address displayed on the OS) of an onboard or extended PCIe device. • The PCIe x16 slots are compatible with PCIe x16, PCIe x8, PCIe x4, and PCIe x1 cards. The PCIe cards are not forward compatible. That is, the PCIe slot width cannot be smaller than the PCIe card link width. • The full-height half-length (FHHL) PCIe slots are compatible with FHHL PCIe cards and half-height half-length (HHHL) PCIe cards. • The maximum power supply of each PCIe slot is 75 W. • FlexIO cards 1 and 2 are not supported to expand the PCIe bandwidth at the same time.								

1.1.8 PSUs

- The server supports one or two PSUs.
- The server supports AC or DC PSUs.
- The PSUs are hot-swappable.
- The server supports two PSUs in 1+1 redundancy.
- PSUs of the same P/N code must be used in a server.
- The PSUs are protected against short circuit. Double-pole fuse is provided for the PSUs with dual input live wires.
- If the DC power supply is used, purchase the DC power supply that meets the requirements of the safety standards or the DC power supply that has passed the CCC certification.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

Figure 1-122 PSU positions



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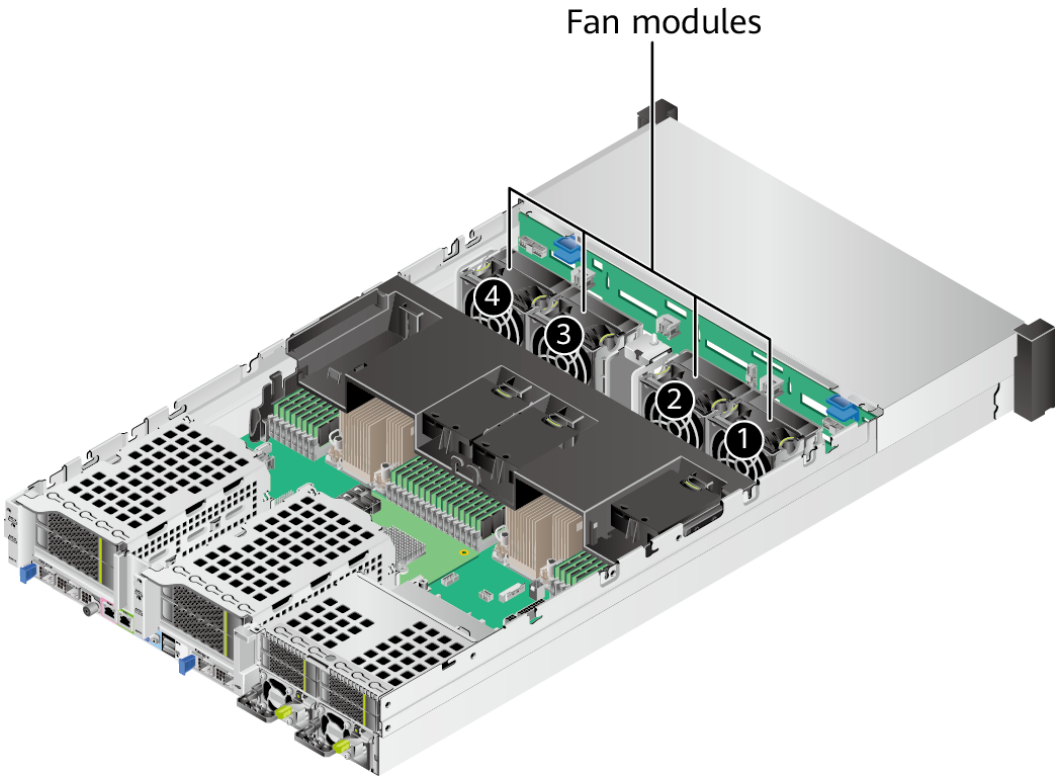
1.1.9 Fan Modules

- The server supports four fan modules.
- The fan modules are hot-swappable.
- N+1 redundancy is supported. That is, the server can work properly when a single fan fails.
- The fan speed can be adjusted.
- Fan modules of the same P/N code must be used in a server.

Figure 1-123 Positions of fan modules



1.1.10 LCD

NOTE

Only the 8 x 2.5" drive pass-through configuration supports the LCD.

Function

The LCD displays the installation status and running status of server components and enables users to set the IP address of the iBMC management network port on the server.

The LCD and the server iBMC form an LCD subsystem. The LCD directly obtains device information from the iBMC. The LCD subsystem does not store device data.

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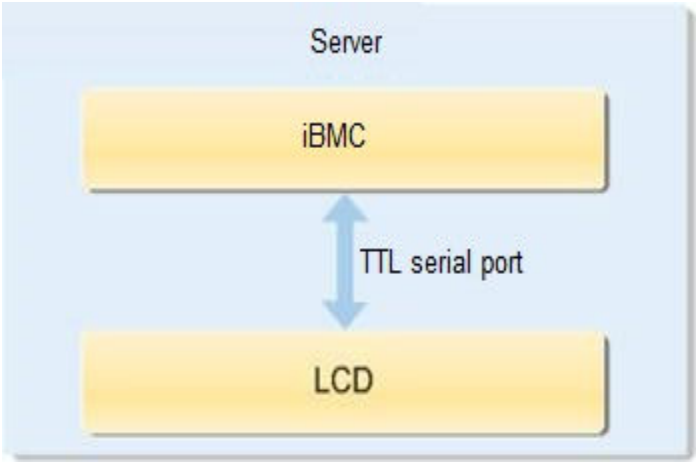
Figure 1-124 LCD subsystem working principle



1.1.10.1 LCD Software Environment

1.1.10.1.1 Icon Description

Table 1-65 Icon meaning

Icon	Description
	Indicates that the server is operating properly and that no alarms have been generated.
	Indicates that a minor alarm has been generated. A minor alarm has a minor impact on the system, but you need to take corrective action as soon as possible to prevent a more severe alarm.
	Indicates that a major alarm has been generated. A major alarm has a major impact on the system. It affects the normal operating of the system or may cause service interruption.
	Indicates that a critical alarm has been generated. A critical alarm indicates a fault that may power off a device or even interrupt system services. Corrective actions must be taken immediately.
	Indicates that the component cannot be scanned.
	Indicates that the component is operating properly.
	Indicates that a minor alarm has been generated on the component.

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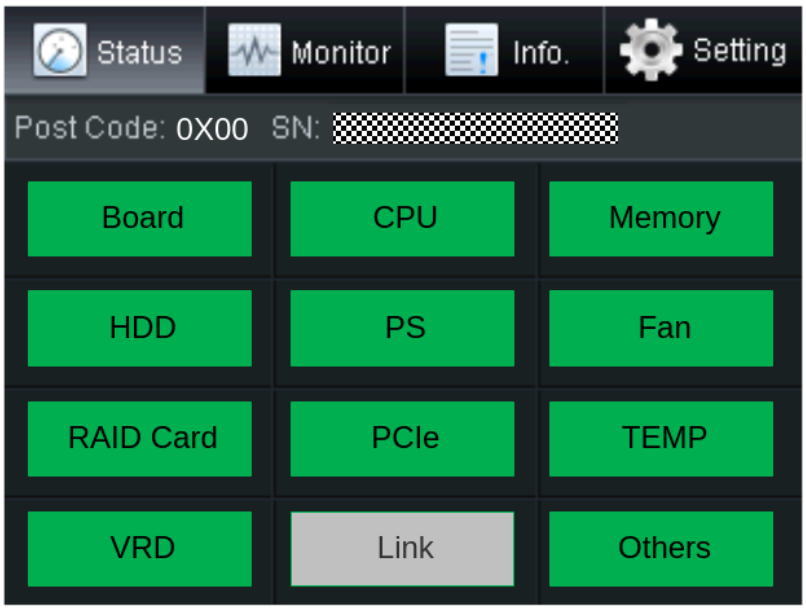
Icon	Description
	Indicates that a major alarm has been generated on the component.
	Indicates that a critical alarm has been generated on the component.
	Indicates that the component is not installed.
	Next screen
	Back
	Previous screen
	Indicates the delete key on the soft keyboard.

1.1.10.1.2 Home Screen

Screenshot

Figure 1-125 LCD home screen



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Parameter Description

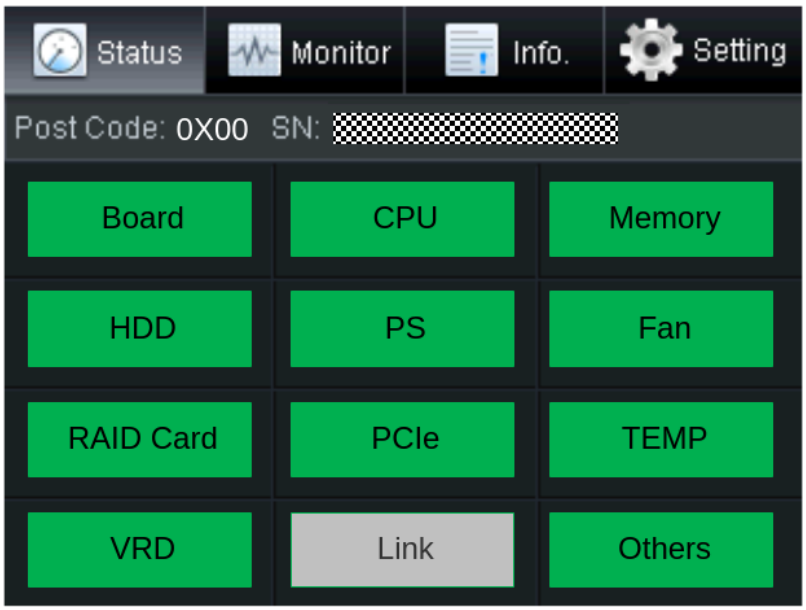
Table 1-66 Parameters on the LCD home screen

Tab	Function
Status	Displays the port 80 status, serial number, component status, and component alarms of the server.
Monitor	Displays the current power, CPU temperature, and inlet temperature of the server.
Info.	Displays the IP address and MAC address of the iBMC management network port, device SNs, asset information, and firmware version.
Setting	Sets the IP address of the iBMC management network port.

1.1.10.1.3 Status

Screenshot

Figure 1-126 Status screen



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Parameter Description

Table 1-67 Parameters on the Status screen

Parameter	Description
Board	Contains the status and alarms of boards and daughter cards.
CPU	Contains the status and alarms of CPUs.
Memory	Contains the status and alarms of memory.
HDD	Contains the status and alarms of drives.
PS	Contains the status and alarms of PSUs.
FAN	Contains the status and alarms of fans.
PCIe	Contains the status and alarms of PCIe cards.
TEMP	Contains the temperature of each server component. **NOTE** ● If the temperature is normal, "Device in health state" is displayed on the **TEMP** screen. ● To view alarm details, tap **>** to expand the information area.
VRD (Voltage Regulator Down)	Contains the voltage alarms of the components. **NOTE** ● If the voltage is normal, "Device in health state" is displayed on the **VRD** screen. ● To view alarm details, tap **>** to expand the information area.
Others	Contains the alarms of other components. **NOTE** ● If the component is operating properly, "Device in health state" is displayed on the **Others** screen. ● To view alarm details, tap **>** to expand the information area.

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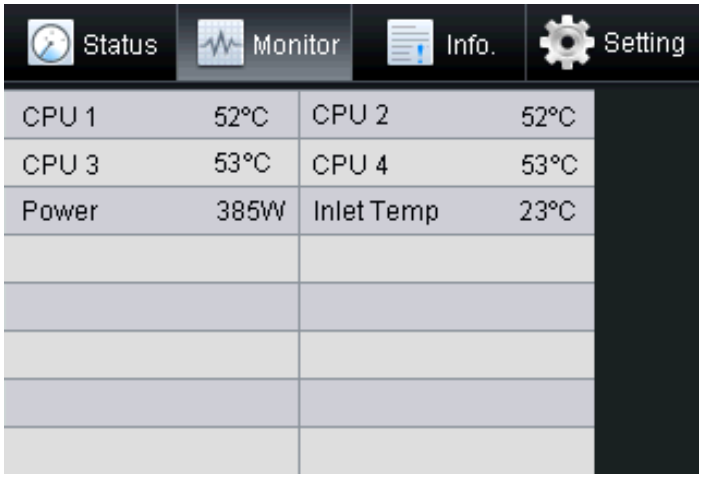
1.1.10.1.4 Monitor

Screenshot

Figure 1-127 Monitor screen



Parameter Description

Table 1-68 Parameters on the Monitor screen

Parameter	Description
CPU *N*	Indicates the operating temperature of CPU *N*. **NOTE** *N* indicates the number of the slot where the CPU is located.
Power	Indicates the operating power of the server.
Inlet Temp	Indicates the air inlet temperature.

1.1.10.1.5 Info.

Figure 1-128 Info. page

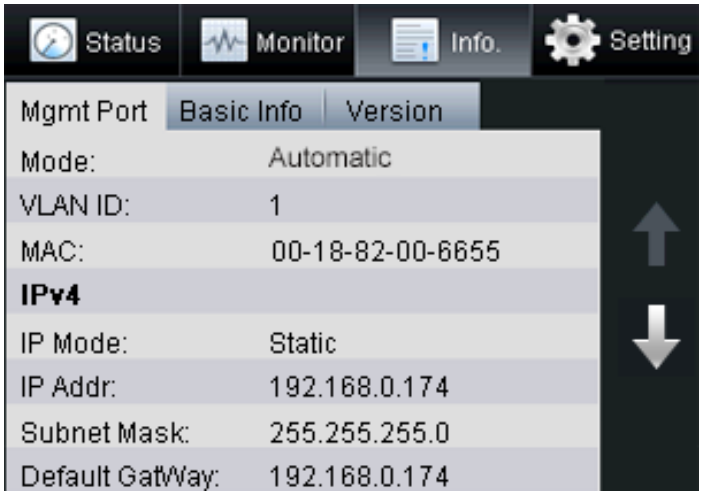


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Table 1-69 Parameters on the Info. page

Item	Description
Mgmtport	Basic information about the iBMC management network port, including the management network port mode, VLAN ID, MAC address, and IP address.
Basic Info	Device SN and asset information.
Version	Firmware version.

Figure 1-129 Info. > Mgmt Port page

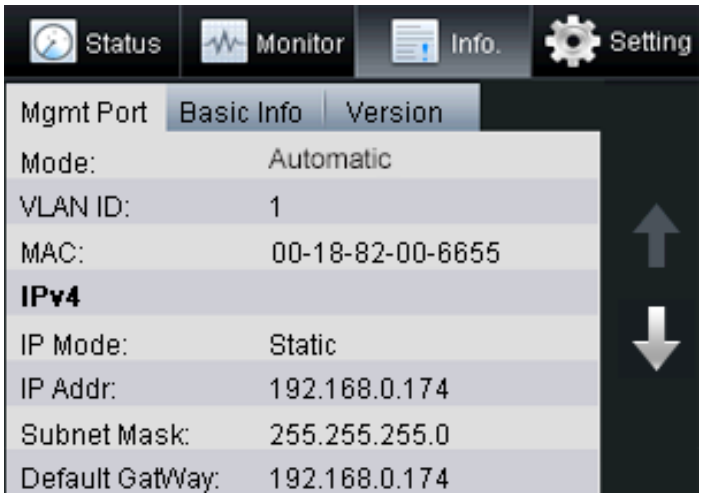

Table 1-70 Parameters on the Info. > Mgmtport page

Item	Description
Mode	iBMC management network port selection mode
VLAN ID	VLAN to which the iBMC management network port belongs
MAC	MAC address of the iBMC management network port **NOTE** This parameter is displayed only when an IPv4 address is configured. When an IPv6 address is configured, it is displayed as a link-local address.
IPv4 Mode	IPv4 address configuration mode
IPv4 Addr	IPv4 address
IPv4 Subnet Mask	IPv4 address subnet mask
IPv4 Default GatWay	IPv4 address default gateway
IPv6 Mode	IPv6 address configuration mode

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Item	Description
IPv6 Addr	IPv6 address
IPv6 Prefix	IPv6 address prefix length
IPv6 Default GatWay	IPv6 address default gateway

Figure 1-130 Info. > Basic Info page

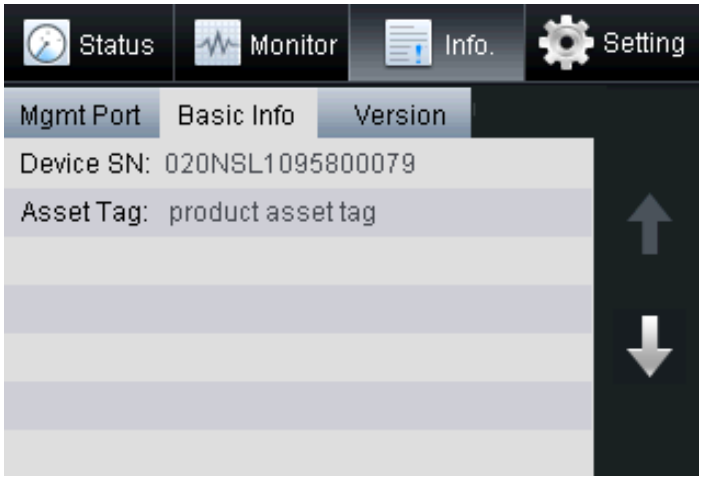

Table 1-71 Parameters on the Info. > Basic Info page

Item	Description
Device SN	Product SN.
Asset Tag	Asset information.

Figure 1-131 Info. > Version page

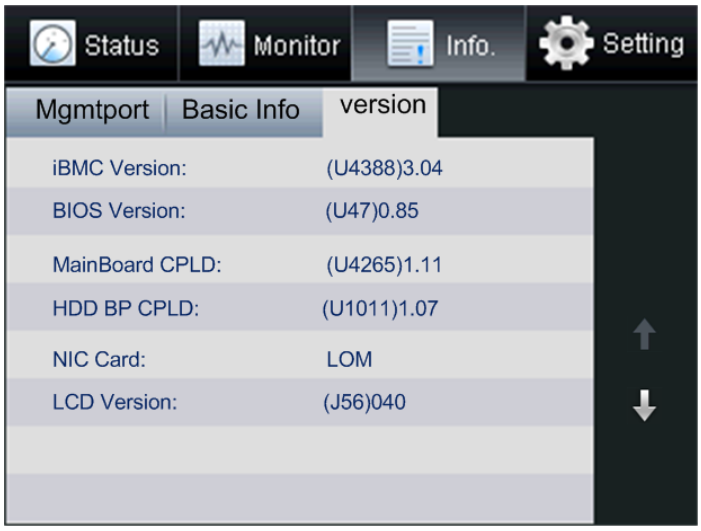

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Table 1-72 Parameters on the Info. > Version page

Item	Description
iBMC Version	iBMC version
BIOS Version	BIOS version
MainBoard CPLD	Mainboard CPLD version
HDD BP CPLD	Drive backplane CPLD version
NIC Card	NIC type
LCD Version	LCD version

1.1.10.1.6 Setting

Screenshot

Figure 1-132 Setting screen

Parameter Description

Table 1-73 Parameters on the Setting > Mgmtport screen

Parameter	Parameter
IPv4	

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Parameter	Parameter
DHCP	Indicates whether to enable the Dynamic Host Configuration Protocol (DHCP) function. **NOTE** The iBMC management network port supports dynamic and static IP addresses. The dynamic IP address is controlled by the DHCP function. After the DHCP function is enabled, the IP address of the management network port can be obtained automatically. The static IP address is set manually. You can set a static IP address for the management network port only after the DHCP function is disabled. ● indicates that the DHCP function is enabled. ● indicates that the DHCP function is disabled. Setting method: ● Tap to enable the DHCP function. ● Tap to disable the DHCP function.
IP Addr	Indicates the static IPv4 address of the management network port. Value: The IPv4 address is expressed in decimal format. The maximum length is 32 digits. Value: ● The value is divided into four sets. Each set has three decimal numbers. ● Each set is separated by period (.). ● The value of each set ranges from 0 to 255. Setting method: Use the soft keyboard.
Subnet Mask	Indicates the subnet mask of the management network port. Setting method: Use the soft keyboard.
Default GatWay	Indicates the gateway address of the management network port. Setting method: Use the soft keyboard.
IPv6	

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Parameter	Parameter
DHCP	Indicates whether to enable the DHCP function. **NOTE** The iBMC management network port supports dynamic and static IP addresses. The dynamic IP address is controlled by the DHCP function. After the DHCP function is enabled, the IP address of the management network port can be obtained automatically. The static IP address is set manually. You can set a static IP address for the management network port only after the DHCP function is disabled. ● indicates that the DHCP function is enabled. ● indicates that the DHCP function is disabled. Setting method: ● Tap to enable the DHCP function. ● Tap to disable the DHCP function.
IP Addr	Indicates the static IPv6 address of the management network port. Value: The IPv6 address is expressed in hexadecimal format. The maximum length is 128 characters. Value: ● The value is divided into eight sets. Each set has four hexadecimal numbers. ● Each set is separated by colon (:). ● The value of each set ranges from 0 to 9 or a to f. Setting method: Use the soft keyboard.
Prefix Length	Indicates the type of IPv6 address. The default value is **64**, indicating the subnet in the Local Area Network (LAN). Setting method: Use the soft keyboard.
Default GateWay	Indicates the gateway address of the management network port. Setting method: Use the soft keyboard.

1.1.11 Board

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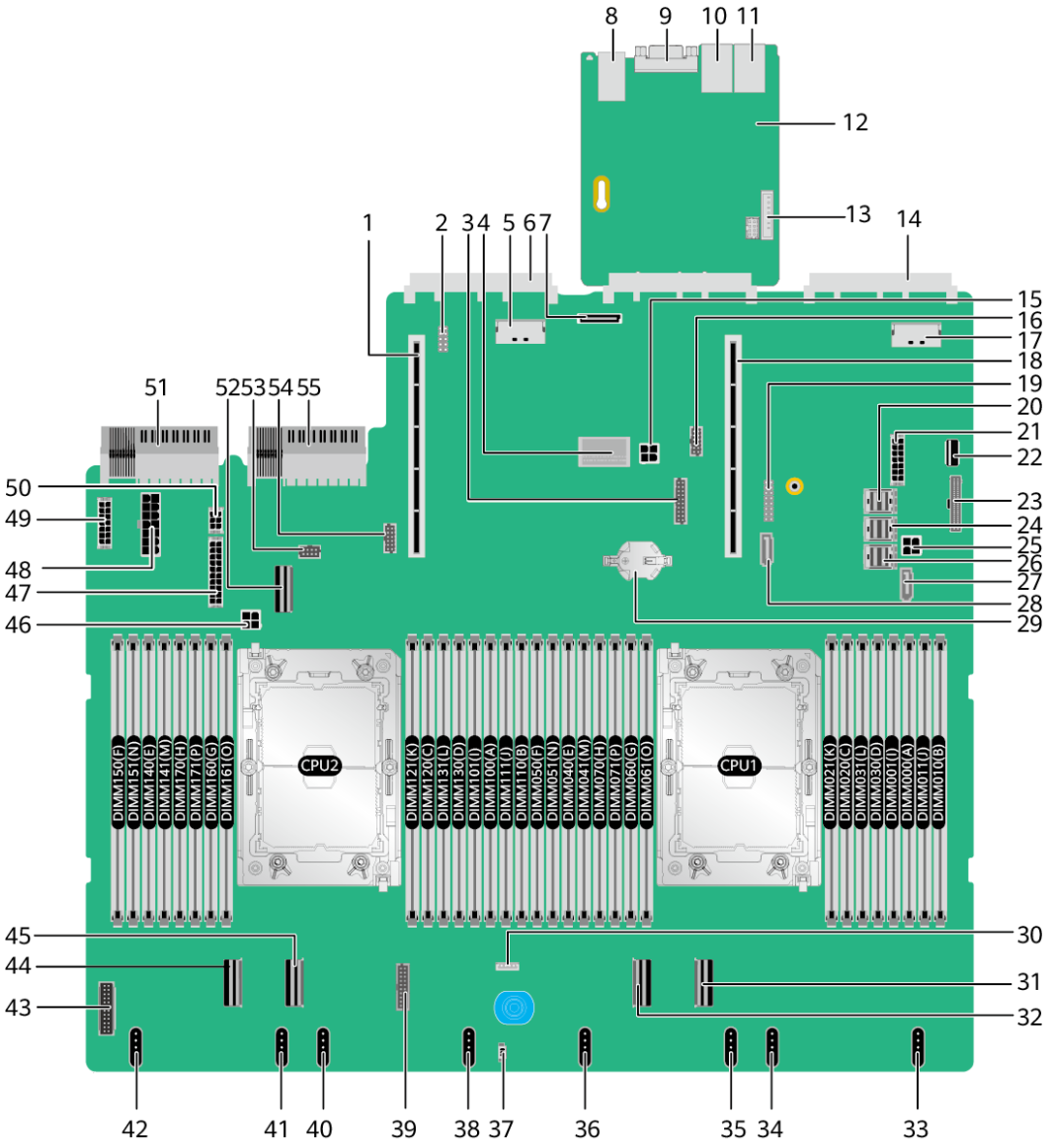
1.1.11.1 Mainboard

Figure 1-133 2288H V6-32DIMM mainboard



1	PCIe riser 2 slot (PCIE RISER2(CPU2)/J51)	2	Debugging pin (J103)
3	Rear-drive backplane & BBU low-speed signal connector (BACK HDD BP&BBU SIGNAL/J90)	4	Screw-in RAID controller card connector (RAID CARD/J86)
5	LP slimline 7 connector for OCP 3.0 network adapter 2 (SLIMLINE7/J31)	6	OCP 3.0 network adapter 2 connector (OCP2 CONN/ J109)

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7	Built-in storage expansion port (SD CARD/J87)	8	2 x USB 3.0 ports (USB3.0 CONN/J88)
9	Rear VGA port (VGA CONN/J60)	10	Serial port (COM/J6020)
11	BMC management network port (BMC_GE /J6019)	12	BMC management board
13	LCD connector (LCD CONN/J6025)	14	OCP 3.0 network adapter 1 connector (OCP1 CONN/ J108)
15	Rear-drive backplane power connector 2 (REAR BP PWR2/J21)	16	NC-SI connector (NCSI CONN/J114)
17	LP slimline 6 connector for OCP 3.0 network adapter 1 (SLIMLINE6/J13)	18	PCIe riser 1 slot (PCIE RISER1(CPU1)/J50)
19	TPM/TCM connector (J10)	20	mini-SAS HD connector C (MINIHD PORTC/J4)
21	Drive backplane power connector 3 (HDD BP PWR3/J89)	22	Built-in USB 3.0 connector (INNER USB3.0/J110)
23	Right mounting ear connector (RCIA BOARD/ J113)	24	mini-SAS HD connector B (MINIHD PORTB/J5)
25	Rear-drive backplane power connector 1 (REAR BP PWR1/J64)	26	mini-SAS HD connector A (MINIHD PORTA/J6)
27	SATA connector 1 (SATA1/J1)	28	SATA connector 2 (SATA2/J2)
29	Cell battery holder (U9)	30	VROC key connector (Soft RAID KEY/J3)
31	LP slimline 1 connector (SLIMLNE1(CPU1)/J11)	32	LP slimline 2 connector (SLIMLNE2(CPU1)/J84)
33	Fan module 4 connector (J100)	34	Fan module 4 connector (2U FAN4/J98)
35	Fan module 3 connector (J97)	36	Fan module 3 connector (2U FAN3/J95)
37	Intrusion sensor connector (INTRUDER CONN/S1)	38	Fan module 2 connector (J93)

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39	Low-speed signal connector for the front-drive backplane (FRONT HDD BP/J75)	40	Fan module 2 connector (2U FAN2/J91)
41	Fan module 1 connector (J102)	42	Fan module 1 connector (2U FAN1/J67)
43	Left mounting ear connector (LCIA BOARD/J106)	44	LP slimline 4 connector (SLIMLINE4(CPU2)/J12)
45	LP slimline 3 connector (SLIMLINE3(CPU2)/J85)	46	Power connector for the built-in-drive backplane (INNER HDD PWR/J22)
47	Drive backplane power connector 2 (HDD BP PWR2/J88)	48	BBU power connector (BBU POWER/J13001)
49	Drive backplane power connector 1 (HDD BP PWR1/J26)	50	Rear-drive backplane power connector 3 (REAR BP PWR3/J20)
51	PSU 2 connector (PSU2/J56)	52	LP slimline 5 connector (SLIMLINE5(CPU2)/J30)
53	Low-speed signal connector for the built-in-drive backplane (INNER HDD BP/J27)	54	Low-speed signal connector for the rear 4 x 2.5" drive backplane (REAR 4x2.5 HDD BP/J57)
55	PSU 1 connector (PSU1/J28)	-	-

- Use connectors 34, 36, 40, and 42 when the 8038+ fan modules are configured.
- Use connectors 33, 34, 35, 36, 38, 40, 41, and 42 when the 8080 and 8056 fan modules are configured.

NOTE

When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.

- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

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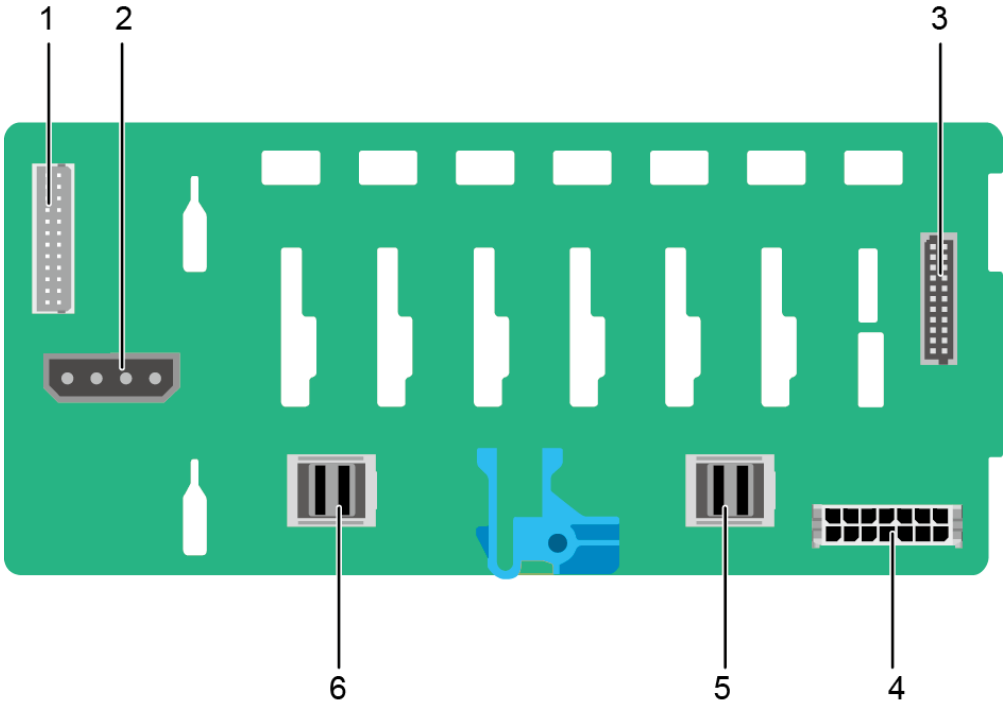
1.1.11.2 Drive Backplane

Front Drive Backplane

- 8 x 2.5" drive pass-through backplane

  This backplane is supported by 8 x 2.5" drive pass-through configuration 1, 8 x 2.5" drive pass-through configuration 2, 8 x 2.5" drive pass-through configuration 3, 8 x 2.5" drive pass-through + 11 x PCIe card configuration 1, 8 x 2.5" drive pass-through + 11 x PCIe card configuration 2, 8 x 2.5" drive pass-through + 11 x PCIe card configuration 3, 8 x 2.5" drive + 4 x GPU configuration 1, and 8 x 2.5" drive + 4 x GPU configuration 2 in **1.1.5.1.1 8 x 2.5" Drive Pass-through Configuration**.

Figure 1-134 8 x 2.5" drive pass-through backplane



No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP1/J3)[a]	-
2	DVD drive power connector (DVD/J11)	-
3	Backplane signal cable connector (HDD BP/J1)	-
4	Power connector (POWER/J2)	-

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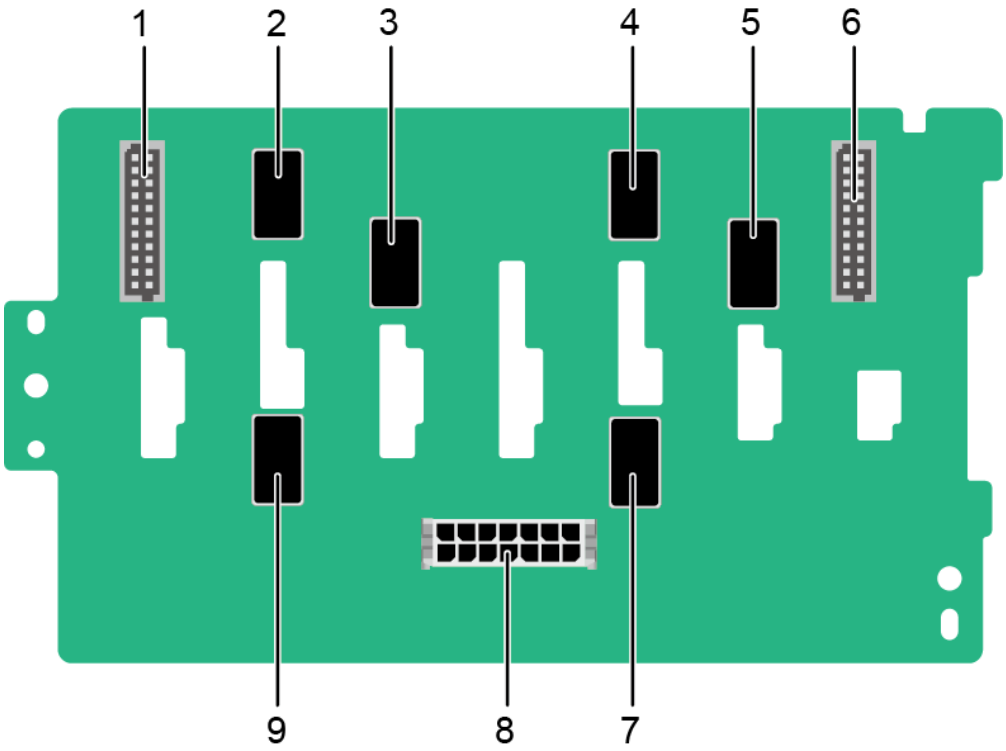
No.	Connector	The managed drive slots
5	Mini-SAS HD connector (PORT A/J28)	Slot 0-Slot 3
6	Mini-SAS HD connector (PORT B/J29)	Slot 4-Slot 7
a: Reserved and unavailable currently.		

- 8 x 2.5" drive pass-through NVMe hardware RAID backplane

  This backplane is supported by 8 x 2.5" drive pass-through NVMe hardware RAID configuration 1 (8 x NVMe), and 8 x 2.5" drive pass-through NVMe hardware RAID configuration 2 (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 4 x NVMe) in **1.1.5.1.1 8 x 2.5" Drive Pass-through Configuration** and all drive configurations in **1.1.5.1.6 16 x 2.5" Drive Pass-through Configuration**.

Figure 1-135 8 x 2.5" drive pass-through NVMe hardware RAID backplane



No.	Connector	Drive Slots Managed by Backplane 1	Drive Slots Managed by Backplane 2
1	Cascade backplane low-speed connector (BP2_CONN/J1102)	-	-

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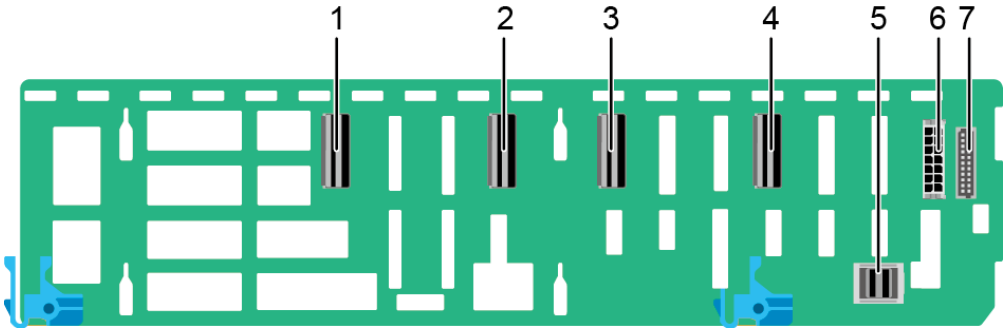
No.	Connector	Drive Slots Managed by Backplane 1	Drive Slots Managed by Backplane 2
2	SlimSAS connector (2B-NV/J404)	Slot 6-Slot 7	Slot 14-Slot 15
3	SlimSAS connector (2A-NV/J403)	Slot 4-Slot 5	Slot 12-Slot 13
4	SlimSAS connector (1B-NV/J402)	Slot 2-Slot 3	Slot 10-Slot 11
5	SlimSAS connector (1A-NV/J401)	Slot 0-Slot 1	Slot 8-Slot 9
6	Backplane signal cable connector (HDD_BP/J1103)	-	-
7	SlimSAS connector (1A-SS/J501)	Slot 0-Slot 3	Slot 8-Slot 11
8	Power connector (POWER/J1801)	-	-
9	SlimSAS connector (1B-SS/J502)	Slot 4-Slot 7	Slot 12-Slot 15

- 12 x 2.5" drive pass-through (4 x SAS/SATA + 8 x NVMe) backplane

  This backplane is supported by 12 x 2.5" drive pass-through configuration 1 (4 x SATA + 8 x NVMe), 12 x 2.5" drive pass-through configuration 2 (4 x SAS/SATA + 8 x NVMe), and 12 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 8 x NVMe), 12 x 2.5" drive (4 x SATA + 8 x NVMe) + 4 x GPU configuration 1, and 12 x 2.5" drive (4 x SAS/SATA + 8 x NVMe) + 4 x GPU configuration 2 in **1.1.5.1.3 12 x 2.5" Drive Pass-through Configuration**.

  Figure 1-136 12 x 2.5" drive pass-through (4 x SAS/SATA + 8 x NVMe) backplane



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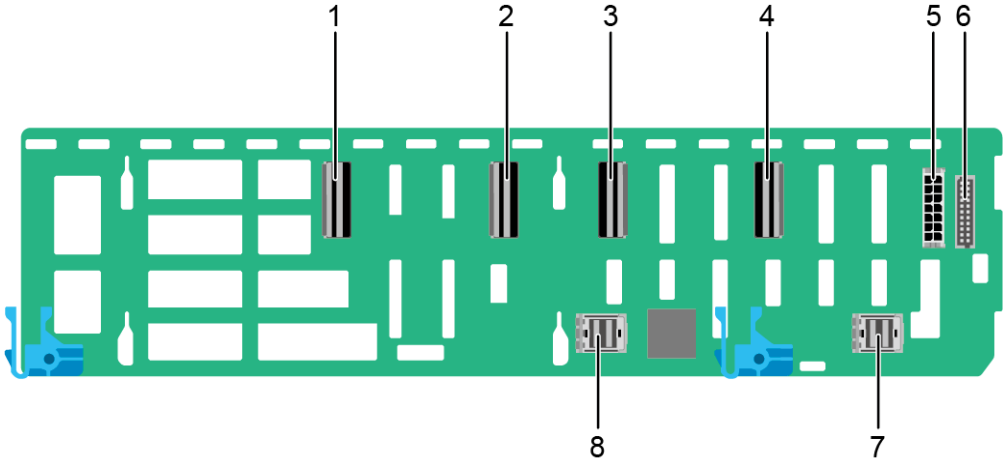
No.	Connector	The managed drive slots
1	LP slimline 2 connector (SLIM_2/J1001)	Slot 10-Slot 11
2	LP slimline 1 connector (SLIM_1/J901)	Slot 8-Slot 9
3	LP slimline 4 connector (SLIM_4/J1201)	Slot 6-Slot 7
4	LP slimline 3 connector (SLIM_3/J1101)	Slot 4-Slot 5
5	Mini-SAS HD connector (PORT A/J801)	Slot 0-Slot 3
6	Backplane power connector (HDD POWER/J4003)	-
7	Backplane signal cable connector (HDD_BP/ J3702)	-

- 12 x 2.5" drive pass-through (4 x SAS + 4 x SAS/SATA/NVMe + 4 x NVMe) backplane

  This backplane is supported by 8 x 2.5" drive (4 x SAS/SATA + 4 x SAS/SATA/ NVMe) + 4 x GPU configuration in **1.1.5.1.1 8 x 2.5" Drive Pass-through Configuration**.

  Figure 1-137 12 x 2.5" drive pass-through (4 x SAS + 4 x SAS/SATA/NVMe + 4 x NVMe) backplane



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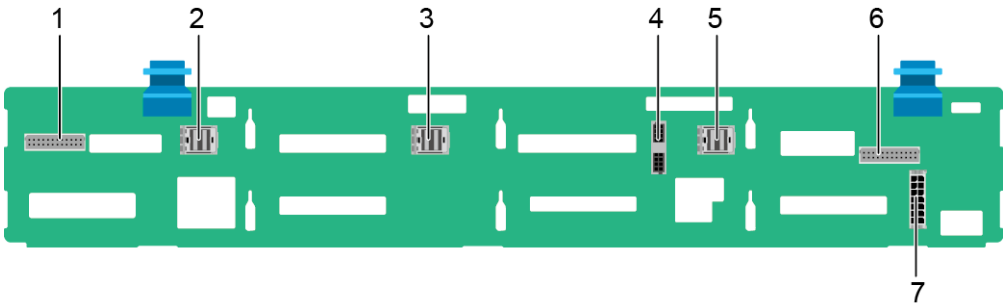
No.	Connector	The managed drive slots
1	LP slimline 2 connector (SLIM_2/J1001)	Slot 10-Slot 11
2	LP slimline 1 connector (SLIM_1/J901)	Slot 8-Slot 9
3	LP slimline 4 connector (SLIM_4/J1201)	Slot 6-Slot 7
4	LP slimline 3 connector (SLIM_3/J1101)	Slot 4-Slot 5
5	Backplane power connector (HDD POWER/J4003)	-
6	Backplane signal cable connector (HDD_BP/ J3702)	-
7	Mini-SAS HD connector (PORT A/J801)	Slot 0-Slot 3
8	Mini-SAS HD connector (PORT B/J802)	Slot 4-Slot 7

- 12 x 3.5" drive pass-through backplane

  This backplane is supported by all drive configurations in **1.1.5.1.2 8 x 3.5" Drive Pass-through Configuration** and 12 x 3.5" drive pass-through configuration 1, 12 x 3.5" drive pass-through configuration 2, 12 x 3.5" drive pass-through configuration 3, 12 x 3.5" drive pass-through configuration 4, 12 x 3.5" drive pass-through configuration 5 (dual RAID controller cards), and 12 x 3.5" drive pass-through configuration 6 (dual RAID controller cards) in .

  Figure 1-138 12 x 3.5" drive pass-through backplane



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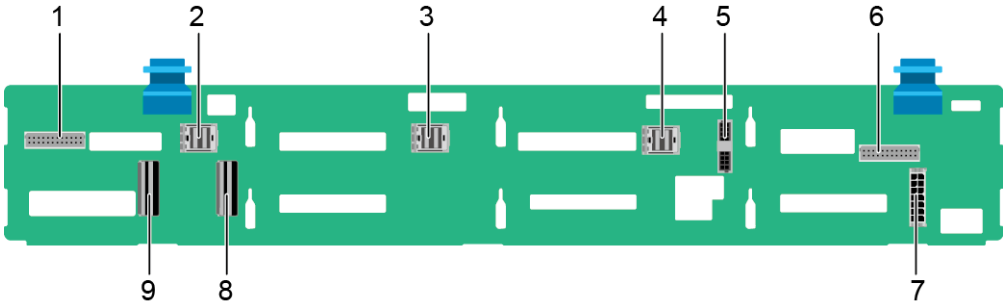
No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP0/J7)	-
2	Mini-SAS HD connector (PORT C/J5)	Slot 8-Slot 11
3	Mini-SAS HD connector (PORT B/J4)	Slot 4-Slot 7
4	Backplane signal cable connector (HDD BP/J6)	-
5	Mini-SAS HD connector (PORT A/J3)	Slot 0-Slot 3
6	Indicator signal cable connector (REAR BP1/J8)	-
7	Power connector (POWER/J1)	-

- 12 x 3.5" drive NVMe backplane (4 x NVMe)

  This backplane is supported by 12 x 3.5" drive pass-through configuration 1 (4 x NVMe), 12 x 3.5" drive pass-through configuration 2 (4 x NVMe), and 12 x 3.5" drive pass-through configuration 3 (4 x NVMe) in .

Figure 1-139 12 x 3.5" drive NVMe backplane (4 x NVMe)



No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP0/J30)	-
2	Mini-SAS HD connector (PORT C/J36)	Slot 8-Slot 11

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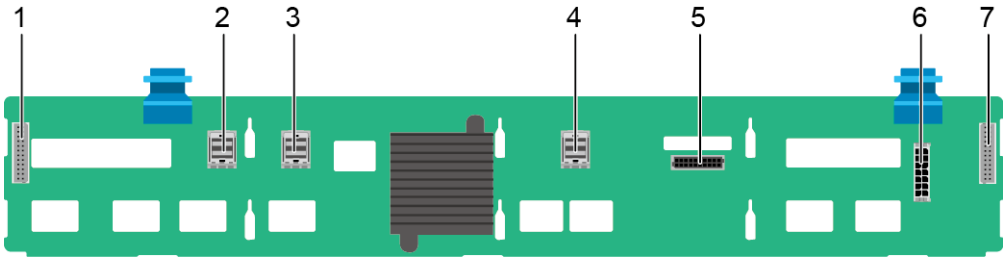
No.	Connector	The managed drive slots
3	Mini-SAS HD connector (PORT B/J29)	Slot 4-Slot 7
4	Mini-SAS HD connector (PORT A/J28)	Slot 0-Slot 3
5	Backplane signal cable connector (HDD_BP/J1)	-
6	Indicator signal cable connector (REAR BP1/J31)	-
7	Backplane power connector (HDD_BP/J24)	-
8	LP slimline 1 connector (SLIMLINE 1/J4)	Slot 8-Slot 9
9	LP slimline 2 connector (SLIMLINE 2/J37)	Slot 10-Slot 11

- 12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)

  This backplane is supported by 16 x 3.5" drive EXP configuration 1, 16 x 3.5" drive EXP configuration 2 in **1.1.5.1.7 16 x 3.5" Drive EXP Configuration**, and 12 x 3.5" drive EXP configuration 1, 12 x 3.5" drive EXP configuration 2, 12 x 3.5" drive EXP configuration 3 (dual RAID controller card) in **1.1.5.1.5 12 x 3.5" Drive EXP Configuration**.

Figure 1-140 12 x 3.5" drive EXP backplane 1



No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/J31)	2	Mini-SAS HD connector (PORT A/J28)
3	Mini-SAS HD connector (PORT B/J29)	4	Mini-SAS HD connector (REAR PORT/J34)

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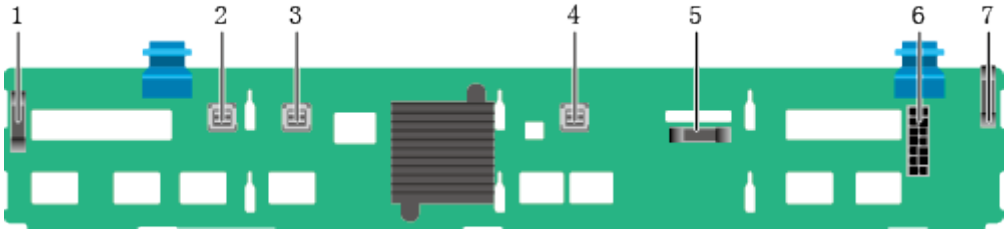
No.	Connector	No.	Connector
5	Backplane signal cable connector (HDD BP/J35)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J32)	-	-

- 12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)

  This backplane is supported by 16 x 3.5" drive EXP configuration 1, 16 x 3.5" drive EXP configuration 2 in **1.1.5.1.7 16 x 3.5" Drive EXP Configuration** and 12 x 3.5" drive EXP configuration 1, 12 x 3.5" drive EXP configuration 2, and 12 x 3.5" drive EXP configuration 3 (dual RAID controller card) in **1.1.5.1.5 12 x 3.5" Drive EXP Configuration**.

  Figure 1-141 12 x 3.5" drive EXP backplane 2

No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J32)	2	Mini-SAS HD connector (PORT A/J28)
3	Mini-SAS HD connector (PORT B/J29)	4	Mini-SAS HD connector (REAR PORT/J31)
5	Backplane signal cable connector (HDD BP/J1)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J35)	-	-

- 12 x 3.5" drive EXP backplane 3 (P/N code: 0302Y072)

  This backplane is supported by 12 x 3.5" drive EXP configuration 4 in **1.1.5.1.5 12 x 3.5" Drive EXP Configuration**.

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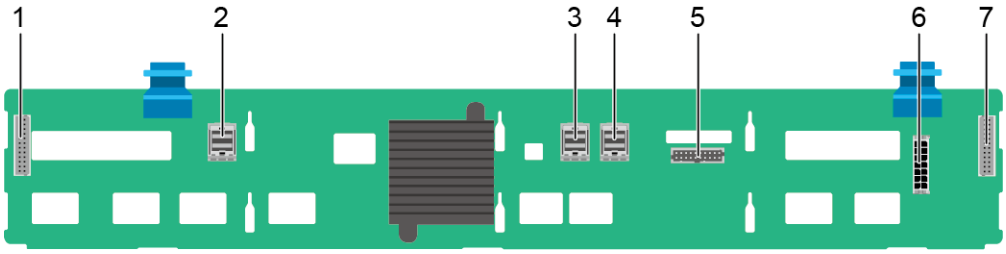
Figure 1-142 12 x 3.5" drive EXP backplane 3

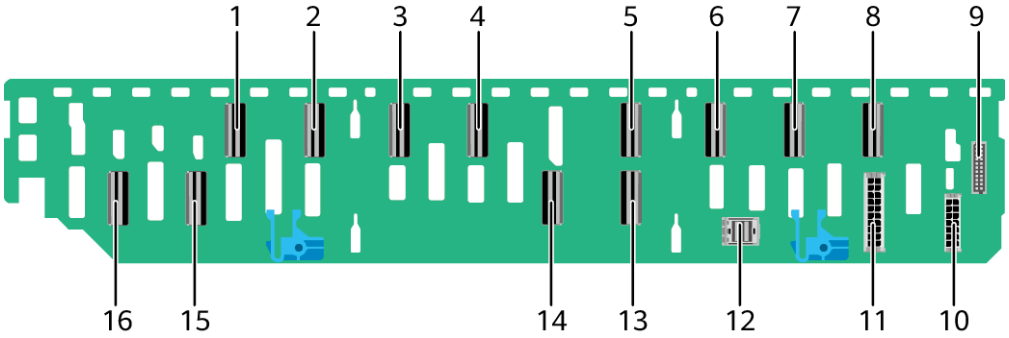


No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J31)	2	Mini-SAS HD connector (REAR PORT/J34)
3	Mini-SAS HD connector (PORT A/J28)	4	Mini-SAS HD connector (PORT B/J29)
5	Backplane signal cable connector (HDD BP/J35)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J32)	-	-

- 24 x 2.5" NVMe backplane

  This backplane is supported by all drive configurations in **1.1.5.1.9 24 x 2.5" Drive Configuration** and 24 x 2.5" drive NVMe configuration 1 and 24 x 2.5" drive NVMe configuration 2 in **1.1.5.1.9 24 x 2.5" Drive Configuration**.

Figure 1-143 24 x 2.5" NVMe backplane



No.	Connector	The managed drive slots
1	LP slimline 1D connector (SLIMLINE 1D/J1801)	Slot 18-Slot 19

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No.	Connector	The managed drive slots
2	LP slimline 1C connector (SLIMLINE 1C/J1701)	Slot 16-Slot 17
3	LP slimline 1A connector (SLIMLINE 1A/J1601)	Slot 14-Slot 15
4	LP slimline 1B connector (SLIMLINE 1B/J1501)	Slot 12-Slot 13
5	LP slimline 2D connector (SLIMLINE 2D/J2201)	Slot 6-Slot 7
6	LP slimline 2C connector (SLIMLINE 2C/J2101)	Slot 4-Slot 5
7	LP slimline 2B connector (SLIMLINE 2B/J2001)	Slot 2-Slot 3
8	LP slimline 2A connector (SLIMLINE 2A/J1901)	Slot 0-Slot 1
9	Backplane signal cable connector (HDD BP/ J7102)	-
10	Power connector 1 (HDD POWER1/J30)	-
11	Power connector 2 (HDD POWER2/J7303)	-
12	Mini-SAS HD connector (PORT A/J1001)	Slot 0-Slot 3
13	LP slimline 3 connector (SLIMLINE 3/J1301)	Slot 8-Slot 9
14	LP slimline 4 connector (SLIMLINE 4/J1401)	Slot 10-Slot 11
15	LP slimline 1 connector (SLIMLINE 1/J1101)	Slot 20-Slot 21
16	LP slimline 2 connector (SLIMLINE 2/J1201)	Slot 22-Slot 23

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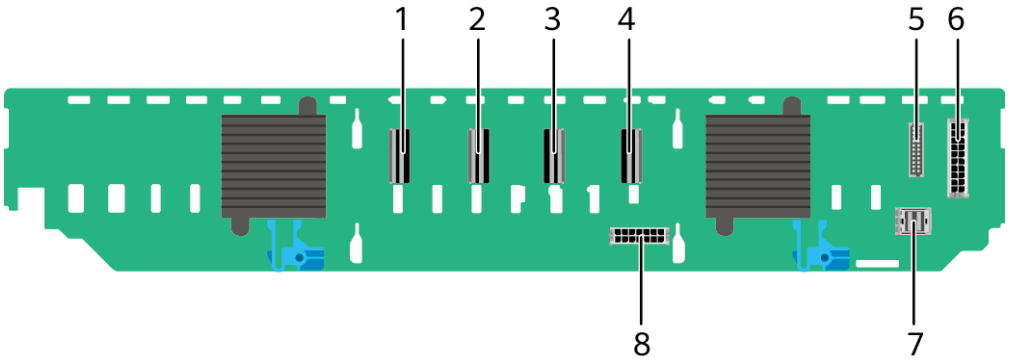
- 24 x 2.5" NVMe switch backplane

  This backplane is supported by 24 x 2.5" drive NVMe configuration 3, 24 x 2.5" drive NVMe configuration 4, and 24 x 2.5" drive NVMe configuration 5 in **1.1.5.1.9 24 x 2.5" Drive Configuration**.

  Figure 1-144 24 x 2.5" NVMe switch backplane

No.	Connector	The managed drive slots
1	LP slimline 2 connector (SLIMLINE 2/J5)	Slot 6-Slot 11
2	LP slimline 1 connector (SLIMLINE 1/J6)	Slot 0-Slot 5
3	LP slimline 3 connector (SLIMLINE 3/J7)	Slot 12-Slot 17
4	LP slimline 4 connector (SLIMLINE 4/J8)	Slot 18-Slot 23
5	Backplane signal cable connector (HDD BP/J3)	-
6	Power connector 2 (HDD POWER2/J2)	-
7	Mini-SAS HD connector (PORT A/J52)	Slot 0-Slot 3
8	Power connector 1 (HDD POWER1/J34)	-

- 24 x 2.5" drive pass-through backplane

  This backplane is supported by 24 x 2.5" drive pass-through configuration (3 x RAID controller card) in **1.1.5.1.9 24 x 2.5" Drive Configuration**.

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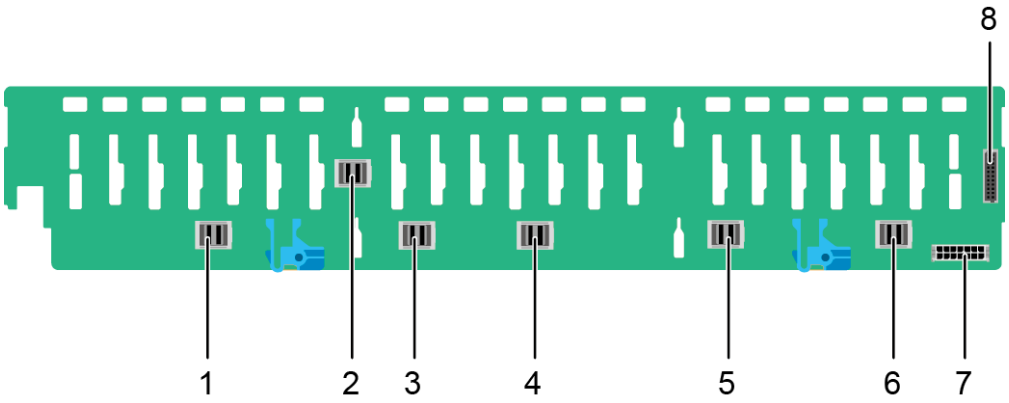
Figure 1-145 24 x 2.5" drive pass-through backplane



No.	Connector	The managed drive slots
1	Mini-SAS HD connector (PORT 3B/J33)	Slot 19-Slot 23
2	Mini-SAS HD connector (PORT 3A/J39)	Slot 16-Slot 19
3	Mini-SAS HD connector (PORT 2B/J31)	Slot 12-Slot 15
4	Mini-SAS HD connector (PORT 2A/J30)	Slot 8-Slot 11
5	Mini-SAS HD connector (PORT 1B/J29)	Slot 4-Slot 7
6	Mini-SAS HD connector (PORT 1A/J28)	Slot 0-Slot 3
7	Power connector (POWER/J24)	-
8	Backplane signal cable connector (HDD_BP/J1)	-

- 25 x 2.5" drive EXP backplane (P/N code: 03027QFN and 0302Y073)

  The backplane with the P/N code 03027QFN is supported by 25 x 2.5" drive EXP configuration 1, 25 x 2.5" drive EXP configuration 2, 25 x 2.5" drive EXP configuration 3, 25 x 2.5" drive EXP configuration 4 , and 25 x 2.5" drive EXP configuration 5 (dual RAID controller cards) in **1.1.5.1.10 25 x 2.5" Drive EXP Configuration**. The backplane with the P/N code 0302Y073 is supported by 25 x 2.5" drive EXP configuration 6 and 25 x 2.5" drive EXP configuration 7 in **1.1.5.1.10 25 x 2.5" Drive EXP Configuration**.

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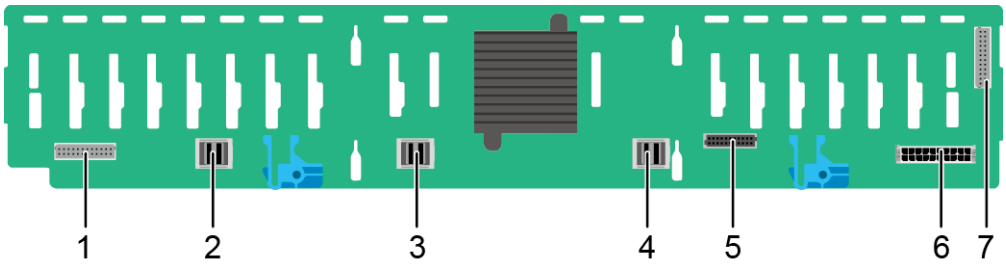
Figure 1-146 25 x 2.5" drive EXP backplane



No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J32)	2	Mini-SAS HD connector (PORT A/J28)
3	Mini-SAS HD connector (PORT B/J29)	4	Mini-SAS HD connector (REAR PORT/J31)
5	Backplane signal cable connector (HDD_BP/J1)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J35)	-	-

Built-in-Drive Backplane

- 4 x 3.5" drive backplane

Figure 1-147 4 x 3.5" drive backplane

No.	Connector	The managed drive slots
1	Mini-SAS HD connector (PORT A/J3)	Slot 36-Slot 39
2	Backplane signal cable connector (INNER HDD BP/J1)	-
3	Backplane power connector (INNER HDD PWR/J2)	-

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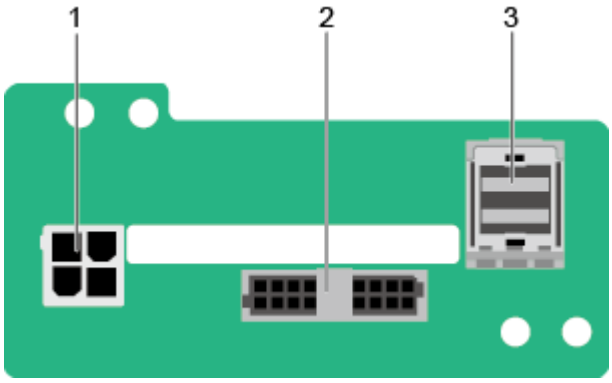
Rear-drive backplane

- 2 x 2.5" drive backplane

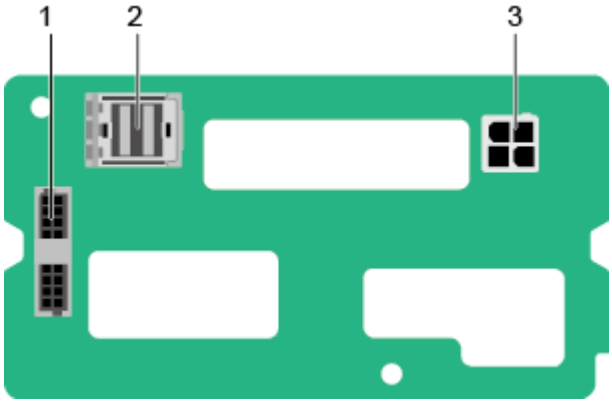
Figure 1-148 2 x 2.5" drive backplane



No.	Connector	The managed drive slots
1	Power connector (BP PWR/J1)	-
2	Indicator signal cable connector (REAR BP/J5)	-
3	Mini-SAS HD connector (REAR PORT/J2)	• The managed Slot 40-Slot 41 when a cable is connected to I/O 1 • The managed Slot 42-Slot 43 when a cable is connected to I/O 2

- 2 x 3.5" drive backplane

Figure 1-149 2 x 3.5" drive backplane



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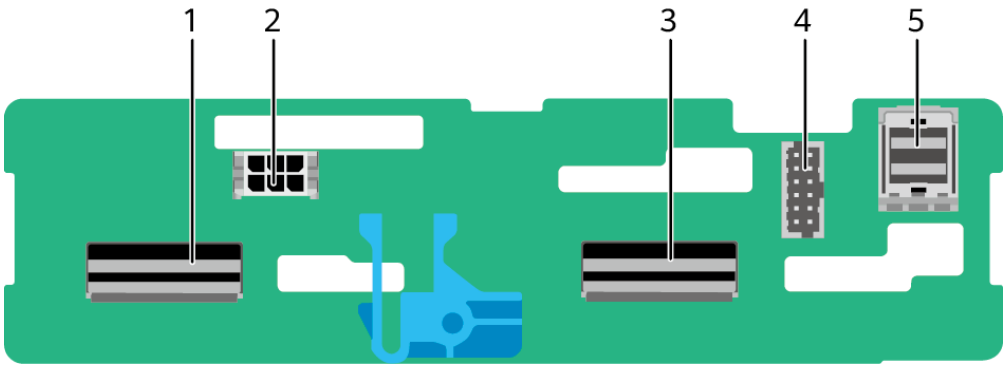
No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP/J5)	-
2	Mini-SAS HD connector (REAR PORT/J2)	• The managed Slot 40-Slot 41 when a cable is connected to I/O 1 • The managed Slot 42-Slot 43 when a cable is connected to I/O 2
3	Power connector (BP PWR/J1)	-

- 4 x 2.5" drive backplane

Figure 1-150 4 x 2.5" drive backplane



No.	Connector	The managed drive slots
1	LP slimline 4 connector (SLIM_4/J1001)	Slot 46-Slot 47
2	Power connector (POWR/J2502)	-
3	LP slimline 3 connector (SLIM_3/J901)	Slot 44-Slot 45
4	Backplane signal cable connector (HDD BP/ J2302)	-
5	Mini-SAS HD connector (Port A/J801)	Slot 44-Slot 47

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1.2 2288H V6-16DIMM

1.2.1 Front Panel

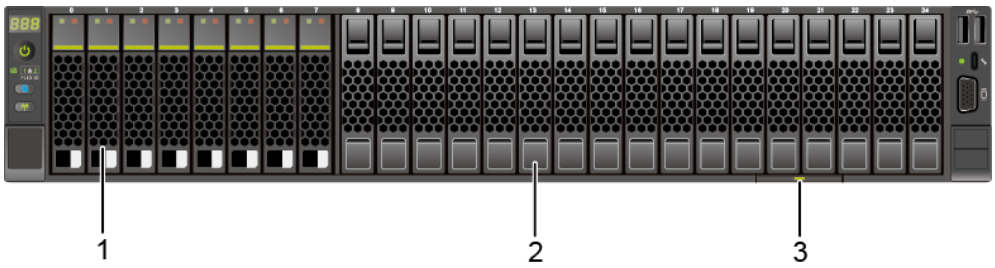
1.2.1.1 Appearance

- 8 x 2.5" drive configuration

  NOTE

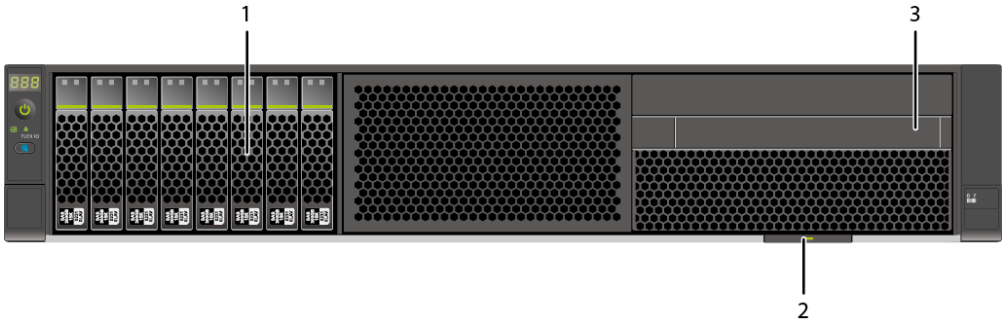
  Two types of front panels are configured on a server with 8 x 2.5" drives. The front panel appearance of the chassis delivered on or before June 30, 2022 is shown in **Figure 1-151**. The front panel appearance of the chassis delivered after June 30, 2022 is shown in **Figure 1-152**.

Figure 1-151 Front view 1



1	Drive	2	Filler modules **NOTE** The slot cannot hold drives.
3	Slide-out label plate (with an SN label)	-	-

Figure 1-152 Front view 2



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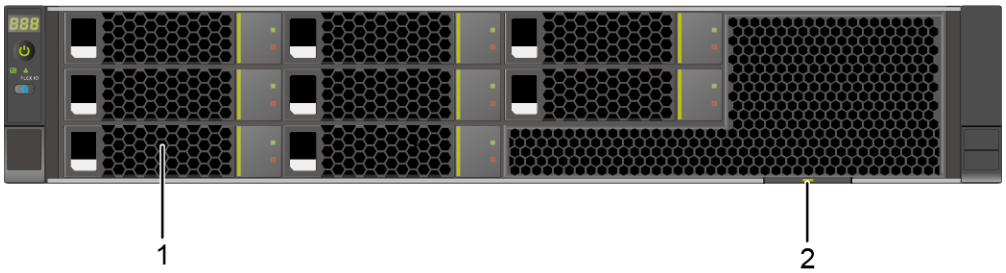
1	Drive	2	Slide-out label plate (with an SN label)
3	(Optional) Built-in DVD drive (or LCD module)	-	-

- 8 x 3.5" drive configuration

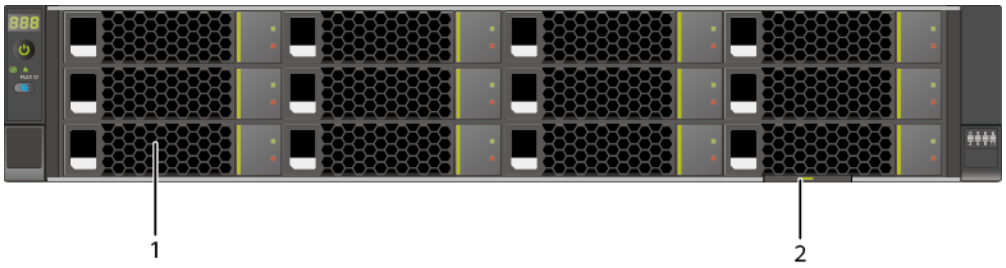
Figure 1-153 Front view



1	Drive	2	Slide-out label plate (with an SN label)

- 12 x 3.5" drive configuration

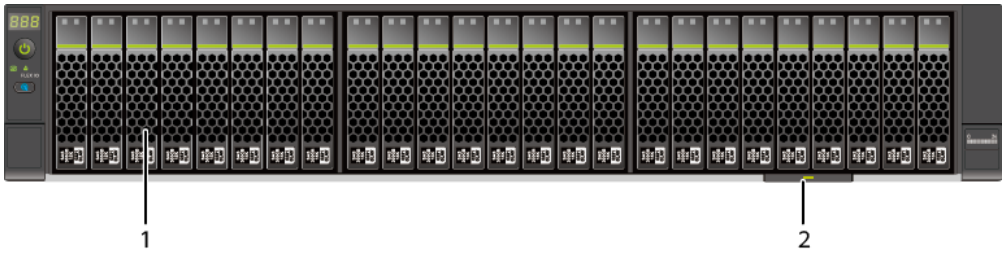
Figure 1-154 Front view



1	Drive	2	Slide-out label plate (with an SN label)

- 25 x 2.5" drive configuration

Figure 1-155 Front view



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1	Drive	2	Slide-out label plate (with an SN label)

1.2.1.2 Indicators and Buttons

Indicator and Button Positions

- 8 x 2.5" drive configuration

  NOTE

  Two types of front panels are configured on a server with 8 x 2.5" drives. The indicators and buttons on the front panel of the chassis delivered on or before June 30, 2022 are shown in **Figure 1-156**. The indicators and buttons on the front panel of the chassis delivered after June 30, 2022 are shown in **Figure 1-157**.

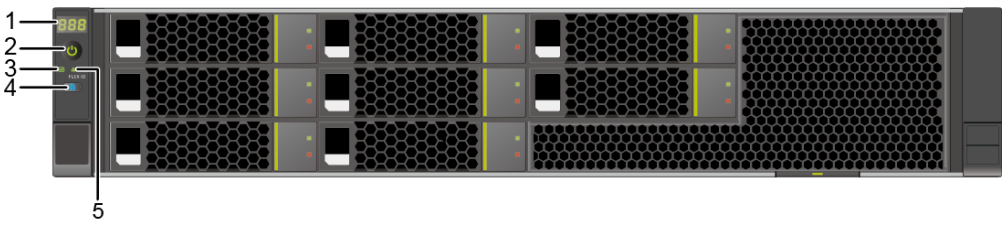
  Figure 1-156 Indicators and buttons on the front panel 1

  Figure 1-157 Indicators and buttons on the front panel 2

1	Fault Diagnosis LED	2	Power Button/Indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card presence indicator	-	-

- 8 x 3.5" drive configuration

  Figure 1-158 Indicators and buttons on the front panel

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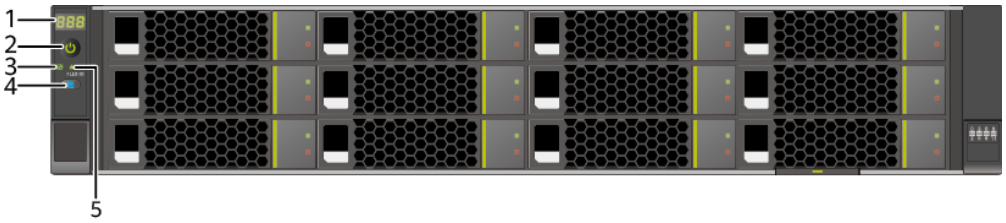
1	Fault Diagnosis LED	2	Power Button/Indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card presence indicator	-	-

- 12 x 3.5" drive configuration

Figure 1-159 Indicators and buttons on the front panel



1	Fault Diagnosis LED	2	Power Button/Indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card presence indicator	-	-

- 25 x 2.5" drive configuration

Figure 1-160 Indicators and buttons on the front panel

1	Fault Diagnosis LED	2	Power Button/Indicator
3	Health status indicator	4	UID button/indicator
5	FlexIO card presence indicator	-	-

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Indicator and Button Descriptions

Table 1-74 Description of indicators and buttons on the front panel

[Azure] Available	Indicator/ Button	Description
	Fault Diagnosis LED	● ---: The device is operating properly. ● Error code: A component is faulty. For details about error codes, see the *iBMC Alarm Handling*. **NOTE** If multiple error codes are generated at the same time, the error codes are displayed in a loop. Each error code is displayed for 5 seconds.
	Power Button/ Indicator	Power indicator: ● Off: The device is not powered on. ● Steady green: The device is powered on. ● Blinking yellow: The iBMC is starting. The power button is locked and cannot be pressed. The iBMC is started in about 1 minute, and then the power indicator is steady yellow. ● Steady yellow: The device is standby. Power button: ● When the device is powered on, you can press this button to gracefully shut down the OS. **NOTE** For different OSs, you may need to shut down the OS as prompted. ● When the device is powered on, you can hold down this button for 6 seconds to forcibly power off the device. ● When the power indicator is steady yellow, you can press this button to power on the device.
	Health status indicator	● Off: The device is powered off or is faulty. ● Blinking red at 1 Hz: A major alarm has been generated on the system. ● Blinking red at 5 Hz: A critical alarm has been generated on the system. ● Steady green: The device is operating properly.

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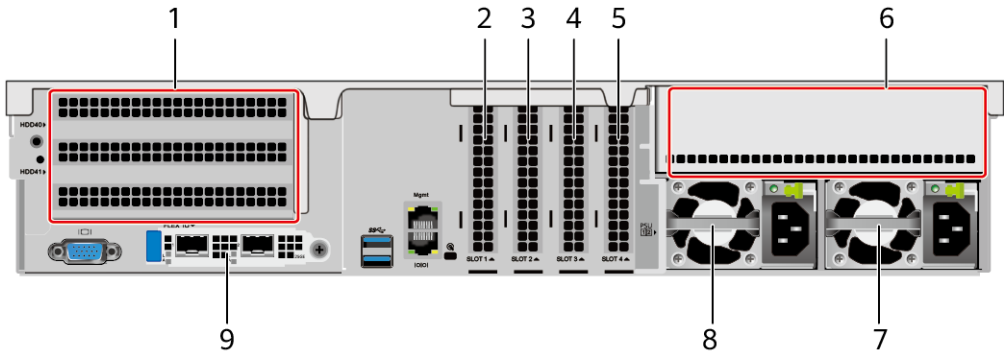
[Azure] Available	Indicator/ Button	Description
	UID Button/ Indicator	The UID button/indicator helps identify and locate a device. UID indicator: ● Off: The device is not being located. ● Blinking or steady blue: The device is being located. UID button: ● You can control the UID indicator status by pressing the UID button or using the iBMC. ● You can press this button to turn on or off the UID indicator. ● You can press and hold down this button for 4 to 6 seconds to reset the iBMC.
	FlexIO card presence indicator	● Off: The FlexIO card is not detected. ● Blinking green at 0.5 Hz: The FlexIO card is detected but is not powered on. ● Blinking green at 2 Hz: The FlexIO card is detected and has just been inserted. ● Steady green: The FlexIO card is detected and the power supply is normal.

1.2.2 Rear Panel

1.2.2.1 Appearance

Figure 1-161 Rear view



1	I/O module 1	2	PCIe Slot1
3	PCIe Slot2	4	PCIe Slot3

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5	PCIe Slot4	6	I/O module 3
7	PSU 2	8	PSU 1
9	FlexIO card **NOTE** The FlexIO card slot supports OCP 3.0 network adapters.	-	-

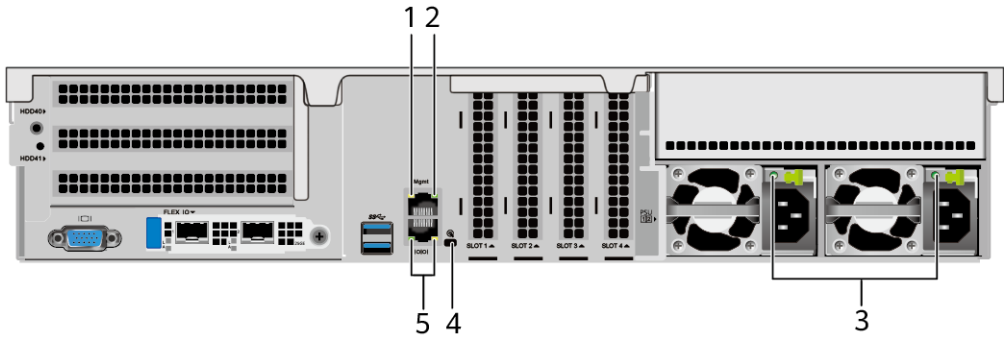
NOTE

- I/O module 1 supports only the 2 x 3.5" rear-drive module.
- I/O module 3 supports a PCIe riser module or 4 x 2.5" rear-drive module.
- For details about the OCP 3.0 network adapter, see **1.2.6.1 OCP 3.0 Network Adapters**.
- The figure is for reference only. The actual configuration may vary.

1.2.2.2 Indicators and Buttons

Indicator Positions

Figure 1-162 Indicators on the rear panel



1	Data transmission status indicator of the management network port	2	Connection status indicator of the management network port
3	PSU indicator	4	UID indicator
5	Serial port indicator **NOTE** Reserved and unavailable currently.	-	-

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Indicator Description

Table 1-75 Description of indicators on the rear panel

Identifier	Indicator	State Description
-	Data transmission status indicator of the management network port	● Off: No data is being transmitted. ● Blinking yellow: Data is being transmitted.
-	Connection status indicator of the management network port	● Off: The network port is not connected. ● Steady green: The network port is connected properly.
	UID indicator	The UID indicator helps identify and locate a device. ● Off: The device is not being located. ● Blinking or steady blue: The device is being located. **NOTE** You can control the UID indicator status by pressing the UID button or using the iBMC.
-	PSU indicator	● Off: No power is supplied. ● Blinking green at 1 Hz: – The input is normal, and the server is standby. – The input is overvoltage or undervoltage. – The PSU is in deep hibernation mode. ● Blinking green at 4 Hz: The firmware is being upgraded online. ● Steady green: The power input and output are normal. ● Steady orange: The input is normal but there is no output. **NOTE** The possible causes of no power output are as follows: ● Power supply overtemperature protection ● Power output overcurrent or short-circuit ● Output overvoltage ● Short-circuit protection ● Device failure (excluding failure of all devices)

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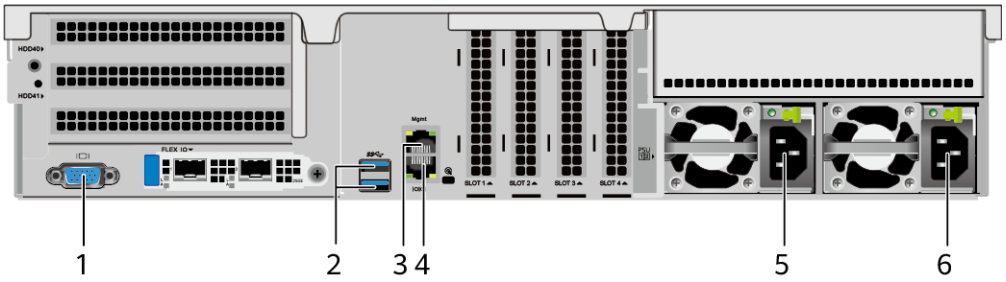
1.2.2.3 Interface

Port Positions

Figure 1-163 Ports on the rear panel



1	VGA port	2	USB 3.0 port
3	Management network port	4	Serial port
5	Socket for PSU 1	6	Socket for PSU 2

Port Description

Table 1-76 Ports on the rear panel

Port	Type	Quantity	Description
VGA port	DB15	1	Used to connect a display terminal, such as a monitor or KVM.

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Port	Type	Quantity	Description
USB port	USB 3.0	2	Used to connect to a USB 3.0 device. **NOTICE** ● The maximum current is 1.3 A for an external USB device. ● Before connecting an external USB device, ensure that the USB device functions properly. Otherwise, it may adversely impact the server. ● The USB 3.0 port can be used to supply power to low-power peripherals. However, the USB 3.0 port must comply with the USB specifications. To run advanced peripherals, such as external CD/DVD drives, an external power supply is required.
Management network port	RJ45	1	iBMC management network port, which is used to manage the server. **NOTE** ● The management network port is a GE port that supports 100 Mbit/s and 1000 Mbit/s auto-negotiation. ● The iBMC management network ports cannot be connected to power over Ethernet (PoE) devices (such as a switch with PoE enabled). Connecting a LOM port to a PoE device may cause link communication failure or even damage the NIC.
Serial port	RJ45	1	Default operating system serial port used for debugging. You can also set it as the iBMC serial port by using the iBMC command. **NOTE** The port uses 3-wire serial communication interface, and the default baud rate is 115,200 bit/s.

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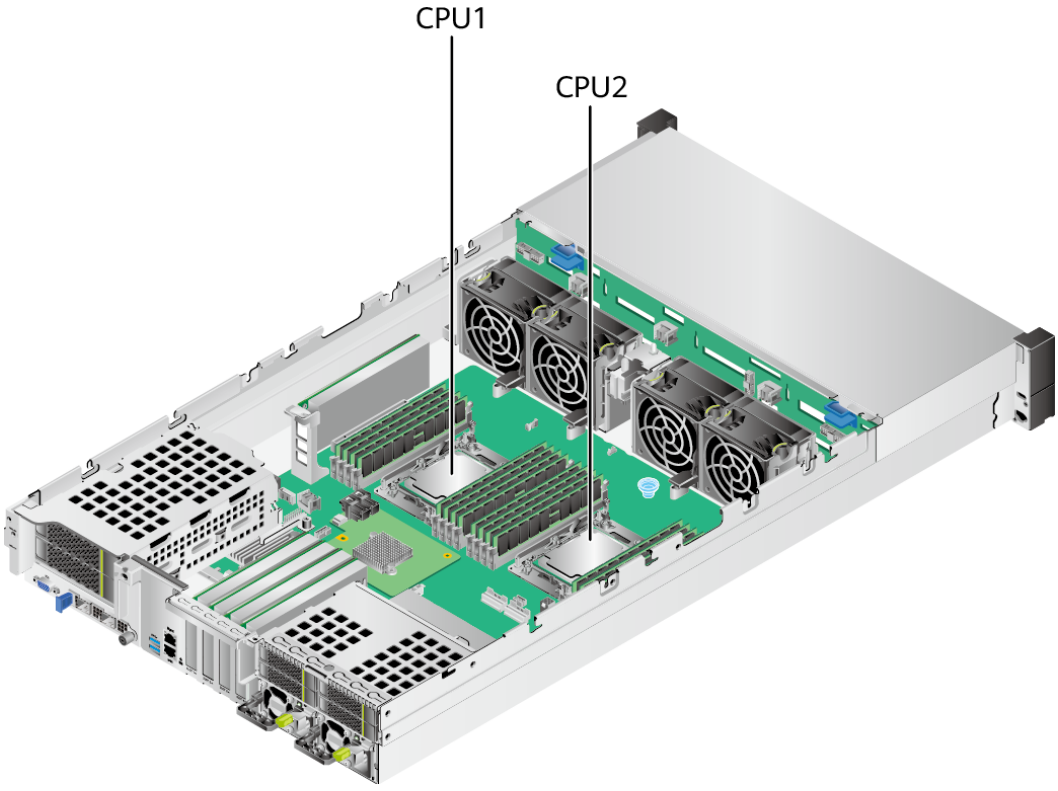
Port	Type	Quantity	Description
PSU socket	-	2	Used to connect to a power distribution unit (PDU) through a power cable. You can select the PSUs as required. **NOTE** When determining the PSUs, ensure that the rated power of the PSUs is greater than that of the server.

1.2.3 Processor

- The server supports one or two processors.
- If only one processor is required, install it in socket CPU1.
- Processors of the same model must be used in a server.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

Figure 1-164 Positions of processors



1.2.4 Memory

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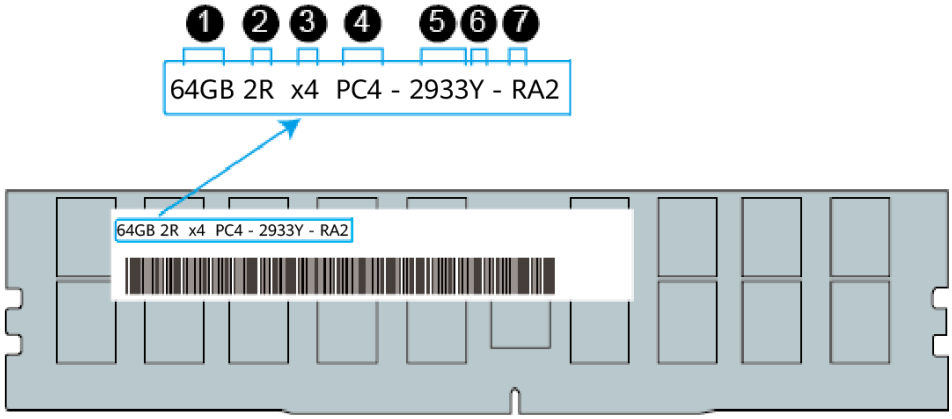
1.2.4.1 DDR4 Memory

1.2.4.1.1 Memory ID

You can determine the memory module properties based on the label attached to the memory module.

Figure 1-165 Memory identifier



No.	Description	Example
1	Capacity	• 16 GB • 32 GB • 64 GB • 128 GB
2	rank(s)	• 1R = Single rank • 2R = Dual rank • 4R = Quad rank • 8R = Octal rank
3	Data width on the DRAM	• x4: 4-bit • x8: 8-bit
4	Type of the memory interface	• PC4 = DDR4
5	Maximum memory speed	• 2933 MT/S • 3200 MT/S
6	Column Access Strobe (CAS) latency	• W=CAS 20-20-20 • Y=CAS 21-21-21 • AA=CAS 22-22-22
7	DIMM type	• R = RDIMM • L = LRDIMM

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1.2.4.1.2 Memory Subsystem Architecture

A server provides 16 memory slots. Each processor integrates eight memory channels.

Table 1-77 Channels

CPU	Channel	Memory Slot
CPU 1	A	DIMM000(A)
	B	DIMM010(B)
	C	DIMM020(C)
	D	DIMM030(D)
	E	DIMM040(E)
	F	DIMM050(F)
	G	DIMM060(G)
	H	DIMM070(H)
CPU 2	A	DIMM100(A)
	B	DIMM110(B)
	C	DIMM120(C)
	D	DIMM130(D)
	E	DIMM140(E)
	F	DIMM150(F)
	G	DIMM160(G)
	H	DIMM170(H)

1.2.4.1.3 Memory Compatibility

Observe the following rules when configuring DDR4 memory modules:

NOTICE

- A server must use DDR4 memory modules of the same part number (P/N code), and the memory speed is the minimum value of the following items:
  - Memory speed supported by a CPU
  - Maximum operating speed of a memory module
- The DDR4 DIMMs of different types (RDIMM and LRDIMM) and specifications (capacity, bit width, rank, and height) cannot be used together.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

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- The memory can be used with the third-generation Intel® Xeon® Scalable Ice Lake processors. The maximum memory capacity supported by all processor models is the same.
- The total memory capacity is the sum of the capacity of all DDR4 memory modules.
  - For details about the capacity type of a single memory module, see "Search Parts" in the compatibility list on the technical support website.
- The maximum number of memory modules supported depends on the memory type and rank quantity.

  NOTE

  Each memory channel supports a maximum of 8 ranks. The number of memory modules supported by each channel varies depending on the number of ranks supported by each channel:

  Number of memory modules supported by each channel ≤ Number of ranks supported by each memory channel/Number of ranks supported by each memory module

Table 1-78 DDR4 memory specifications

Parameter		Specifications			
Capacity per DDR4 memory module (GB)		16	32	64	128
Type		RDIMM	RDIMM	RDIMM	LRDIMM
Rated speed (MT/s)		3200	3200	3200	3200
Operating voltage (V)		1.2	1.2	1.2	1.2
Maximum number of DDR4 DIMMs in a server[a]		16	16	16	16
Maximum DDR4 memory capacity of the server (GB)		256	512	1024	2048
Actual rate (MT/s)	1DPC[b]	3200	3200	3200	3200

- a: The maximum number of DDR4 memory modules is based on dual-processor configuration. The value is halved for a server with only one processor.
- b: DPC (DIMM per channel) indicates the number of memory modules per channel.
- The information listed in this table is for reference only. For details, consult the local sales representative.

1.2.4.1.4 DIMM Installation Rules

Observe the following when configuring DDR4 memory modules:

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- Install memory modules only when corresponding processors are installed.
- Do not install LRDIMMs and RDIMMs in the same server.
- Install filler memory modules in vacant slots.

Observe the following when configuring DDR4 memory modules in specific operating mode:

- Memory sparing mode
  - Comply with the general installation guidelines.
  - Each memory channel must have a valid online spare configuration.
  - The channels can have different online spare configurations.
  - Each populated channel must have a spare rank.
- Memory mirroring mode
  - Comply with the general installation guidelines.
  - Each processor supports four integrated memory controllers (IMCs), and each IMC has two channels for installing memory modules. The installed memory modules must be identical in size and organization.
  - For a multi-processor configuration, each processor must have a valid memory mirroring configuration.
- Memory scrubbing mode
  - Comply with the general installation guidelines.

1.2.4.1.5 Memory Installation Positions

A server supports a maximum of 16 DDR4 memory modules. To maximize performance, balance the total memory capacity between the installed processors and to load the channels similarly whenever possible.

Observe the memory module installation rules when configuring memory modules. For details, see the *Memory Configuration Guide* of the server on the technical support website.

NOTICE

At least one DDR4 memory module must be installed in the primary memory channels corresponding to CPU 1.

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Figure 1-166 Memory slots

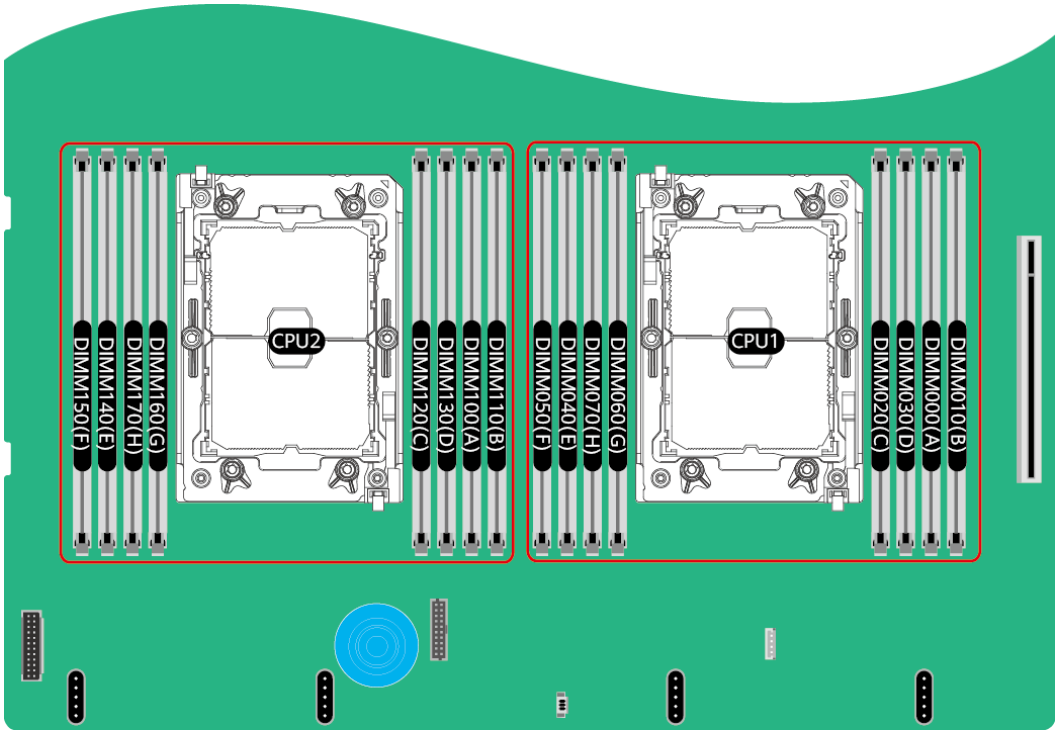

Figure 1-167 DDR4 memory module installation guidelines (1 processor)

CPU	Channel	DIMM Slot	Number of DIMMs				
			✓	✓	✓	✓	✓
			1	2	4	6	8
CPU1	A	DIMM000(A)	●	●	●	●	●
	B	DIMM010(B)				●	●
	C	DIMM020(C)			●	●	●
	D	DIMM030(D)					●
	E	DIMM040(E)		●	●	●	●
	F	DIMM050(F)				●	●
	G	DIMM060(G)			●	●	●
	H	DIMM070(H)					●

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Figure 1-168 DDR4 memory module installation guidelines (2 processors)

CPU	Channel	DIMM Slot	Number of DIMMs				
			2	4	8	12	16
CPU1	A	DIMM000(A)	●	●	●	●	●
	B	DIMM010(B)				●	●
	C	DIMM020(C)			●	●	●
	D	DIMM030(D)					●
	E	DIMM040(E)		●	●	●	●
	F	DIMM050(F)				●	●
	G	DIMM060(G)			●	●	●
	H	DIMM070(H)					●
CPU2	A	DIMM100(A)	●	●	●	●	●
	B	DIMM110(B)				●	●
	C	DIMM120(C)			●	●	●
	D	DIMM130(D)					●
	E	DIMM140(E)		●	●	●	●
	F	DIMM150(F)				●	●
	G	DIMM160(G)			●	●	●
	H	DIMM170(H)					●

1.2.4.1.6 Memory Protection Technologies

The following memory protection technologies are supported:

- ECC
- Memory Mirroring
- Memory Single Device Data Correction (SDDC)
- Failed DIMM Isolation
- Memory Thermal Throttling
- Command/Address Parity Check and Retry
- Memory Demand/Patrol Scrubbing
- Memory Data Scrambling
- Post Package Repair (PPR)
- Write Data CRC Protection
- Adaptive Data Correction - Single Region (ADC-SR)
- Adaptive Double Device Data Correction - Multiple Region (ADDDC-MR)
- Partial Cache Line Sparing (PCLS)

1.2.5 Storage

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1.2.5.1 Drive Configurations

1.2.5.1.1 8 x 2.5" drive pass-through configuration

Drive configuration

Table 1-79 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 2.5" drive pass-through configuration 1	● Front drive: 8 x 2.5" – Slots 0 to 7 support only SATA drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SATA drive: PCH ● NVMe drive: CPU
8 x 2.5" drive pass-through configuration 2	● Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[b] ● NVMe drive: CPU
8 x 2.5" drive pass-through configuration 3	● Front drive: 8 x 2.5" – Slots 0 to 7 support only SAS/ SATA drives.	● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x PCIe RAID controller card[c] The PCIe RAID controller card must be installed in slot 1. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards. • c: For now, this configuration supports only the 9460-8i (3508), 9440-8i (3408iMR), 9560-8i (3908) and 9540-8i (3808iMR) PCIe plug-in RAID controller cards. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.2.11.2 Drive Backplane**.				

Slot numbers

- Drive slot numbers of 8 x 2.5" drive pass-through configuration 1 in **Table 1-79**

Figure 1-169 Slot numbers

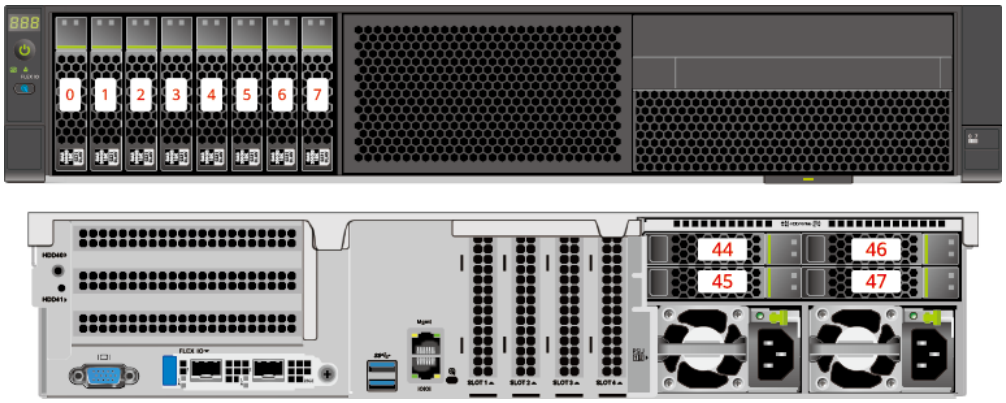

Table 1-80 Slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5

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Drive No.	Drive Number Identified by the iBMC
6	6
7	7
44	44
45	45
46	46
47	47

- Drive slot numbers of 8 x 2.5" drive pass-through configuration 2 and 8 x 2.5" drive pass-through configuration 3 in **Table 1-79**

Figure 1-170 Slot numbers

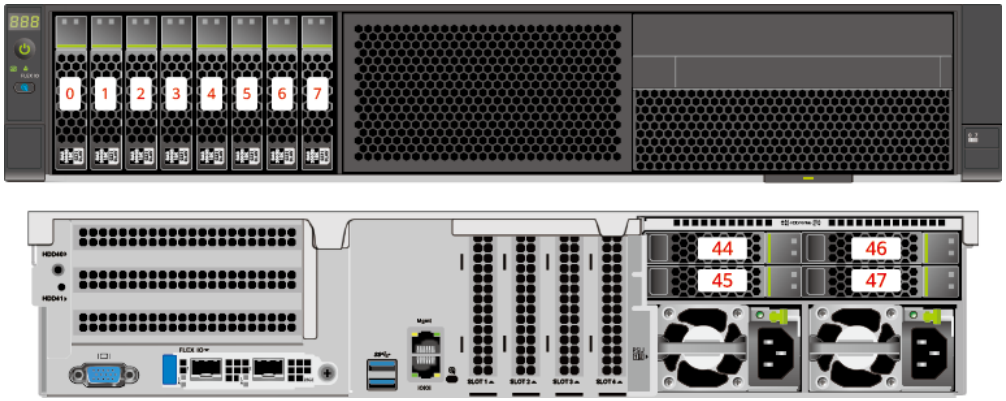

Table 1-81 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
44	44	-

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
45	45	-
46	46	-
47	47	-

1.2.5.1.2 8 x 3.5" drive pass-through configuration

Drive configuration

Table 1-82 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
8 x 3.5" drive pass-through configuration 1	• Front drive: 8 x 3.5" – Slots 0 to 7 support only SAS/ SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card • NVMe drive: CPU
8 x 3.5" drive pass-through configuration 2	• Front drive: 8 x 3.5" – Slots 0 to 7 support only SAS/ SATA drives.	• I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[b] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only the 9460-8i (3508) and 9560-8i (3908) PCIe plug-in RAID controller card. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.2.11.2 Drive Backplane**.				

Slot numbers

- Drive slot numbers of 8 x 3.5" drive pass-through configuration 1 and 8 x 3.5" drive pass-through configuration 2 in **Table 1-82**

Figure 1-171 Slot numbers

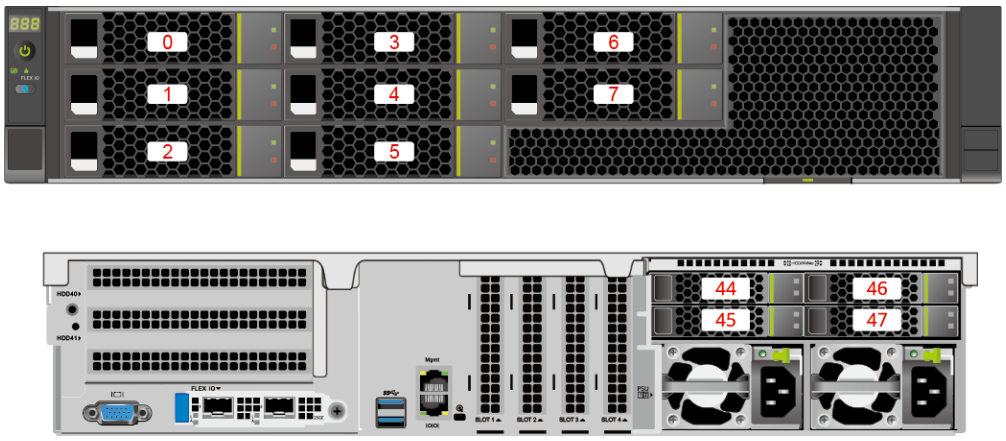

Table 1-83 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
6	6	6
7	7	7
44	44	-
45	45	-
46	46	-
47	47	-

1.2.5.1.3 12 x 3.5" drive pass-through configuration

Drive configuration

Table 1-84 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 1	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SATA drive: PCH • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 2	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x screw-in RAID controller card[b] • NVMe drive: CPU
12 x 3.5" drive pass-through configuration 3	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 4 (dual RAID controller cards)	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[d]. The PCIe RAID controller card must be configured in the built-in PCIe slot. – The screw-in RAID controller card manages the SAS/ SATA drives in slots 40 to 41. – The PCIe RAID controller card manages SAS/ SATA drives in slots 0 to 11. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 1 (4 x NVMe)	● Front drive: 12 x 3.5" – Slots 0 to 7 support only SATA drives. – Slots 8 to 11 support only SATA/ NVMe drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SATA drives.	-	● SATA drive: PCH ● NVMe drive: CPU
12 x 3.5" drive pass-through configuration 2 (4 x NVMe)	● Front drive: 12 x 3.5" – Slots 0 to 7 support only SAS/ SATA drives. – Slots 8 to 11 support SAS/ SATA/ NVMe drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives.	-	● SAS/SATA drive: 1 x screw-in RAID controller card[e] ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive pass-through configuration 3 (4 x NVMe)	• Front drive: 12 x 3.5" – Slots 0 to 7 support only SAS/ SATA drives. – Slots 8 to 11 support SAS/ SATA/ NVMe drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives.	-	• SAS/SATA drive: 1 x PCIe RAID controller card[c] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • b: For now, this configuration supports only theXR760-M (3416iMR) and XR760IT-M (3416IT) screw-in RAID controller cards. • c: For now, this configuration supports only the 9460-16i (3516) and 9560-16i (3916) PCIe plug-in RAID controller cards. • d: For now, this configuration supports only the XR450C-MX (3508) screw-in RAID controller card, and 9460-16i (3516) PCIe plug-in RAID controller card. • e: For now, this configuration supports only the XR760-M (3416iMR) screw-in RAID controller card. • Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.2.11.2 Drive Backplane**.				

Slot numbers

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 1 in **Table 1-84**

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Figure 1-172 Slot numbers

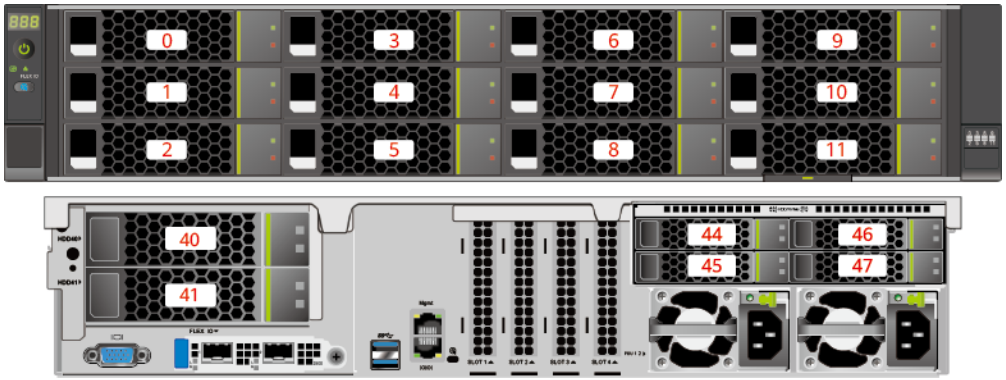

Table 1-85 Slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
40	40
41	41
44	44
45	45
46	46
47	47

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 2 and 12 x 3.5" drive pass-through configuration 3 in **Table 1-84**

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Figure 1-173 Slot numbers

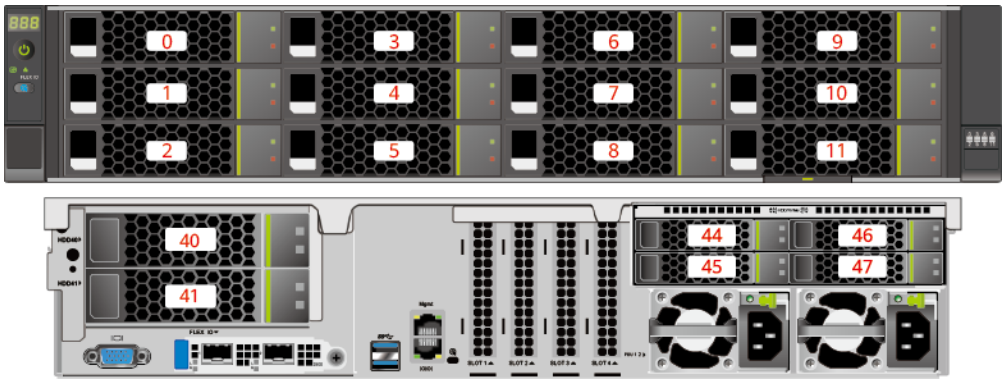

Table 1-86 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 4 (dual RAID controller cards) in **Table 1-84**

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Figure 1-174 Slot numbers

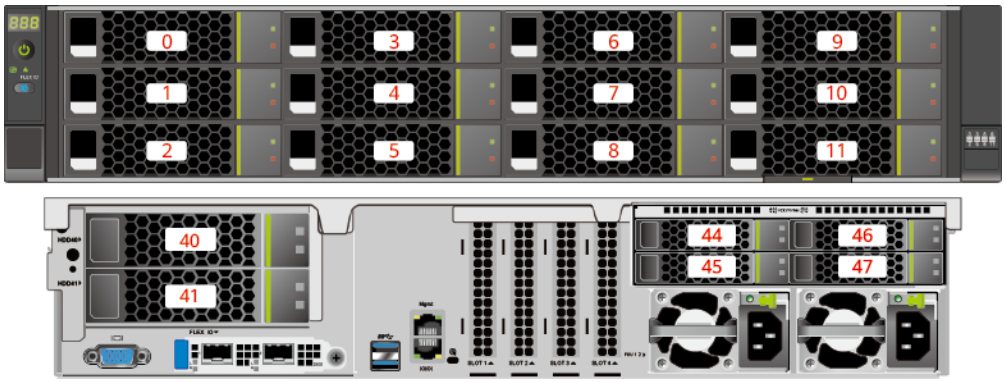

Table 1-87 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	0
41	41	1
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 1 (4 x NVMe) in **Table 1-84**

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Figure 1-175 Slot numbers

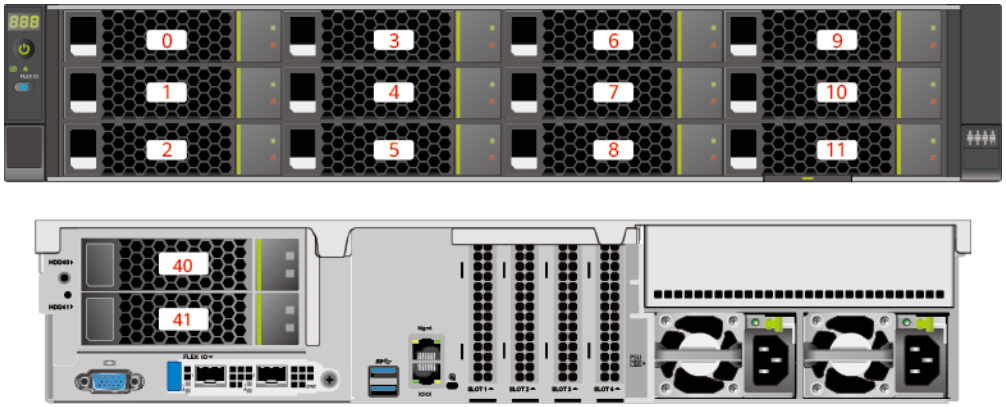

Table 1-88 Slot numbers

Drive No.	Drive Number Identified by the iBMC
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
40	40
41	41

- Drive slot numbers of 12 x 3.5" drive pass-through configuration 2 (4 x NVMe) and 12 x 3.5" drive pass-through configuration 3 (4 x NVMe) in **Table 1-84**

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Figure 1-176 Slot numbers

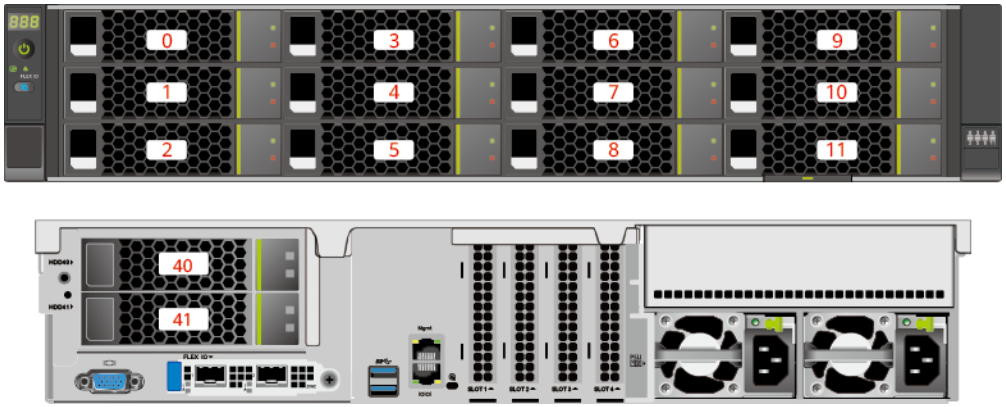

Table 1-89 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8[Note]
9	9	9[Note]
10	10	10[Note]
11	11	11[Note]
40	40	12
41	41	13
Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.		

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1.2.5.1.4 12 x 3.5" drive EXP configuration

Drive configuration

Table 1-90 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 1	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[b] ● NVMe drive: CPU
12 x 3.5" drive EXP configuration 2	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x PCIe RAID controller card[c] The PCIe RAID controller card must be installed in slot 1. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 3(dual RAID controller cards)	● Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[d]. The PCIe RAID controller card must be configured in the built-in PCIe slot. – The screw-in RAID controller card manages the SAS/ SATA drives in slots 40 to 41. – The PCIe RAID controller card manages SAS/ SATA drives in slots 0 to 11. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
12 x 3.5" drive EXP configuration 4[e]	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[f] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU

- a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives.
- b: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards.
- c: For now, this configuration supports only the 9460-8i (3508), 9440-8i (3408iMR), and 9560-8i (3908) PCIe plug-in RAID controller cards. The 9560-8i (3908) PCIe plug-in RAID controller card is used only for 12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255).
- d: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards, and 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards.
- e: Use the 12 x 3.5-inch EXP drive backplane 3.
- f: For now, this configuration supports only the 9560-8i (3908) PCIe plug-in RAID controller card.
- Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- Note2: For details about the backplane specifications supported by each drive configuration, see **1.2.11.2 Drive Backplane**.

Slot numbers

- Drive slot numbers of 12 x 3.5" drive EXP configuration 1 and 12 x 3.5" drive EXP configuration 2 in **Table 1-90**

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Figure 1-177 Slot numbers

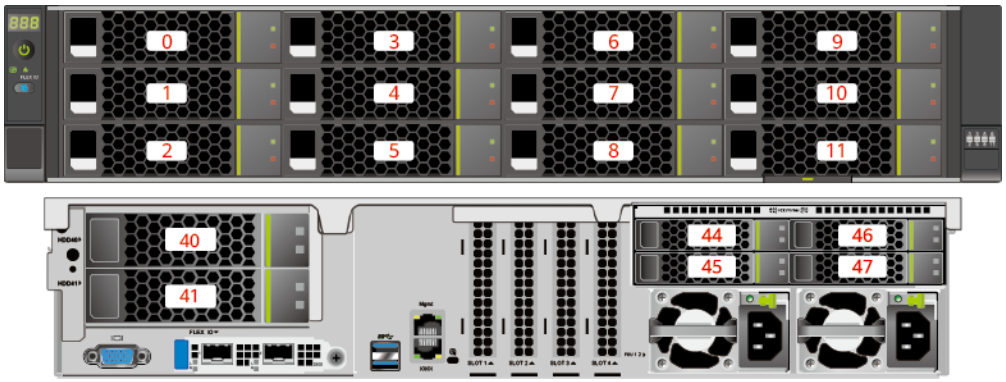

Table 1-91 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive EXP configuration 3 (dual RAID controller cards) in **Table 1-90**

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Figure 1-178 Slot numbers

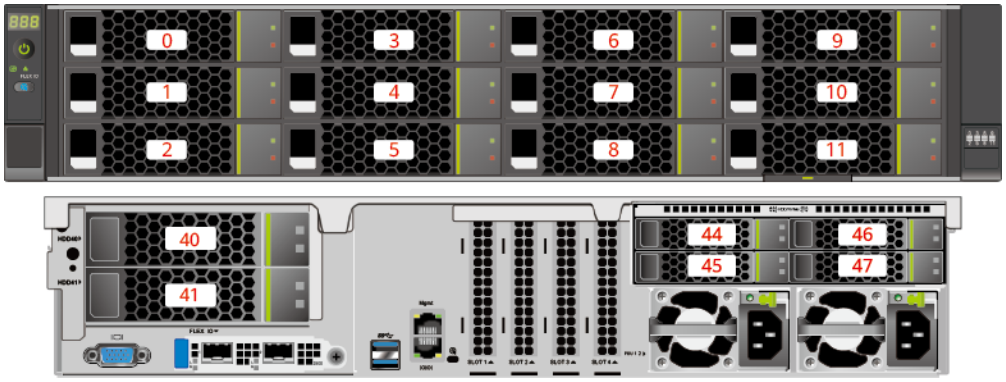

Table 1-92 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	0
41	41	1
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 12 x 3.5" drive EXP configuration 4 in **Table 1-90**

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Figure 1-179 Slot numbers

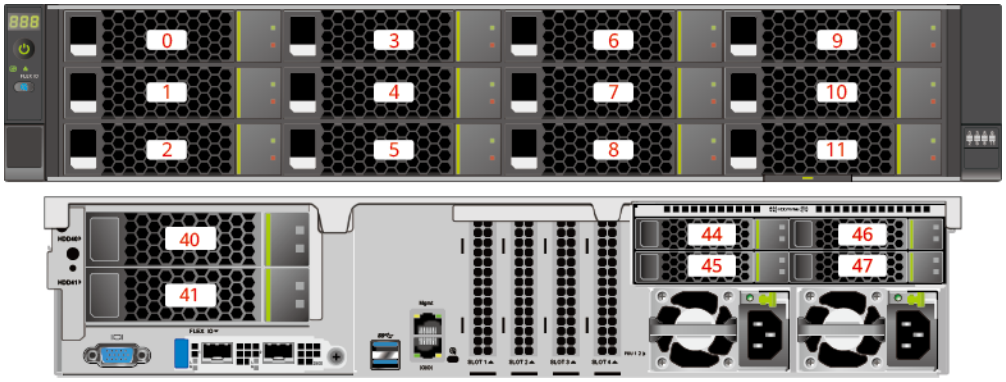

Table 1-93 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
40	40	12
41	41	13
44	44	-
45	45	-
46	46	-
47	47	-

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1.2.5.1.5 16 x 3.5" drive EXP configuration

Drive configuration

Table 1-94 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
16 x 3.5" drive EXP configuration 1	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/b].	• Built-in drive: 4 x 3.5" – Slots 36 to 39 support only SAS/ SATA drives.	• SAS/SATA drive: 1 x screw-in RAID controller card[c] • NVMe drive: CPU
16 x 3.5" drive EXP configuration 2	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/b].	• Built-in drive: 4 x 3.5" – Slots 36 to 39 support only SAS/ SATA drives.	• SAS/SATA drive: 1 x PCIe RAID controller card[d] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
16 x 3.5" drive EXP configuration 3[e]	• Front drive: 12 x 3.5" – Slots 0 to 11 support only SAS/ SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/b] .	• Built-in drive: 4 x 3.5" – Slots 36 to 39 support only SAS/ SATA drives.	• SAS/SATA drive: 1 x PCIe RAID controller card[f] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU
• a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives. • c: For now, this configuration supports only the XR760IT-M (3416IT) and XR760-M (3416iMR) screw-in RAID controller cards. • d: For now, this configuration supports only the 9460-16i (3516) PCIe plug-in RAID controller card. • e: Use the 12 x 3.5-inch EXP drive backplane 3. • f: For now, this configuration supports only the 9560-16i (3916) PCIe plug-in RAID controller card. • Note1: Contact your local sales representative or see "Search Parts" in the **Compatibility List** to determine the components to be used. • Note2: For details about the backplane specifications supported by each drive configuration, see **1.2.11.2 Drive Backplane**.				

Slot numbers

- Drive slot numbers of 16 x 3.5" drive EXP configuration 1 and 16 x 3.5" drive EXP configuration 2 in **Table 1-94**

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Figure 1-180 Slot numbers

Table 1-95 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
10	10	10
11	11	11
36	36	8
37	37	9
38	38	10
39	39	11
40	40	12
41	41	13
44	44	12Note
45	45	13Note
46	46	14Note
47	47	15Note
• Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive. • If duplicate RAID controller card numbers are displayed, identify the RAID controller cards based on the EID.		

- Drive slot numbers of 16 x 3.5" drive EXP configuration 3 in **Table 1-94**

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Figure 1-181 Slot numbers

Table 1-96 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
10	10	10
11	11	11
36	36	8
37	37	9
38	38	10
39	39	11
40	40	12
41	41	13
44	44	12Note
45	45	13Note
46	46	14Note
47	47	15Note

- Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive.
- If duplicate RAID controller card numbers are displayed, identify the RAID controller cards based on the EID.

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1.2.5.1.6 25 x 2.5" drive EXP configuration

Drive configuration

Table 1-97 Drive configuration

Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 1	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[b] ● NVMe drive: CPU
25 x 2.5" drive EXP configuration 2	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x PCIe RAID controller card[c] The PCIe RAID controller card must be installed in slot 1. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 3	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/b].	-	● SAS/SATA drive: 1 x screw-in RAID controller card[d] ● NVMe drive: CPU
25 x 2.5" drive EXP configuration 4	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support SAS/ SATA/ NVMe drives[a/b].	-	● SAS/SATA drive: 1 x PCIe RAID controller card[e] The PCIe RAID controller card must be installed in slot 1. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 5 (dual RAID controller cards)	● Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	● I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. ● I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	● SAS/SATA drive: 1 x screw-in RAID controller card + 1 x PCIe RAID controller card[f]. The PCIe RAID controller card must be configured in the built-in PCIe slot. – The screw-in RAID controller card manages the SAS/ SATA drives in slots 40 to 41. – The PCIe RAID controller card manages SAS/ SATA drives in slots 0 to 24. ● NVMe drive: CPU

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Configuration	Front Drive	Rear Drive	Built-in Drive	Drive Management Mode
25 x 2.5" drive EXP configuration 6	• Front drive: 25 x 2.5" – Slots 0 to 24 support only SAS/ SATA drives.	• I/O module 1: 2 x 3.5" – Slots 40 and 41 support only SAS/ SATA drives. • I/O module 3: 4 x 2.5" – Slots 44 to 47 support only NVMe drives[a].	-	• SAS/SATA drive: 1 x PCIe RAID controller card[g] The PCIe RAID controller card must be installed in slot 1. • NVMe drive: CPU

- a: The server with CPU 2 supports NVMe drives, but the server with a single CPU does not support NVMe drives.
- b: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards.
- c: For now, this configuration supports only the 9460-8i (3508) and 9440-8i (3408iMR) PCIe plug-in RAID controller cards.
- d: For now, this configuration supports only the XR760-M (3416iMR) screw-in RAID controller card.
- e: For now, this configuration supports only the 9460-16i (3516) PCIe plug-in RAID controller card.
- f: For now, this configuration supports only the XR450C-MX (3508) and XR150-M (3408iMR) screw-in RAID controller cards and 9460-8i (3508), and 9440-8i (3408iMR) PCIe plug-in RAID controller cards.
- g: For now, this configuration supports only the9560-8i (3908) PCIe plug-in RAID controller card.
- Note1: For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- Note2: For details about the backplane specifications supported by each drive configuration, see **1.2.11.2 Drive Backplane**.

Slot numbers

- Drive slot numbers of 25 x 2.5" drive EXP configuration 1 and 25 x 2.5" drive EXP configuration 2 in **Table 1-97**

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Figure 1-182 Slot numbers

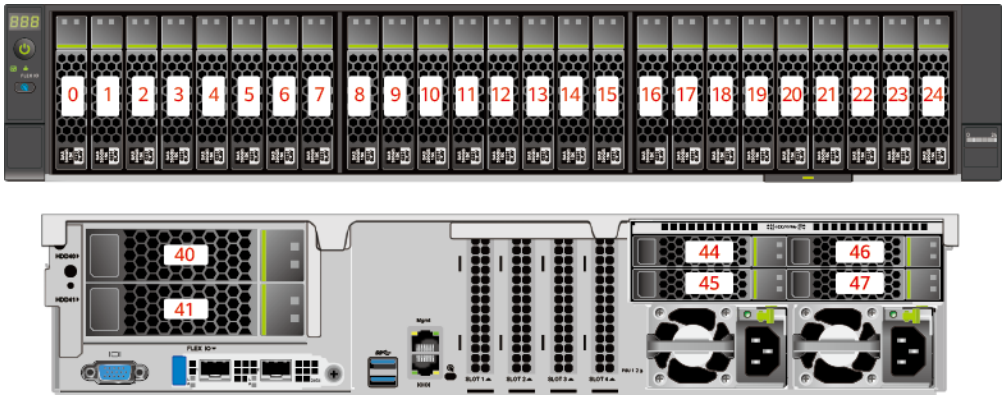

Table 1-98 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 25 x 2.5" drive EXP configuration 3 and 25 x 2.5" drive EXP configuration 4 in **Table 1-97**

Figure 1-183 Slot numbers

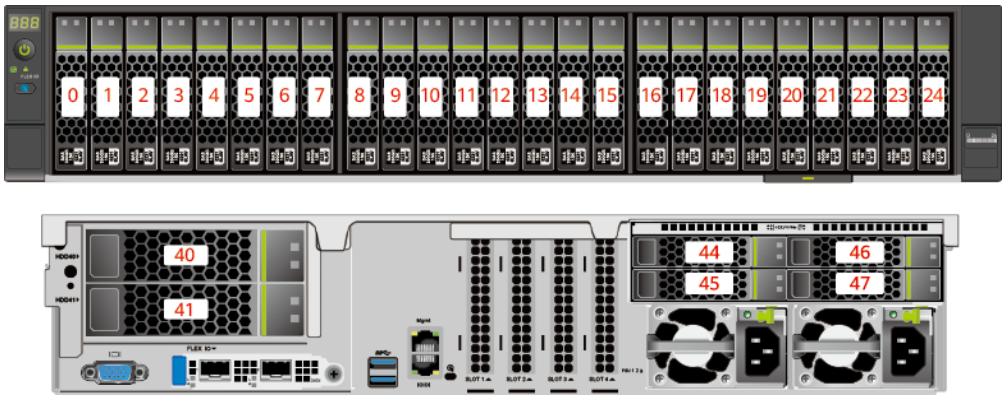

Table 1-99 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	8[Note]
45	45	9[Note]
46	46	10[Note]
47	47	11[Note]

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
• Note: If the slot is configured with a SAS/SATA drive, the RAID controller card can manage the drive and allocate a number to the drive. • If duplicate RAID controller card numbers are displayed, identify the RAID controller cards based on the EID.		

- Drive slot numbers of 25 x 2.5" drive EXP configuration 5 (dual RAID controller cards) in **Table 1-97**

Figure 1-184 Slot numbers

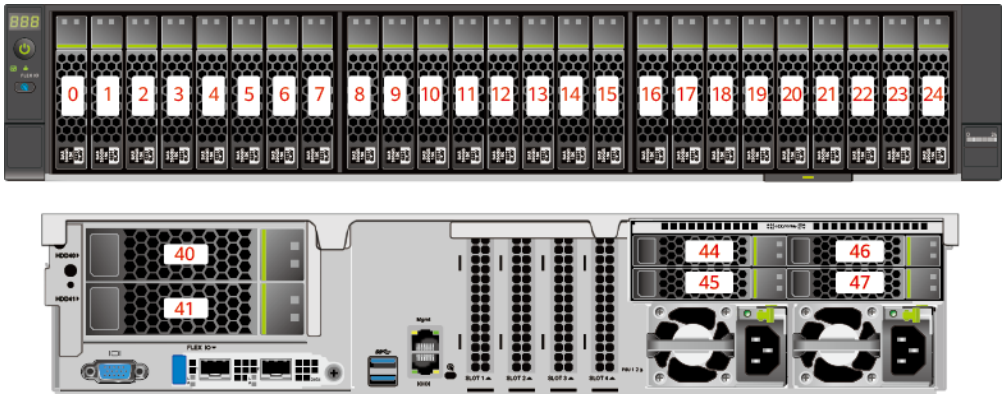

Table 1-100 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	0
41	41	1
44	44	-
45	45	-
46	46	-
47	47	-

- Drive slot numbers of 25 x 2.5" drive EXP configuration 6 in **Table 1-97**

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Figure 1-185 Slot numbers

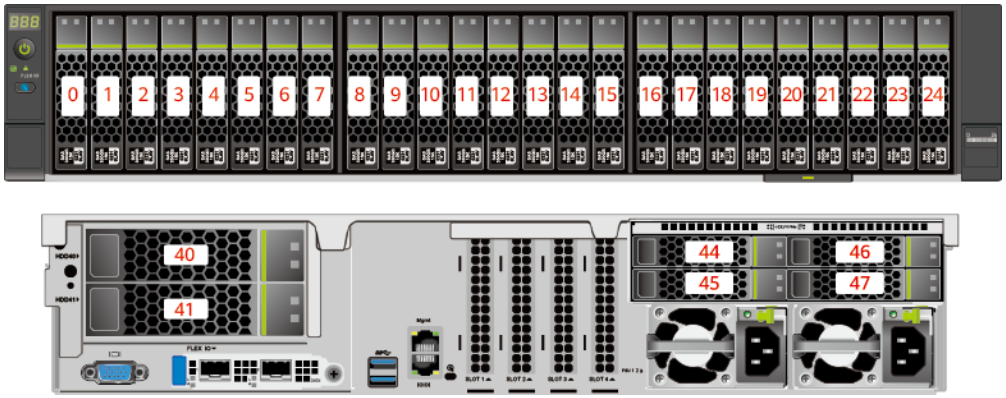

Table 1-101 Slot numbers

Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18

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Drive No.	Drive Number Identified by the iBMC	Drive Number Identified by the RAID Controller
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
40	40	25
41	41	26
44	44	-
45	45	-
46	46	-
47	47	-

1.2.5.2 Drive Indicators

SAS/SATA Drive Indicators

Figure 1-186 SAS/SATA drive indicators

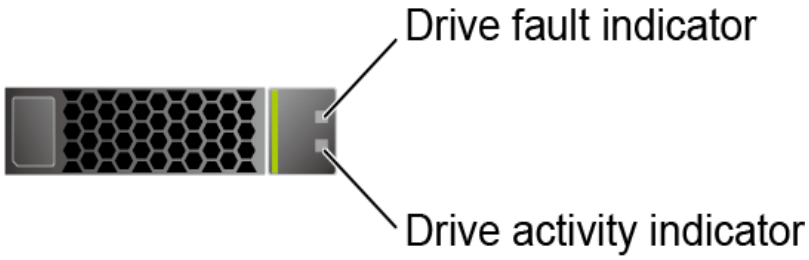

Table 1-102 SAS/SATA drive indicators

Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Off	The drive is not in position.
Steady on	Off	The drive is detected.
Blinking at 4 Hz	Off	Data is being read or written properly, or data on the primary drive is being rebuilt.

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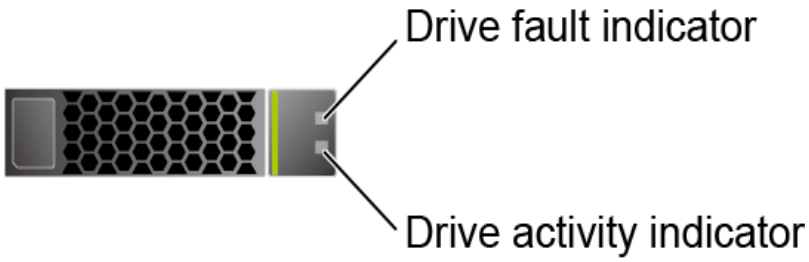
Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Steady on	Blinking at 1 Hz	The drive is being located.
Blinking at 1 Hz	Blinking at 1 Hz	Data on the secondary drive is being rebuilt.
Off	Steady on	A drive in a RAID array is removed.
Steady on	Steady on	The drive is faulty.

NVMe Drive Indicators

Figure 1-187 NVMe drive indicators



- If the VMD function is enabled and the latest VMD driver is installed, the NVMe drives support surprise hot swap.

  Table 1-103 NVMe drive indicators (VMD enabled)

Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Off	The NVMe drive is not detected.
Steady on	Off	The NVMe drive is detected and operating properly.
Blinking at 2 Hz	Off	Data is being read from or written to the NVMe drive.
Steady on	Blinking at 2 Hz	The NVMe drive is being located.
Off	Blinking at 8 Hz	The data on the secondary NVMe drive is being rebuilt.
Steady on/Off	Steady on	The NVMe drive is faulty.

- If the VMD function is disabled, NVMe drives support only orderly hot swap.

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Table 1-104 NVMe drive indicators (VMD disabled)

Activity Indicator (Green)	Fault Indicator (Yellow)	Description
Off	Off	The NVMe drive is not detected.
Steady on	Off	The NVMe drive is detected and operating properly.
Blinking at 2 Hz	Off	Data is being read from or written to the NVMe drive.
Off	Blinking at 2 Hz	The NVMe drive is being located or hot-swapped.
Off	Blinking at 0.5 Hz	The NVMe drive has completed the hot swap process and is removable.
Steady on/Off	Steady on	The NVMe drive is faulty.

M.2 FRU Indicators

The server supports the Avago SAS3004iMR RAID controller card, which supports two M.2 FRUs.

Figure 1-188 M.2 FRU indicators

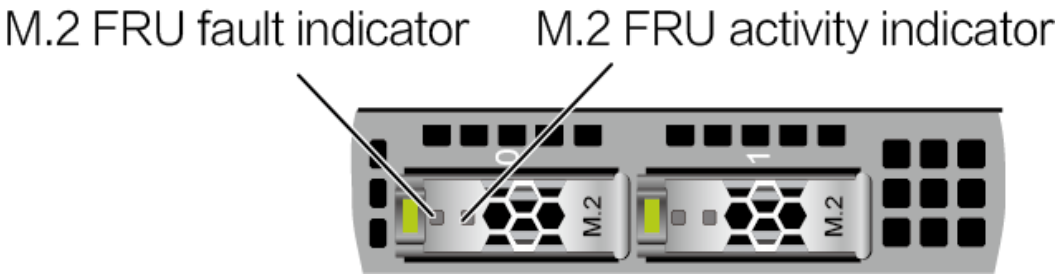

Table 1-105 M.2 FRU indicators

M.2 FRU Active Indicator (Green or Light Green)	M.2 FRU Fault Indicator (Yellow)	Description
Off	Off	The M.2 FRU is not detected.
Steady on	Off	The M.2 FRU is inactive.
Blink	Off	The M.2 FRU is in the read/write or synchronization state.
Steady on	Blink	The M.2 FRU is being located.
Blink	Blink	The RAID array is being rebuilt.

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M.2 FRU Active Indicator (Green or Light Green)	M.2 FRU Fault Indicator (Yellow)	Description
Off	Steady on	The M.2 FRU cannot be detected or is faulty.
Steady on	Steady on	The M.2 FRU RAID status is abnormal.

1.2.5.3 RAID Controller Card

The RAID controller card supports RAID configuration, RAID level migration, and drive roaming.

- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- For details about the RAID controller card, see server *RAID Controller Card User Guide*.

1.2.6 Network

1.2.6.1 OCP 3.0 Network Adapters

OCP 3.0 network adapters provide network expansion capabilities.

- The FlexIO slot supports the OCP 3.0 network adapter, which can be configured as required.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.
- For details about OCP 3.0 NICs, see OCP 3.0 *NIC User Guide*.

1.2.7 I/O Expansion

1.2.7.1 PCIe Card

PCIe cards provide ease of expandability and connection.

- A maximum of five PCIe 3.0 and two PCIe 4.0 slots are supported.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

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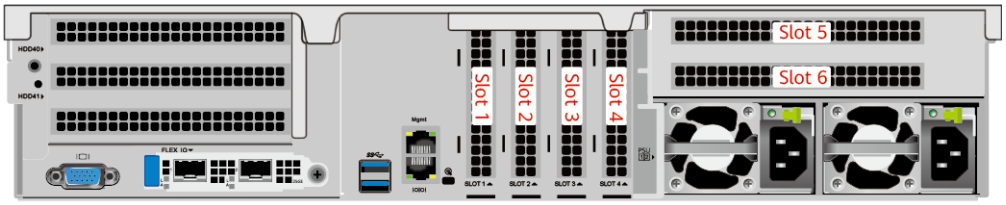
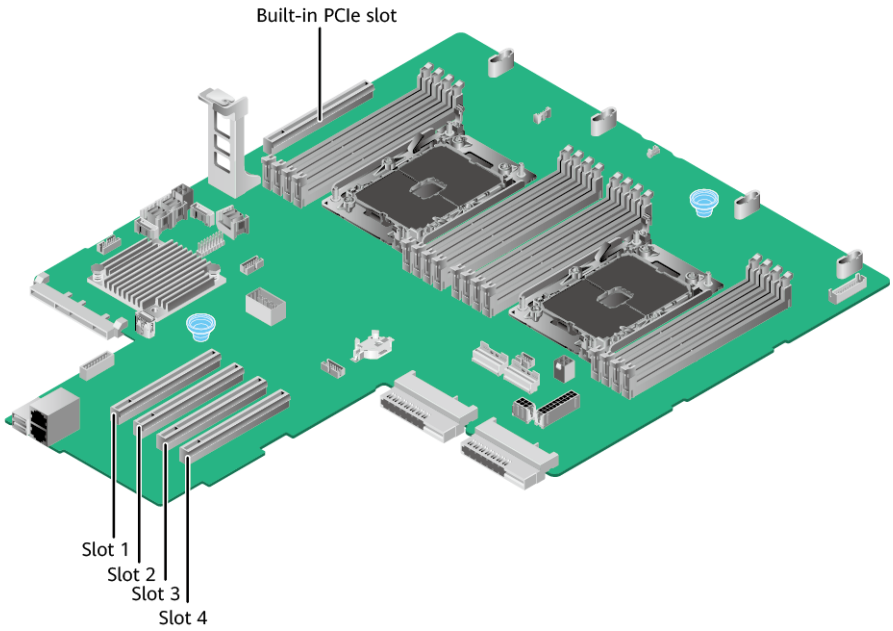
1.2.7.2 PCIe Slots

PCIe Slots

Figure 1-189 PCIe slots





- I/O module 3 provides slots 5 and 6. If a one-slot PCIe riser module is used, slot 5 is unavailable.
- The mainboard provides PCIe slots 1, 2, 3, and 4, and a built-in PCIe slot.

  NOTE

  T4 GPU cards can only be installed in slots 2 to 4 and the built-in PCIe slots.

PCIe Riser Module

- PCIe riser module

  Provides PCIe slots 5 and 6 when installed in I/O module 3.

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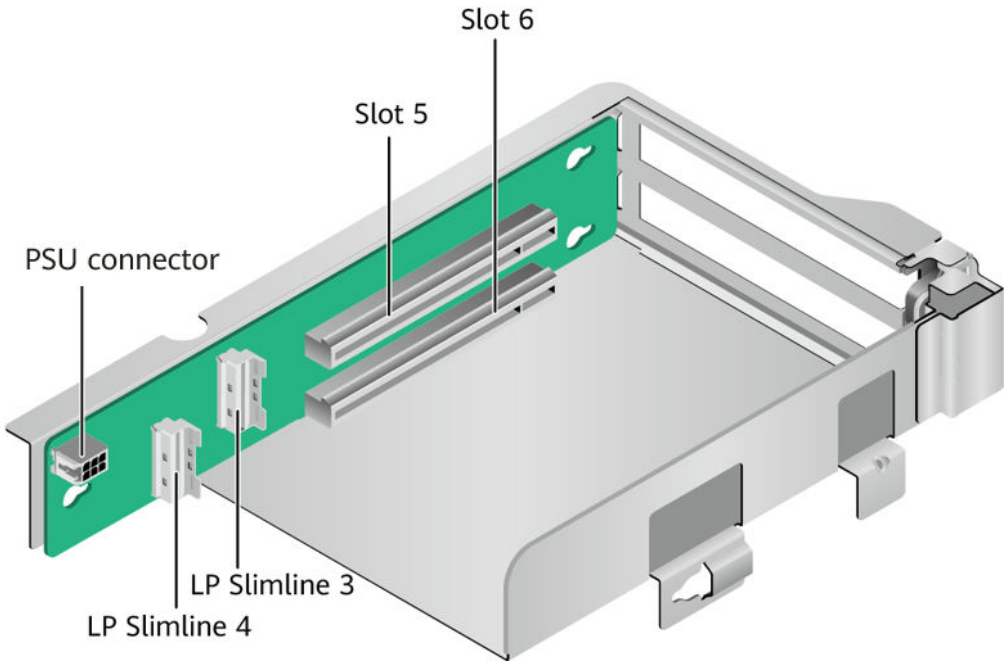
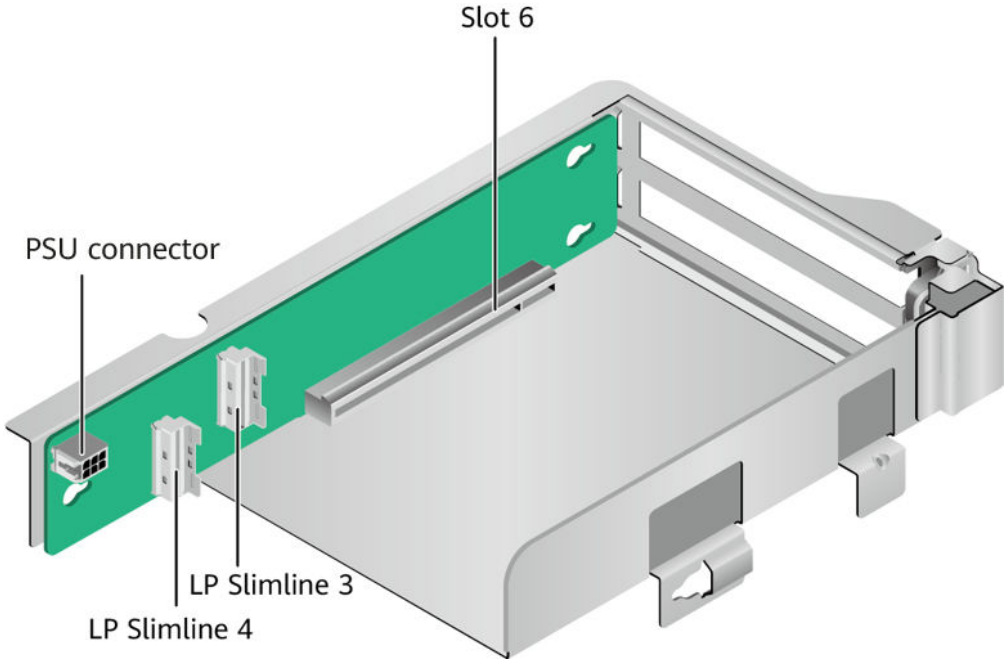
Figure 1-190 PCIe riser module



- PCIe riser module

  Provides PCIe slot 6 when installed in I/O module 3.

Figure 1-191 PCIe riser module



1.2.7.3 PCIe Slot Description

NOTE

The PCIe slots mapping to a vacant CPU socket are unavailable.

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Table 1-106 PCIe slot description

PCIe Slot	CPU	PCIe Standard	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Screw-in RAID controller card	CPU1	PCIe 3.0	x8	x8	Port1C	30/4/0	33/0/0	-
FlexIO card	CPU1	PCIe 3.0	x16	x16	Port0A	16/2/0	17/0/0	OCP 3.0 specifications
Built-in PCIe slot	CPU1	PCIe 3.0	x16	x16	Port3A	64/2/0	65/0/0	Half-height and half-length
Slot 1	CPU1	PCIe 3.0	x8	x8	Port1A	30/2/0	31/0/0	Half-height and half-length
Slot 2	CPU1	PCIe 3.0	x16	x16	Port2A	4A/2/0	4B/0/0	Half-height and half-length
Slot 3	CPU2	PCIe 3.0	x16	x16	Port0A	97/2/0	98/0/0	Half-height and half-length
Slot 4	CPU2	PCIe 3.0	x16	x16	Port1A	B0/2/0	B1/0/0	Half-height and half-length

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PCIe Slot	CPU	PCIe Standard	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Device (B/D/F)	Slot Size
Slot5	CPU2	PCIe 4.0	x16	• 2-slot PRM: x8 • 1-slot PRM: N/A	Port2A	C9/2/0	CA/0/0	Full-height and half-length
Slot6	CPU2	PCIe 4.0	x16	• 2-slot PRM: x8 • 1-slot PRM: x16	Port2C	C9/4/0	CC/0/0	Full-height and half-length

- The B/D/F (Bus/Device/Function Number) is the default value when the server is fully configured with PCIe cards. The value may differ if the server is not fully configured with PCIe cards or if a PCIe card with a PCI bridge is configured.
- Root Port (B/D/F) indicates the B/D/F of an internal PCIe root port of the processor.
- Device (B/D/F) indicates the B/D/F (bus address displayed on the OS) of an onboard or extended PCIe device.
- The PCIe x16 slots are compatible with PCIe x16, PCIe x8, PCIe x4, and PCIe x1 cards. The PCIe cards are not forward compatible. That is, the PCIe slot width cannot be smaller than the PCIe card link width.
- The full-height half-length (FHHL) PCIe slots are compatible with FHHL PCIe cards and half-height half-length (HHHL) PCIe cards.
- The maximum power supply of each PCIe slot is 75 W.

1.2.8 PSUs

- The server supports one or two PSUs.
- The server supports AC or DC PSUs.
- The PSUs are hot-swappable.
- The server supports two PSUs in 1+1 redundancy.

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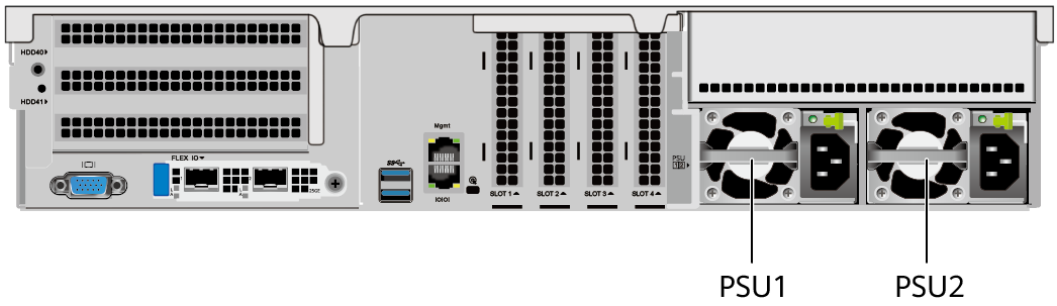
- PSUs of the same P/N code must be used in a server.
- The PSUs are protected against short circuit. Double-pole fuse is provided for the PSUs with dual input live wires.
- If the DC power supply is used, purchase the DC power supply that meets the requirements of the safety standards or the DC power supply that has passed the CCC certification.
- For details about the optional components, consult the local sales representative or see "Search Parts" in the compatibility list on the technical support website.

Figure 1-192 PSU positions



1.2.9 Fan Modules

- The server supports four fan modules.
- The fan modules are hot-swappable.
- N+1 redundancy is supported. That is, the server can work properly when a single fan fails.
- The fan speed can be adjusted.
- Fan modules of the same P/N code must be used in a server.

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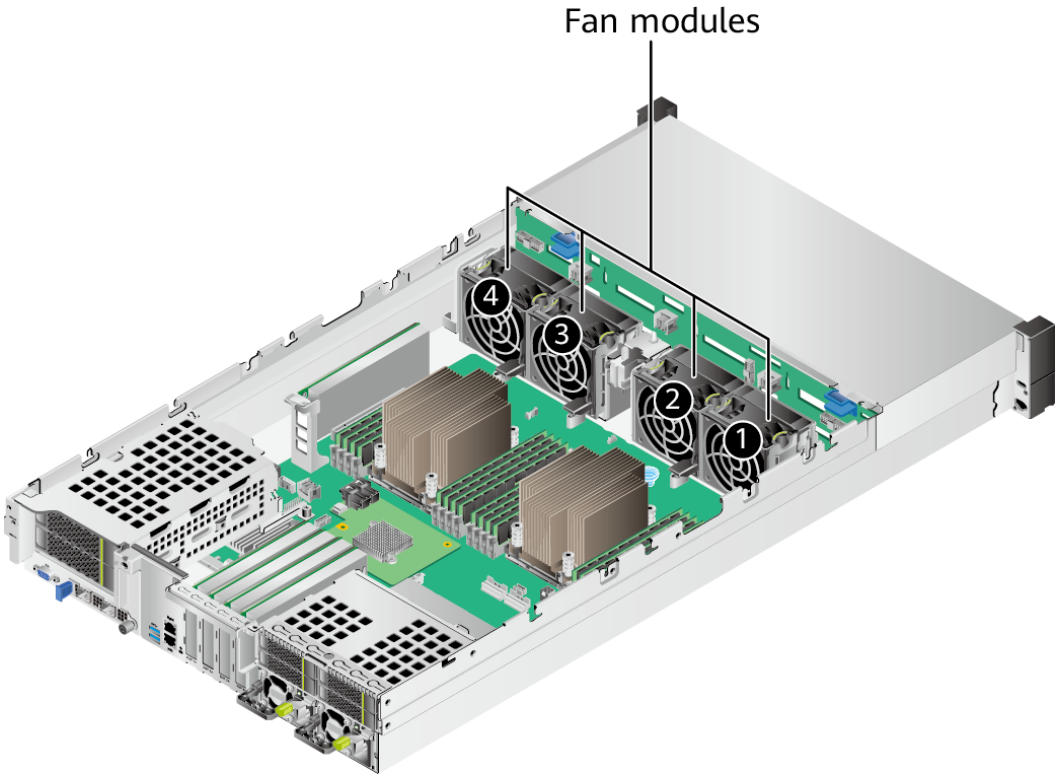
Figure 1-193 Positions of fan modules



1.2.10 LCD

NOTE

Only the 8 x 2.5" drive pass-through configuration supports the LCD.

Function

The LCD displays the installation status and running status of server components and enables users to set the IP address of the iBMC management network port on the server.

The LCD and the server iBMC form an LCD subsystem. The LCD directly obtains device information from the iBMC. The LCD subsystem does not store device data.

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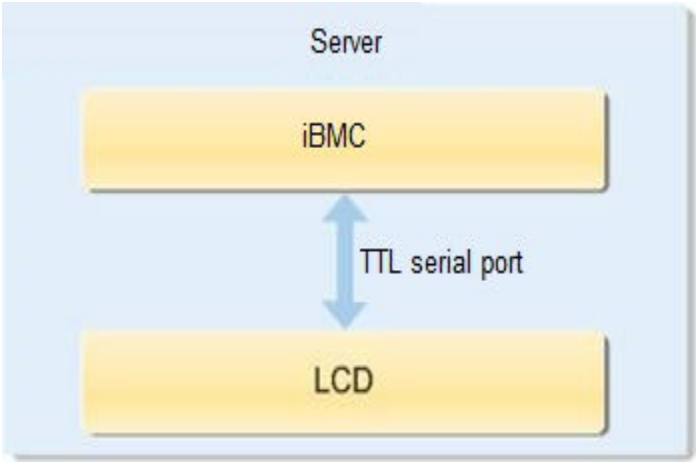
Figure 1-194 LCD subsystem working principle



1.2.10.1 LCD Software Environment

1.2.10.1.1 Icon Description

Table 1-107 Icon meaning

Icon	Description
	Indicates that the server is operating properly and that no alarms have been generated.
	Indicates that a minor alarm has been generated. A minor alarm has a minor impact on the system, but you need to take corrective action as soon as possible to prevent a more severe alarm.
	Indicates that a major alarm has been generated. A major alarm has a major impact on the system. It affects the normal operating of the system or may cause service interruption.
	Indicates that a critical alarm has been generated. A critical alarm indicates a fault that may power off a device or even interrupt system services. Corrective actions must be taken immediately.
	Indicates that the component cannot be scanned.
	Indicates that the component is operating properly.
	Indicates that a minor alarm has been generated on the component.

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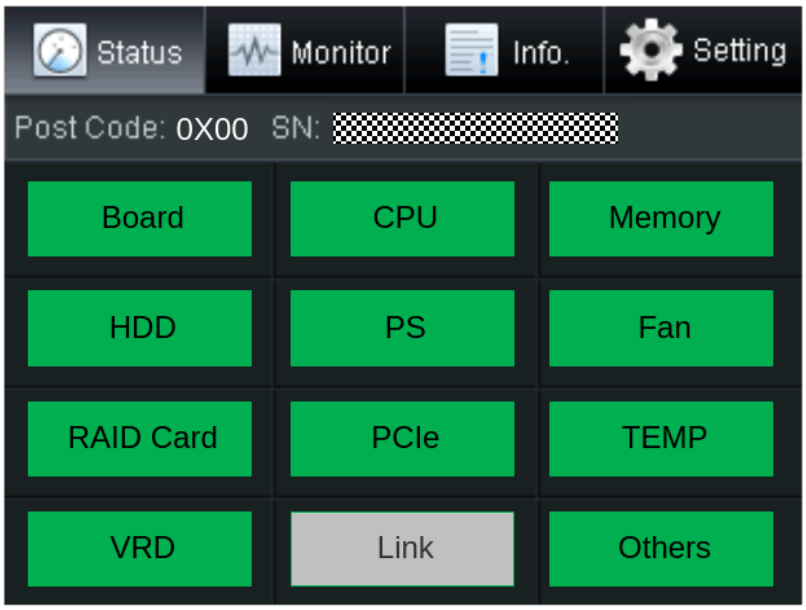
Icon	Description
	Indicates that a major alarm has been generated on the component.
	Indicates that a critical alarm has been generated on the component.
	Indicates that the component is not installed.
	Next screen
	Back
	Previous screen
	Indicates the delete key on the soft keyboard.

1.2.10.1.2 Home Screen

Screenshot

Figure 1-195 LCD home screen



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Parameter Description

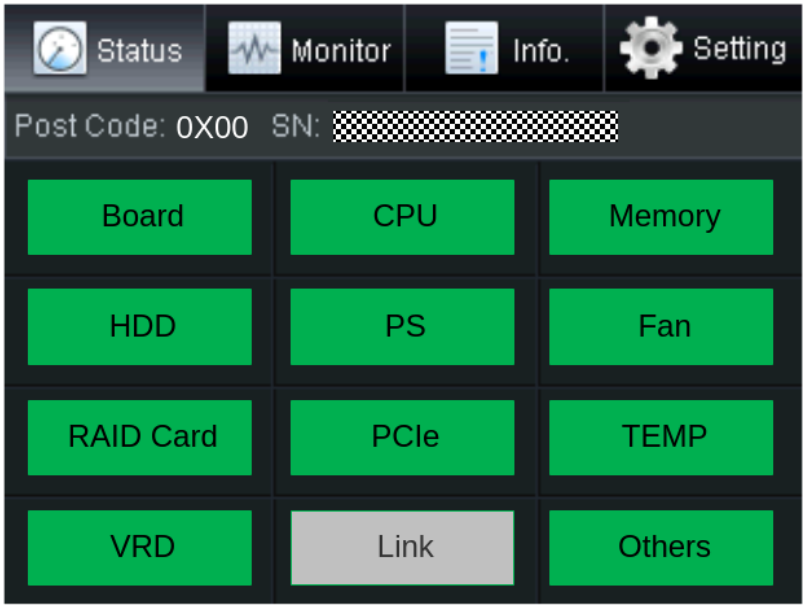
Table 1-108 Parameters on the LCD home screen

Tab	Function
Status	Displays the port 80 status, serial number, component status, and component alarms of the server.
Monitor	Displays the current power, CPU temperature, and inlet temperature of the server.
Info.	Displays the IP address and MAC address of the iBMC management network port, device SNs, asset information, and firmware version.
Setting	Sets the IP address of the iBMC management network port.

1.2.10.1.3 Status

Screenshot

Figure 1-196 Status screen



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Parameter Description

Table 1-109 Parameters on the Status screen

Parameter	Description
Board	Contains the status and alarms of boards and daughter cards.
CPU	Contains the status and alarms of CPUs.
Memory	Contains the status and alarms of memory.
HDD	Contains the status and alarms of drives.
PS	Contains the status and alarms of PSUs.
FAN	Contains the status and alarms of fans.
PCIe	Contains the status and alarms of PCIe cards.
TEMP	Contains the temperature of each server component. **NOTE** ● If the temperature is normal, "Device in health state" is displayed on the **TEMP** screen. ● To view alarm details, tap **>** to expand the information area.
VRD (Voltage Regulator Down)	Contains the voltage alarms of the components. **NOTE** ● If the voltage is normal, "Device in health state" is displayed on the **VRD** screen. ● To view alarm details, tap **>** to expand the information area.
Others	Contains the alarms of other components. **NOTE** ● If the component is operating properly, "Device in health state" is displayed on the **Others** screen. ● To view alarm details, tap **>** to expand the information area.

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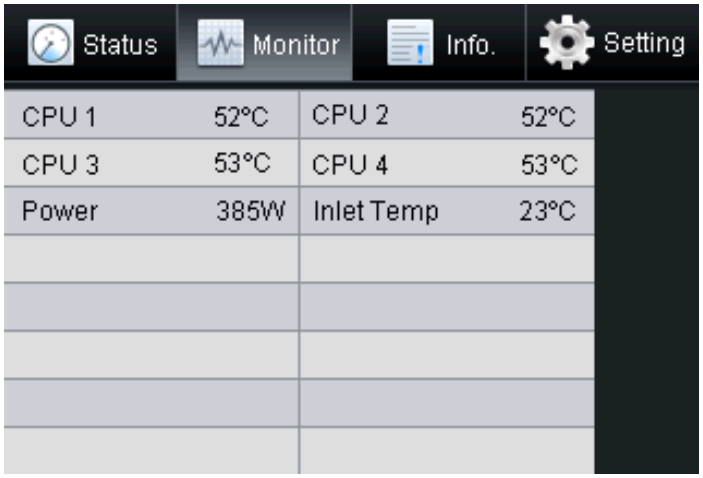
1.2.10.1.4 Monitor

Screenshot

Figure 1-197 Monitor screen



Parameter Description

Table 1-110 Parameters on the Monitor screen

Parameter	Description
CPU *N*	Indicates the operating temperature of CPU *N*. **NOTE** *N* indicates the number of the slot where the CPU is located.
Power	Indicates the operating power of the server.
Inlet Temp	Indicates the air inlet temperature.

1.2.10.1.5 Info.

Figure 1-198 Info. page

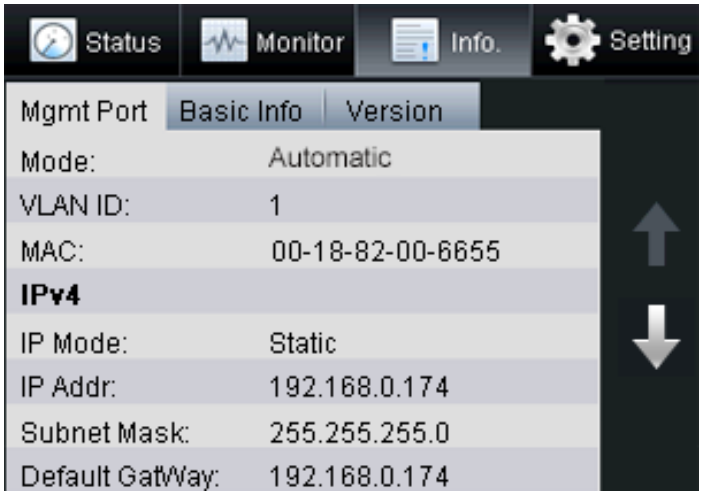


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Table 1-111 Parameters on the Info. page

Item	Description
Mgmtport	Basic information about the iBMC management network port, including the management network port mode, VLAN ID, MAC address, and IP address.
Basic Info	Device SN and asset information.
Version	Firmware version.

Figure 1-199 Info. > Mgmt Port page

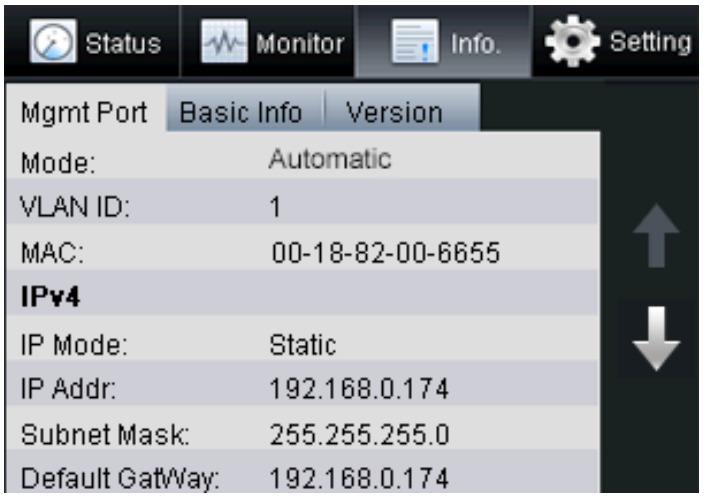

Table 1-112 Parameters on the Info. > Mgmtport page

Item	Description
Mode	iBMC management network port selection mode
VLAN ID	VLAN to which the iBMC management network port belongs
MAC	MAC address of the iBMC management network port **NOTE** This parameter is displayed only when an IPv4 address is configured. When an IPv6 address is configured, it is displayed as a link-local address.
IPv4 Mode	IPv4 address configuration mode
IPv4 Addr	IPv4 address
IPv4 Subnet Mask	IPv4 address subnet mask
IPv4 Default GatWay	IPv4 address default gateway
IPv6 Mode	IPv6 address configuration mode

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Item	Description
IPv6 Addr	IPv6 address
IPv6 Prefix	IPv6 address prefix length
IPv6 Default GatWay	IPv6 address default gateway

Figure 1-200 Info. > Basic Info page

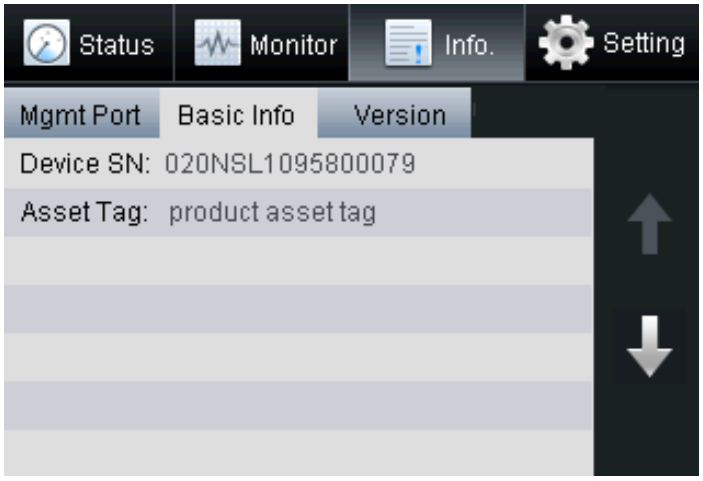

Table 1-113 Parameters on the Info. > Basic Info page

Item	Description
Device SN	Product SN.
Asset Tag	Asset information.

Figure 1-201 Info. > Version page

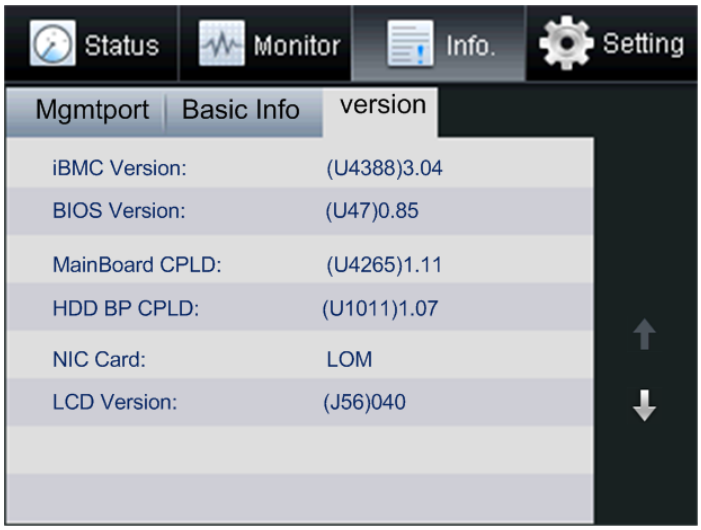

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Table 1-114 Parameters on the Info. > Version page

Item	Description
iBMC Version	iBMC version
BIOS Version	BIOS version
MainBoard CPLD	Mainboard CPLD version
HDD BP CPLD	Drive backplane CPLD version
NIC Card	NIC type
LCD Version	LCD version

1.2.10.1.6 Setting

Screenshot

Figure 1-202 Setting screen

Parameter Description

Table 1-115 Parameters on the Setting > Mgmtport screen

Parameter	Parameter
IPv4	

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Parameter	Parameter
DHCP	Indicates whether to enable the Dynamic Host Configuration Protocol (DHCP) function. **NOTE** The iBMC management network port supports dynamic and static IP addresses. The dynamic IP address is controlled by the DHCP function. After the DHCP function is enabled, the IP address of the management network port can be obtained automatically. The static IP address is set manually. You can set a static IP address for the management network port only after the DHCP function is disabled. ● indicates that the DHCP function is enabled. ● indicates that the DHCP function is disabled. Setting method: ● Tap to enable the DHCP function. ● Tap to disable the DHCP function.
IP Addr	Indicates the static IPv4 address of the management network port. Value: The IPv4 address is expressed in decimal format. The maximum length is 32 digits. Value: ● The value is divided into four sets. Each set has three decimal numbers. ● Each set is separated by period (.). ● The value of each set ranges from 0 to 255. Setting method: Use the soft keyboard.
Subnet Mask	Indicates the subnet mask of the management network port. Setting method: Use the soft keyboard.
Default GatWay	Indicates the gateway address of the management network port. Setting method: Use the soft keyboard.
IPv6	

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Parameter	Parameter
DHCP	Indicates whether to enable the DHCP function. **NOTE** The iBMC management network port supports dynamic and static IP addresses. The dynamic IP address is controlled by the DHCP function. After the DHCP function is enabled, the IP address of the management network port can be obtained automatically. The static IP address is set manually. You can set a static IP address for the management network port only after the DHCP function is disabled. ● indicates that the DHCP function is enabled. ● indicates that the DHCP function is disabled. Setting method: ● Tap to enable the DHCP function. ● Tap to disable the DHCP function.
IP Addr	Indicates the static IPv6 address of the management network port. Value: The IPv6 address is expressed in hexadecimal format. The maximum length is 128 characters. Value: ● The value is divided into eight sets. Each set has four hexadecimal numbers. ● Each set is separated by colon (:). ● The value of each set ranges from 0 to 9 or a to f. Setting method: Use the soft keyboard.
Prefix Length	Indicates the type of IPv6 address. The default value is **64**, indicating the subnet in the Local Area Network (LAN). Setting method: Use the soft keyboard.
Default GateWay	Indicates the gateway address of the management network port. Setting method: Use the soft keyboard.

1.2.11 Board

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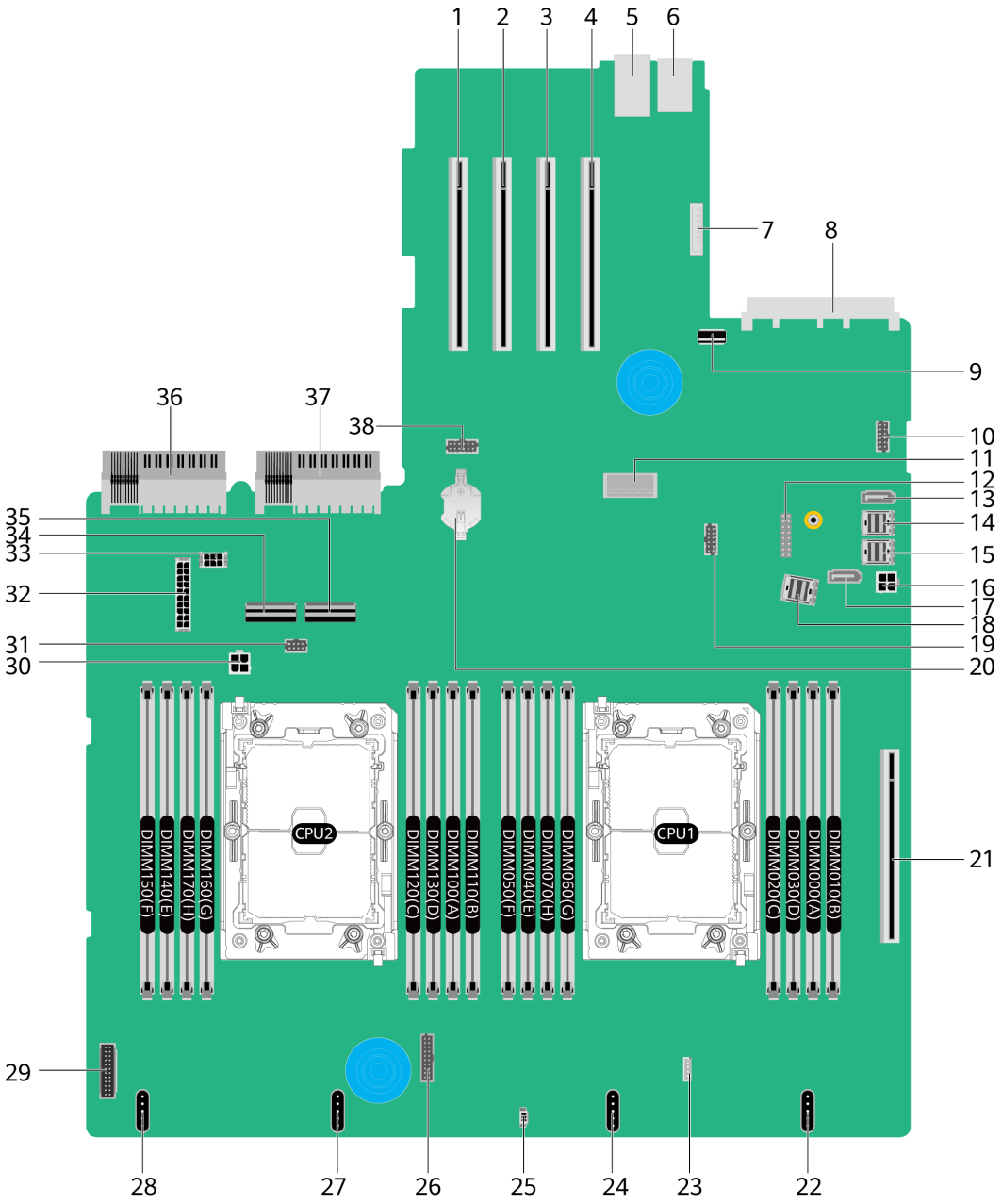
1.2.11.1 Mainboard

Figure 1-203 2288H V6-16DIMM mainboard



1	PCIe slot 4 (PCIE SLOT4(CPU2)/J2034)	2	PCIe slot 3 (PCIE SLOT3(CPU2)/J2035)
3	PCIe slot 2 (PCIE SLOT2(CPU1)/J2033)	4	PCIe slot 1 (PCIE SLOT1(CPU1)/J2032)
5	BMC management network port and management serial port (BMC_GE/COM/ J2038)	6	USB 3.0 port (USB 3.0 CONN/J17)

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7	LCD connector (LCD CONN/J9)	8	OCP 3.0 network adapter connector (OCP1 CONN/ J108)
9	Built-in USB 3.0 connector (INNER USB 3.0/J110)	10	VGA port (VGA CONN/ J2037)
11	Screw-in RAID controller card connector (RAID CARD/J86)	12	TPM/TCM connector (J10)
13	SATA connector 2 (SATA2/J2)	14	mini-SAS HD connector C (MINIHD PORTC/J4)
15	mini-SAS HD connector B (MINIHD PORTB/J5)	16	Rear-drive backplane power connector 1 (REAR BP PWR1/J64)
17	SATA connector 1 (SATA1/J1)	18	mini-SAS HD connector A (MINIHD PORTA/J6)
19	NC-SI connector (NCSI CONN/J114)	20	Cell battery holder (U9)
21	Built-in PCIe slot (PCIe SLOT7/J2036)	22	Fan module 4 connector (FAN4/J98)
23	VROC key connector (Soft RAID KEY/J3)[a]	24	Fan module 3 connector (FAN3/J95)
25	Intrusion sensor connector (INTRUDER CONN/S1)	26	Low-speed signal connector for the front-drive backplane (FRONT HDD BP/J75)
27	Fan module 2 connector (FAN2/J91)	28	Fan module 1 connector (FAN1/J67)
29	Left mounting ear connector (LCID BOARD/ J106)	30	Power connector for the built-in-drive backplane (INNER HDD PWR/J22)
31	Low-speed signal connector for the built-in-drive backplane (INNER HDD BP/J27)	32	Power connector for the front-drive backplane (HDD BP PWR1/J88)
33	Rear-drive backplane power connector 2 (REAR BP PWR2/J20)	34	LP Slimline 4 connector (SLIMLINE4(CPU2)/J12)
35	LP Slimline 3 connector (SLIMLINE3(CPU2)/J85)	36	PSU 2 connector (PSU2/ J56)

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37	PSU 1 connector (PSU1/J28)	38	Rear 4 x 2.5" drive backplane low-speed signal connector (REAR 4*2.5 HDD BP/J57)
a: Reserved and unavailable currently.			

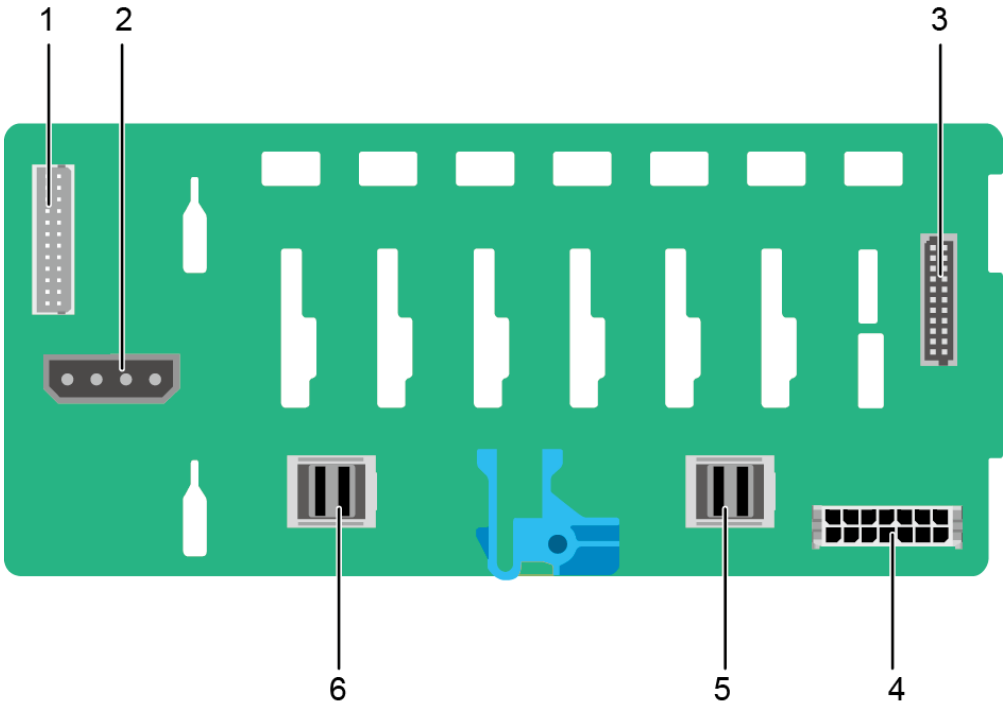
1.2.11.2 Drive Backplane

Front hard disk backplane

- 8 x 2.5" drive pass-through backplane

  All drive configurations in **1.2.5.1.1 8 x 2.5" drive pass-through configuration** support this backplane.

Figure 1-204 8 x 2.5" drive pass-through backplane



No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP1/J3)[a]	-
2	DVD drive power connector (DVD/J11)	-

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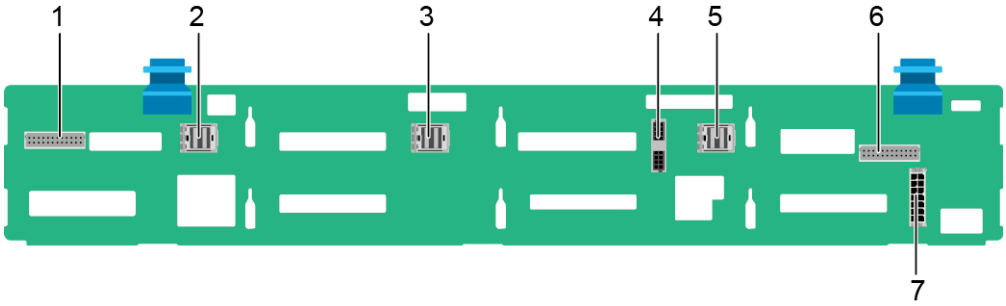
No.	Connector	The managed drive slots
3	Backplane signal cable connector (HDD BP/J1)	-
4	Power connector (POWER/J2)	-
5	Mini-SAS HD connector (PORT A/J28)	Slot 0-Slot 3
6	Mini-SAS HD connector (PORT B/J29)	Slot 4-Slot 7
a: Reserved and unavailable currently.		

- 12 x 3.5" drive pass-through backplane

  This backplane is supported by all drive configurations in **1.2.5.1.2 8 x 3.5" drive pass-through configuration** and 12 x 3.5" drive pass-through configuration 1, 12 x 3.5" drive pass-through configuration 2, 12 x 3.5" drive pass-through configuration 3, and 12 x 3.5" drive pass-through configuration 4 (dual RAID controller cards) in **1.2.5.1.3 12 x 3.5" drive pass-through configuration**.

Figure 1-205 12 x 3.5" drive pass-through backplane



No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP0/J7)	-
2	Mini-SAS HD connector (PORT C/J5)	Slot 8-Slot 11
3	Mini-SAS HD connector (PORT B/J4)	Slot 4-Slot 7
4	Backplane signal cable connector (HDD BP/J6)	-

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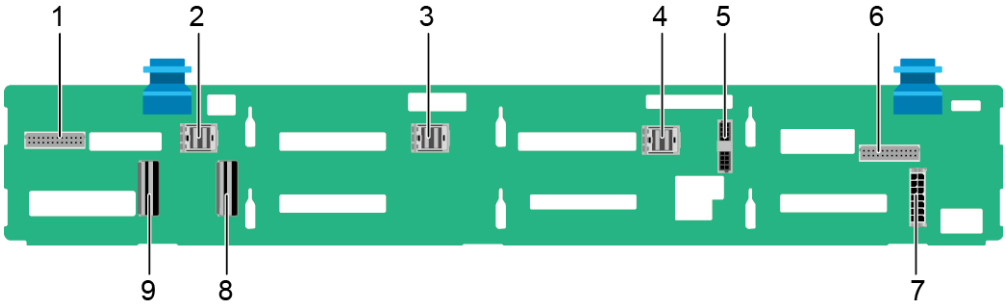
No.	Connector	The managed drive slots
5	Mini-SAS HD connector (PORT A/J3)	Slot 0-Slot 3
6	Indicator signal cable connector (REAR BP1/J8)	-
7	Power connector (POWER/J1)	-

- 12 x 3.5" drive NVMe backplane (4 x NVMe)

  This backplane is supported by 12 x 3.5" drive pass-through configuration 1 (4 x NVMe), 12 x 3.5" drive pass-through configuration 2 (4 x NVMe), and 12 x 3.5" drive pass-through configuration 3 (4 x NVMe) in **1.2.5.1.3 12 x 3.5" drive pass-through configuration**.

Figure 1-206 12 x 3.5" drive NVMe backplane (4 x NVMe)



No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP0/J30)	-
2	Mini-SAS HD connector (PORT C/J36)	Slot 8-Slot 11
3	Mini-SAS HD connector (PORT B/J29)	Slot 4-Slot 7
4	Mini-SAS HD connector (PORT A/J28)	Slot 0-Slot 3
5	Backplane signal cable connector (HDD_BP/J1)	-
6	Indicator signal cable connector (REAR BP1/J31)	-

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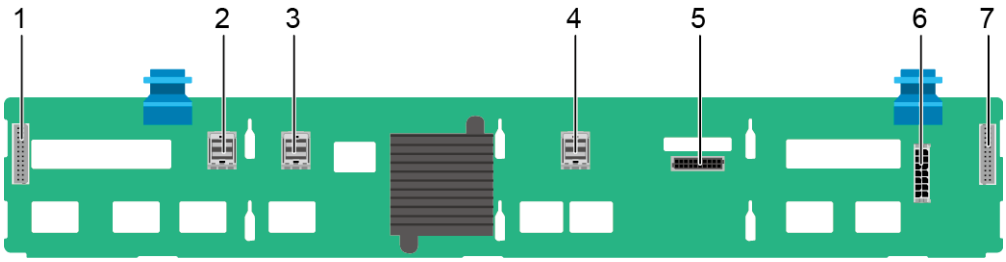
No.	Connector	The managed drive slots
7	Backplane power connector (HDD_BP/ J24)	-
8	LP slimline 1 connector (SLIMLINE 1/J4)	Slot 8-Slot 9
9	LP slimline 2 connector (SLIMLINE 2/J37)	Slot 10-Slot 11

- 12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)

  This backplane is supported by 12 x 3.5" drive EXP configuration 1, 12 x 3.5" drive EXP configuration 2, and 12 x 3.5" drive EXP configuration 3 (dual RAID controller card) in **1.2.5.1.4 12 x 3.5" drive EXP configuration** and 16 x 3.5" drive EXP configuration 1, 16 x 3.5" drive EXP configuration 2 in **1.2.5.1.5 16 x 3.5" drive EXP configuration**.

  Figure 1-207 12 x 3.5" drive EXP backplane 1

No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J31)	2	Mini-SAS HD connector (PORT A/J28)
3	Mini-SAS HD connector (PORT B/J29)	4	Mini-SAS HD connector (REAR PORT/J34)
5	Backplane signal cable connector (HDD BP/J35)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J32)	-	-

- 12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)

  This backplane is supported by 12 x 3.5" drive EXP configuration 1, 12 x 3.5" drive EXP configuration 2, and 12 x 3.5" drive EXP configuration 3 (dual RAID controller card) in **1.2.5.1.4 12 x 3.5" drive EXP configuration** and 16 x 3.5" drive EXP configuration 1, 16 x 3.5" drive EXP configuration 2 in **1.2.5.1.5 16 x 3.5" drive EXP configuration**.

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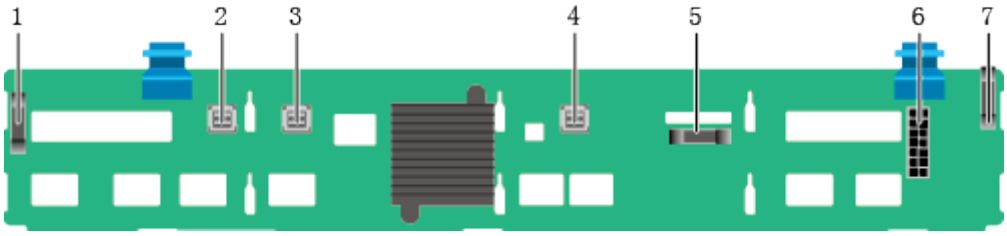
Figure 1-208 12 x 3.5" drive EXP backplane 2

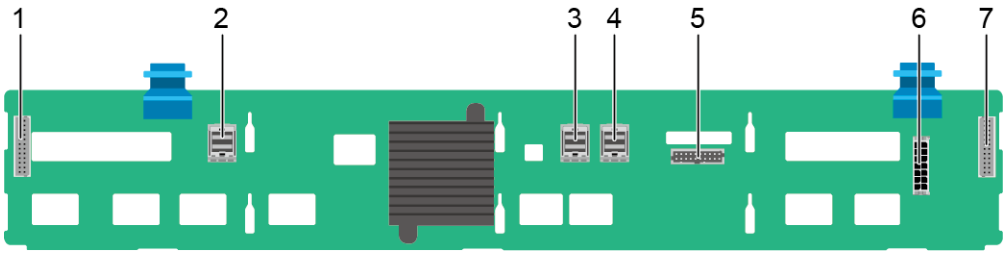


No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J32)	2	Mini-SAS HD connector (PORT A/J28)
3	Mini-SAS HD connector (PORT B/J29)	4	Mini-SAS HD connector (REAR PORT/J31)
5	Backplane signal cable connector (HDD BP/J1)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J35)	-	-

- 12 x 3.5" drive EXP backplane 3 (P/N code: 0302Y072)

  This backplane is supported by 12 x 3.5" drive EXP configuration 4 in **1.2.5.1.4 12 x 3.5" drive EXP configuration** , and 16 x 3.5" drive EXP configuration 3 in **1.2.5.1.5 16 x 3.5" drive EXP configuration**..

Figure 1-209 12 x 3.5" drive EXP backplane 3



No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J31)	2	Mini-SAS HD connector (REAR PORT/J34)
3	Mini-SAS HD connector (PORT A/J28)	4	Mini-SAS HD connector (PORT B/J29)
5	Backplane signal cable connector (HDD BP/J35)	6	Power connector (POWER/J24)

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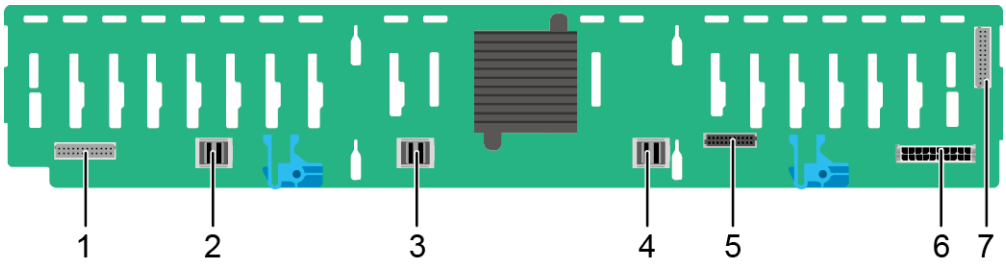
No.	Connector	No.	Connector
7	Indicator signal cable connector (REAR BP1/ J32)	-	-

- 25 x 2.5" drive backplane (P/N code: 03027QFN and 0302Y073)

  The backplane with the P/N code 03027QFN is supported by 25 x 2.5" drive EXP configuration 1, 25 x 2.5" drive EXP configuration 2, 25 x 2.5" drive EXP configuration 3, 25 x 2.5" drive EXP configuration 4 , 25 x 2.5" drive EXP configuration 5 (dual RAID controller cards), and 25 x 2.5" drive EXP configuration 6 in **1.2.5.1.6 25 x 2.5" drive EXP configuration**. The backplane with the P/N code 0302Y073 is supported by 25 x 2.5" drive EXP configuration 7 in **1.2.5.1.6 25 x 2.5" drive EXP configuration**.

Figure 1-210 25 x 2.5" drive backplane



No.	Connector	No.	Connector
1	Indicator signal cable connector (REAR BP0/ J32)	2	Mini-SAS HD connector (PORT A/J28)
3	Mini-SAS HD connector (PORT B/J29)	4	Mini-SAS HD connector (REAR PORT/J31)
5	Backplane signal cable connector (HDD_BP/J1)	6	Power connector (POWER/J24)
7	Indicator signal cable connector (REAR BP1/ J35)	-	-

Built-in-Drive Backplane

- 4 x 3.5" drive backplane

Figure 1-211 4 x 3.5" drive backplane

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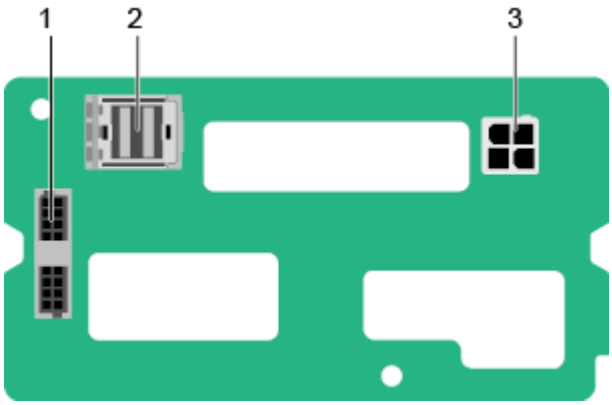
No.	Connector	The managed drive slots
1	Mini-SAS HD connector (PORT A/J3)	Slot 36-Slot 39
2	Backplane signal cable connector (INNER HDD BP/J1)	-
3	Backplane power connector (INNER HDD PWR/J2)	-

Rear-drive backplane

- 2 x 3.5" drive backplane

Figure 1-212 2 x 3.5" drive backplane



No.	Connector	The managed drive slots
1	Indicator signal cable connector (REAR BP/J5)	-
2	Mini-SAS HD connector (REAR PORT/J2)	• The managed Slot 40-Slot 41 when a cable is connected to I/O 1 • The managed Slot 42-Slot 43 when a cable is connected to I/O 2
3	Power connector (BP PWR/J1)	-

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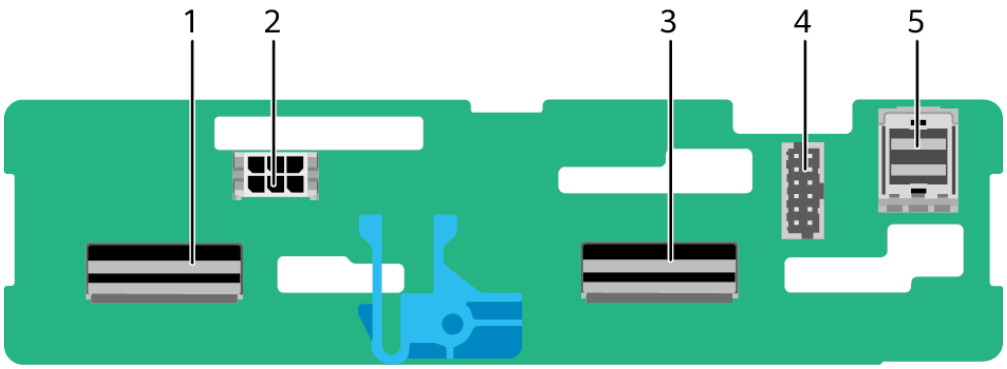
- 4 x 2.5" drive backplane

Figure 1-213 4 x 2.5" drive backplane



No.	Connector	The managed drive slots
1	LP slimline 4 connector (SLIM_4/J1001)	Slot 46-Slot 47
2	Power connector (POWR/J2502)	-
3	LP slimline 3 connector (SLIM_3/J901)	Slot 44-Slot 45
4	Backplane signal cable connector (HDD BP/ J2302)	-
5	Mini-SAS HD connector (Port A/J801)	Slot 44-Slot 47

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2 Product Specifications

2.1 2288H V6-32DIMM
2.2 2288H V6-16DIMM

2.1 2288H V6-32DIMM

2.1.1 Technical Specifications

Table 2-1 Technical specifications

Component	Specifications
Form factor	2U rack server
Chipset	Intel® C621A
Processor	Supports one or two processors. ● Third-generation Intel® Xeon® Scalable Ice Lake processors ● Built-in memory controller and eight memory channels per processor ● Built-in PCIe controller, supporting PCIe 4.0 and 64 lanes per processor ● Three UPI buses between processors, providing up to 11.2 GT/s transmission per channel ● Up to 40 cores ● Max. 3.6 GHz ● Min. 1.5 MB L3 cache per core ● Max. 270 W TDP **NOTE** The preceding information is for reference only. For details, see "Search Parts" in the compatibility list on the technical support website.

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Component	Specifications
DIMM	Supports 32 memory module slots. ● Up to 32 DDR4 memory modules – RDIMM and LRDIMM support – Max. 3200 MT/s memory speed – The DDR4 memory modules of different types (RDIMM and LRDIMM) and specifications (capacity, bit width, rank, and height) cannot be used together. – A server must use DDR4 memory modules of the same P/N code. ● Up to 16 PMem modules – The PMem modules must be used with the DDR4 memory modules, and only one PMem module can be installed in each memory channel. – The PMem modules support the AD or MM mode. – Max. 3200 MT/s memory speed – The PMem modules of different specifications (capacity and rank) cannot be used together. – For details about the PMem modules, see *PMem 200-Barlow pass User Guide*. **NOTE** The preceding information is for reference only. For details, see "Search Parts" in the compatibility list on the technical support website.

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Component	Specifications
Storage	Supports a variety of drive configurations. For details, see **1.1.5.1 Drive Configurations**. ● Supports two M.2 SSDs. – M.2 SSDs are supported for RAID 0/1 and hot swap without opening the chassis cover is supported when the server is configured with an Avago SAS3004iMR RAID controller card. – M.2 SSDs are supported for VROC (SATA RAID) configuration when the server is configured with an M.2 SSD adapter card. **NOTE** ● The M.2 SSD is used only as a boot device for installing the OS. Small-capacity (32 GB or 64 GB) M.2 SSDs do not support logging due to poor endurance. If a small-capacity M.2 SSD is used as the boot device, a dedicated log drive or log server is required for logging. For example, you can dump VMware logs in either of the following ways: ● Redirect **/scratch**. For details, see **https://kb.vmware.com/s/article/1033696**. ● Configure syslog. For details, see **https://kb.vmware.com/s/article/2003322**. ● The M.2 SSD cannot be used to store data due to poor endurance. In write-intensive applications, the M.2 SSD will wear out in a short time. If you want to use SSDs or HDDs as data storage devices, use enterprise-level SSDs or HDDs with high DWPD. ● The M.2 SSD is not recommended for write-intensive service software due to poor endurance. ● Do not use M.2 SSDs for cache. ● Supports hot swap of SAS/SATA/NVMe U.2 drives.

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Component	Specifications
	NOTE When NVMe drives are configured: 1. NVMe drive pass-through model: 1. Supports CPU pass-through without RAID configuration and Intel VROC VMD NVMe RAID configuration. 2. VMD function usage note: ● Before using the VMD function, contact technical support engineers of the OS vendor to check whether the OS supports the VMD function. If yes, check whether the VMD driver needs to be manually installed and check the installation method. ● Surprise hot swap if the VMD function is enabled and the latest Intel VMD driver is installed. ● Orderly hot swap if the VMD function is disabled. 2. NVMe drive switch model: supports only the CPU pass-through without RAID configuration. 3. NVMe drive Tri-Mode model: Only PCIe RAID controller cards are supported, and each NVMe slot only supports PCIe 4.0 x2 bandwidth. For details about how to support RAID controller cards, see the server *RAID Controller Card User Guide*. ● Supports a variety of RAID controller cards. For details, see "Search Parts" in the compatibility list on the technical support website. – The RAID controller card supports RAID configuration, RAID level migration, and drive roaming. – The RAID controller card supports a supercapacitor for power-off protection to ensure user data security. – The PCIe RAID controller card occupies one PCIe slot. – The RAID controller card supports Intel VROC (VMD NVMe RAID) for RAID management. Different VROC keys can be configured to support different RAID levels. For details about the NVMe drives, see "Search Parts" in the compatibility list on the technical support website. For details about the RAID controller card, see server *RAID Controller Card User Guide*. **NOTE** If the BIOS is in legacy mode, the 4K drive cannot be used as the boot drive.

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Component	Specifications
Network	Supports expansion capability of multiple types of networks. ● OCP 3.0 network adapter – The two FlexIO card slots support two OCP 3.0 network adapter respectively, which can be configured as required. – Supports orderly hot swap. **NOTE** The OCP 3.0 network adapter supports orderly hot swap only when the VMD function is disabled. – Supports a variety of OCP 3.0 network adapters. For details, see "Search Parts" in the compatibility list on the technical support website.
I/O expansion	Supports PCIe slots. ● Server model with drive module or PCIe riser module (PRM) on the rear panel: one PCIe slot dedicated for a screw-in RAID controller card, two FlexIO slots dedicated for OCP 3.0 network adapters, and eight slots for standard PCIe cards. ● Server model with four GPU cards installed on the rear panel: one PCIe slot dedicated for a screw-in RAID controller card, two FlexIO slots dedicated for OCP 3.0 network adapters, and five slots for PCIe cards. ● Server model with 11 standard PCIe cards installed on the rear panel: one PCIe slot dedicated for a screw-in RAID controller card, two FlexIO slots dedicated for OCP 3.0 network adapters, and 11 slots for standard PCIe cards. For details, see **1.1.7.2 PCIe Slots** and **1.1.7.3 PCIe Slot Description**. **NOTE** The preceding information is for reference only. For details, see "Search Parts" in the compatibility list on the technical support website.

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Component	Specifications
Port	Supports a variety of ports. ● Ports on the front panel: – One USB Type-C iBMC direct connect management port – Two USB 3.0 ports – One DB15 VGA port ● Ports on the rear panel: – Two USB 3.0 ports – One DB15 VGA port – One RJ45 serial port – One RJ45 management network port ● Built-in ports: – One USB 3.0 port – Two SATA ports **NOTE** You are not advised to install the operating system on the USB storage media.
Video card	An SM750 video chip with 32 MB display memory is integrated on the mainboard. The maximum display resolution is 1920 x 1200 at 60 Hz with 16 M colors. **NOTE** ● The integrated video card can provide the maximum display resolution (1920 x 1200) only after the video card driver matching the operating system version is installed. Otherwise, only the default resolution supported by the operating system is provided. ● If both the front and rear VGA ports are connected to monitors, only the monitor connected to the front VGA port displays information.
System management	● UEFI ● iBMC ● NC-SI ● Integration with third-party management systems
Security feature	● Power-on password ● Administrator password ● TCM (only in China)/TPM ● Secure boot ● Front bezel (optional) ● Chassis cover opening detection

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2.1.2 Environmental Specifications

Table 2-2 Environmental specifications

Category	Specifications
Temperature	• Operating temperature: 5°C to 45°C (41°F to 113°F) (ASHRAE Classes A1 to A4 compliant) • Storage temperature (within three months): –30°C to +60°C (–22°F to 140°F) • Storage temperature (within six months): –15°C to +45°C (5°F to 113°F) • Storage temperature (within one year): –10°C to +35°C (14°F to 95°F) • Maximum rate of temperature change: 20°C (36°F) per hour, 5°C (9°F) per 15 minutes **NOTE** The highest operating temperature varies depending on the server configuration. For details, see **A.3.1 2288H V6-32DIMM**.
Relative humidity (RH, non-condensing)	• Operating humidity: 8% to 90% • Storage humidity (within three months): 8% to 85% • Storage humidity (within six months): 8% to 80% • Storage humidity (within one year): 20% to 75% • Maximum humidity change rate: 20%/h
Air volume	≥ 204 cubic feet per minute (CFM)
Operating altitude	≤ 3050 m (10006.56 ft) • When the server configuration complies with ASHRAE Classes A1 and A2 and the altitude is above 900 m (2952.76 ft), the highest operating temperature decreases by 1°C (1.8°F) for every increase of 300 m (984.24 ft). • When the server configuration complies with ASHRAE Class A3 and the altitude is above 900 m (2952.76 ft), the highest operating temperature decreases by 1°C (1.8°F) for every increase of 175 m (574.14 ft). • When the server configuration complies with ASHRAE Class A4 and the altitude is above 900 m (2952.76 ft), the highest operating temperature decreases by 1°C (1.8°F) for every increase of 125 m (410.1 ft). • HDDs cannot be used at an altitude of over 3050 m (10006.44 ft).

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Category	Specifications
Corrosive gaseous contaminant	Maximum corrosion product thickness growth rate: ● Copper corrosion rate test: 300 Å/month (meeting level G1 requirements of the ANSI/ISA-71.04-2013 standard on gaseous corrosion) ● Silver corrosion rate test: 200 Å/month
Particle contaminant	● The equipment room environment meets the requirements of ISO 14664-1 Class 8. ● There is no explosive, conductive, magnetic, or corrosive dust in the equipment room. **NOTE** It is recommended that the particulate pollutants in the equipment room be monitored by a professional organization.
Acoustic noise	The declared A-weighted sound power levels (LWAd) and declared average bystander position A-weighted sound pressure levels (LpAm) listed are measured at 23°C (73.4°F) in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). ● Idle: – LWAd: 5.73 Bels – LpAm: 40.2 dBA ● Operating: – LWAd: 6.62 Bels – LpAm: 49.1 dBA **NOTE** Actual sound levels generated during server operation vary depending on server configuration, load, and ambient temperature.

NOTE

SSDs and HDDs (including NL-SAS, SAS, and SATA) cannot be preserved for a long time in the power-off state. Data may be lost or faults may occur if the preservation duration exceeds the specified maximum duration. When drives are preserved under the storage temperature and humidity specified in the preceding table, the following preservation time is recommended:

- Maximum preservation duration of SSDs:
  - 12 months in power-off state without data stored
  - 3 months in power-off state with data stored
- Maximum preservation duration of HDDs:
  - 6 months in unpacked/packed and powered-off state
- The maximum preservation duration is determined according to the preservation specifications provided by drive vendors. For details, see the manuals provided by drive vendors.

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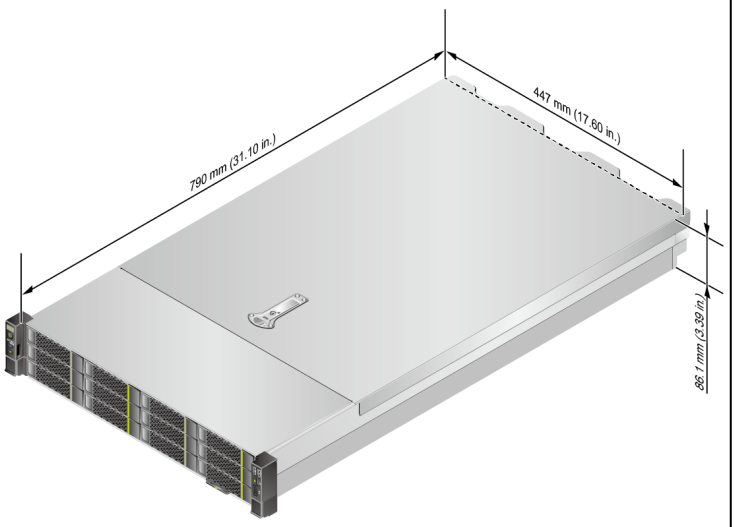
2.1.3 Physical Specifications

Table 2-3 Physical specifications

Category	Description
Dimensions (H x W x D)	• Chassis with 3.5" drives: 86.1 mm × 447 mm × 790 mm (3.39 in. x 17.60 in. x 31.10 in.) • Chassis with 2.5" drives: 86.1 mm × 447 mm × 790 mm (3.39 in. x 17.60 in. x 31.10 in.) **Figure 2-1** Physical dimensions (example: a chassis with 3.5" drives)  **NOTE** • See **Figure 2-1** for methods in measuring physical dimensions of the chassis. • Methods measuring chassis with 3.5" and 2.5" drives are the same. The 3.5" drive chassis is used as an example.

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Category	Description
Installation dimension requirements	● Requirements for cabinet installation: 19-inch standard cabinet compliant with the International Electrotechnical Commission (IEC) 297 and EIA-310-E standards – Cabinet width: 482.6 mm (19.00 in.) – Cabinet depth ≥ 1000 mm (39.37 in.) ● Requirements for guide rail installation: – L-shaped guide rails: apply only to xFusion cabinets. – Adjustable L-shaped guide rail: apply to cabinets with a distance of 543.5 mm to 848.5 mm (21.40 in. to 33.41 in.) between the front and rear mounting bars. – Ball bearing rail kit: applies to cabinets with a distance of 609 mm to 950 mm (23.98 in. to 37.40 in.) between the front and rear mounting bars.
Fully equipped weight	● Net weight – Maximum weight for server with 8 x 2.5" front drives: 22.5 kg (49.60 lb) – Maximum weight for server with 12 x 2.5" front drives: 23.5 kg (51.80 lb) – Maximum weight for server with 12 x 3.5" front drives: 35.5 kg (78.26 lb) – Maximum weight for server with 20 x 2.5" front drives: 25.5 kg (56.22 lb) – Maximum weight for server with 24 x 2.5" front drives: 25.5 kg (56.22 lb) – Maximum weight for server with 20 x 2.5" front drives: 25.5 kg (56.22 lb) ● Packaging materials: 5 kg (11.03 lb)
Power consumption	The power consumption parameters vary with hardware configurations (including the configurations complying with EU ErP). For details, see Power Calculator on the technical support website.

2.2 2288H V6-16DIMM

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2.2.1 Technical Specifications

Table 2-4 Technical specifications

Component	Specifications
Form factor	2U rack server
Chipset	Intel® C621A
Processor	Supports one or two processors. ● Third-generation Intel® Xeon® Scalable Ice Lake processors ● Built-in memory controller and eight memory channels per processor ● Built-in PCIe controller, supporting PCIe 4.0 and 64 lanes per processor ● Three UPI buses between processors, providing up to 11.2 GT/s transmission per channel ● Up to 40 cores ● Max. 3.6 GHz ● Min. 1.5 MB L3 cache per core ● Max. 270 W TDP **NOTE** The preceding information is for reference only. For details, see "Search Parts" in the compatibility list on the technical support website.
DIMM	● Up to 16 DDR4 memory modules – RDIMM and LRDIMM support – Max. 3200 MT/s memory speed – The DDR4 memory modules of different types (RDIMM and LRDIMM) and specifications (capacity, bit width, rank, and height) cannot be used together. – A server must use DDR4 memory modules of the same P/N code. **NOTE** The preceding information is for reference only. For details, see "Search Parts" in the compatibility list on the technical support website.

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Component	Specifications
Storage	Supports a variety of drive configurations. For details, see **1.2.5.1 Drive Configurations**. ● Supports two M.2 SSDs. – M.2 SSDs are supported for RAID 0/1 and hot swap without opening the chassis cover is supported when the server is configured with an Avago SAS3004iMR RAID controller card. **NOTE** ● The M.2 SSD is used only as a boot device for installing the OS. Small-capacity (32 GB or 64 GB) M.2 SSDs do not support logging due to poor endurance. If a small-capacity M.2 SSD is used as the boot device, a dedicated log drive or log server is required for logging. For example, you can dump VMware logs in either of the following ways: ● Redirect **/scratch**. For details, see **https://kb.vmware.com/s/article/1033696**. ● Configure syslog. For details, see **https://kb.vmware.com/s/article/2003322**. ● The M.2 SSD cannot be used to store data due to poor endurance. In write-intensive applications, the M.2 SSD will wear out in a short time. If you want to use SSDs or HDDs as data storage devices, use enterprise-level SSDs or HDDs with high DWPD. ● The M.2 SSD is not recommended for write-intensive service software due to poor endurance. ● Do not use M.2 SSDs for cache. ● Supports hot swap of SAS/SATA/NVMe U.2 drives. **NOTE** The NVMe drives support: ● Before using the VMD function, contact technical support engineers of the OS vendor to check whether the OS supports the VMD function. If yes, check whether the VMD driver needs to be manually installed and check the installation method. ● Surprise hot swap if the VMD function is enabled and the latest Intel VMD driver is installed. ● Orderly hot swap if the VMD function is disabled. ● Supports a variety of RAID controller cards. For details, see "Search Parts" in the compatibility list on the technical support website. – The RAID controller card supports RAID configuration, RAID level migration, and drive roaming. – The RAID controller card supports a supercapacitor for power-off protection to ensure user data security.

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Component	Specifications
	– The PCIe RAID controller card occupies one PCIe slot. For details about the RAID controller card, see server *RAID Controller Card User Guide*. **NOTE** If the BIOS is in legacy mode, the 4K drive cannot be used as the boot drive.
Network	Supports expansion capability of multiple types of networks. ● OCP 3.0 network adapter – The FlexIO card slot supports OCP 3.0 network adapters, which can be configured as required. – Supports orderly hot swap. **NOTE** The OCP 3.0 network adapter supports orderly hot swap only when the VMD function is disabled. – Supports a variety of OCP 3.0 network adapters. For details, see "Search Parts" in the compatibility list on the technical support website.
I/O expansion	Supports 9 PCIe slots. ● One PCIe slot dedicated for a screw-in RAID controller card, one FlexIO slot dedicated for an OCP 3.0 network adapter, and seven PCIe slots for standard PCIe cards. For details, see **1.2.7.2 PCIe Slots** and **1.2.7.3 PCIe Slot Description**. ● Support GPU cards. **NOTE** The preceding information is for reference only. For details, see "Search Parts" in the compatibility list on the technical support website.
Port	Supports a variety of ports. ● Ports on the rear panel: – Two USB 3.0 ports – One DB15 VGA port – One RJ45 serial port – One RJ45 management network port ● Built-in ports: – One USB 3.0 port – Two SATA ports **NOTE** You are not advised to install the operating system on the USB storage media.

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Component	Specifications
Video card	An SM750 video chip with 32 MB display memory is integrated on the mainboard. The maximum display resolution is 1920 x 1200 at 60 Hz with 16 M colors. **NOTE** The integrated video card can provide the maximum display resolution (1920 x 1200) only after the video card driver matching the operating system version is installed. Otherwise, only the default resolution supported by the operating system is provided.
System management	• UEFI • iBMC • NC-SI • Integration with third-party management systems
Security feature	• Power-on password • Administrator password • TCM (only in China)/TPM • Secure boot • Front bezel (optional) • Chassis cover opening detection

2.2.2 Environmental Specifications

Table 2-5 Environmental specifications

Category	Specifications
Temperature	• Operating temperature: 5°C to 45°C (41°F to 113°F) (ASHRAE Classes A1 to A4 compliant) • Storage temperature (within three months): –30°C to +60°C (–22°F to 140°F) • Storage temperature (within six months): –15°C to +45°C (5°F to 113°F) • Storage temperature (within one year): –10°C to +35°C (14°F to 95°F) • Maximum rate of temperature change: 20°C (36°F) per hour, 5°C (9°F) per 15 minutes **NOTE** The highest operating temperature varies depending on the server configuration. For details, see **A.3.2 2288H V6-16DIMM**.

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Category	Specifications
Relative Humidity (RH, non-condensing)	● Operating humidity: 8% to 90% ● Storage humidity (within three months): 8% to 85% ● Storage humidity (within six months): 8% to 80% ● Storage humidity (within one year): 20% to 75% ● Maximum humidity change rate: 20%/h
Air volume	≥204 CFM
Operating altitude	≤ 3050 m (10006.56 ft) ● When the server configuration complies with ASHRAE Classes A1 and A2 and the altitude is above 900 m (2952.76 ft), the highest operating temperature decreases by 1°C (1.8°F) for every increase of 300 m (984.24 ft). ● When the server configuration complies with ASHRAE Class A3 and the altitude is above 900 m (2952.76 ft), the highest operating temperature decreases by 1°C (1.8°F) for every increase of 175 m (574.14 ft). ● When the server configuration complies with ASHRAE Class A4 and the altitude is above 900 m (2952.76 ft), the highest operating temperature decreases by 1°C (1.8°F) for every increase of 125 m (410.1 ft). ● HDDs cannot be used at an altitude of over 3050 m (10006.44 ft).
Corrosive gaseous contaminant	Maximum corrosion product thickness growth rate: ● Copper corrosion rate test: 300 Å/month (meeting level G1 requirements of the ANSI/ISA-71.04-2013 standard on gaseous corrosion) ● Silver corrosion rate test: 200 Å/month
Particle contaminant	● The equipment room environment meets the requirements of ISO 14664-1 Class 8. ● There is no explosive, conductive, magnetic, or corrosive dust in the equipment room. **NOTE** It is recommended that the particulate pollutants in the equipment room be monitored by a professional organization.

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Category	Specifications
Acoustic noise	The declared A-weighted sound power levels (LWAd) and declared average bystander position A-weighted sound pressure levels (LpAm) listed are measured at 23°C (73.4°F) in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). ● Idle: – LWAd: 5.98 Bels – LpAm: 42.6 dBA ● Running: – LWAd: 6.68 Bels – LpAm: 49.5 dBA **NOTE** Actual sound levels generated during server operation vary depending on server configuration, load, and ambient temperature.

NOTE

SSDs and HDDs (including NL-SAS, SAS, and SATA) cannot be preserved for a long time in the power-off state. Data may be lost or faults may occur if the preservation duration exceeds the specified maximum duration. When drives are preserved under the storage temperature and humidity specified in the preceding table, the following preservation time is recommended:

- Maximum preservation duration of SSDs:
  - 12 months in power-off state without data stored
  - 3 months in power-off state with data stored
- Maximum preservation duration of HDDs:
  - 6 months in unpacked/packed and powered-off state
- The maximum preservation duration is determined according to the preservation specifications provided by drive vendors. For details, see the manuals provided by drive vendors.

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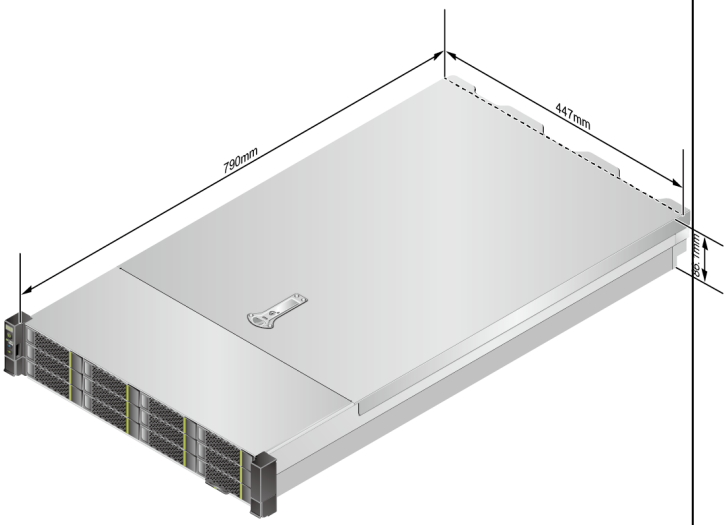
2.2.3 Physical Specifications

Table 2-6 Physical specifications

Category	Description
Dimensions (H x W x D)	• Chassis with 3.5" drives: 86.1 mm × 447 mm × 790 mm (3.39 in. x 17.60 in. x 31.10 in.) • Chassis with 2.5" drives: 86.1 mm × 447 mm × 790 mm (3.39 in. x 17.60 in. x 31.10 in.) **Figure 2-2** Physical dimensions (example: a chassis with 3.5" drives)  **NOTE** • See **Figure 2-2** for methods in measuring physical dimensions of the chassis. • Methods measuring chassis with 3.5" and 2.5" drive are the same. The 3.5" drive chassis is used as an example.

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Category	Description
Installation dimension requirements	● Requirements for cabinet installation: 19-inch standard cabinet compliant with the International Electrotechnical Commission (IEC) 297 and EIA-310-E standards – Cabinet width: 482.6 mm (19.00 in.) – Cabinet depth ≥ 1000 mm (39.37 in.) ● Requirements for guide rail installation: – L-shaped guide rails: apply only to xFusion cabinets. – Adjustable L-shaped guide rail: apply to cabinets with a distance of 543.5 mm to 848.5 mm (21.40 in. to 33.41 in.) between the front and rear mounting bars. – Ball bearing rail kit: applies to cabinets with a distance of 609 mm to 950 mm (23.98 in. to 37.40 in.) between the front and rear mounting bars.
Fully equipped weight	● Net weight – Server with 8 x 2.5" front drives: 22.5 kg (49.60 lb) – Server with 8 x 3.5" front drives: 32.7 kg (72.09 lb) – Server with 12 x 3.5" front drives: 35.5 kg (78.26 lb) – Server with 25 x 2.5" front drives: 25.5 kg (56.22 lb) ● Packaging materials: 5 kg (11.03 lb)
Power consumption	The power consumption parameters vary with hardware configurations (including the configurations complying with EU ErP). For details, see Power Calculator on the technical support website.

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3 Software and Hardware Compatibility

See the compatibility list on the technical support website to obtain information about the operating systems and hardware supported.

NOTICE

- If incompatible components are used, the device may be abnormal. This fault is beyond the scope of technical support and warranty.
- The performance of servers is closely related to application software, basic middleware software, and hardware. The slight differences of the application software, middleware basic software, and hardware may cause performance inconsistency between the application layer and test software layer.
  - If the customer has requirements on the performance of specific application software, contact technical support to apply for POC tests in the pre-sales phase to determine detailed software and hardware configurations.
  - If the customer has requirements on hardware performance consistency, specify the specific configuration requirements (for example, specific drive models, RAID controller cards, or firmware versions) in the pre-sales phase.

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4 Safety Instructions

4.1 Security
4.2 Maintenance and Warranty

4.1 Security

General Statement

- Comply with local laws and regulations when installing equipment. These safety instructions are only a supplement.
- Observe the safety instructions that accompany all "DANGER", "WARNING", and "CAUTION" symbols in this document.
- Observe all safety instructions provided on device labels.
- Operators of special types of work (such as electricians, operators of electric forklifts, and so on.) must be certified or authorized by the local government or authority.

⚠ WARNING

In a household scenario, operation of this device may cause radio interference.

Human Safety

- This device is not suitable for use in places where children may be present.
- Only certified or authorized personnel are allowed to install equipment.
- Discontinue any dangerous operations and take protective measures. Report anything that could cause personal injury or device damage to a project supervisor.
- Do not move devices or install cabinets and power cables in hazardous weather conditions.
- Do not carry the weight that exceeds the maximum load per person allowed by local laws or regulations. Before moving a device, check the maximum device weight and arrange required personnel.

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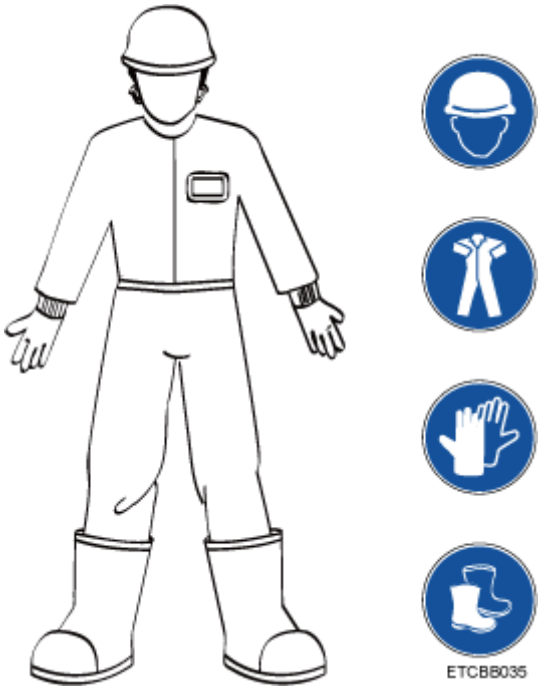
- Wear clean protective gloves, ESD clothing, a protective hat, and protective shoes, as shown in **Figure 4-1**.

Figure 4-1 Safety work wear



- Before touching a device, wear ESD clothing and gloves (or wrist strap), and remove any conductive objects (such as watches and jewelry). **Figure 4-2** shows conductive objects that must be removed before you touch a device.

Figure 4-2 Removing conductive objects

Figure 4-3 shows how to wear an ESD wrist strap.

a. Secure the ESD wrist strap around your wrist.
b. Fasten the strap buckle and ensure that the ESD wrist strap is in contact with your skin.
c. Insert the ground terminal attached to the ESD wrist strap into the jack on the grounded cabinet or chassis.

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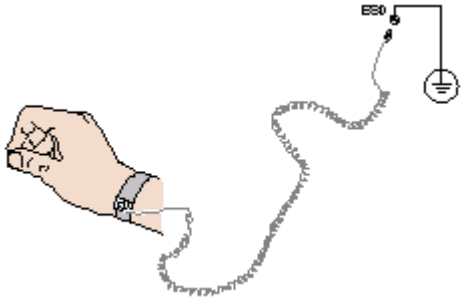
Figure 4-3 Wearing an ESD wrist strap



- Exercise caution when using tools that could cause personal injury.
- If the installation position of a device is higher than the shoulders of the installation personnel, use a vehicle such as a lift to facilitate installation. Prevent the device from falling down and causing personal injury or damage to the device.
- The equipment is powered by high-voltage power sources. Direct or indirect contact (especially through damp objects) with high-voltage power sources may result in serious injury or death.
- Ground a device before powering it on. Otherwise, high voltage leakage current may cause personal injury.
- When a ladder is used, ensure that another person holds the ladder steady to prevent accidents.
- Do not look into optical ports without eye protection when installing, testing, or replacing optical cables.

Equipment Safety

- Use the recommended power cables at all times.
- Power cables are used only for dedicated servers. Do not use them for other devices.
- Before operating equipment, wear ESD clothes and gloves to prevent electrostatic-sensitive devices from being damaged by ESD.
- When moving a device, hold the bottom of the device. Do not hold the handles of the installed modules, such as the PSUs, fan modules, drives, and the mainboard. Handle the equipment with care.
- Exercise caution when using tools that could cause damage to devices.
- Connect the primary and secondary power cables to different power distribution units (PDUs) to ensure reliable system operation.
- Ground a device before powering it on. Otherwise, high voltage leakage current may cause device damage.

Transportation Precautions

Improper transportation may damage equipment. Contact the manufacturer for precautions before attempting transportation.

Transportation precautions include but are not limited to:

- The logistics company engaged to transport the device must be reliable and comply with international standards for transporting electronics. Ensure that the

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equipment being transported is always kept upright. Take necessary precautions to prevent collisions, corrosion, package damage, damp conditions and pollution.

- Transport each device in its original packaging.
- If the original packaging is unavailable, package heavy, bulky parts (such as chassis and blades) and fragile parts (such as PCIe cards and optical modules) separately.

  NOTE

  For details about components supported by the server, see "Search Parts" in the compatibility list on the technical support website.
- Power off all devices before transportation.

Maximum Weight Carried by a Person

CAUTION

The maximum weight allowed to be carried by a single person is subject to local laws or regulations. The markings on the device and the descriptions in the documentation are for reference only.

Table 4-1 lists the maximum weight one person is permitted to carry as stipulated by a number of organizations.

Table 4-1 Maximum weight carried per person

Organization	Weight (kg/lb)
European Committee for Standardization (CEN)	25/55.13
International Organization for Standardization (ISO)	25/55.13
National Institute for Occupational Safety and Health (NIOSH)	23/50.72
Health and Safety Executive (HSE)	25/55.13
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ)	• Male: 15/33.08 • Female: 10/22.05

For more information about security instructions, see the server *Safety Information*.

4.2 Maintenance and Warranty

For details about maintenance, visit the **Technical Support Website** > **Service Support Center** > **Customer Support Service**.

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For details about warranty, visit the **Technical Support Website** > **Service Support Center** > **Warranty**.

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5 ESD

5.1 ESD Prevention

5.2 Grounding Methods for ESD Prevention

5.1 ESD Prevention

The static electricity released by the human body or conductors may damage the mainboard or other electrostatic-sensitive devices. The damage caused by static electricity will shorten the service time of the devices.

To prevent electrostatic damage, observe the following:

- Use the ESD floor (or ESD mat) and ESD chairs in the equipment room. Use ESD materials for partition boards, screens, and curtains in the equipment room.
- All floor-standing electric devices, metal frames, and metal rack shells in the equipment room must be directly grounded. All electric meters or tools on a workbench must be connected to the common ground point of the workbench.
- Monitor the temperature and humidity in the equipment room. The heating system may reduce the humidity and increases static electricity indoors.
- Place the product in an ESD bag to avoid direct contact during transportation and storage.
- Before transporting electrostatic-sensitive components to a work area that is not affected by static electricity, store them in their original packages.
- Place the component on a grounded surface and then take it out of the package.
- Before installing or removing a server component, wear an ESD wrist strap that is properly grounded.
- During parts replacement, keep new components in ESD bags before installation, and place removed components on conductive mats for temporary storage.
- Do not touch pins, wires, or circuits.

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5.2 Grounding Methods for ESD Prevention

Use one or more of the following grounding methods when handling or installing electrostatic-sensitive devices:

- Use an ESD wrist strap that connects to a grounded work area or computer chassis through a ground cable. The wrist strap must be scalable, and the resistance of the ground cable must be at least 1 megohm (±10%). Wear the wrist strap tightly against your skin.
- Use a heel-grounded, toe-grounded, or shoe-grounded ESD strap when working in a standing position. When standing on a conductive floor or electrostatic dissipative floor mat, tie a strap on your feet.
- Use conductive maintenance tools.
- Use a folding tool mat that dissipates static electricity and a portable field service kit.

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6 Installation and Configuration

6.1 Installation Environment Requirements
6.2 Hardware Installation
6.3 Connecting External Cables
6.4 Internal Cabling (2288H V6-32DIMM)
6.5 Internal Cabling (2288H V6-16DIMM)
6.6 Power-On and Power-Off
6.7 Initial Configuration

6.1 Installation Environment Requirements

6.1.1 Space and Airflow Requirements

To allow for servicing and adequate airflow, observe the following space and airflow requirements:

- Install the server in an access-restricted area.
- Keep the area in which the server is located clean and tidy.
- To facilitate heat dissipation and device maintenance, leave a clearance of 1000 mm in front of the cabinet and a clearance of 800 mm at the rear of the cabinet.
- Do not block the air intake vents. Otherwise, air intake and heat dissipation will be affected.
- The air conditioning system in the equipment room provides enough wind to ensure proper heat dissipation of all components.

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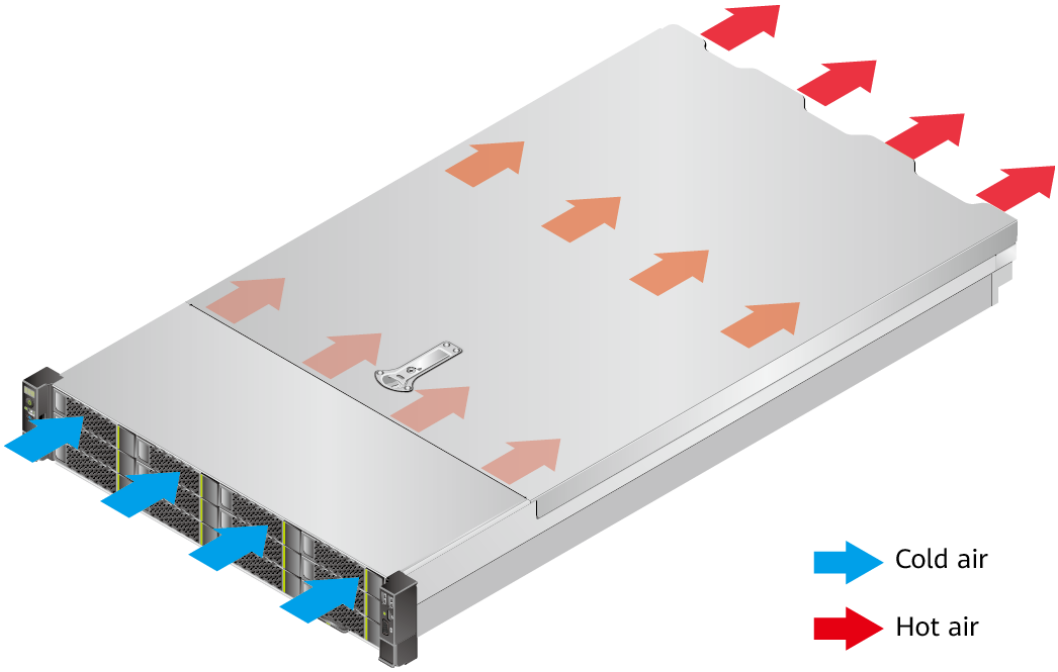
Figure 6-1 Direction of heat dissipation



6.1.2 Temperature and Humidity Requirements

To ensure continued safe and reliable device operation, install or position the device in a well-ventilated, climate-controlled environment.

- Use temperature control devices all year long in any climates.
- Use humidifiers and dehumidifiers in dry or humid areas to maintain ambient humidity within range.

Table 6-1 Temperature and humidity requirements in the equipment room

Item	Description
Temperature	5ºC to 35ºC (41ºF to 95ºF)
Humidity (non-condensing)	8% RH to 90% RH

6.1.3 Cabinet Requirements

- Use a 19-inch standard cabinet that is equal to or more than 1000 mm (39.37 in.) deep and complies with the International Electrotechnical Commission 297 (IEC 297) standard.
- Install air filters on cabinet doors.

NOTE

The 2288H V6 is 2 U high and stackable. If space is sufficient, leave a distance of 1 U between two adjacent servers.

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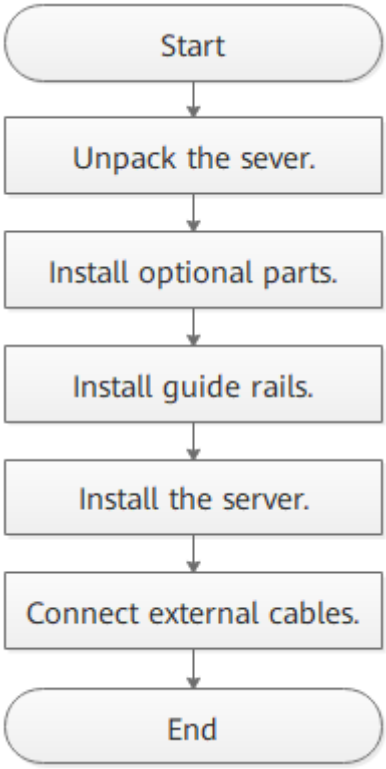
6.2 Hardware Installation

6.2.1 Installation Overview

Installation process

Figure 6-2 Installation process



Precautions

- Properly ground the server before installation to avoid damage to electronic components from electrostatic discharge. Improper grounding may cause ESD.

  For details about how to prevent electrostatic discharge, see **5 ESD**.
- Before installing multiple components, read the installation instructions for all the components and identify similar actions to simplify the installation process.

  For details about component compatibility, see "Search Parts" in the compatibility list on the technical support website.

CAUTION

Wait until overheating devices have cooled down before touching them to avoid injury.

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6.2.2 Unpacking the Server

6.2.2.1 Non-collective packaging

Procedure

Step 1 Check whether the packing case and seals are in good conditions.

NOTE

If the packing case is soaked or deformed, or the seals or pressure-sensitive adhesive tapes are not intact, contact technical support to obtain the *Cargo Problem Feedback Form*.

Step 2 Use a box cutter to open the packing case.

CAUTION

Exercise caution with the box cutter to avoid injury to your hands or damage to devices.

Step 3 Unpack the packing case.

Step 4 Ensure that the components are complete and in good condition without defects such as oxidation, chemical corrosion, missing components, or other damage incurred during transport.

Table 6-2 Packing list

No.	Description
1	(Optional) Documentation bag containing a warranty card and quick start guide
2	(Optional) Server guide rails
3	One rack server

----End

6.2.2.2 Collective Packaging

Procedure

Step 1 Check whether the packing case and seals are in good conditions.

NOTE

If the packing case is soaked or deformed, or the seals or pressure-sensitive adhesive tapes are not intact, contact technical support to obtain the *Cargo Problem Feedback Form*.

Step 2 Use a box cutter to open the packing case.

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CAUTION

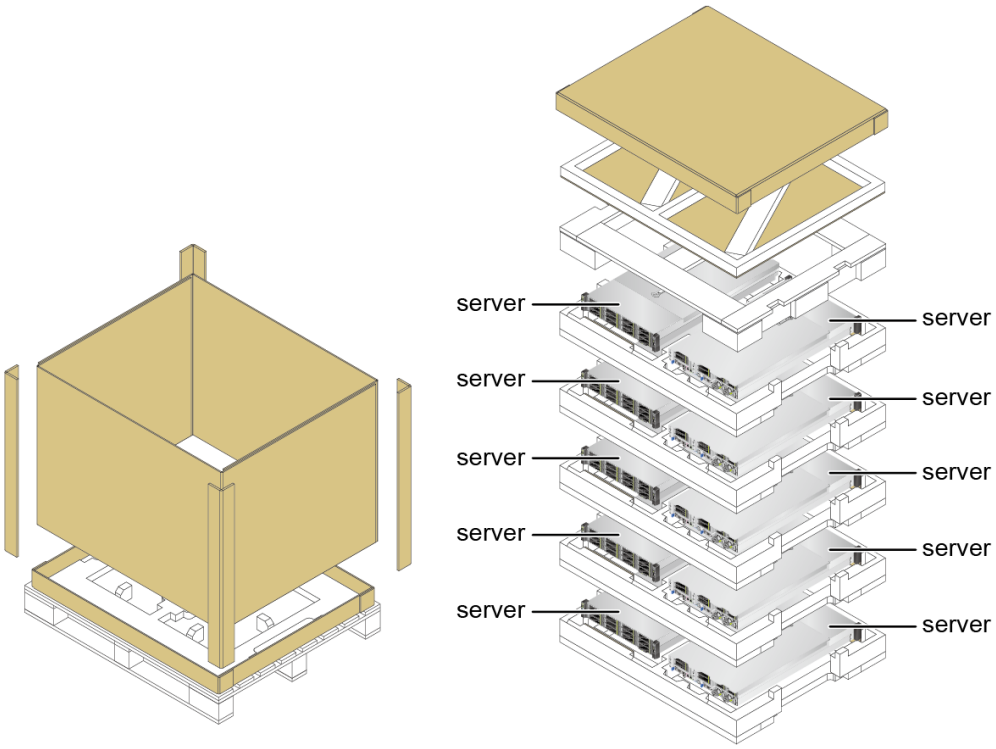
Exercise caution with the box cutter to avoid injury to your hands or damage to devices.

Step 3 Unpack the server and take out the devices layer by layer from top to bottom.

CAUTION

Pay attention to lifting. If the product does not have handles, use each layer of cushion foam to lift together.

Figure 6-3 Unpacking the server



Step 4 Ensure that the components are complete and in good condition without defects such as oxidation, chemical corrosion, missing components, or other damage incurred during transport.

Table 6-3 Packaging list

No.	Description
1	(Optional) Documentation bag containing a warranty card and quick start guide
2	(Optional) Server guide rails
3	Multiple rack servers

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----End

6.2.3 Installing Optional Parts

Before installing and configuring a server, you need to install all optional parts required, such as purchased CPUs, drives, and PCIe cards.

Procedure

Step 1 Install the optional parts for the 2288H V6.

For details, see server *Maintenance and Service Guide*.

----End

6.2.4 Installing Server Guide Rails

6.2.4.1 Installing L-Shaped Guide Rails

L-shaped guide rails apply only to our company's cabinets only.

Procedure

Step 1 Install floating nuts.

1. Determine the installation positions of the floating nuts according to the cabinet device installation plan.

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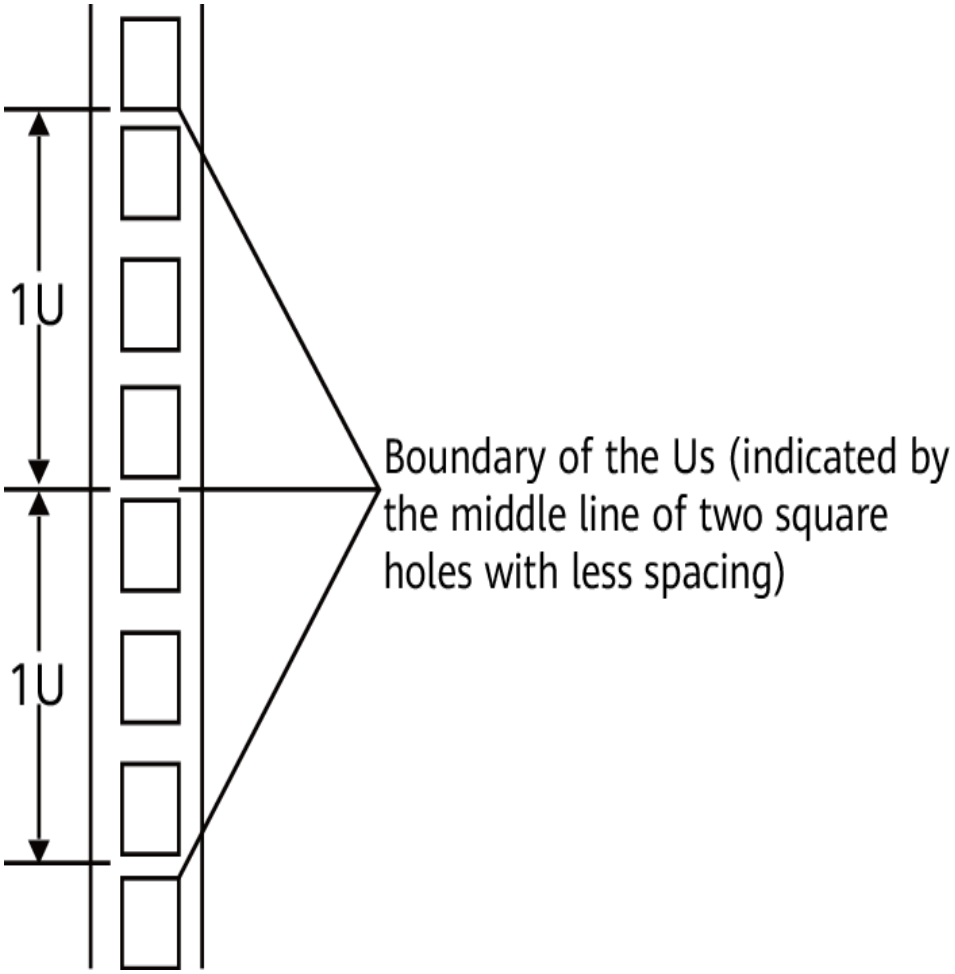
Figure 6-4 Spacing of 1U on a mounting bar of a cabinet



NOTE

- Floating nuts are used to tighten screws.
- The boundary between Us is used as the reference for calculating device installation space.

2. Fasten the lower end of a floating nut to the target square hole in a mounting bar at the front of the cabinet.
3. Use a floating nut hook to pull the upper end of the floating nut, and fasten it to the upper edge of the square hole.

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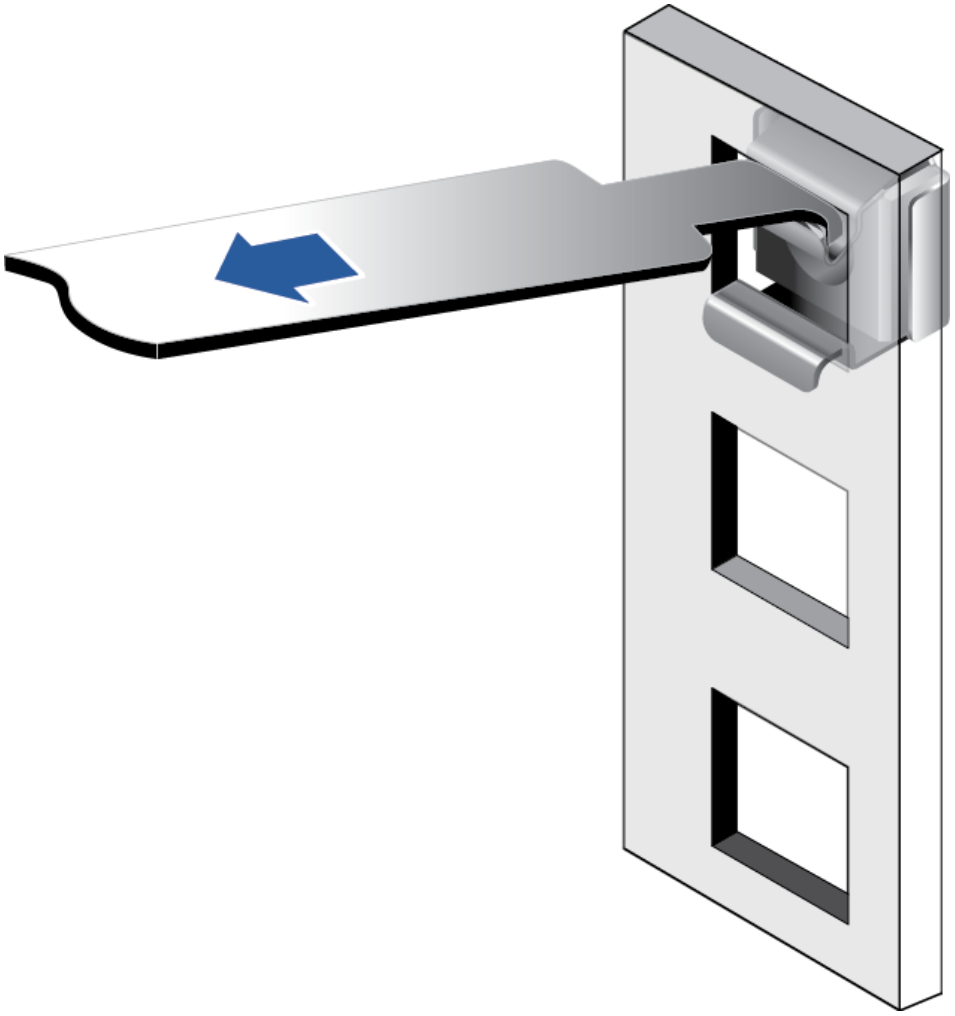
Figure 6-5 Installing a floating nut



4. Install the other floating nut in the same way.

Step 2 Install the L-shaped guide rails.

1. Position a guide rail horizontally in contact with the mounting bars in the cabinet.
2. Tighten the screws to secure the guide rail.

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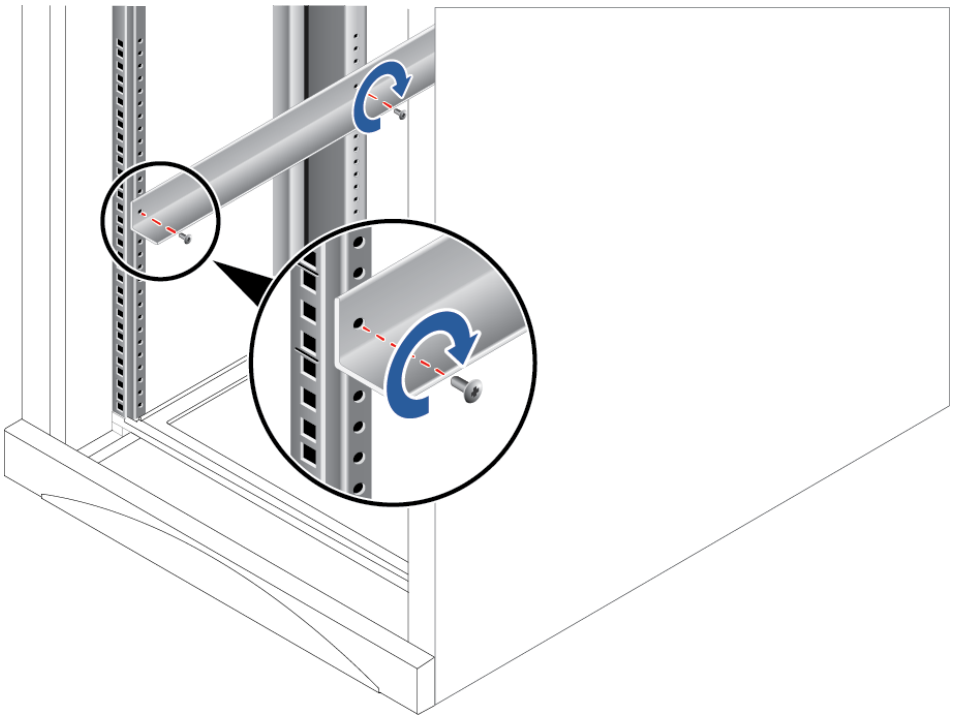
Figure 6-6 Installing an L-shaped guide rail



3. Install the other guide rail in the same way.

----End

6.2.4.2 Installing the Adjustable L-shaped Guide Rail

This section applies to the adjustable L-shaped guide rail whose P/N code is 21240434.

The adjustable L-shaped guide rail applies to cabinets with a distance of 543.5 mm to 848.5 mm (21.40 in. to 33.41 in.) between the front and rear mounting bars.

Procedure

Step 1 Place the rail horizontally in the planned position. Stretch the rail on both sides of the cabinet based on the cabinet length, keeping it in contact with the mounting bar in the cabinet, and hook the rail. See (1) in **Figure 6-7**.

NOTE

The distance between the three holes in each mounting bar for the guide rail must be within 1 U.

Step 2 Use the plug delivered with the guide rail to secure the guide rail.

- Front end of the guide rail: Plug the first square hole in the upper part of the guide rail. The second square hole is used to secure the captive screws on the mounting ears on both sides of the server. See (2) in **Figure 6-7**.
- Rear end of the guide rail: Plug the second square hole. See (3) in **Figure 6-7**.

Step 3 On the first lower square hole at the rear of the rail, insert an M6 screw. See (4) in **Figure 6-7**.

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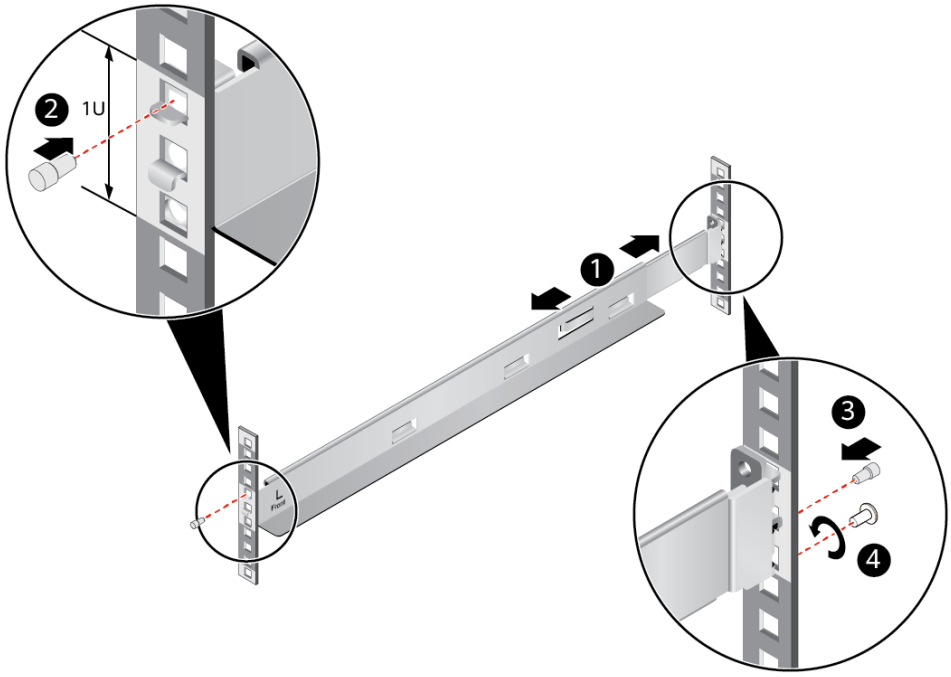
NOTE

Although the adjustable L-shaped guide rail does not need screws for installation, you can perform this operation to improve the shockproof level and fastening degree of the server.

Figure 6-7 Installing an adjustable L-shaped guide rail



Step 4 Install the other guide rail in the same way.

----End

6.2.4.3 Installing the Ball Bearing Rail Kit

This section applies to the ball bearing rail kit whose P/N code is 21243789.

The ball bearing rail kit applies to cabinets with a distance of 609 mm to 950 mm (23.98 in. to 37.40 in.) between the front and rear mounting bars.

Procedure

Step 1 Push the release latch on the front of the rail and pull out the hook. See (1) and (2) in **Figure 6-8**.

Step 2 Insert the positioning pin at the rear of the rail into the hole on the rear column of the cabinet. See (3) in **Figure 6-8**.

Step 3 Keep the rail horizontal, and push the front end of the rail until it is inserted into the hole on the front column of the cabinet. See (4) in **Figure 6-8**.

Step 4 Hook the rail. See (5) in **Figure 6-8**.

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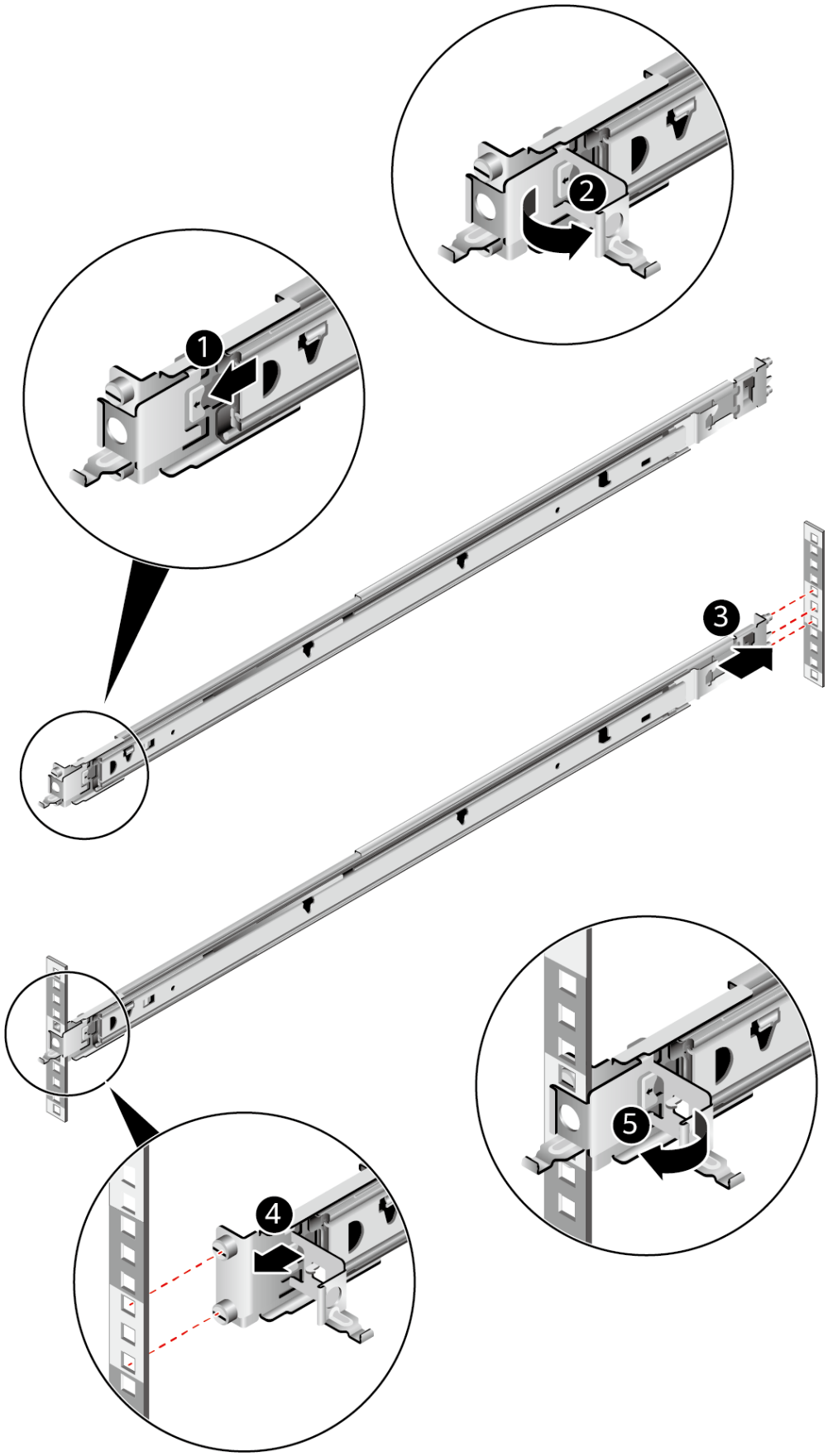
Figure 6-8 Installing a ball bearing rail



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Step 5 Install the other guide rail in the same way.

----End

6.2.5 Installing a Server

6.2.5.1 Installing the Server on L-Shaped Guide Rails or Adjustable L-shaped Guide Rail

- The methods for installing the 2288H V6-32DIMM and 2288H V6-16DIMM servers on the L-shaped guide rails or adjustable L-shaped guide rail are the same. This section uses the 2288H V6-32DIMM server as an example.
- Before installing the server, ensure that the L-shaped guide rails or adjustable L-shaped guide rail is properly installed. For details, see **6.2.4.1 Installing L-Shaped Guide Rails** or **6.2.4.2 Installing the Adjustable L-shaped Guide Rail**.
- The servers are stackable onto L-shaped guide rails or adjustable L-shaped guide rail.

Procedure

Step 1 Install the server.

CAUTION

At least two people are required to move the device. Otherwise, personal injury or device damage may occur.

1. At least two people are required to lift the server vertically from both sides and place it on the guide rails, see **Figure 6-9**. Then push it into the cabinet, see (1) in **Figure 6-10**.

   NOTE

   If you touch the drive unlock button by mistake, do not remove the drive and immediately close the drive ejector lever to install the drive in place.

2. Press the mounting ears on both sides of the server against the mounting bars, open the baffle plate of the captive screws on the mounting ears, and tighten the captive screws. See (2) in **Figure 6-10**.

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Figure 6-9 Moving the server

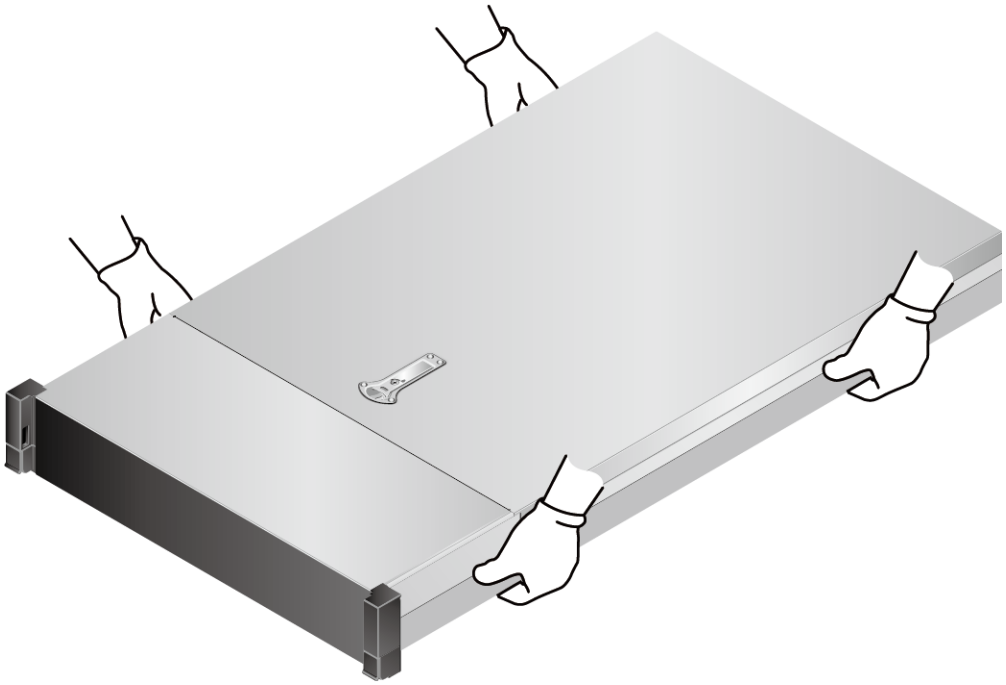
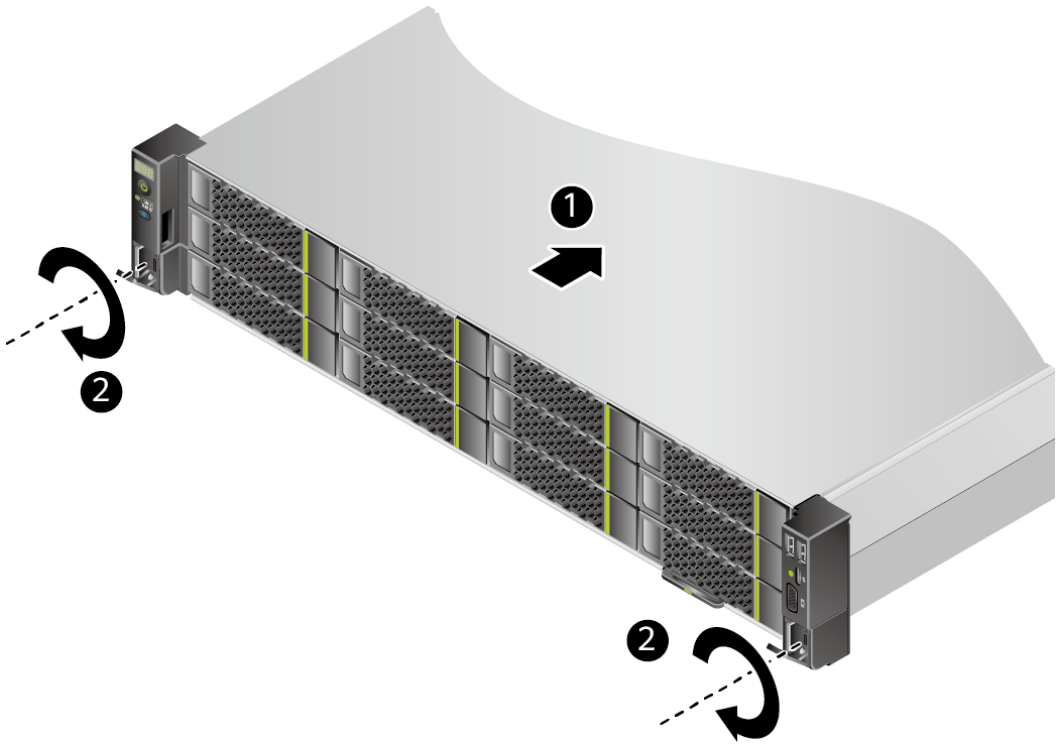


Figure 6-10 Installing a server



Step 2 Connect external cables as required, such as network cables, VGA cables, and USB devices.

Step 3 Connect the cables to the PSU.

For details, see **6.3.7.1 Connecting PSU Cables**.

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Step 4 Power on the server.

For details, see **6.6.1 Powering On** .

Step 5 Check indicator status.

For details about 2288H V6-32DIMM, see **1.1.1.2 Indicators and Buttons**.

For details about 2288H V6-16DIMM, see **1.2.1.2 Indicators and Buttons**.

----End

6.2.5.2 Installing a Server on the Ball Bearing Rail Kit

- The methods for installing the 2288H V6-32DIMM and 2288H V6-16DIMM servers on the ball bearing rail kit are the same. This section uses the 2288H V6-32DIMM server as an example.
- Before installing the server, ensure that the ball bearing rail kit is properly installed. For details, see **6.2.4.3 Installing the Ball Bearing Rail Kit**.
- If servers are installed on the ball bearing guide rail kit, they can only be stacked in a cabinet with the depth of greater than or equal to 1.1 m (3.61 ft).

Procedure

Step 1 Install the server.

⚠ CAUTION

At least two people are required to move the device. Otherwise, personal injury or device damage may occur.

---

1. Pull out the inner rails as far as they will go.

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Figure 6-11 Pulling out an inner rail

2. At least two people are required to lift the server vertically from both sides, align the two mounting screws at the rear of the server with the fixing holes on the inner rails, and place the server vertically at the rear of the server. Then push the server horizontally as far as it will go. See **Figure 6-12** and **Figure 6-13**.

Figure 6-12 Moving the server

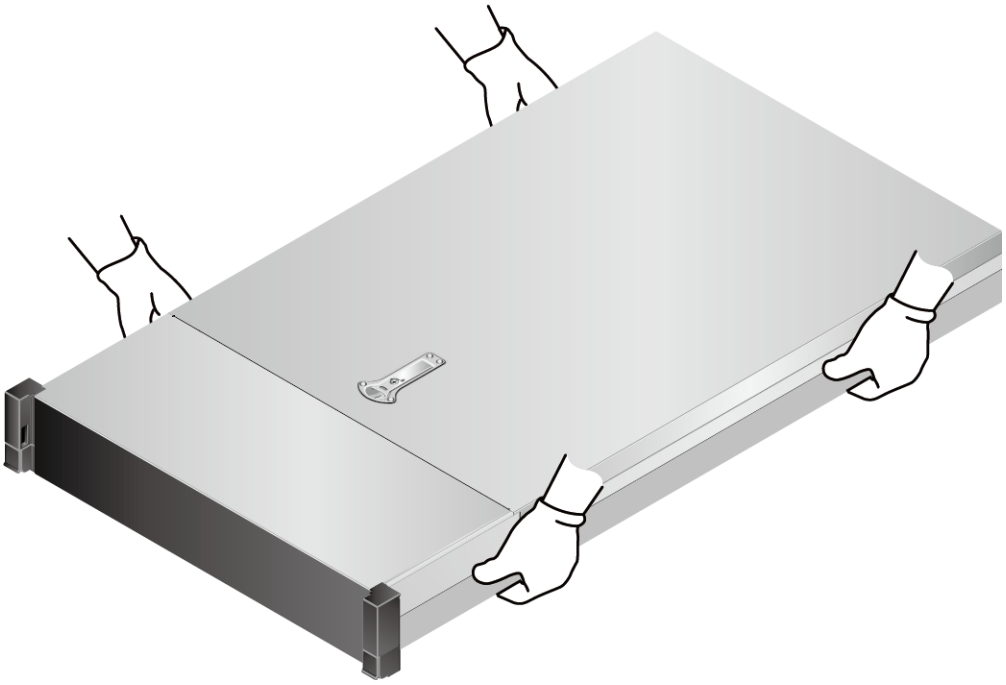

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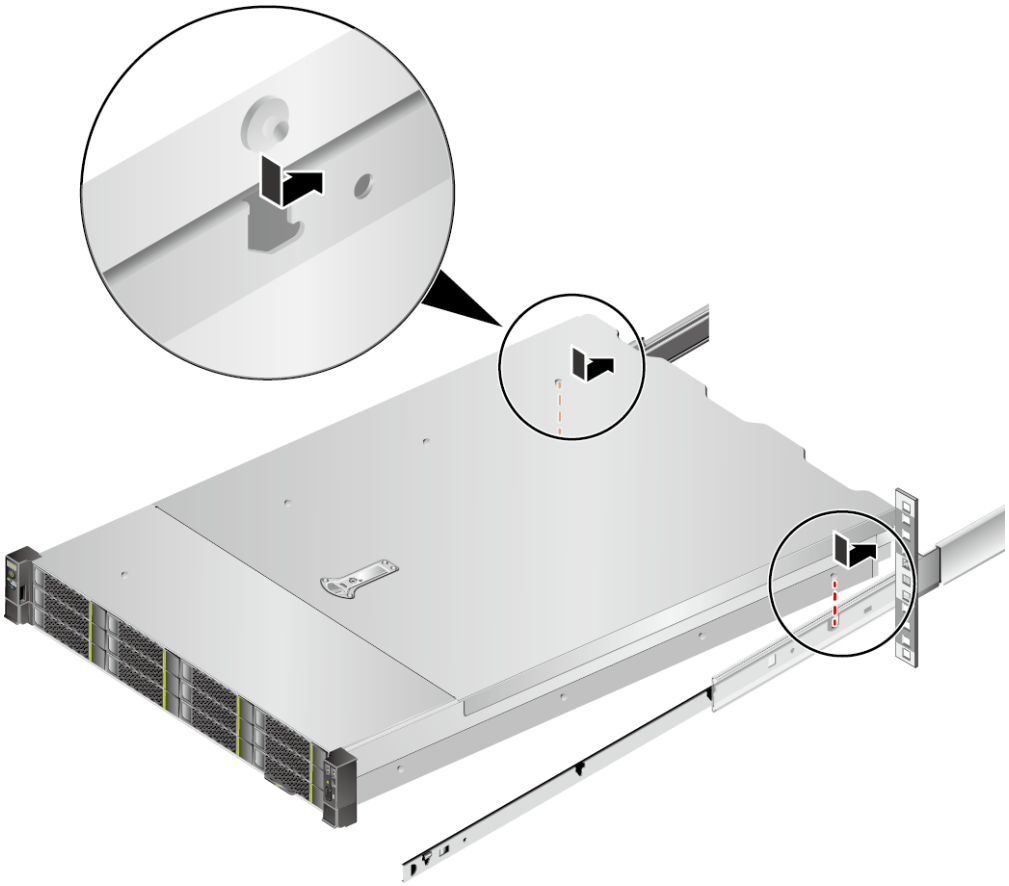
Figure 6-13 Securing the server to inner rails (1)



3. Aligning the six mounting screws at the front of the server with the fixing holes on the inner rails, place the server vertically to ensure that the server is secured to the inner rails. See **Figure 6-14**.

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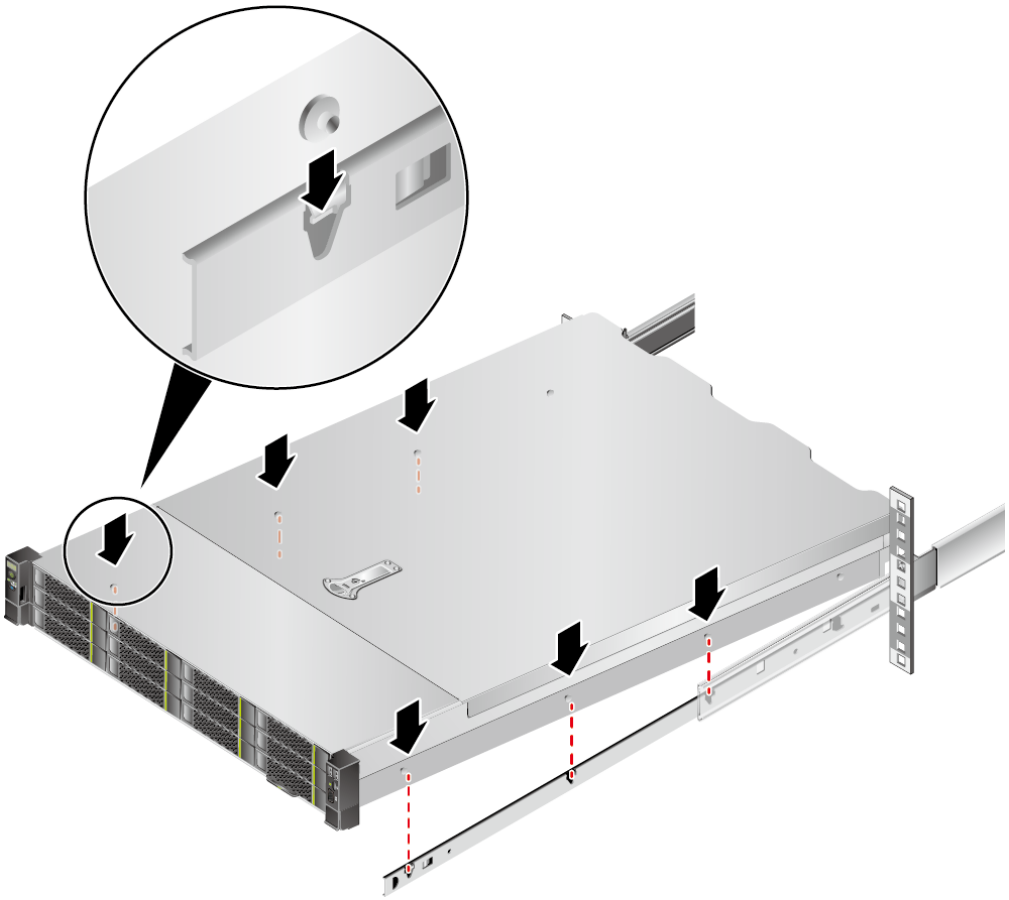
Figure 6-14 Securing a server to inner rails (2)



4. Unlock the release latches on both sides of the inner rails and push the server as far as it will go. See (1) and (2) in **Figure 6-15**.

   NOTE

   If you touch the drive unlock button by mistake, do not remove the drive and immediately close the drive ejector lever to install the drive in place.

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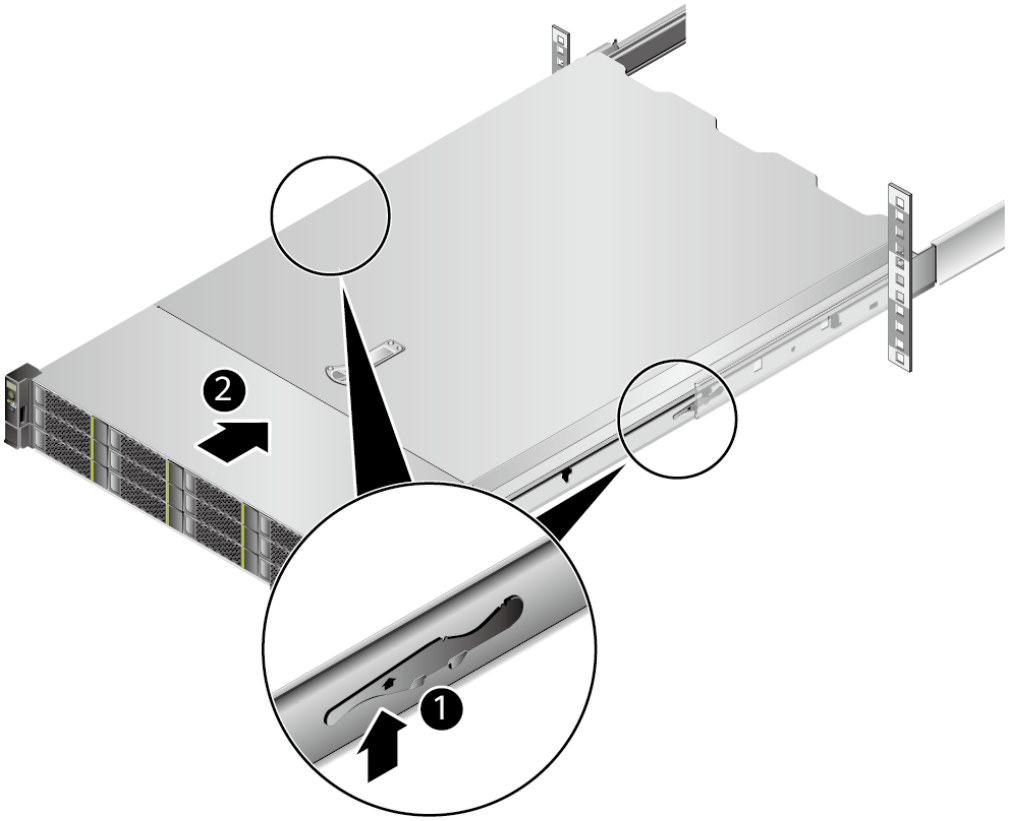
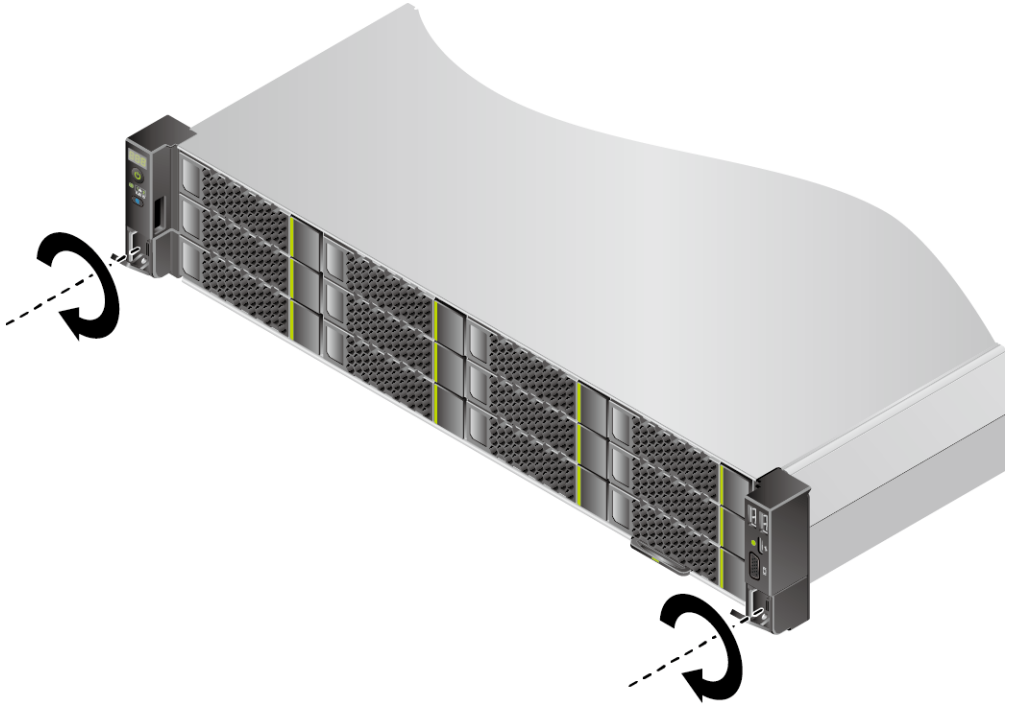
Figure 6-15 Pushing the server into the ball bearing rail kit



5. Open the baffle plate of the captive screws on the mounting ears and tighten the captive screws.

Figure 6-16 Securing a server



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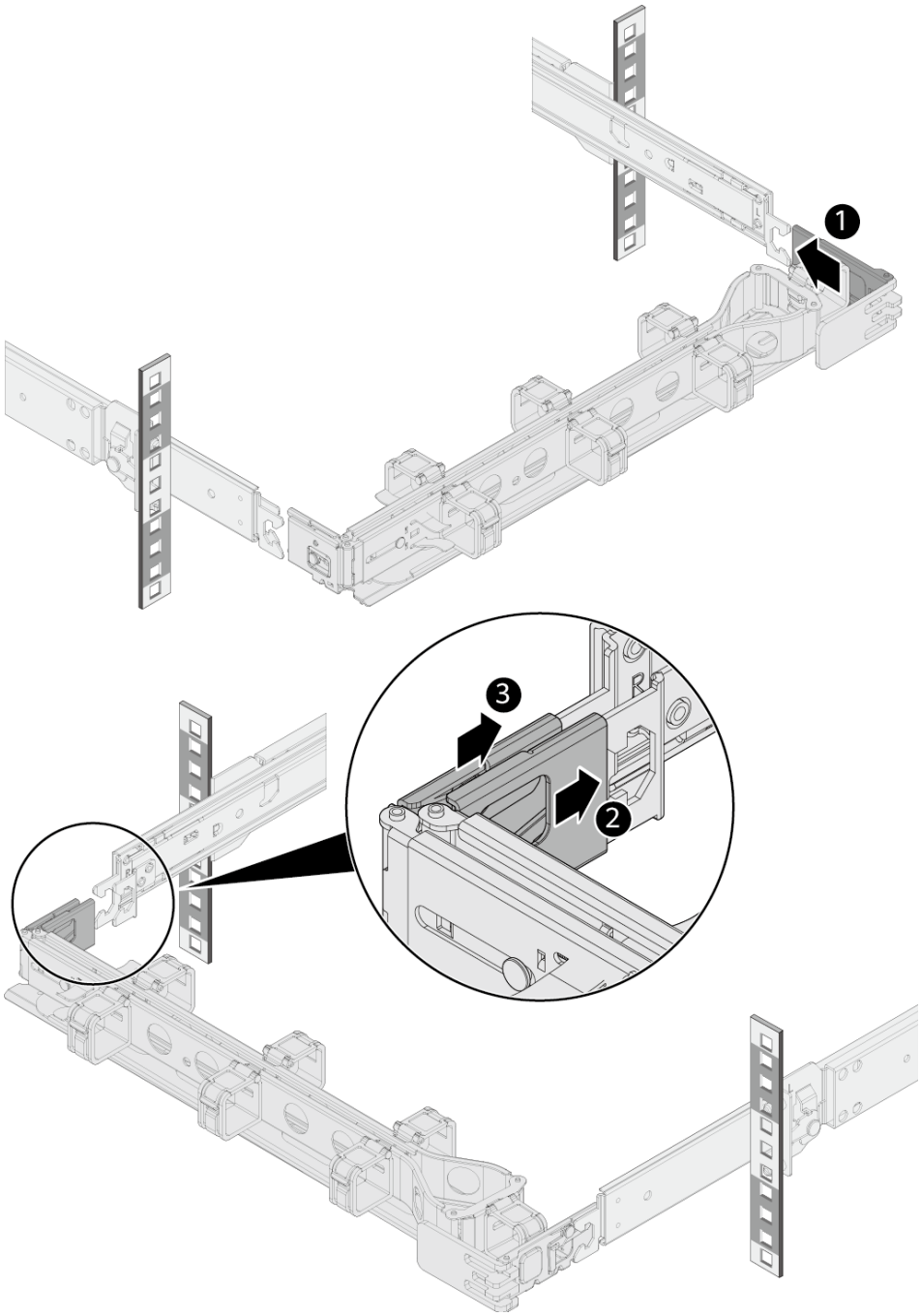
Step 2 Install a cable management arm (CMA).

1. Insert the bracket on the right of the CMA into the right guide rail. See (1) in **Figure 6-17**.
2. Insert the internal bracket on the left of the CMA into the left guide rail. See (2) in **Figure 6-17**.
3. Insert the external bracket on the left of the CMA into the left guide rail. See (3) in **Figure 6-17**.

Figure 6-17 Installing a CMA



Step 3 Connect external cables as required, such as network cables, VGA cables, and USB devices.

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Step 4 Connect the cables to the PSU.

For details, see **6.3.7.1 Connecting PSU Cables**.

Step 5 Power on the server.

For details, see **6.6.1 Powering On** .

Step 6 Check indicator status.

For details about 2288H V6-32DIMM, see **1.1.1.2 Indicators and Buttons**.

For details about 2288H V6-16DIMM, see **1.2.1.2 Indicators and Buttons**.

----End

6.3 Connecting External Cables

6.3.1 Connecting Mouse, Keyboard, and VGA Cables

The panel of the server provides DB15 VGA ports but no standard PS/2 port for a keyboard or mouse.

You can connect a keyboard and mouse to the USB port on the panel based on site installation conditions. There are two connection methods:

- Connect the keyboard and mouse to the USB ports.
- Connect the keyboard and mouse using a USB-to-PS/2 cable.

This section describes how to connect a keyboard and mouse using a USB-to-PS/2 cable and connect a monitor using a VGA cable.

Procedure

Step 1 Connect the USB connector of the USB-to-PS/2 cable to a USB port on the panel of the server.

Step 2 Connect the PS/2 connectors of the USB-to-PS/2 cable to the keyboard and mouse.

Step 3 Connect the DB15 connector of the VGA cable to the VGA port on the panel of the server and tighten the two screws.

Step 4 Connect the other connector of the VGA cable to the VGA port on the monitor and tighten the two screws.

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Figure 6-18 Connecting a USB-to-PS/2 cable and VGA cable (2288H V6-32DIMM)

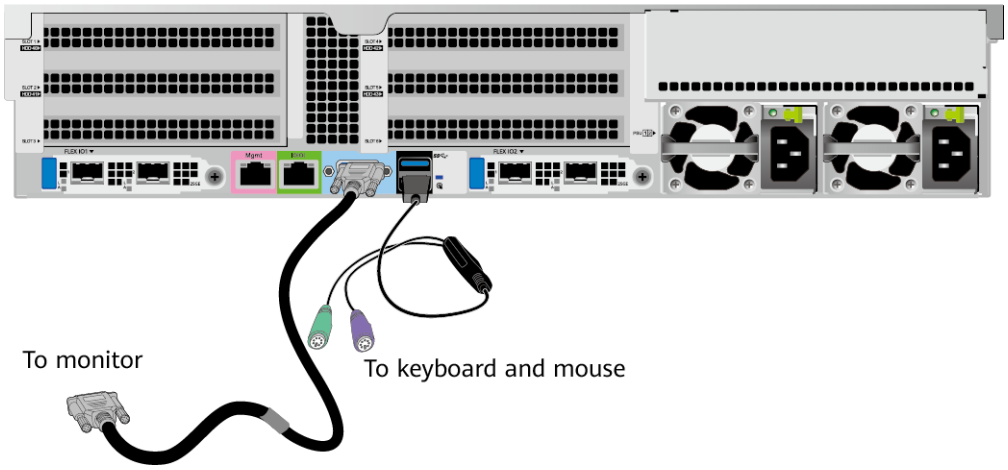
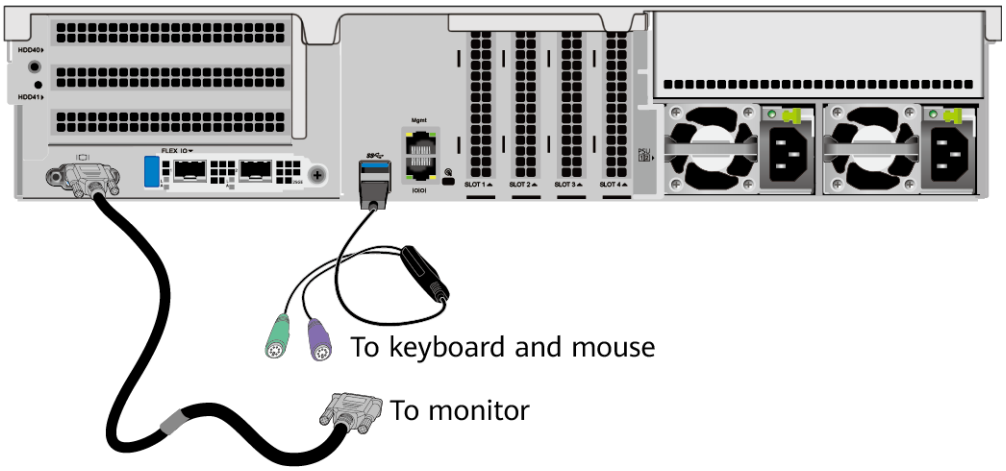


Figure 6-19 Connecting a USB-to-PS/2 cable and VGA cable (2288H V6-16DIMM)



----End

6.3.2 Connecting Network Cables

Before connecting or replacing a network cable, use a network cable tester to ensure that the new network cable is functional.

Procedure

Step 1 Determine the model of the new network cable.

- Shielded cables are recommended.

  NOTE

  If a non-shielded cable is used, the system cannot respond to ESD. As a result, the server may work abnormally.

- The new and old cables must be of the same model or be compatible.

Step 2 Number the new network cable.

- The number of the new network cable must be the same as that of the old one.

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- Use the same type of labels for the network cable.
  - Record the name and number of the local device to be connected on one side of the label, and those of the peer device on the other side.
  - Attach the label 2 cm (0.79 in.) away from the end of the network cable.

Step 3 Lay out the new network cable.

- Lay out the new cable in the same way as the old one. Underfloor cabling is recommended because it is tidy and easy.
- Lay out network cables in the cabinet based on installation requirements. You are advised to arrange cables in the same way as existing cables. Ensure that cables are routed neatly and undamaged.
- Separate network cables from power cables and signal cables when laying out the cables.
- The minimum bend radius of a network cable is 4 cm (1.57 in.). Ensure that the cable insulation layer is intact.
- Ensure that cables are laid out for easy maintenance and capacity expansion.
- Network cables must be bound using cable ties. Ensure that network cables are bound closely, neatly, and straight, and cable ties are in even distance and fastened properly.

Step 4 Remove the network cable to be replaced.

Remove the network cable from the network interface card (NIC) or board in the cabinet.

Step 5 Connect the new network cable to the NIC or board.

- Connect the new network cable to the same network port as the removed one.
- Before installing a network cable to a network port, ensure that the network cable connector is intact and the pins have no sundries or deformation.
- Connect the network cable to the network port securely.

Figure 6-20 Connecting the network cable (2288H V6-32DIMM)

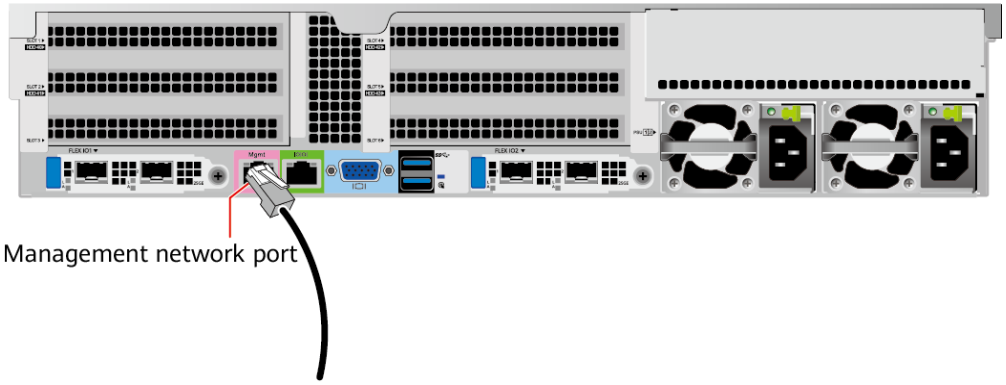

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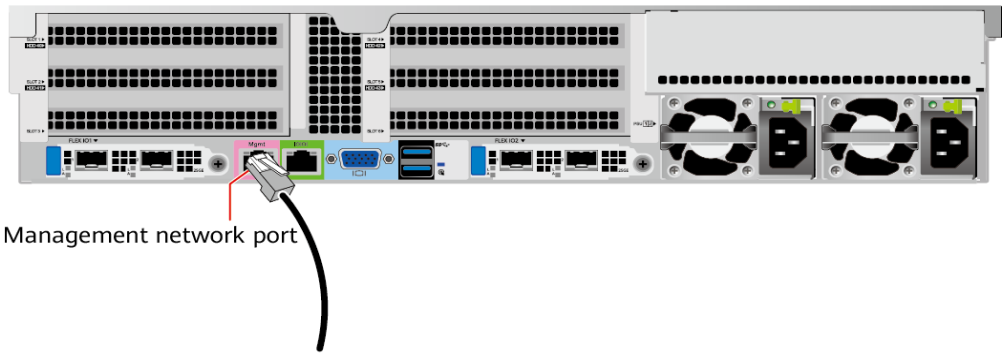
Figure 6-21 Connecting the network cable (2288H V6-16DIMM)



Step 6 Connect the new network cable to the peer network port.

- Connect the other cable connector to the peer device based on the network plan.
- Connect the new network cable to the same port as the removed one.
- Connect the network cable to the network port securely.

Step 7 Check whether the new network cable is functioning properly.

Power on the device. Check whether the communication with the peer device is normal by running the **ping** command.

- If yes, bind the new network cable with other cables.

  Bind the new network cable in the same way as the existing network cables. You can also remove all existing cable ties and bind all network cables again if necessary.
- If no, check whether the network cable is damaged or whether the connector of the network cable is not securely inserted.

----End

6.3.3 Connecting a Cable to an Optical Port

Procedure

Step 1 Determine the model of the new cable.

You can use an optical cable or an SFP+ cable to connect to the optical port.

Step 2 Number the new cable.

- The number of the new cable must be the same as that of the old one.
- Use the same type of labels for the optical cable.
  - Record the name and number of the local device to be connected on one side of the label, and those of the peer device on the other side.
  - Attach the label 2 cm (0.79 in.) away from the end of the optical cable.

Step 3 Lay out the new cable.

- Lay out the new cable in the same way as the old one.

  For example, if the old cable is laid out in underfloor cabling mode, so is the new cable.

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- Lay out optical cables or SFP+ cables in the cabinet based on installation requirements.

  You are advised to arrange cables in the same way as existing cables. Ensure that cables are routed neatly and undamaged.
- Separate optical cables or SFP+ cables from power cables and signal cables when laying out the cables.
- The minimum bend radius of an optical cable or SFP+ cables is 4 cm (1.57 in.).
- Ensure that optical cables or SFP+ cables are laid out for easy maintenance and capacity expansion.
- Optical cables must be bound using cable ties. Ensure that:
  – Optical cables are bound closely, neatly, and straight.
  – Cable ties are in even distance and fastened properly.

Step 4 Connect the cable to an optical port.

- When you use an optical cable:

  a. Remove the optical cable to be replaced.

  b. Connect the new optical cable.

  NOTE

  - Connect the new optical cable to the same port as the removed one.
  - Connect the optical cable to the optical module securely.

  i. Insert the optical module into the optical port. See (1) in **Figure 6-22**.

  ii. Close the latch on the optical module to secure it. See (2) in **Figure 6-22**.

  iii. Insert the optical cable into the optical module. See (3) in **Figure 6-22**.

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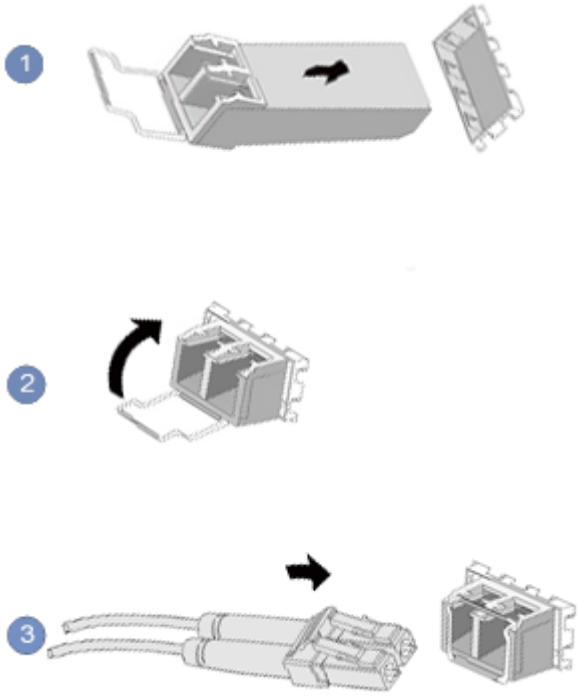
Figure 6-22 Connecting an optical cable



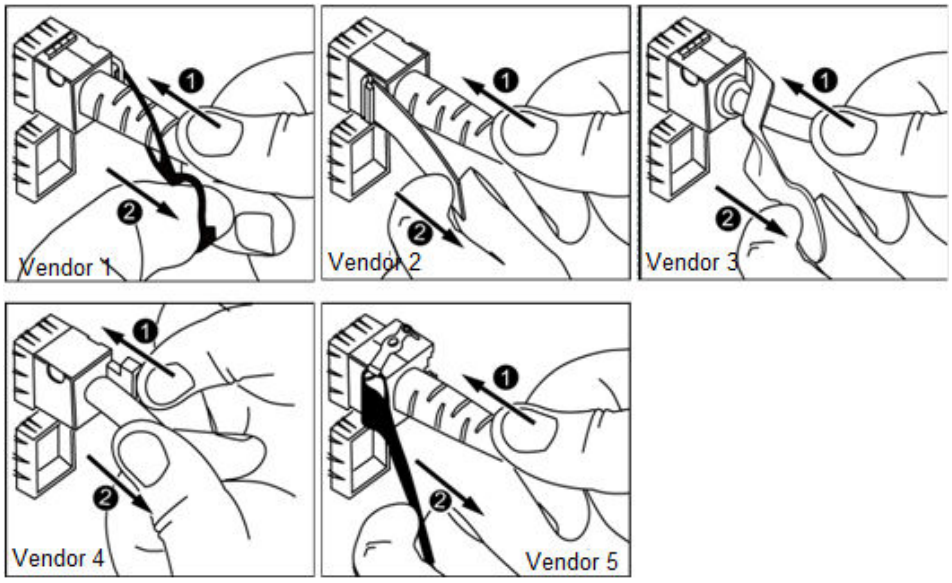
- When you use an SFP+ cable:

1. Remove the SFP+ cable to be replaced.
   Gently push the power connector inwards and pull the latch out to remove the SFP+ cable.

NOTICE

Do not directly pull out the latch.

Figure 6-23 Removing an SFP+ cable



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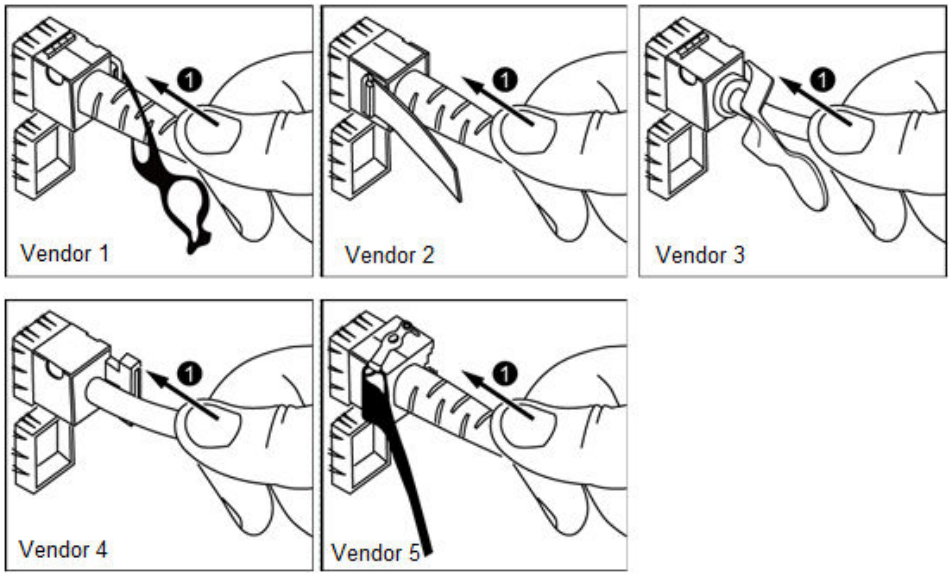
2. Connect the new SFP+ cable.

   Remove the dust-proof cap on the port, and insert the cable connector into the port. When you hear a "click" and the cable cannot be pulled out, the connector is secured.

Figure 6-24 Connecting an SFP+ cable



Step 5 Check whether the new cable is properly connected.

Power on the device. Check whether the port indicator is normal.

- If yes, go to **Step 7**.
- If no, go to **Step 6**.

Step 6 If the peer device cannot be pinged, check whether the cable is intact or the connector is securely connected.

- If yes, contact technical support.
- If no, replace the cable or insert the connector securely, and go to **Step 5**.

Step 7 Bind the new optical cable.

Bind the new optical cable in the same way as the existing optical cables. You can also remove all existing cable ties and bind all optical cables again if necessary.

----End

6.3.4 Connecting an IB Cable

Procedure

Step 1 Check the model of the new cable.

You can use QSFP+ cables to connect IB cables.

Step 2 Number the new cable.

The number of the new cable must be the same as that of the old one.

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Step 3 Route the new cable.

- Route the new cable in the same way (underfloor or overhead) as the old one.

  For example, if the old cable is routed in underfloor cabling mode, so is the new cable; if the old cable is routed in overhead mode, so is the new cable.
- Route QSFP+ cables in the cabinet based on installation requirements.

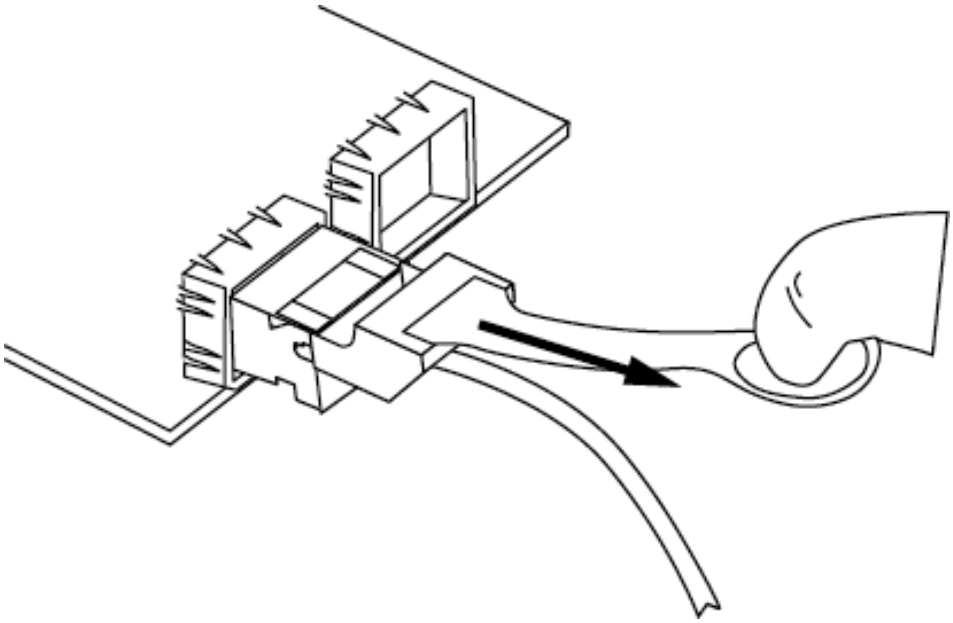
  You are advised to arrange new cables in the same way as existing cables. Ensure that cables are routed neatly without damage to the cable sheath.
- Separate QSFP+ cables from power cables and signal cables when routing the cables.
- Bend the QSFP+ cables with a bending radius of at least 4 cm (1.57 in.) to prevent damage to core wires. Ensure that the cable sheath is intact.
- Ensure that QSFP+ cables are routed for easy maintenance and capacity expansion.

Step 4 Replace the cable.

1. Remove the old cable to be replaced.

   Release the latch and remove the cable.

   Figure 6-25 Removing a cable (IB NIC with two 56 Gbit/s ports as an example)

2. Connect the new cable.

   Remove the dust-proof cap on the port, and insert the cable connector into the port. When you hear a "click" and the cable cannot be pulled out, the connector is secured.

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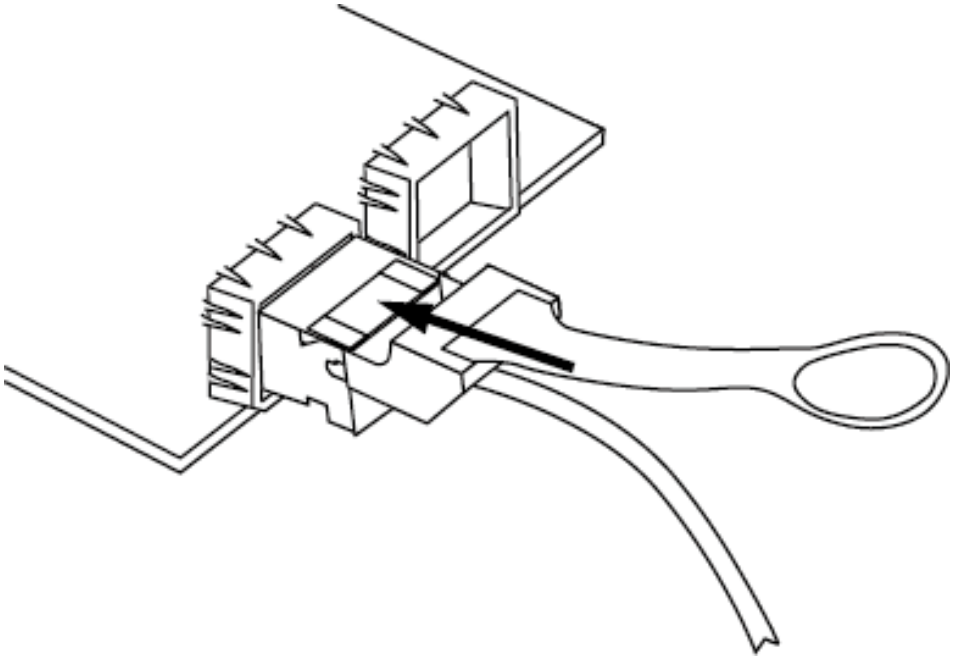
Figure 6-26 Connecting a cable (IB NIC with two 56 Gbit/s ports as an example)



Step 5 Check whether the new cable is properly connected.

Power on the device. If the LOM indicator is green, the cable is properly connected.

----End

6.3.5 Connecting a USB Type-C Cable

The server panel provides an iBMC management port, which is connected to a PC or mobile phone through a USB Type-C cable to monitor and manage the system.

There are two types of USB Type-C cables:

- Both ends of the cable are USB Type-C connectors.
- One end of the cable is a USB Type-C connector, and the other end is a USB connector.

Procedure

Step 1 Connect the USB Type-C connector of the cable to the USB Type-C port on the server panel.

Step 2 Connect the other end of the adapter cable to a PC or mobile phone.

- Connect the other end of the adapter cable to the USB Type-C port on the laptop or mobile phone.

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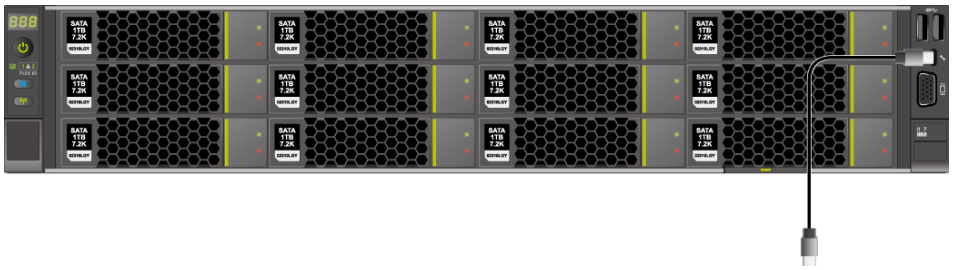
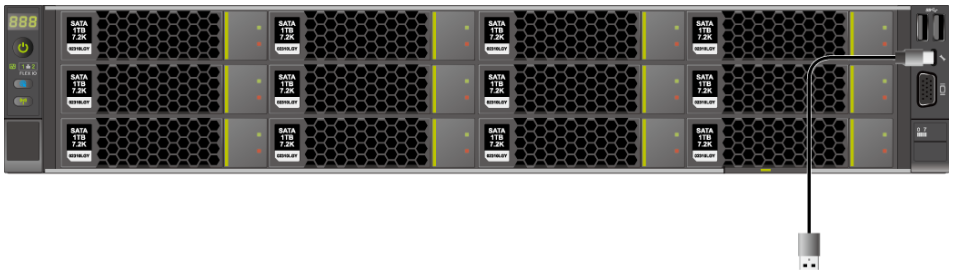
Figure 6-27 Connecting a cable to the USB Type-C port



- Connect the other end of the adapter cable to the USB port on the PC.

Figure 6-28 Connecting a USB Type-C to USB cable



----End

6.3.6 Connecting a USB Device

Procedure

Step 1 Connect the USB device to a USB port of the server.

Figure 6-29 Connecting a USB device (2288H V6-32DIMM)

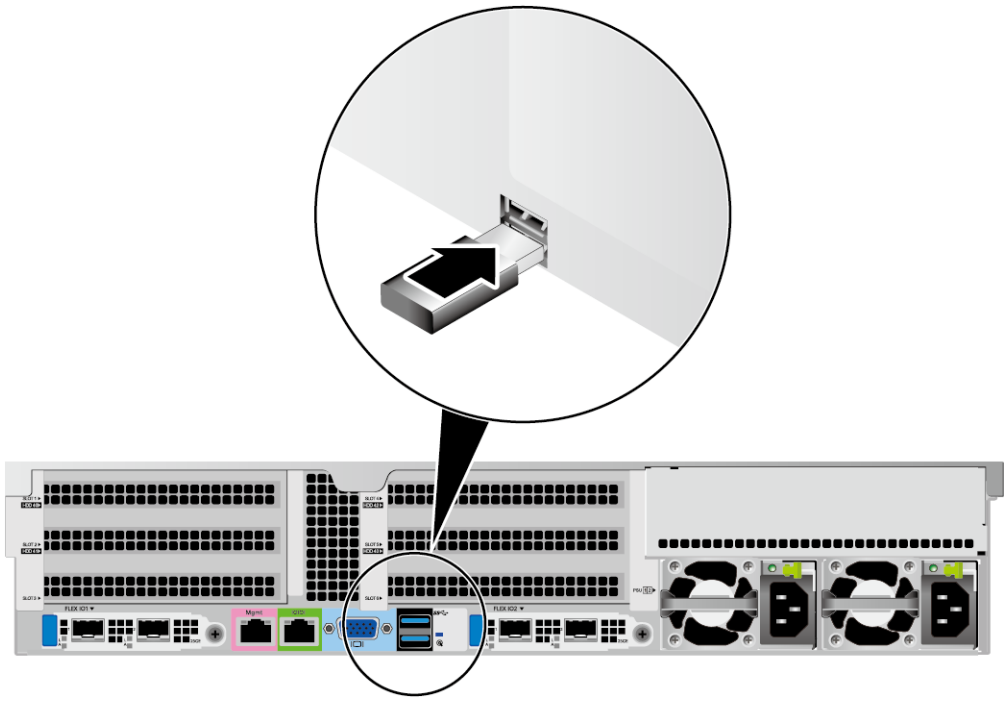


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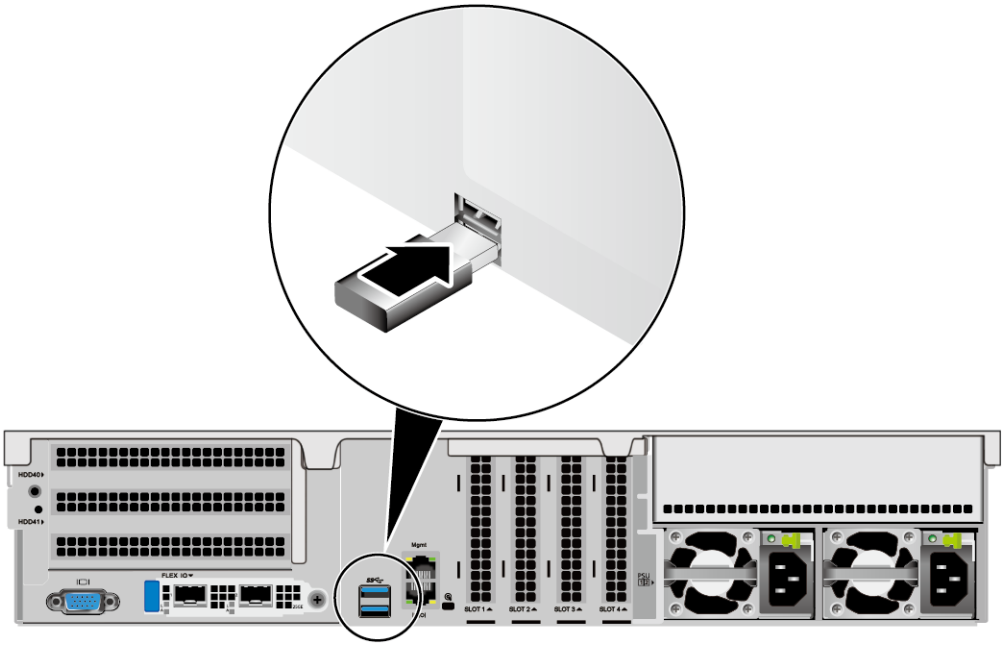
Figure 6-30 Connecting a USB device (2288H V6-16DIMM)



----End

6.3.7 Connecting a Serial Cable

The rear panel of the server provides a standard RJ45 serial port (3-wire), which works as the OS serial port by default. You can configure it as the iBMC serial port by using the iBMC CLI.

The serial port can be used as:

- OS serial port to monitor the OS status
- iBMC serial port for debugging and fault locating

Procedure

Step 1 Connect the serial cable.

Figure 6-31 Connecting a serial cable (2288H V6-32DIMM)

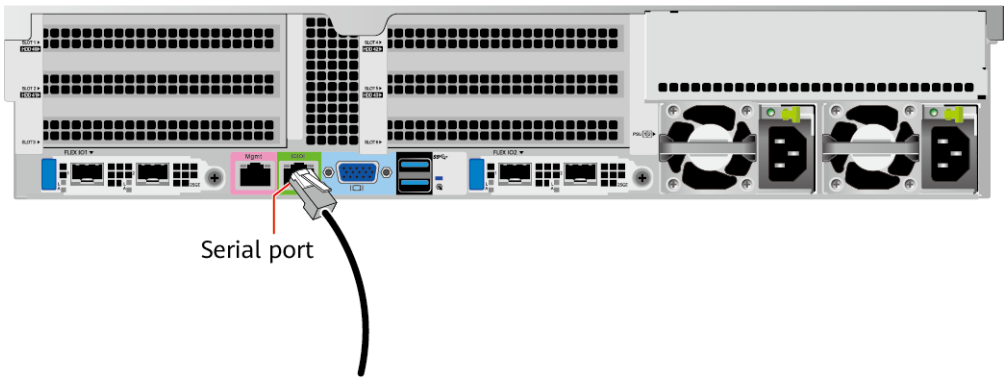


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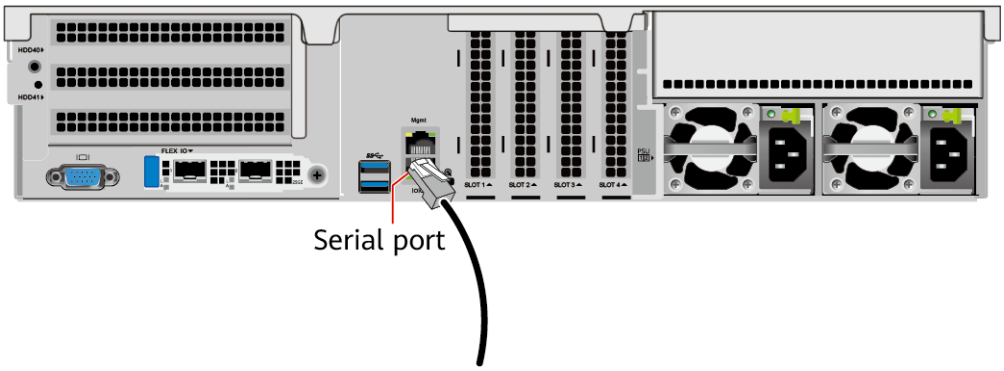
Figure 6-32 Connecting a serial cable (2288H V6-16DIMM)



----End

6.3.7.1 Connecting PSU Cables

6.3.7.1.1 Connecting the AC PSU Cable

The methods for installing AC PSU cables for the 2288H V6-32DIMM and 2288H V6-16DIMM servers are the same. This section uses the 2288H V6-32DIMM server as an example.

Before connecting power cables, ensure that the server has been correctly installed. For details, see **6.2.5 Installing a Server**.

NOTICE

- Use dedicated power cables to ensure equipment and personal safety.
- Use power cables only for dedicated servers. Do not use them for other devices.
- Connect the power cables of the active and standby PSUs to different PDUs to ensure reliable system operation.
- Ground the equipment before powering it on. In AC or HVDC environment, the power cables of AC PSUs are grounded. Ensure that the power cables are in good contact.

Procedure

Step 1 Take the component out of its ESD bag.

Step 2 Connect one end of the power cable to the power socket on the PSU of the server.

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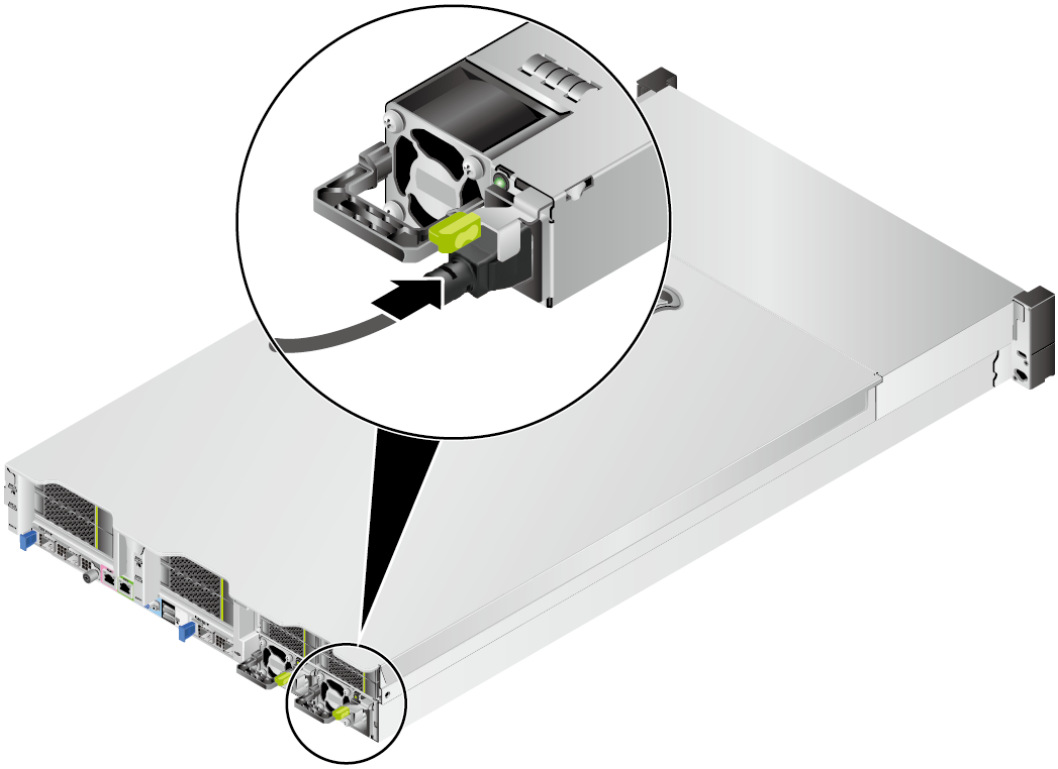
Figure 6-33 Connecting the cable

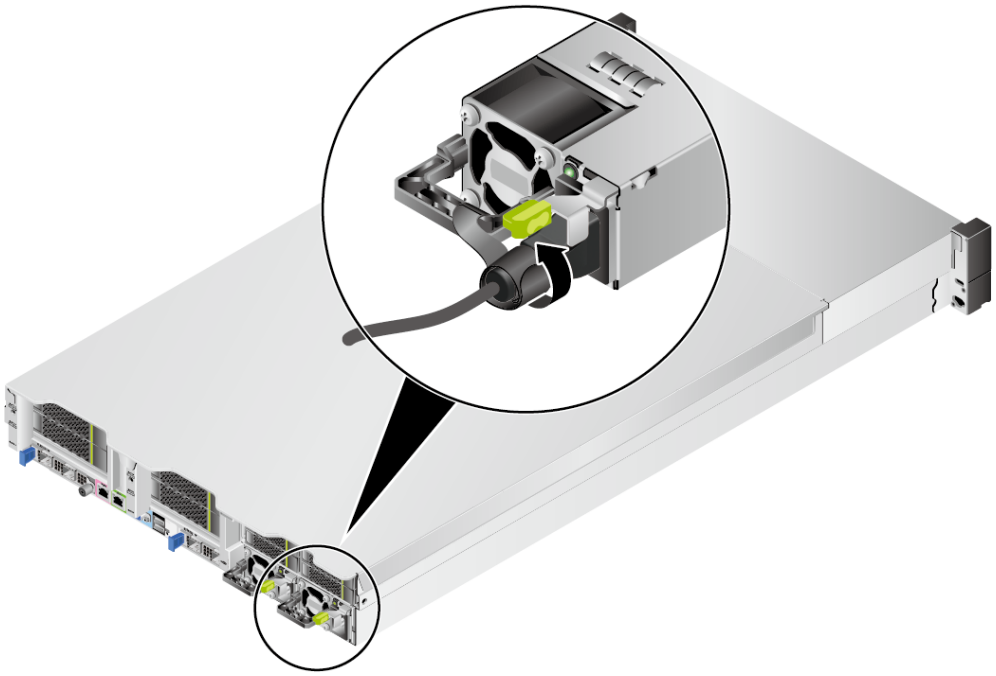


Step 3 Secure the power cable using a velcro strap.

NOTE

After the power module cables are connected to the server, adjust the velcro on the power module to the right corner of the handle, and then wrap the velcro tape around the lower part of the power cable plug, as shown in **Figure 6-34**.

Figure 6-34 Securing the cable



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Step 4 Connect the other end of the power cable to the AC PDU in the cabinet.

The AC PDU is fastened in the rear of the cabinet. Connect the power cable to the nearest jack on the AC PDU.

Step 5 Bind the power cables to the cable guide using cable ties.

----End

6.3.7.1.2 Connecting the DC PSU Cable

The methods for installing DC PSU cables for the 2288H V6-32DIMM and 2288H V6-16DIMM servers are the same. This section uses the 2288H V6-32DIMM server as an example.

Before connecting power cables, ensure that the server has been correctly installed. For details, see **6.2.5 Installing a Server**.

NOTICE

- Use dedicated power cables to ensure equipment and personal safety.
- Use power cables only for dedicated servers. Do not use them for other devices.
- Connect the power cables of the active and standby PSUs to different PDUs to ensure reliable system operation.
- Ground the equipment before powering it on. In DC environment, the ground terminals of DC PSUs are grounded. Ensure that the ground cables are in good contact.

Procedure

Step 1 Take the component out of its ESD bag.

Step 2 Connect the cables to the PSU.

- 1200 W (power cable P/N code: 02232SVN)
  a. Insert the power cable to the wiring terminals on the PSU until the cable click into position, as shown in **Figure 6-35**.
     i. Connect the cord end terminal of the negative power cable (blue) to the NEG(–) wiring terminal on the PSU.
     ii. Connect the cord end terminal of the positive power cable (black) to the RTN(+) wiring terminal on the PSU.

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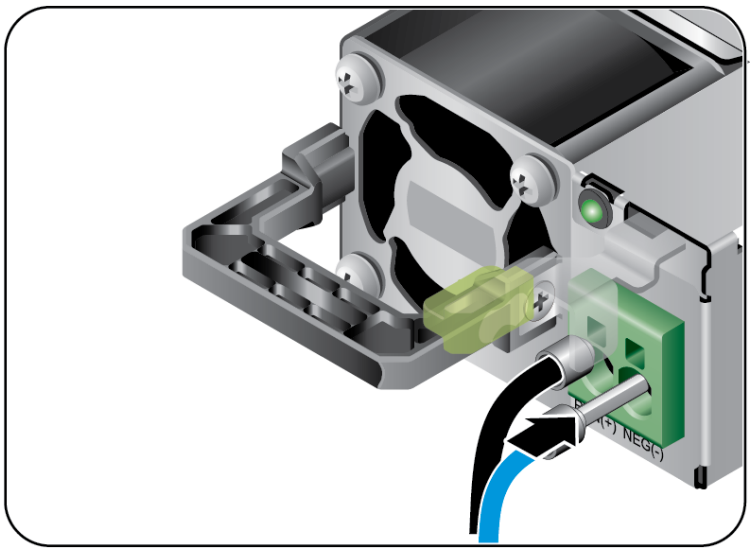
Figure 6-35 Connecting the power cable

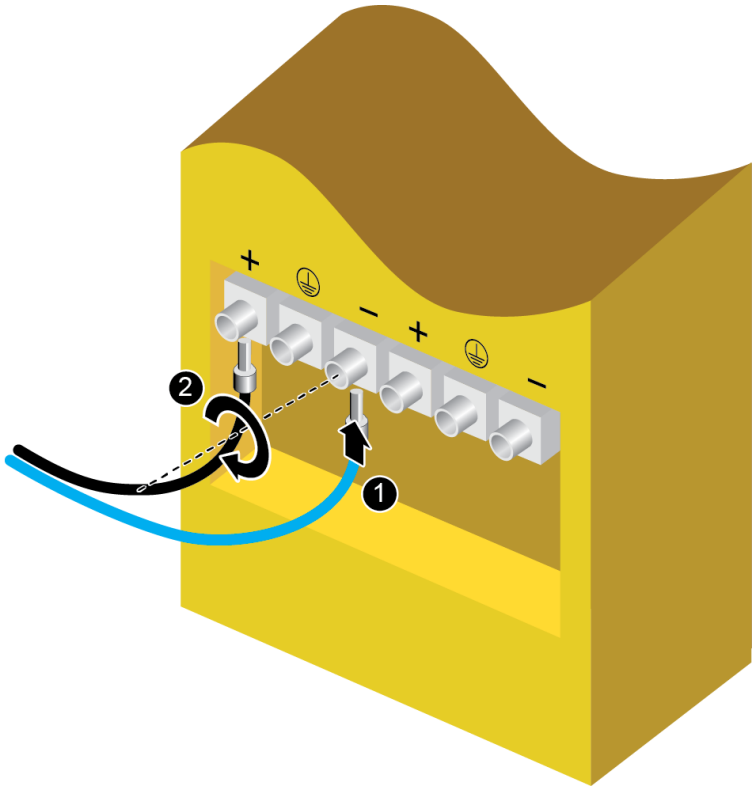


b. Insert the other end of the power cable to the wiring terminals on the PDU, and tighten the screws. See (1) and (2) in **Figure 6-36**.

   i. Connect the cord end terminal of the negative power cable (blue) to the PDU(–) wiring terminal.

   ii. Connect the cord end terminal of the positive power cable (black) to the PDU(+) wiring terminal.

Figure 6-36 Connecting the power cable to the PDU



- 1500 W (power cable P/N codes: 04151188/04151188-002 for the HVDC cable and 04152747 for the AC cable)

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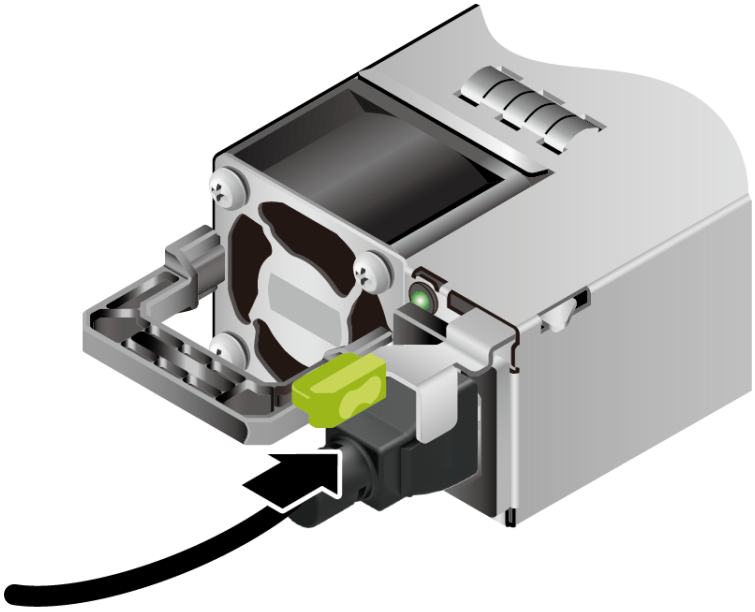
NOTE

The 1500 W HVDC PSU supports AC and DC input. Cables 04152747 and 04151188/04151188-002 can be used for AC input. Cable 04151188/04151188-002 can only be used for DC input.

– 04151188/04151188-002

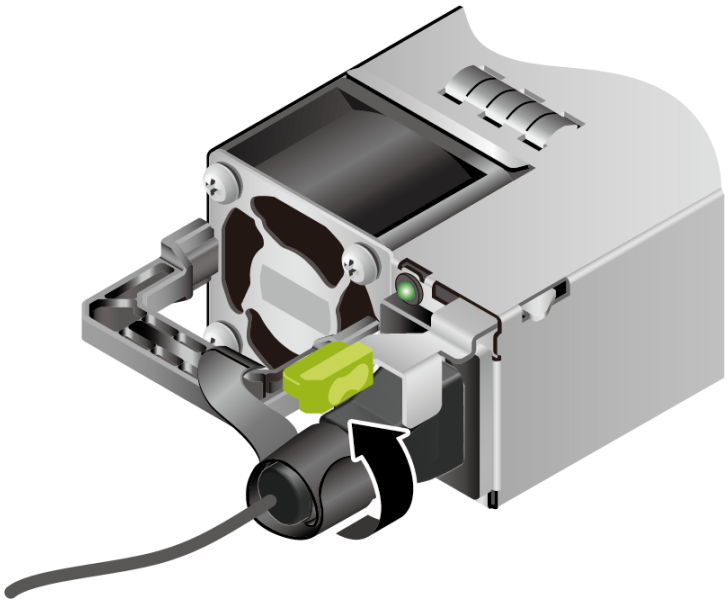
i. Connect one end of the power cable to the power socket on the PSU of the server.

Figure 6-37 Connecting the power cable



ii. Secure the power cable using a velcro strap.

Figure 6-38 Securing the cable



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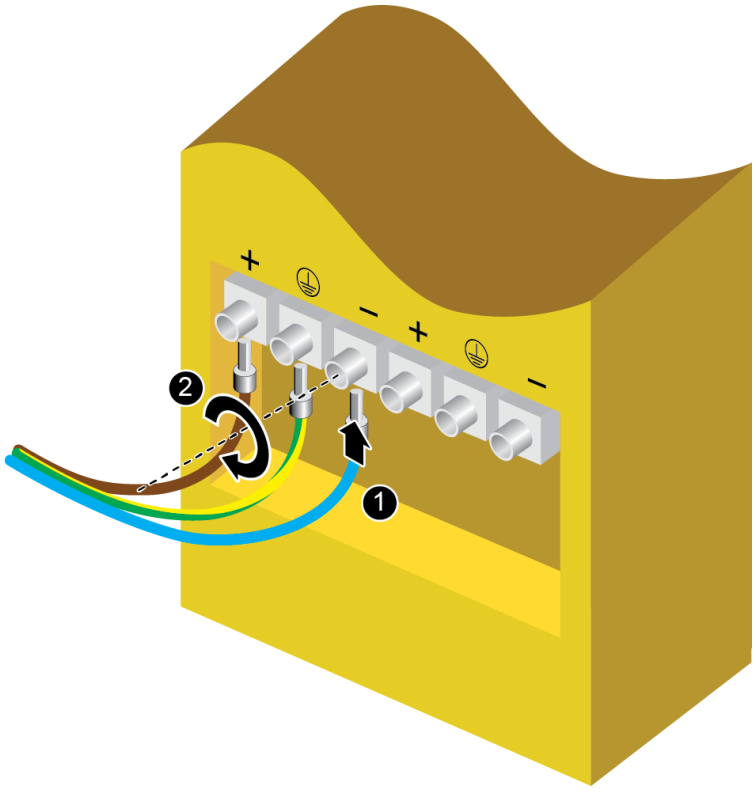
iii. Insert the other end of the power cable to the wiring terminals on the PDU, and tighten the screws. See (1) and (2) in **Figure 6-39**.

1) Connect the cord end terminal of the live wire (brown) to the PDU(+) wiring terminal.
2) Connect the cord end terminal of the neutral wire (blue) to the PDU(–) wiring terminal.
3) Connect the cord end terminal of the ground cable (yellow and green) to the ground terminal of the PDU.

Figure 6-39 Connecting the power cable to the PDU



– 04152747

i. Connect one end of the power cable to the power socket on the PSU of the server.

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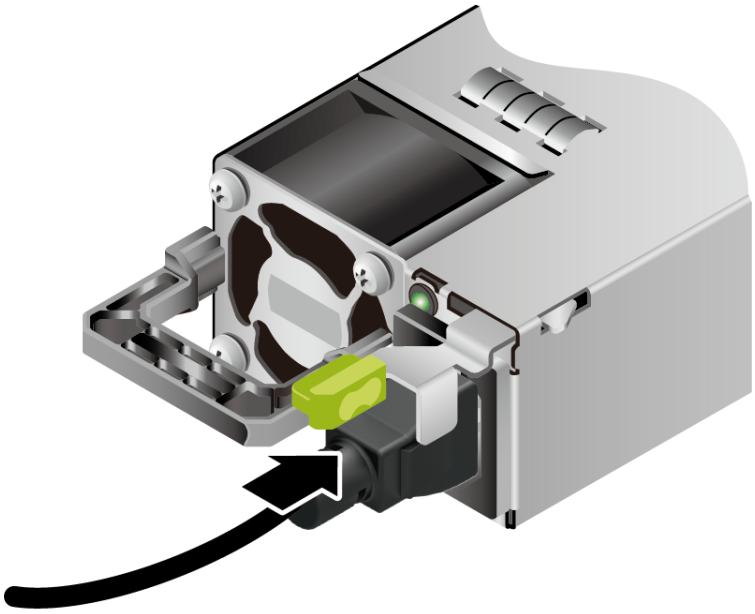
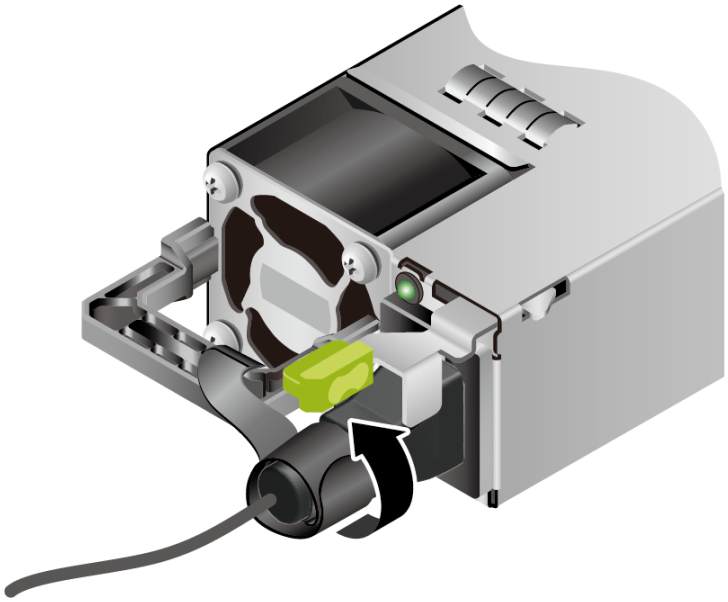
Figure 6-40 Connecting the power cable



ii. Secure the power cable using a velcro strap.

Figure 6-41 Securing the cable



iii. Connect the other end of the power cable to the PDU in the cabinet.

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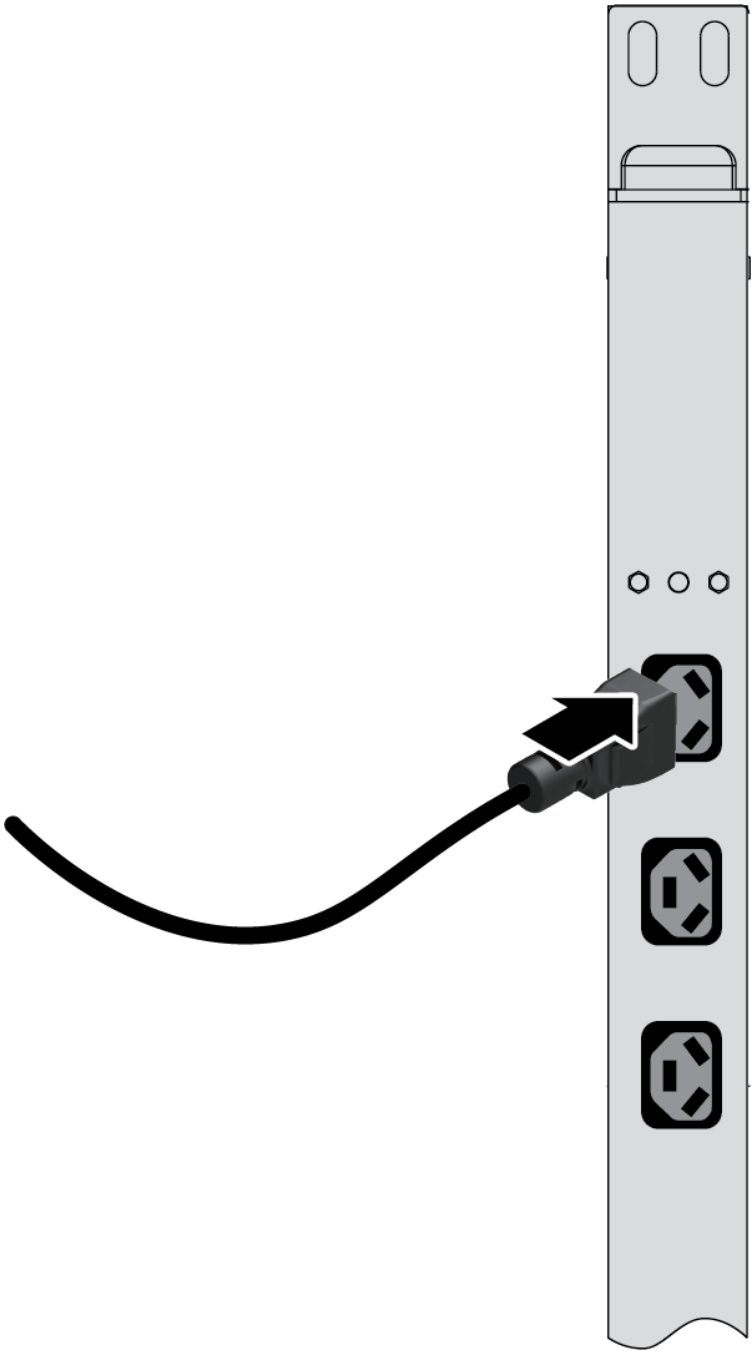
Figure 6-42 Connecting the power cable to the PDU



Step 3 Bind the power cables to the cable guide using cable ties.

----End

6.3.8 Checking Cable Connections

⚠ CAUTION

Before checking cable connections, ensure that the power is cut off. Otherwise, any incorrect connection or loose connection may cause human injury or device damage.

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Table 6-4 Cable connection checklist

Check Item	Description
Power cable	Power cables are correctly connected to the rear of the chassis.
Network cable	Network cables are connected correctly to the management ports or data ports on the rear panel of the chassis.
Ground cable	The server does not provide a separate ground port. ● In AC or HVDC environment, the power cables of AC PSUs are grounded. Ensure that the power cables are in good contact. ● In DC environment, the ground terminals of DC PSUs must be grounded. Ensure that the ground cables are in good contact.

6.4 Internal Cabling (2288H V6-32DIMM)

6.4.1 Cabling Overview

- Before connecting cables:
  - Check the connection ports of the cables to ensure that the ports are not rusty or damaged.
  - Do not forcibly unfold the pre-bent part of a cable to prevent damage to the cable.
  - Do not touch the ports at both ends of a cable to protect the cable from being contaminated by the oil on your hands or damaged.
- When connecting cables:
  - Check whether the cable codes are correct. Incorrect cables may cause the connector to be damaged or the device to work abnormally.
  - Properly route and secure cables to protect the cables from being squeezed and reduce interference in signal and transmission errors.
  - Avoid bending or stretching a cable excessively to prevent damage to the cable.
- When disconnecting cables:
  - Disconnect cables carefully and orderly to ensure that the normal operation of devices is not affected.
  - Hold the main body of a cable connector to avoid pulling the cable itself and damaging the internal wires of the cable or the pins on the connector.
  - If a cable cannot be disconnected easily, do not pull the cable forcibly. Check whether there is a guide pin that can be pressed to release the cable.
  - If a cable of the server is no longer required, remove and store it properly to prevent airflow inside the server from being blocked and heat dissipation being affected.

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6.4.2 8 x 2.5" Drive Pass-through Configuration

6.4.2.1 8 x 2.5" Drive Pass-through Configuration 1

6.4.2.1.1 DVD Drive Cabling

DVD Drive Cabling

Figure 6-43 DVD drive cabling

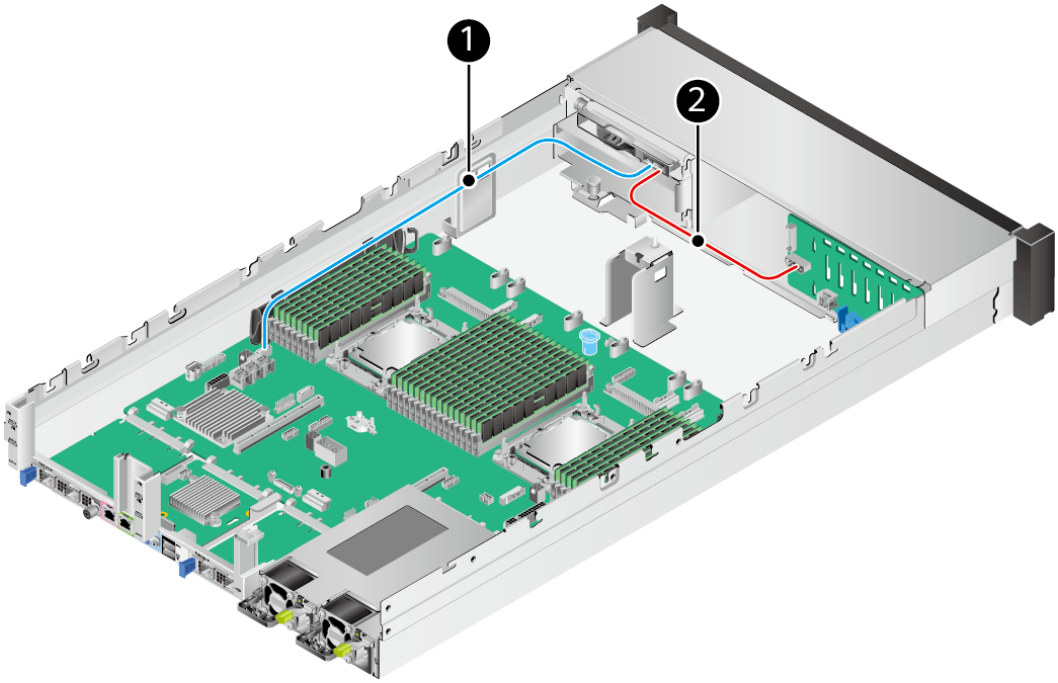

Table 6-5 DVD drive cabling

No.	P/N Code	Description
1	04050689	High-speed cable for connecting the DVD drive to the mainboard (J1)
2	04050689	Power cable for connecting the DVD drive to the front-drive backplane (J11)

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6.4.2.1.2 LCD Cabling

LCD Cabling

Figure 6-44 LCD cabling

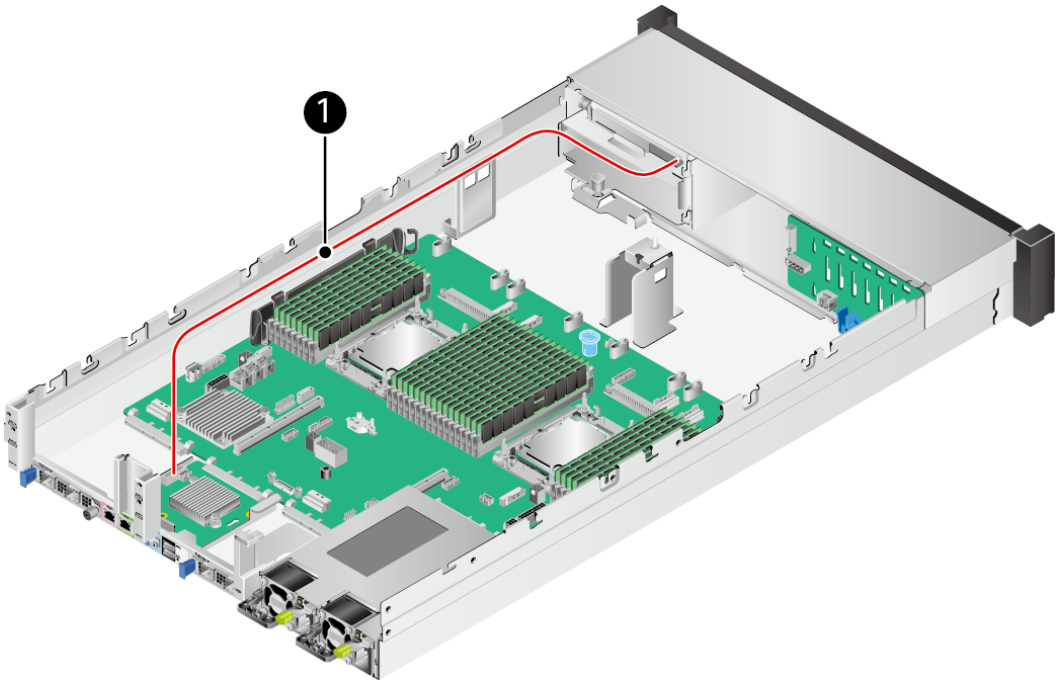

Table 6-6 LCD cabling

No.	P/N Code	Description
1	-	Signal cable for connecting the LCD to the mainboard (J6025)

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6.4.2.1.3 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-45 Left and right mounting ear cabling

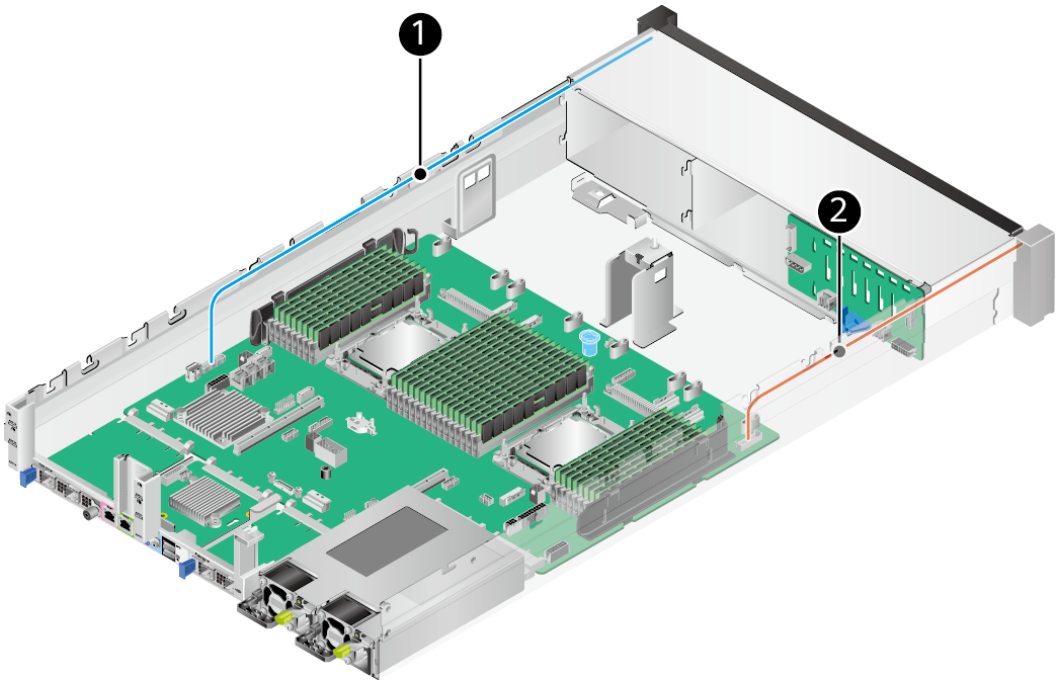

Table 6-7 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.1.4 NC-SI Cabling

NC-SI Cabling

Figure 6-46 NC-SI cabling

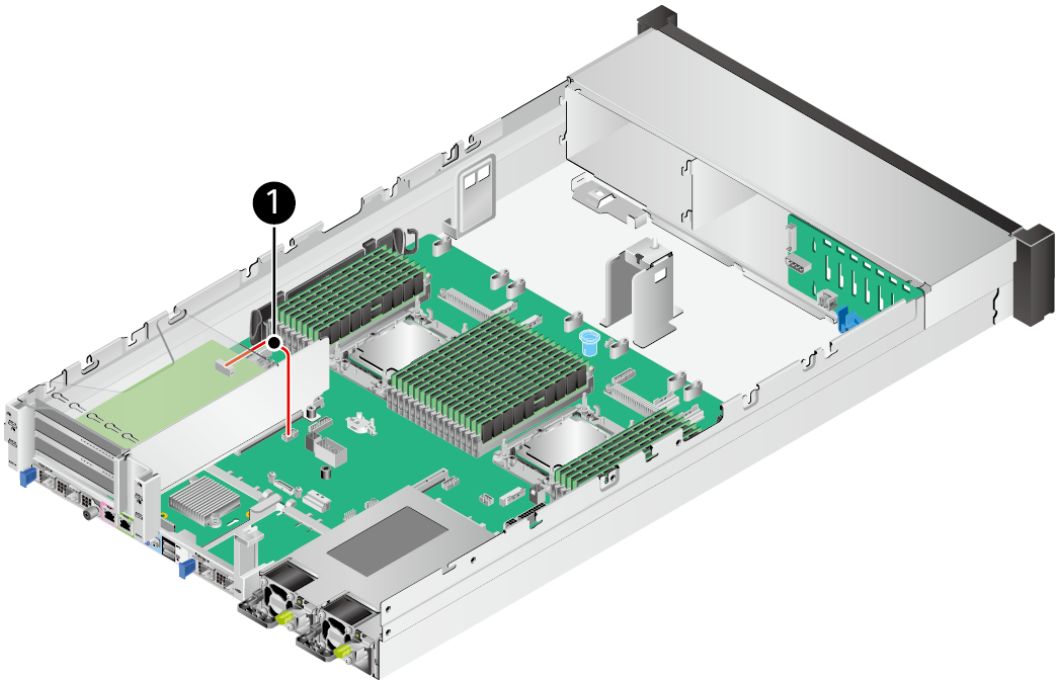

Table 6-8 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.2.1.5 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-47 OCP 3.0 expansion cable 1

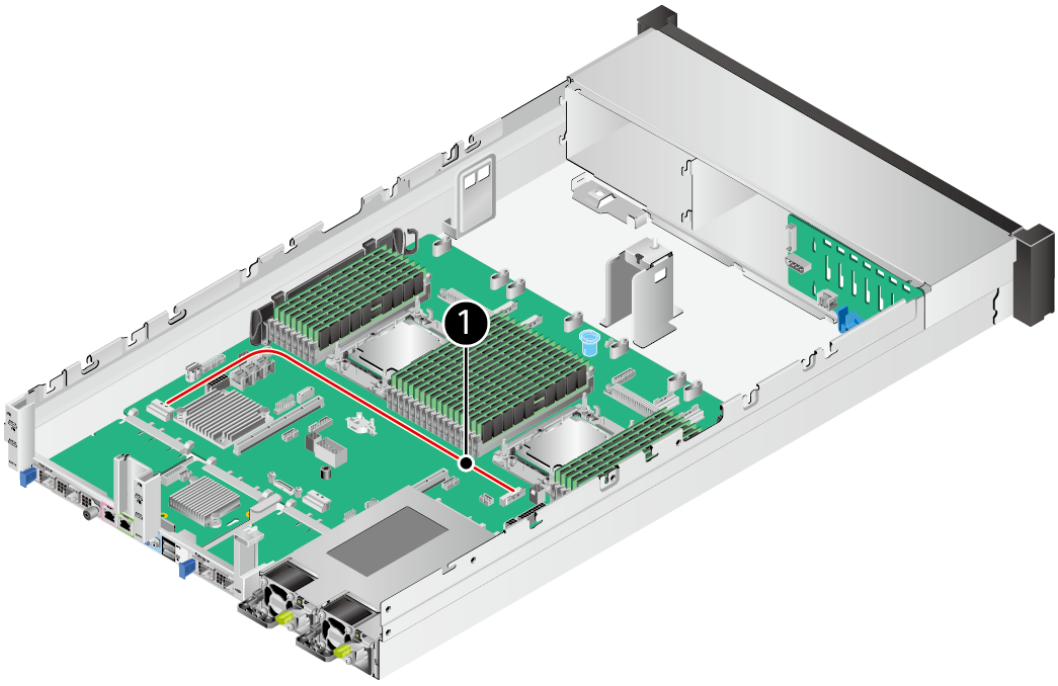

Table 6-9 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-48 OCP 3.0 expansion cable 2

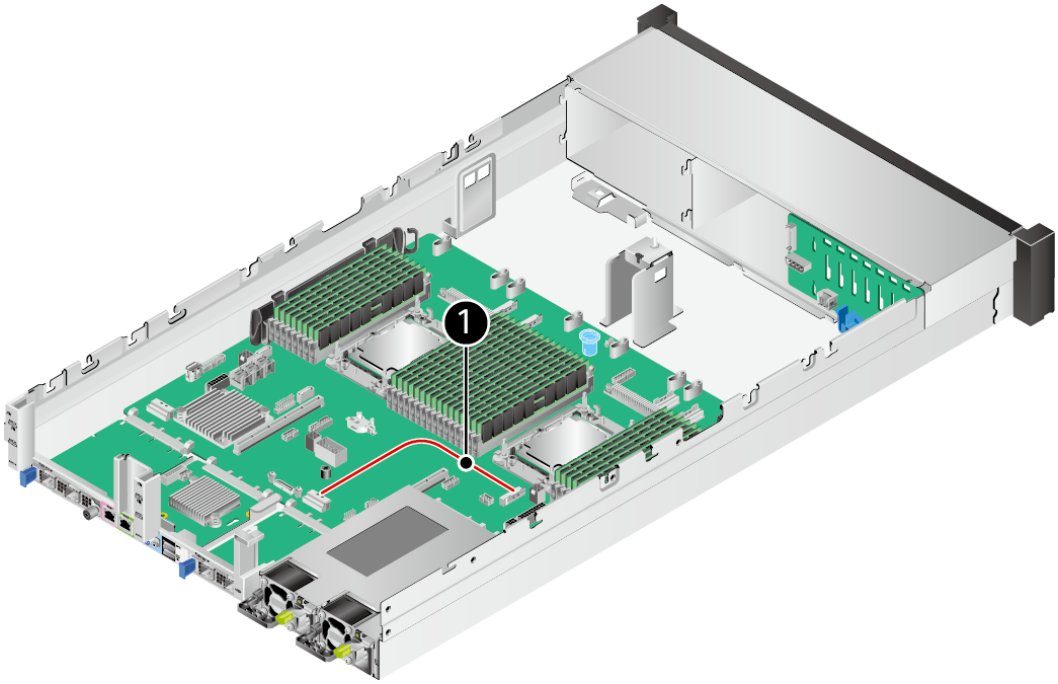

Table 6-10 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.2.1.6 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-49 Intrusion sensor cabling

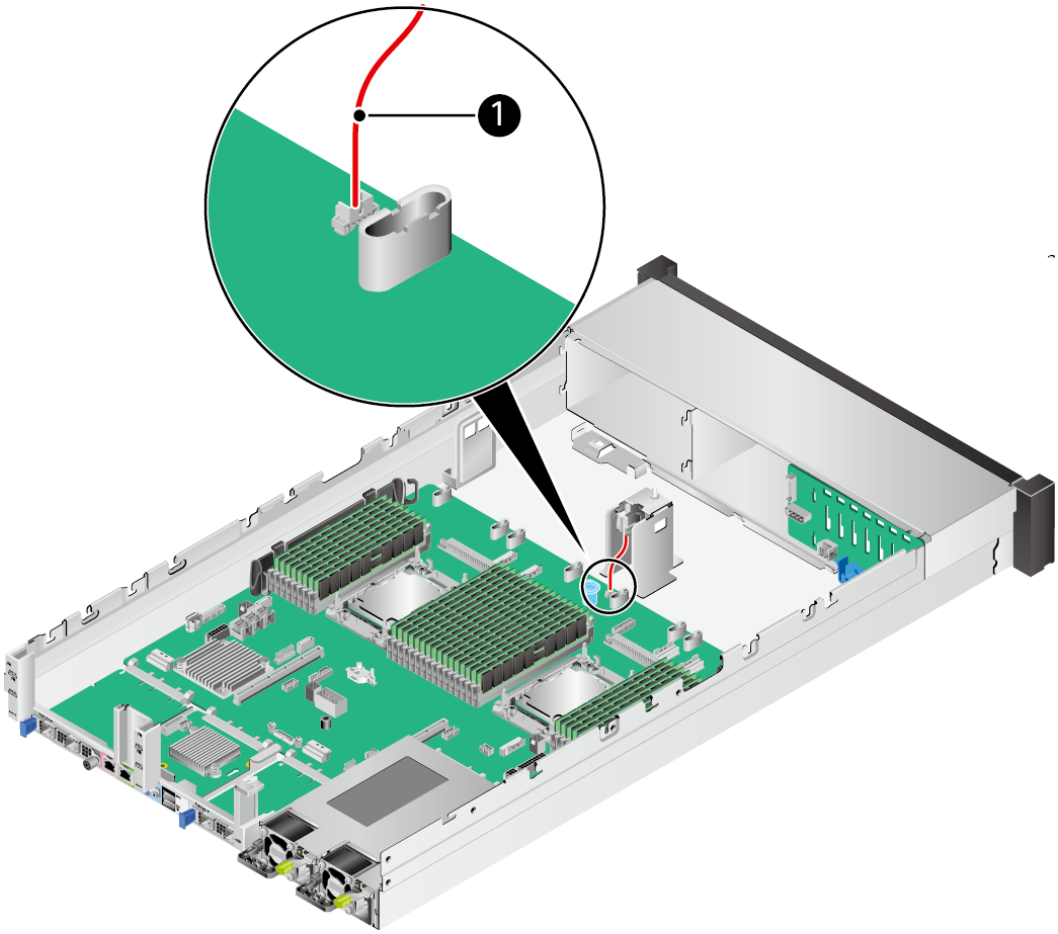

Table 6-11 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.1.7 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-50 M.2 SSD cabling

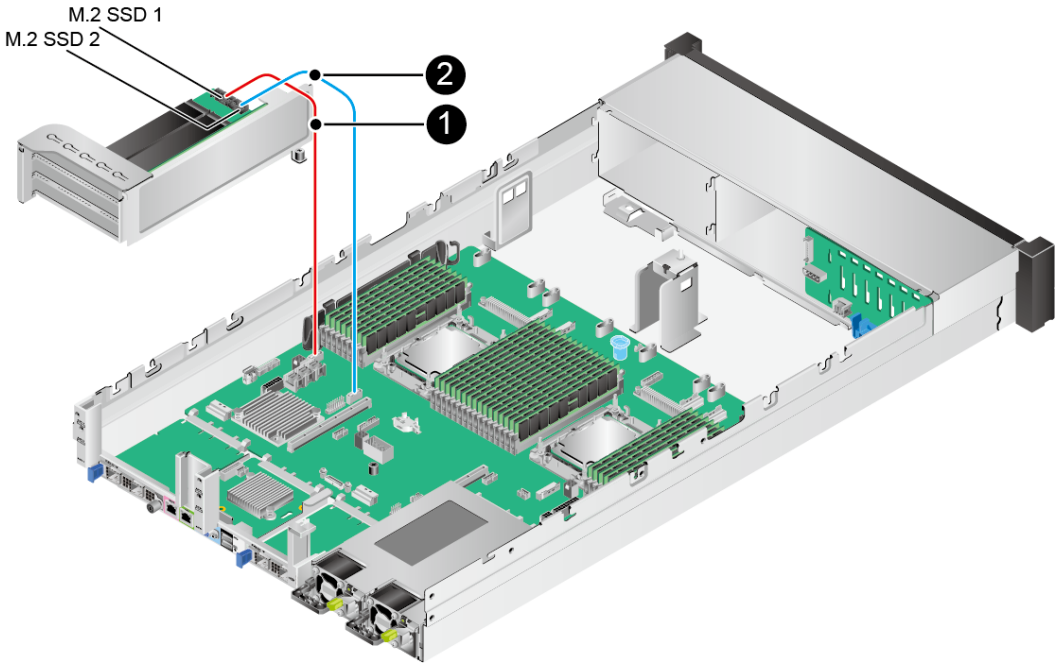

Table 6-12 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.2.1.8 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-51 Front-drive backplane power and low-speed signal cables

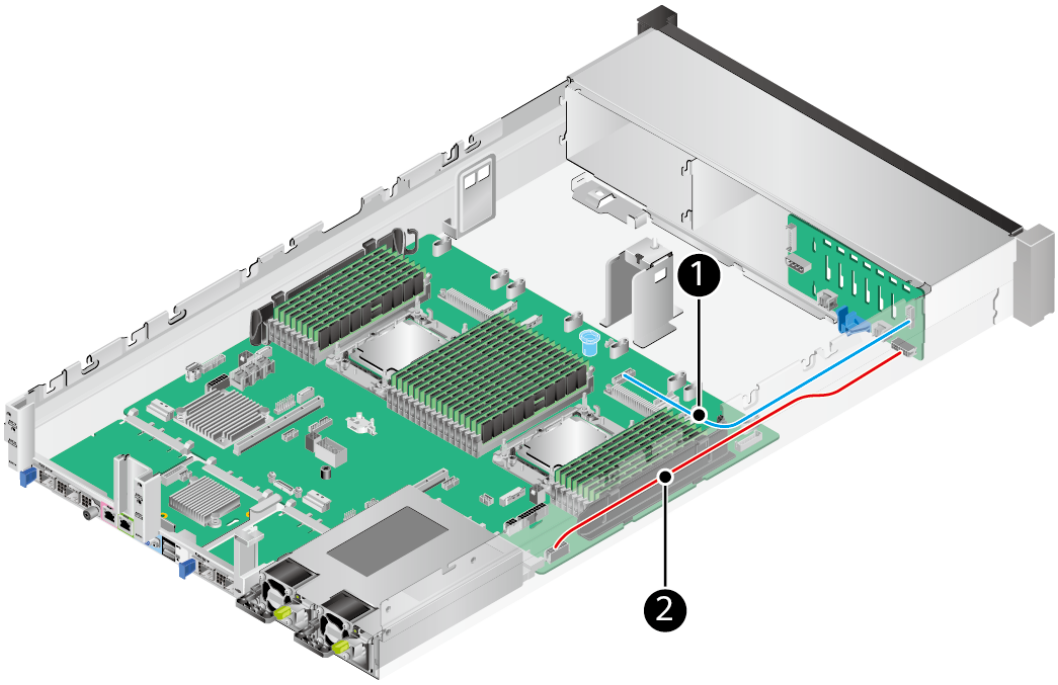

Table 6-13 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

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6.4.2.1.9 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-52 Front-drive backplane SAS high-speed cabling

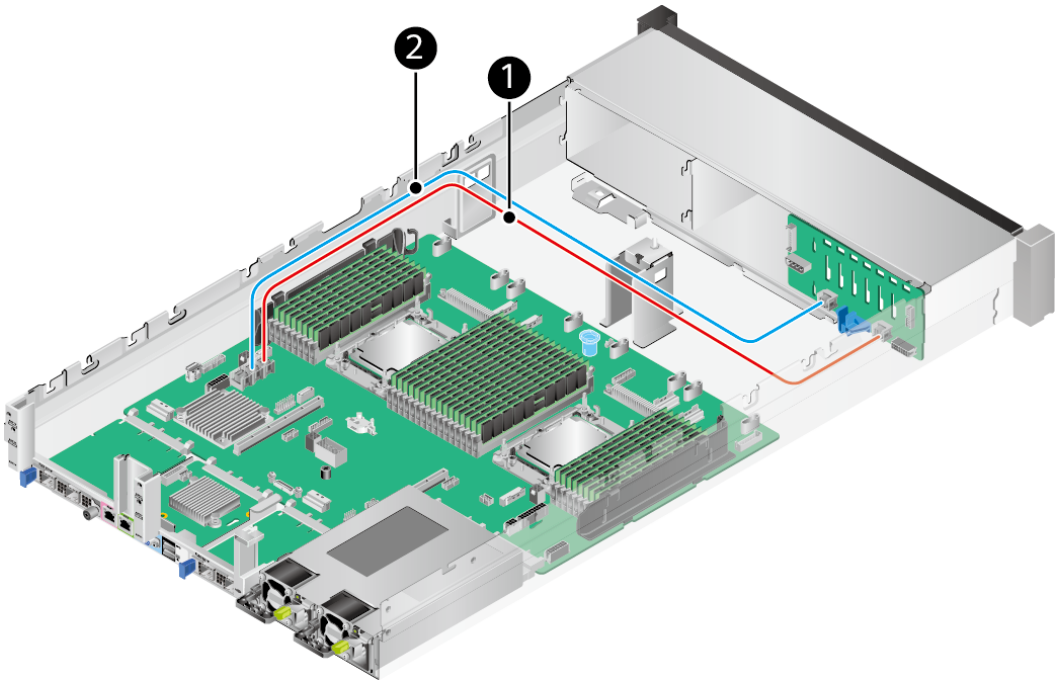

Table 6-14 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J28) to the mainboard (J6)
2	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J29) to the mainboard (J5)

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6.4.2.1.10 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-53 I/O module 3 cabling

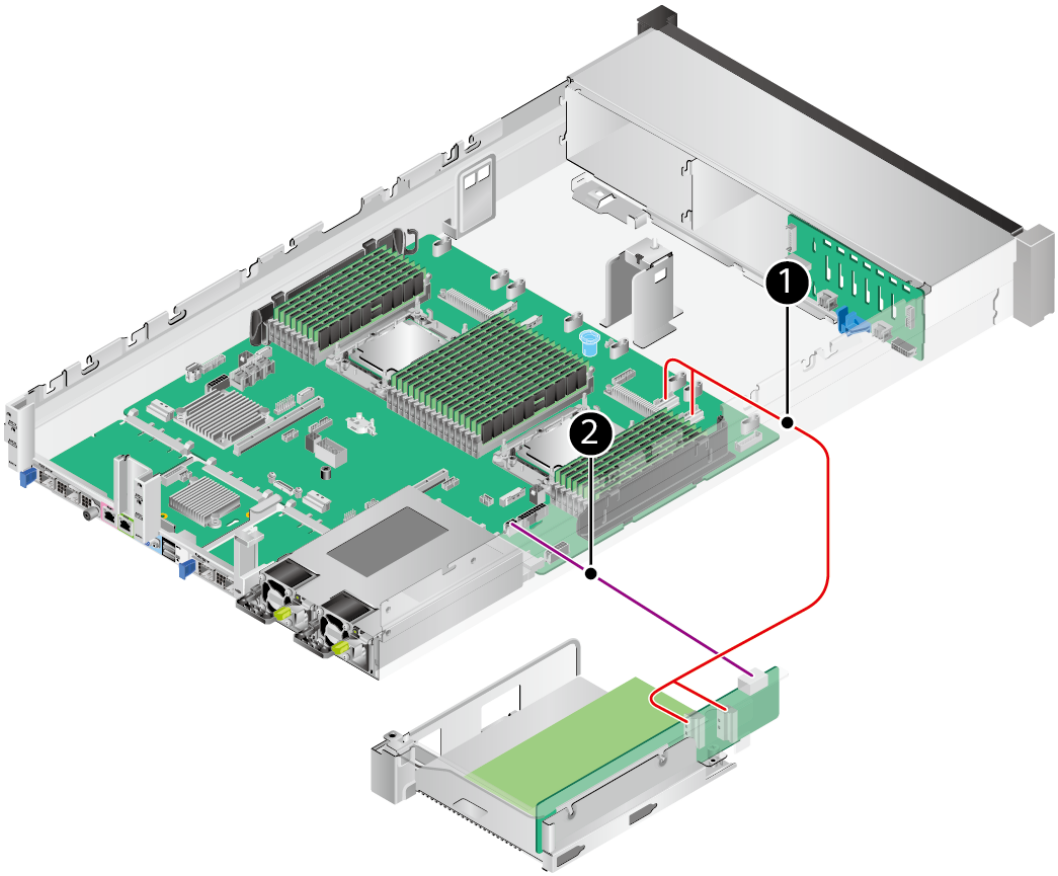

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Table 6-15 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.2.1.11 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-54 I/O module 3 cabling

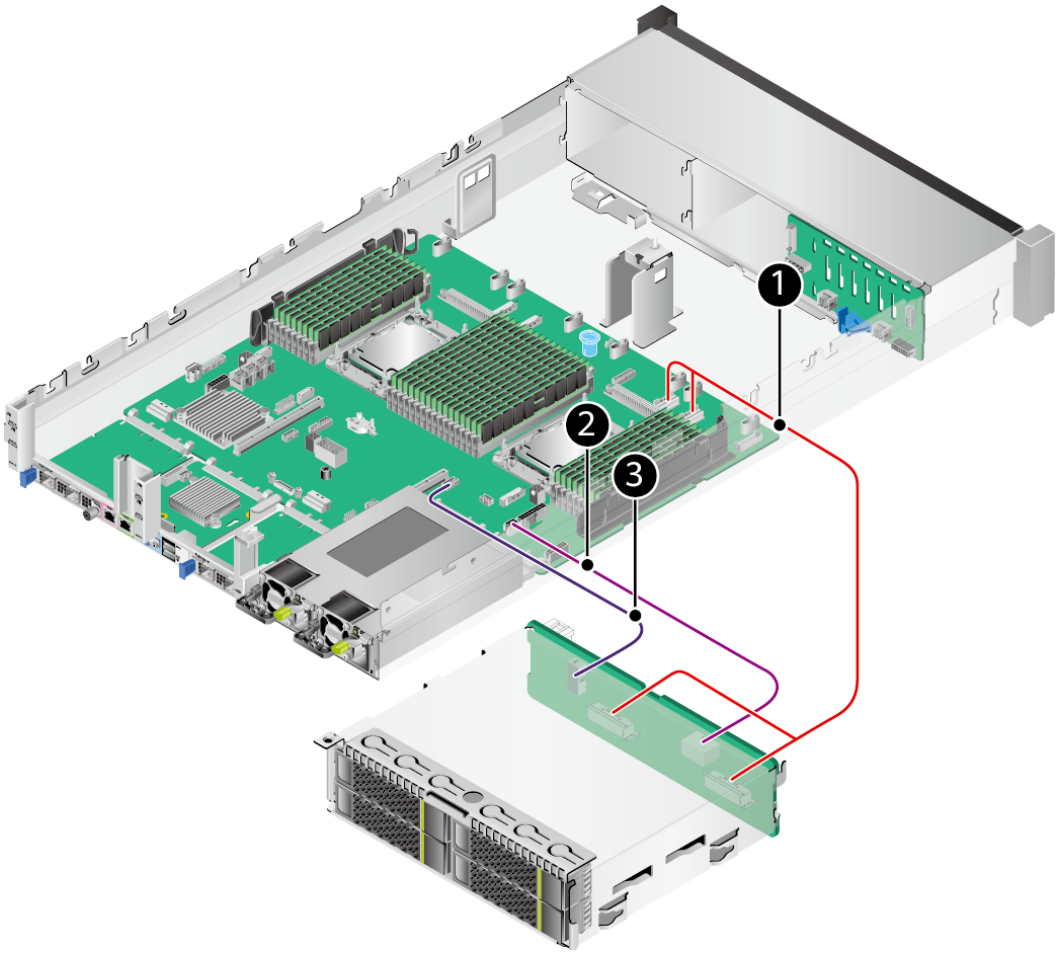

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Table 6-16 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.2.2 8 x 2.5" Drive Pass-through Configuration 2

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6.4.2.2.1 DVD Drive Cabling

DVD Drive Cabling

Figure 6-55 DVD drive cabling

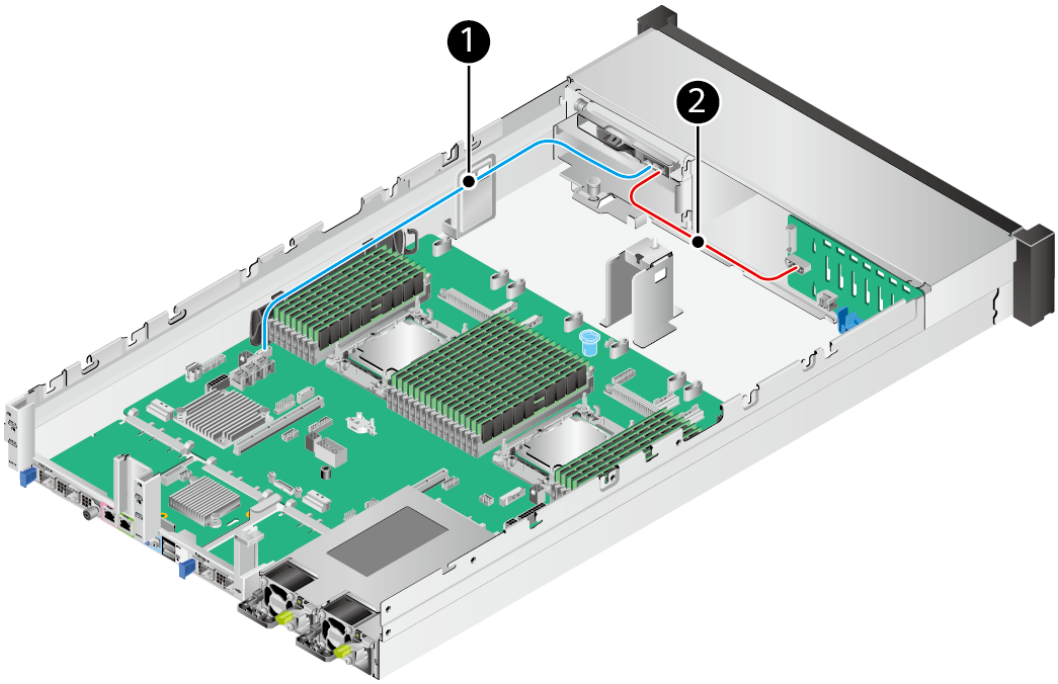

Table 6-17 DVD drive cabling

No.	P/N Code	Description
1	04050689	High-speed cable for connecting the DVD drive to the mainboard (J1)
2	04050689	Power cable for connecting the DVD drive to the front-drive backplane (J11)

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6.4.2.2.2 LCD Cabling

LCD Cabling

Figure 6-56 LCD cabling

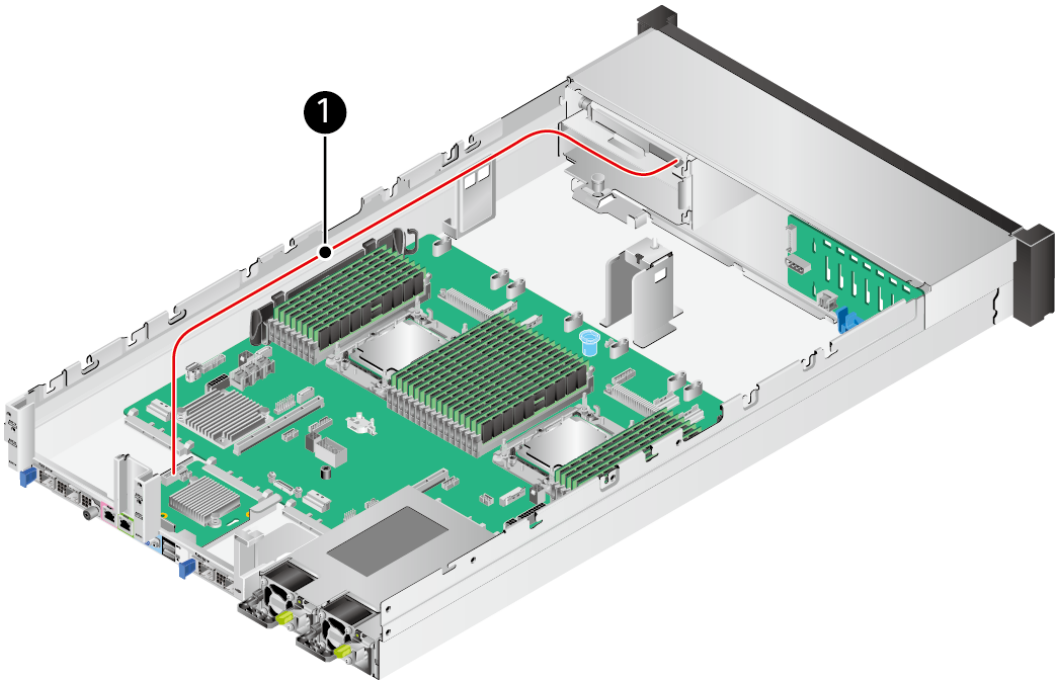

Table 6-18 LCD cabling

No.	P/N Code	Description
1	-	Signal cable for connecting the LCD to the mainboard (J6025)

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6.4.2.2.3 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-57 Left and right mounting ear cabling

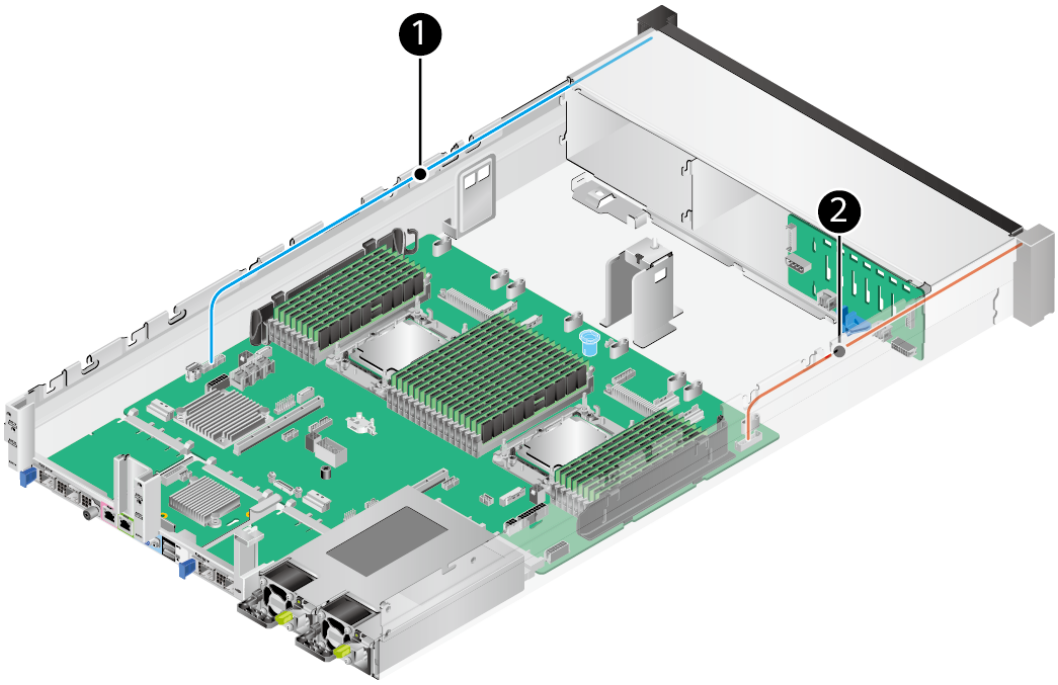

Table 6-19 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.2.4 NC-SI Cabling

NC-SI Cabling

Figure 6-58 NC-SI cabling

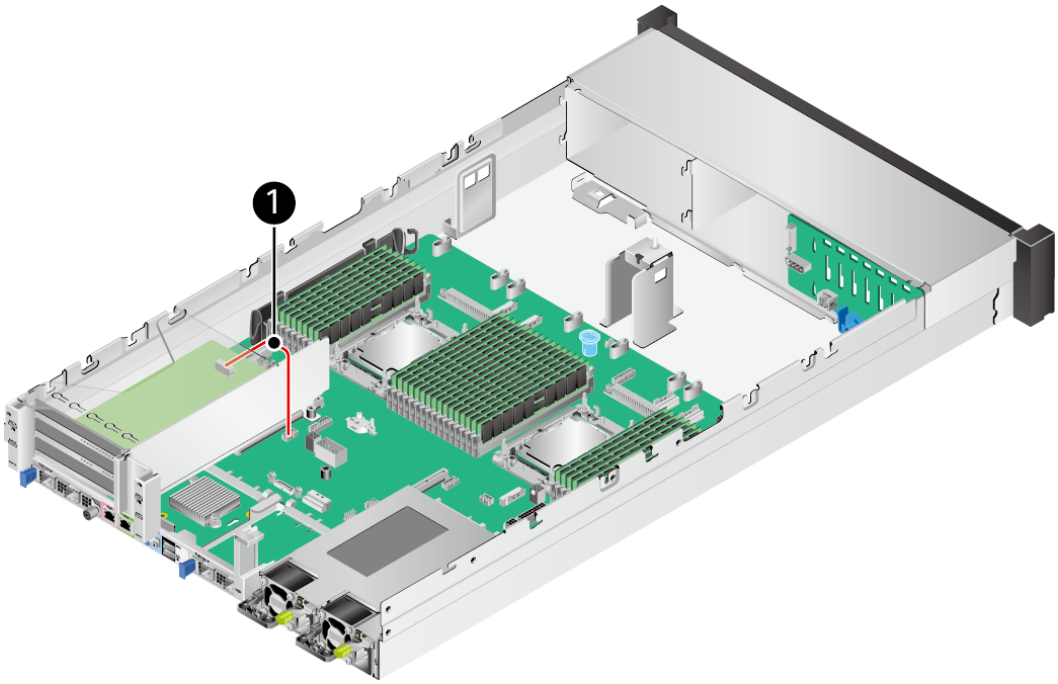

Table 6-20 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.2.2.5 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-59 OCP 3.0 expansion cable 1

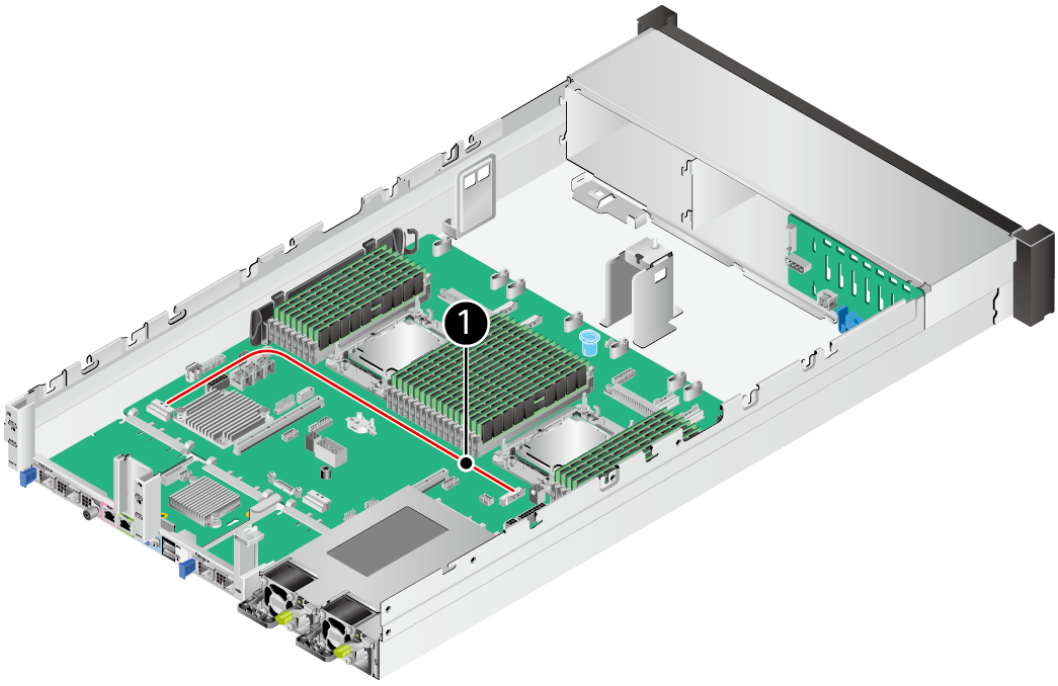

Table 6-21 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-60 OCP 3.0 expansion cable 2

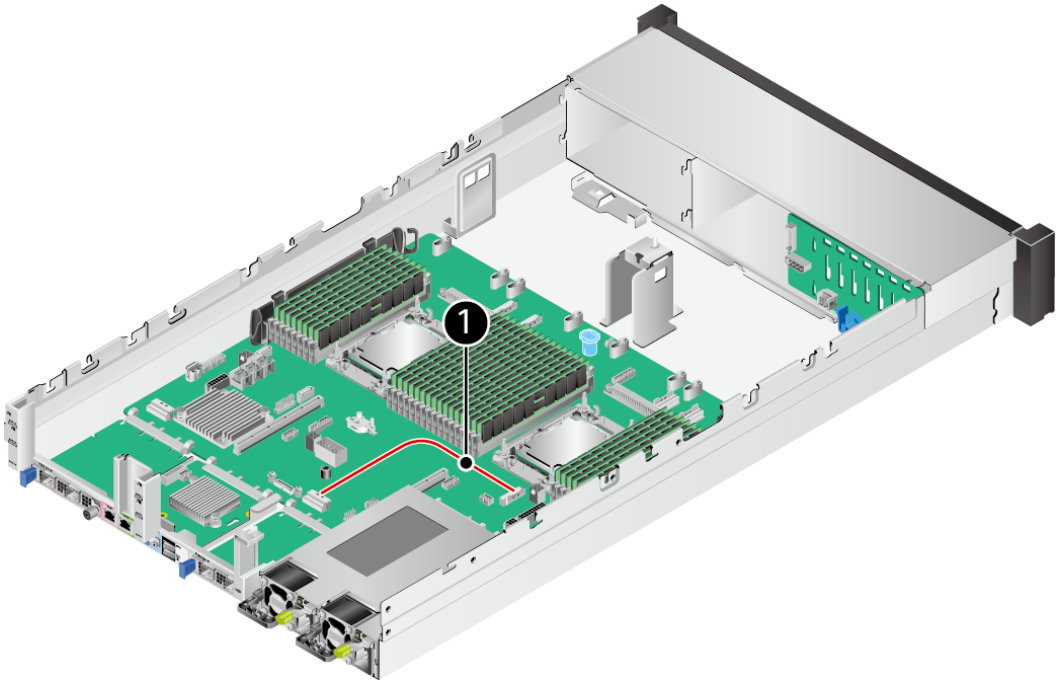

Table 6-22 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.2.2.6 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-61 Intrusion sensor cabling

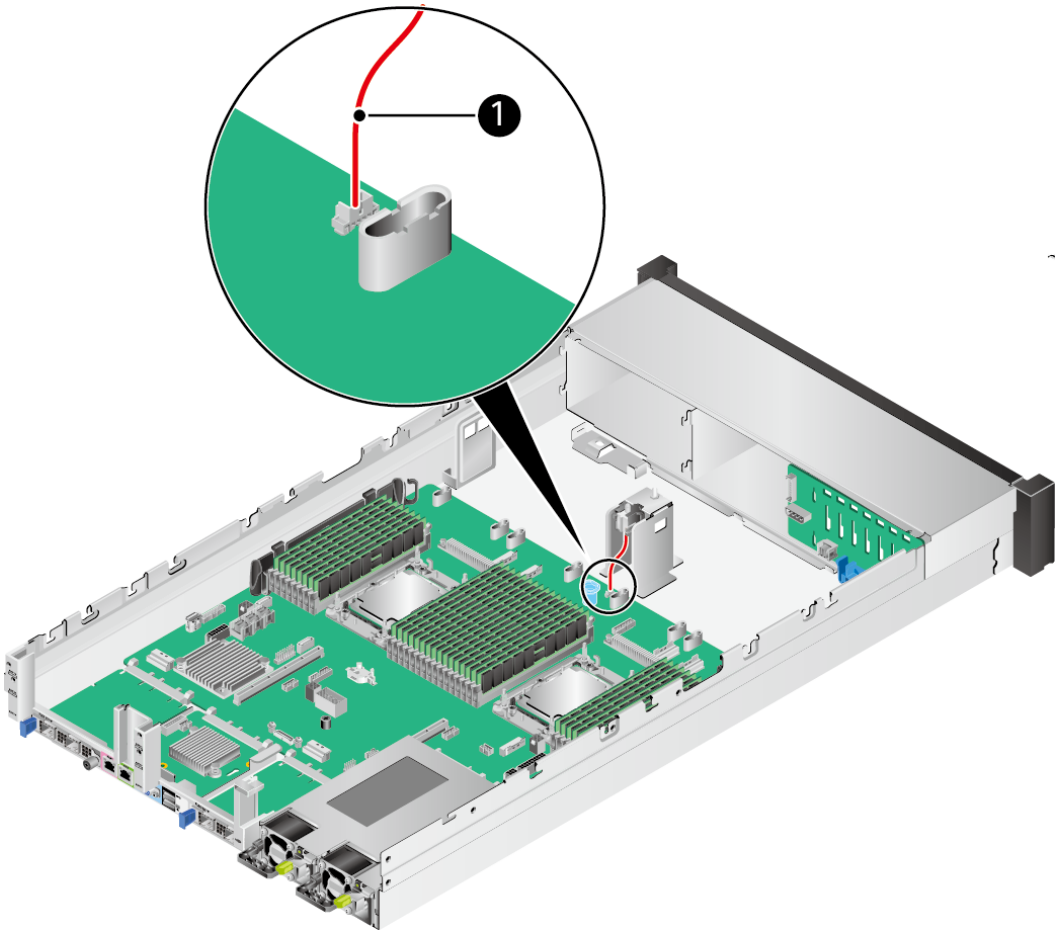

Table 6-23 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.2.7 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-62 M.2 SSD cabling

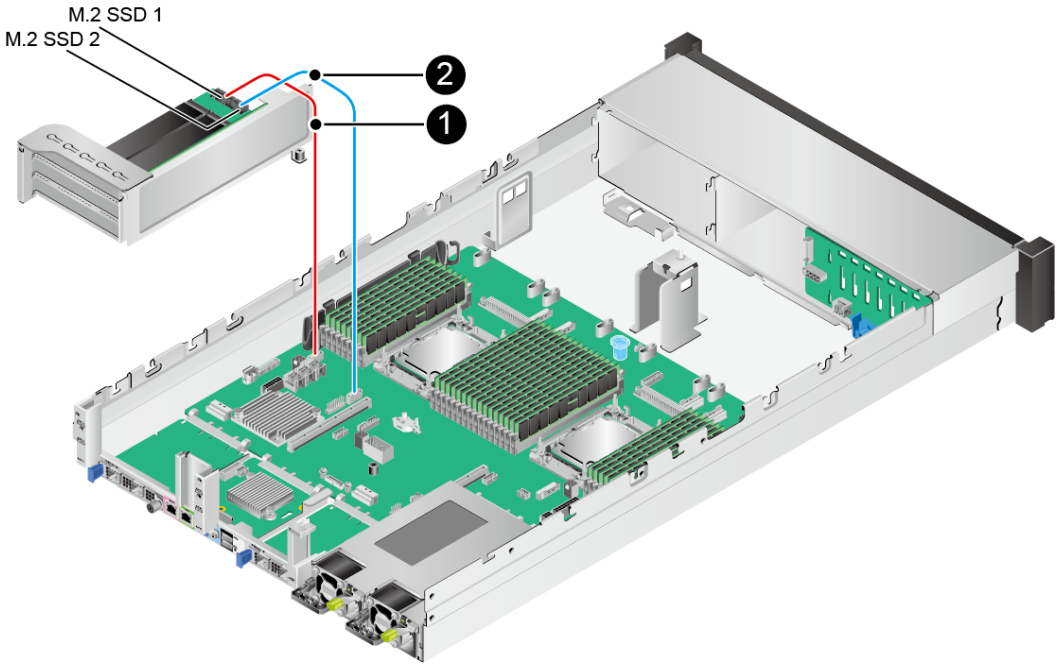

Table 6-24 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.2.2.8 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-63 Front-drive backplane power and low-speed signal cables

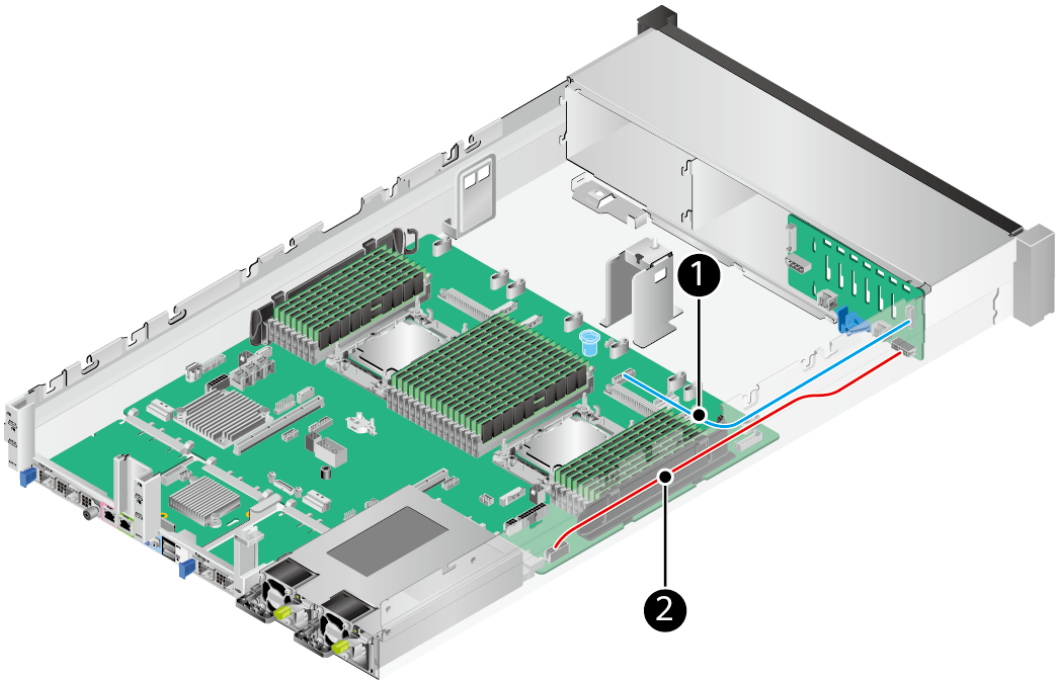

Table 6-25 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

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6.4.2.2.9 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-64 Front-drive backplane SAS high-speed cabling (Configuring a screw-in RAID controller card with two Mini SAS ports)

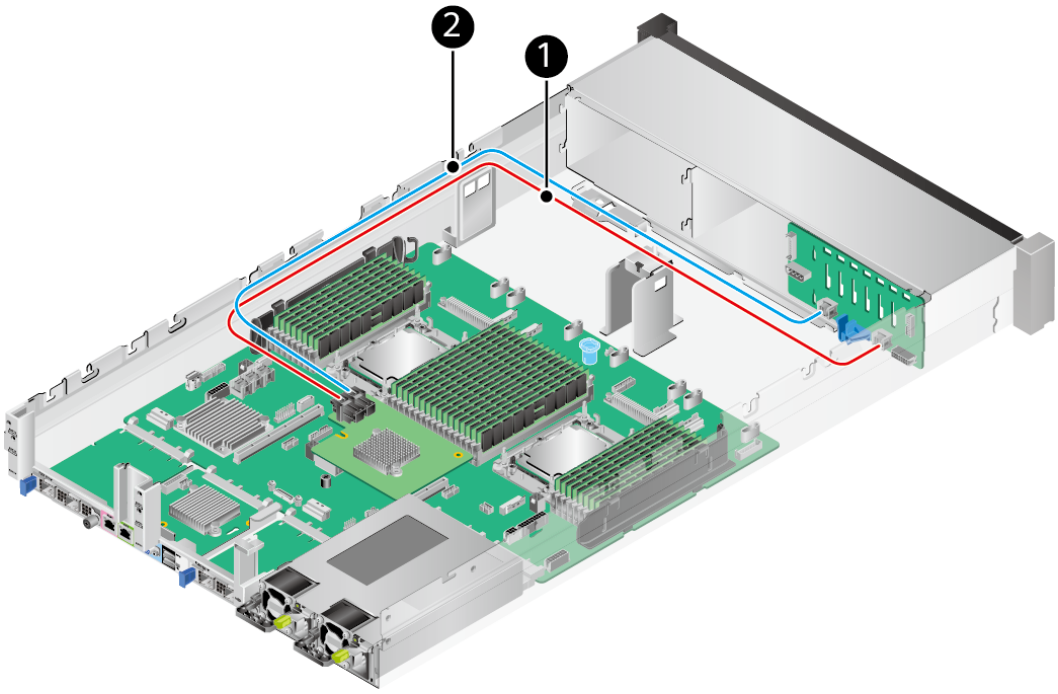

Table 6-26 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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Figure 6-65 Front-drive backplane SAS high-speed cabling (Configuring a screw-in RAID controller card with one SlimSAS port)

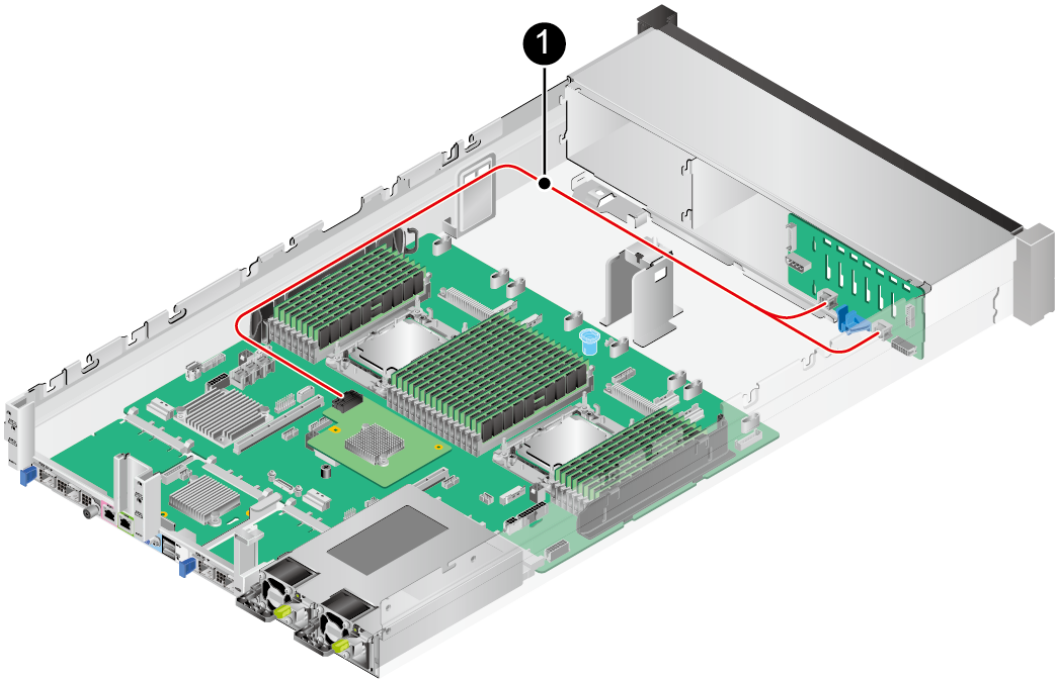

Table 6-27 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y020	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to PORT A of the screw-in RAID controller card **NOTE** 0405Y020 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28) , connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.2.2.10 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-66 I/O module 3 cabling

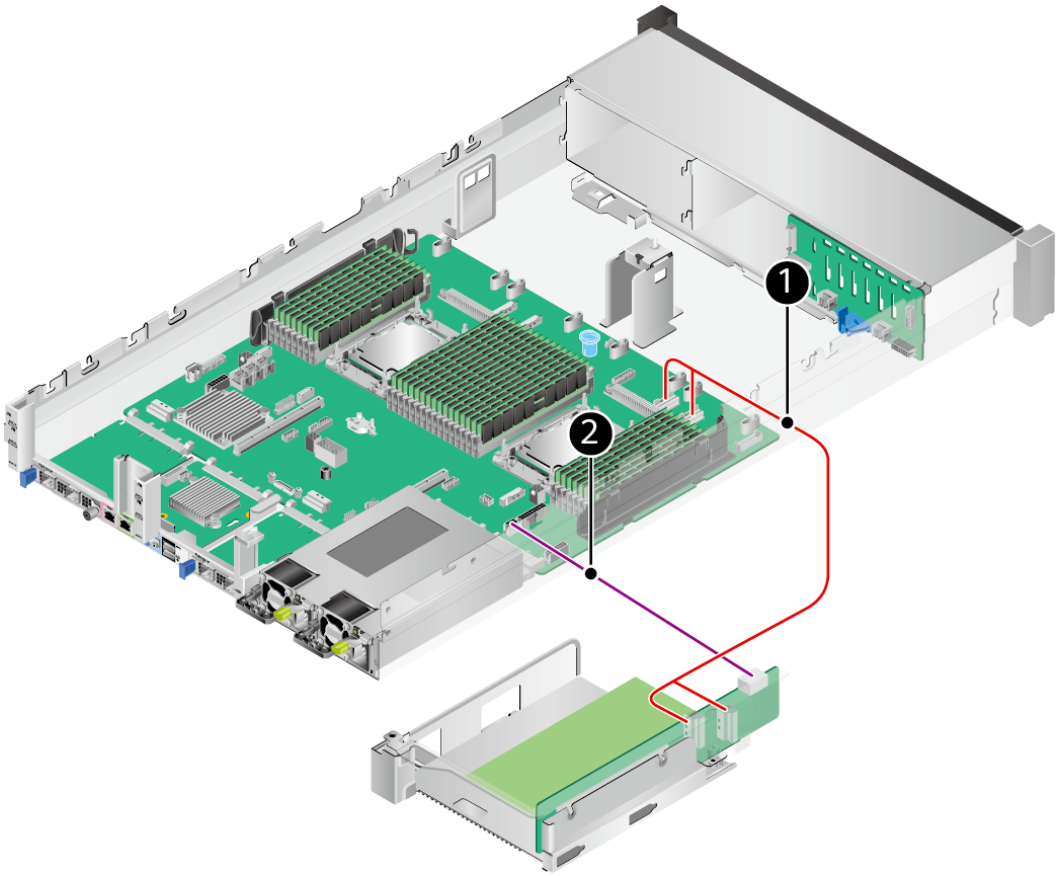

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Table 6-28 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.2.2.11 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-67 I/O module 3 cabling

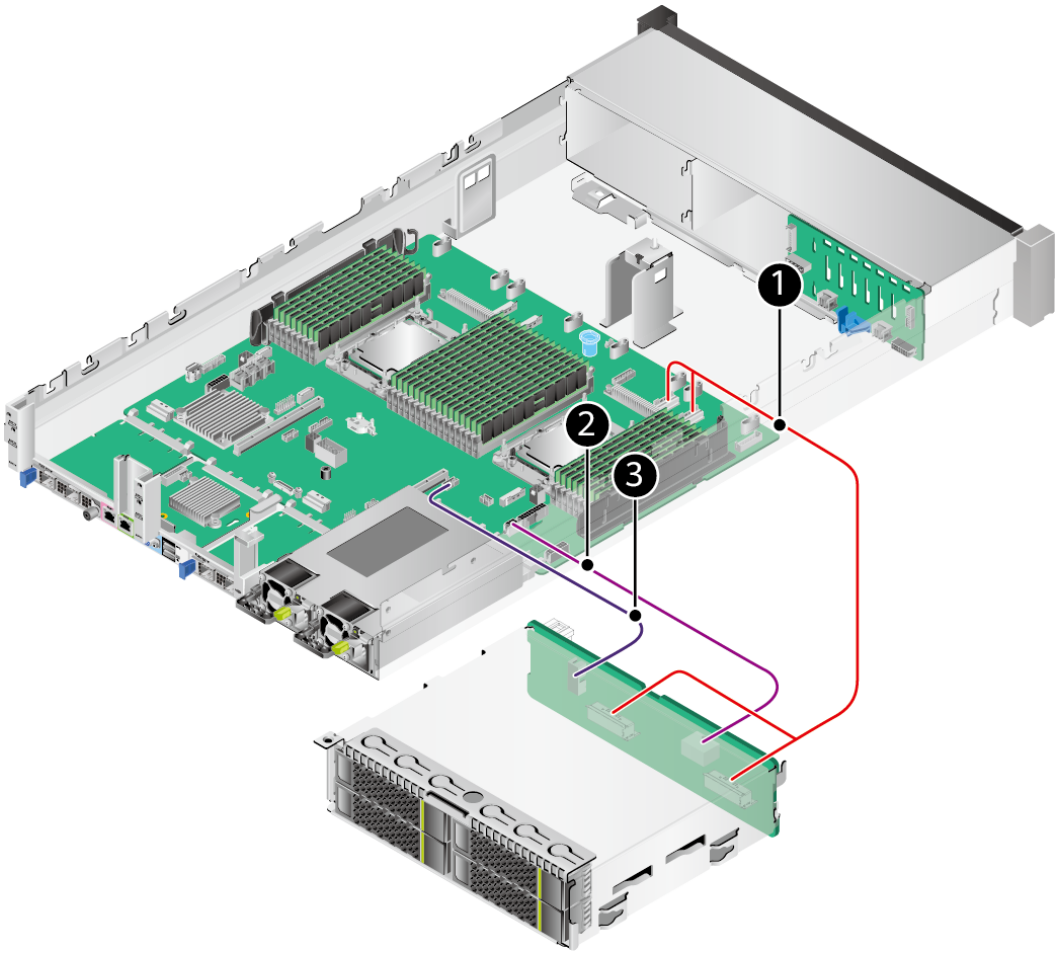

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Table 6-29 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.2.3 8 x 2.5" Drive Pass-through Configuration 3

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6.4.2.3.1 DVD Drive Cabling

DVD Drive Cabling

Figure 6-68 DVD drive cabling

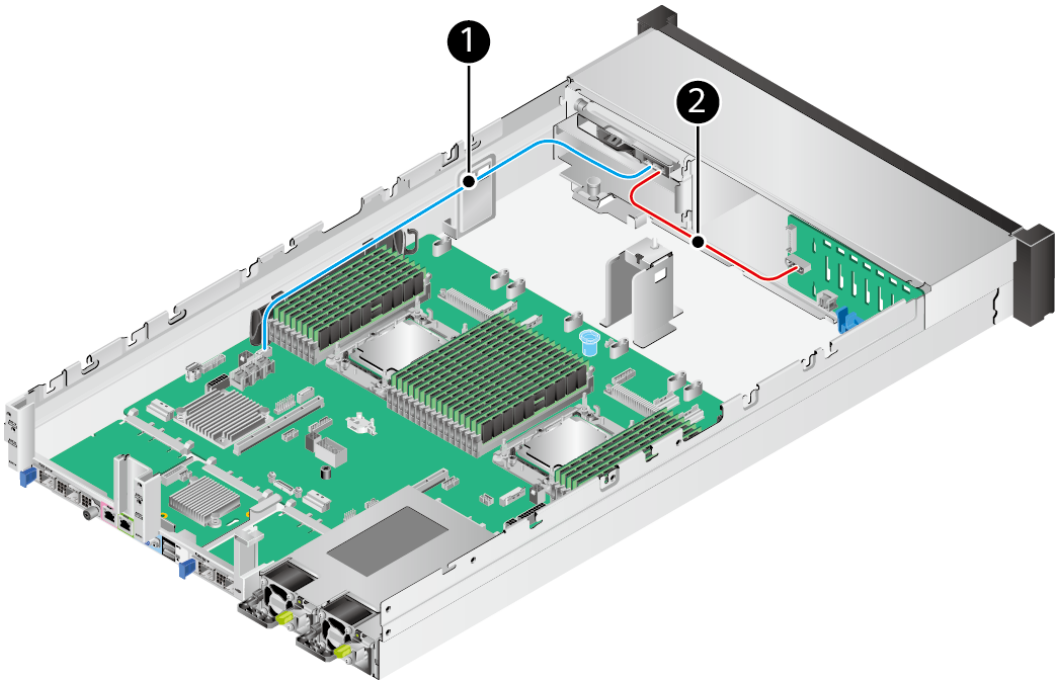

Table 6-30 DVD drive cabling

No.	P/N Code	Description
1	04050689	High-speed cable for connecting the DVD drive to the mainboard (J1)
2	04050689	Power cable for connecting the DVD drive to the front-drive backplane (J11)

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6.4.2.3.2 LCD Cabling

LCD Cabling

Figure 6-69 LCD cabling

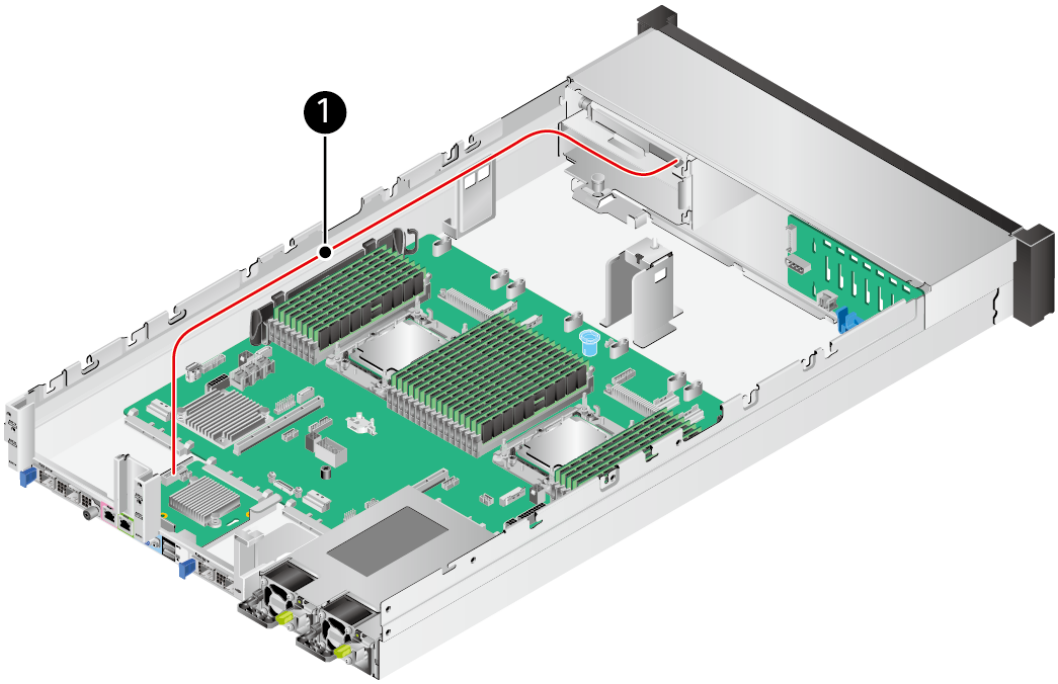

Table 6-31 LCD cabling

No.	P/N Code	Description
1	-	Signal cable for connecting the LCD to the mainboard (J6025)

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6.4.2.3.3 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-70 Left and right mounting ear cabling

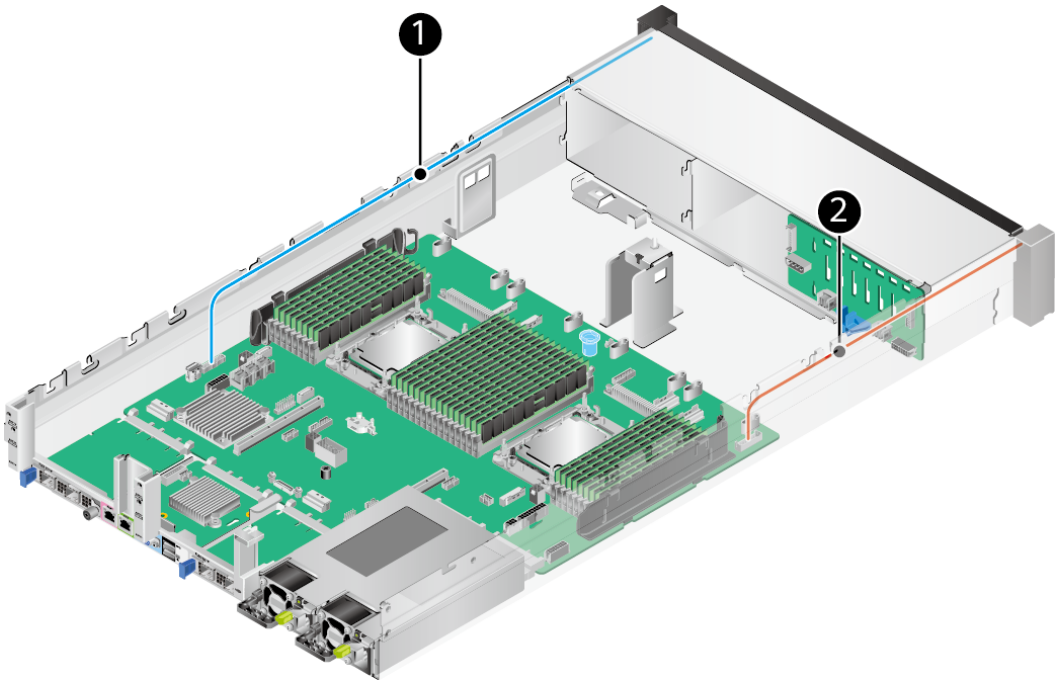

Table 6-32 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.3.4 NC-SI Cabling

NC-SI Cabling

Figure 6-71 NC-SI cabling

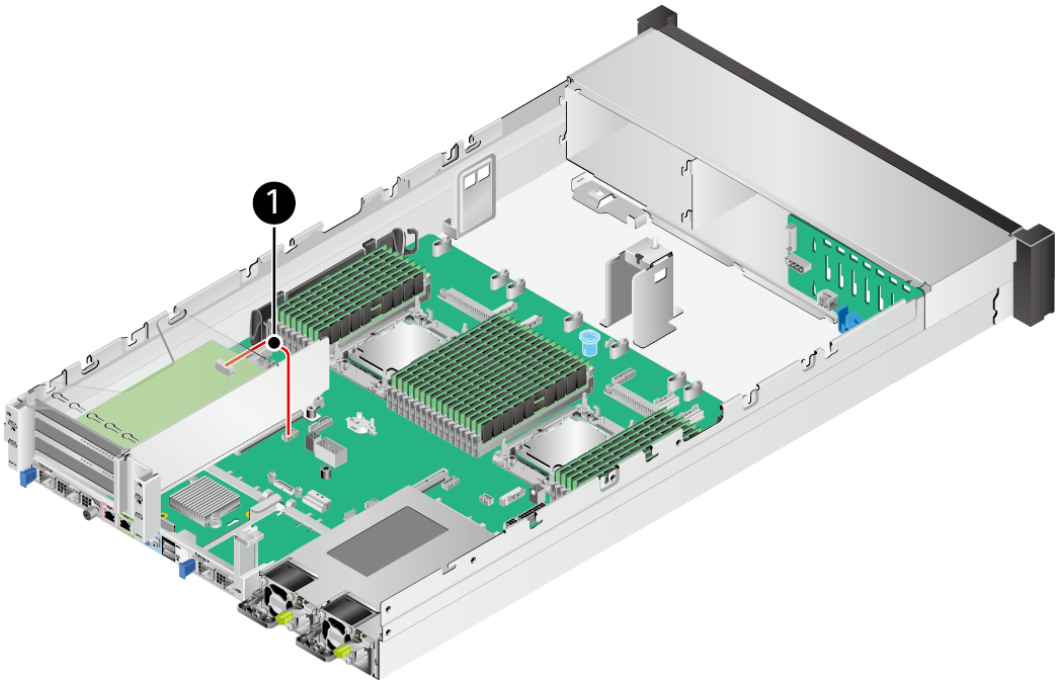

Table 6-33 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.2.3.5 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-72 OCP 3.0 expansion cable 1

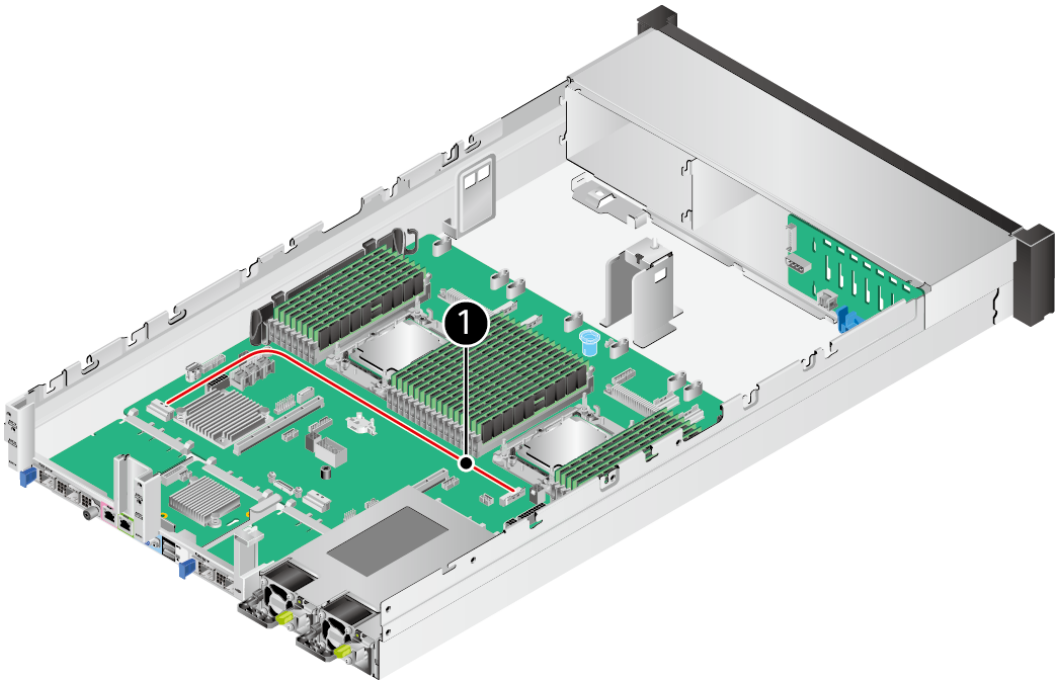

Table 6-34 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-73 OCP 3.0 expansion cable 2

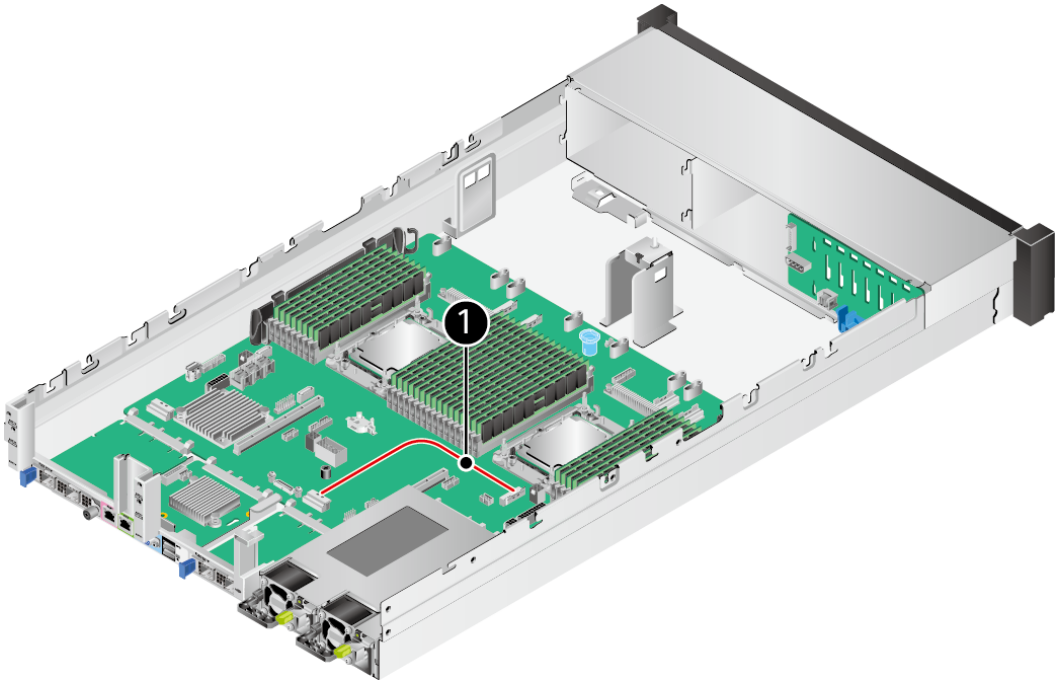

Table 6-35 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.2.3.6 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-74 Intrusion sensor cabling

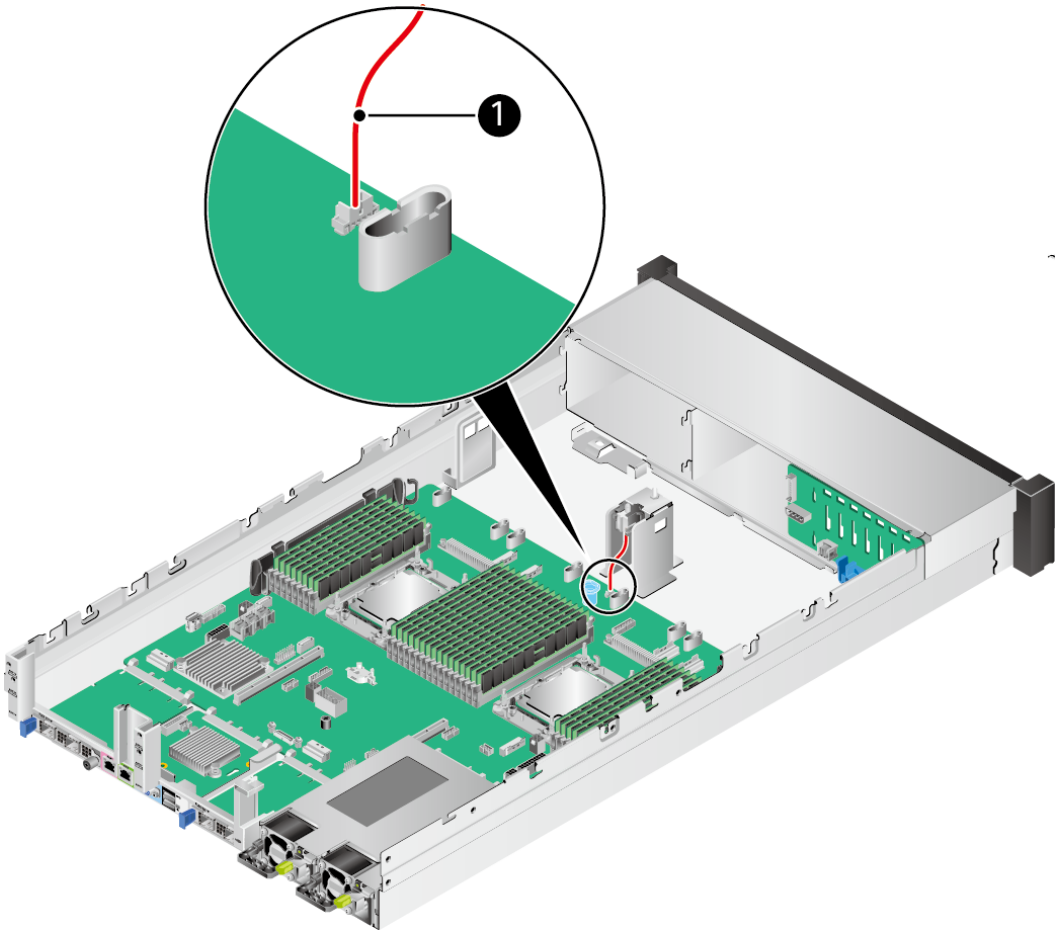

Table 6-36 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.3.7 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-75 M.2 SSD cabling

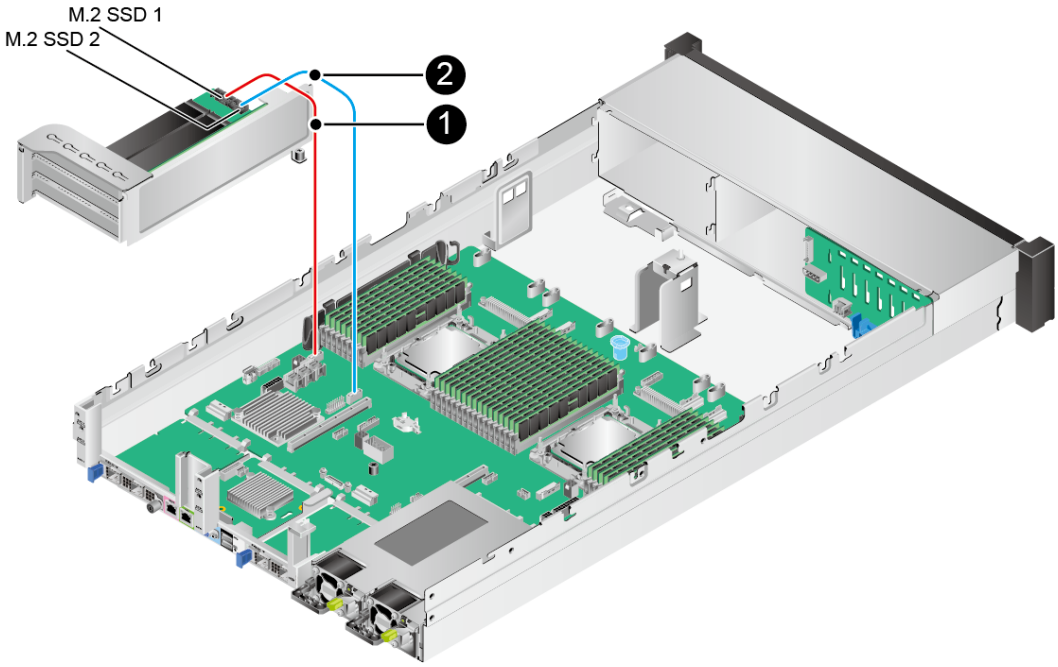

Table 6-37 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.2.3.8 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-76 Front-drive backplane power and low-speed signal cables

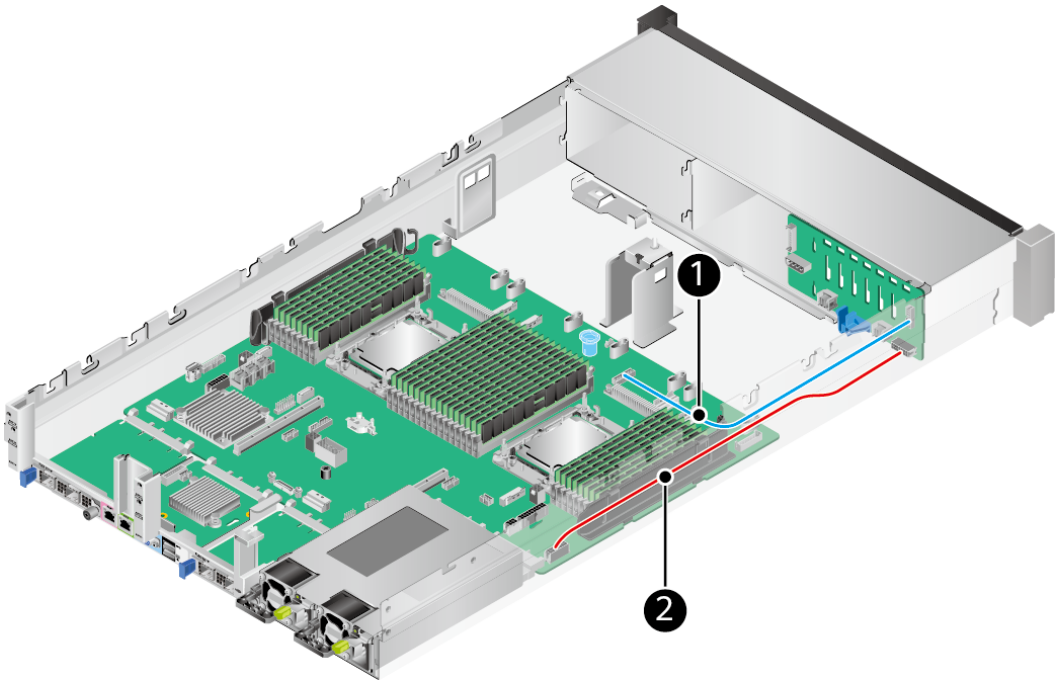

Table 6-38 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

6.4.2.3.9 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-77 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

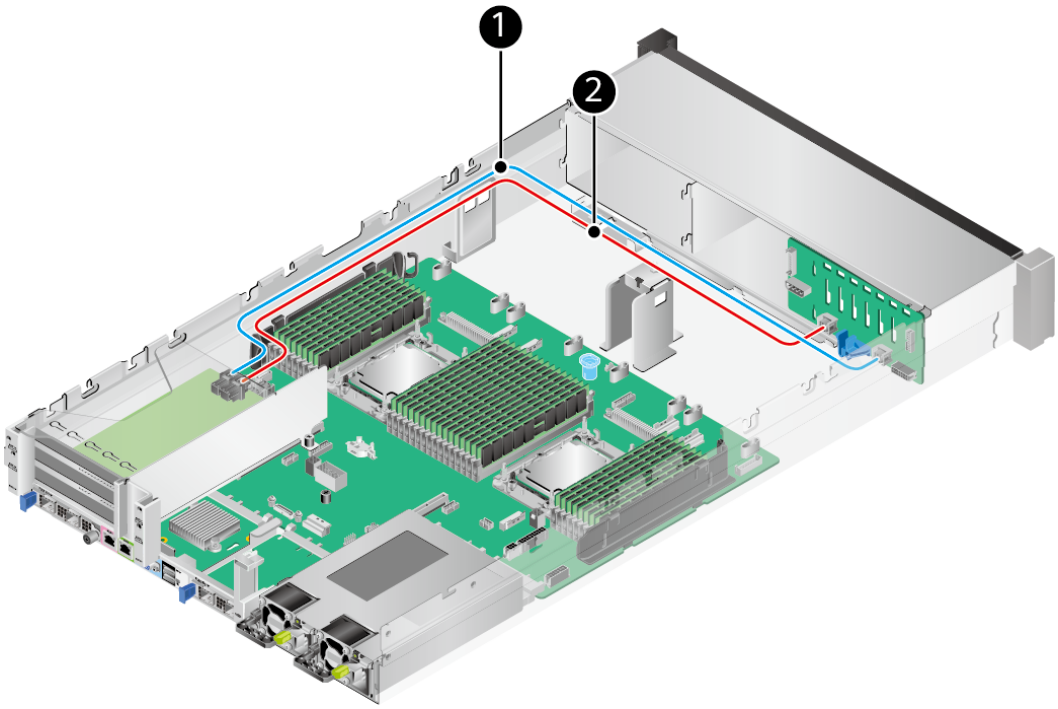

Table 6-39 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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Figure 6-78 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one SlimSAS port)

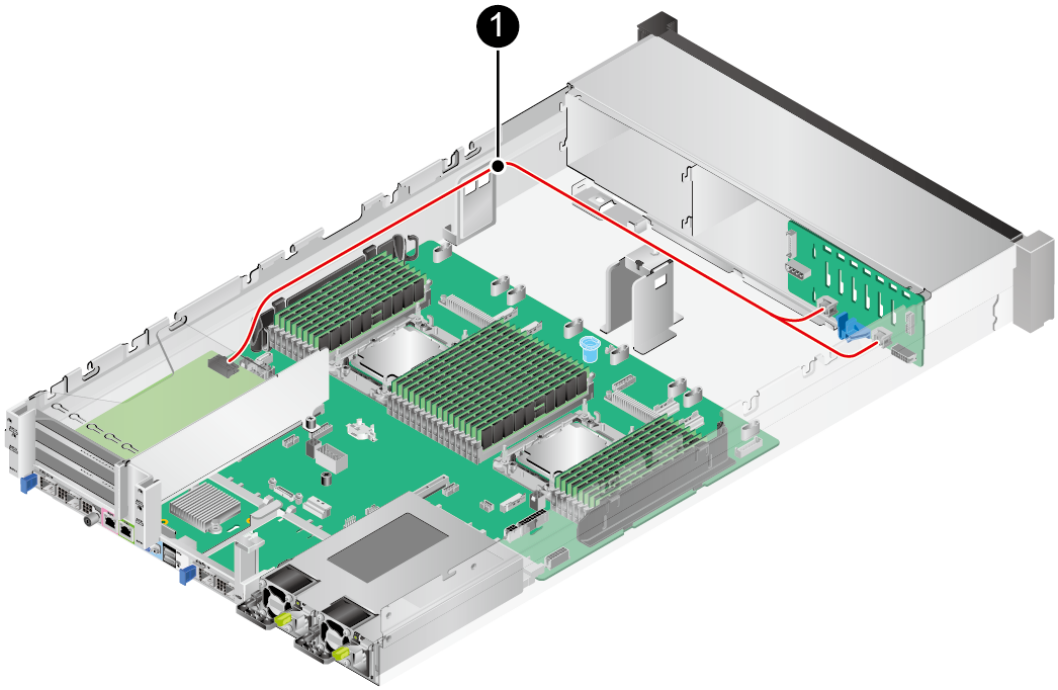

Table 6-40 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y020	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y020 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.2.3.10 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-79 I/O module 3 cabling

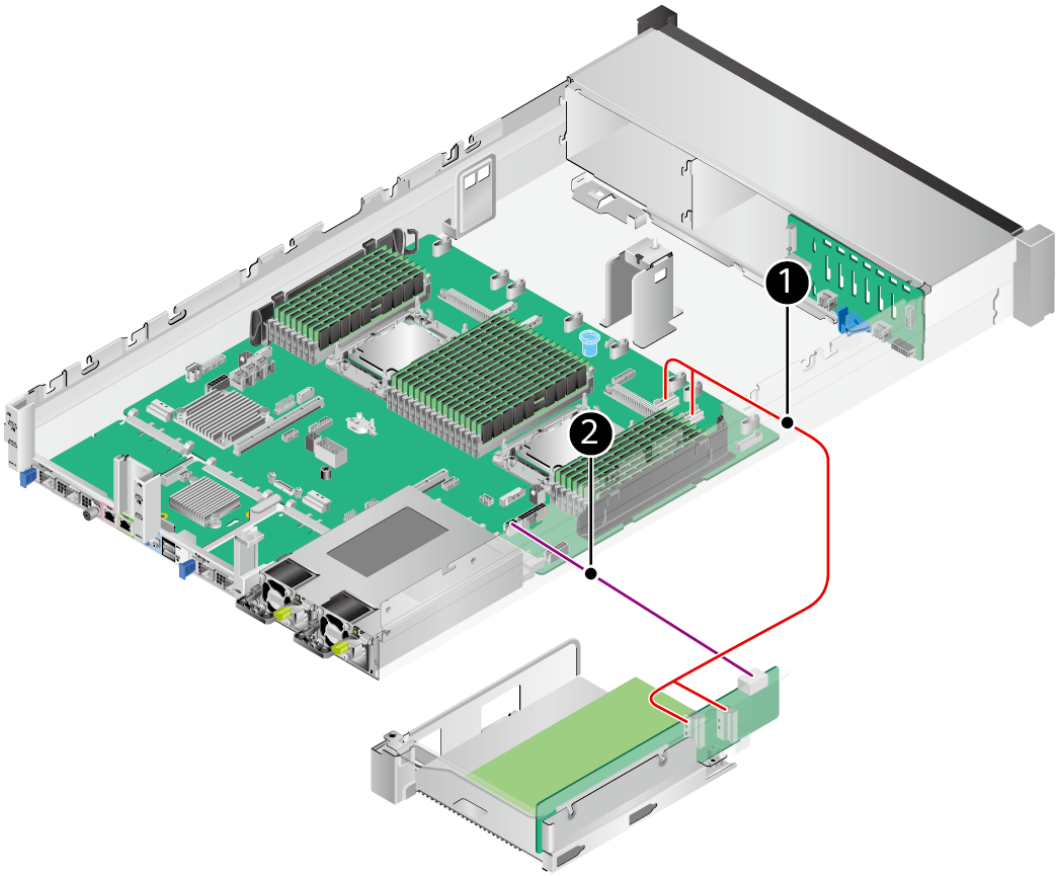

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Table 6-41 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.2.3.11 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-80 I/O module 3 cabling

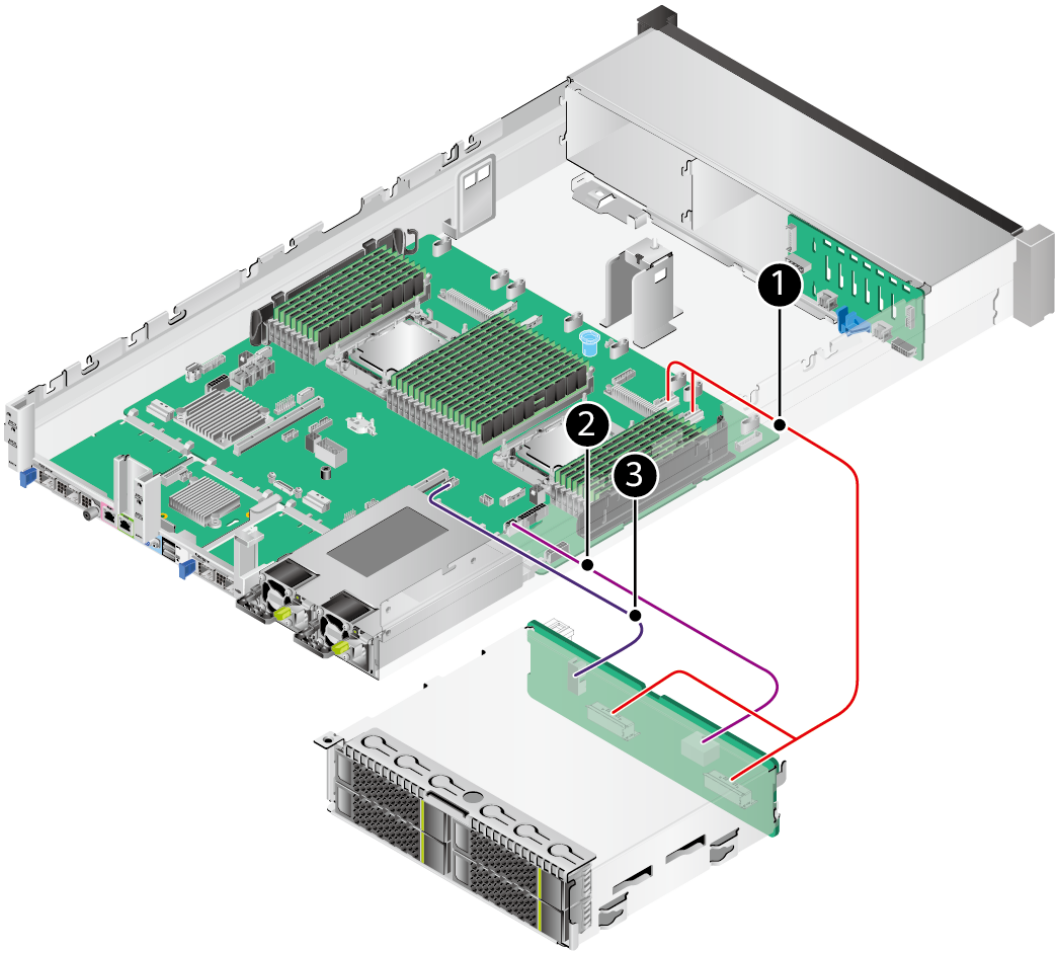

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Table 6-42 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.2.4 8 x 2.5" Drive Pass-through + 11 x PCIe Card Configuration 1

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6.4.2.4.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-81 Left and right mounting ear cabling

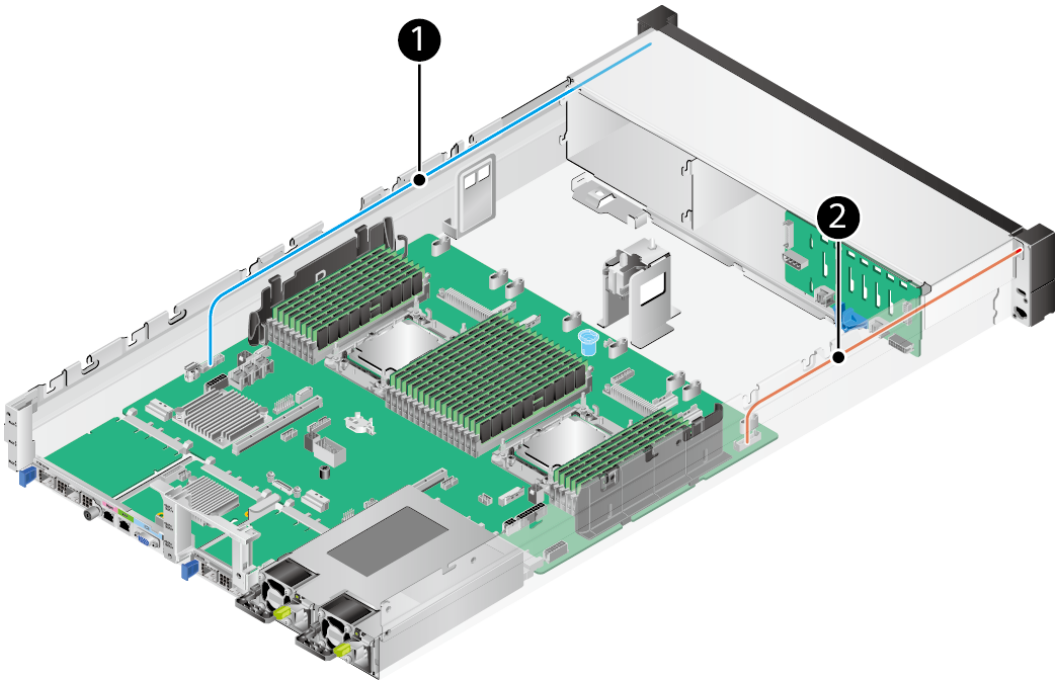

Table 6-43 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.4.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-82 Intrusion sensor cabling

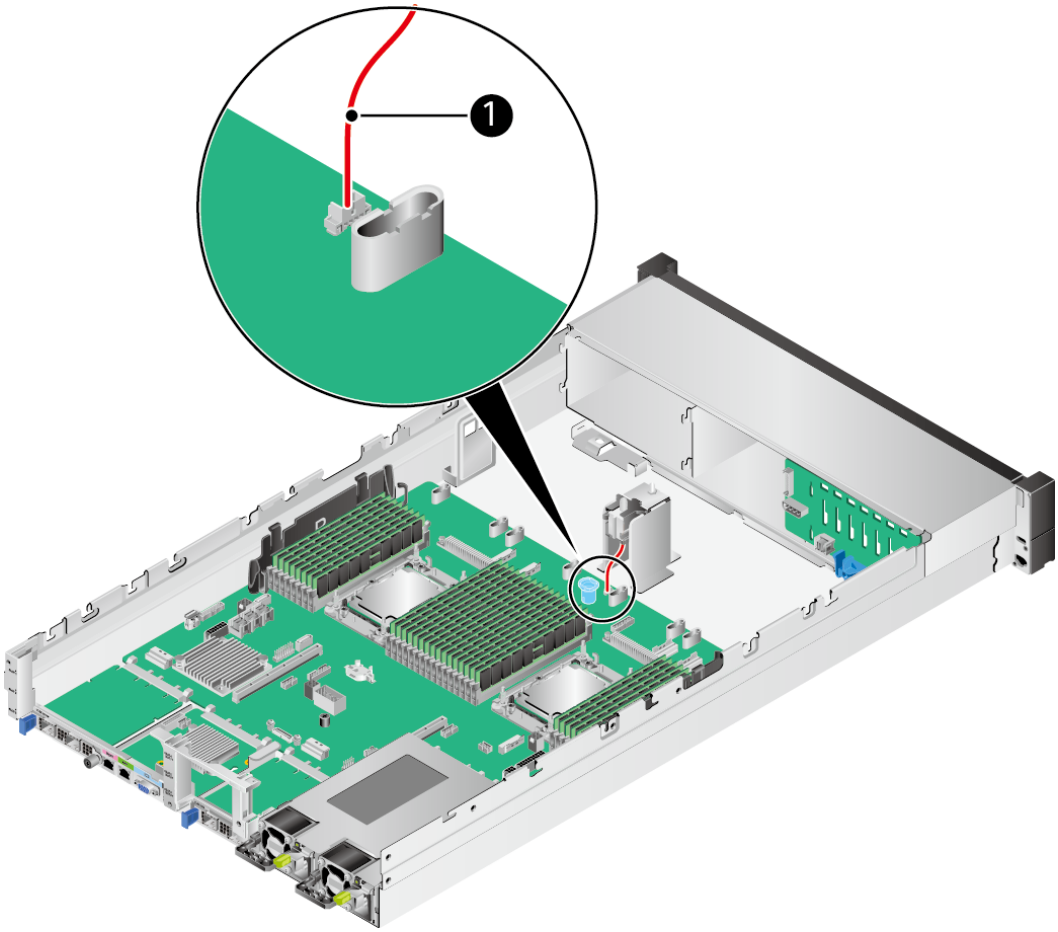

Table 6-44 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.4.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-83 Front-drive backplane power and low-speed signal cables

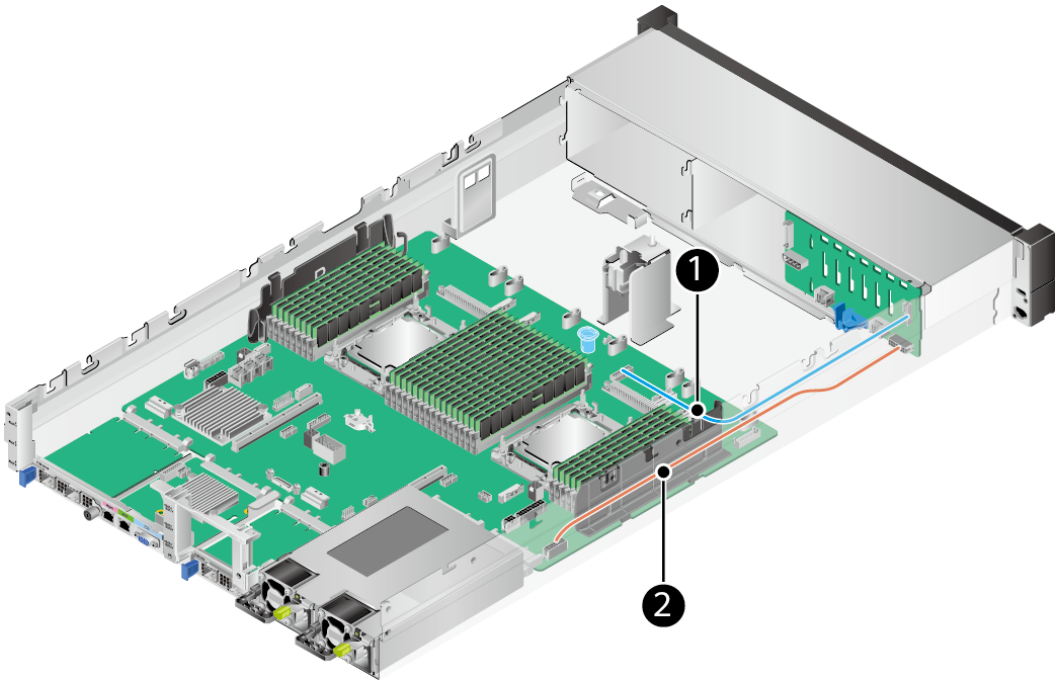

Table 6-45 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

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6.4.2.4.4 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-drive backplane SAS high-speed cabling

Figure 6-84 Front-drive backplane SAS high-speed cabling

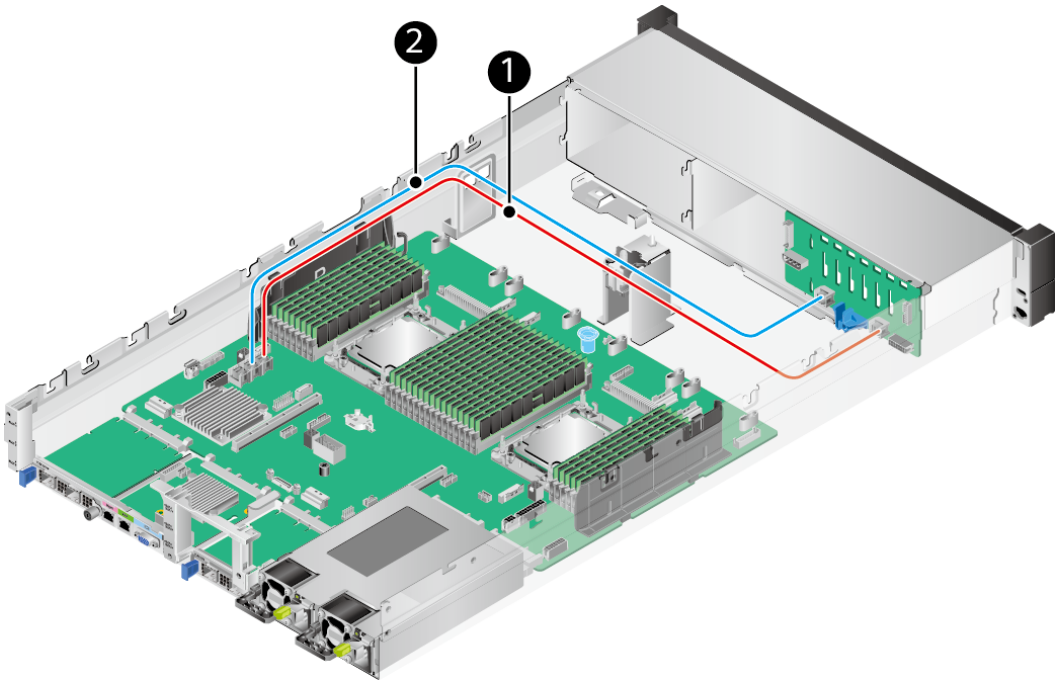

Table 6-46 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J28) to the mainboard (J6)
2	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J29) to the mainboard (J5)

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6.4.2.4.5 PCIe Riser Module 1 Cabling

PCIe Riser Module 1 Cabling

Figure 6-85 PCIe riser module 1 cabling

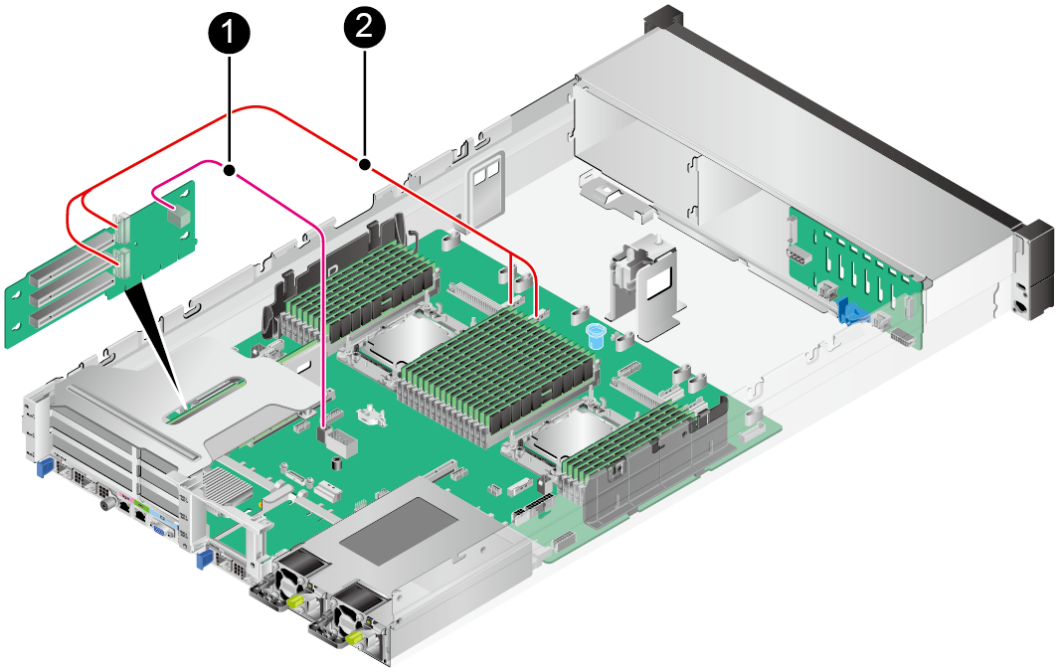

Table 6-47 PCIe riser module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the PCIe riser card to the mainboard (J21)
2	04052950	High-speed cables for connecting LP Slimline 1 and LP Slimline 2 on the PCIe riser card to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 connector on the 04052950 cable corresponds to the PCIe riser card LP Slimline 1, the Slim_2 connector corresponds to the PCIe riser card LP Slimline 2; the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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6.4.2.4.6 PCIe Riser Module 3 Cabling

PCIe Riser Module 3 Cabling

Figure 6-86 PCIe riser module 3 cabling

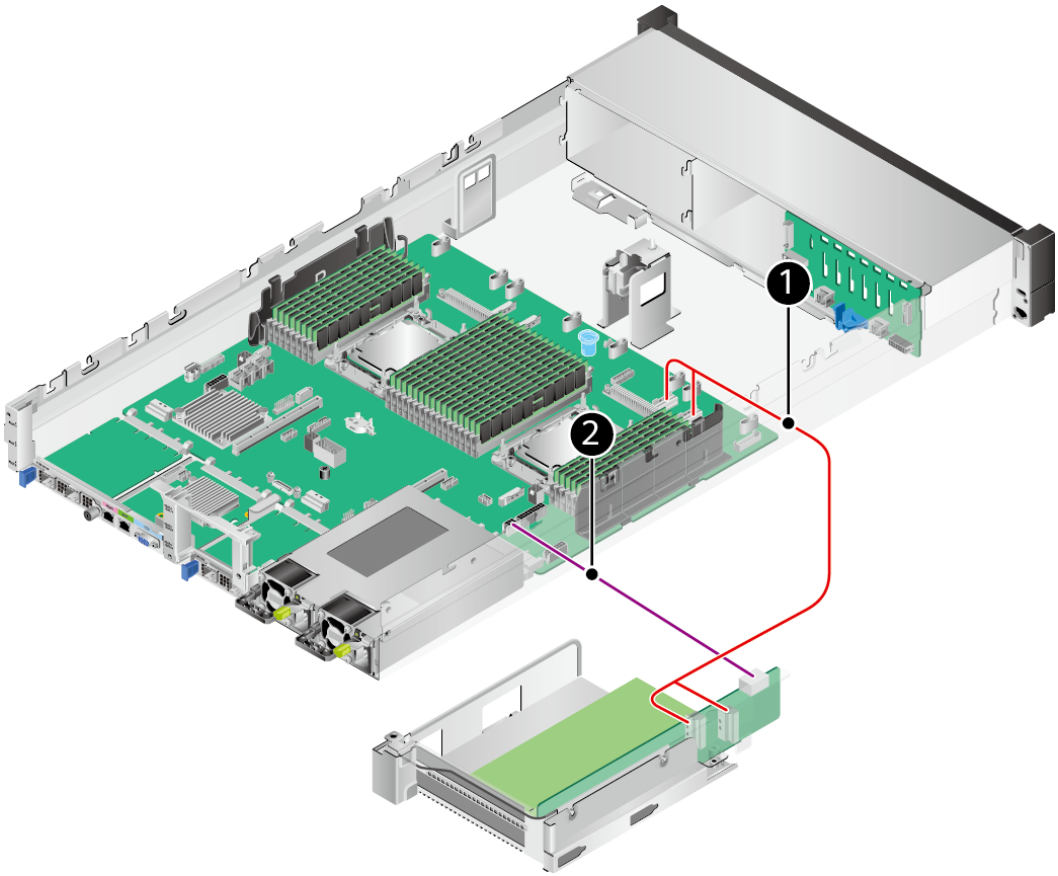

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Table 6-48 PCIe riser module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

6.4.2.5 8 x 2.5" Drive Pass-through + 11 x PCIe Card Configuration 2

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6.4.2.5.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-87 Left and right mounting ear cabling

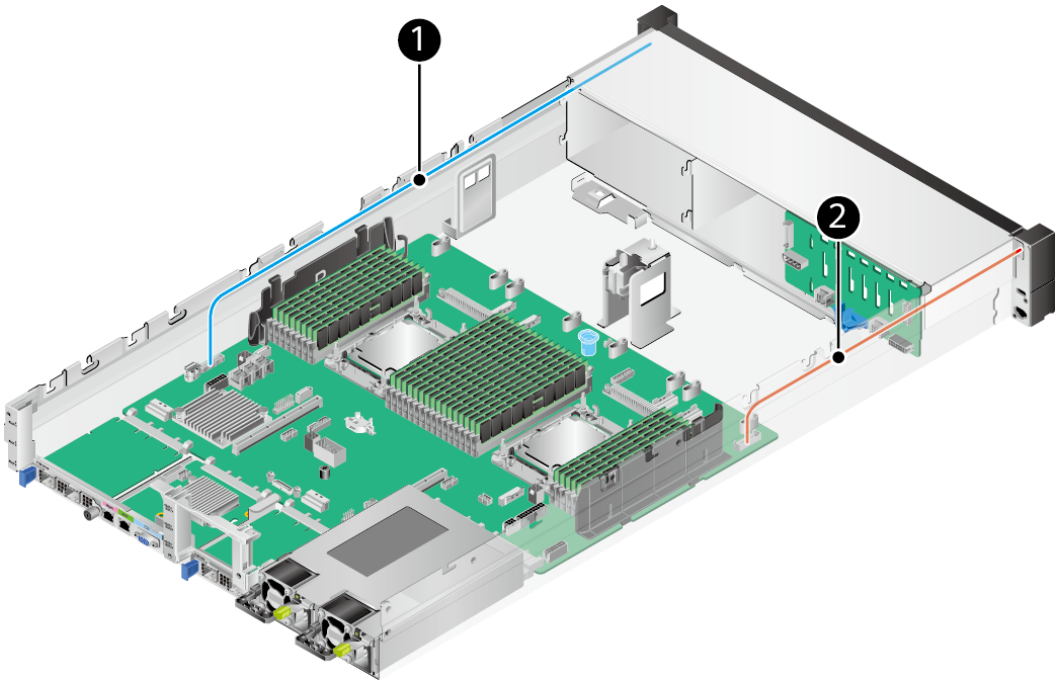

Table 6-49 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.5.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-88 Intrusion sensor cabling

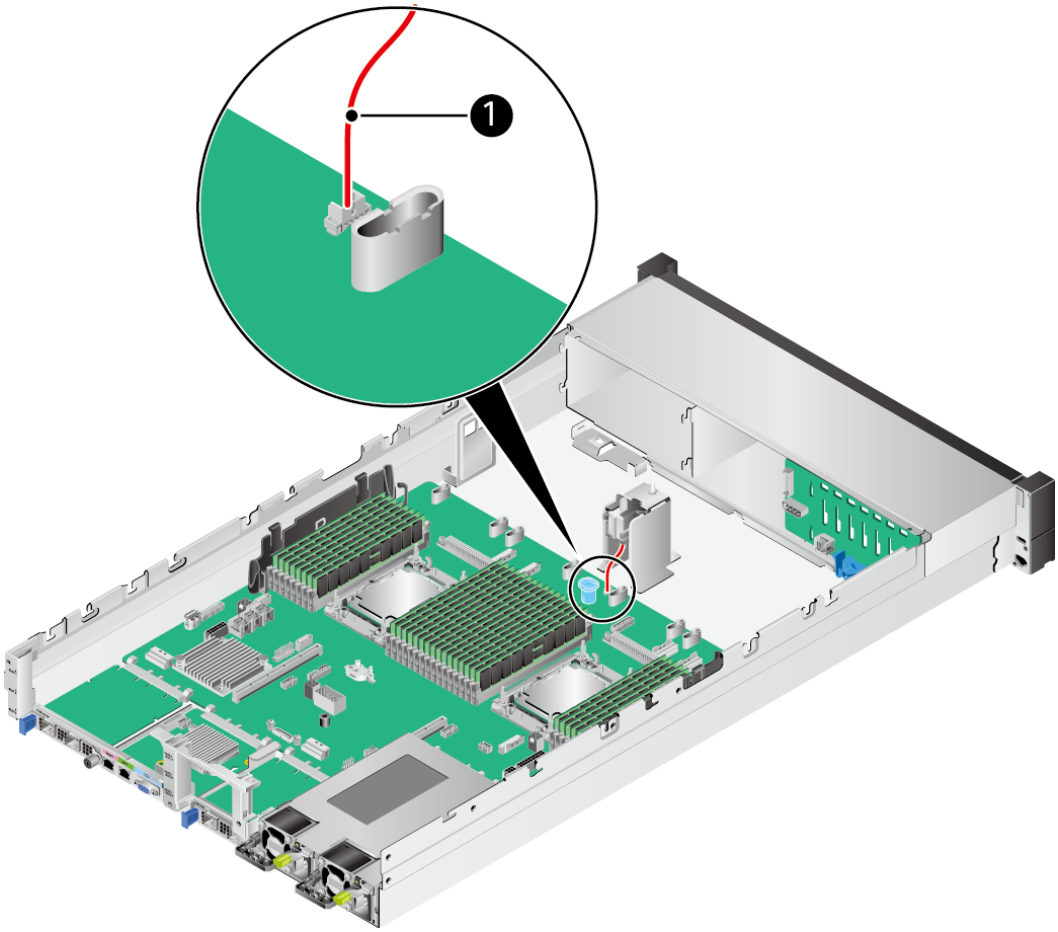

Table 6-50 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.5.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-89 Front-drive backplane power and low-speed signal cables

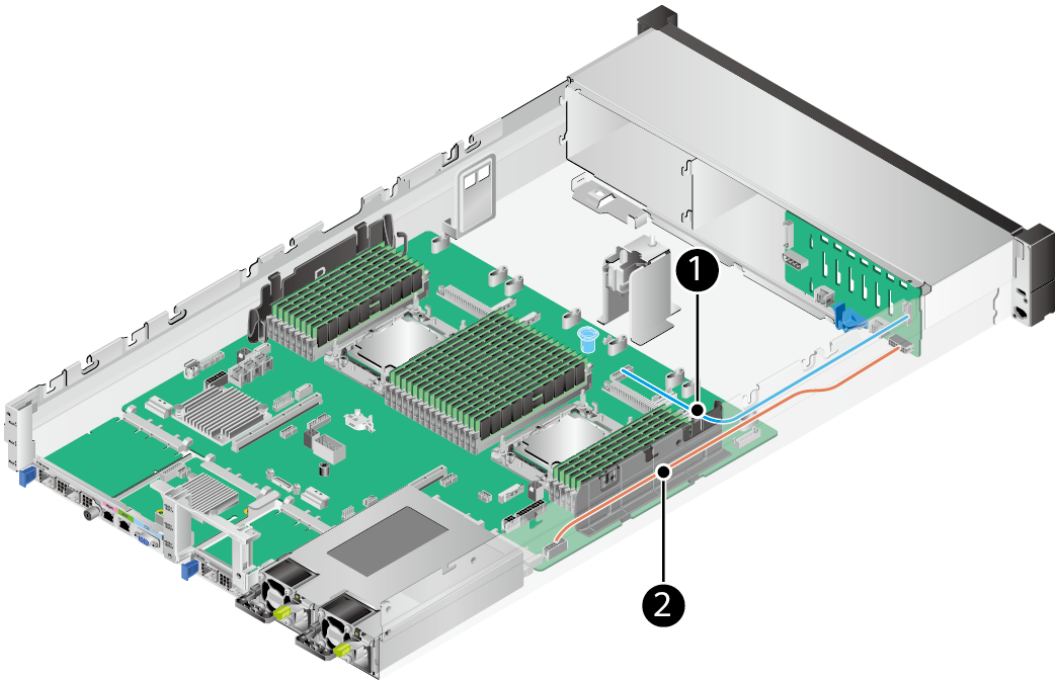

Table 6-51 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

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6.4.2.5.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-drive backplane SAS high-speed cabling

Figure 6-90 Front-drive backplane SAS high-speed cabling

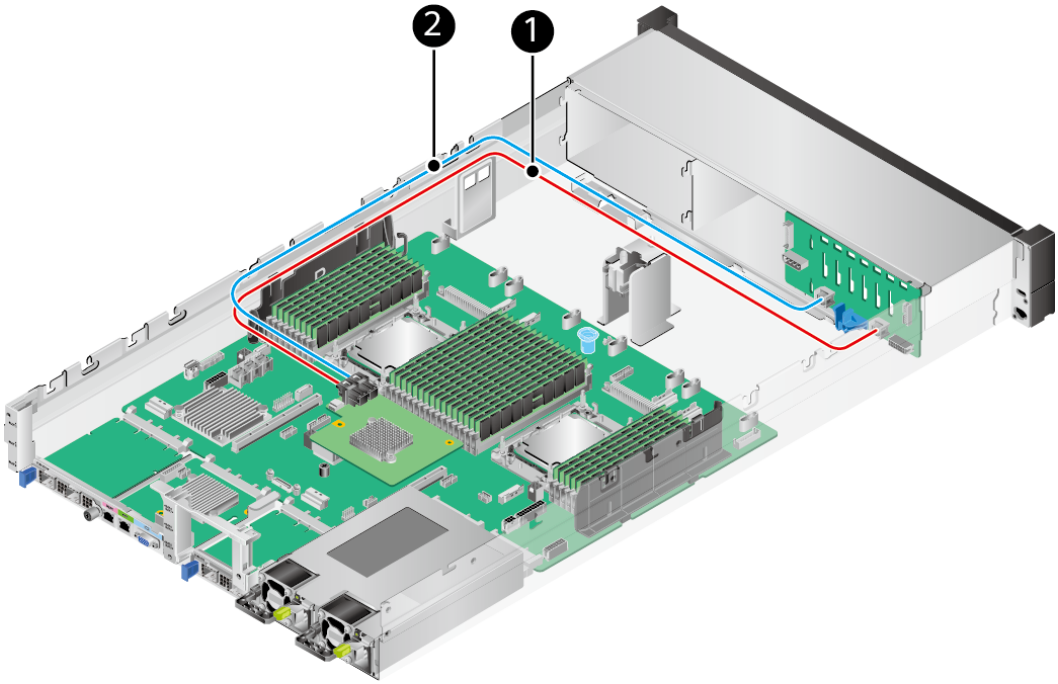

Table 6-52 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.4.2.5.5 PCIe Riser Module 1 Cabling

PCIe Riser Module 1 Cabling

Figure 6-91 PCIe riser module 1 cabling

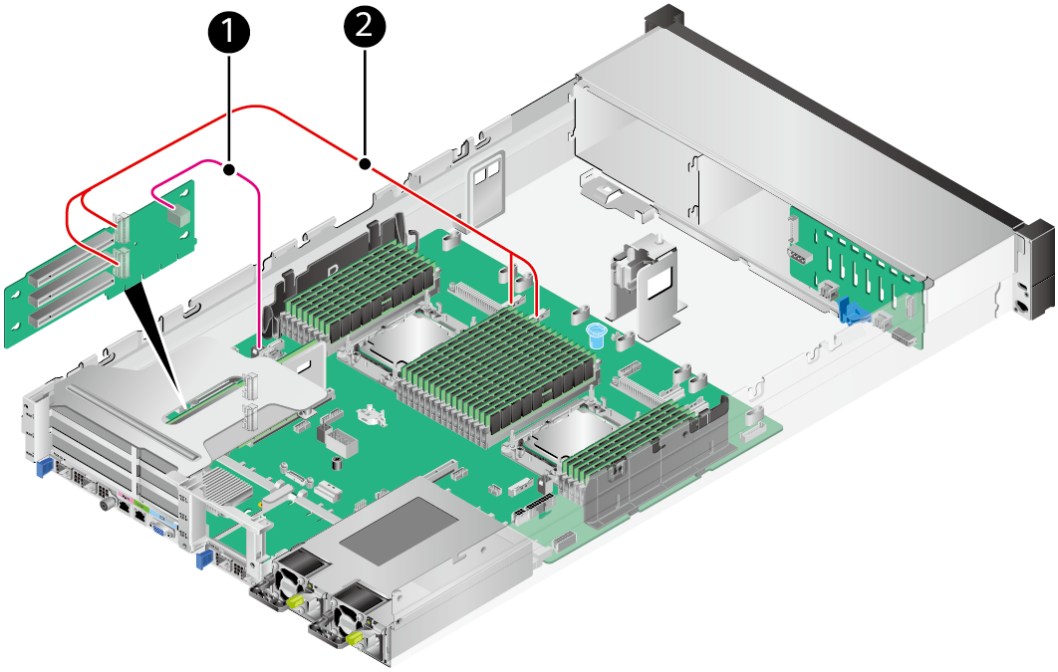

Table 6-53 PCIe riser module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the PCIe riser card to the mainboard (J64)
2	04052950	High-speed cables for connecting LP Slimline 1 and LP Slimline 2 on the PCIe riser card to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 connector on the 04052950 cable corresponds to the PCIe riser card LP Slimline 1, the Slim_2 connector corresponds to the PCIe riser card LP Slimline 2; the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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6.4.2.5.6 PCIe Riser Module 3 Cabling

PCIe Riser Module 3 Cabling

Figure 6-92 PCIe riser module 3 cabling

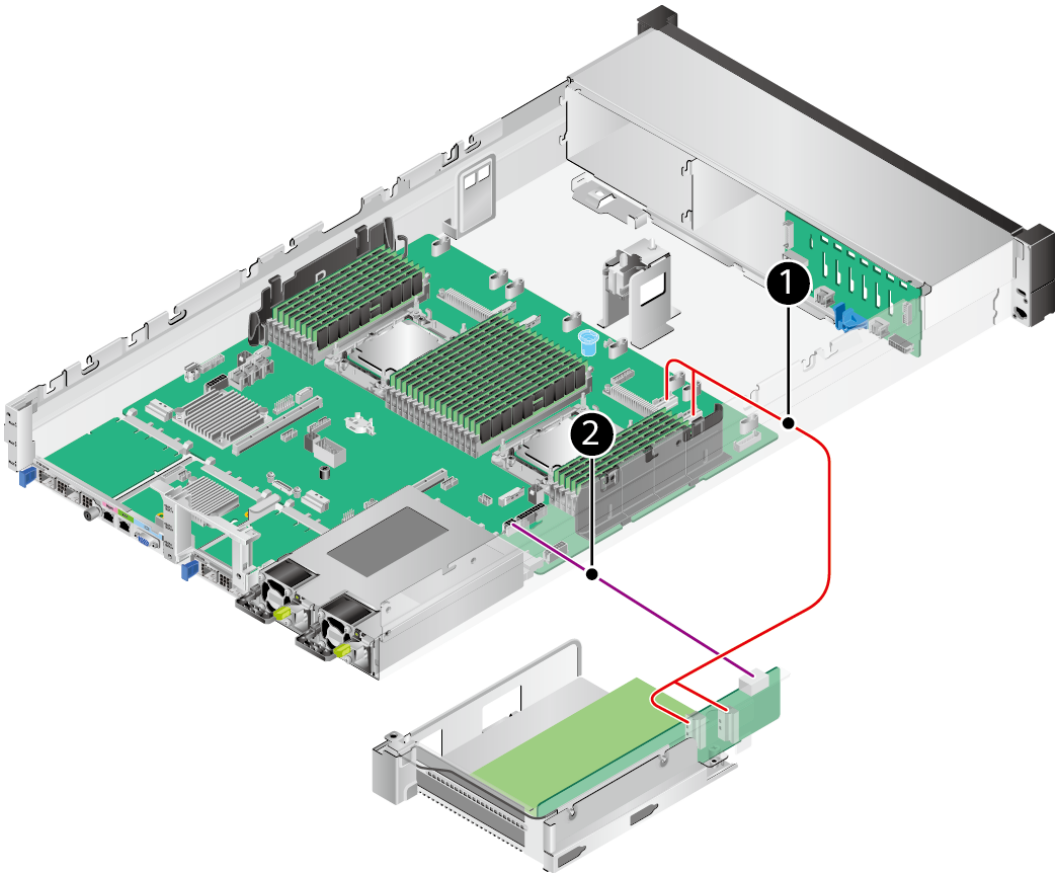

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Table 6-54 PCIe riser module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

6.4.2.6 8 x 2.5" Drive Pass-through + 11 x PCIe Card Configuration 3

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6.4.2.6.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-93 Left and right mounting ear cabling

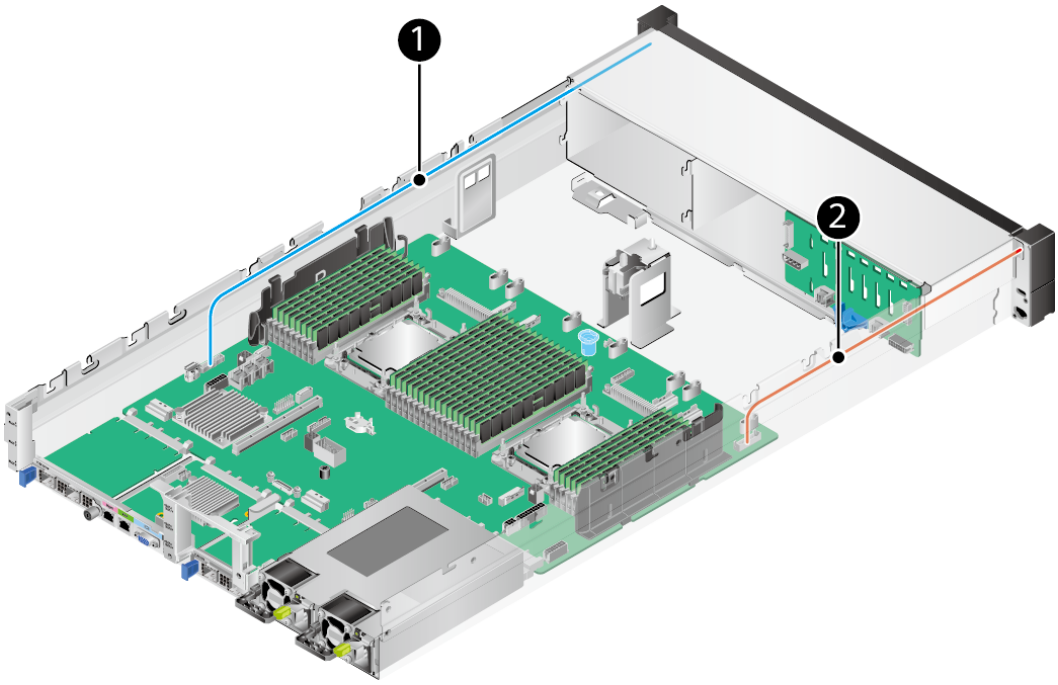

Table 6-55 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.6.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-94 Intrusion sensor cabling

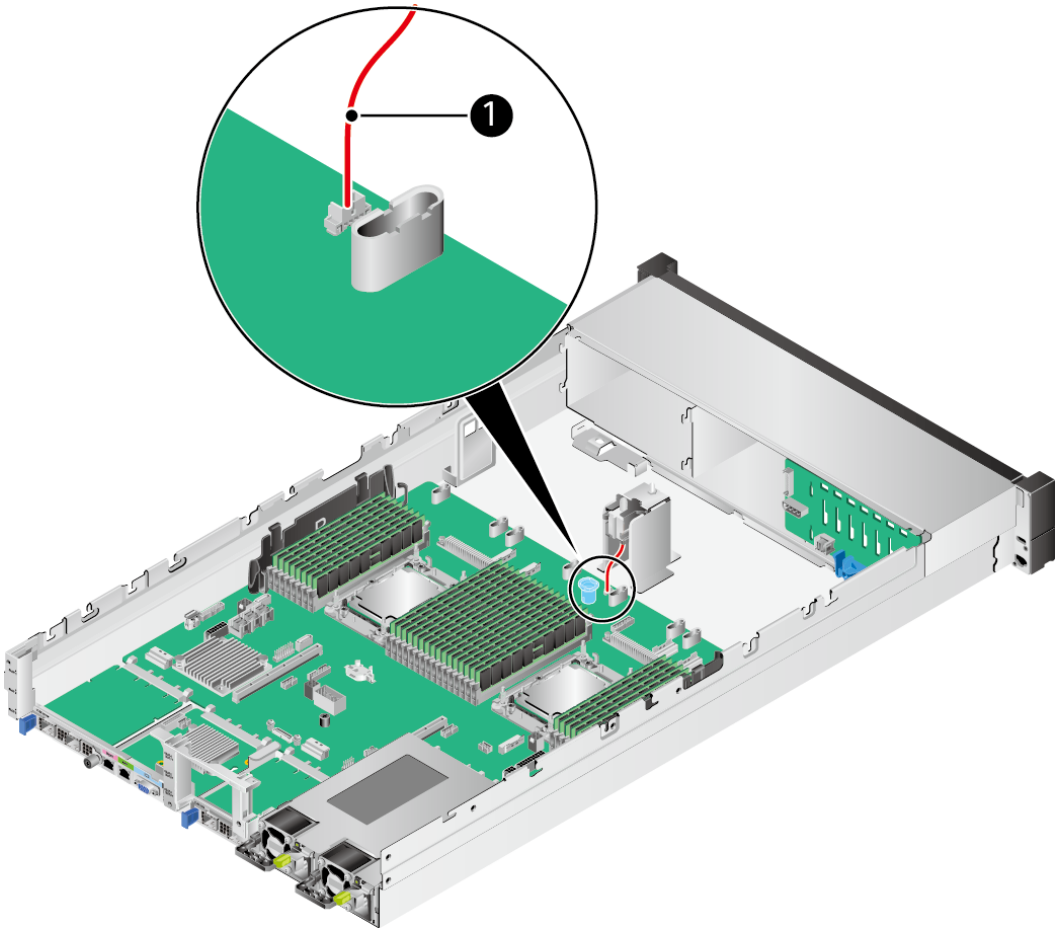

Table 6-56 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.6.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-95 Front-drive backplane power and low-speed signal cables

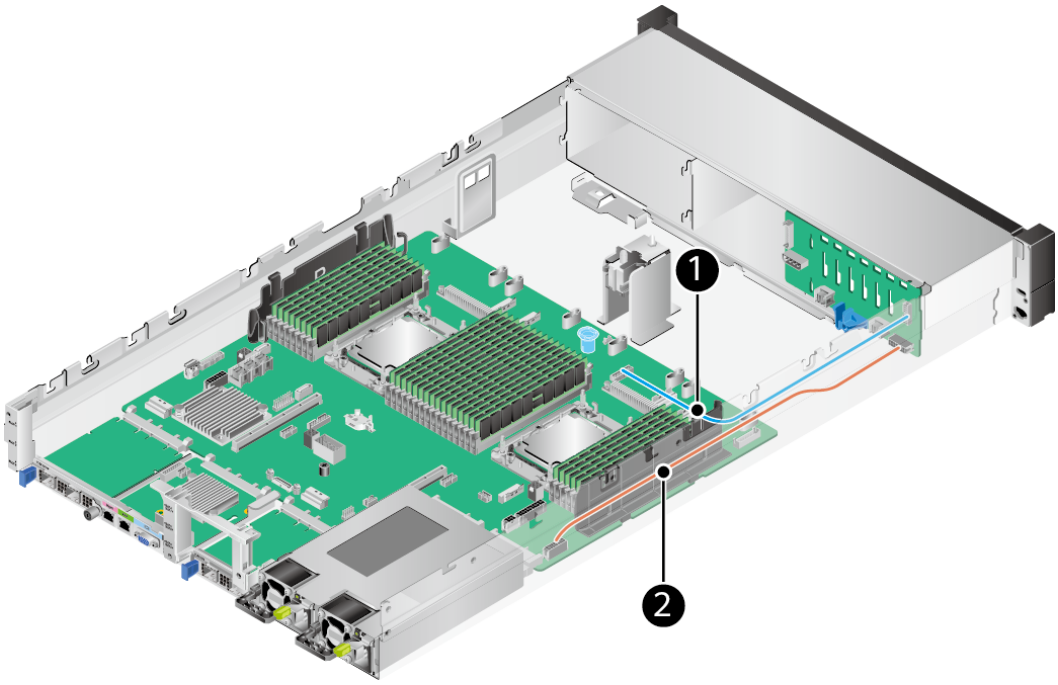

Table 6-57 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

6.4.2.6.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-drive backplane SAS high-speed cabling

Figure 6-96 Front-drive backplane SAS high-speed cabling

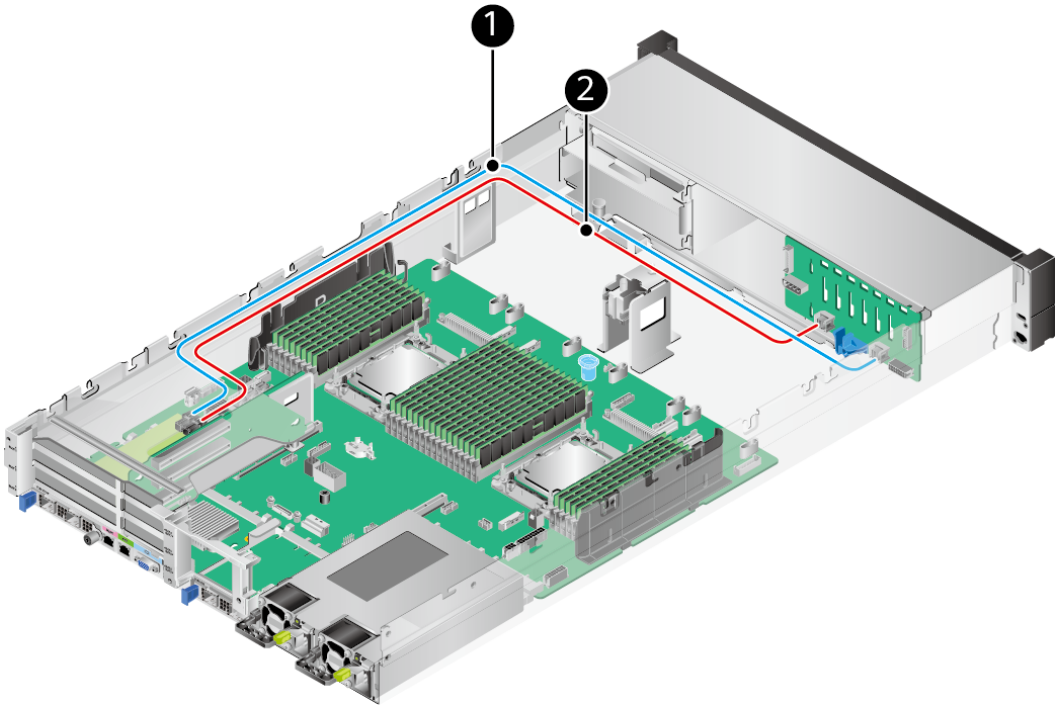

Table 6-58 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.2.6.5 PCIe Riser Module 1 Cabling

PCIe Riser Module 1 Cabling

Figure 6-97 PCIe riser module 1 cabling

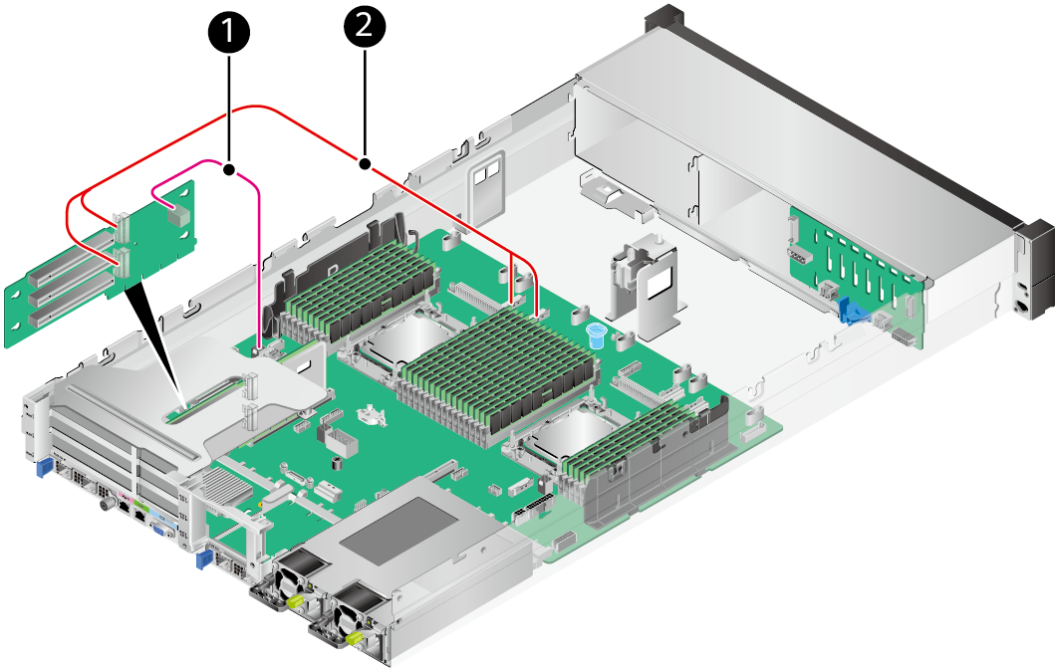

Table 6-59 PCIe riser module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the PCIe riser card to the mainboard (J64)
2	04052950	High-speed cables for connecting LP Slimline 1 and LP Slimline 2 on the PCIe riser card to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 connector on the 04052950 cable corresponds to the PCIe riser card LP Slimline 1, the Slim_2 connector corresponds to the PCIe riser card LP Slimline 2; the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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6.4.2.6.6 PCIe Riser Module 3 Cabling

PCIe Riser Module 3 Cabling

Figure 6-98 PCIe riser module 3 cabling

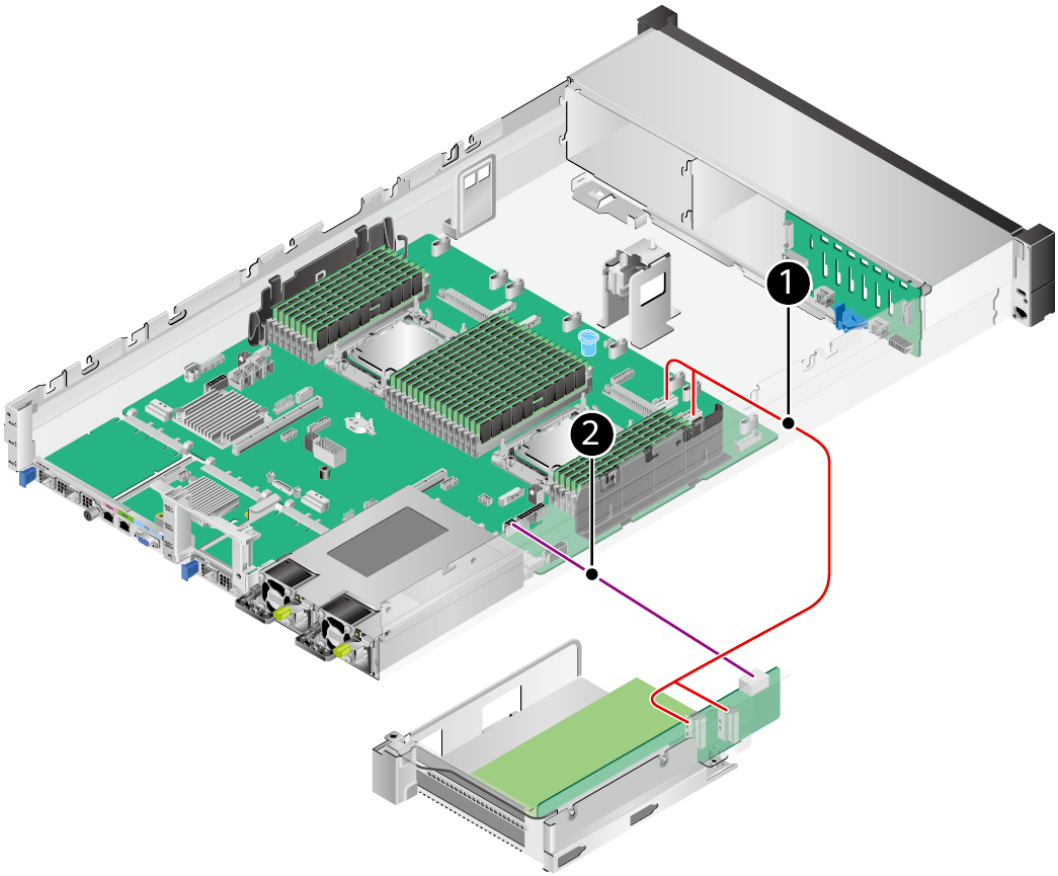

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Table 6-60 PCIe riser module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

6.4.2.7 8 x 2.5" Drive + 4 x GPU Configuration 1

6.4.2.7.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-99 Left and right mounting ear cabling

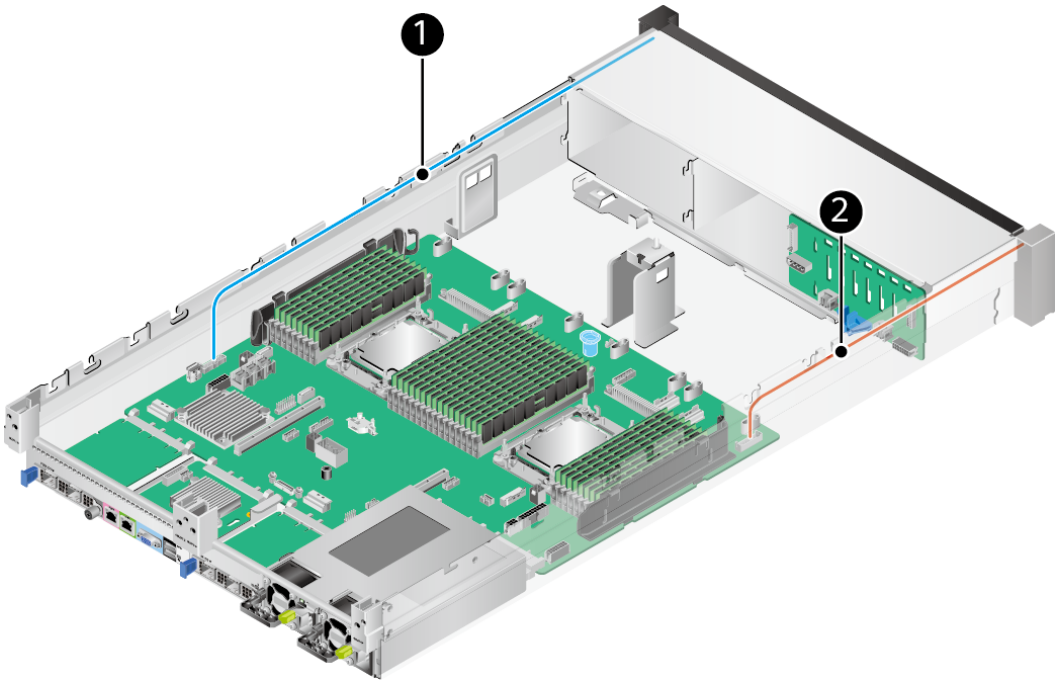

Table 6-61 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.7.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-100 Intrusion sensor cabling

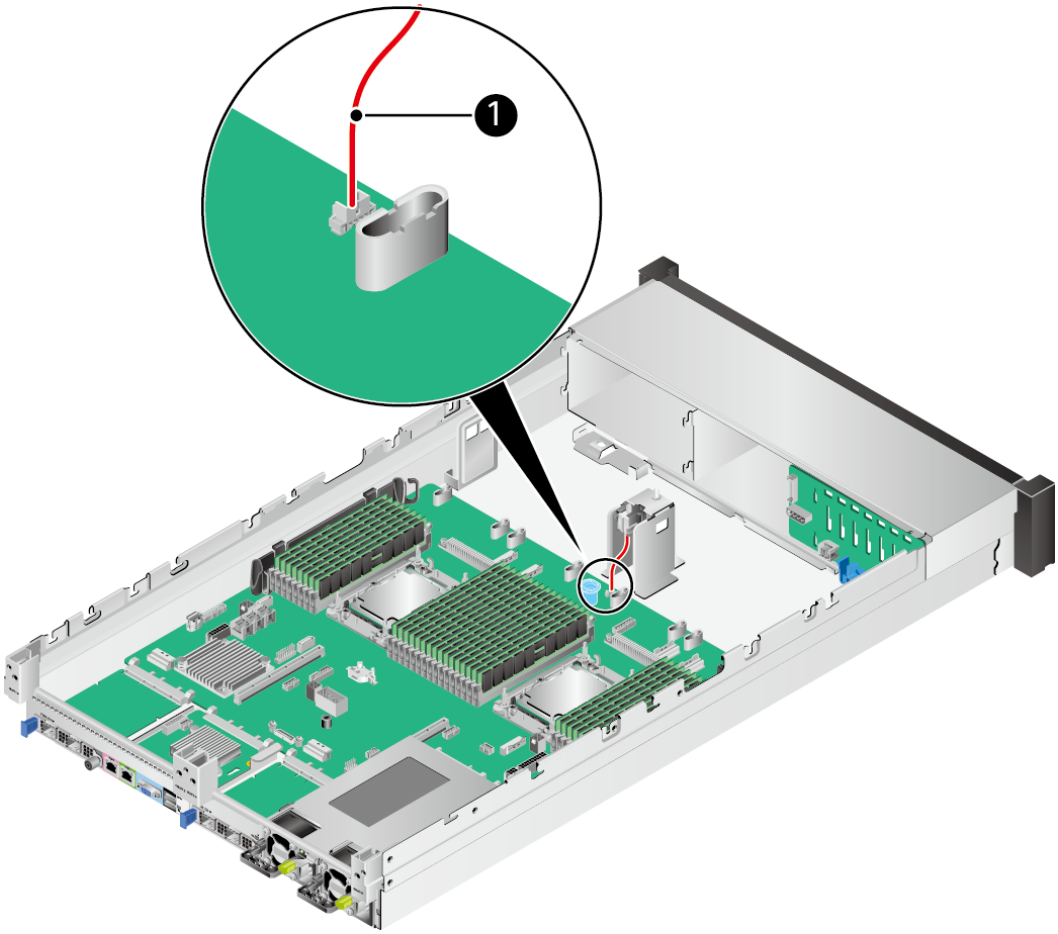

Table 6-62 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.7.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-101 Front-drive backplane power and low-speed signal cables

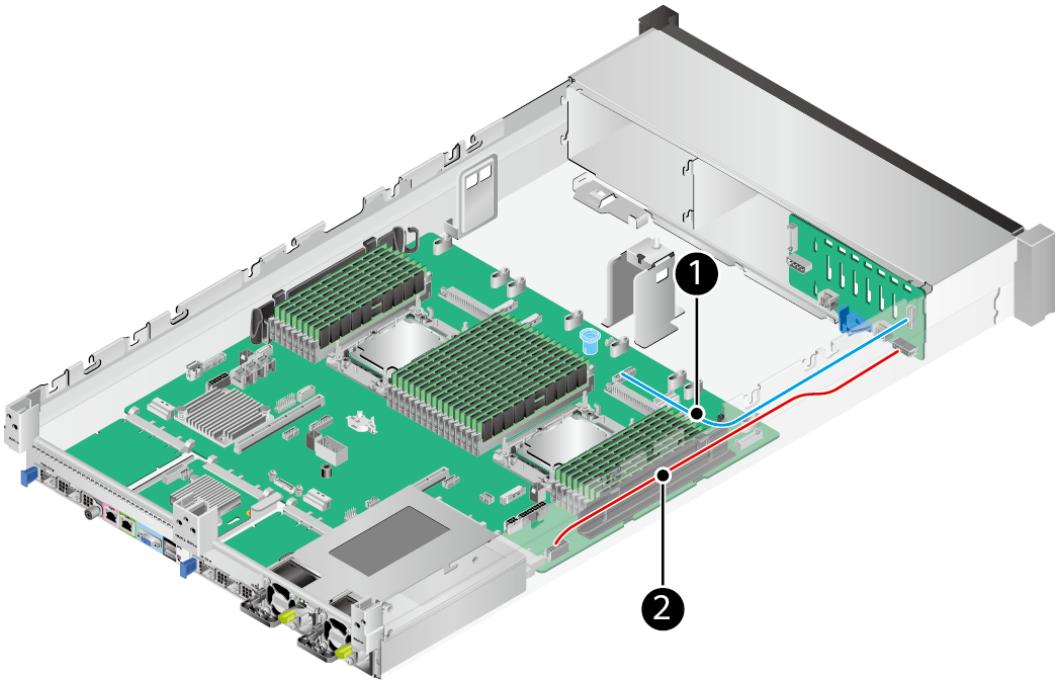

Table 6-63 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

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6.4.2.7.4 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-drive backplane SAS High-speed cabling

Figure 6-102 Front-drive backplane SAS high-speed cabling

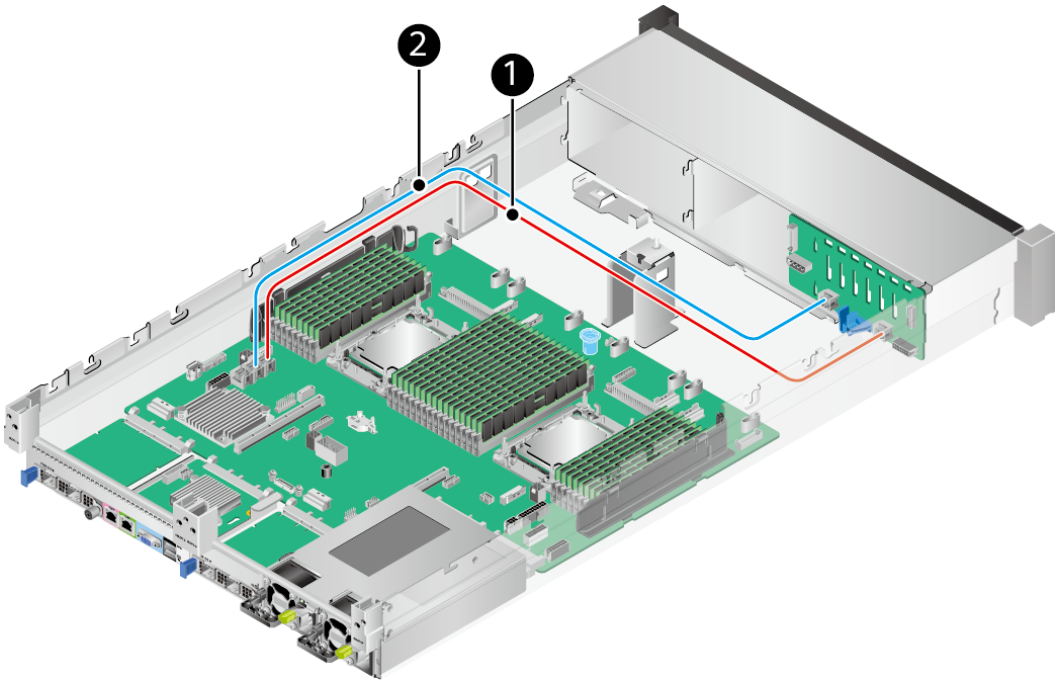

Table 6-64 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J28) to the mainboard (J6)
2	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J29) to the mainboard (J5)

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6.4.2.7.5 Cable for Connecting the First-layer and Second-layer Adapter Boards

Cable for Connecting the First-layer and Second-layer Adapter Boards

Figure 6-103 Cable for Connecting the First-layer and Second-layer Adapter Boards

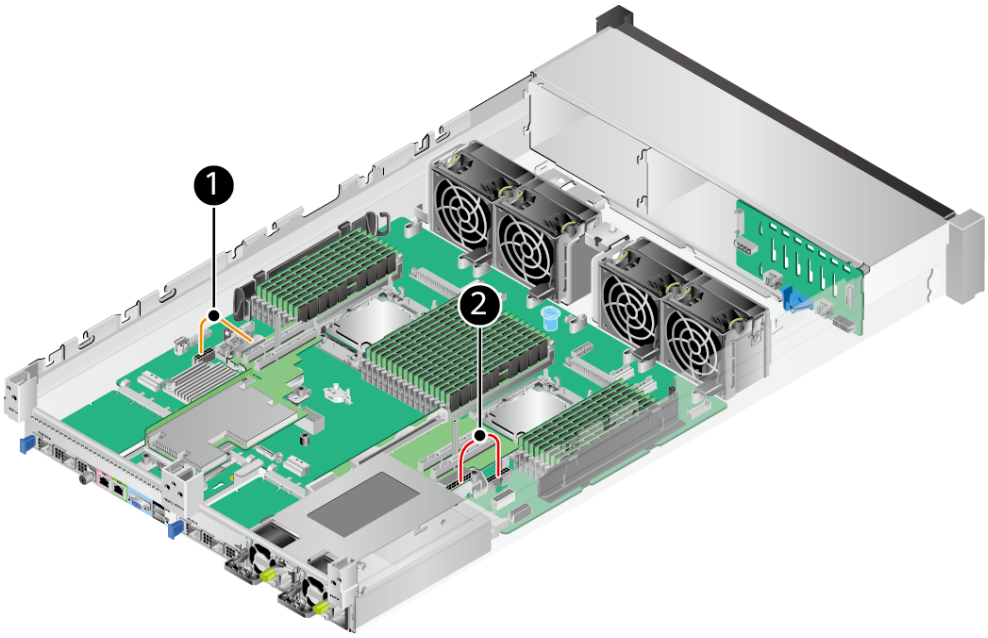

Table 6-65 Cable for Connecting the First-layer and Second-layer Adapter Boards

No.	P/N Code	Description
1	04152704-002	Power cable for connecting the layer 1 and layer 2 adapter board of CPU1 to the mainboard (J89)
2	04152142-010	Power cable for connecting the layer 1 and layer 2 adapter board of CPU2 to the mainboard (J88)

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6.4.2.7.6 GPU Card Cabling

GPU Card Cabling

Figure 6-104 GPU card cabling

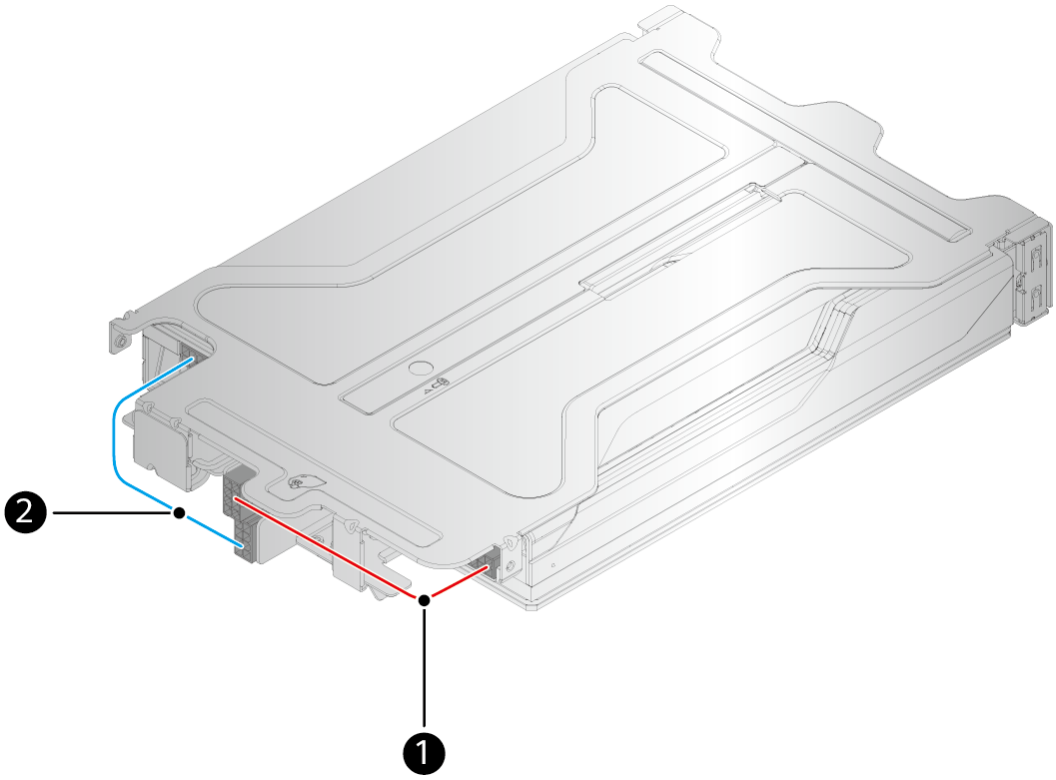

Table 6-66 GPU card cabling

No.	P/N Code	Description
1	04152766 04152765	Power cable for connecting the GPU card in slot 2 or slot 6 to the riser card in slot 2 or slot 6
2	04152764	Power cable for connecting the GPU card in slot 3 or slot 7 to the riser card in slot 3 or slot 7

6.4.2.8 8 x 2.5" Drive + 4 x GPU Configuration 2

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6.4.2.8.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-105 Left and Right Mounting Ear Cabling

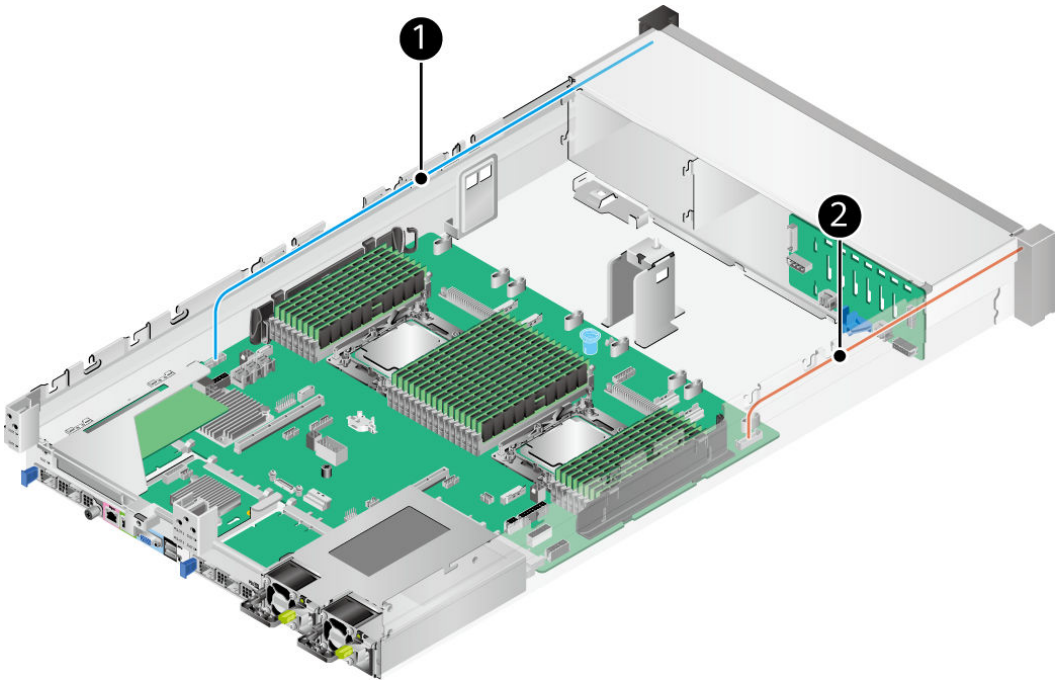

Table 6-67 Left and Right Mounting Ear Cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.8.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-106 Intrusion Sensor Cabling

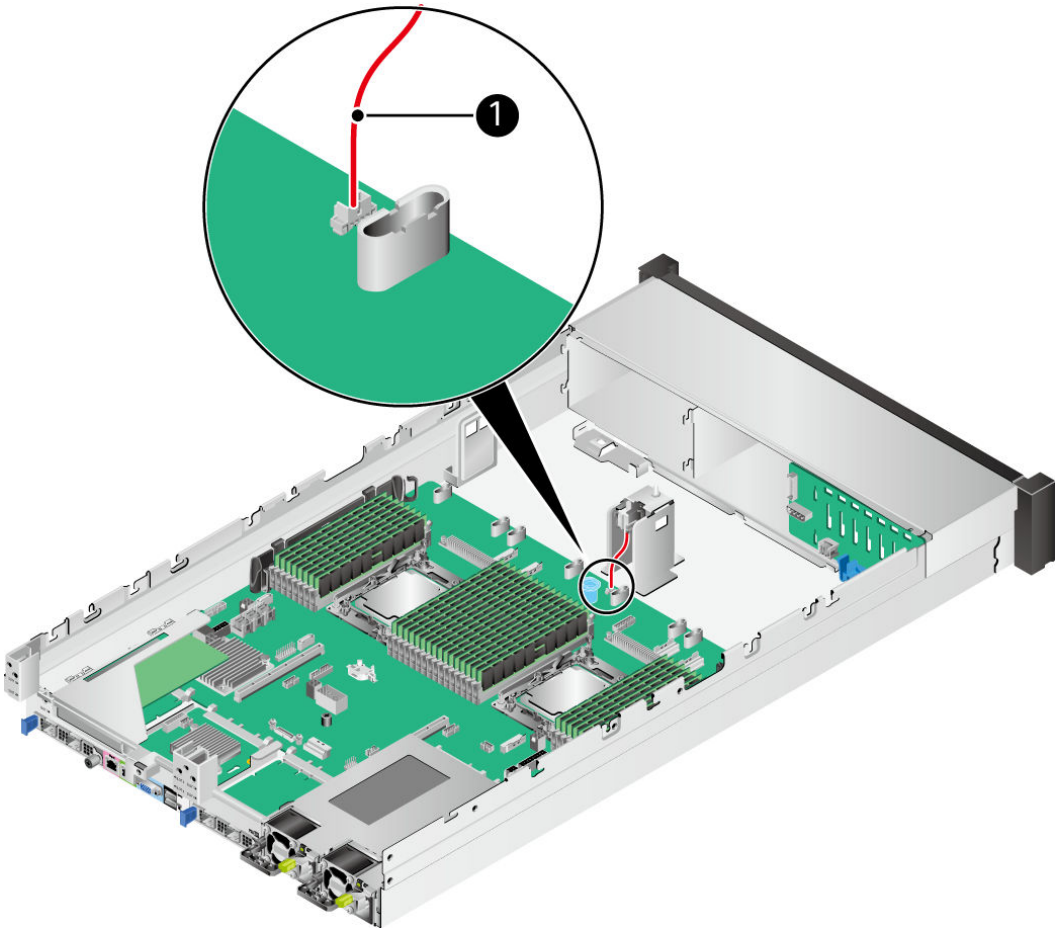

Table 6-68 Intrusion Sensor Cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.8.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-107 Front-Drive Backplane Power and Low-speed Signal Cabling

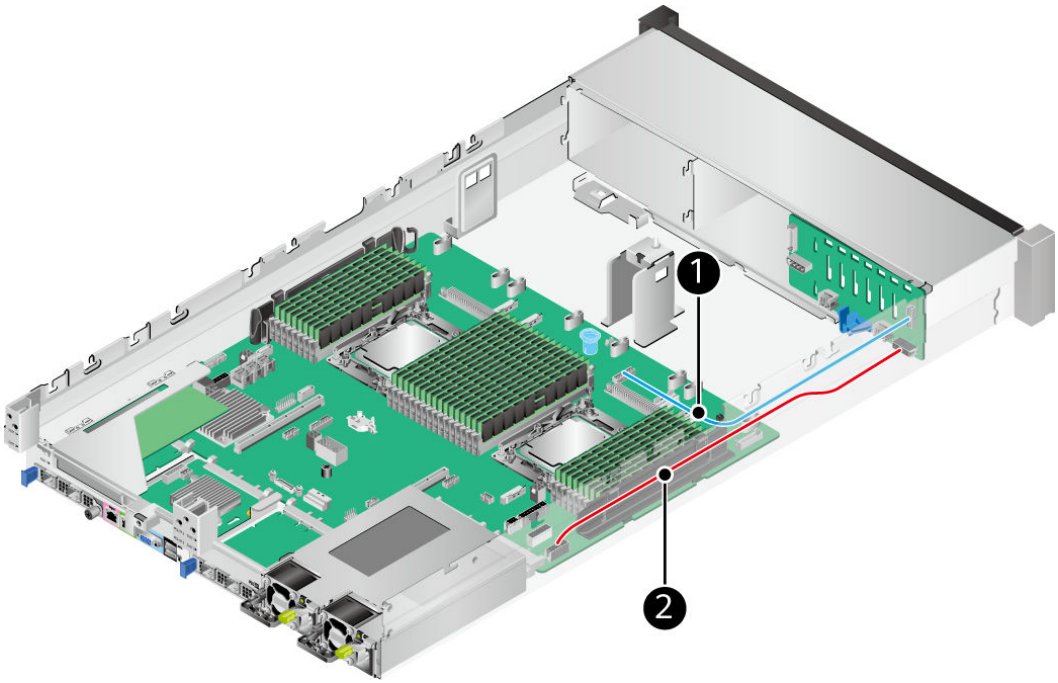

Table 6-69 Front-Drive Backplane Power and Low-speed Signal Cabling

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J2) to the mainboard (J26)

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6.4.2.8.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-108 Front-drive backplane SAS high-speed cabling

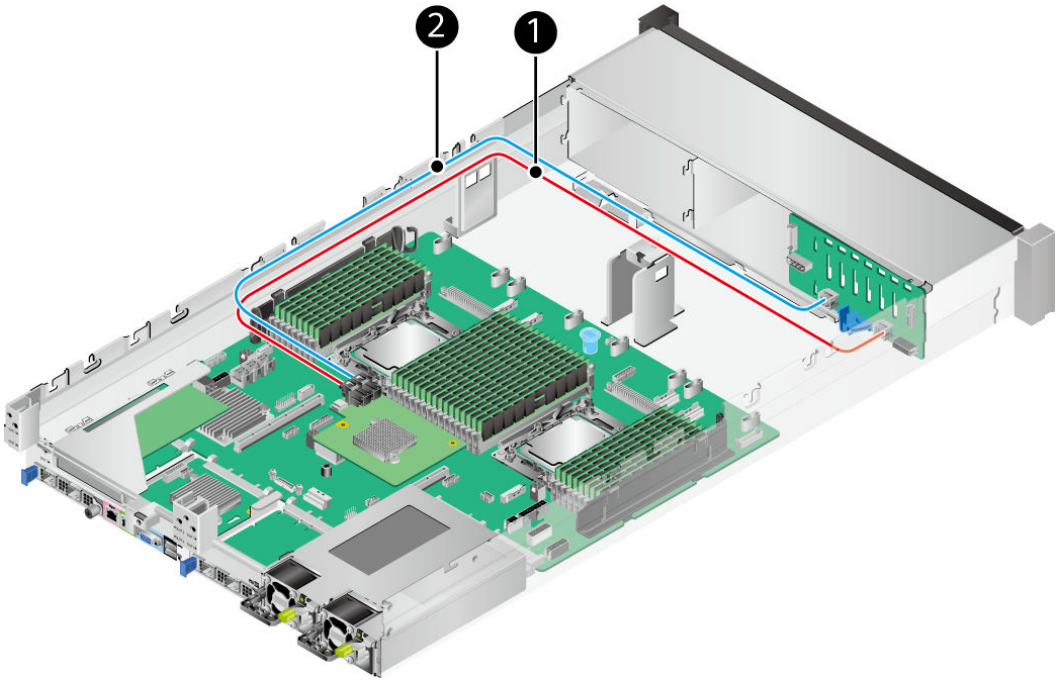

Table 6-70 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.4.2.8.5 Cable for Connecting the First-layer and Second-layer Adapter Boards

Cable for Connecting the First-layer and Second-layer Adapter Boards

Figure 6-109 Cable for Connecting the First-layer and Second-layer Adapter Boards

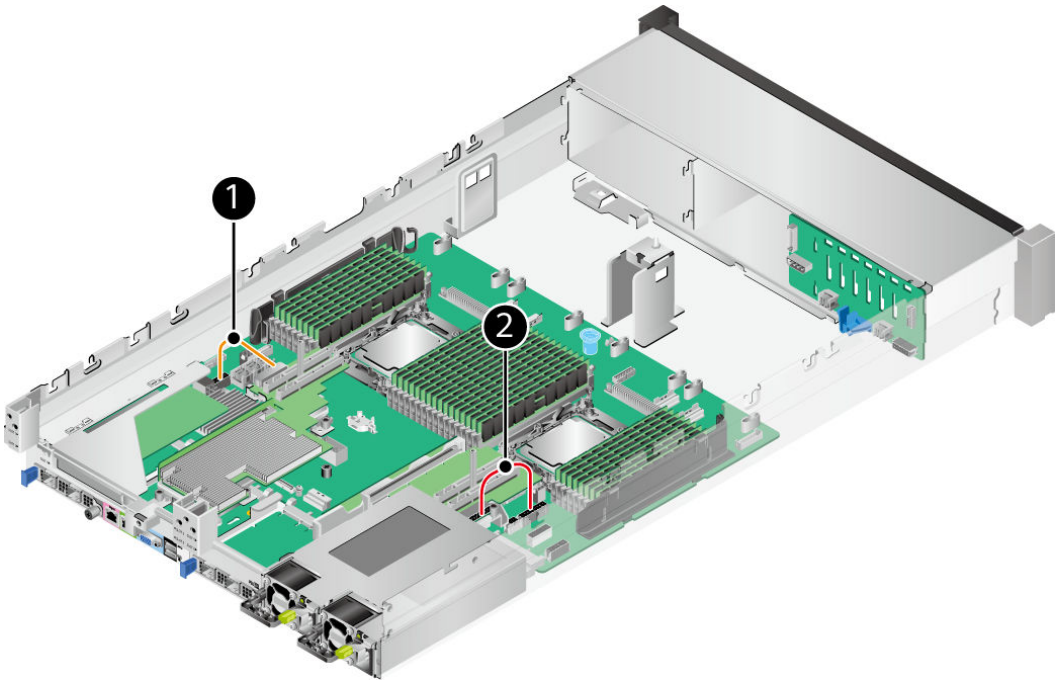

Table 6-71 Cable for Connecting the First-layer and Second-layer Adapter Boards

No.	P/N Code	Description
1	04152704-002	Power cable for connecting the layer 1 and layer 2 adapter board of CPU1 to the mainboard (J89)
2	04152142-010	Power cable for connecting the layer 1 and layer 2 adapter board of CPU2 to the mainboard (J88)

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6.4.2.8.6 GPU Card Cabling

GPU Card Cabling

Figure 6-110 GPU Card Cabling

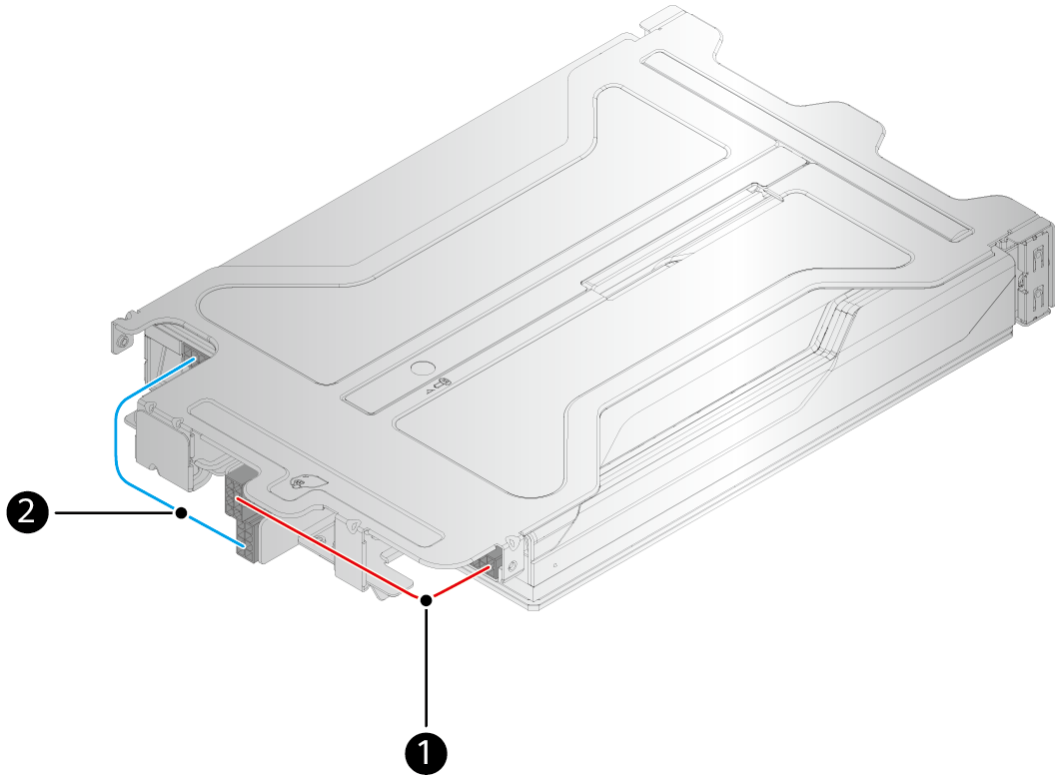

Table 6-72 GPU Card Cabling

No.	P/N Code	Description
1	04152766 04152765	Power cable for connecting the GPU card in slot 2 or slot 4 to the riser card in slot 2 or slot 6
2	04152764	Power cable for connecting the GPU in slot 3/slot 7 to the riser card in slot 3/slot 7

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6.4.2.8.7 PCIe Riser Module 3 Cabling

PCIe Riser Module 3 Cabling

Figure 6-111 PCIe Riser Module 3 Cabling

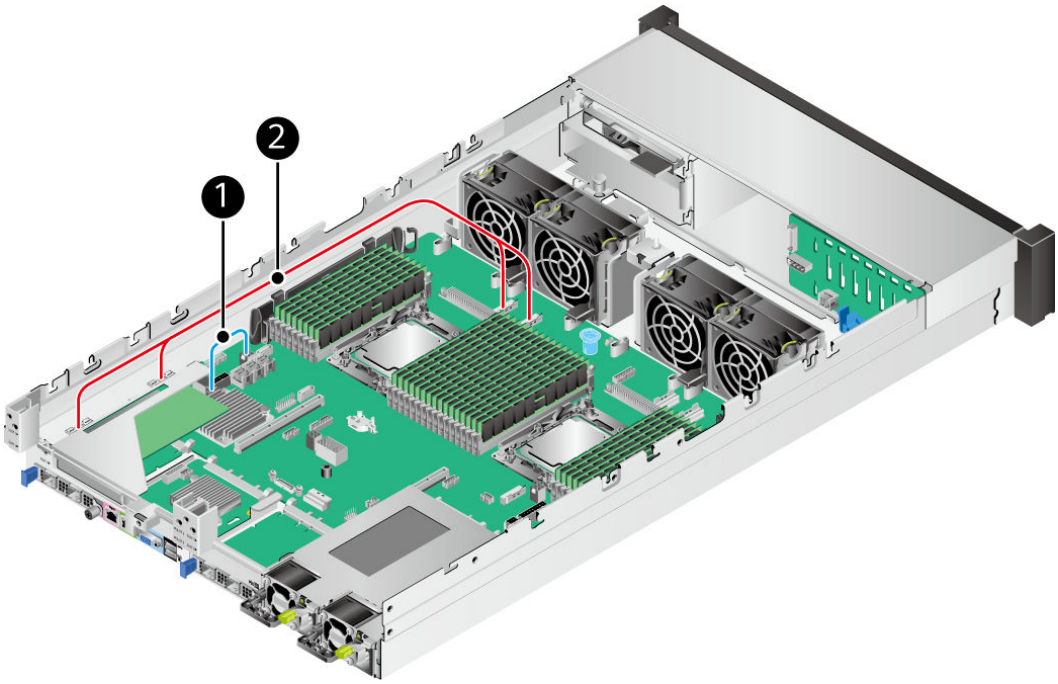

Table 6-73 PCIe Riser Module 3 Cabling

No.	P/N Code	Description	Remarks
1	04152996-008	Power cable for connecting the PCIe riser card to the mainboard (J64)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04053144	High-speed cables for connecting LP Slimline 1 and LP Slimline 2 on the PCIe riser card to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard	

6.4.2.9 8 x 2.5" (4 x SAS/SATA + 4 x SAS/SATA/NVMe) + 4 x GPU Configuration

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6.4.2.9.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-112 Left and right mounting ear cabling

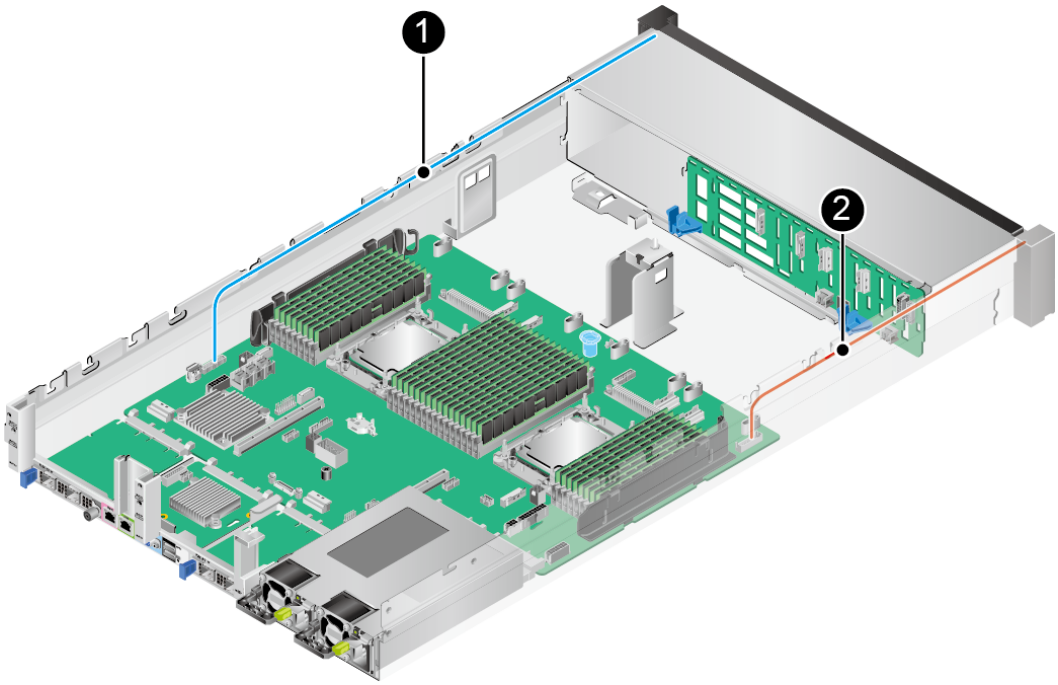

Table 6-74 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.9.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-113 OCP 3.0 expansion cable 1

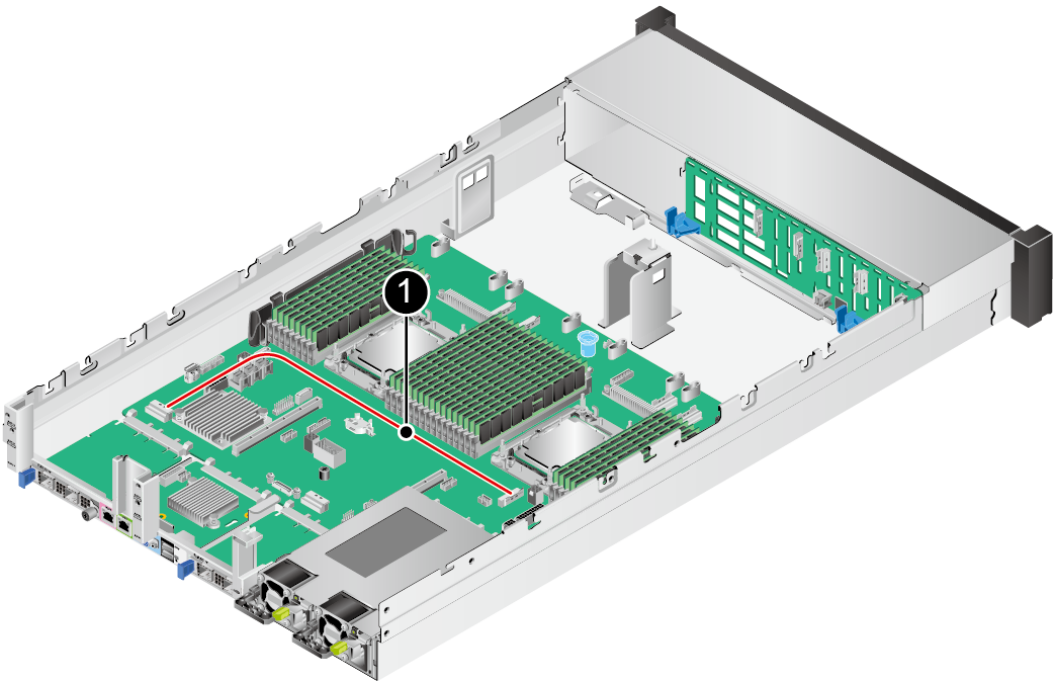

Table 6-75 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-114 OCP 3.0 expansion cable 2

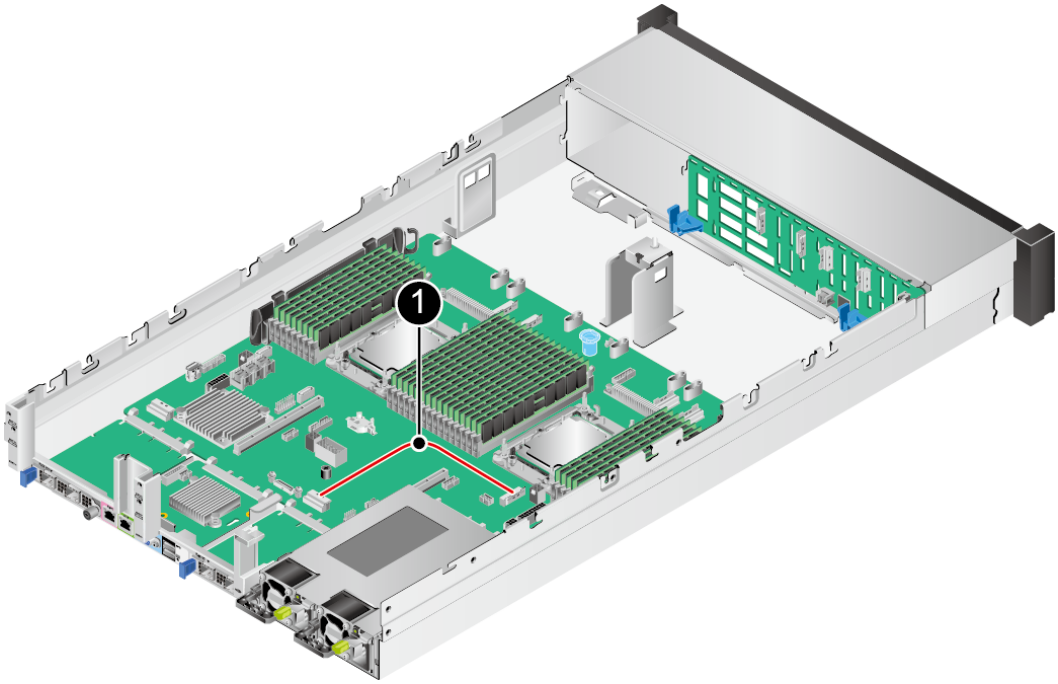

Table 6-76 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.2.9.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-115 Intrusion sensor cabling

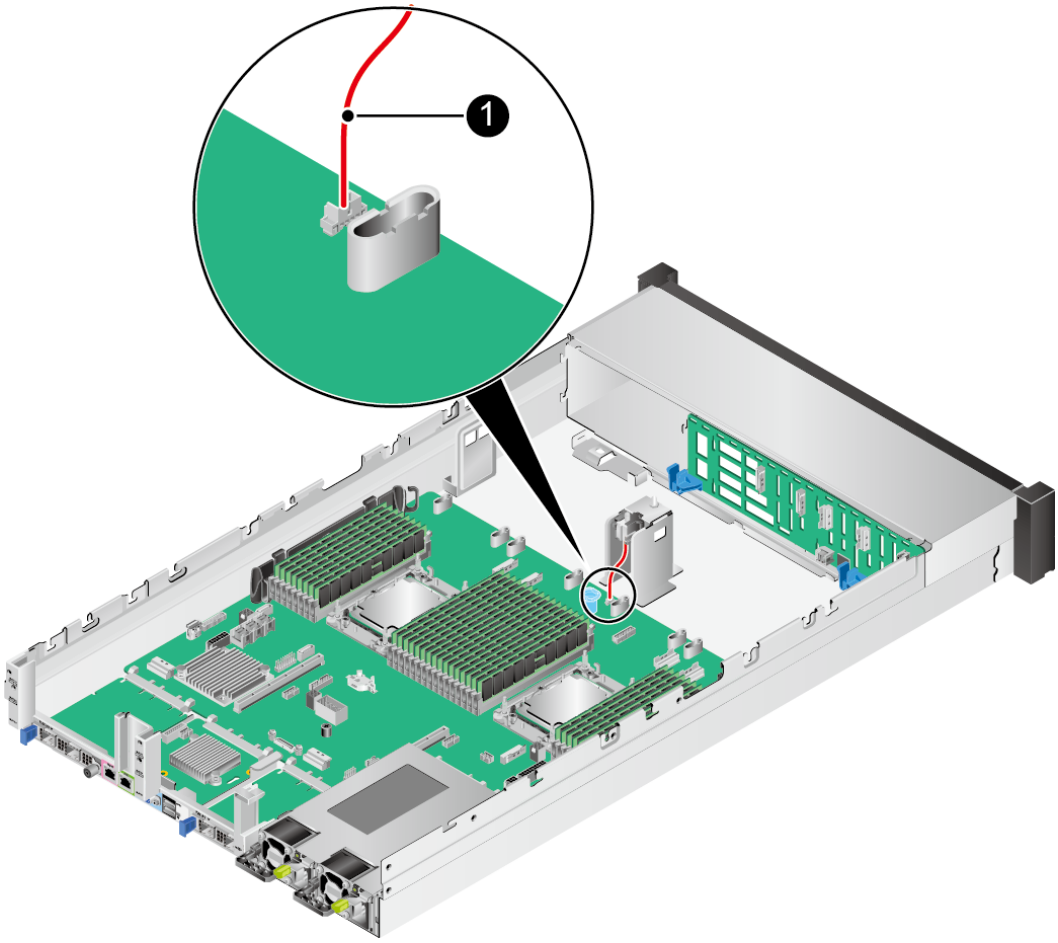

Table 6-77 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.9.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-116 Front-drive backplane power and low-speed signal cables

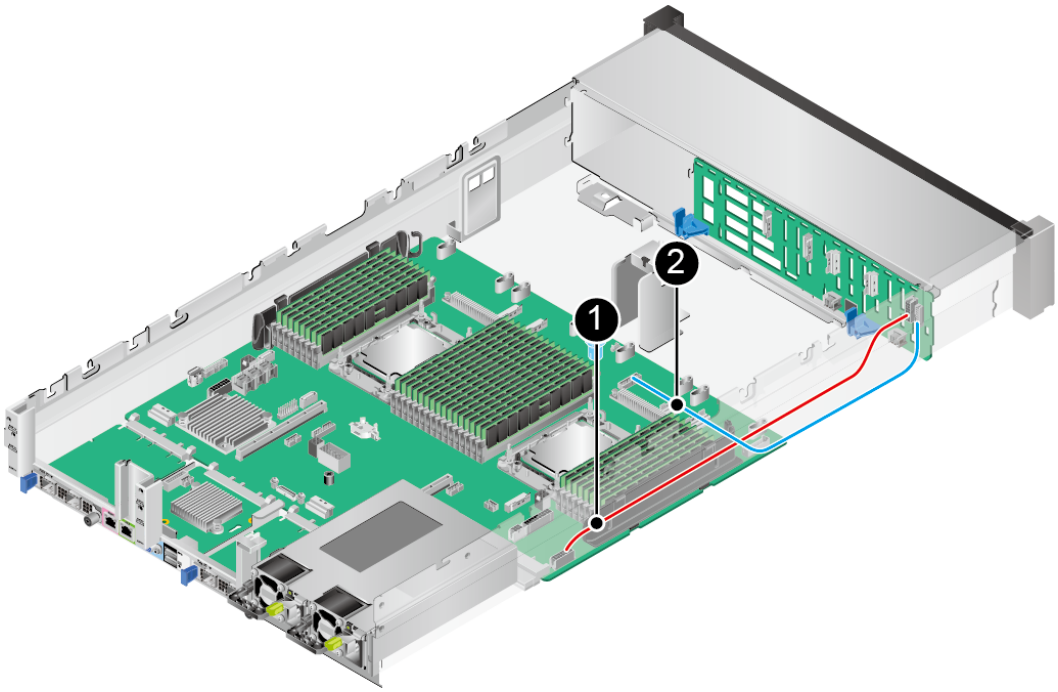

Table 6-78 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152145-009	Power cable for connecting the front-drive backplane (J4003) to the mainboard (J26)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3702) to the mainboard (J75)

6.4.2.9.5 Front-Drive Backplane SAS High-speed Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-drive backplane SAS High-speed cabling

Figure 6-117 Front-drive backplane SAS high-speed cabling (Configuring a screw-in RAID controller card with two Mini SAS ports)

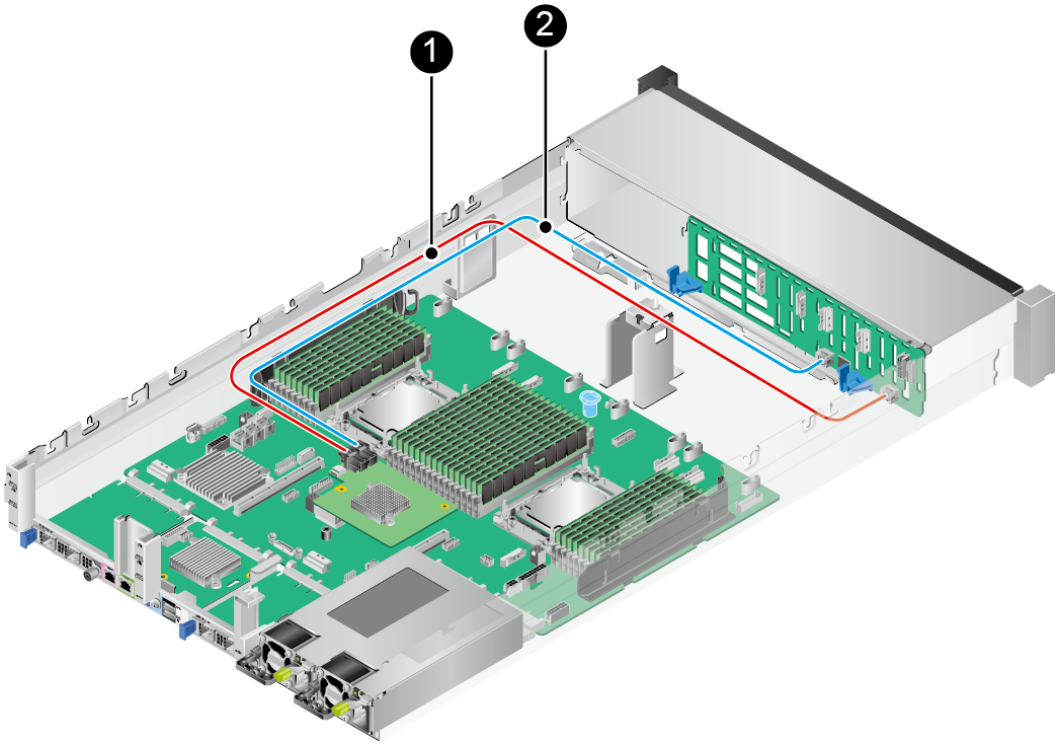

Table 6-79 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J801) to PORT A of the screw-in RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J802) to PORT B of the screw-in RAID controller card

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Figure 6-118 Front-drive backplane SAS high-speed cabling (Configuring a screw-in RAID controller card with one SlimSAS port)

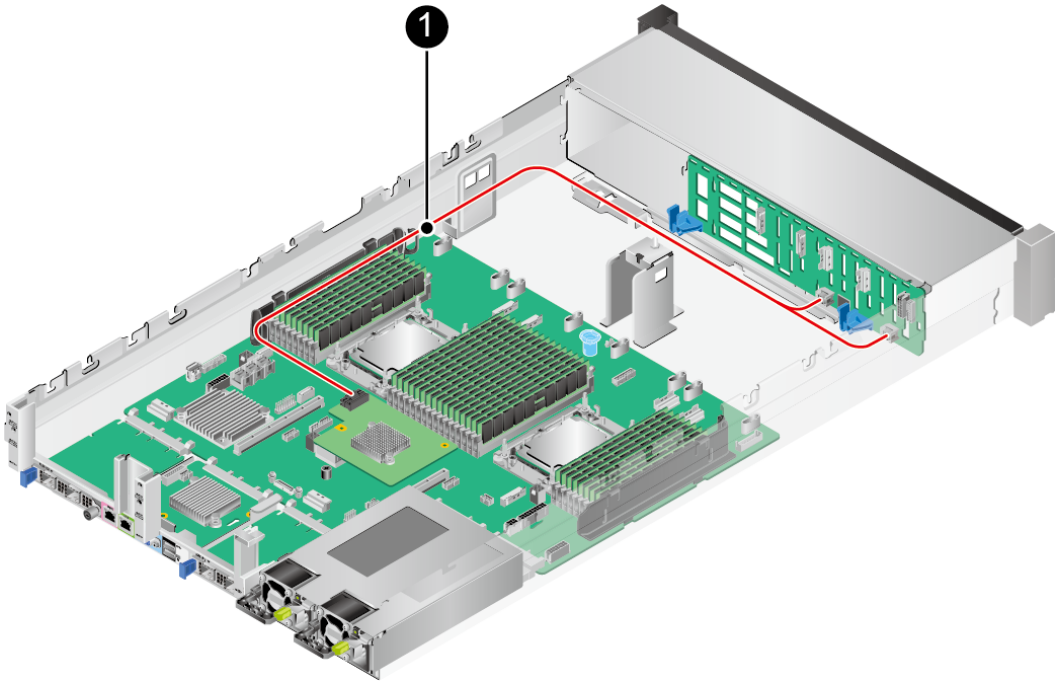

Table 6-80 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y020	SAS high-speed cable for connecting the front-drive backplane (J801) and (J802) to PORT A of the screw-in RAID controller card **NOTE** 0405Y020 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J801) , connector PORT B corresponds to the front-drive backplane (J802), and another end of the cable is connected to the RAID controller card. Use cable connectors based on actual situation.

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6.4.2.9.6 Front-Drive Backplane LP Slimline High-speed Cable

Front-drive backplane LP Slimline high-speed cable

Figure 6-119 Front-drive backplane LP slimline high-speed cable

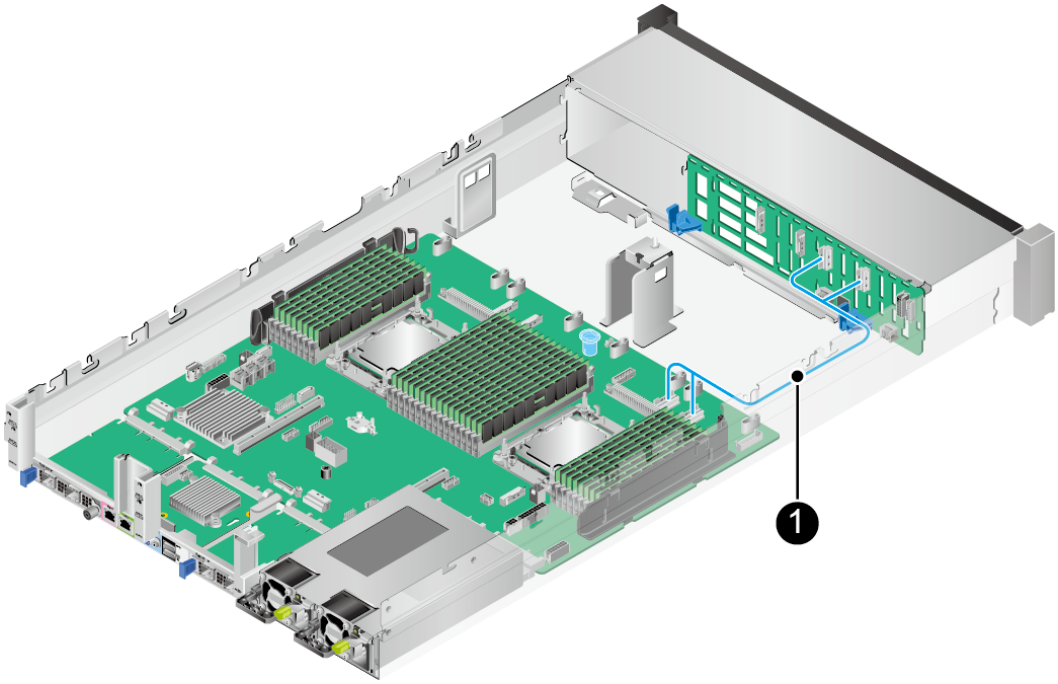

Table 6-81 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	04052316-002	High-speed cable for connecting LP Slimline 3 (J1101) and LP Slimline 4 (J1201) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316-002 cable corresponds to the front-drive backplane LP Slimline 3 (J1101), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1201); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12) .

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6.4.2.9.7 Cable for Connecting the First-layer and Second-layer Adapter Boards

Cable for Connecting the Layer 1 and Layer 2 Adapter Boards

Figure 6-120 Cable for connecting the layer 1 and layer 2 adapter boards

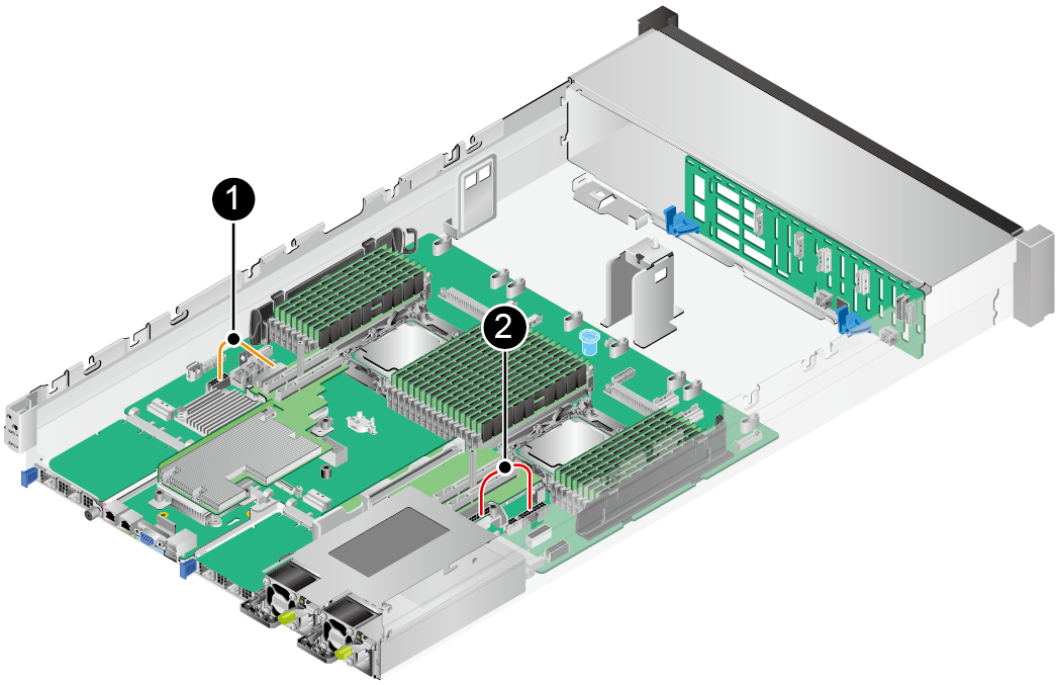

Table 6-82 Cable for connecting the layer 1 and layer 2 adapter boards

No.	P/N Code	Description
1	04152704-002	Power cable for connecting the layer 1 and layer 2 adapter board of CPU1 to the mainboard (J89)
2	04152142-010	Power cable for connecting the layer 1 and layer 2 adapter board of CPU2 to the mainboard (J88)

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6.4.2.9.8 GPU Card Cabling

GPU Card Cabling

Figure 6-121 GPU card cabling

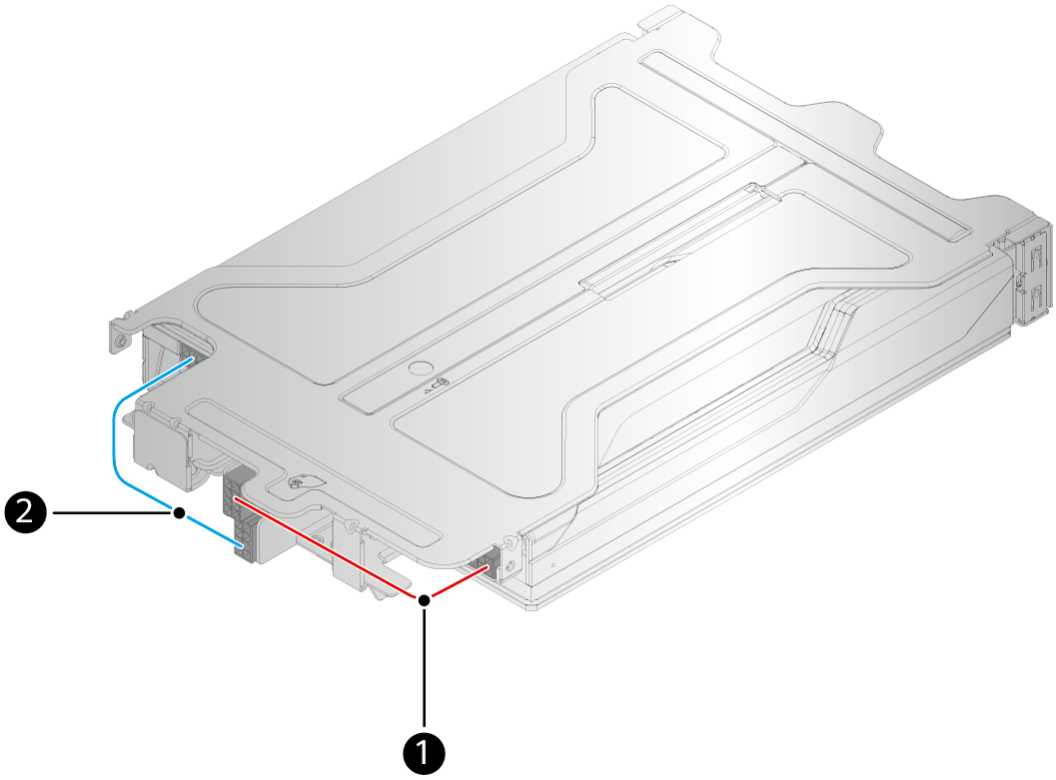

Table 6-83 GPU card cabling

No.	P/N Code	Description
1	04152766 04152765	Power cable for connecting the GPU card in slot 2 or slot 6 to the riser card in slot 2 or slot 6
2	04152764	Power cable for connecting the GPU card in slot 3 or slot 7 to the riser card in slot 3 or slot 7

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6.4.2.9.9 PCIe Riser Module 3 Cabling

PCIe Riser Module 3 Cabling

Figure 6-122 PCIe Riser Module 3 Cabling

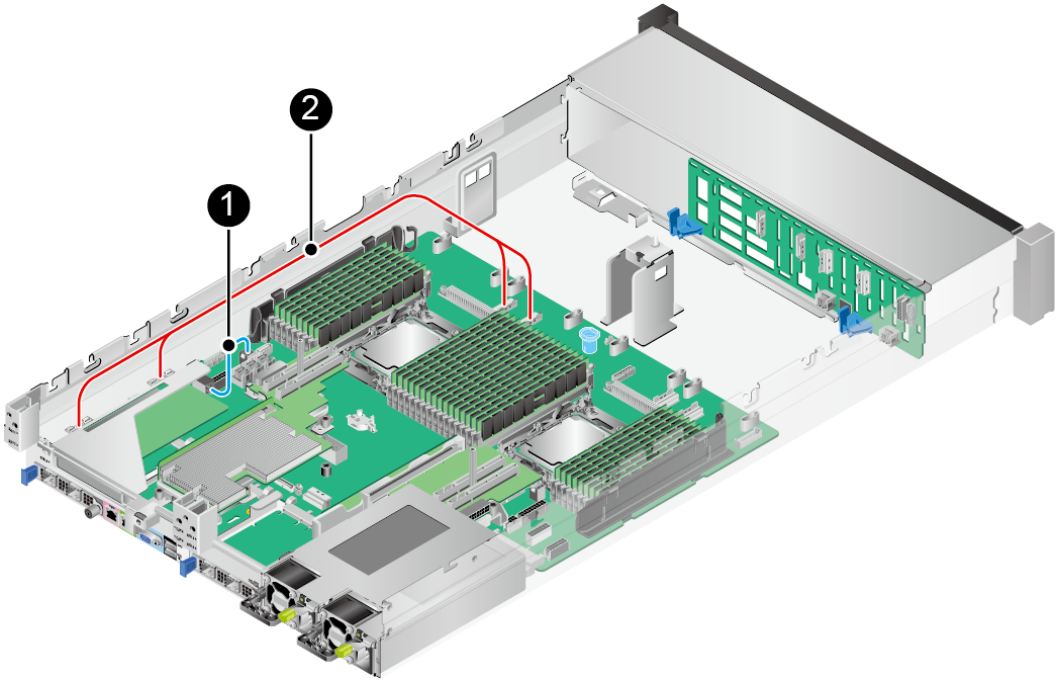

Table 6-84 PCIe Riser Module 3 Cabling

No.	P/N Code	Description	Remarks
1	04152996-008	Power cable for connecting the PCIe riser card to the mainboard (J64)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04053144	High-speed cables for connecting LP Slimline 1 and LP Slimline 2 on the PCIe riser card to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard	

6.4.2.10 8 x 2.5" Drive Pass-through backplane (Tri-Mode) Configuration (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 4 x NVMe)

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6.4.2.10.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-123 Left and right mounting ear cabling

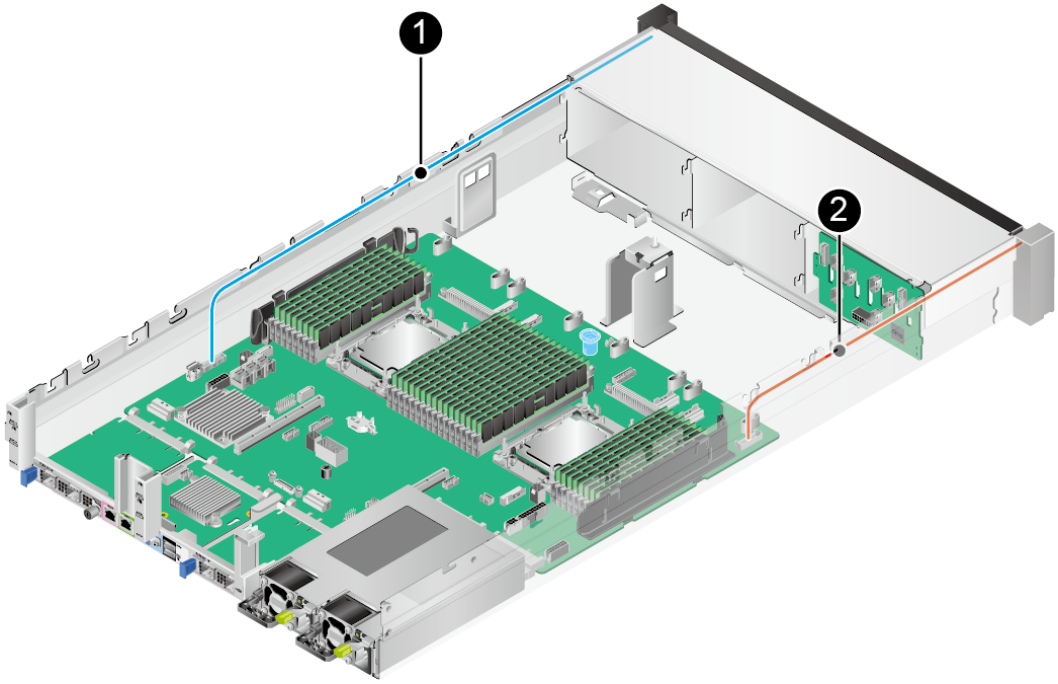

Table 6-85 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.10.2 NC-SI Cabling

NC-SI Cabling

Figure 6-124 NC-SI cabling

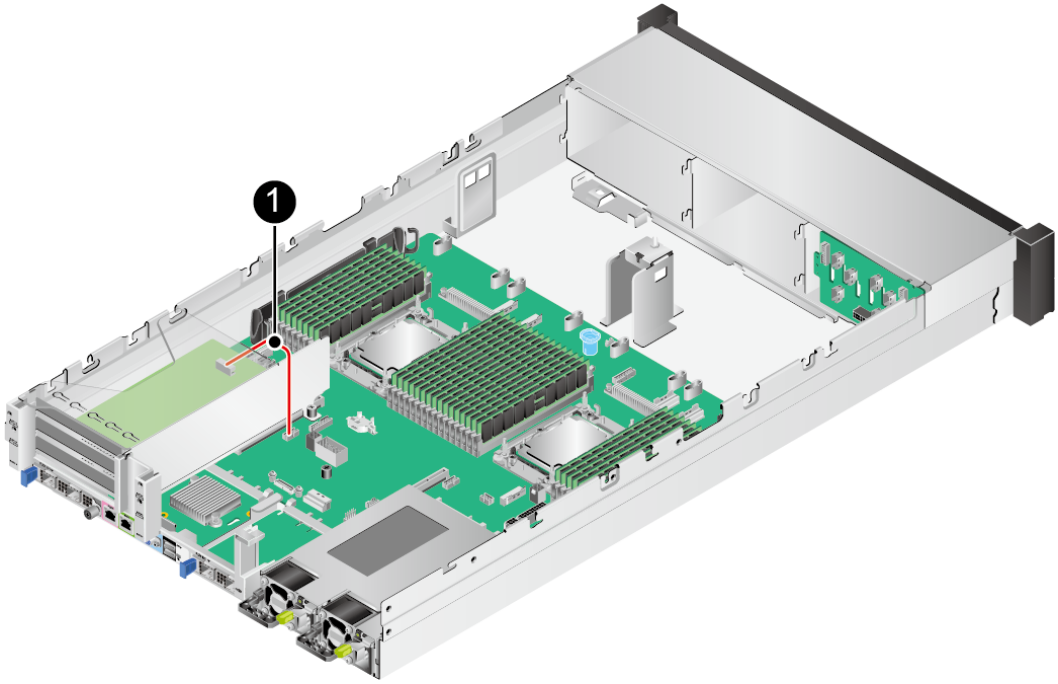

Table 6-86 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.2.10.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-125 OCP 3.0 expansion cable 1

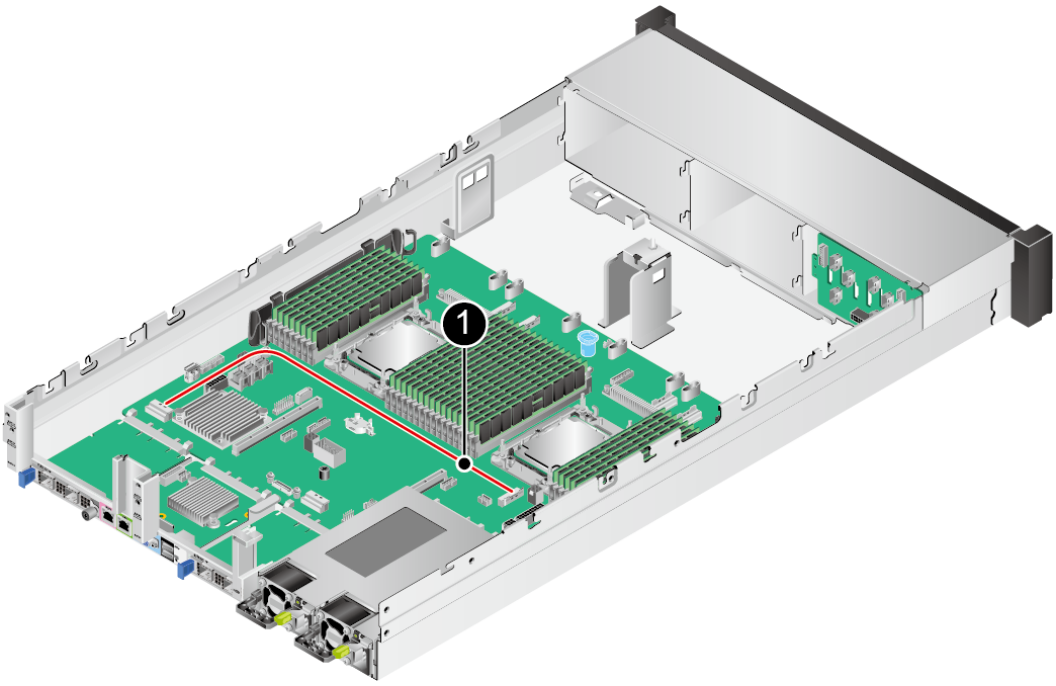

Table 6-87 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-126 OCP 3.0 expansion cable 2

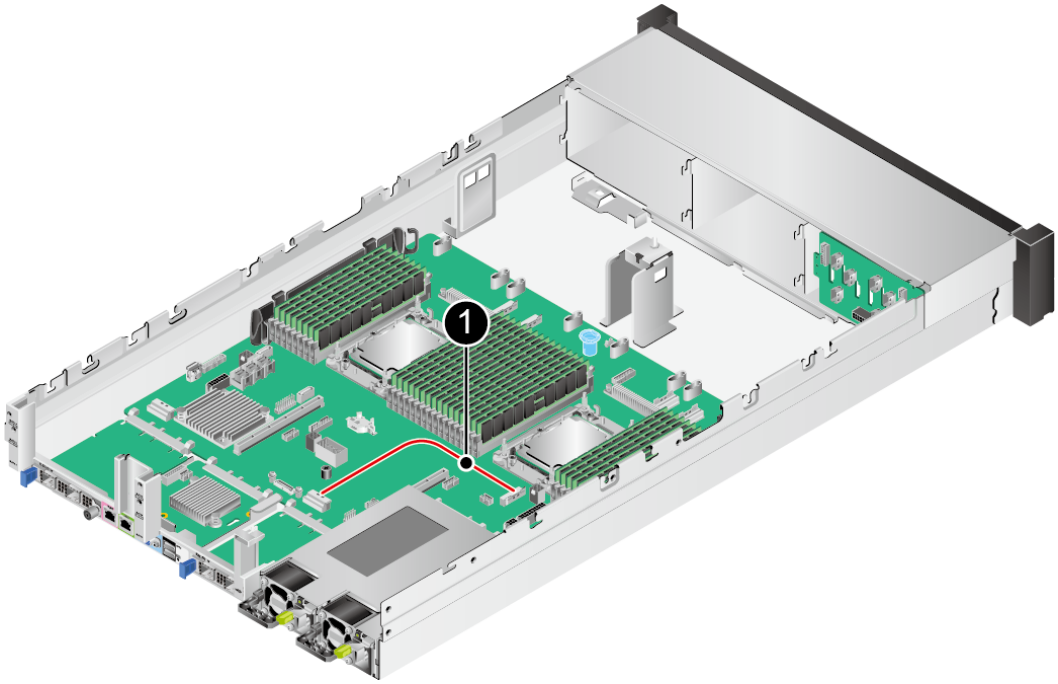

Table 6-88 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.2.10.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-127 Intrusion sensor cabling

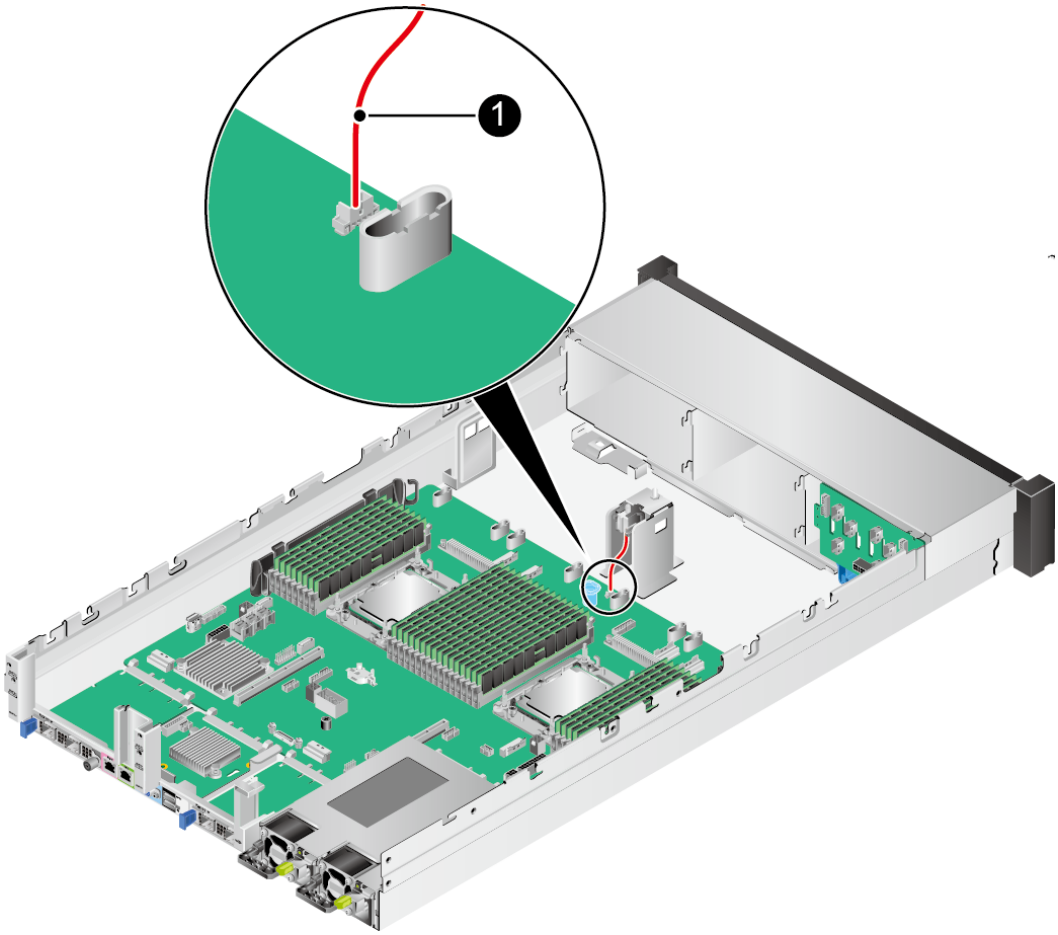

Table 6-89 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.10.5 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-128 Front-drive backplane power and low-speed signal cables

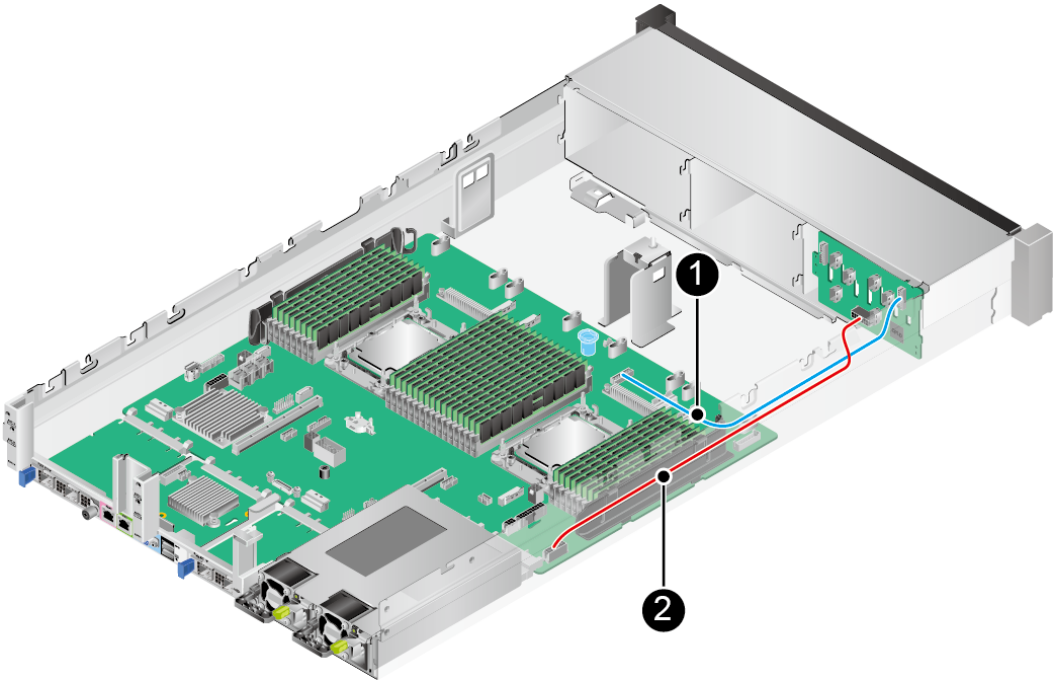

Table 6-90 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04051340	Low-speed signal cable for connecting the front-drive backplane (J1103) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1801) to the mainboard (J26)

6.4.2.10.6 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-129 Front-drive backplane SAS high-speed cabling

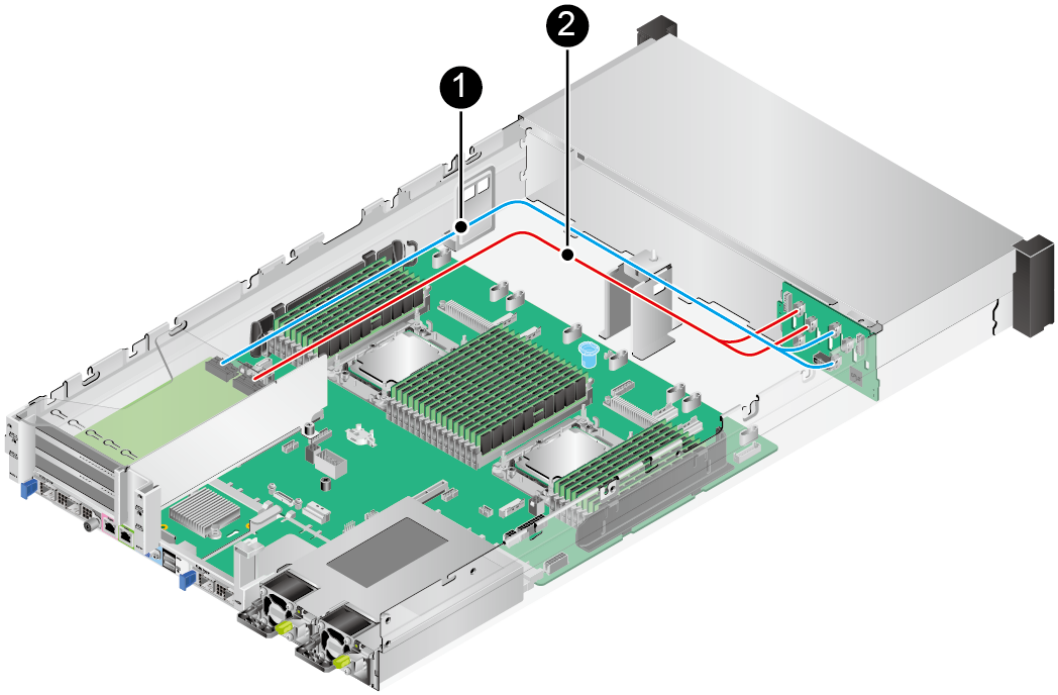

Table 6-91 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane (J501) and (J402) to C0 of the PCIe RAID controller card **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J501) , connector PORT B corresponds to the front-drive backplane (J402), and another end of the cable is connected to the RAID controller card. Use cable connectors based on actual situation.
2	0405Y072	SAS high-speed cable for connecting the front-drive backplane (J403) and (J404) to C1 of the PCIe RAID controller card **NOTE** 0405Y072 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J403) , connector PORT B corresponds to the front-drive backplane (J404), and another end of the cable is connected to the RAID controller card. Use cable connectors based on actual situation.

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6.4.2.11 8 x 2.5" Drive Pass-through backplane (Tri-Mode) Configuration 1 (8 x NVMe)

6.4.2.11.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-130 Left and right mounting ear cabling

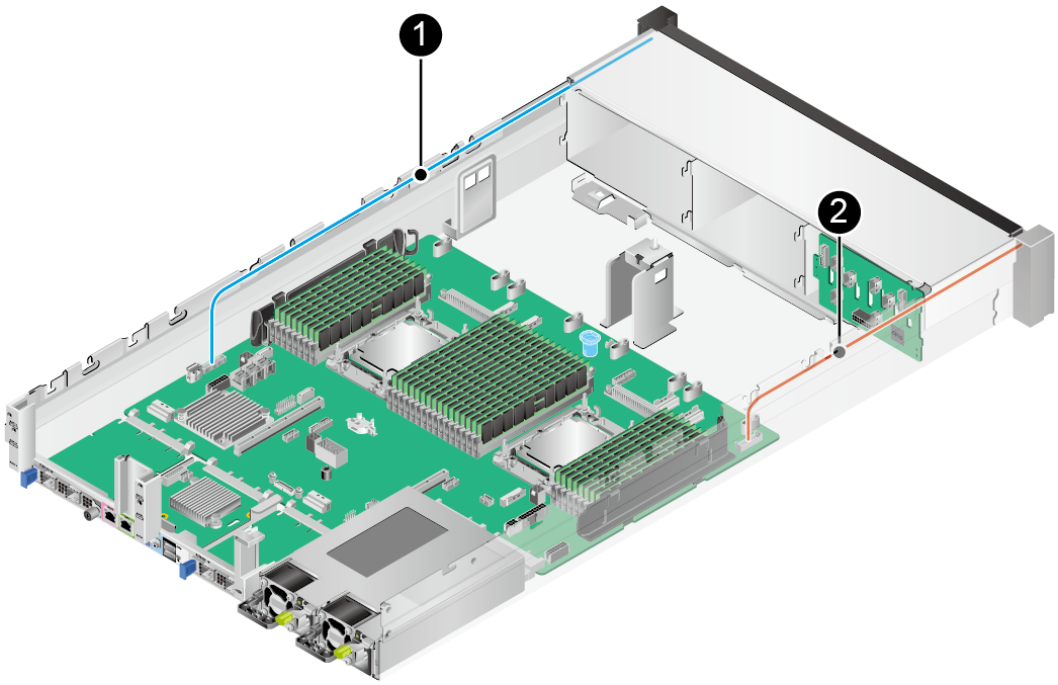

Table 6-92 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.2.11.2 NC-SI Cabling

NC-SI Cabling

Figure 6-131 NC-SI cabling

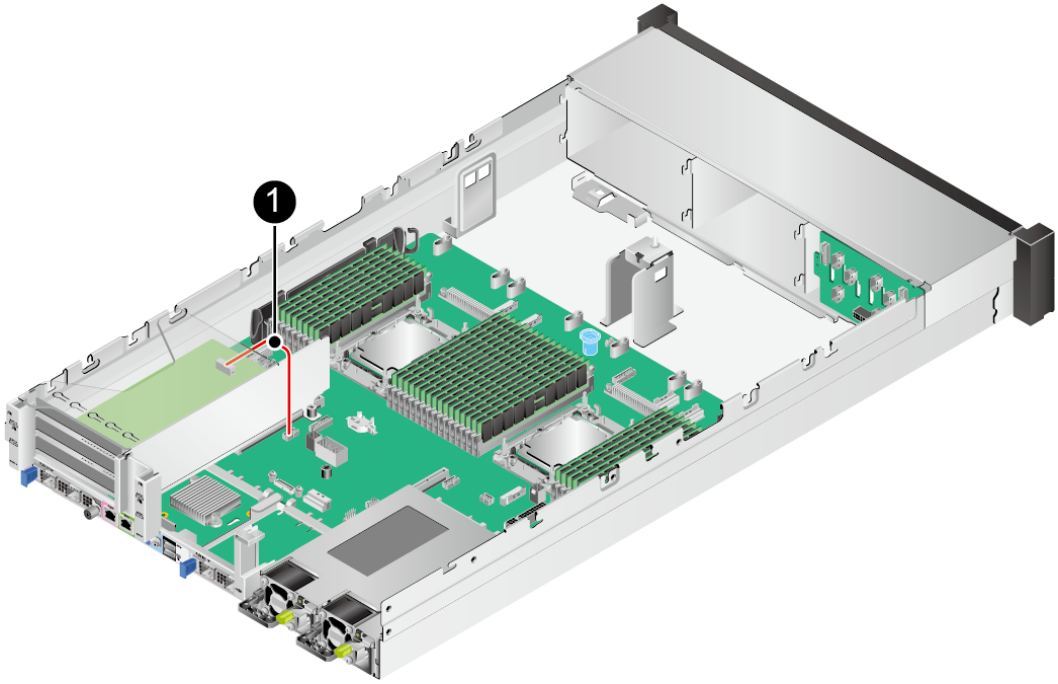

Table 6-93 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.2.11.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-132 OCP 3.0 expansion cable 1

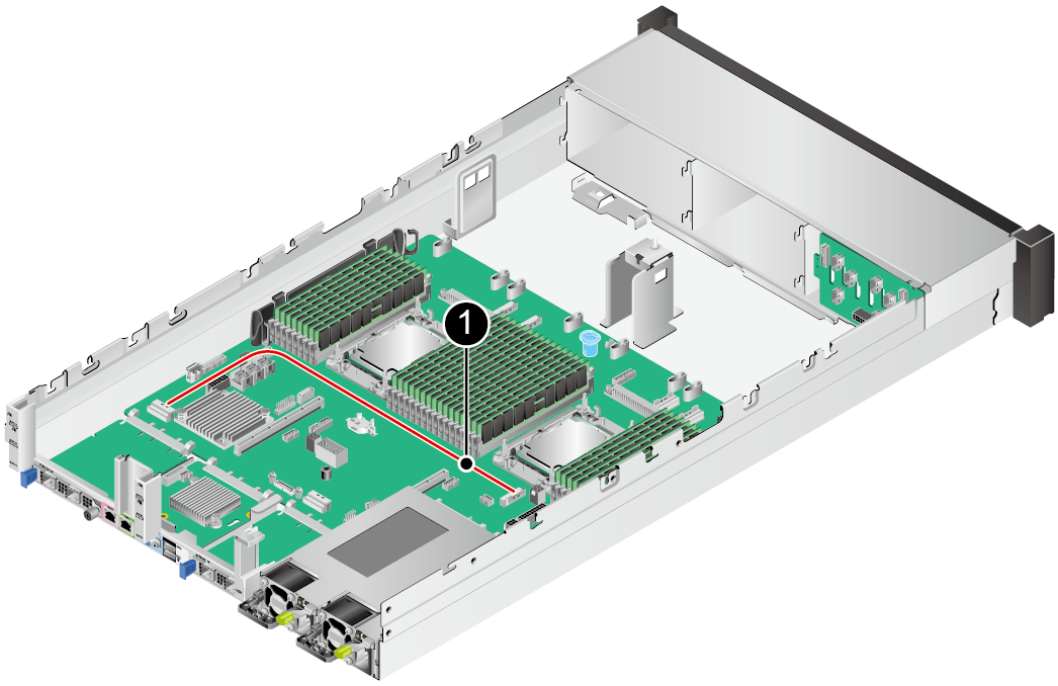

Table 6-94 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-133 OCP 3.0 expansion cable 2

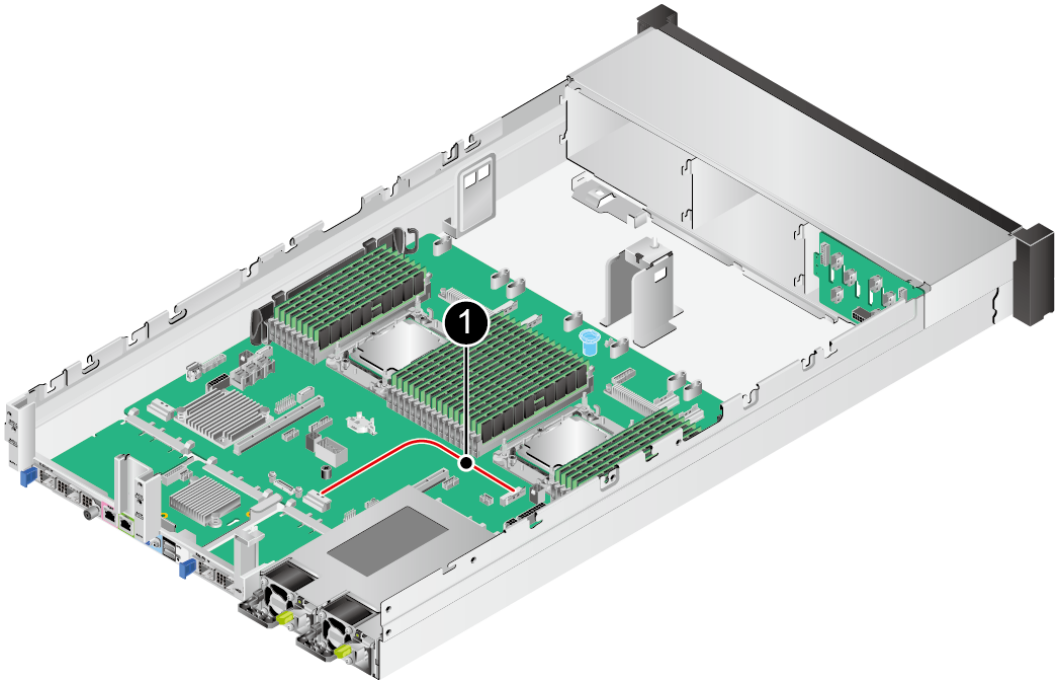

Table 6-95 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.2.11.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-134 Intrusion sensor cabling

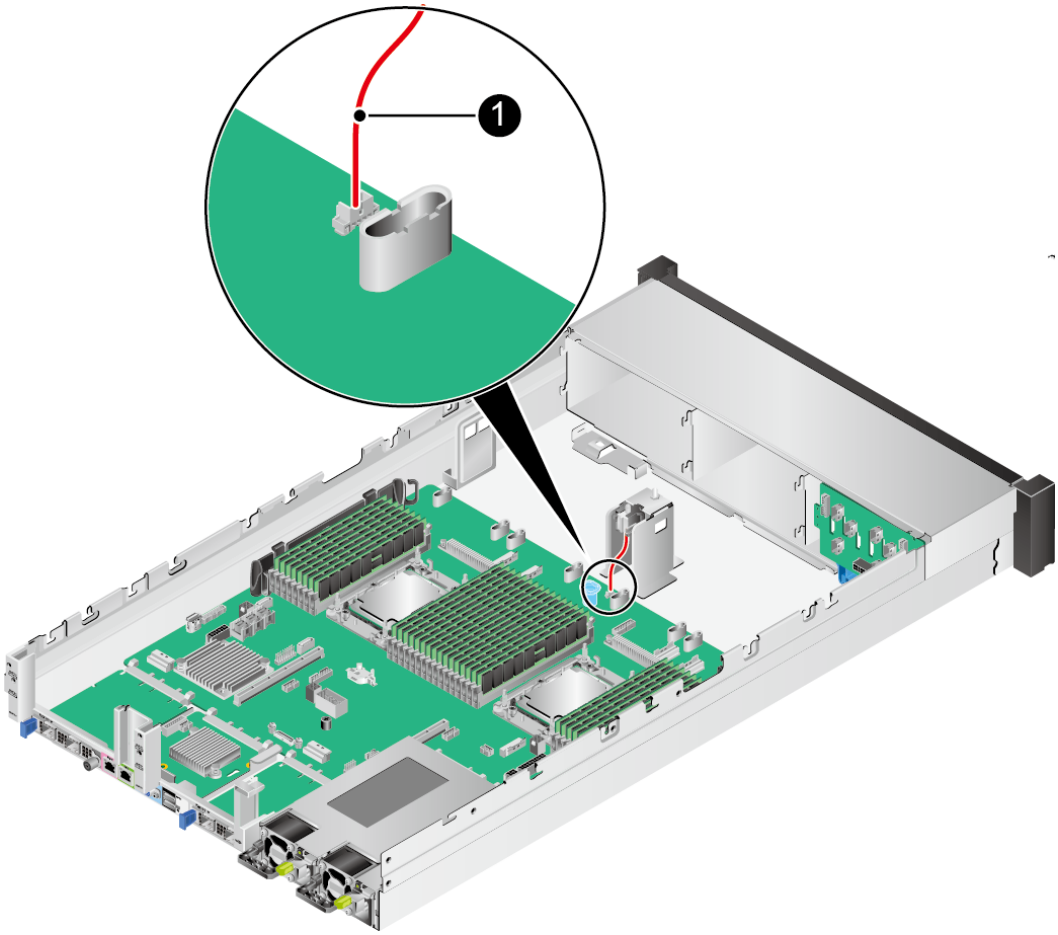

Table 6-96 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.2.11.5 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-135 Front-drive backplane power and low-speed signal cables

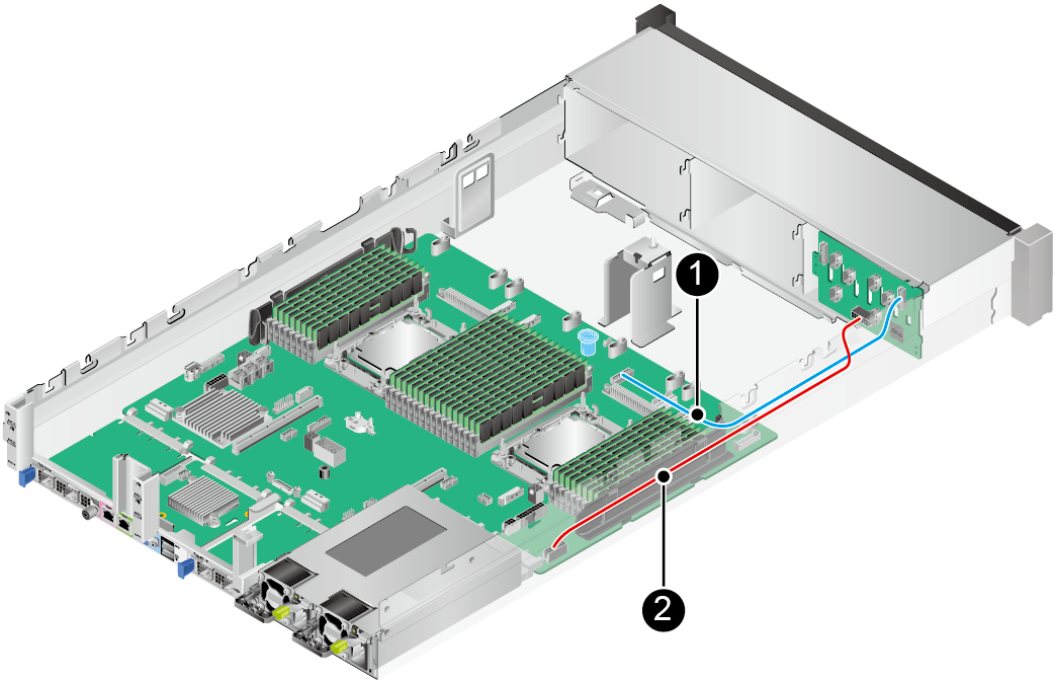

Table 6-97 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04051340	Low-speed signal cable for connecting the front-drive backplane (J1103) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1801) to the mainboard (J26)

6.4.2.11.6 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-136 Front-drive backplane SAS high-speed cabling

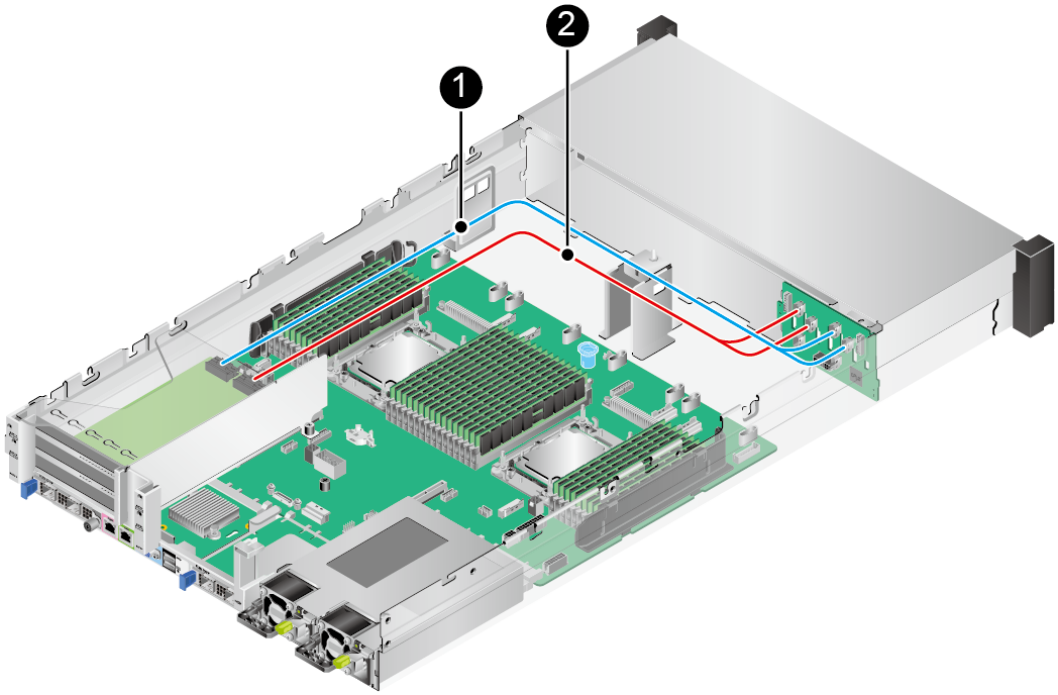

Table 6-98 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane (J401) and (J402) to C0 of the PCIe RAID controller card **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J401) and connector PORT B corresponds to the front-drive backplane (J402), and another end of the cable is connected to the RAID controller card. Use cable connectors based on actual situation.
2	0405Y072	SAS high-speed cable for connecting the front-drive backplane (J403) and (J404) to C1 of the PCIe RAID controller card **NOTE** 0405 Y072 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J403) and connector PORT B corresponds to the front-drive backplane (J404), and another end of the cable is connected to the RAID controller card Use cable connectors based on actual situation.

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6.4.3 8 x 3.5" Drive Pass-through Configuration

6.4.3.1 8 x 3.5" Drive Pass-through Configuration 1

6.4.3.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-137 Left and right mounting ear cabling

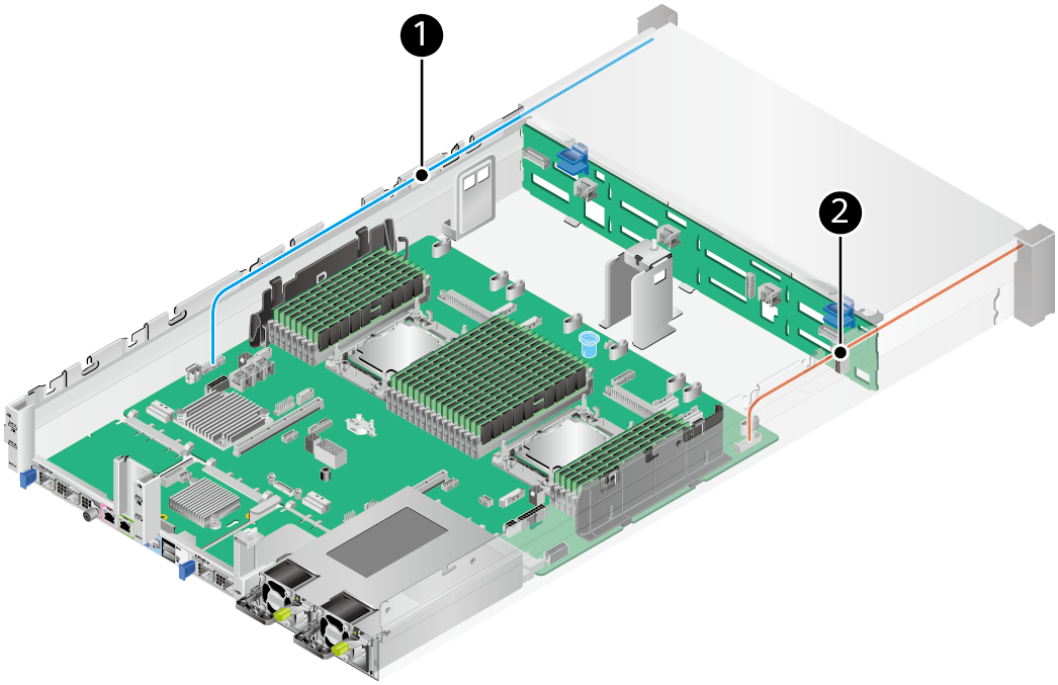

Table 6-99 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.3.1.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-138 OCP 3.0 expansion cable 1

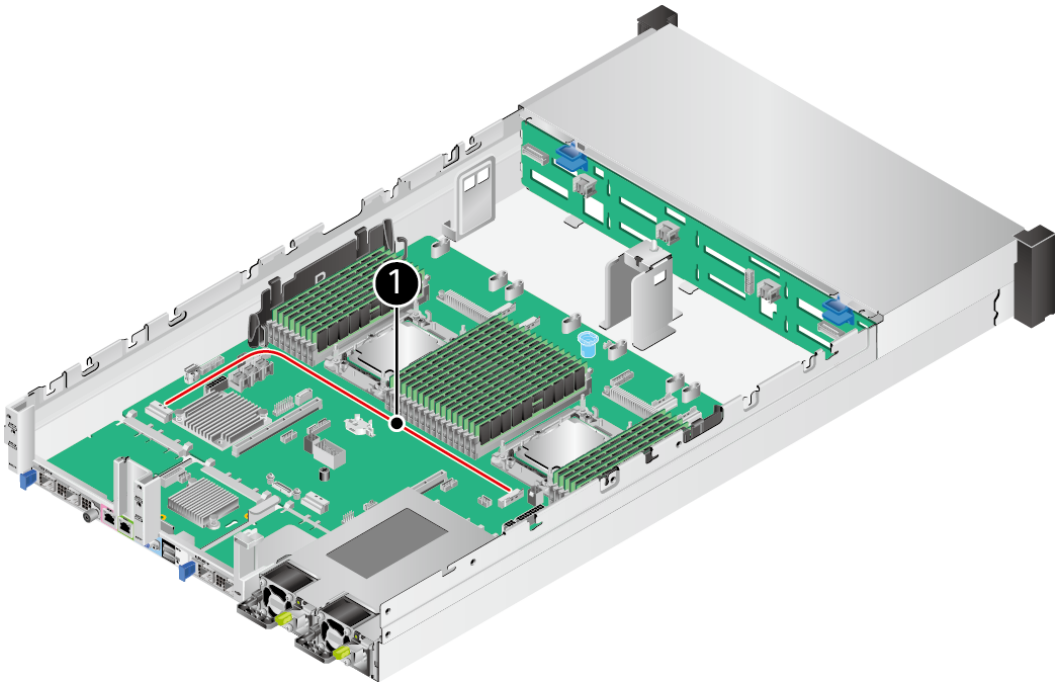

Table 6-100 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-139 OCP 3.0 expansion cable 2

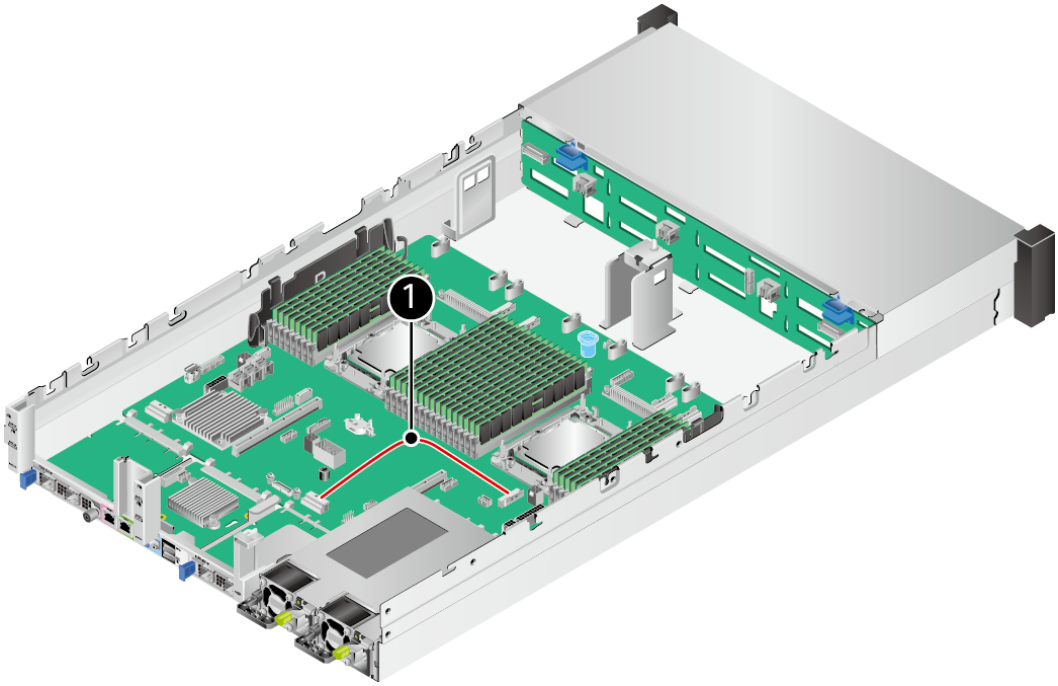

Table 6-101 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.3.1.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-140 Intrusion sensor cabling

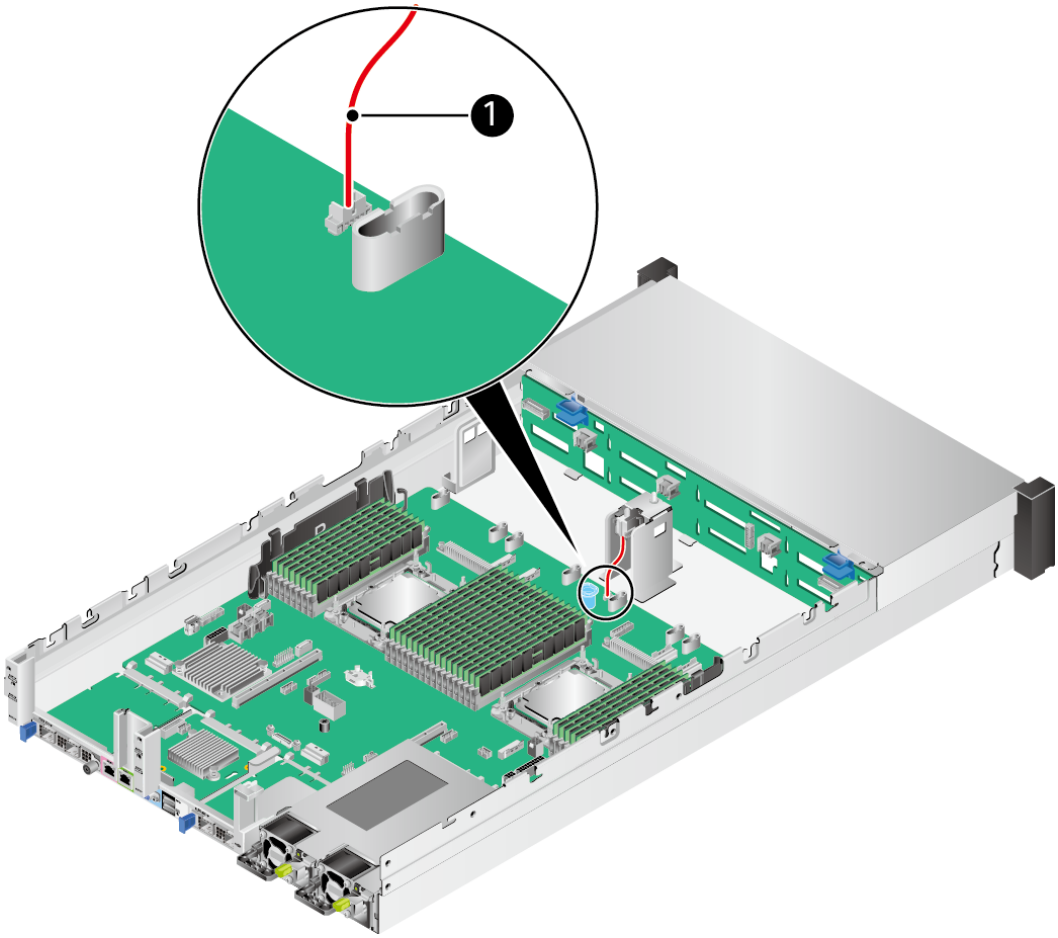

Table 6-102 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.3.1.4 Front-Drive Backplane Power and Low-speed Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-141 Front-drive backplane power and low-speed signal cables

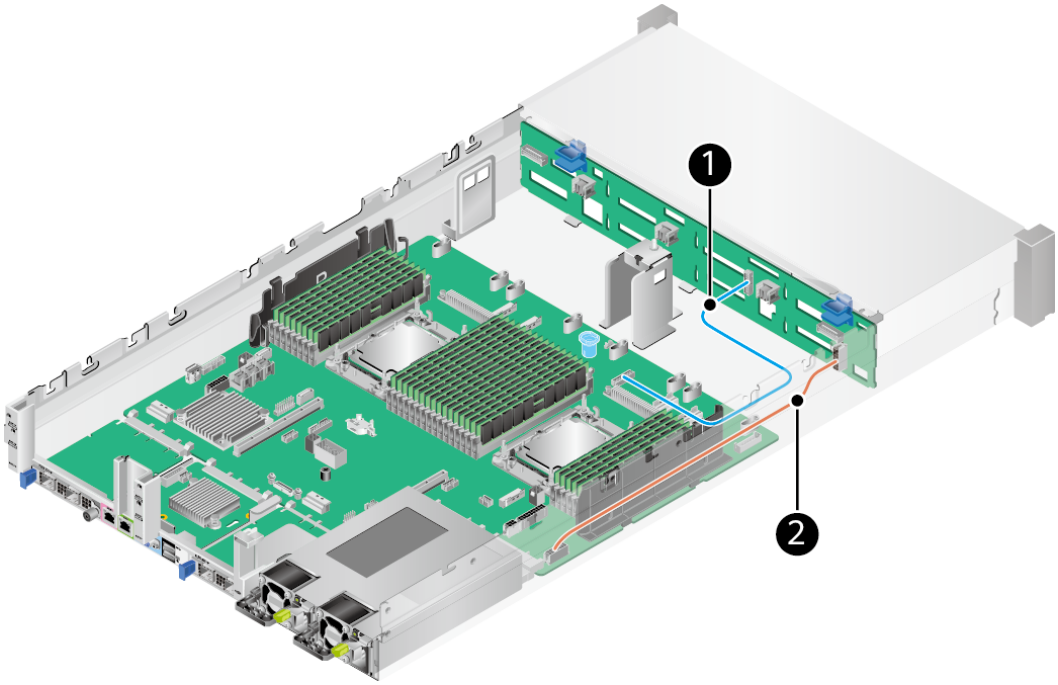

Table 6-103 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04051340	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

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6.4.3.1.5 Front-Drive Backplane SAS High-speed Cable (PCH Pass-through)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-142 Front-drive backplane SAS high-speed cabling

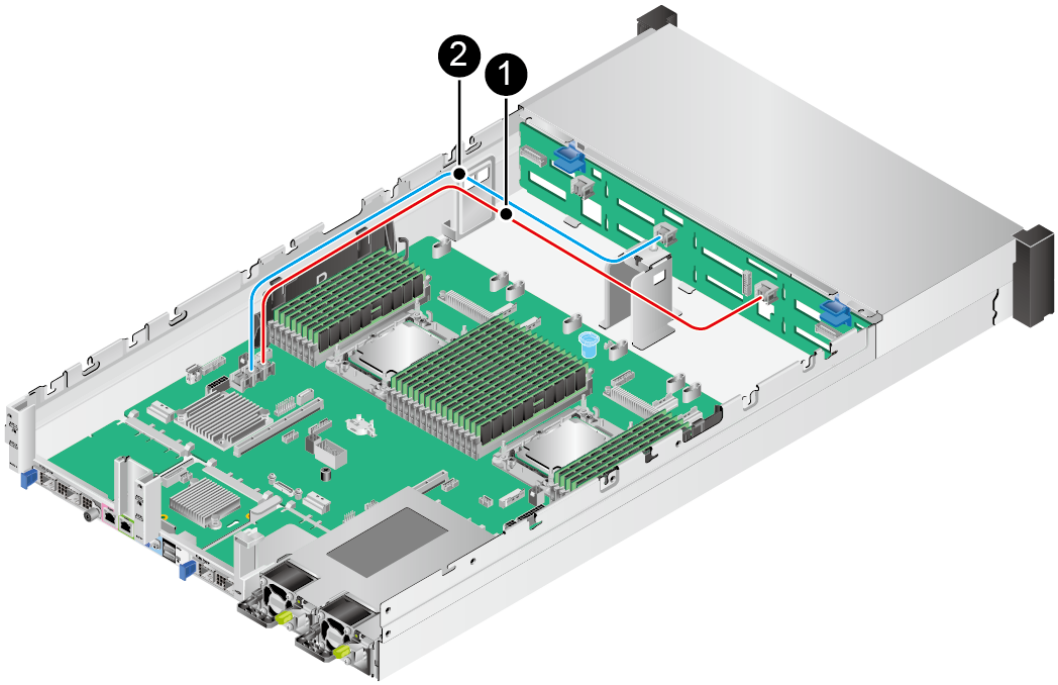

Table 6-104 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939	SAS high-speed cable for connecting the front-drive backplane (J3) to the mainboard (J6)
2	04051939	SAS high-speed cable for connecting the front-drive backplane (J4) to the mainboard (J5)

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6.4.3.1.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-143 I/O module 3 cabling

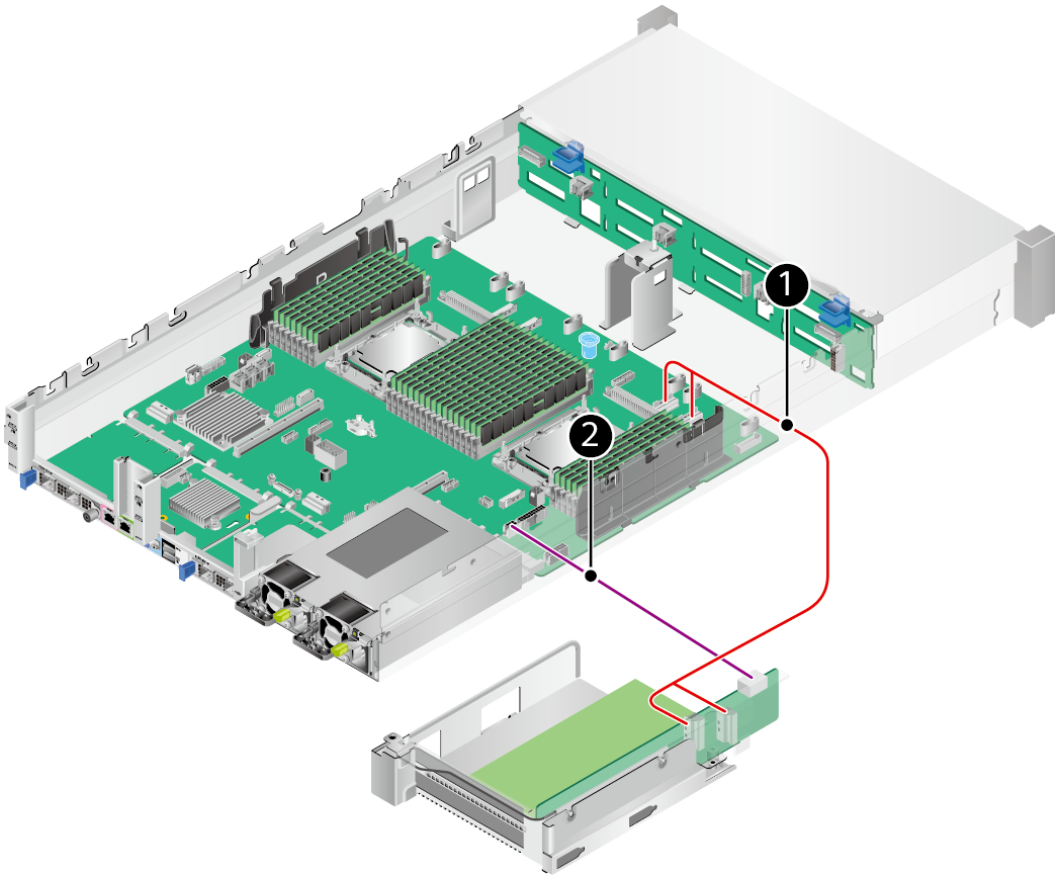

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Table 6-105 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.3.1.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-144 I/O module 3 cabling

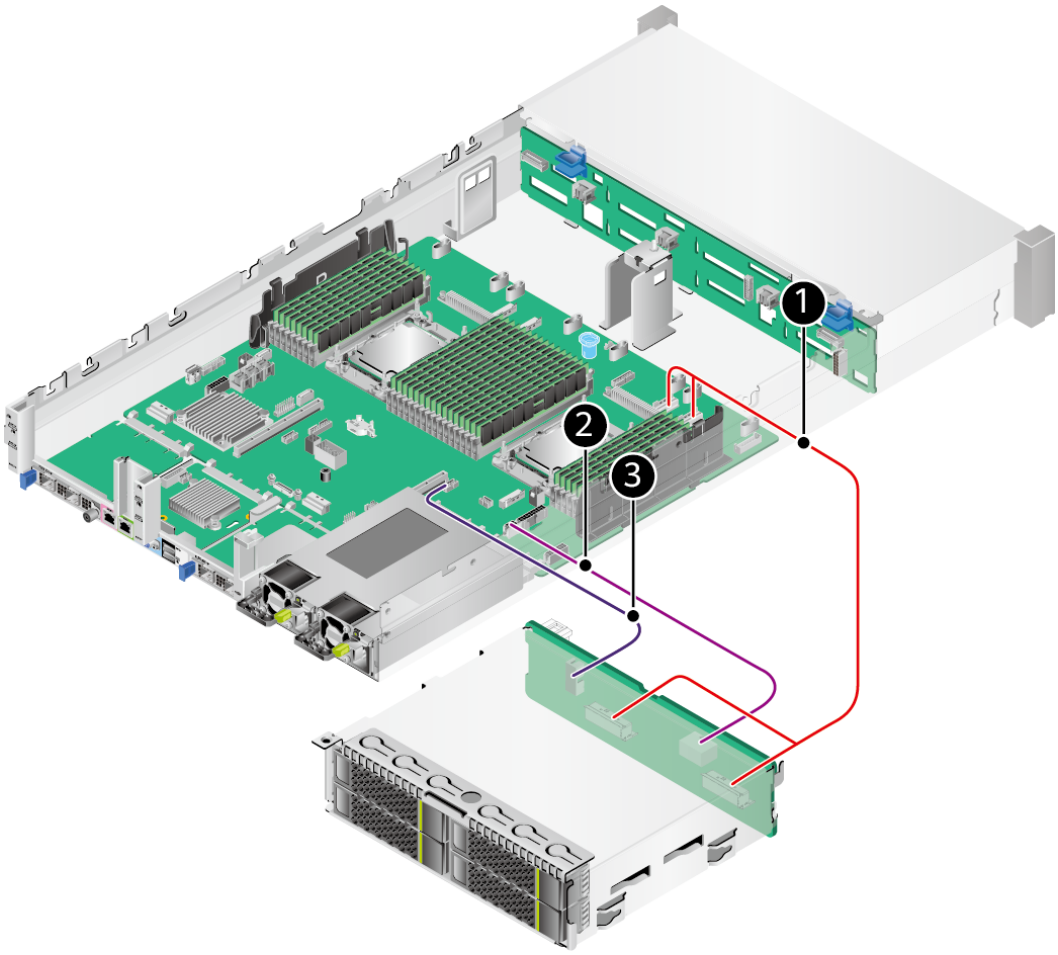

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Table 6-106 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.3.2 8 x 3.5" Drive Pass-through Configuration 2

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6.4.3.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-145 Left and right mounting ear cabling

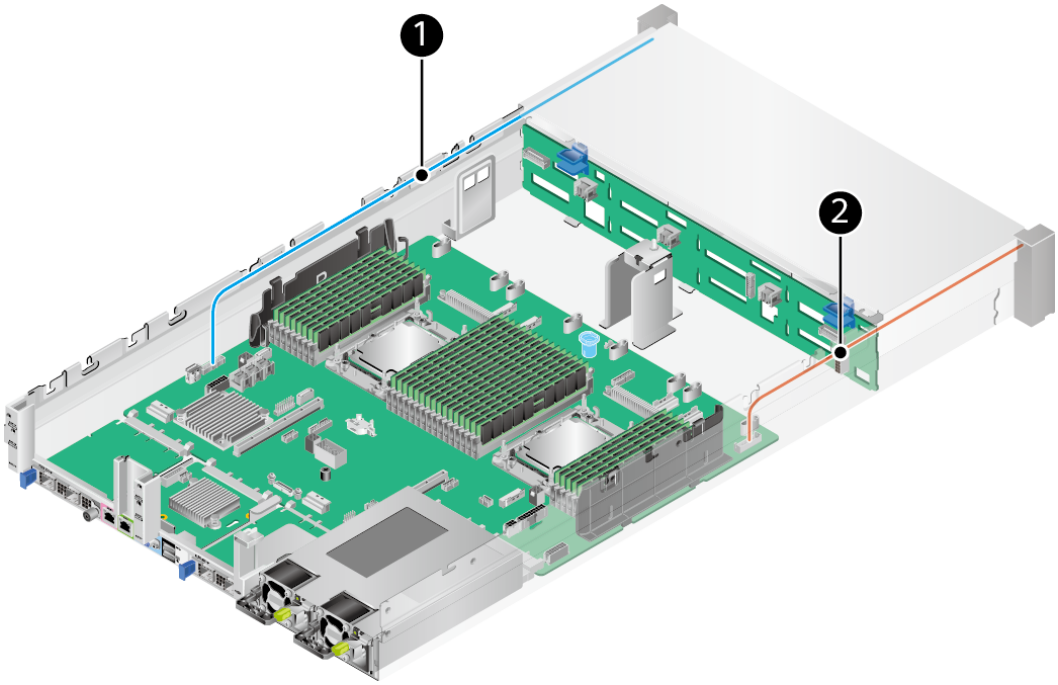

Table 6-107 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.3.2.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-146 OCP 3.0 expansion cable 1

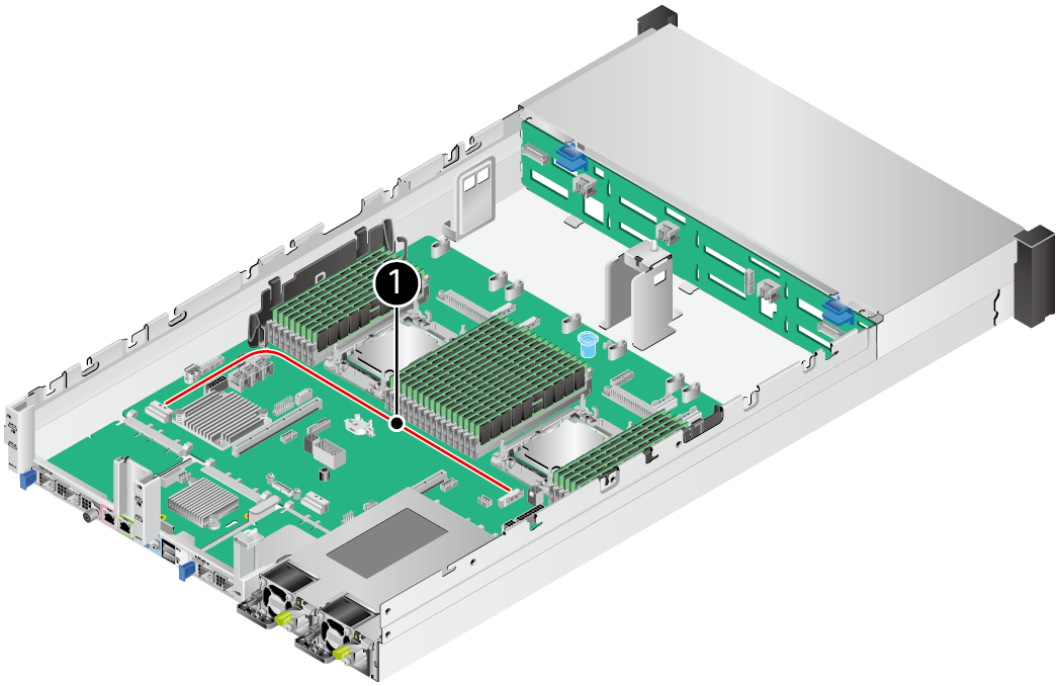

Table 6-108 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-147 OCP 3.0 expansion cable 2

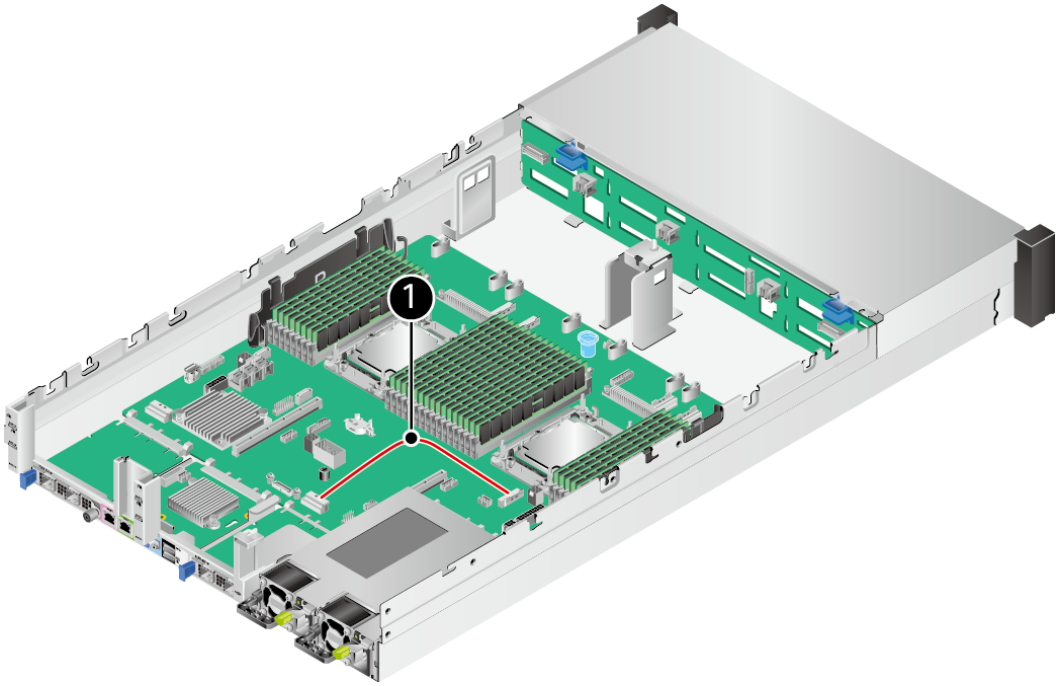

Table 6-109 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.3.2.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-148 Intrusion sensor cabling

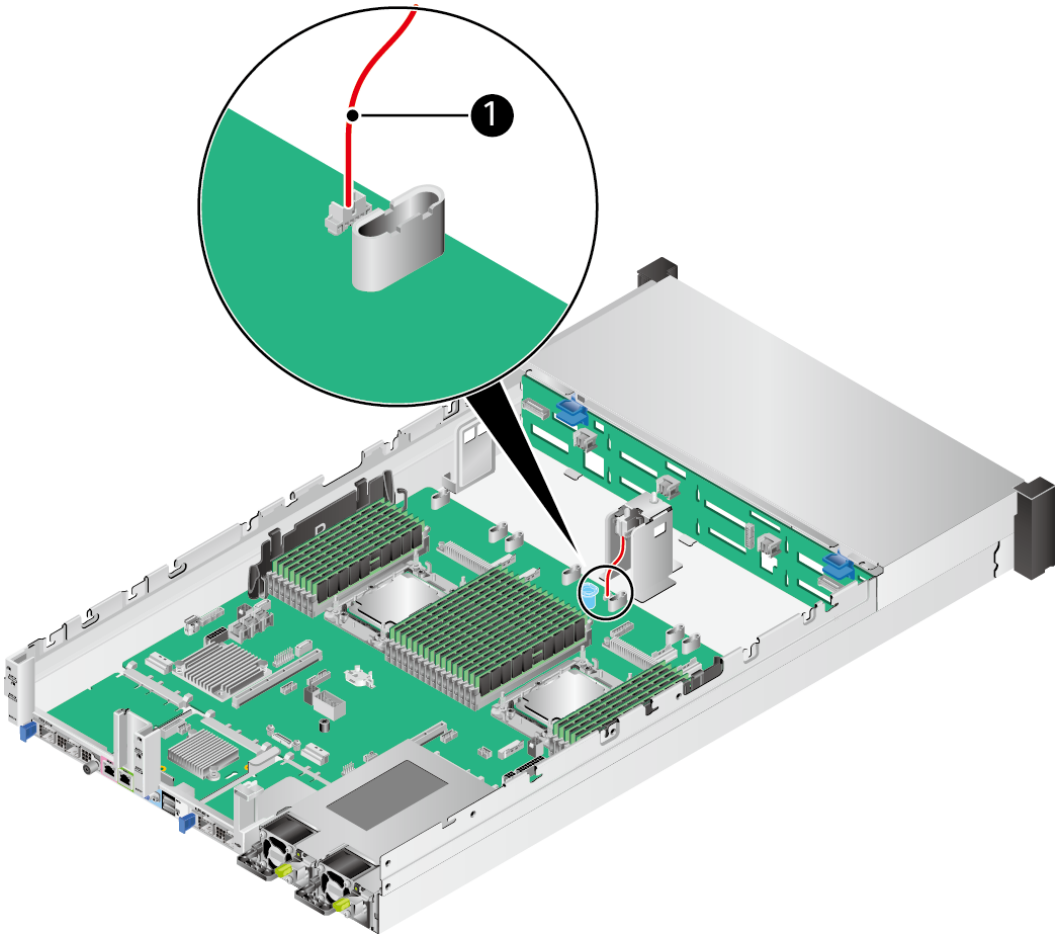

Table 6-110 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.3.2.4 Front-Drive Backplane Power and Low-speed Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-149 Front-drive backplane power and low-speed signal cables

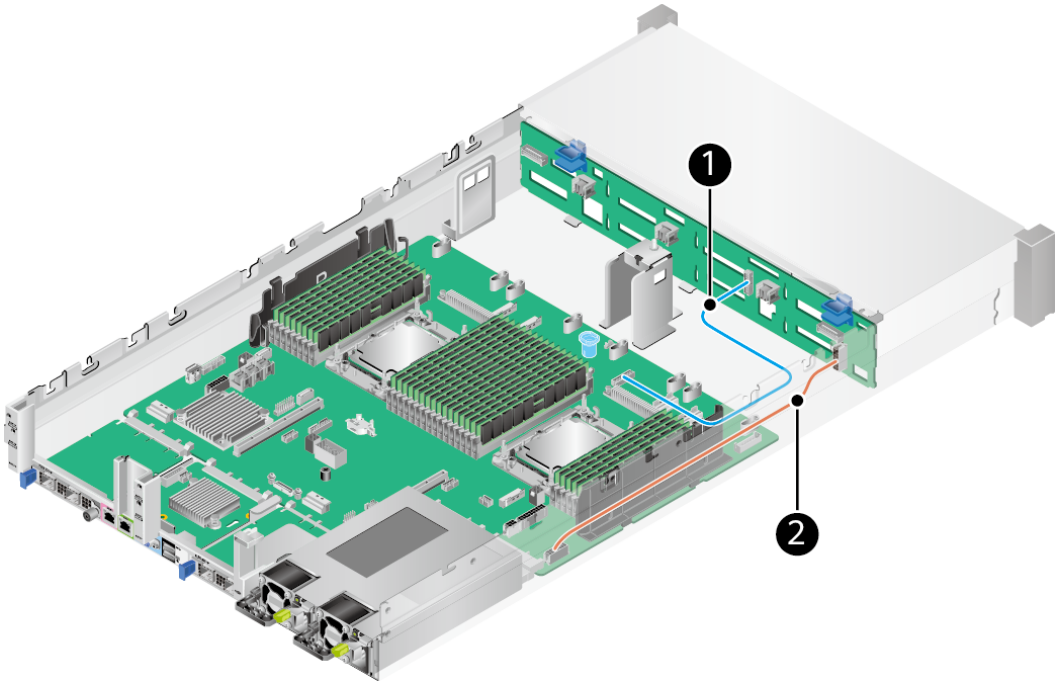

Table 6-111 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04051340	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

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6.4.3.2.5 Front-Drive Backplane SAS High-speed Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-150 Front-drive backplane SAS high-speed cabling

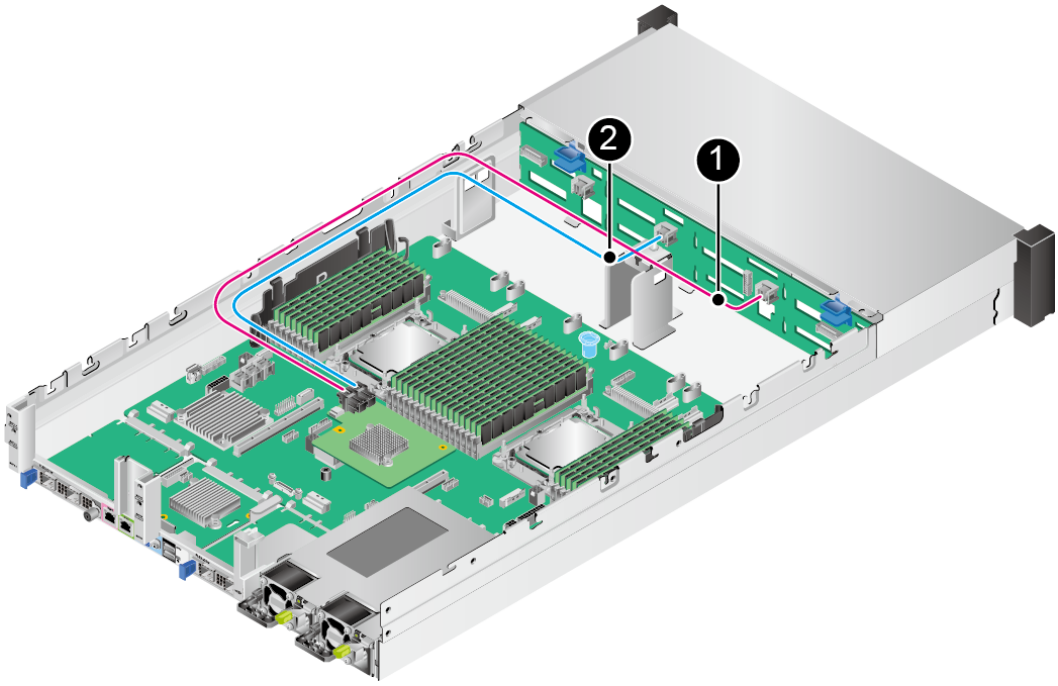

Table 6-112 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the screw-in RAID controller card

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6.4.3.2.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-151 I/O module 3 cabling

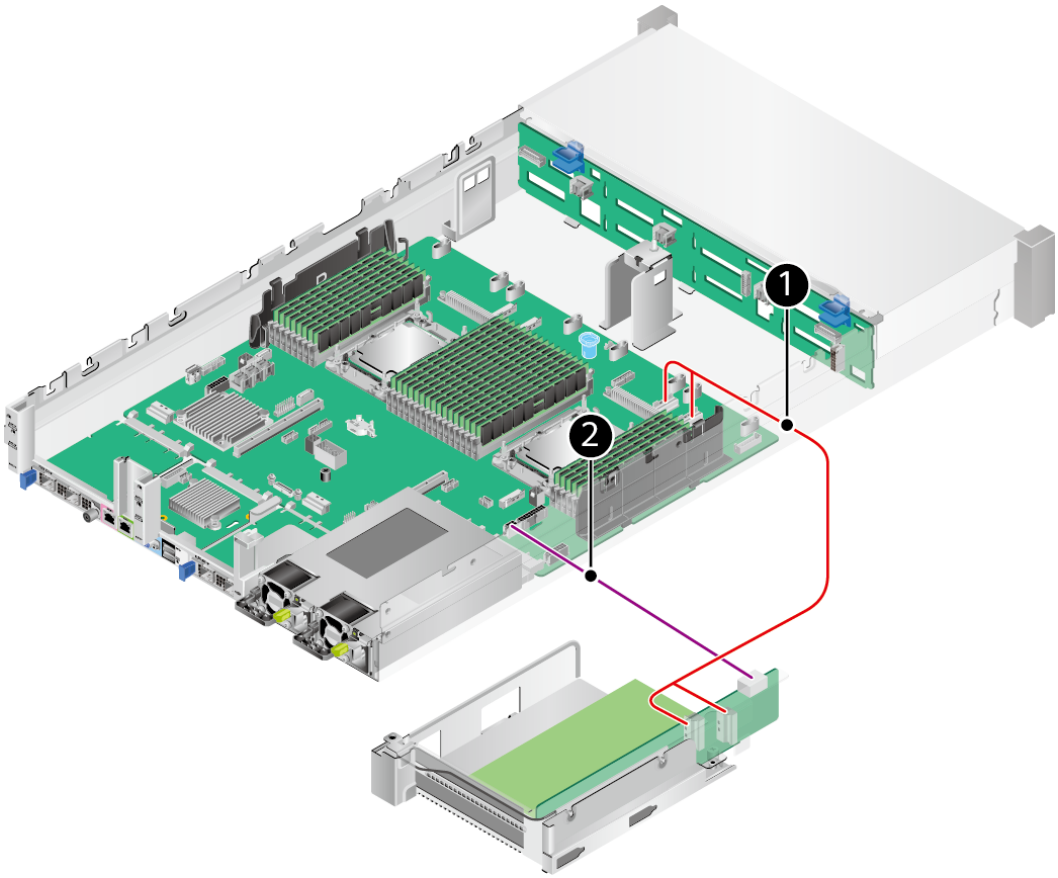

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Table 6-113 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.3.2.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-152 I/O module 3 cabling

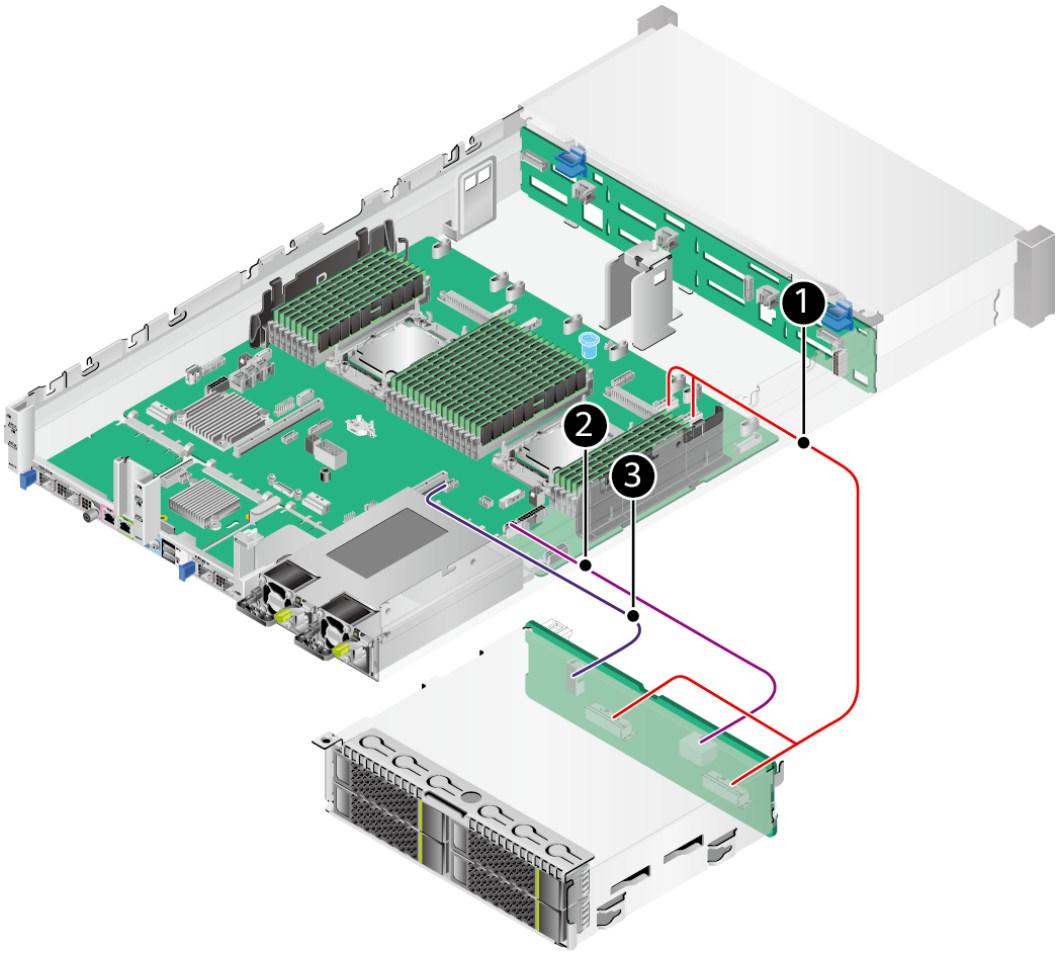

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Table 6-114 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.3.3 8 x 3.5" Drive Pass-through Configuration 3

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6.4.3.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-153 Left and right mounting ear cabling

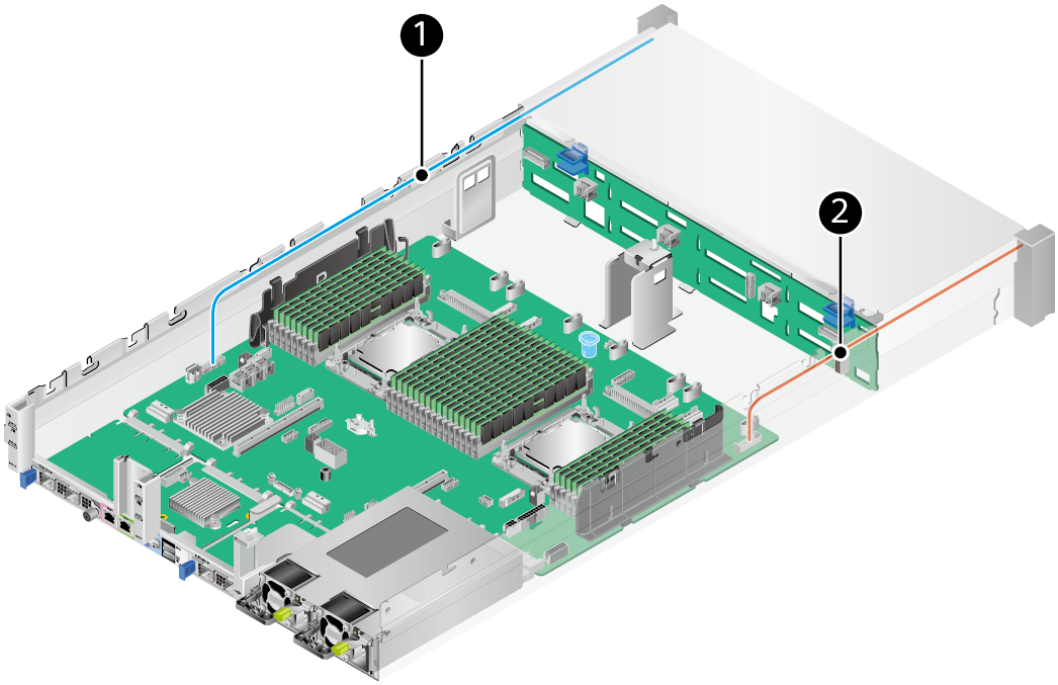

Table 6-115 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.3.3.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-154 OCP 3.0 expansion cable 1

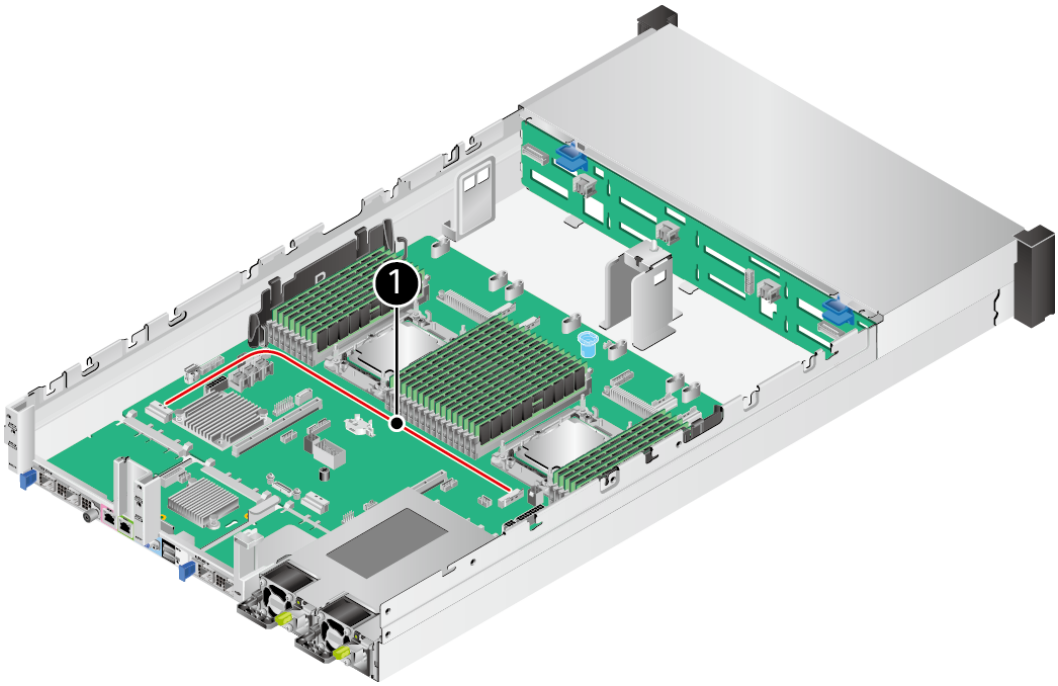

Table 6-116 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-155 OCP 3.0 expansion cable 2

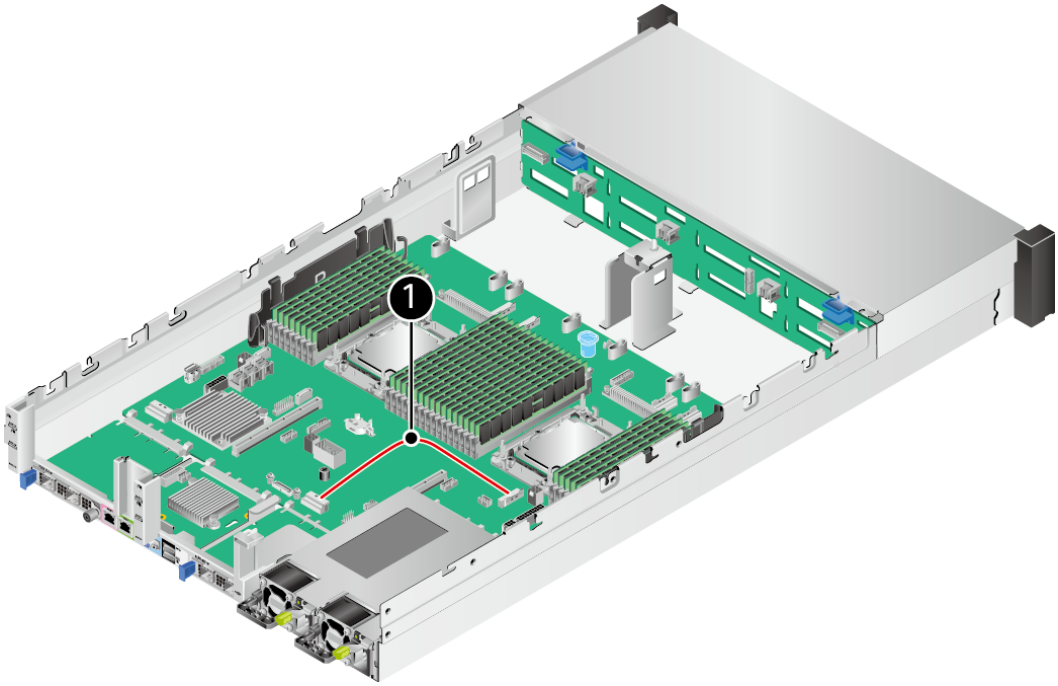

Table 6-117 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.3.3.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-156 Intrusion sensor cabling

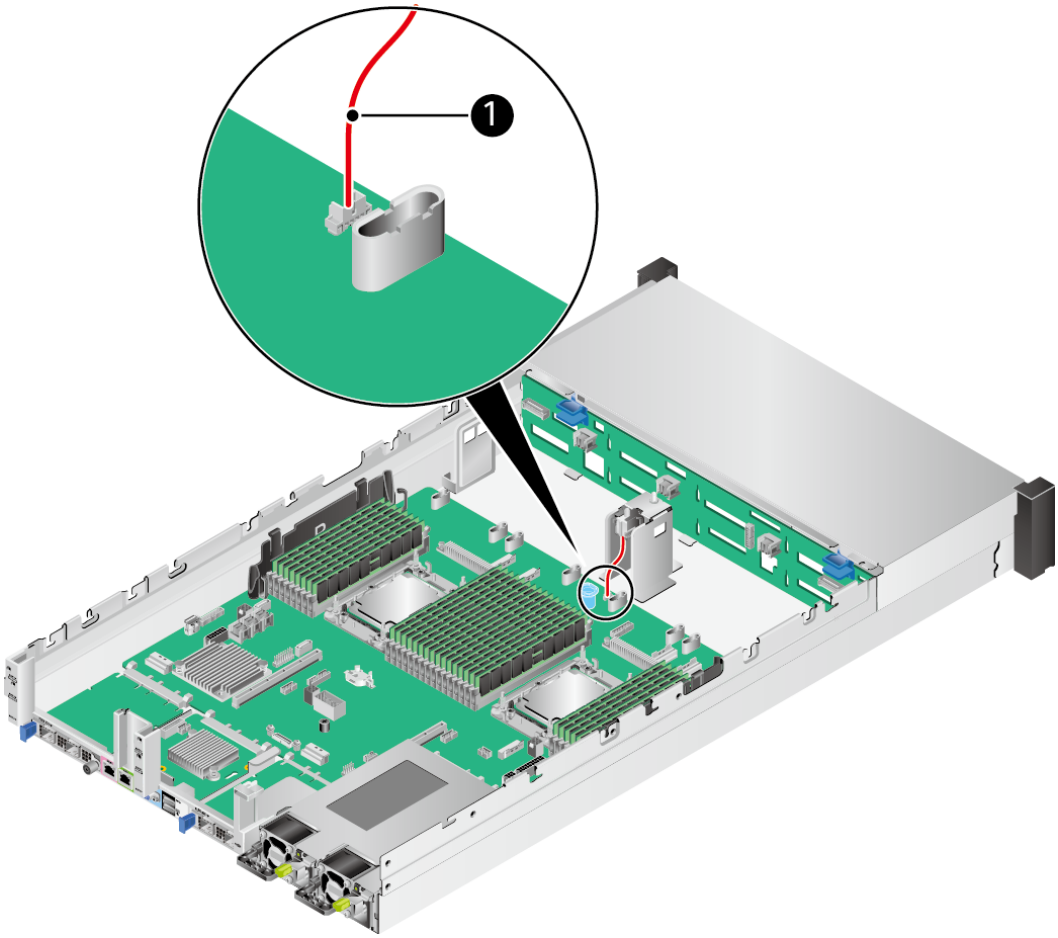

Table 6-118 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.3.3.4 Front-Drive Backplane Power and Low-speed Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-157 Front-drive backplane power and low-speed signal cables

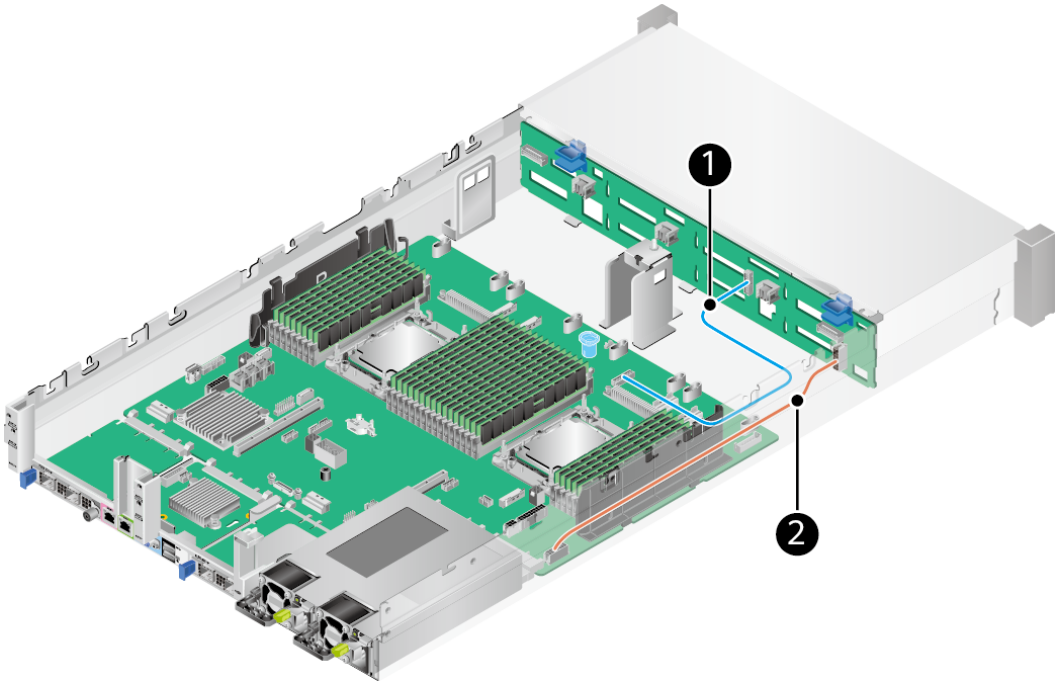

Table 6-119 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04051340	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

6.4.3.3.5 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-158 Front-drive backplane SAS high-speed cabling

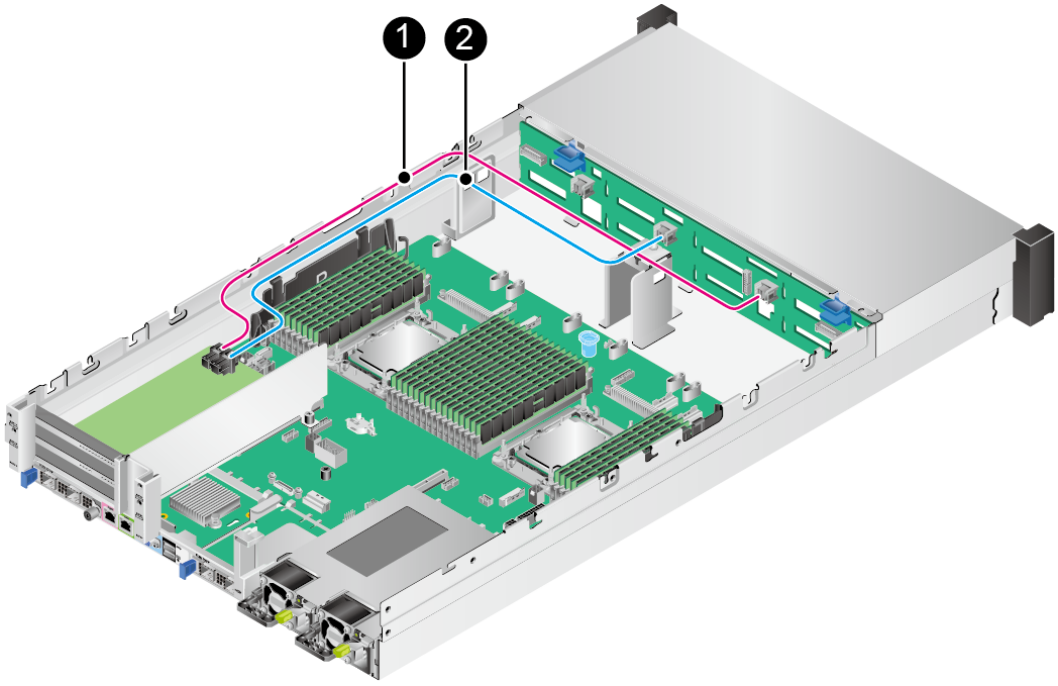

Table 6-120 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J3) may be C0, PORT A, 0, or CN0. The port number of the PCIe RAID controller card connected to front-drive backplane (J4) may be C1, PORT B, 1, or CN1, and the port number of the PCIe RAID controller card connected to front-drive backplane (J5) may be C2, PORT C, 2, or CN2.

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6.4.3.3.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-159 I/O module 3 cabling

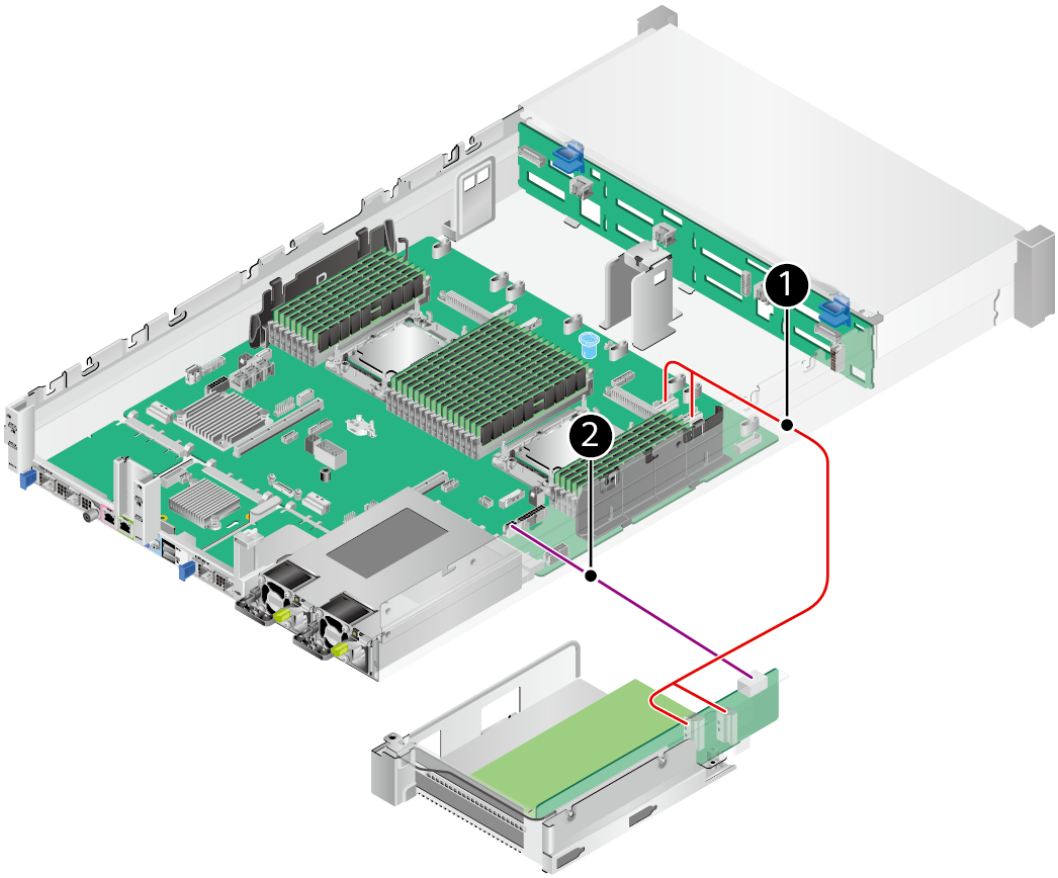

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Table 6-121 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.3.3.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-160 I/O module 3 cabling

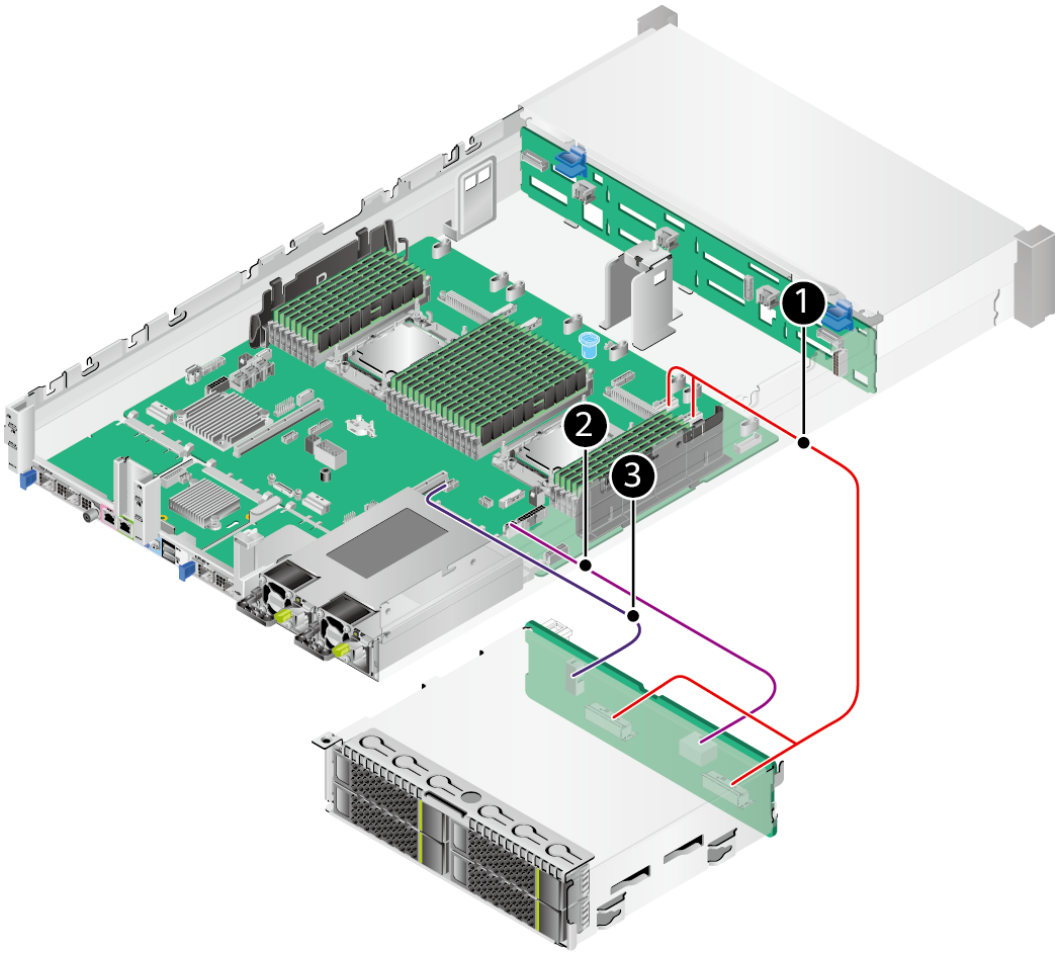

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Table 6-122 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.4 12 x 2.5" Drive Pass-through Configuration

6.4.4.1 12 x 2.5" Drive Pass-through Configuration 1 (4 x SATA + 8 x NVMe)

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6.4.4.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-161 Left and right mounting ear cabling

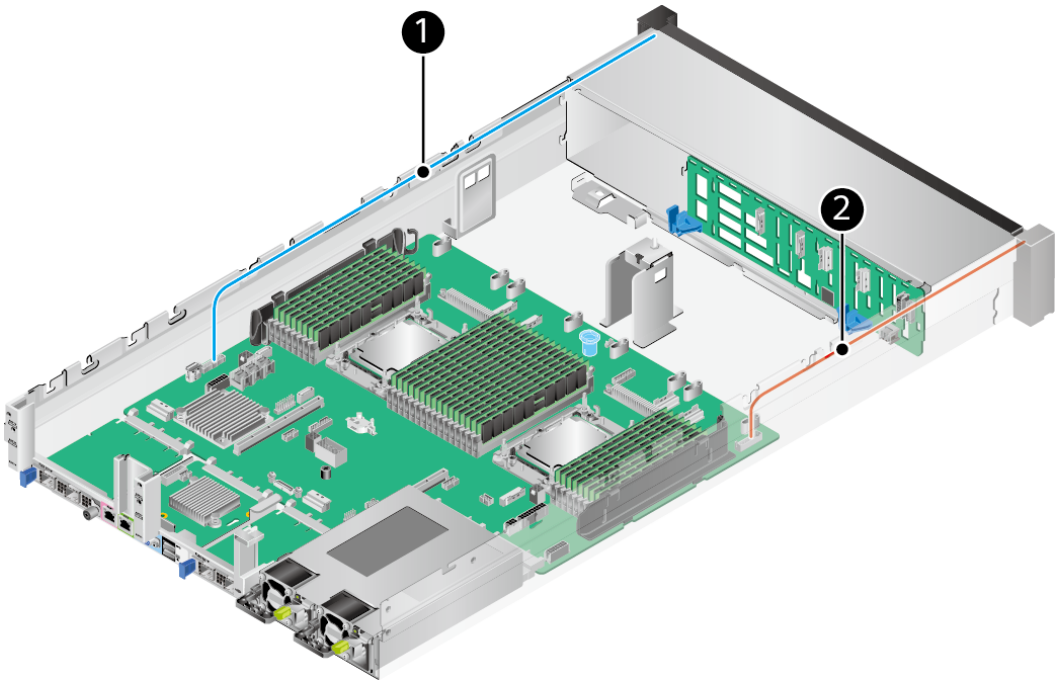

Table 6-123 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.4.1.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-162 OCP 3.0 expansion cable 1

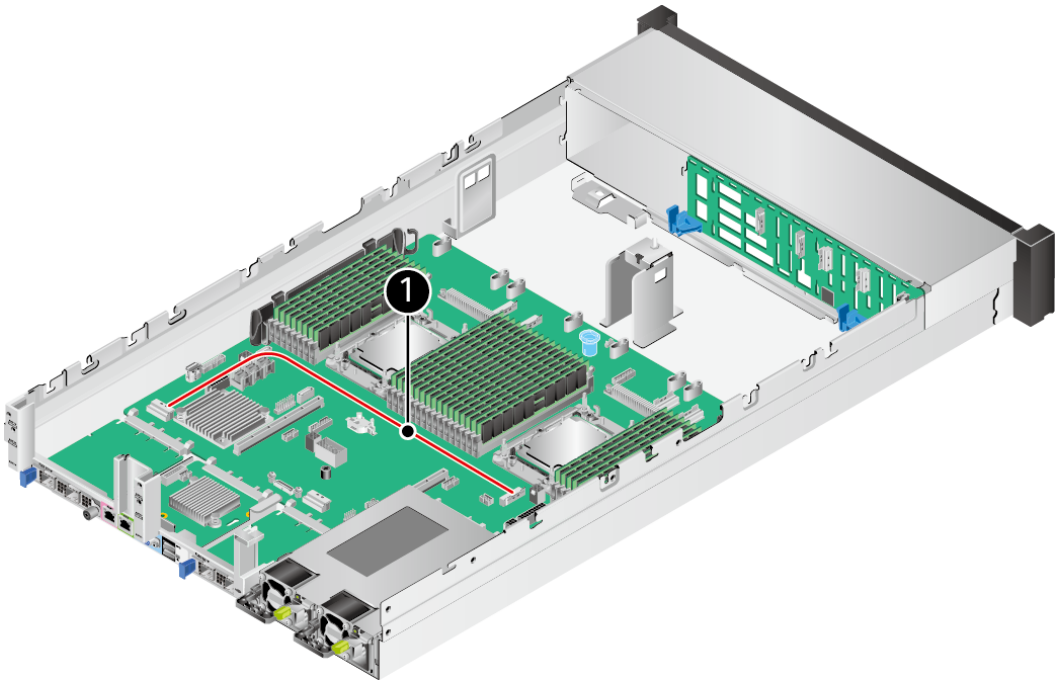

Table 6-124 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-163 OCP 3.0 expansion cable 2

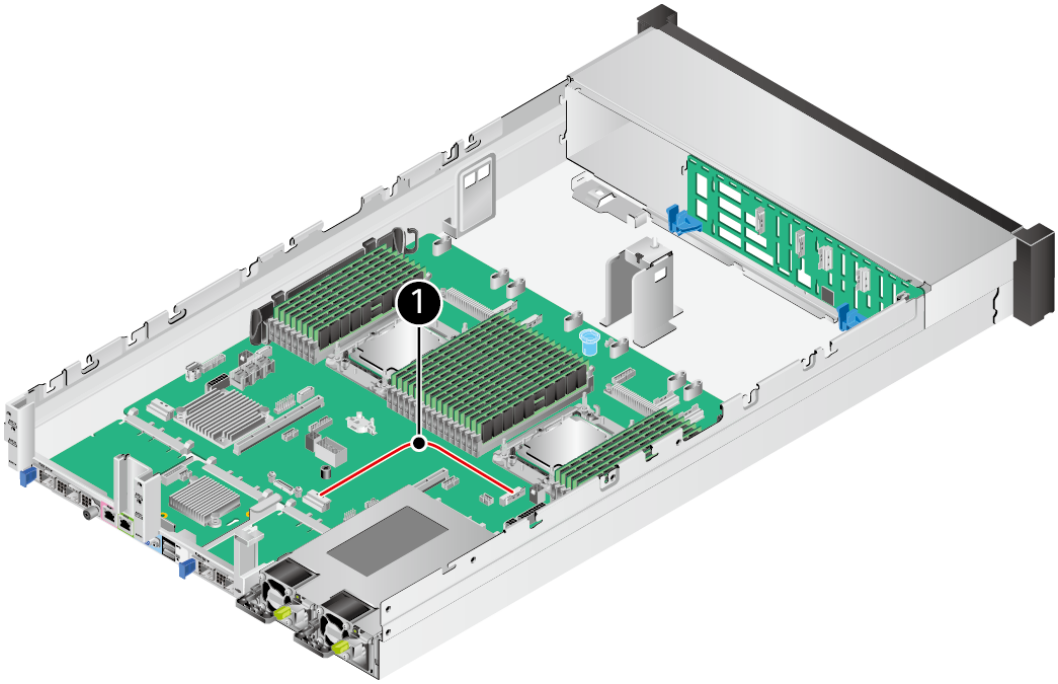

Table 6-125 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.4.1.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-164 Intrusion sensor cabling

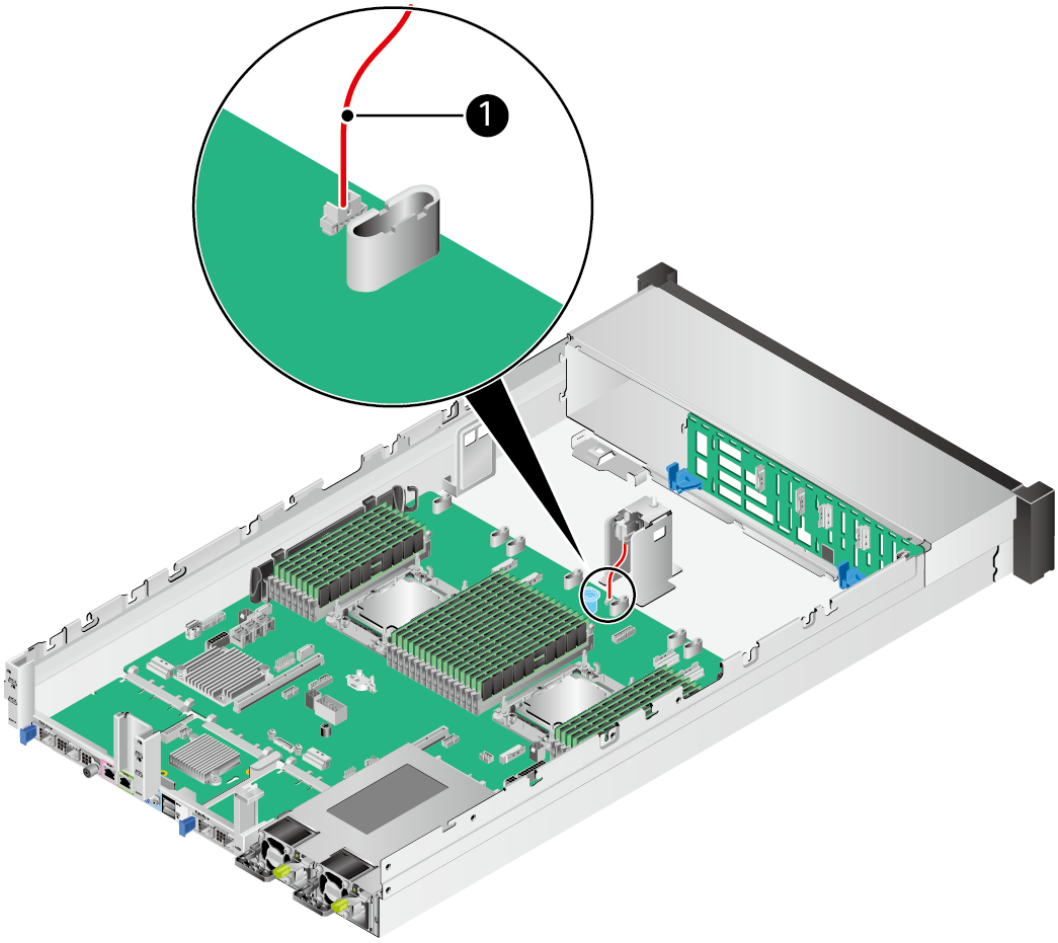

Table 6-126 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.4.1.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-165 Front-drive backplane power and low-speed signal cables

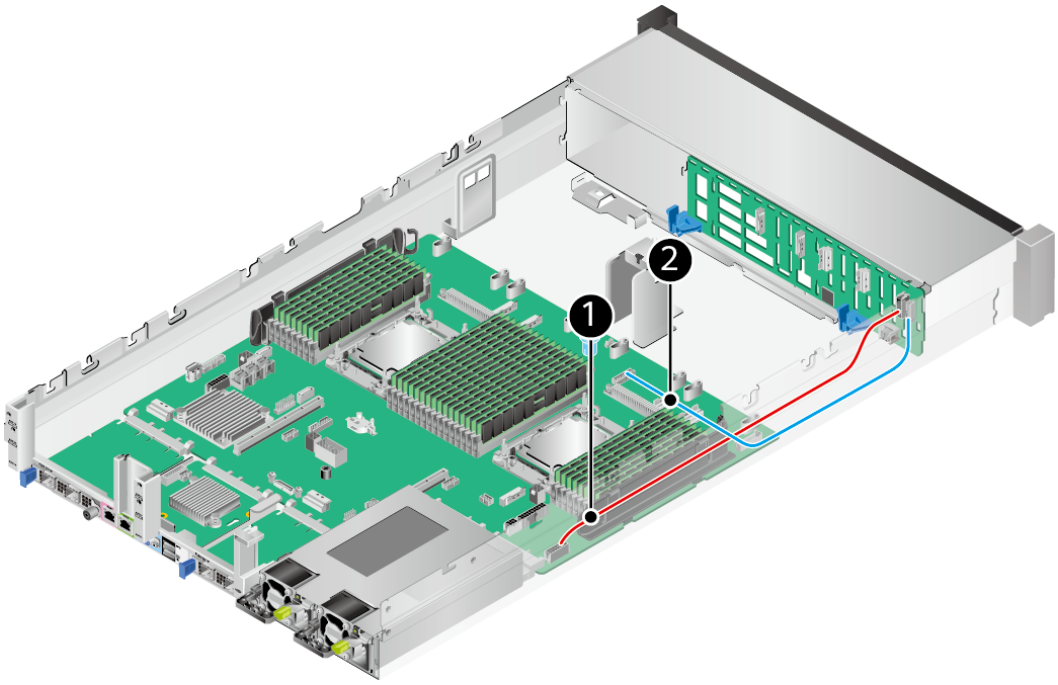

Table 6-127 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152145-009	Power cable for connecting the front-drive backplane (J4003) to the mainboard (J26)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3702) to the mainboard (J75)

6.4.4.1.5 Front-Drive Backplane SAS Cable (PCH Pass-through)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-166 Front-drive backplane SAS high-speed cabling

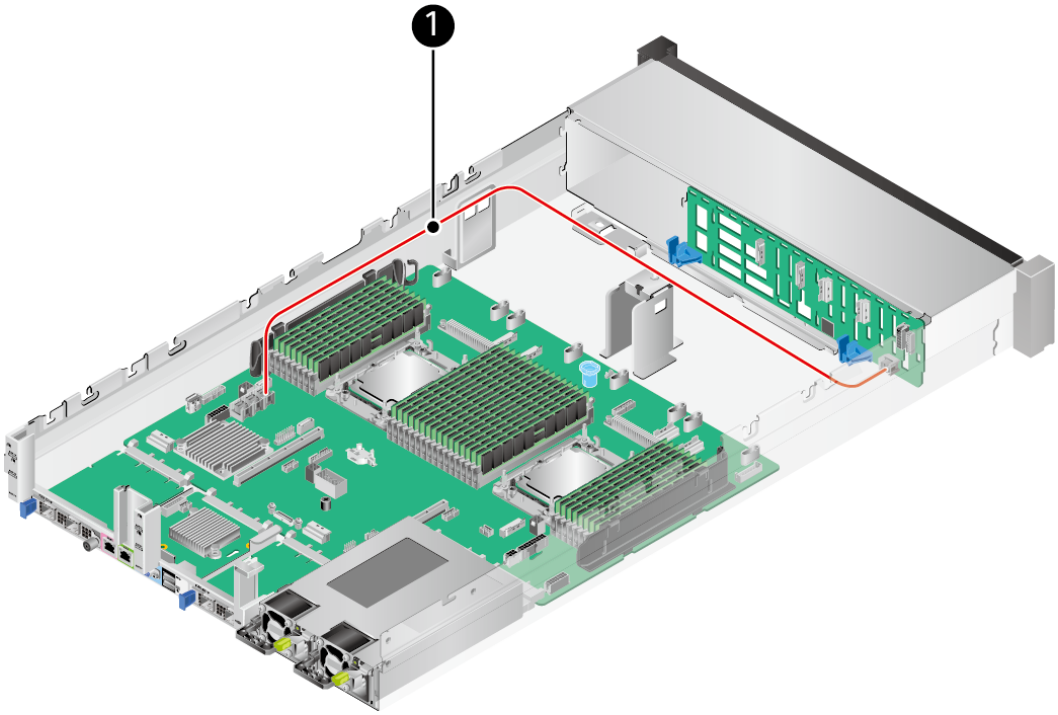

Table 6-128 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J801) to the mainboard (J6)

6.4.4.1.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cables

Figure 6-167 Front-drive backplane LP slimline high-speed cables

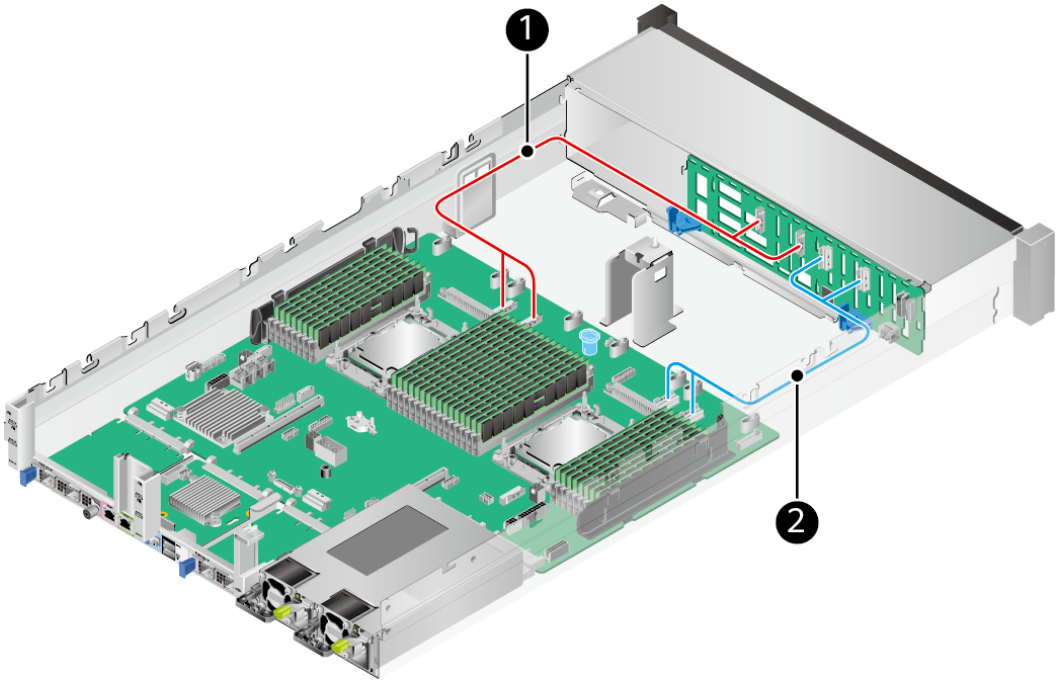

Table 6-129 Front-drive backplane LP slimline high-speed cables

No.	P/N Code	Description
1	04052316-003	High-speed cable for connecting LP Slimline 1 (J901) and LP Slimline 2 (J1001) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-003 cable corresponds to the front-drive backplane LP Slimline 1 (J901), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1001); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).
2	04052316-002	High-speed cable for connecting LP Slimline 3 (J1101) and LP Slimline 4 (J1201) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316-002 cable corresponds to the front-drive backplane LP Slimline 3 (J1101), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1201); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12) .

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6.4.4.2 12 x 2.5" Drive Pass-through Configuration 2 (4 x SAS/SATA + 8 x NVMe)

6.4.4.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-168 Left and right mounting ear cabling

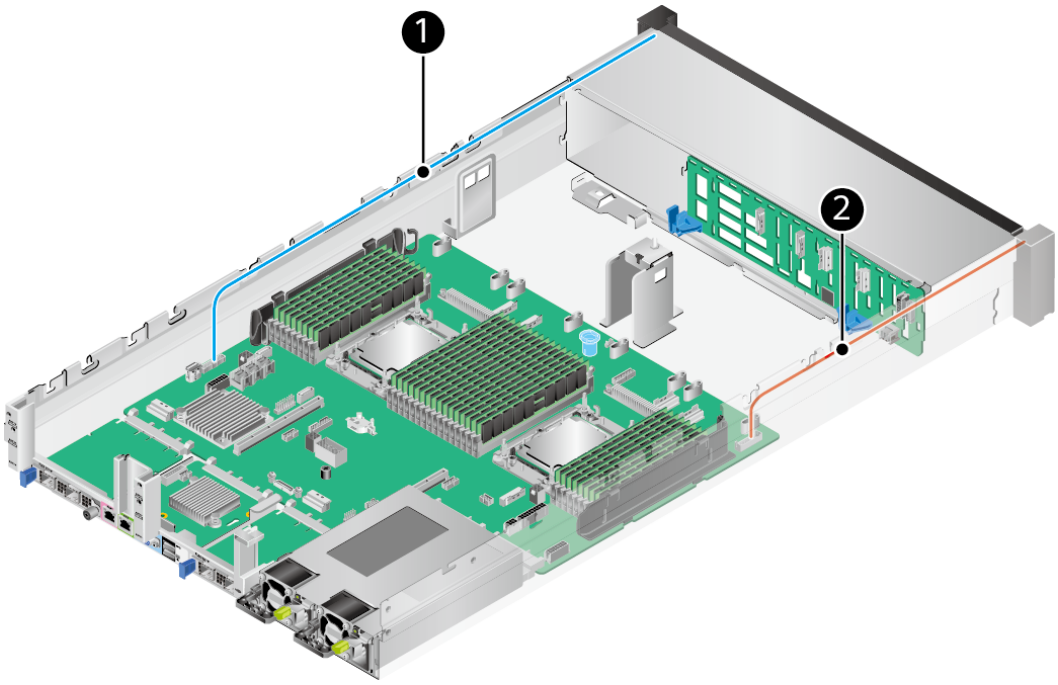

Table 6-130 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.4.2.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-169 OCP 3.0 expansion cable 1

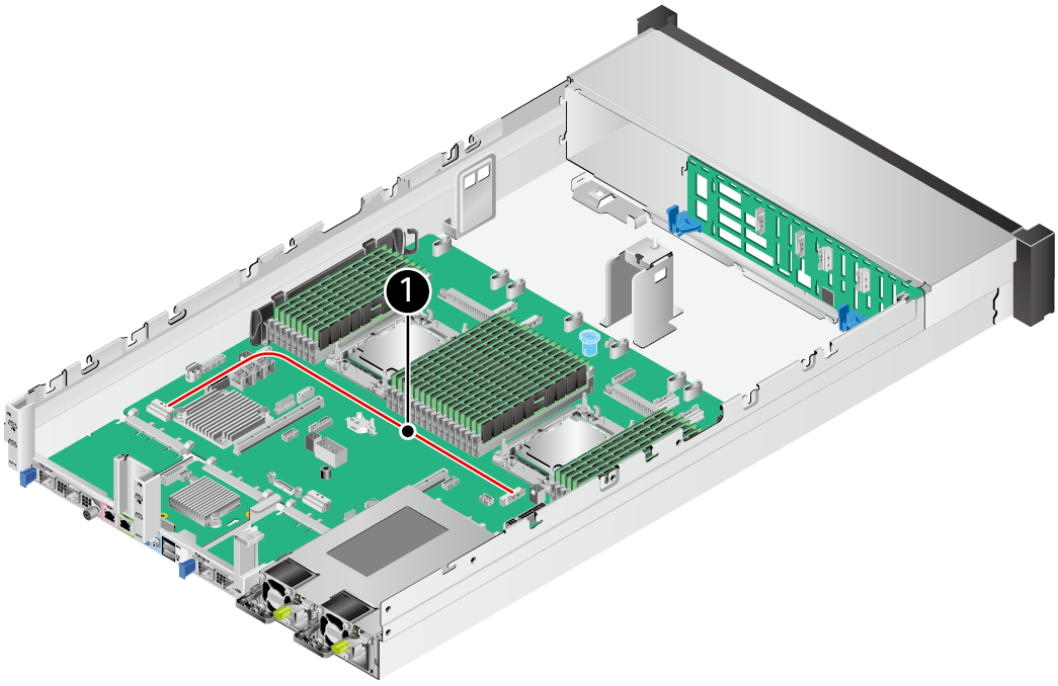

Table 6-131 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-170 OCP 3.0 expansion cable 2

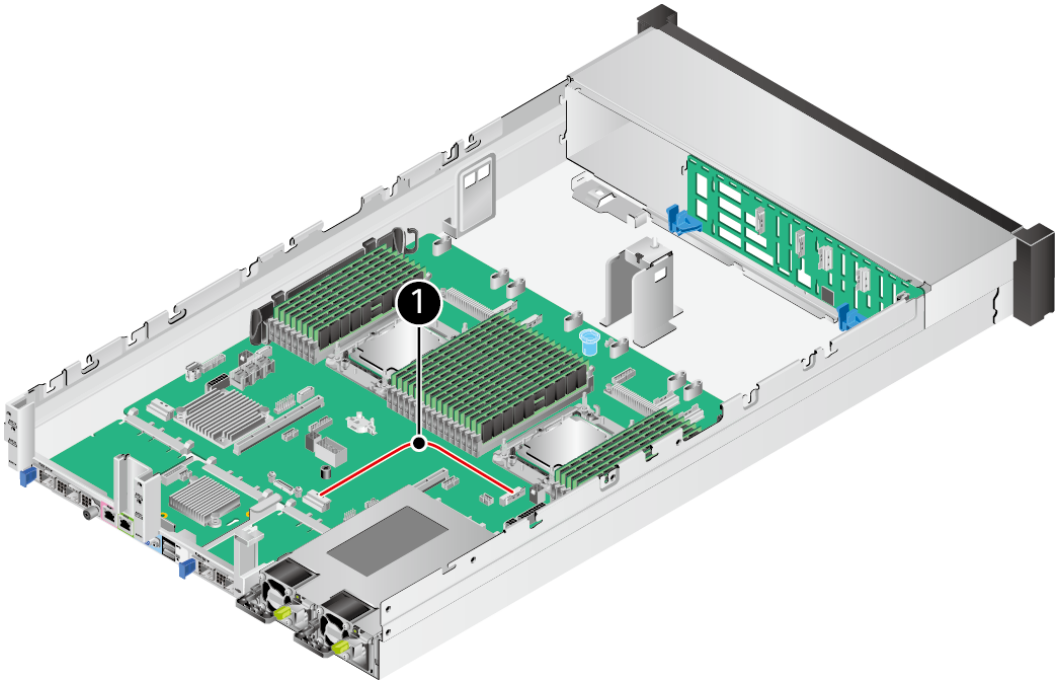

Table 6-132 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.4.2.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-171 Intrusion sensor cabling

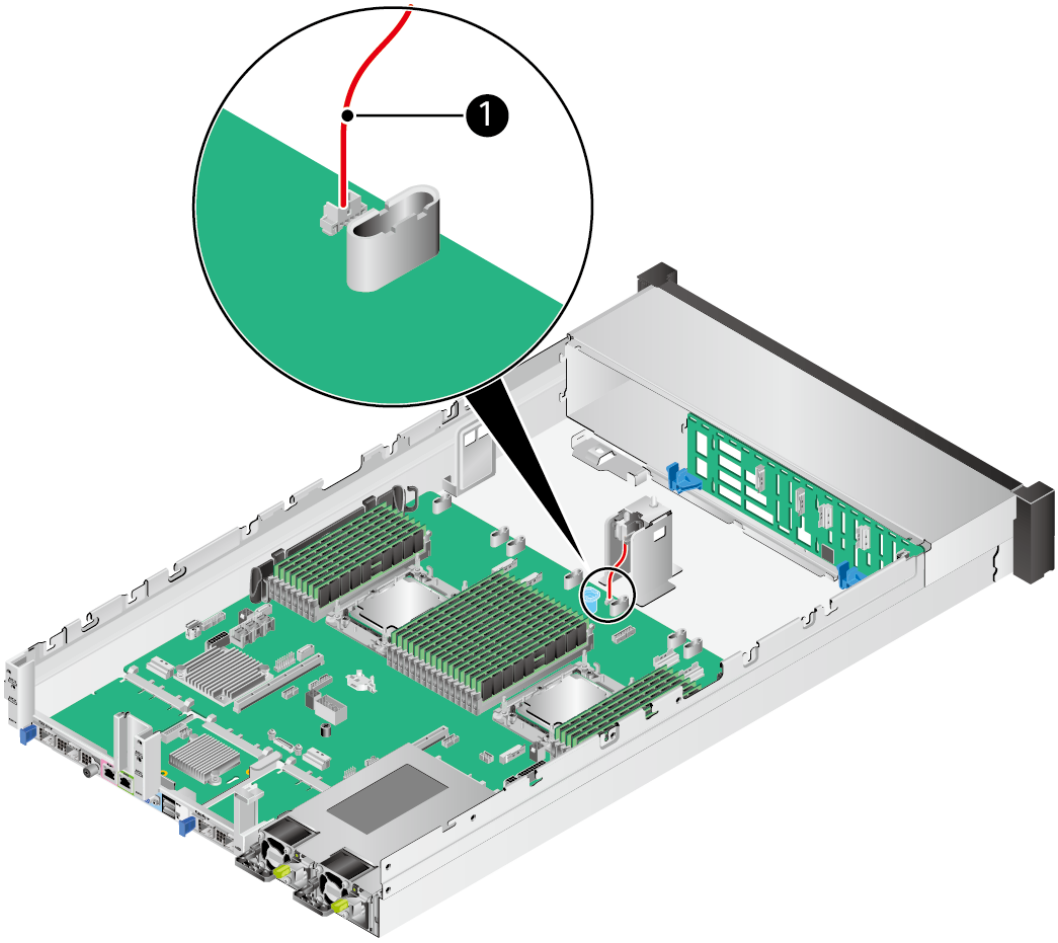

Table 6-133 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.4.2.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-172 Front-drive backplane power and low-speed signal cables

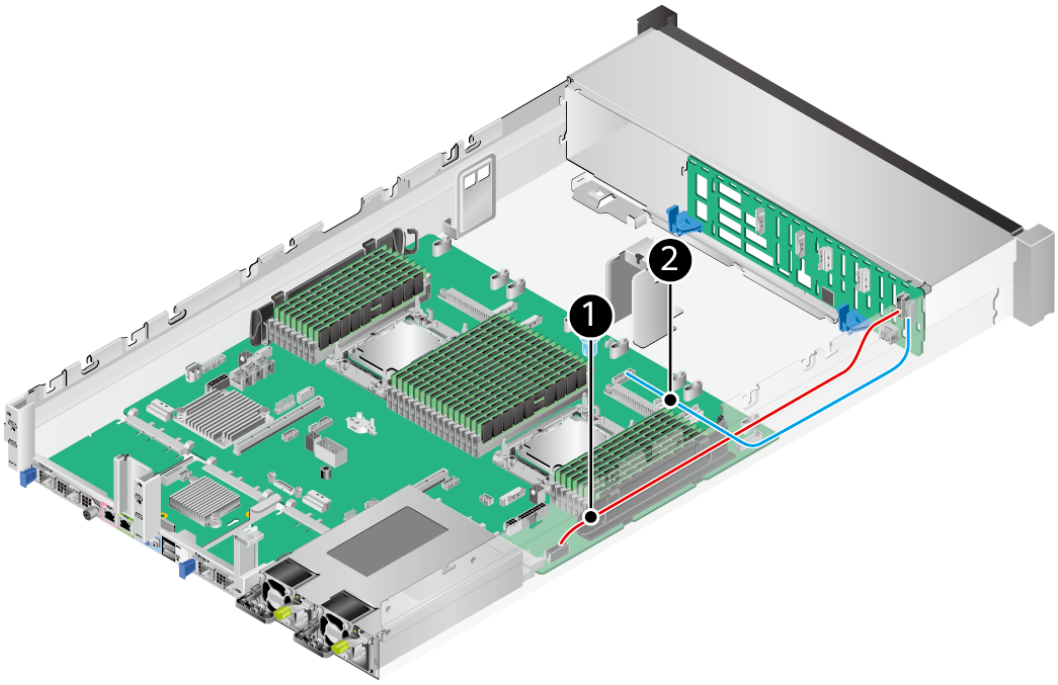

Table 6-134 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152145-009	Power cable for connecting the front-drive backplane (J4003) to the mainboard (J26)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3702) to the mainboard (J75)

6.4.4.2.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-173 Front-drive backplane SAS high-speed cabling

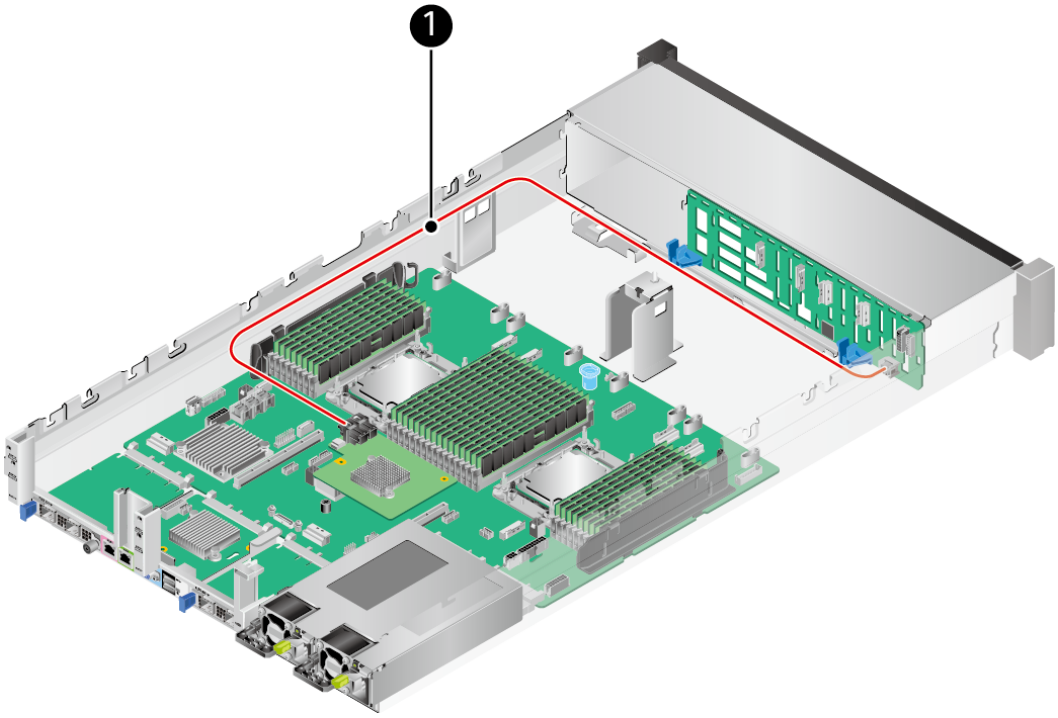

Table 6-135 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J801) to PORT A of the screw-in RAID controller card

6.4.4.2.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cables

Figure 6-174 Front-drive backplane LP slimline high-speed cables

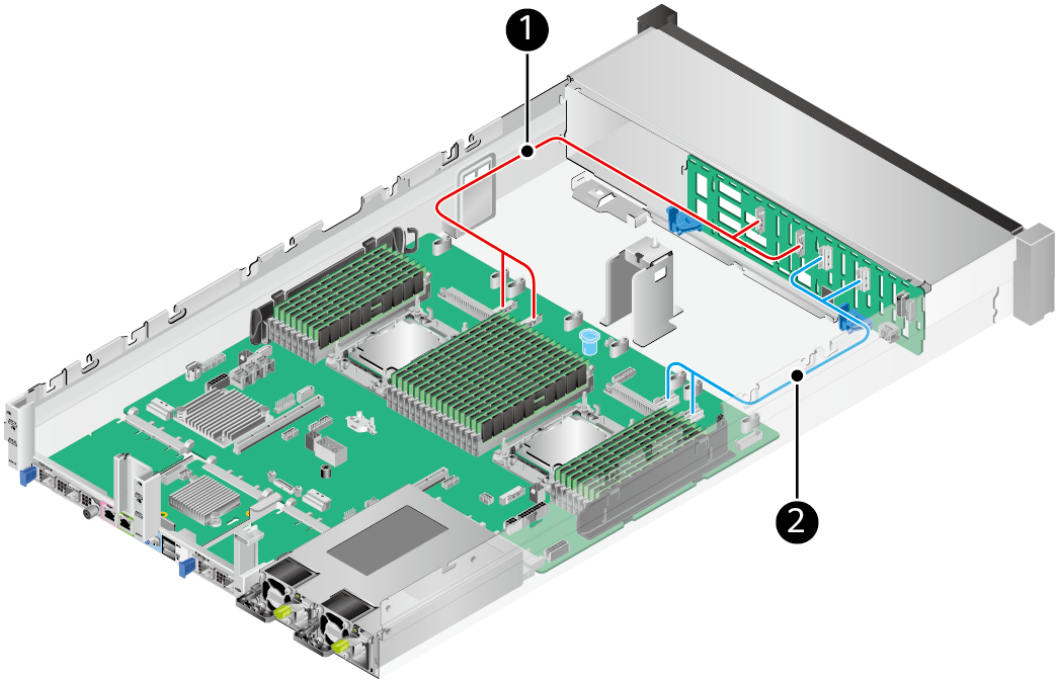

Table 6-136 Front-drive backplane LP slimline high-speed cables

No.	P/N Code	Description
1	04052316-003	High-speed cable for connecting LP Slimline 1 (J901) and LP Slimline 2 (J1001) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-003 cable corresponds to the front-drive backplane LP Slimline 1 (J901), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1001); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).
2	04052316-002	High-speed cable for connecting LP Slimline 3 (J1101) and LP Slimline 4 (J1201) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316-002 cable corresponds to the front-drive backplane LP Slimline 3 (J1101), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1201); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12) .

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6.4.4.3 12 x 2.5" Drive Pass-through Configuration 3 (4 x SAS/SATA + 8 x NVMe)

6.4.4.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-175 Left and right mounting ear cabling

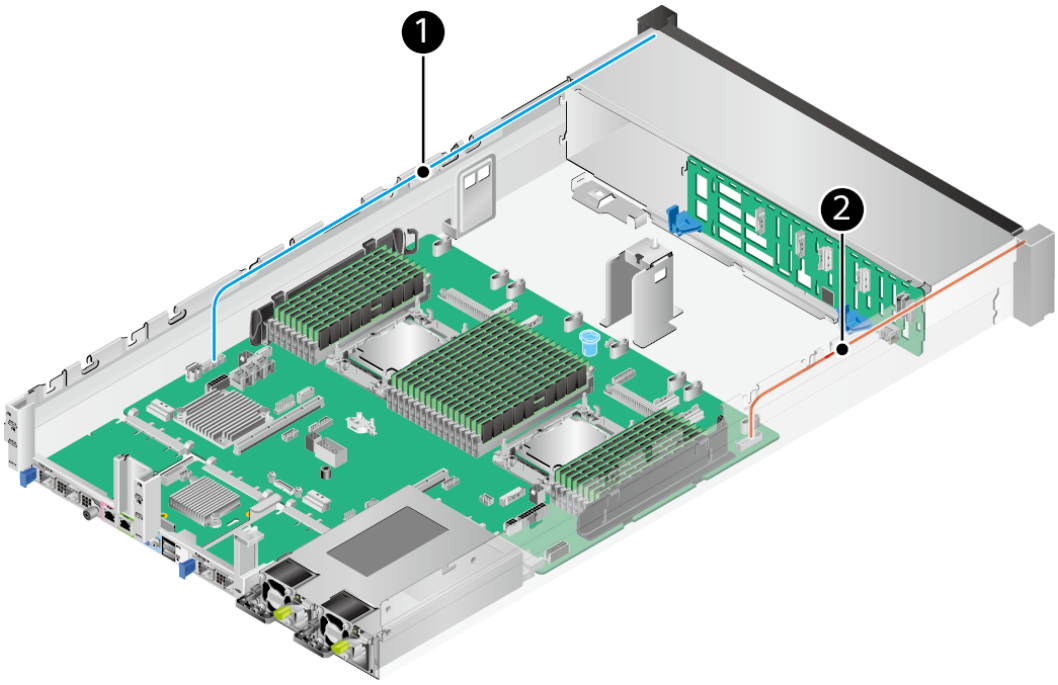

Table 6-137 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.4.3.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-176 OCP 3.0 expansion cable 1

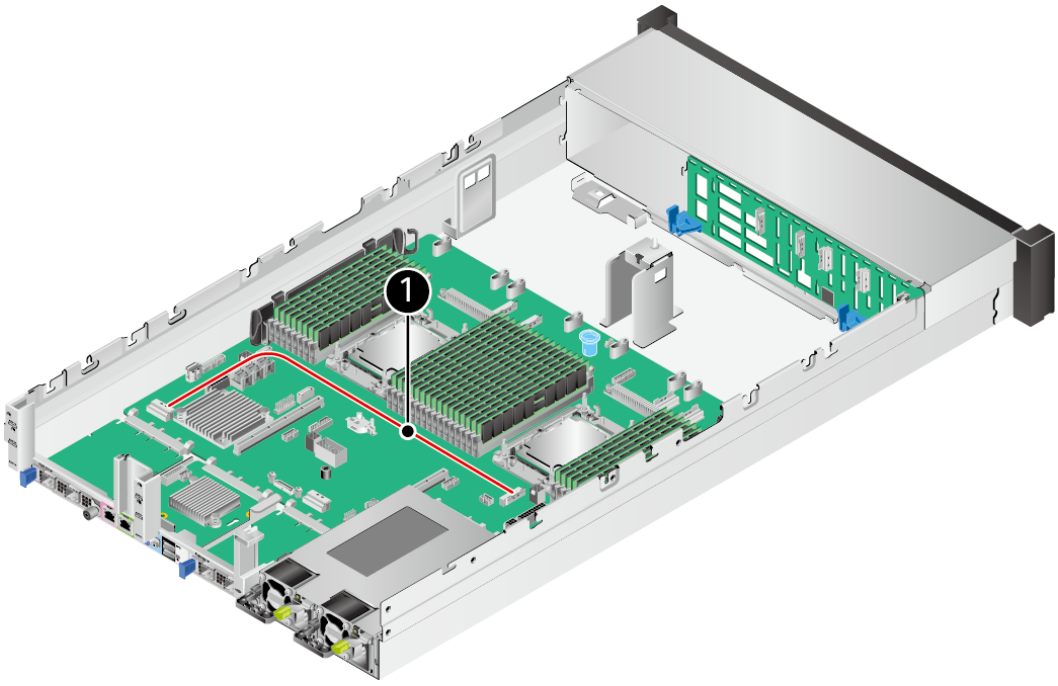

Table 6-138 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-177 OCP 3.0 expansion cable 2

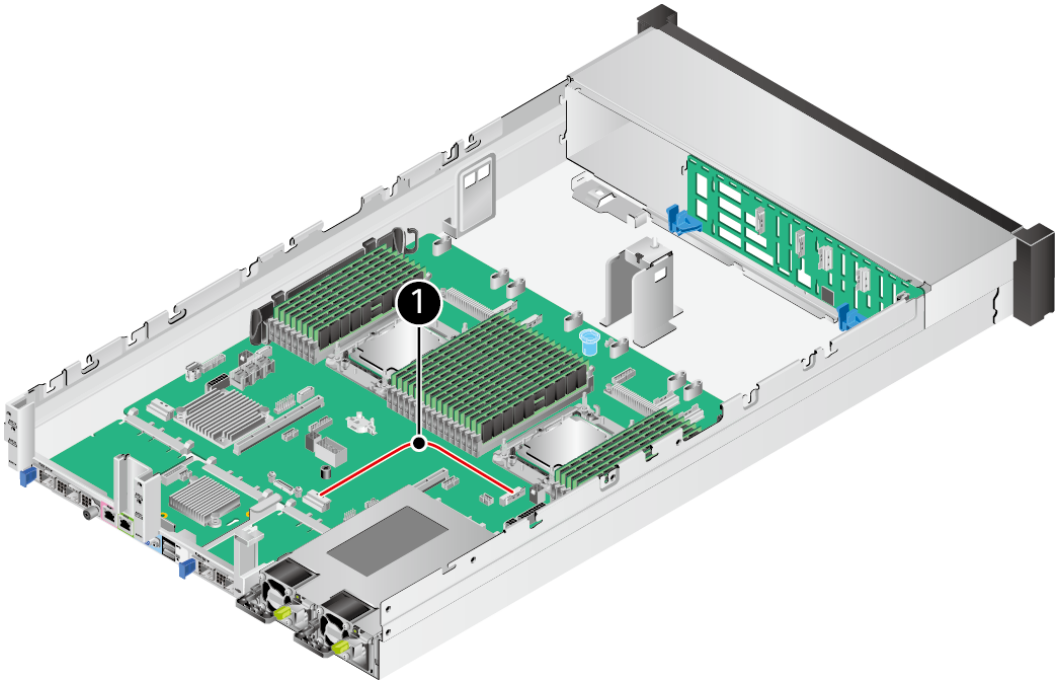

Table 6-139 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.4.3.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-178 Intrusion sensor cabling

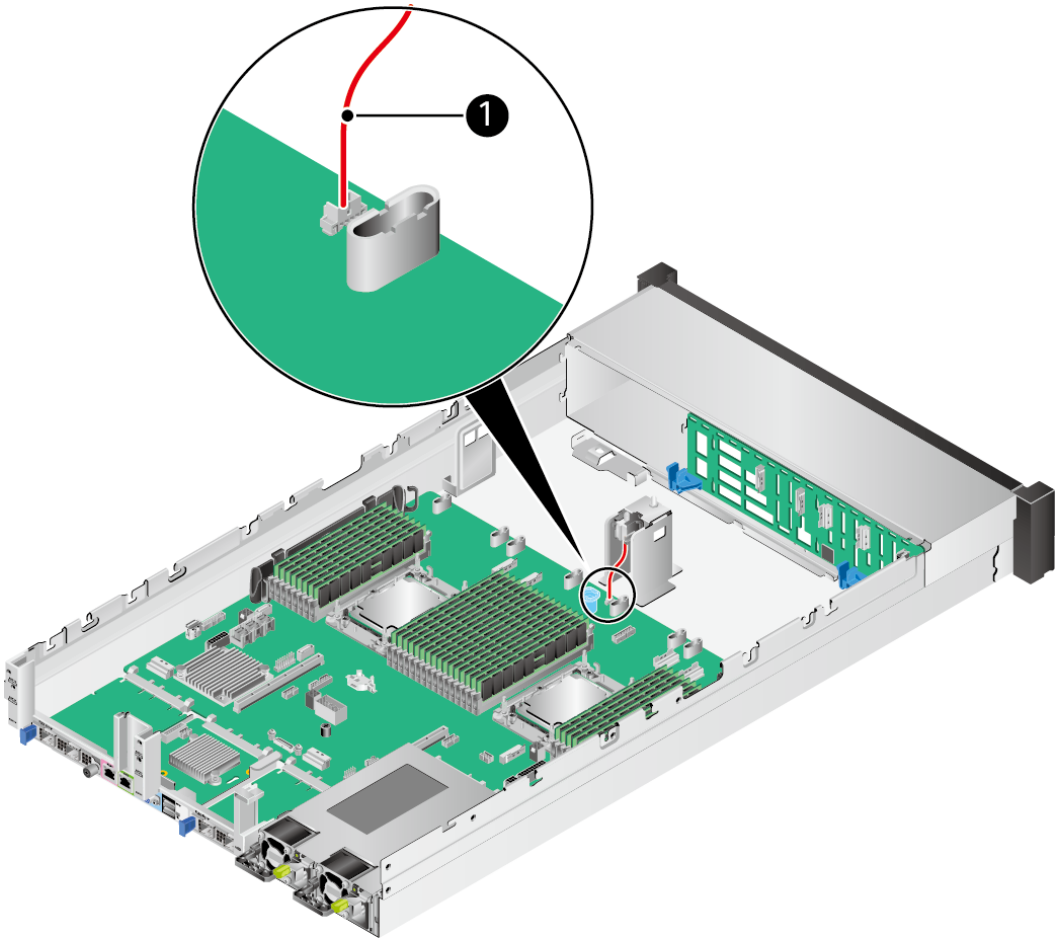

Table 6-140 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.4.3.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-179 Front-drive backplane power and low-speed signal cables

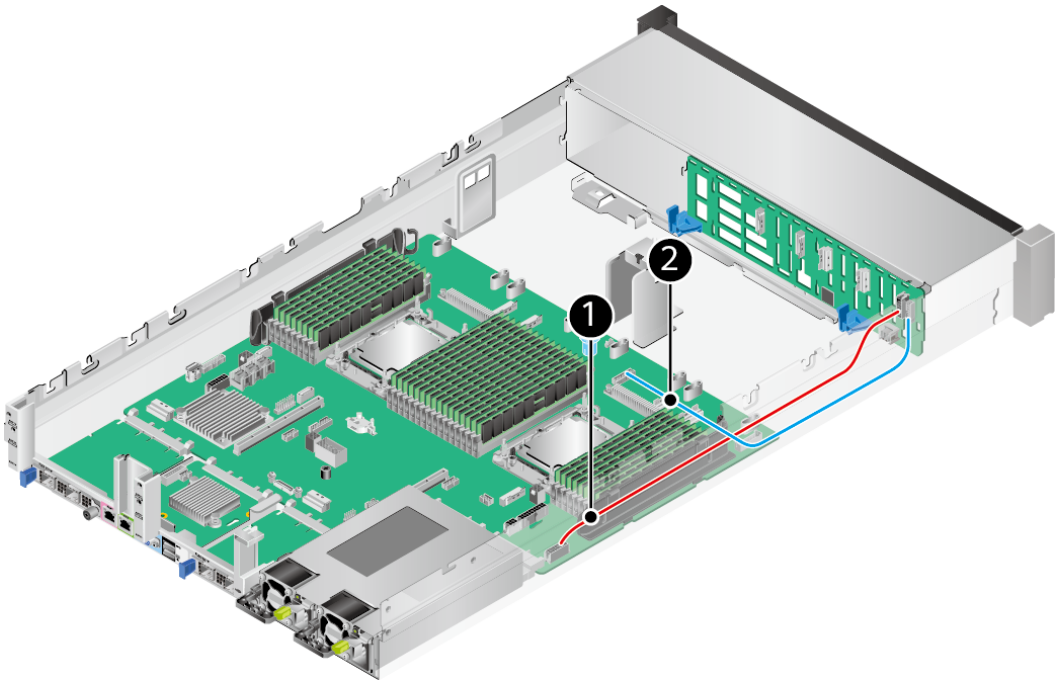

Table 6-141 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152145-009	Power cable for connecting the front-drive backplane (J4003) to the mainboard (J26)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3702) to the mainboard (J75)

6.4.4.3.5 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

- Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.
- The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-180 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

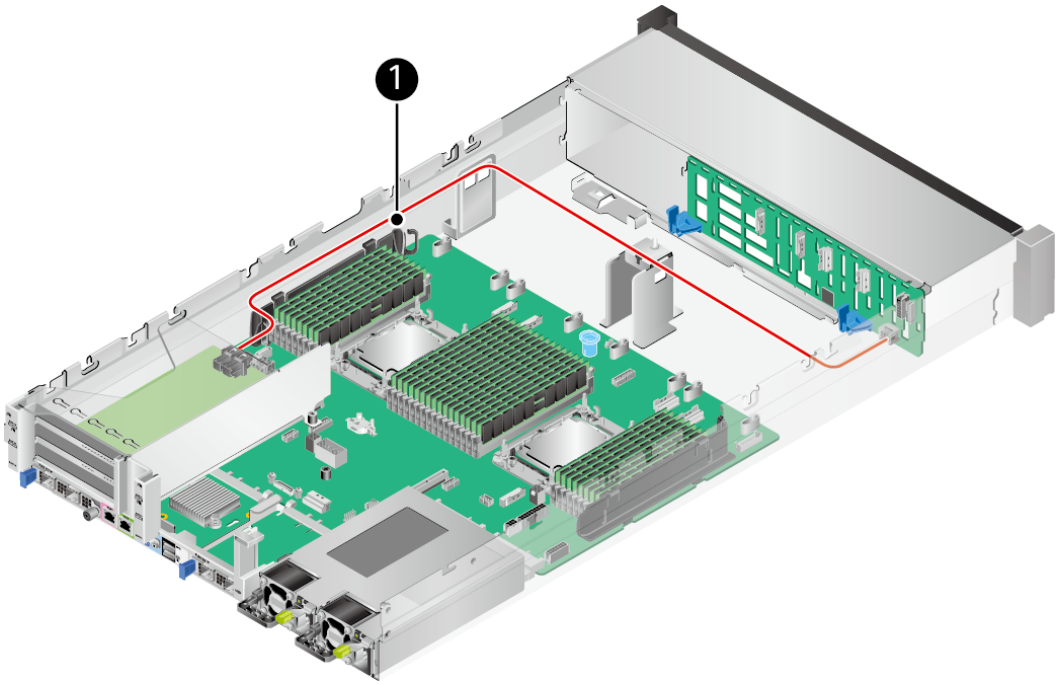

Table 6-142 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J801) to PORT A of the PCIe RAID controller card

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Figure 6-181 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one Mini SAS ports)

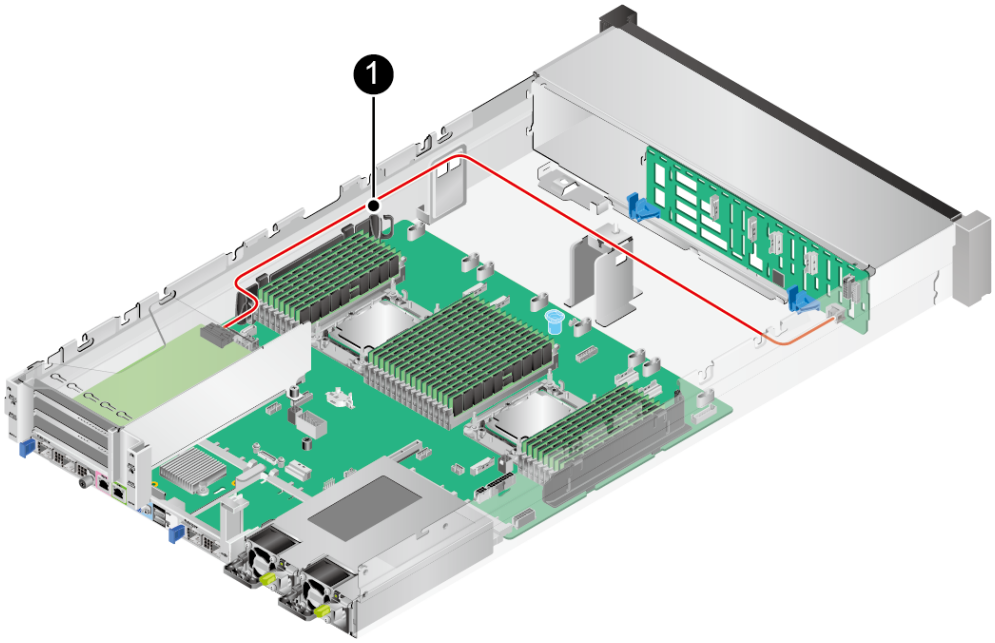

Table 6-143 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y026-001	SAS high-speed cable for connecting the front-drive backplane (J801) to C0 of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J801) may be C0, PORT A, 0, or CN0.

6.4.4.3.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cables

Figure 6-182 Front-drive backplane LP slimline high-speed cables

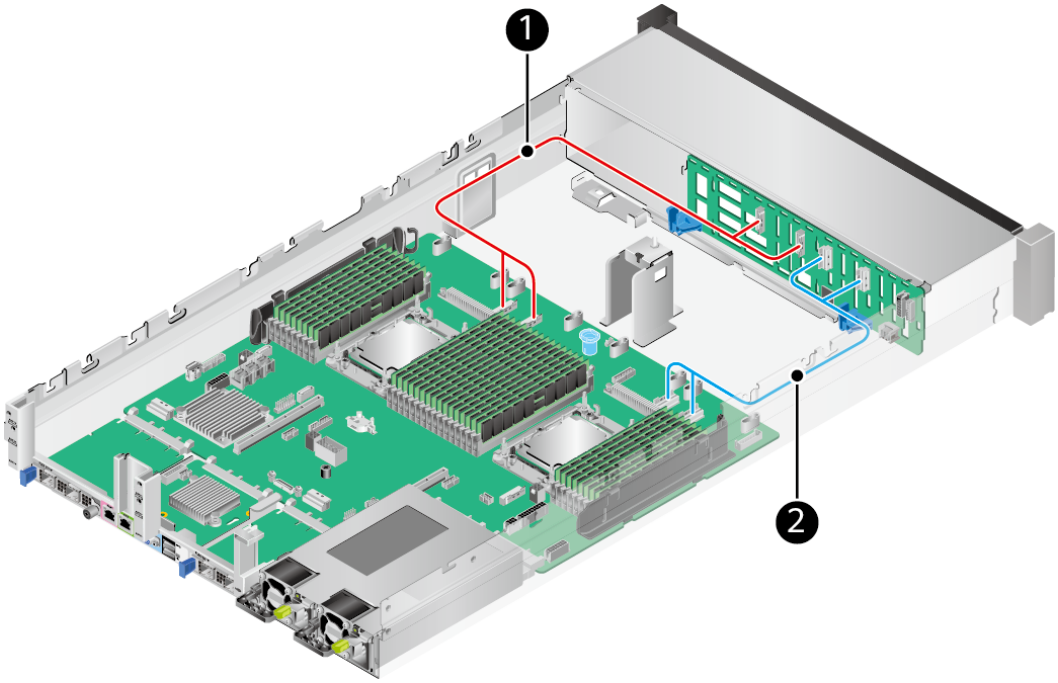

Table 6-144 Front-drive backplane LP slimline high-speed cables

No.	P/N Code	Description
1	04052316-003	High-speed cable for connecting LP Slimline 1 (J901) and LP Slimline 2 (J1001) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-003 cable corresponds to the front-drive backplane LP Slimline 1 (J901), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1001); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).
2	04052316-002	High-speed cable for connecting LP Slimline 3 (J1101) and LP Slimline 4 (J1201) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316-002 cable corresponds to the front-drive backplane LP Slimline 3 (J1101), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1201); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12) .

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6.4.4.4 12 x 2.5" (4 x SATA + 8 x NVMe) + 4 x GPU Configuration 1

6.4.4.4.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-183 Left and right mounting ear cabling

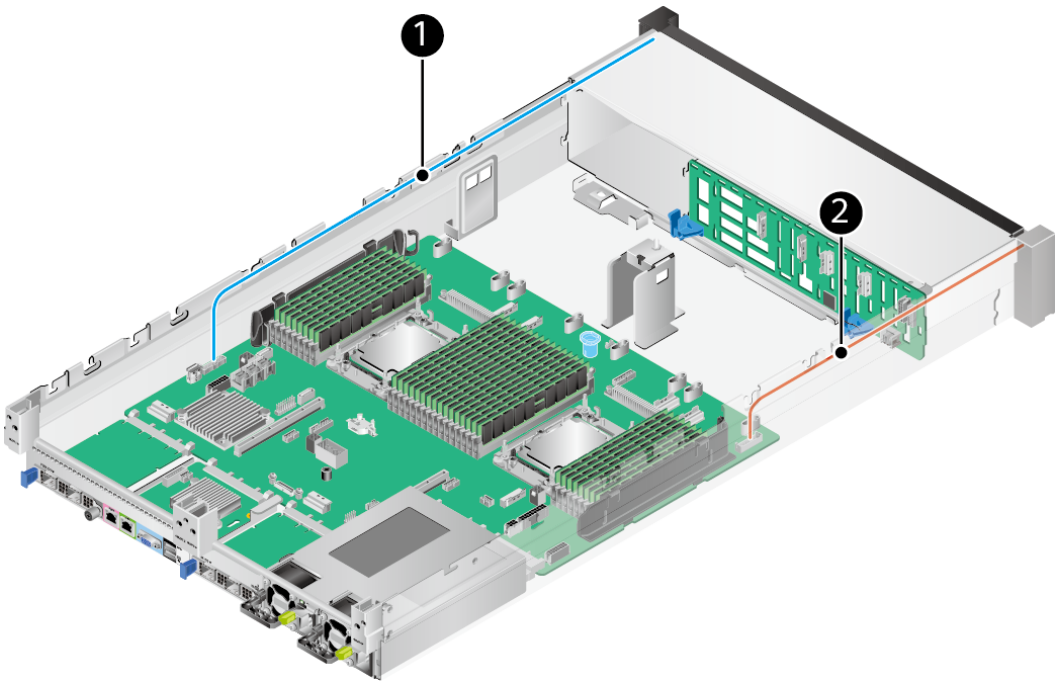

Table 6-145 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.4.4.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-184 OCP 3.0 expansion cable 1

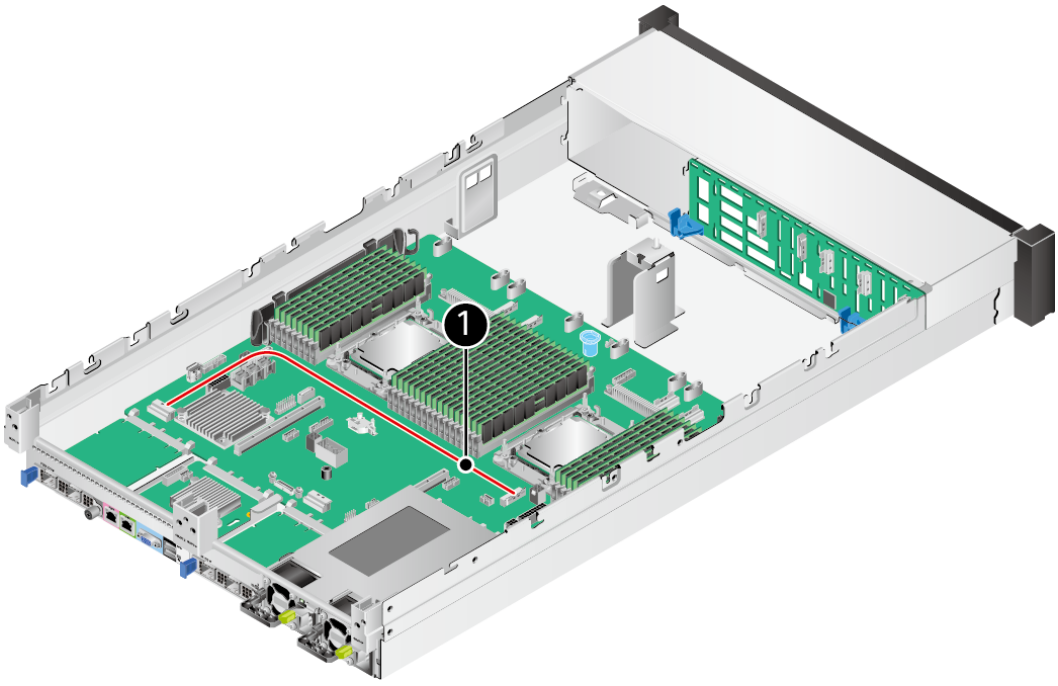

Table 6-146 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-185 OCP 3.0 expansion cable 2

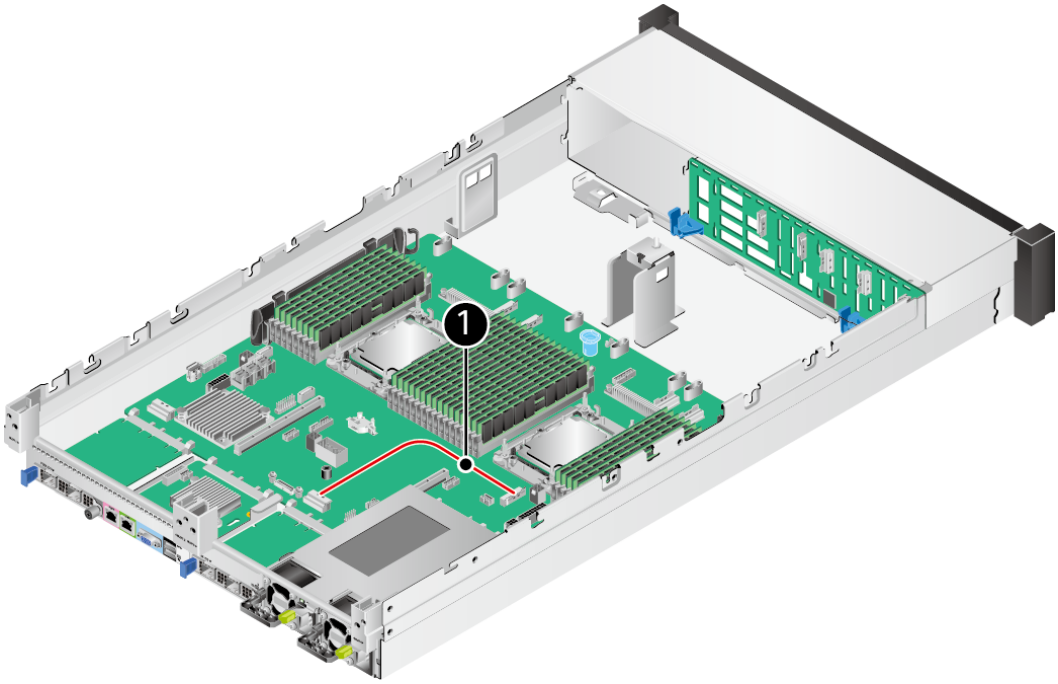

Table 6-147 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.4.4.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-186 Intrusion sensor cabling

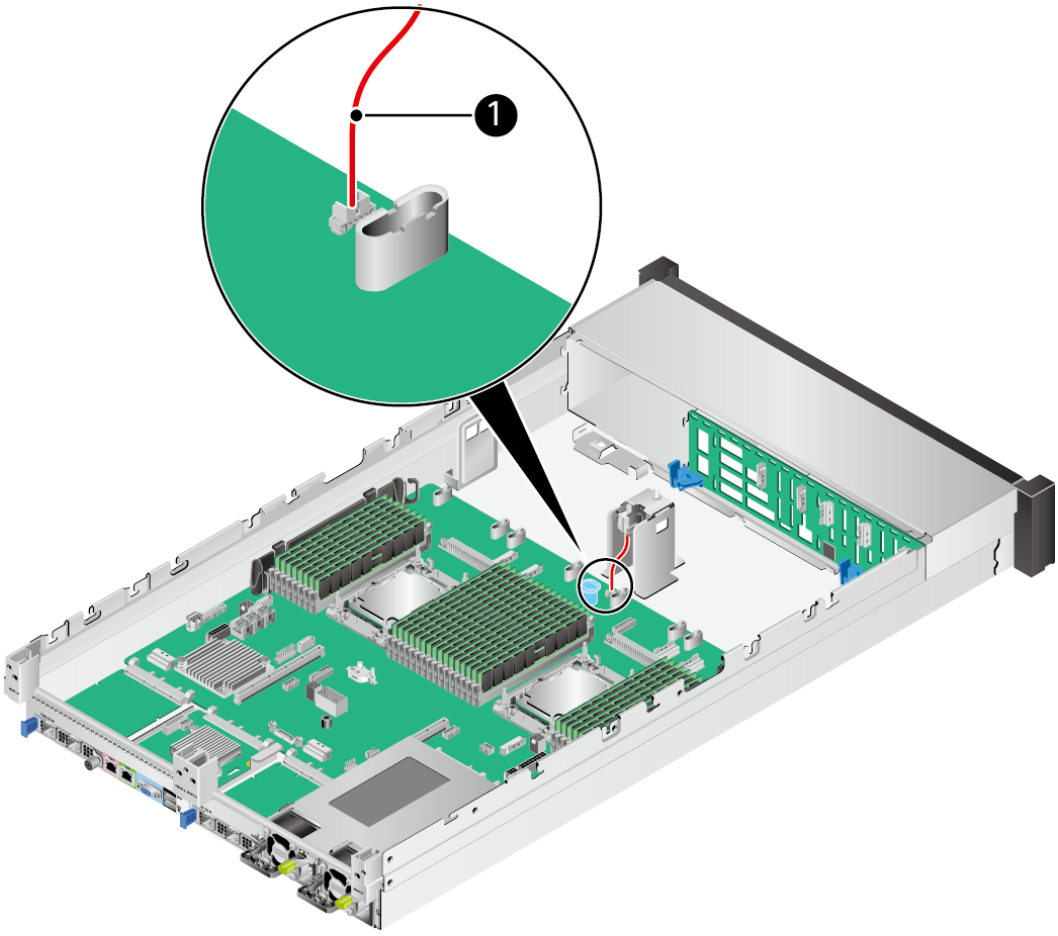

Table 6-148 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.4.4.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-187 Front-drive backplane power and low-speed signal cables

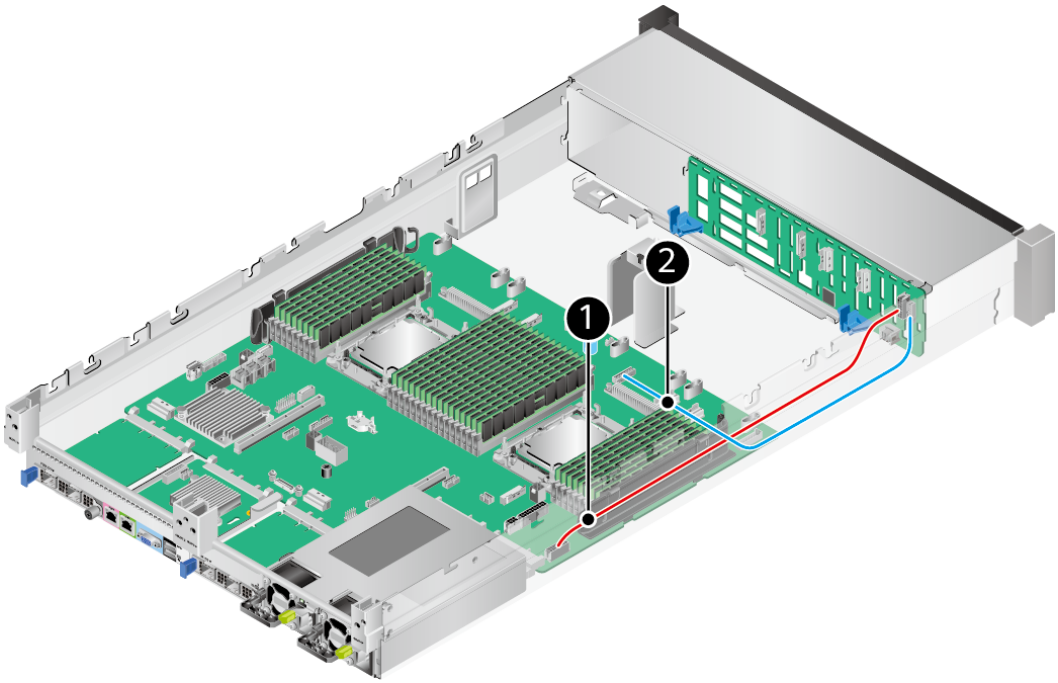

Table 6-149 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152145-009	Power cable for connecting the front-drive backplane (J4003) to the mainboard (J26)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3702) to the mainboard (J75)

6.4.4.4.5 Front-Drive Backplane SAS Cable (PCH Pass-through)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-drive backplane SAS High-speed cabling

Figure 6-188 Front-drive backplane SAS high-speed cabling

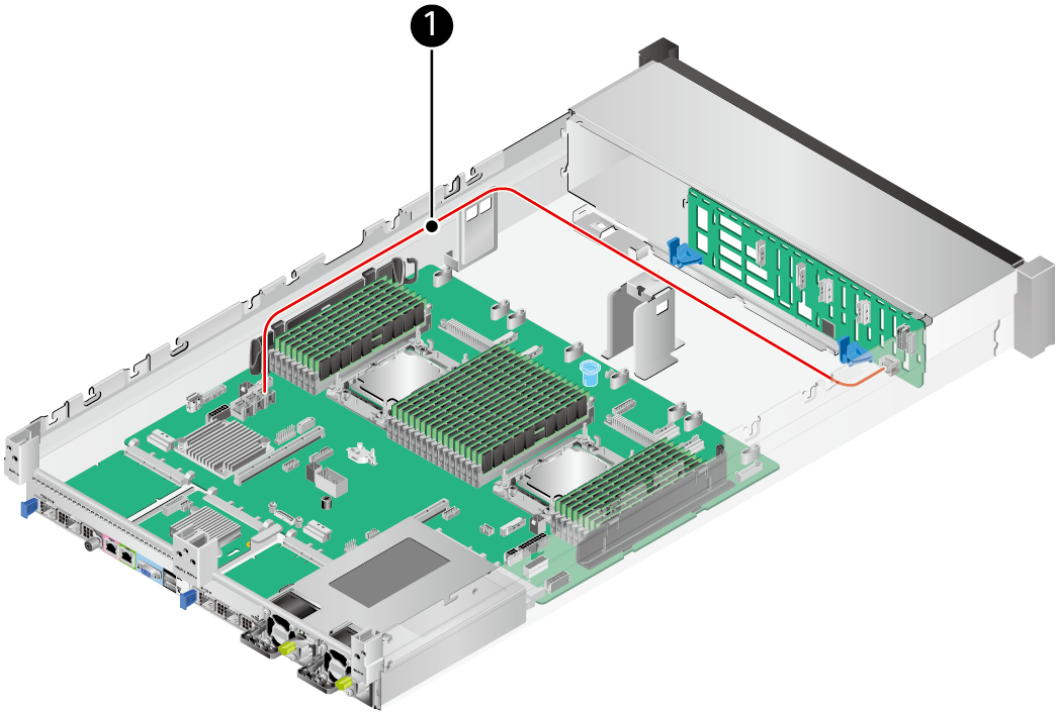

Table 6-150 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J801) to the mainboard (J6)

6.4.4.4.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-drive Backplane LP Slimline High-speed Cable

Figure 6-189 Front-drive backplane LP slimline high-speed cable

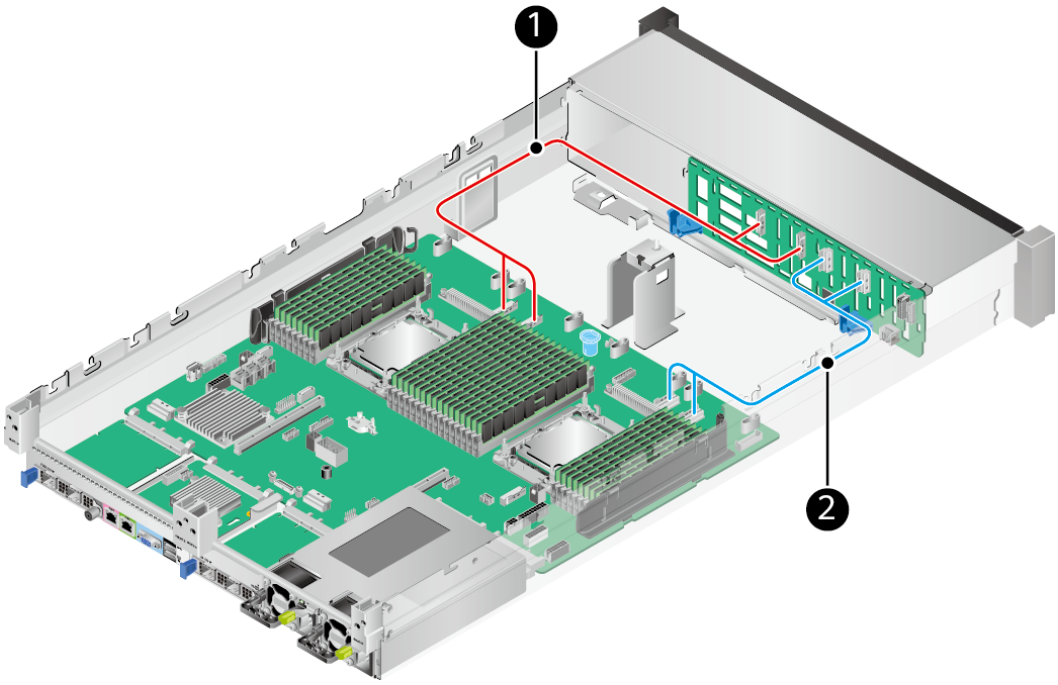

Table 6-151 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	04052316-003	High-speed cable for connecting LP Slimline 1 (J901) and LP Slimline 2 (J1001) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-003 cable corresponds to the front-drive backplane LP Slimline 1 (J901), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1001); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).
2	04052316-002	High-speed cable for connecting LP Slimline 3 (J1101) and LP Slimline 4 (J1201) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316-002 cable corresponds to the front-drive backplane LP Slimline 3 (J1101), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1201); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12) .

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6.4.4.4.7 Cable for Connecting the First-layer and Second-layer Adapter Boards

Cable for Connecting the Layer 1 and Layer 2 Adapter Boards

Figure 6-190 Cable for connecting the layer 1 and layer 2 adapter boards

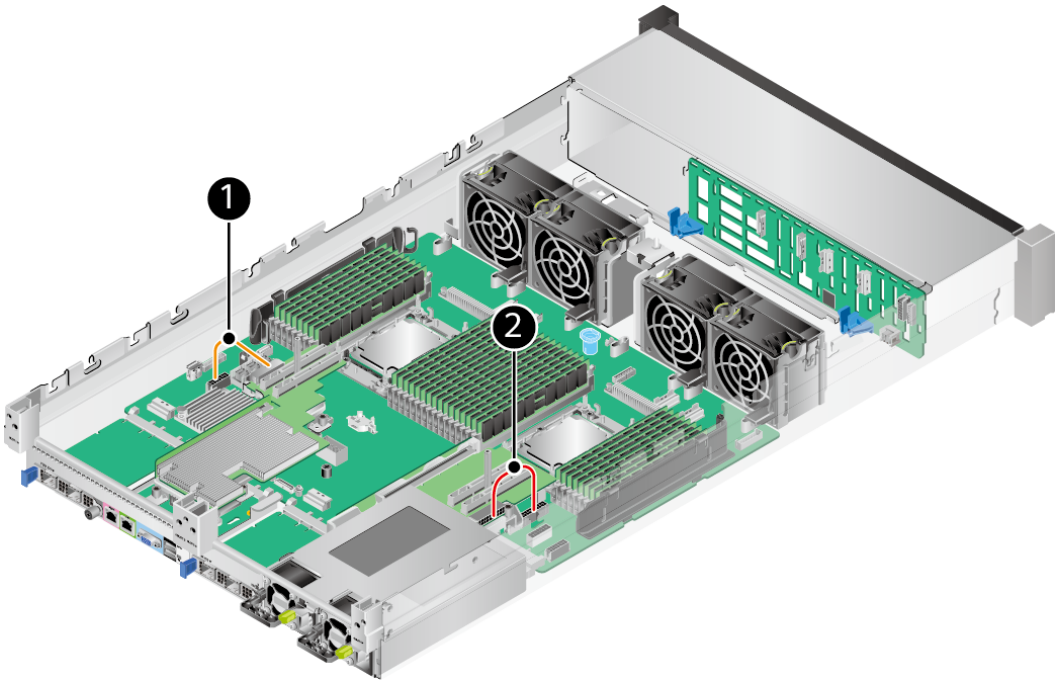

Table 6-152 Cable for connecting the layer 1 and layer 2 adapter boards

No.	P/N Code	Description
1	04152704-002	Power cable for connecting the layer 1 and layer 2 adapter board of CPU1 to the mainboard (J89)
2	04152142-010	Power cable for connecting the layer 1 and layer 2 adapter board of CPU2 to the mainboard (J88)

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6.4.4.4.8 GPU Card Cabling

GPU Card Cabling

Figure 6-191 GPU card cabling

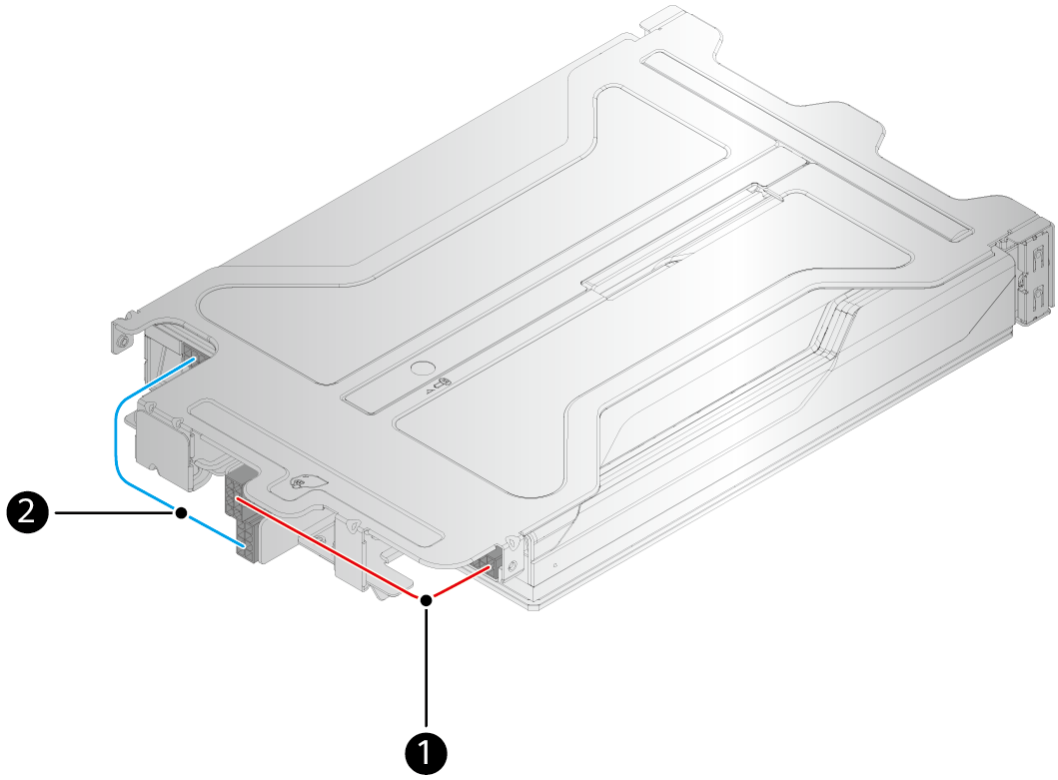

Table 6-153 GPU card cabling

No.	P/N Code	Description
1	04152766 04152765	Power cable for connecting the GPU card in slot 2 or slot 6 to the riser card in slot 2 or slot 6
2	04152764	Power cable for connecting the GPU card in slot 3 or slot 7 to the riser card in slot 3 or slot 7

6.4.4.5 12 x 2.5" (4 x SAS/SATA + 8 x NVMe) + 4 x GPU Configuration 2

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6.4.4.5.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-192 Left and right mounting ear cabling

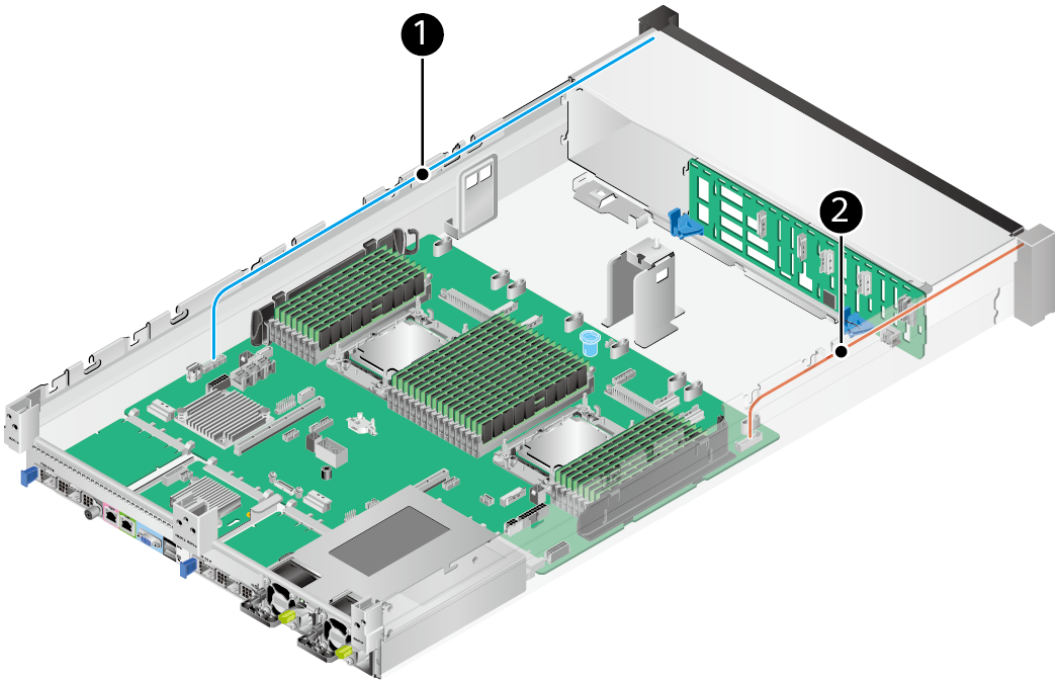

Table 6-154 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.4.5.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-193 OCP 3.0 expansion cable 1

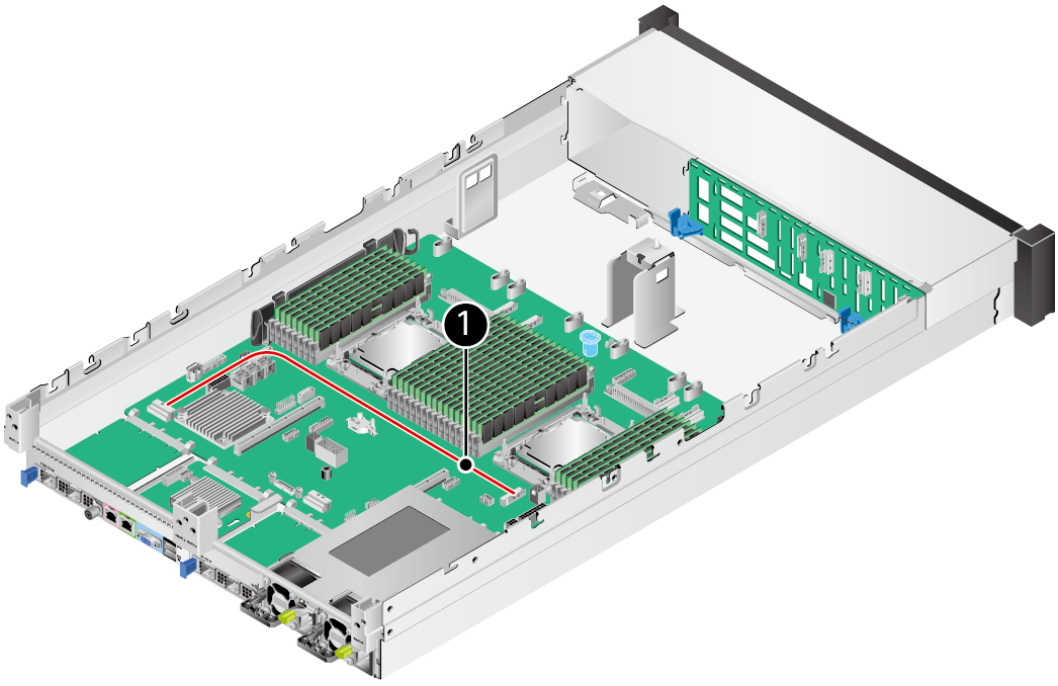

Table 6-155 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-194 OCP 3.0 expansion cable 2

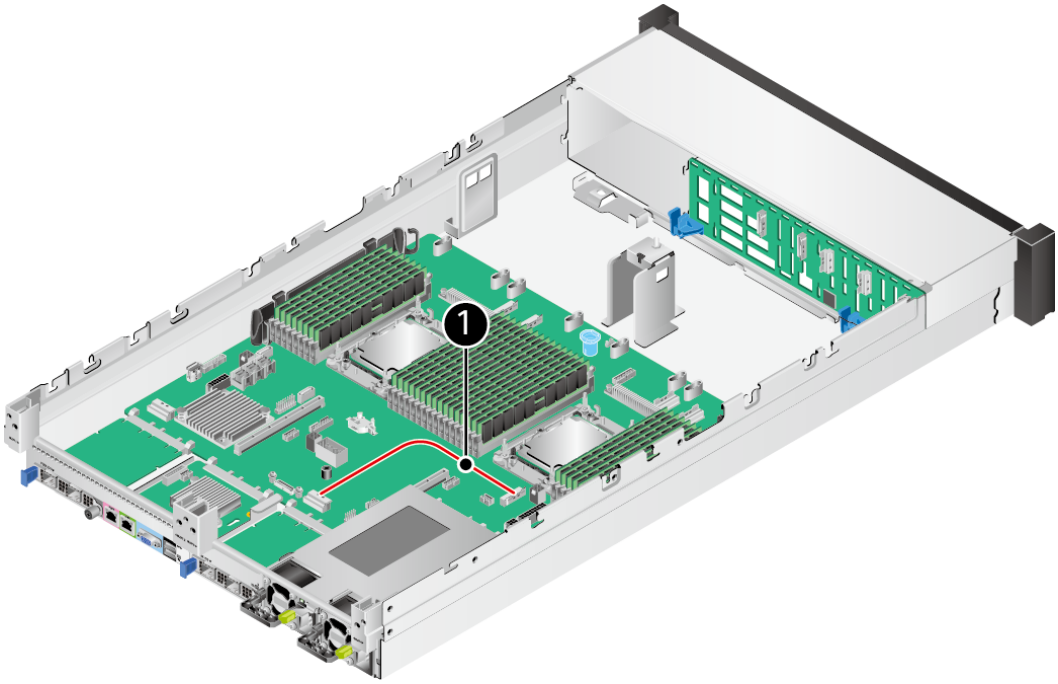

Table 6-156 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.4.5.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-195 Intrusion sensor cabling

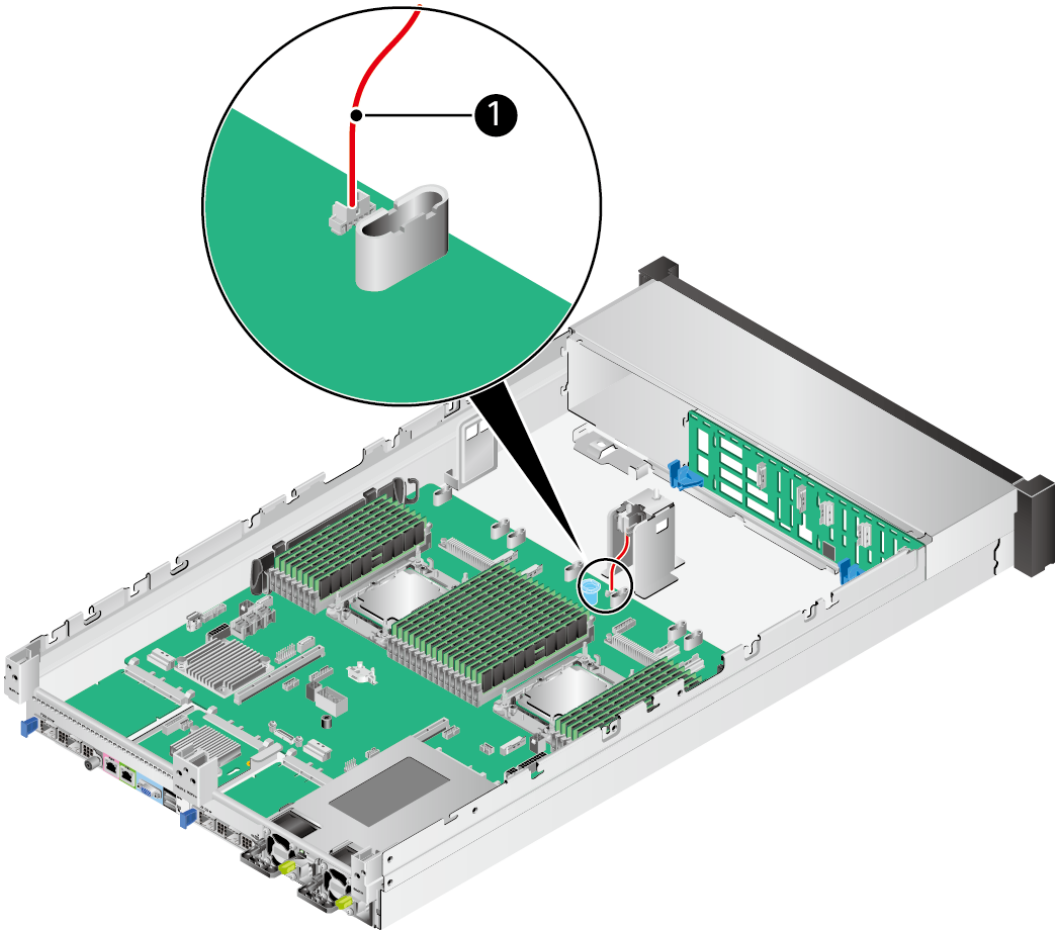

Table 6-157 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.4.5.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-196 Front-drive backplane power and low-speed signal cables

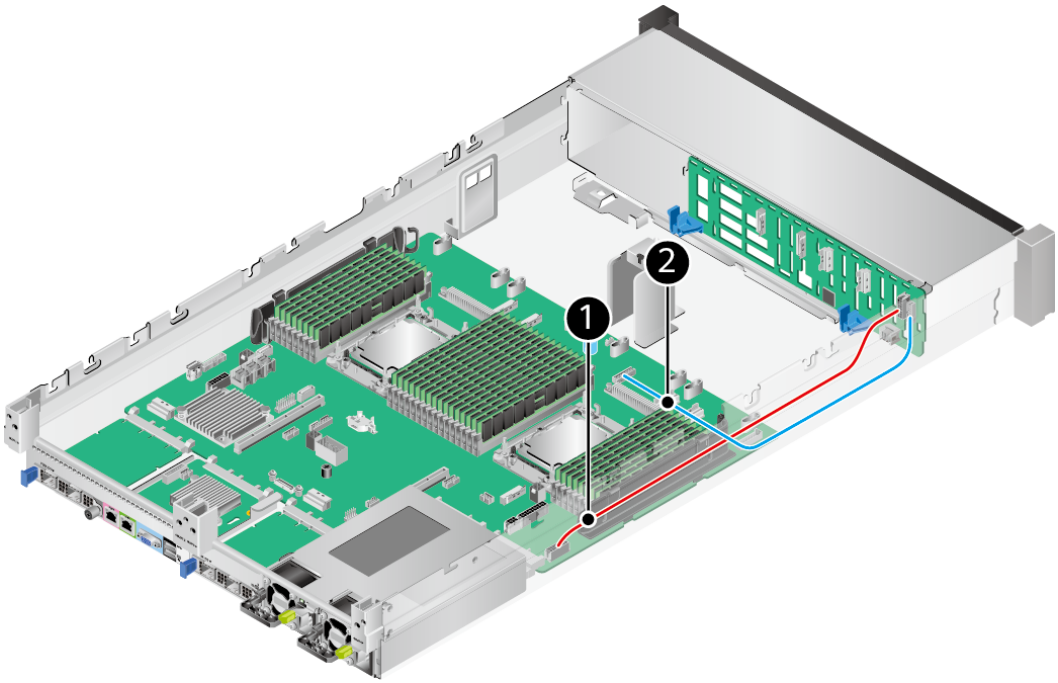

Table 6-158 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152145-009	Power cable for connecting the front-drive backplane (J4003) to the mainboard (J26)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3702) to the mainboard (J75)

6.4.4.5.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-drive backplane SAS high-speed cabling

Figure 6-197 Front-drive backplane SAS high-speed cabling

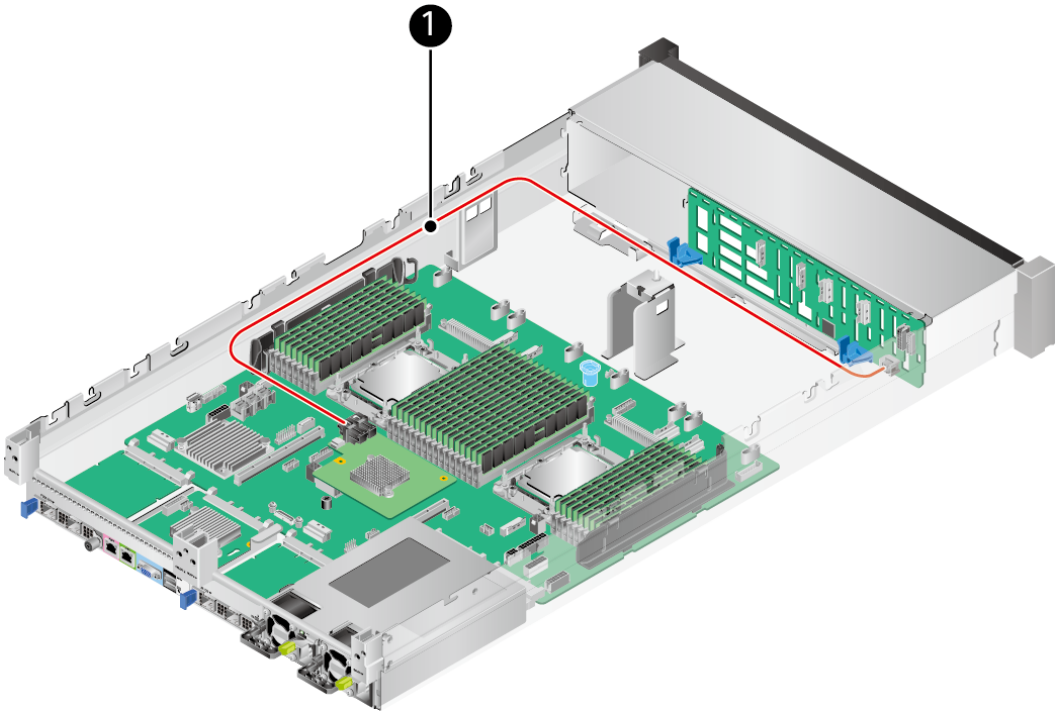

Table 6-159 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J801) to PORT A of the screw-in RAID controller card

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6.4.4.5.6 Front-Drive Backplane LP Slimline Signal Cable

Front-drive Backplane LP Slimline High-speed Cable

Figure 6-198 Front-drive backplane LP slimline high-speed cable

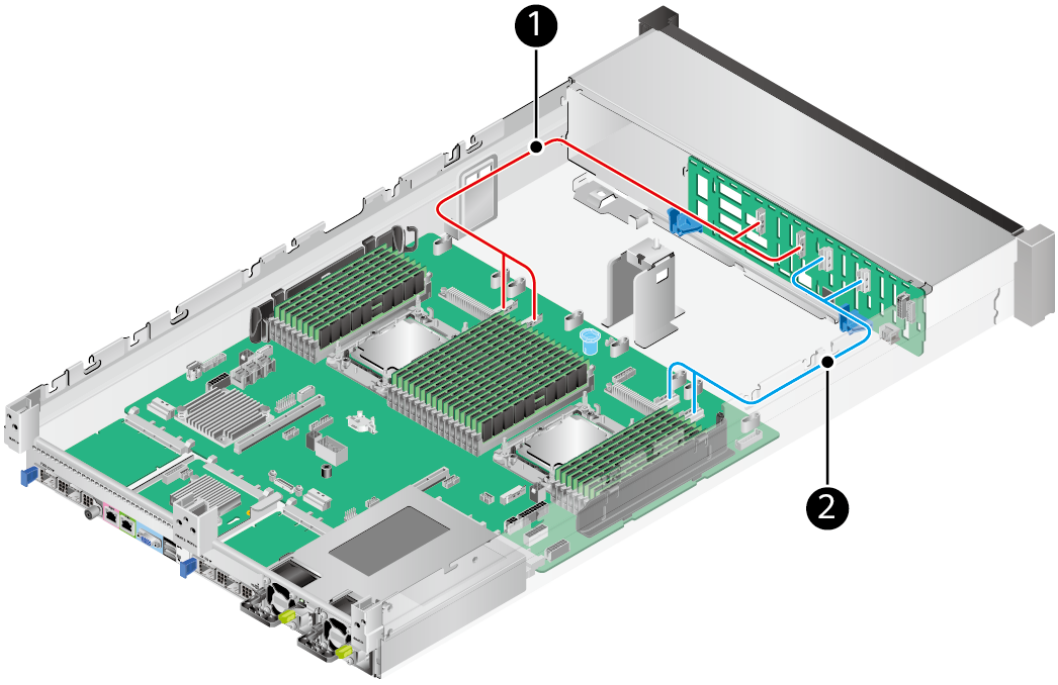

Table 6-160 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	04052316-003	High-speed cable for connecting LP Slimline 1 (J901) and LP Slimline 2 (J1001) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-003 cable corresponds to the front-drive backplane LP Slimline 1 (J901), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1001); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
2	04052316-002	High-speed cable for connecting LP Slimline 3 (J1101) and LP Slimline 4 (J1201) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316-002 cable corresponds to the front-drive backplane LP Slimline 3 (J1101), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1201); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12) .

6.4.4.5.7 Cable for Connecting the First-layer and Second-layer Adapter Boards

Cable for Connecting the Layer 1 and Layer 2 Adapter Boards

Figure 6-199 Cable for connecting the layer 1 and layer 2 adapter boards

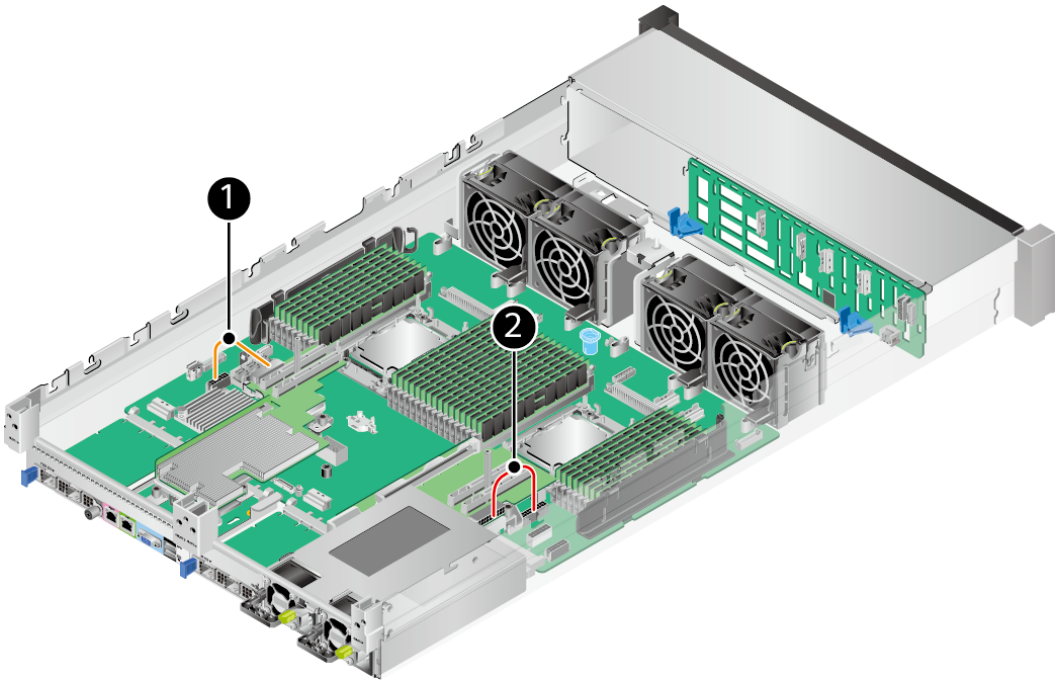

Table 6-161 Cable for connecting the layer 1 and layer 2 adapter boards

No.	P/N Code	Description
1	04152704-002	Power cable for connecting the layer 1 and layer 2 adapter board of CPU1 to the mainboard (J89)
2	04152142-010	Power cable for connecting the layer 1 and layer 2 adapter board of CPU2 to the mainboard (J88)

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6.4.4.5.8 GPU Card Cabling

GPU Card Cabling

Figure 6-200 GPU card cabling

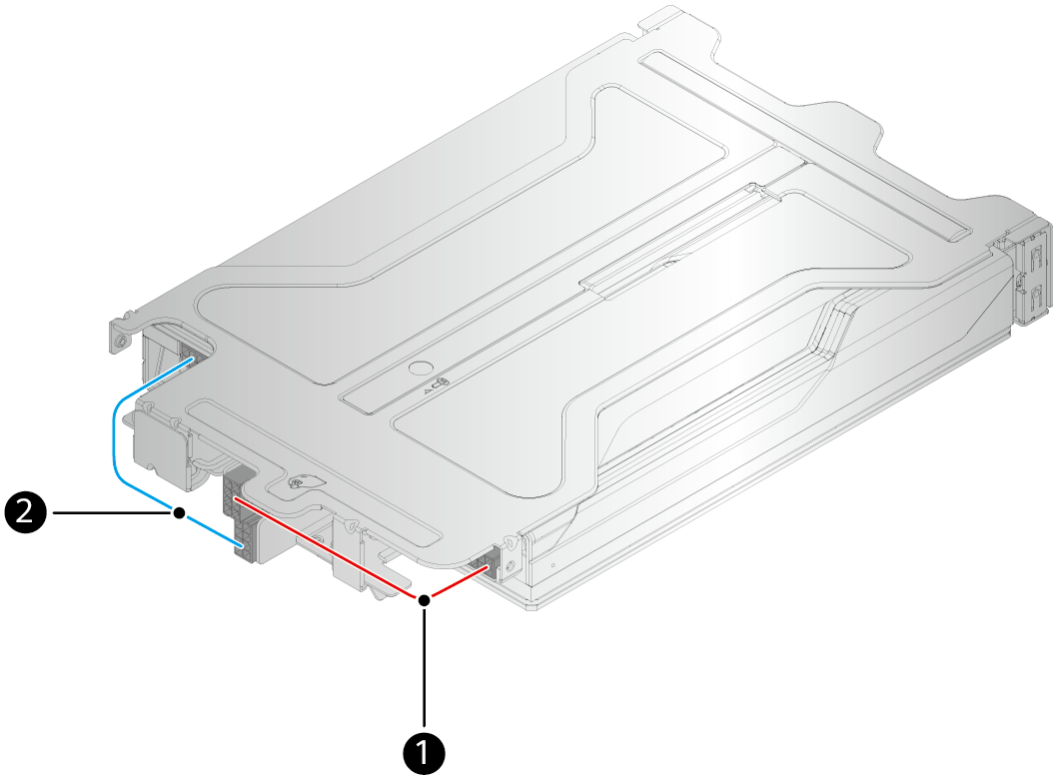

Table 6-162 GPU card cabling

No.	P/N Code	Description
1	04152766 04152765	Power cable for connecting the GPU card in slot 2 or slot 6 to the riser card in slot 2 or slot 6
2	04152764	Power cable for connecting the GPU card in slot 3 or slot 7 to the riser card in slot 3 or slot 7

6.4.5 12 x 3.5" Drive Pass-through Configuration

6.4.5.1 12 x 3.5" Drive Pass-through Configuration 1

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6.4.5.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-201 Left and right mounting ear cabling

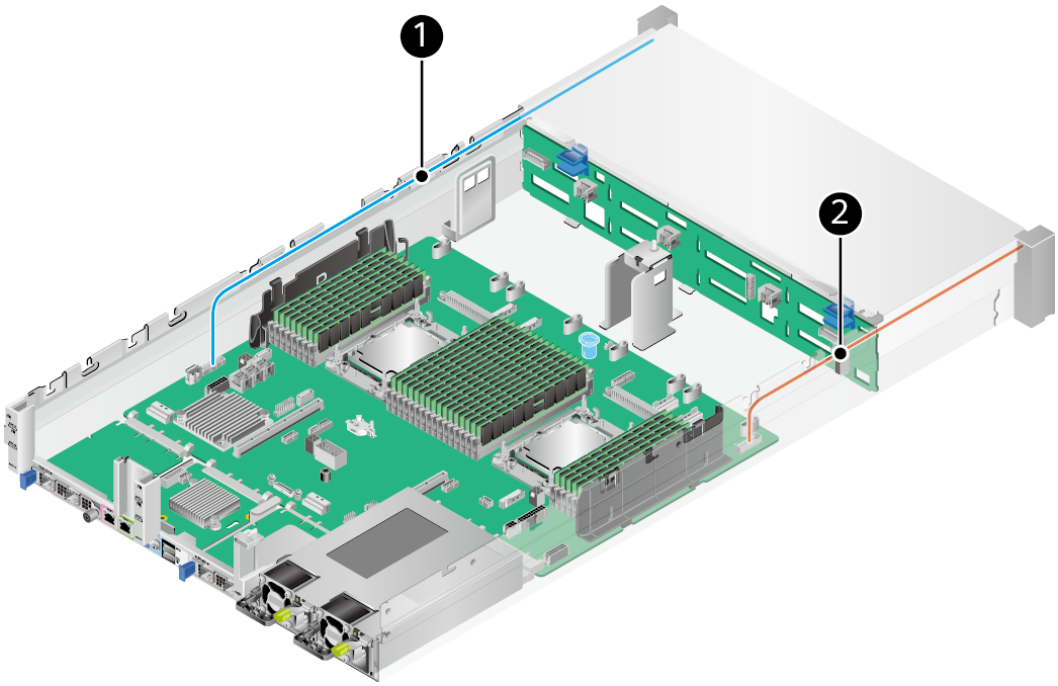

Table 6-163 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.1.2 NC-SI Cabling

NC-SI Cabling

Figure 6-202 NC-SI cabling

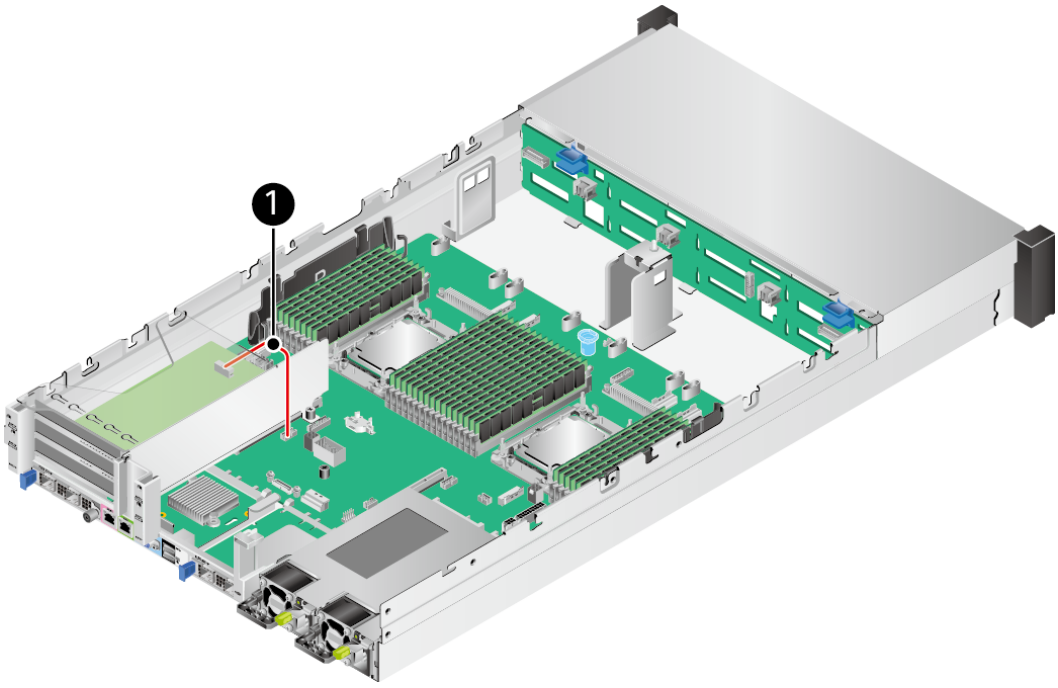

Table 6-164 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.5.1.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-203 OCP 3.0 expansion cable 1

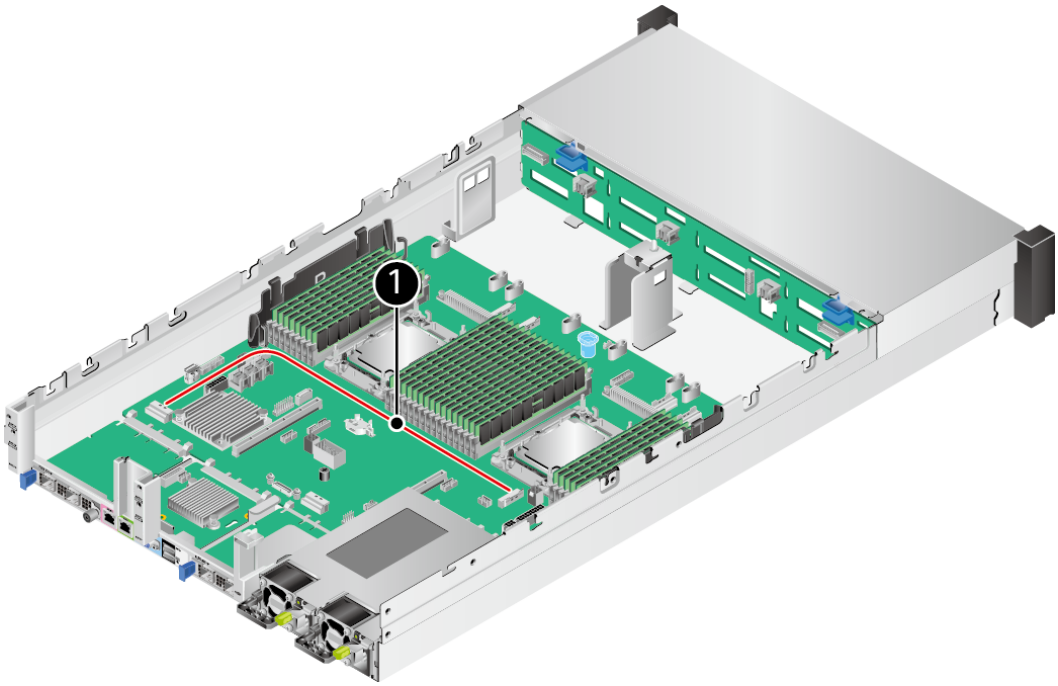

Table 6-165 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-204 OCP 3.0 expansion cable 2

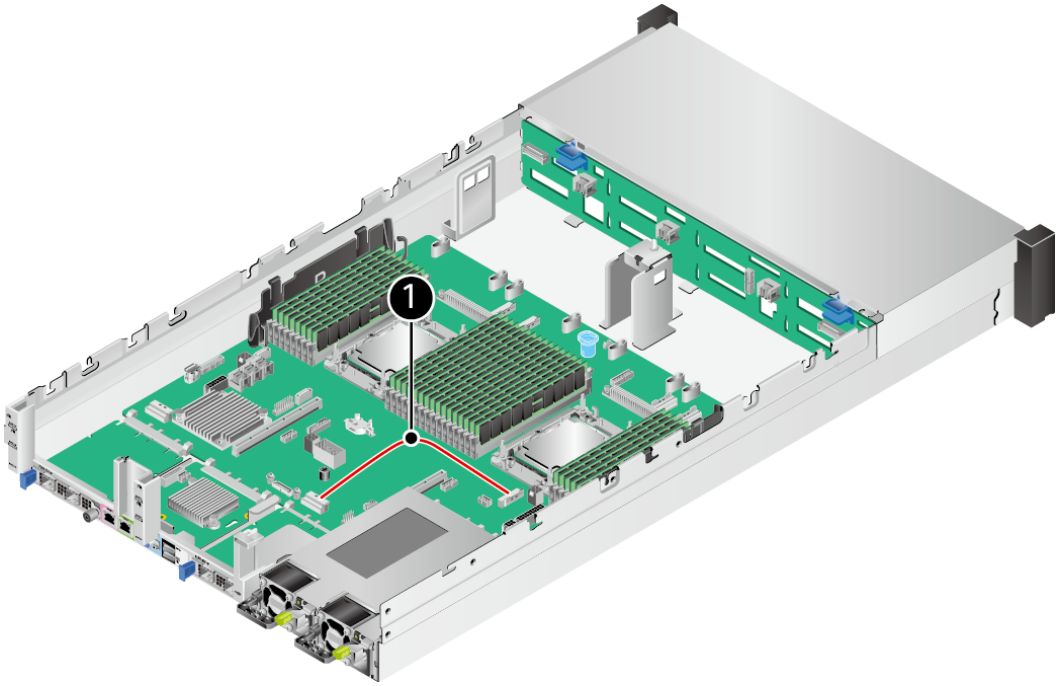

Table 6-166 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.1.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-205 Intrusion sensor cabling

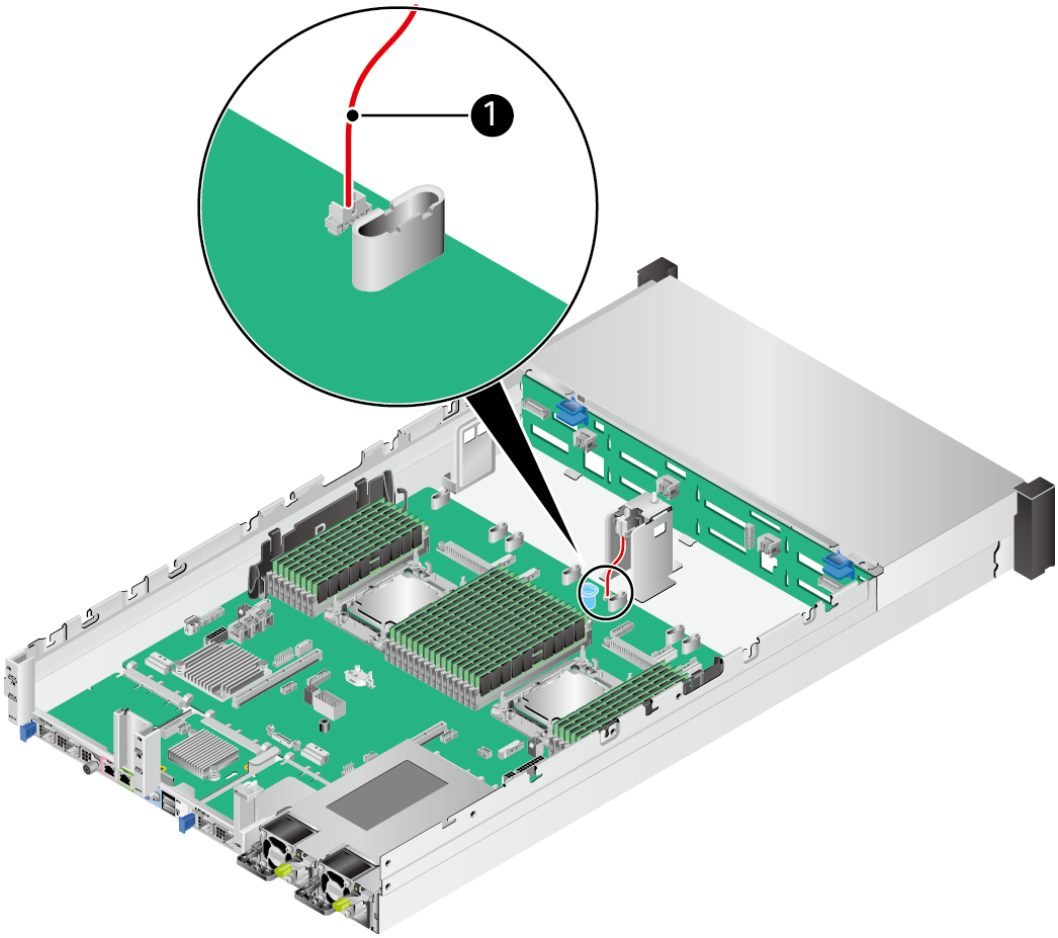

Table 6-167 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.1.5 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-206 M.2 SSD cabling

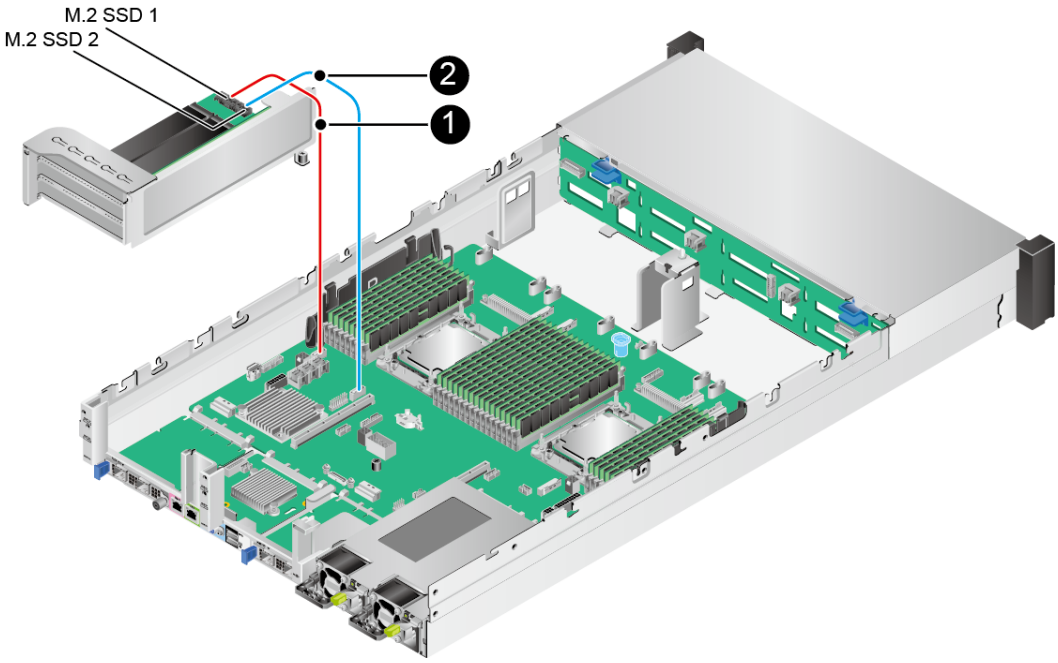

Table 6-168 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.5.1.6 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-207 Front-drive backplane power and low-speed signal cables

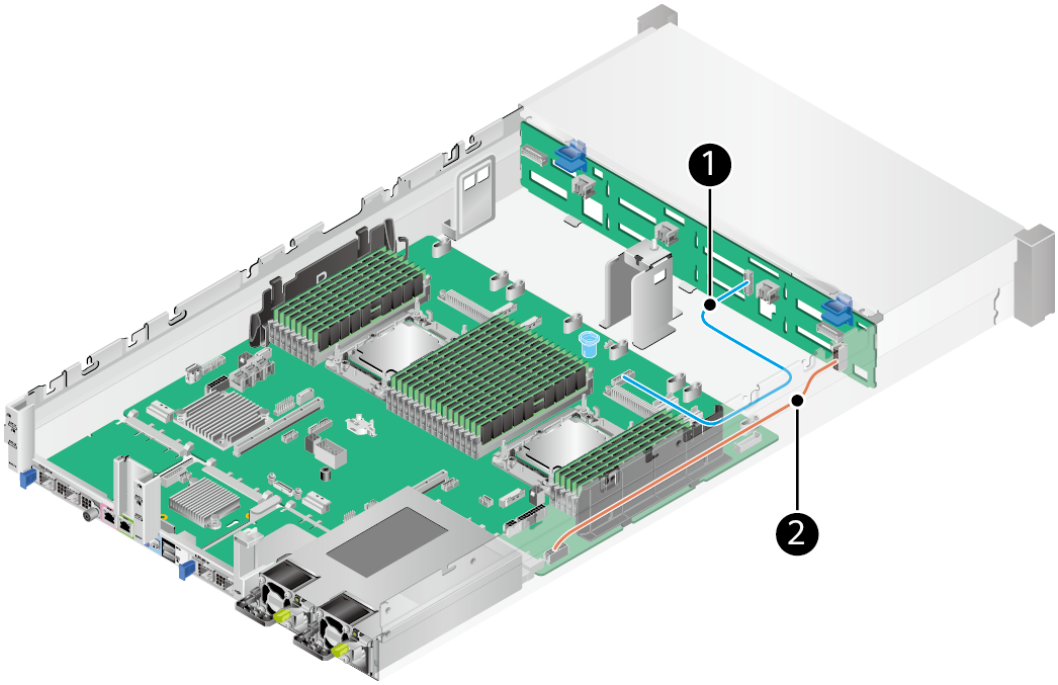

Table 6-169 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

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6.4.5.1.7 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-208 Front-drive backplane SAS high-speed cabling

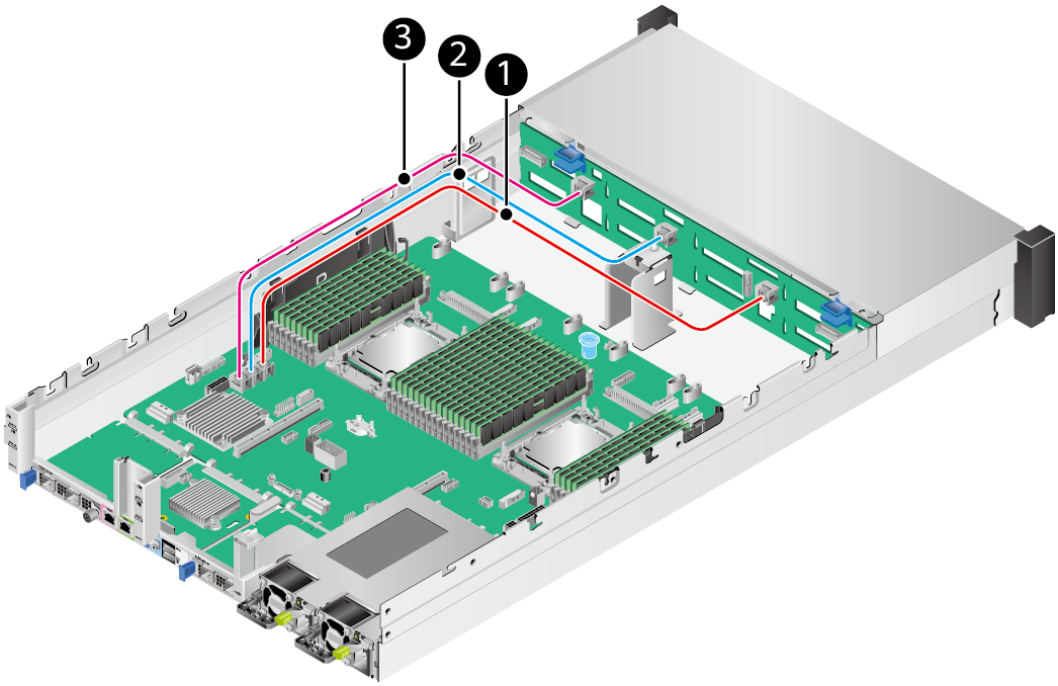

Table 6-170 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939	SAS high-speed cable for connecting the front-drive backplane (J3) to the mainboard (J6)
2	04051939	SAS high-speed cable for connecting the front-drive backplane (J4) to the mainboard (J5)
3	04051939	SAS high-speed cable for connecting the front-drive backplane (J5) to the mainboard (J4)

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6.4.5.1.8 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-209 I/O module 3 cabling

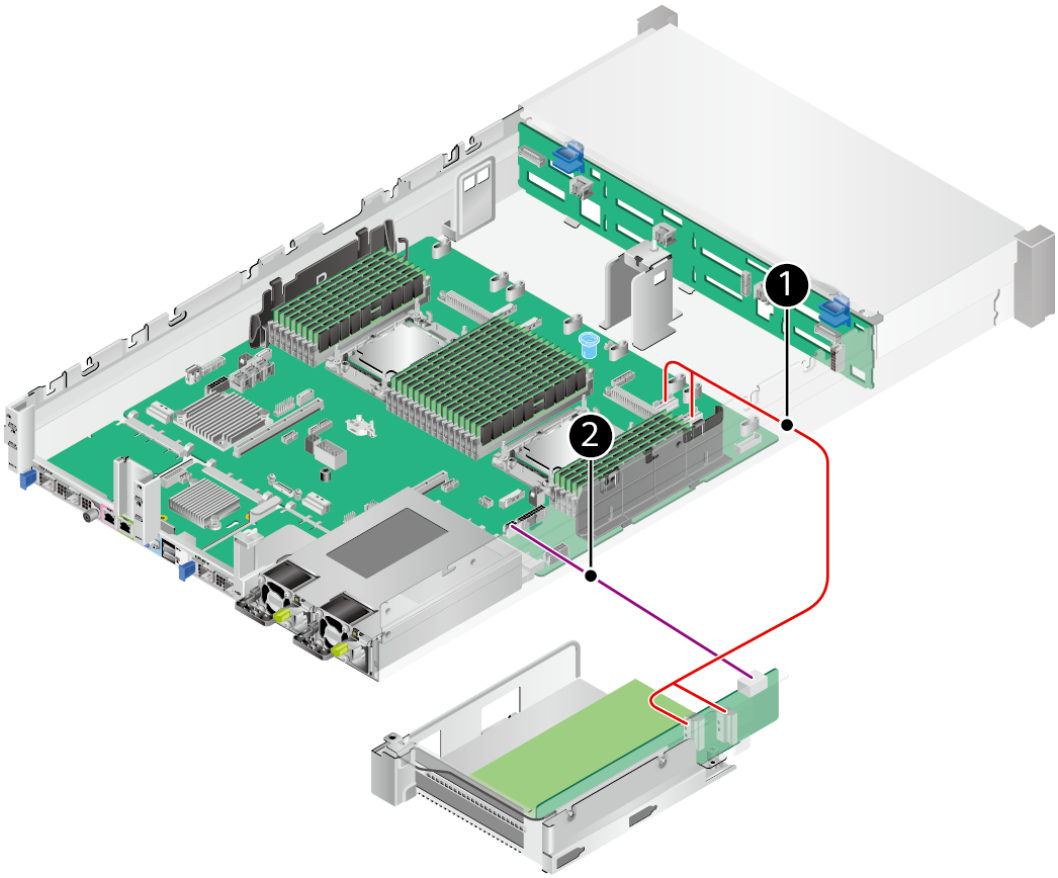

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Table 6-171 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.1.9 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-210 I/O module 3 cabling

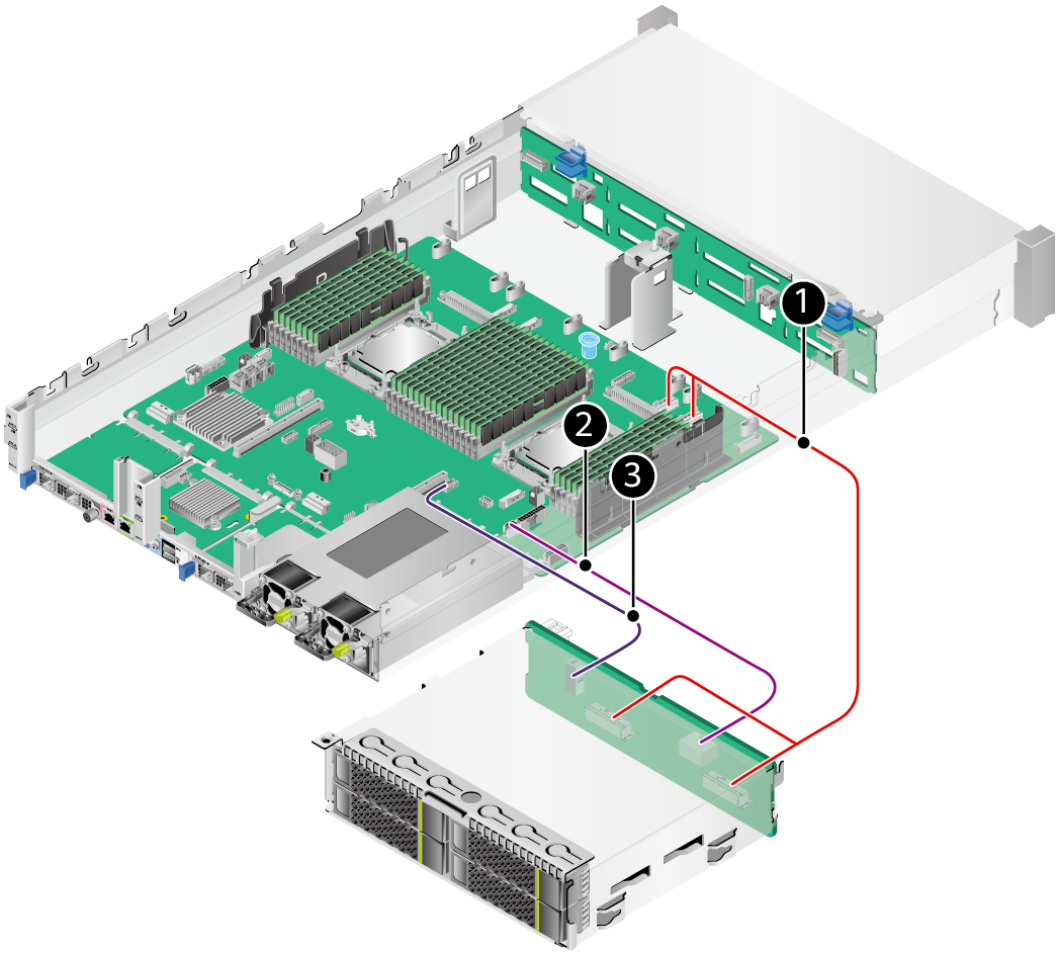

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Table 6-172 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.2 12 x 3.5" Drive Pass-through Configuration 2

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6.4.5.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-211 Left and right mounting ear cabling

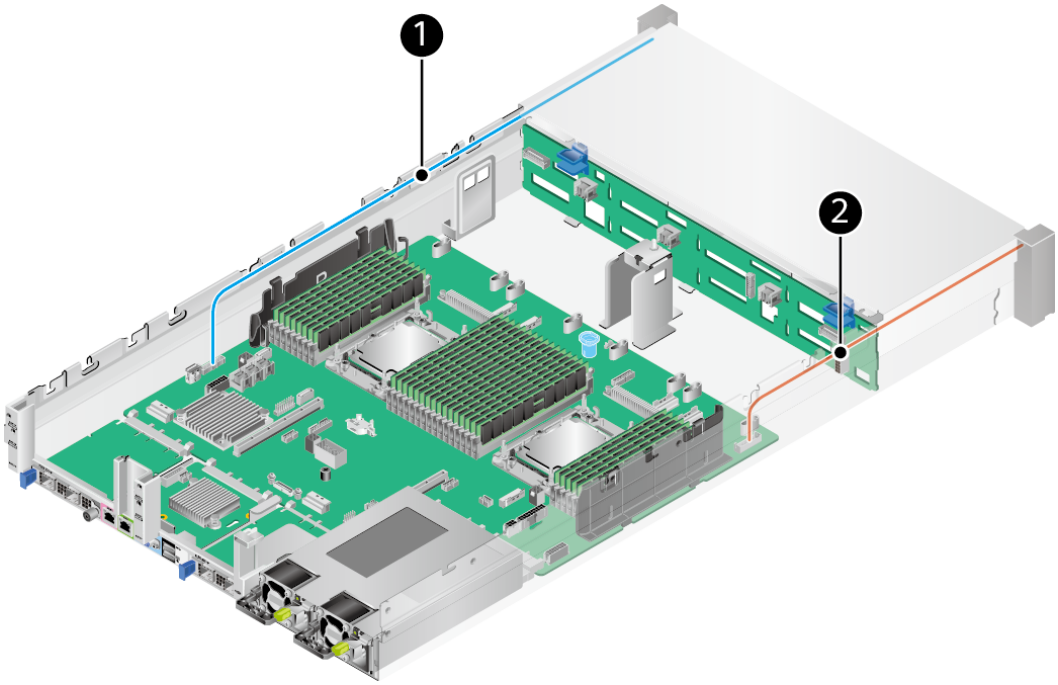

Table 6-173 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.2.2 NC-SI Cabling

NC-SI Cabling

Figure 6-212 NC-SI cabling

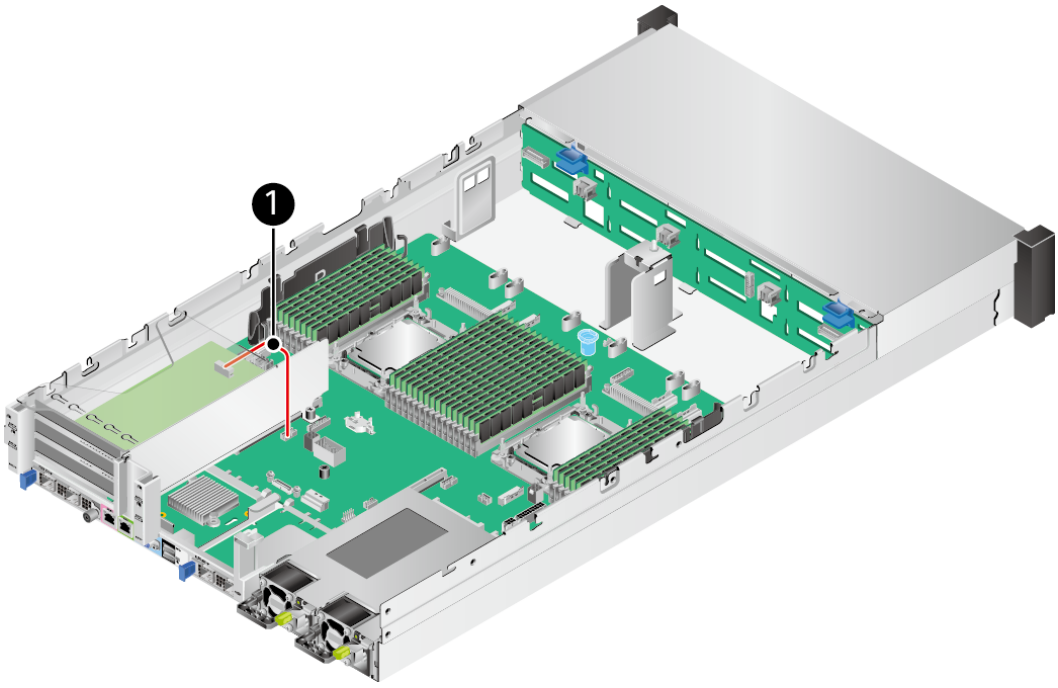

Table 6-174 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.5.2.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-213 OCP 3.0 expansion cable 1

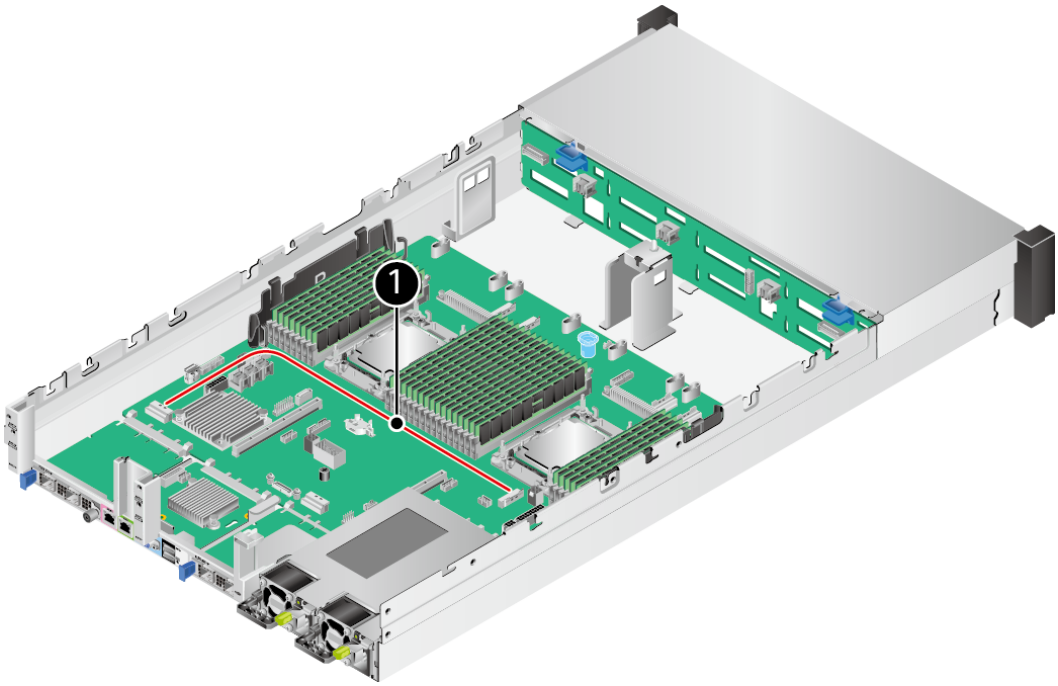

Table 6-175 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-214 OCP 3.0 expansion cable 2

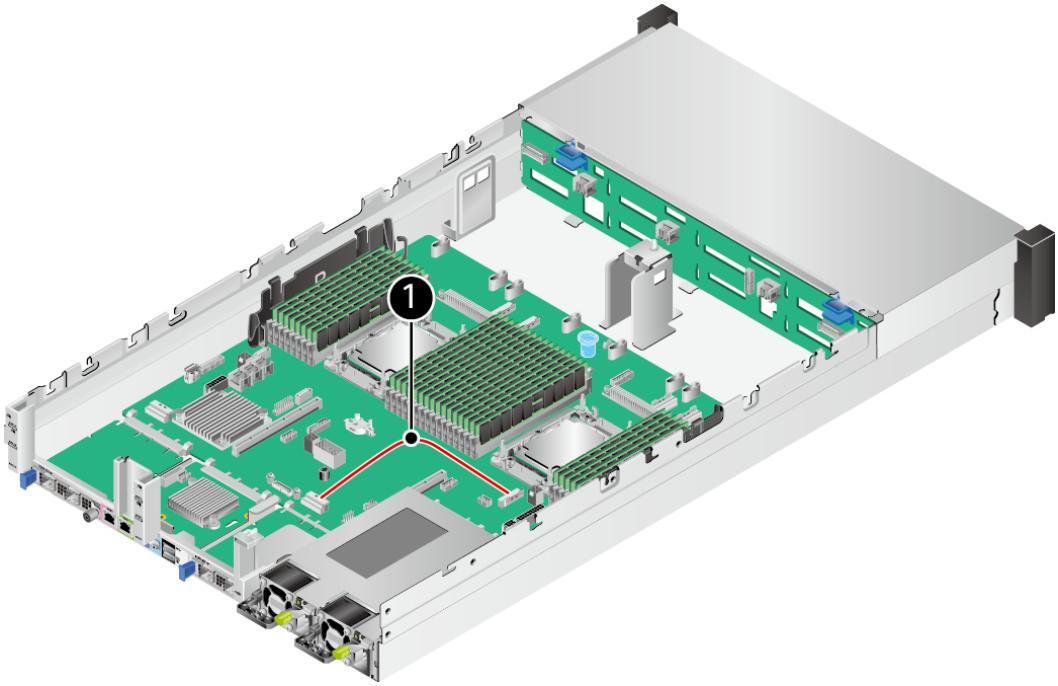

Table 6-176 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.2.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-215 Intrusion sensor cabling

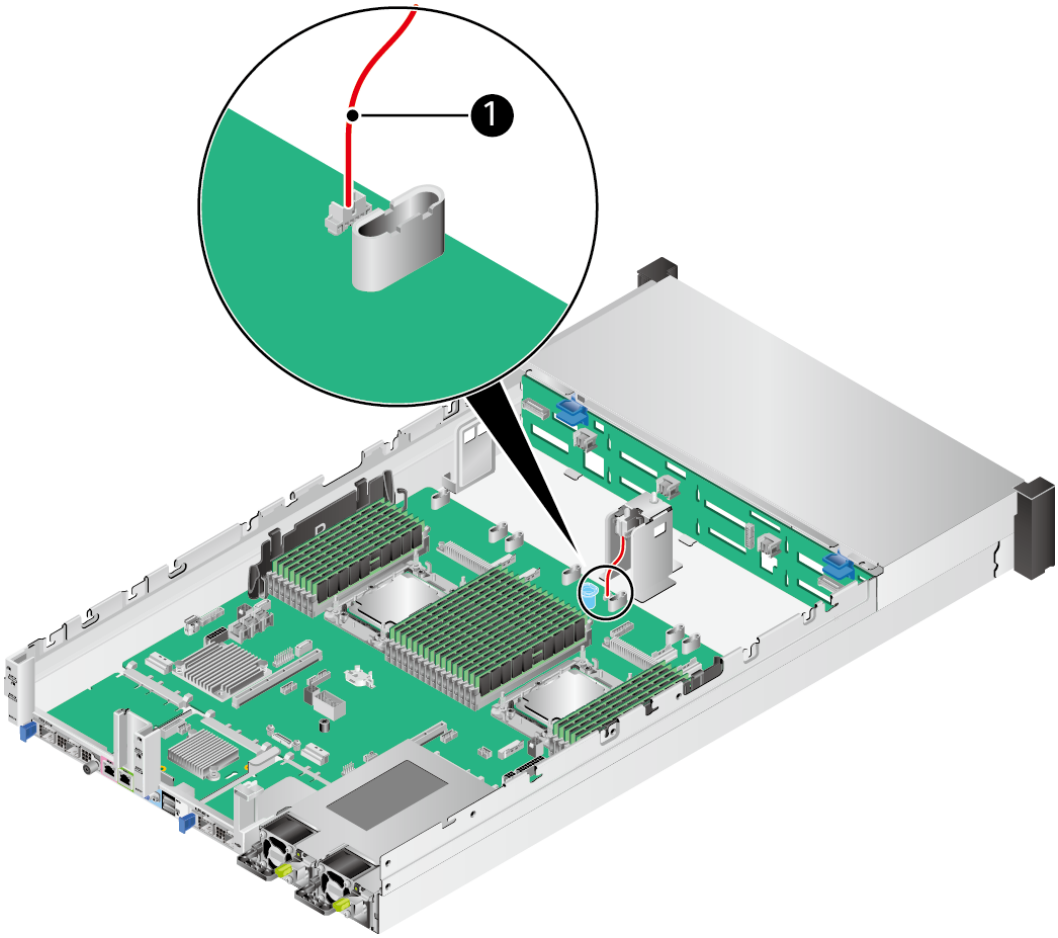

Table 6-177 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.2.5 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-216 M.2 SSD cabling

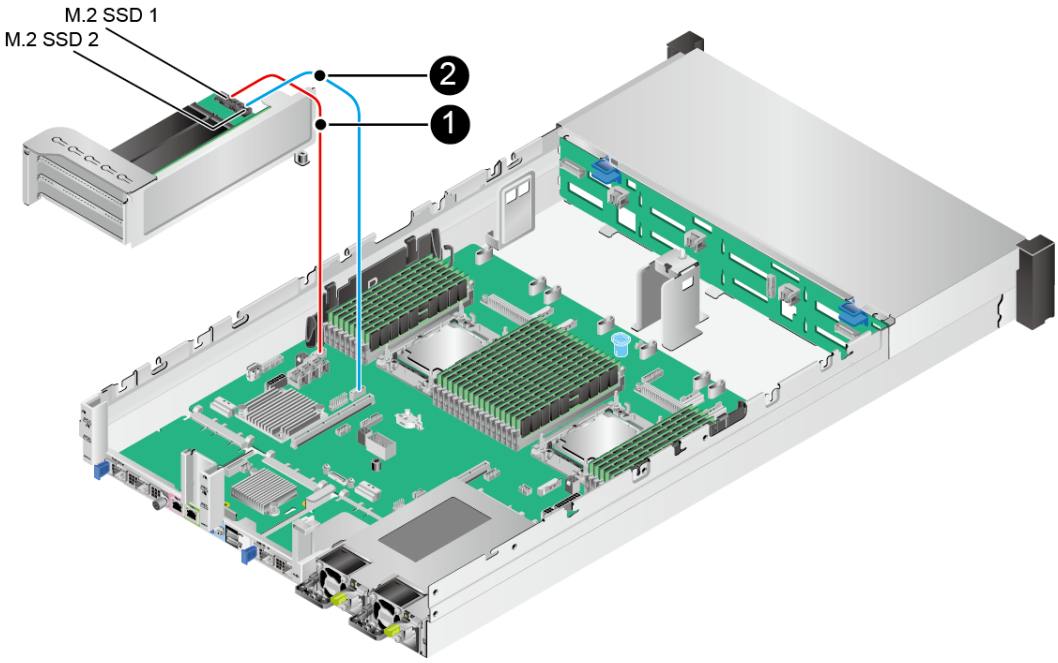

Table 6-178 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.5.2.6 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-217 Front-drive backplane power and low-speed signal cables

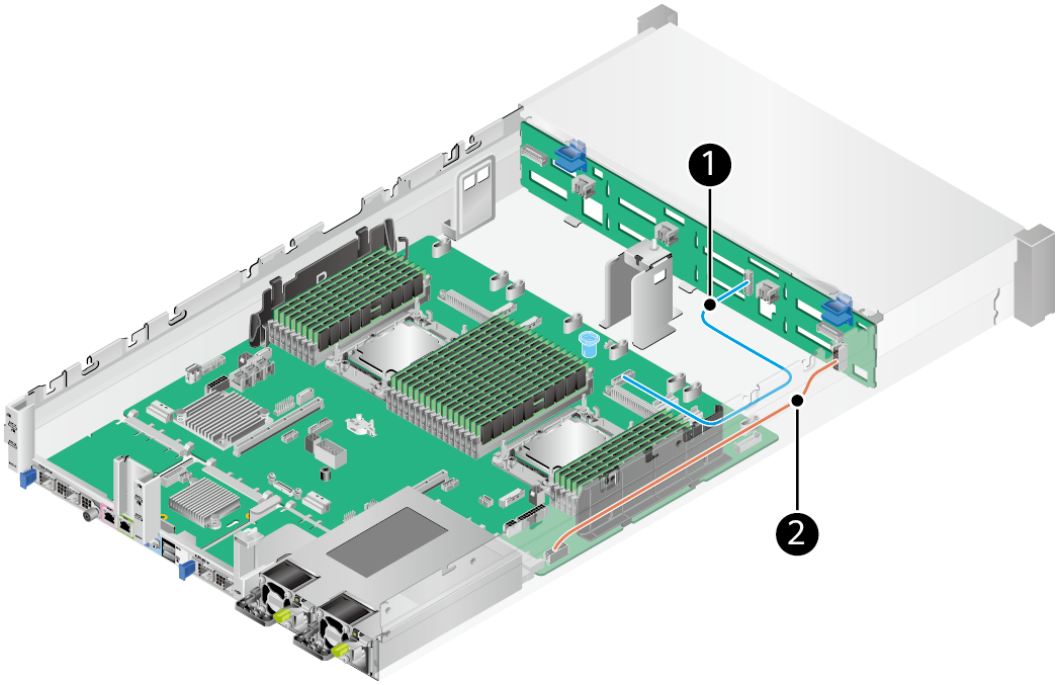

Table 6-179 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

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6.4.5.2.7 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-218 Front-drive backplane SAS high-speed cabling

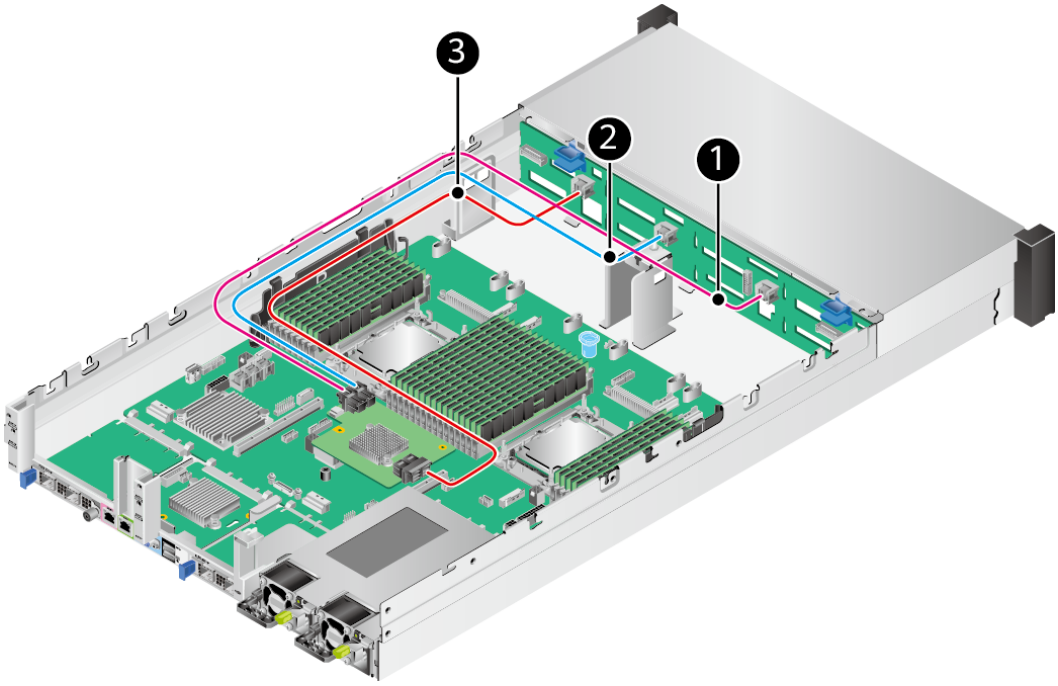

Table 6-180 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the screw-in RAID controller card

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6.4.5.2.8 I/O Module 1 (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-219 I/O module 1 cabling

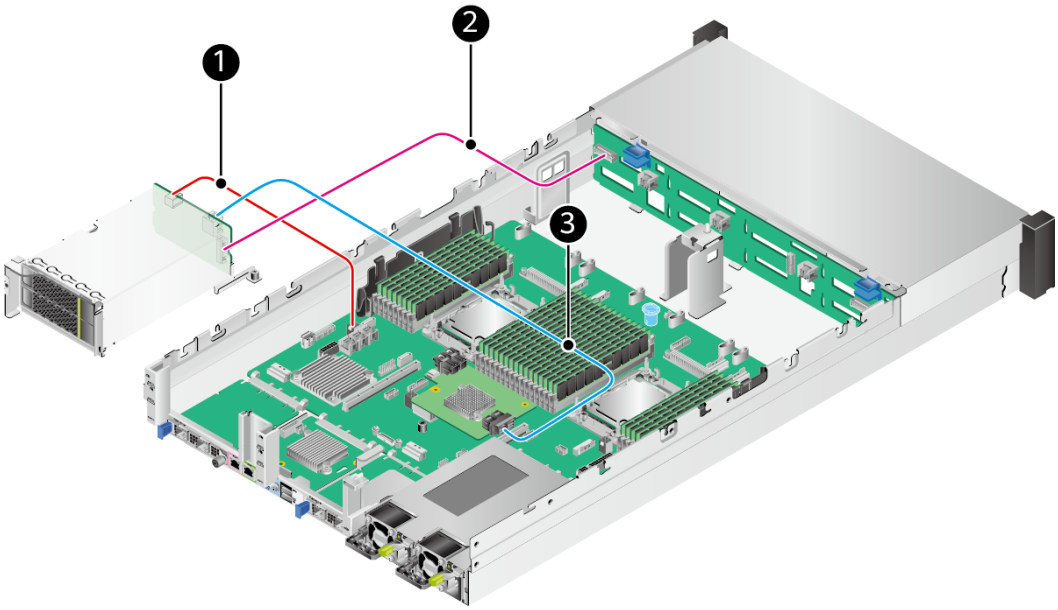

Table 6-181 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the screw-in RAID controller card.

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6.4.5.2.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-220 I/O module 1 cabling

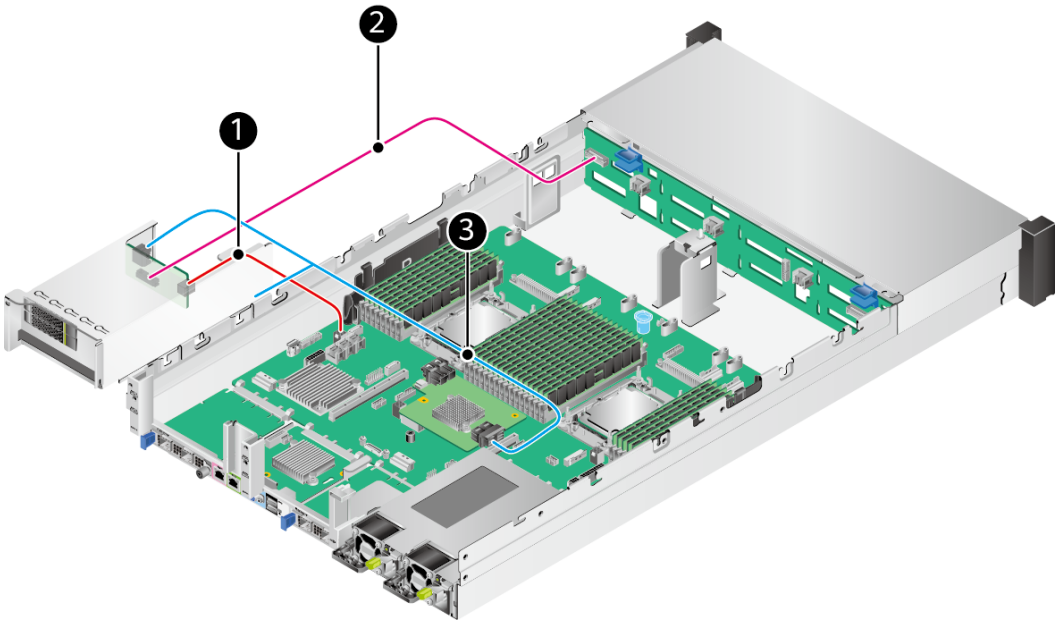

Table 6-182 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the the RAID controller card.

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6.4.5.2.10 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-221 I/O module 1 and I/O module 2 cabling

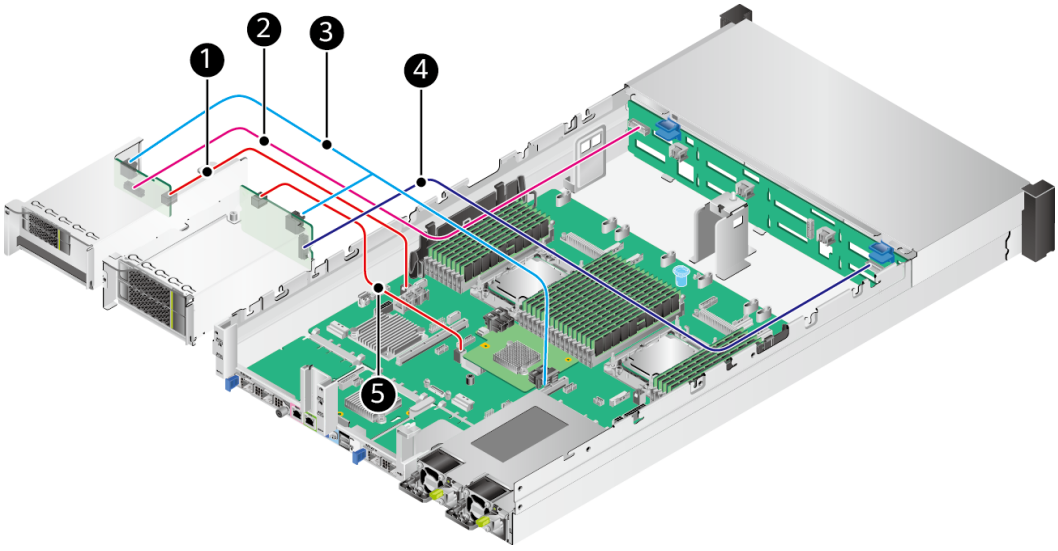

Table 6-183 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)

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6.4.5.2.11 I/O Module 1 (2 x 3.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-222 I/O module 1 and I/O module 2 cabling

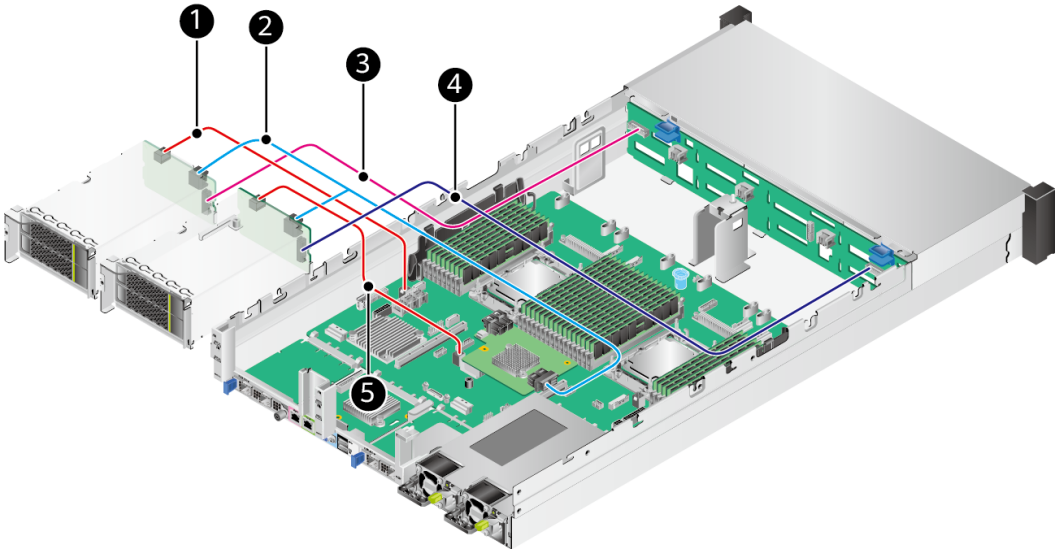

Table 6-184 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)

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6.4.5.2.12 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-223 I/O module 3 cabling

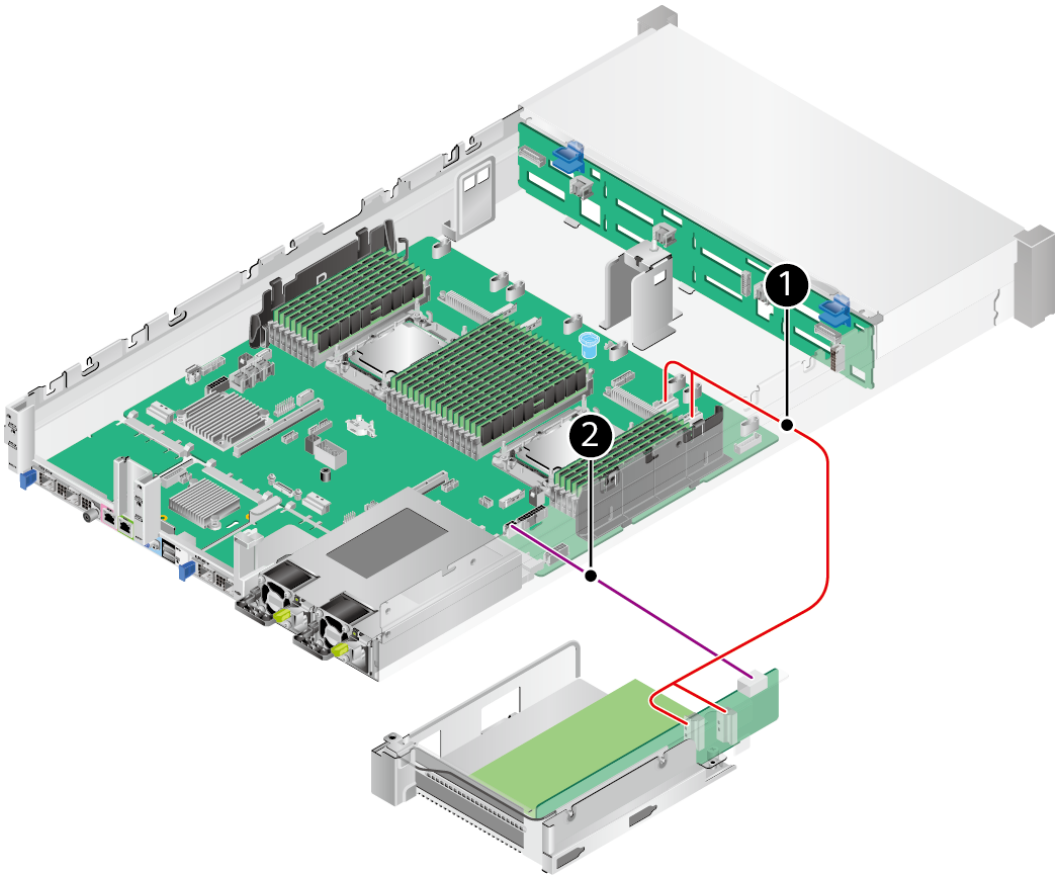

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Table 6-185 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.2.13 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-224 I/O module 3 cabling

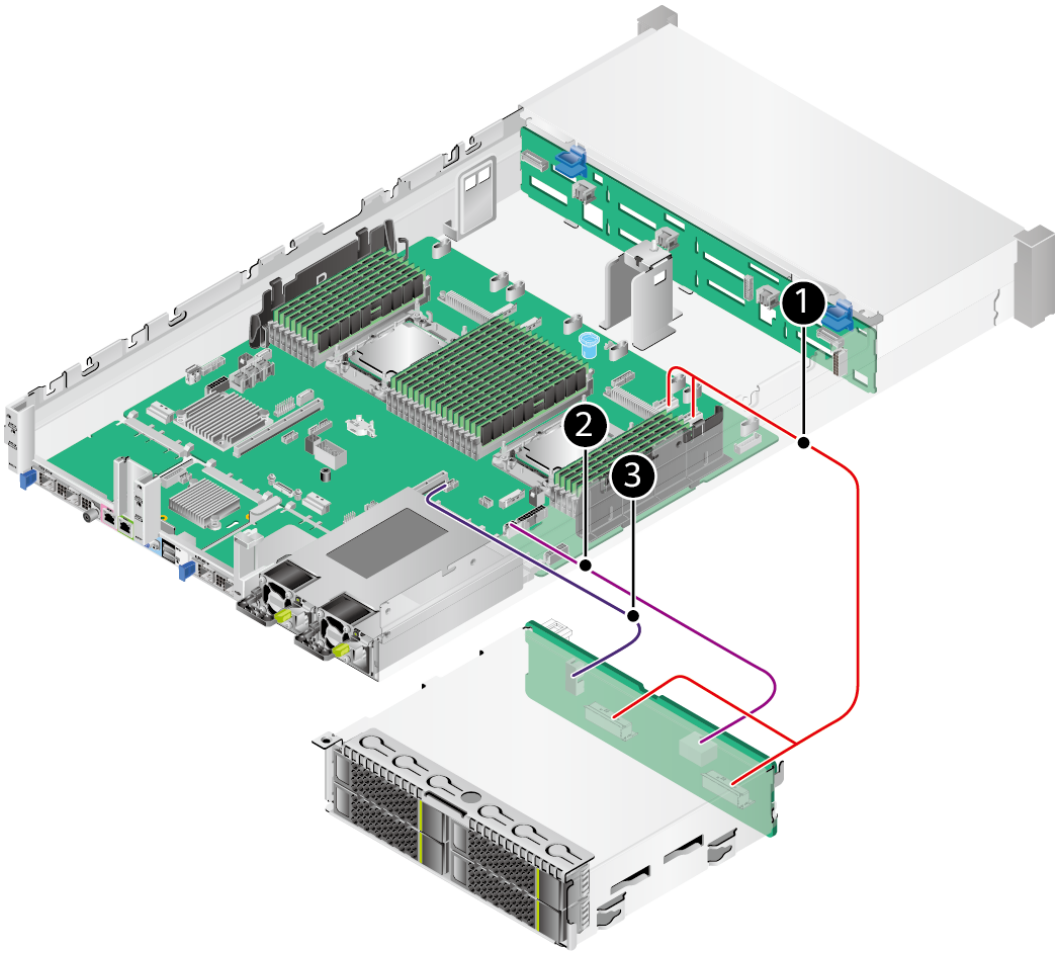

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Table 6-186 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.3 12 x 3.5" Drive Pass-through Configuration 3

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6.4.5.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-225 Left and right mounting ear cabling

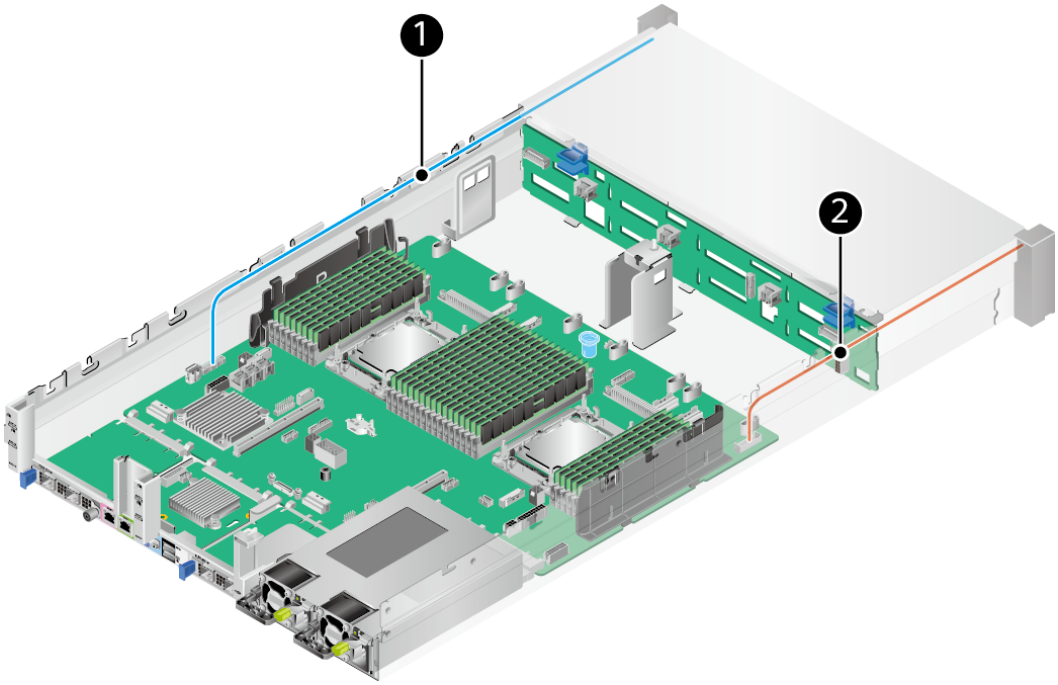

Table 6-187 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.3.2 NC-SI Cabling

NC-SI Cabling

Figure 6-226 NC-SI cabling

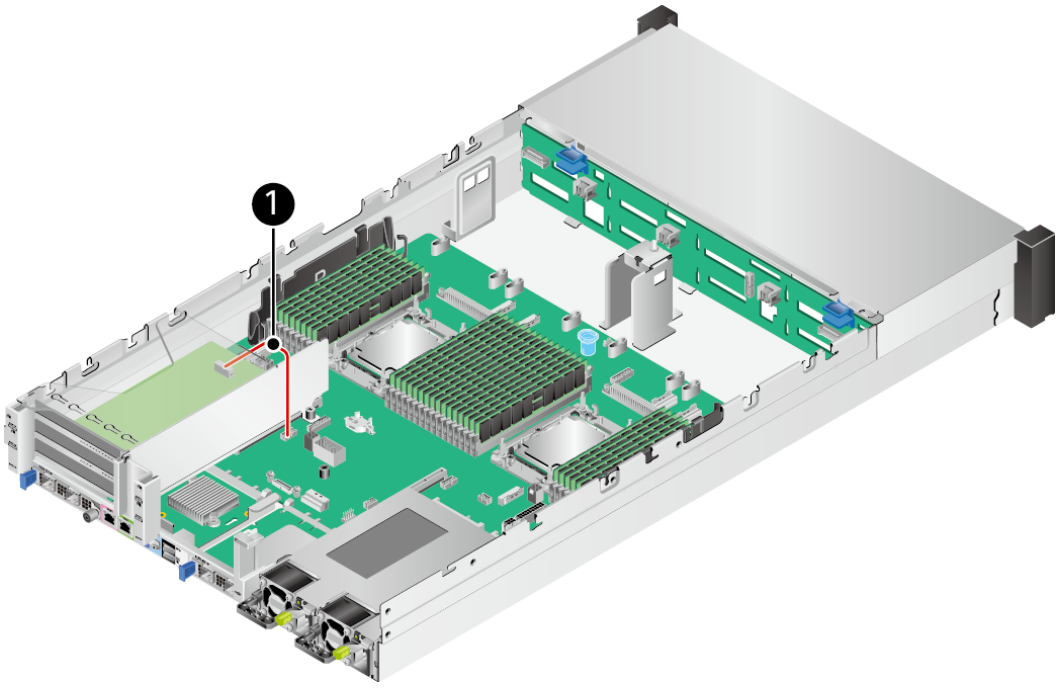

Table 6-188 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.5.3.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-227 OCP 3.0 expansion cable 1

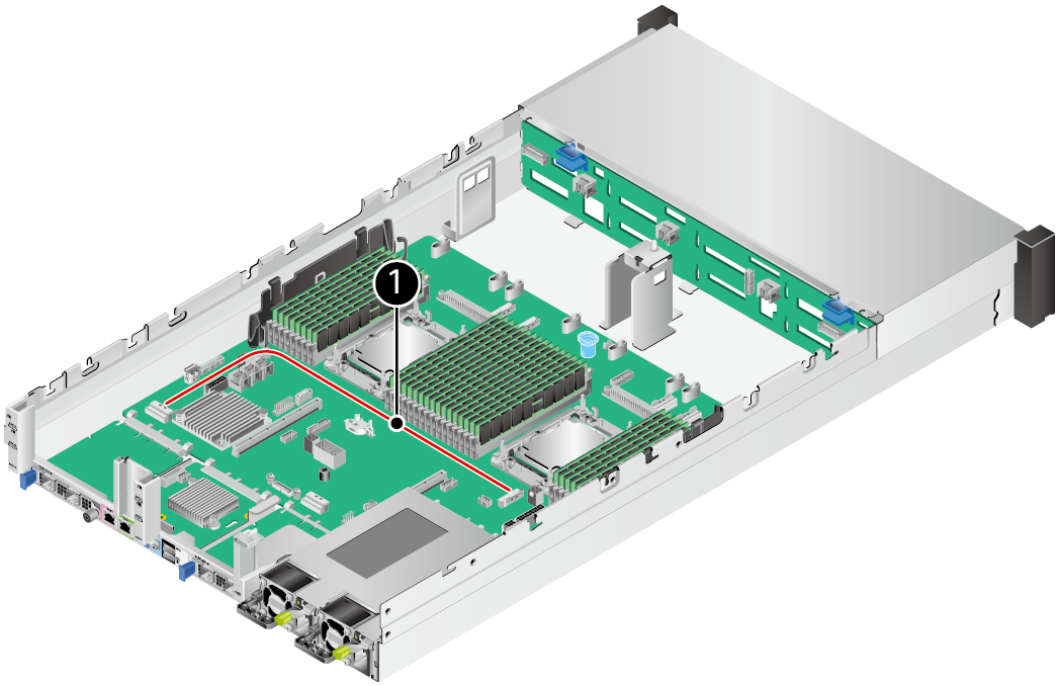

Table 6-189 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-228 OCP 3.0 expansion cable 2

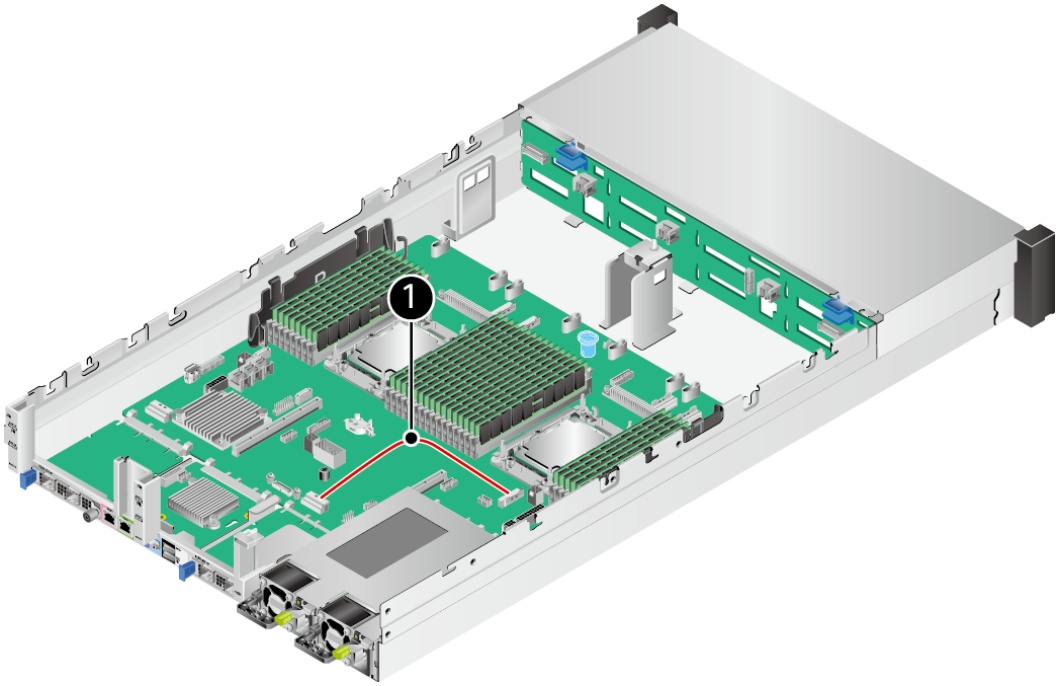

Table 6-190 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.3.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-229 Intrusion sensor cabling

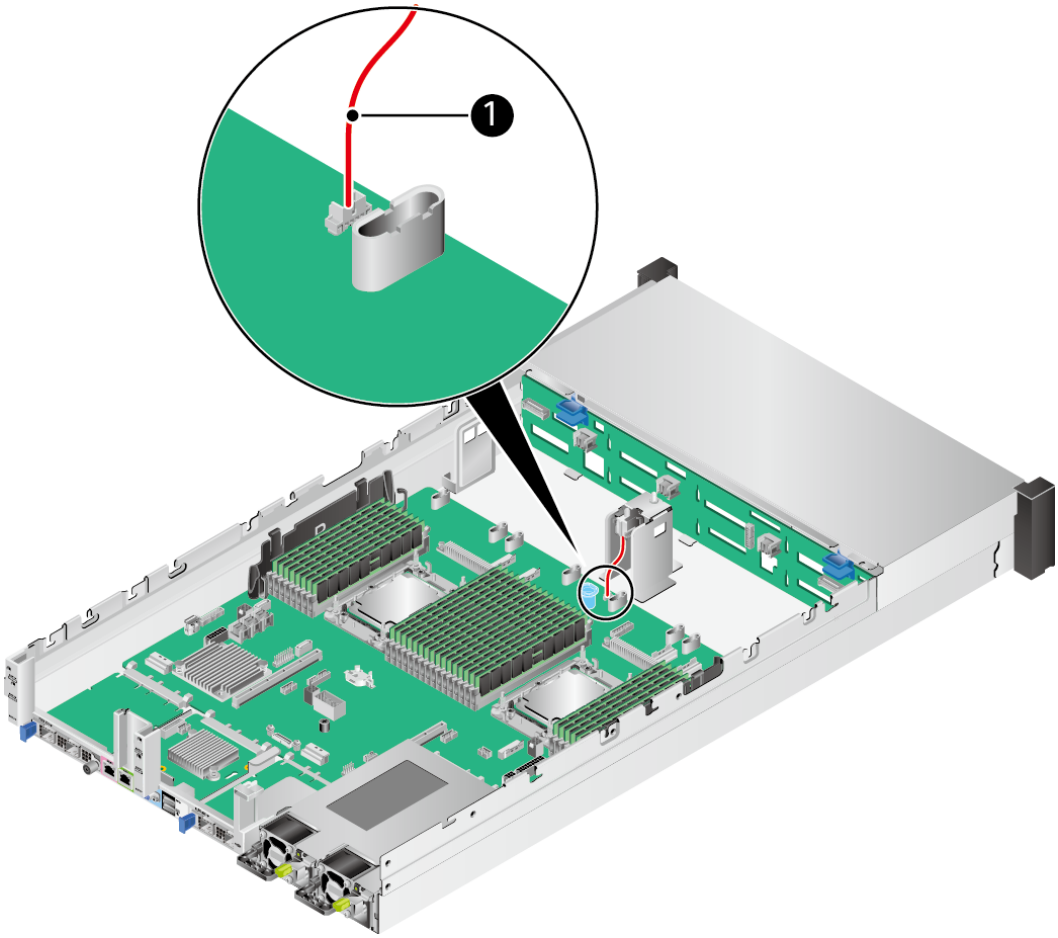

Table 6-191 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.3.5 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-230 M.2 SSD cabling

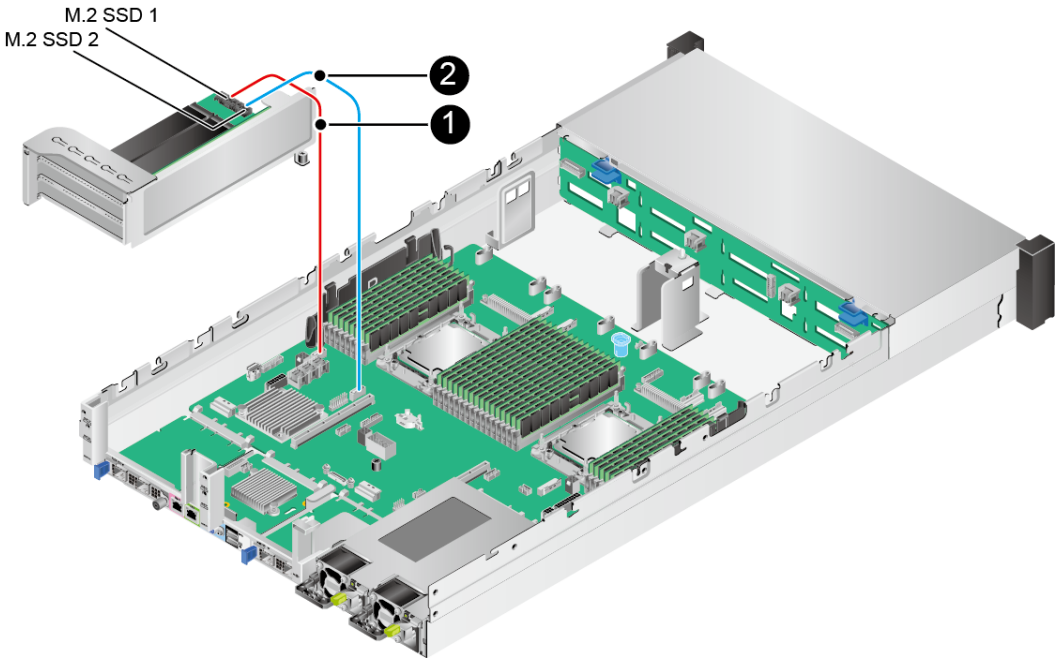

Table 6-192 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.5.3.6 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-231 Front-drive backplane power and low-speed signal cables

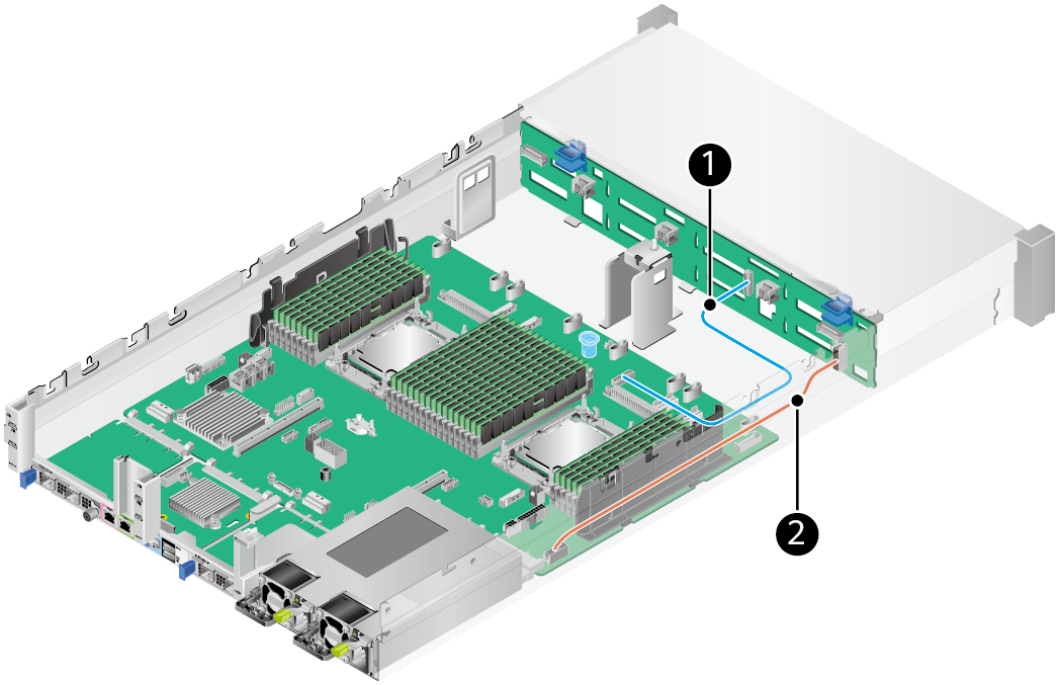

Table 6-193 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

6.4.5.3.7 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-232 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

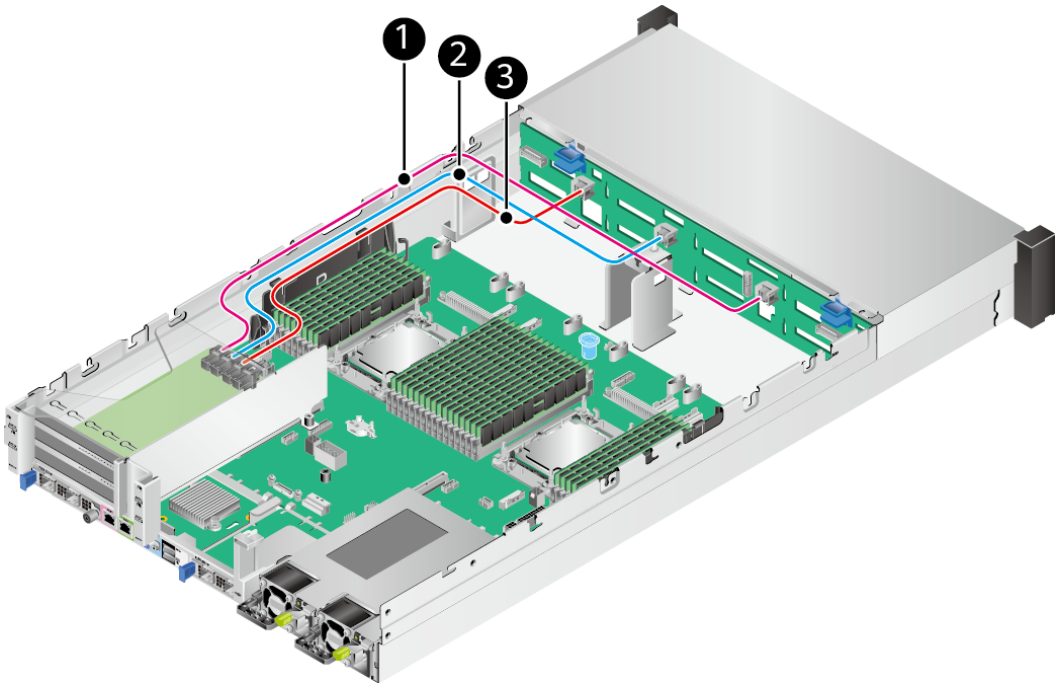

Table 6-194 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the PCIe RAID controller card
3	04051018	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the PCIe RAID controller card

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Figure 6-233 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

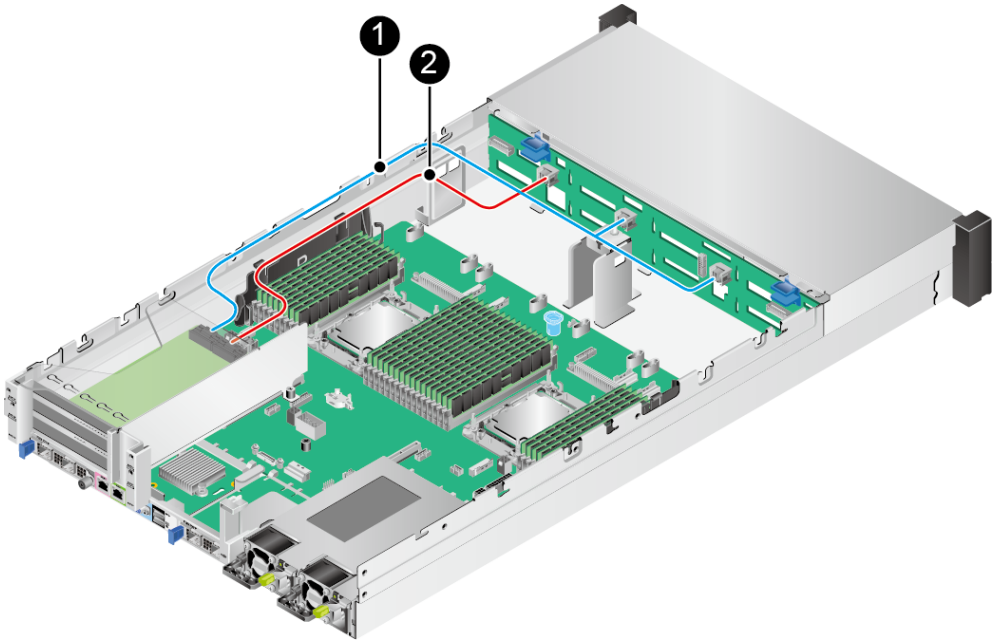

Table 6-195 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y017	SAS high-speed cable for connecting the front-drive backplane (J3/J4) to C0 of the PCIe RAID controller card **NOTE** 0405Y017 is a Y-shaped cable. The PORT A connector is connected to the front drive backplane (J3) , the PORT B connector is connected to the front drive backplane (J4), and another end of the cable is connected to the RAID controller card.
2	0405Y023	SAS high-speed cable for connecting the front-drive backplane (J5) to C1 of the PCIe RAID controller card **NOTE** PORT C of 0405Y023 connects to the front-drive backplane (J5), HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J3) may be C0, PORT A, 0, or CN0. The port number of the PCIe RAID controller card connected to front-drive backplane (J4) may be C1, PORT B, 1, or CN1, and the port number of the PCIe RAID controller card connected to front-drive backplane (J5) may be C2, PORT C, 2, or CN2.

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6.4.5.3.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-234 I/O module 1 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

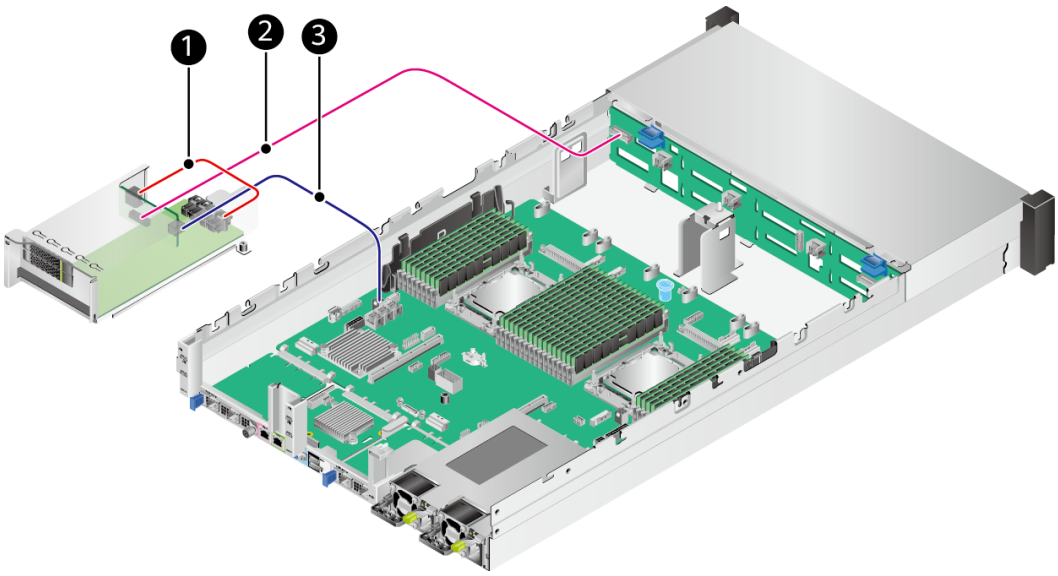

Table 6-196 I/O module 1 cabling

No.	P/N Code	Description
1	04052385	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card **NOTE** 04052385 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)

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Figure 6-235 I/O module 1 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

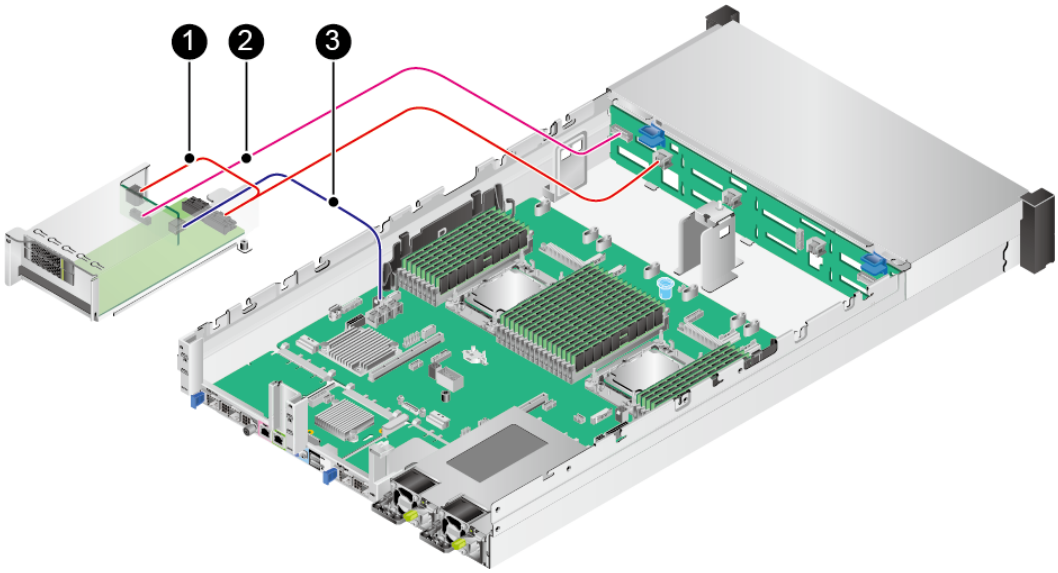

Table 6-197 I/O module 1 cabling

No.	P/N Code	Description
1	0405Y023	SAS high-speed cable for connecting the rear-drive backplane (J2) and front-drive backplane (J5) to C1 of the PCIe RAID controller card **NOTE** PORT C of 0405Y023 connects to the front-drive backplane (J5), HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.4.5.3.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-236 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

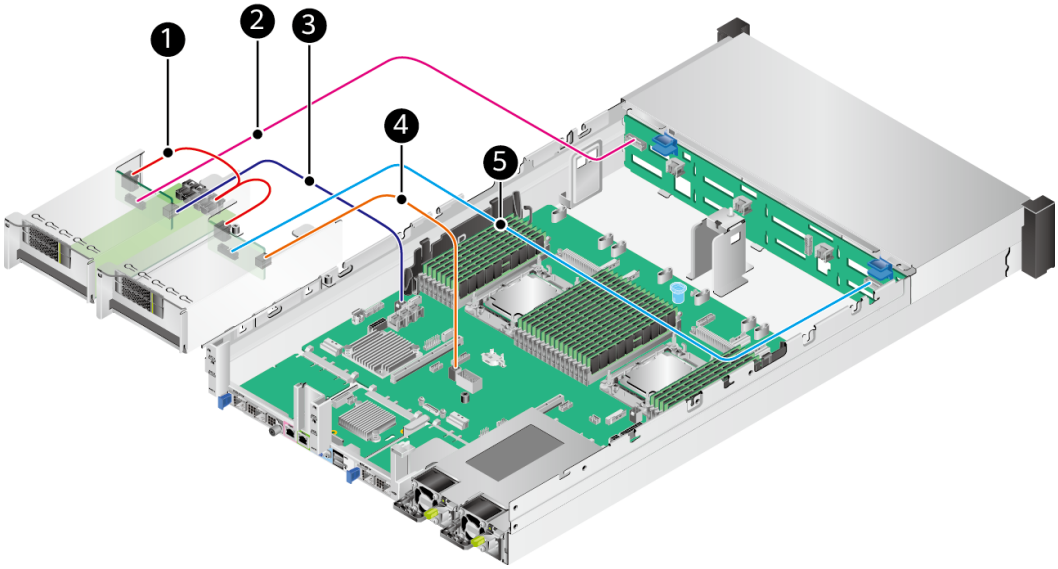

Table 6-198 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052385	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card **NOTE** 04052385is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)

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Figure 6-237 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

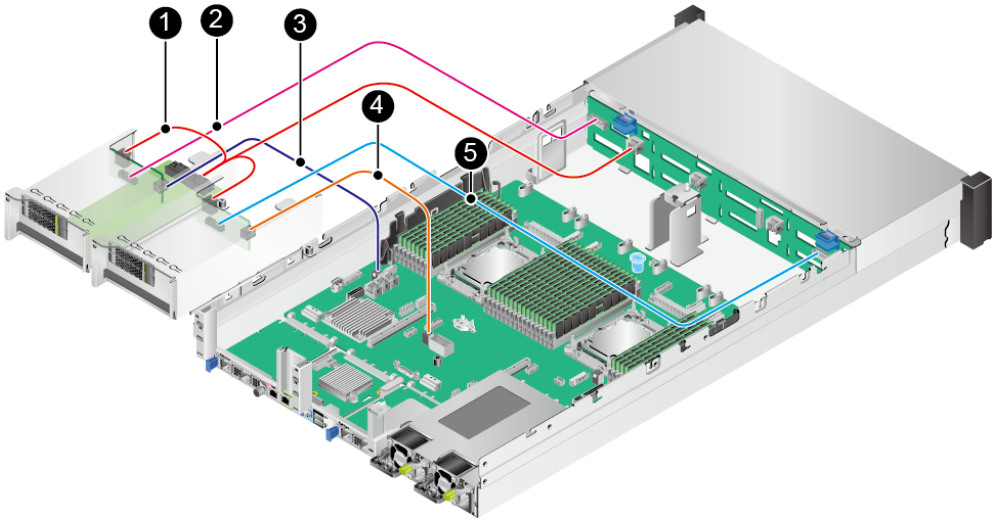

Table 6-199 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	0405Y023	SAS high-speed cable for connecting the rear-drive backplane (J2) and front-drive backplane (J5) to C1 of the PCIe RAID controller card **NOTE** PORT C of 0405Y023 connects to the front-drive backplane (J5), HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.4.5.3.10 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-238 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

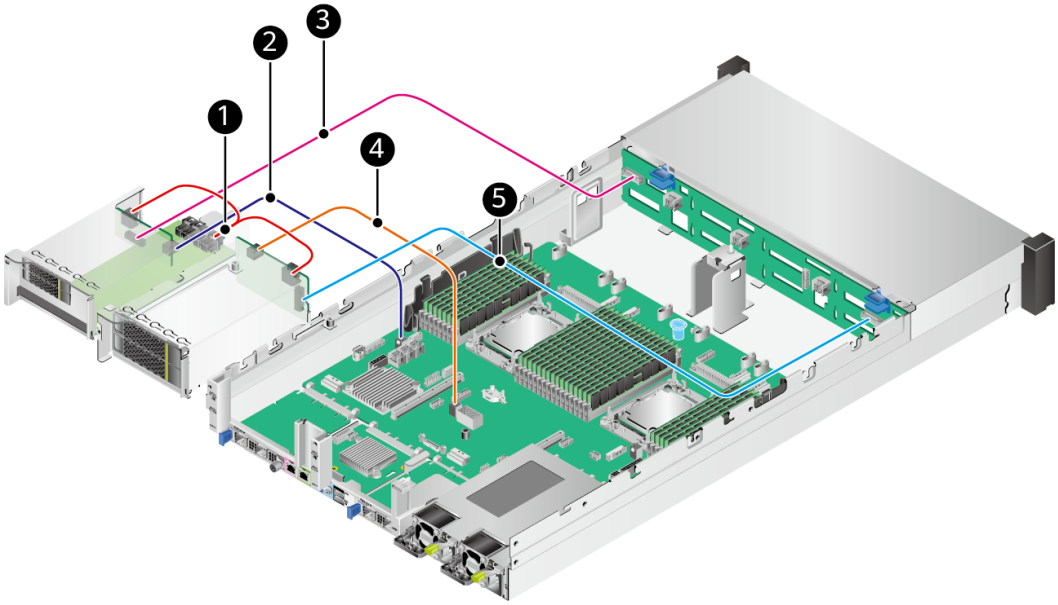

Table 6-200 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052385	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card **NOTE** 04052385 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)

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Figure 6-239 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

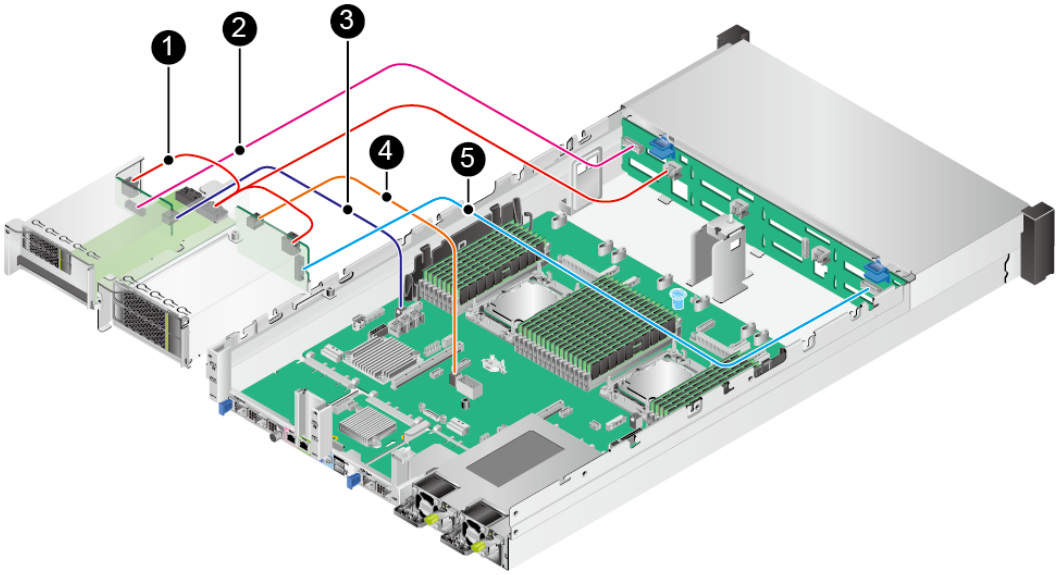

Table 6-201 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	0405Y023	SAS high-speed cable for connecting the rear-drive backplane (J2) and front-drive backplane (J5) to C1 of the PCIe RAID controller card **NOTE** PORT C of 0405Y023 connects to the front-drive backplane (J5), HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.4.5.3.11 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-240 I/O module 3 cabling

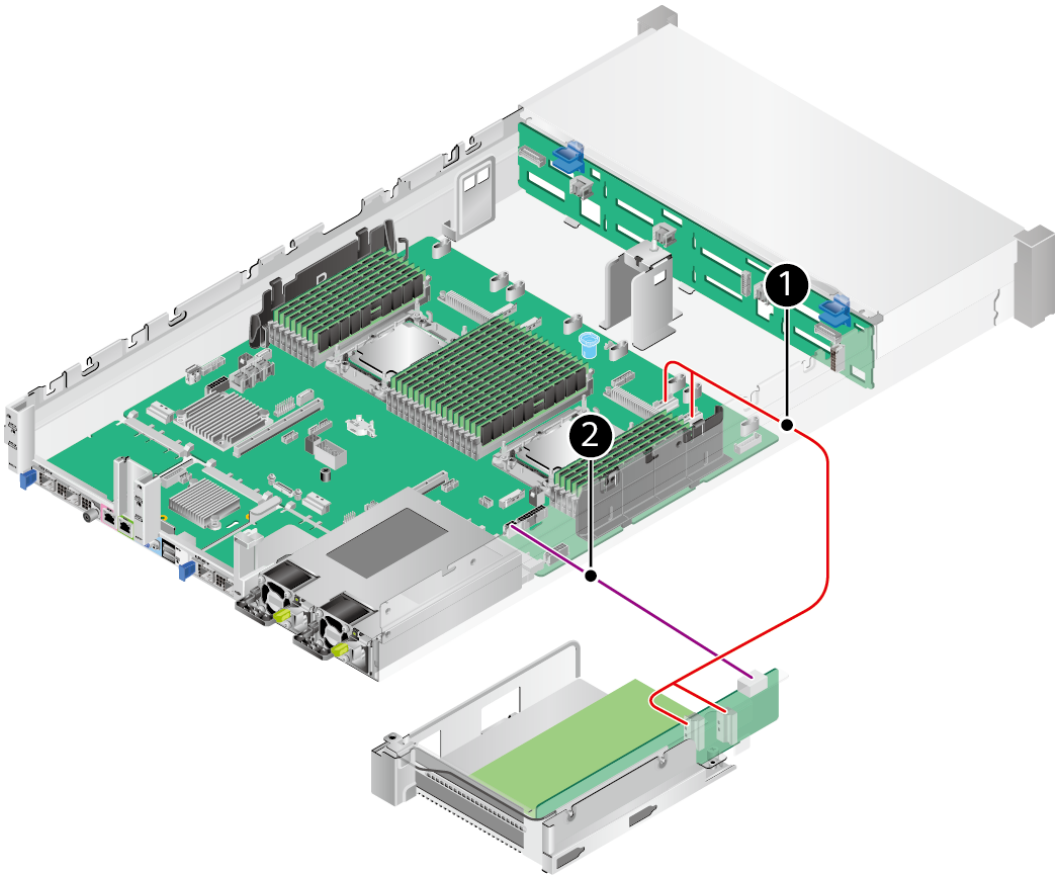

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Table 6-202 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.3.12 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-241 I/O module 3 cabling

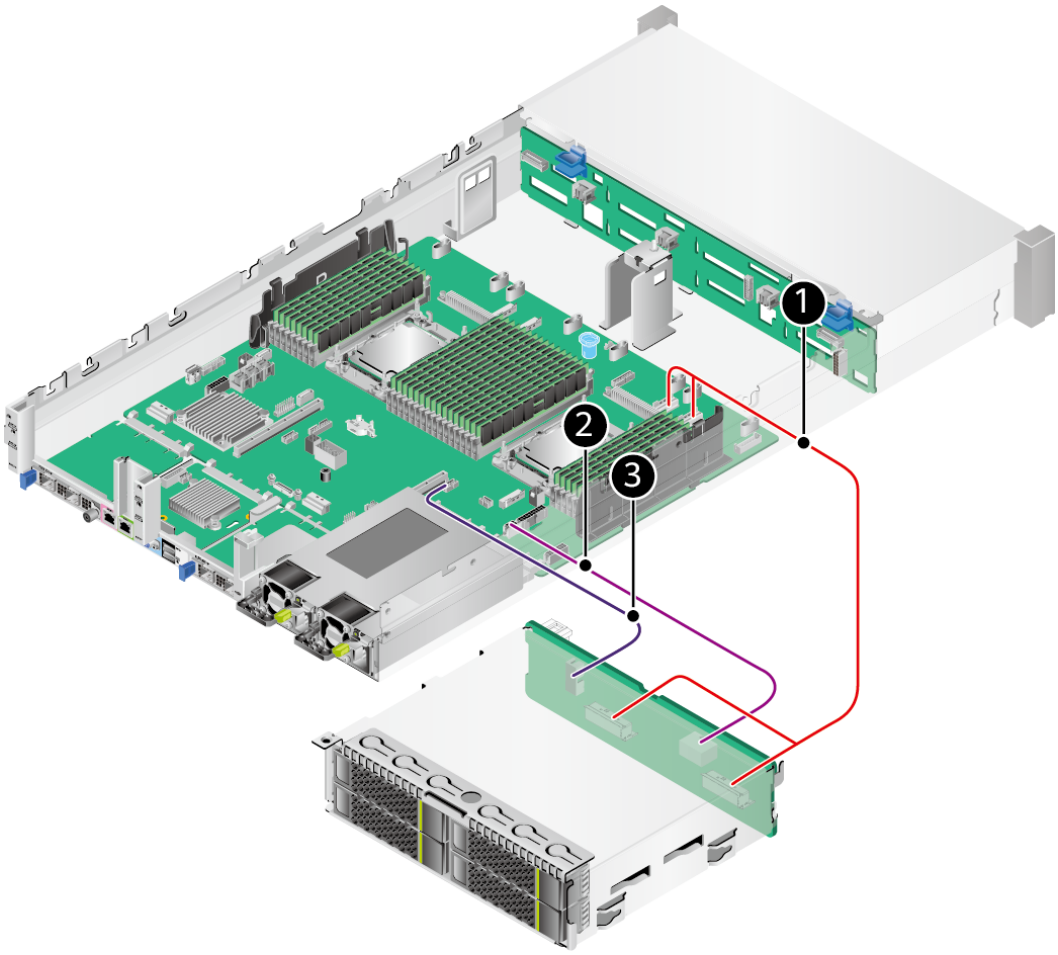

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Table 6-203 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.4 12 x 3.5" Drive Pass-through Configuration 4

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6.4.5.4.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-242 Left and right mounting ear cabling

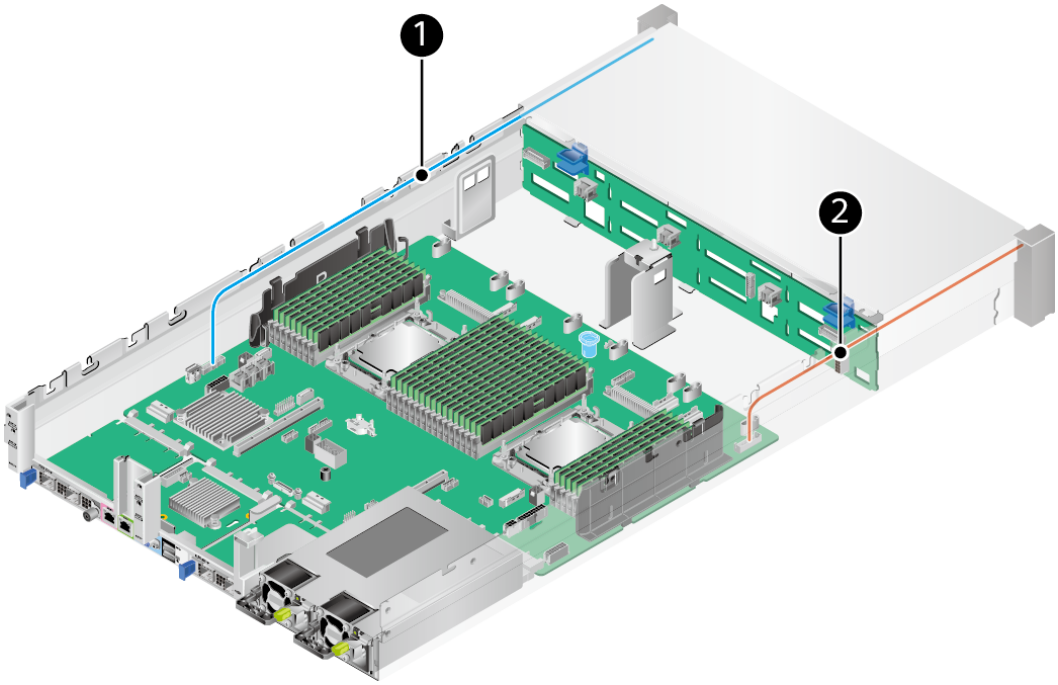

Table 6-204 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.4.2 NC-SI Cabling

NC-SI Cabling

Figure 6-243 NC-SI cabling

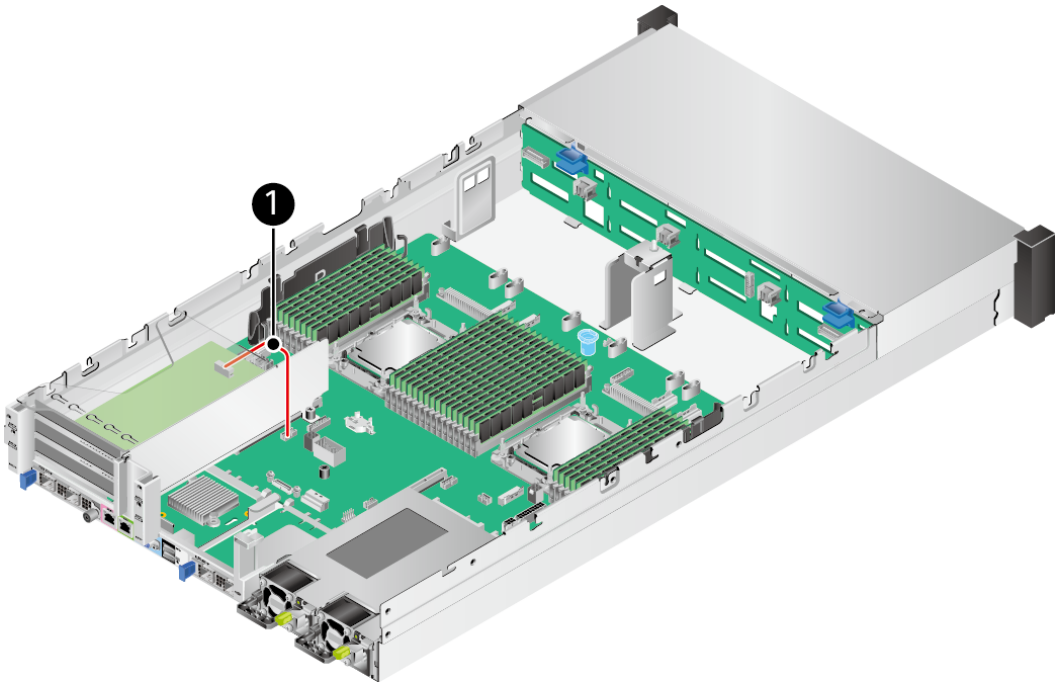

Table 6-205 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.5.4.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-244 OCP 3.0 expansion cable 1

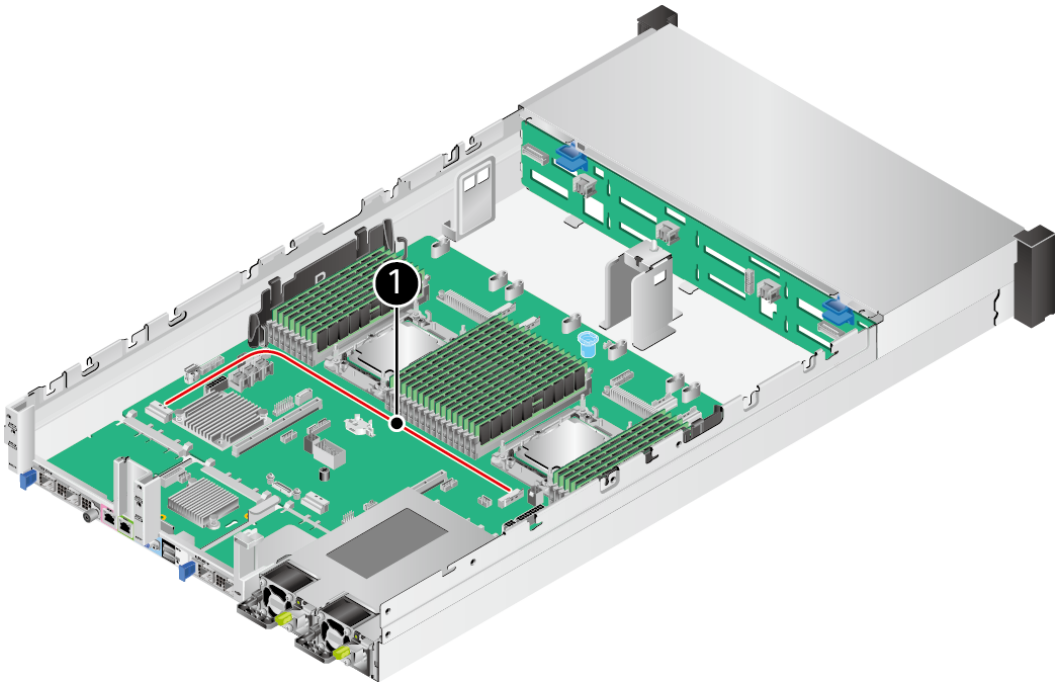

Table 6-206 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-245 OCP 3.0 expansion cable 2

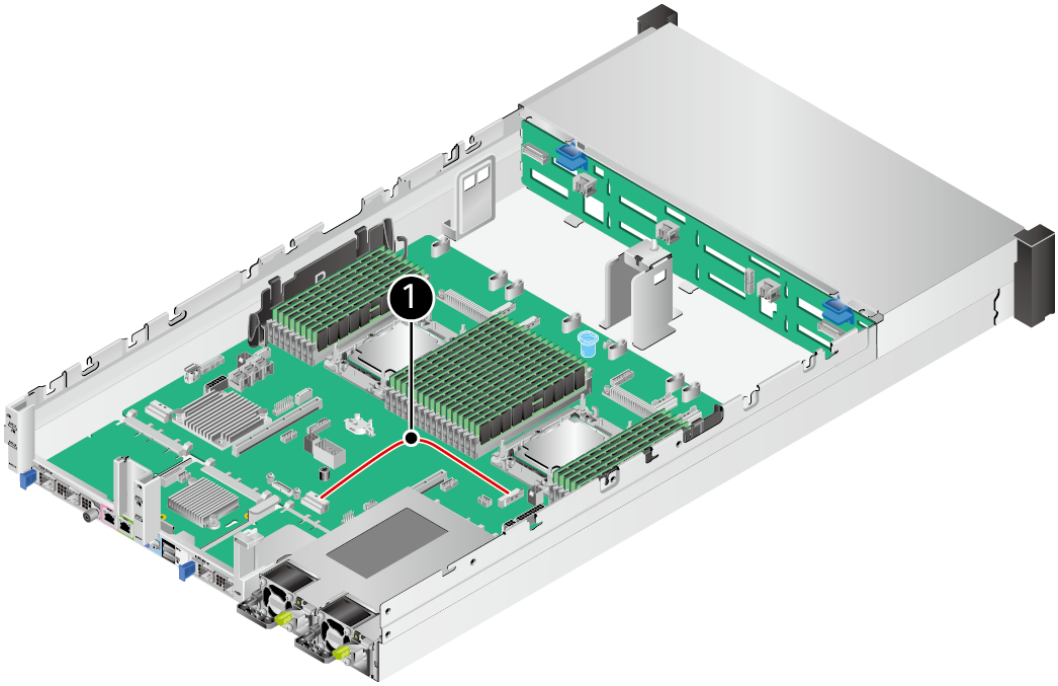

Table 6-207 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.4.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-246 Intrusion sensor cabling

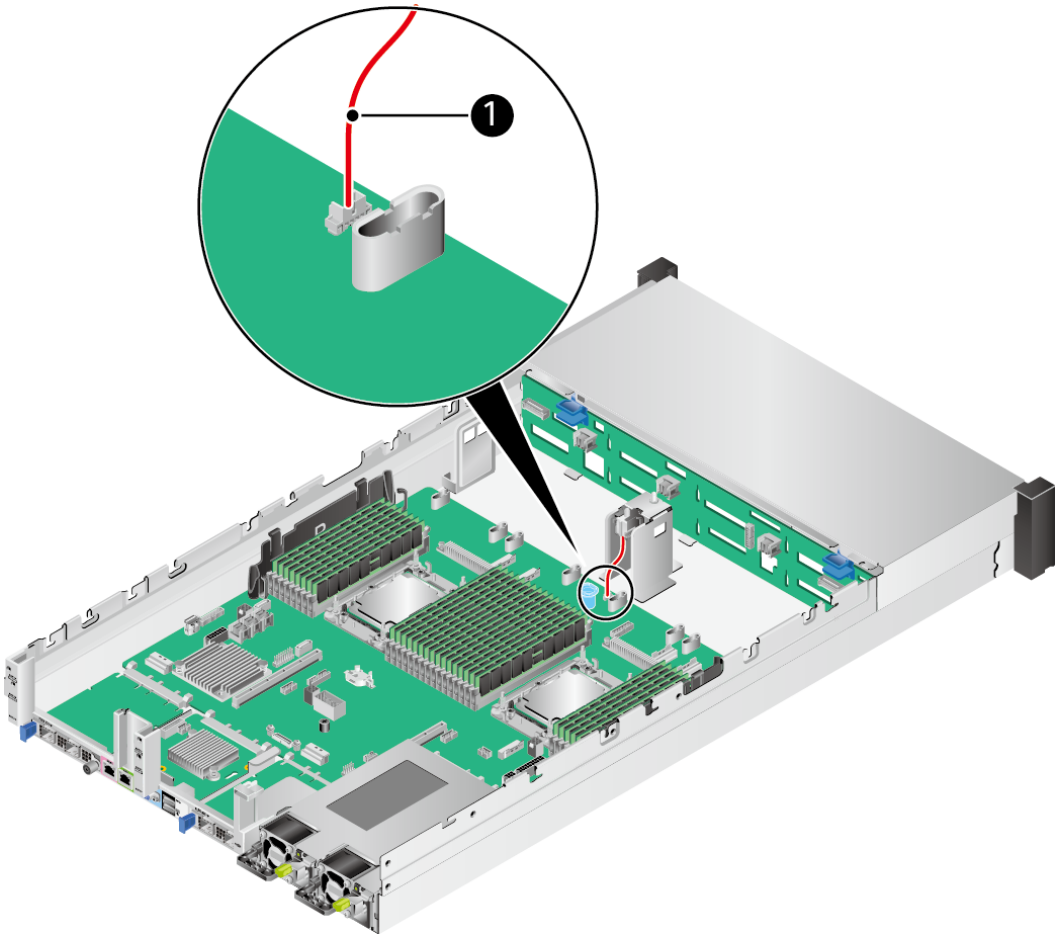

Table 6-208 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.4.5 M.2 SSD Cabling

M.2 SSD Cabling

Figure 6-247 M.2 SSD cabling

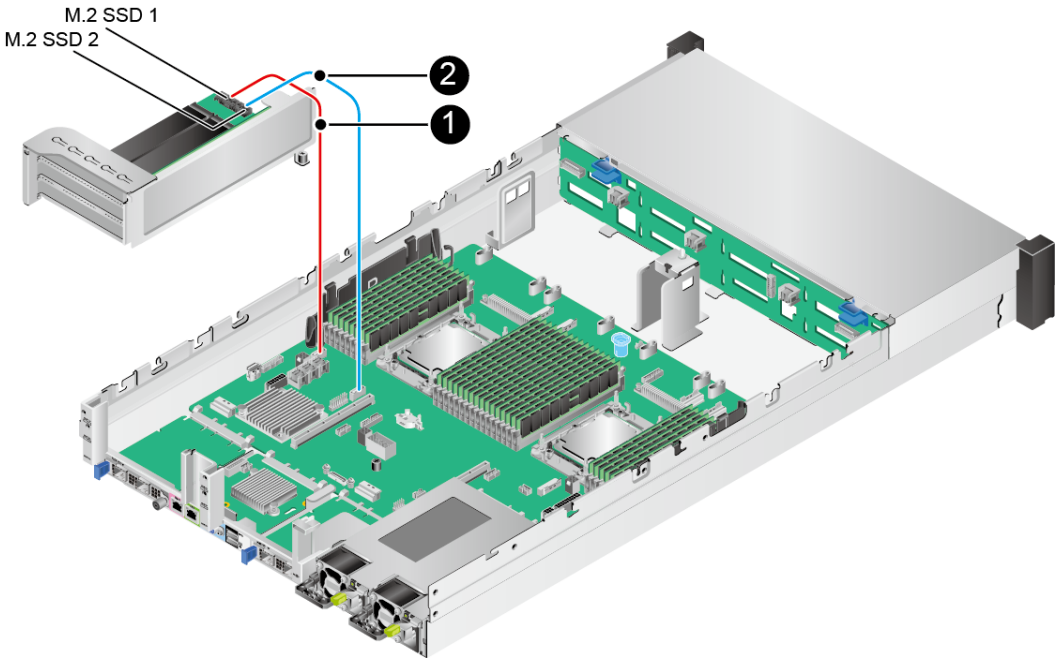

Table 6-209 M.2 SSD cabling

No.	P/N Code	Description
1	04051409	High-speed cable for connecting M.2 SSD 1 to the mainboard (J1)
2	04051409	High-speed cable for connecting M.2 SSD 2 to the mainboard (J2)

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6.4.5.4.6 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-248 Front-drive backplane power and low-speed signal cables

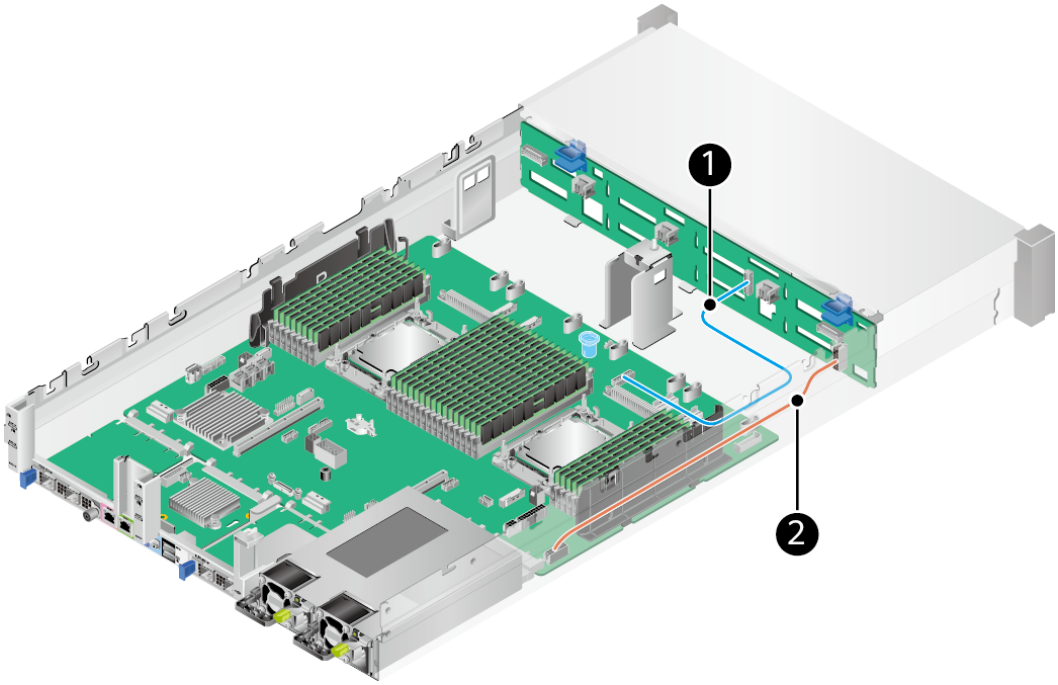

Table 6-210 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

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6.4.5.4.7 Front-Drive Backplane SAS High-speed Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-249 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

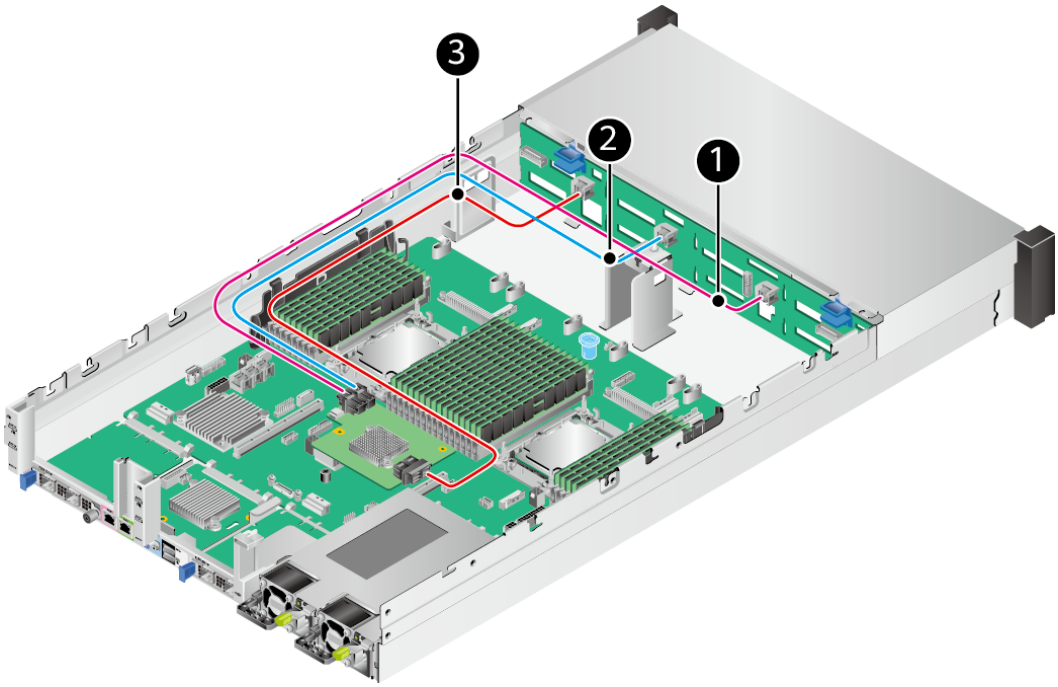

Table 6-211 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the screw-in RAID controller card

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Figure 6-250 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

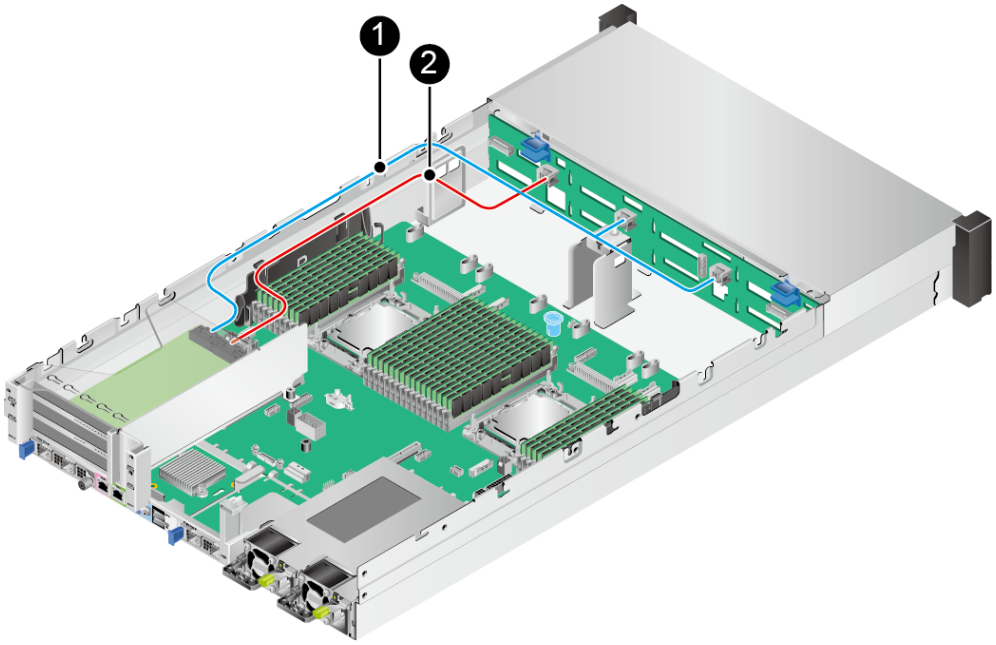

Table 6-212 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1		SAS high-speed cable for connecting the front-drive backplane (J3/J4) to C0 of the screw-in RAID controller card **NOTE** 0405Y017 is a Y-shaped cable. The PORT A connector is connected to the front drive backplane (J3) , the PORT B connector is connected to the front drive backplane (J4), and another end of the cable is connected to the RAID controller card.
2	0405Y023	SAS high-speed cable for connecting the front-drive backplane (J5) to C1 of the screw-in RAID controller card **NOTE** 0 .

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6.4.5.4.8 I/O Module 2 (2 x 3.5" SAS/SATA Drives)

I/O Module 2 Cabling

Figure 6-251 I/O module 2 cabling

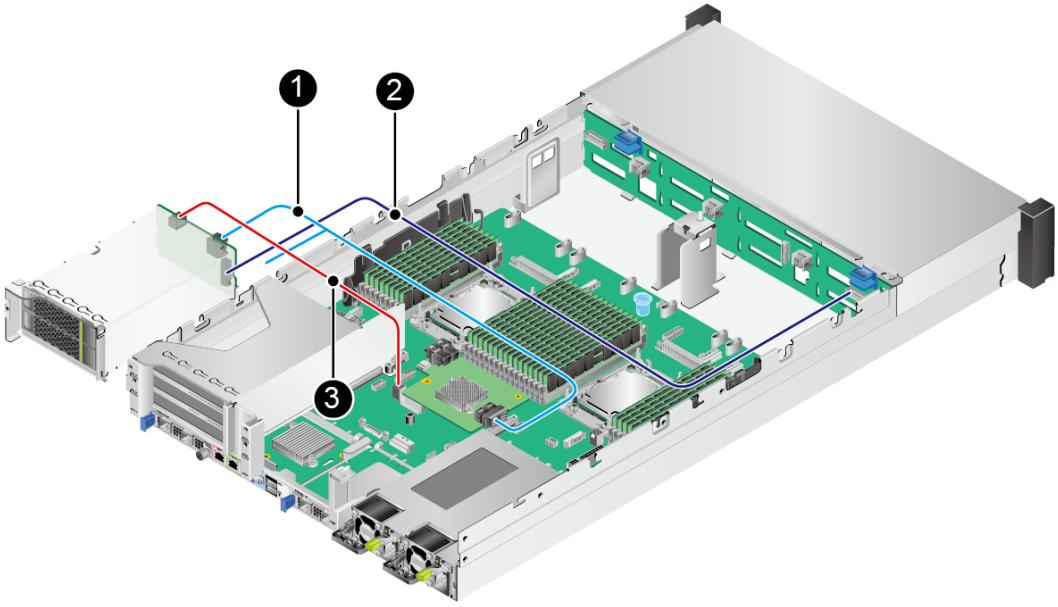

Table 6-213 I/O module 2 cabling

No.	P/N Code	Description
1	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 2, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)

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6.4.5.4.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-252 I/O module 3 cabling

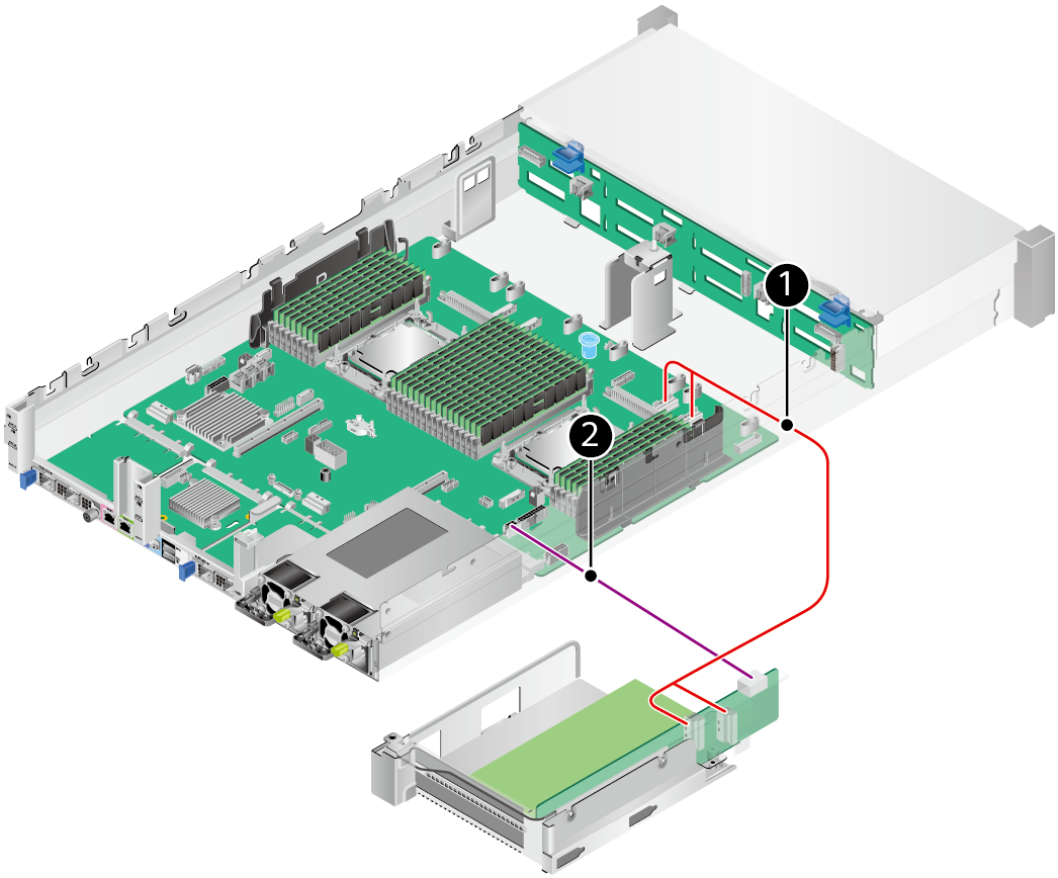

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Table 6-214 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.4.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-253 I/O module 3 cabling

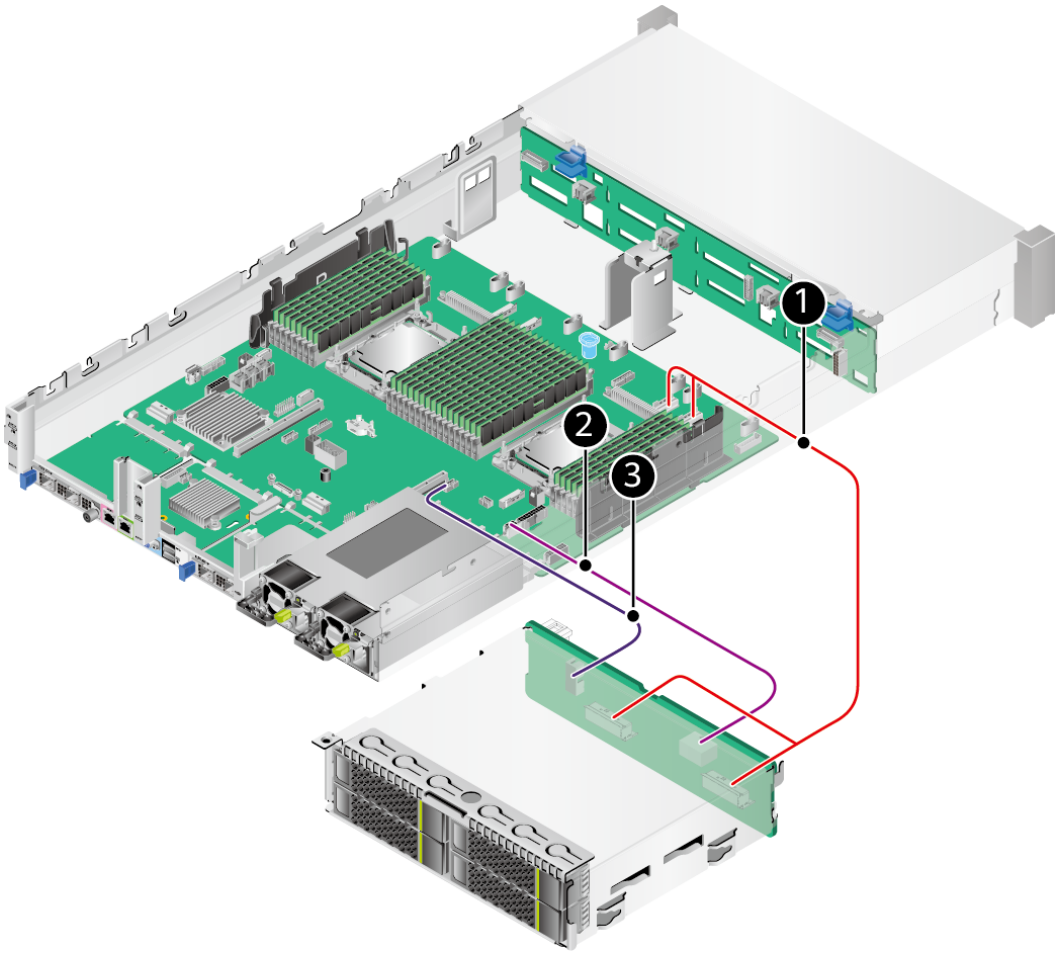

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Table 6-215 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.5 12 x 3.5" Drive Pass-through Configuration 5 (Dual RAID Controller Cards)

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6.4.5.5.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-254 Left and right mounting ear cabling

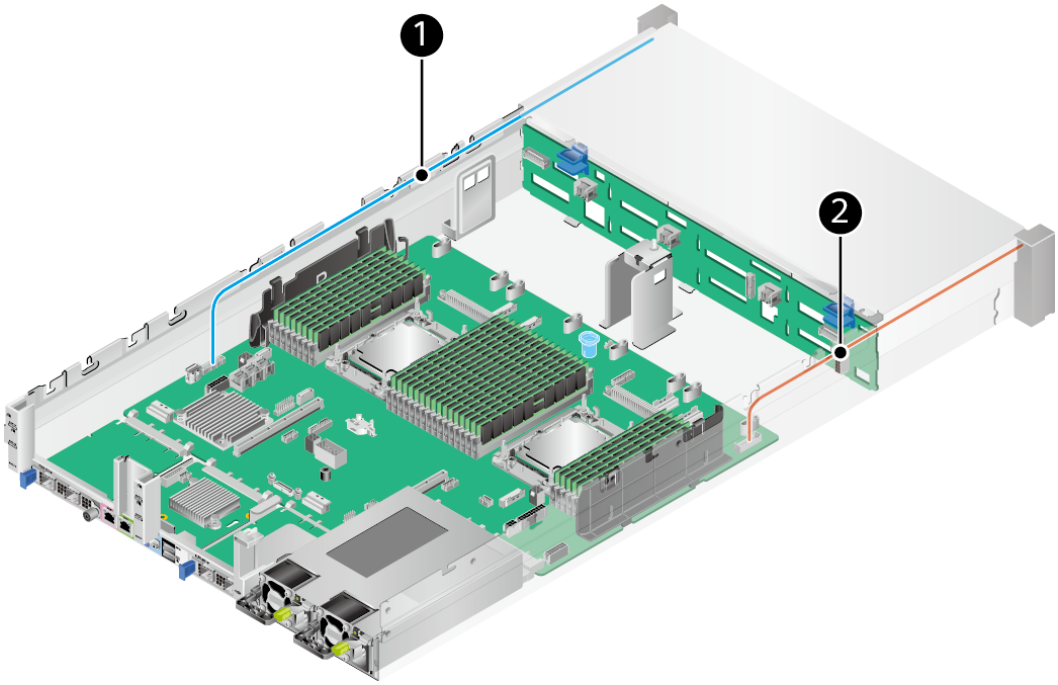

Table 6-216 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.5.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-255 OCP 3.0 expansion cable 1

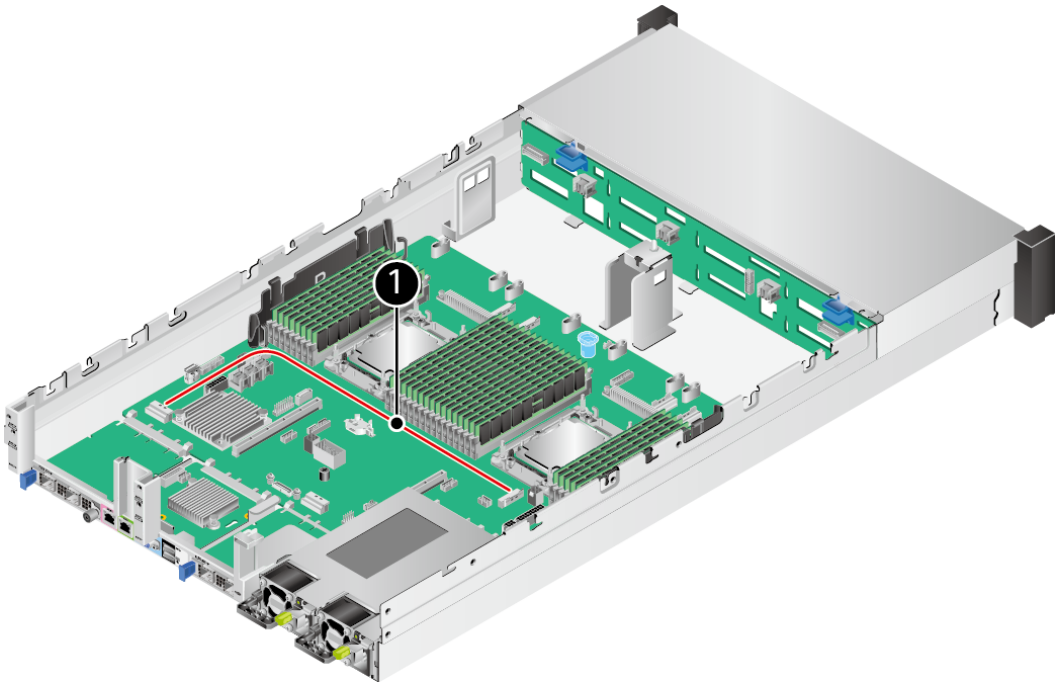

Table 6-217 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-256 OCP 3.0 expansion cable 2

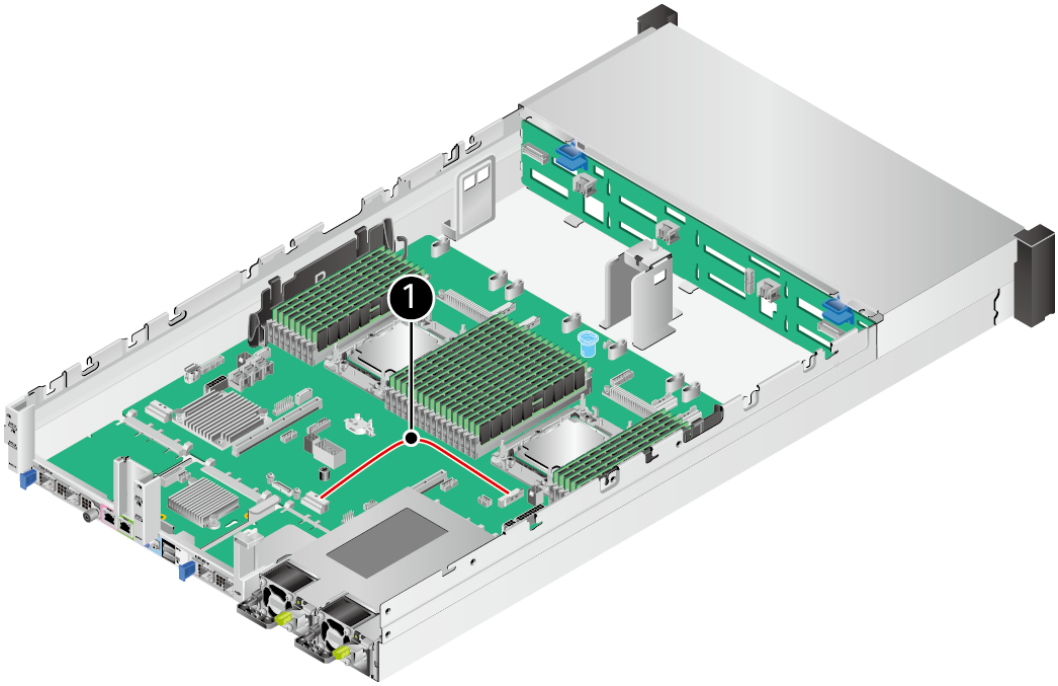

Table 6-218 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.5.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-257 Intrusion sensor cabling

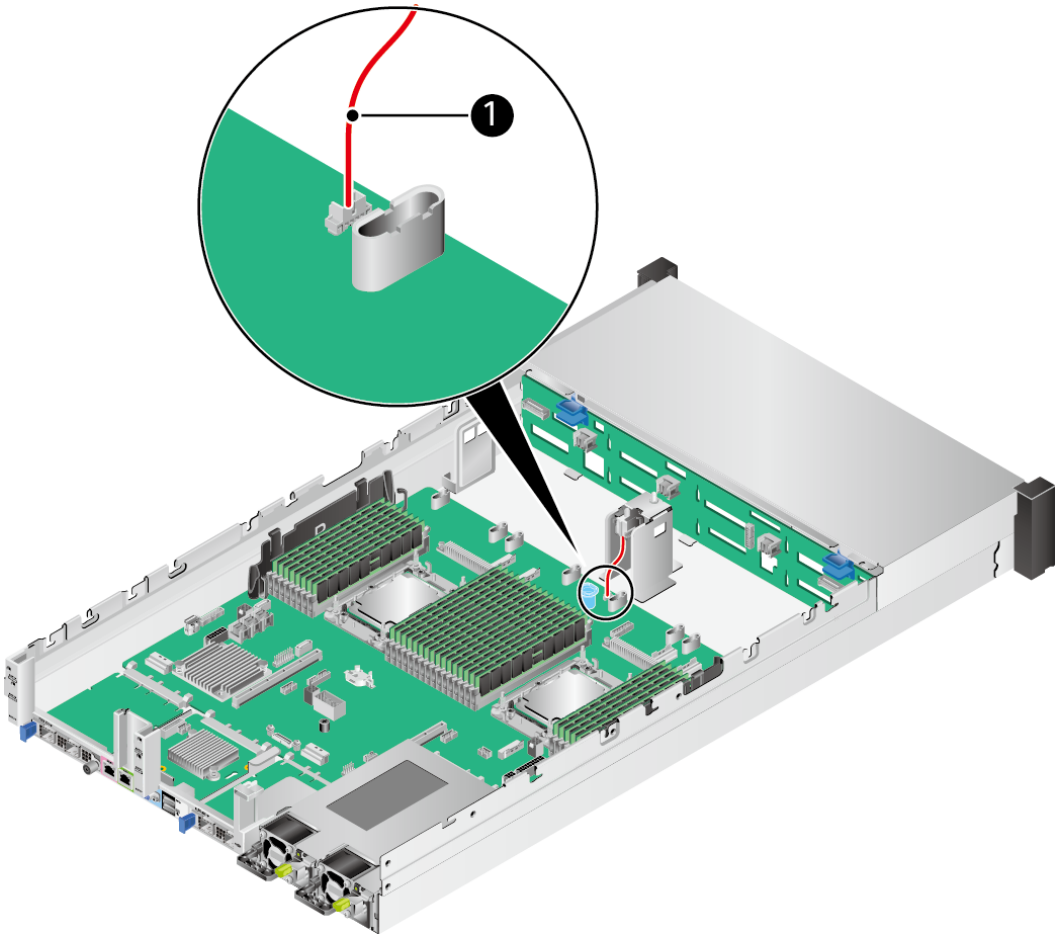

Table 6-219 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.5.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-258 Front-drive backplane power and low-speed signal cables

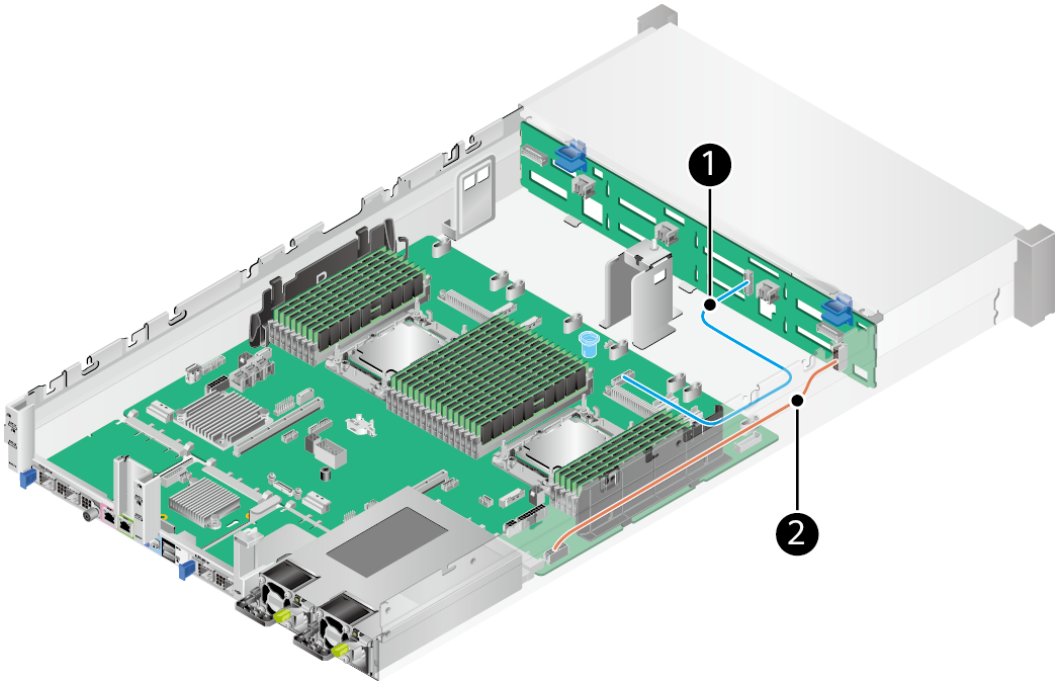

Table 6-220 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

6.4.5.5.5 Front-Drive Backplane SAS High-speed Cabling

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-259 Front-drive backplane SAS high-speed cabling

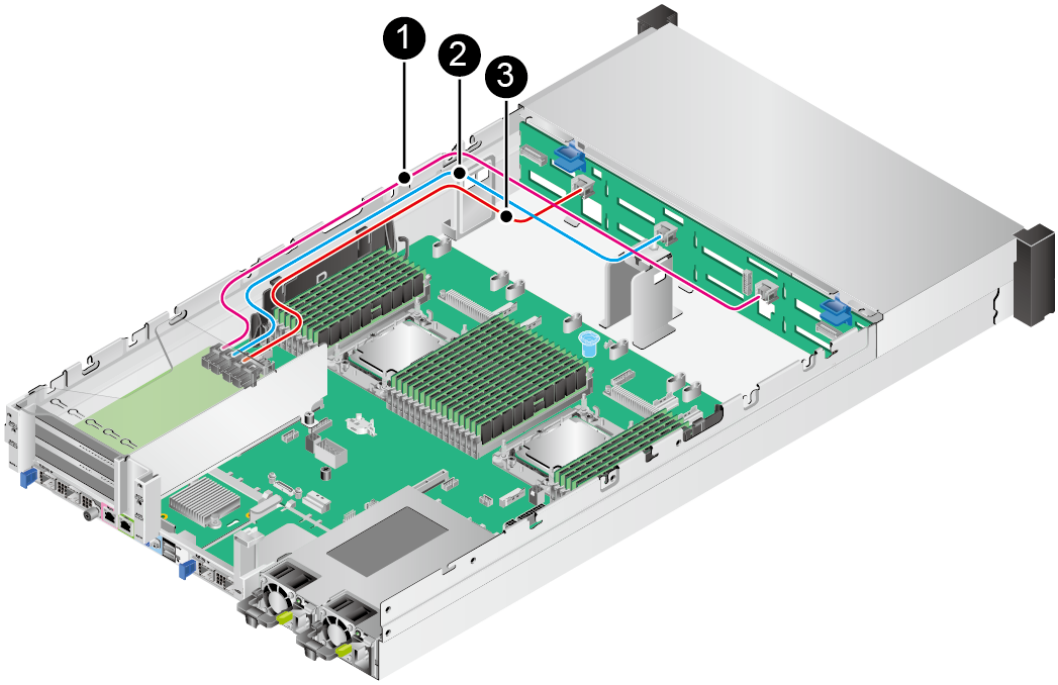

Table 6-221 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the PCIe RAID controller card
3	04051018	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J3) may be C0, PORT A, 0, or CN0. The port number of the PCIe RAID controller card connected to front-drive backplane (J4) may be C1, PORT B, 1, or CN1, and the port number of the PCIe RAID controller card connected to front-drive backplane (J5) may be C2, PORT C, 2, or CN2.

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6.4.5.5.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-260 I/O module 1 cabling

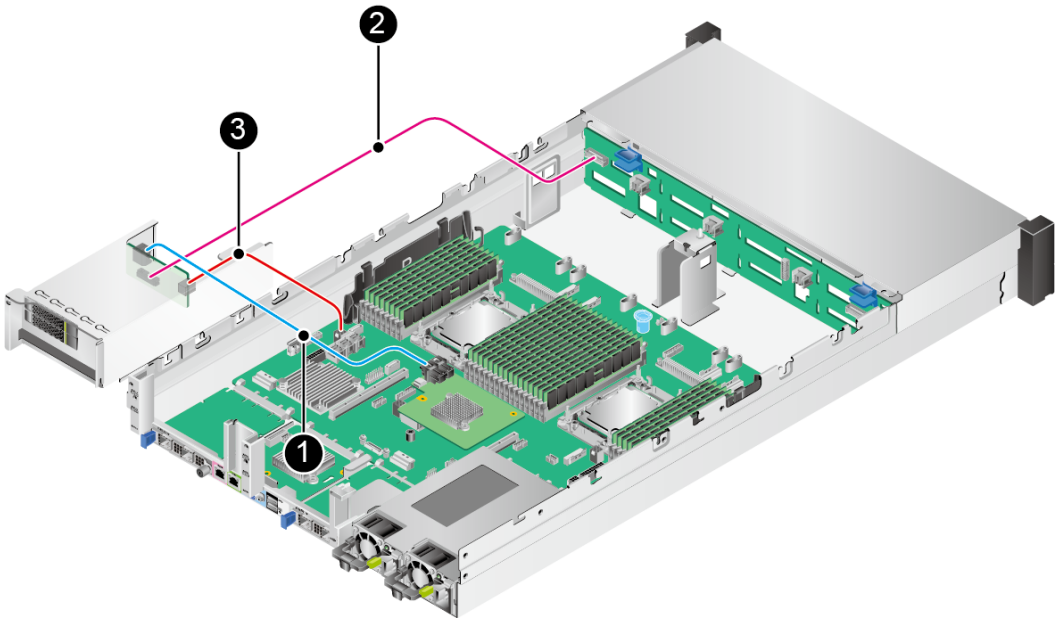

Table 6-222 I/O module 1 cabling

No.	P/N Code	Description
1	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)

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6.4.5.5.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-261 I/O module 3 cabling

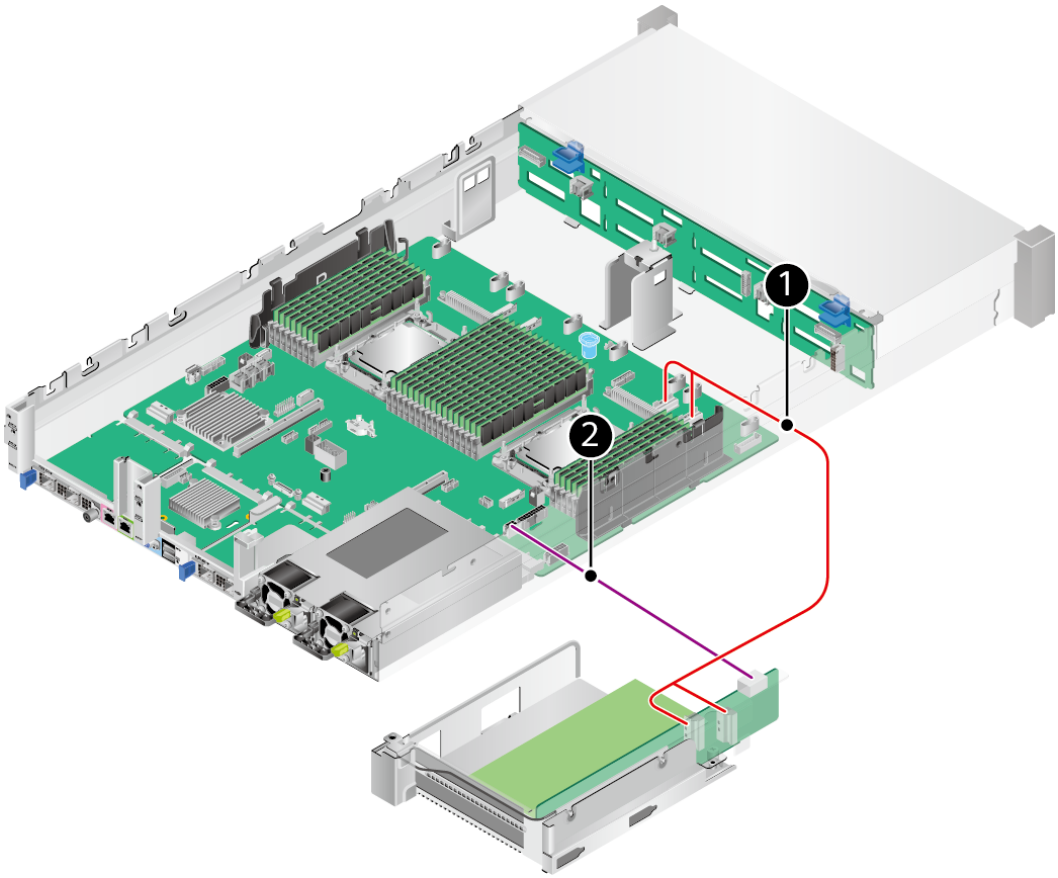

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Table 6-223 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.5.8 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-262 I/O module 3 cabling

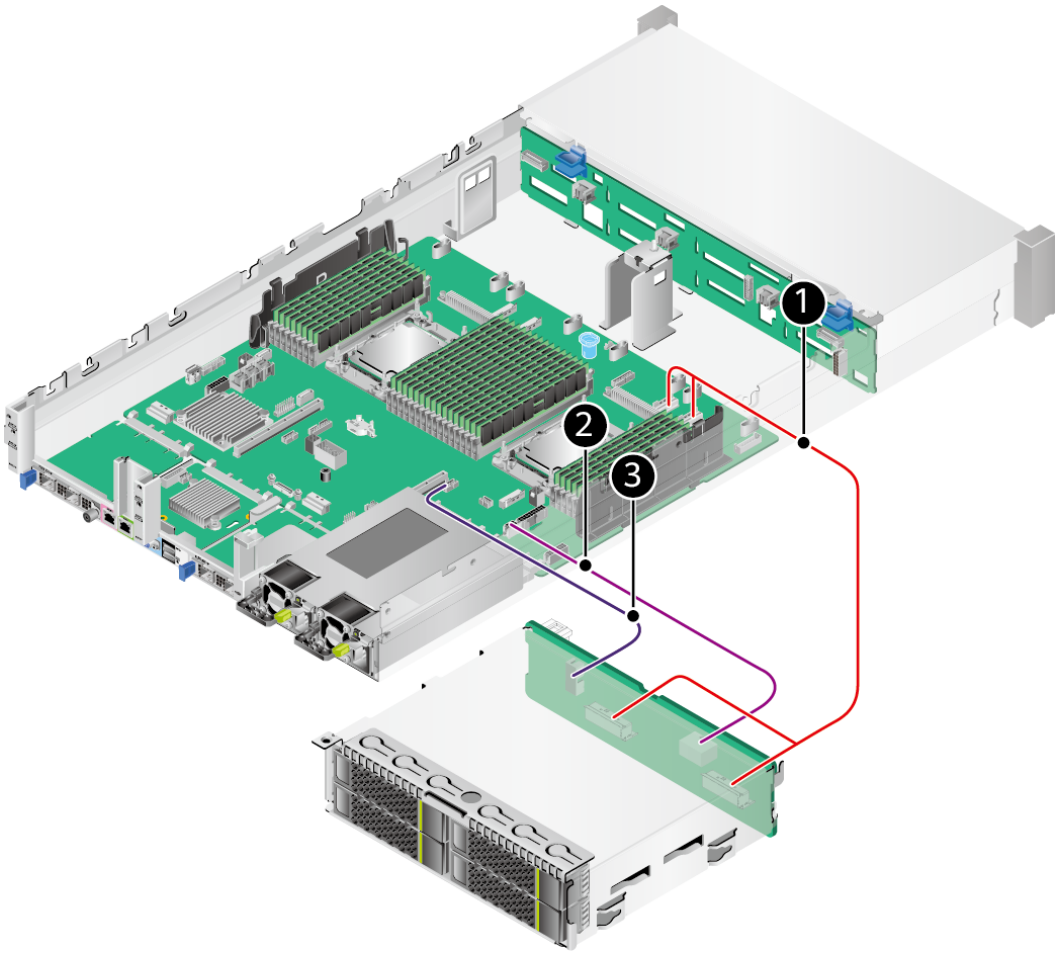

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Table 6-224 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.6 12 x 3.5" Drive Pass-through Configuration 6 (Dual RAID Controller Cards)

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6.4.5.6.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-263 Left and right mounting ear cabling

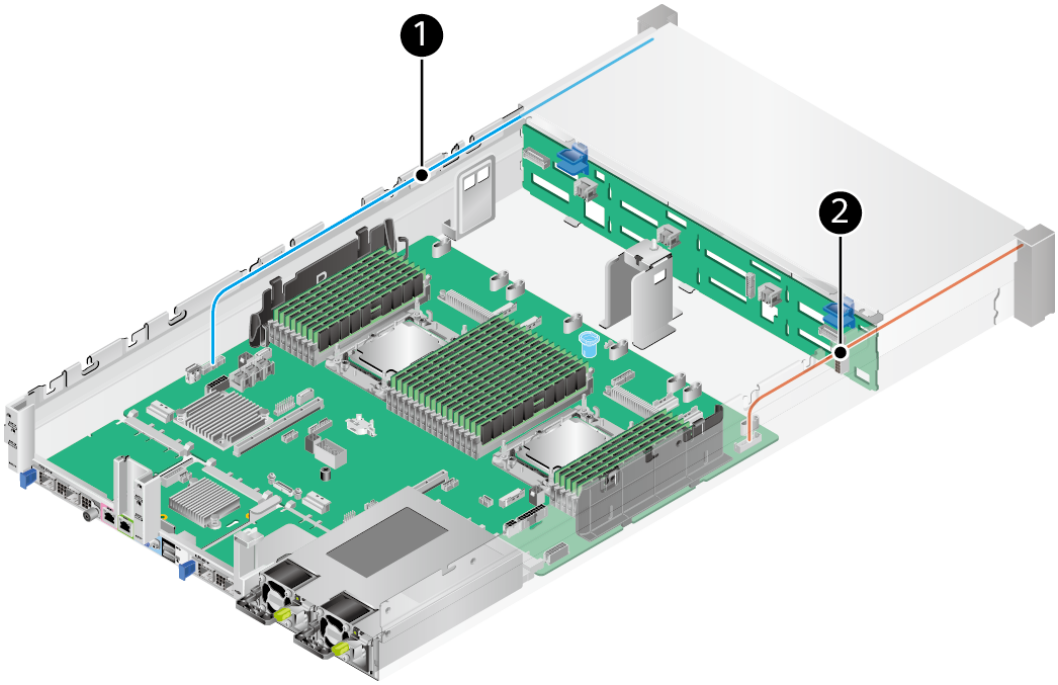

Table 6-225 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.6.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-264 OCP 3.0 expansion cable 1

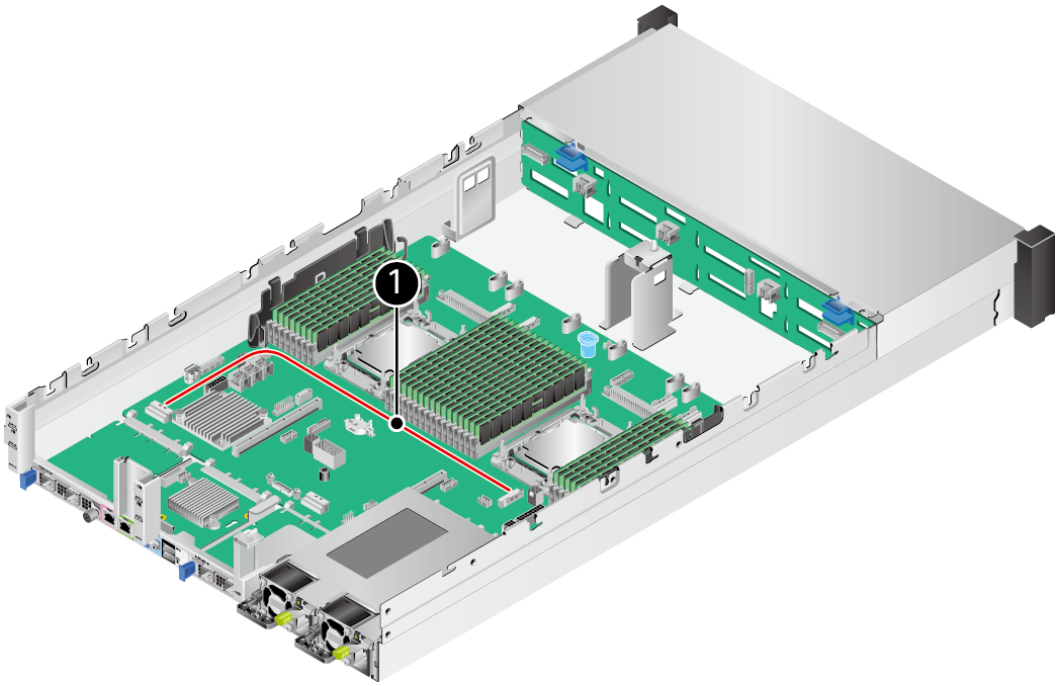

Table 6-226 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-265 OCP 3.0 expansion cable 2

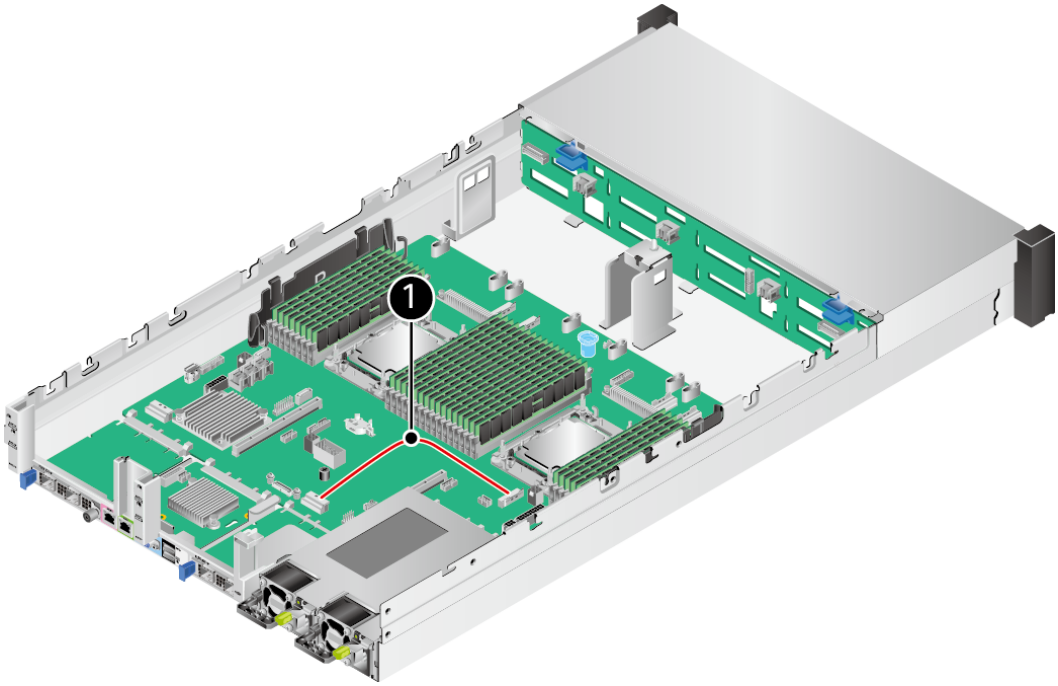

Table 6-227 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.6.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-266 Intrusion sensor cabling

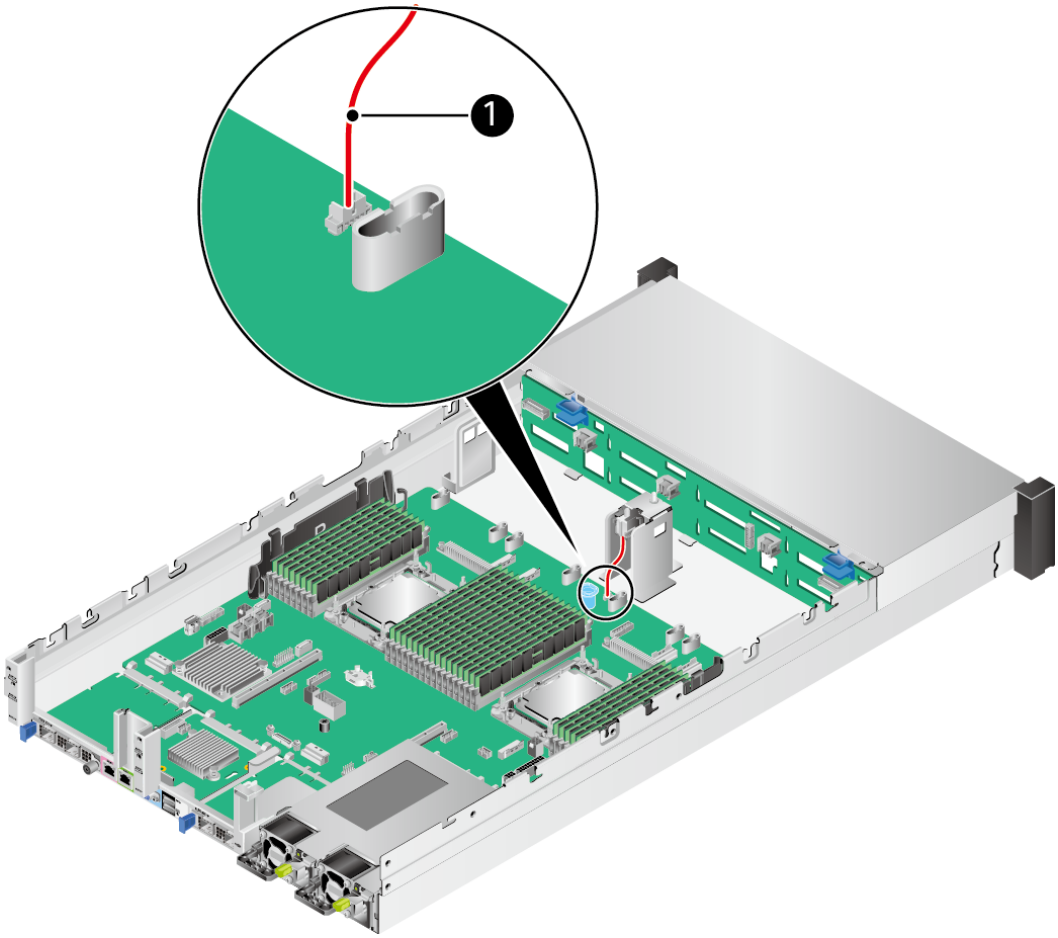

Table 6-228 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.6.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-267 Front-drive backplane power and low-speed signal cables

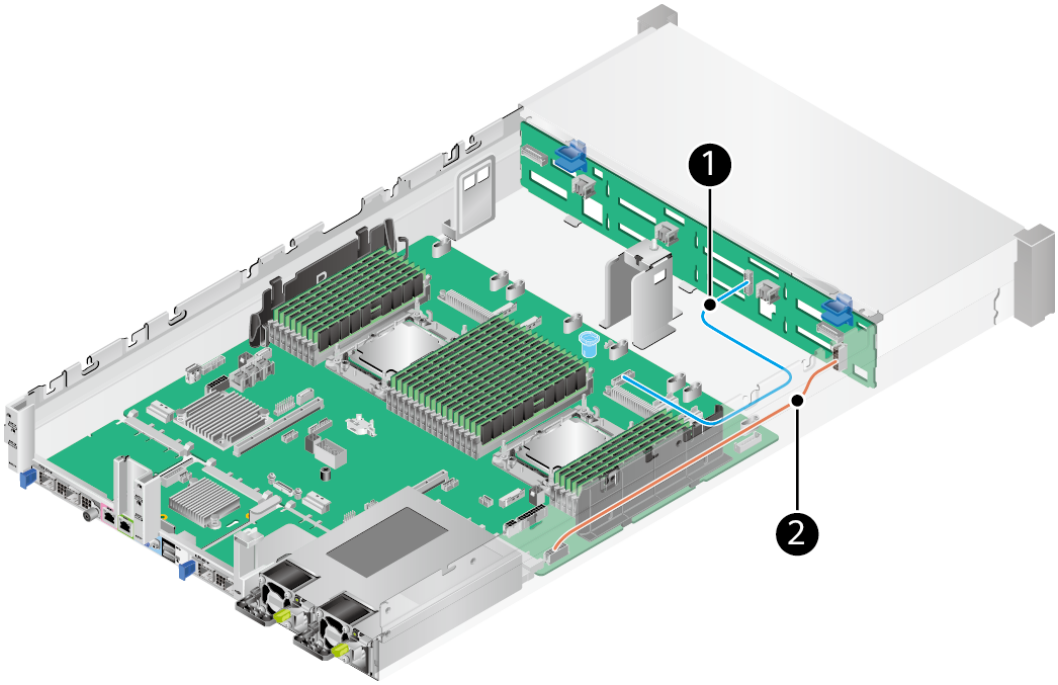

Table 6-229 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J1) to the mainboard (J26)

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6.4.5.6.5 Front-Drive Backplane SAS High-speed Cabling

Front-Drive Backplane SAS High-speed Cabling

Figure 6-268 Front-drive backplane SAS high-speed cabling

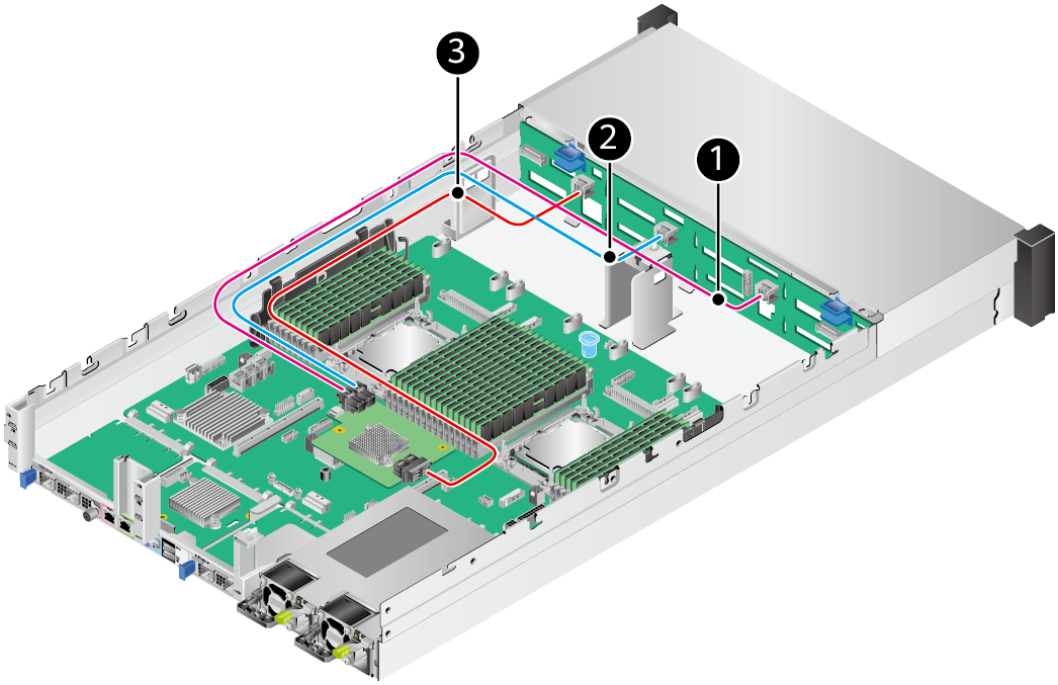

Table 6-230 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the screw-in RAID controller card

6.4.5.6.6 I/O Module 2 (2 x 3.5" SAS/SATA Drives)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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I/O Module 2 Cabling

Figure 6-269 I/O module 2 cabling

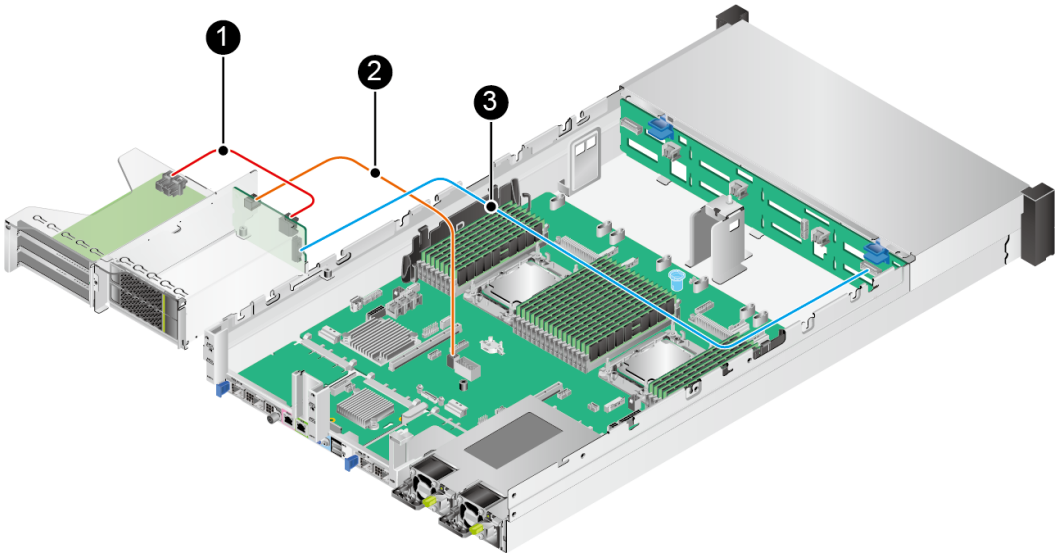

Table 6-231 I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	-
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J8)	-

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C0, PORT A, 0, or CN0.

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6.4.5.6.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-270 I/O module 3 cabling

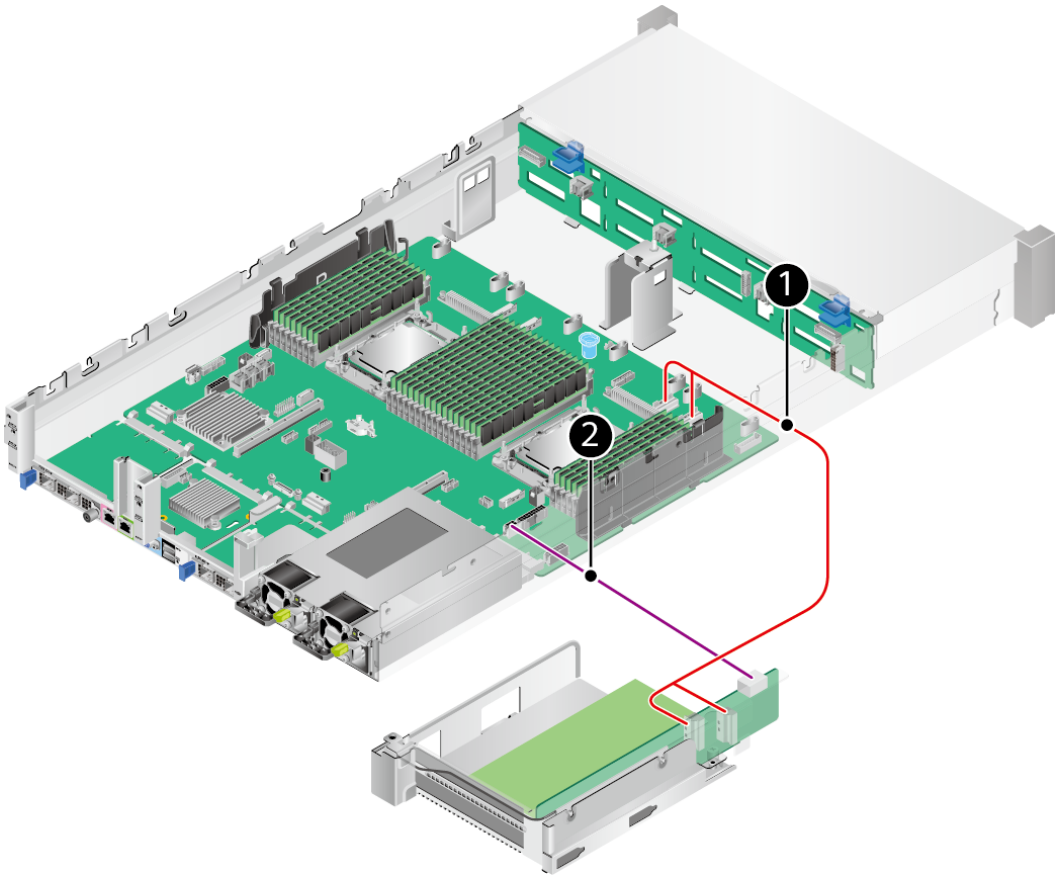

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Table 6-232 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.6.8 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-271 I/O module 3 cabling

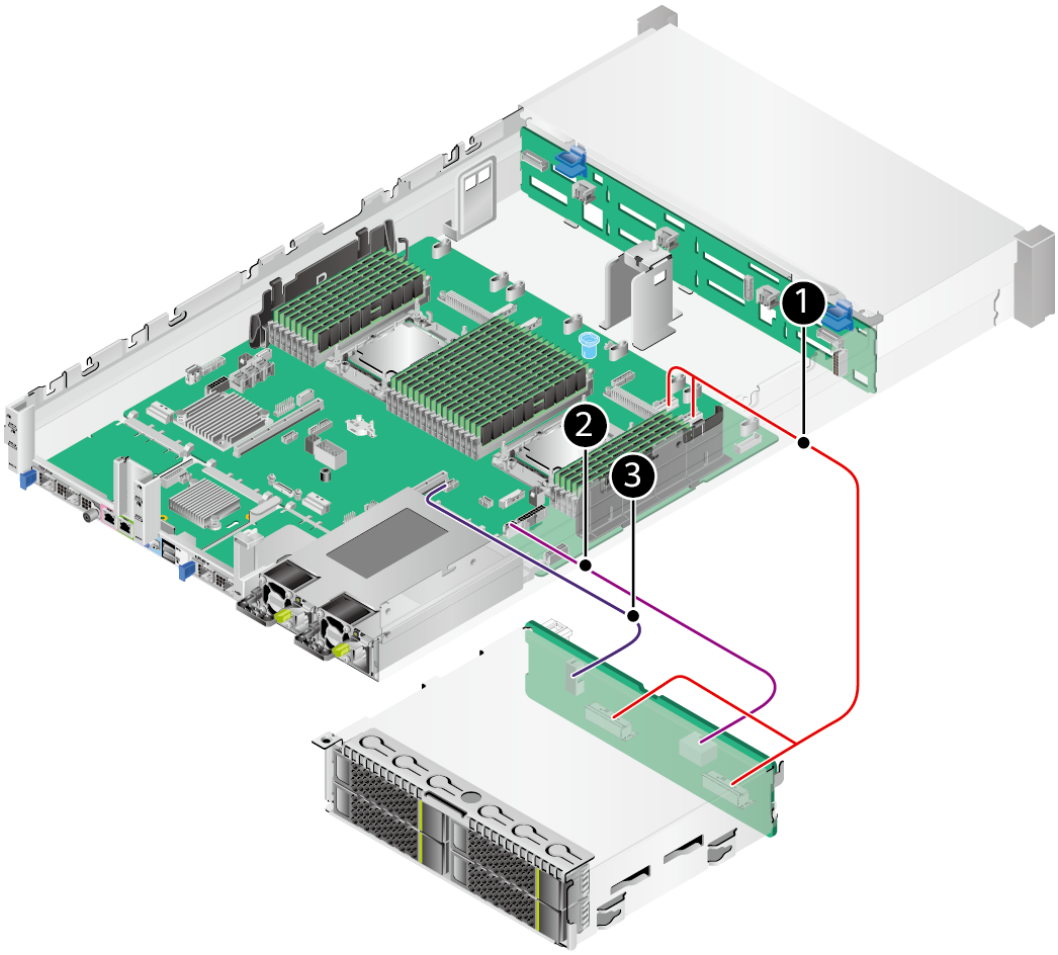

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Table 6-233 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.7 12 x 3.5" Drive Pass-through Configuration 1 (4 x NVMe)

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6.4.5.7.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-272 Left and right mounting ear cabling

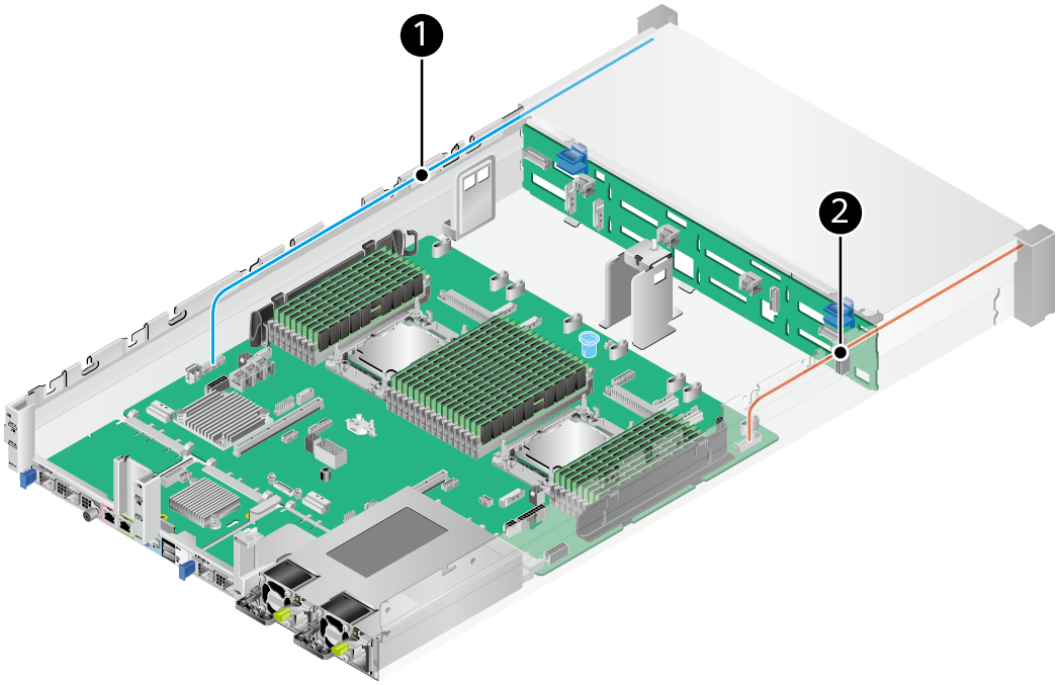

Table 6-234 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.7.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-273 OCP 3.0 expansion cable 1

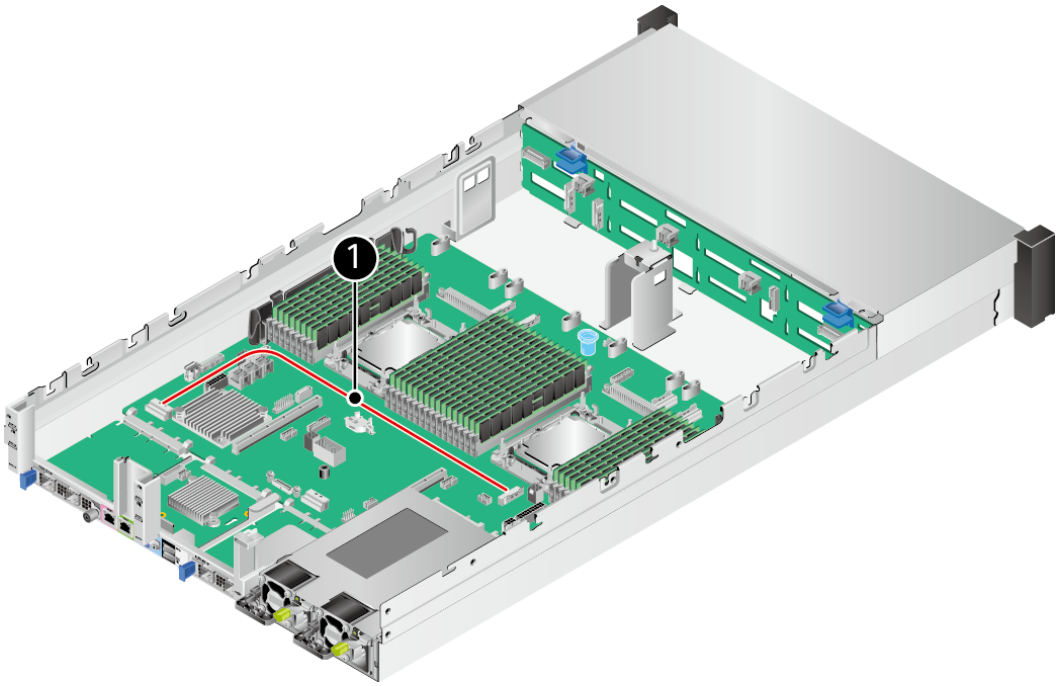

Table 6-235 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-274 OCP 3.0 expansion cable 2

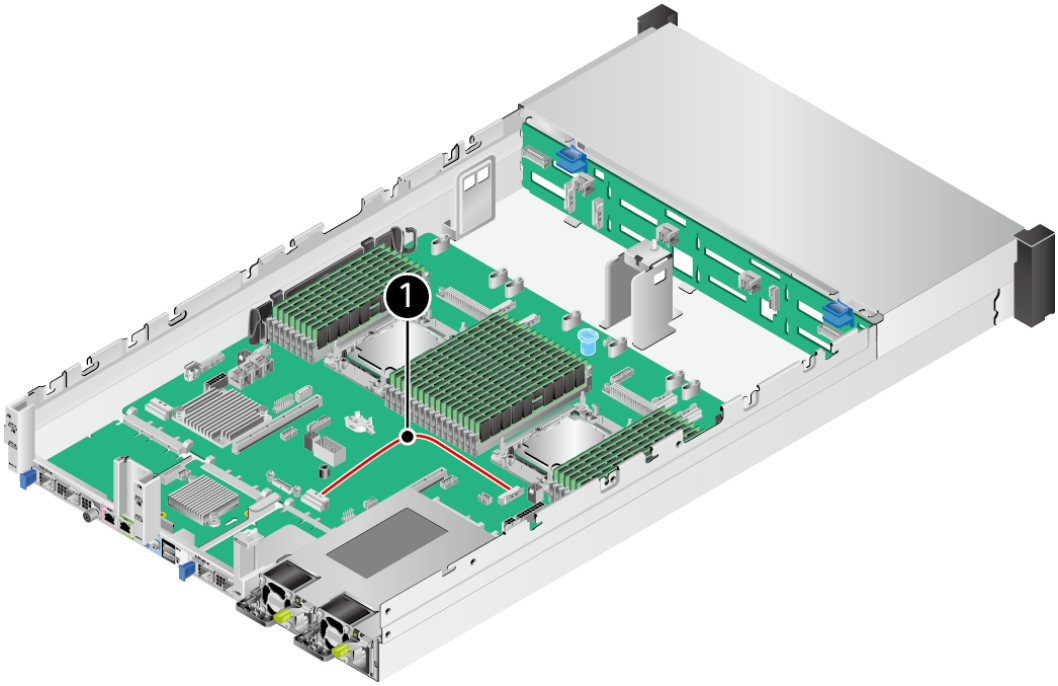

Table 6-236 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.7.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-275 Intrusion sensor cabling

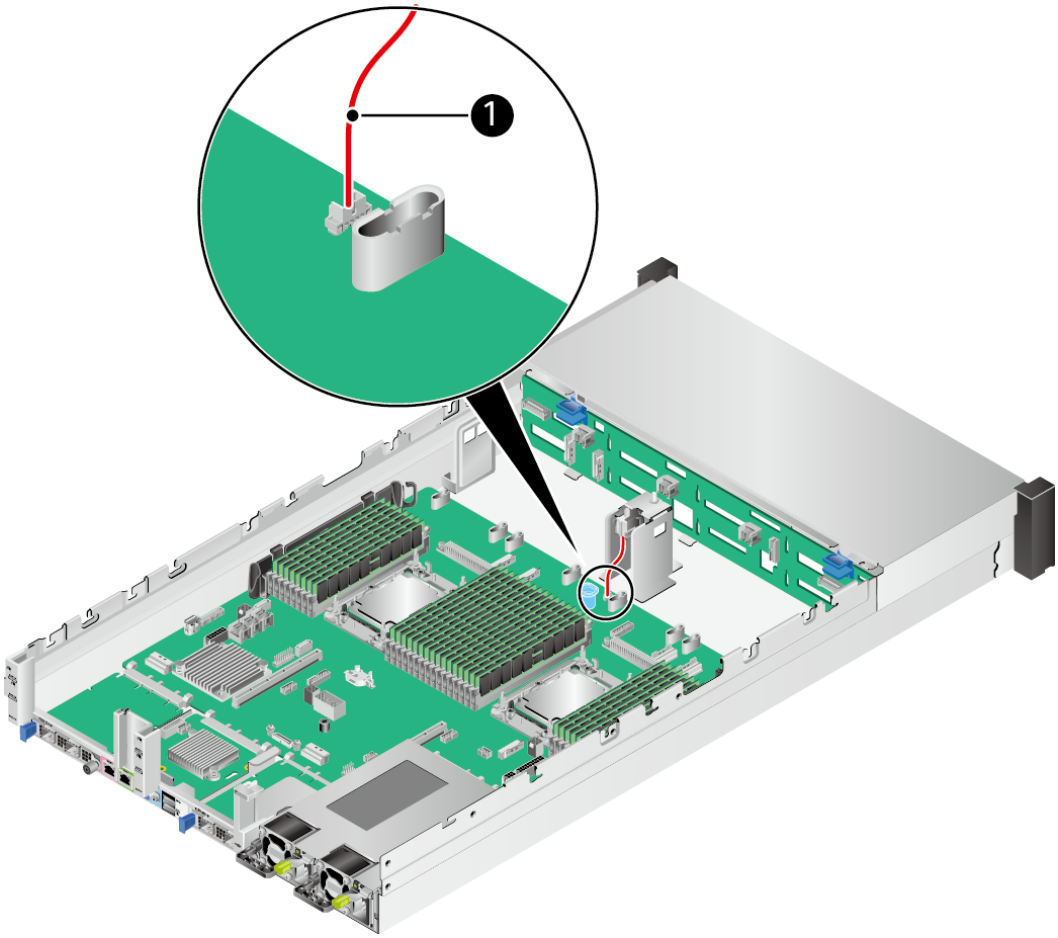

Table 6-237 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.7.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-276 Front-drive backplane power and low-speed signal cables

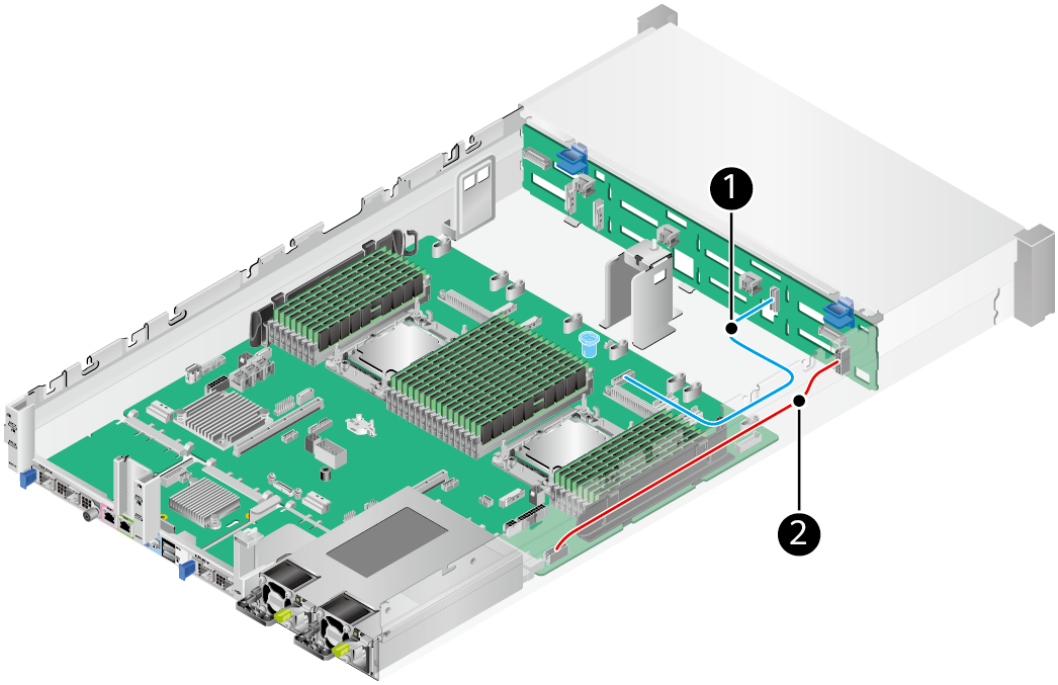

Table 6-238 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)

6.4.5.7.5 Front-Drive Backplane SAS Cable (PCH Pass-through)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-277 Front-drive backplane SAS high-speed cabling

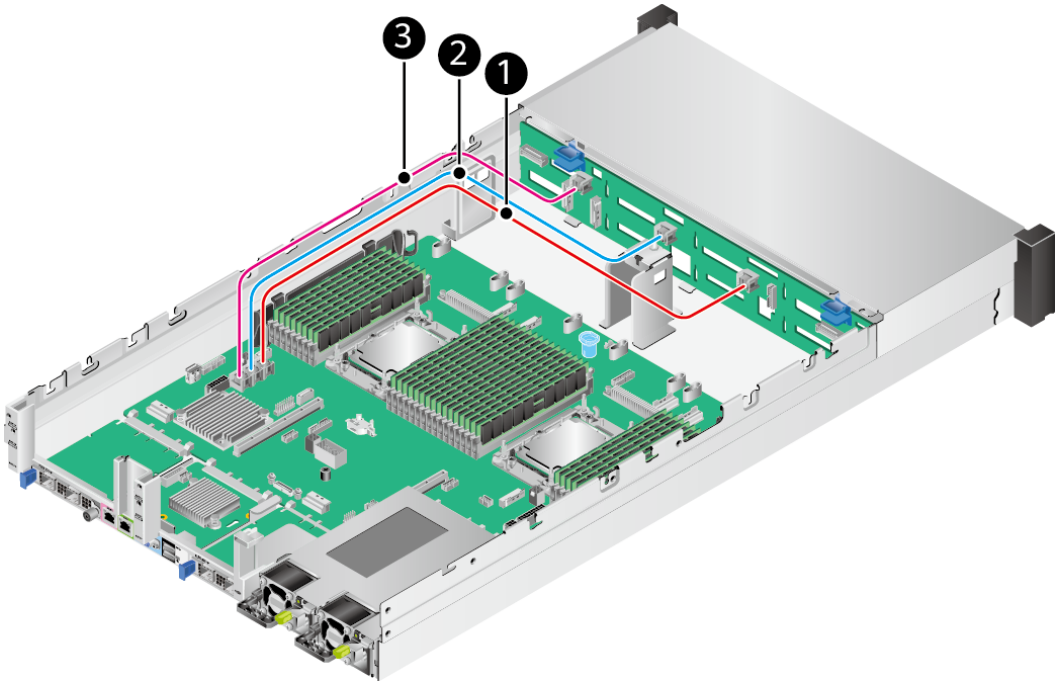

Table 6-239 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939	SAS high-speed cable for connecting the front-drive backplane (J28) to the mainboard (J6)
2	04051939	SAS high-speed cable for connecting the front-drive backplane (J29) to the mainboard (J5)
3	04051939	SAS high-speed cable for connecting the front-drive backplane (J36) to the mainboard (J4)

6.4.5.7.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cables

Figure 6-278 Front-drive backplane LP slimline high-speed cables

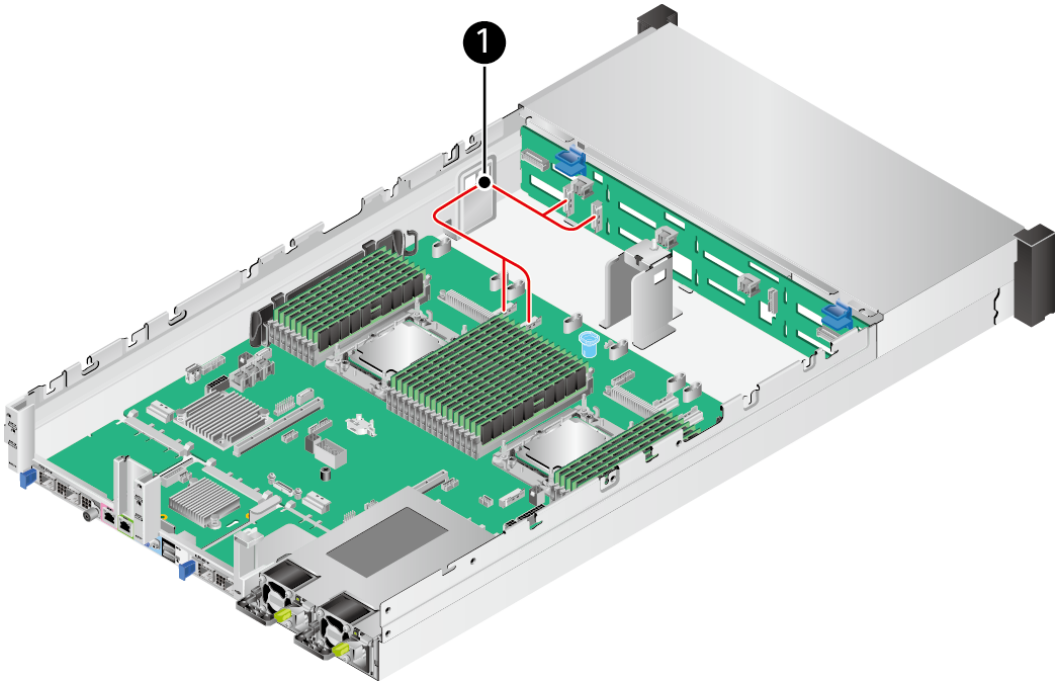

Table 6-240 Front-drive backplane LP slimline high-speed cables

No.	P/N Code	Description
1	04052316-001	High-speed cable for connecting LP Slimline 1 (J4) and LP Slimline 2 (J37) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J4), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J37); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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6.4.5.7.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-279 I/O module 3 cabling

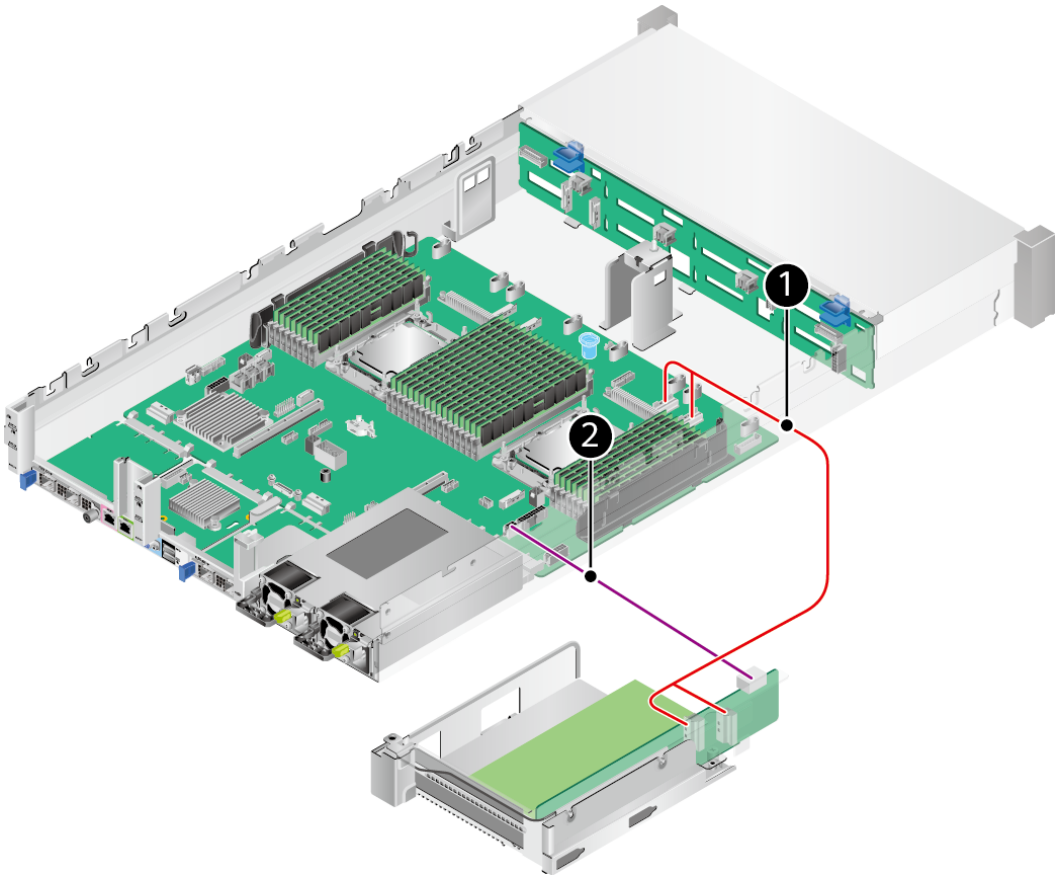

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Table 6-241 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.7.8 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-280 I/O module 3 cabling

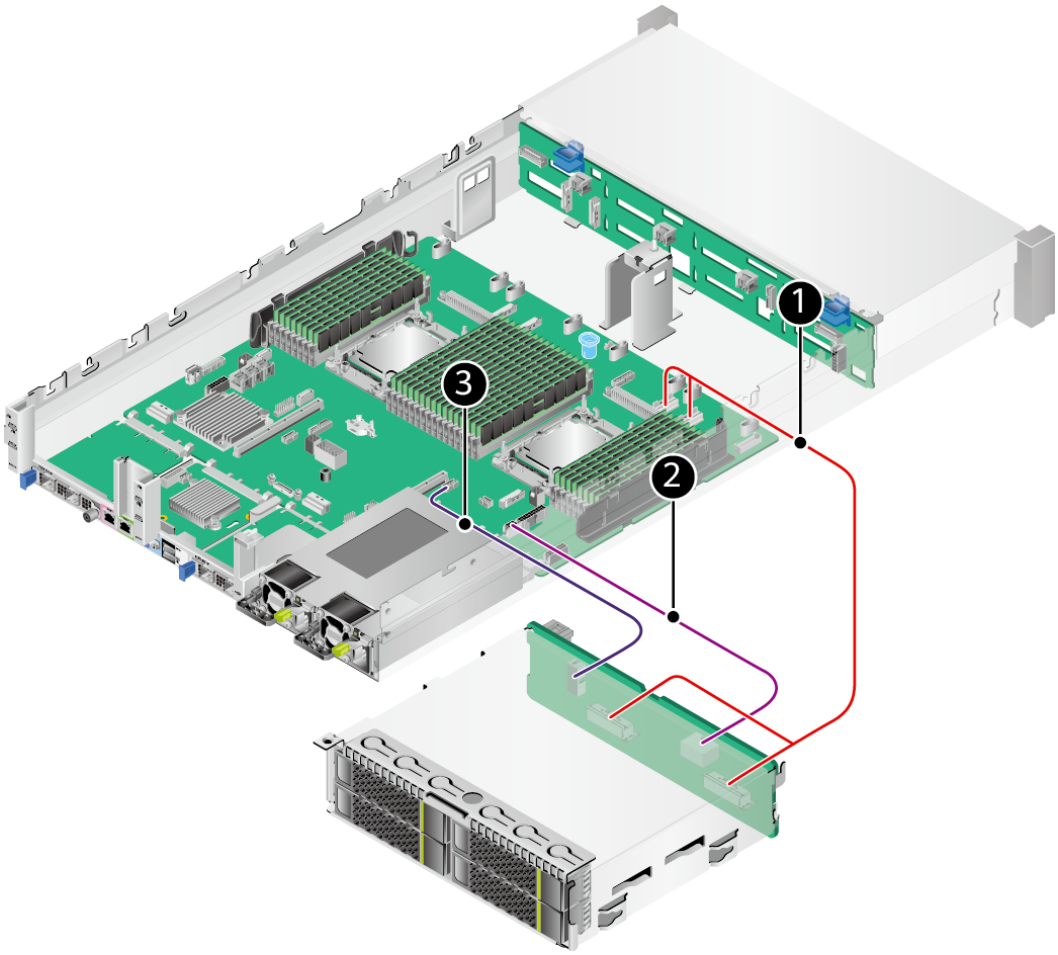

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Table 6-242 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.8 12 x 3.5" Drive Pass-through Configuration 3 (4 x NVMe)

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6.4.5.8.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-281 Left and right mounting ear cabling

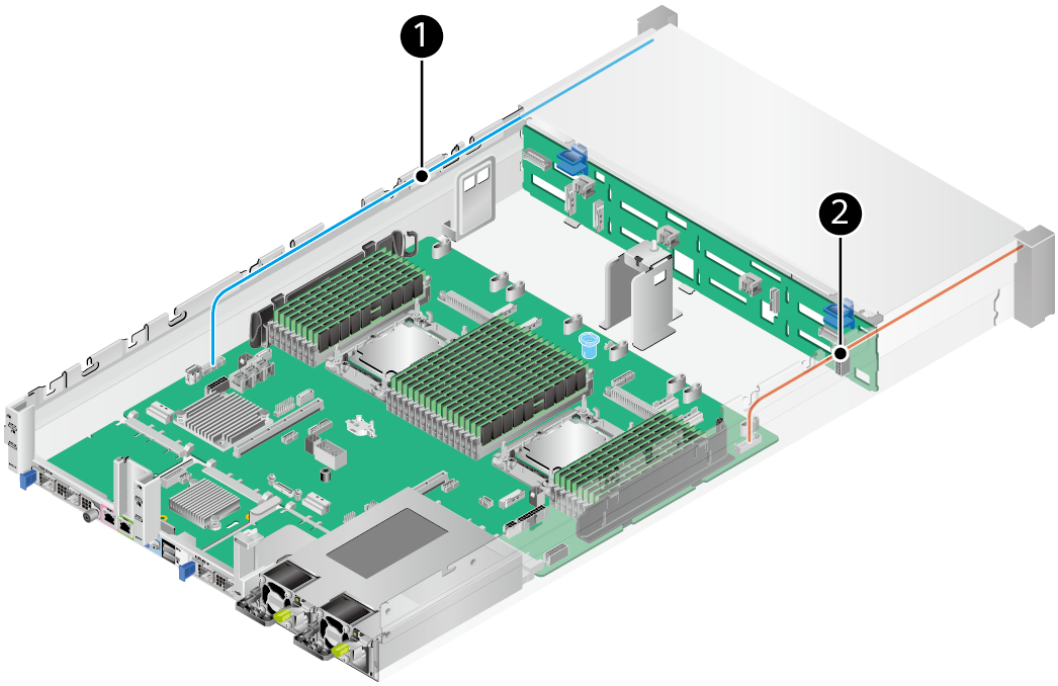

Table 6-243 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.8.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-282 OCP 3.0 expansion cable 1

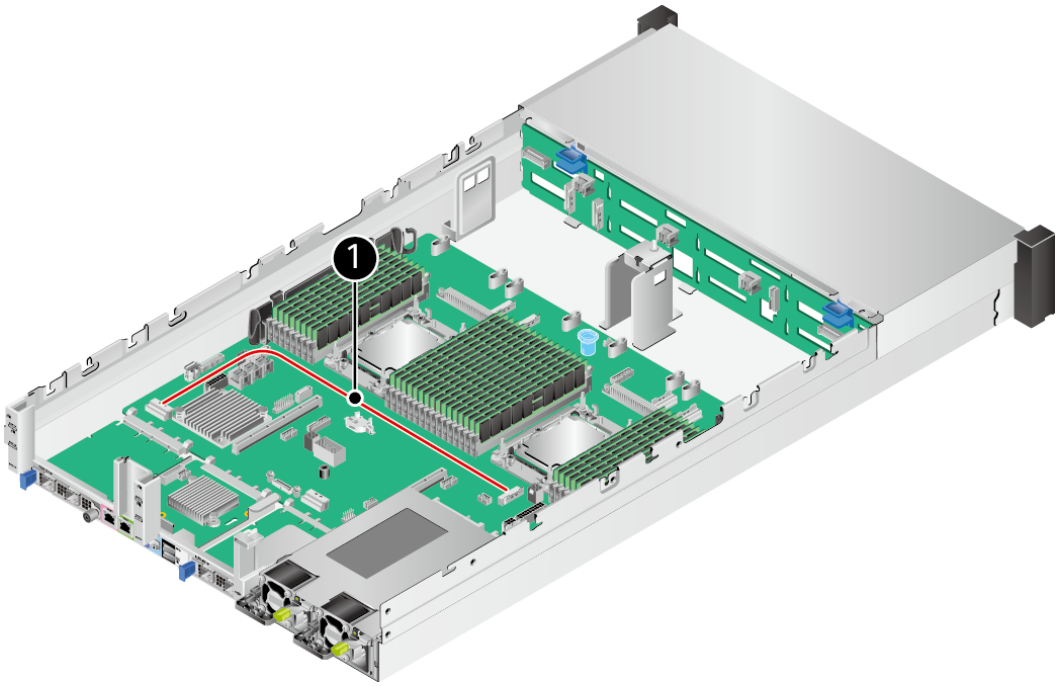

Table 6-244 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-283 OCP 3.0 expansion cable 2

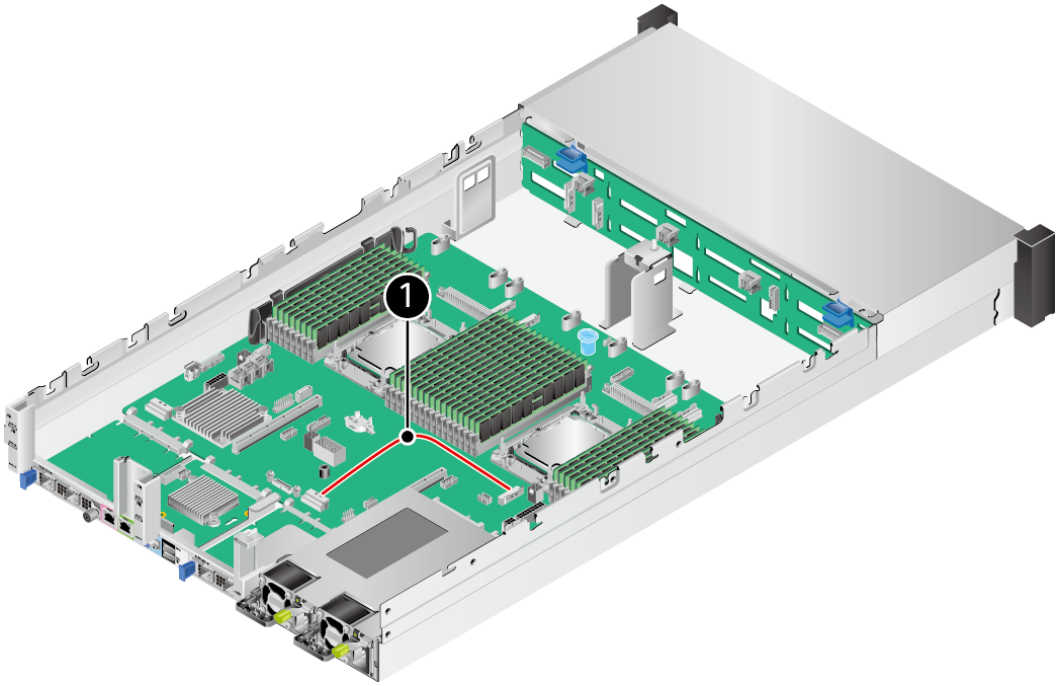

Table 6-245 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.8.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-284 Intrusion sensor cabling

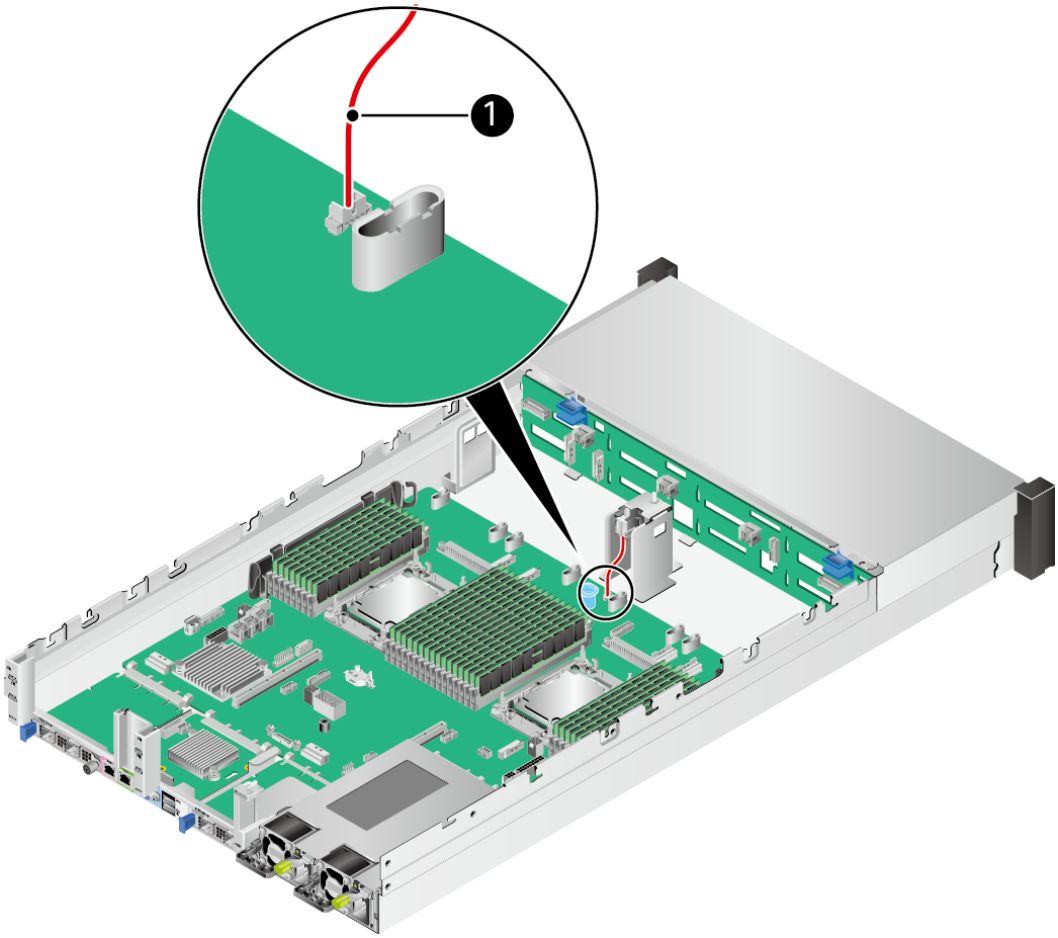

Table 6-246 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.8.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-285 Front-drive backplane power and low-speed signal cables

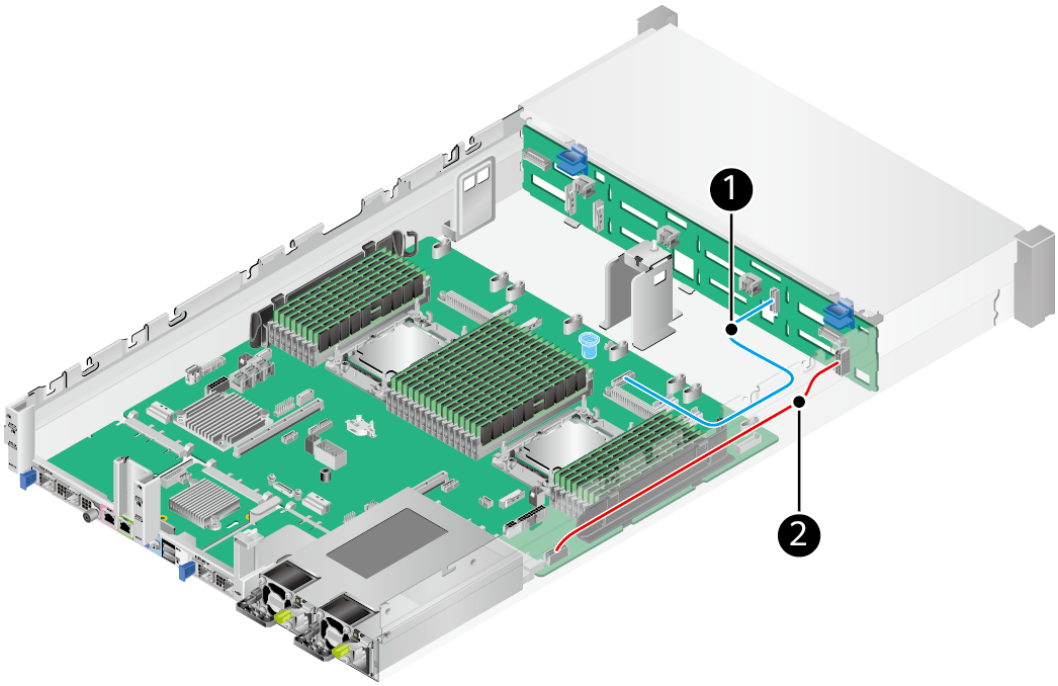

Table 6-247 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)

6.4.5.8.5 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

- Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.
- The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-286 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

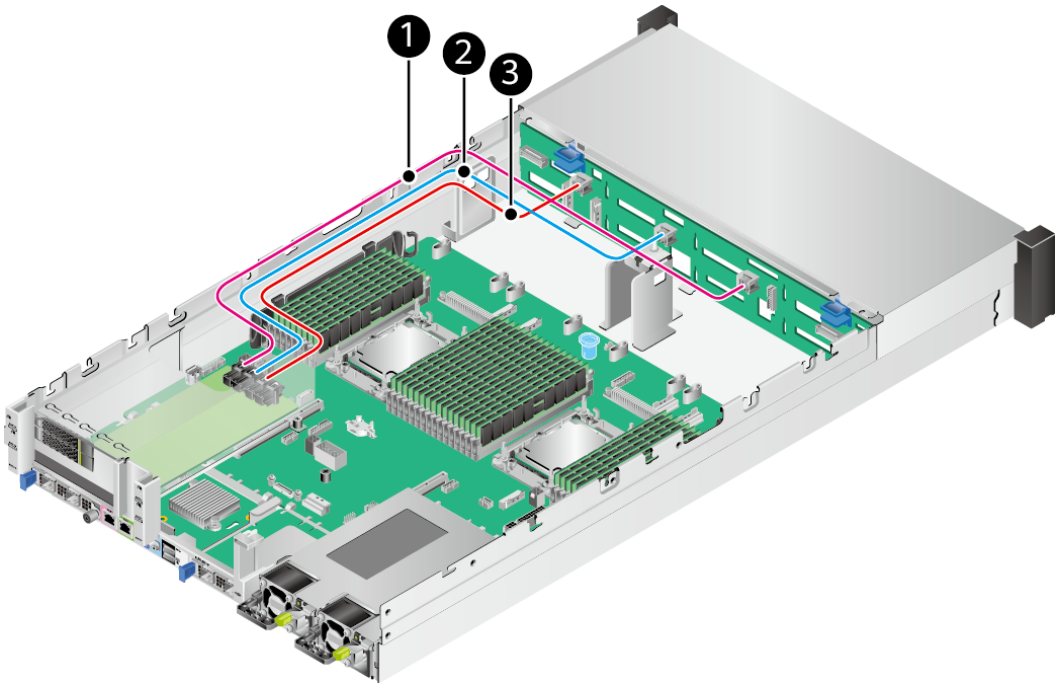

Table 6-248 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card
3	04051018	SAS high-speed cable for connecting the front-drive backplane (J36) to PORT C of the PCIe RAID controller card

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Figure 6-287 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

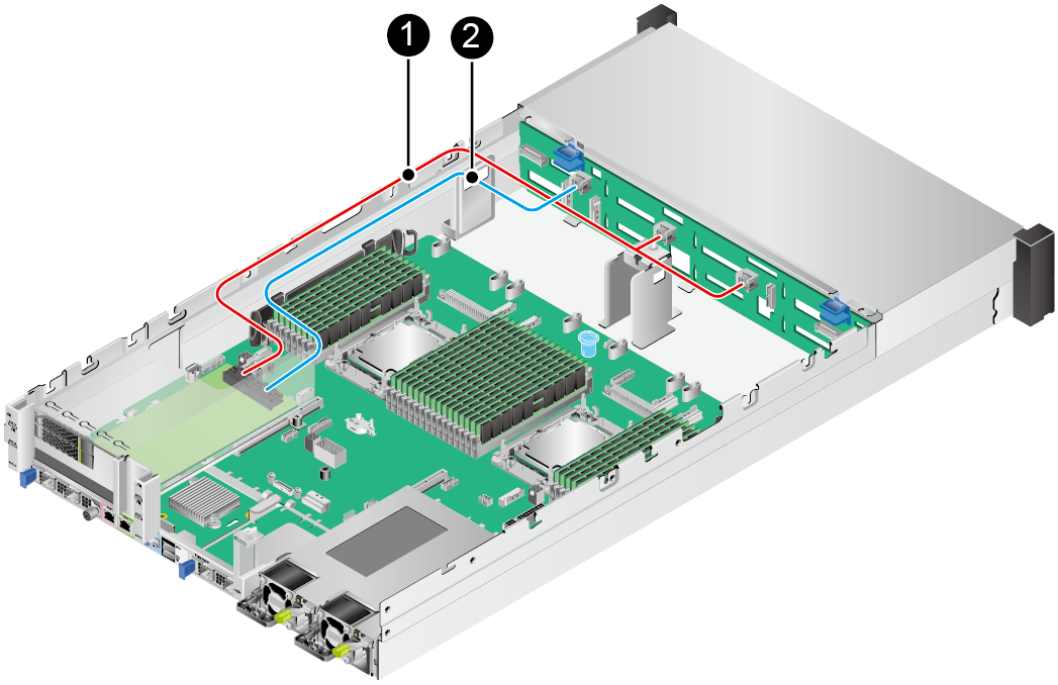

Table 6-249 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y017	SAS high-speed cable for connecting the front-drive backplane (J28/J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y017 is a Y-shaped cable. The PORT A connector is connected to the front drive backplane (J28) , the PORT B connector is connected to the front drive backplane (J29), and another end of the cable is connected to the RAID controller card.
2	0405Y023	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0. The port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1, and the port number of the PCIe RAID controller card connected to front-drive backplane (J36) may be C2, PORT C, 2, or CN2.

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6.4.5.8.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

Front-Drive Backplane LP Slimline High-speed Cables

Figure 6-288 Front-drive backplane LP slimline high-speed cables

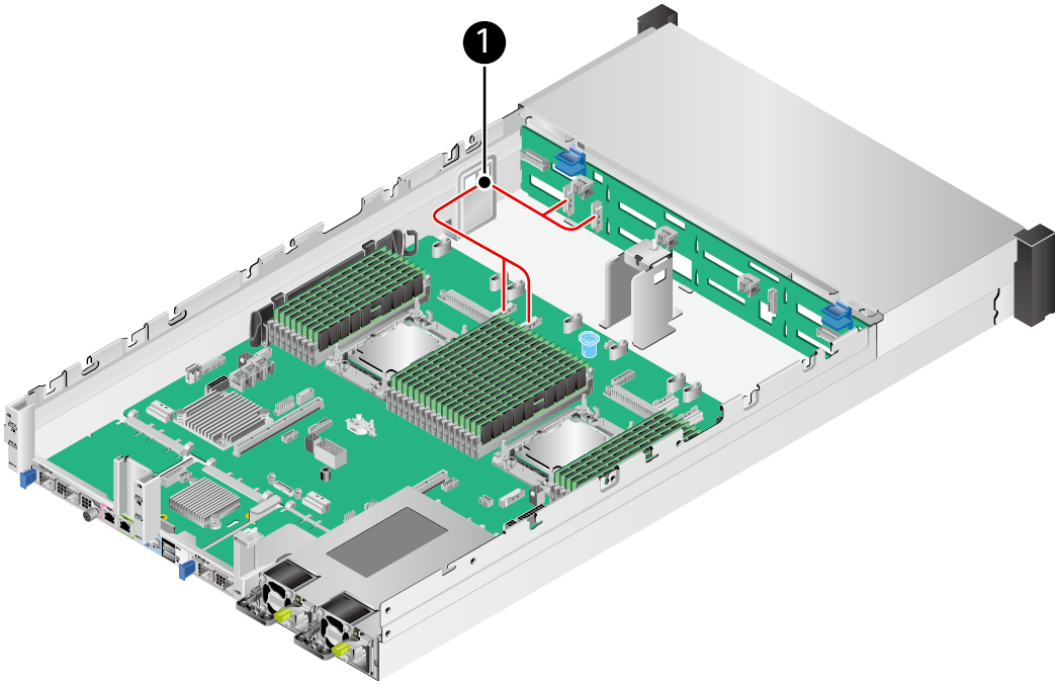

Table 6-250 Front-drive backplane LP slimline high-speed cables

No.	P/N Code	Description
1	04052316-001	High-speed cable for connecting LP Slimline 1 (J4) and LP Slimline 2 (J37) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J4), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J37); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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6.4.5.8.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-289 I/O module 1 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

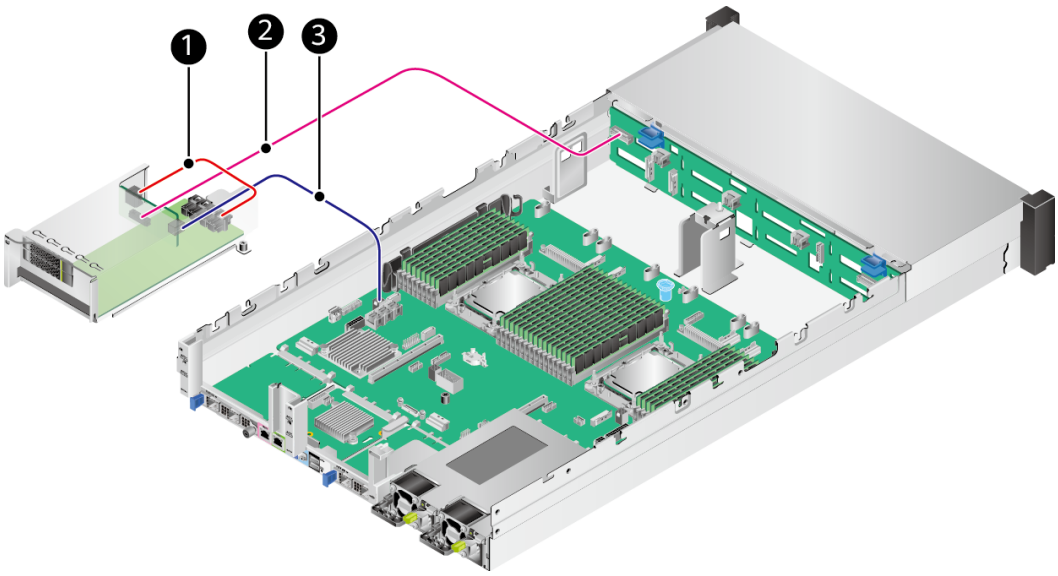

Table 6-251 I/O module 1 cabling

No.	P/N Code	Description
1	04052385	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card **NOTE** 04052385 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)

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Figure 6-290 I/O module 1 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

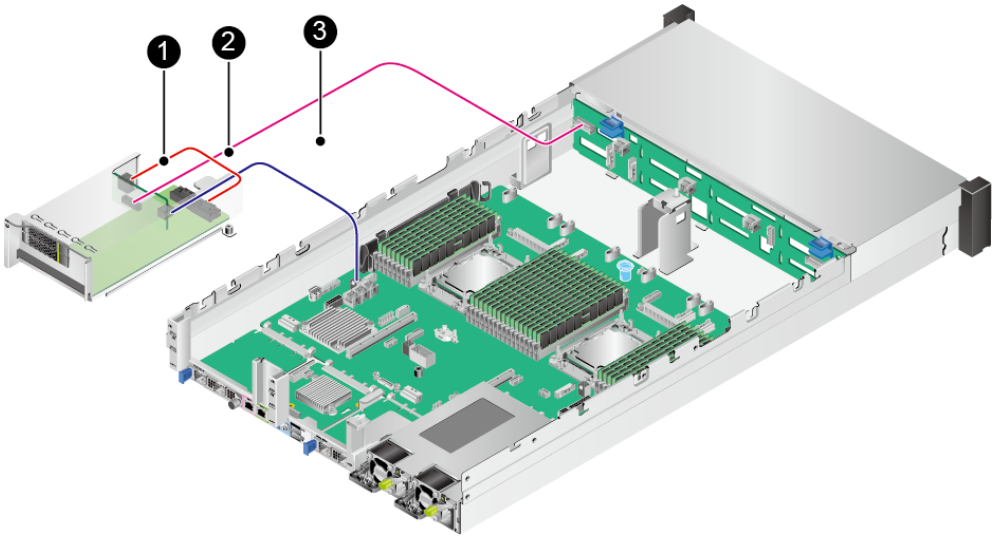

Table 6-252 I/O module 1 cabling

No.	P/N Code	Description
1	0405Y023	SAS high-speed cable for connecting the rear-drive backplane (J2) to C1 of the PCIe RAID controller card **NOTE** 0405Y023 is a Y-shaped cable. The PORT C connector is connected to the front drive backplane (J36), the HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.4.5.8.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-291 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

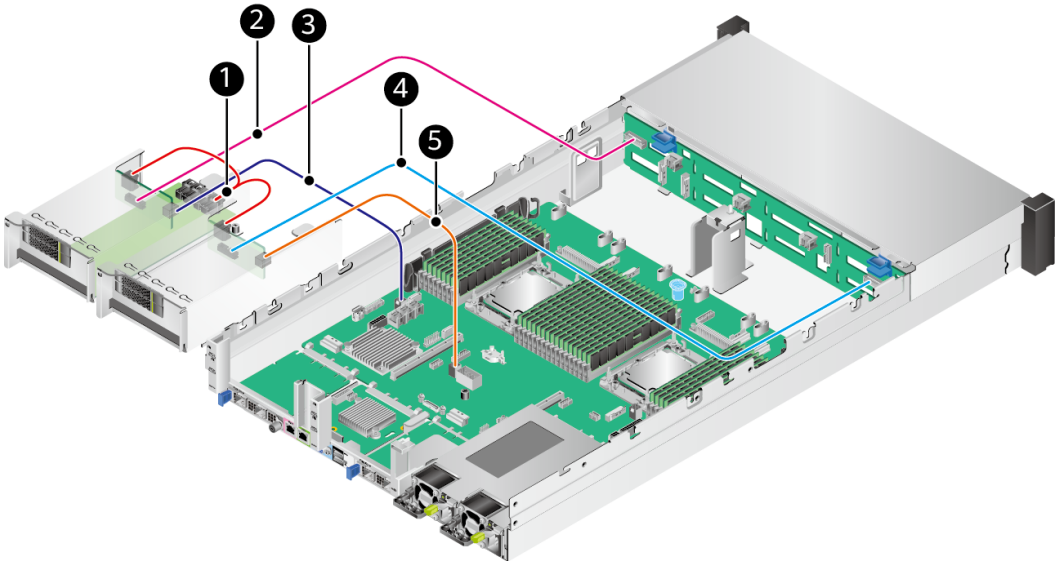

Table 6-253 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052385	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card **NOTE** 04052385 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)

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Figure 6-292 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

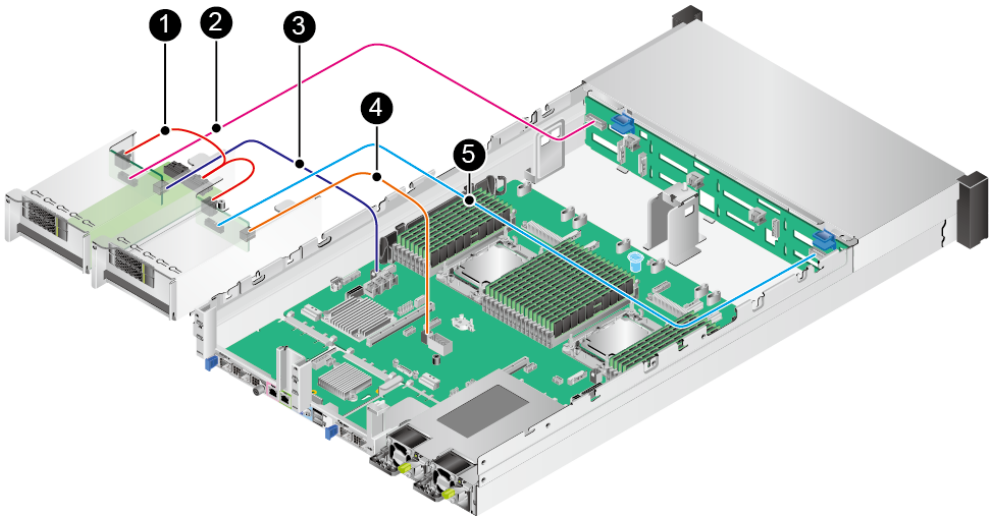

Table 6-254 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	0405Y023	SAS high-speed cable for connecting the rear-drive backplane (J2) to C1 of the PCIe RAID controller card **NOTE** 0405Y023 is a Y-shaped cable. The PORT C connector is connected to the front drive backplane (J36), the HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.4.5.8.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-293 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

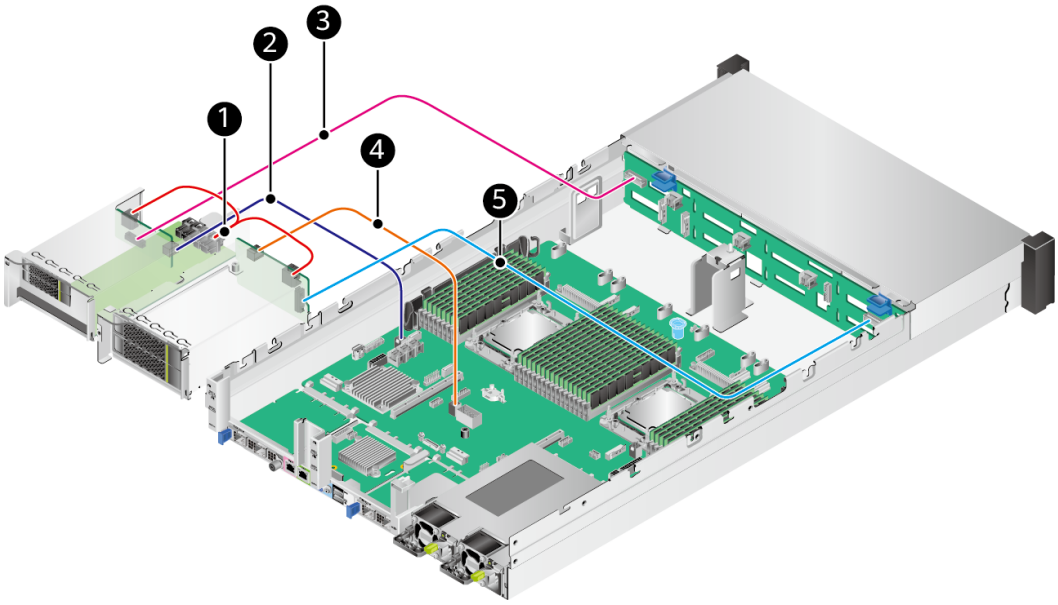

Table 6-255 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052385	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card **NOTE** 04052385 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)

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Figure 6-294 I/O module 1 and I/O module 2 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

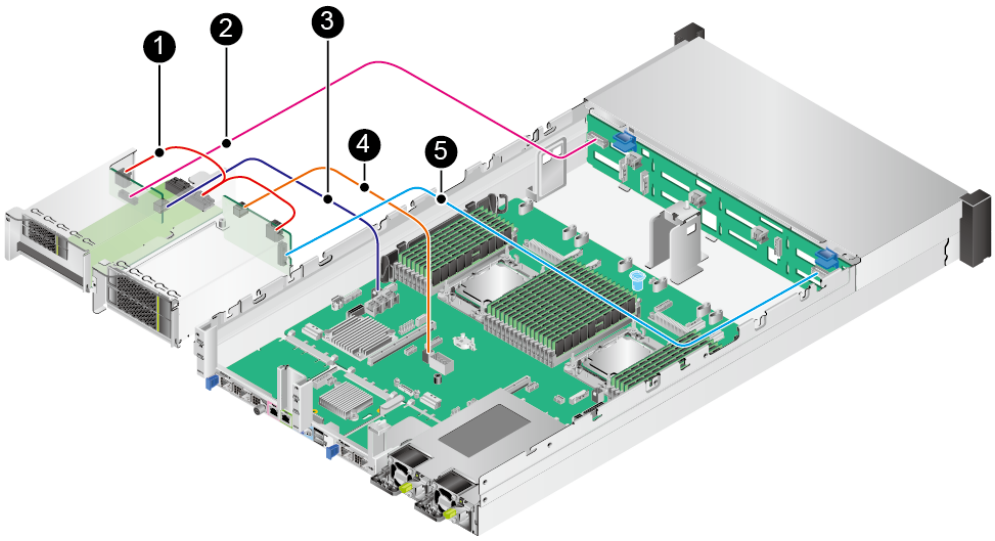

Table 6-256 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	0405Y023	SAS high-speed cable for connecting the rear-drive backplane (J2) to C1 of the PCIe RAID controller card **NOTE** 0405Y023 is a Y-shaped cable. The PORT C connector is connected to the front drive backplane (J36), the HDD A connects to the drive backplane (J2) of I/O module 1, HDD B connects to the drive backplane (J2) of I/O module 2, and the remaining end connects to the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.4.5.8.10 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-295 I/O module 3 cabling

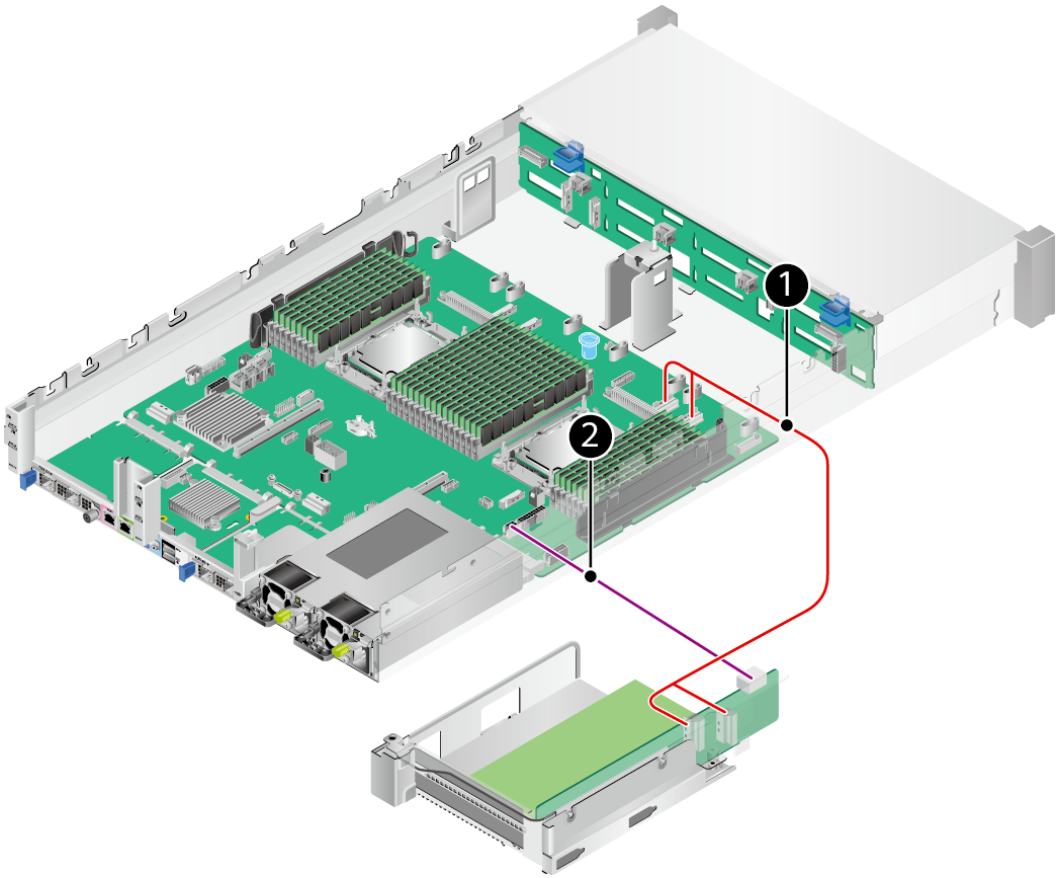

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Table 6-257 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.8.11 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-296 I/O module 3 cabling

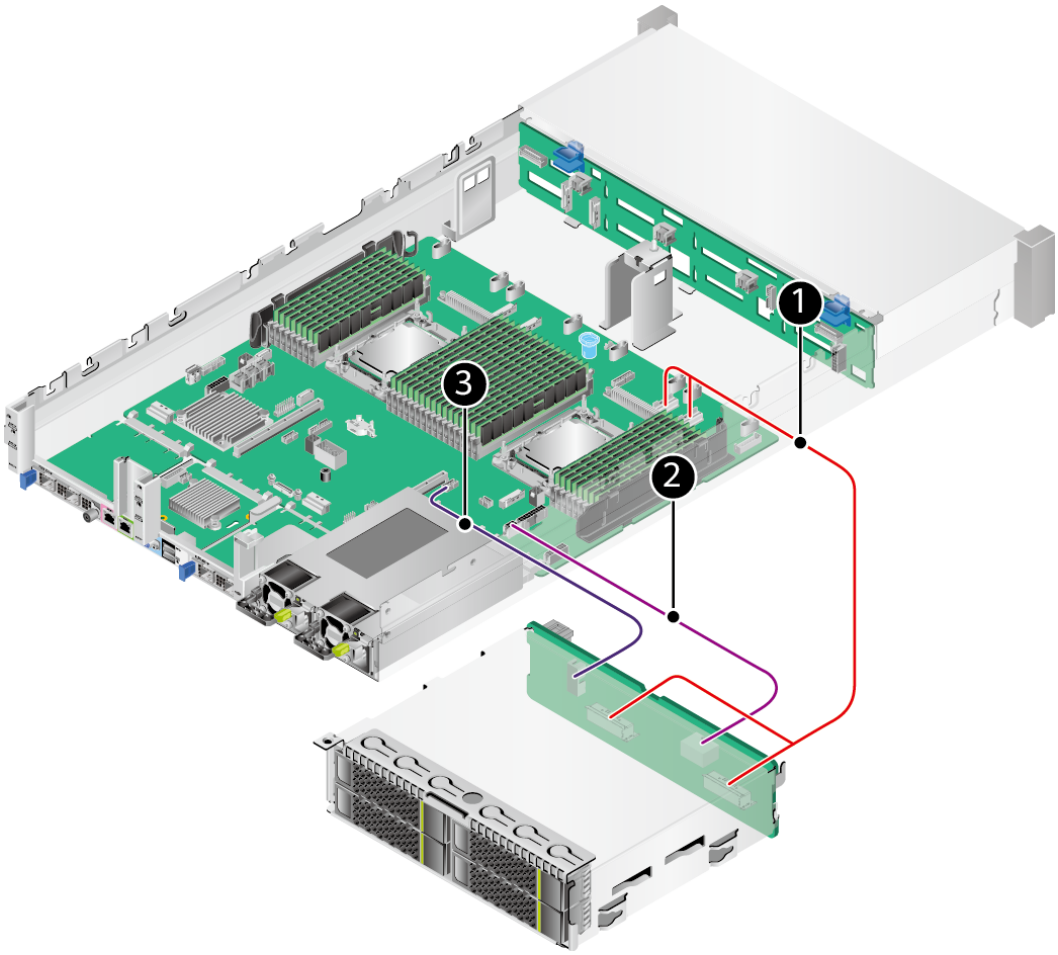

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Table 6-258 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.5.9 12 x 3.5" Drive Pass-through Configuration 2 (4 x NVMe)

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6.4.5.9.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-297 Left and right mounting ear cabling

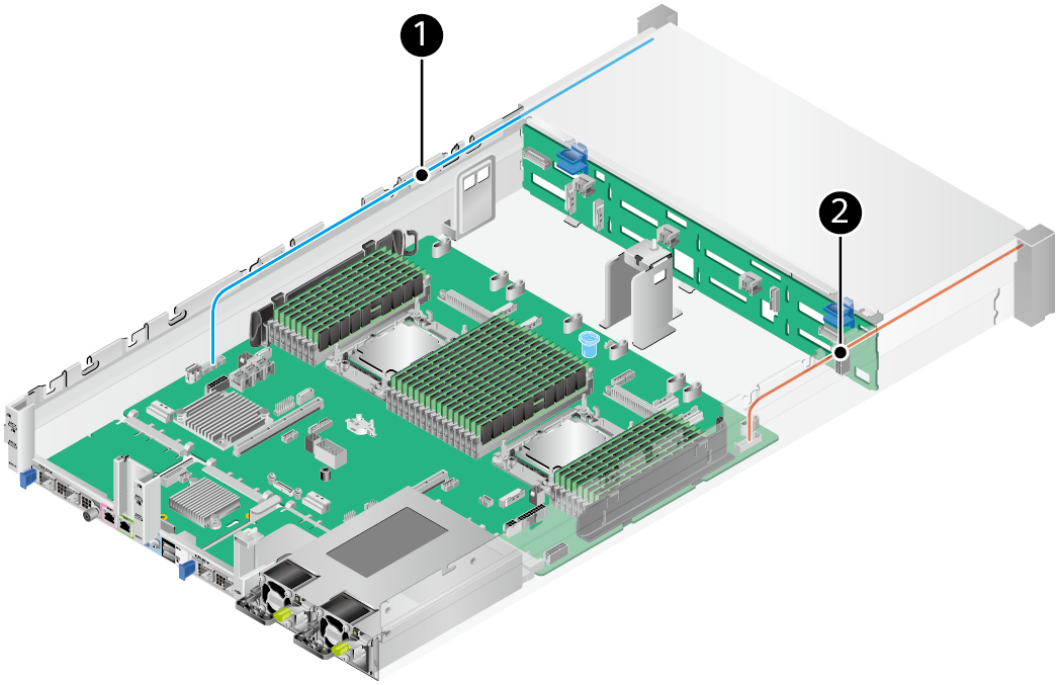

Table 6-259 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.5.9.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-298 OCP 3.0 expansion cable 1

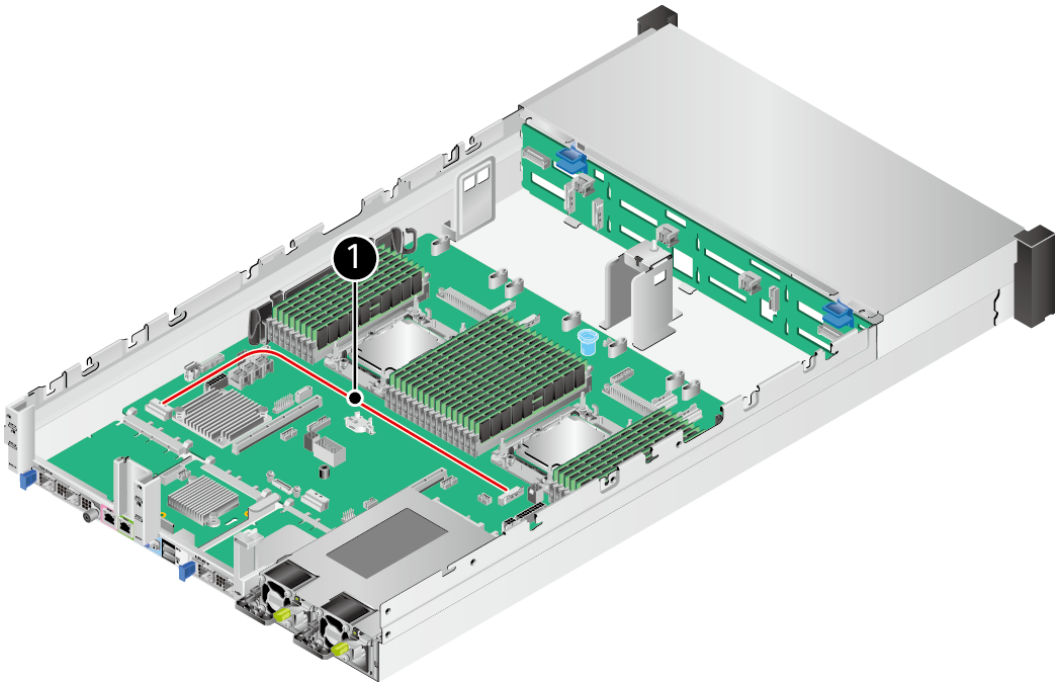

Table 6-260 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-299 OCP 3.0 expansion cable 2

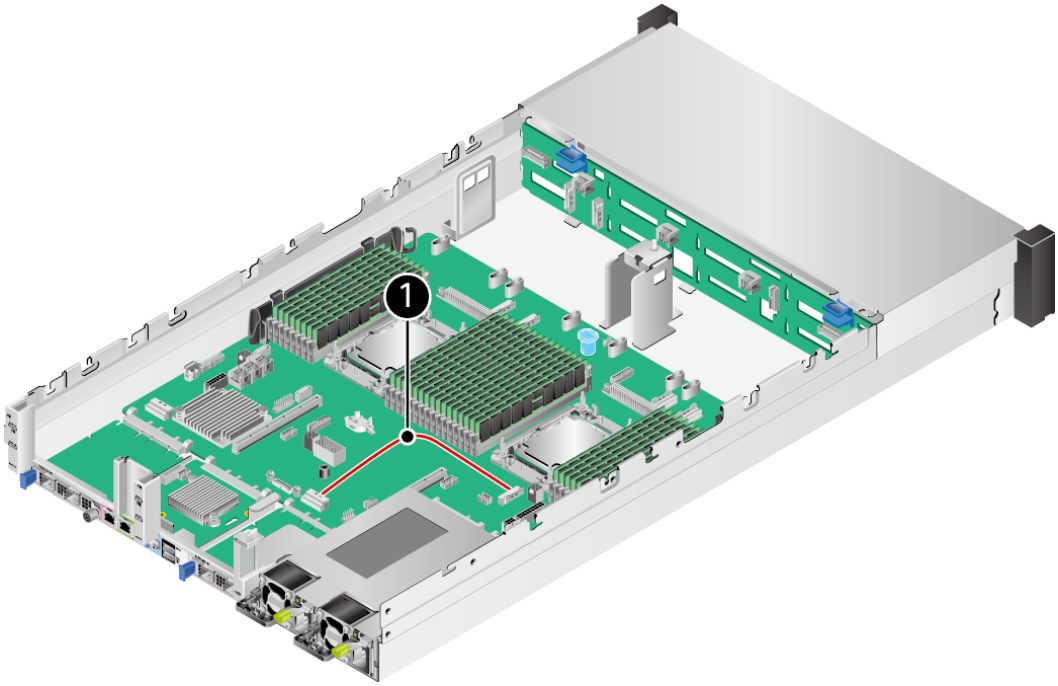

Table 6-261 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.5.9.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-300 Intrusion sensor cabling

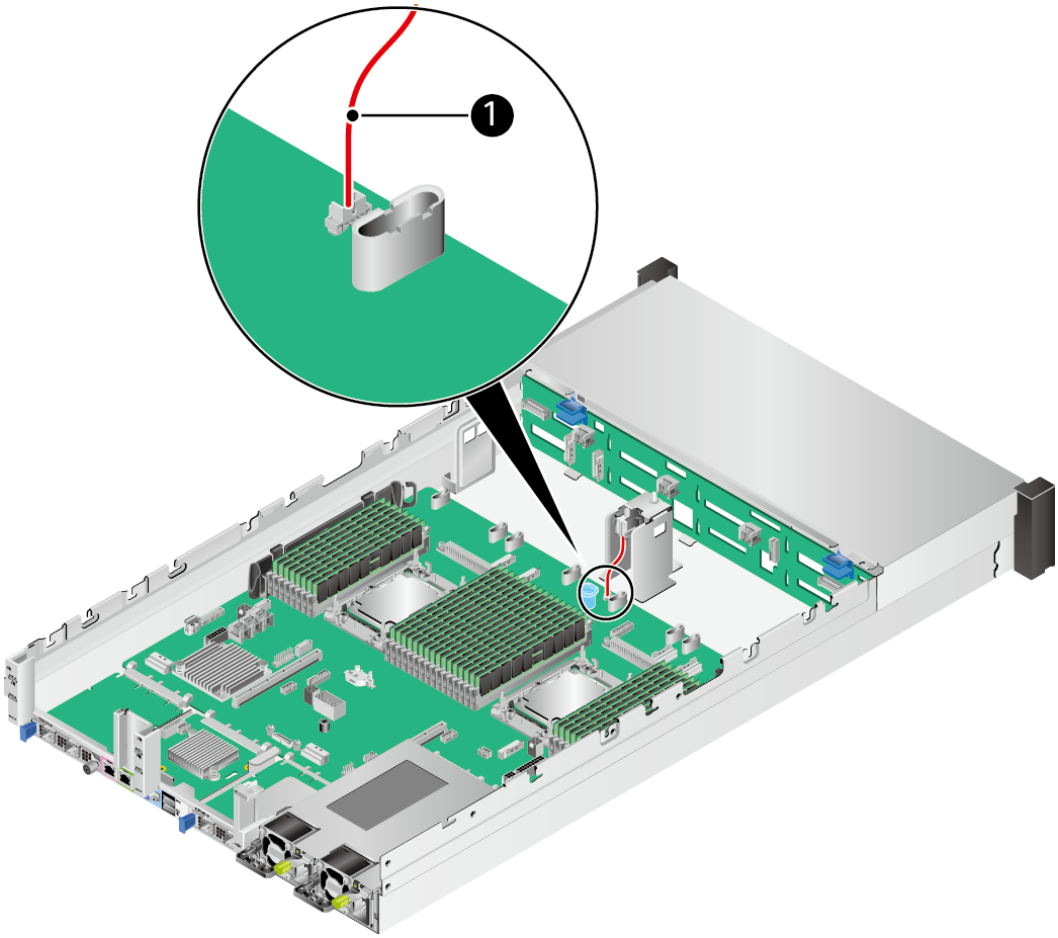

Table 6-262 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.5.9.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-301 Front-drive backplane power and low-speed signal cables

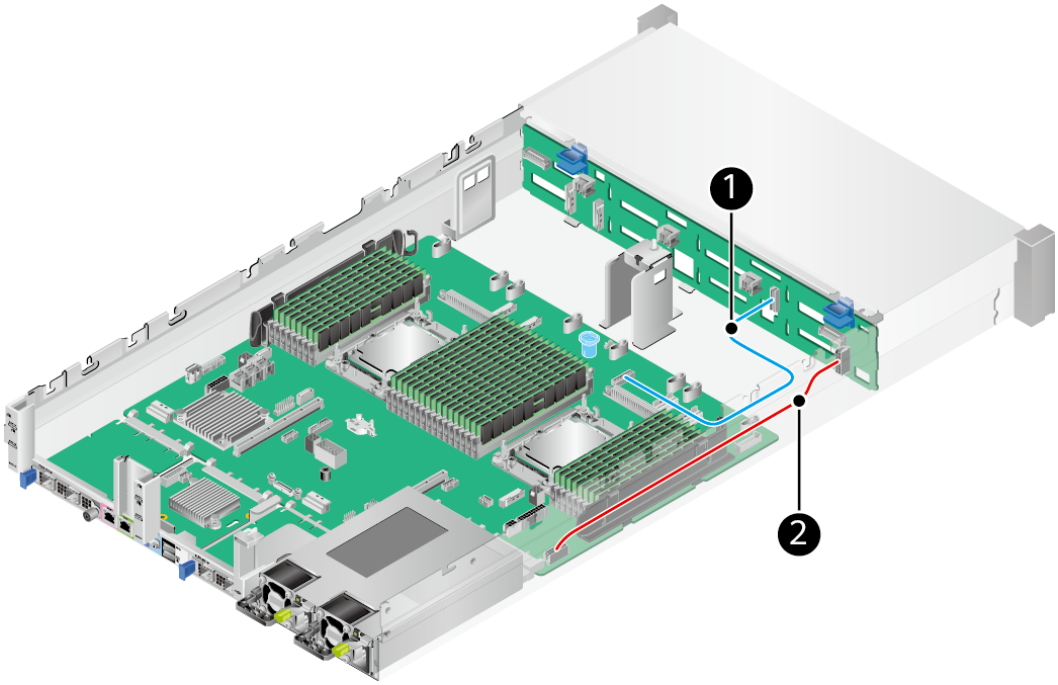

Table 6-263 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)

6.4.5.9.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-302 Front-drive backplane SAS high-speed cabling

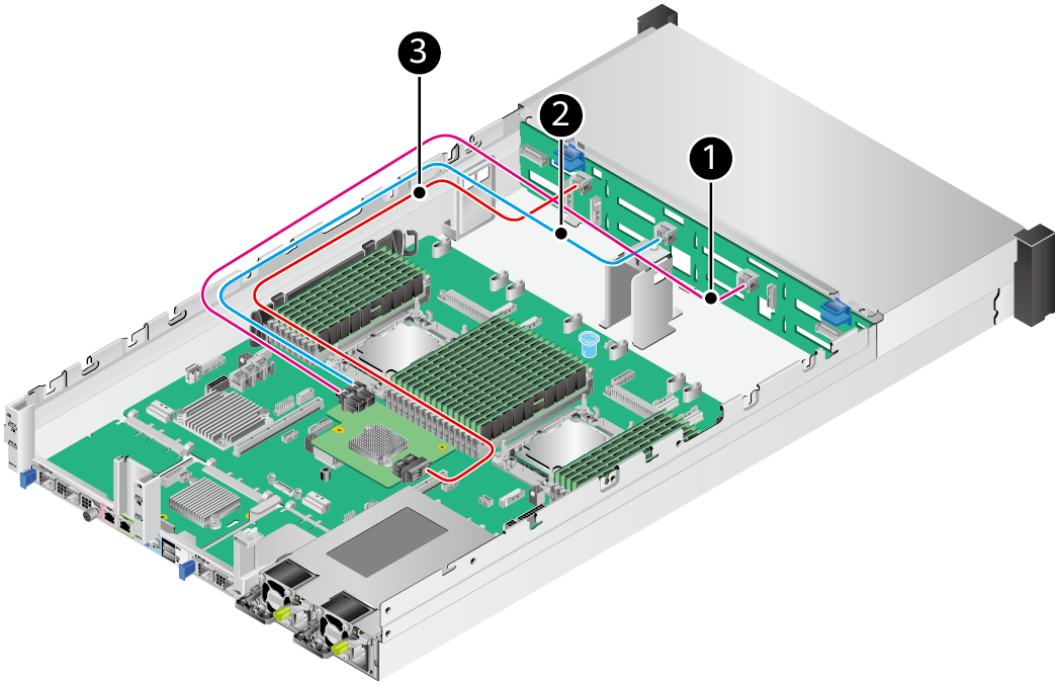

Table 6-264 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J36) to PORT C of the screw-in RAID controller card

6.4.5.9.6 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cables

Figure 6-303 Front-drive backplane LP slimline high-speed cables

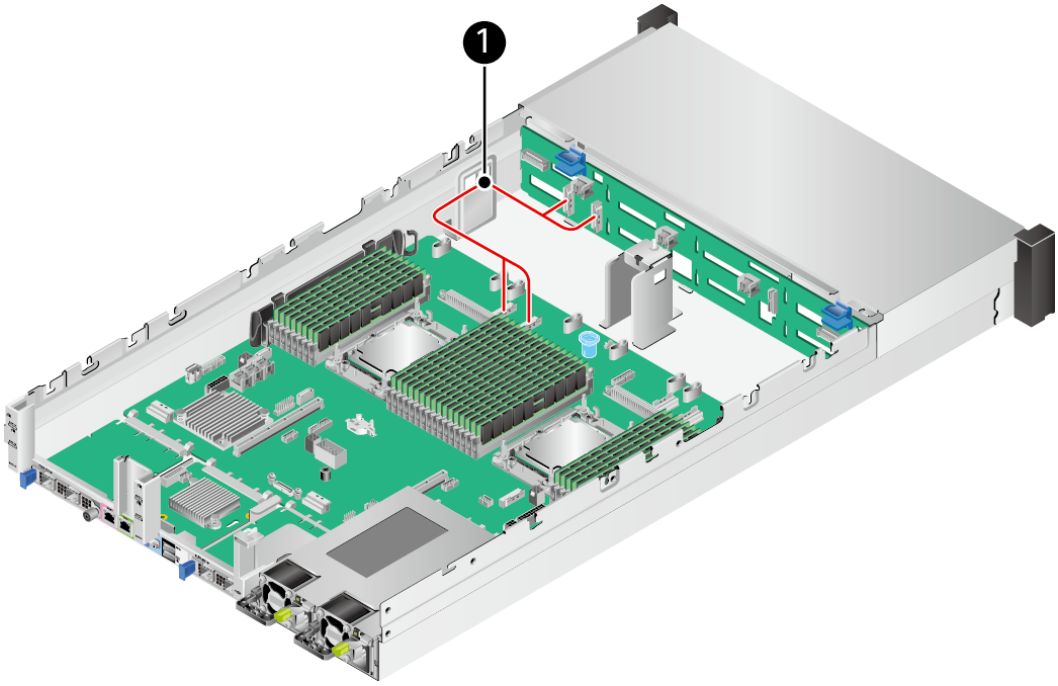

Table 6-265 Front-drive backplane LP slimline high-speed cables

No.	P/N Code	Description
1	04052316-001	High-speed cable for connecting LP Slimline 1 (J4) and LP Slimline 2 (J37) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J4), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J37); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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6.4.5.9.7 I/O Module 1 (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-304 I/O module 1 cabling

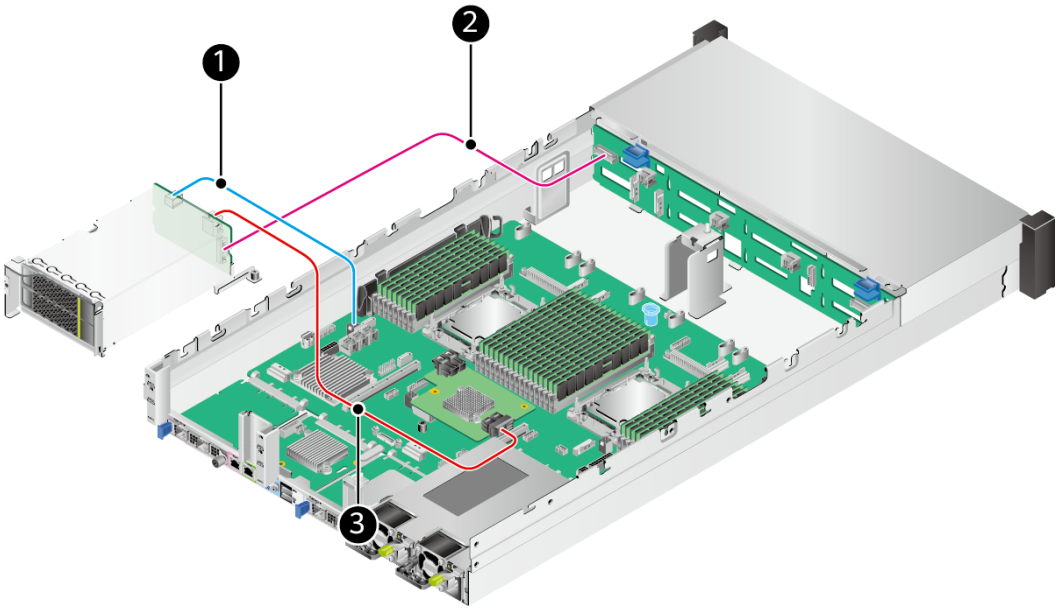

Table 6-266 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the the RAID controller card.

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6.4.5.9.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-305 I/O module 1 cabling

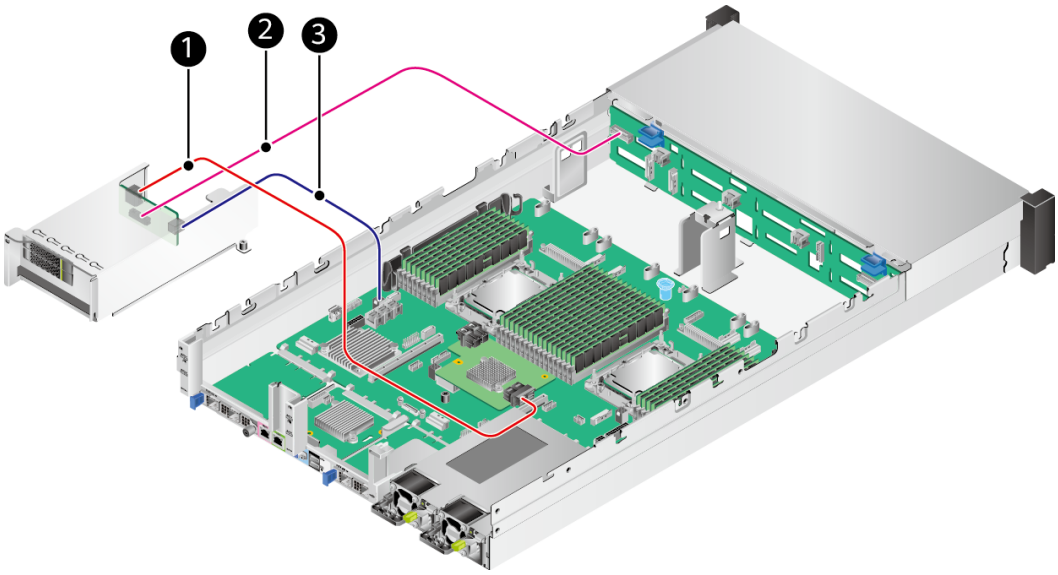

Table 6-267 I/O module 1 cabling

No.	P/N Code	Description
1	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the the RAID controller card.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)

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6.4.5.9.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-306 I/O module 1 and I/O module 2 cabling

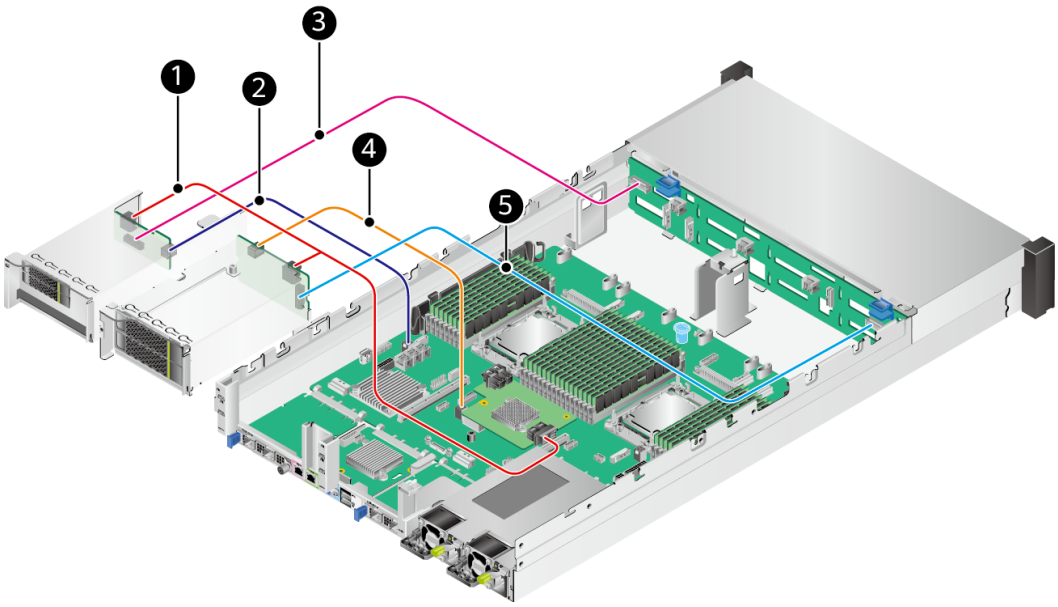

Table 6-268 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)

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6.4.5.9.10 I/O Module 1 (2 x 3.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-307 I/O module 1 and I/O module 2 cabling

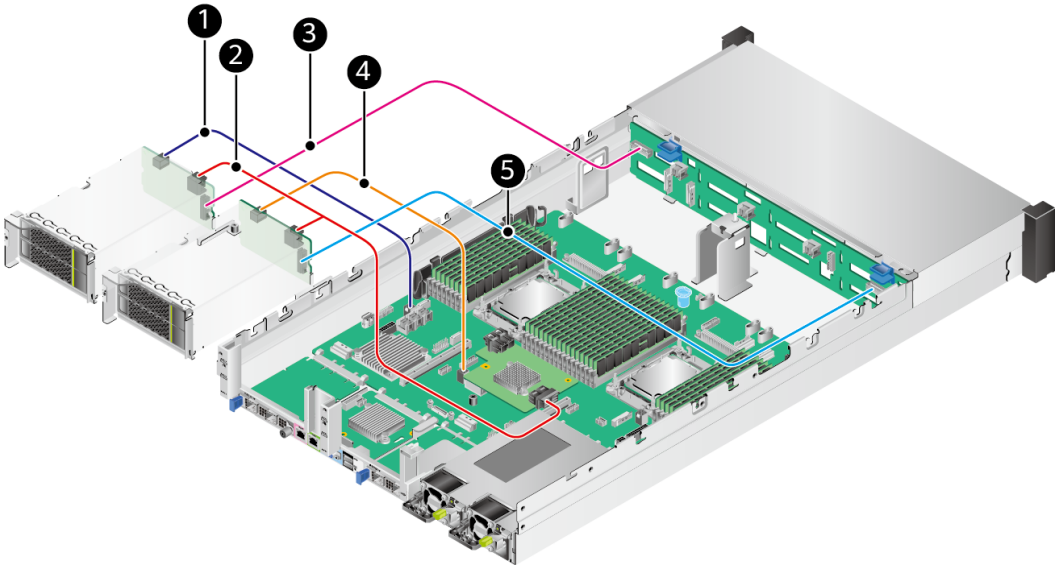

Table 6-269 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04052385-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card **NOTE** 04052385-001 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) Vof I/O module 2, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)

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6.4.5.9.11 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-308 I/O module 3 cabling

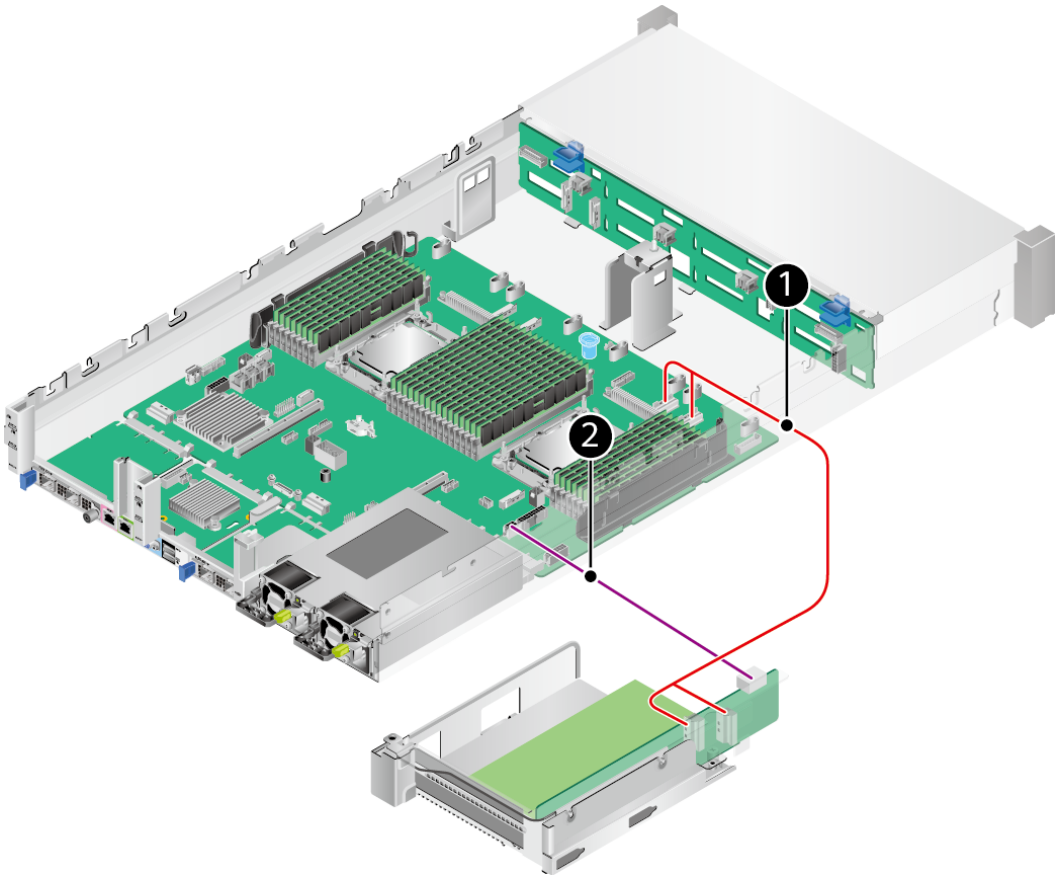

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Table 6-270 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.5.9.12 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-309 I/O module 3 cabling

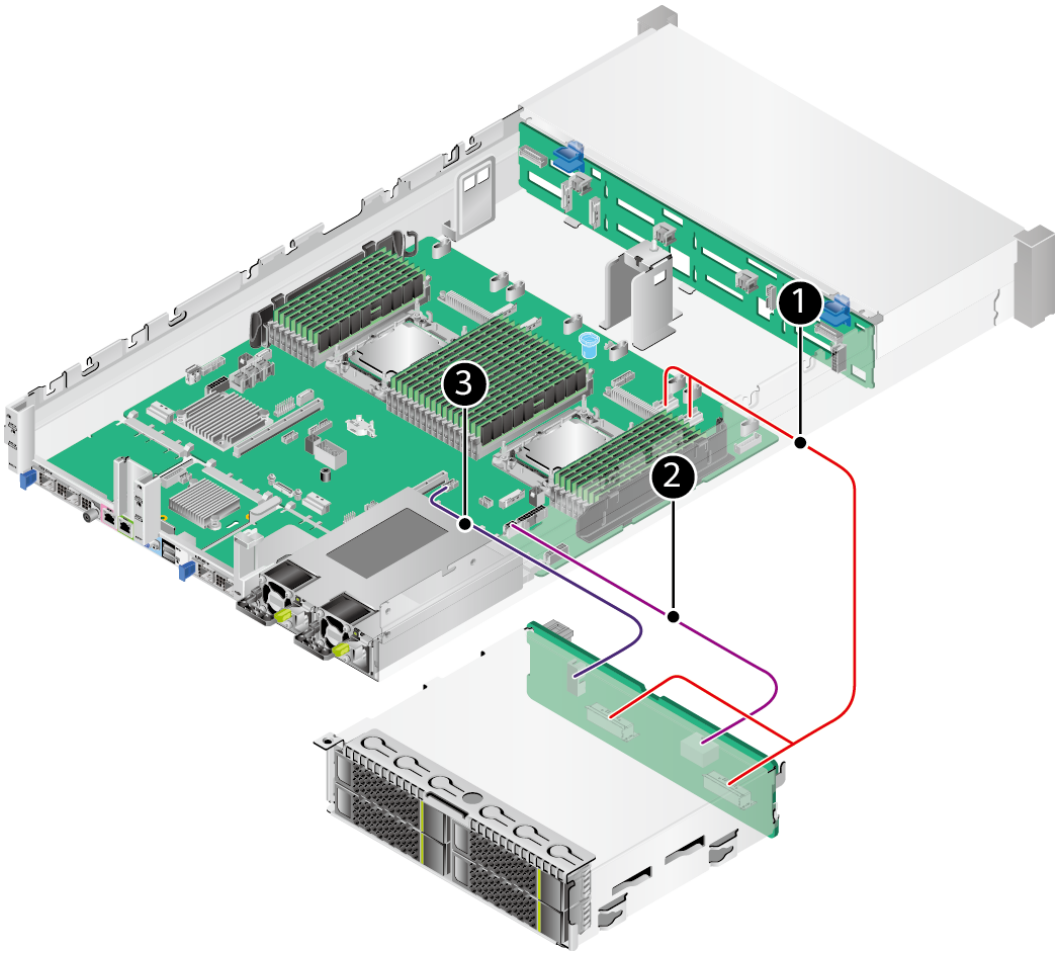

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Table 6-271 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.6 12 x 3.5" Drive EXP Configuration

6.4.6.1 12 x 3.5" Drive EXP Configuration 1

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6.4.6.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-310 Left and right mounting ear cabling

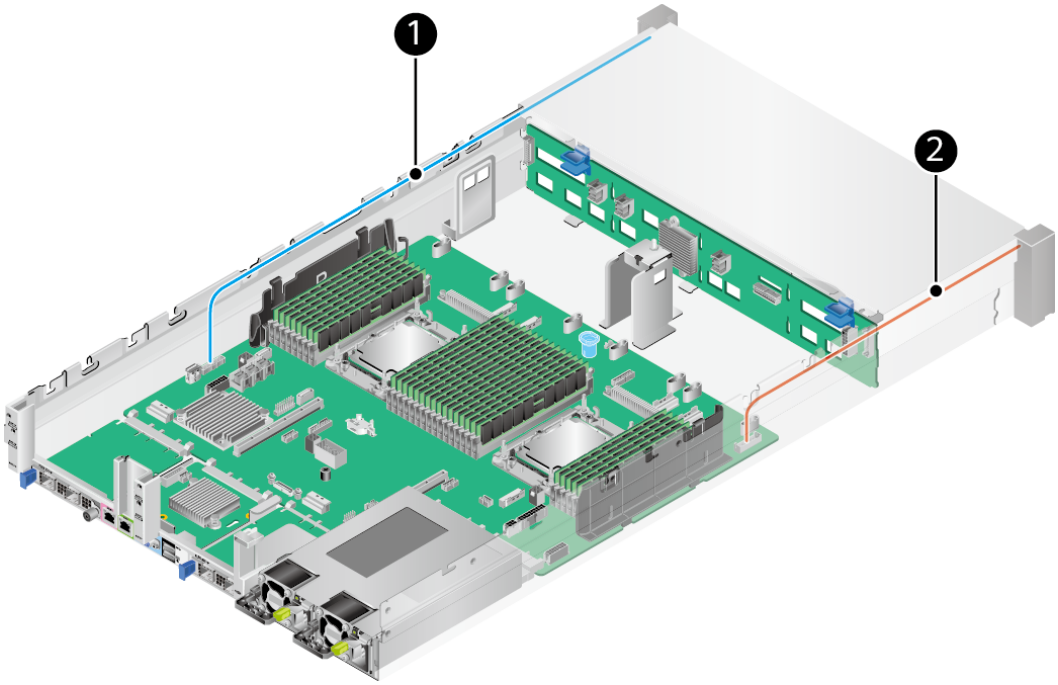

Table 6-272 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.6.1.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-311 OCP 3.0 expansion cable 1

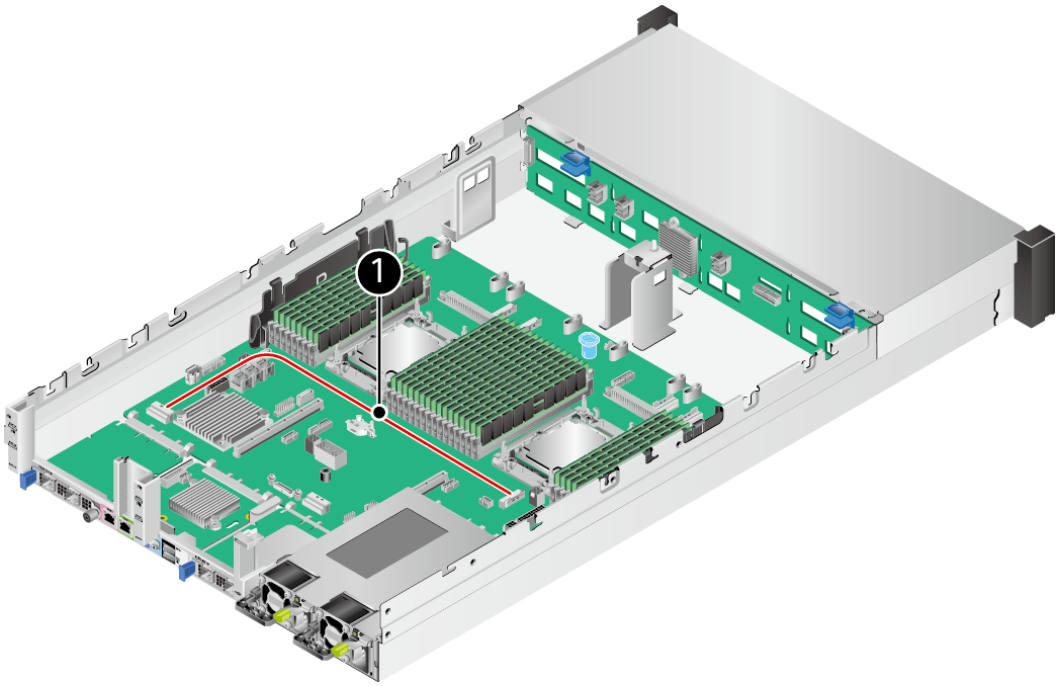

Table 6-273 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-312 OCP 3.0 expansion cable 2

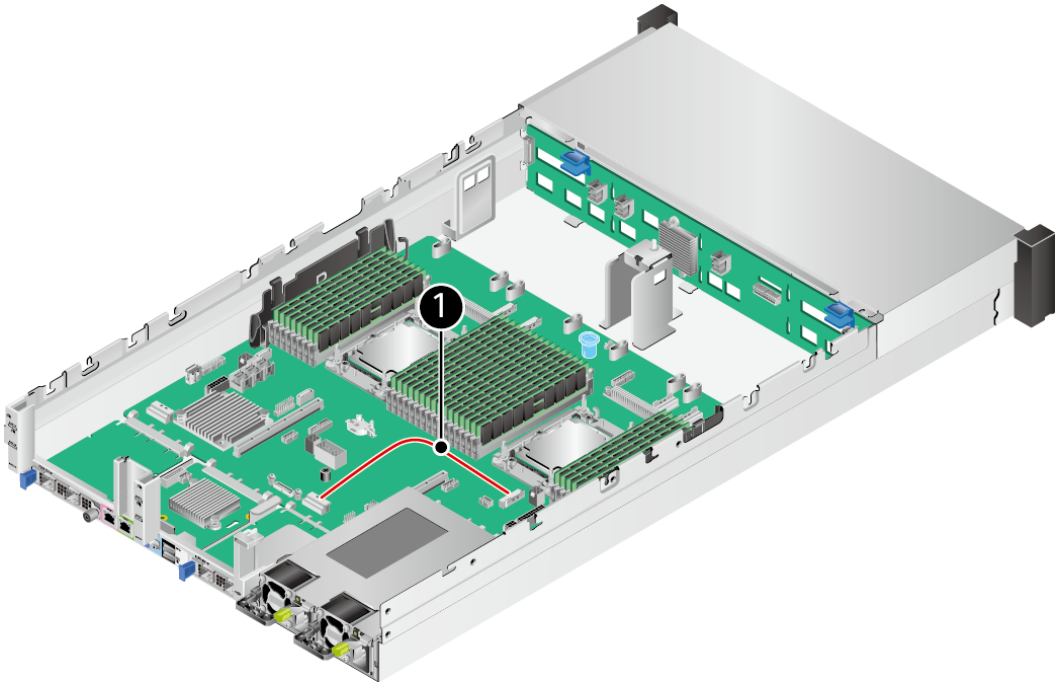

Table 6-274 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.6.1.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-313 Intrusion sensor cabling

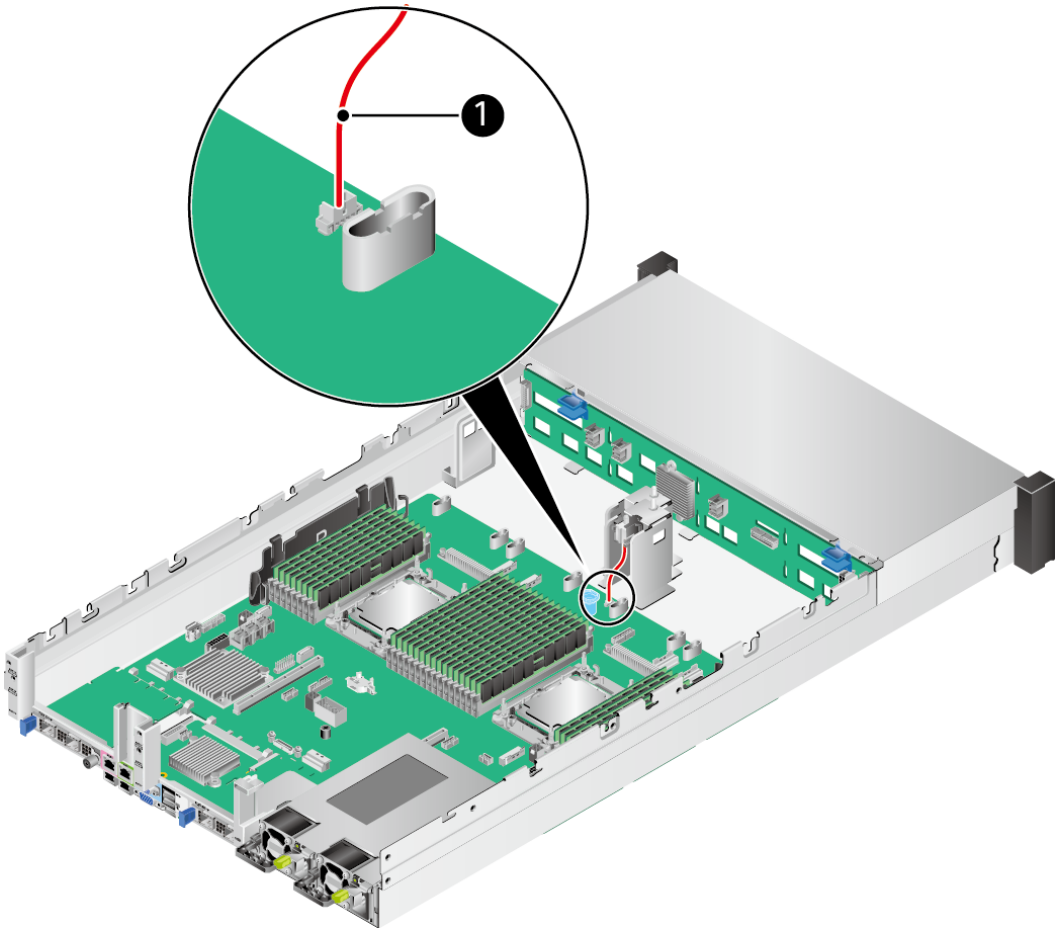

Table 6-275 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.6.1.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-314 Front-drive backplane power and low-speed signal cabling

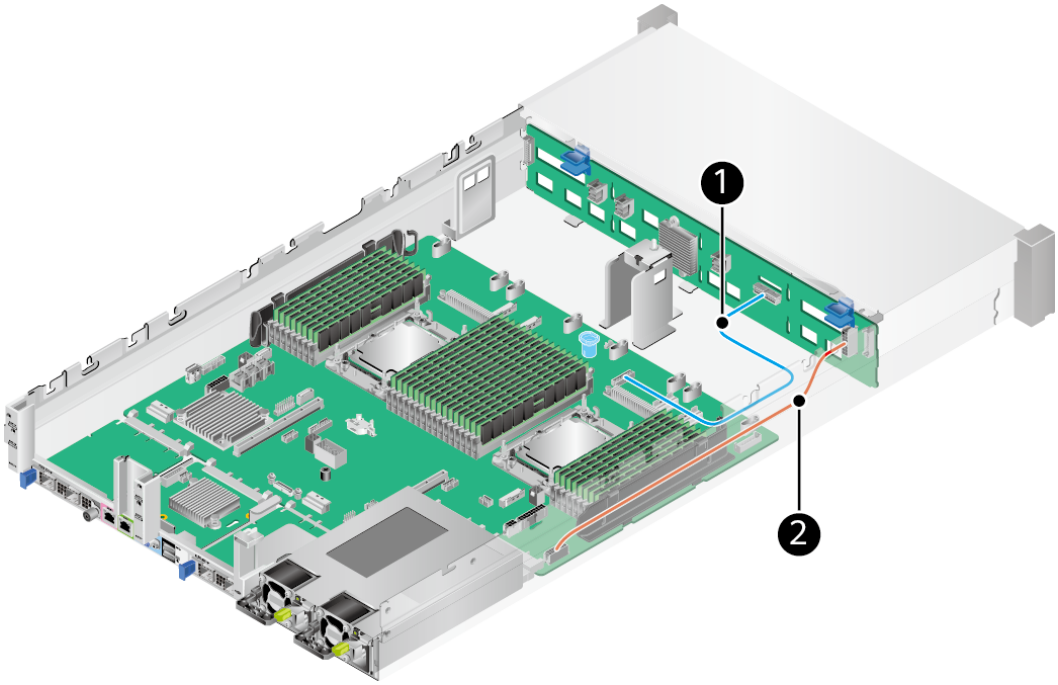

Table 6-276 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)	

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Figure 6-315 Front-drive backplane power and low-speed signal cabling

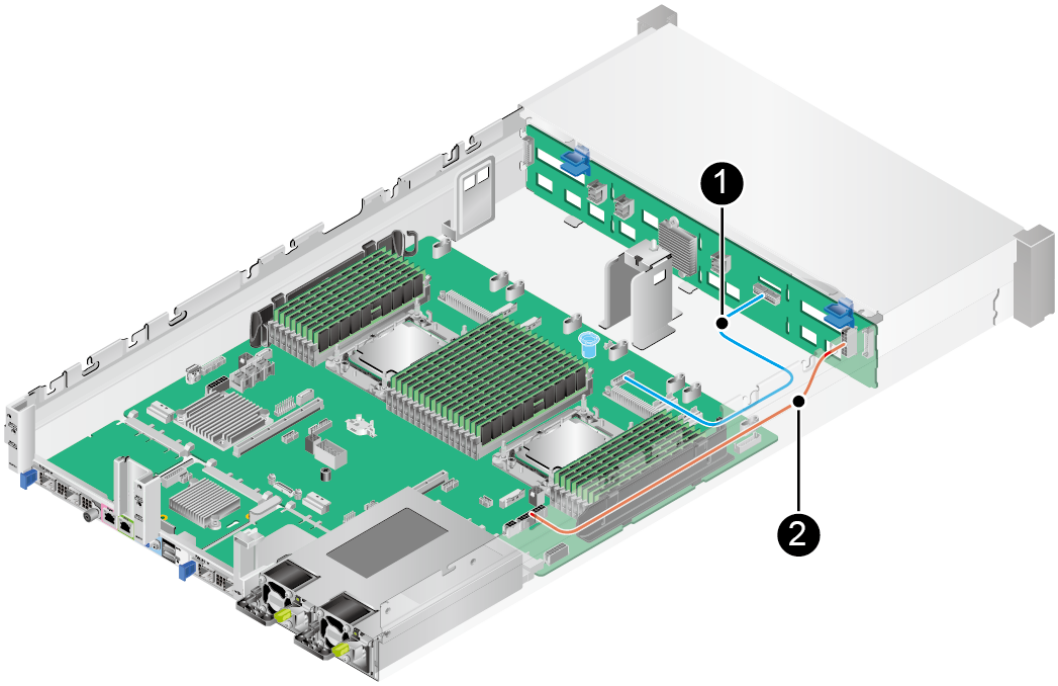

Table 6-277 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.
2	04152178-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	

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6.4.6.1.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-316 Front-drive backplane SAS high-speed cabling

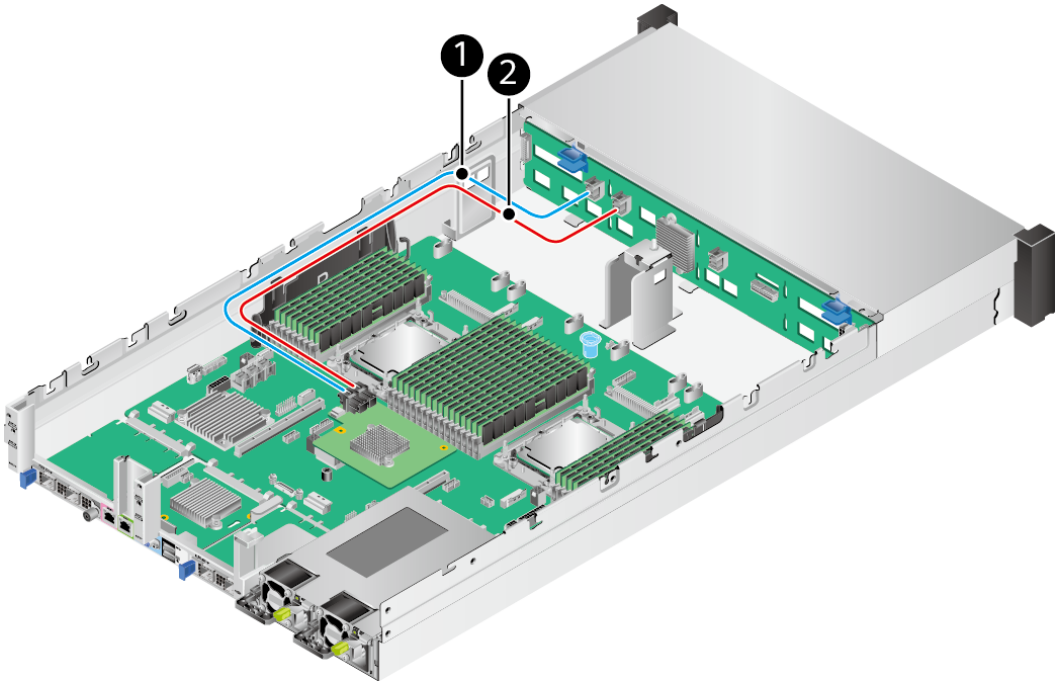

Table 6-278 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.4.6.1.6 I/O Module 1 (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-317 I/O module 1 cabling

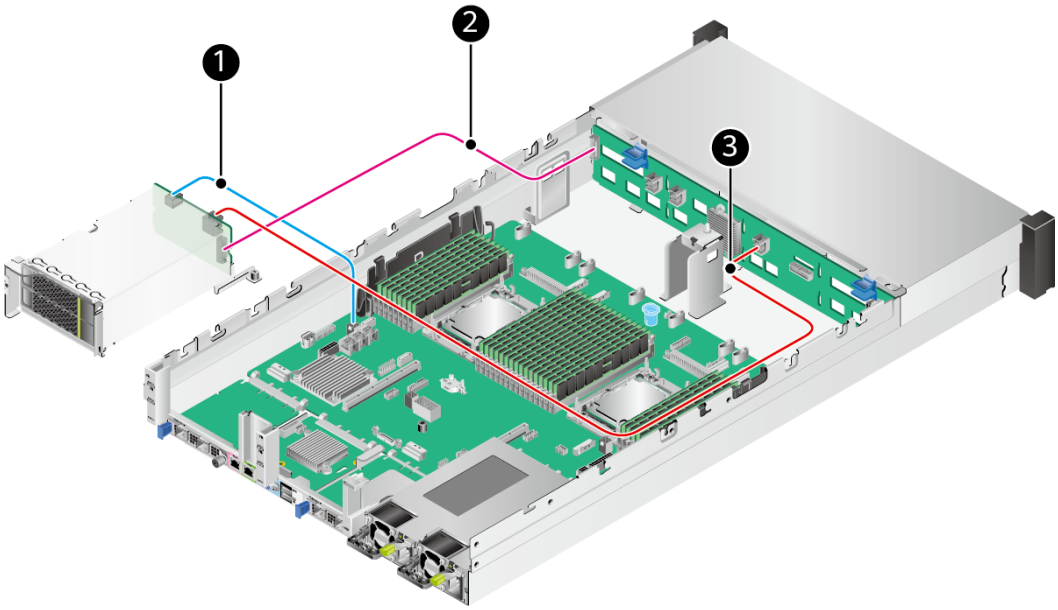

Table 6-279 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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Table 6-280 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

6.4.6.1.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-318 I/O module 1 cabling

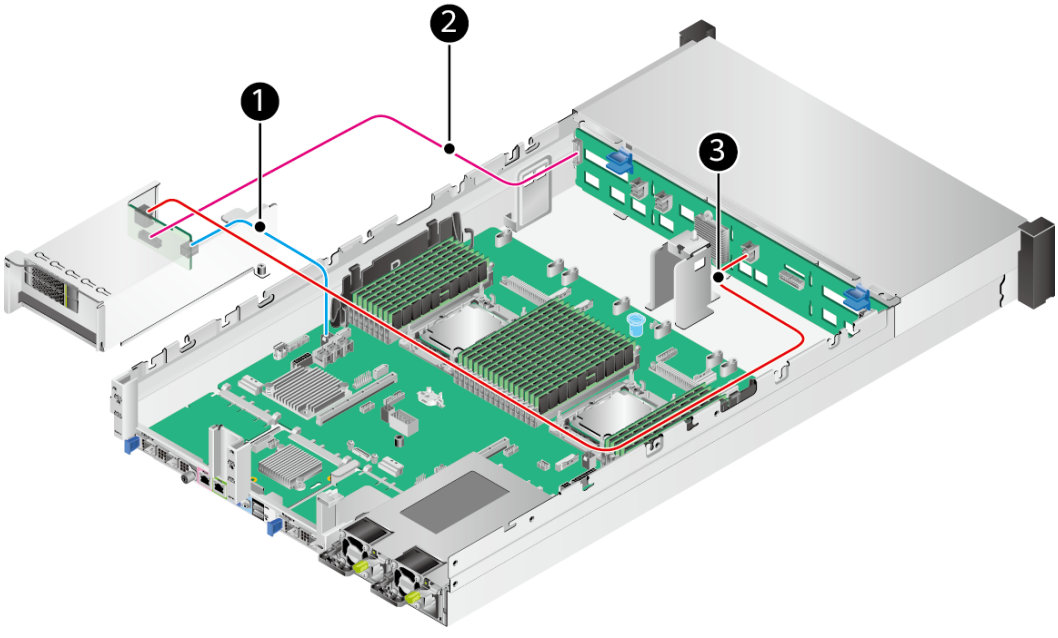

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Table 6-281 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

Table 6-282 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.4.6.1.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-319 I/O module 1 and I/O module 2 cabling

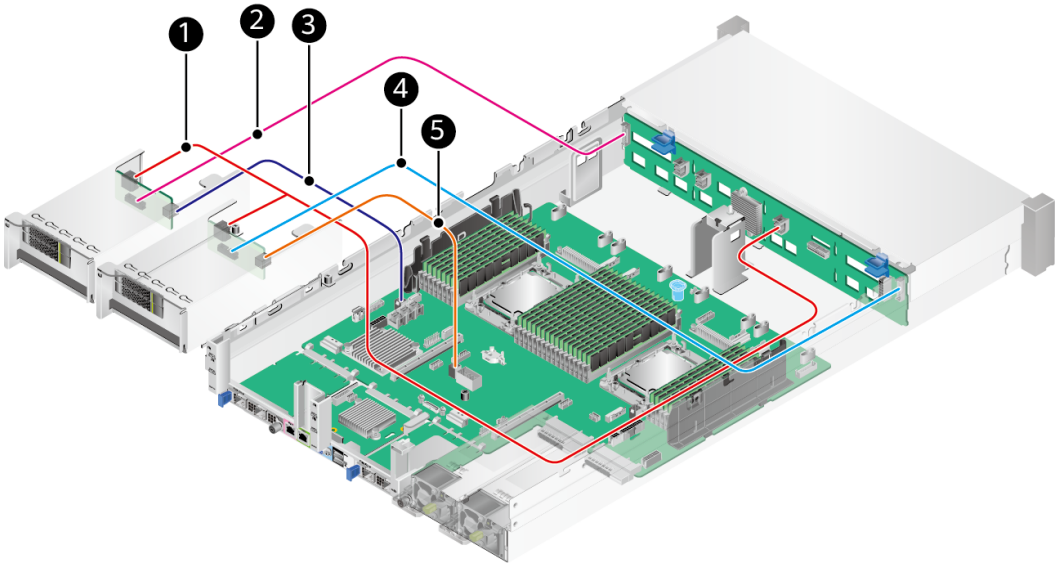

Table 6-283 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

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No.	P/N Code	Description	Remarks
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

Table 6-284 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
4	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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6.4.6.1.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-320 I/O module 1 and I/O module 2 cabling

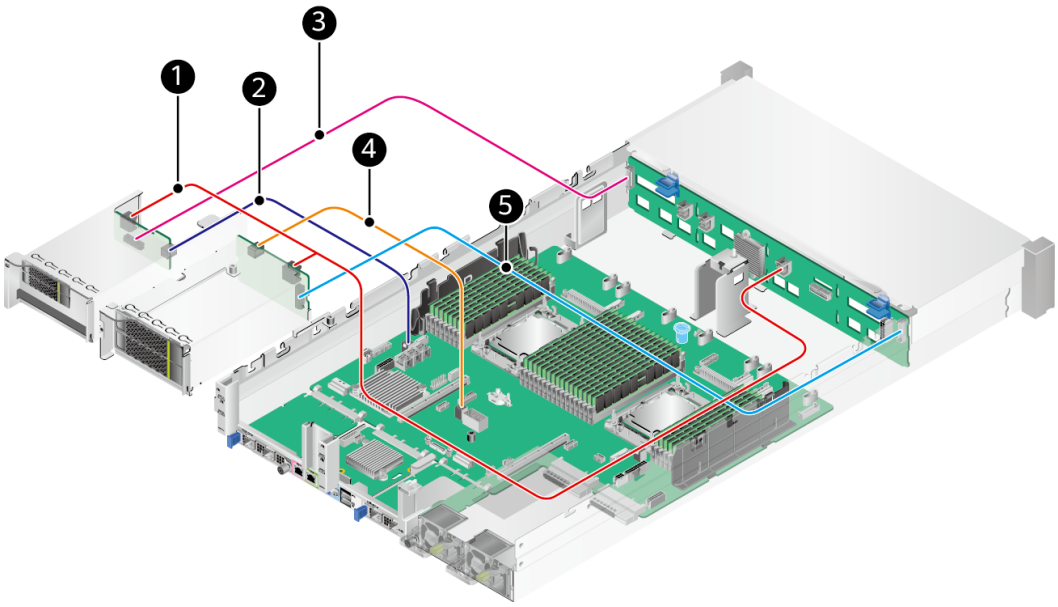

Table 6-285 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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No.	P/N Code	Description	Remarks
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-286 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5"/2 x 3.5" drive module as a spare part.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

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6.4.6.1.10 I/O Module 1 (2 x 3.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-321 I/O module 1 and I/O module 2 cabling

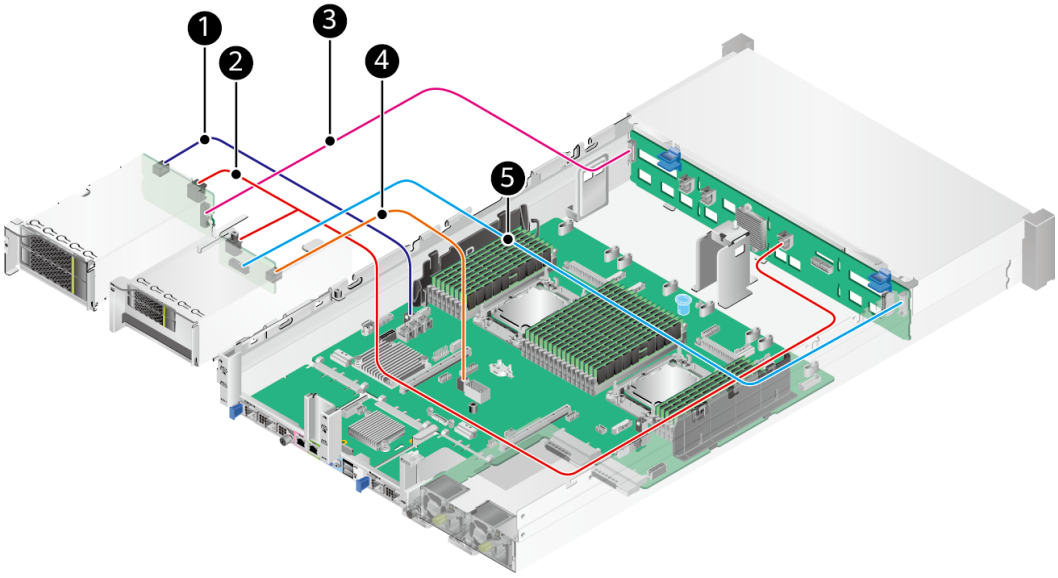

Table 6-287 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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No.	P/N Code	Description	Remarks
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-288 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5"/2 x 3.5" drive module as a spare part.
2	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

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6.4.6.1.11 I/O Module 1 (2 x 3.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-322 I/O module 1 and I/O module 2 cabling

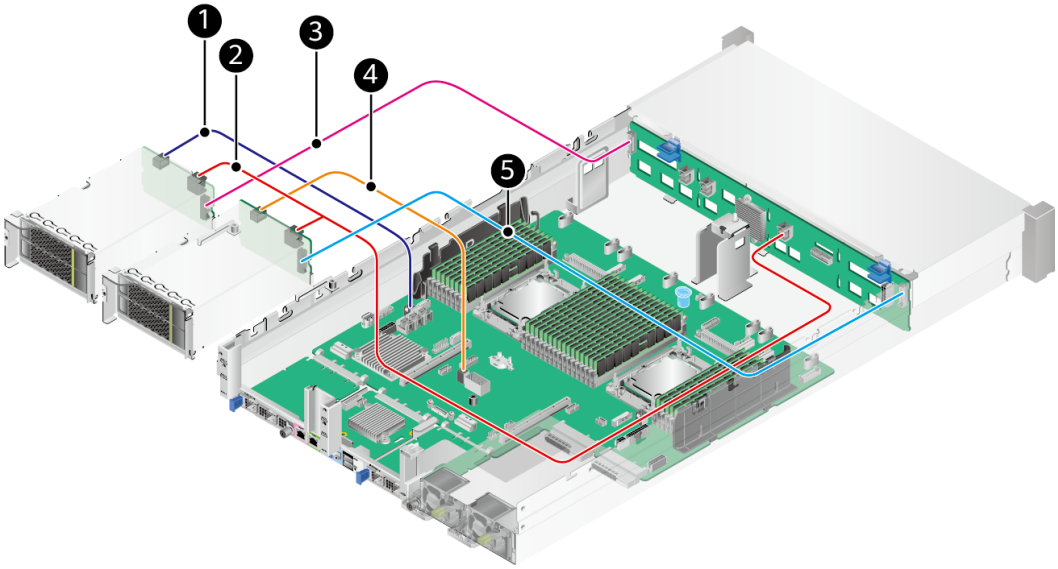

Table 6-289 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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No.	P/N Code	Description	Remarks
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-290 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

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6.4.6.1.12 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-323 I/O module 3 cabling

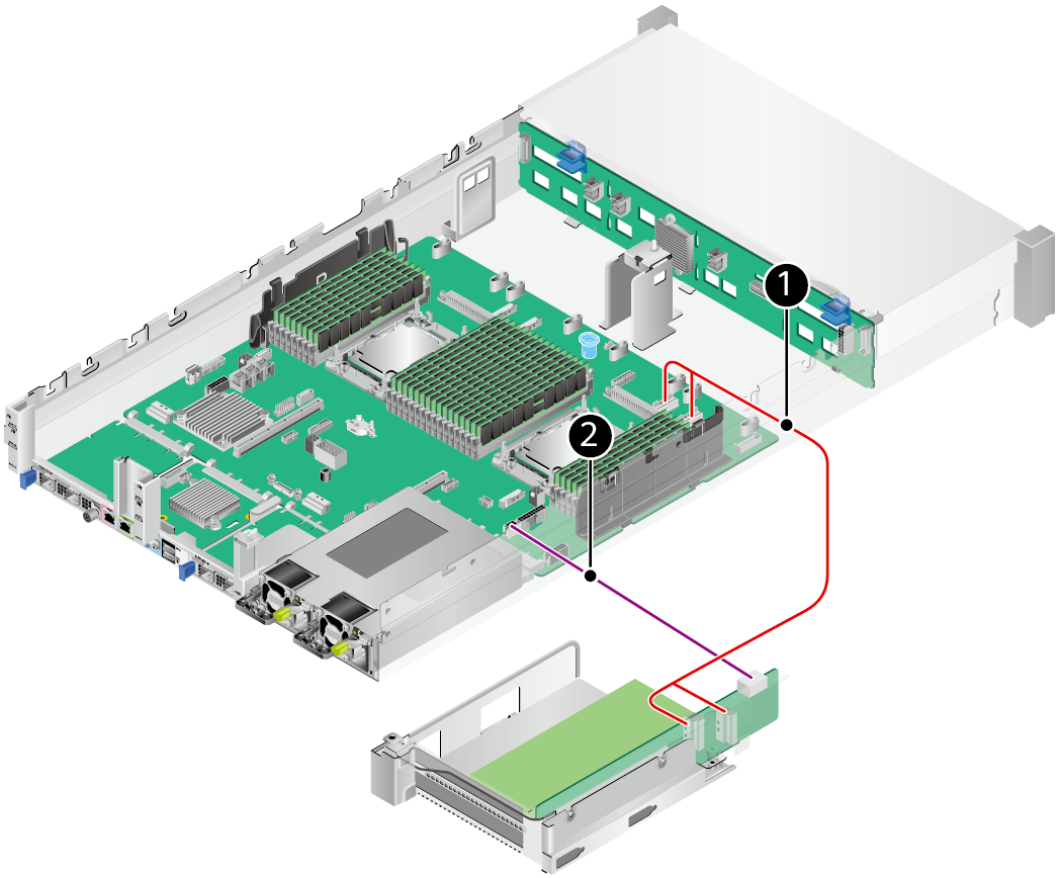

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Table 6-291 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.6.1.13 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-324 I/O module 3 cabling

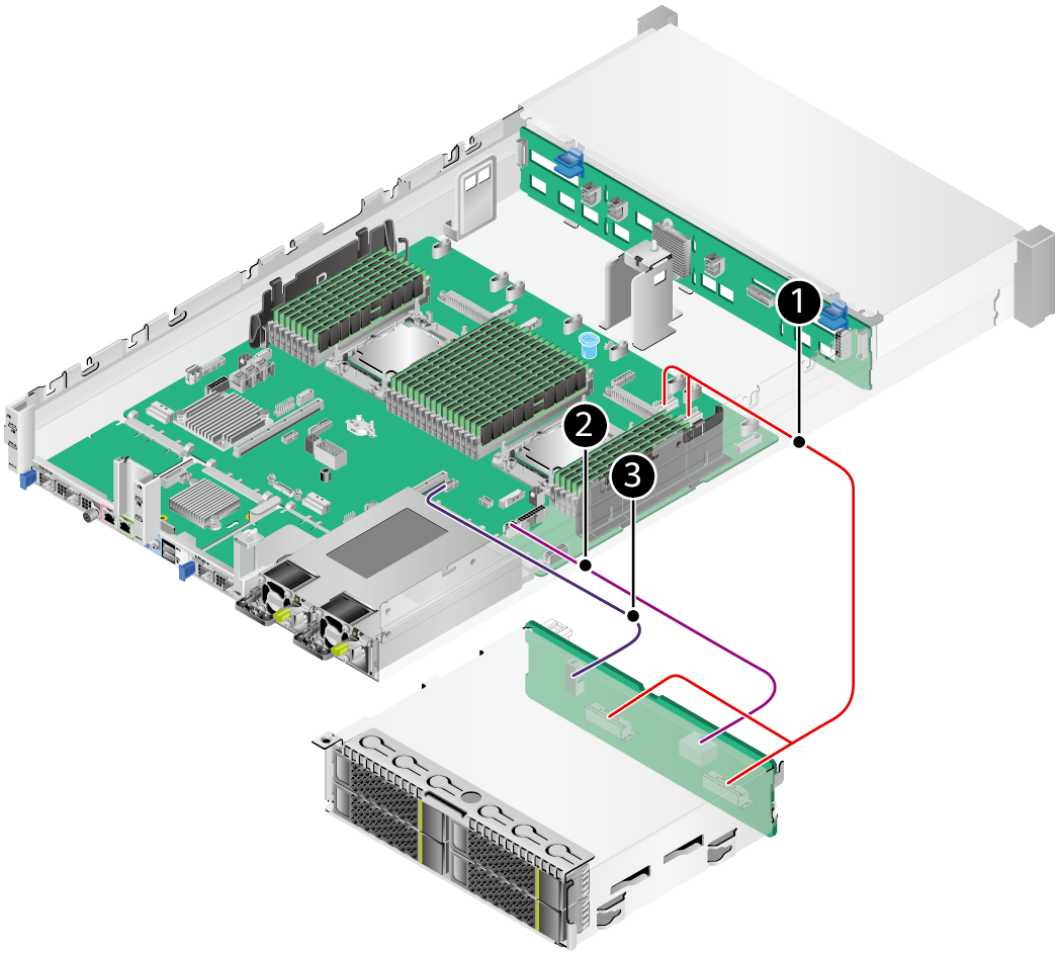

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Table 6-292 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.6.2 12 x 3.5" Drive EXP Configuration 2

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6.4.6.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-325 Left and right mounting ear cabling

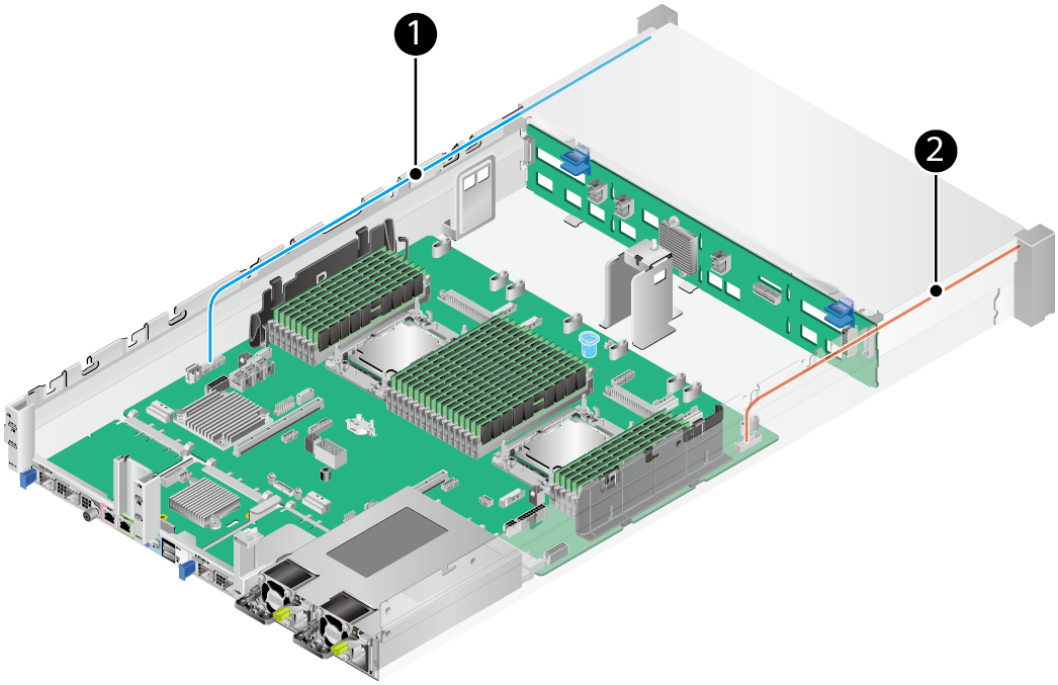

Table 6-293 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.6.2.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-326 OCP 3.0 expansion cable 1

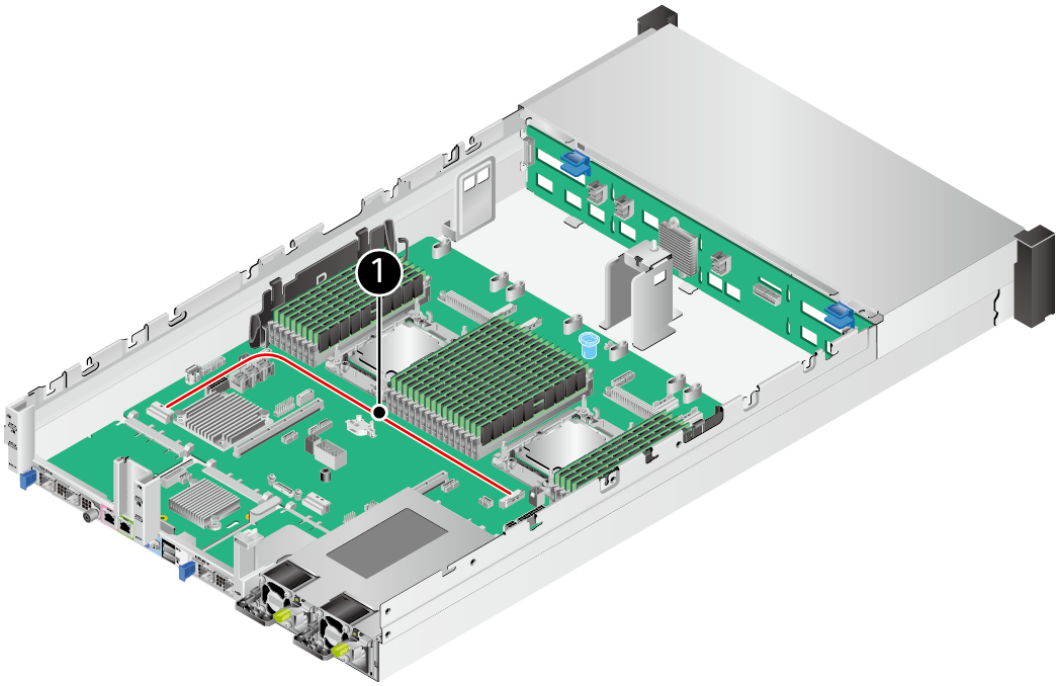

Table 6-294 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-327 OCP 3.0 expansion cable 2

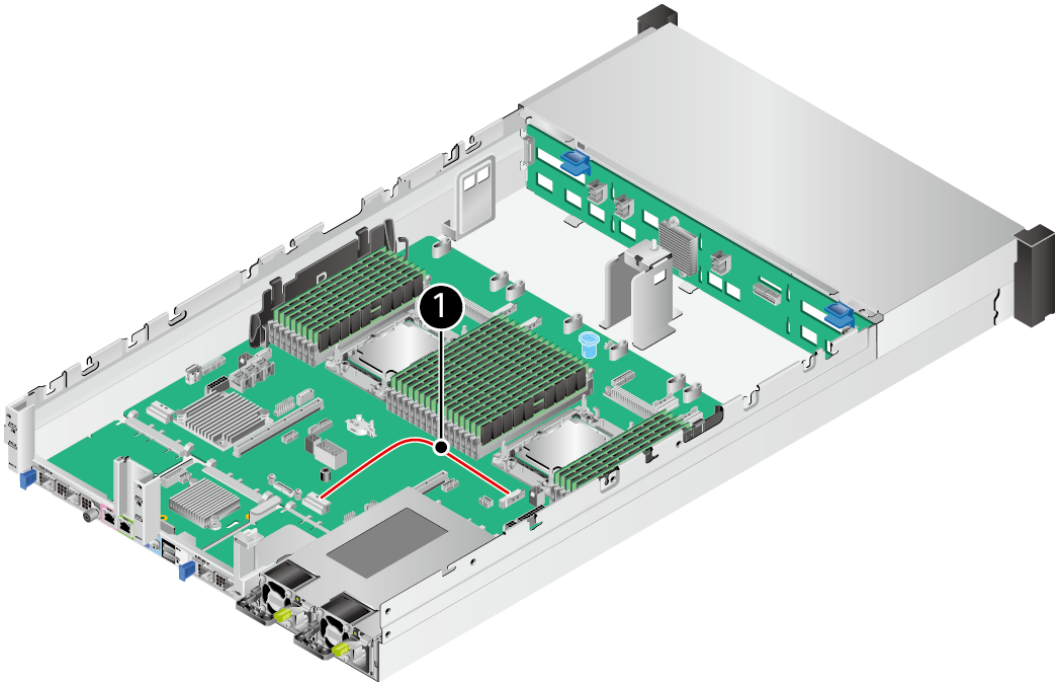

Table 6-295 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.6.2.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-328 Intrusion sensor cabling

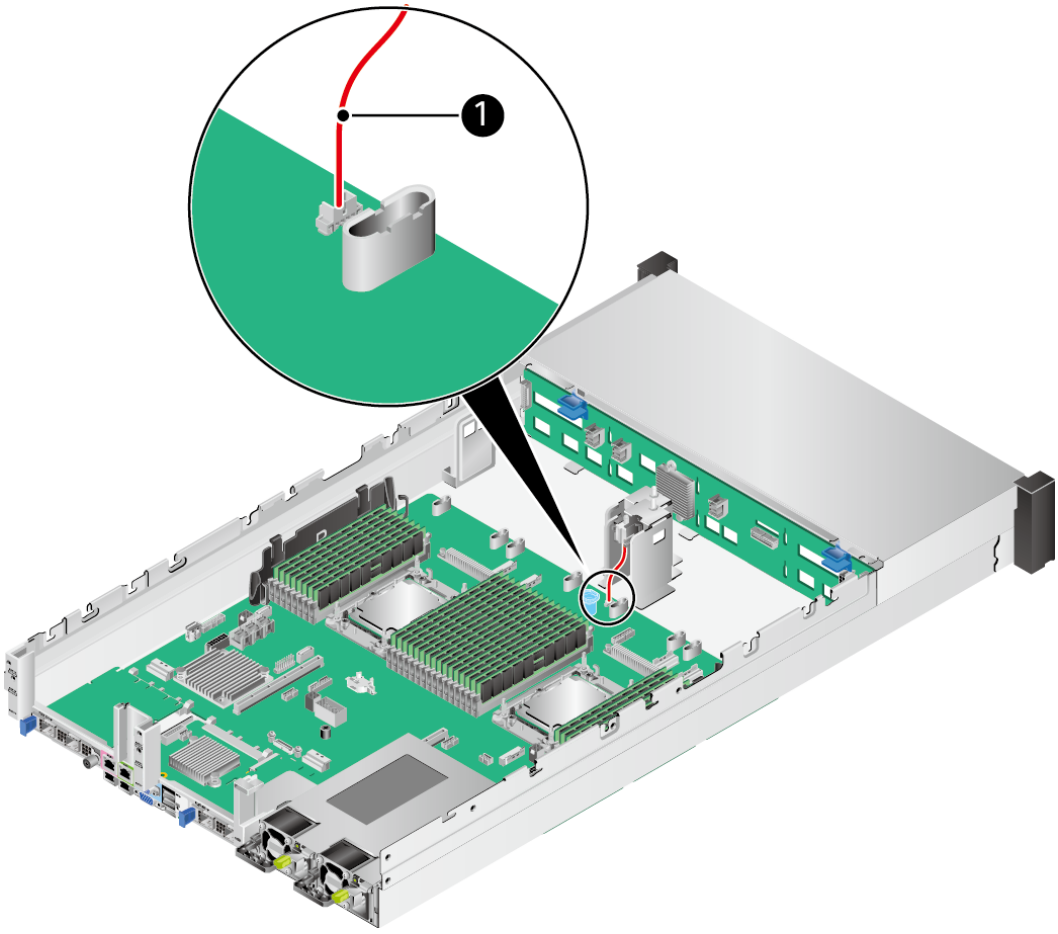

Table 6-296 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.6.2.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-329 Front-drive backplane power and low-speed signal cabling

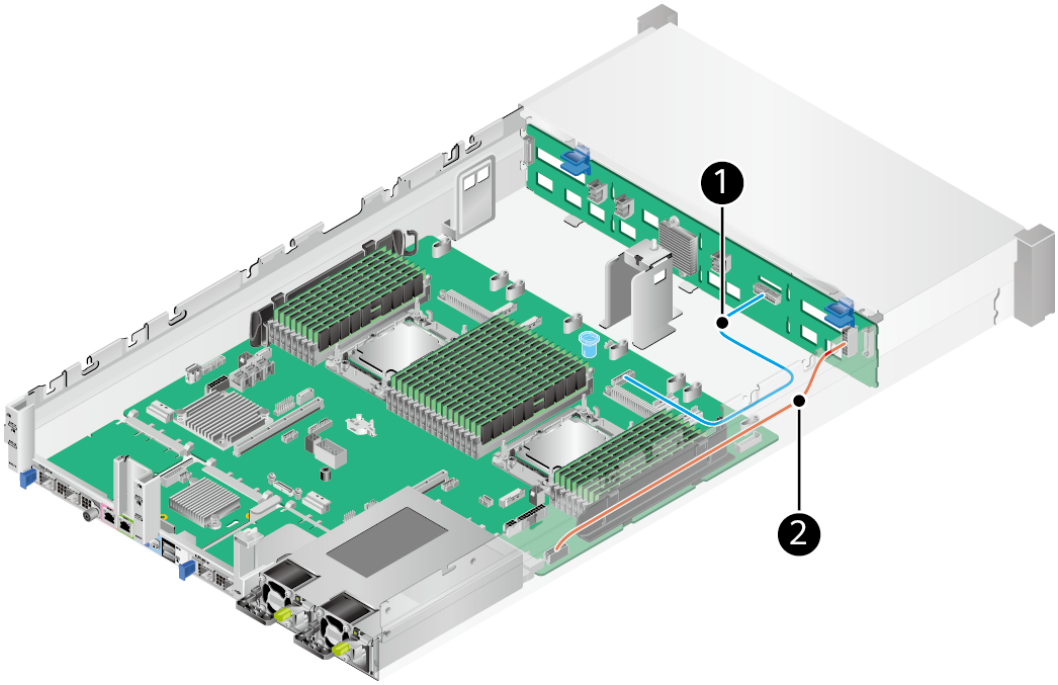

Table 6-297 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)	

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Figure 6-330 Front-drive backplane power and low-speed signal cabling

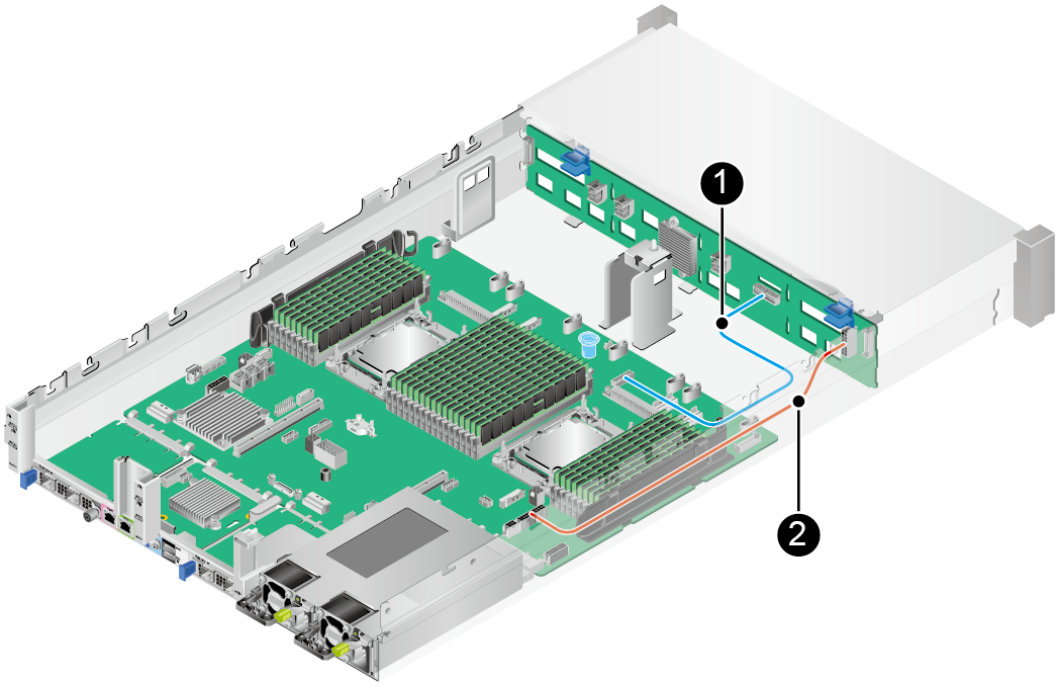

Table 6-298 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.
2	04152178-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	

6.4.6.2.5 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-331 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

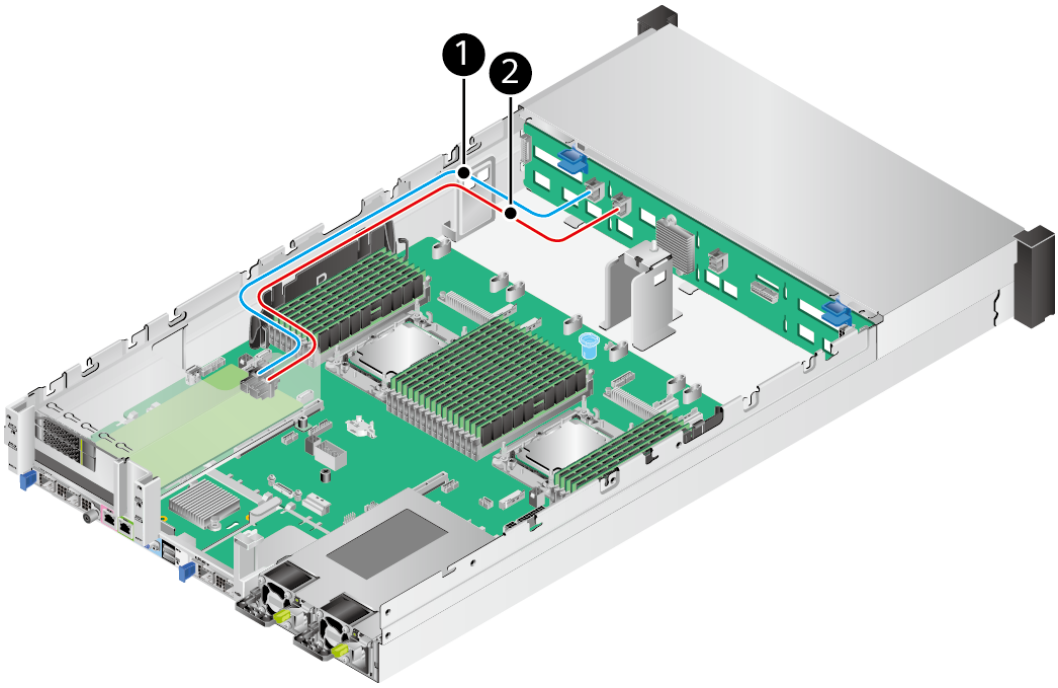

Table 6-299 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

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Figure 6-332 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one Mini SAS ports)

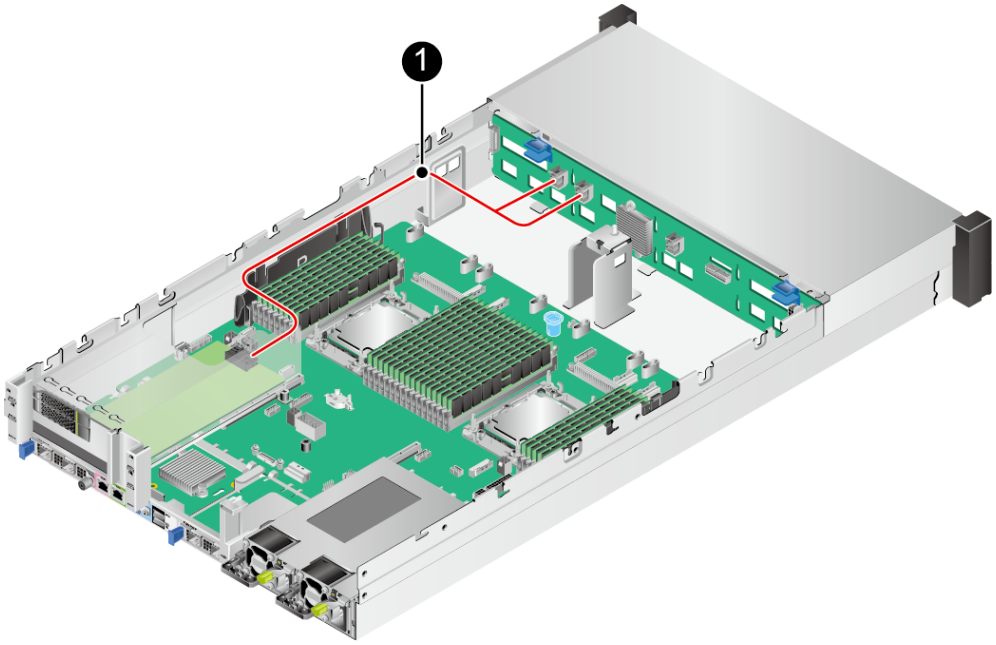

Table 6-300 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y017	SAS high-speed cable for connecting the front-drive backplane (J28/J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y017 is a Y-shaped cable. The PORT A connector is connected to the front drive backplane (J3) , the PORT B connector is connected to the front drive backplane (J4), and another end of the cable is connected to the RAID controller card.

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.6.2.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-333 I/O module 1 cabling

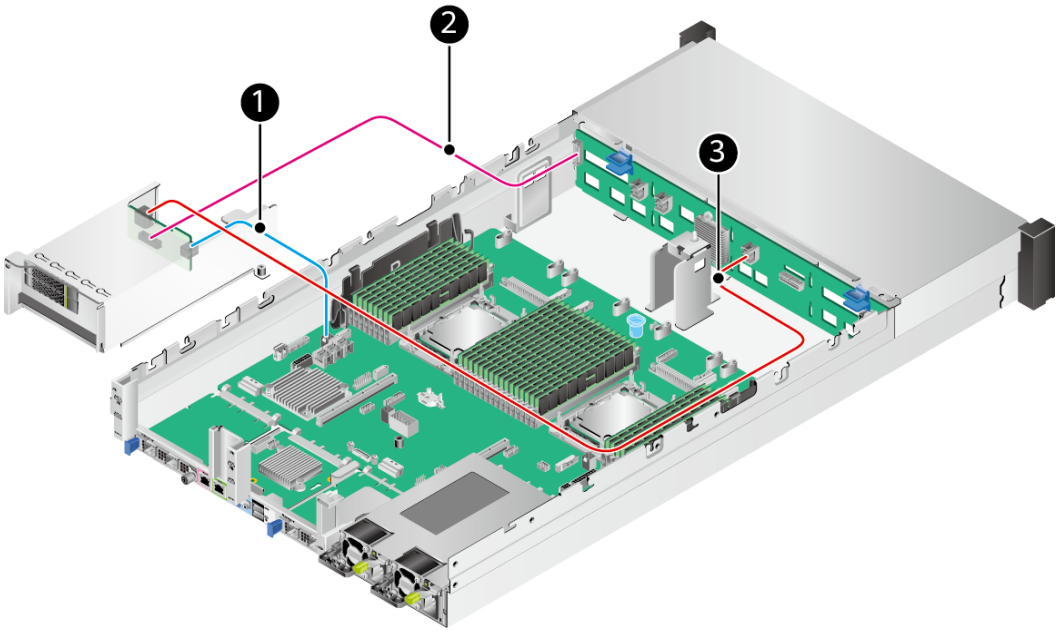

Table 6-301 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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Table 6-302 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

6.4.6.2.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-334 I/O module 1 and I/O module 2 cabling

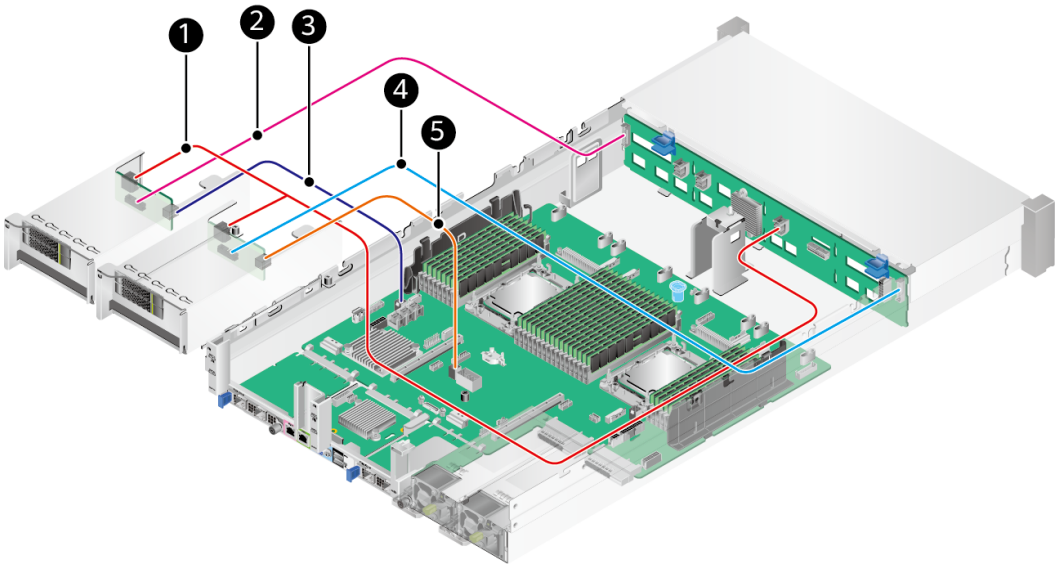

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Table 6-303 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

Table 6-304 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	

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No.	P/N Code	Description	Remarks
4	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	module as a spare part.
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

6.4.6.2.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-335 I/O module 1 and I/O module 2 cabling

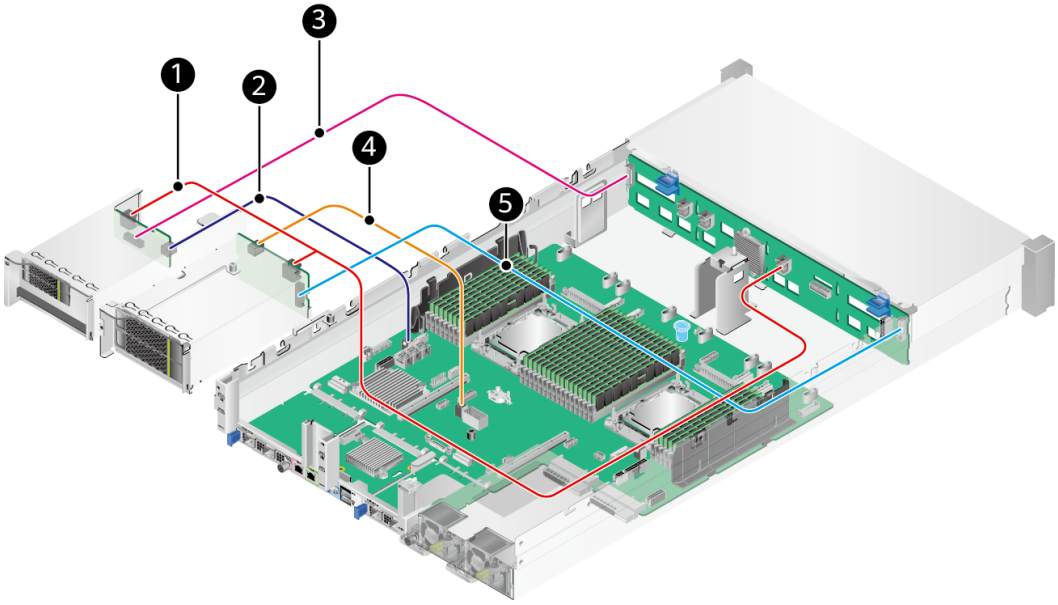

Table 6-305 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.

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No.	P/N Code	Description	Remarks
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-306 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5"/2 x 3.5" drive module as a spare part.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

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6.4.6.2.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-336 I/O module 3 cabling

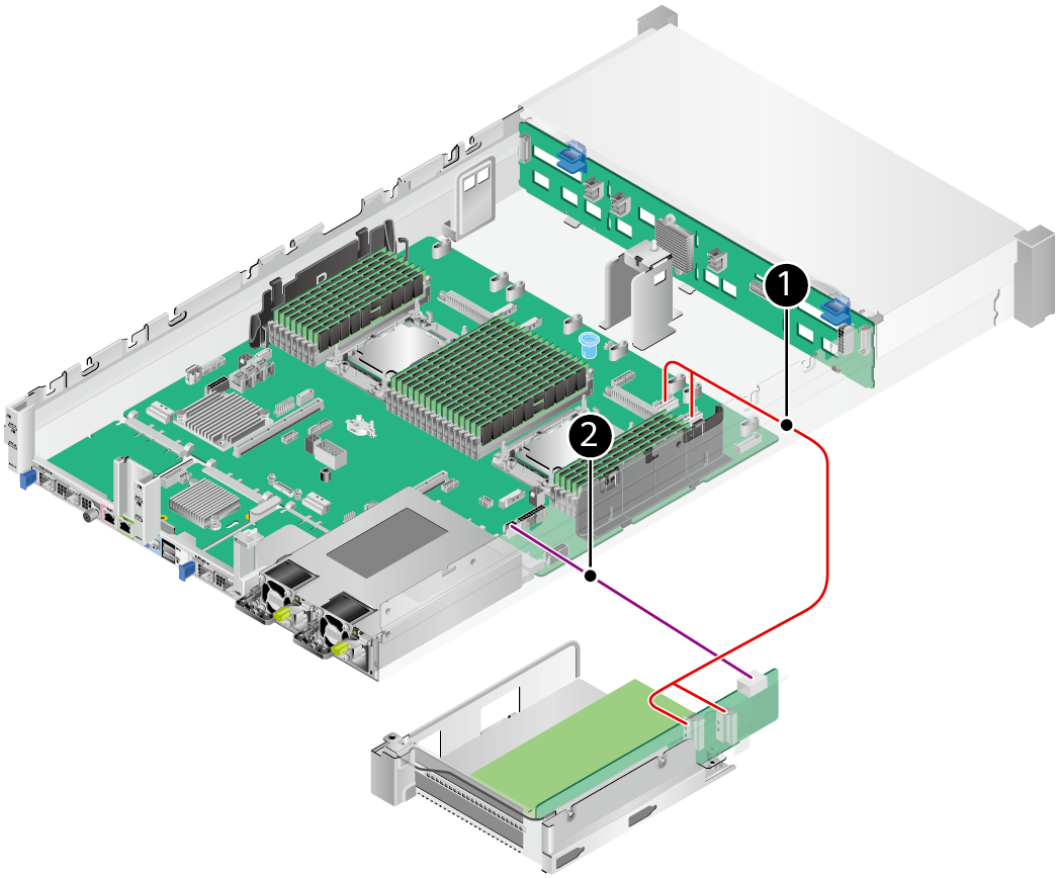

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Table 6-307 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.6.2.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-337 I/O module 3 cabling

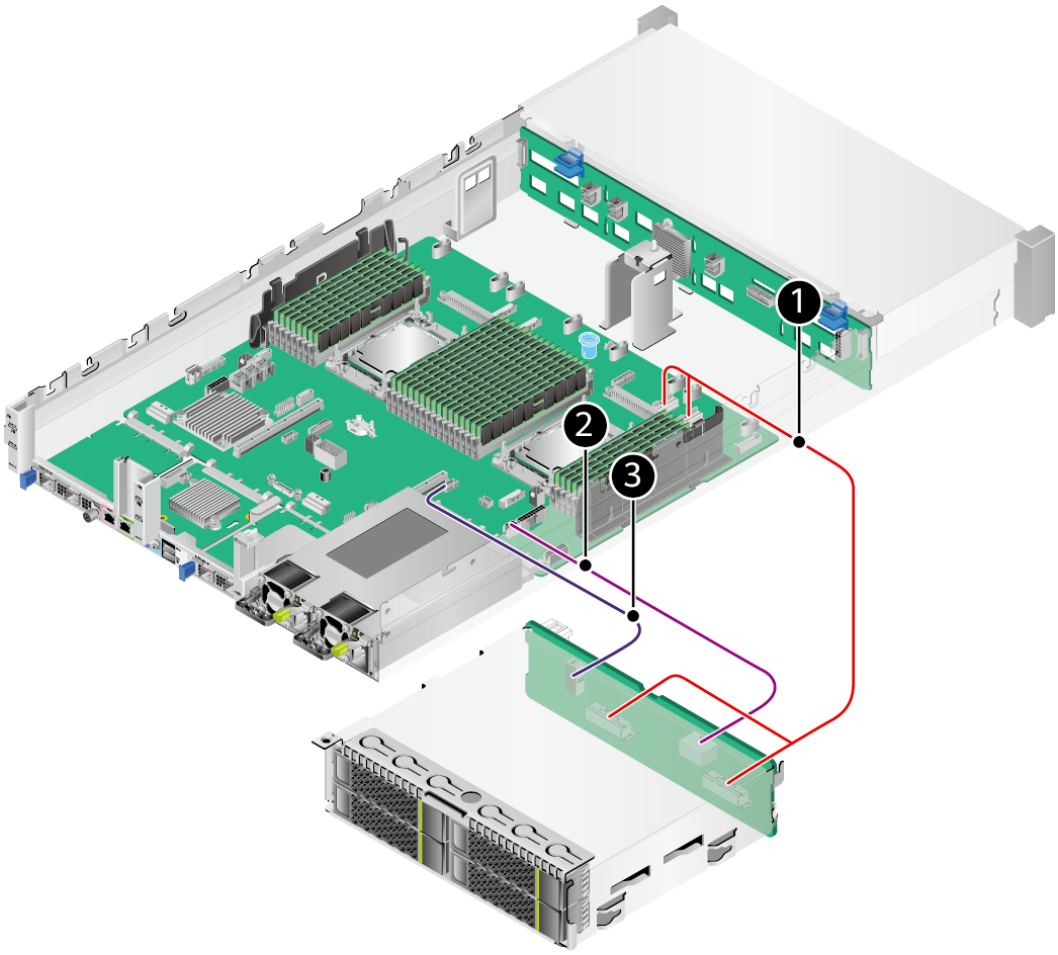

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Table 6-308 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.6.3 12 x 3.5" Drive EXP Configuration 3 (Dual RAID Controller Cards)

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6.4.6.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-338 Left and right mounting ear cabling

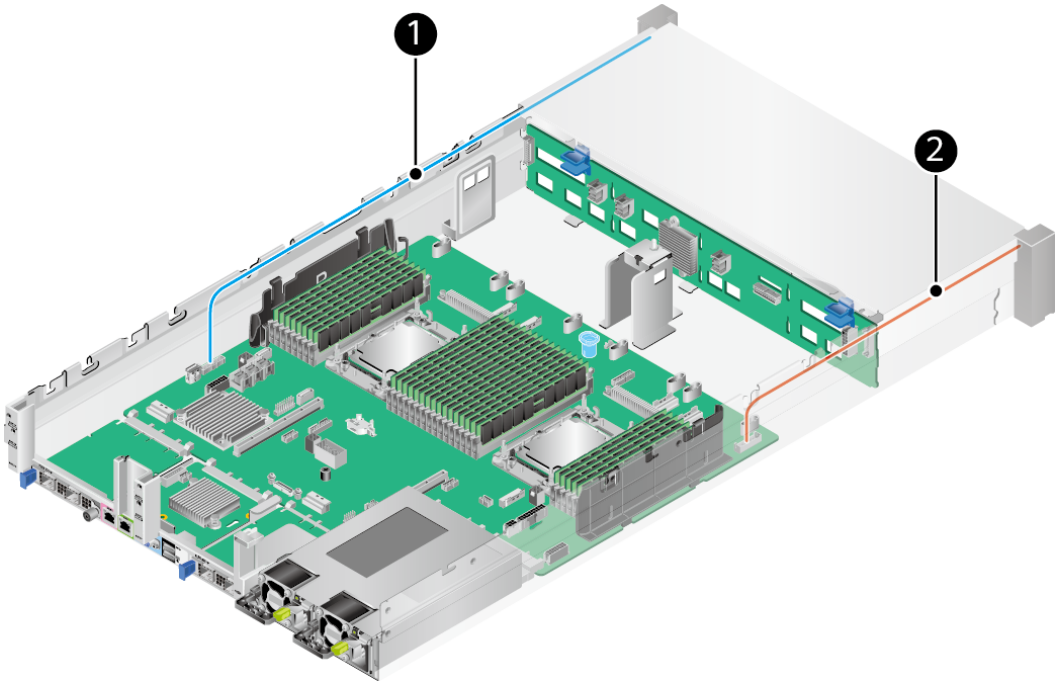

Table 6-309 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.6.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-339 Intrusion sensor cabling

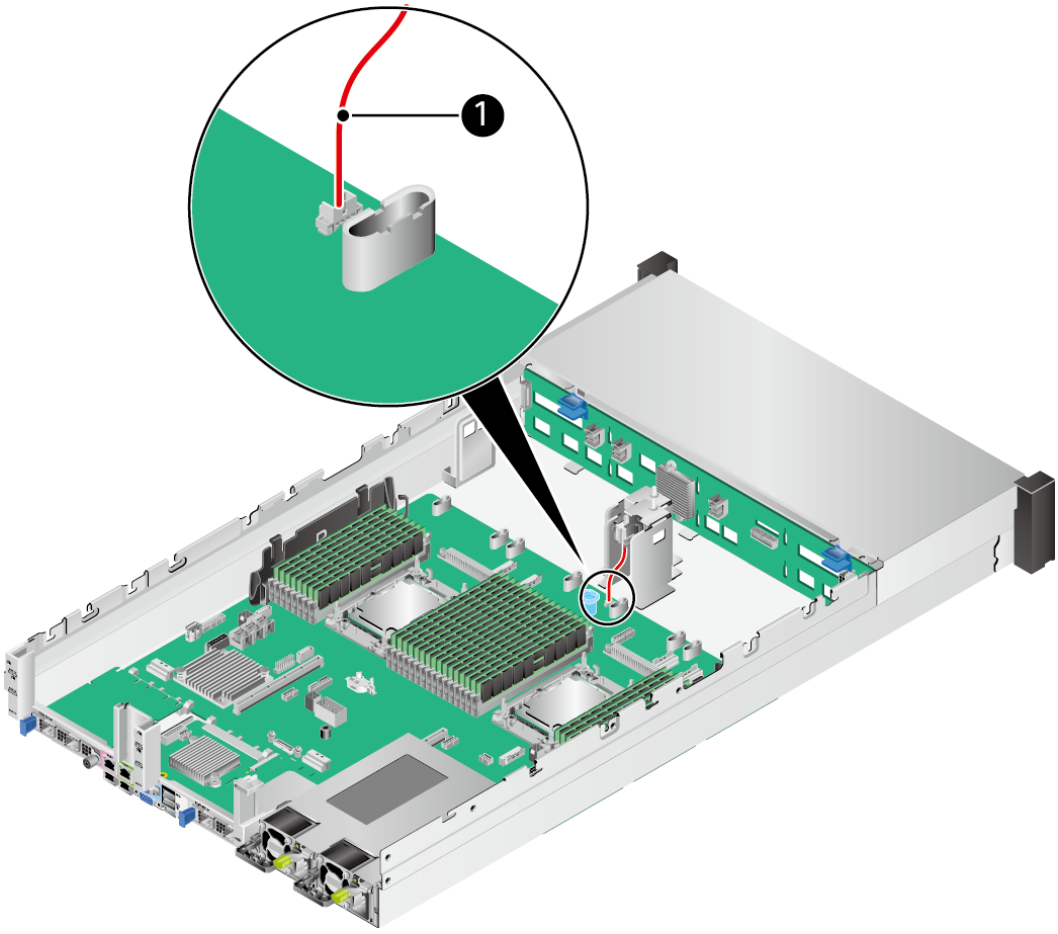

Table 6-310 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.6.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-340 Front-drive backplane power and low-speed signal cabling

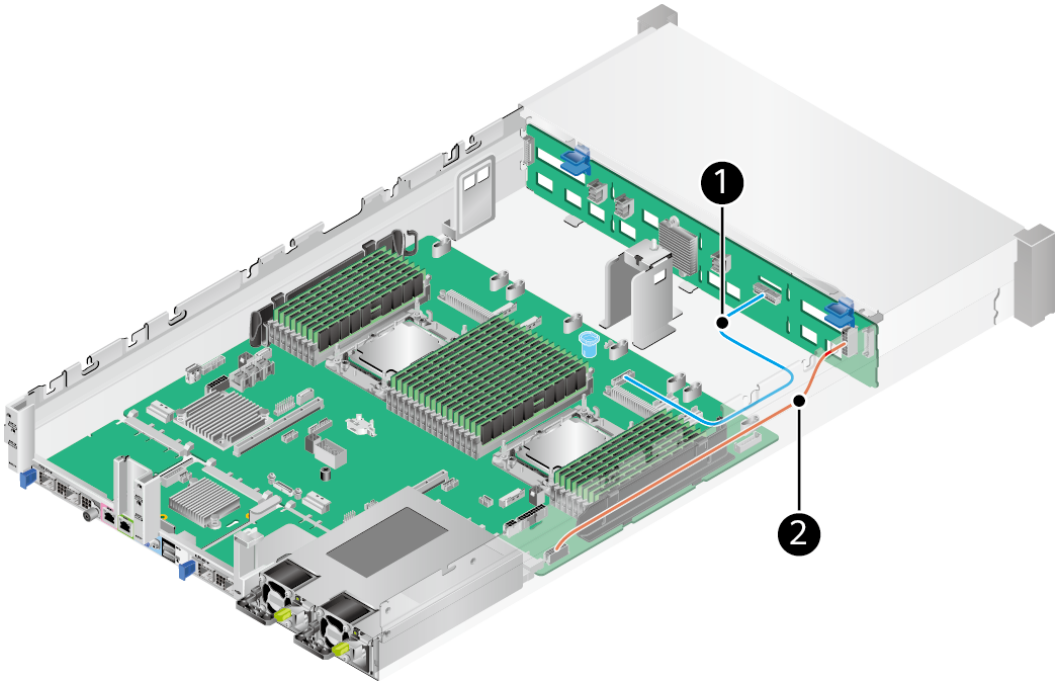

Table 6-311 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)	

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Figure 6-341 Front-drive backplane power and low-speed signal cabling

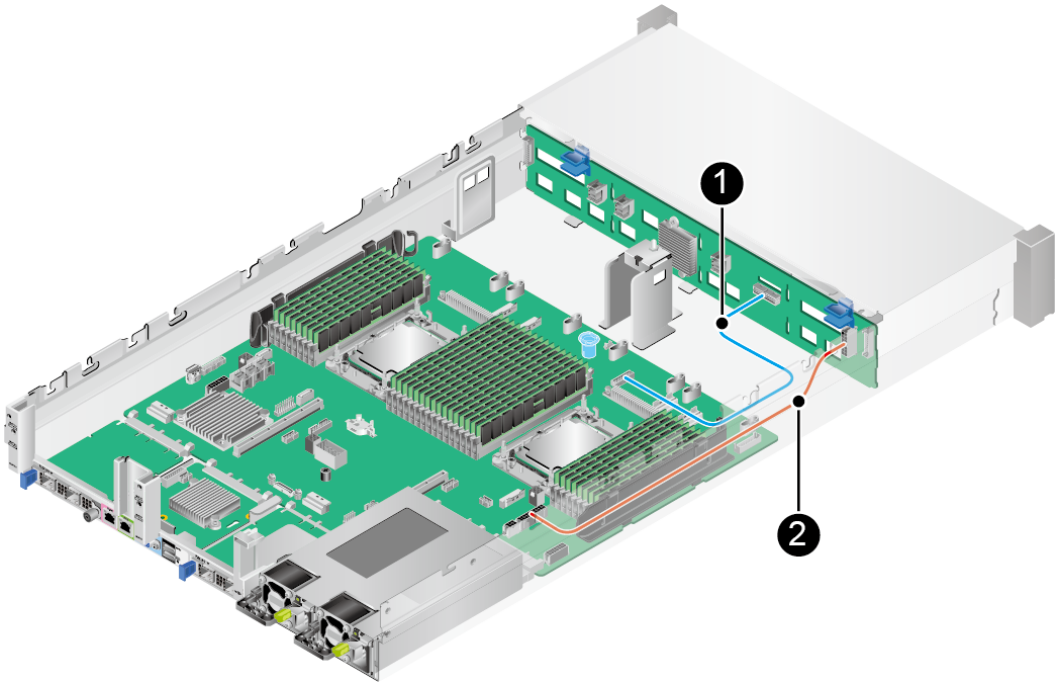

Table 6-312 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.
2	04152178-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	

6.4.6.3.4 Front-Drive Backplane SAS Signal Cabling

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-342 Front-drive backplane SAS high-speed cabling

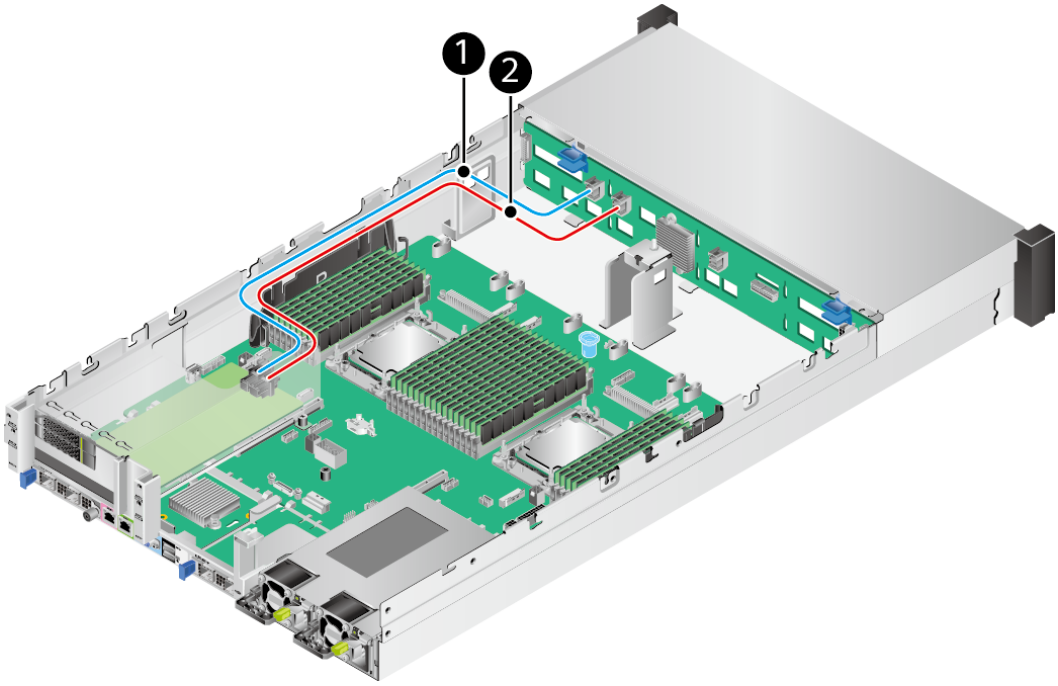

Table 6-313 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.6.3.5 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-343 I/O module 1 cabling

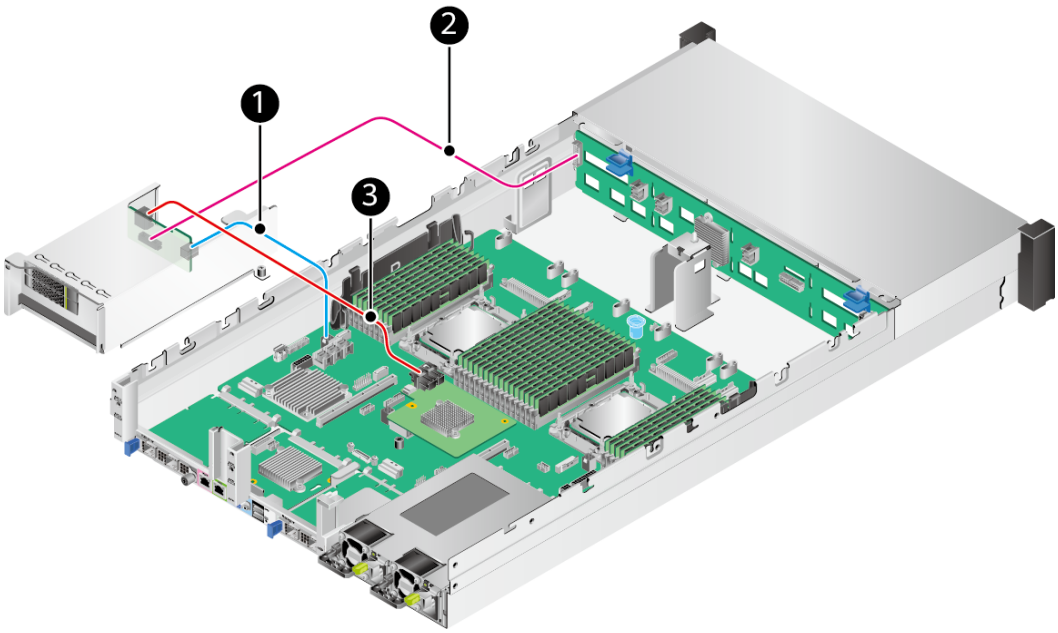

Table 6-314 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**. • The cable (04052363-001) is not an independent spare part in this configuration. It is packed with the 2 x 2.5" drive module as a spare part.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	

Table 6-315 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP**

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No.	P/N Code	Description	Remarks
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	**backplane 2 (P/N code: 0302Y255)**. • The cables (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part. • The cable (04052363-001) is not an independent spare part in this configuration. It is packed with the 2 x 2.5" drive module as a spare part.
3	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	

6.4.6.3.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-344 I/O module 3 cabling

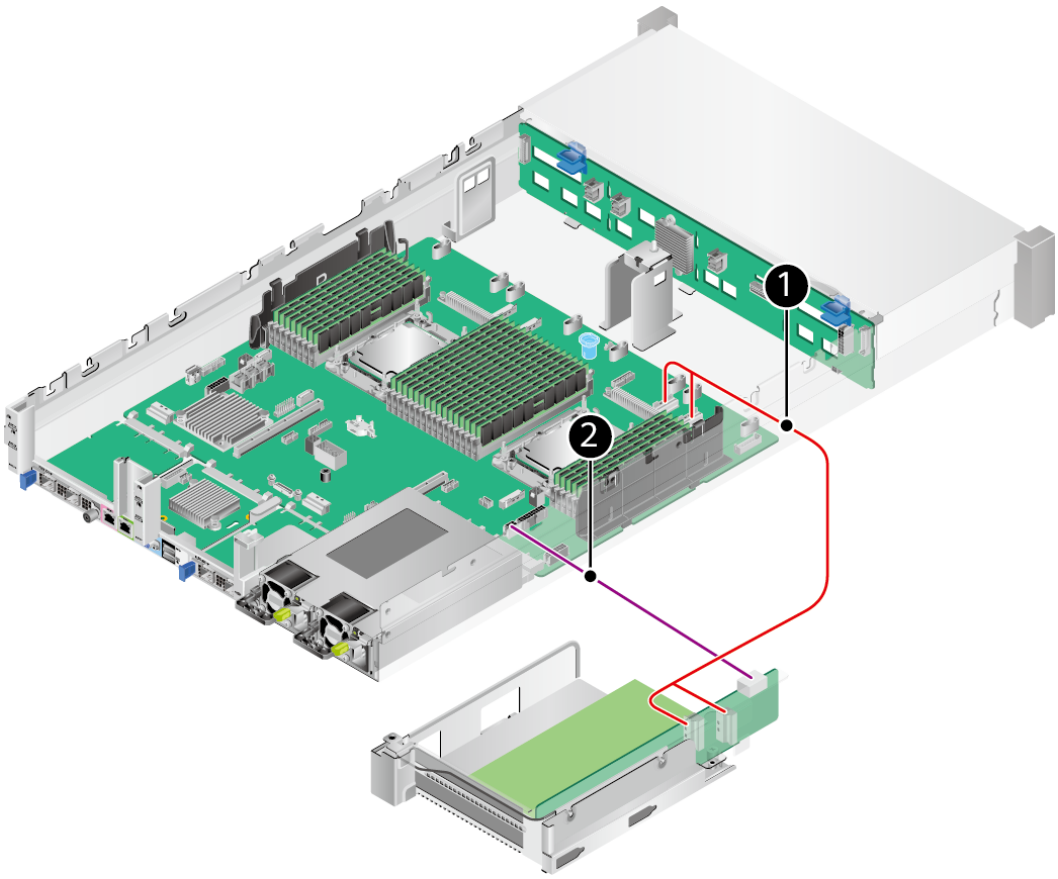

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Table 6-316 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.6.3.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-345 I/O module 3 cabling

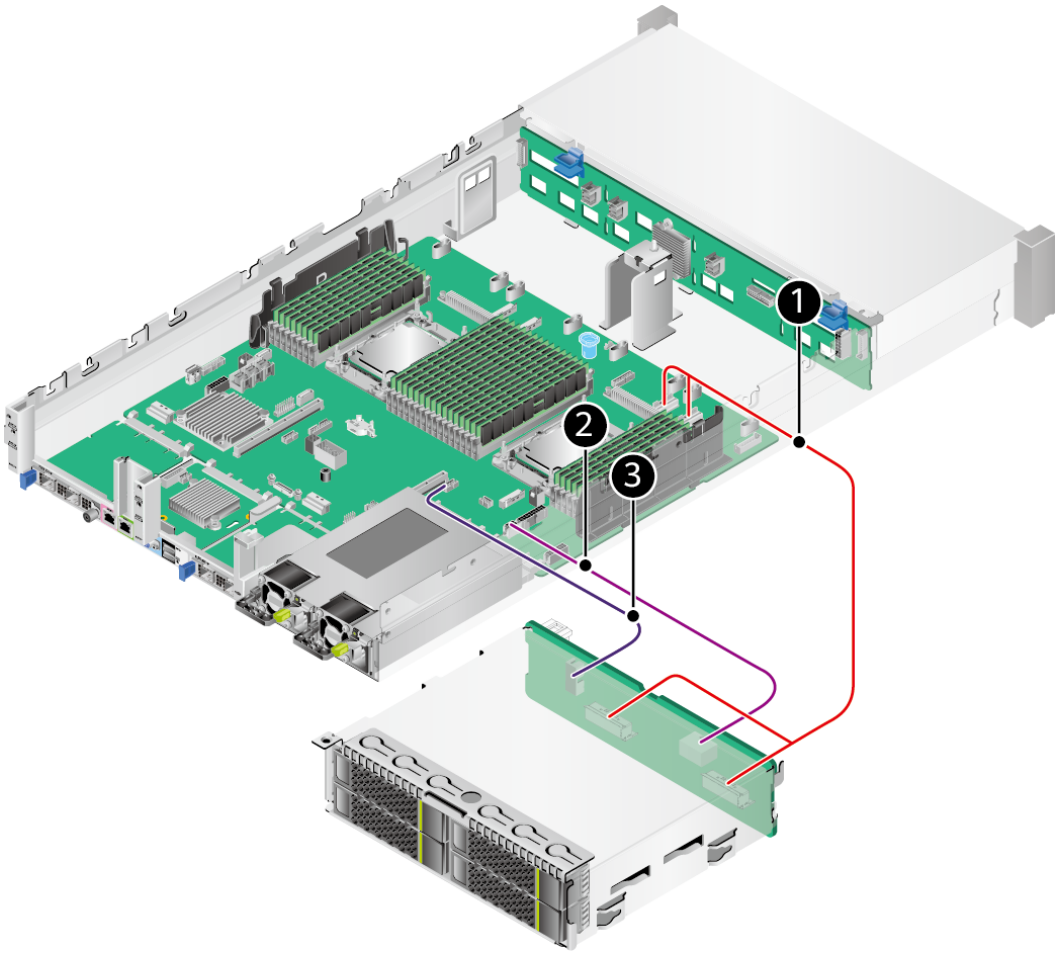

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Table 6-317 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.6.4 12 x 3.5" Drive EXP Configuration 4

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6.4.6.4.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-346 Left and right mounting ear cabling

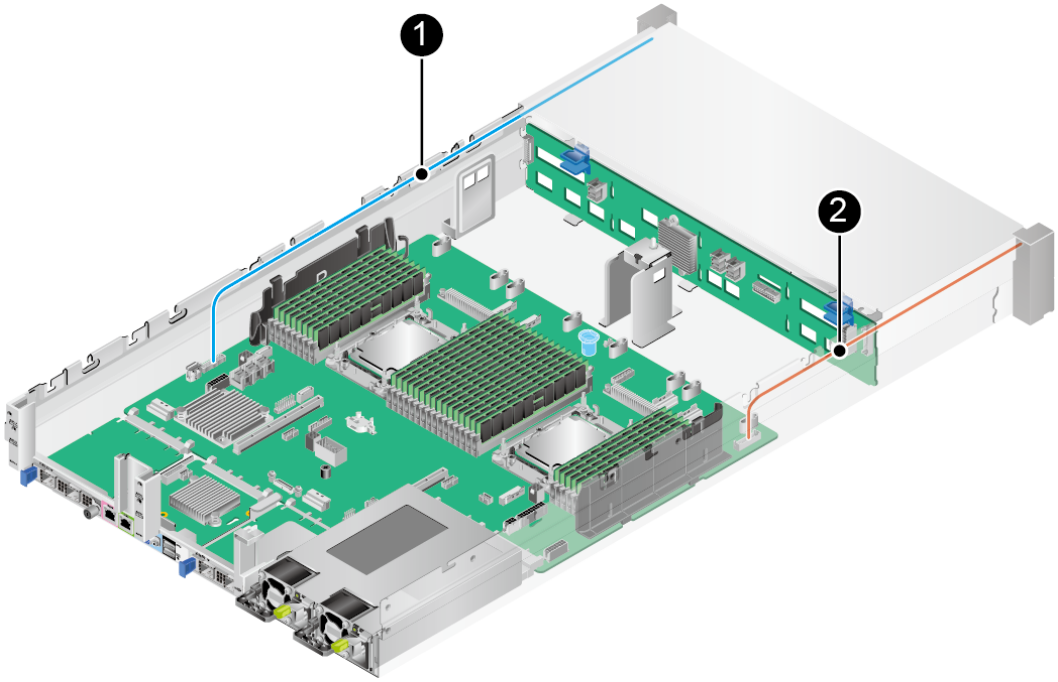

Table 6-318 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.6.4.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-347 OCP 3.0 expansion cable 1

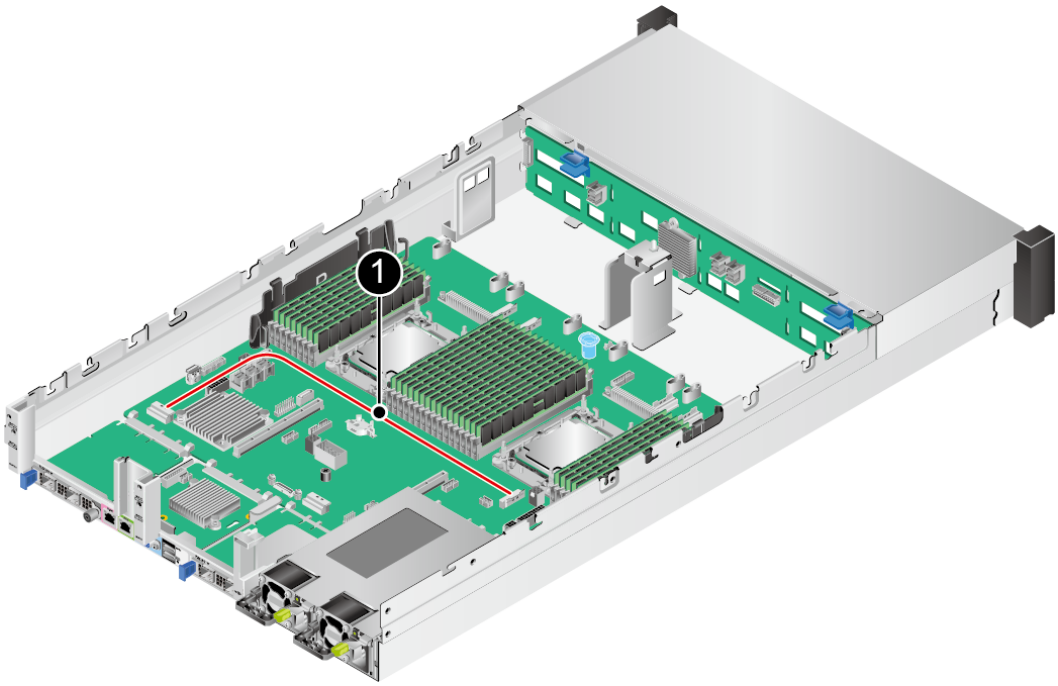

Table 6-319 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-348 OCP 3.0 expansion cable 2

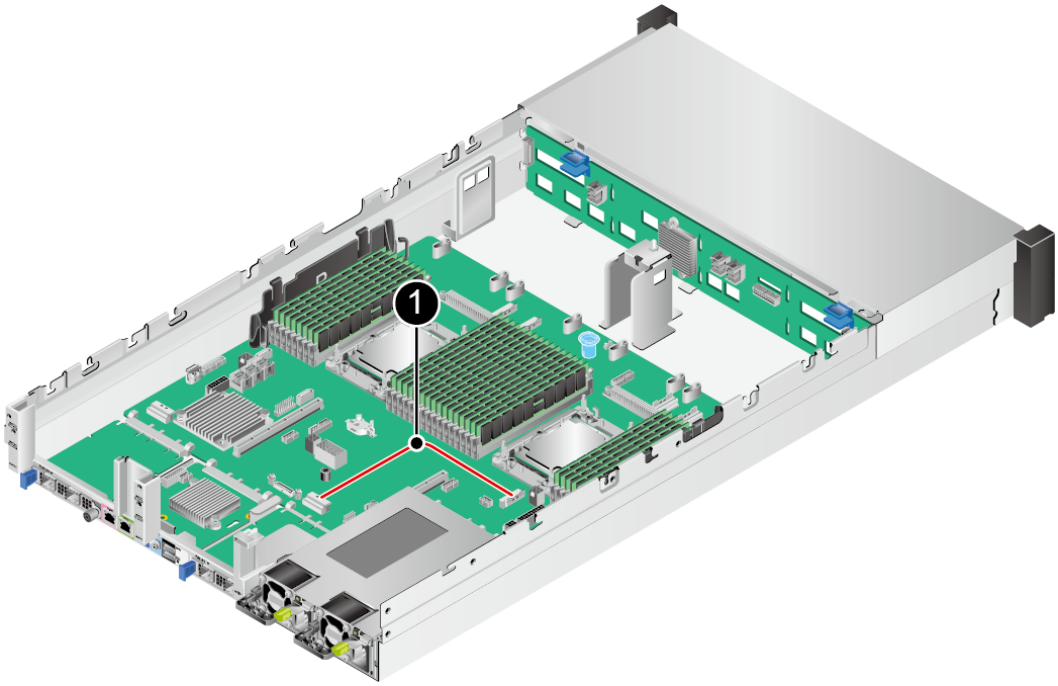

Table 6-320 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.6.4.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-349 Intrusion sensor cabling

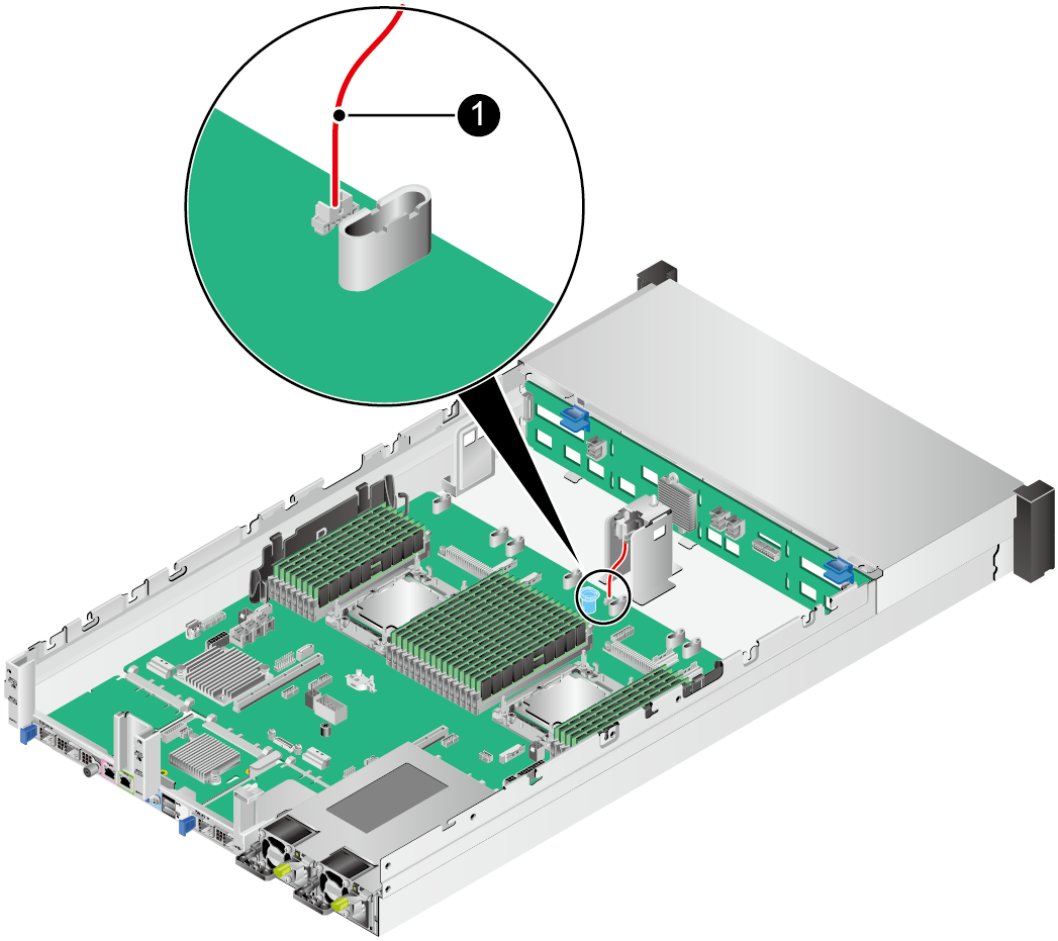

Table 6-321 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.6.4.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-350 Front-drive backplane power and low-speed signal cabling

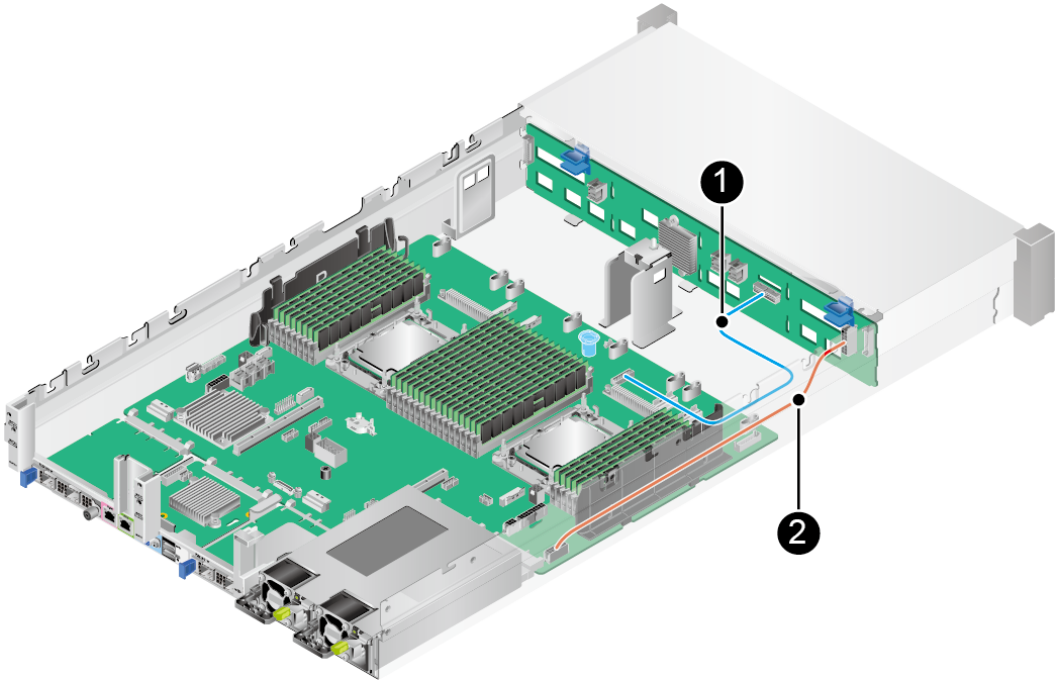

Table 6-322 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)

6.4.6.4.5 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-351 Front-drive backplane SAS high-speed cabling

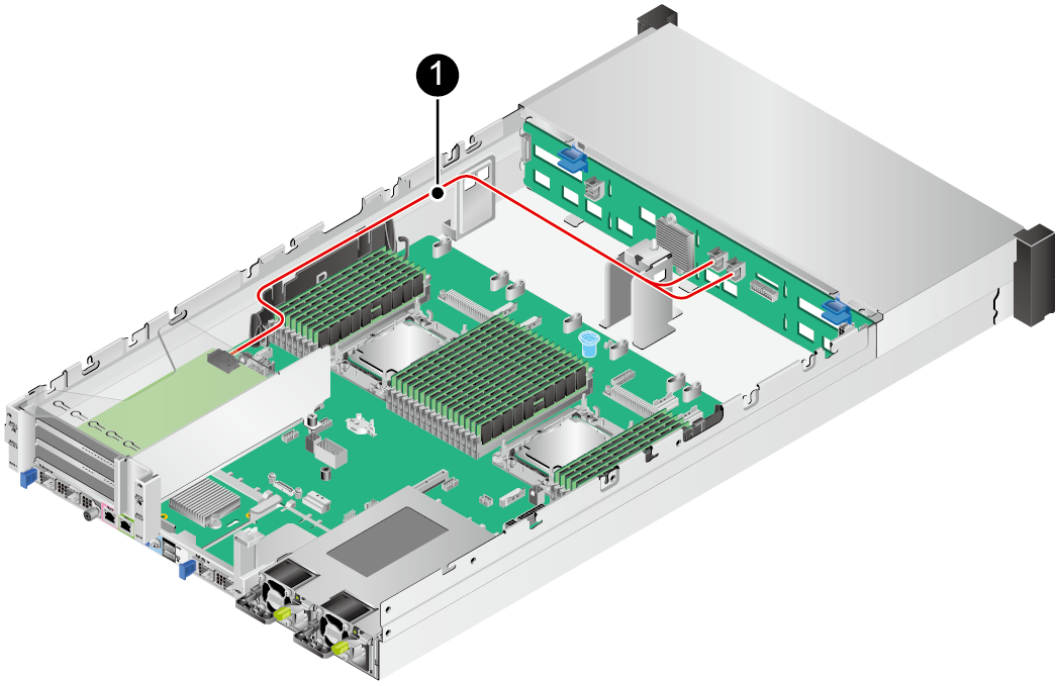

Table 6-323 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y017-002	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y017-002 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.6.4.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-352 I/O module 1 cabling

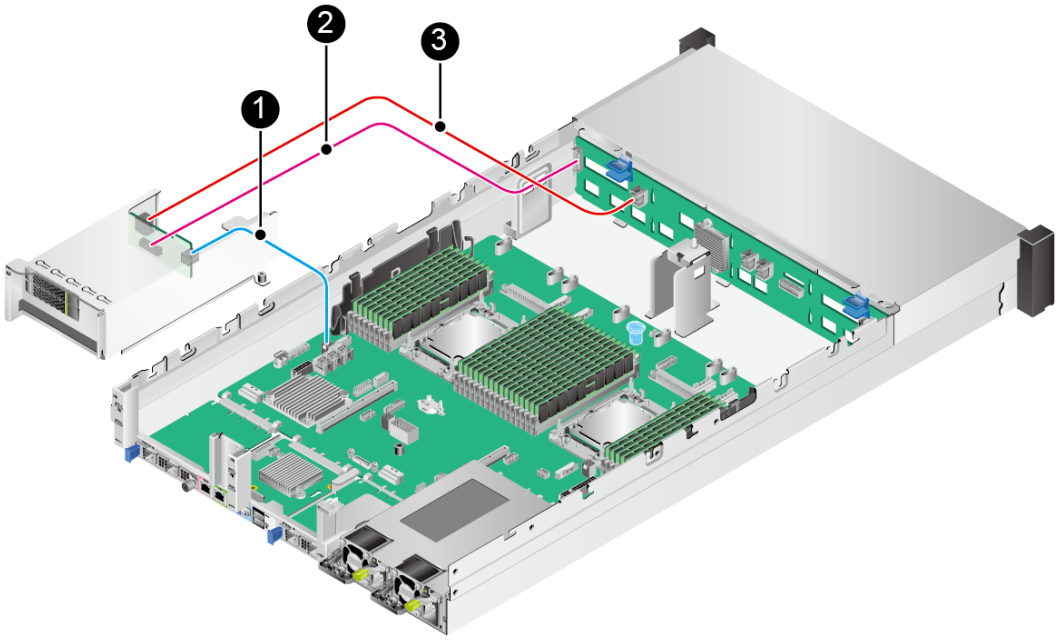

Table 6-324 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD B connector is connected to the backplane of I/O module 1, the HDD A connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.6.4.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-353 I/O module 1 and I/O module 2 cabling

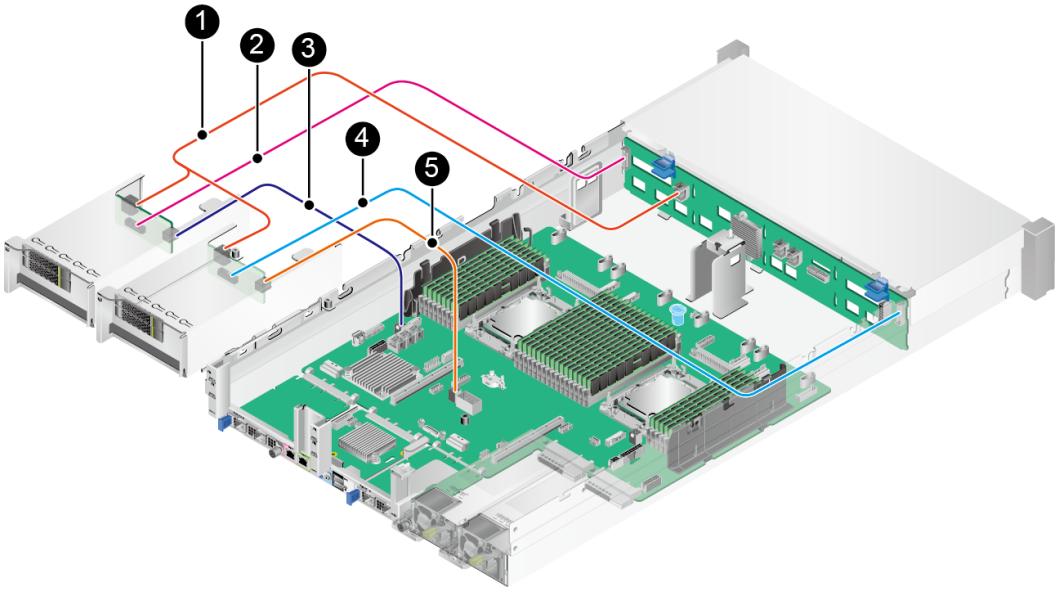

Table 6-325 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 2 and connector HDD B corresponds to the backplane (J2) of I/O module 1, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)

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6.4.6.4.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-354 I/O module 1 and I/O module 2 cabling

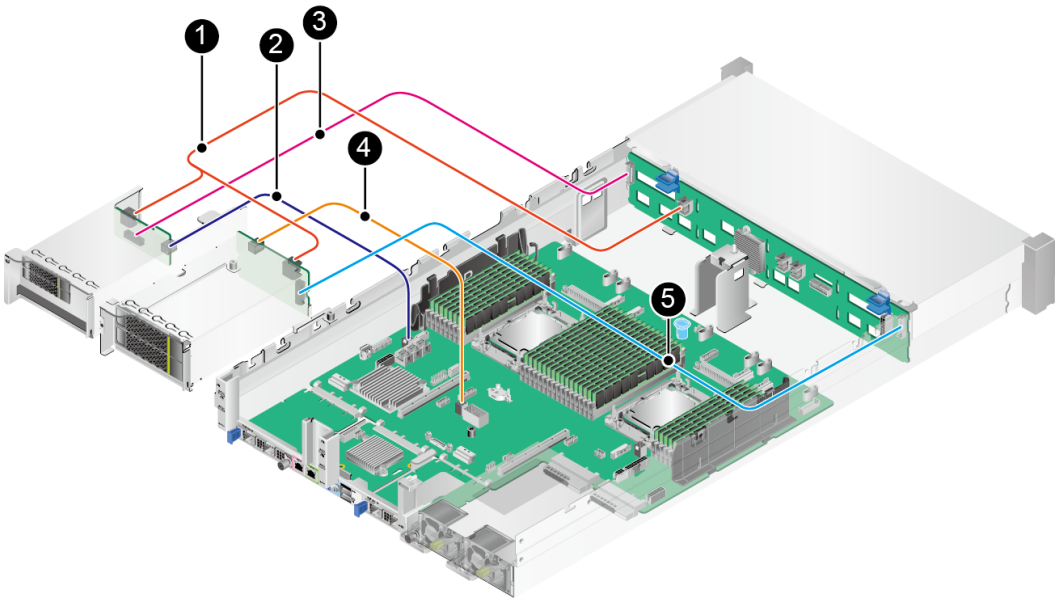

Table 6-326 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 2, connector HDD B corresponds to the backplane (J2) of I/O module 1, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)

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6.4.6.4.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-355 I/O module 3 cabling

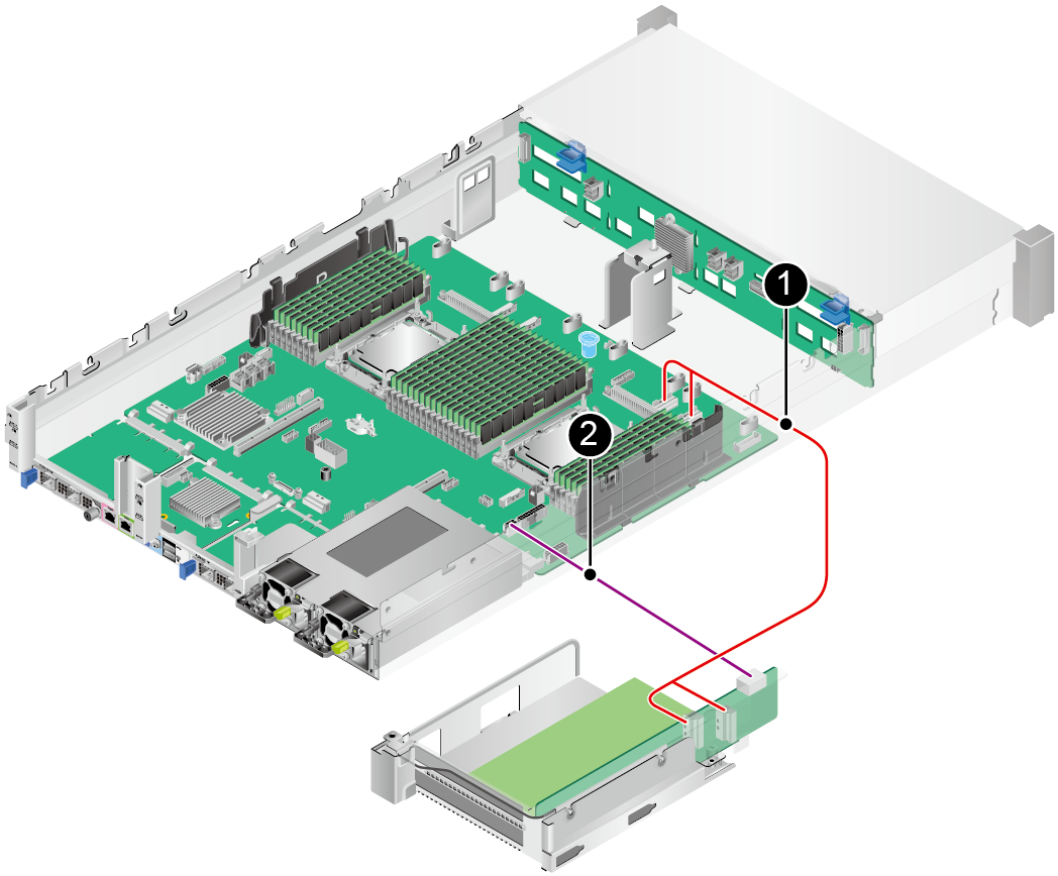

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Table 6-327 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.6.4.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-356 I/O module 3 cabling

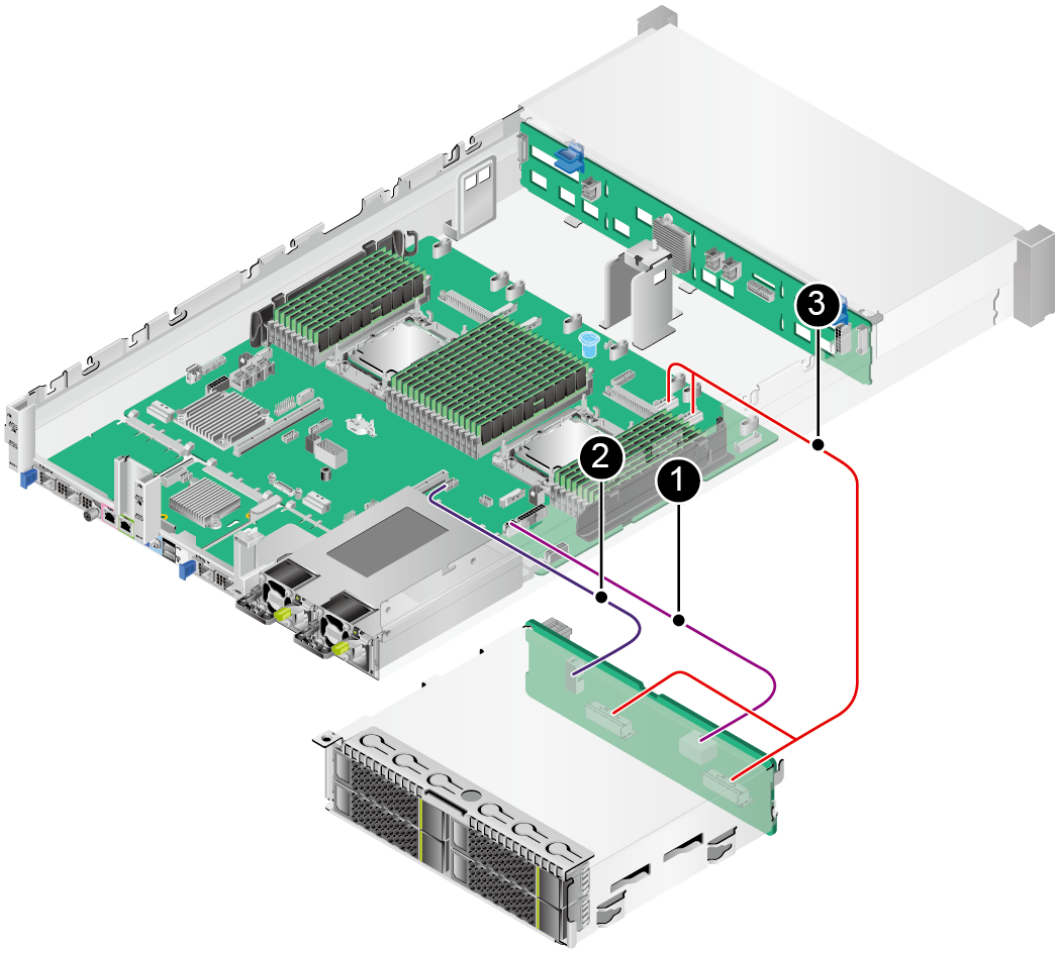

Table 6-328 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

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No.	P/N Code	Description	Remarks
3	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	

6.4.7 16 x 2.5" Drive Pass-through Configuration

6.4.7.1 16 x 2.5" Drive Pass-through NVMe Hardware RAID Configuration 1 (16 x NVMe)

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6.4.7.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-357 Left and right mounting ear cabling

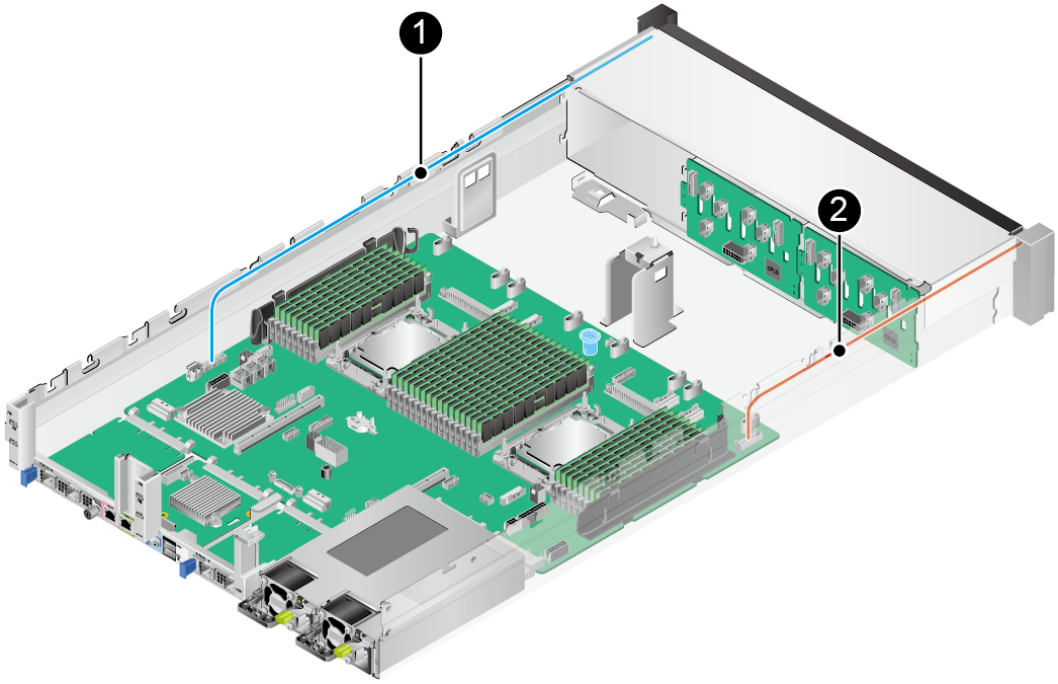

Table 6-329 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.7.1.2 NC-SI Cabling

NC-SI Cabling

Figure 6-358 NC-SI cabling

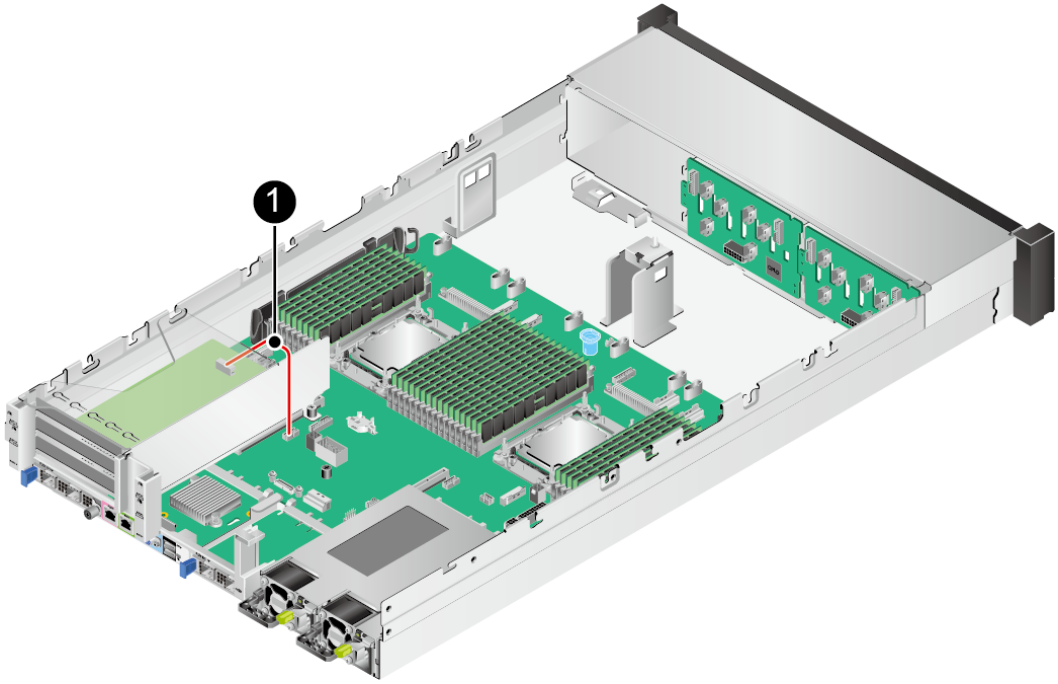

Table 6-330 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.7.1.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-359 OCP 3.0 expansion cable 1

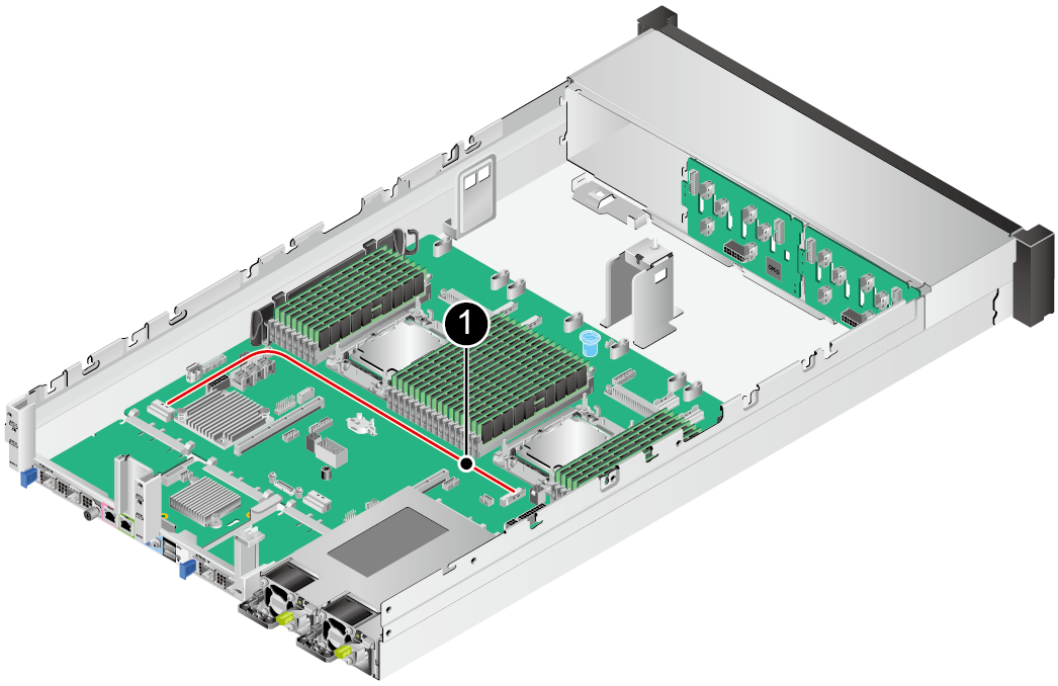

Table 6-331 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-360 OCP 3.0 expansion cable 2

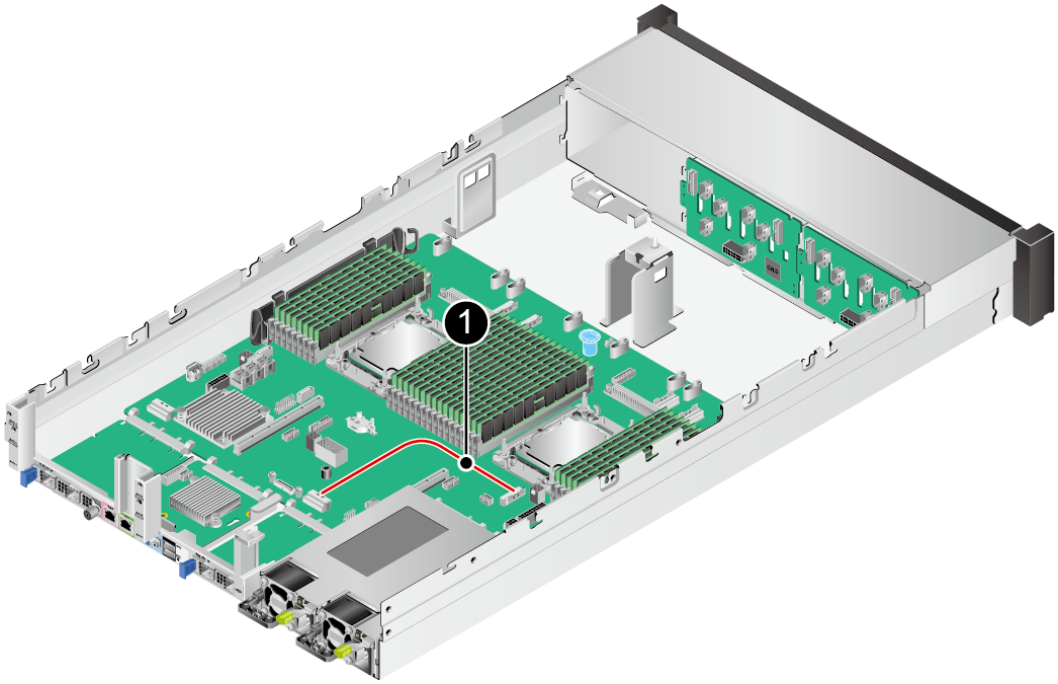

Table 6-332 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.7.1.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-361 Intrusion sensor cabling

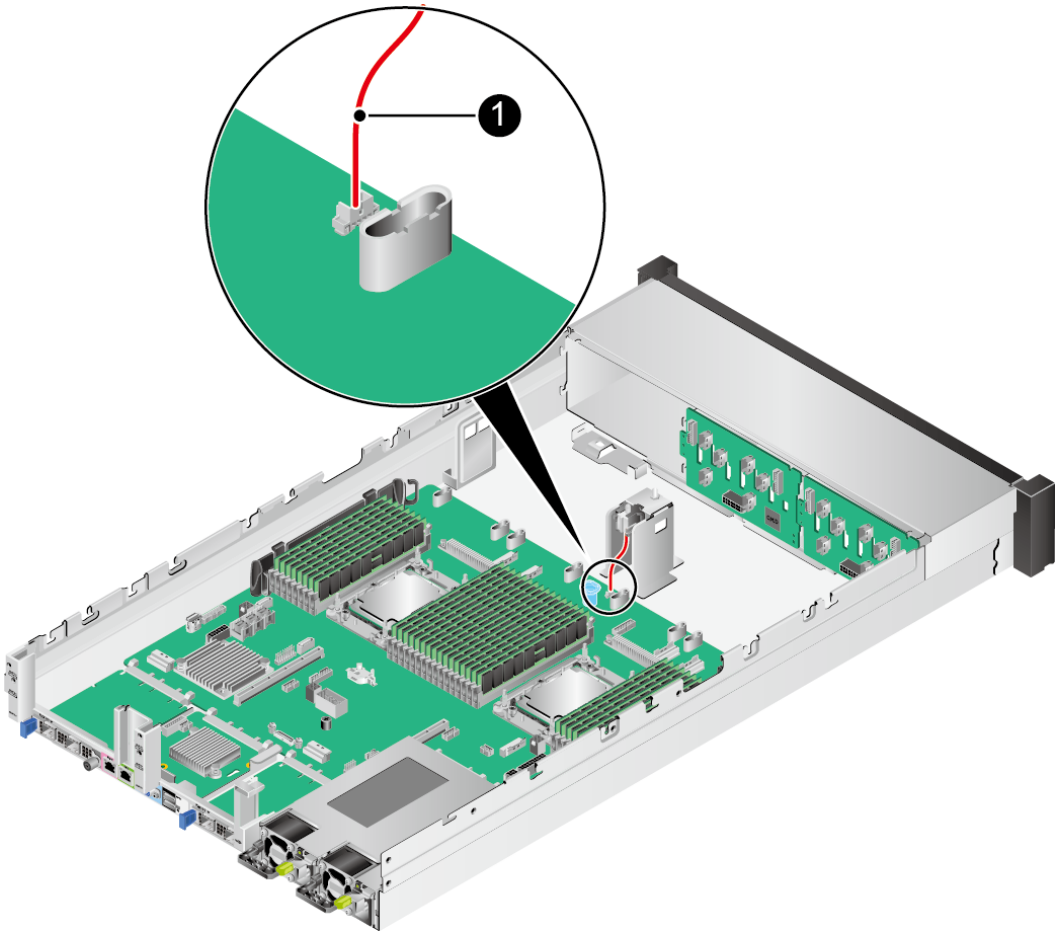

Table 6-333 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.7.1.5 Front-Drive Backplane Power and Low-speed Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-362 Front-drive backplane power and low-speed signal cabling

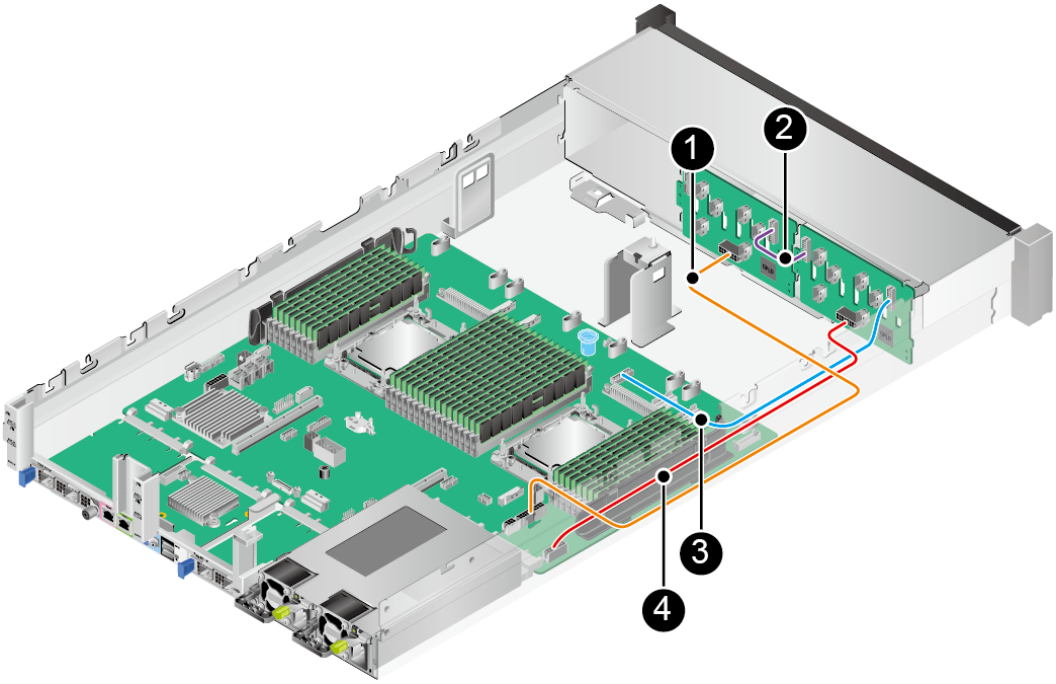

Table 6-334 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04153778	Power cable for connecting the front-drive backplane 2 (J1801) to the mainboard (J88)
2	04080651-003	Low-speed signal cable for connecting the front-drive backplane 1 (J1102) to the front-drive backplane 2 (J1103)
3	04051340	Low-speed signal cable for connecting the front-drive backplane 1 (J1103) to the mainboard (J75)
4	04152145-009	Power cable for connecting the front-drive backplane 1 (J1801) to the mainboard (J26)

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6.4.7.1.6 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3 and slot 5.

Front-Drive Backplane SAS High-speed Cabling

Figure 6-363 Front-drive backplane SAS high-speed cabling

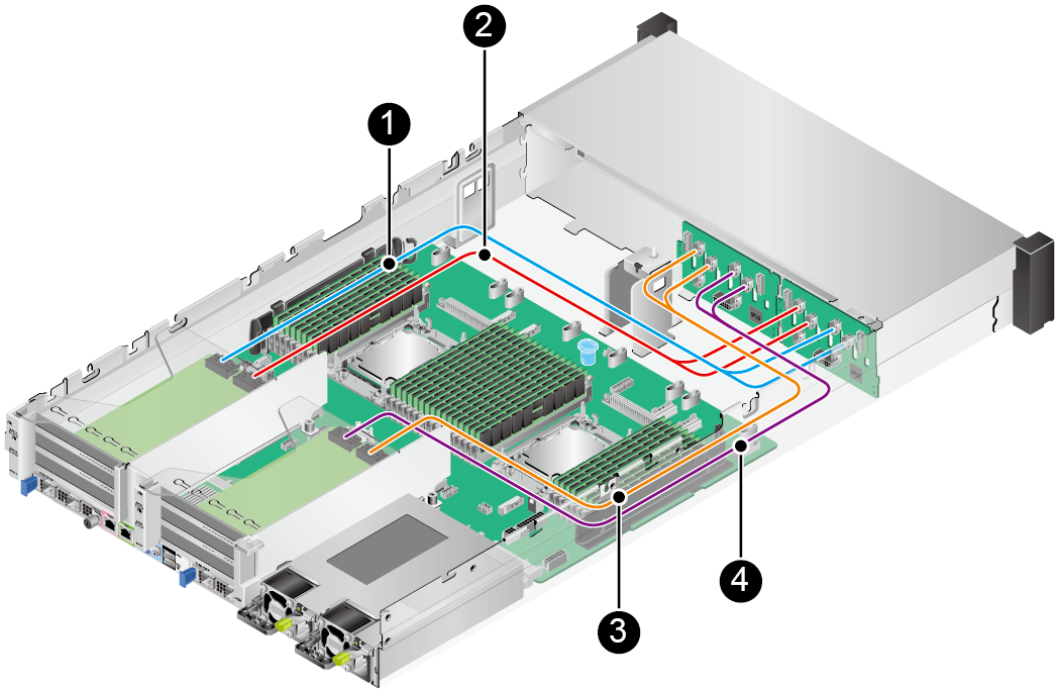

Table 6-335 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 1 (J401) and (J402) to C0 of the PCIe RAID controller card (in slot 3) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 1 (J401), connector PORT B corresponds to the front-drive backplane 1 (J402), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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No.	P/N Code	Description
2	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 1 (J403) and (J404) to C1 of the PCIe RAID controller card (in slot 3) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 1 (J403), connector PORT B corresponds to the front-drive backplane 1 (J404), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
3	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 2 (J403) and (J404) to C1 of the PCIe RAID controller card (in slot 5) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 2 (J403), connector PORT B corresponds to the front-drive backplane 2 (J404), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
4	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 2 (J401) and (J402) to C0 of the PCIe RAID controller card (in slot 5) **NOTE** T0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 2 (J401), connector PORT B corresponds to the front-drive backplane 2 (J402), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

6.4.7.2 16 x 2.5" Drive Pass-through NVMe Hardware RAID Configuration 2 (2 x SAS/SATA + 2 x SAS/SATA/NVMe + 12 x NVMe)

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6.4.7.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-364 Left and right mounting ear cabling

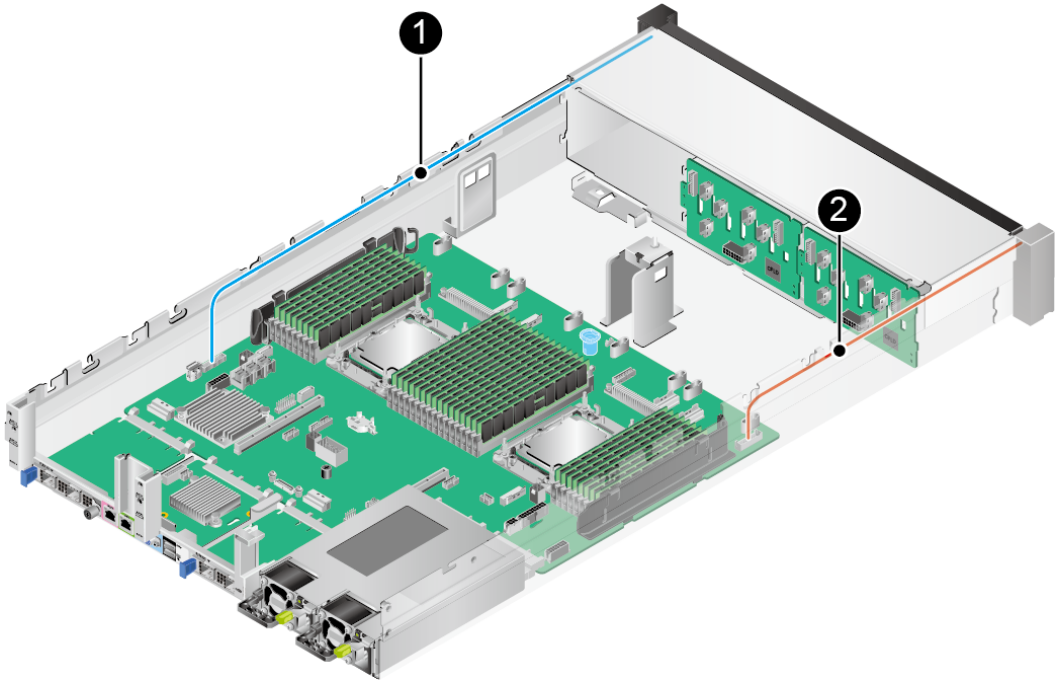

Table 6-336 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.7.2.2 NC-SI Cabling

NC-SI Cabling

Figure 6-365 NC-SI cabling

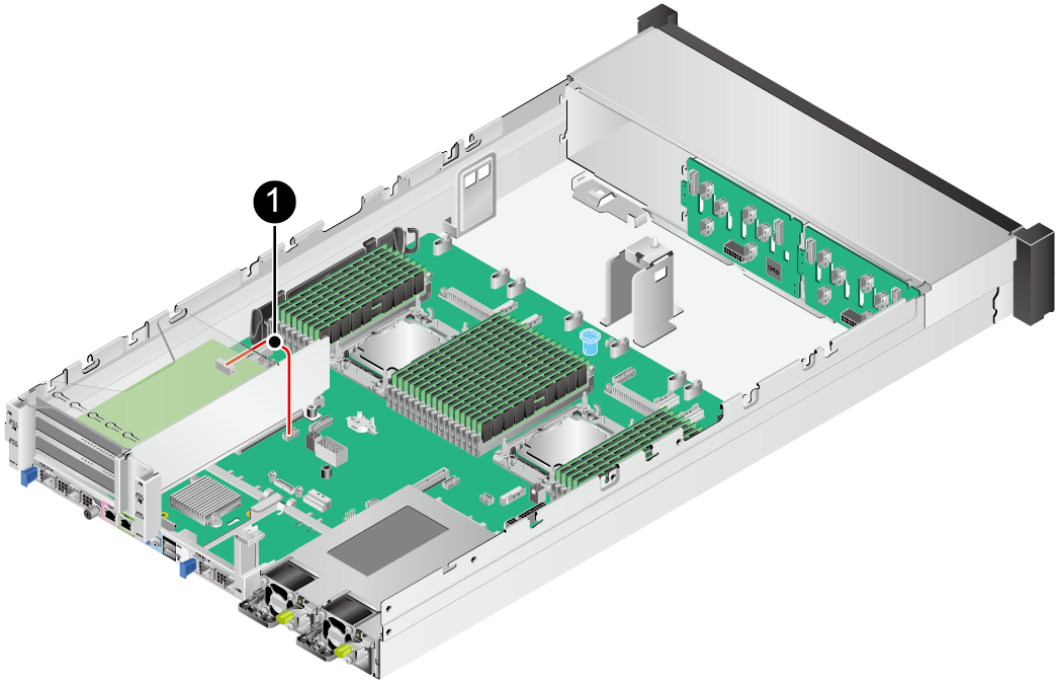

Table 6-337 NC-SI cabling

No.	P/N Code	Description	Remarks
1	04080584-005	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)	The cable is not an independent spare part. It is packed with the PCIe NIC as a spare part.

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6.4.7.2.3 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-366 OCP 3.0 expansion cable 1

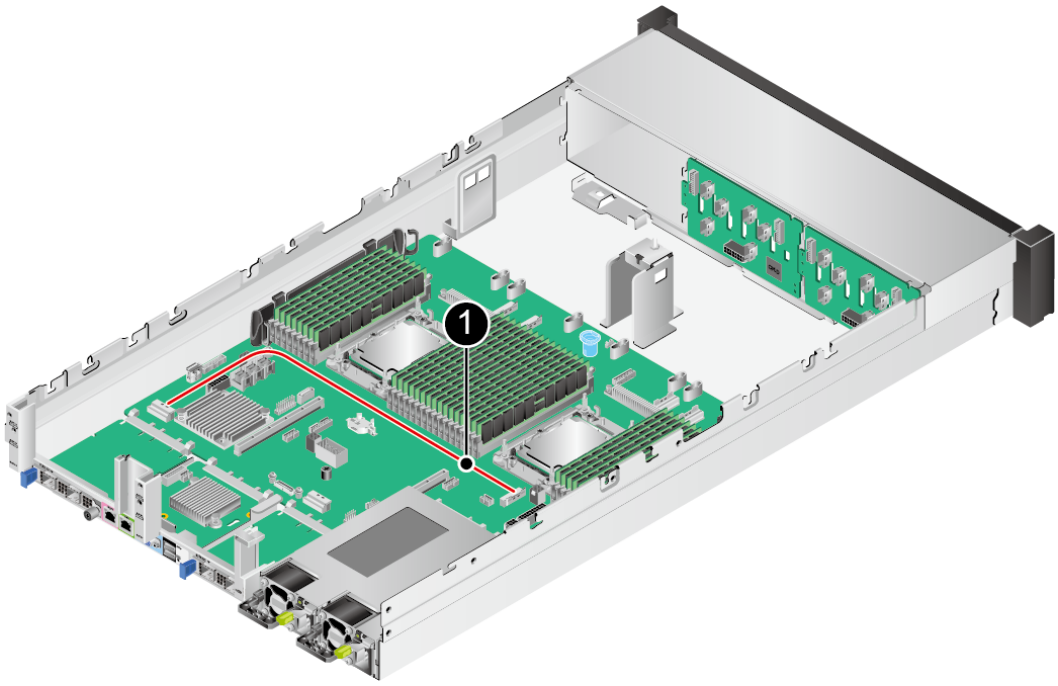

Table 6-338 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-367 OCP 3.0 expansion cable 2

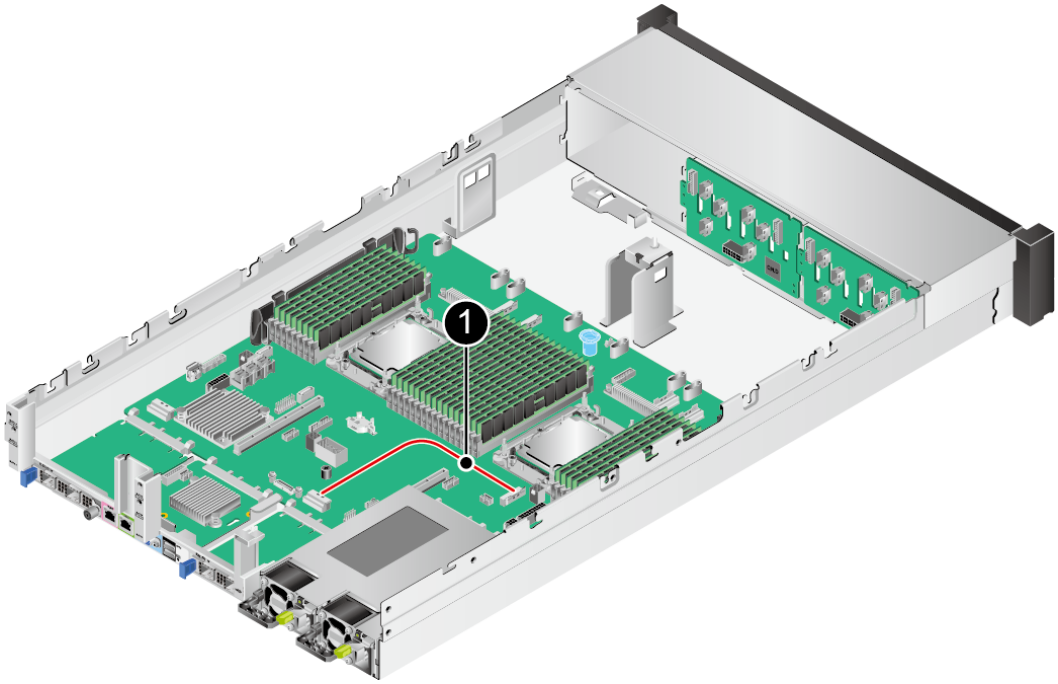

Table 6-339 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.7.2.4 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-368 Intrusion sensor cabling

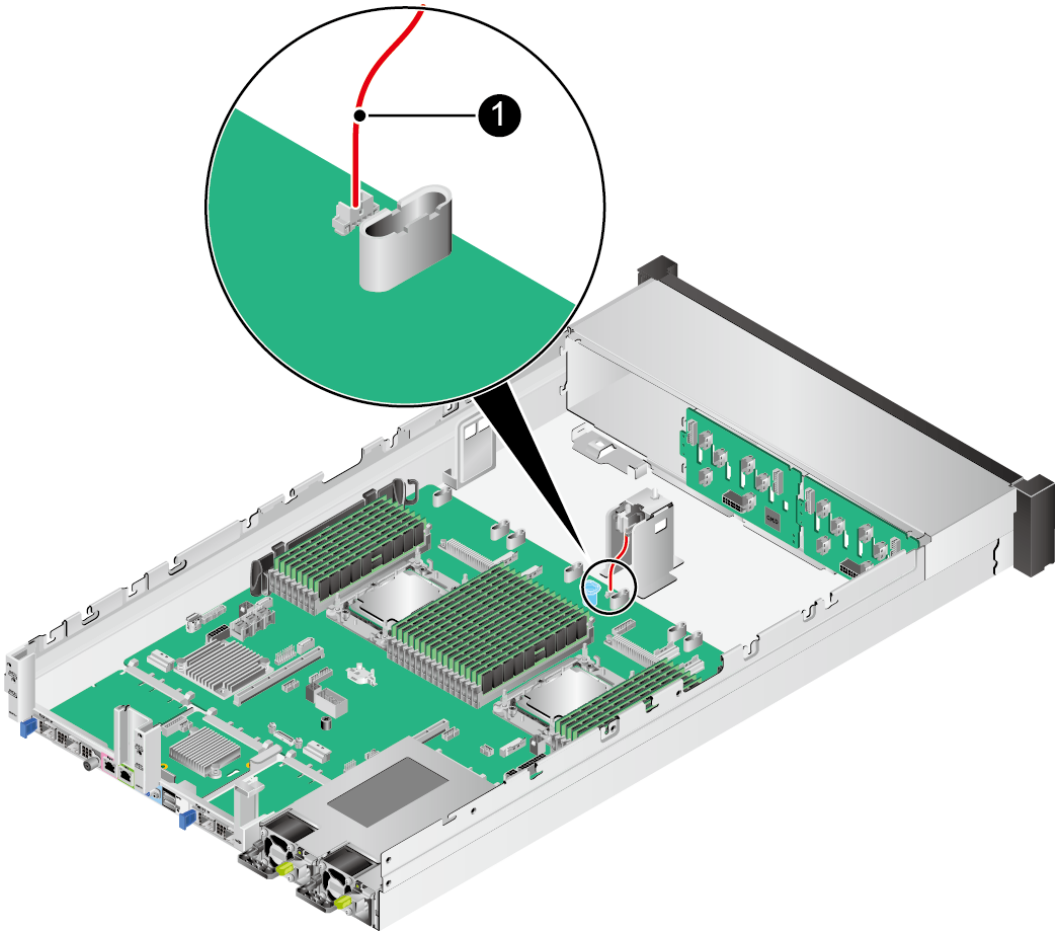

Table 6-340 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.7.2.5 Front-Drive Backplane Power and Low-speed Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-369 Front-drive backplane power and low-speed signal cabling

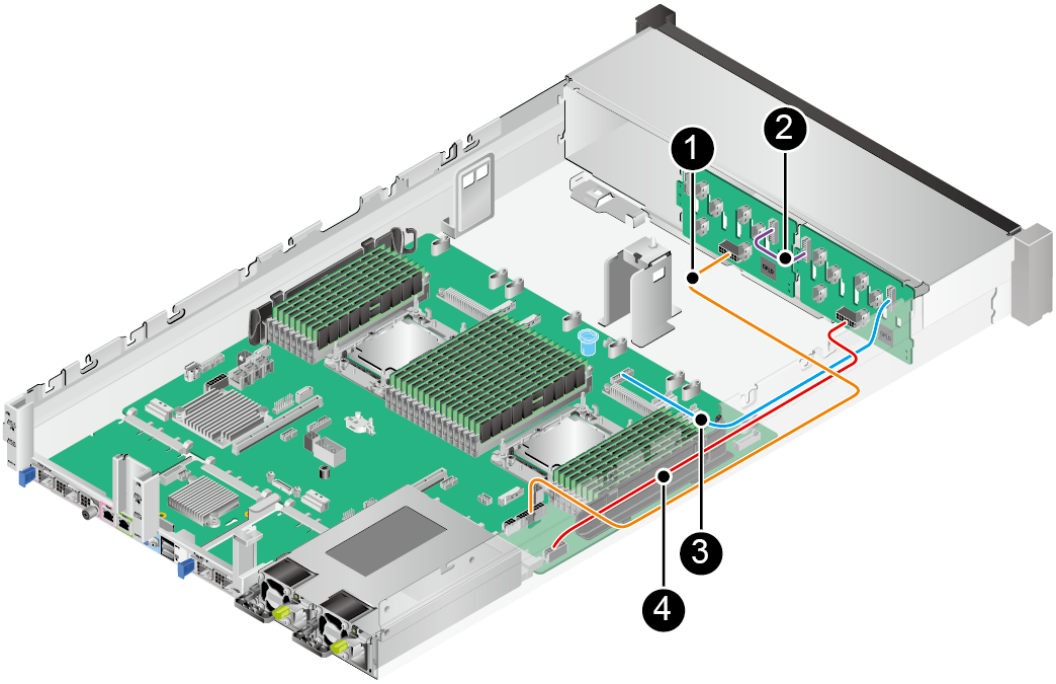

Table 6-341 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04153778	Power cable for connecting the front-drive backplane 2 (J1801) to the mainboard (J88)
2	04080651-003	Low-speed signal cable for connecting the front-drive backplane 1 (J1102) to the front-drive backplane 2 (J1103)
3	04051340	Low-speed signal cable for connecting the front-drive backplane 1 (J1103) to the mainboard (J75)
4	04152145-009	Power cable for connecting the front-drive backplane 1 (J1801) to the mainboard (J26)

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6.4.7.2.6 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3 and slot 5.

Front-Drive Backplane SAS High-speed Cabling

Figure 6-370 Front-drive backplane SAS high-speed cabling

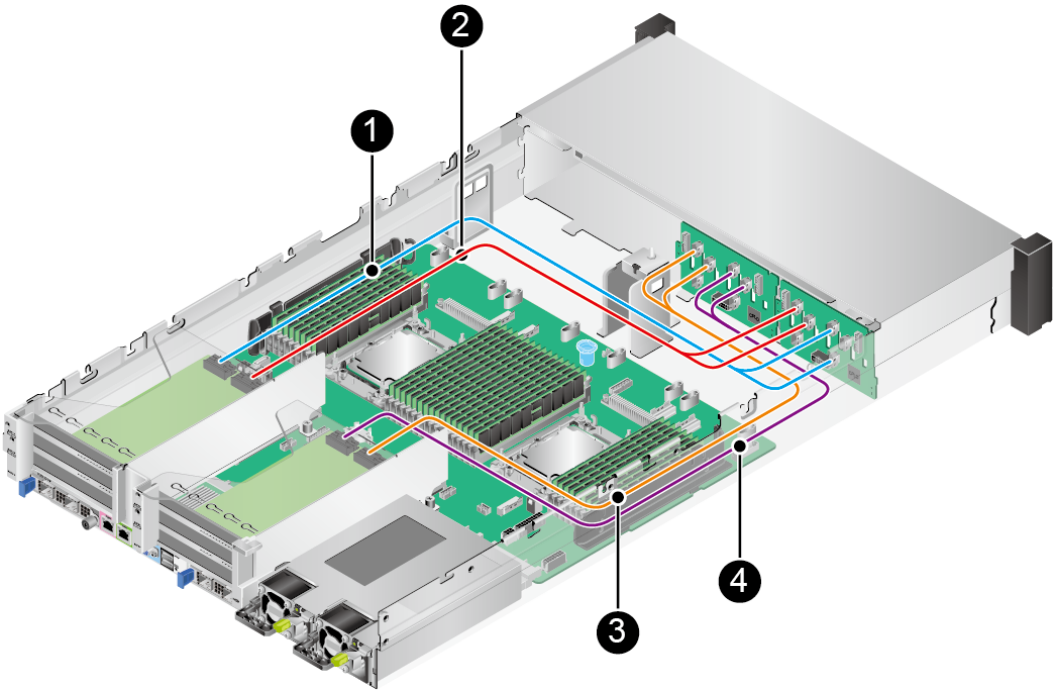

Table 6-342 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 1 (J501) and (J402) to C0 of the PCIe RAID controller card (in slot 3) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 1 (J501), connector PORT B corresponds to the front-drive backplane 1 (J402), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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No.	P/N Code	Description
2	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 1 (J403) and (J404) to C1 of the PCIe RAID controller card (in slot 3) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 1 (J403), connector PORT B corresponds to the front-drive backplane 1 (J404), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
3	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 2 (J403) and (J404) to C1 of the PCIe RAID controller card (in slot 5) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 2 (J403), connector PORT B corresponds to the front-drive backplane 2 (J404), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.
4	0405Y072-001	SAS high-speed cable for connecting the front-drive backplane 2 (J401) and (J402) to C0 of the PCIe RAID controller card (in slot 5) **NOTE** 0405Y072-001 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane 2 (J401), connector PORT B corresponds to the front-drive backplane 2 (J402), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

6.4.8 16 x 3.5" Drive EXP Configuration

6.4.8.1 16 x 3.5" Drive EXP Configuration 1

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6.4.8.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-371 Left and right mounting ear cabling

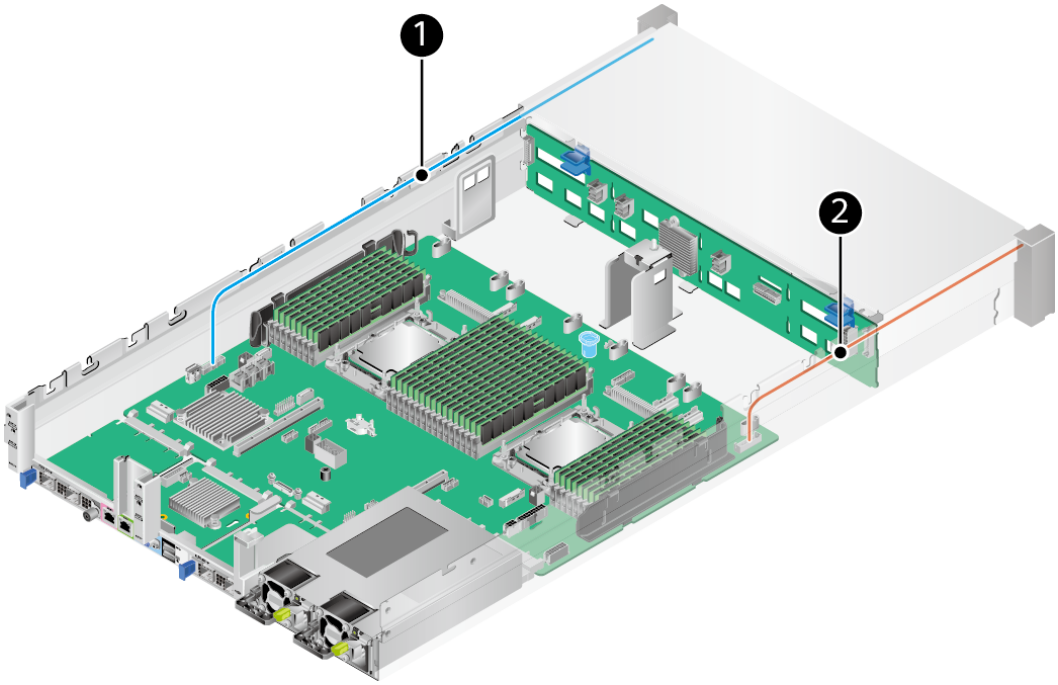

Table 6-343 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.8.1.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-372 OCP 3.0 expansion cable 1

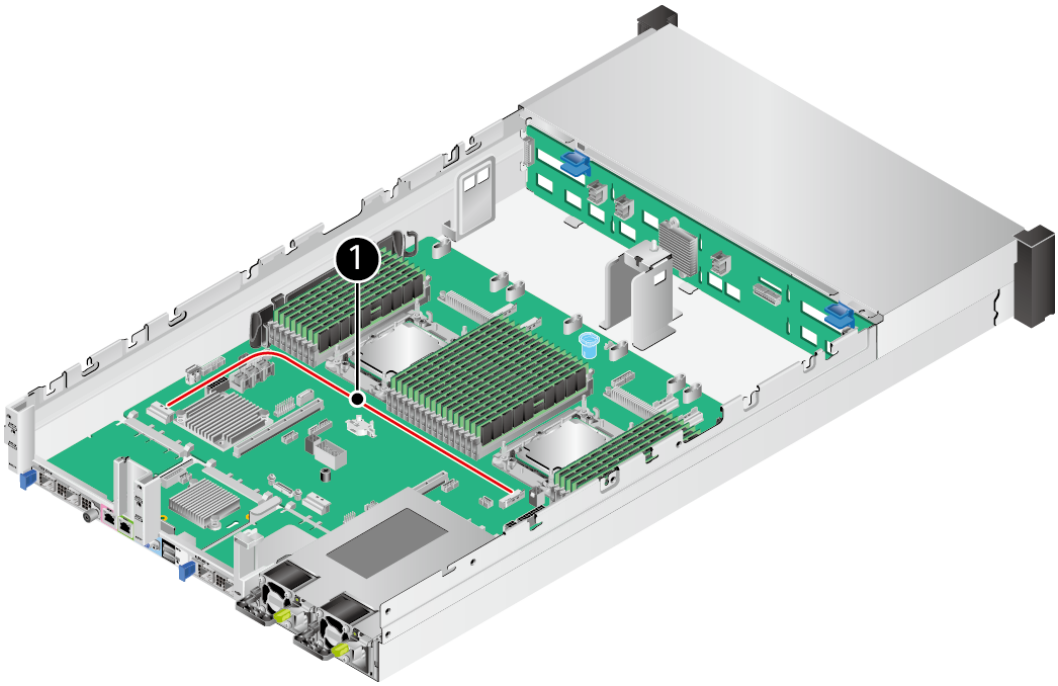

Table 6-344 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-373 OCP 3.0 expansion cable 2

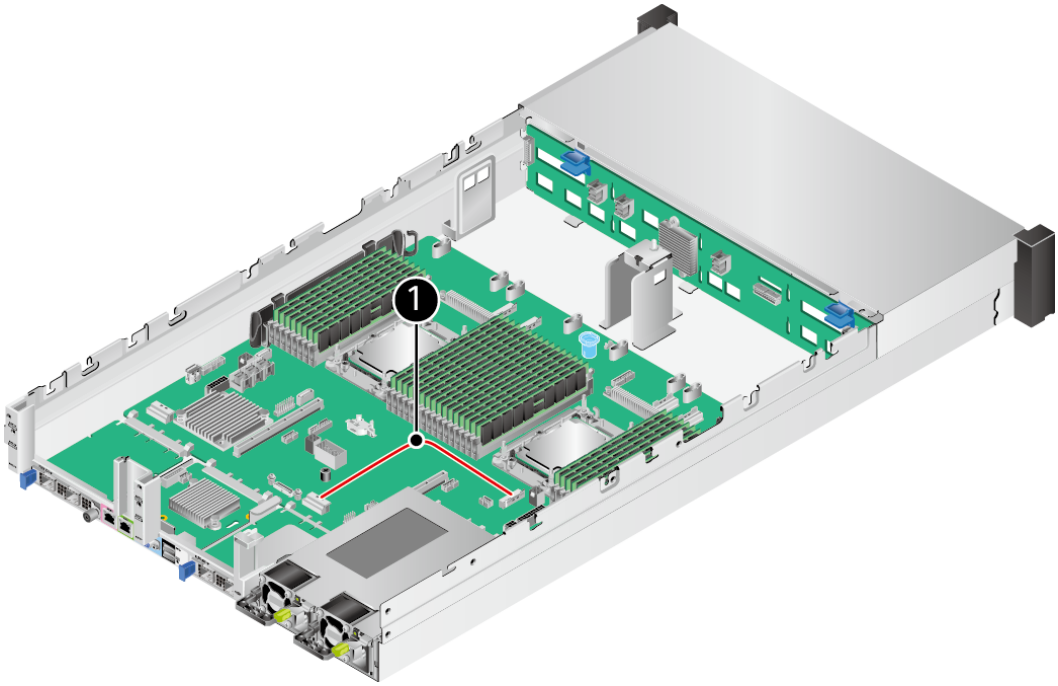

Table 6-345 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.8.1.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-374 Intrusion sensor cabling

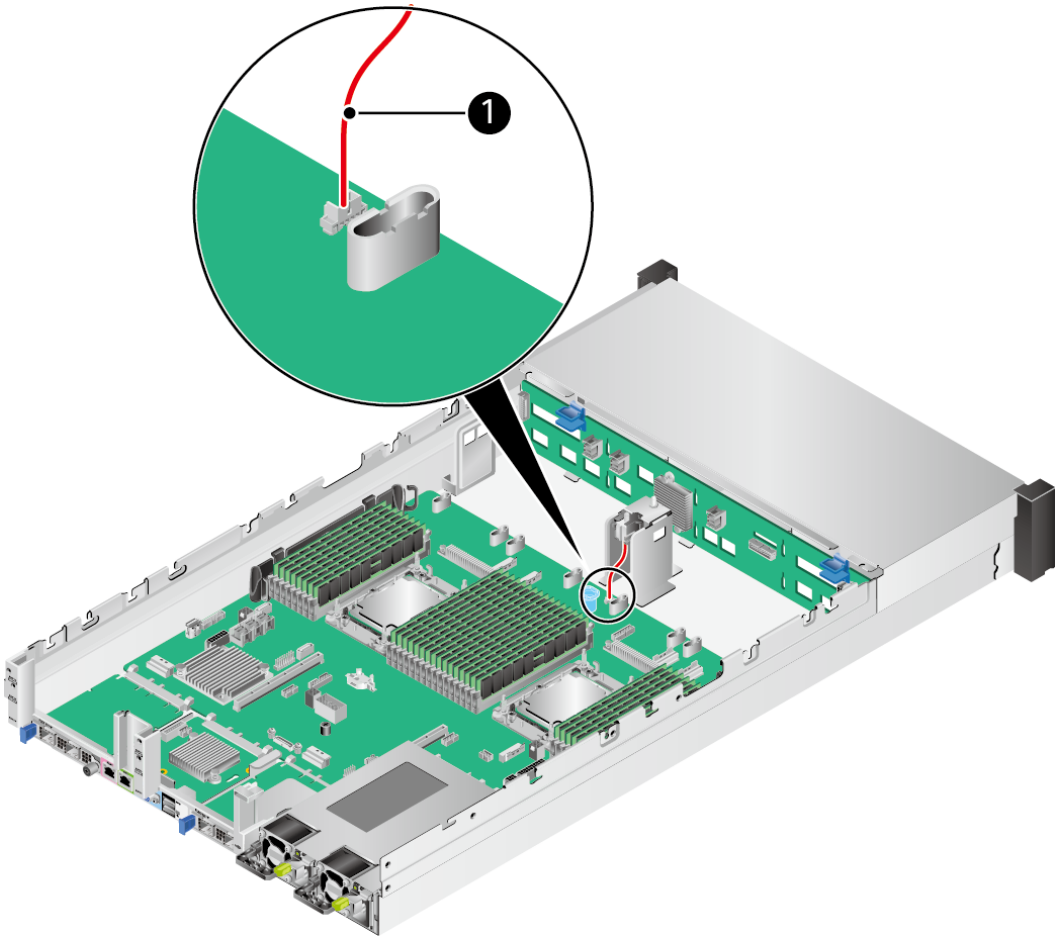

Table 6-346 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.8.1.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-375 Front-drive backplane power and low-speed signal cabling

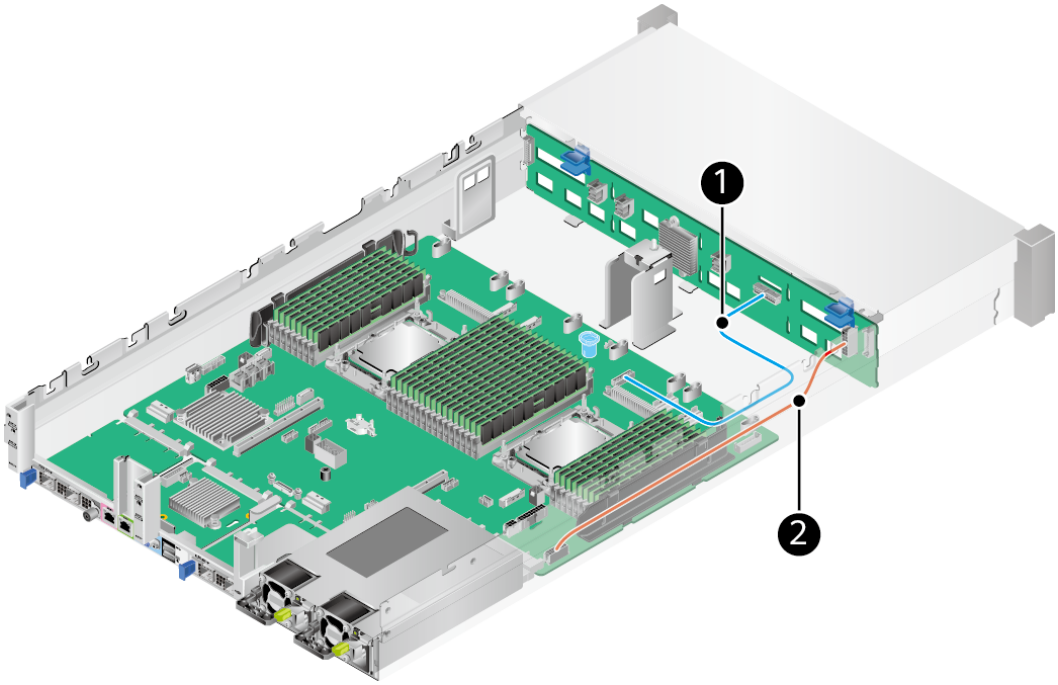

Table 6-347 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)	

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Figure 6-376 Front-drive backplane power and low-speed signal cabling

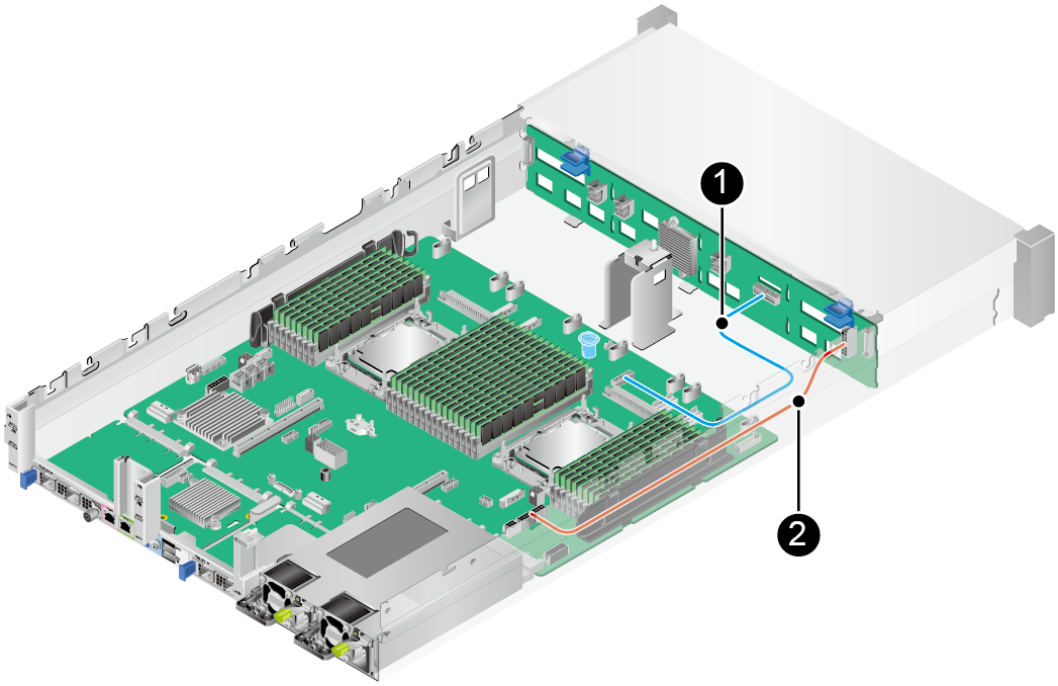

Table 6-348 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.
2	04152178-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	

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6.4.8.1.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-377 Front-drive backplane SAS high-speed cabling

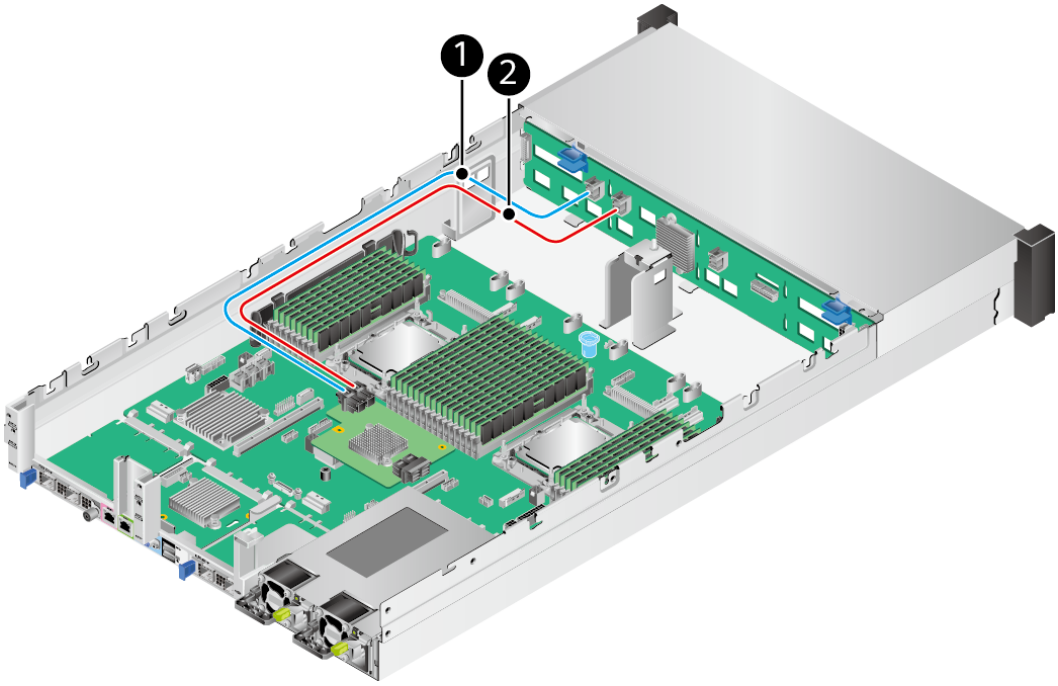

Table 6-349 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.4.8.1.6 Built-in-Drive Backplane Cabling

NOTICE

Remove and connect cables for the built-in drive backplane in the following sequence:

- Remove the cables:
  1. Remove the cables from the built-in drive backplane.
  2. Remove the entire built-in drive module.
  3. Remove the cables from the mainboard.
- Connect the cables:
  1. Connect the cables to the mainboard.
  2. Install the entire built-in drive module.
  3. Connect the cables to the built-in drive backplane.

Built-in Drive Backplane Cabling

Figure 6-378 Built-in drive backplane cabling

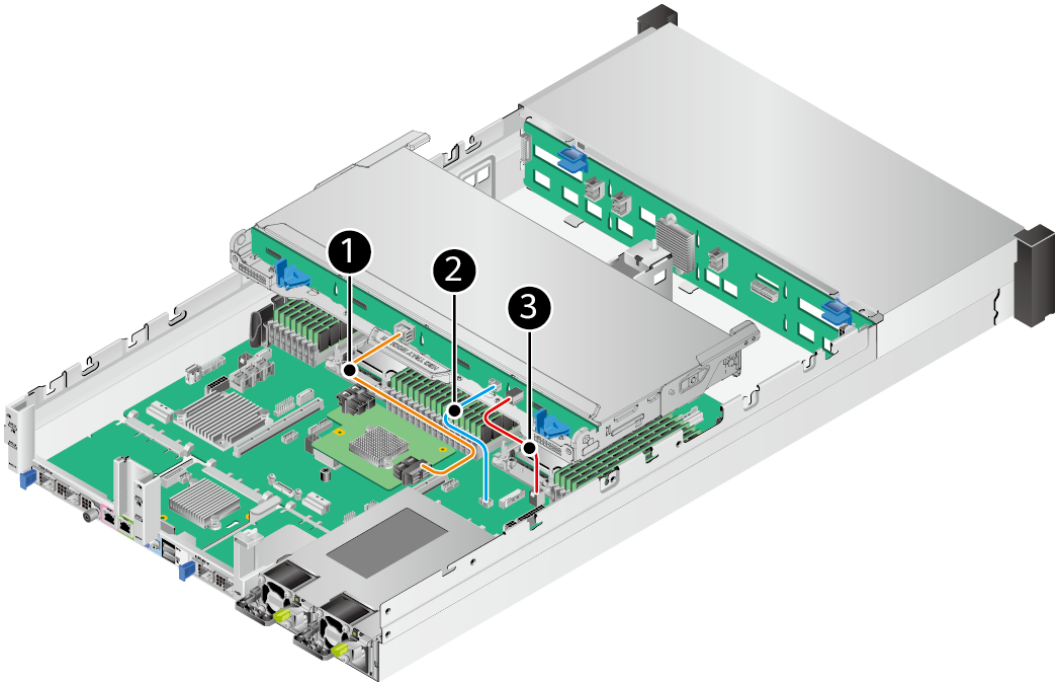

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Table 6-350 Built-in drive backplane cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the built-in drive backplane (J3) to PORT C of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the built-in drive module as a spare part.
2	04051948	Low-speed signal cable for connecting the built-in drive backplane (J1) to the mainboard (J27)	The cable is not an independent spare part. It is packed with the built-in drive module as a spare part.
3	04150448-001	Power cable for connecting the built-in drive backplane (J2) to the mainboard (J22)	-

6.4.8.1.7 I/O Module 1 (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-379 I/O module 1 cabling

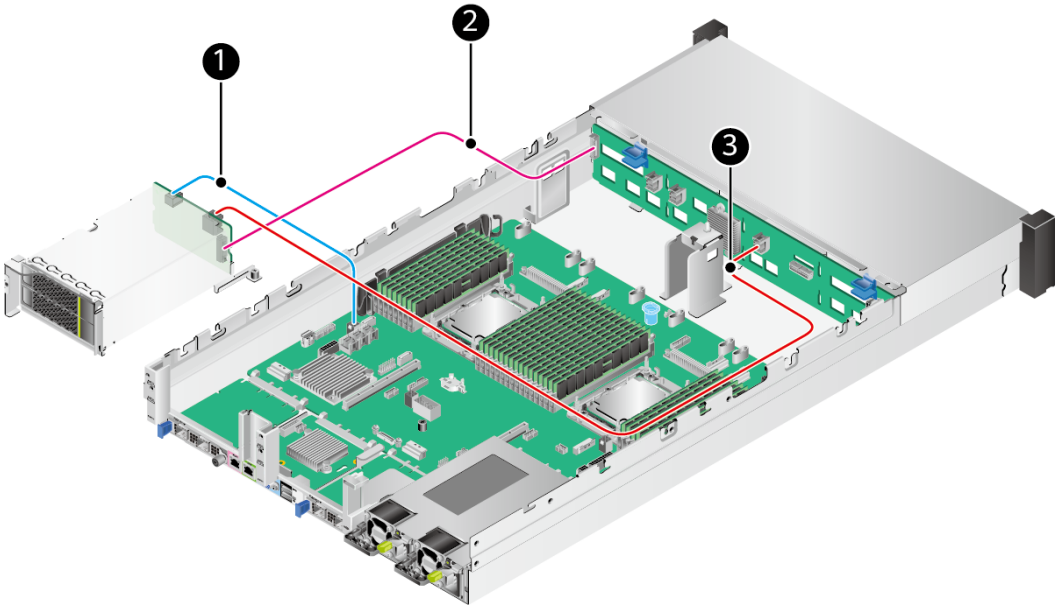

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Table 6-351 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

Table 6-352 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.4.8.1.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-380 I/O module 1 cabling

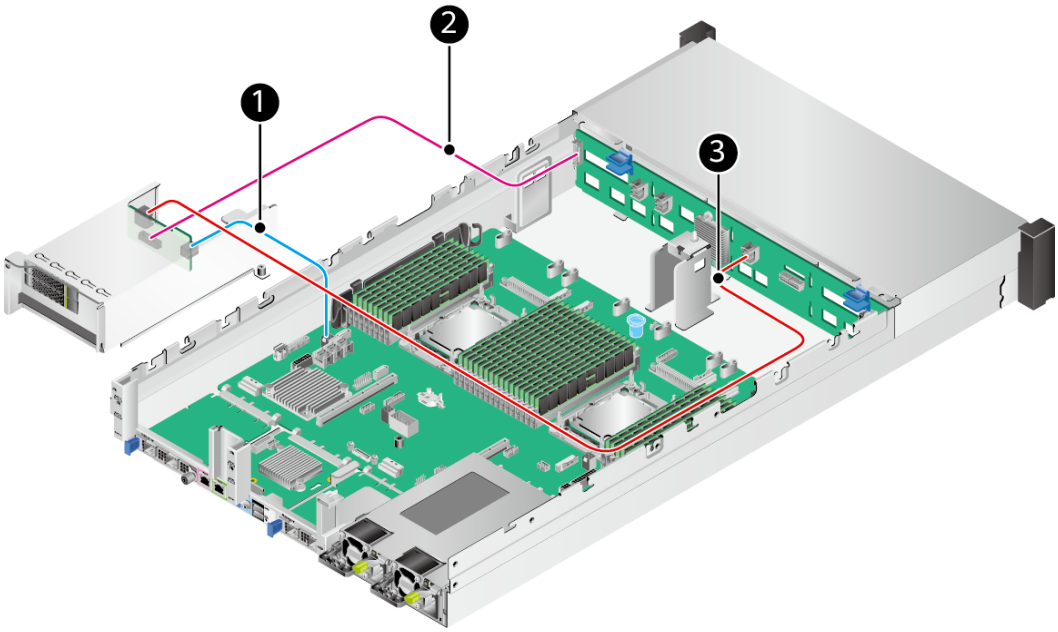

Table 6-353 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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Table 6-354 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

6.4.8.1.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-381 I/O module 1 and I/O module 2 cabling

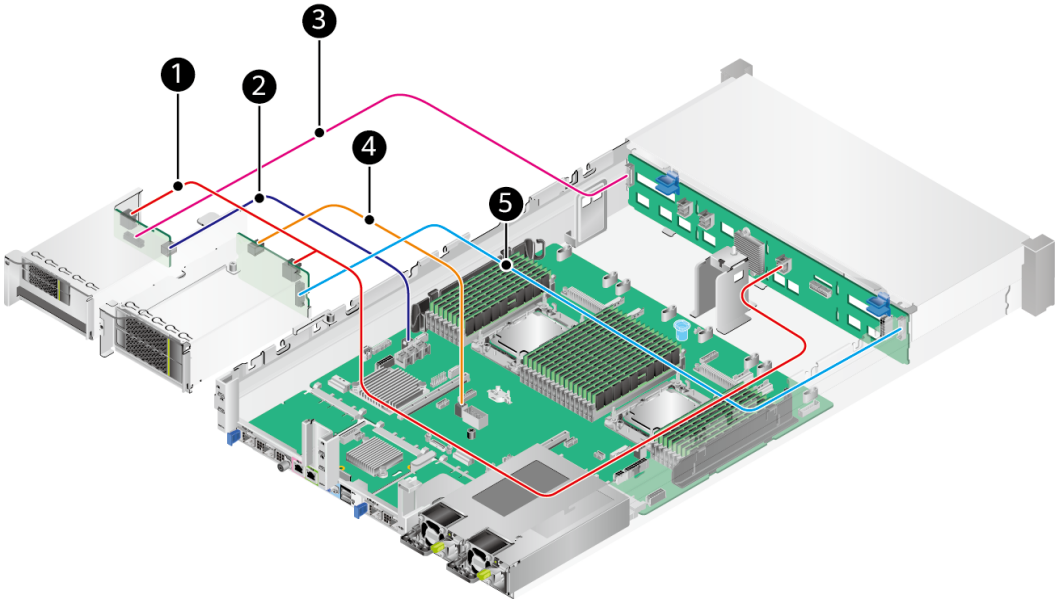

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Table 6-355 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-356 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5"/2 x
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

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No.	P/N Code	Description	Remarks
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	3.5" drive module as a spare part.
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

6.4.8.1.10 I/O Module 1 (2 x 3.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-382 I/O module 1 and I/O module 2 cabling

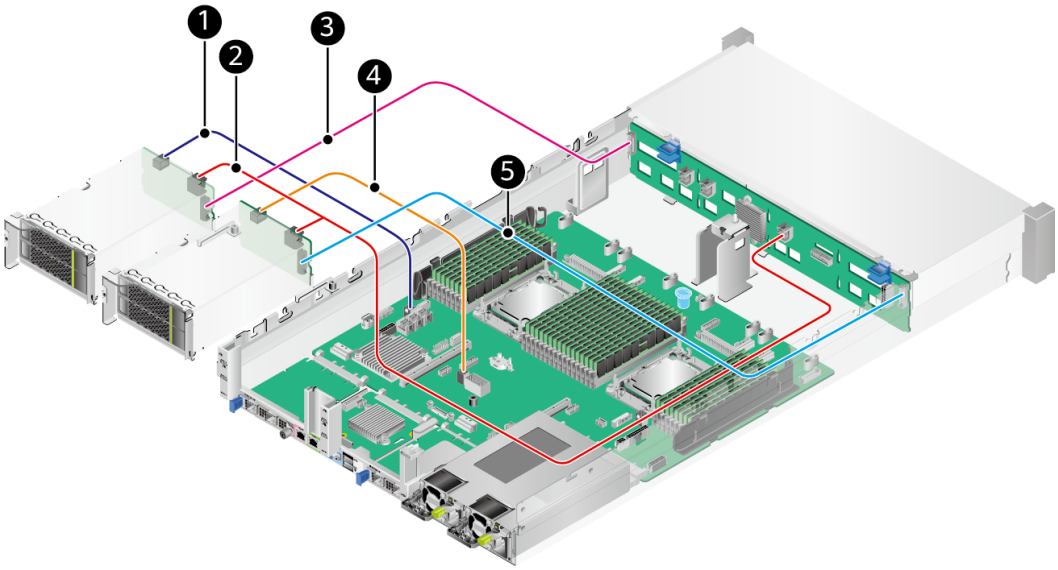

Table 6-357 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.

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No.	P/N Code	Description	Remarks
2	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-358 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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No.	P/N Code	Description	Remarks
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

6.4.8.1.11 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-383 I/O module 3 cabling

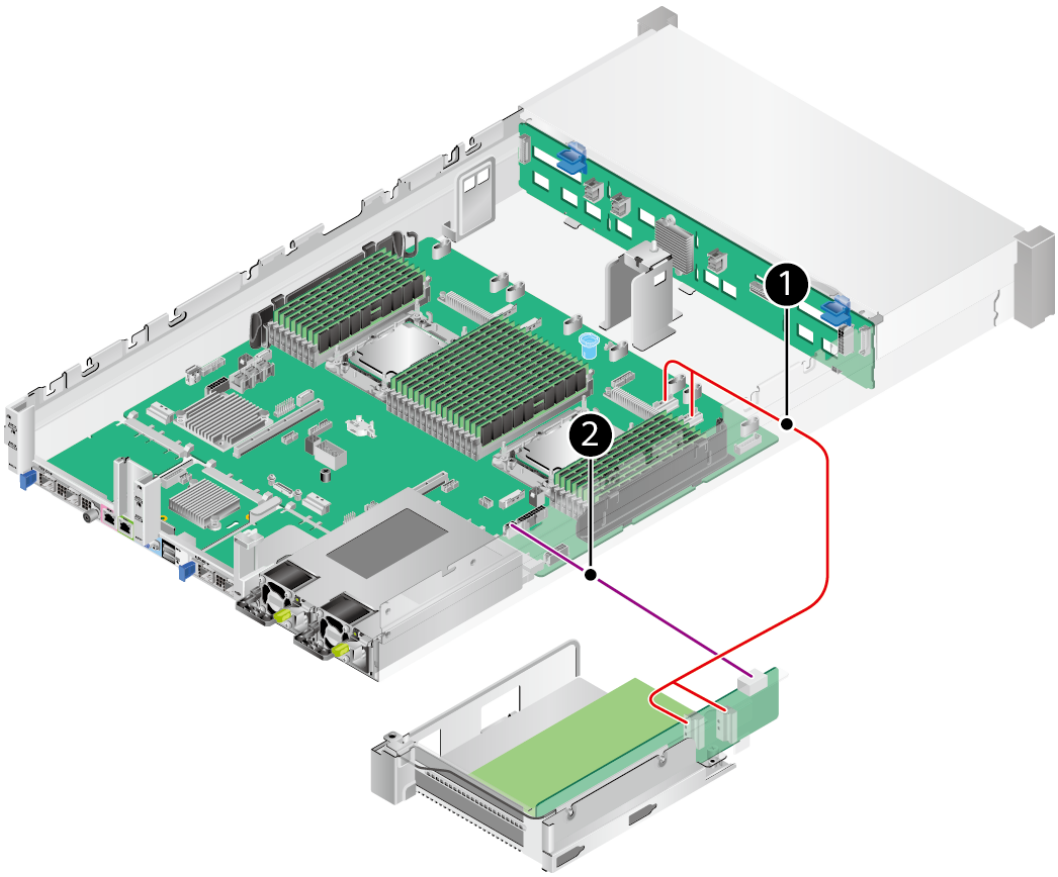

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Table 6-359 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.8.1.12 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-384 I/O module 3 cabling

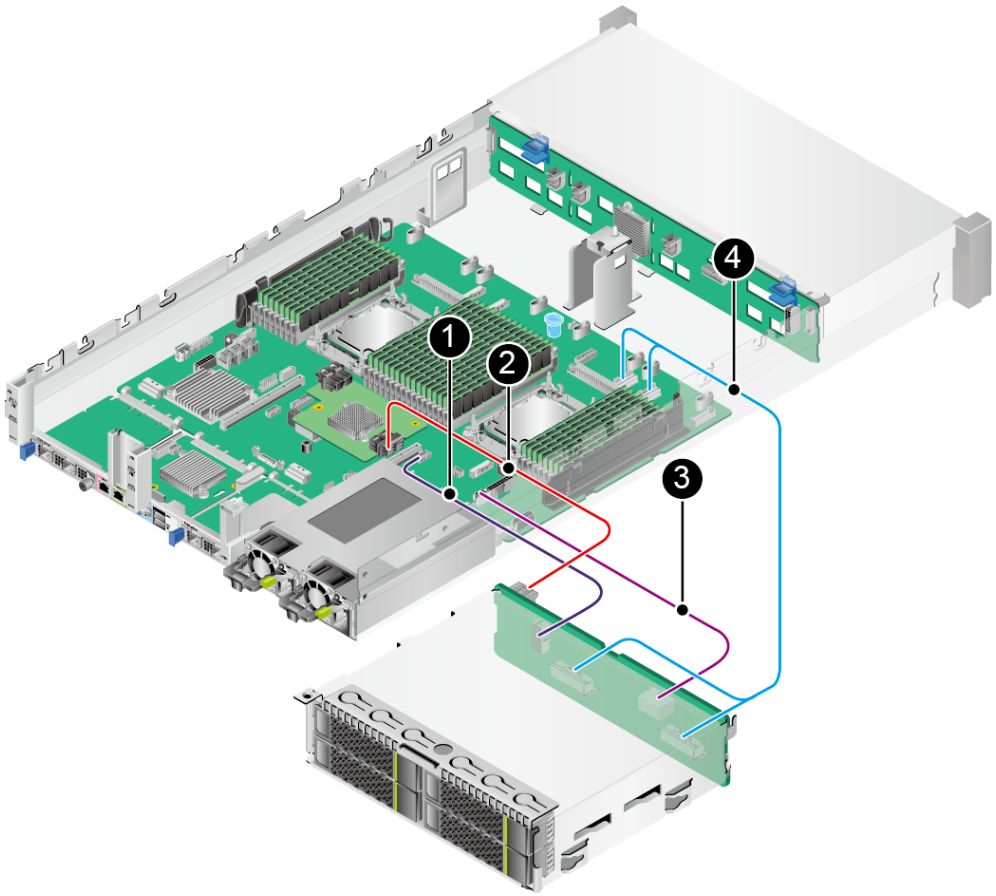

Table 6-360 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT D of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.

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No.	P/N Code	Description	Remarks
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
4	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	

6.4.8.2 16 x 3.5" Drive EXP Configuration 2

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6.4.8.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-385 Left and right mounting ear cabling

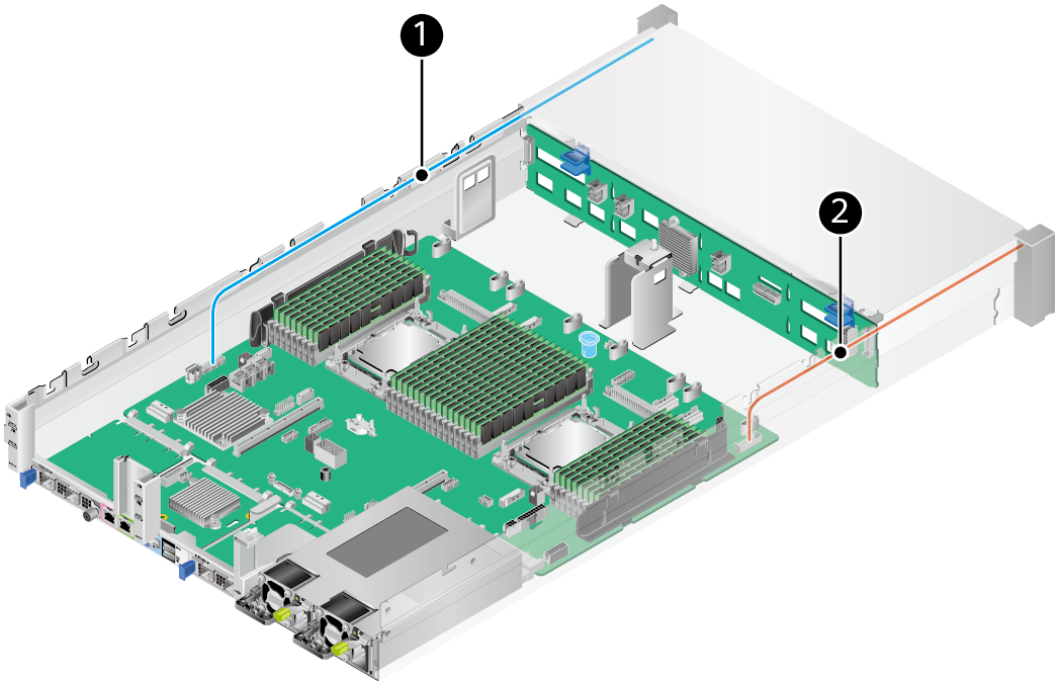

Table 6-361 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.8.2.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-386 OCP 3.0 expansion cable 1

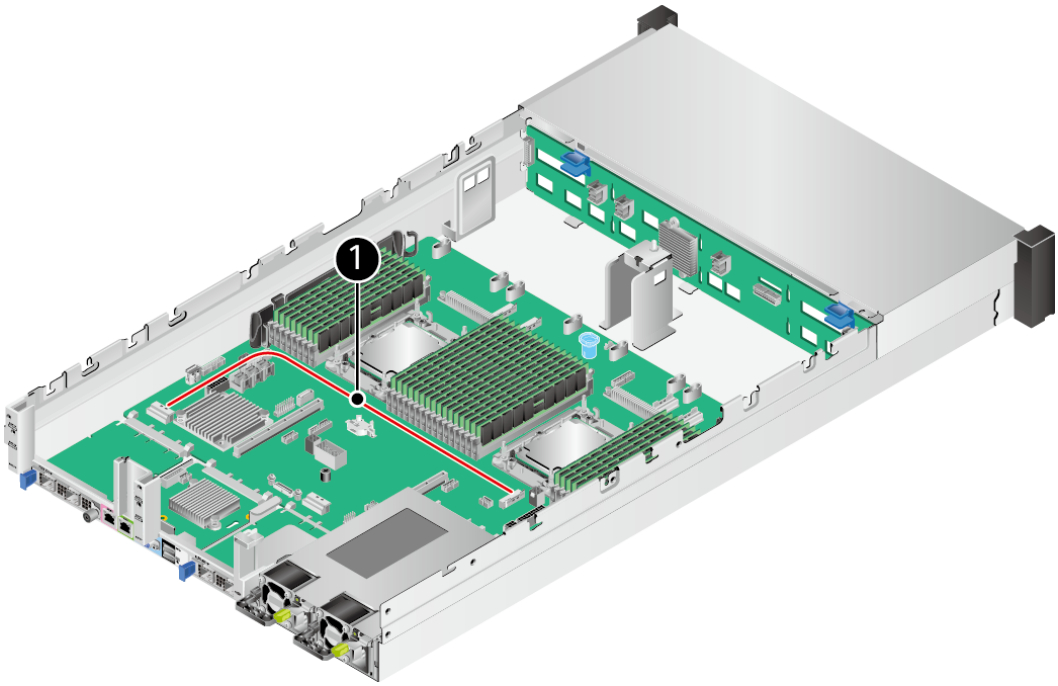

Table 6-362 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-387 OCP 3.0 expansion cable 2

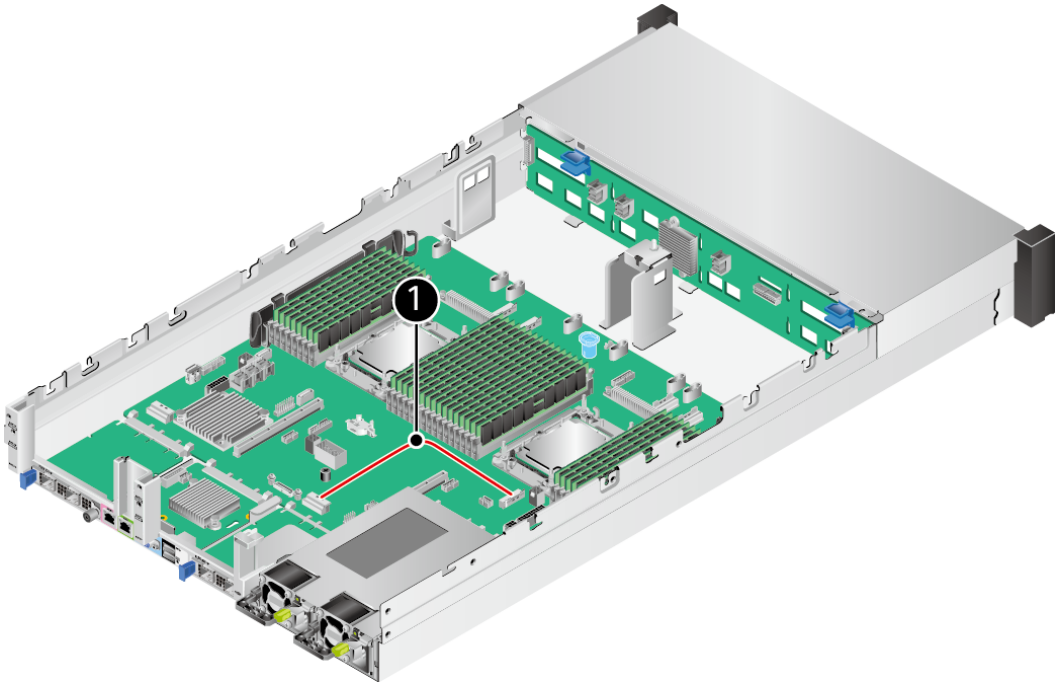

Table 6-363 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.8.2.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-388 Intrusion sensor cabling

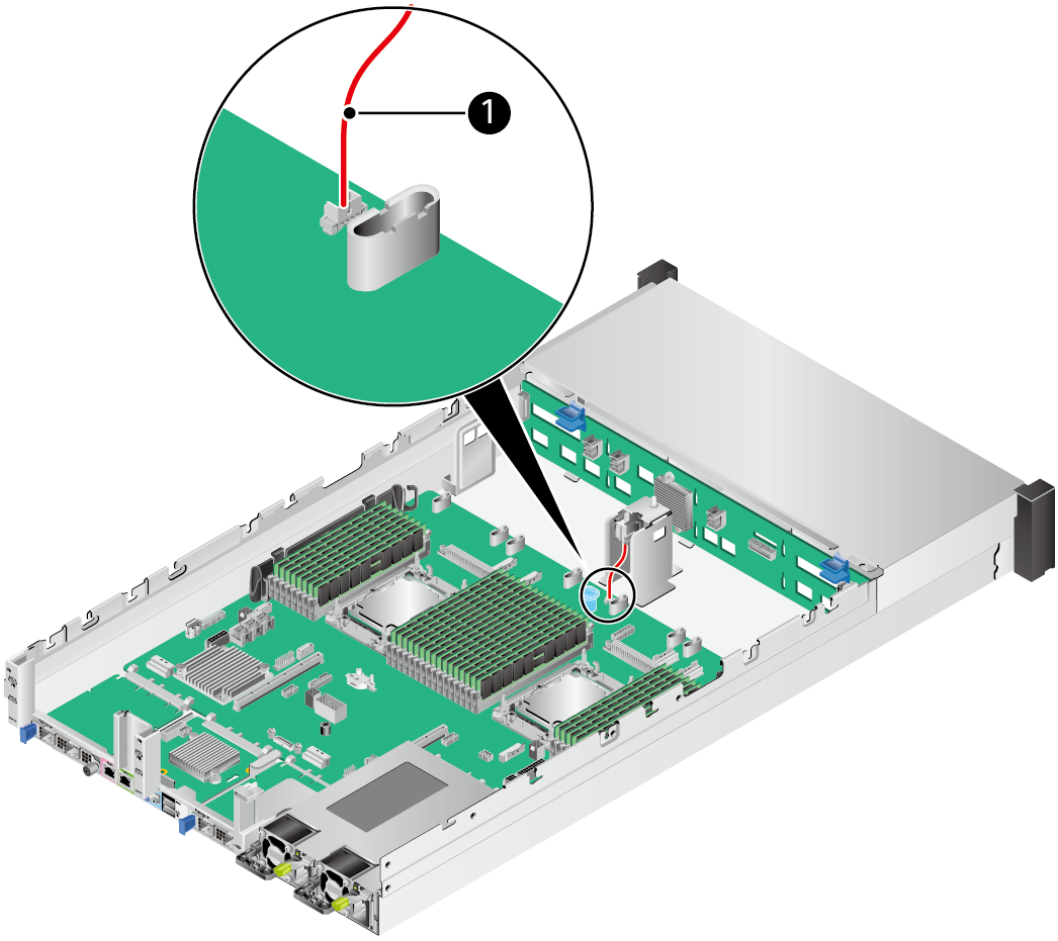

Table 6-364 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.8.2.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-389 Front-drive backplane power and low-speed signal cabling

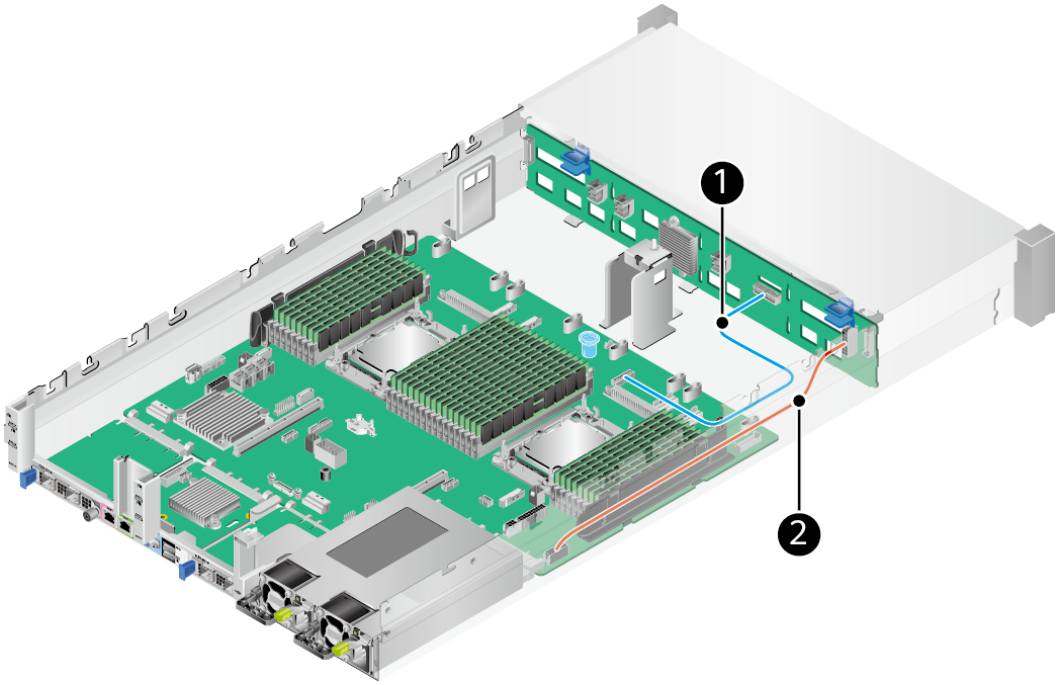

Table 6-365 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)	

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Figure 6-390 Front-drive backplane power and low-speed signal cabling

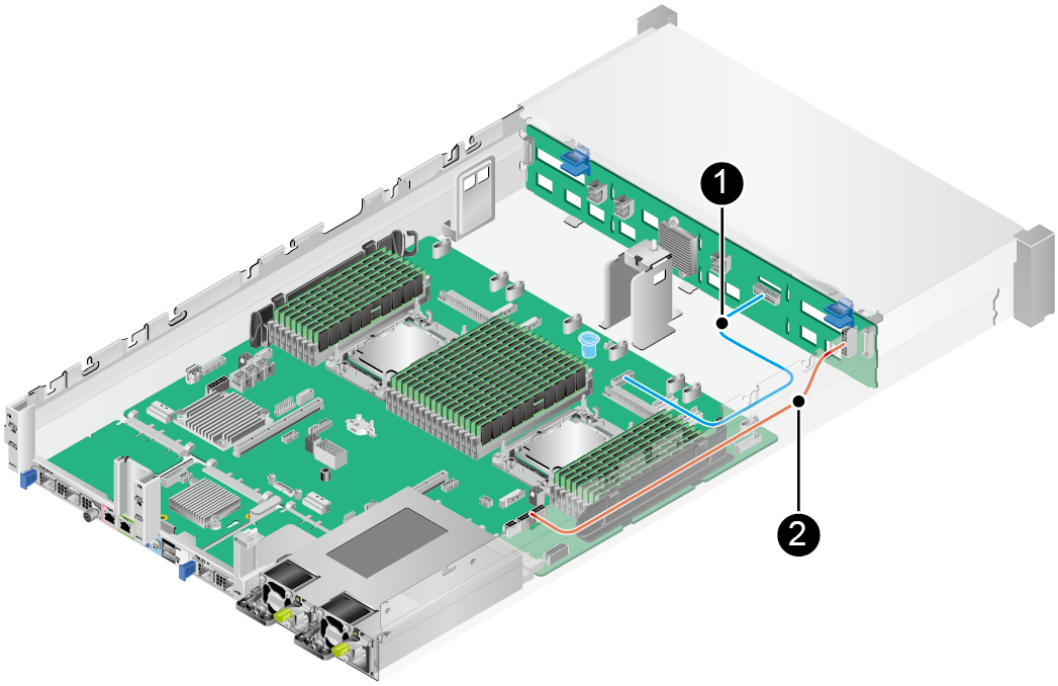

Table 6-366 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description	Remarks
1	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.
2	04152178-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	

6.4.8.2.5 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-391 Front-drive backplane SAS high-speed cabling

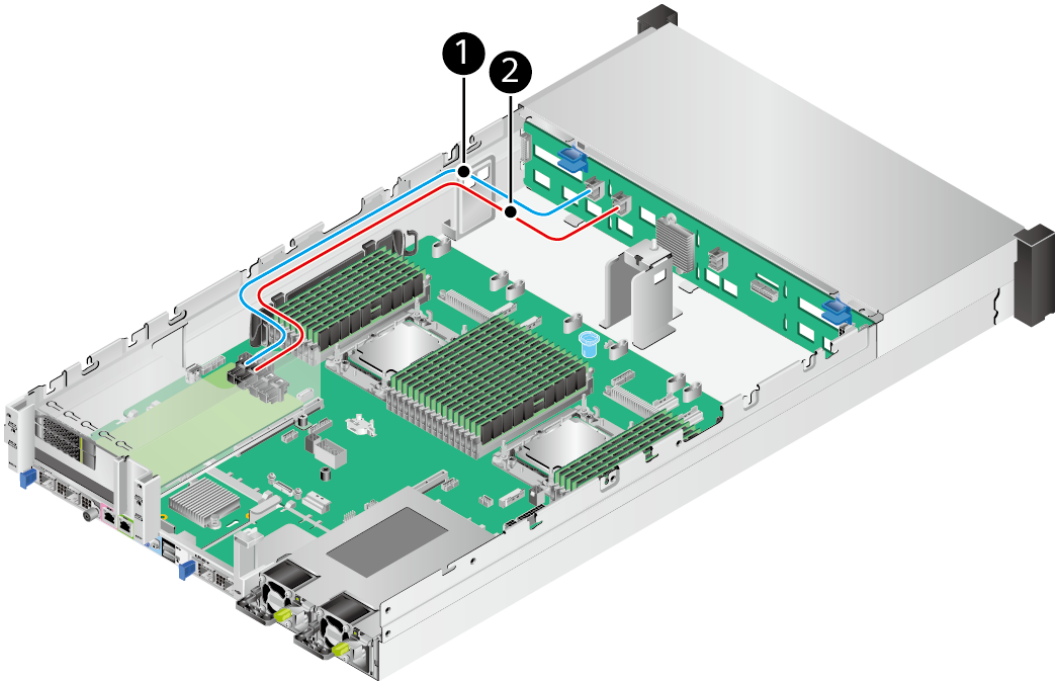

Table 6-367 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.8.2.6 Built-in-Drive Backplane Cabling

NOTICE

Remove and connect cables for the built-in drive backplane in the following sequence:

- Remove the cables:
  1. Remove the cables from the built-in drive backplane.
  2. Remove the entire built-in drive module.
  3. Remove the cables from the mainboard.
- Connect the cables:
  1. Connect the cables to the mainboard.
  2. Install the entire built-in drive module.
  3. Connect the cables to the built-in drive backplane.

Built-in Drive Backplane Cabling

Figure 6-392 Built-in drive backplane cabling

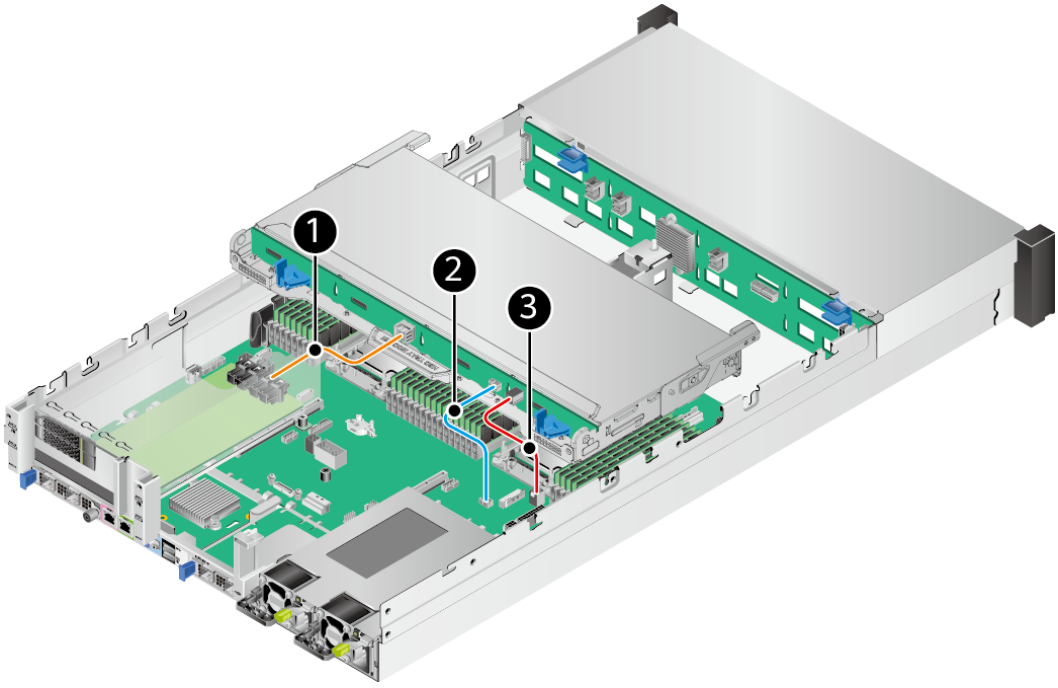

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Table 6-368 Built-in drive backplane cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the built-in drive backplane (J3) to PORT C of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the built-in drive module as a spare part.
2	04051948	Low-speed signal cable for connecting the built-in drive backplane (J1) to the mainboard (J27)	The cable is not an independent spare part. It is packed with the built-in drive module as a spare part.
3	04150448-001	Power cable for connecting the built-in drive backplane (J2) to the mainboard (J22)	-

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to built-in drive backplane (J3) may be C2, PORT C, 2, or CN2.

6.4.8.2.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-393 I/O module 1 cabling

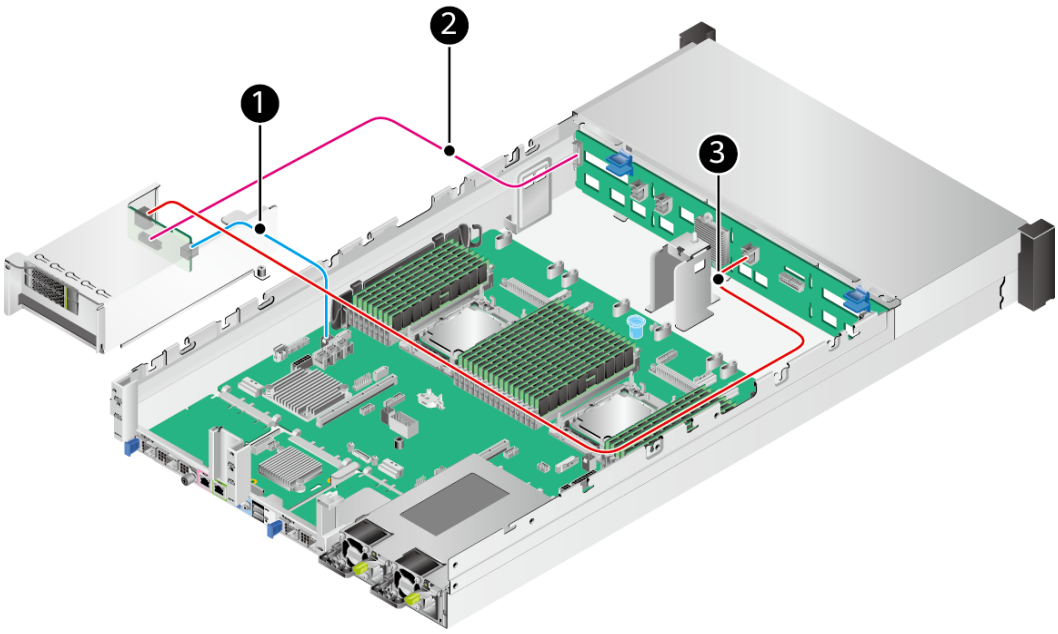

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Table 6-369 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

Table 6-370 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.4.8.2.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-394 I/O module 1 and I/O module 2 cabling

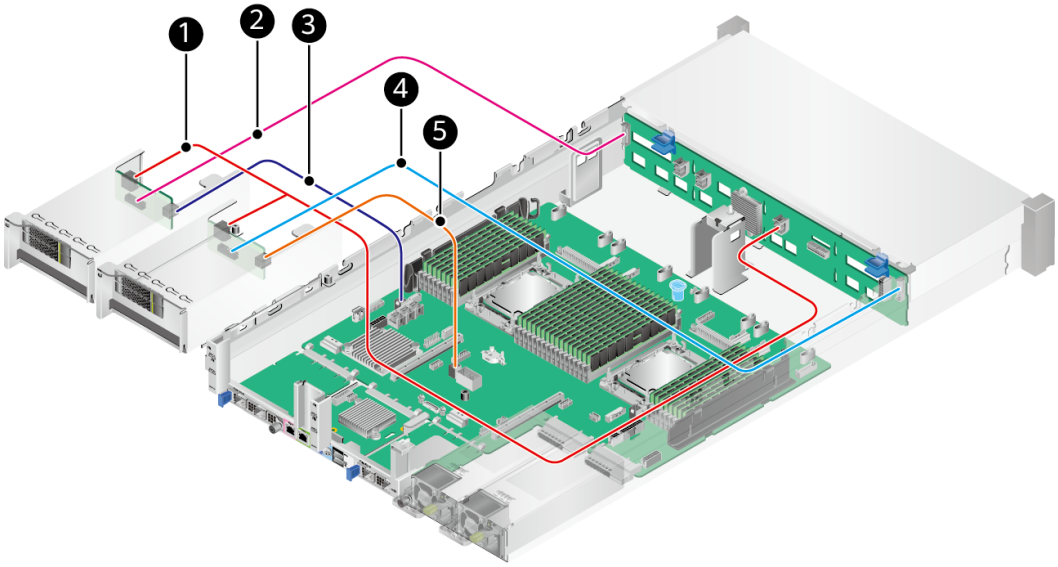

Table 6-371 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
4	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

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No.	P/N Code	Description	Remarks
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

Table 6-372 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
4	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	
5	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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6.4.8.2.9 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-395 I/O module 1 and I/O module 2 cabling

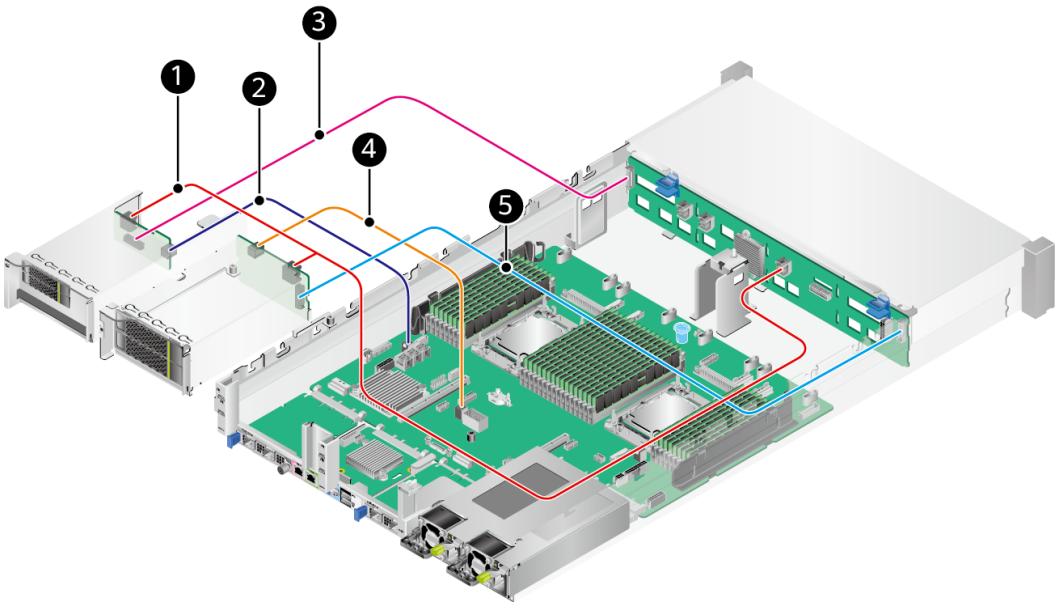

Table 6-373 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	

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No.	P/N Code	Description	Remarks
5	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	

Table 6-374 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description	Remarks
1	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1 and connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 2.5"/2 x 3.5" drive module as a spare part.
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	
3	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)	
5	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)	

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6.4.8.2.10 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-396 I/O module 3 cabling

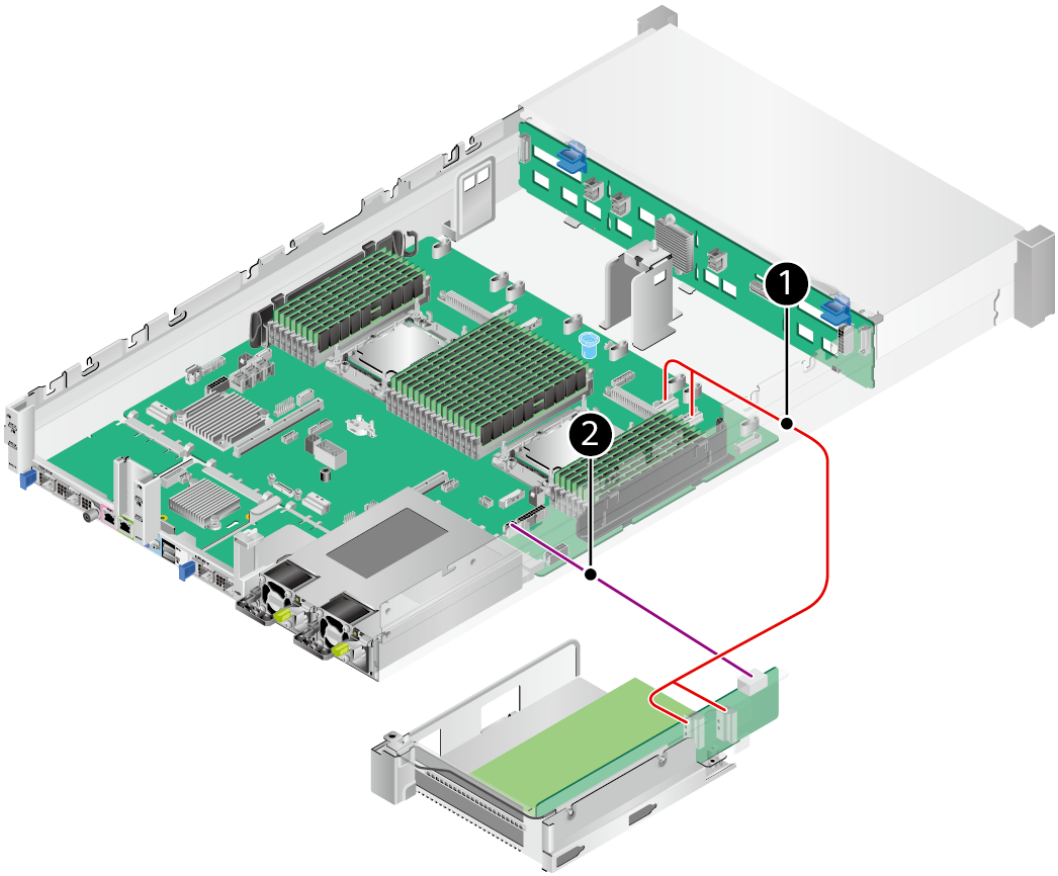

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Table 6-375 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.8.2.11 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-397 I/O module 3 cabling

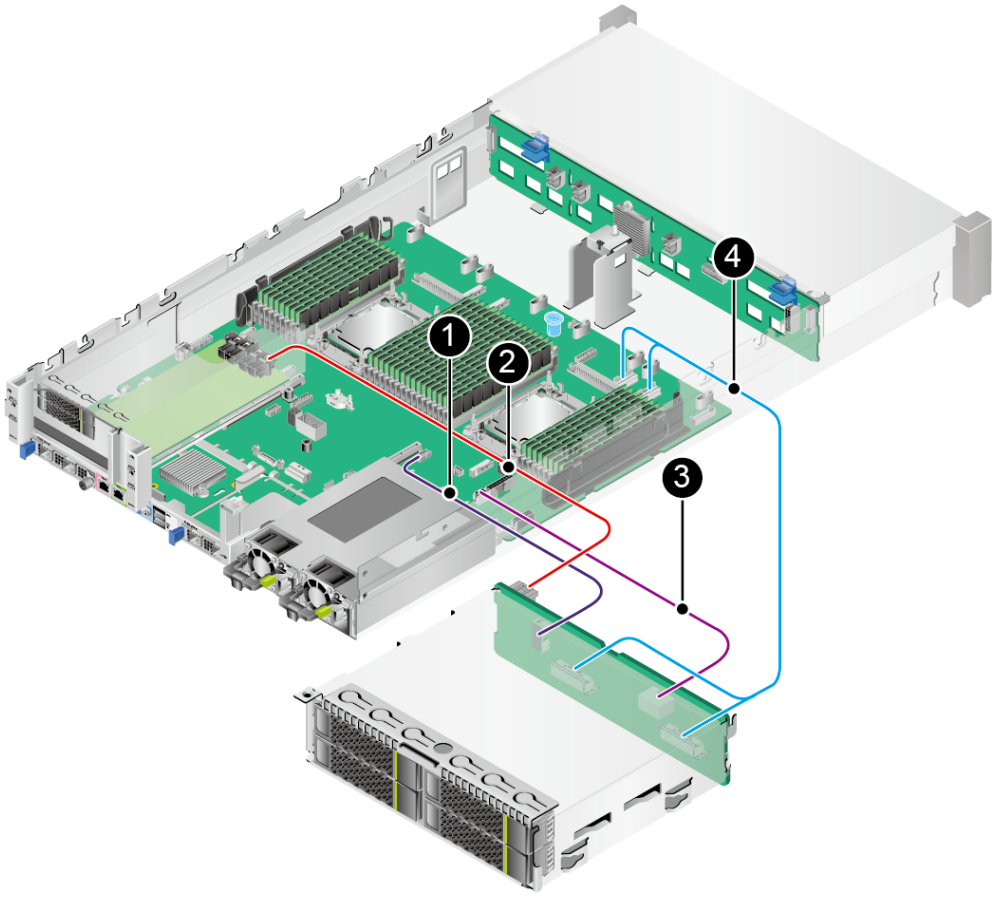

Table 6-376 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04051059 -002	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT D of the PCIe RAID controller card	-
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	The cable is not an independent spare part. It is packed with the 4 x 2.5"

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No.	P/N Code	Description	Remarks
4	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	drive module as a spare part.

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J801) may be C3, PORT D, 3, or CN3.

6.4.9 20 x 2.5" Drive Pass-through Configuration

6.4.9.1 20 x 2.5" Drive Pass-through Configuration 1 (4 x SATA + 16 x NVMe)

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6.4.9.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-398 Left and Right Mounting Ear Cabling

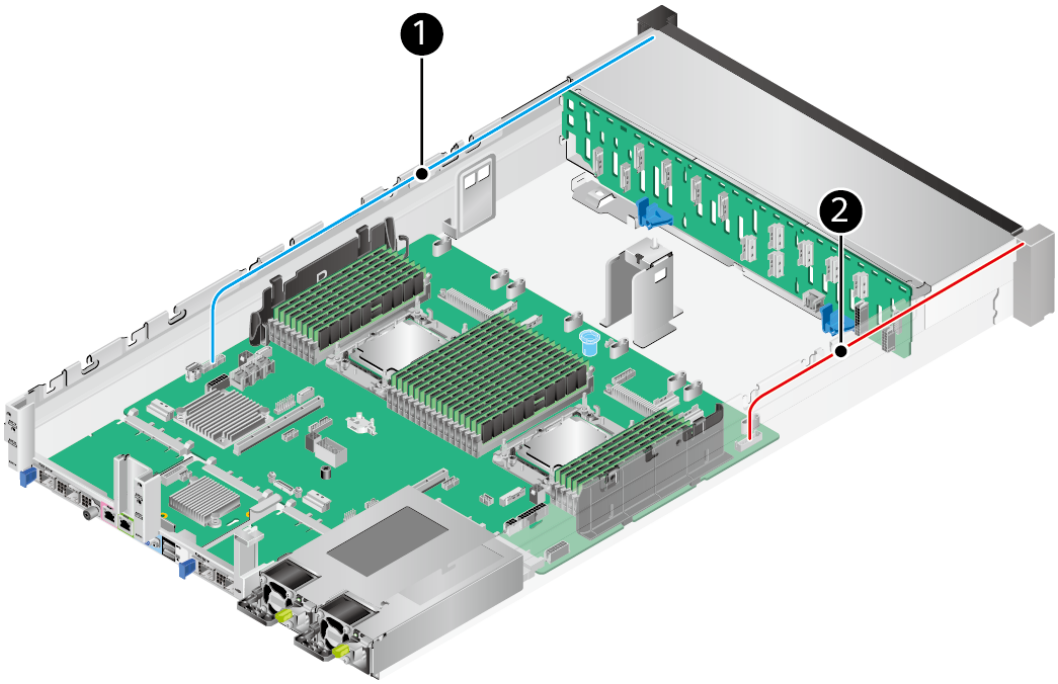

Table 6-377 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.9.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-399 Intrusion sensor cabling

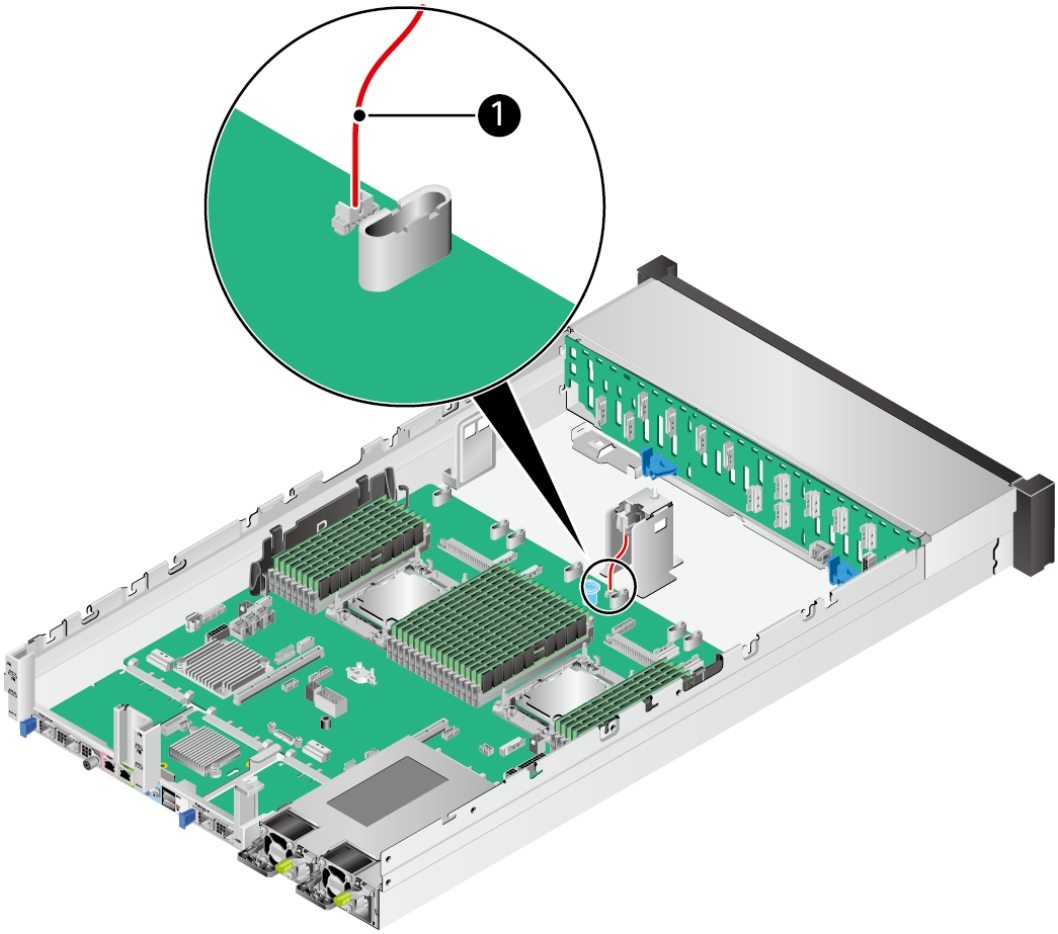

Table 6-378 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.9.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-400 Front-drive backplane power and low-speed signal cabling

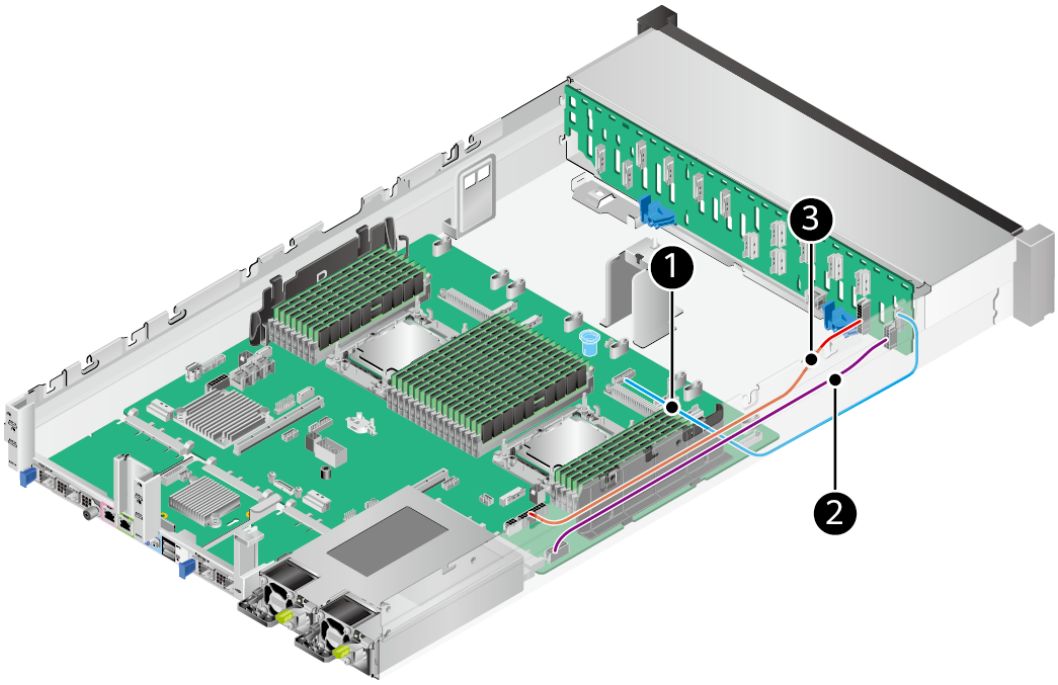

Table 6-379 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J7102) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J30) to the mainboard (J26)
3	04152142-011	Power cable for connecting the front-drive backplane (J7303) to the mainboard (J88)

6.4.9.1.4 Front-Drive Backplane SAS Cable (PCH Pass-through)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-401 Front-drive backplane SAS high-speed cabling

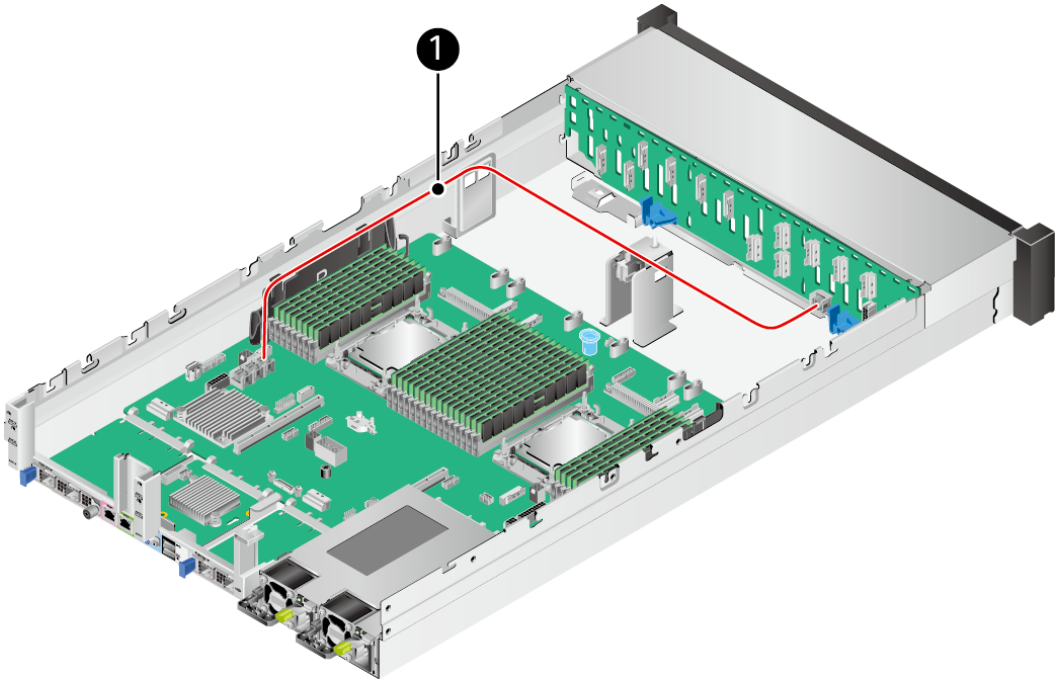

Table 6-380 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J1001) to the mainboard (J6)

6.4.9.1.5 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-402 Front-drive backplane LP Slimline high-speed cable

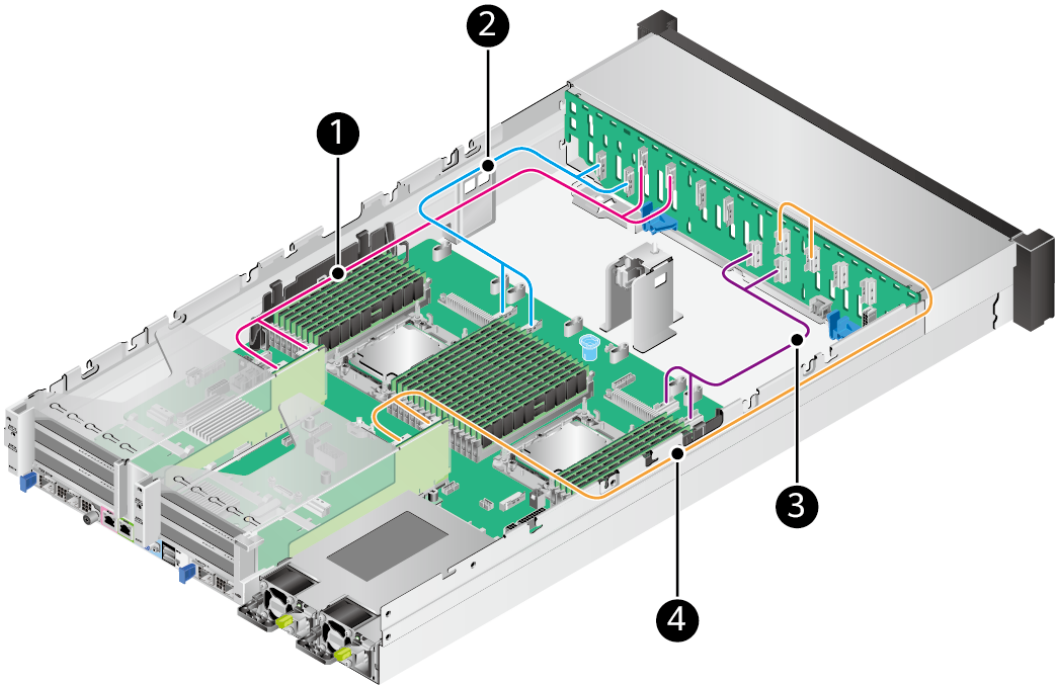

Table 6-381 Front-drive backplane LP Slimline high-speed cable

No.	P/N Code	Description
1	04052395	High-speed cable for connecting LP Slimline 1C (J1701) and LP Slimline 1D (J1801) of the front-drive backplane to LP Slimline C and LP Slimline D of the PCIe riser card on I/O module 1
2	04052316-001	High-speed cable for connecting LP Slimline 1 (J1101) and LP Slimline 2 (J1201) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J1101), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1201); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
3	04052316	High-speed cable for connecting LP Slimline 3 (J1301) and LP Slimline 4 (J1401) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316 cable corresponds to the front-drive backplane LP Slimline 3 (J1301), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1401); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12).
4	04052379	High-speed cable for connecting LP Slimline 2C (J2101) and LP Slimline 2D (J2201) of the front-drive backplane to LP Slimline C and LP Slimline D of the PCIe riser card on I/O module 2

6.4.9.2 20 x 2.5" Drive Pass-through Configuration 2 (4 x SAS/SATA + 16 x NVMe)

6.4.9.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-403 Left and Right Mounting Ear Cabling

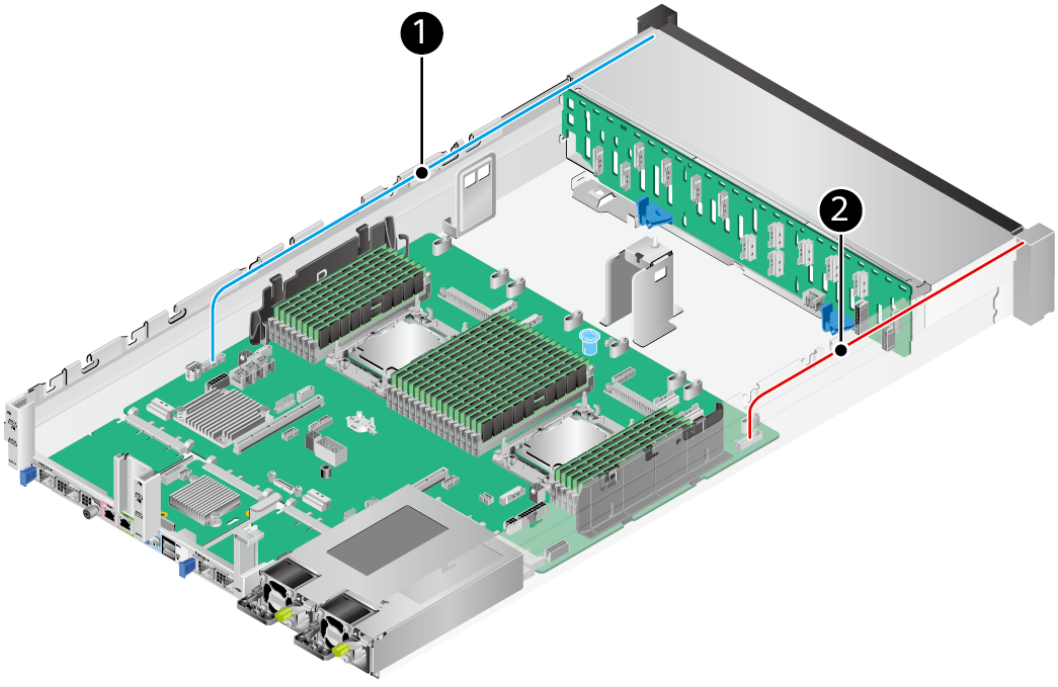

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Table 6-382 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.4.9.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-404 Intrusion sensor cabling

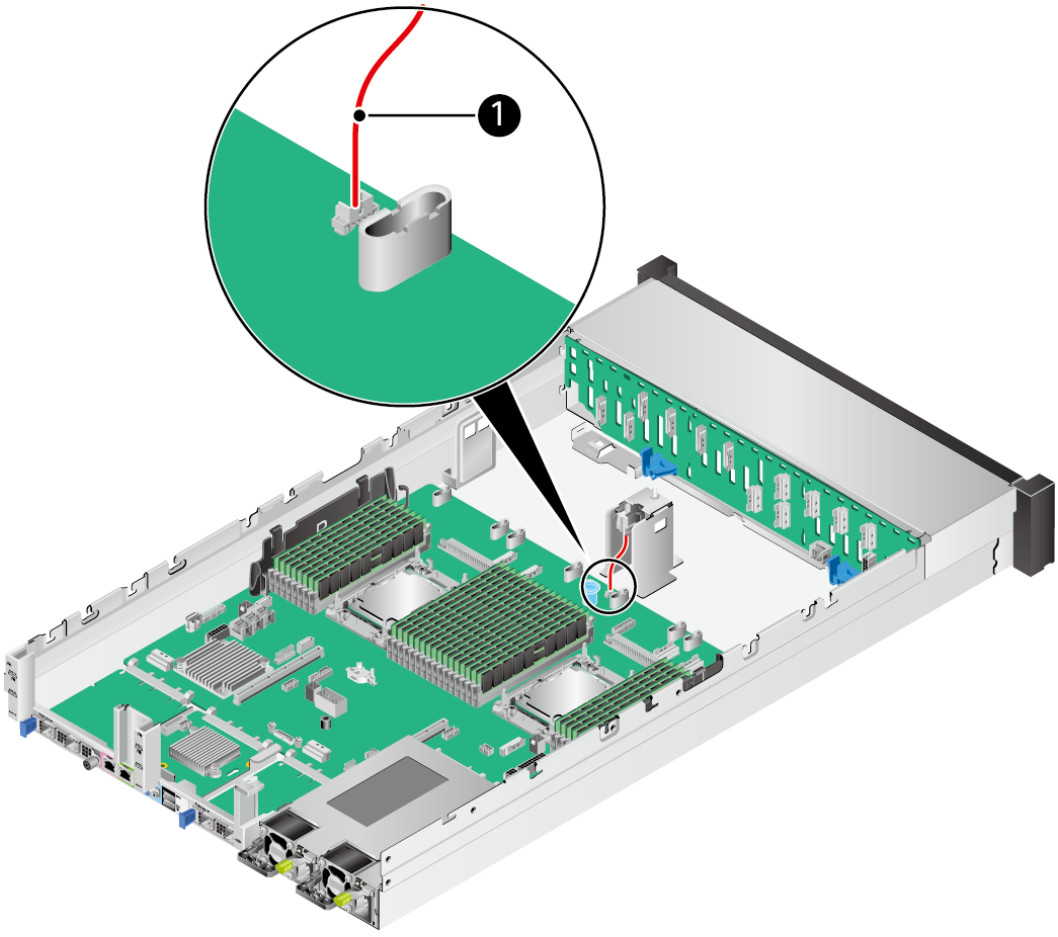

Table 6-383 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.9.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-405 Front-drive backplane power and low-speed signal cabling

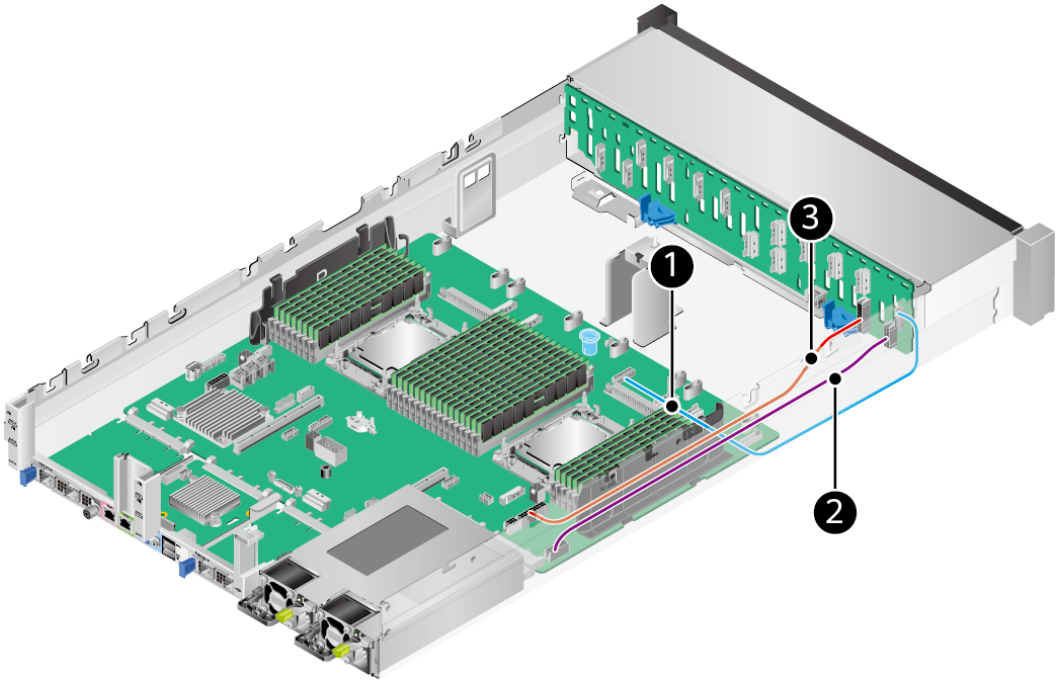

Table 6-384 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J7102) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J30) to the mainboard (J26)
3	04152142-011	Power cable for connecting the front-drive backplane (J7303) to the mainboard (J88)

6.4.9.2.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-406 Front-drive backplane SAS high-speed cabling

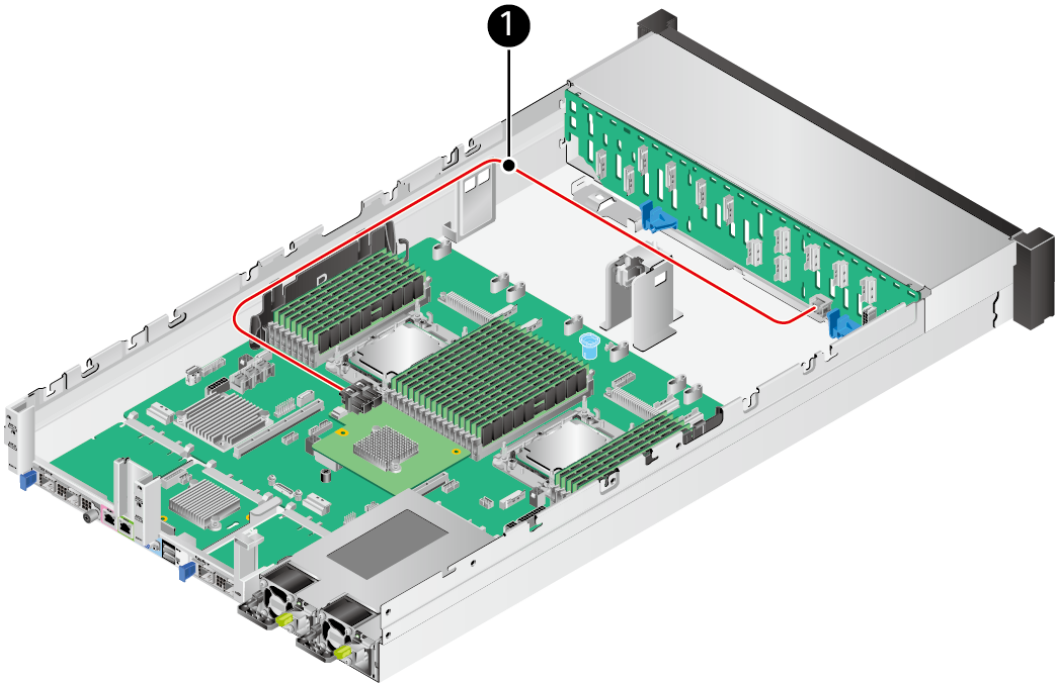

Table 6-385 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051021	SAS high-speed cable for connecting the front-drive backplane (PORTA/J1001) to PORT A of the screw-in RAID controller card

6.4.9.2.5 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-407 Front-drive backplane LP Slimline high-speed cable

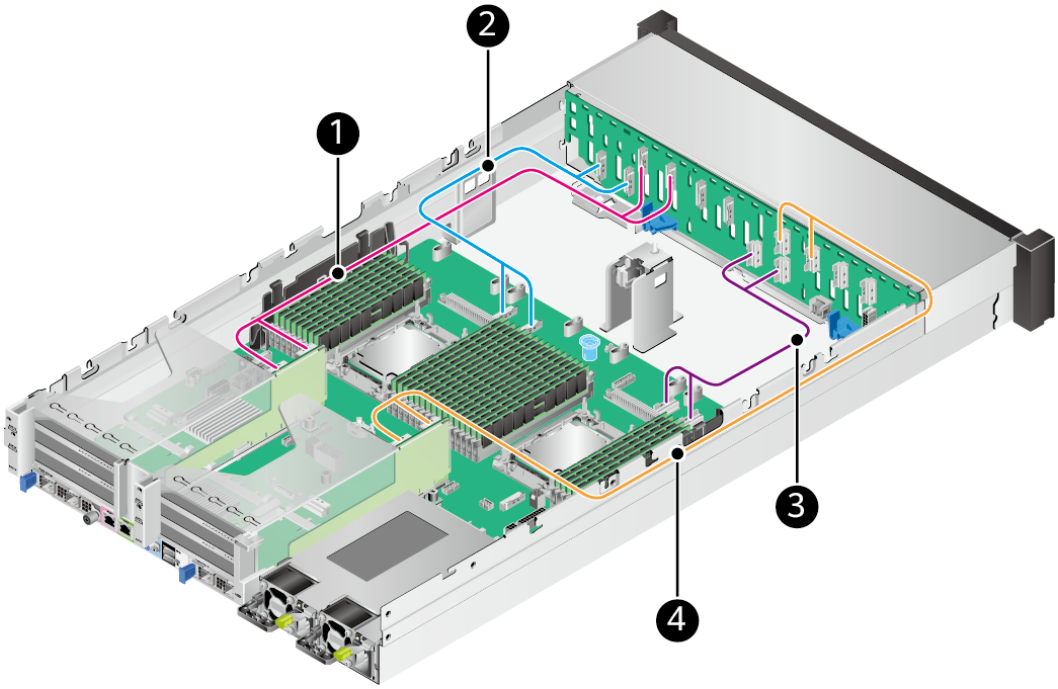

Table 6-386 Front-drive backplane LP Slimline high-speed cable

No.	P/N Code	Description
1	04052395	High-speed cable for connecting LP Slimline 1C (J1701) and LP Slimline 1D (J1801) of the front-drive backplane to LP Slimline C and LP Slimline D of the PCIe riser card on I/O module 1
2	04052316-001	High-speed cable for connecting LP Slimline 1 (J1101) and LP Slimline 2 (J1201) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J1101), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1201); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
3	04052316	High-speed cable for connecting LP Slimline 3 (J1301) and LP Slimline 4 (J1401) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316 cable corresponds to the front-drive backplane LP Slimline 3 (J1301), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1401); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12).
4	04052379	High-speed cable for connecting LP Slimline 2C (J2101) and LP Slimline 2D (J2201) of the front-drive backplane to LP Slimline C and LP Slimline D of the PCIe riser card on I/O module 2

6.4.9.2.6 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-408 I/O module 3 cabling

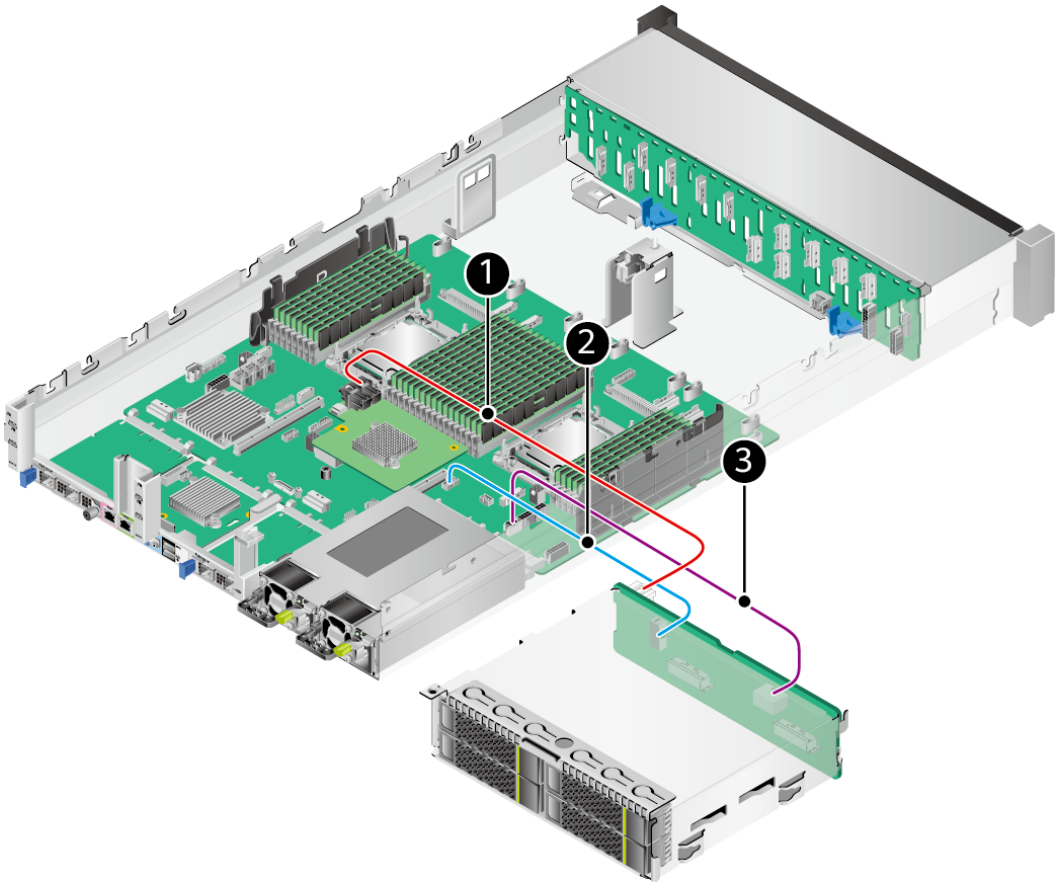

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Table 6-387 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT B of screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.4.9.3 20 x 2.5" Drive Pass-through Configuration 3 (4 x SAS/SATA + 16 x NVMe)

6.4.9.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-409 Left and Right Mounting Ear Cabling

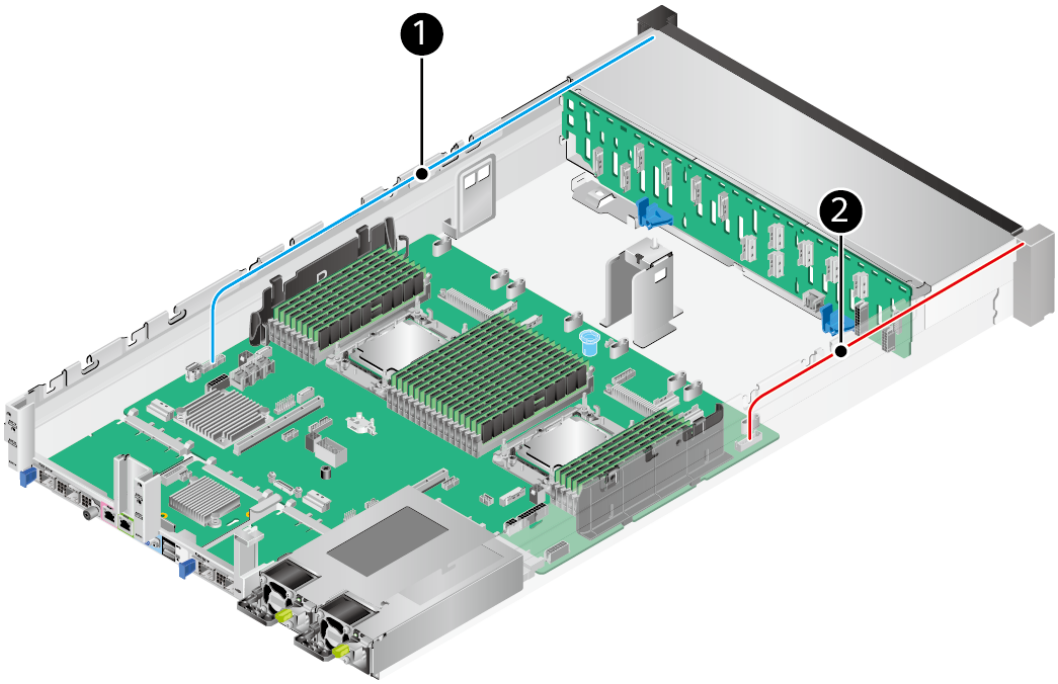

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Table 6-388 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.4.9.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-410 Intrusion sensor cabling

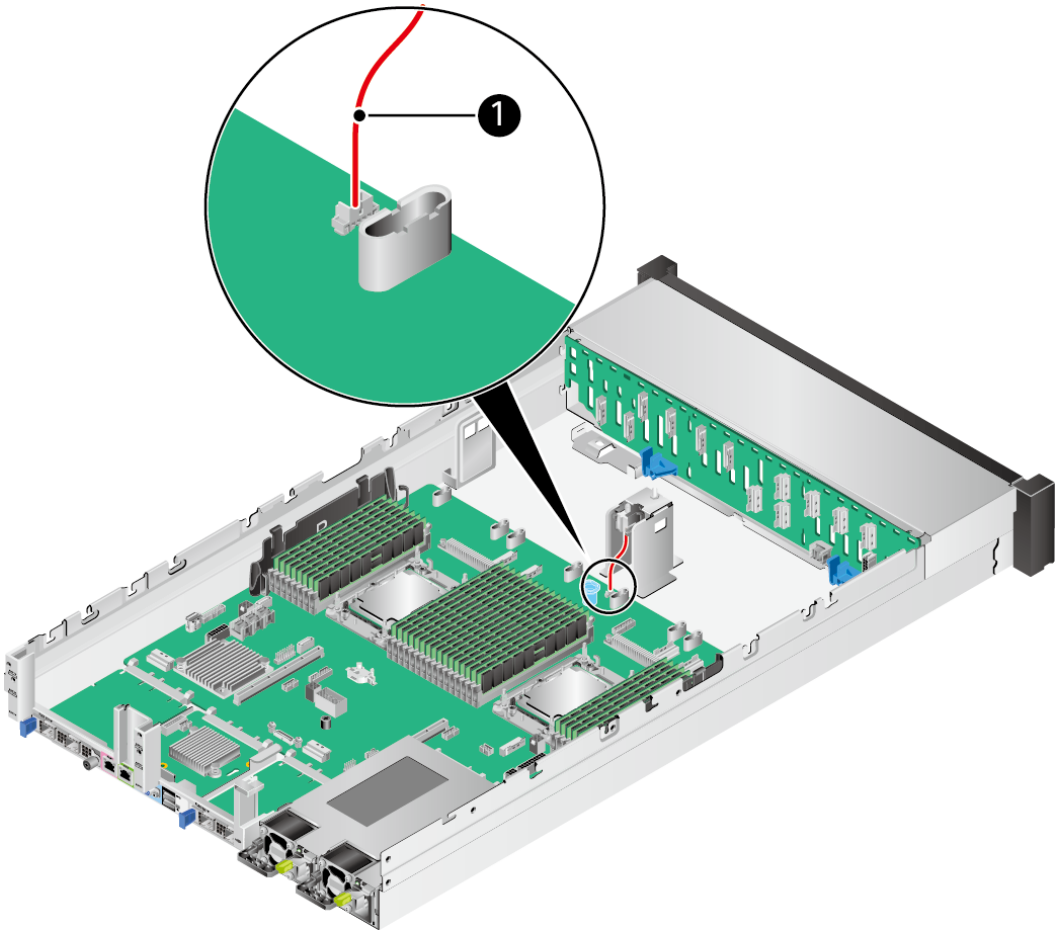

Table 6-389 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.9.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-411 Front-drive backplane power and low-speed signal cabling

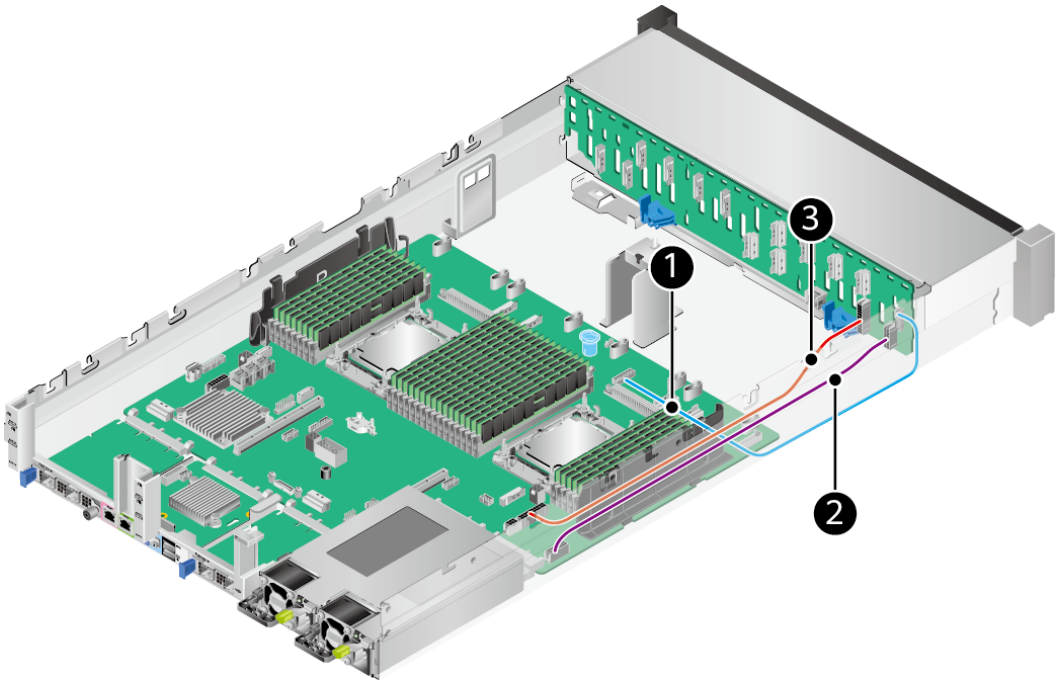

Table 6-390 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J7102) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J30) to the mainboard (J26)
3	04152142-011	Power cable for connecting the front-drive backplane (J7303) to the mainboard (J88)

6.4.9.3.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

- Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.
- The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-412 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

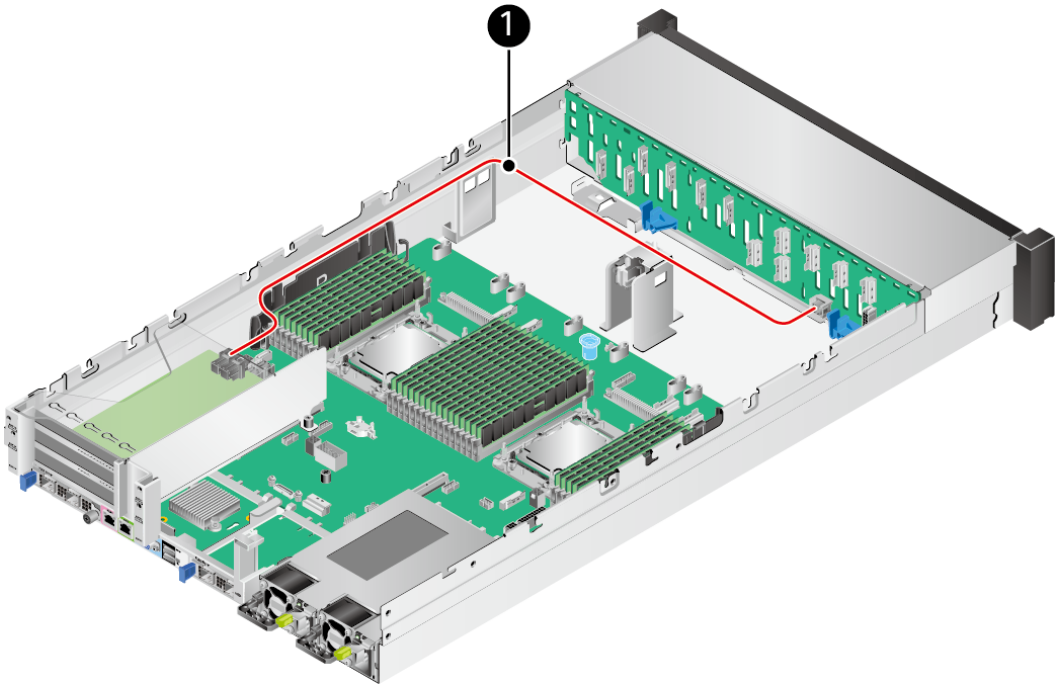

Table 6-391 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051021	SAS high-speed cable for connecting the front-drive backplane (PORTA/J1001) to PORT A of the PCIe RAID controller card

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Figure 6-413 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one Mini SAS ports)

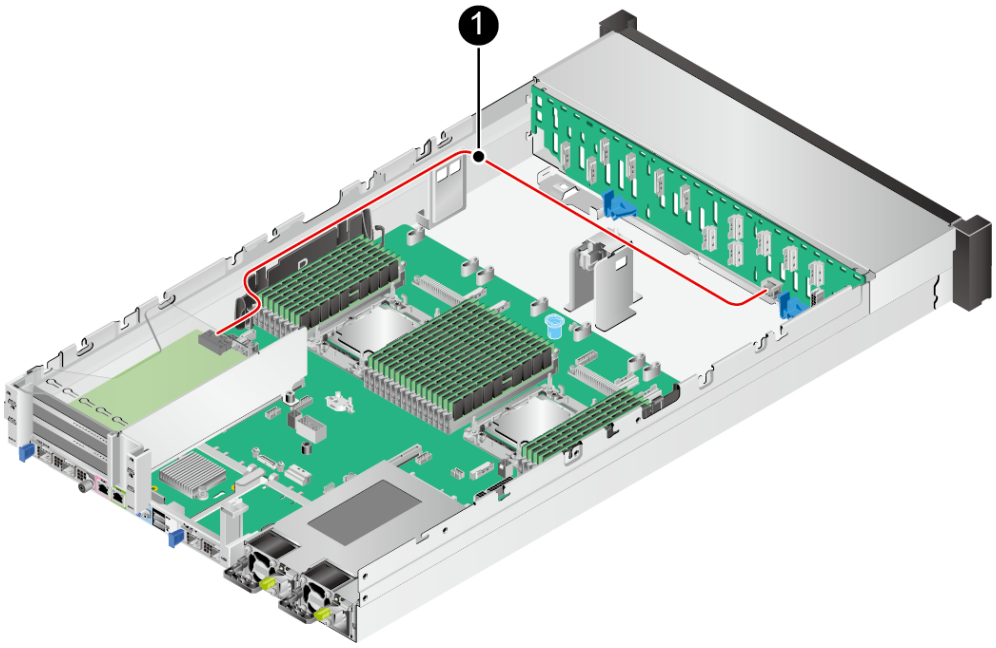

Table 6-392 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y025-002	SAS high-speed cable for connecting the front-drive backplane (PORTA/J1001) to C0 of the PCIe RAID controller card **NOTE** 0405Y025-002 is a Y-shaped cable. The PORT A connector is connected to the backplane of I/O module 1, the PORT B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (PORTA/J1001) may be C0, PORT A, 0, or CN0.

6.4.9.3.5 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-414 Front-drive backplane LP Slimline high-speed cable

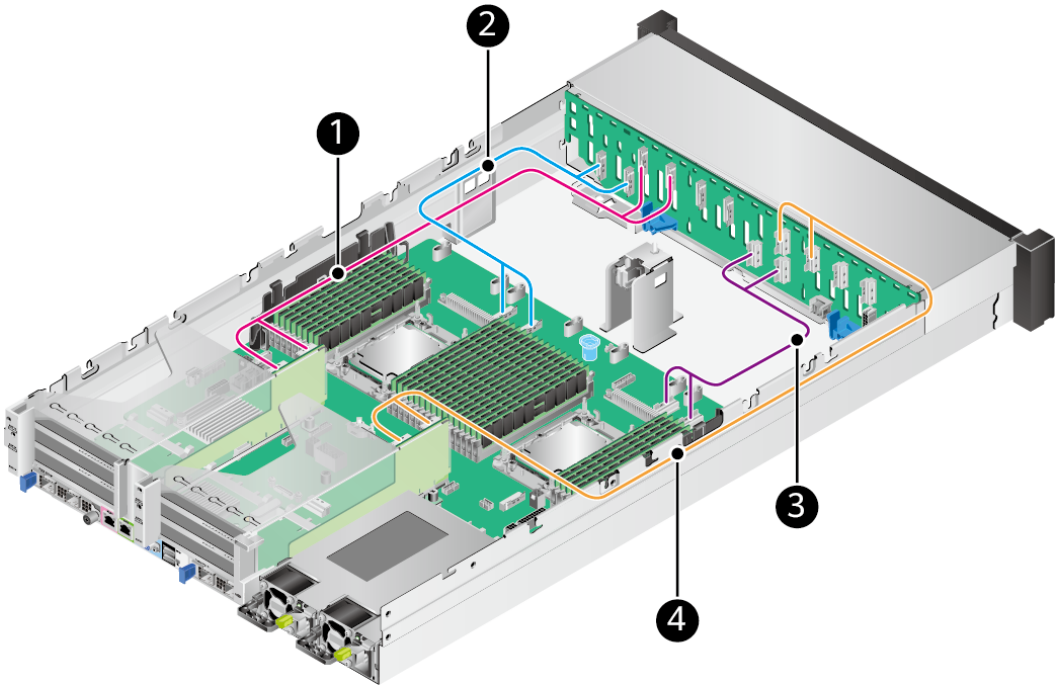

Table 6-393 Front-drive backplane LP Slimline high-speed cable

No.	P/N Code	Description
1	04052395	High-speed cable for connecting LP Slimline 1C (J1701) and LP Slimline 1D (J1801) of the front-drive backplane to LP Slimline C and LP Slimline D of the PCIe riser card on I/O module 1
2	04052316-001	High-speed cable for connecting LP Slimline 1 (J1101) and LP Slimline 2 (J1201) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J1101), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1201); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
3	04052316	High-speed cable for connecting LP Slimline 3 (J1301) and LP Slimline 4 (J1401) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316 cable corresponds to the front-drive backplane LP Slimline 3 (J1301), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1401); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12).
4	04052379	High-speed cable for connecting LP Slimline 2C (J2101) and LP Slimline 2D (J2201) of the front-drive backplane to LP Slimline C and LP Slimline D of the PCIe riser card on I/O module 2

6.4.9.3.6 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-415 I/O module 3 cabling

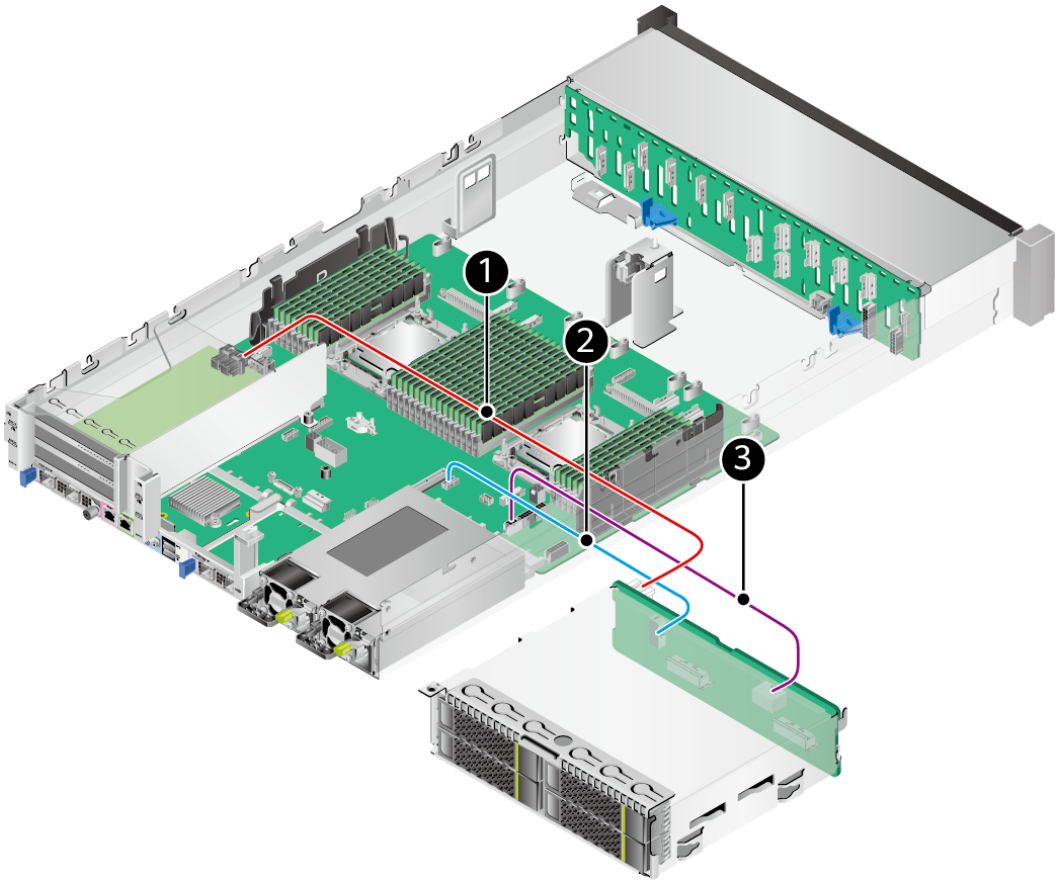

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Table 6-394 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04051059-002	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT B of the PCIe RAID controller card	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J801) may be C1, PORT B, 1, or CN1.

6.4.10 24 x 2.5" Drive Configuration

6.4.10.1 24 x 2.5" Drive NVMe Configuration 1

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6.4.10.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-416 Left and Right Mounting Ear Cabling

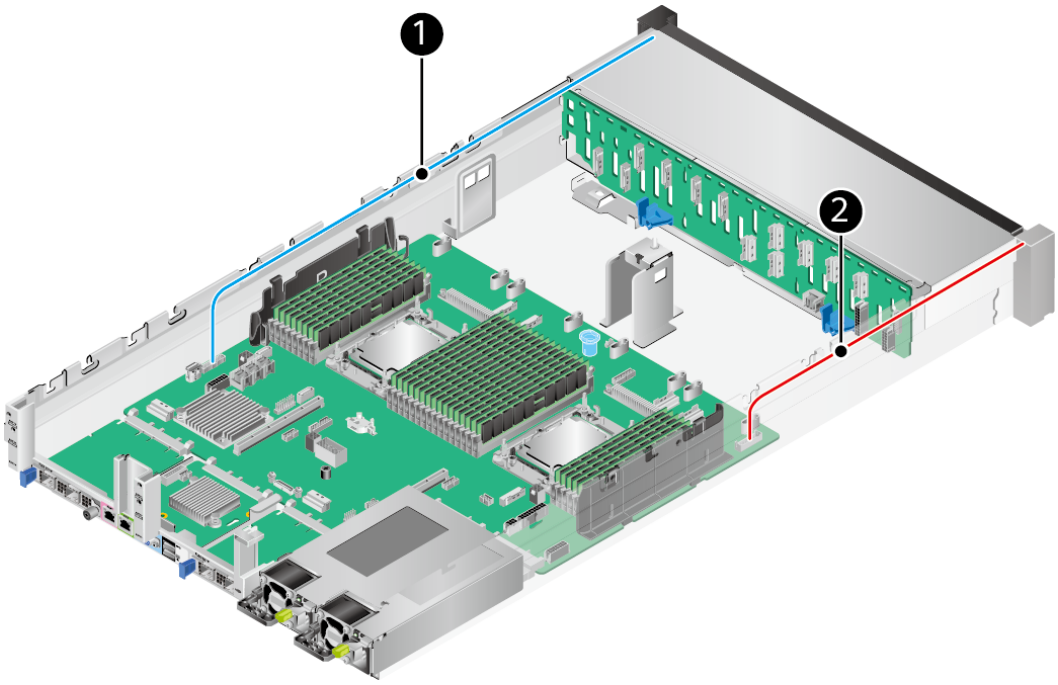

Table 6-395 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.10.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-417 Intrusion sensor cabling

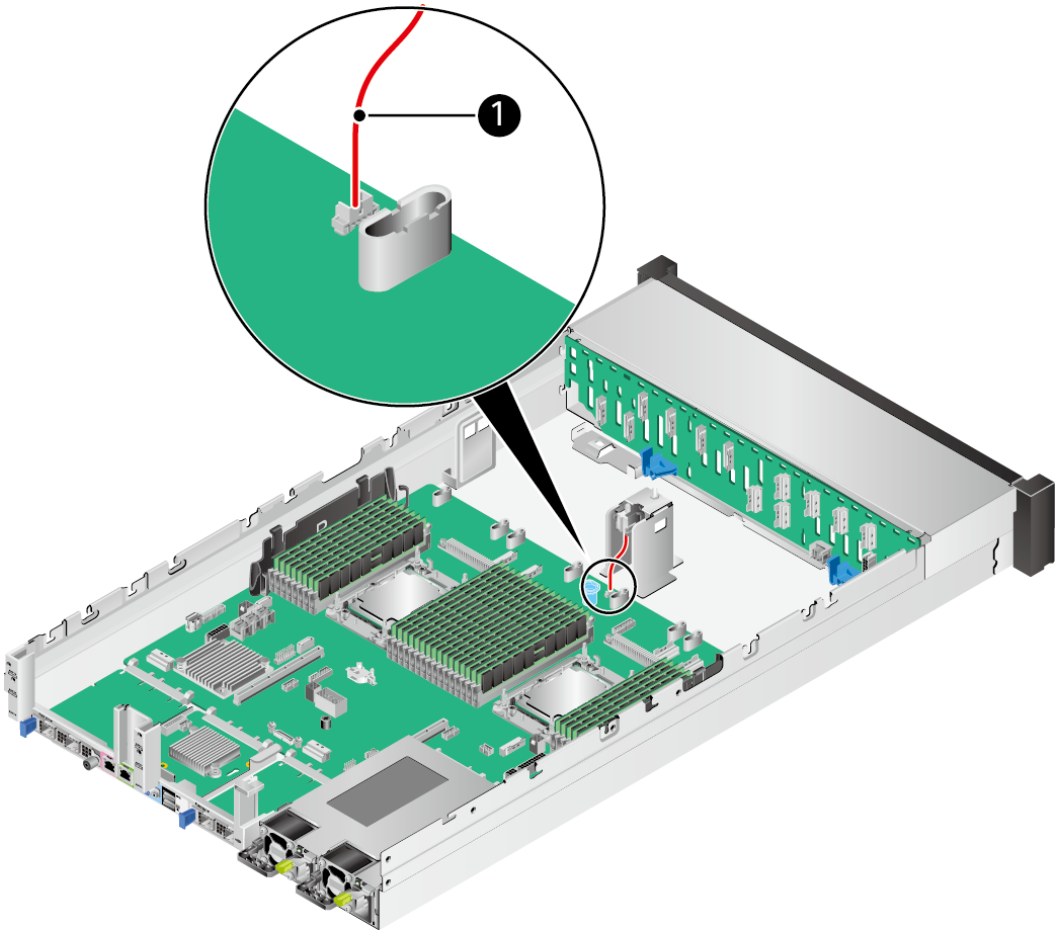

Table 6-396 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.10.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-418 Front-drive backplane power and low-speed signal cabling

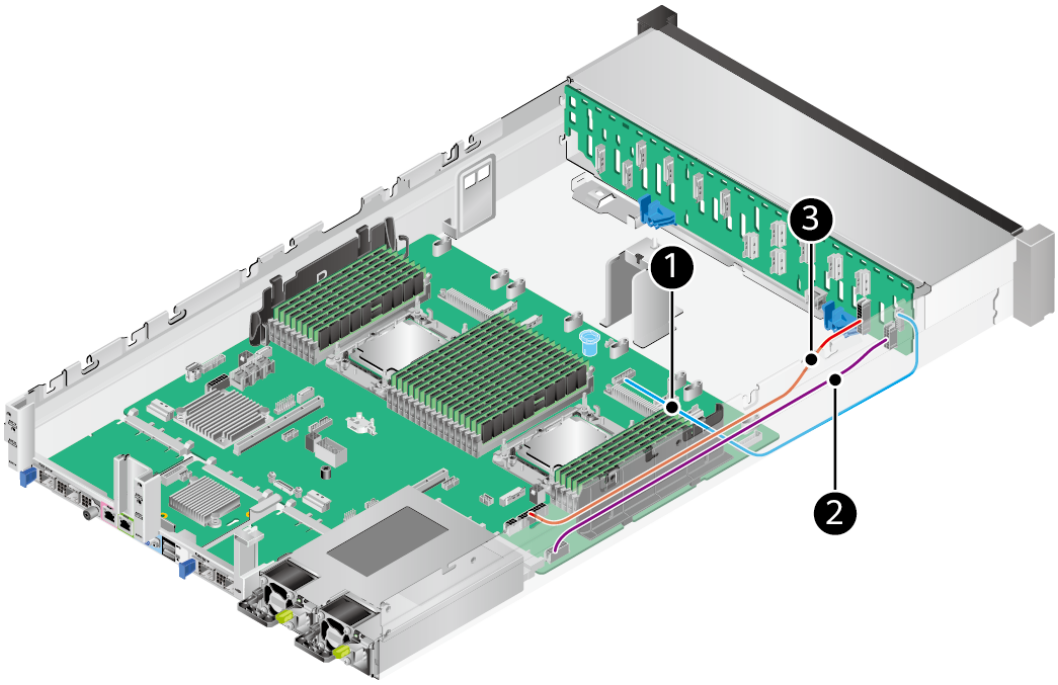

Table 6-397 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J7102) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J30) to the mainboard (J26)
3	04152142-011	Power cable for connecting the front-drive backplane (J7303) to the mainboard (J88)

6.4.10.1.4 Front-Drive Backplane SAS Cable (PCH Pass-through)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-419 Front-drive backplane SAS high-speed cabling

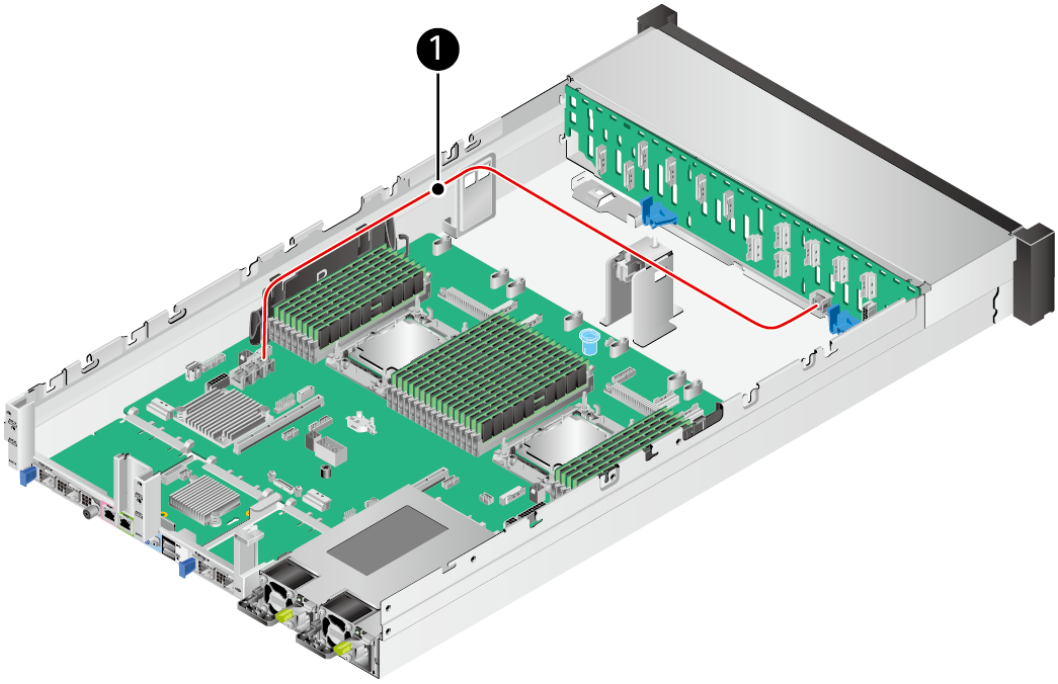

Table 6-398 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J1001) to the mainboard (J6)

6.4.10.1.5 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-420 Front-drive backplane LP Slimline high-speed cable

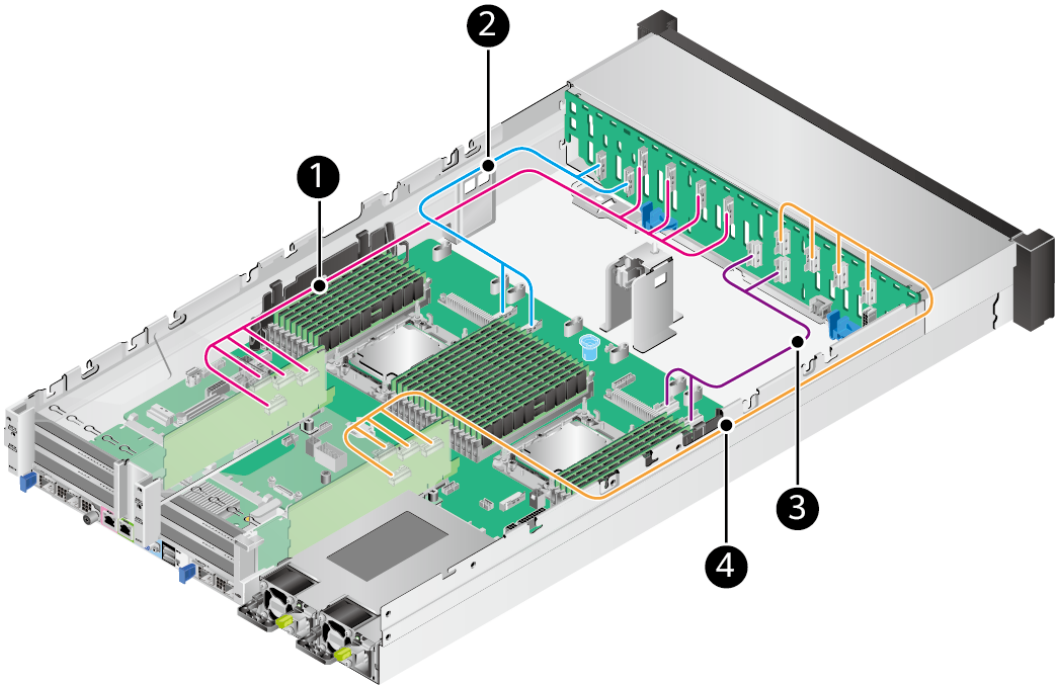

Table 6-399 Front-drive backplane LP Slimline high-speed cable

No.	P/N Code	Description
1	04052315	High-speed cables for connecting LP Slimline 1A (J1601), LP Slimline 1B (J1501), LP Slimline 1C (J1701), and LP Slimline 1D (J1801) of the front-drive backplane to LP Slimline A, LP Slimline B, LP Slimline C, and LP Slimline D of the PCIe riser card on I/O module 1
2	04052316-001	High-speed cable for connecting LP Slimline 1 (J1101) and LP Slimline 2 (J1201) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J1101), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1201); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
3	04052316	High-speed cable for connecting LP Slimline 3 (J1301) and LP Slimline 4 (J1401) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316 cable corresponds to the front-drive backplane LP Slimline 3 (J1301), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1401); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12).
4	04052314	High-speed cables for connecting LP Slimline 2A (J1901), LP Slimline 2B (J2001), LP Slimline 2C (J2101), and LP Slimline 2D (J2201) of the front-drive backplane to LP Slimline A, LP Slimline B, LP Slimline C, and LP Slimline D of the PCIe riser card on I/O module 2

6.4.10.2 24 x 2.5" Drive NVMe Configuration 2

6.4.10.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-421 Left and Right Mounting Ear Cabling

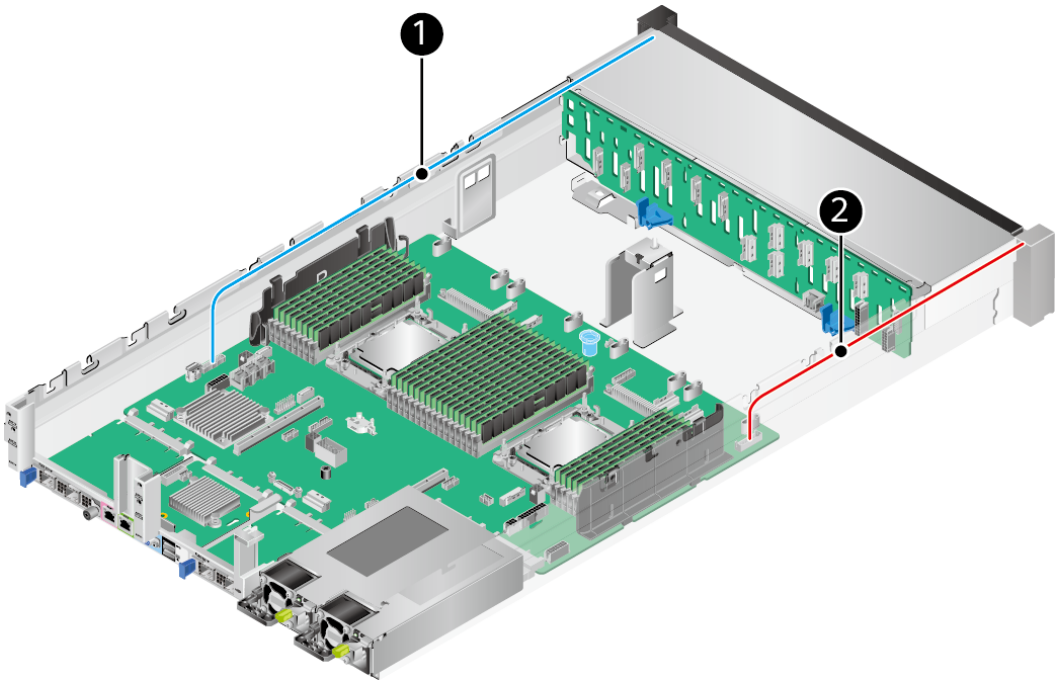

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Table 6-400 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.4.10.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-422 Intrusion sensor cabling

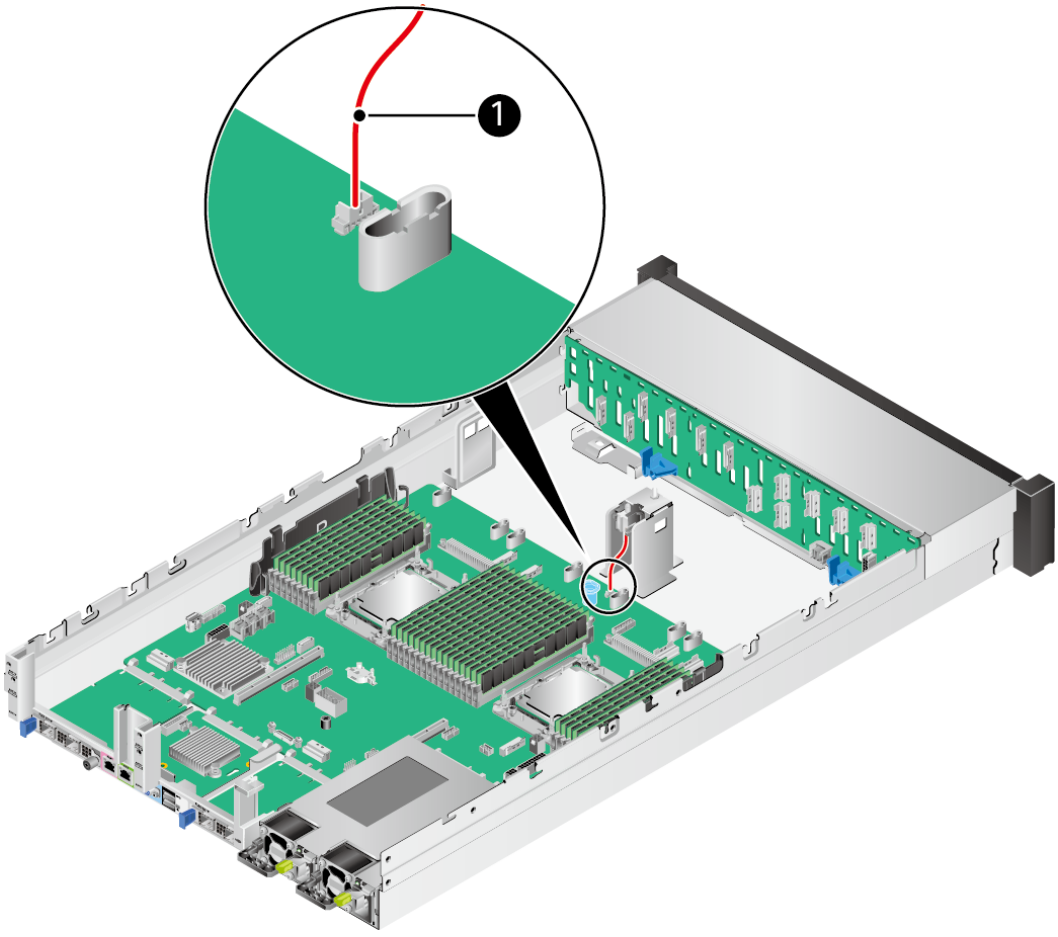

Table 6-401 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.10.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-423 Front-drive backplane power and low-speed signal cabling

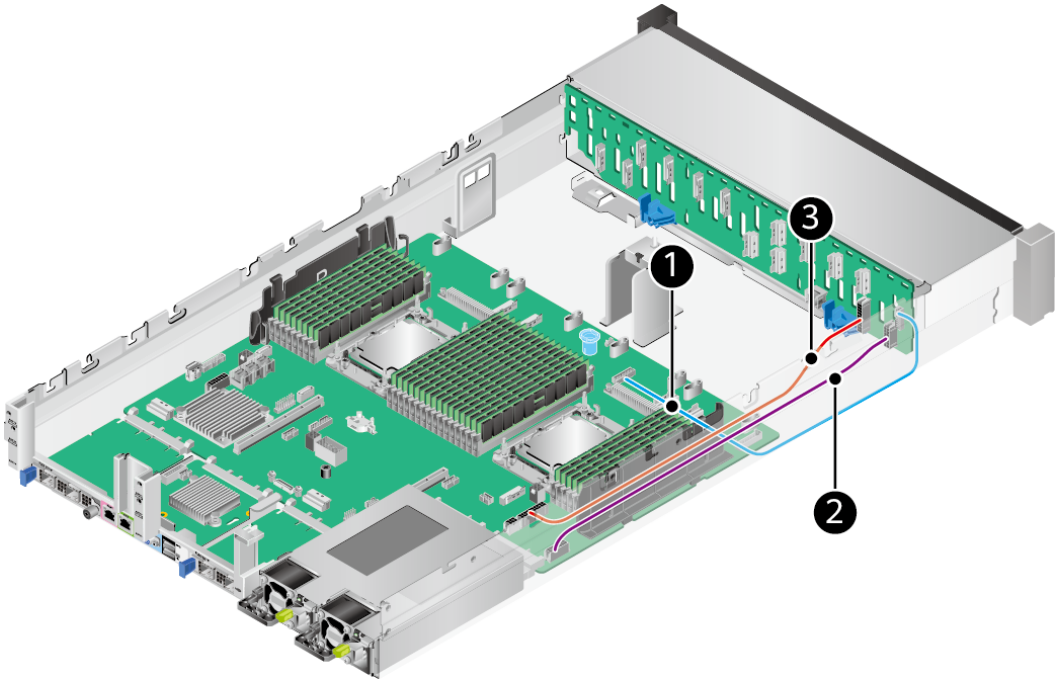

Table 6-402 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J7102) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J30) to the mainboard (J26)
3	04152142-011	Power cable for connecting the front-drive backplane (J7303) to the mainboard (J88)

6.4.10.2.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-424 Front-drive backplane SAS high-speed cabling

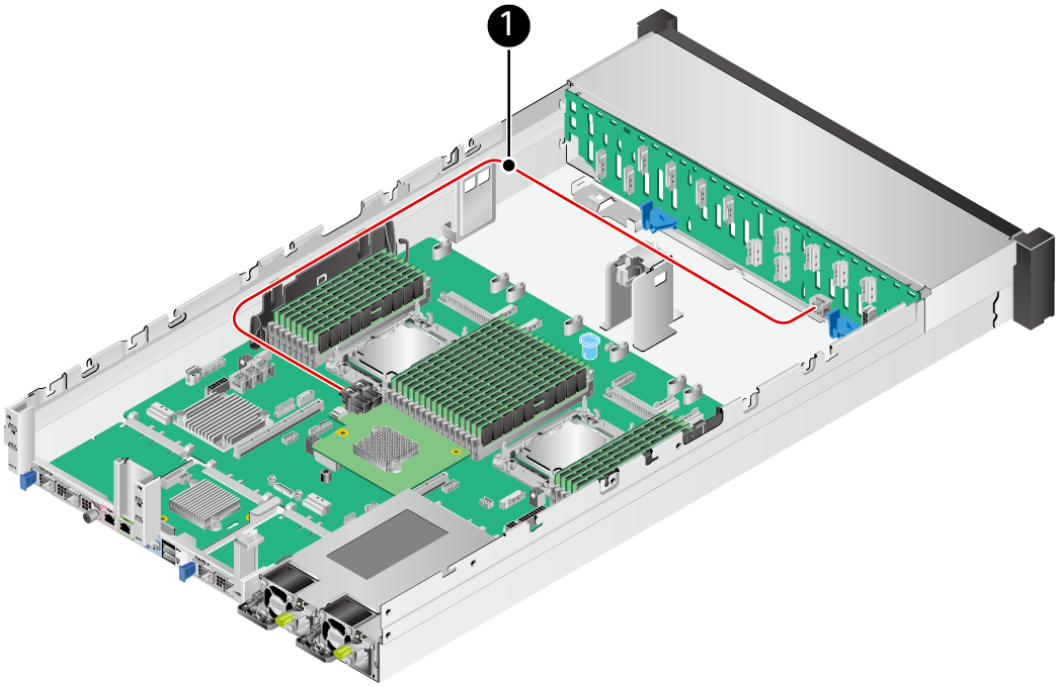

Table 6-403 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051021	SAS high-speed cable for connecting the front-drive backplane (PORTA/J1001) to PORT A of the screw-in RAID controller card

6.4.10.2.5 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

Connect SAS high-speed cables to the front-drive backplane before connecting LP slimline high-speed cables to the front-drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-425 Front-drive backplane LP Slimline high-speed cable

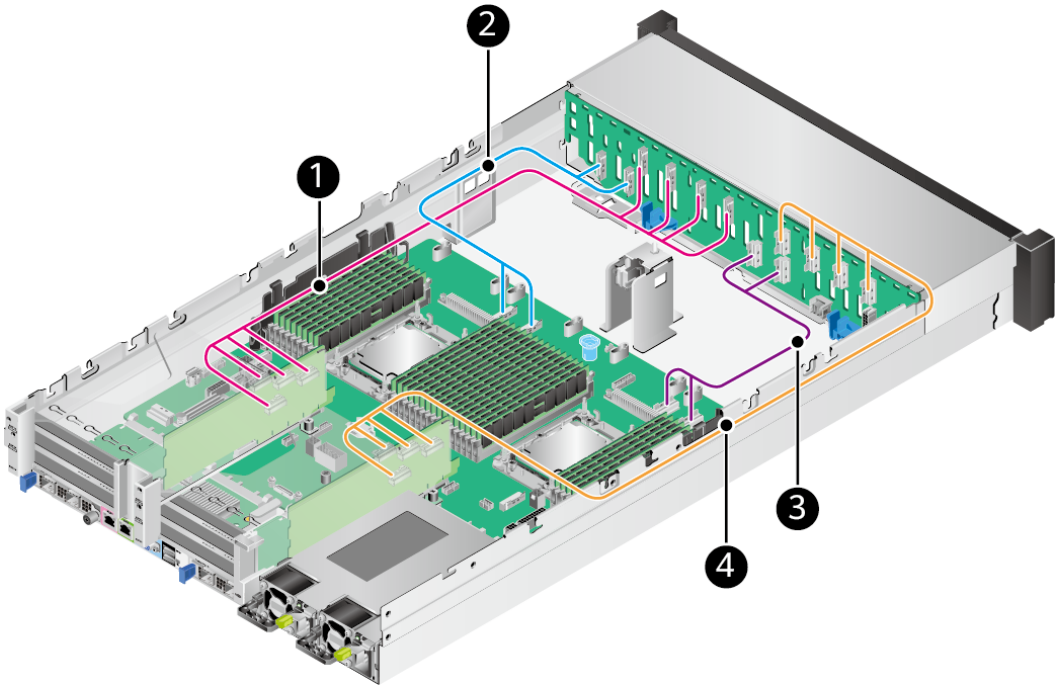

Table 6-404 Front-drive backplane LP Slimline high-speed cable

No.	P/N Code	Description
1	04052315	High-speed cables for connecting LP Slimline 1A (J1601), LP Slimline 1B (J1501), LP Slimline 1C (J1701), and LP Slimline 1D (J1801) of the front-drive backplane to LP Slimline A, LP Slimline B, LP Slimline C, and LP Slimline D of the PCIe riser card on I/O module 1
2	04052316-001	High-speed cable for connecting LP Slimline 1 (J1101) and LP Slimline 2 (J1201) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The Slim_1 (B P) connector on the 04052316-001 cable corresponds to the front-drive backplane LP Slimline 1 (J1101), the Slim_2 (B P) connector corresponds to the front-drive backplane LP Slimline 2 (J1201); the Slim_1 (M B) connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 (M B) connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
3	04052316	High-speed cable for connecting LP Slimline 3 (J1301) and LP Slimline 4 (J1401) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 (B P) connector on the 04052316 cable corresponds to the front-drive backplane LP Slimline 3 (J1301), the Slim_4 (B P) connector corresponds to the front-drive backplane LP Slimline 4 (J1401); the Slim_3 (M B) connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 (M B) connector corresponds to the mainboard LP Slimline 4 (J12).
4	04052314	High-speed cables for connecting LP Slimline 2A (J1901), LP Slimline 2B (J2001), LP Slimline 2C (J2101), and LP Slimline 2D (J2201) of the front-drive backplane to LP Slimline A, LP Slimline B, LP Slimline C, and LP Slimline D of the PCIe riser card on I/O module 2

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6.4.10.2.6 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-426 I/O module 3 cabling

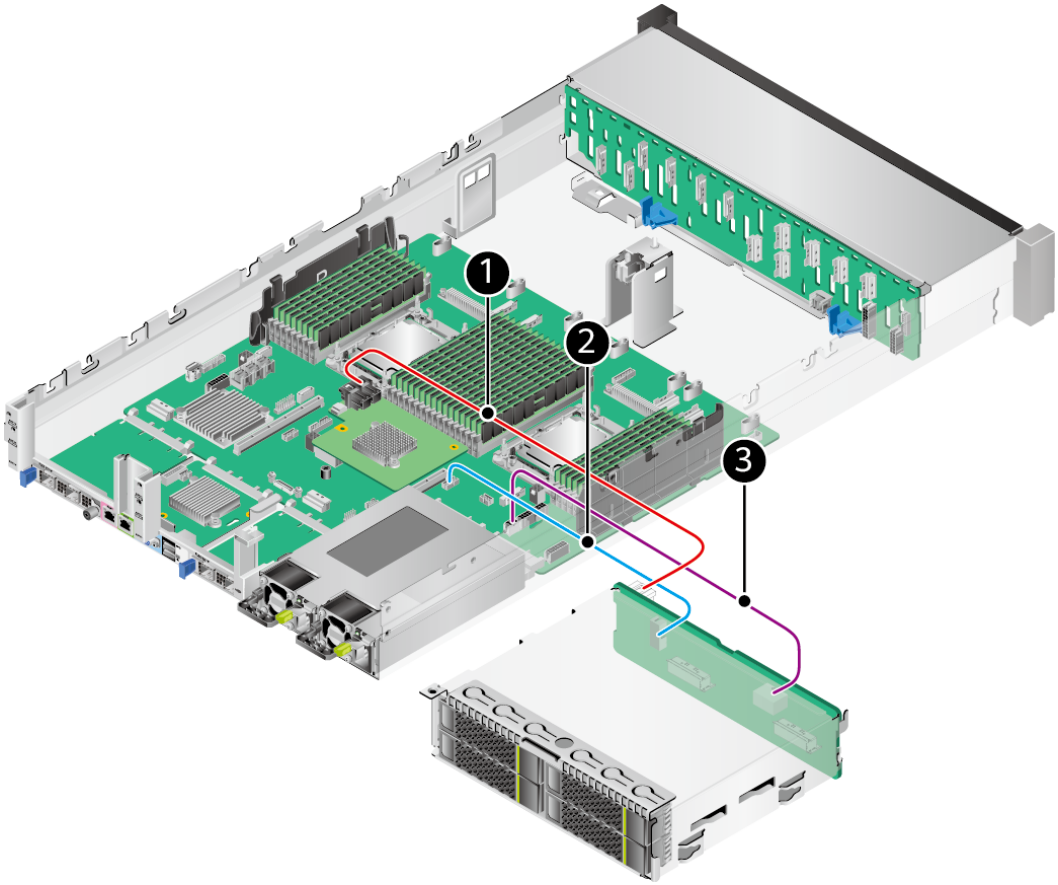

Table 6-405 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT B of screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

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6.4.10.3 24 x 2.5" Drive NVMe Configuration 3

6.4.10.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-427 Left and right mounting ear cabling

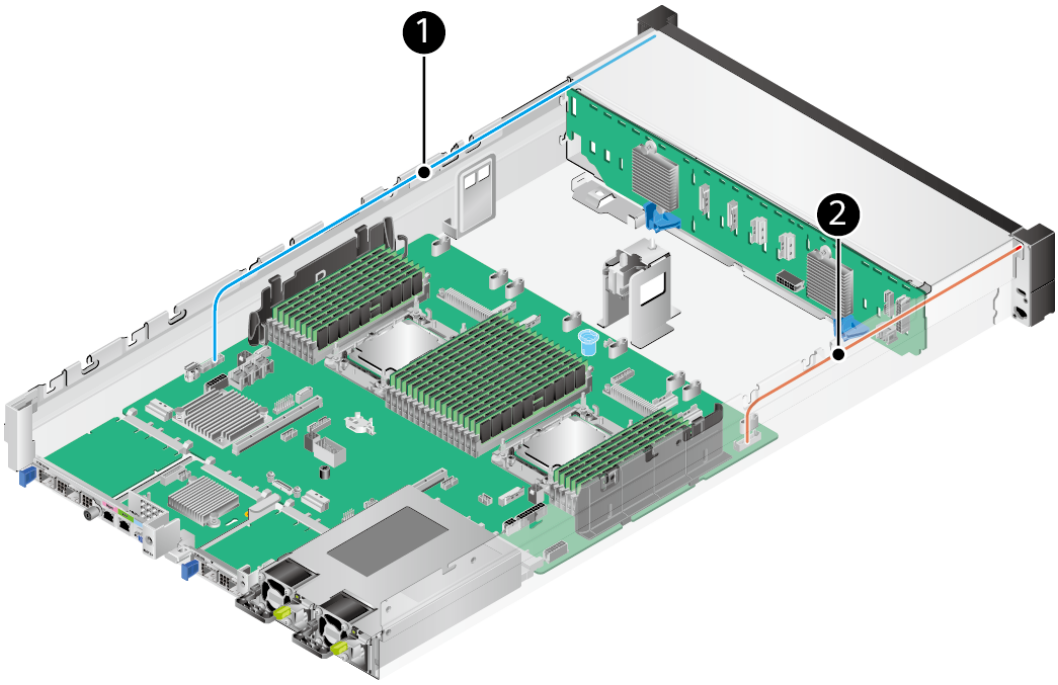

Table 6-406 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.10.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-428 Intrusion sensor cabling

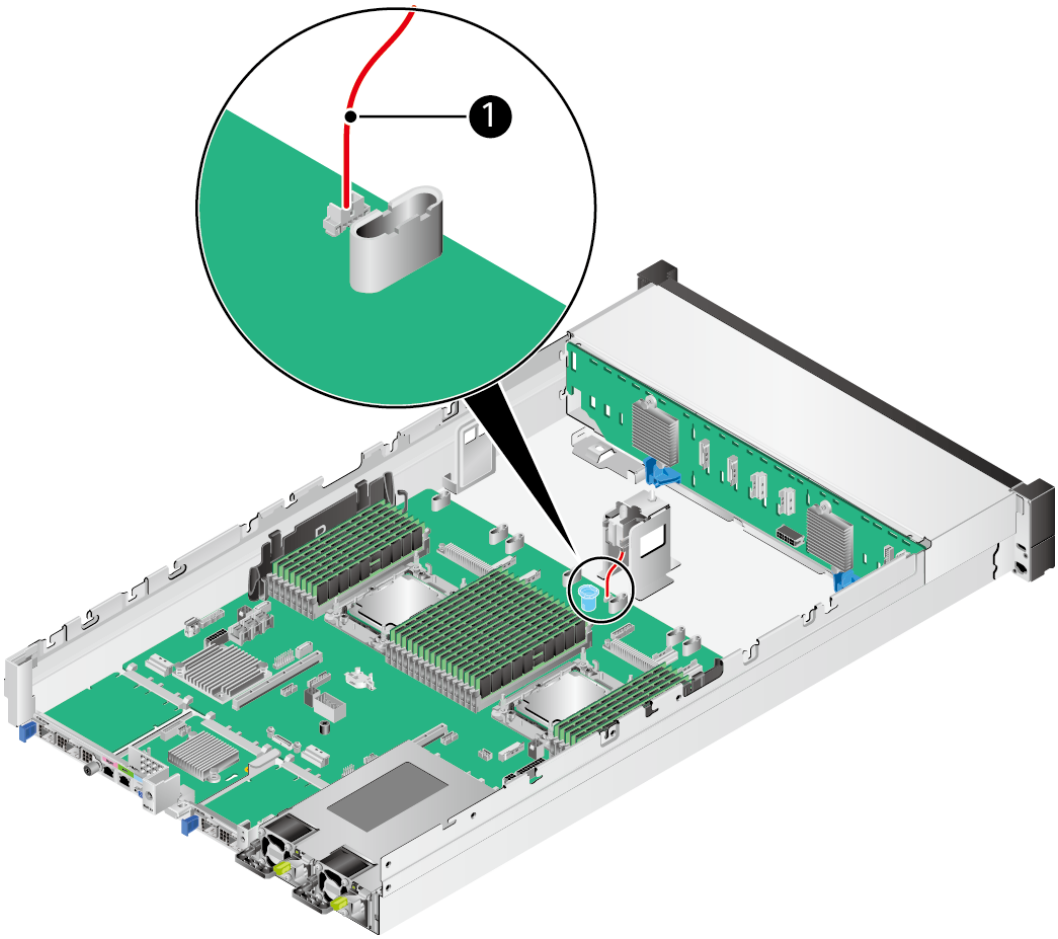

Table 6-407 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.10.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-drive backplane power and Low-speed Signal Cables

Figure 6-429 Front-drive backplane power and low-speed signal cables

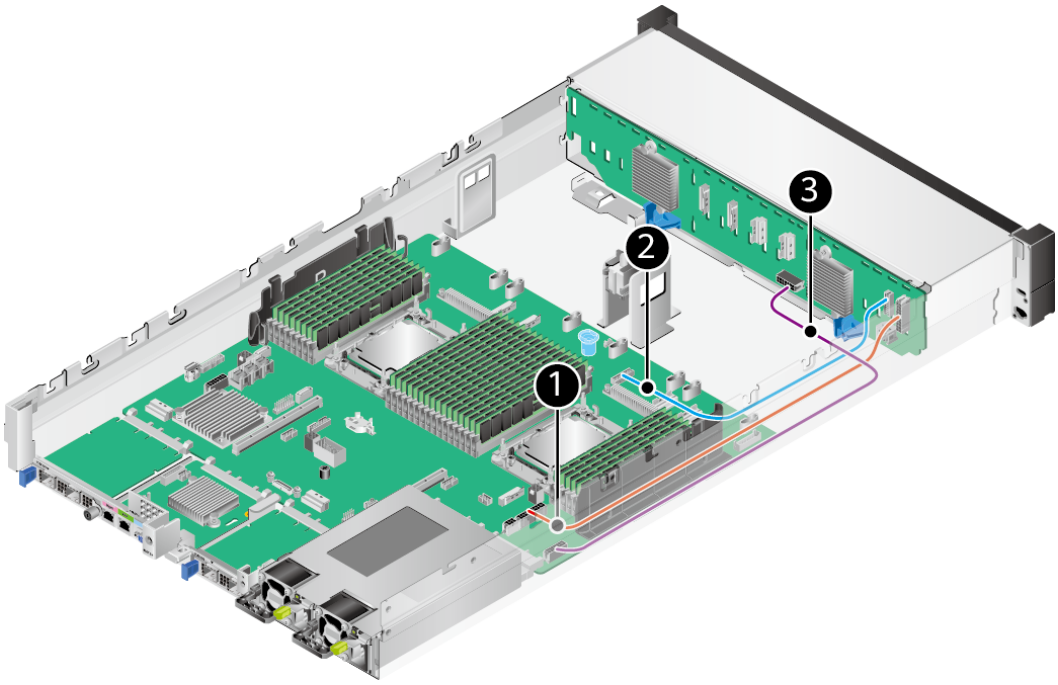

Table 6-408 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3) to the mainboard (J75)
3	04152145	Power cable for connecting the front-drive backplane (J34) to the mainboard (J26)

6.4.10.3.4 Front-Drive Backplane Slimline high-speed cable (PCH Pass-through)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-430 Front-drive backplane SAS high-speed cabling

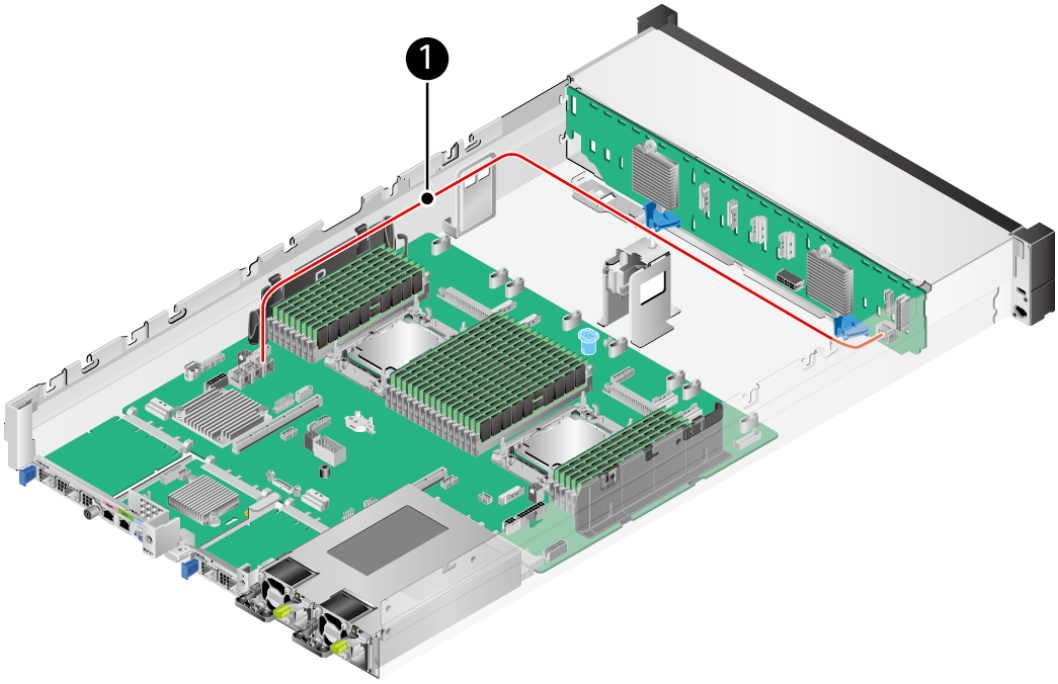

Table 6-409 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J52) to the mainboard (J6)

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6.4.10.3.5 Front-Drive Backplane LP Slimline High-speed Cable

Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-431 Front-drive backplane LP slimline high-speed cable

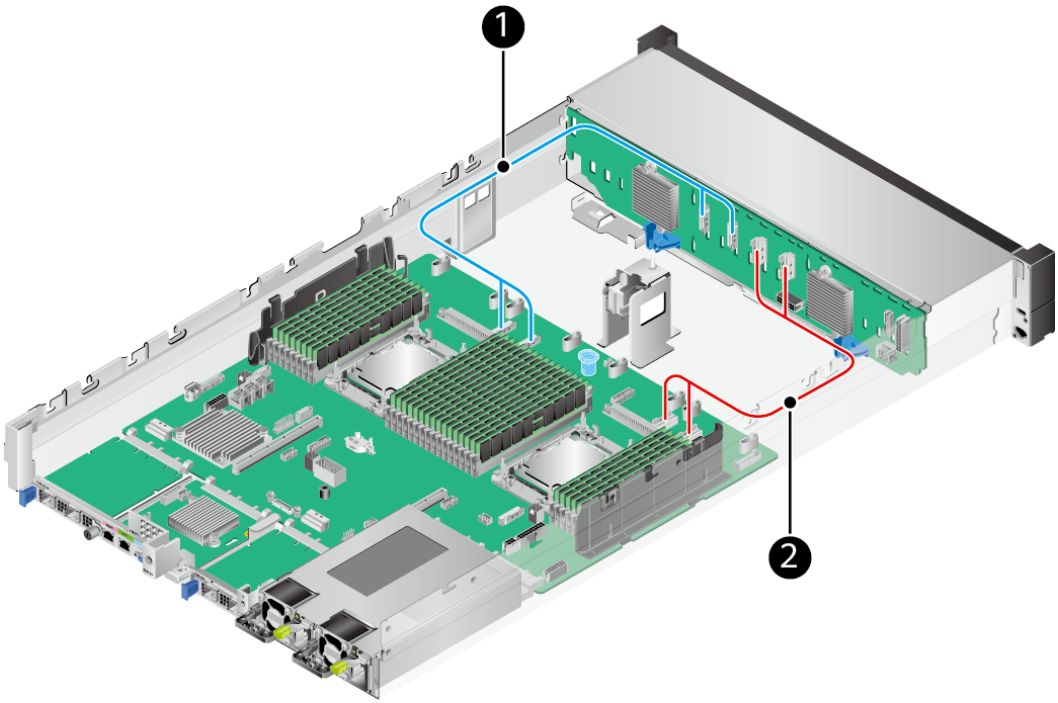

Table 6-410 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	0405Y054	High-speed cable for connecting LP Slimline 1 (J6) and LP Slimline 2 (J5) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The S_1B P connector on the 0405Y054 cable corresponds to the front-drive backplane LP Slimline 1 (J6), the S_2B P connector corresponds to the front-drive backplane LP Slimline 2 (J5); the Slim_1MB connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 MB connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
2	0405Y053	High-speed cable for connecting LP Slimline 3 (J7) and LP Slimline 4 (J8) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The S_3B P connector on the 0405Y053 cable corresponds to the front-drive backplane LP Slimline 3 (J7), the S_4B P connector corresponds to the front-drive backplane LP Slimline 4 (J8); the Slim_3M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).

6.4.10.4 24 x 2.5" Drive NVMe Configuration 4

6.4.10.4.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-432 Left and right mounting ear cabling

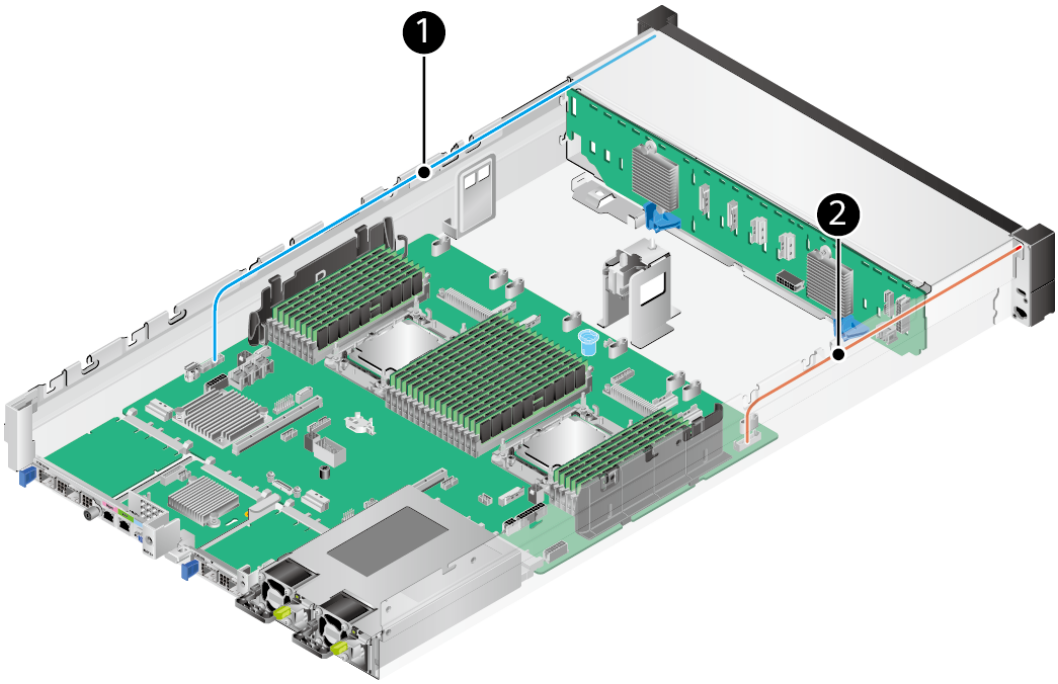

Table 6-411 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)

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No.	P/N Code	Description
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.4.10.4.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-433 Intrusion sensor cabling

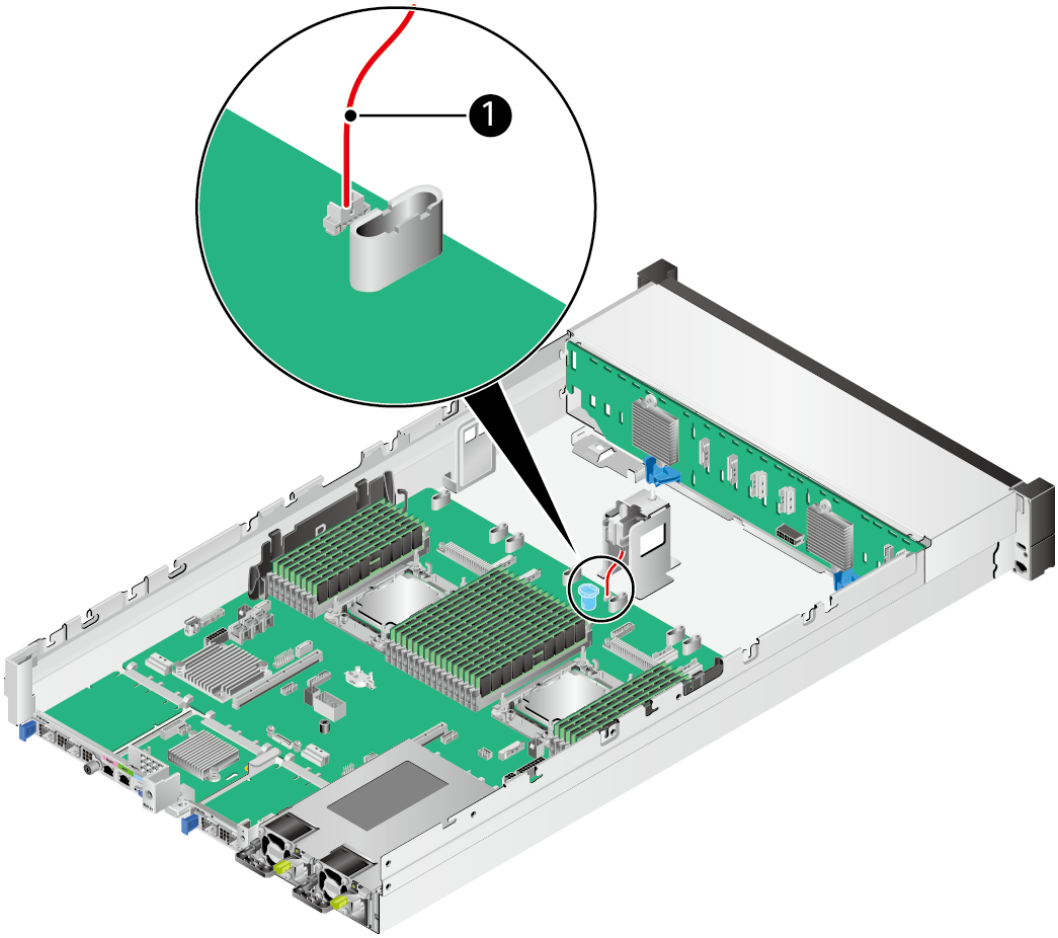

Table 6-412 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.10.4.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-drive backplane power and Low-speed Signal Cables

Figure 6-434 Front-drive backplane power and low-speed signal cables

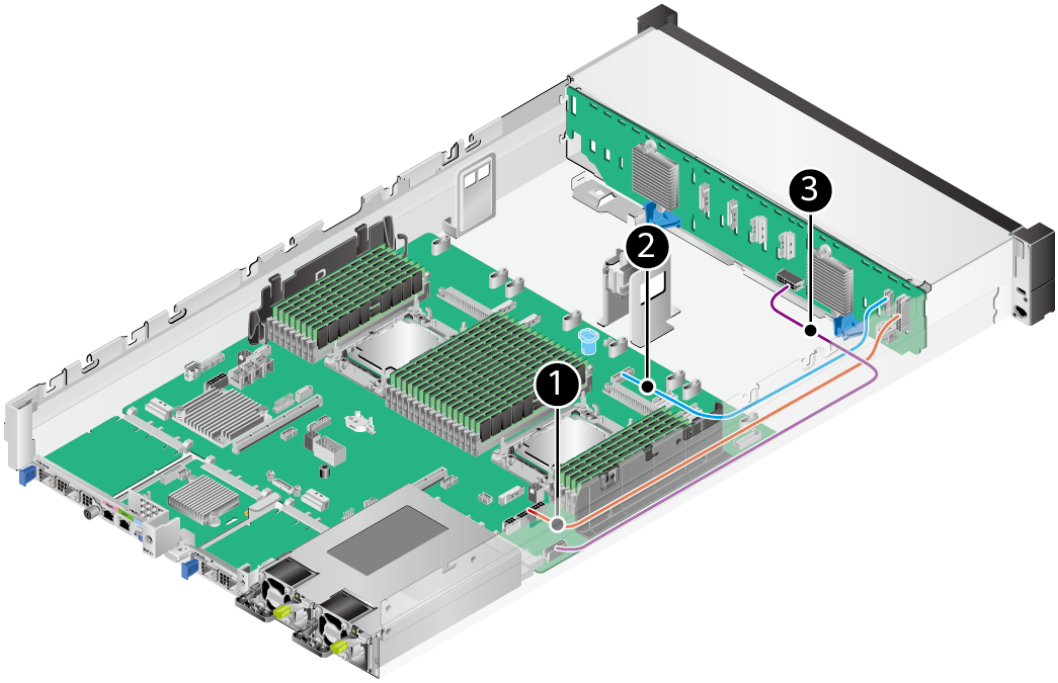

Table 6-413 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3) to the mainboard (J75)
3	04152145	Power cable for connecting the front-drive backplane (J34) to the mainboard (J26)

6.4.10.4.4 Front-Drive Backplane SAS High-speed Cabling (Server with a Screw-in RAID Controller Card)

NOTICE

Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-435 Front-drive backplane SAS high-speed cabling (Configuring a screw-in RAID controller card with two Mini SAS ports)

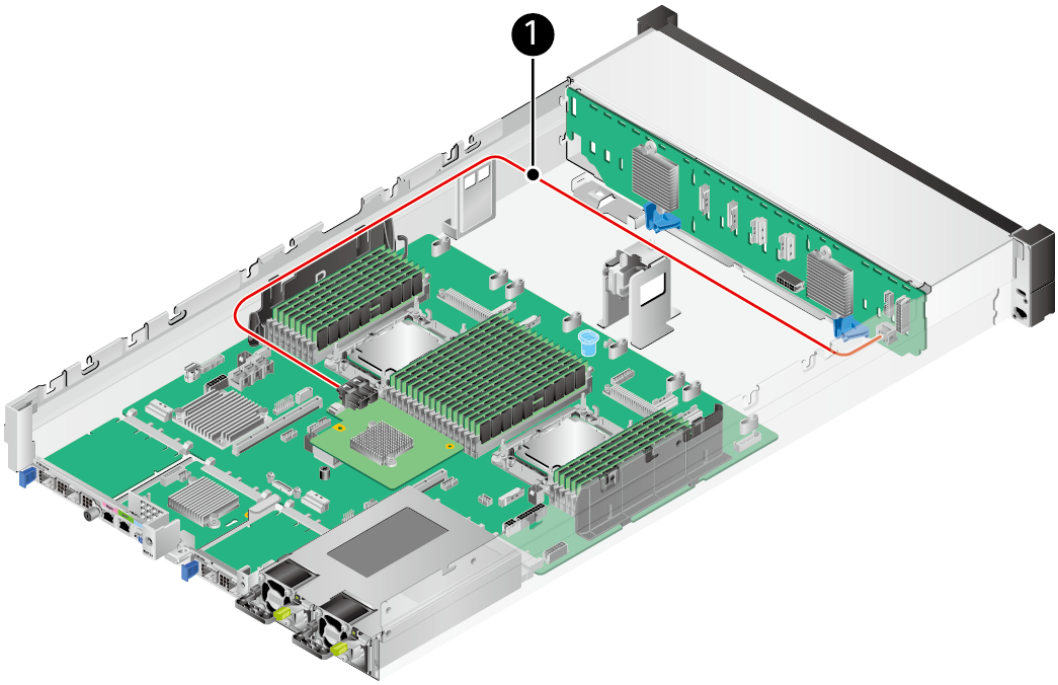

Table 6-414 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J52) to PORT A of the screw-in RAID controller card

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Figure 6-436 Front-drive backplane SAS high-speed cabling (Configuring a screw-in RAID controller card with one SlimSAS port)

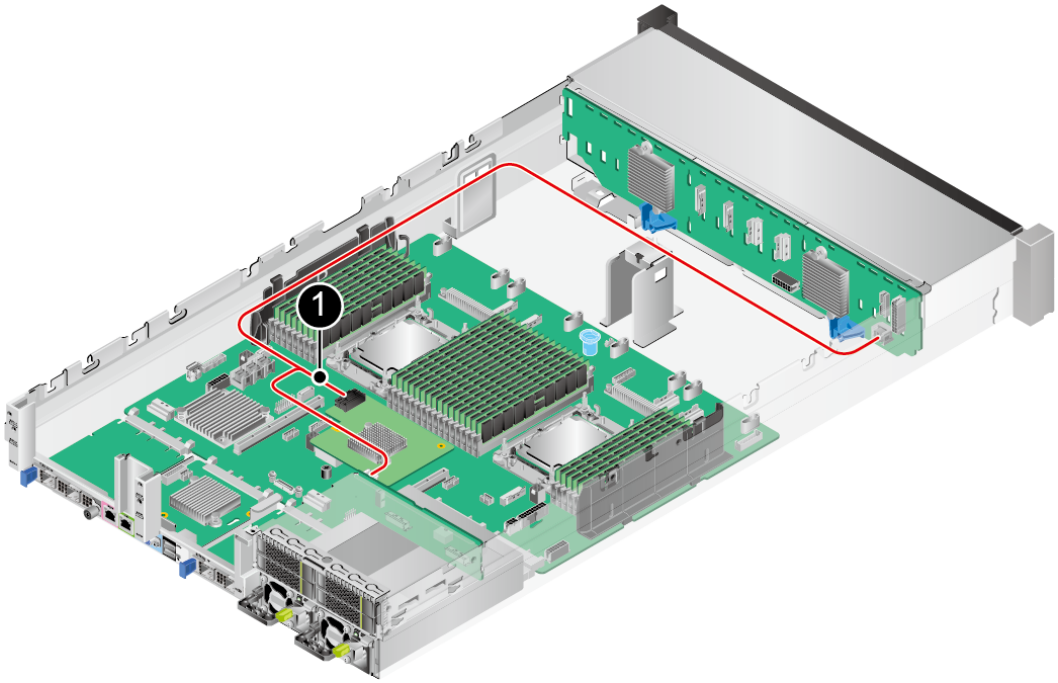

Table 6-415 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y025-002	SAS high-speed cable for connecting the front-drive backplane (J52) to PORT A of the screw-in RAID controller card **NOTE** 0405Y025-002 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J52), connector PORT B corresponds to the rear-drive backplane (J801) of I/O module3, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.10.4.5 Front-Drive Backplane LP Slimline High-speed Cable

Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-437 Front-drive backplane LP slimline high-speed cable

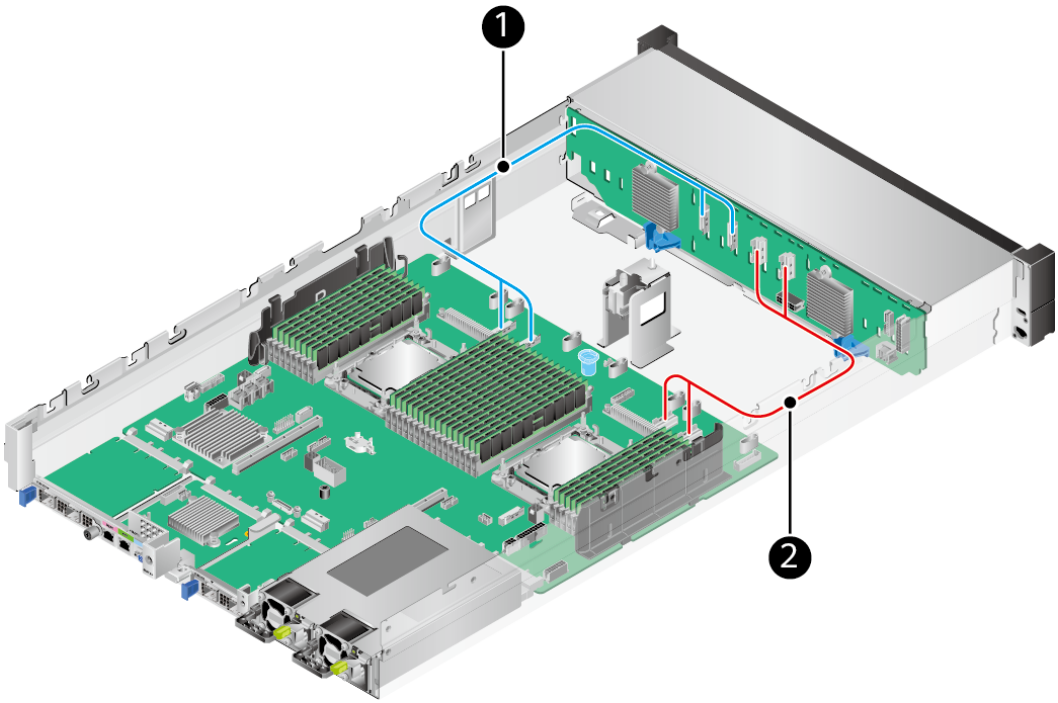

Table 6-416 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	0405Y054	High-speed cable for connecting LP Slimline 1 (J6) and LP Slimline 2 (J5) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The S_1B P connector on the 0405Y054 cable corresponds to the front-drive backplane LP Slimline 1 (J6), the S_2B P connector corresponds to the front-drive backplane LP Slimline 2 (J5); the Slim_1MB connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 MB connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
2	0405Y053	High-speed cable for connecting LP Slimline 3 (J7) and LP Slimline 4 (J8) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The S_3B P connector on the 0405Y053 cable corresponds to the front-drive backplane LP Slimline 3 (J7), the S_4B P connector corresponds to the front-drive backplane LP Slimline 4 (J8); the Slim_3M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).

6.4.10.4.6 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-438 I/O module 3 cabling (Configuring a screw-in RAID controller card with two Mini SAS ports)

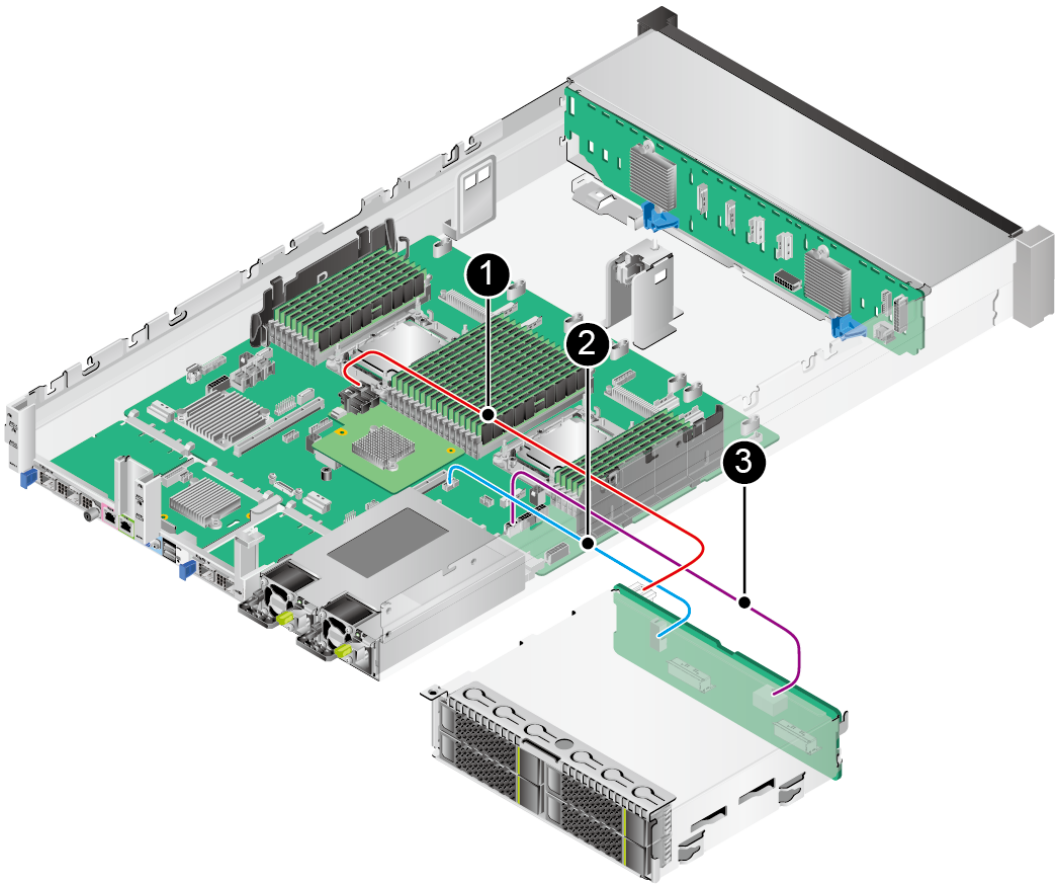

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Table 6-417 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT B of screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

Figure 6-439 I/O module 3 cabling (Configuring a screw-in RAID controller card with one SlimSAS port)

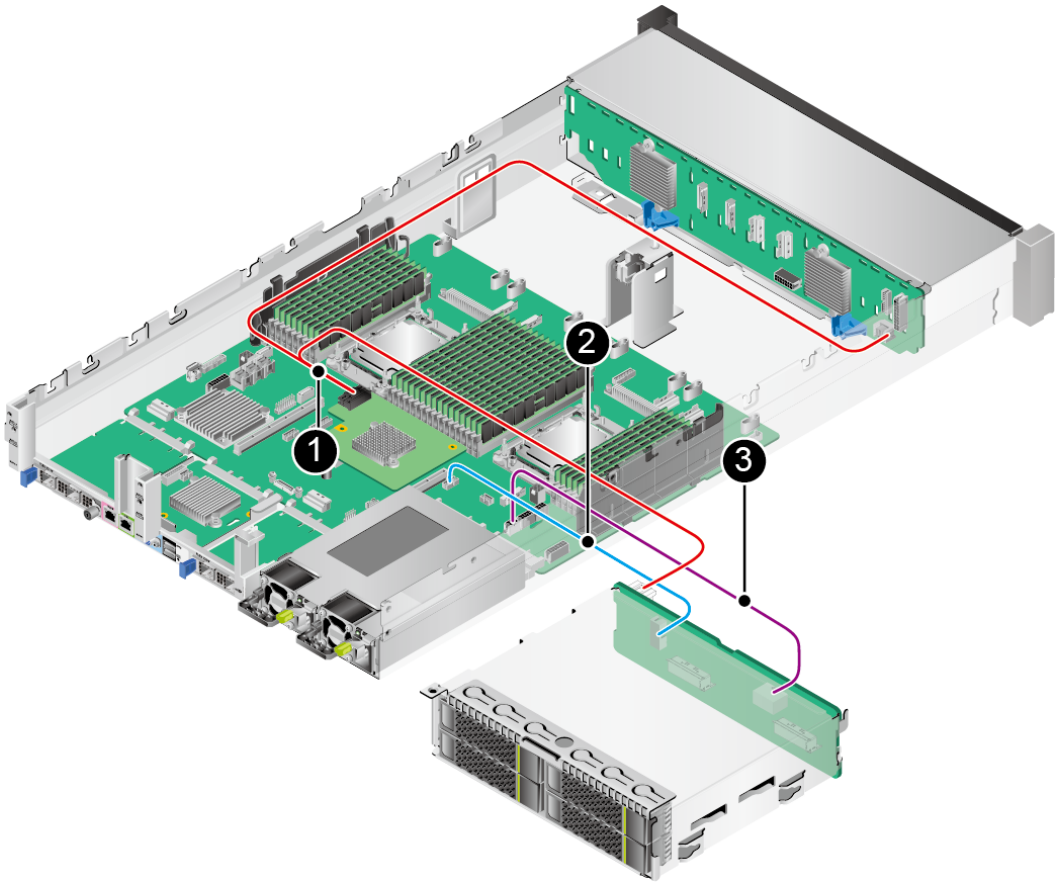

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Table 6-418 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	0405Y025-002	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT A of screw-in RAID controller card **NOTE** 0405Y025-002 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J52),connector PORT B corresponds to the rear-drive backplane (J801) of I/O module3, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.	-
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.4.10.5 24 x 2.5" Drive NVMe Configuration 5

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6.4.10.5.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-440 Left and right mounting ear cabling

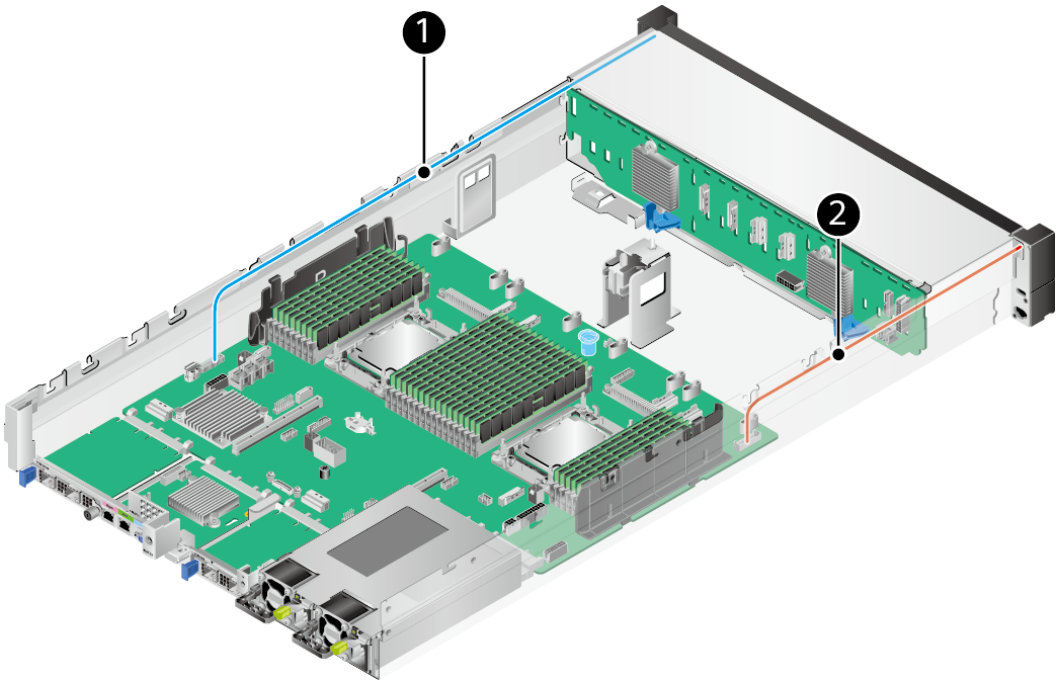

Table 6-419 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.10.5.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-441 Intrusion sensor cabling

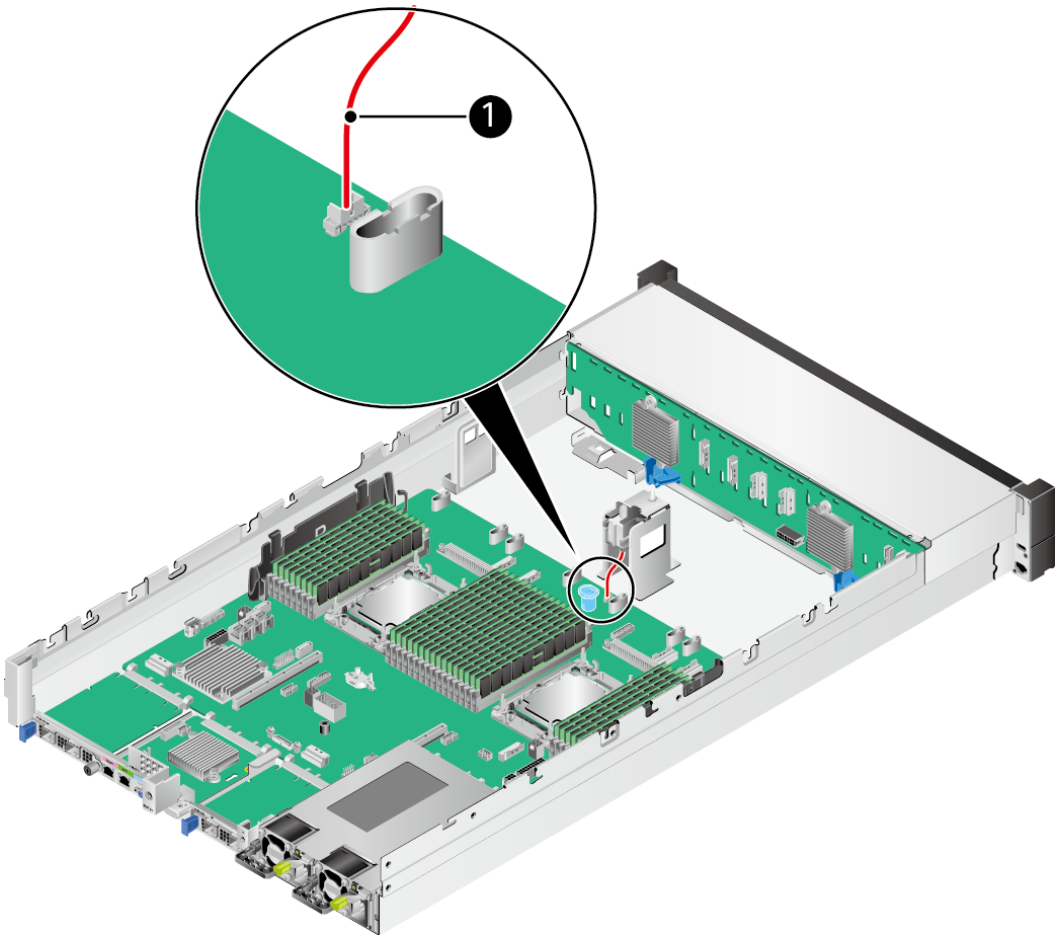

Table 6-420 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.10.5.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-drive backplane power and Low-speed Signal Cables

Figure 6-442 Front-drive backplane power and low-speed signal cables

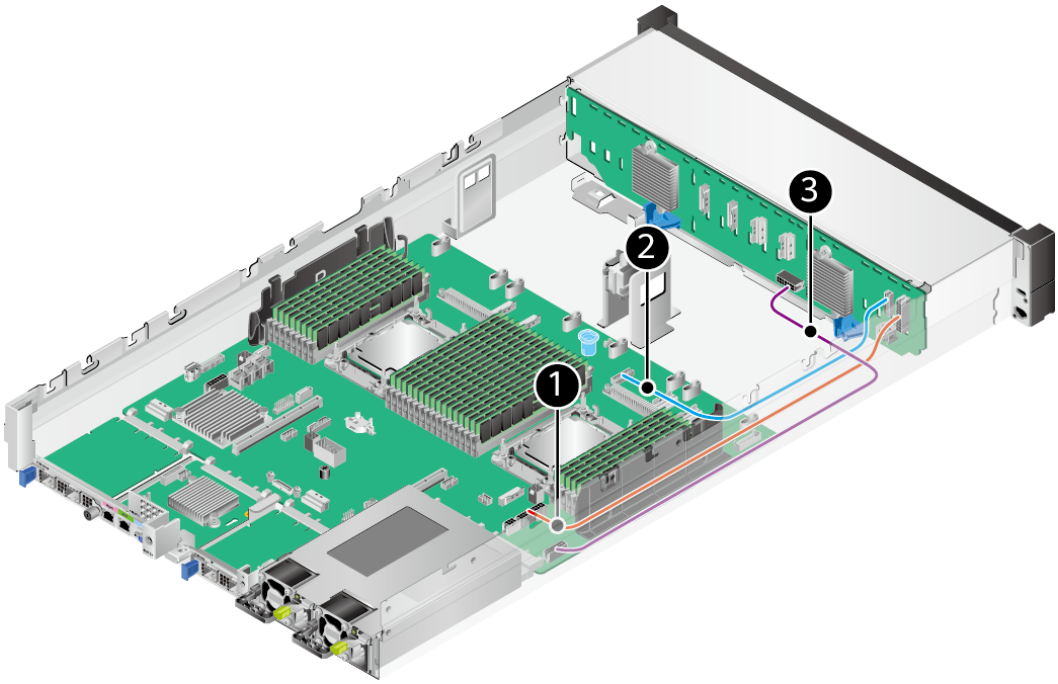

Table 6-421 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J3) to the mainboard (J75)
3	04152145	Power cable for connecting the front-drive backplane (J34) to the mainboard (J26)

6.4.10.5.4 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

- Remove the LP slimline high-speed cables from the front-drive backplane before removing the SAS high-speed cables from the front-drive backplane.
- PCIe RAID controller card: must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-443 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

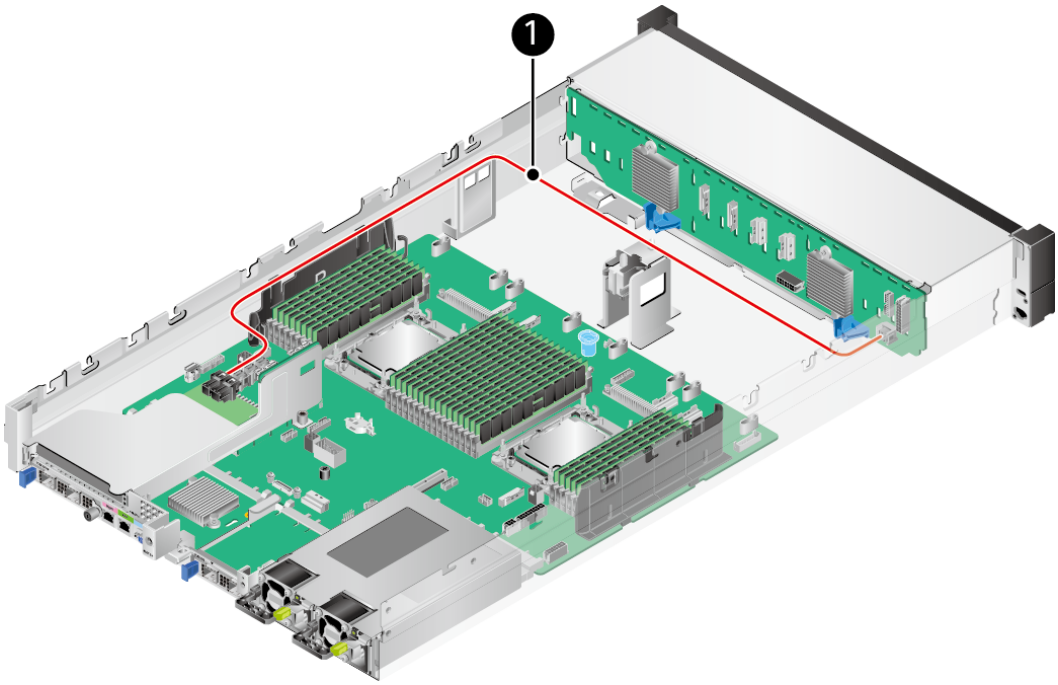

Table 6-422 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J52) to PORT A of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J52) may be C0, PORT A, 0, or CN0.

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Figure 6-444 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one SlimSAS port)

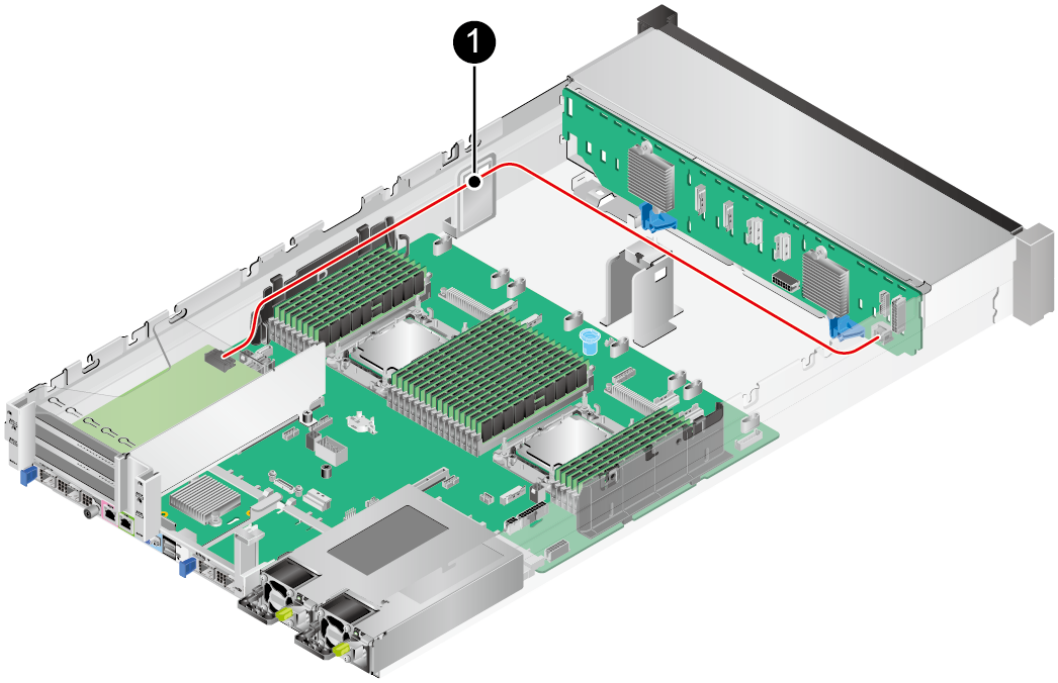

Table 6-423 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y025-002	SAS high-speed cable for connecting the front-drive backplane (J52) to C0 of the PCIe RAID controller card **NOTE** 0405Y025-002is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J52), connector PORT B corresponds to the rear-drive backplane (J801) of I/O module3, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.10.5.5 Front-Drive Backplane LP Slimline High-speed Cable

Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-445 Front-drive backplane LP slimline high-speed cable

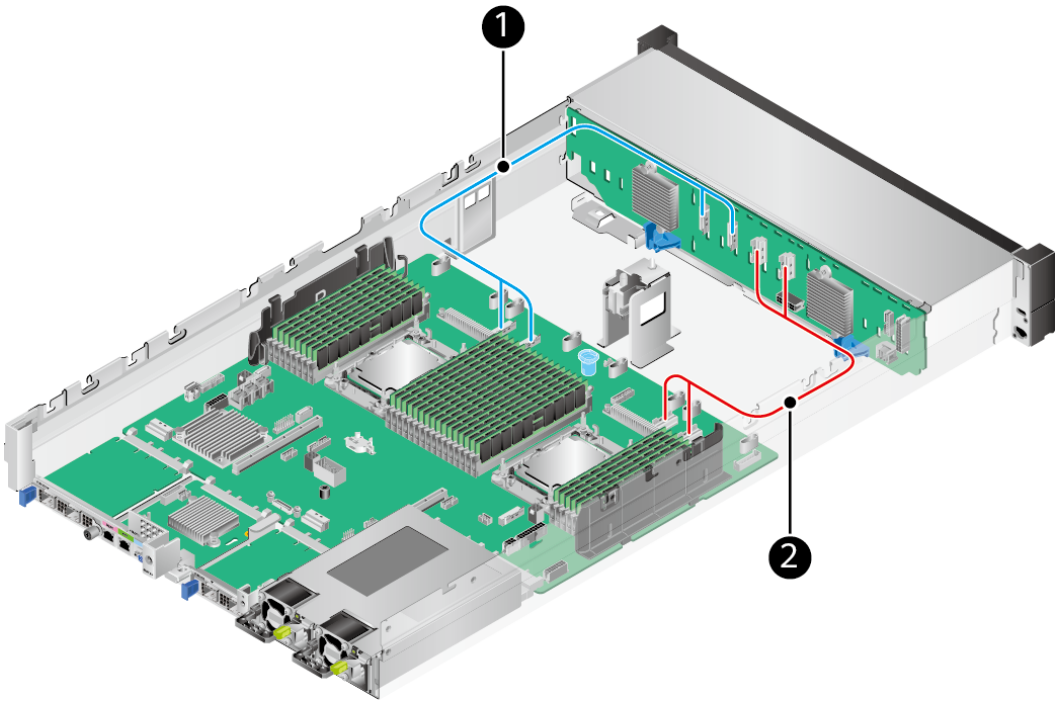

Table 6-424 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	0405Y054	High-speed cable for connecting LP Slimline 1 (J6) and LP Slimline 2 (J5) on the front-drive backplane to LP Slimline 1 (J11) and LP Slimline 2 (J84) on the mainboard **NOTE** The S_1B P connector on the 0405Y054 cable corresponds to the front-drive backplane LP Slimline 1 (J6), the S_2B P connector corresponds to the front-drive backplane LP Slimline 2 (J5); the Slim_1MB connector corresponds to the mainboard LP Slimline 1 (J11), the Slim_2 MB connector corresponds to the mainboard LP Slimline 2 (J84).

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No.	P/N Code	Description
2	0405Y053	High-speed cable for connecting LP Slimline 3 (J7) and LP Slimline 4 (J8) on the front-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The S_3B P connector on the 0405Y053 cable corresponds to the front-drive backplane LP Slimline 3 (J7), the S_4B P connector corresponds to the front-drive backplane LP Slimline 4 (J8); the Slim_3M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).

6.4.10.5.6 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-446 I/O module 3 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

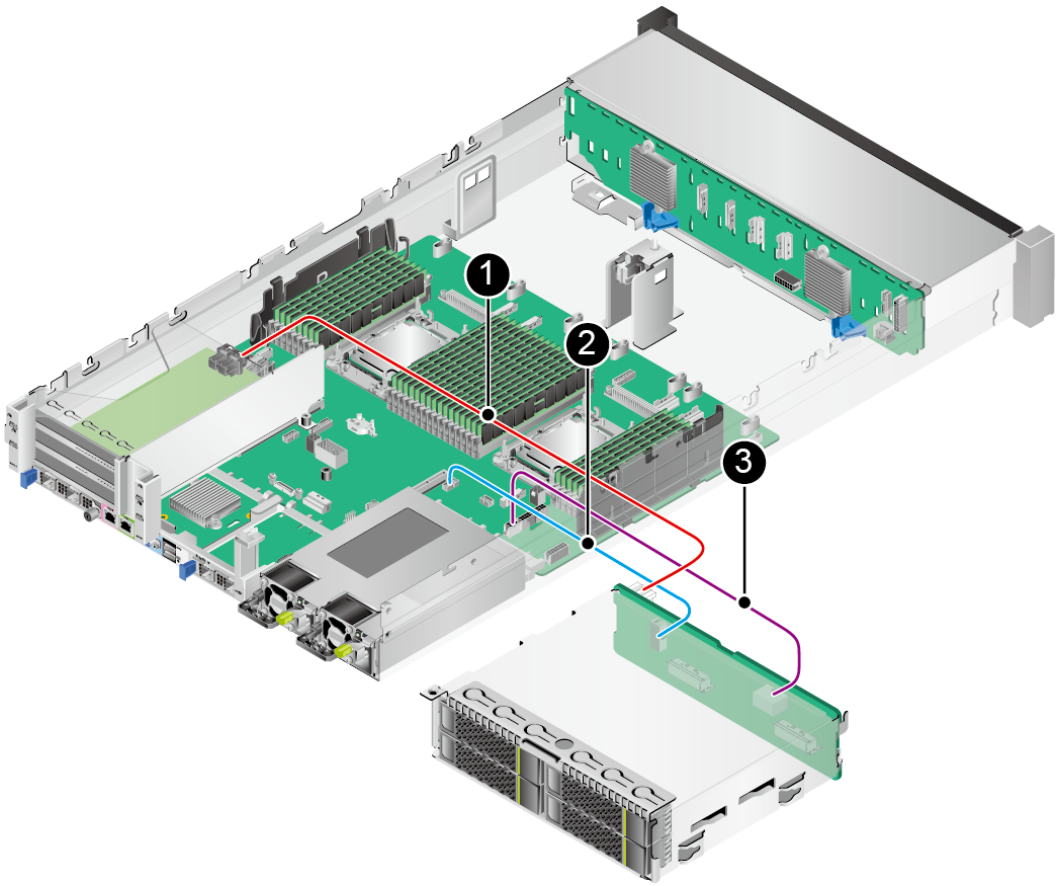

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Table 6-425 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04051059-002	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT B of PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J801) may be C1, PORT B, 1, or CN1.

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Figure 6-447 I/O module 3 cabling (Configuring a PCIe RAID controller card with one SlimSAS port)

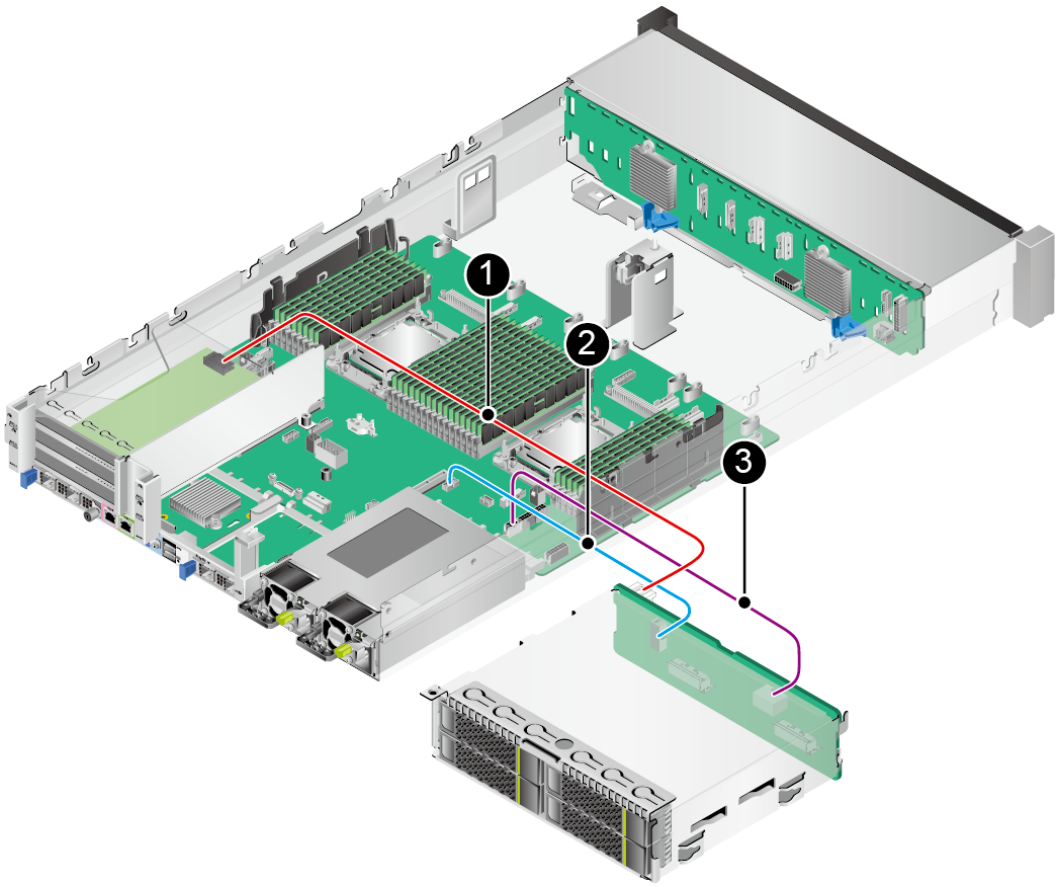

Table 6-426 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	0405Y025-002	SAS high-speed cable for connecting the rear-drive backplane (J801) to C0 of PCIe RAID controller card **NOTE** 0405Y025-002 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J52), connector PORT B corresponds to the rear-drive backplane (J801) of I/O module3, and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.	-
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5"

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No.	P/N Code	Description	Remarks
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	drive module as a spare part.

6.4.10.6 24 x 2.5" Drive Pass-through Configuration (Three RAID Controller Cards)

6.4.10.6.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-448 Left and right mounting ear cabling

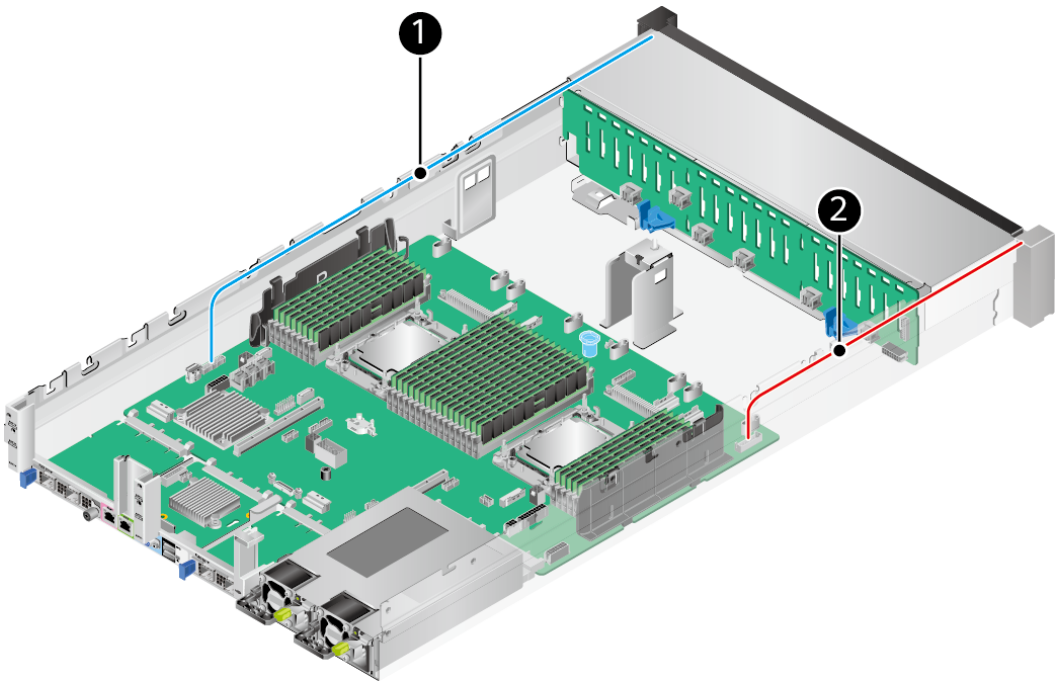

Table 6-427 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.10.6.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-449 Intrusion sensor cabling

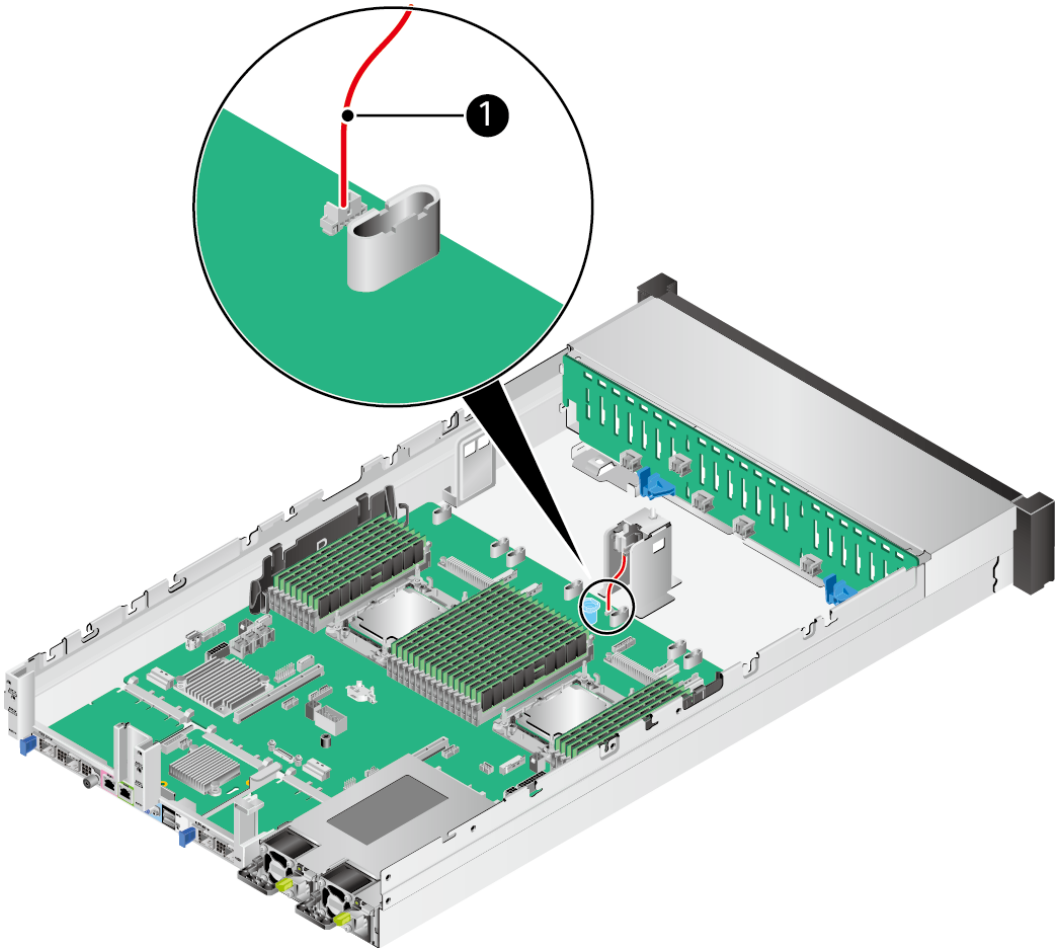

Table 6-428 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.10.6.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-drive backplane power and low-speed signal cabling

Figure 6-450 Front-drive backplane power and low-speed signal cabling

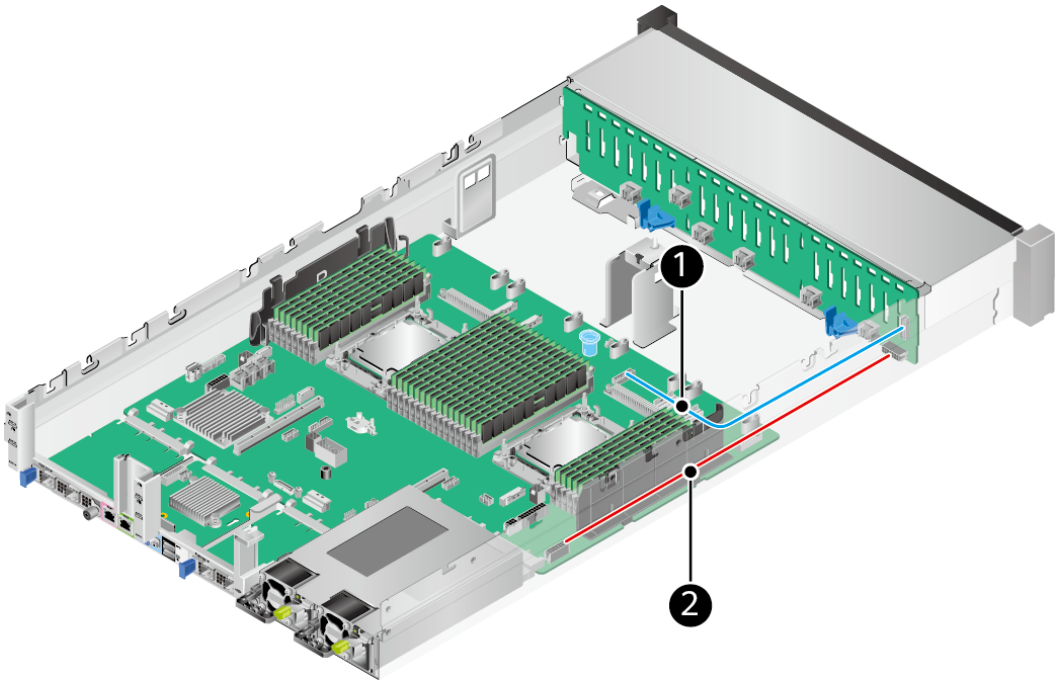

Table 6-429 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152145-009	Power cable for connecting the front-drive backplane (J24) to the mainboard (J26)

6.4.10.6.4 Front-Drive Backplane SAS Signal Cabling (Server with one Screw-in RAID Controller Card and Two PCIe RAID Controller Cards)

NOTICE

You are advised to install the two PCIe RAID controller cards in slots 3 and 5.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-451 Front-drive backplane SAS high-speed cabling

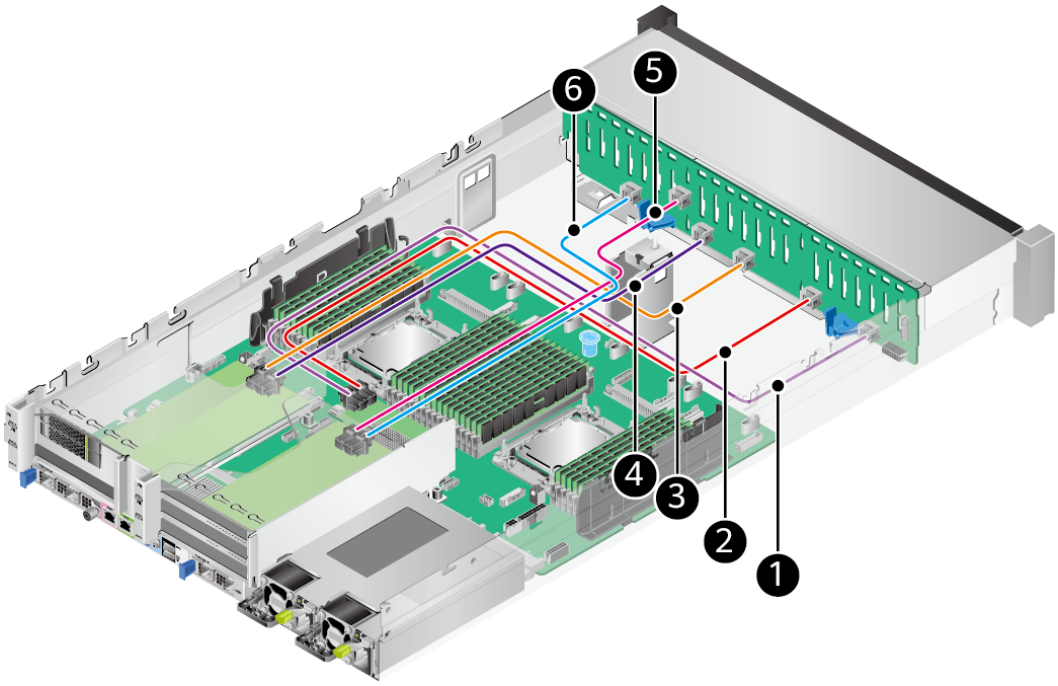

Table 6-430 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J30) to PORT A of PCIe RAID controller card 1
4	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J31) to PORT B of PCIe RAID controller card 1
5	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J39) to PORT A of PCIe RAID controller card 2
6	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J33) to PORT B of PCIe RAID controller card 2

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NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J30) and (J39) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J31) and (J33) may be C1, PORT B, 1, or CN1.

6.4.10.6.5 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-452 I/O module 3 cabling

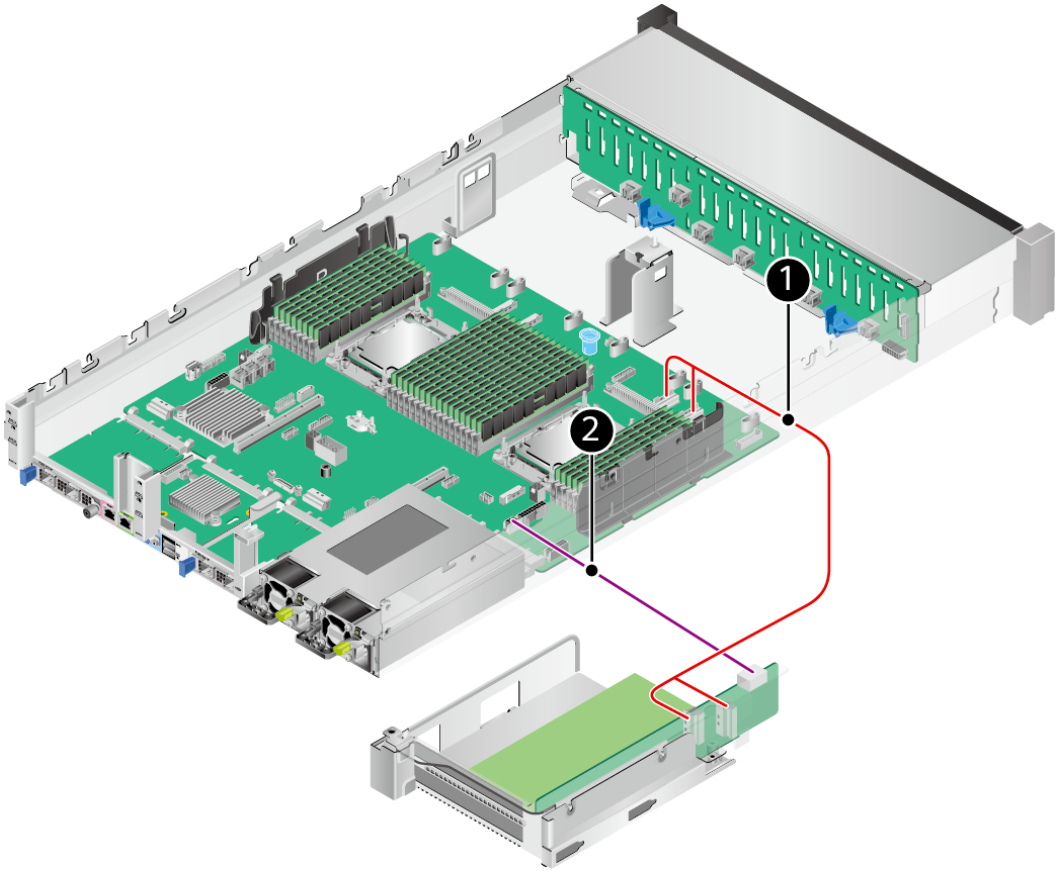

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Table 6-431 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.10.6.6 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-453 I/O module 3 cabling

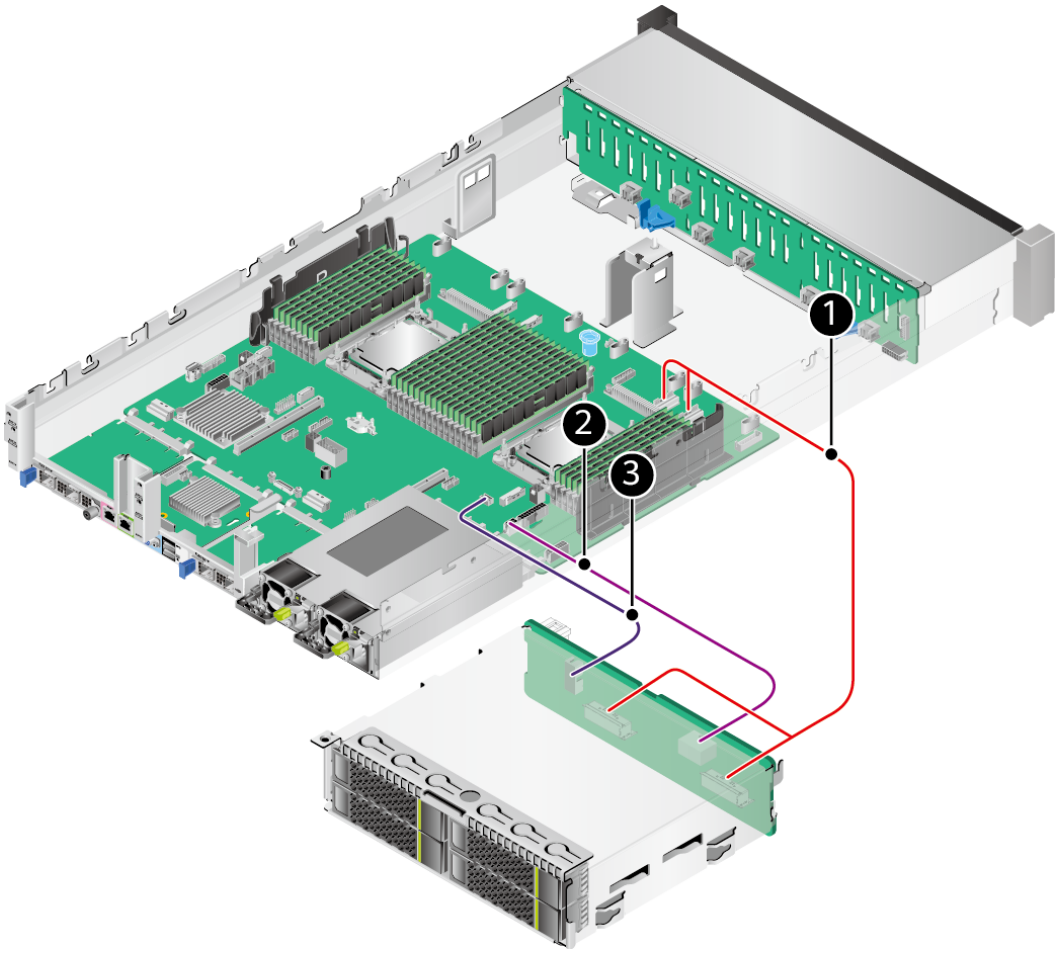

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Table 6-432 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.11 25 x 2.5" Drive EXP Configuration

6.4.11.1 25 x 2.5" Drive EXP Configuration 1

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6.4.11.1.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-454 Left and right mounting ear cabling

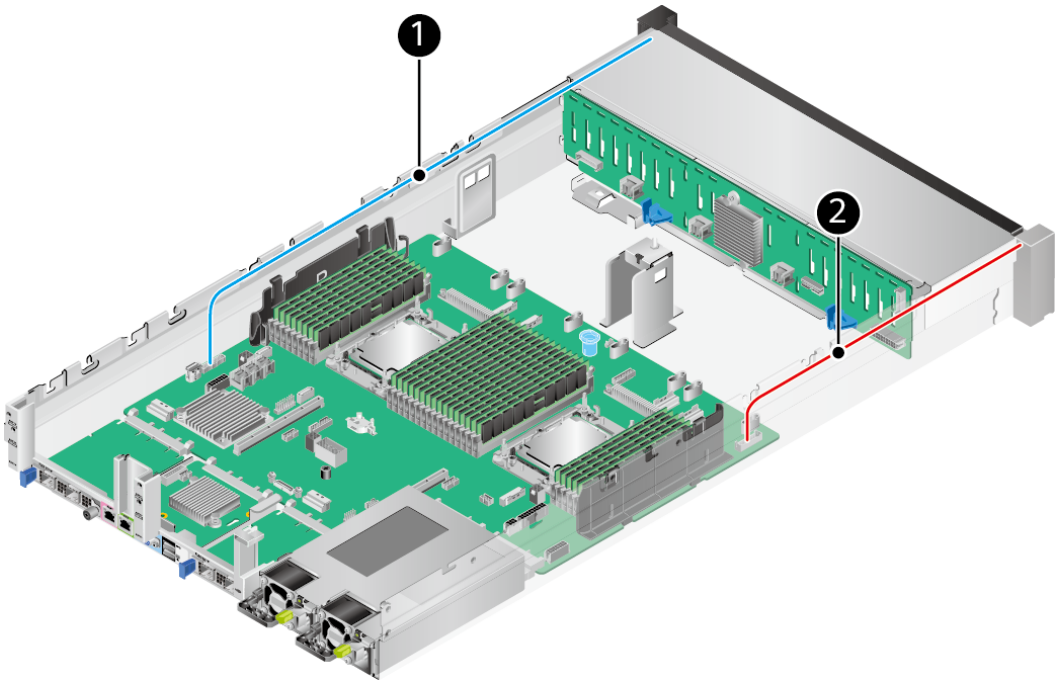

Table 6-433 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.1.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-455 OCP 3.0 expansion cable 1

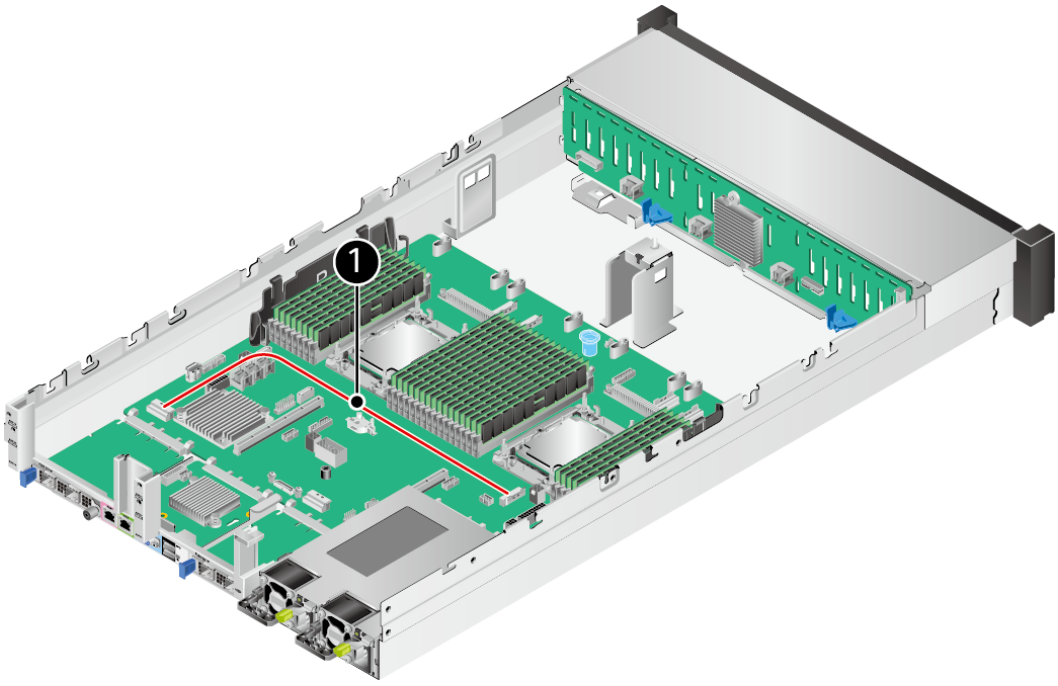

Table 6-434 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-456 OCP 3.0 expansion cable 2

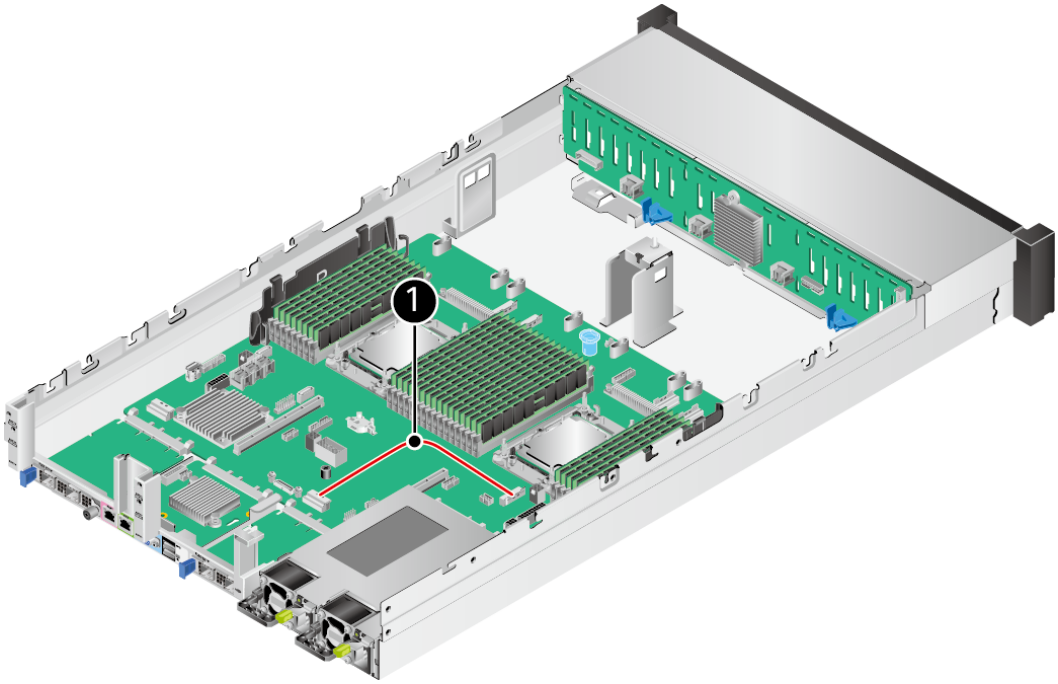

Table 6-435 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.11.1.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-457 Intrusion sensor cabling

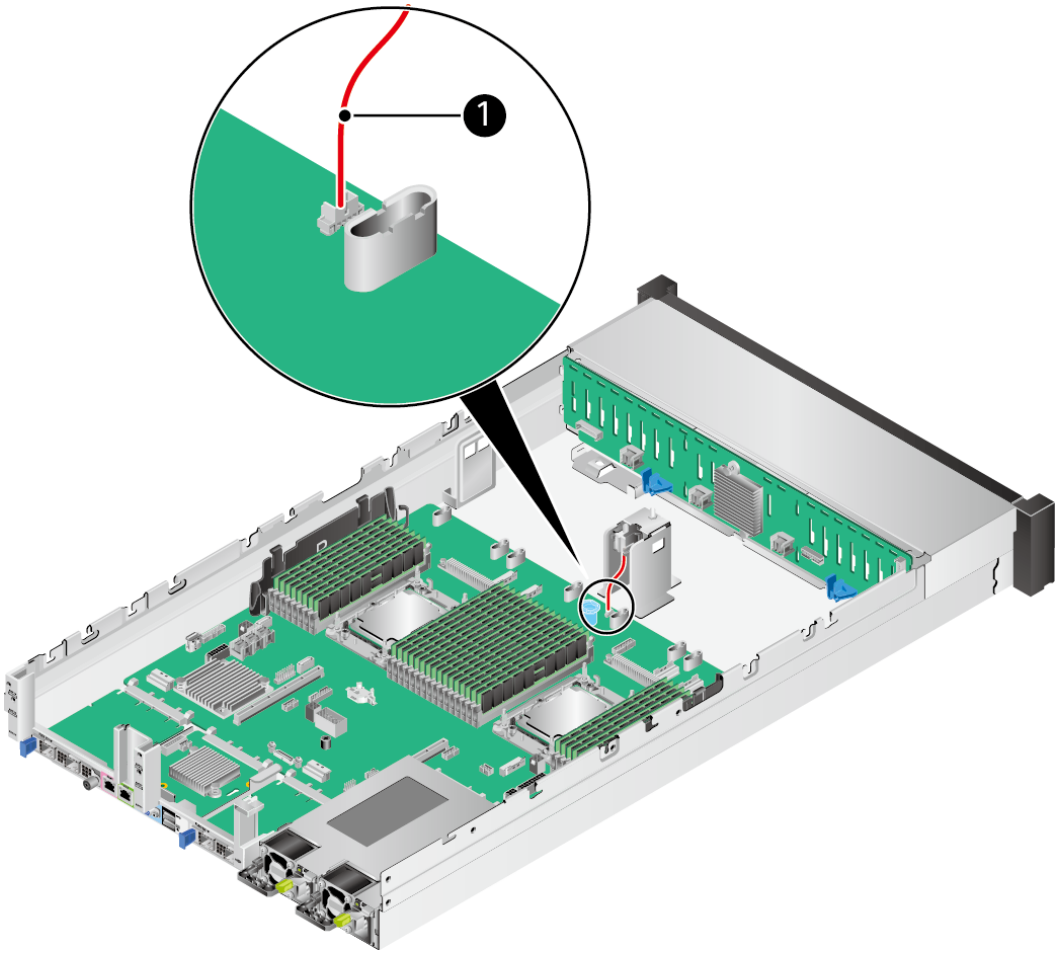

Table 6-436 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.1.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-458 Front-drive backplane power and low-speed signal cables

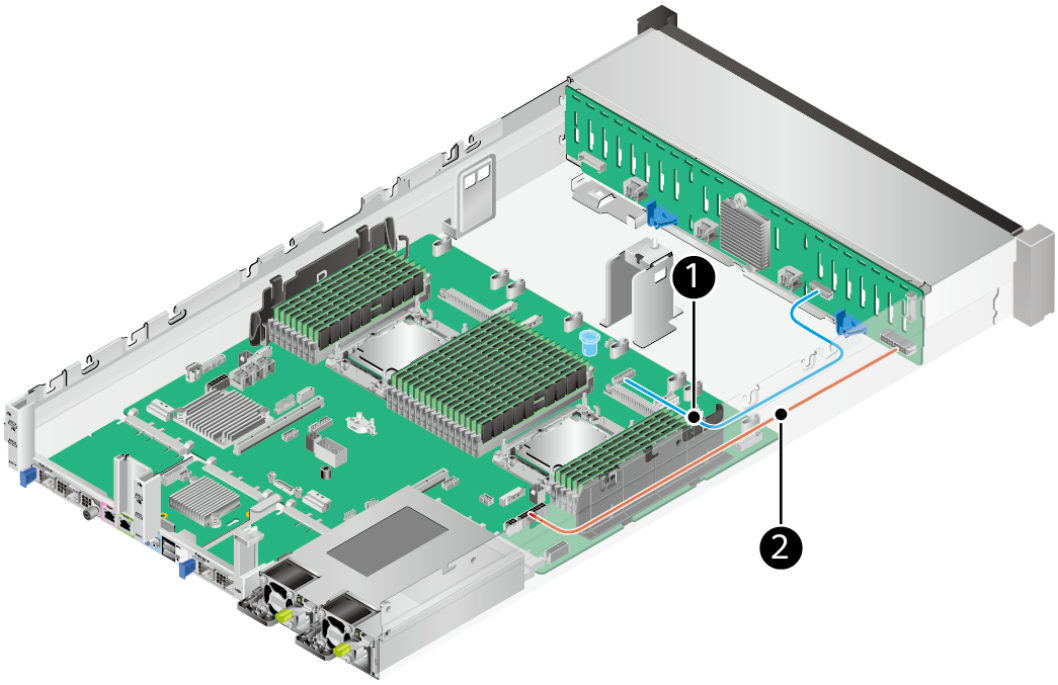

Table 6-437 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

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6.4.11.1.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-459 Front-drive backplane SAS high-speed cabling

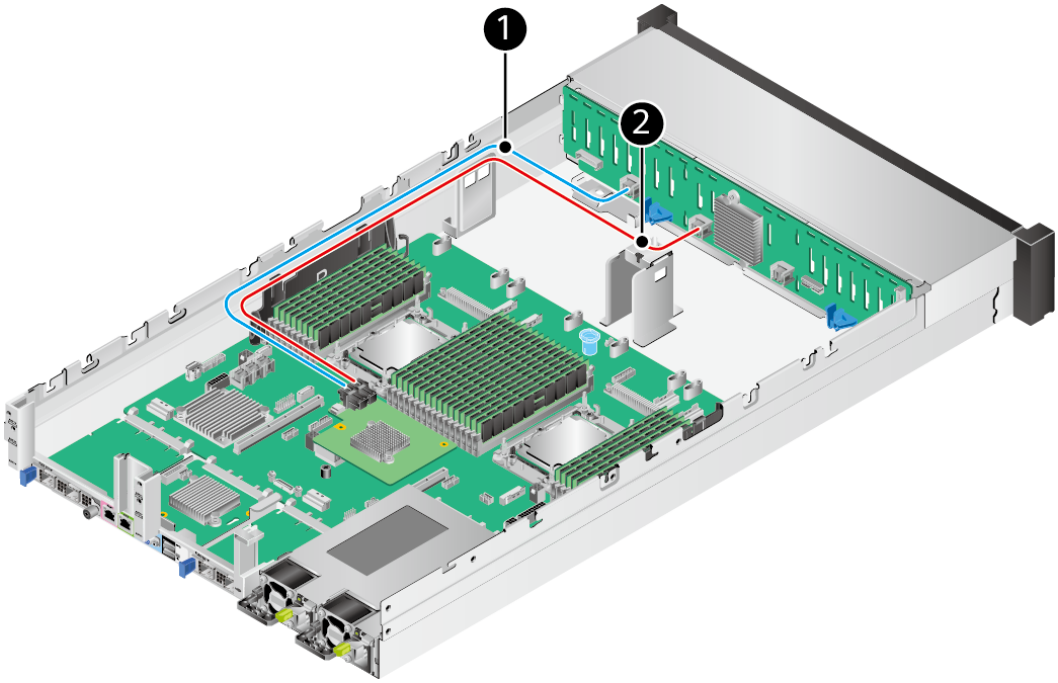

Table 6-438 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.4.11.1.6 I/O Module 1 (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-460 I/O module 1 cabling

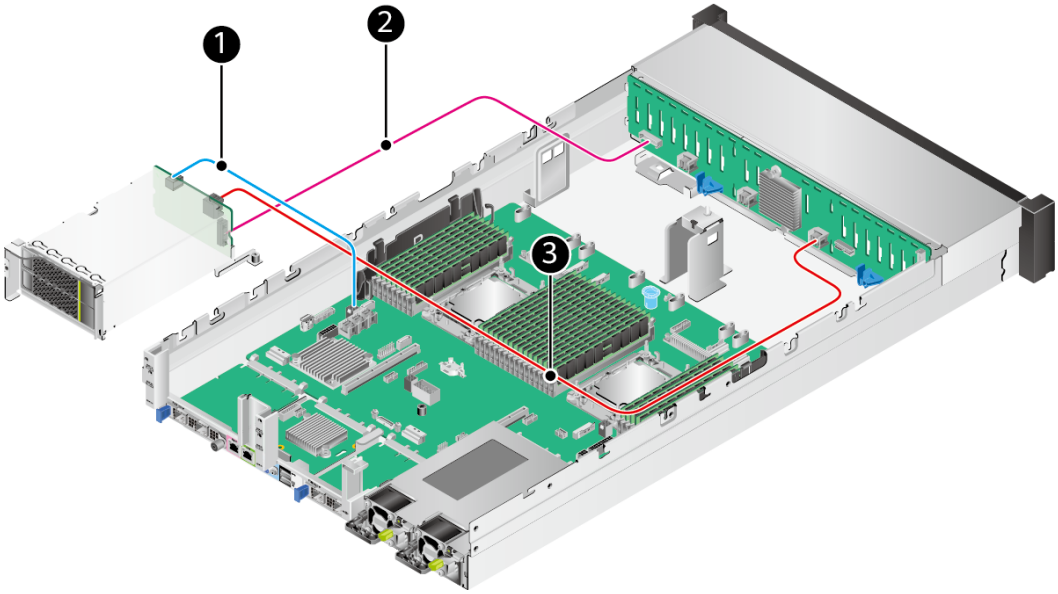

Table 6-439 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.1.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-461 I/O module 1 cabling

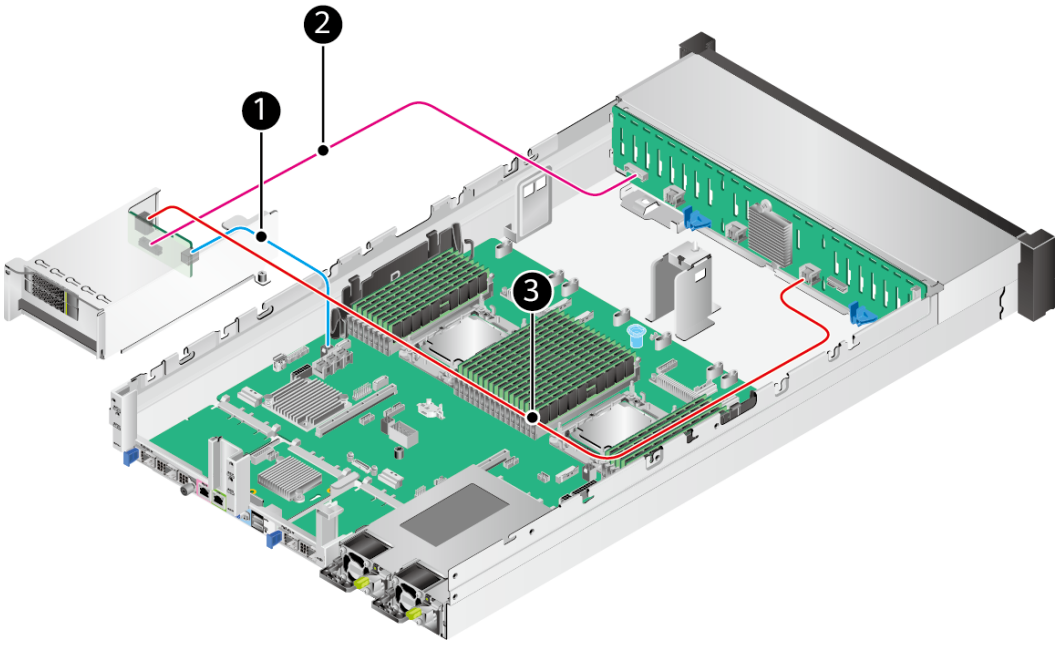

Table 6-440 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.1.8 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-462 I/O module 3 cabling

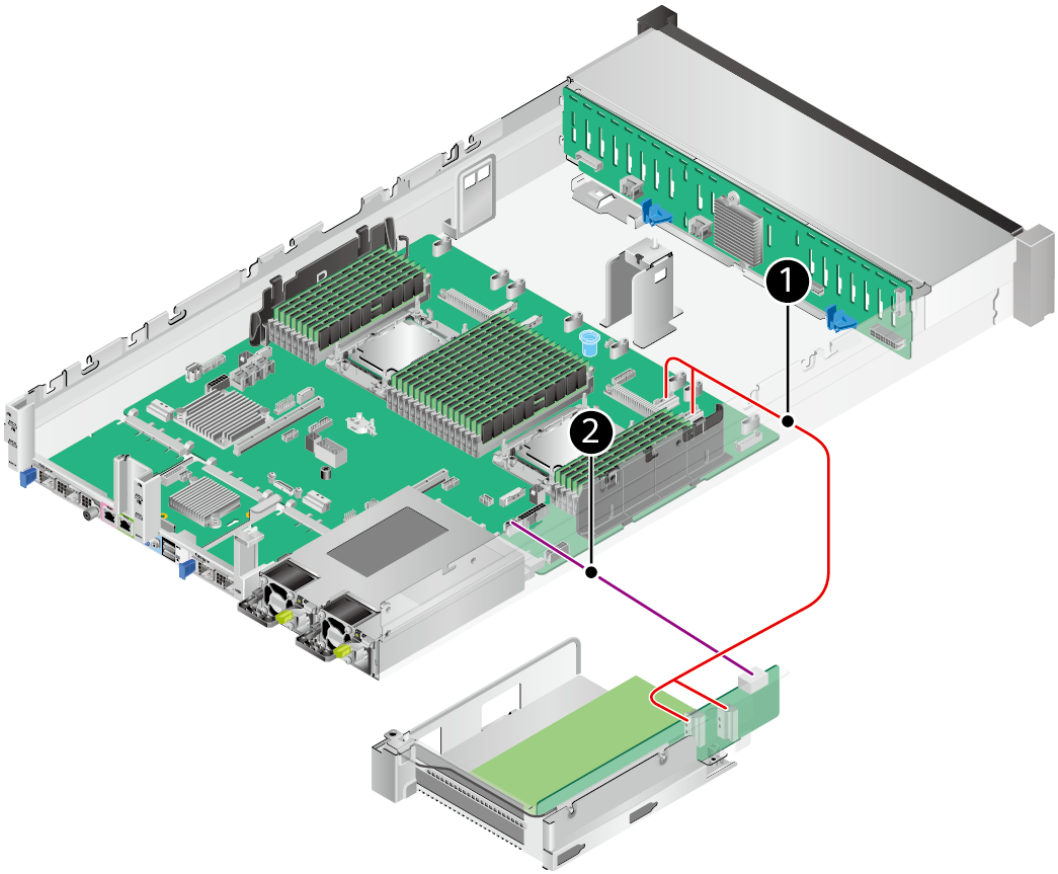

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Table 6-441 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.1.9 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-463 I/O module 3 cabling

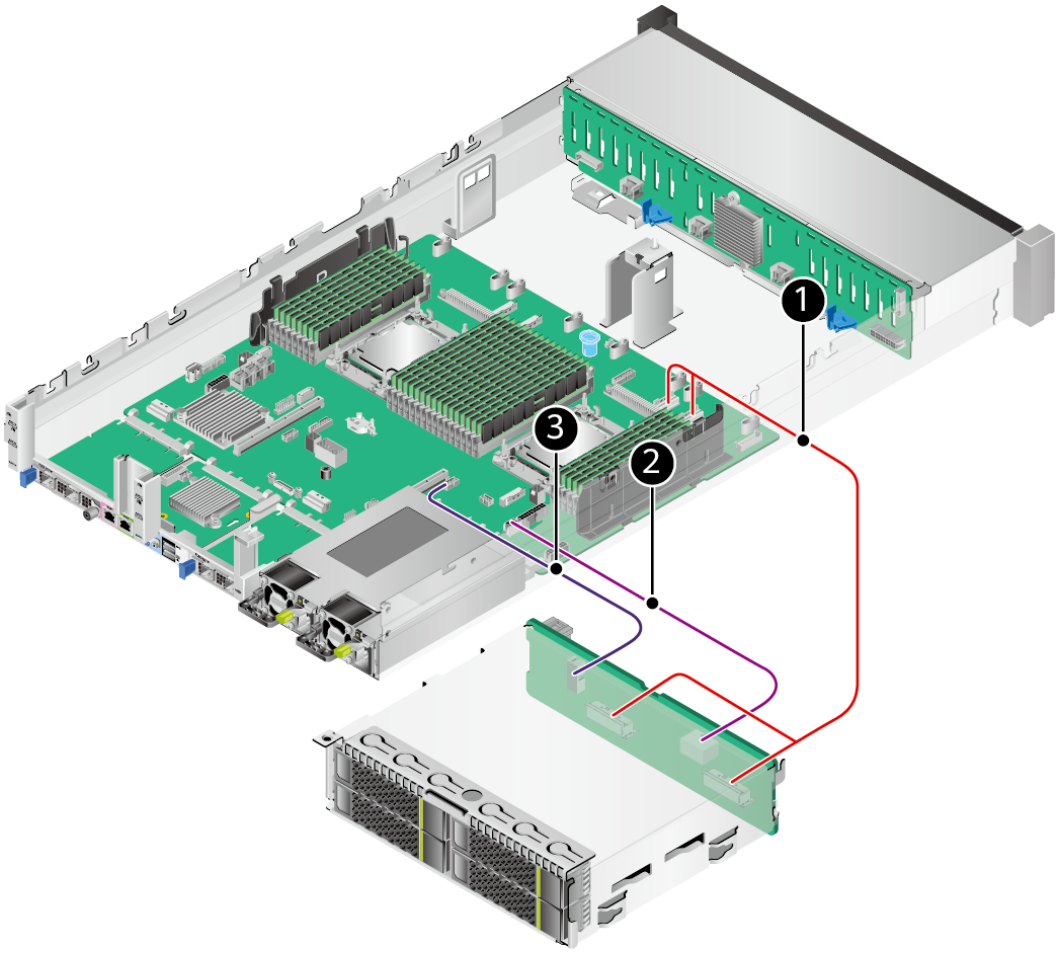

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Table 6-442 I/O Module 3 Cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.11.2 25 x 2.5" Drive EXP Configuration 2

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6.4.11.2.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-464 Left and right mounting ear cabling

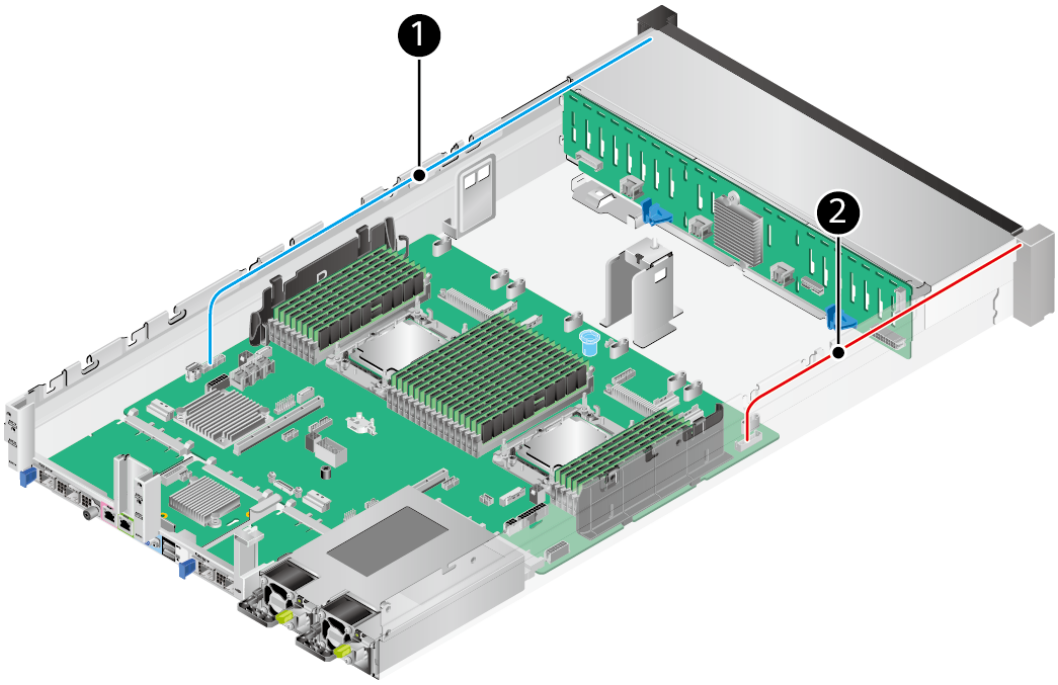

Table 6-443 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.2.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-465 OCP 3.0 expansion cable 1

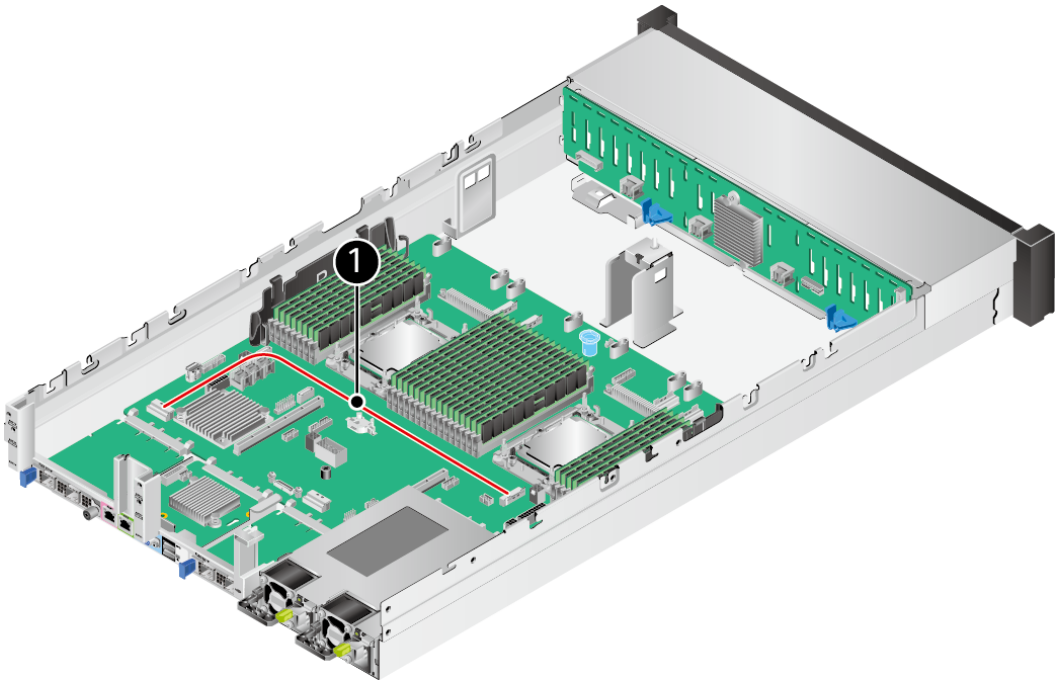

Table 6-444 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-466 OCP 3.0 expansion cable 2

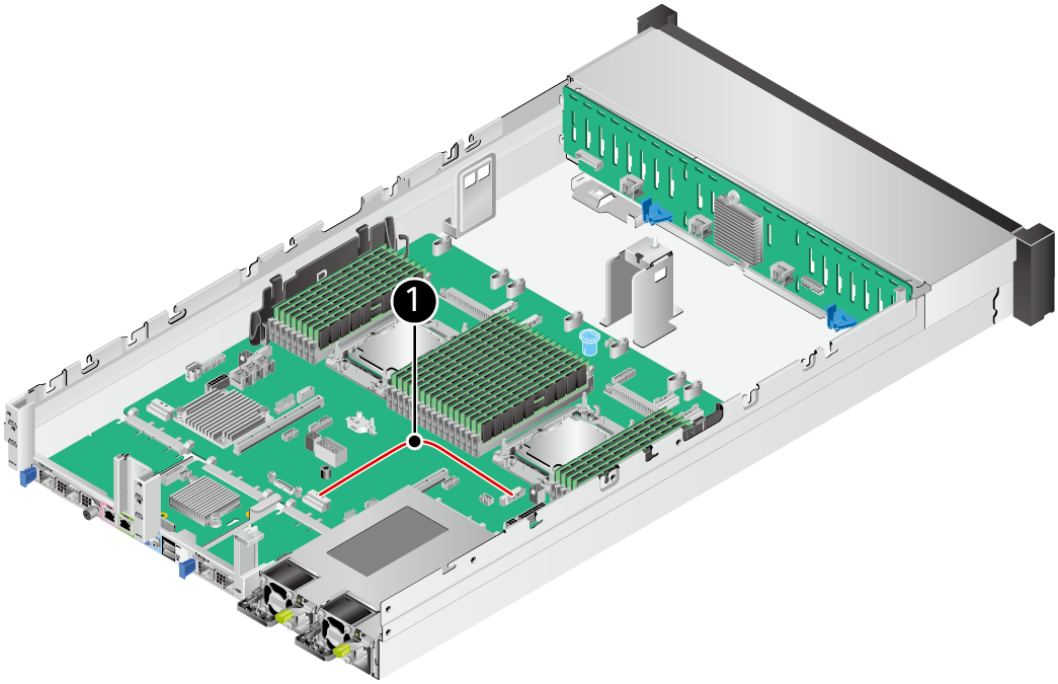

Table 6-445 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.11.2.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-467 Intrusion sensor cabling

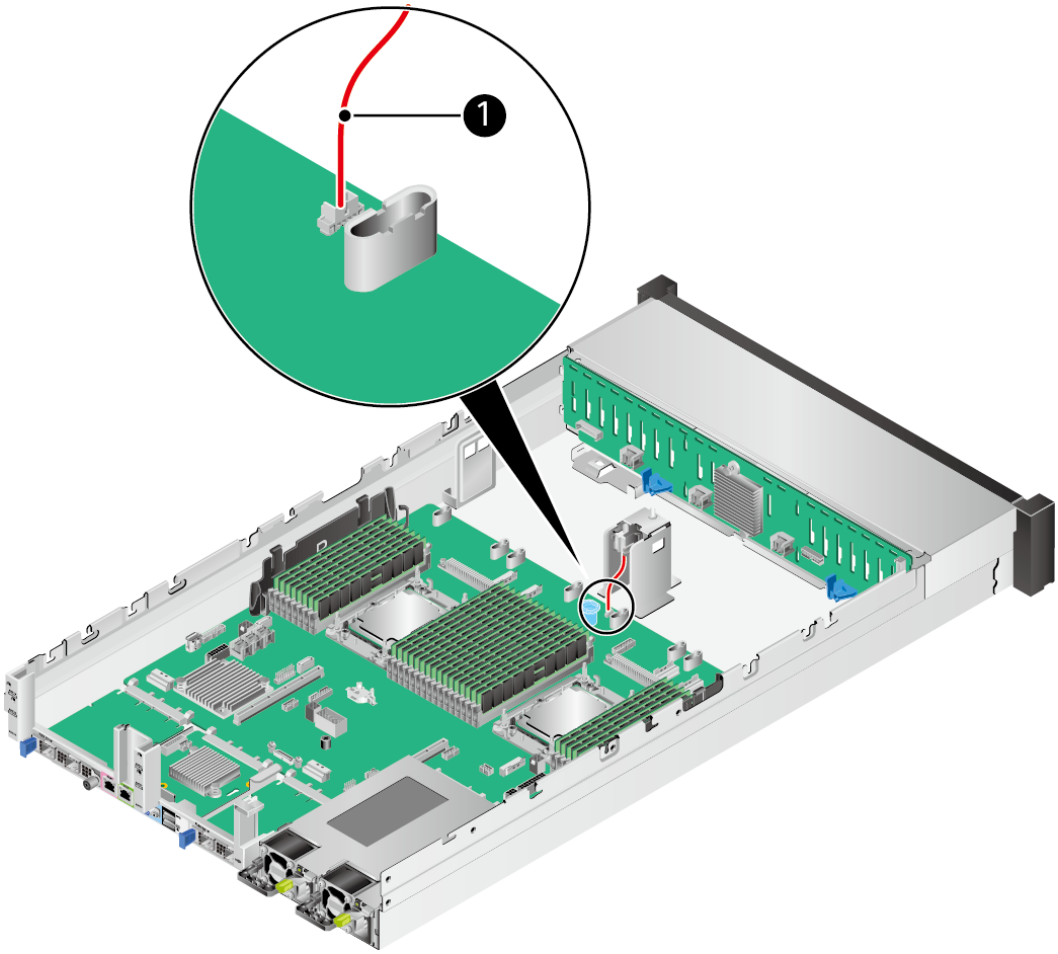

Table 6-446 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.2.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-468 Front-drive backplane power and low-speed signal cables

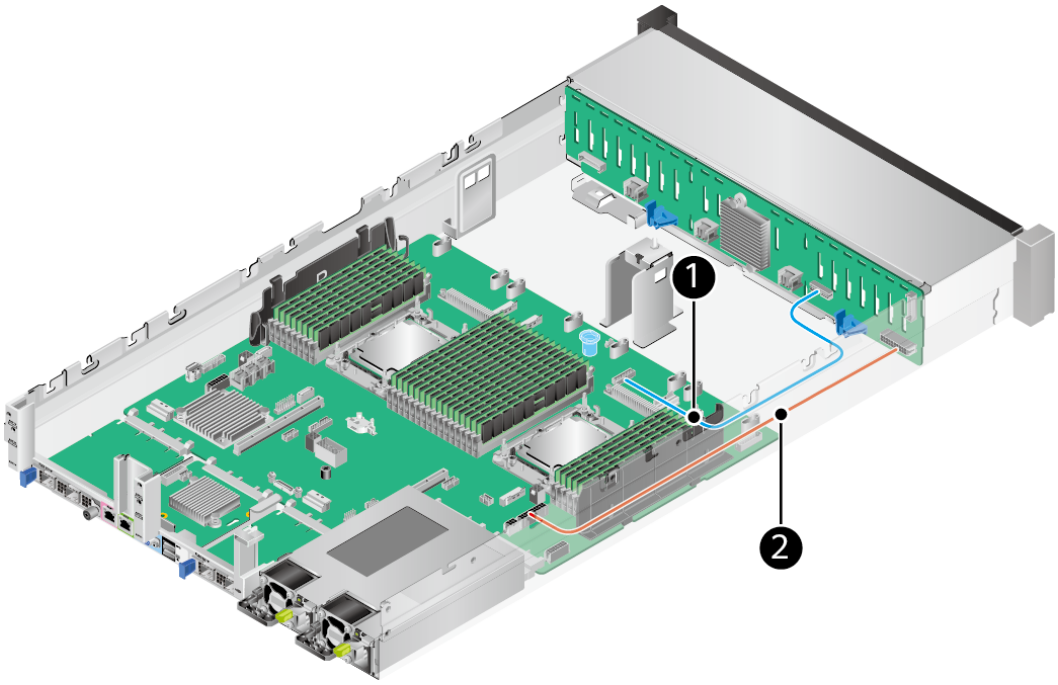

Table 6-447 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

6.4.11.2.5 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-469 Front-drive backplane SAS high-speed cabling

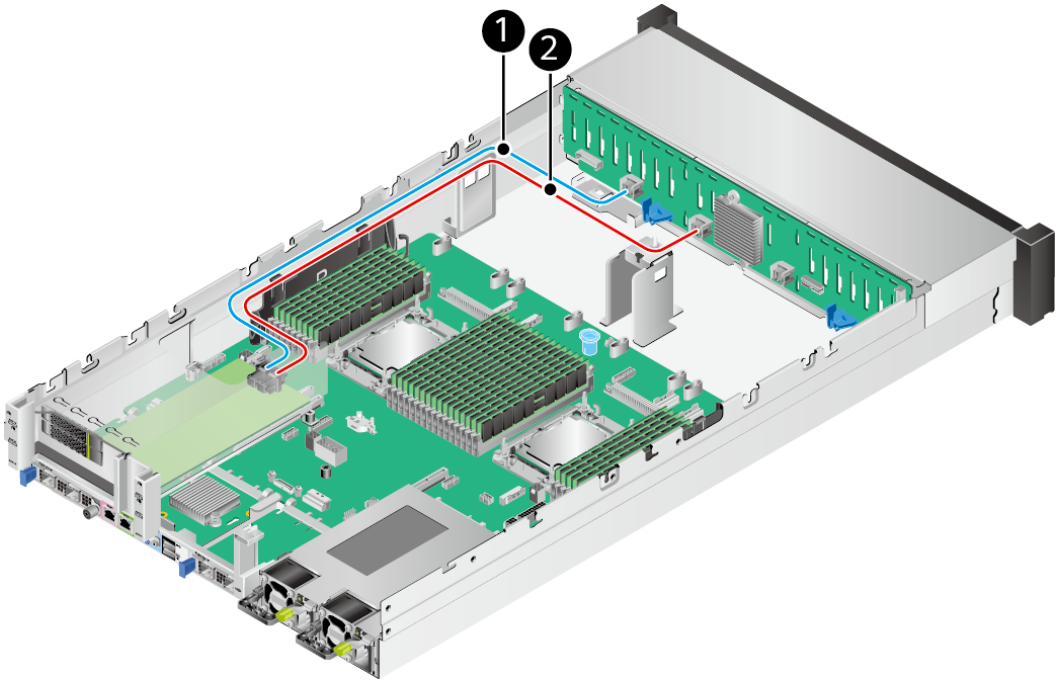

Table 6-448 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.11.2.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-470 I/O module 1 cabling

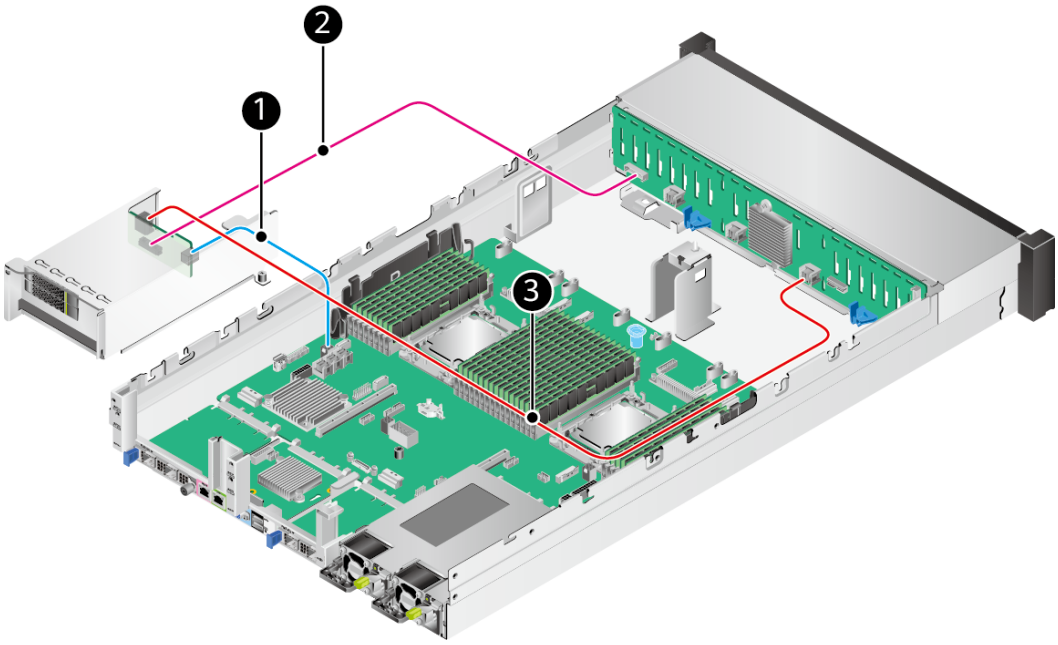

Table 6-449 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.2.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-471 I/O module 3 cabling

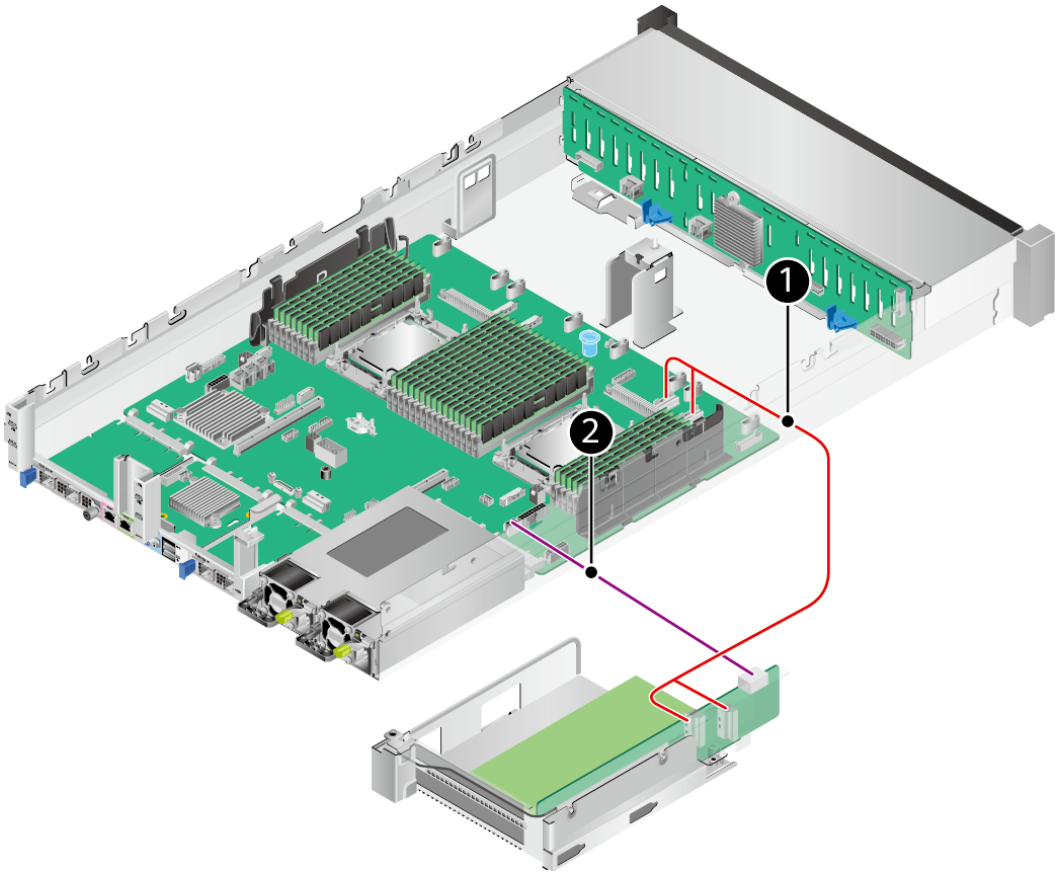

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Table 6-450 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.2.8 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-472 I/O module 3 cabling

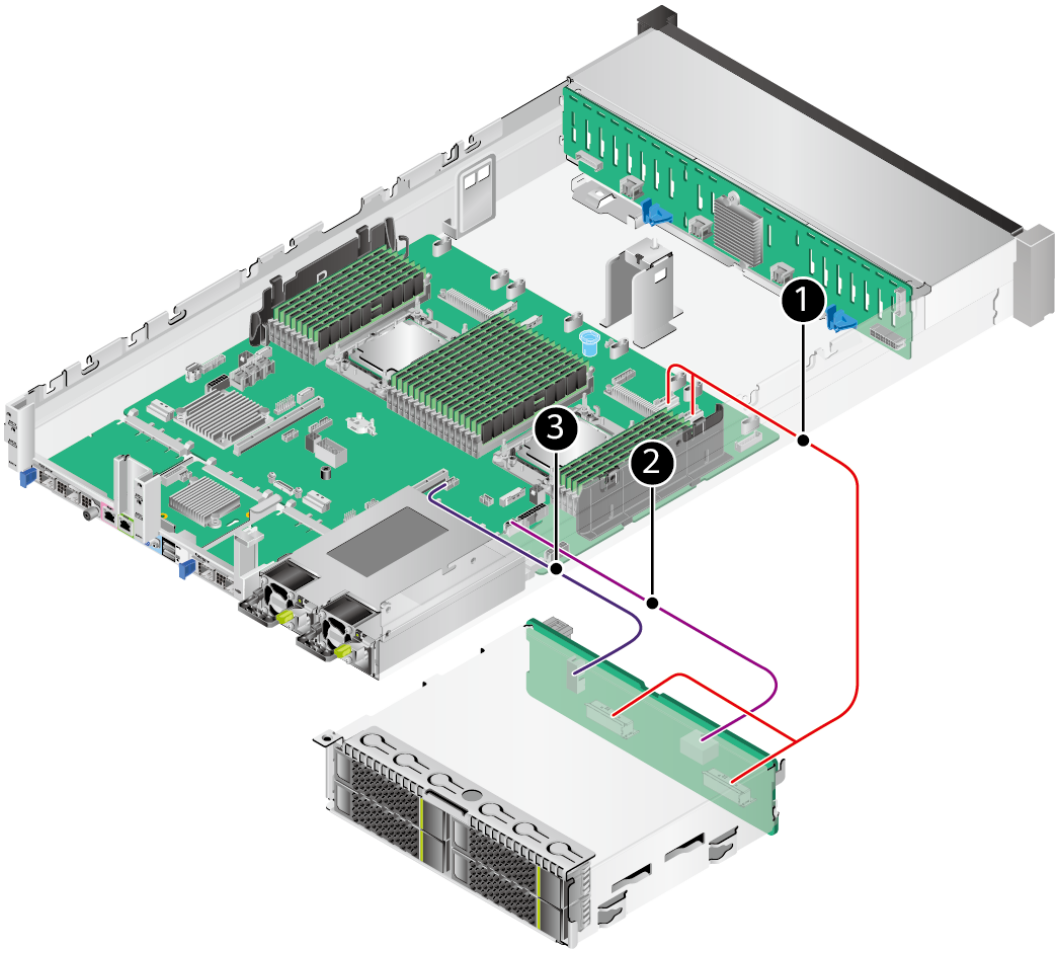

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Table 6-451 I/O Module 3 Cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.11.3 25 x 2.5" Drive EXP Configuration 3

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6.4.11.3.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-473 Left and right mounting ear cabling

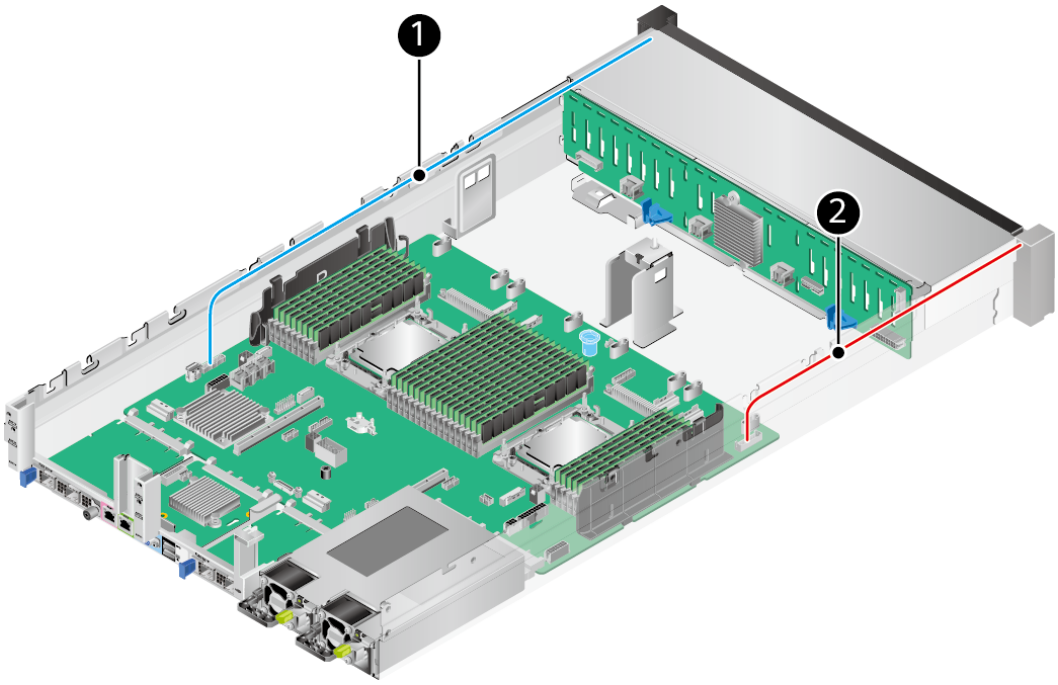

Table 6-452 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.3.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-474 OCP 3.0 expansion cable 1

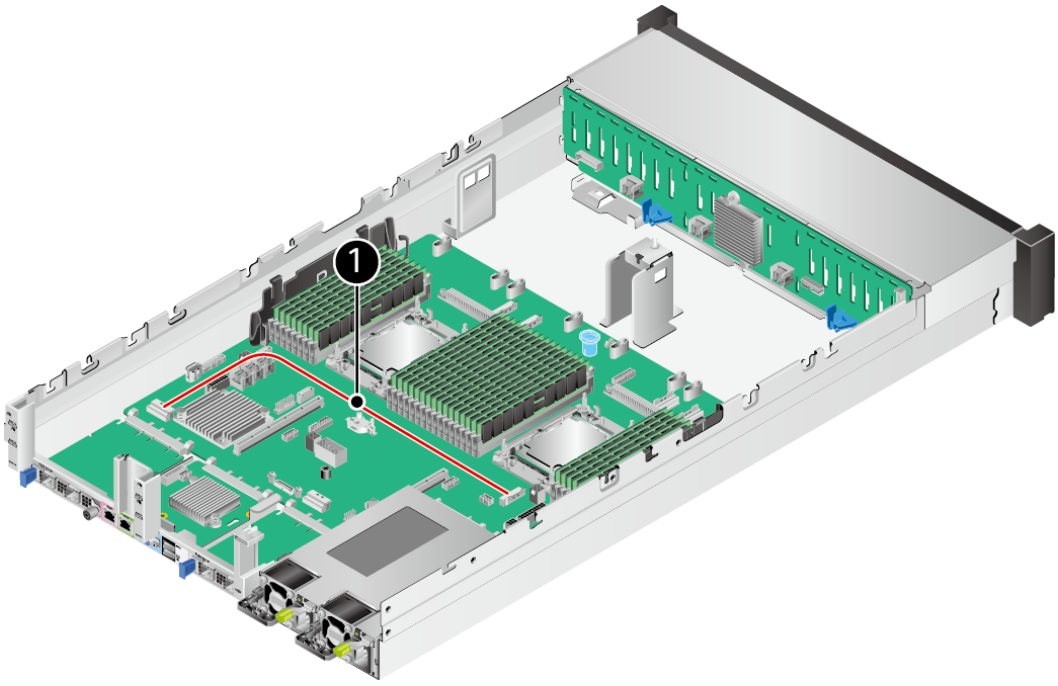

Table 6-453 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-475 OCP 3.0 expansion cable 2

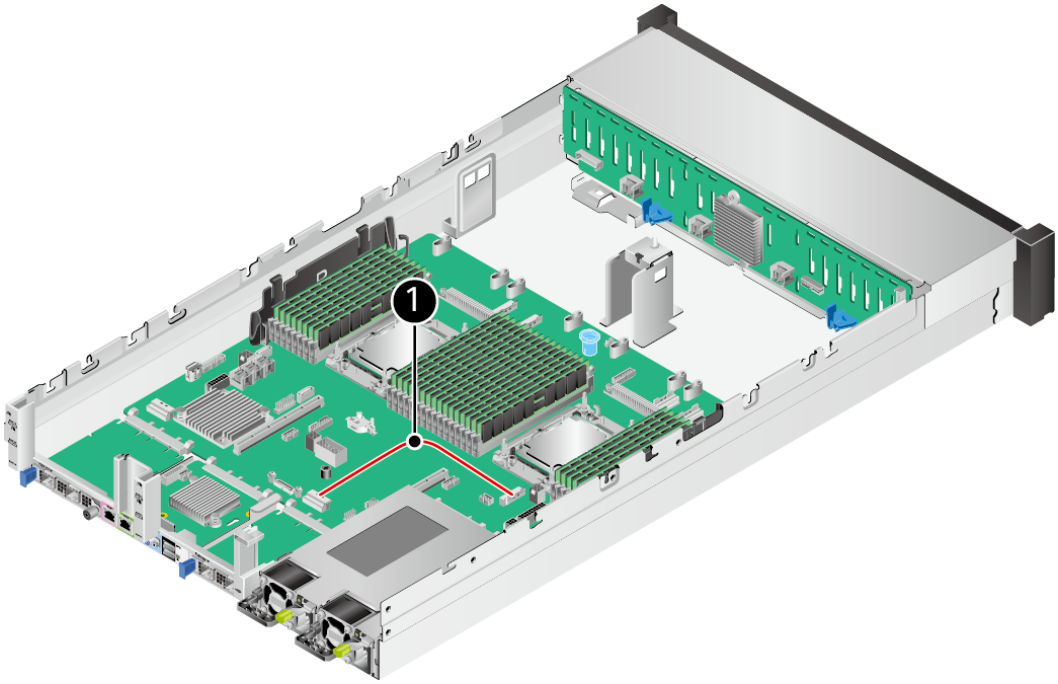

Table 6-454 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.11.3.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-476 Intrusion sensor cabling

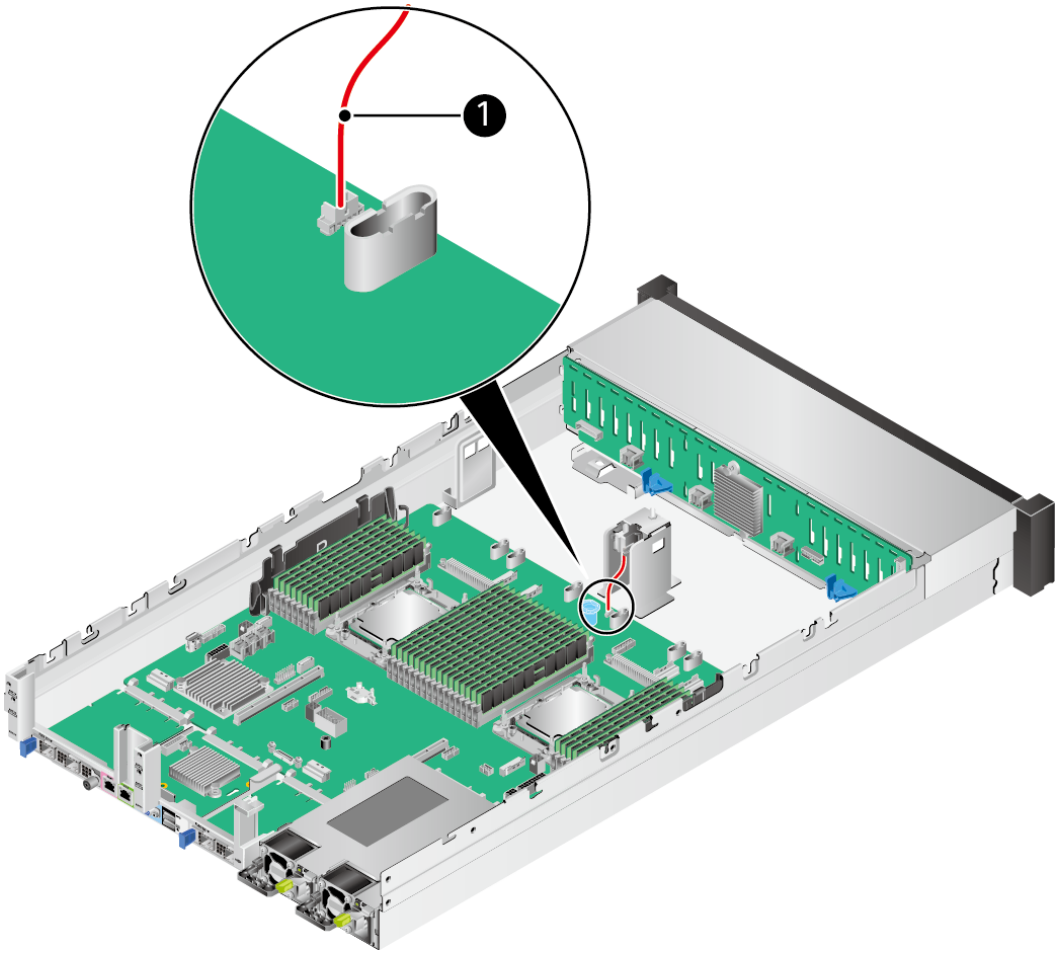

Table 6-455 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.3.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-477 Front-drive backplane power and low-speed signal cables

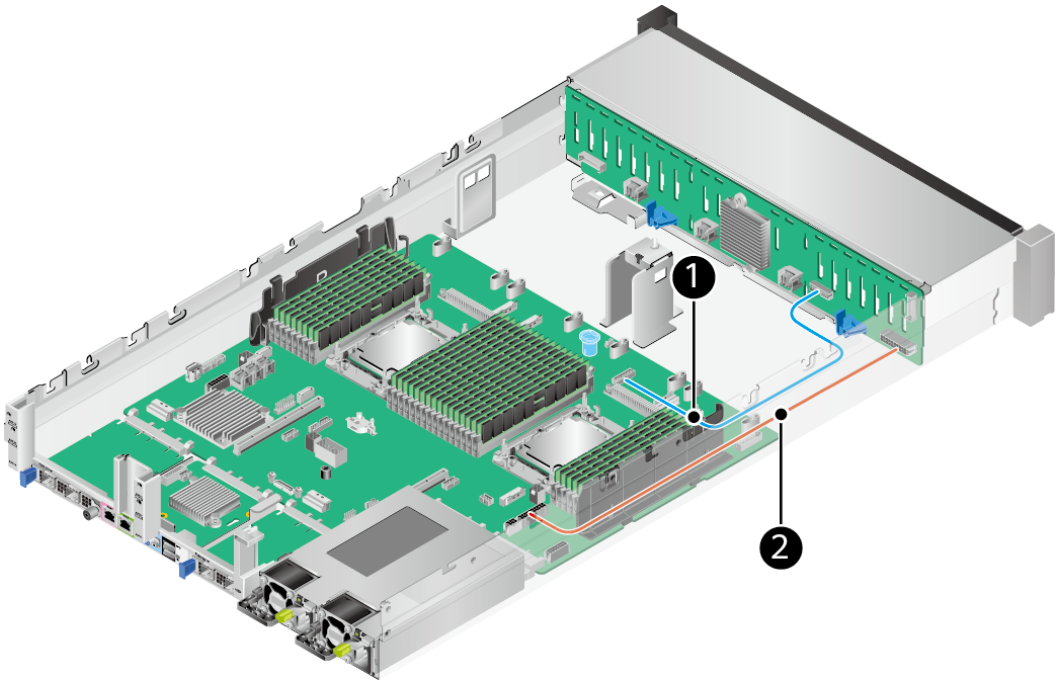

Table 6-456 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

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6.4.11.3.5 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-478 Front-drive backplane SAS high-speed cabling

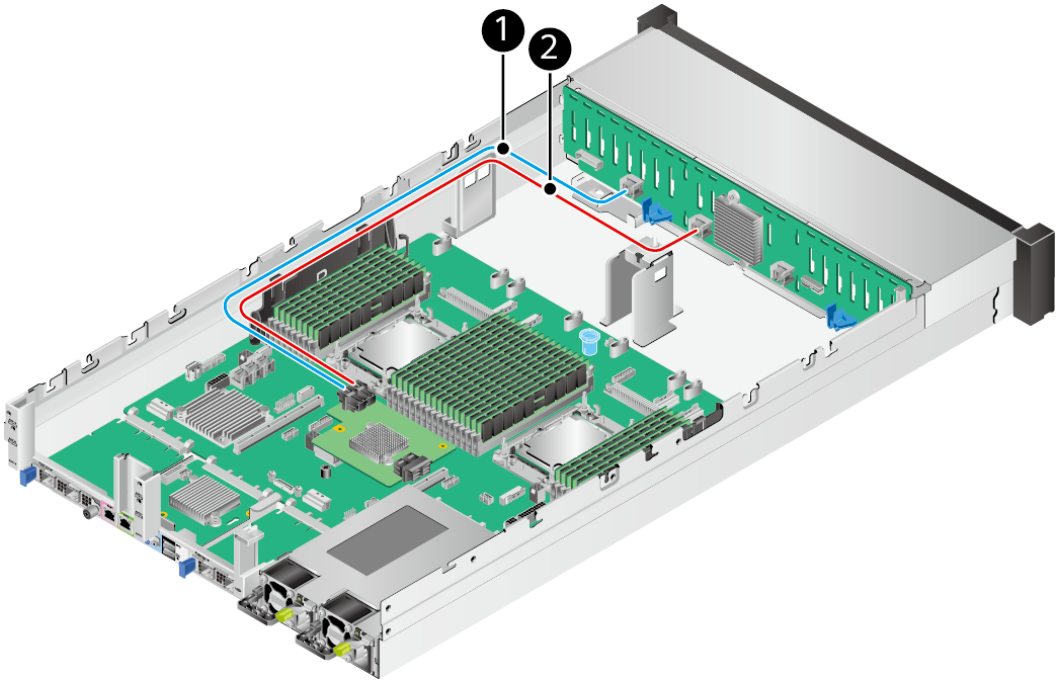

Table 6-457 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.4.11.3.6 I/O Module 1 (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-479 I/O module 1 cabling

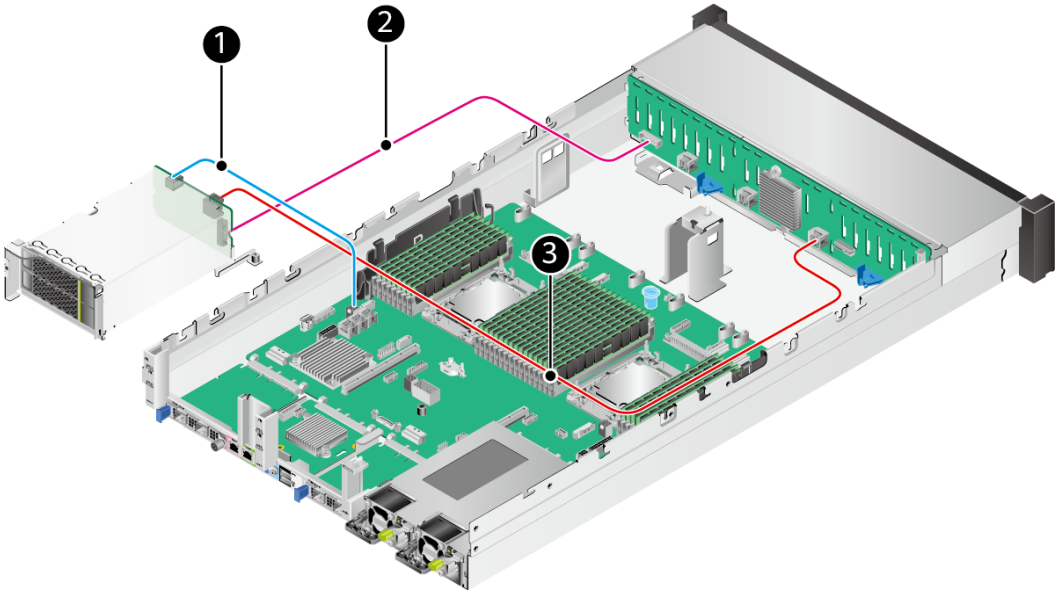

Table 6-458 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.3.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-480 I/O module 1 cabling

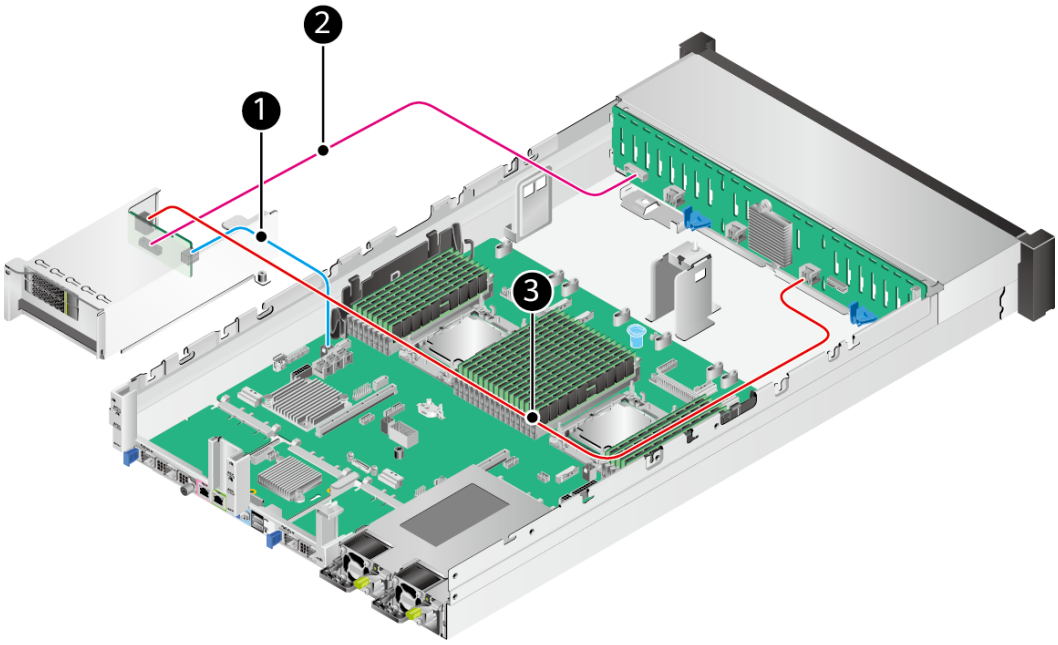

Table 6-459 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.3.8 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-481 I/O module 3 cabling

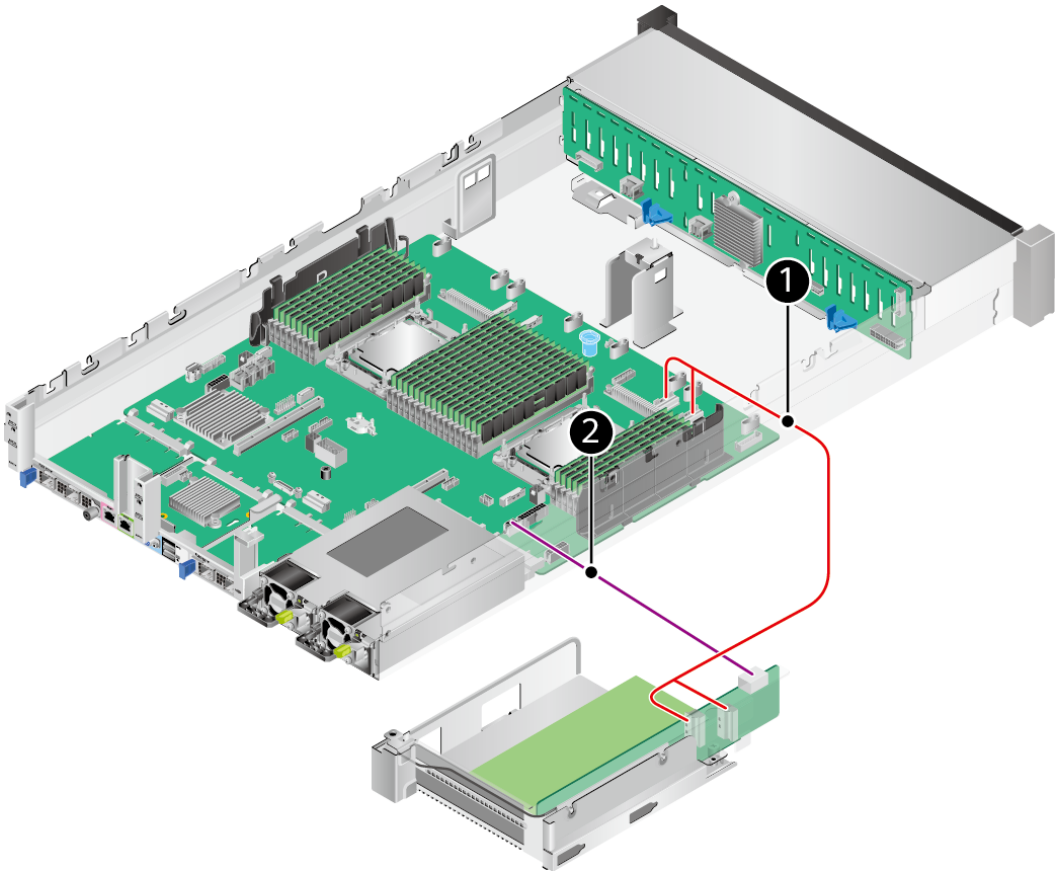

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Table 6-460 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.3.9 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-482 I/O module 3 cabling

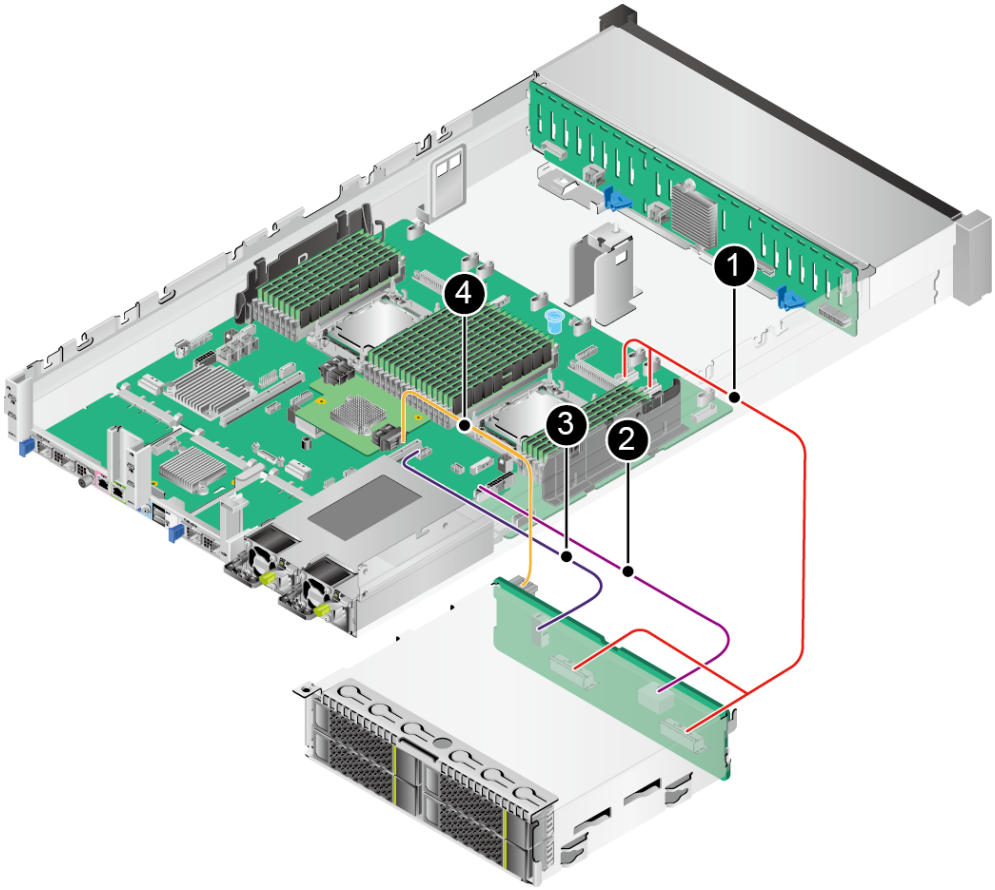

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Table 6-461 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	
4	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT C of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.

6.4.11.4 25 x 2.5" Drive EXP Configuration 4

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6.4.11.4.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-483 Left and right mounting ear cabling

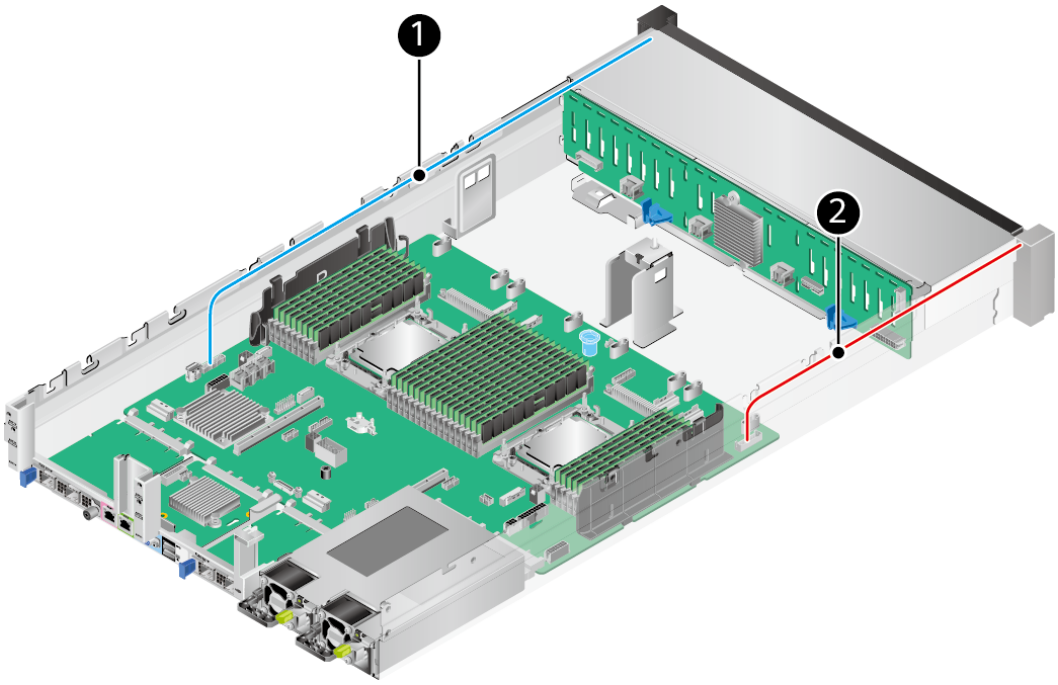

Table 6-462 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.4.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-484 OCP 3.0 expansion cable 1

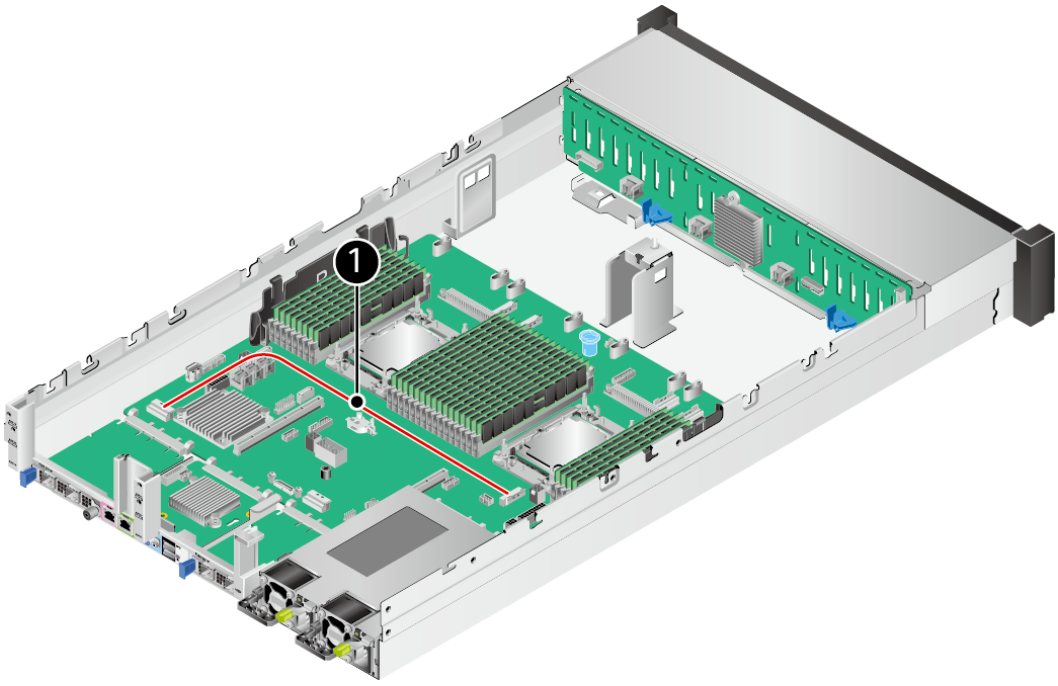

Table 6-463 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-485 OCP 3.0 expansion cable 2

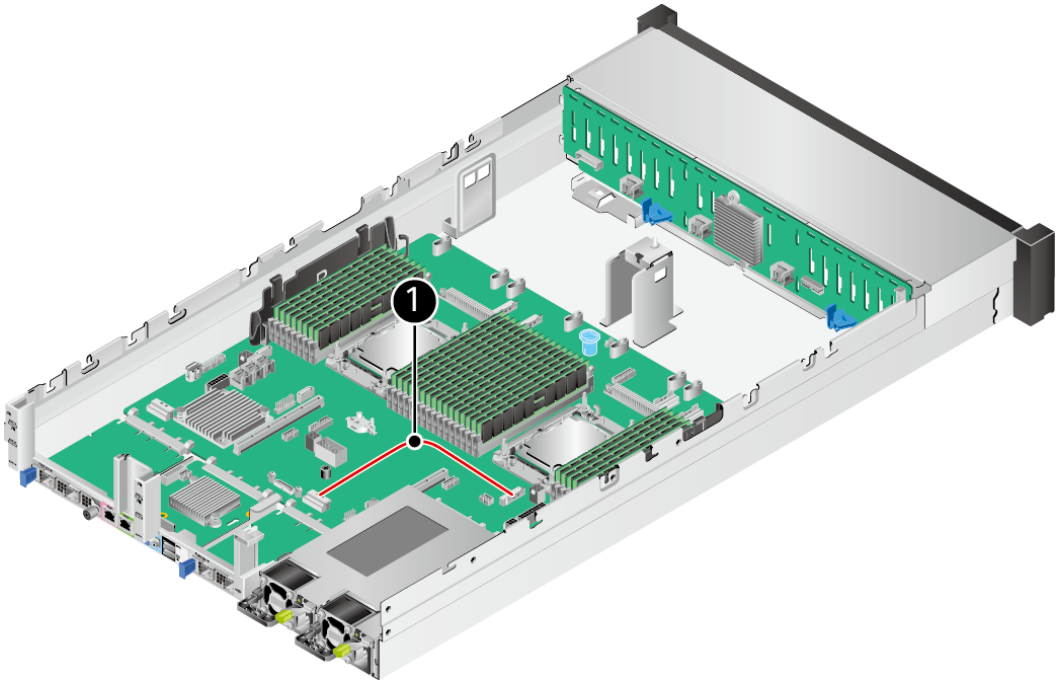

Table 6-464 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.11.4.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-486 Intrusion sensor cabling

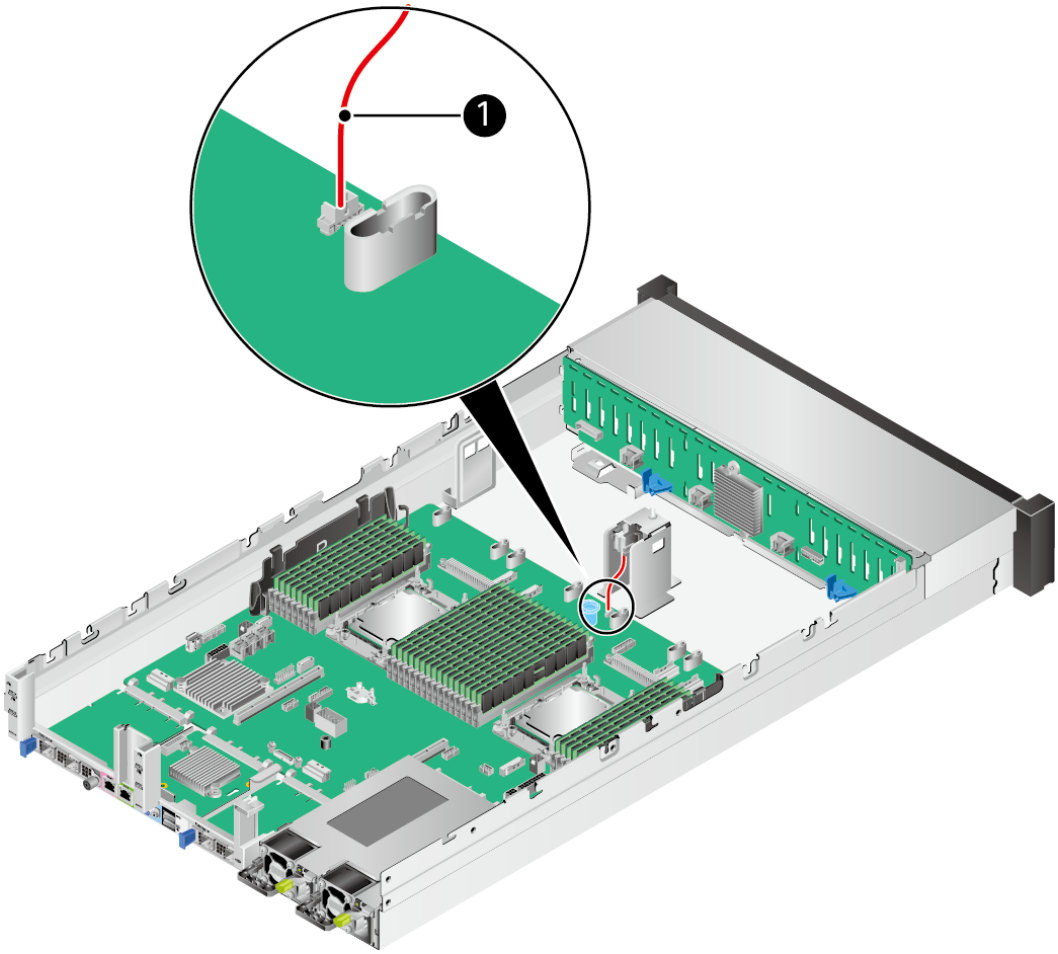

Table 6-465 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.4.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-487 Front-drive backplane power and low-speed signal cables

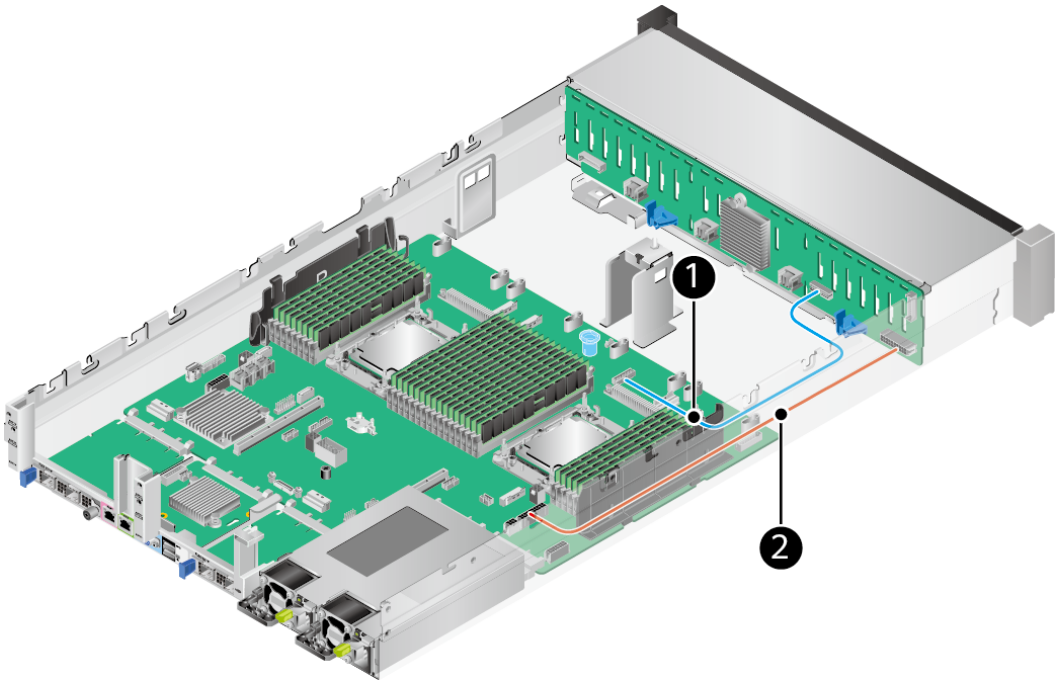

Table 6-466 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

6.4.11.4.5 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-488 Front-drive backplane SAS high-speed cabling

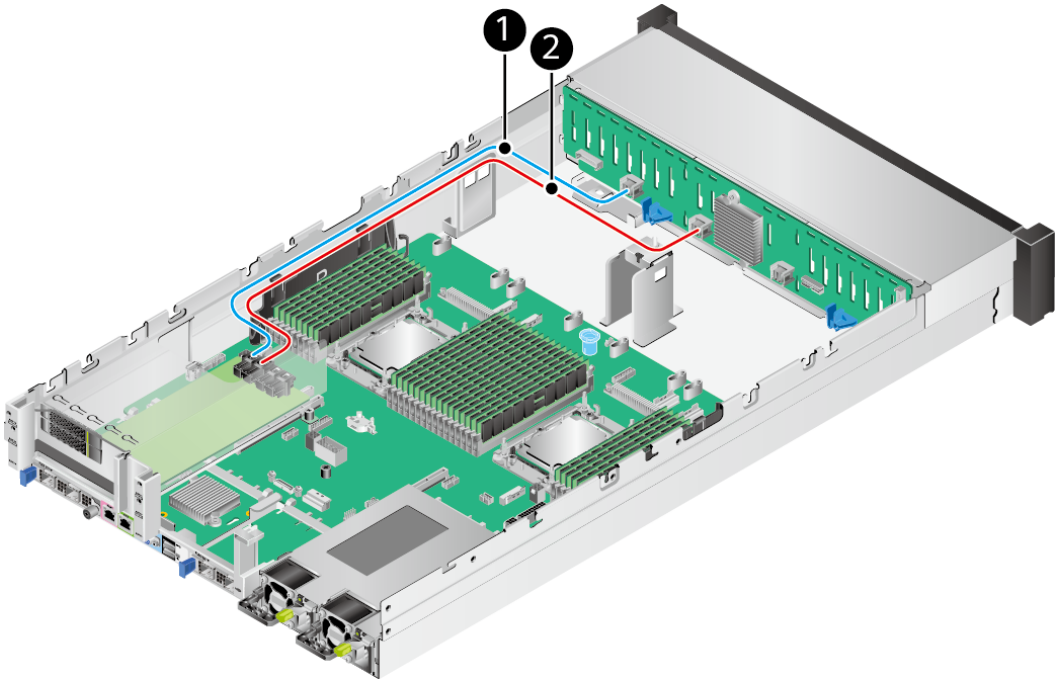

Table 6-467 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.11.4.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-489 I/O module 1 cabling

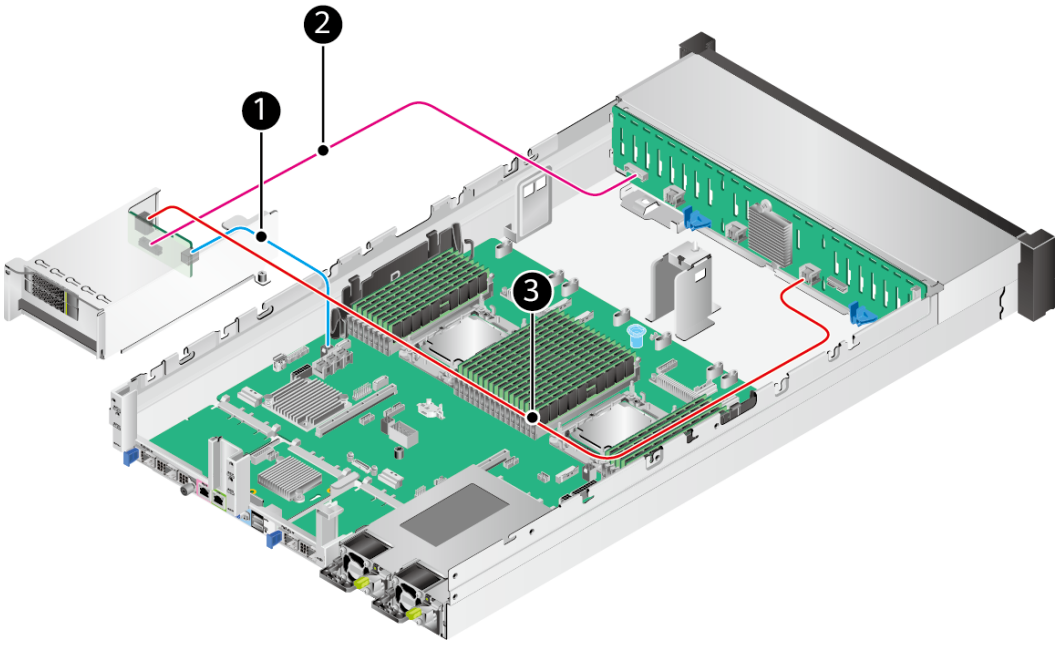

Table 6-468 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.4.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-490 I/O module 3 cabling

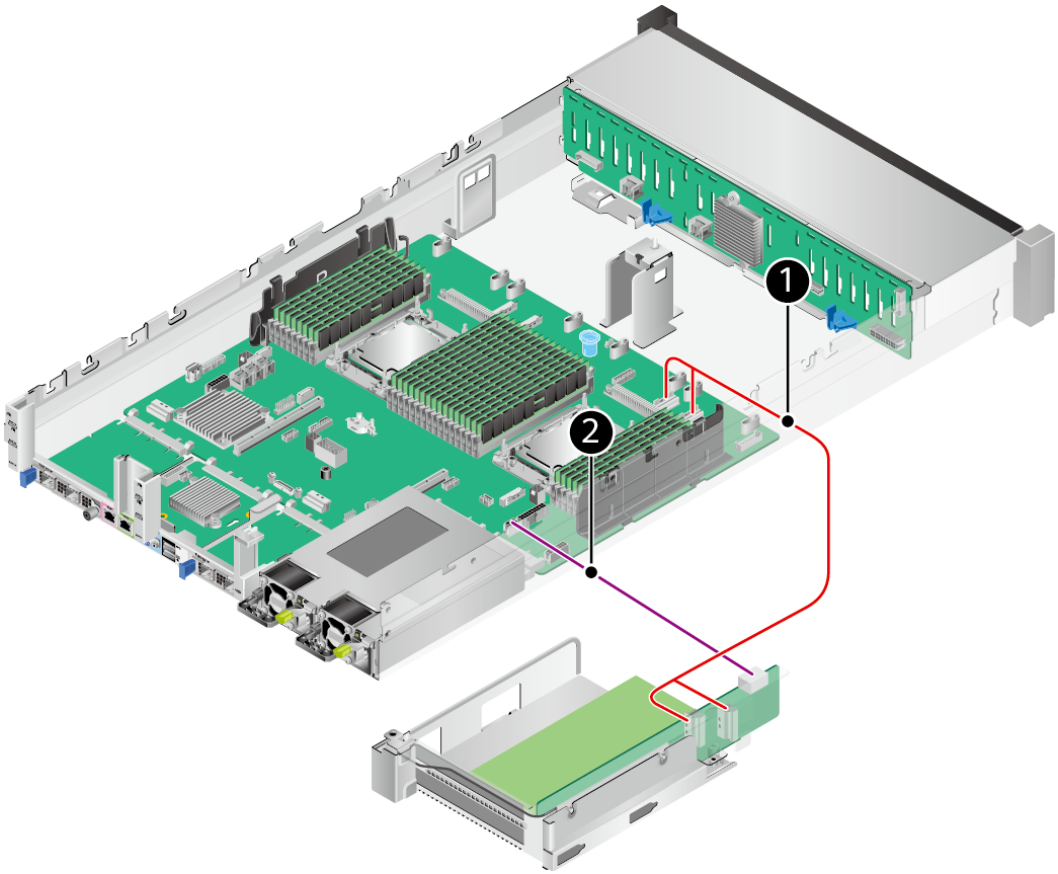

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Table 6-469 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.4.8 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-491 I/O module 3 cabling

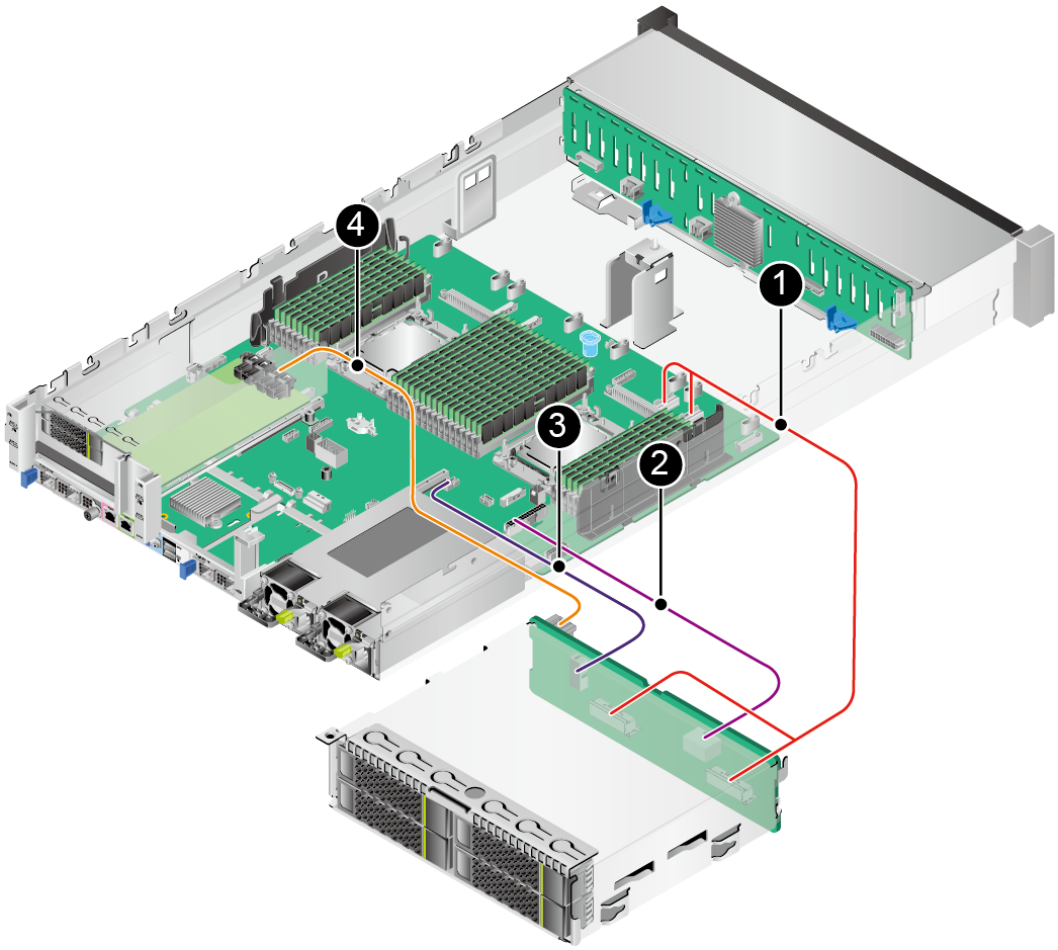

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Table 6-470 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	
4	04051059-002	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT C of the PCIe RAID controller card	-

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J801) may be C2, PORT C, 2, or CN2.

6.4.11.5 25 x 2.5" Drive EXP Configuration 5 (Dual RAID Controller Cards)

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6.4.11.5.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-492 Left and right mounting ear cabling

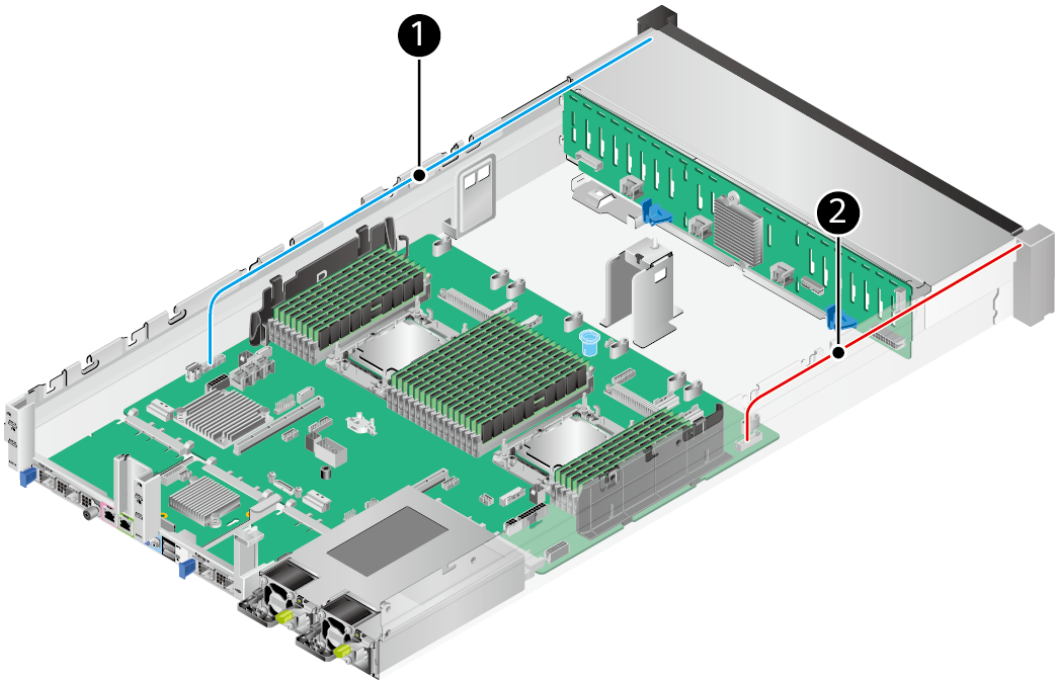

Table 6-471 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.5.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-493 Intrusion sensor cabling

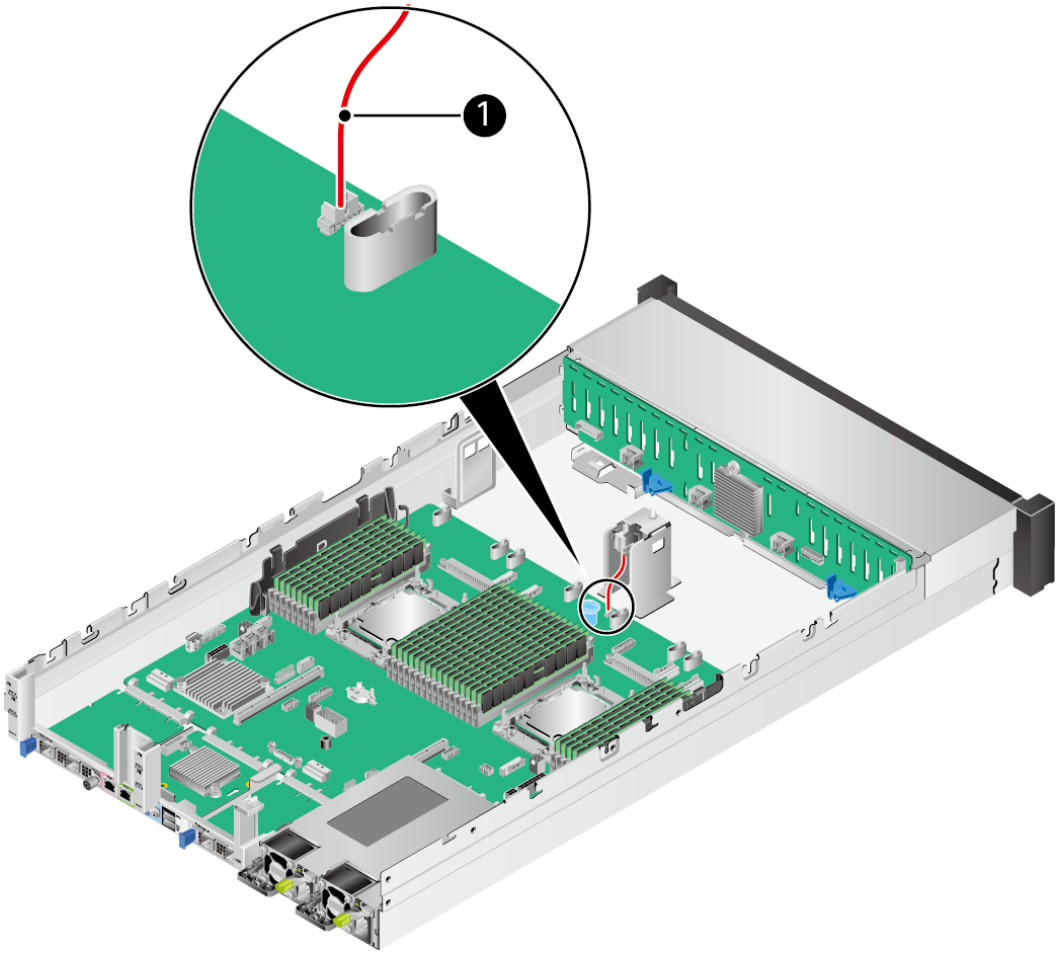

Table 6-472 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.5.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-494 Front-drive backplane power and low-speed signal cables

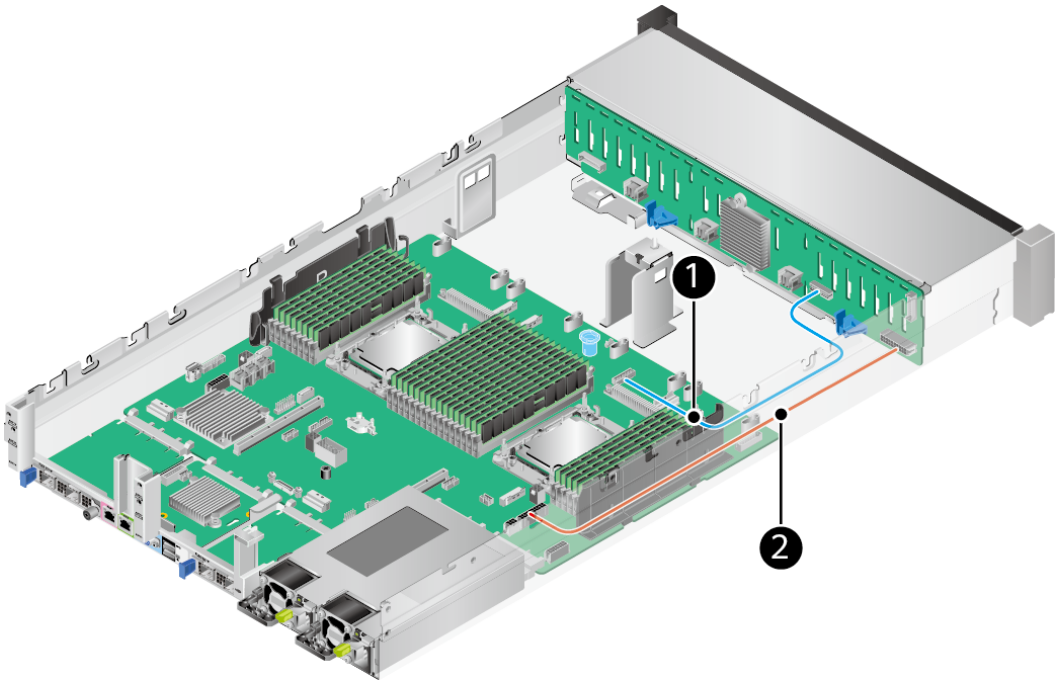

Table 6-473 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

6.4.11.5.4 Front-Drive Backplane SAS Signal Cabling

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-495 Front-drive backplane SAS high-speed cabling

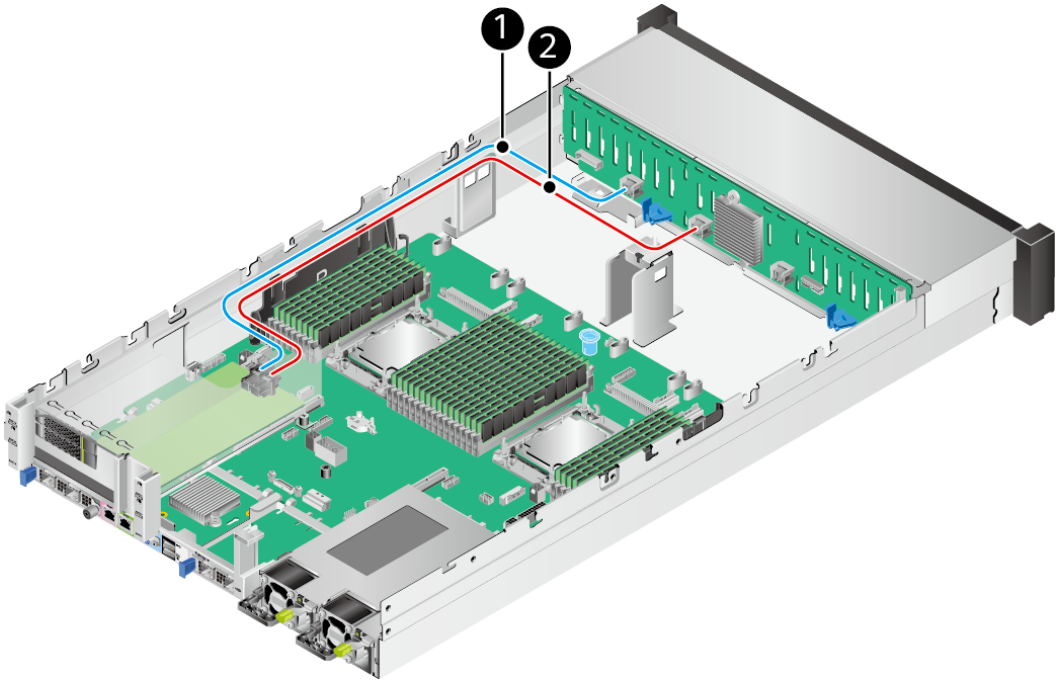

Table 6-474 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.4.11.5.5 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-496 I/O module 1 cabling

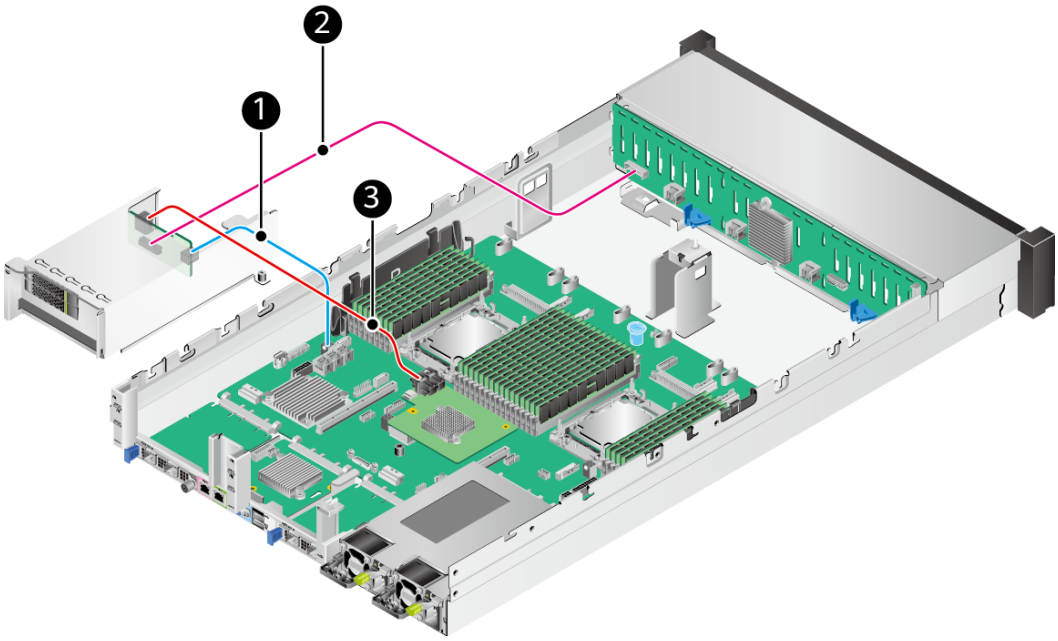

Table 6-475 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448 -001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650 -001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	-
3	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 2.5" drive module as a spare part.

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6.4.11.5.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-497 I/O module 3 cabling

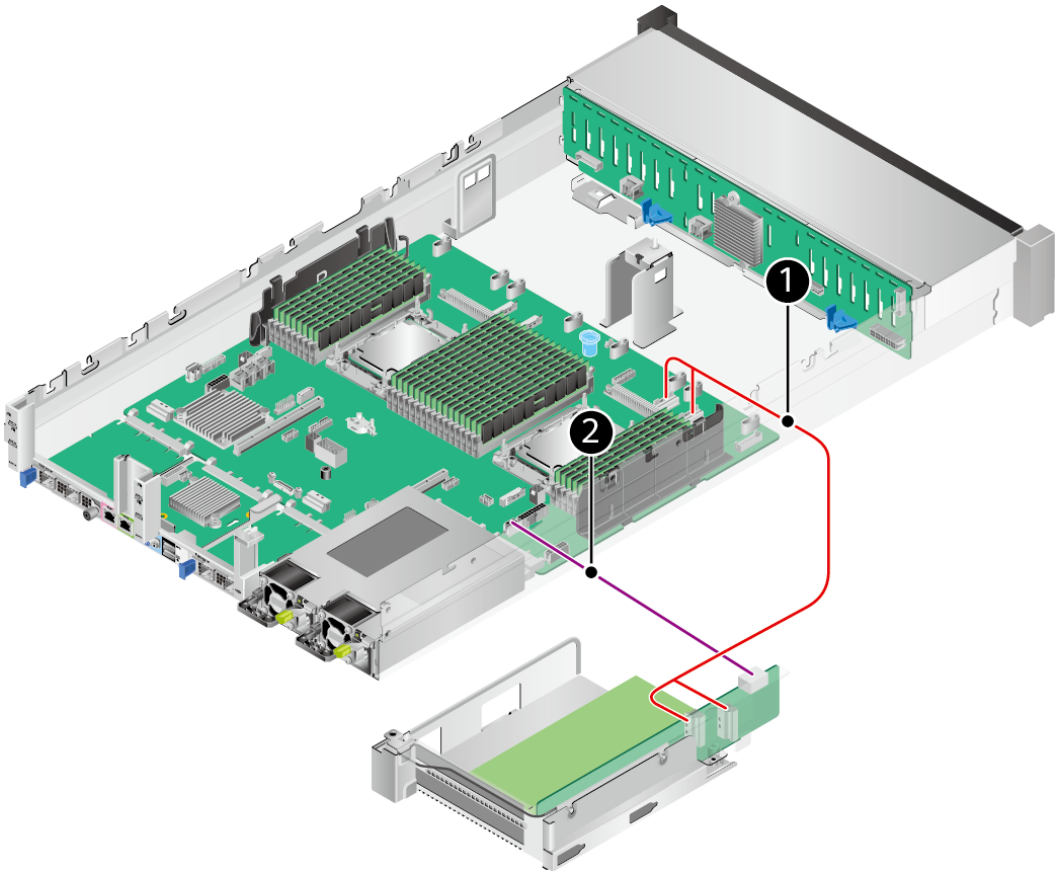

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Table 6-476 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.5.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-498 I/O module 3 cabling

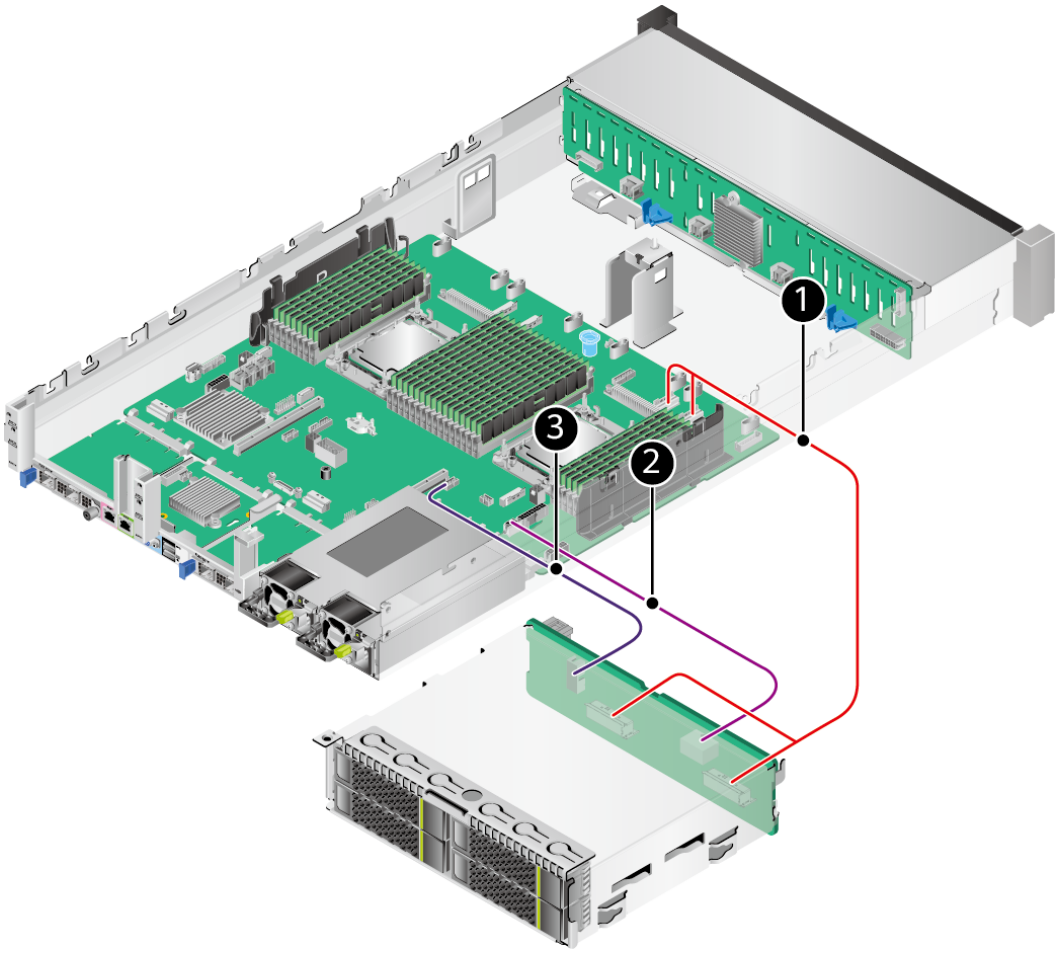

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Table 6-477 I/O Module 3 Cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.11.6 25 x 2.5" Drive EXP Configuration 6

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6.4.11.6.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-499 Left and right mounting ear cabling

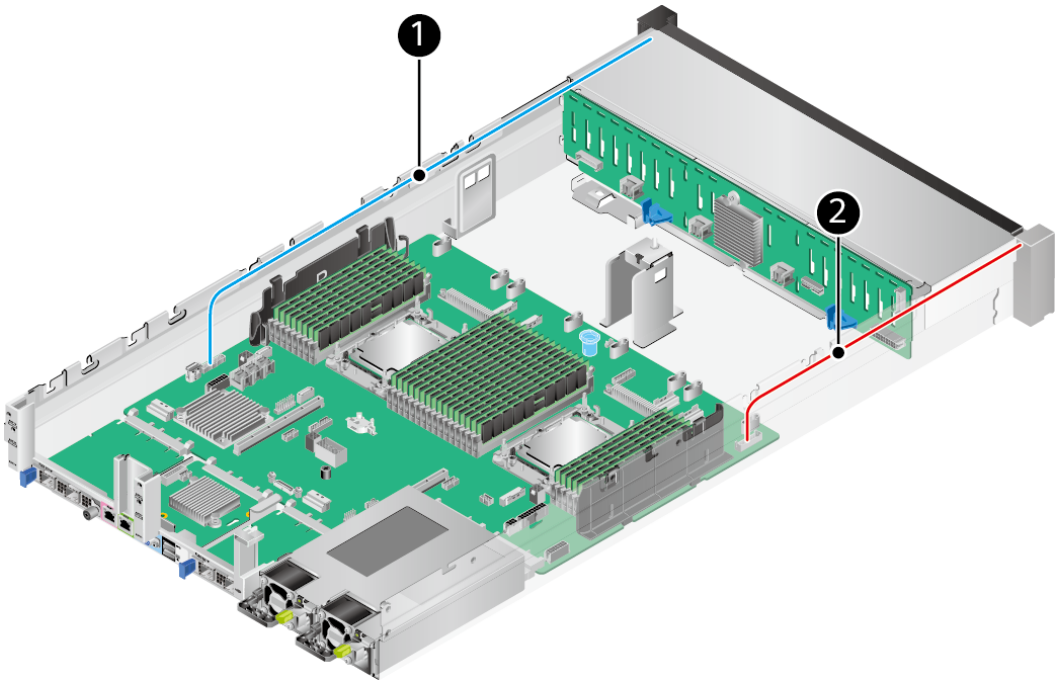

Table 6-478 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.6.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-500 OCP 3.0 expansion cable 1

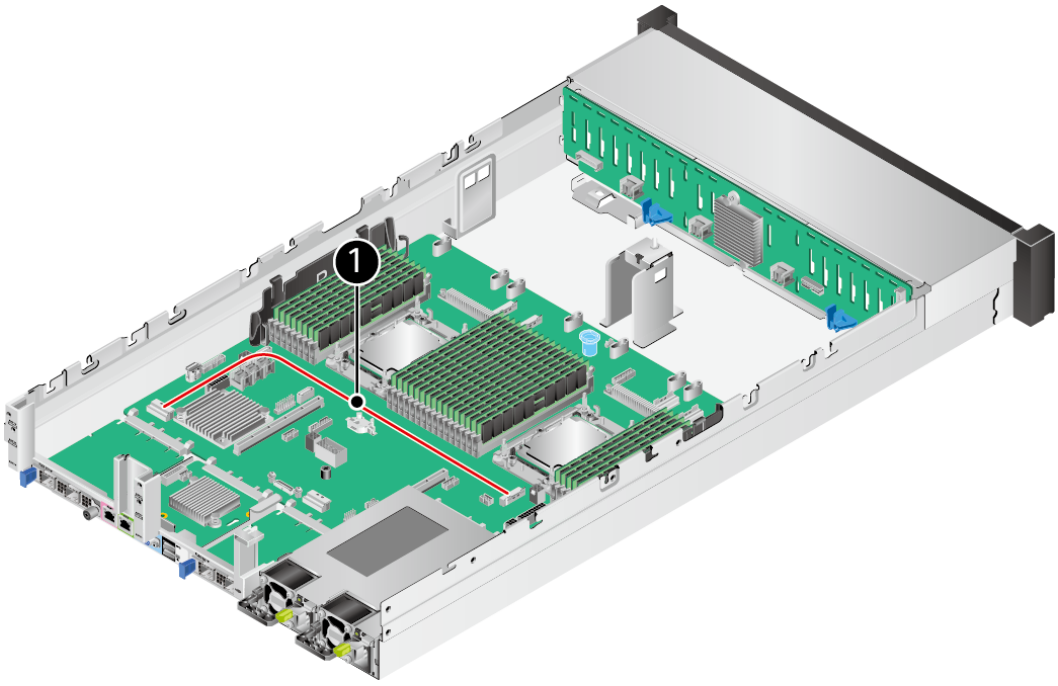

Table 6-479 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-501 OCP 3.0 expansion cable 2

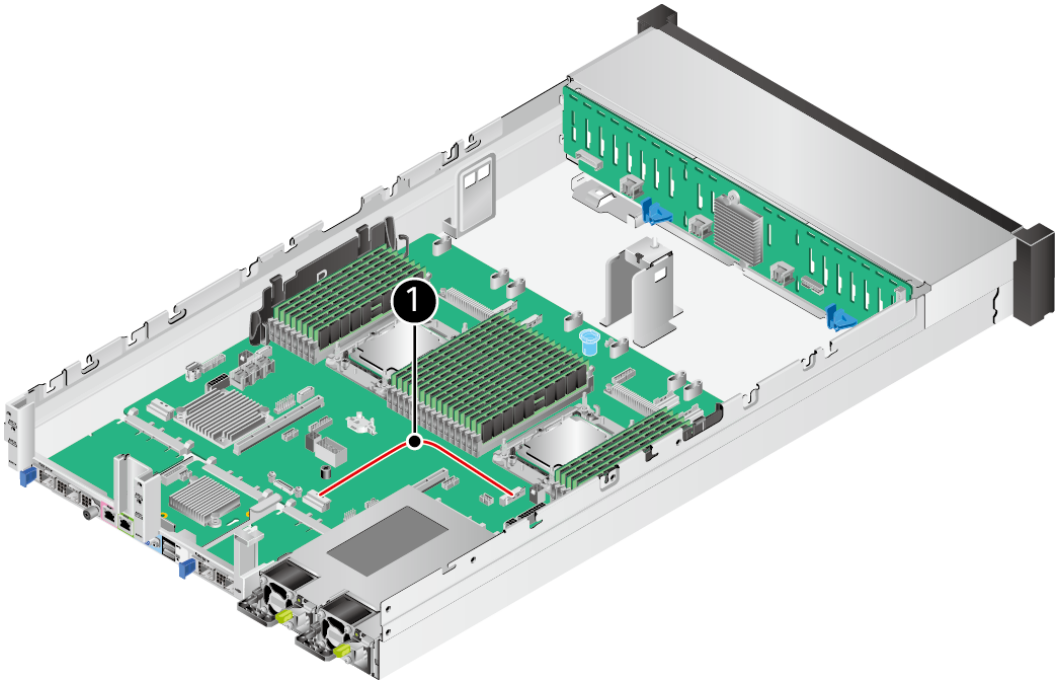

Table 6-480 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.11.6.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-502 Intrusion sensor cabling

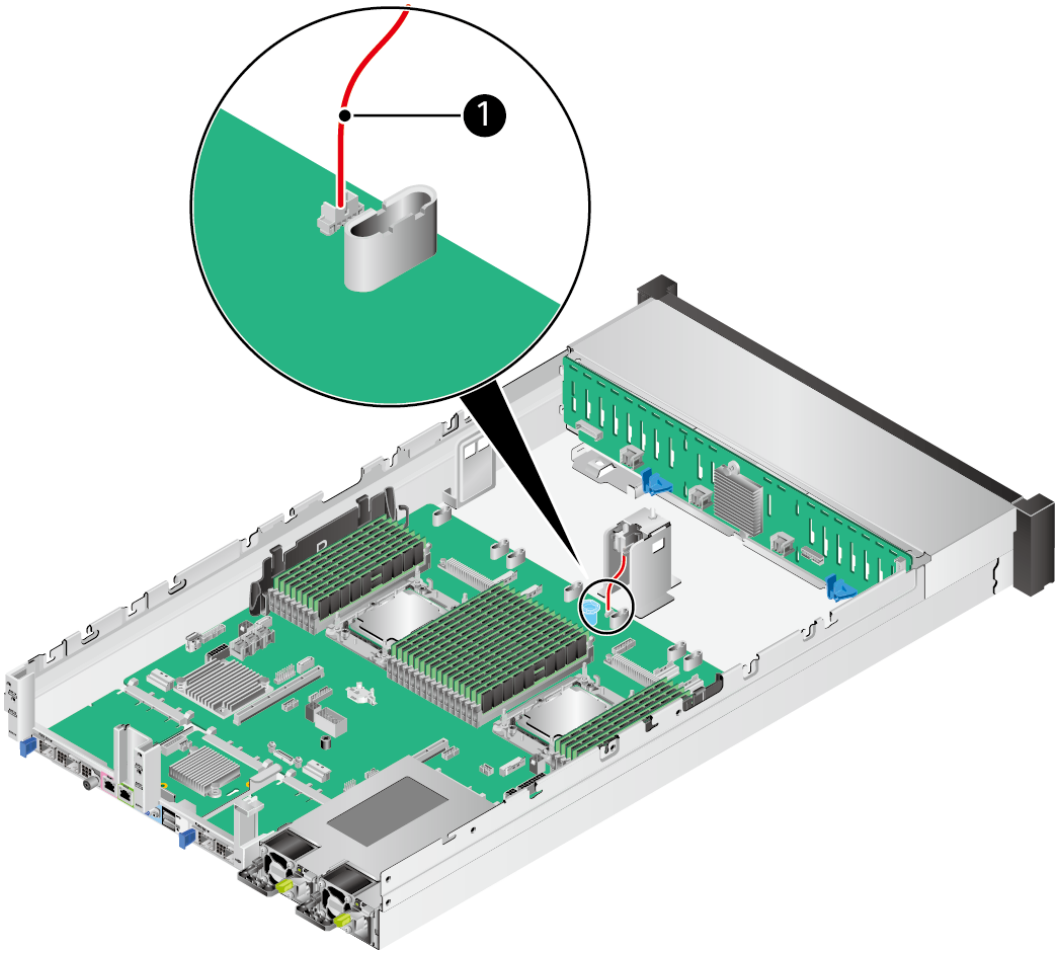

Table 6-481 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.6.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-503 Front-drive backplane power and low-speed signal cables

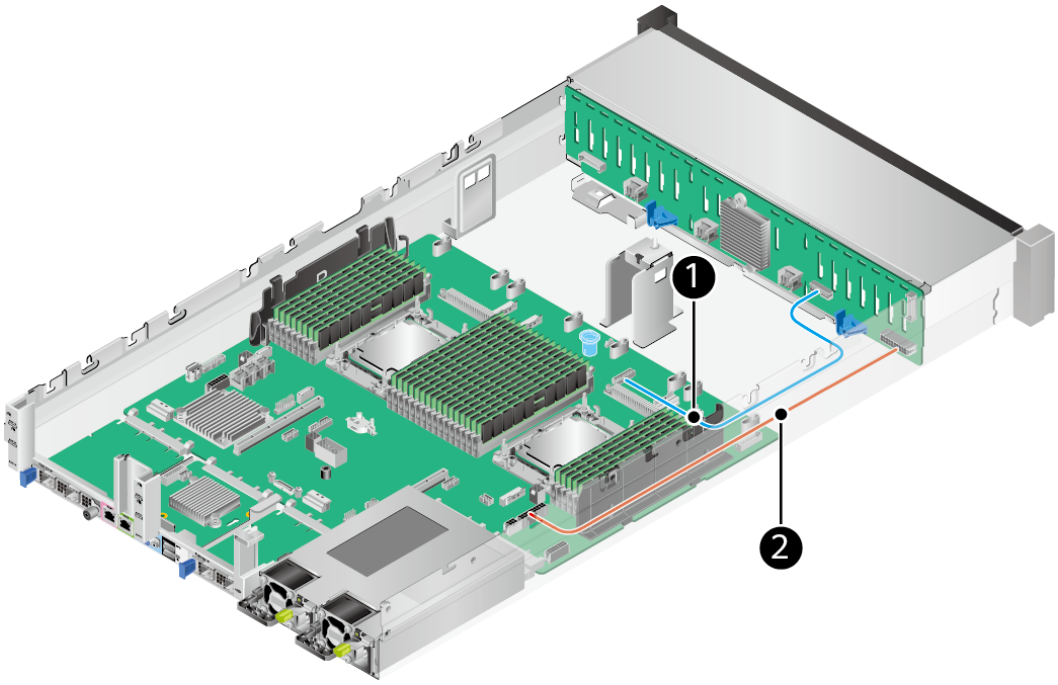

Table 6-482 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

6.4.11.6.5 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-504 Front-drive backplane SAS high-speed cabling

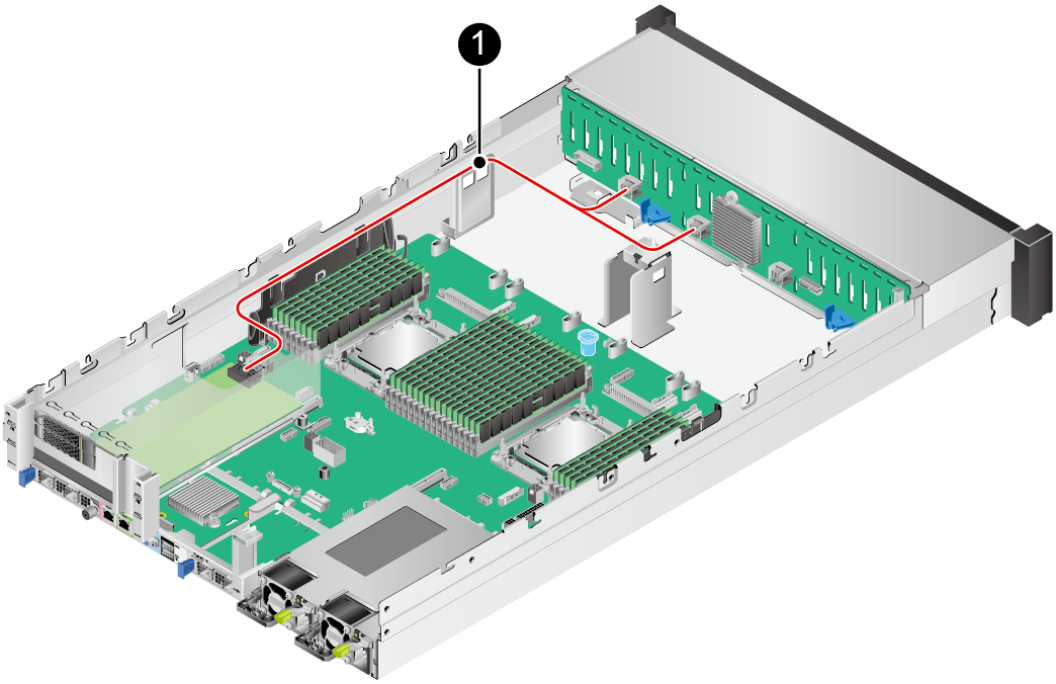

Table 6-483 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y017-003	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y017-003 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.11.6.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-505 I/O module 1 cabling

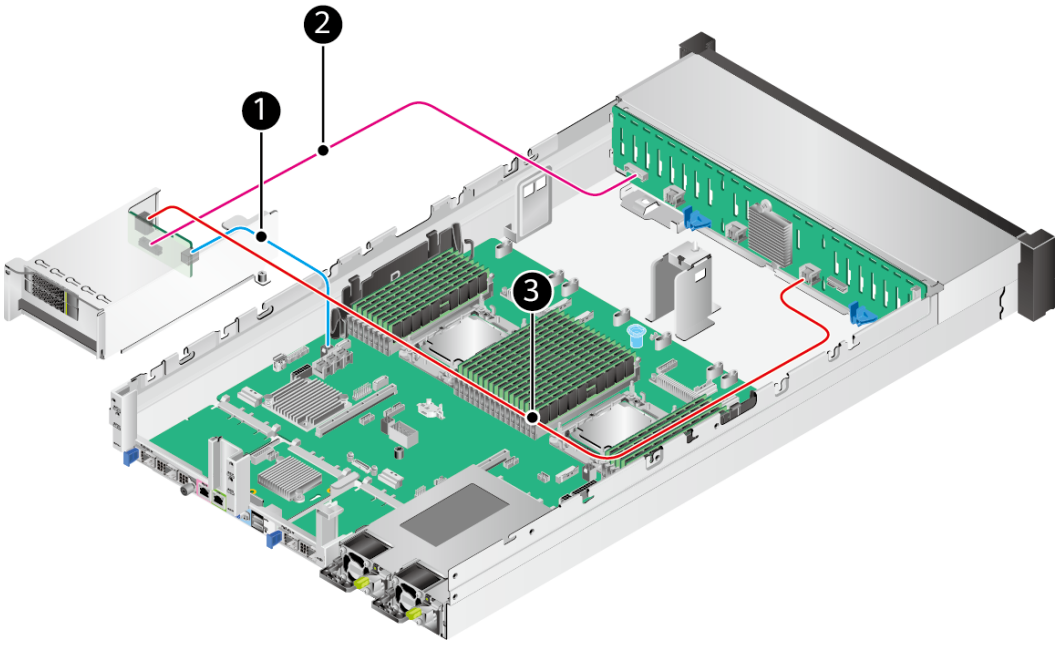

Table 6-484 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.6.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-506 I/O module 1 and I/O module 2 cabling

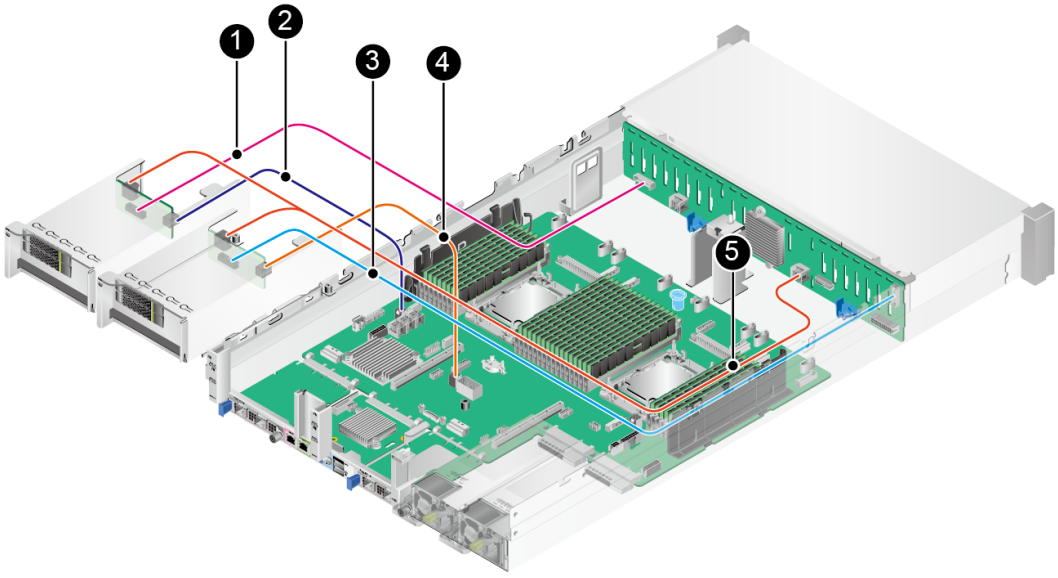

Table 6-485 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 2 and connector HDD B corresponds to the backplane (J2) of I/O module 1, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.

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6.4.11.6.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-507 I/O module 1 and I/O module 2 cabling

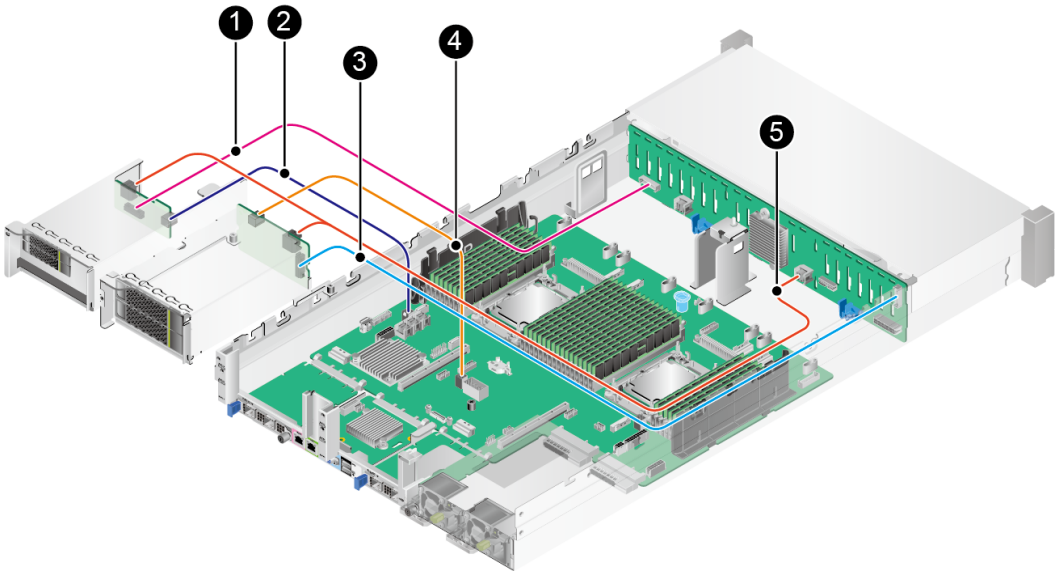

Table 6-486 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.

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6.4.11.6.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-508 I/O module 3 cabling

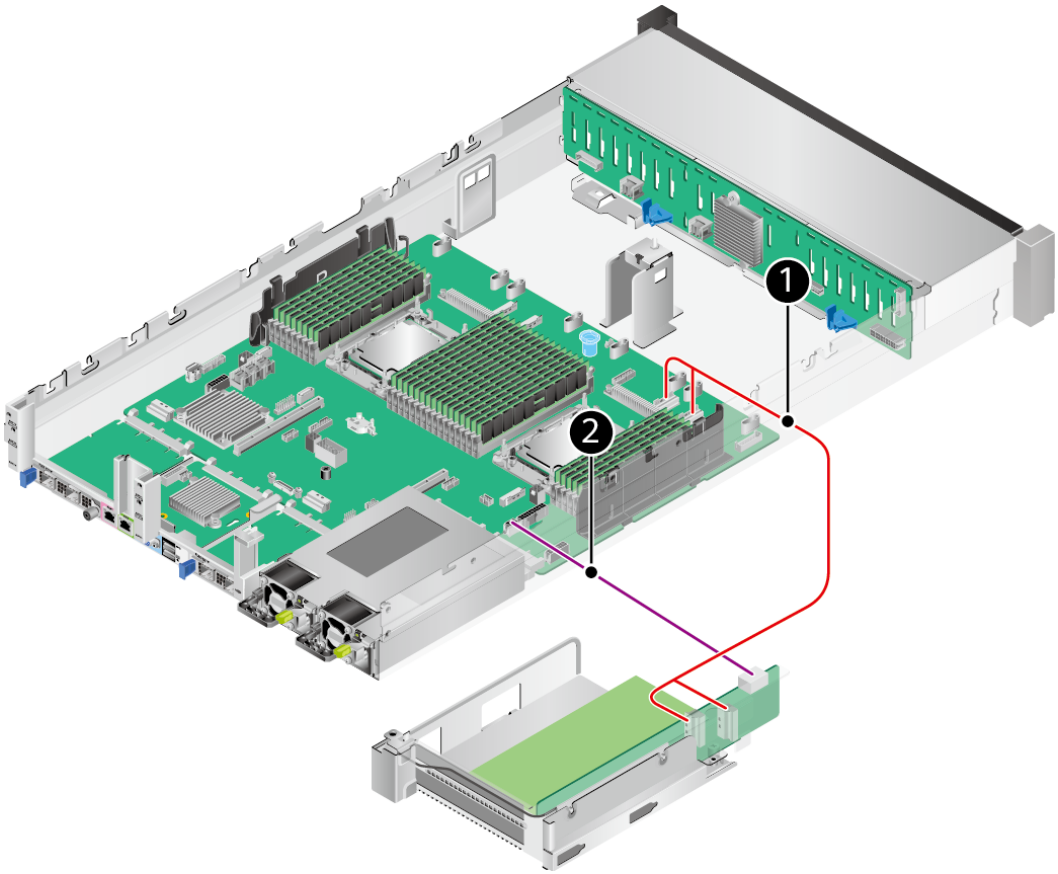

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Table 6-487 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.6.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-509 I/O module 3 cabling

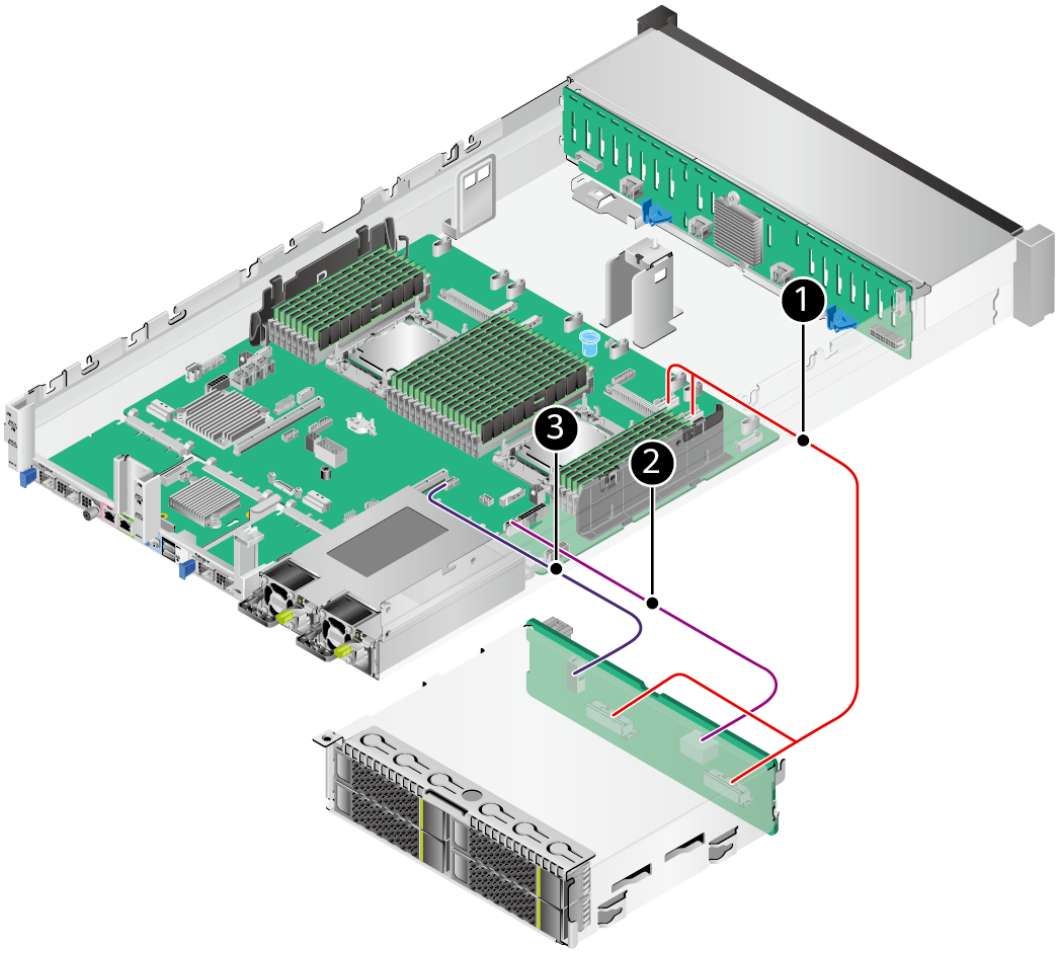

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Table 6-488 I/O Module 3 Cabling

No.	P/N Code	Description	Remarks
1	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	
3	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	

6.4.11.7 25 x 2.5" Drive EXP Configuration 7

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6.4.11.7.1 Left and Right Mounting Ear Cabling

Left and Right Mounting Ear Cabling

Figure 6-510 Left and right mounting ear cabling

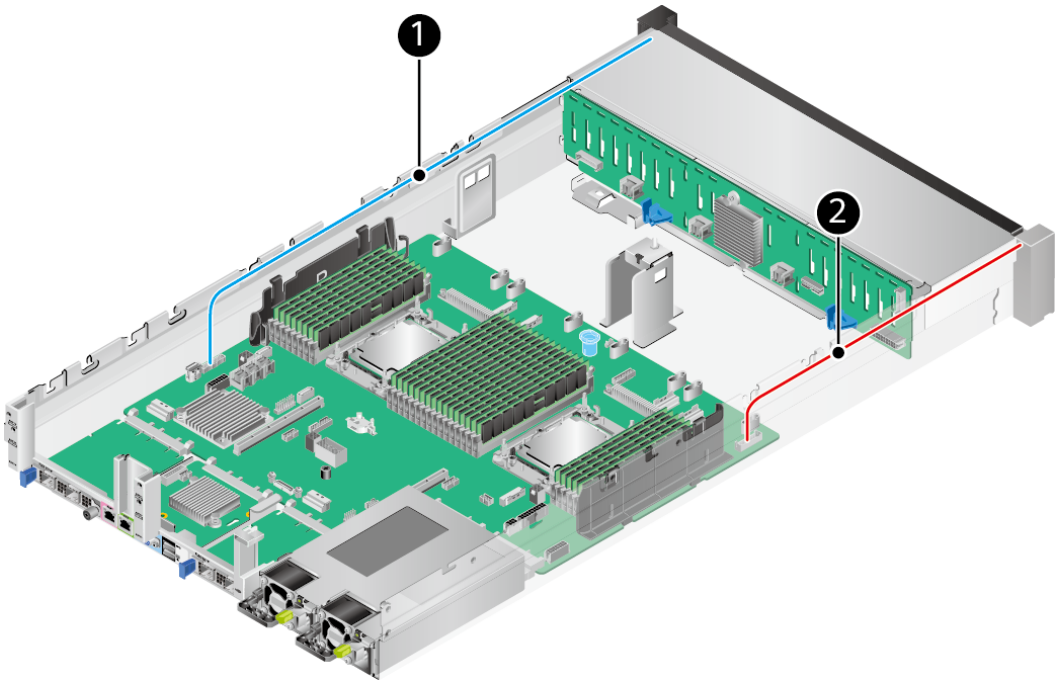

Table 6-489 Left and right mounting ear cabling

No.	P/N Code	Description
1	04052666	Low-speed signal cable for connecting the right mounting ear board to the mainboard (J113)
2	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.4.11.7.2 OCP 3.0 Expansion Cable

OCP 3.0 Expansion Cable

NOTE

- When configured with a single CPU, the OCP 3.0 network card can only be installed in the 1 slot of the FlexIO card, and it does not support the expansion of bandwidth through the OCP 3.0 expansion cable.
- When configuring with dual CPUs, FlexIO card 1 and FlexIO card 2 slots can be configured with OCP 3.0 network cards, but only one OCP 3.0 network cards is supported to expand bandwidth at the same time.
  - FlexIO card has 1 slot, and the default operating bandwidth is x8. If you need to expand to x8+x8, you need to use 04052322-001 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 1 LP Slimline 6 connector (J13).
  - The FlexIO card has 2 slots, and the default operating bandwidth is x8. If you need to expand to x16, you need to use a 04052322 cable to connect the mainboard LP Slimline 5 connector (J30) and OCP 3.0 network card 2 LP Slimline 7 connector (J31).

Figure 6-511 OCP 3.0 expansion cable 1

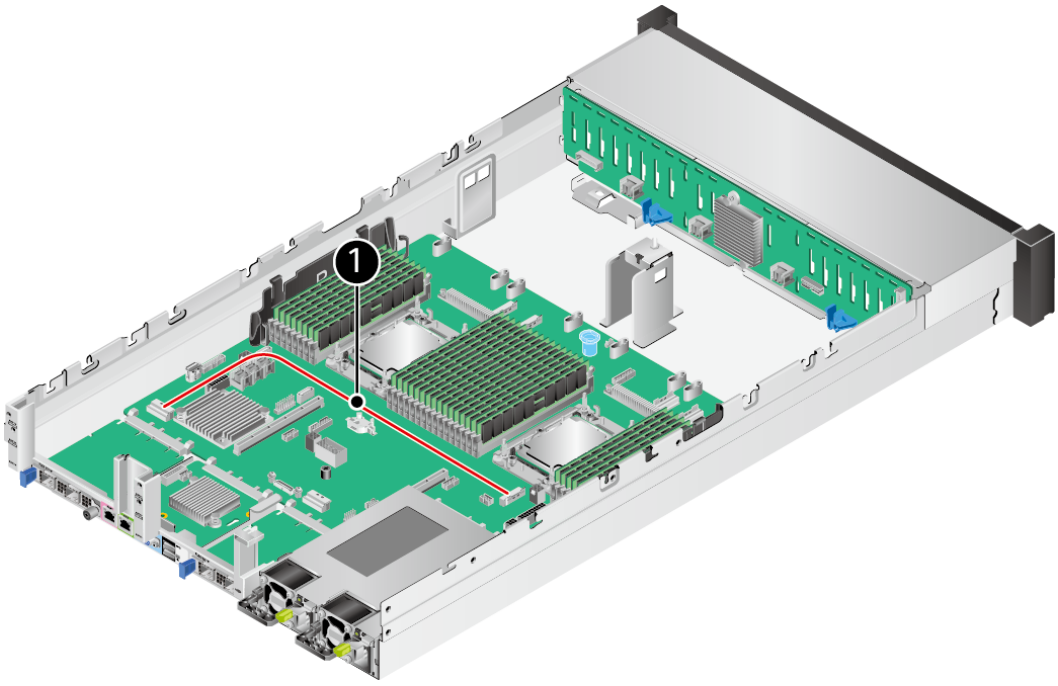

Table 6-490 OCP 3.0 expansion cable 1

No.	P/N Code	Description
1	04052322-001	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 6 (J13) of OCP 3.0 network adapter 1

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Figure 6-512 OCP 3.0 expansion cable 2

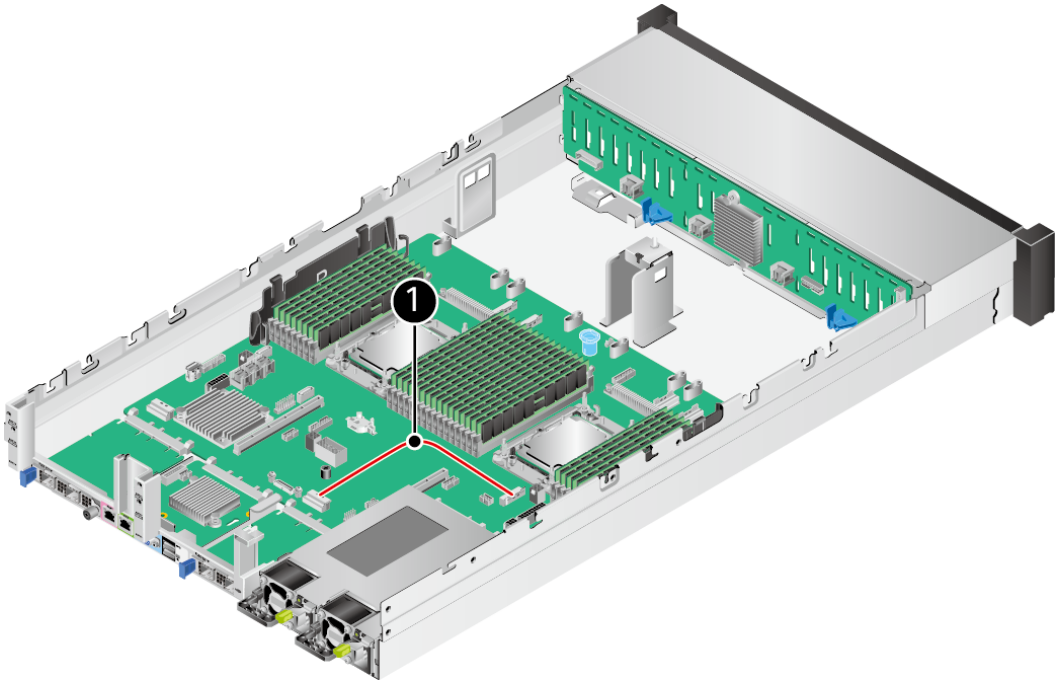

Table 6-491 OCP 3.0 expansion cable 2

No.	P/N Code	Description
1	04052322	OCP 3.0 expansion cable for connecting LP Slimline 5 (J30) to LP Slimline 7 (J31) of OCP 3.0 network adapter 2

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6.4.11.7.3 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-513 Intrusion sensor cabling

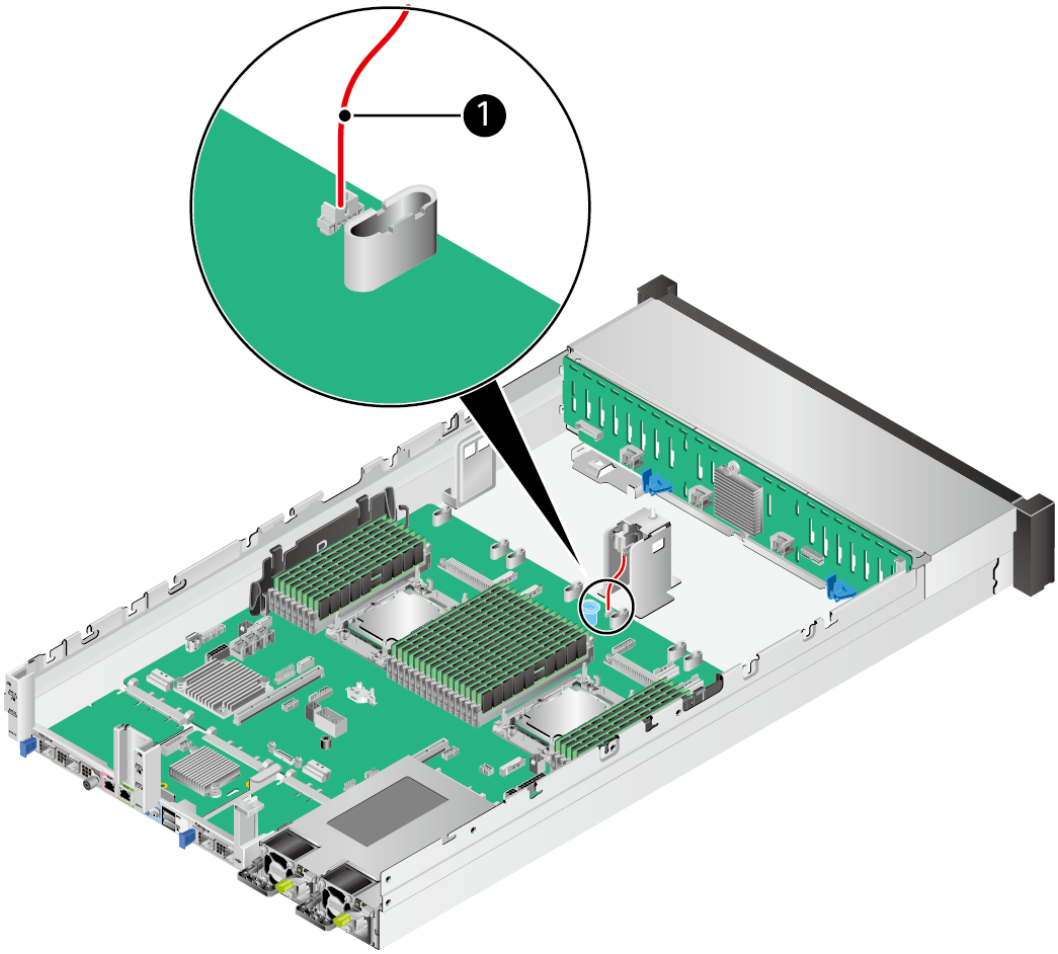

Table 6-492 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.4.11.7.4 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cables

Figure 6-514 Front-drive backplane power and low-speed signal cables

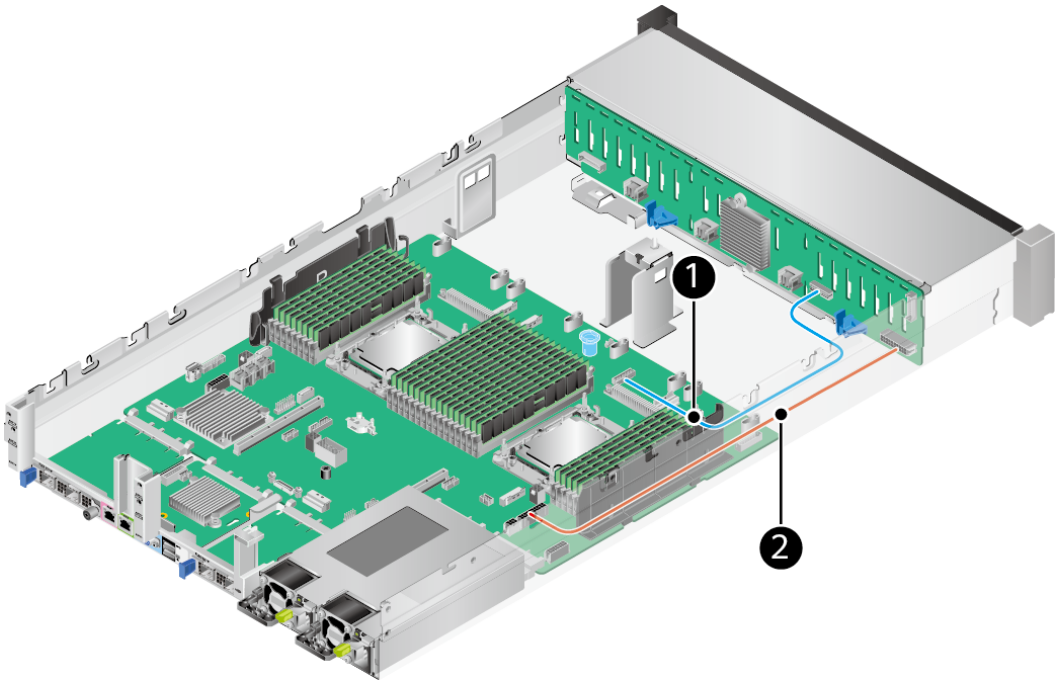

Table 6-493 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)
2	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)

6.4.11.7.5 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

The PCIe RAID controller card must be installed in slot 3.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-515 Front-drive backplane SAS high-speed cabling

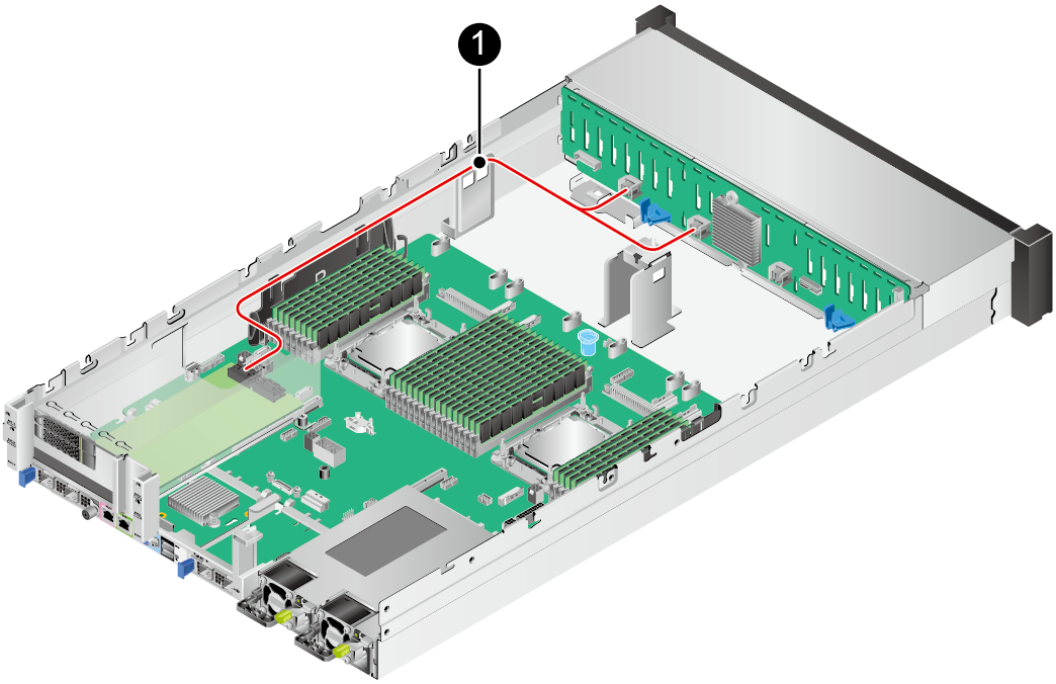

Table 6-494 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y017-003	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y017-003 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.4.11.7.6 I/O Module 1 (2 x 2.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-516 I/O module 1 cabling

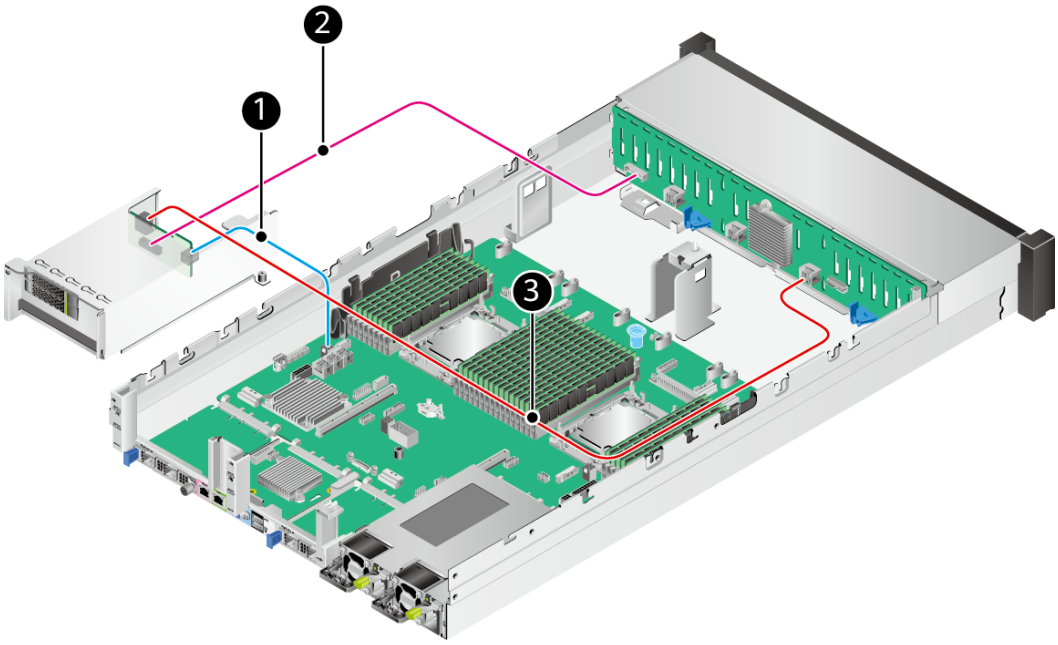

Table 6-495 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.4.11.7.7 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 2.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-517 I/O module 1 and I/O module 2 cabling

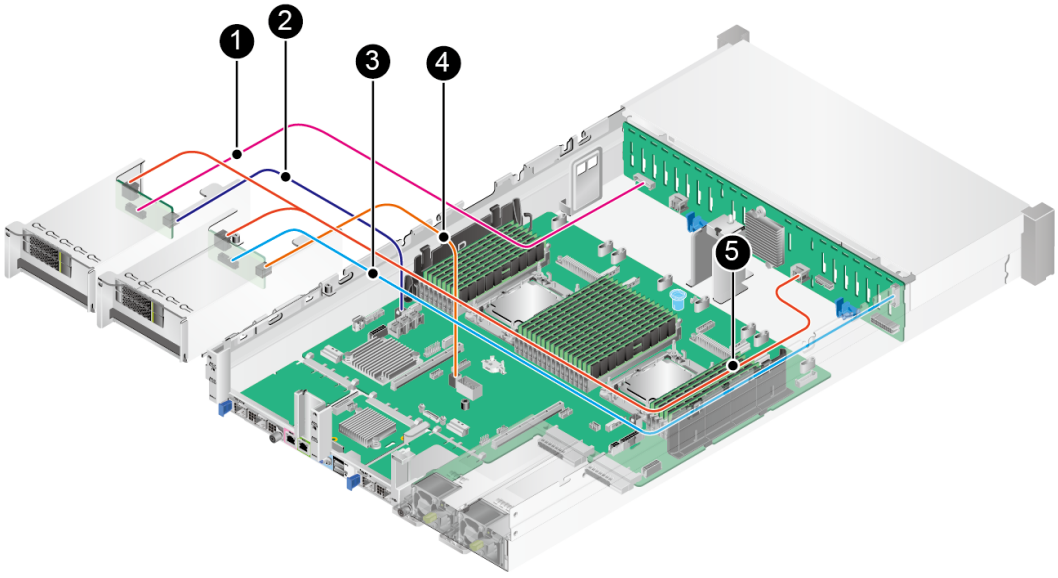

Table 6-496 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 2 and connector HDD B corresponds to the backplane (J2) of I/O module 1, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.

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6.4.11.7.8 I/O Module 1 (2 x 2.5" SAS/SATA Drives) and I/O Module 2 (2 x 3.5" SAS/SATA Drives) Cabling

I/O Module 1 and I/O Module 2 Cabling

Figure 6-518 I/O module 1 and I/O module 2 cabling

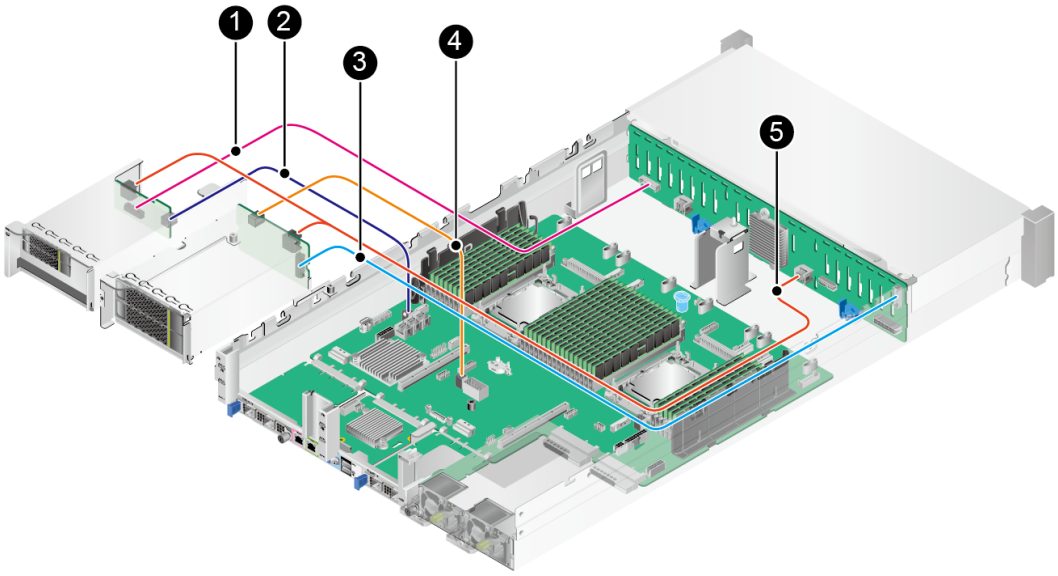

Table 6-497 I/O module 1 and I/O module 2 cabling

No.	P/N Code	Description
1	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
2	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
3	04080650-001	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J35)
4	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J21)
5	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. Connector HDD A corresponds to the backplane (J2) of I/O module 1, connector HDD B corresponds to the backplane (J2) of I/O module 2, and another end of the cable is connected to the front drive backplane. Use cable connectors based on actual situation.

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6.4.11.7.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-519 I/O module 3 cabling

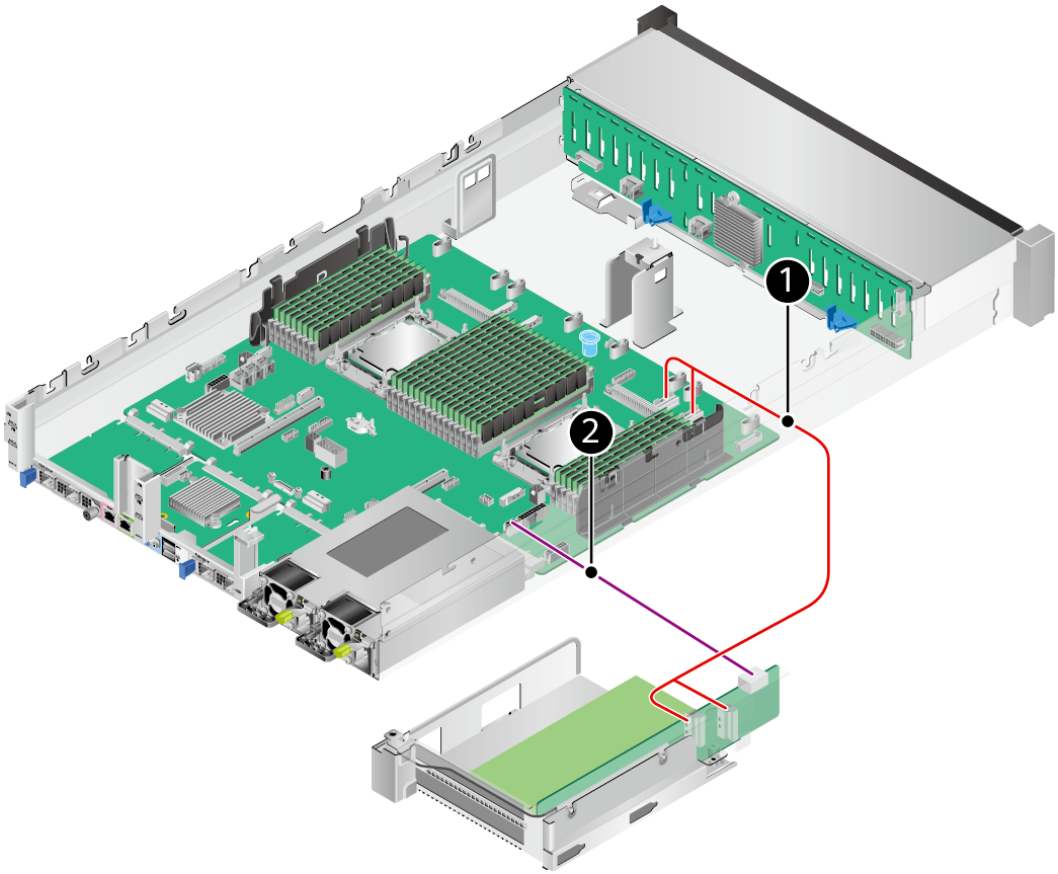

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Table 6-498 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052938	High-speed cables for connecting LP Slimline 3 and LP Slimline 4 on the PCIe riser card to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 connector on the 04052938 cable corresponds to the PCIe riser card LP Slimline 3 and the Slim_4 connector corresponds to the PCIe riser card LP Slimline 4; the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85) and the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.4.11.7.10 I/O Module 3 Cabling (4 x 2.5" SAS/SATA Drives)

I/O Module 3 Cabling

Figure 6-520 I/O module 3 cabling

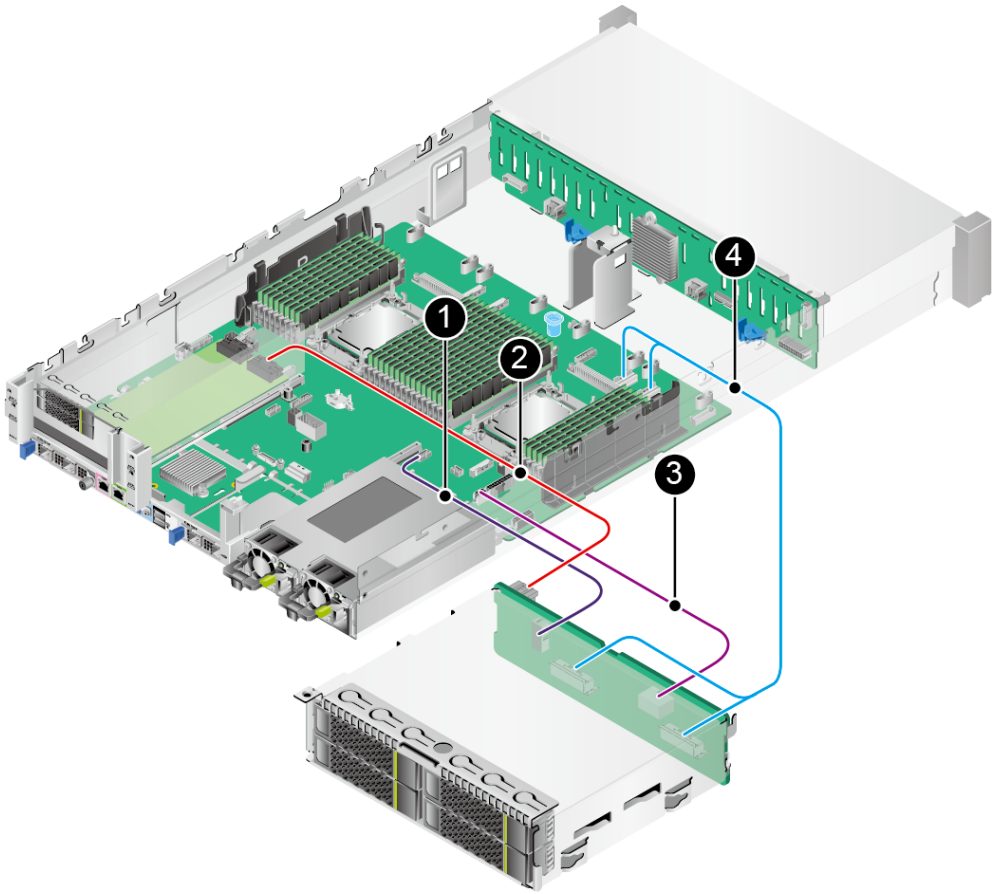

Table 6-499 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	0405Y026	SAS high-speed cable for connecting the rear-drive backplane (J801) to C1 of the PCIe RAID controller card	-
3	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	The cable is not an independent spare part. It is packed with the 4 x 2.5"

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No.	P/N Code	Description	Remarks
4	04052317	High-speed cable for connecting LP Slimline 3 (J901) and LP Slimline 4 (J1001) on the rear-drive backplane to LP Slimline 3 (J85) and LP Slimline 4 (J12) on the mainboard **NOTE** The Slim_3 B P connector on the 04052317 cable corresponds to the rear-drive backplane LP Slimline 3 (J901), the Slim_4 B P connector corresponds to the rear-drive backplane LP Slimline 4 (J1001); the Slim_3 M B connector corresponds to the mainboard LP Slimline 3 (J85), the Slim_4 M B connector corresponds to the mainboard LP Slimline 4 (J12).	drive module as a spare part.

6.5 Internal Cabling (2288H V6-16DIMM)

6.5.1 Cabling Overview

- Before connecting cables:
  - Check the connection ports of the cables to ensure that the ports are not rusty or damaged.
  - Do not forcibly unfold the pre-bent part of a cable to prevent damage to the cable.
  - Do not touch the ports at both ends of a cable to protect the cable from being contaminated by the oil on your hands or damaged.
- When connecting cables:
  - Connect cables of a proper length. Too long or too short cables may cause interference in transmission and transmission instability.
  - Properly route and secure cables to protect the cables from being squeezed and reduce interference in signal and transmission errors.
  - Avoid bending or stretching a cable excessively to prevent damage to the cable.
- When disconnecting cables:
  - Disconnect cables carefully and orderly to ensure that the normal operation of devices is not affected.
  - Hold the main body of a cable connector to avoid pulling the cable itself and damaging the internal wires of the cable or the pins on the connector.

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– If a cable cannot be disconnected easily, do not pull the cable forcibly. Check whether there is a guide pin that can be pressed to release the cable.
– If a cable of the server is no longer required, remove and store it properly to prevent airflow inside the server from being blocked and heat dissipation being affected.

6.5.2 8 x 2.5" Drive Pass-through Configuration

6.5.2.1 8 x 2.5" Drive Pass-through Configuration 1

6.5.2.1.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-521 Left mounting ear cabling

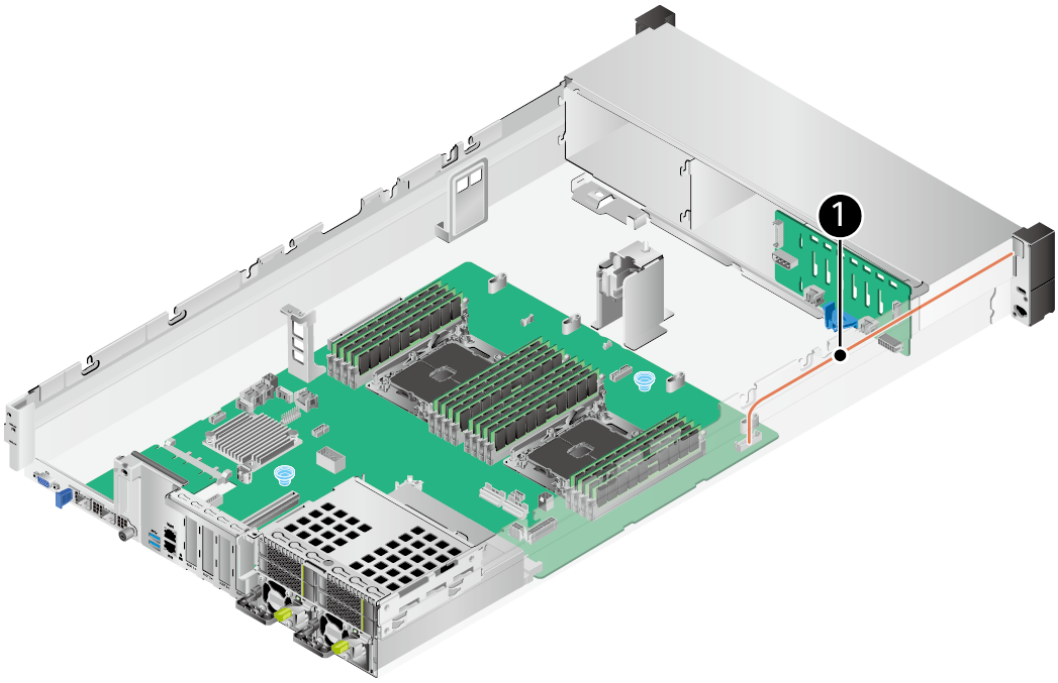

Table 6-500 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.2.1.2 DVD Drive Cabling

DVD Drive Cabling

Figure 6-522 DVD drive cabling

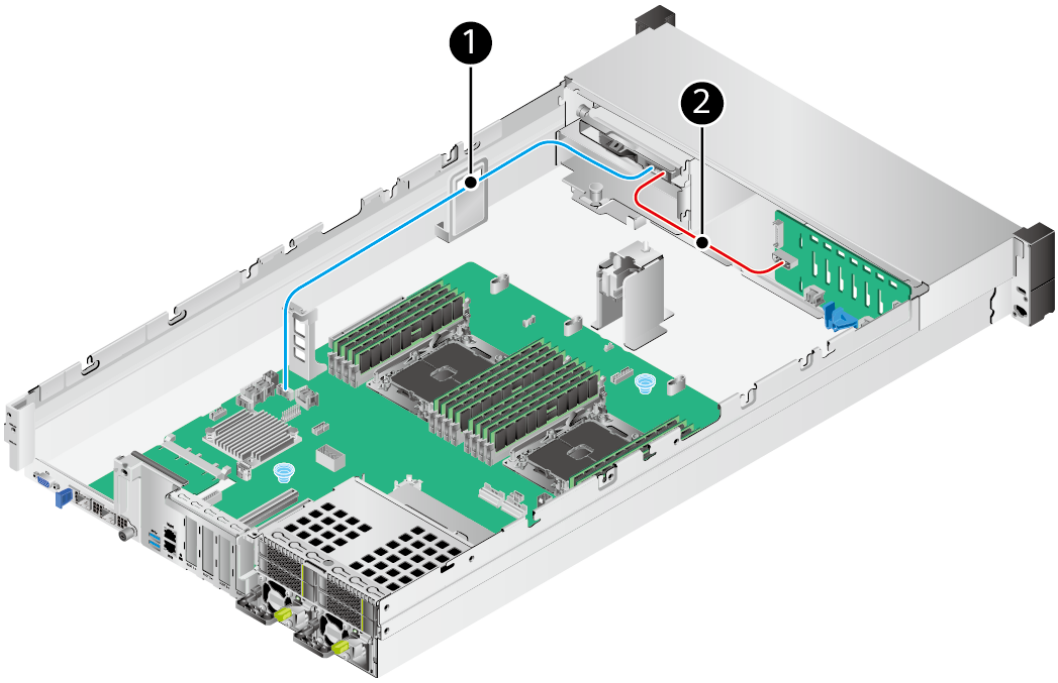

Table 6-501 DVD drive cabling

No.	P/N Code	Description
1	04050689	High-speed cable for connecting the DVD drive to the mainboard (J1)
2	04050689	Power cable for connecting the DVD drive to the front-drive backplane (J11)

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6.5.2.1.3 LCD Cabling

LCD Cabling

Figure 6-523 LCD cabling

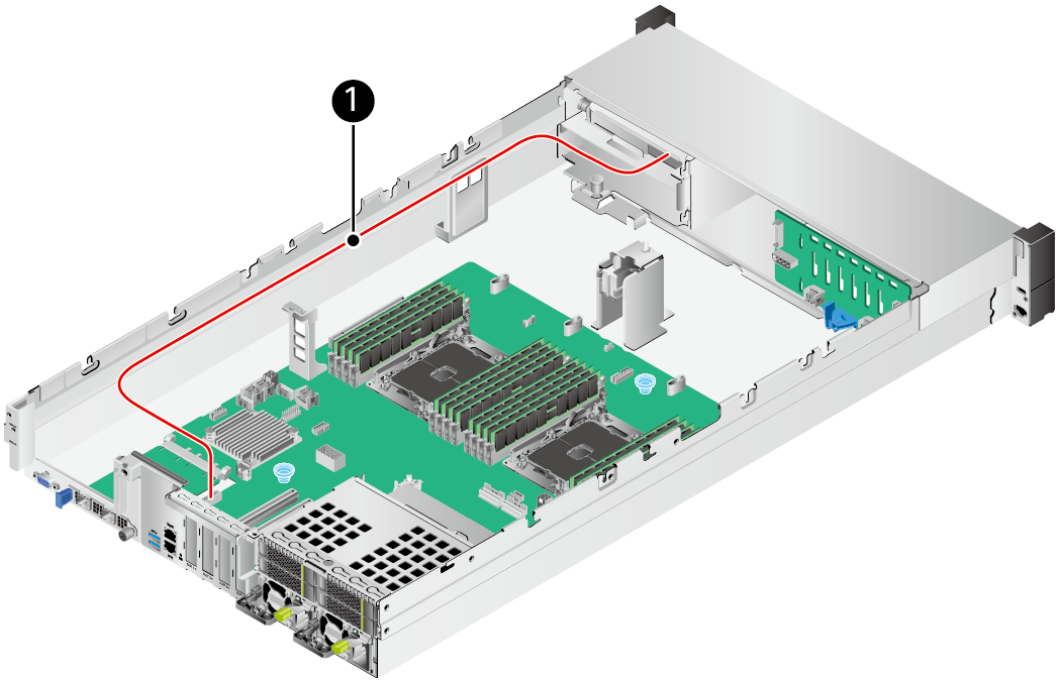

Table 6-502 LCD cabling

No.	P/N Code	Description
1	-	Signal cable for connecting the LCD to the mainboard (J9)

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6.5.2.1.4 NC-SI Cabling

NC-SI Cabling

Figure 6-524 NC-SI cabling

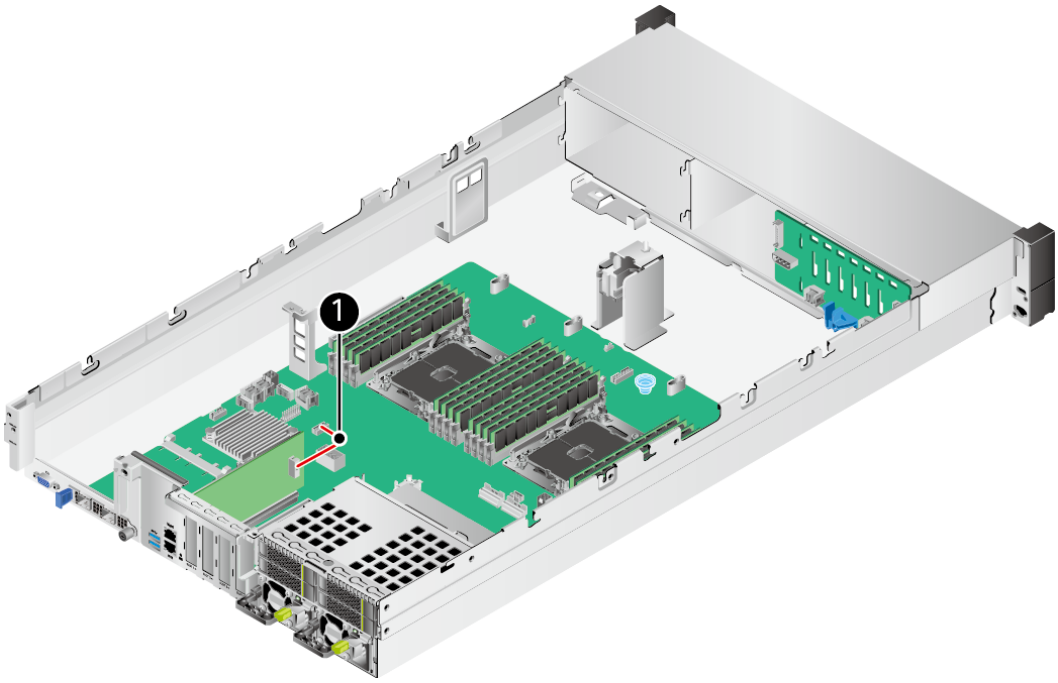

Table 6-503 NC-SI cabling

No.	P/N Code	Description
1	04080584	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)

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6.5.2.1.5 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-525 Intrusion sensor cabling

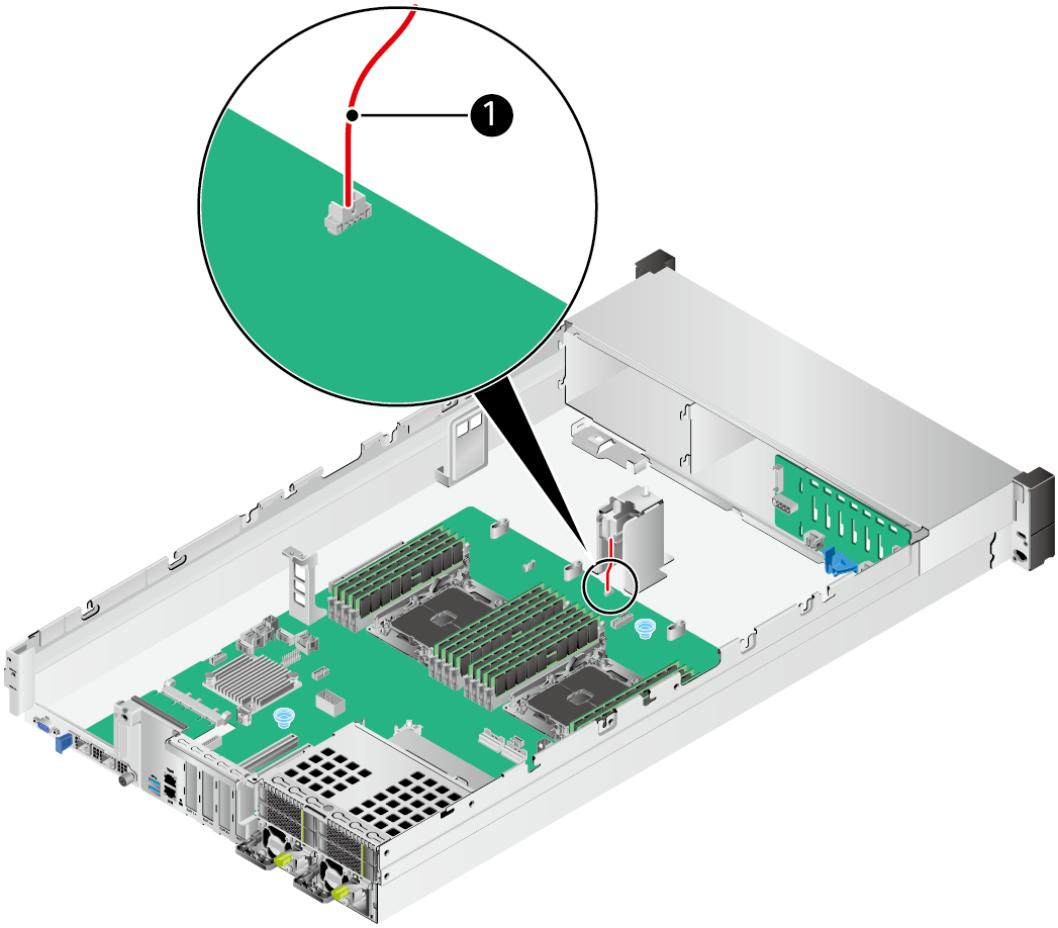

Table 6-504 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.2.1.6 VGA Cabling

VGA Cabling

Figure 6-526 VGA cabling

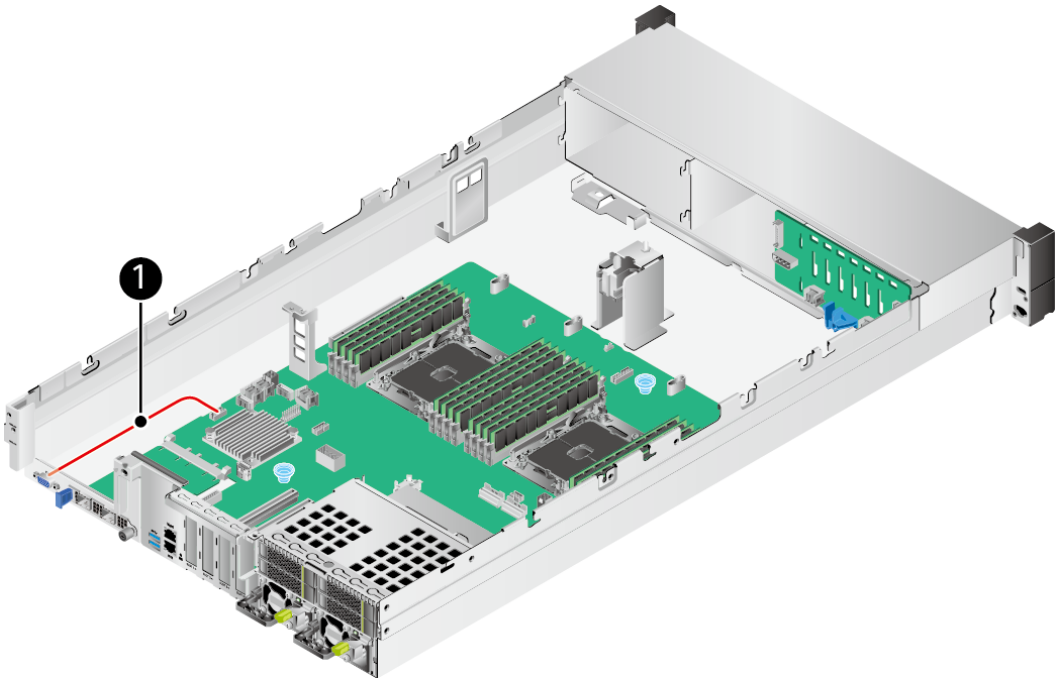

Table 6-505 VGA cabling

No.	P/N Code	Description
1	04053072	Low-speed signal cable for connecting the rear VGA board to the mainboard (J2037)

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6.5.2.1.7 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-527 Front-drive backplane power and low-speed signal cabling

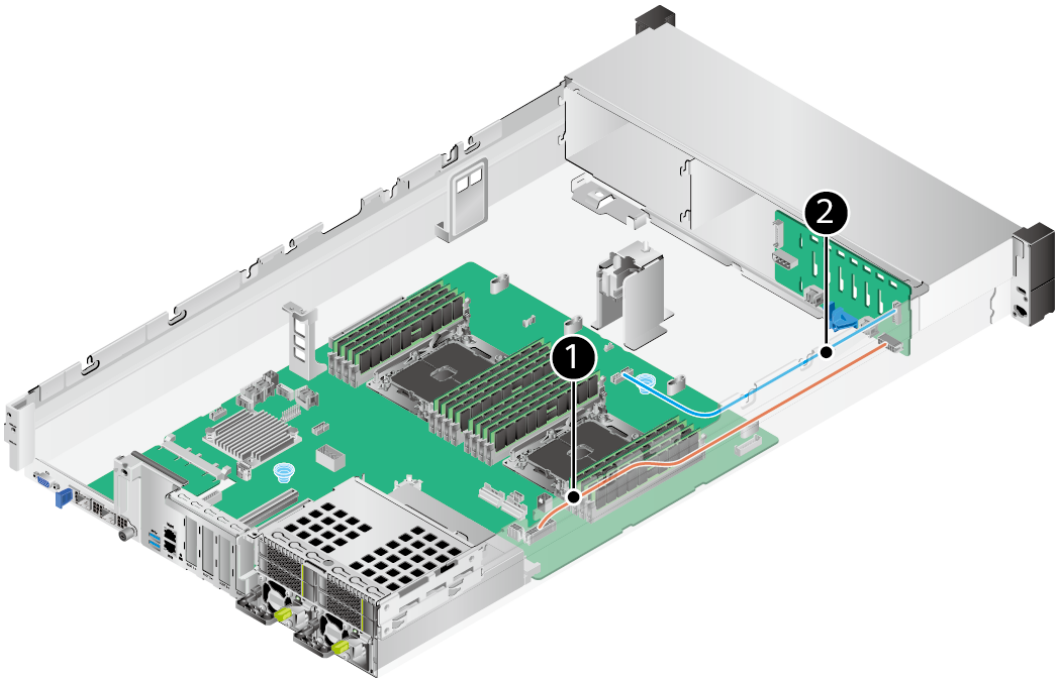

Table 6-506 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

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6.5.2.1.8 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-528 Front-Drive Backplane SAS High-speed Cabling

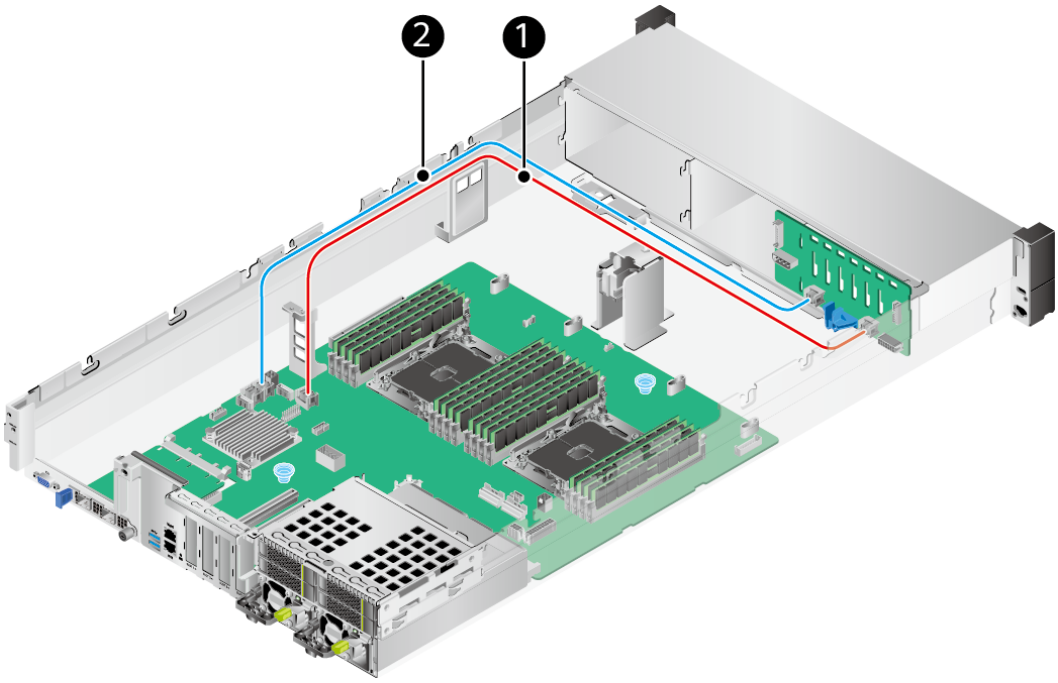

Table 6-507 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J28) to the mainboard (J6)
2	04051939-001	SAS high-speed cable for connecting the front-drive backplane (J29) to the mainboard (J5)

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6.5.2.1.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-529 I/O module 3 cabling

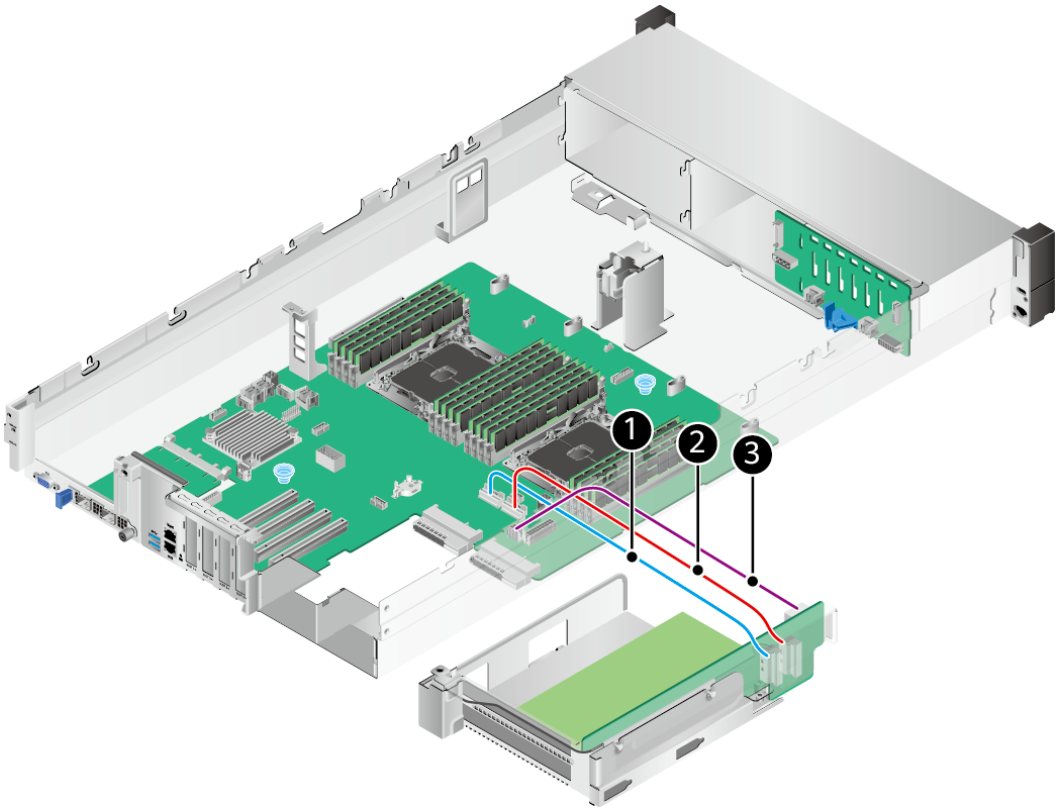

Table 6-508 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.2.1.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-530 I/O module 3 cabling

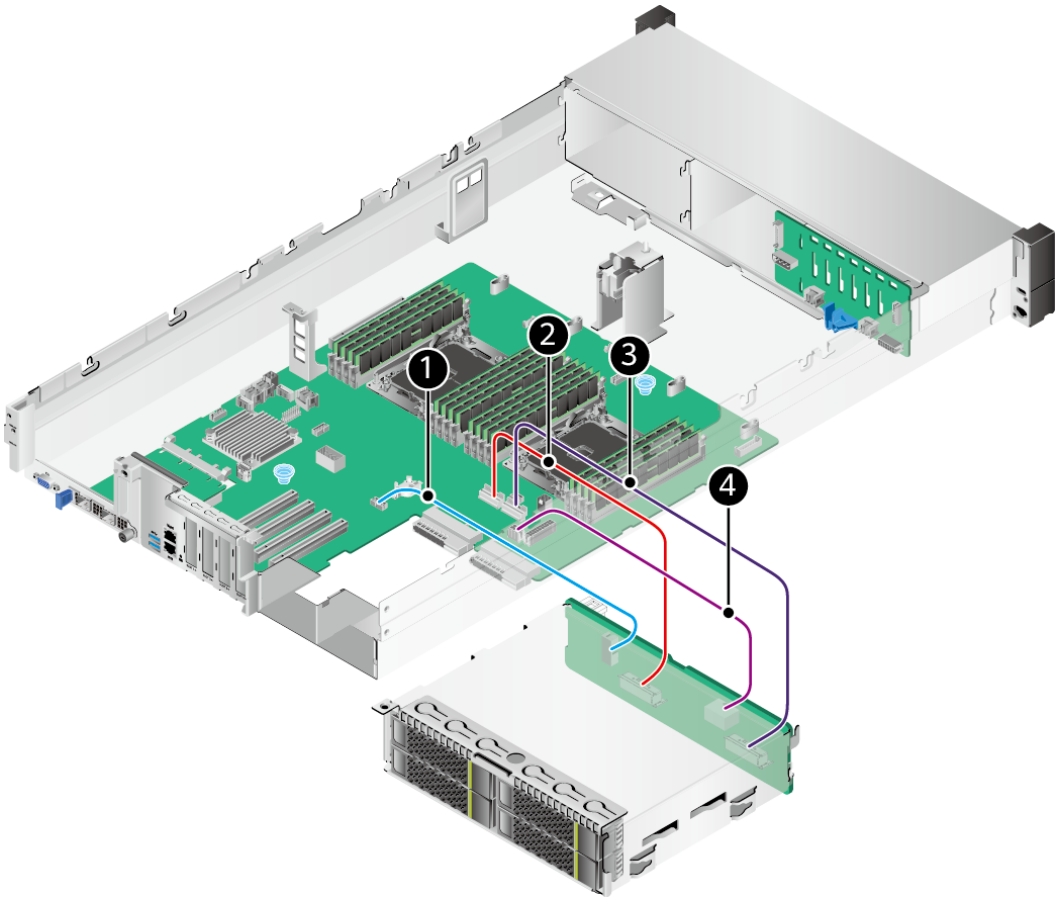

Table 6-509 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.2.2 8 x 2.5" Drive Pass-through Configuration 2

6.5.2.2.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-531 Left mounting ear cabling

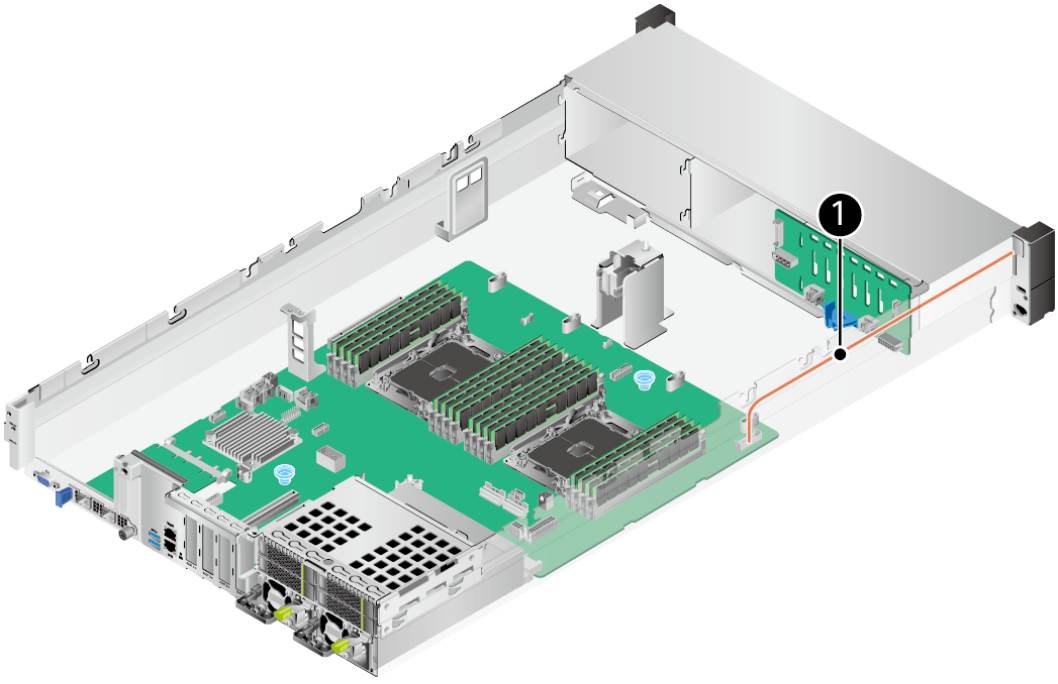

Table 6-510 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.2.2.2 DVD Drive Cabling

DVD Drive Cabling

Figure 6-532 DVD drive cabling

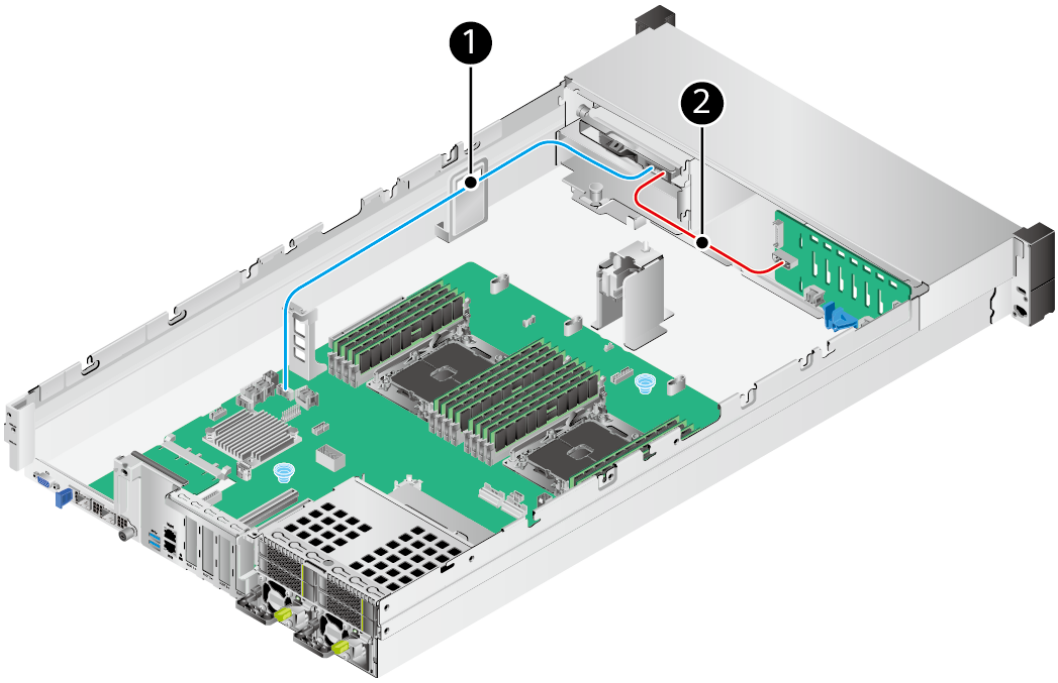

Table 6-511 DVD drive cabling

No.	P/N Code	Description
1	04050689	High-speed cable for connecting the DVD drive to the mainboard (J1)
2	04050689	Power cable for connecting the DVD drive to the front-drive backplane (J11)

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6.5.2.2.3 LCD Cabling

LCD Cabling

Figure 6-533 LCD cabling

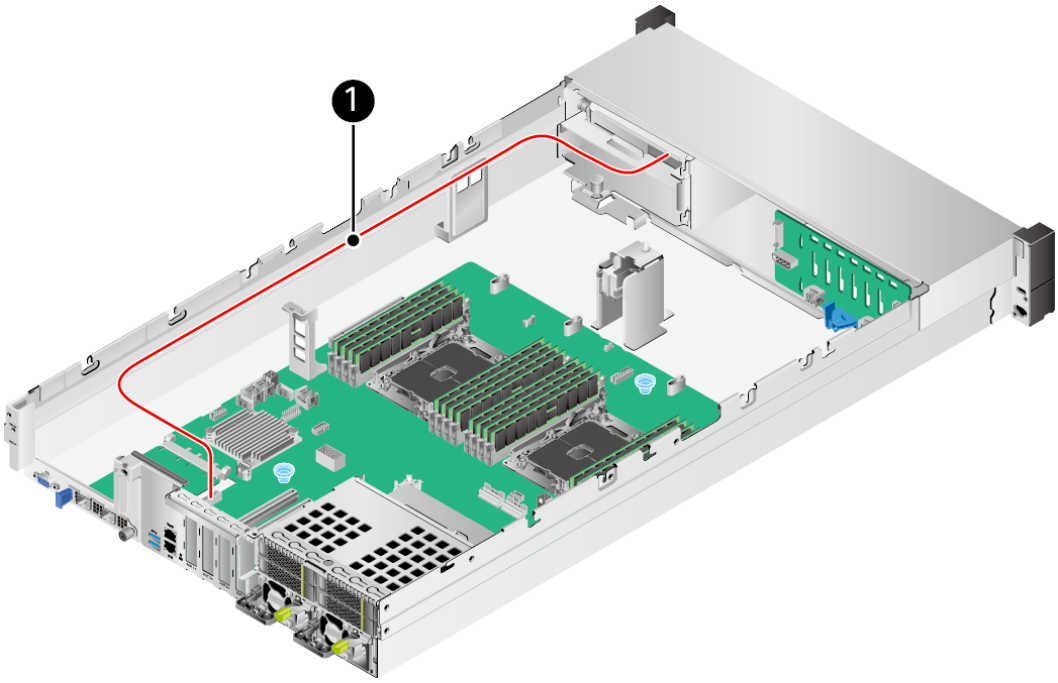

Table 6-512 LCD cabling

No.	P/N Code	Description
1	-	Signal cable for connecting the LCD to the mainboard (J9)

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6.5.2.2.4 NC-SI Cabling

NC-SI Cabling

Figure 6-534 NC-SI cabling

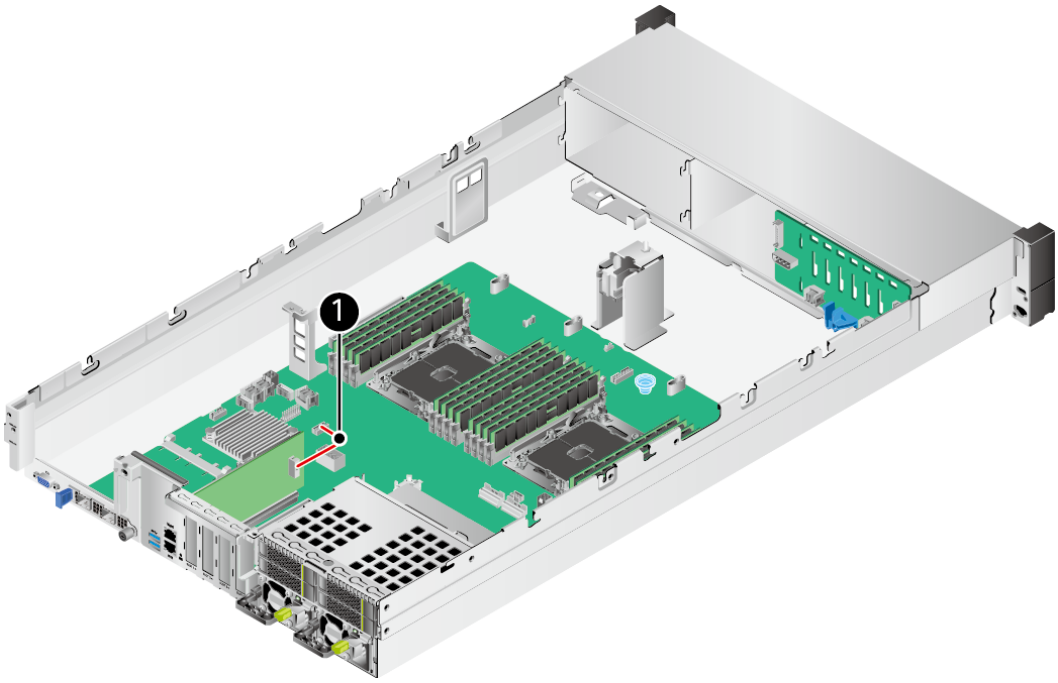

Table 6-513 NC-SI cabling

No.	P/N Code	Description
1	04080584	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)

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6.5.2.2.5 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-535 Intrusion sensor cabling

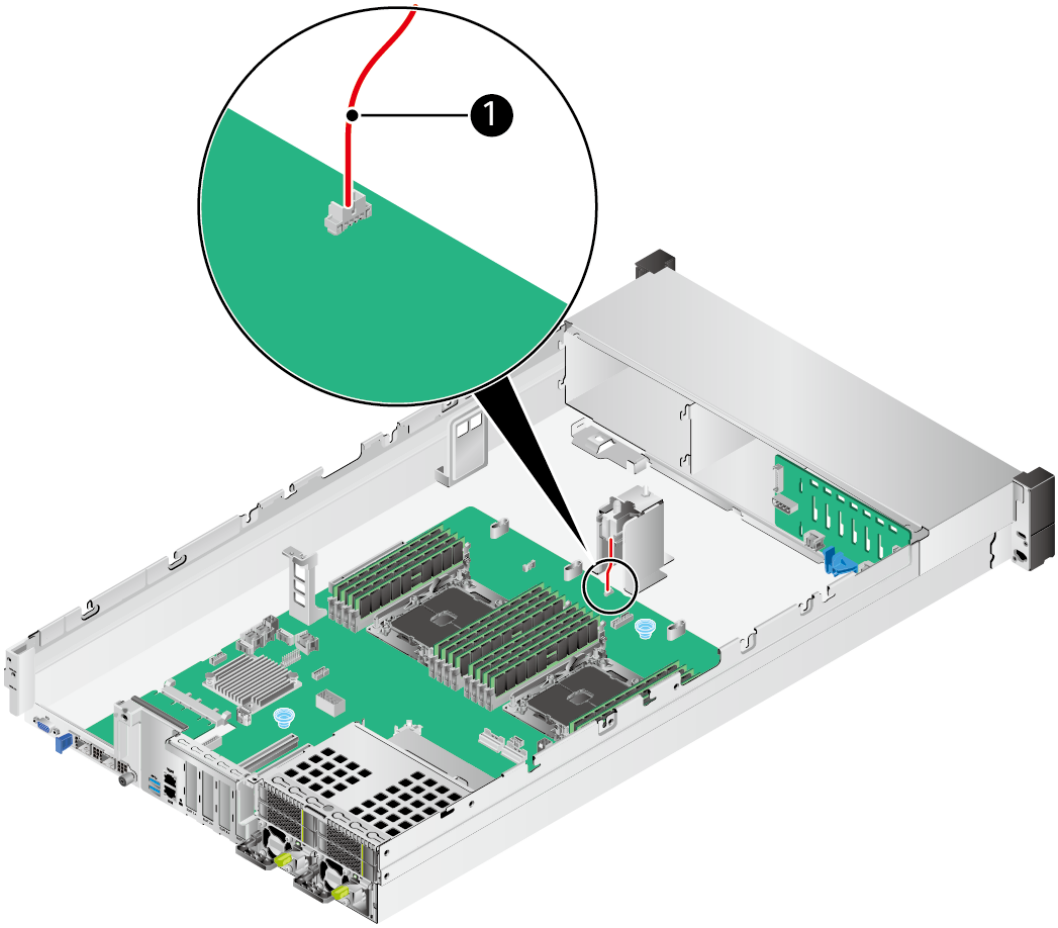

Table 6-514 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.2.2.6 VGA Cabling

VGA Cabling

Figure 6-536 VGA cabling

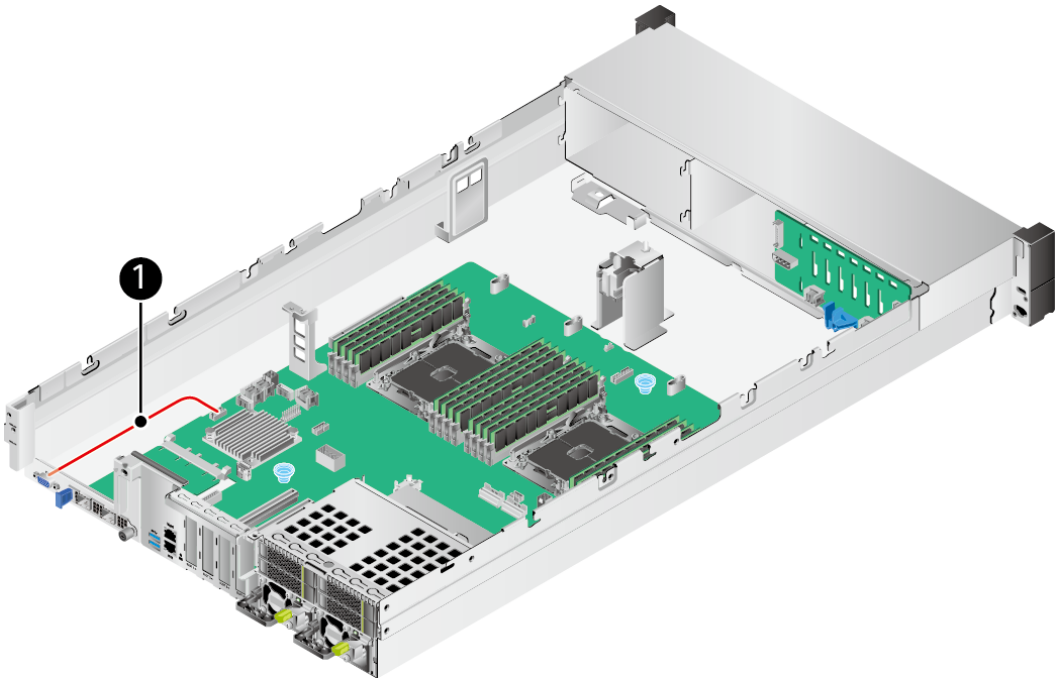

Table 6-515 VGA cabling

No.	P/N Code	Description
1	04053072	Low-speed signal cable for connecting the rear VGA board to the mainboard (J2037)

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6.5.2.2.7 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-537 Front-drive backplane power and low-speed signal cabling

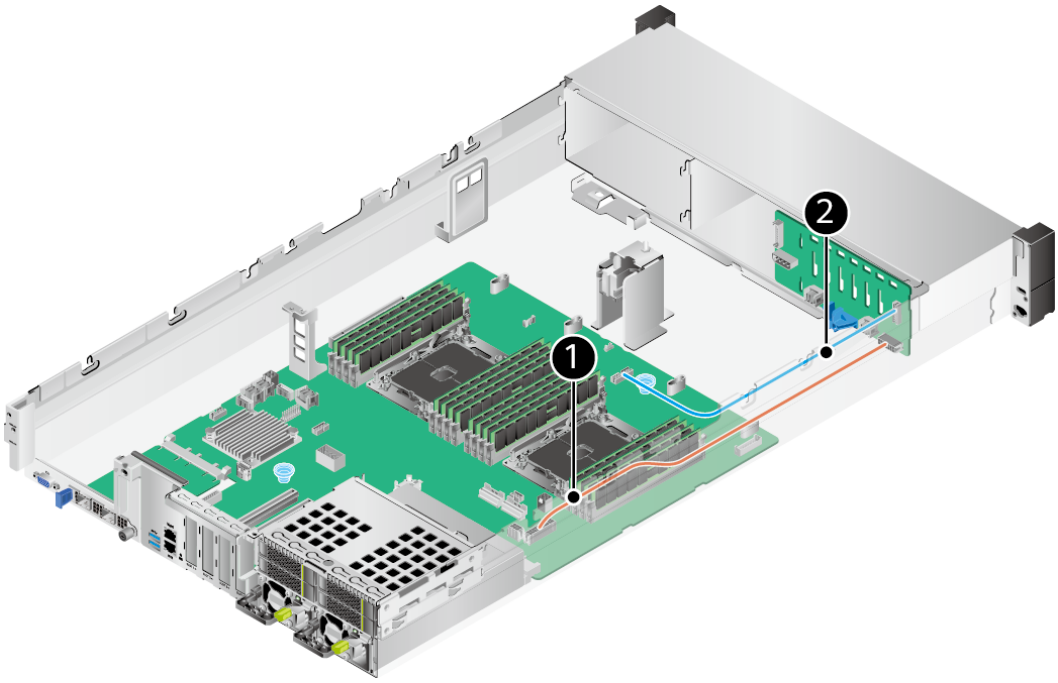

Table 6-516 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

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6.5.2.2.8 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-538 Front-drive backplane SAS high-speed cabling

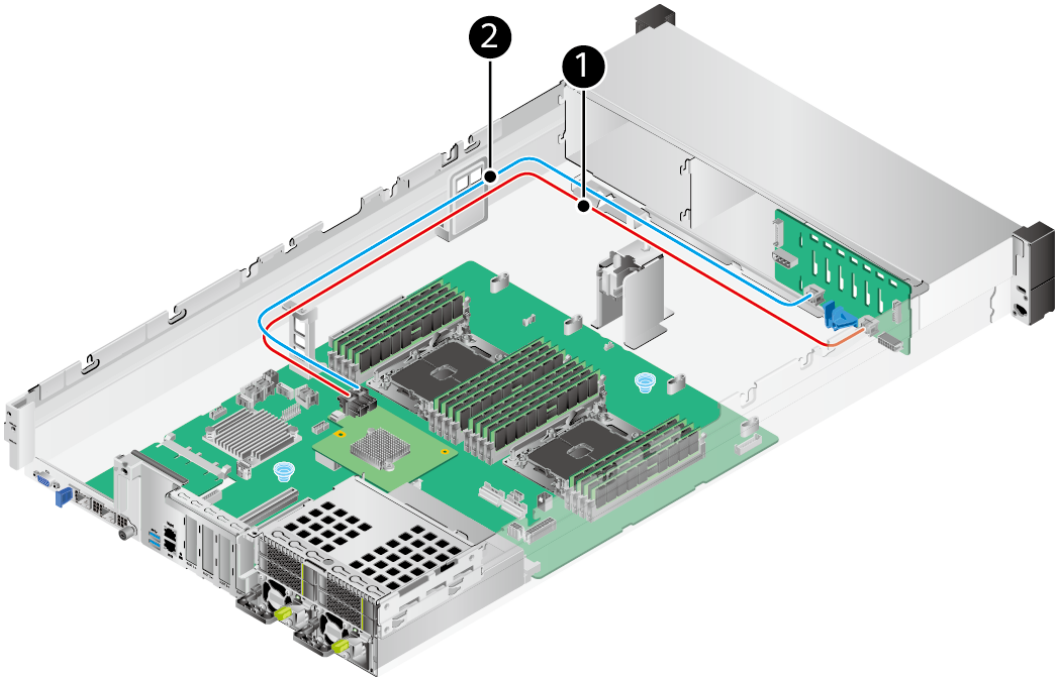

Table 6-517 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051916-015	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.5.2.2.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-539 I/O module 3 cabling

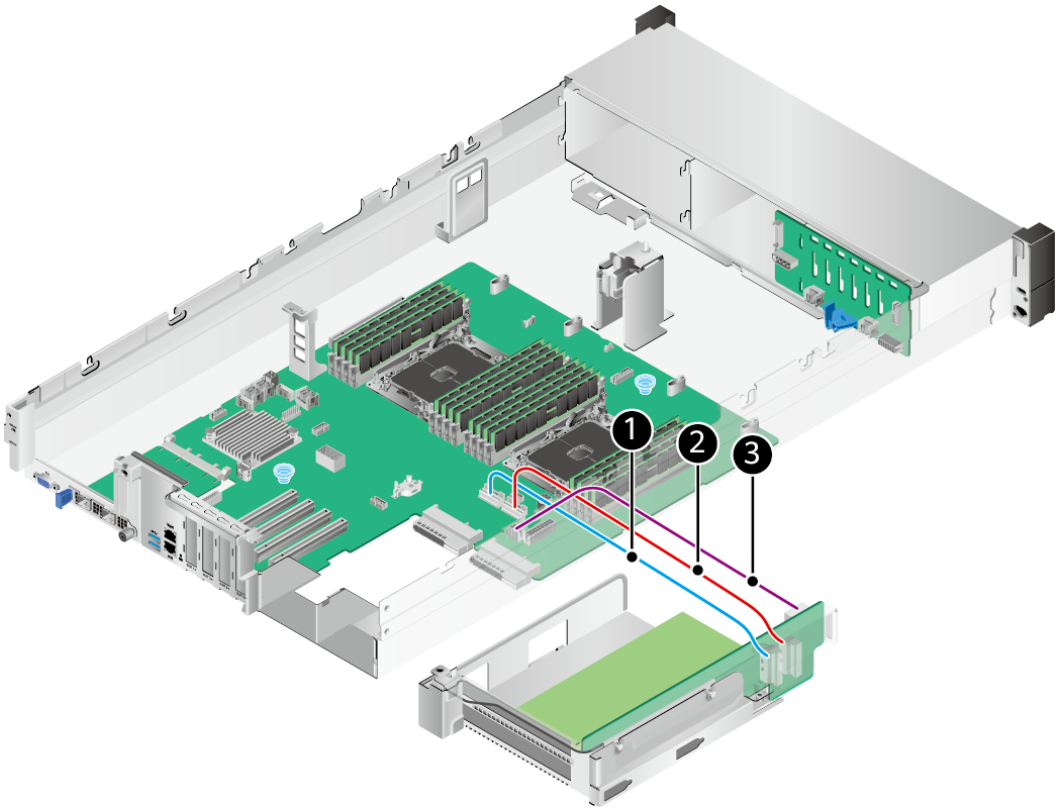

Table 6-518 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.2.2.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-540 I/O module 3 cabling

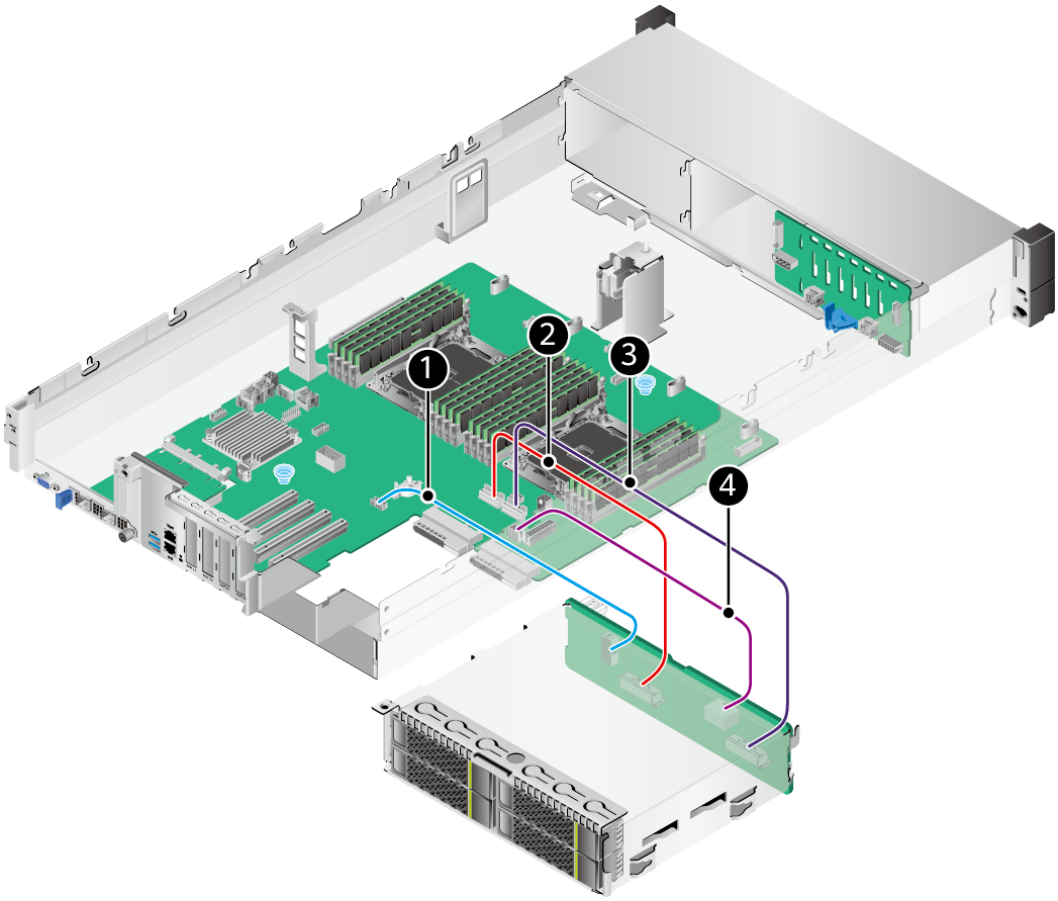

Table 6-519 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.2.3 8 x 2.5" Drive Pass-through Configuration 3

6.5.2.3.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-541 Left mounting ear cabling

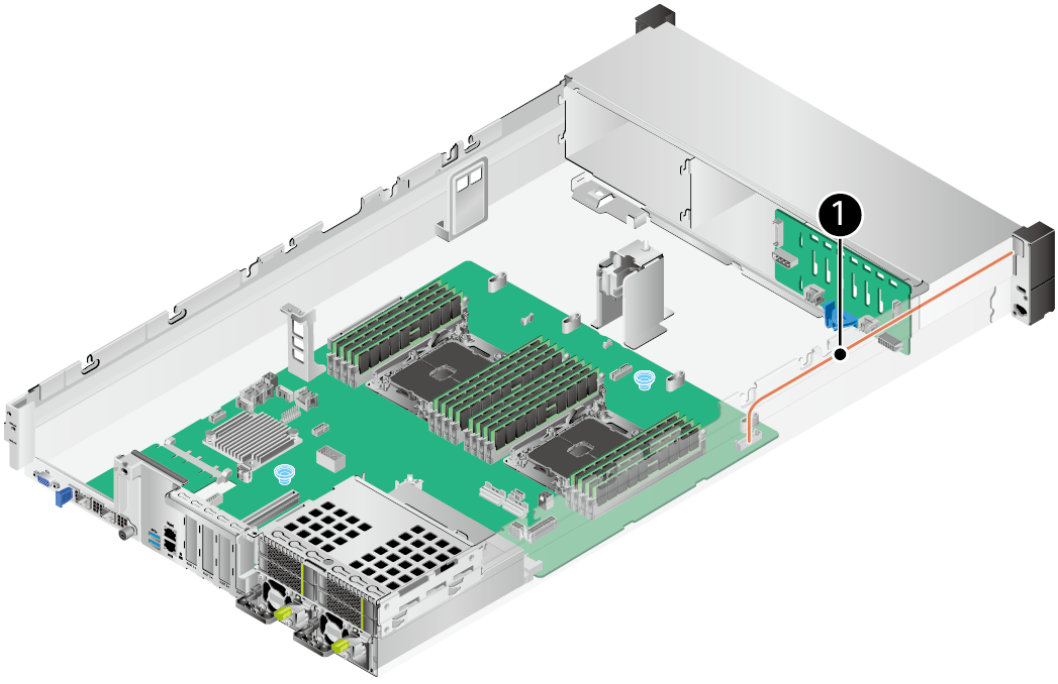

Table 6-520 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.2.3.2 DVD Drive Cabling

DVD Drive Cabling

Figure 6-542 DVD drive cabling

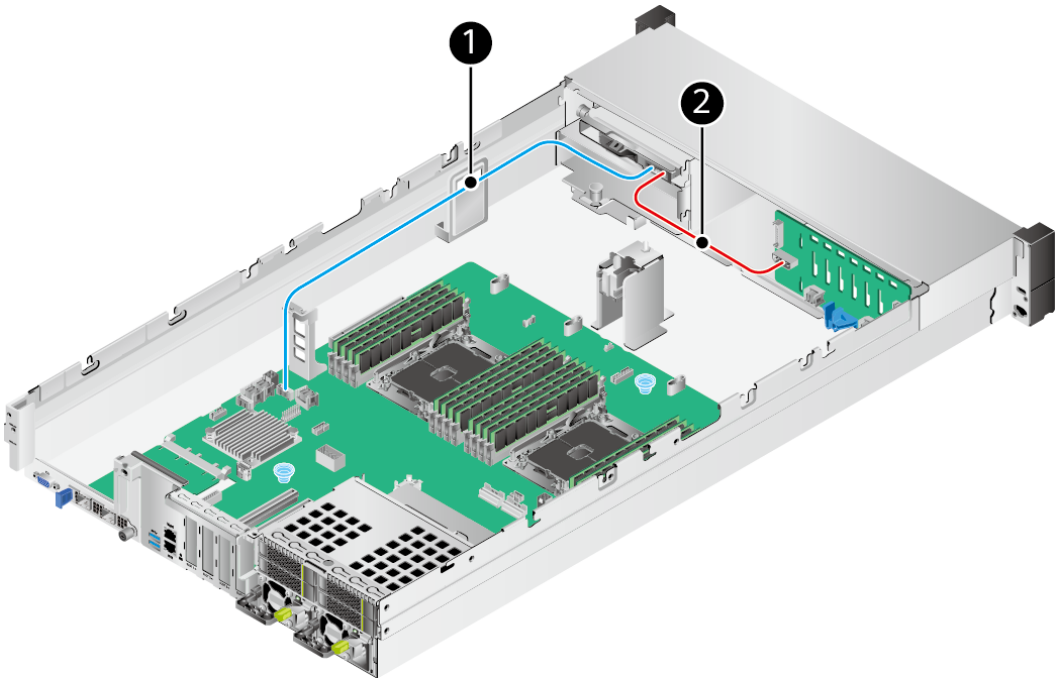

Table 6-521 DVD drive cabling

No.	P/N Code	Description
1	04050689	High-speed cable for connecting the DVD drive to the mainboard (J1)
2	04050689	Power cable for connecting the DVD drive to the front-drive backplane (J11)

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6.5.2.3.3 LCD Cabling

LCD Cabling

Figure 6-543 LCD cabling

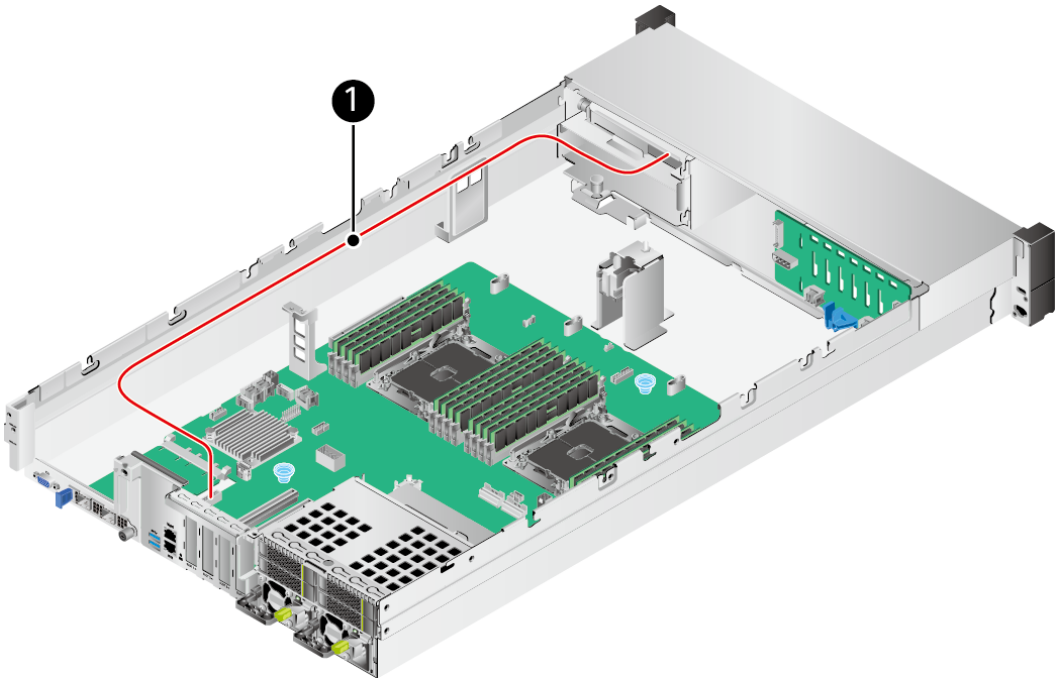

Table 6-522 LCD cabling

No.	P/N Code	Description
1	-	Signal cable for connecting the LCD to the mainboard (J9)

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6.5.2.3.4 NC-SI Cabling

NC-SI Cabling

Figure 6-544 NC-SI cabling

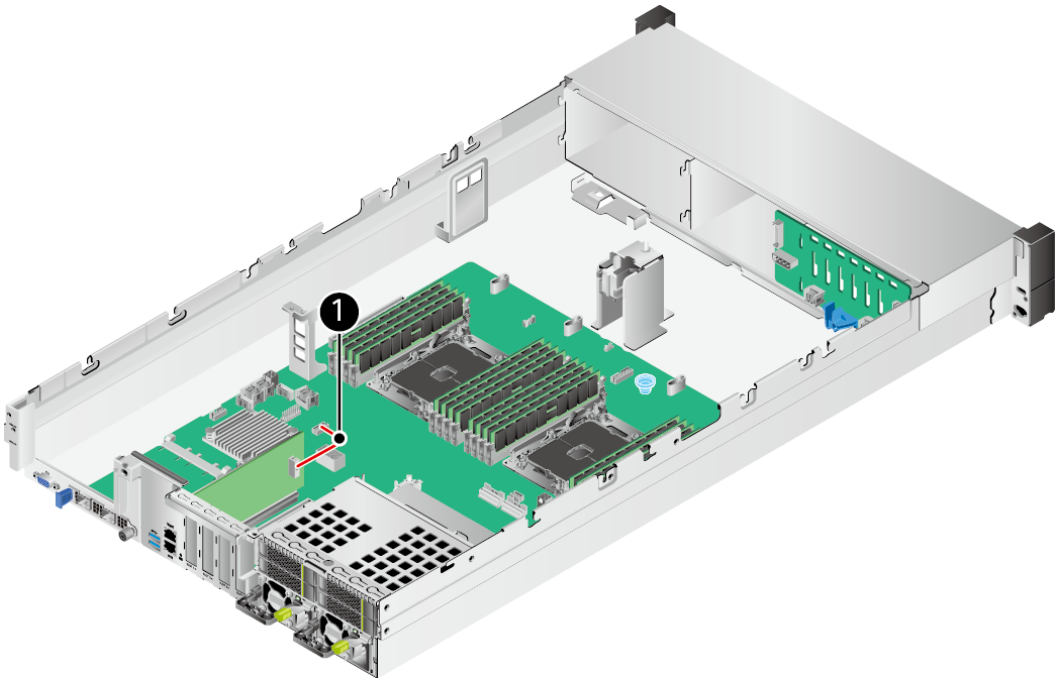

Table 6-523 NC-SI cabling

No.	P/N Code	Description
1	04080584	Low-speed signal cable for connecting the PCIe NIC to the mainboard (J114)

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6.5.2.3.5 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-545 Intrusion sensor cabling

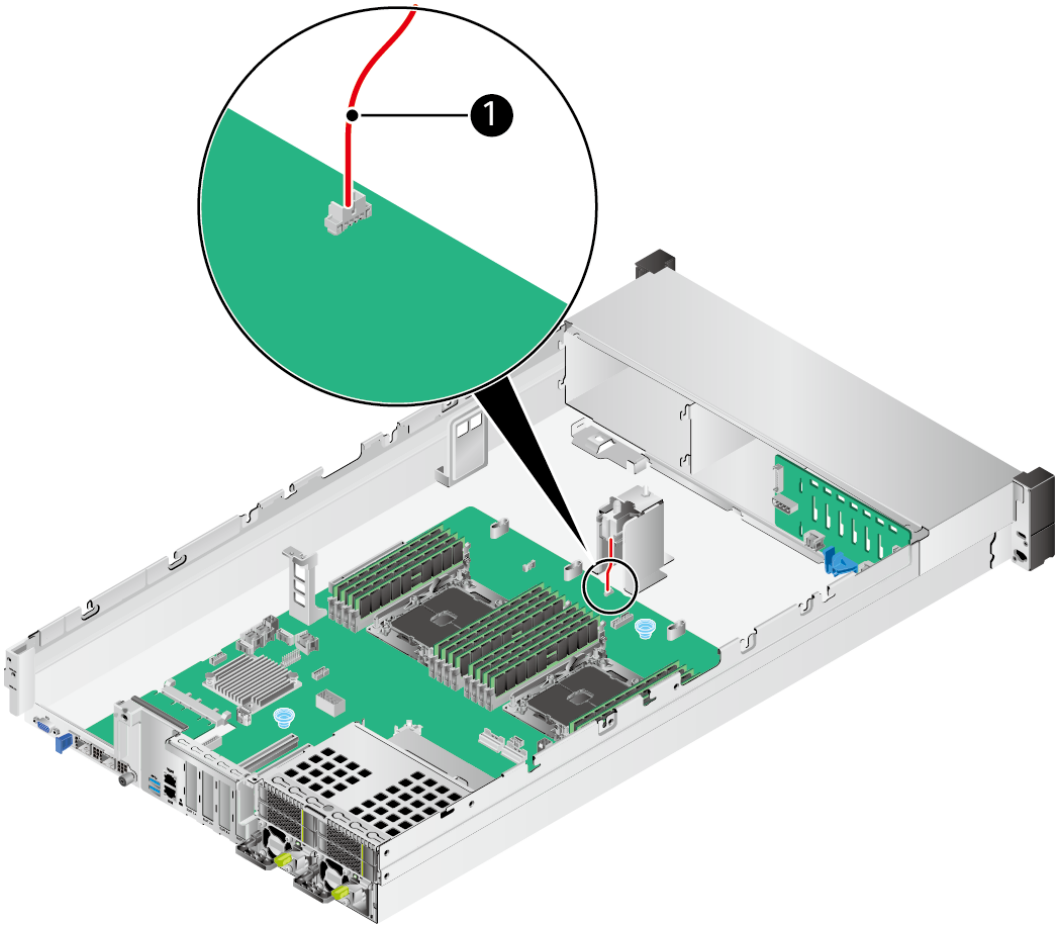

Table 6-524 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.2.3.6 VGA Cabling

VGA Cabling

Figure 6-546 VGA cabling

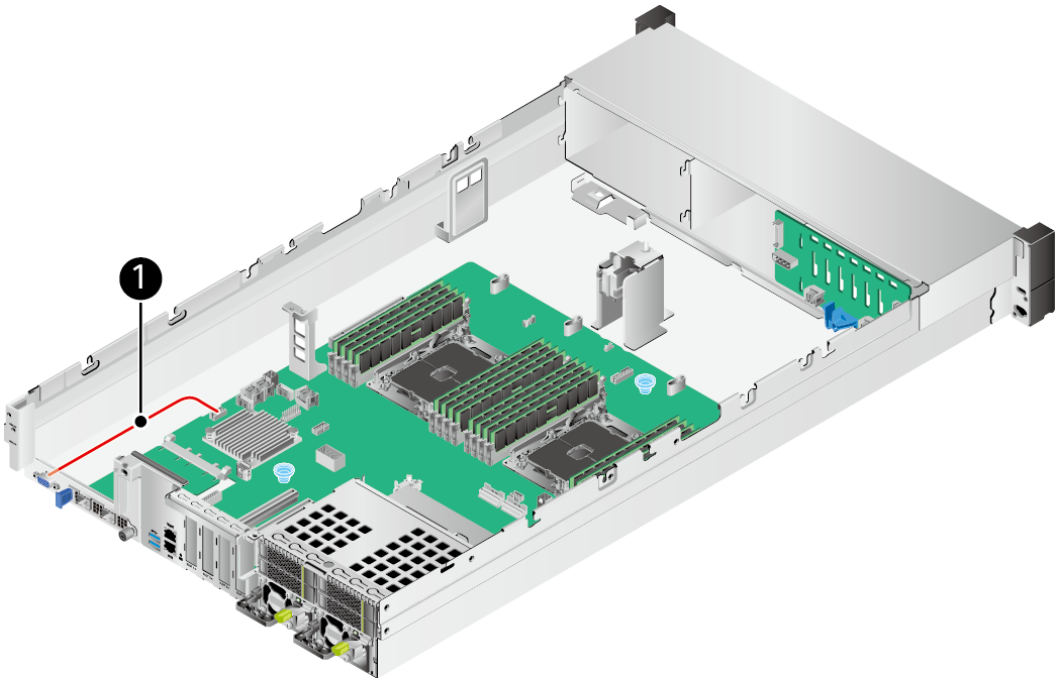

Table 6-525 VGA cabling

No.	P/N Code	Description
1	04053072	Low-speed signal cable for connecting the rear VGA board to the mainboard (J2037)

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6.5.2.3.7 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-547 Front-drive backplane power and low-speed signal cabling

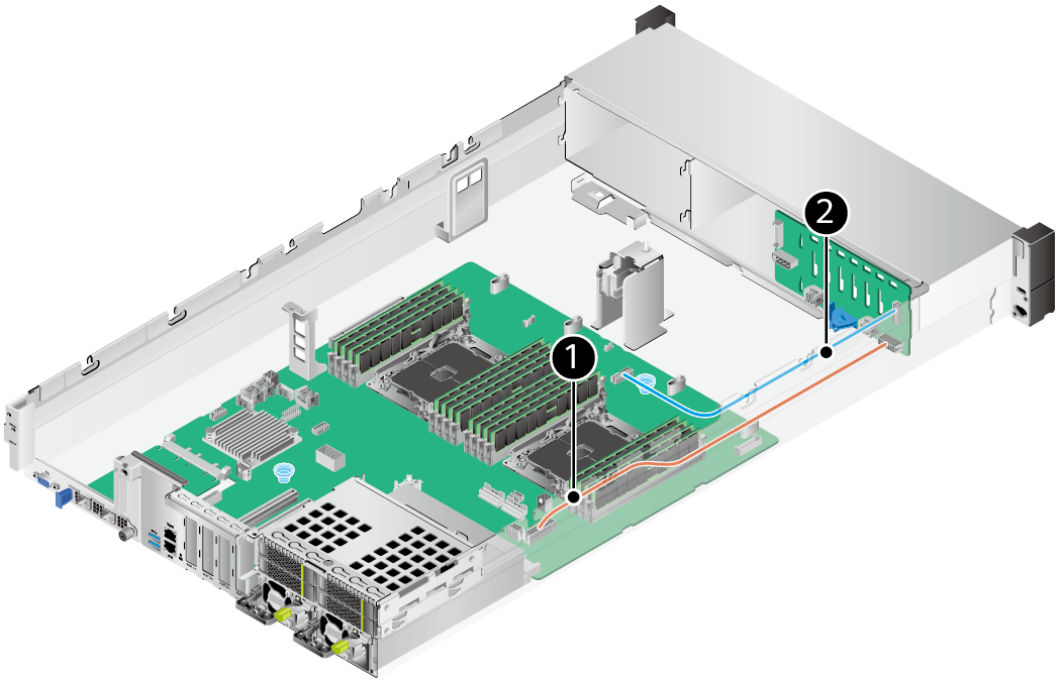

Table 6-526 Front-drive backplane power and low-speed signal cabling

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

6.5.2.3.8 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-548 Front-drive backplane SAS high-speed cabling

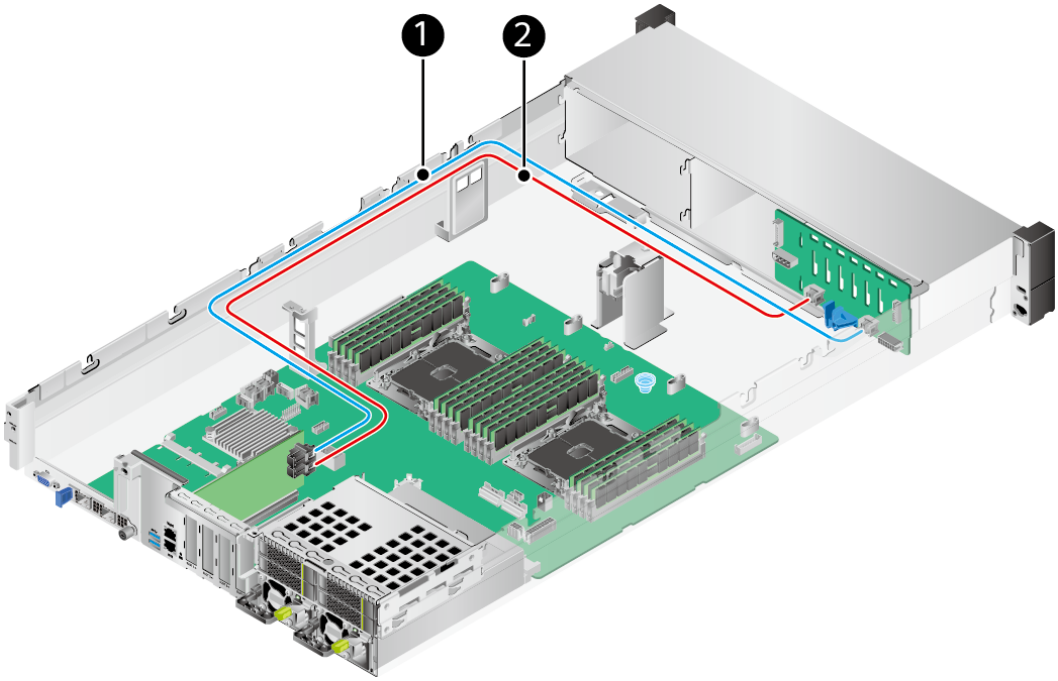

Table 6-527 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-009	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051916-009	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.2.3.9 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-549 I/O module 3 cabling

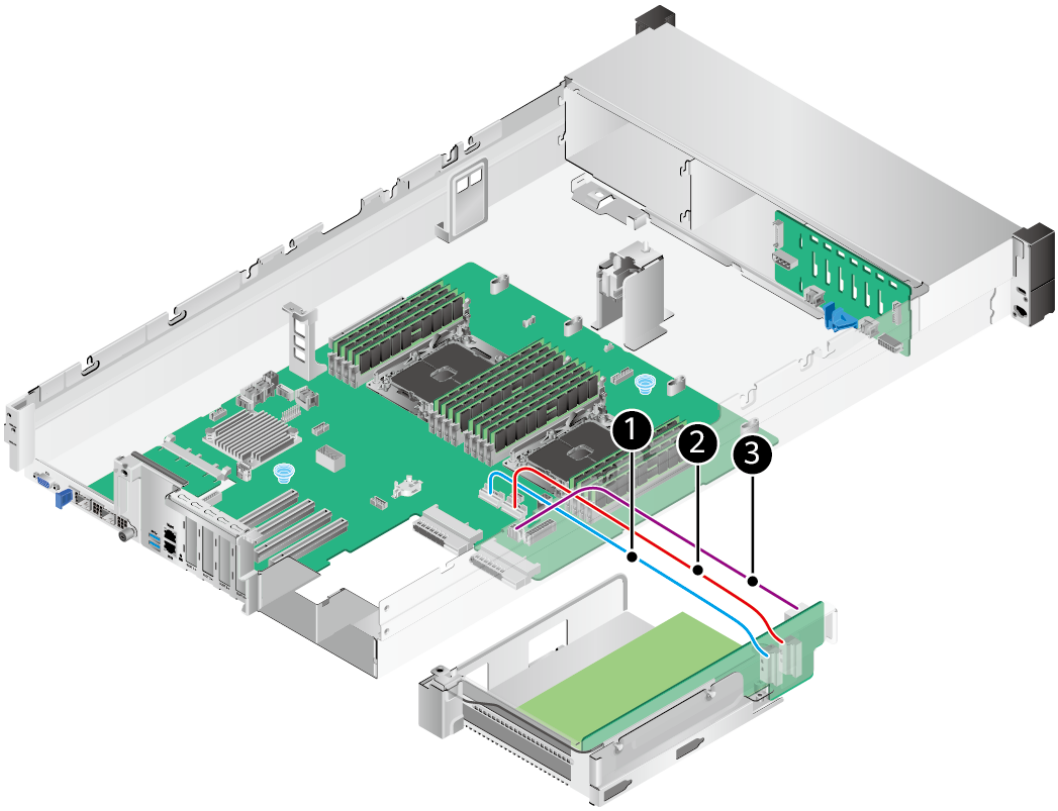

Table 6-528 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.2.3.10 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-550 I/O module 3 cabling

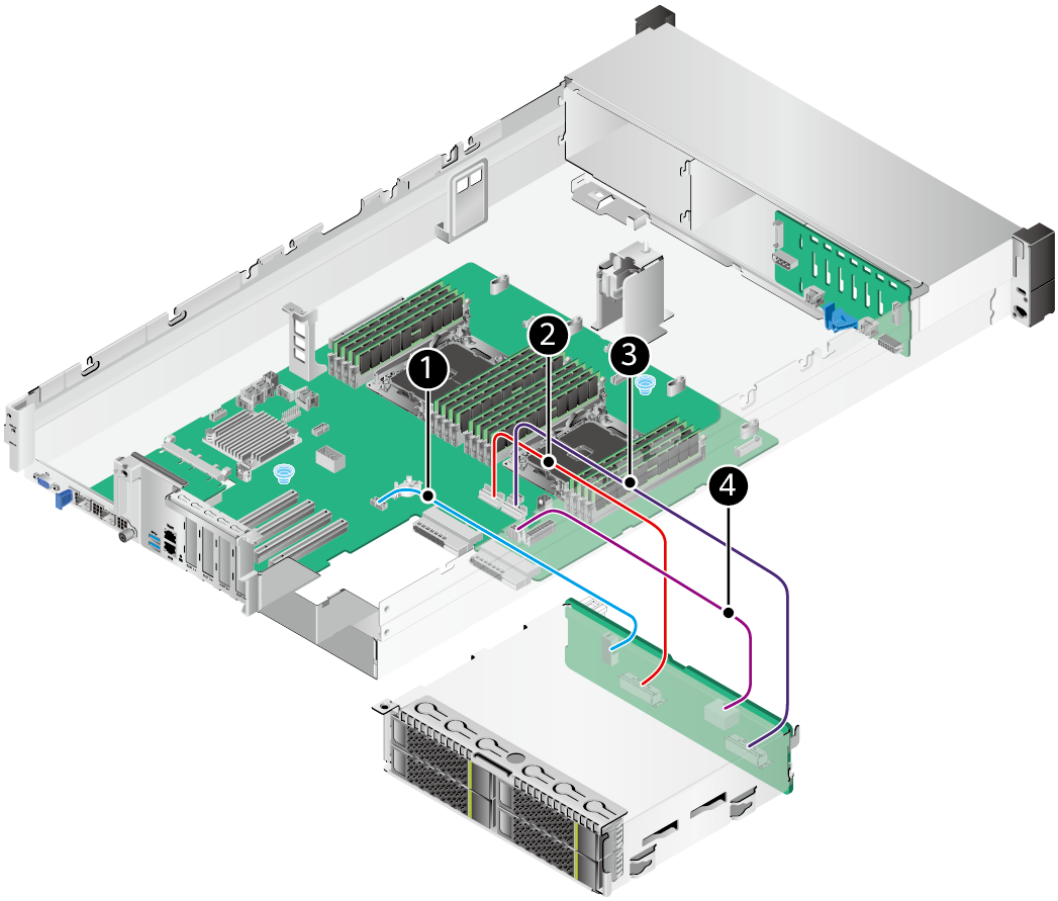

Table 6-529 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.3 8 x 3.5" Drive Pass-through Configuration

6.5.3.1 8 x 3.5" Drive Pass-through Configuration 1

6.5.3.1.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-551 Left mounting ear cabling

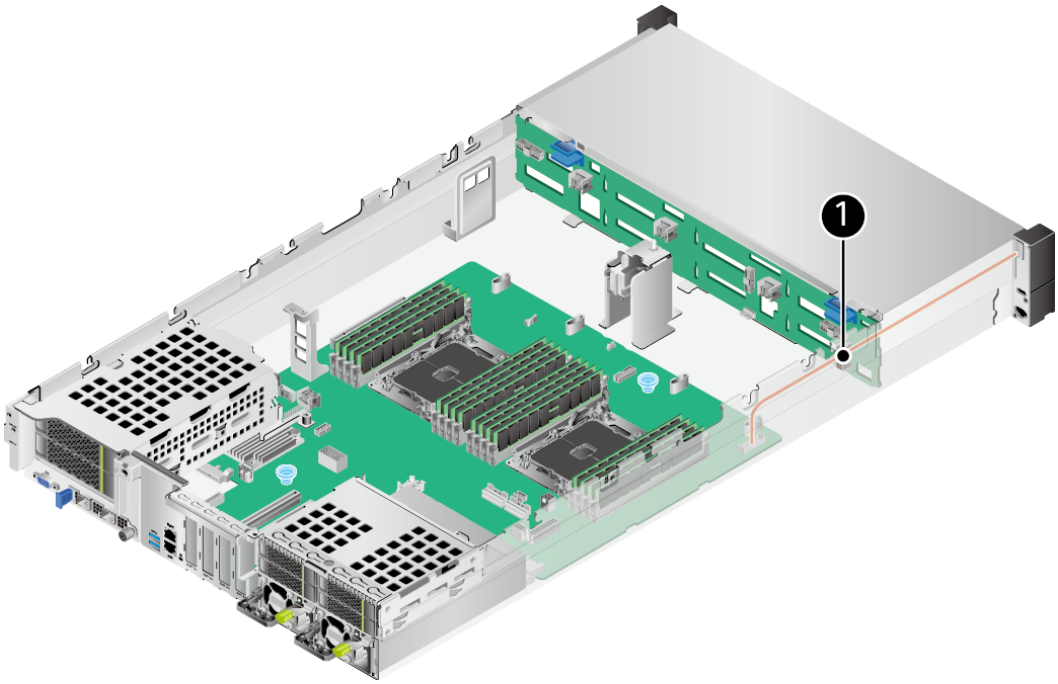

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Table 6-530 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.3.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-552 Intrusion sensor cabling

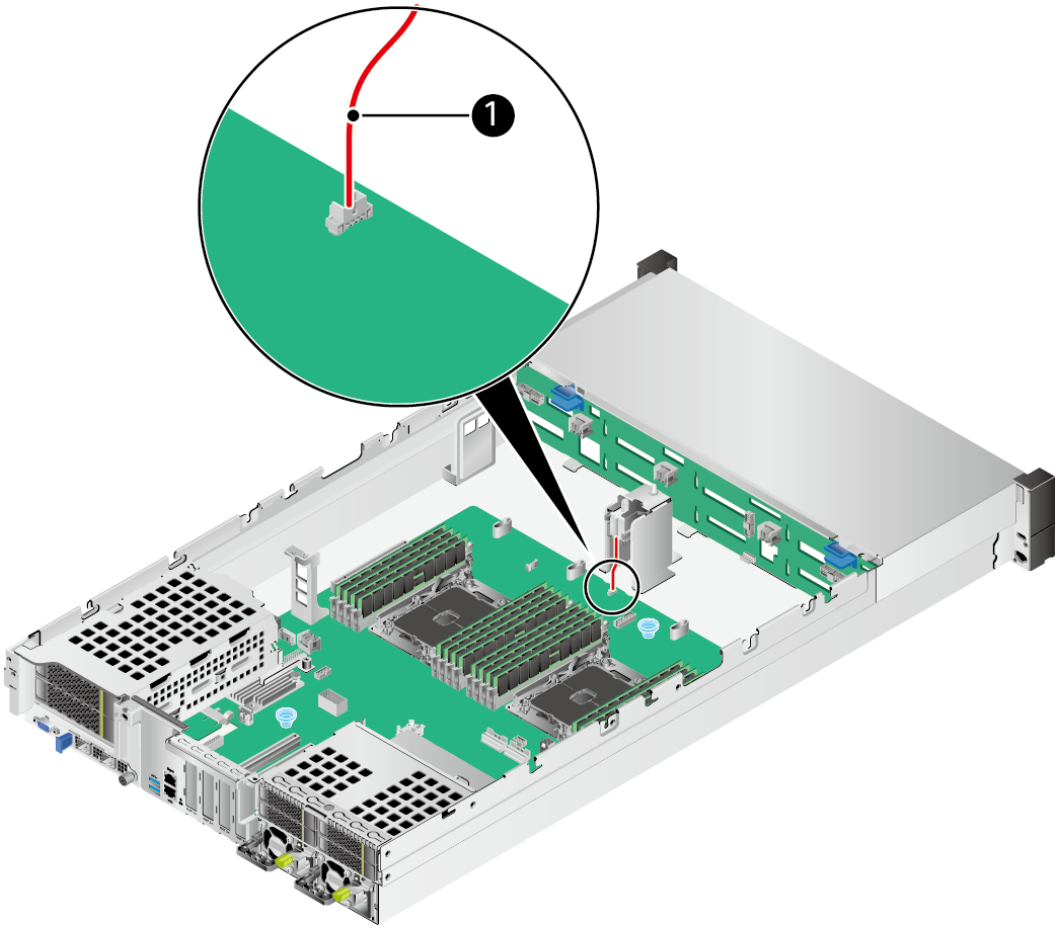

Table 6-531 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.3.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-553 Front-drive backplane power and low-speed signal cables

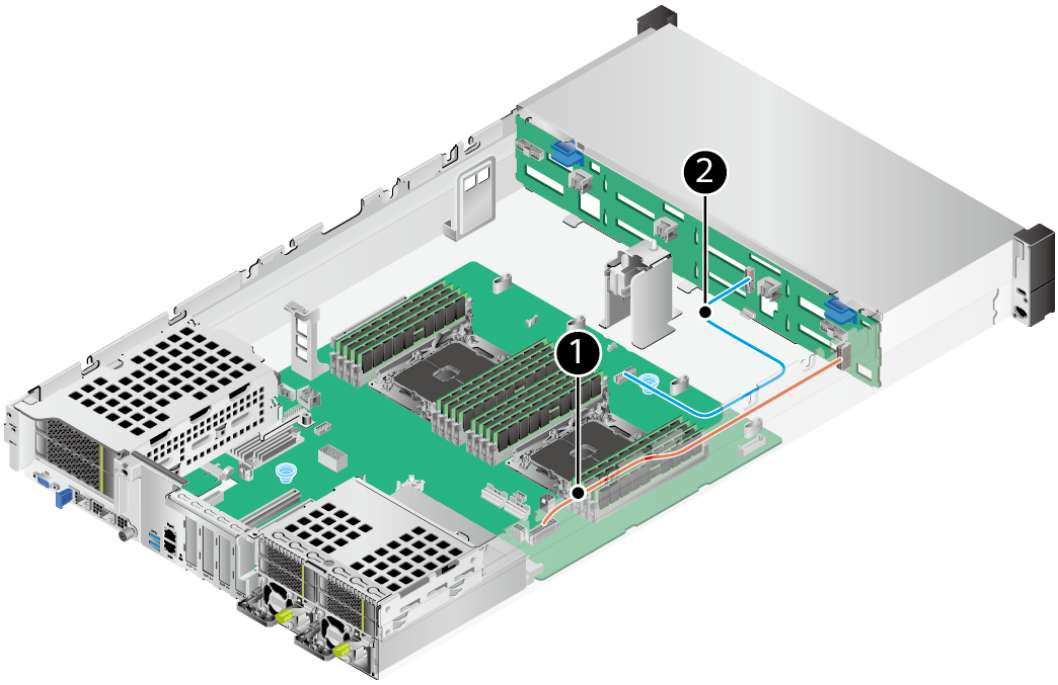

Table 6-532 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J1) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)

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6.5.3.1.4 Front-Drive Backplane SAS High-speed Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-554 Front-drive backplane SAS high-speed cabling

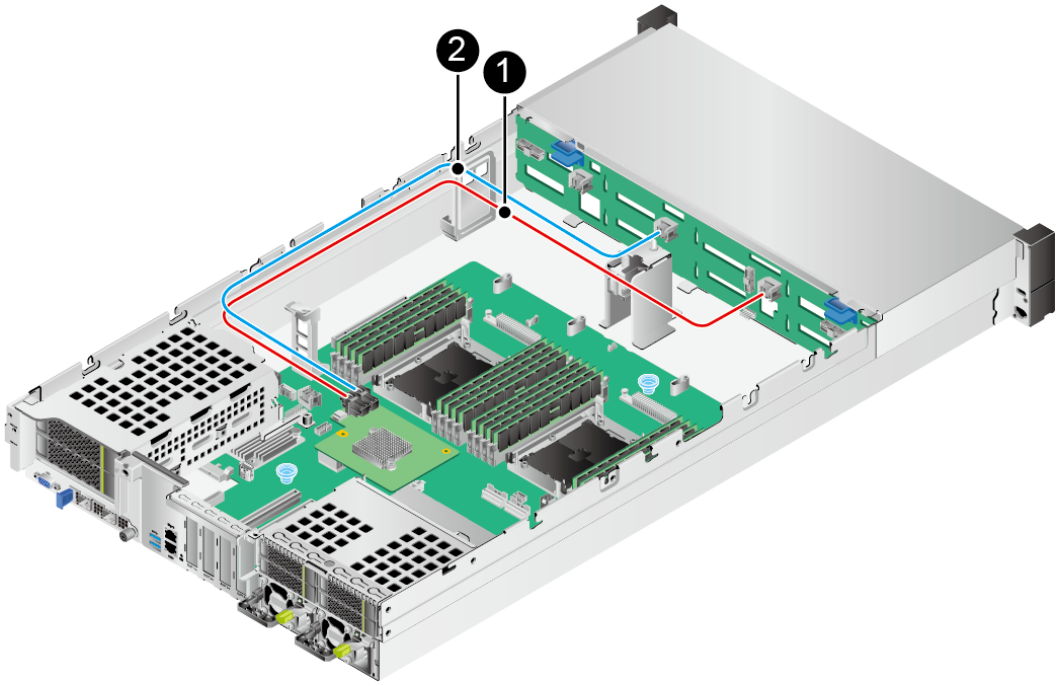

Table 6-533 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the screw-in RAID controller card

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6.5.3.1.5 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-555 I/O module 3 cabling

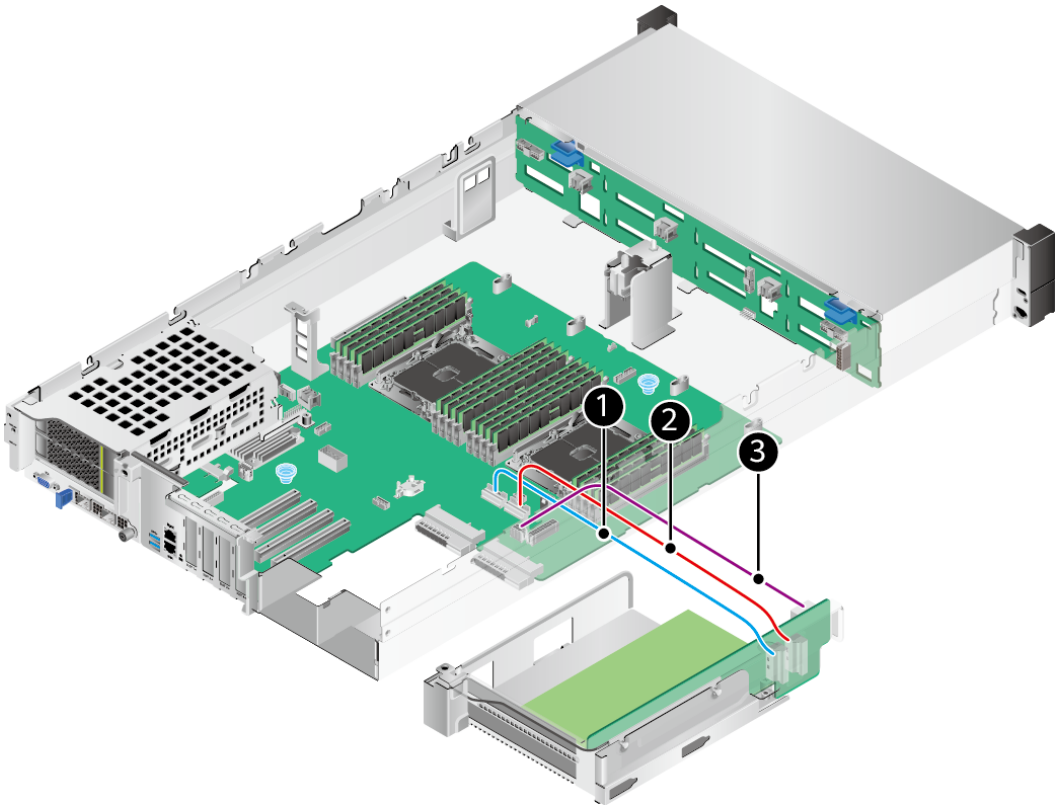

Table 6-534 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	High-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	High-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.3.1.6 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-556 I/O module 3 cabling

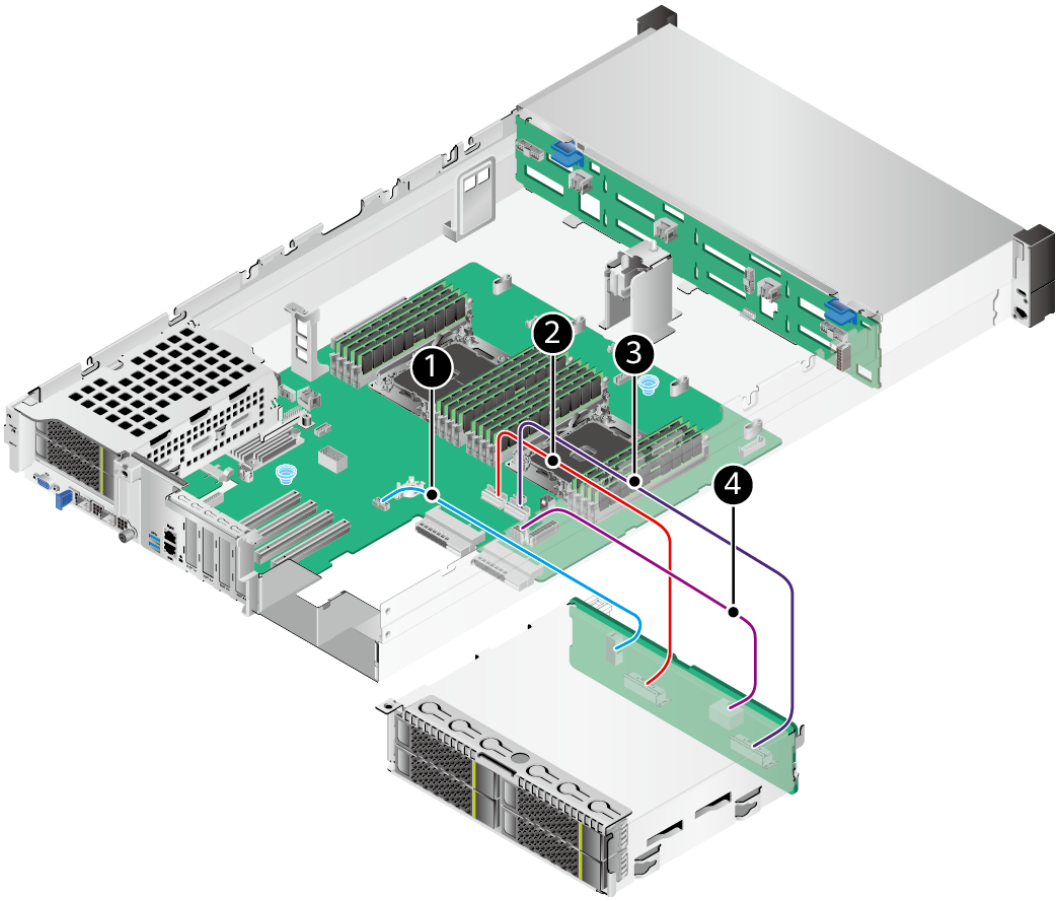

Table 6-535 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.3.2 8 x 3.5" Drive Pass-through Configuration 2

6.5.3.2.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-557 Left mounting ear cabling

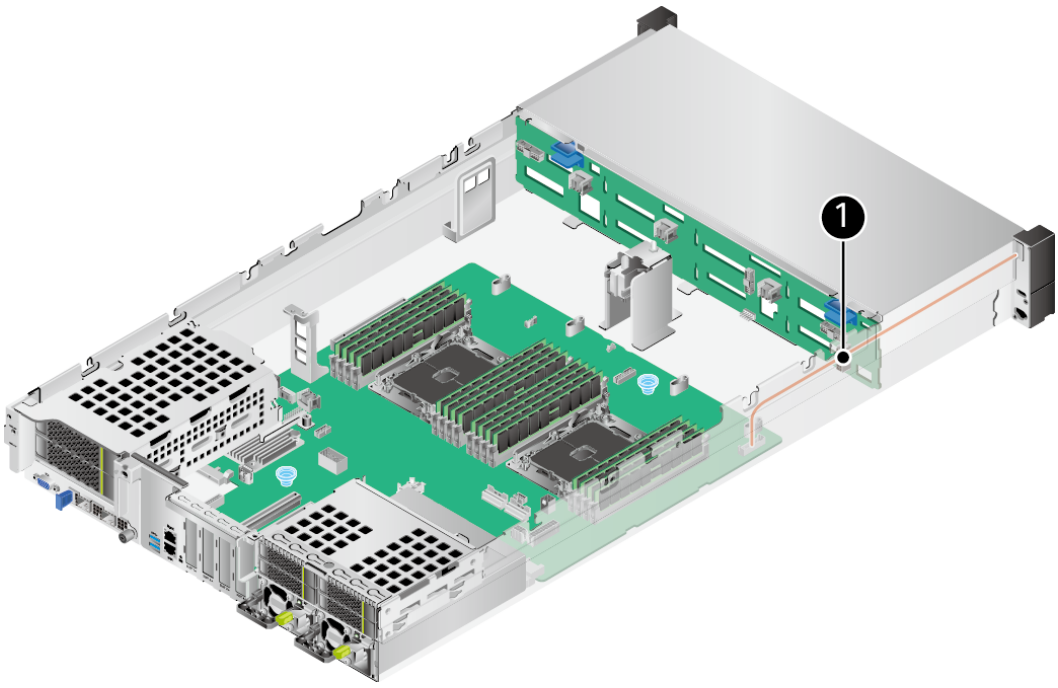

Table 6-536 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.3.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-558 Intrusion sensor cabling

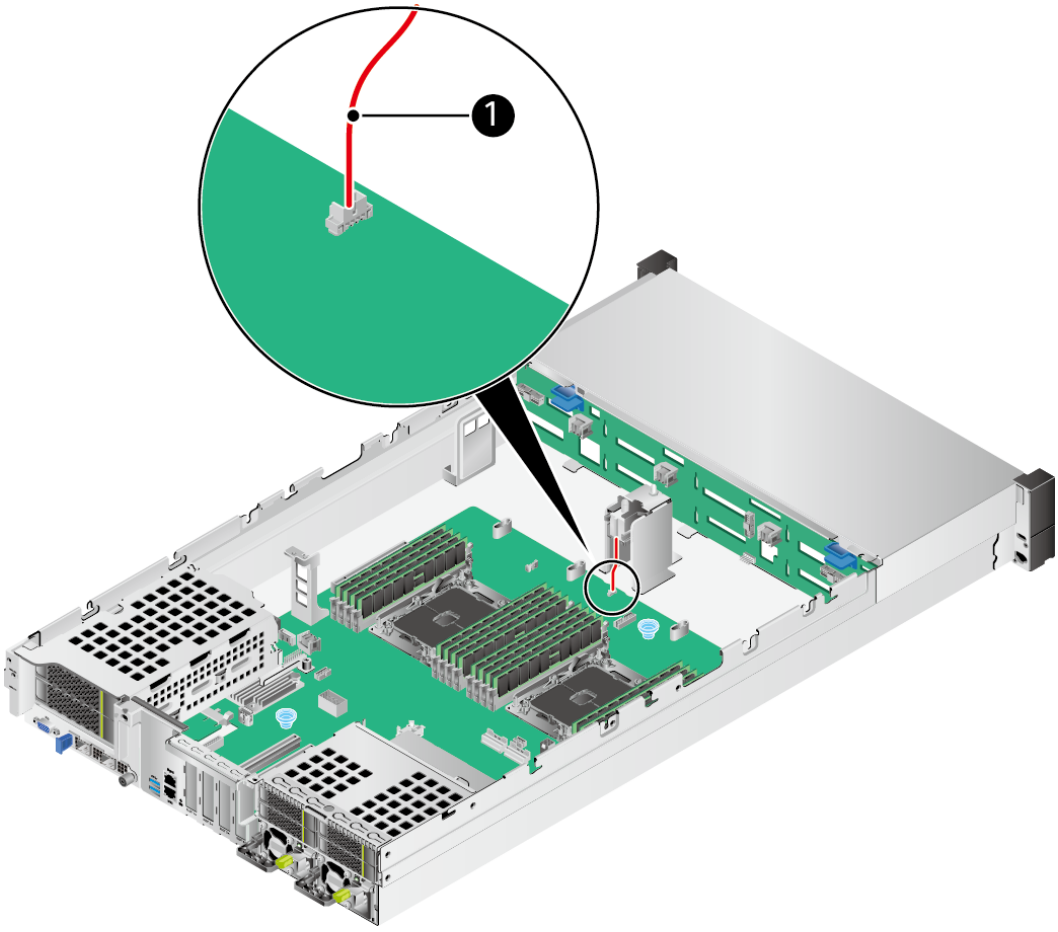

Table 6-537 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.3.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-559 Front-drive backplane power and low-speed signal cables

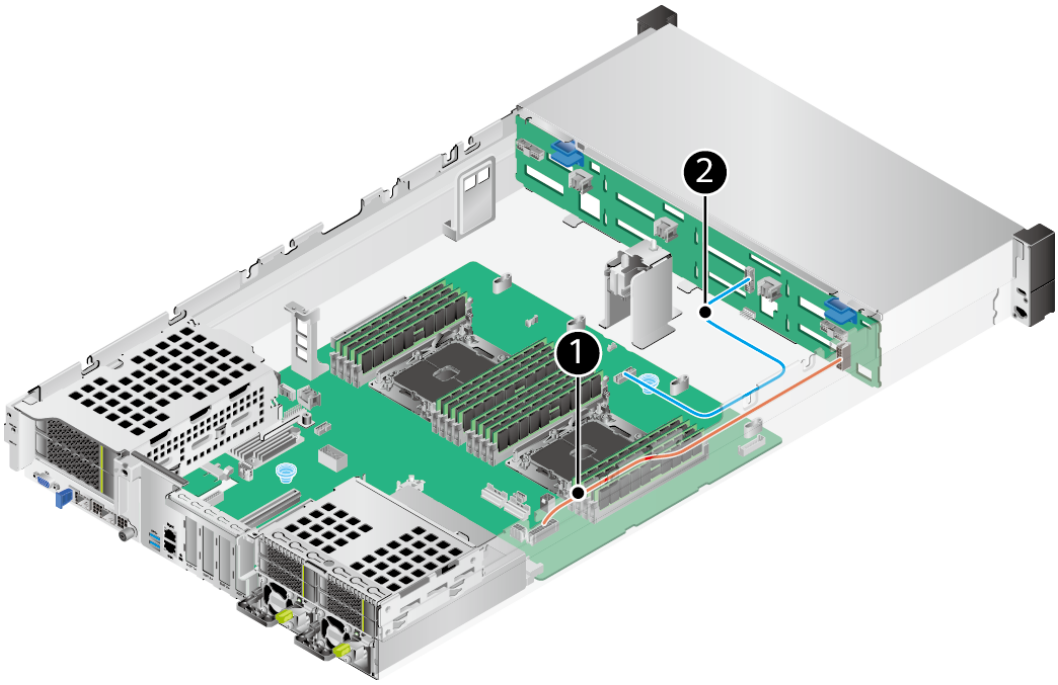

Table 6-538 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J1) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)

6.5.3.2.4 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-560 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

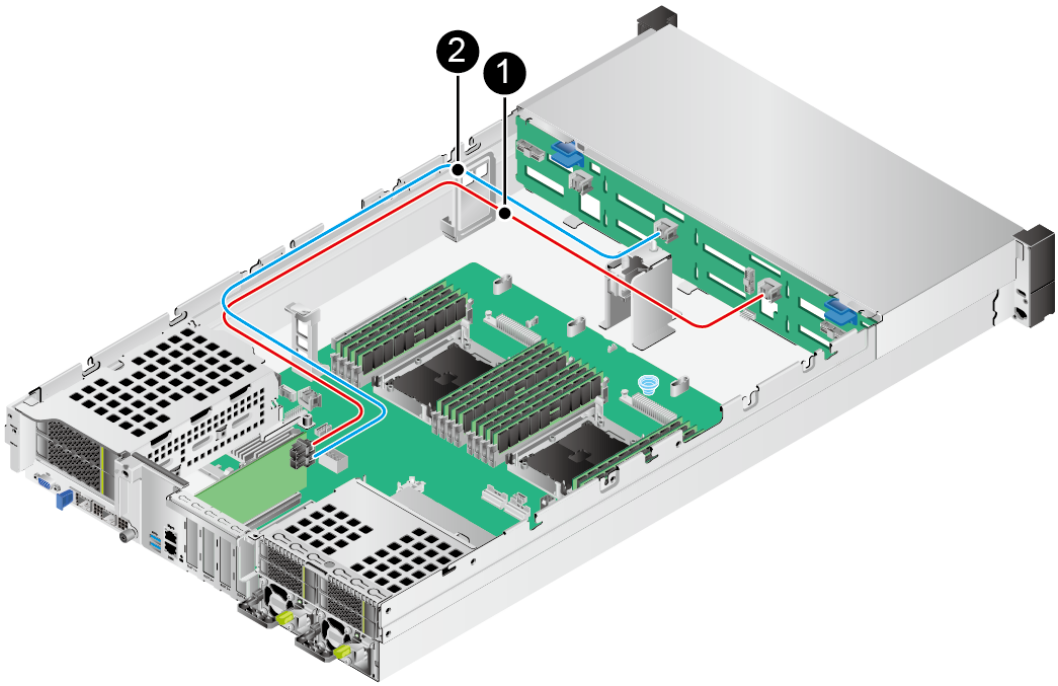

Table 6-539 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051390	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the PCIe RAID controller card
2	04051021	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the PCIe RAID controller card

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Figure 6-561 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one Mini SAS ports)

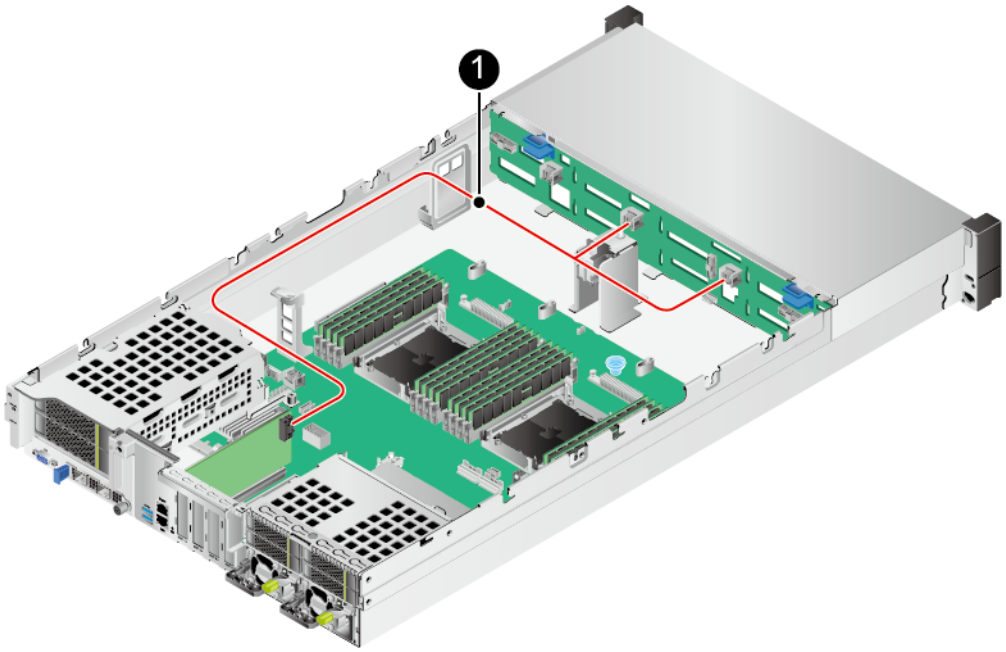

Table 6-540 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y019	SAS high-speed cable for connecting the front-drive backplane (J3/J4) to C0 of the PCIe RAID controller card **NOTE** 0405Y019 is a Y-shaped cable. The PORT A connector is connected to the front drive backplane (J3) , the PORT B connector is connected to the front drive backplane (J4), and another end of the cable is connected to the RAID controller card.

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J3) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J4) may be C1, PORT B, 1, or CN1.

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6.5.3.2.5 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-562 I/O module 3 cabling

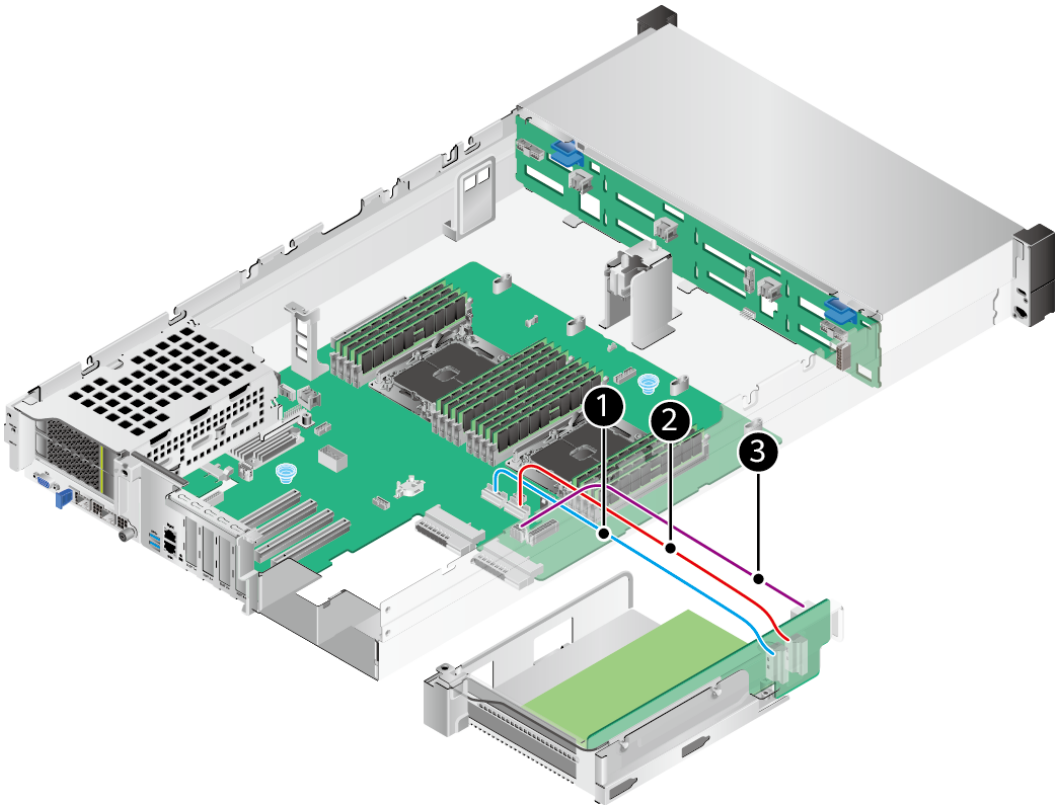

Table 6-541 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	High-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	High-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.3.2.6 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-563 I/O module 3 cabling

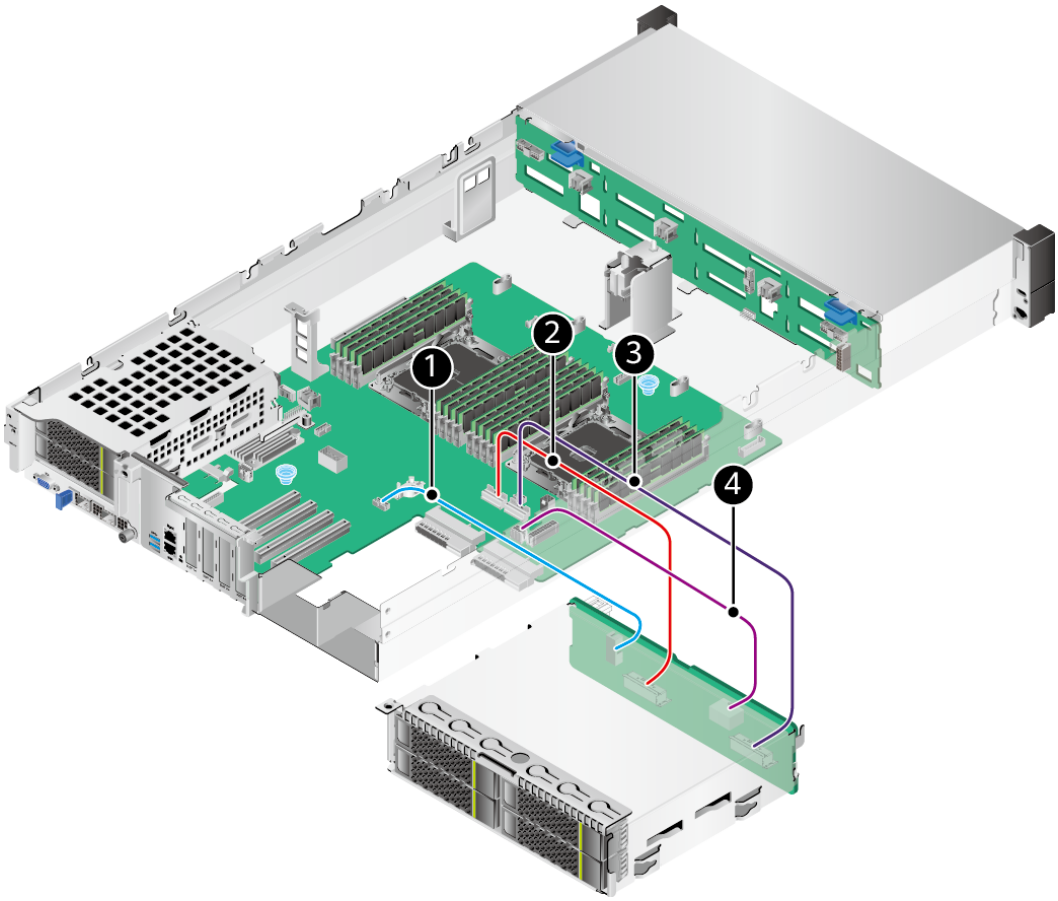

Table 6-542 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.4 12 x 3.5" Drive Pass-through Configuration

6.5.4.1 12 x 3.5" Drive Pass-through Configuration 1

6.5.4.1.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-564 Left mounting ear cabling

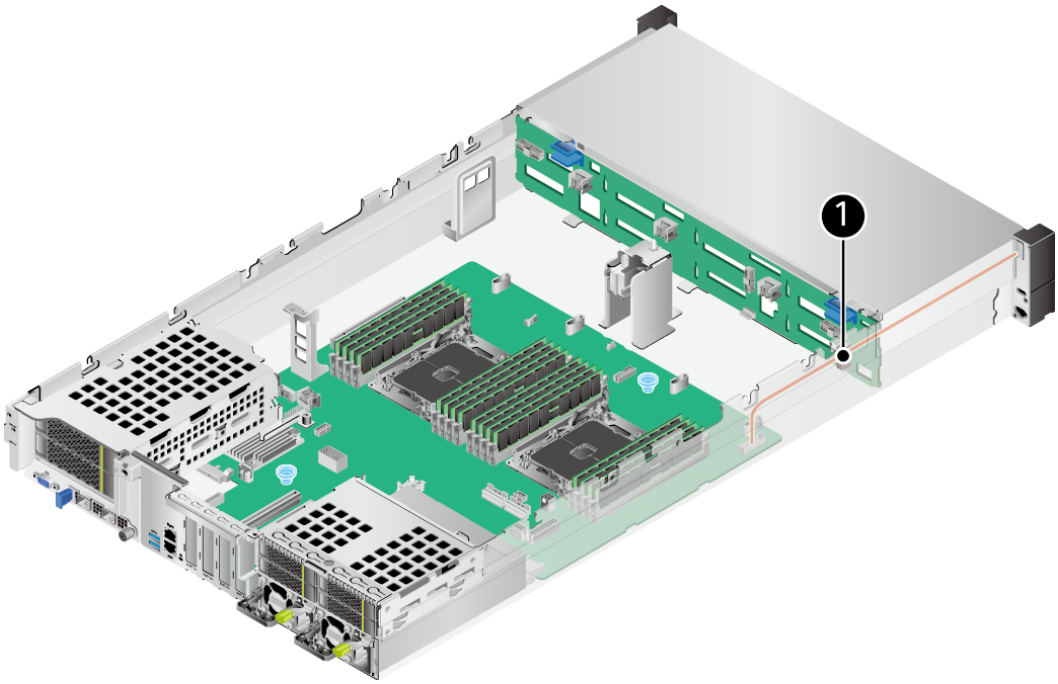

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Table 6-543 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.4.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-565 Intrusion sensor cabling

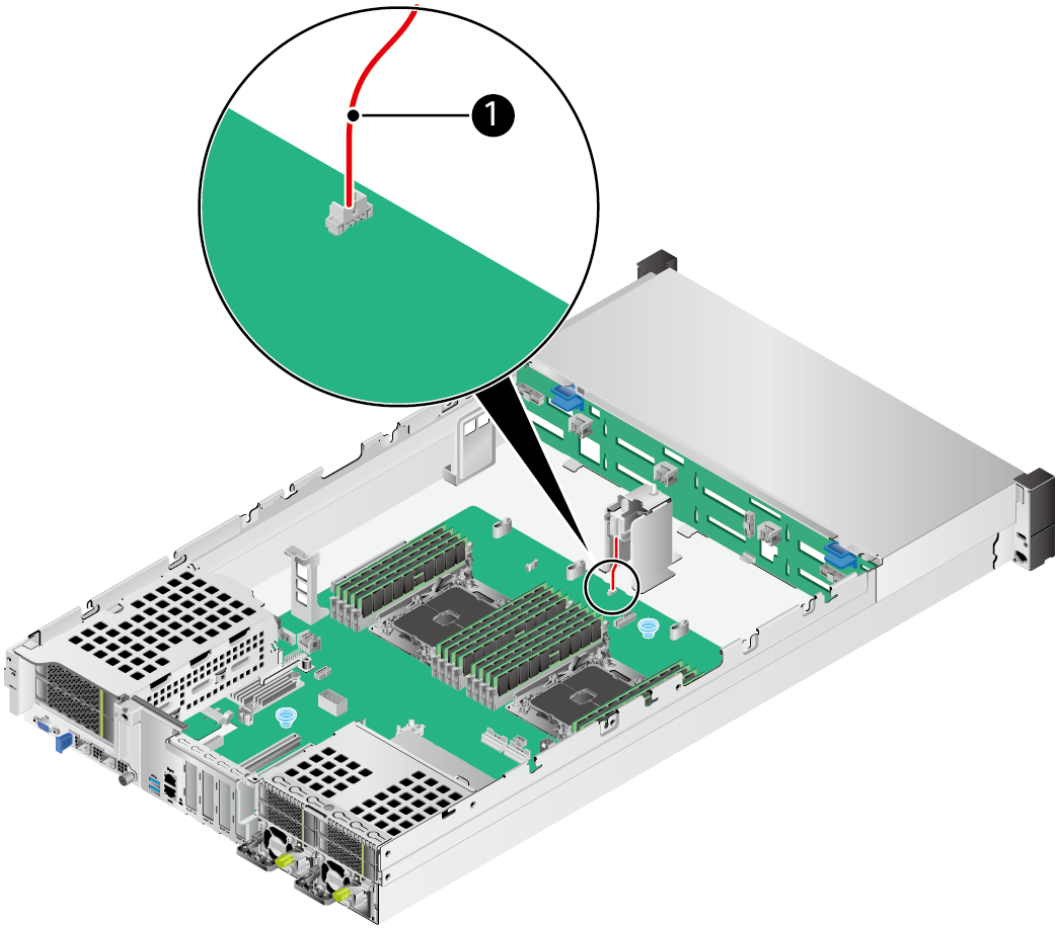

Table 6-544 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-566 Front-drive backplane power and low-speed signal cables

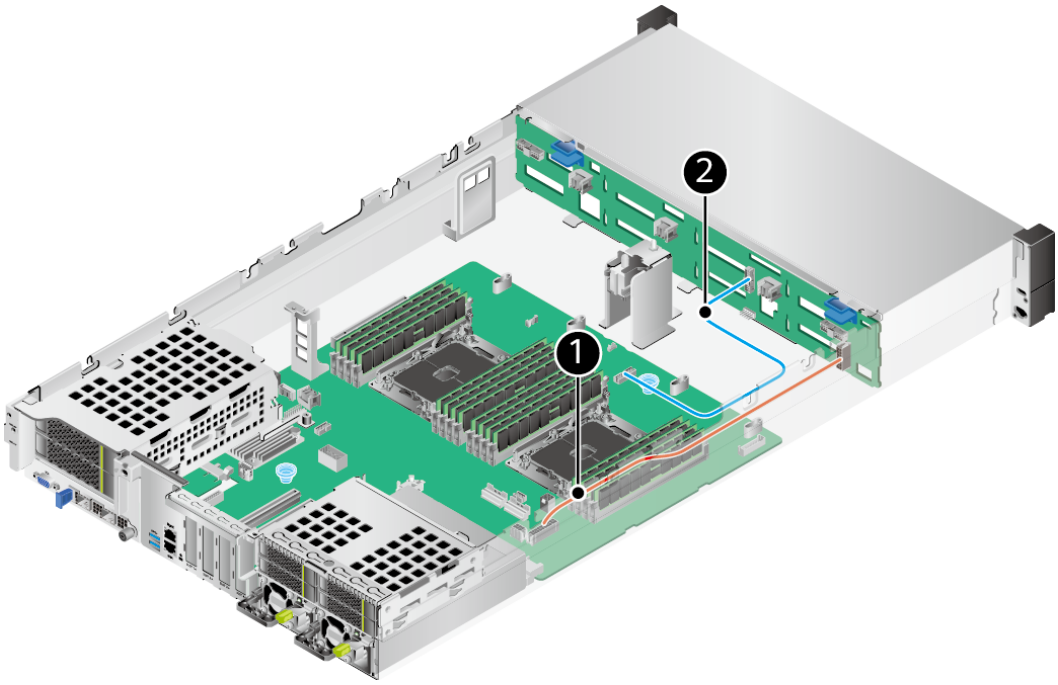

Table 6-545 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J1) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)

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6.5.4.1.4 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-567 Front-drive backplane SAS high-speed cabling

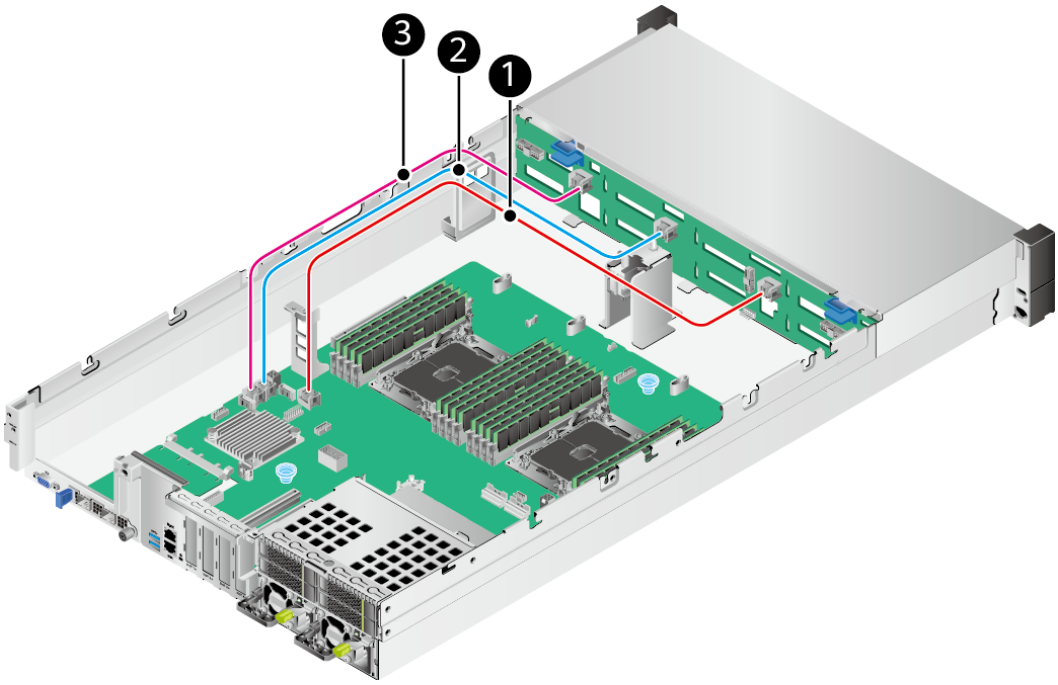

Table 6-546 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939	SAS high-speed cable for connecting the front-drive backplane (J3) to the mainboard (J6)
2	04051939	SAS high-speed cable for connecting the front-drive backplane (J4) to the mainboard (J5)
3	04051939	SAS high-speed cable for connecting the front-drive backplane (J5) to the mainboard (J4)

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6.5.4.1.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

NOTICE

There is a small gap between the rear-drive backplane in I/O module 1 and the mainboard (J2). Remove and connect the rear-drive backplane in I/O module 1 in the following sequence:

- Remove the cabling of the rear-drive backplane in I/O module 1:
  1. Remove the cables from the rear-drive backplane in I/O module 1.
  2. Remove I/O module 1.
  3. Remove the cables from the mainboard.
- Connect the cables to the rear-drive backplane in I/O module 1.
  1. Connect the cables to the mainboard.
  2. Install I/O module 1.
  3. Connect the cables to the rear-drive backplane in I/O module 1.

I/O Module 1 Cabling

Figure 6-568 I/O module 1 cabling

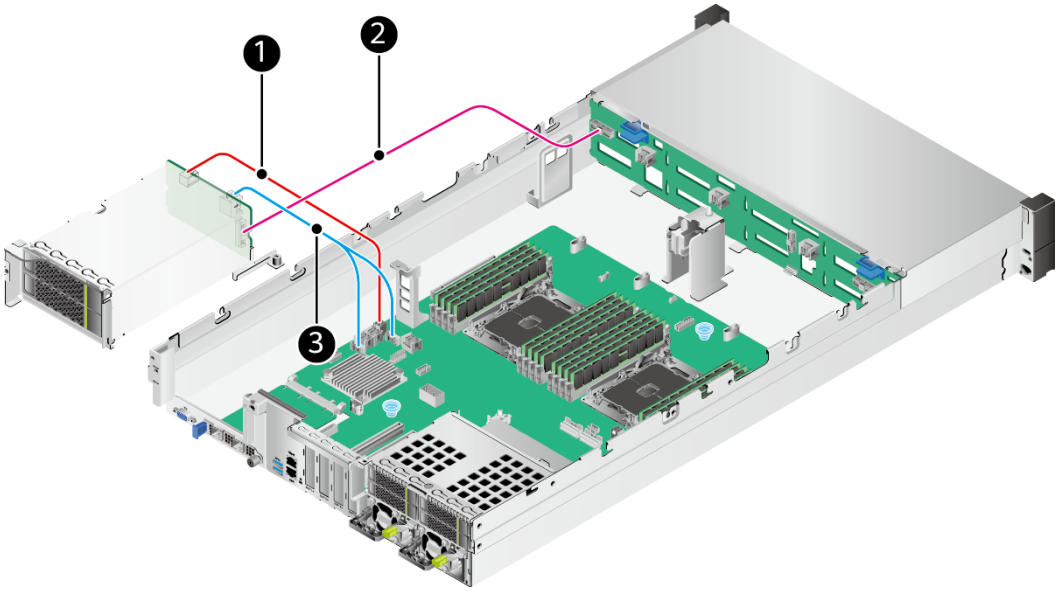

Table 6-547 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)

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No.	P/N Code	Description
3	04051929	SAS high-speed cable for connecting the rear-drive backplane (J2) to the mainboard (J1) and mainboard (J2) **NOTE** There is a small gap between the rear hard disk backplane and the mainboard (J2). Remove the cable from the rear-drive backplane, remove the entire rear-drive module, and then remove the cables from the mainboards (J1) and (J2).

6.5.4.1.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-569 I/O module 3 cabling

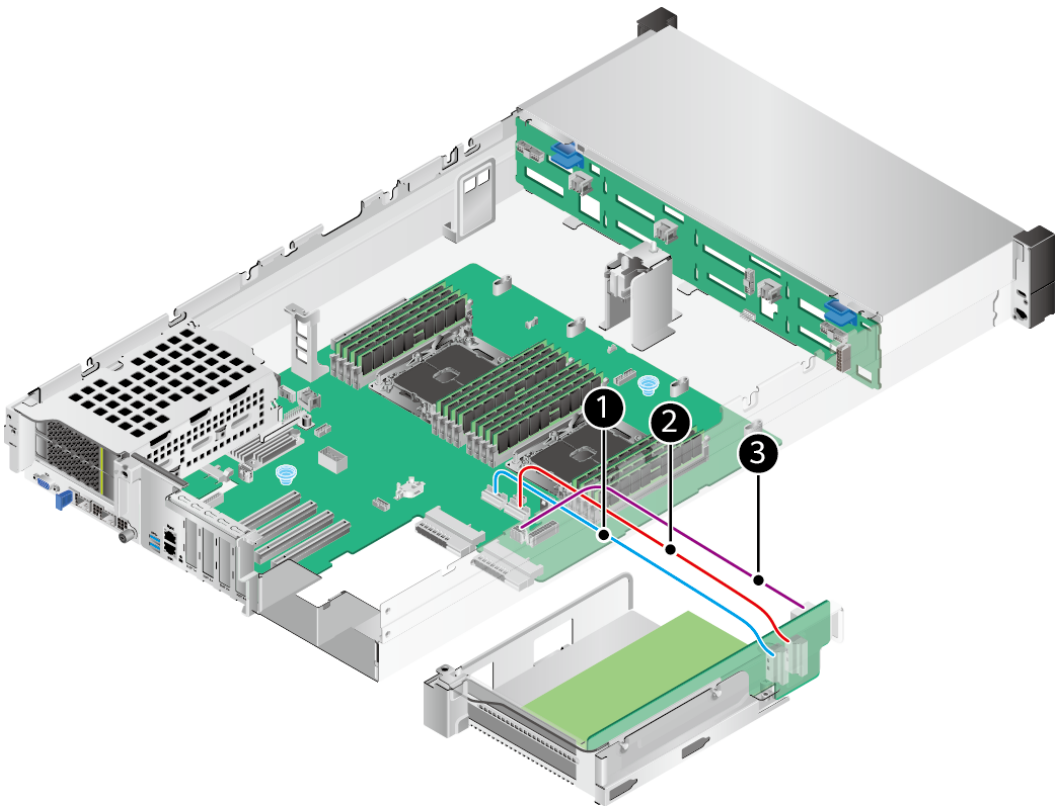

Table 6-548 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	High-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.

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No.	P/N Code	Description	Remarks
2	04052477-007	High-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

6.5.4.1.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-570 I/O module 3 cabling

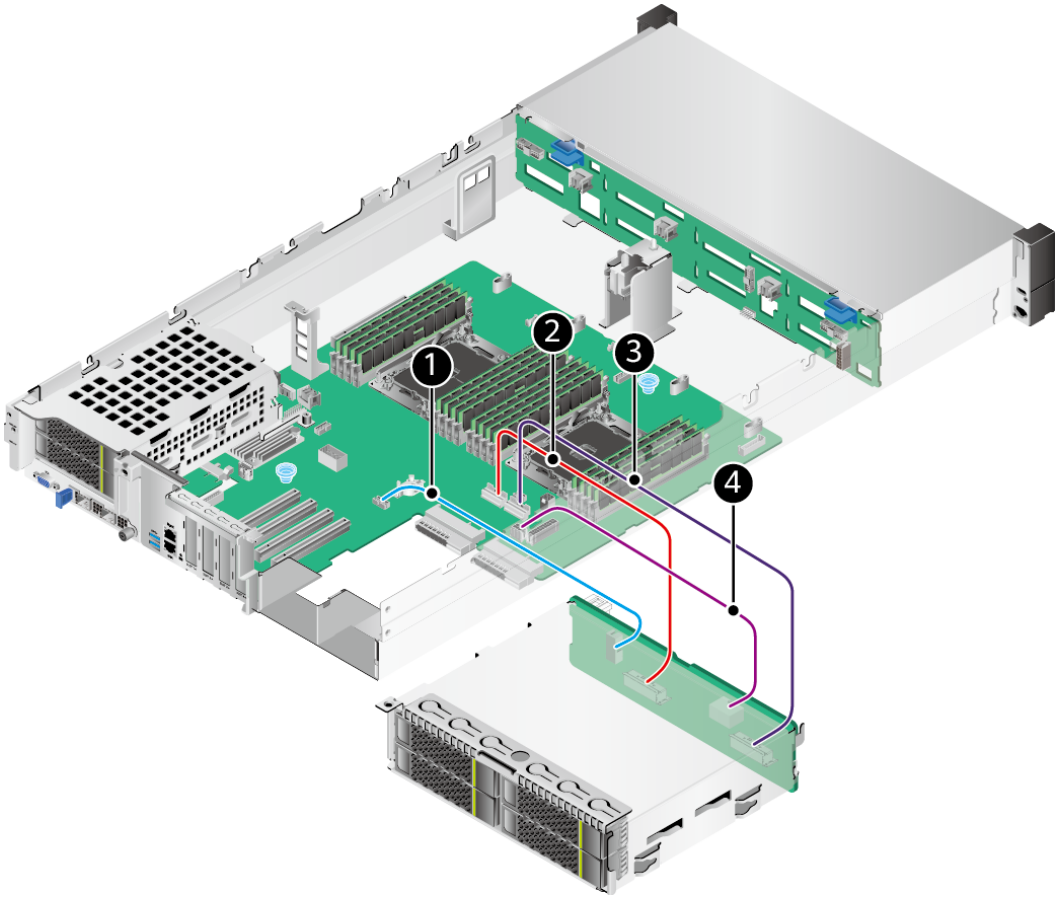

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Table 6-549 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.4.2 12 x 3.5" Drive Pass-through Configuration 2

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6.5.4.2.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-571 Left mounting ear cabling

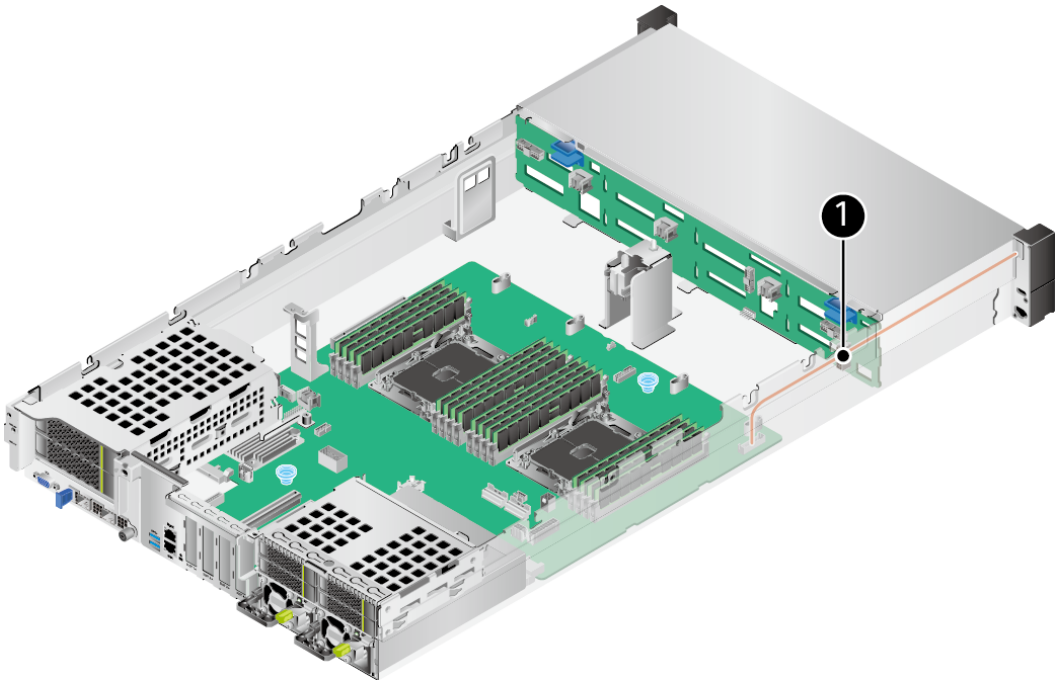

Table 6-550 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.4.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-572 Intrusion sensor cabling

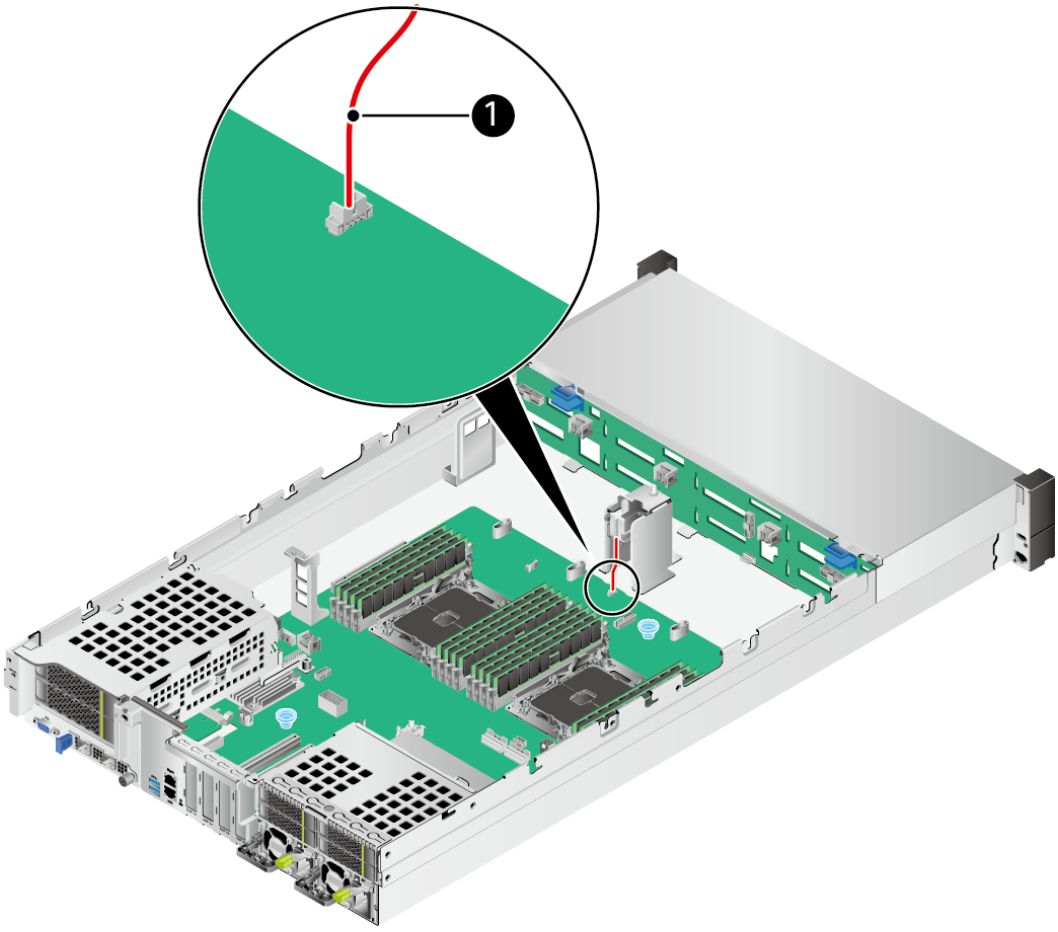

Table 6-551 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-573 Front-drive backplane power and low-speed signal cables

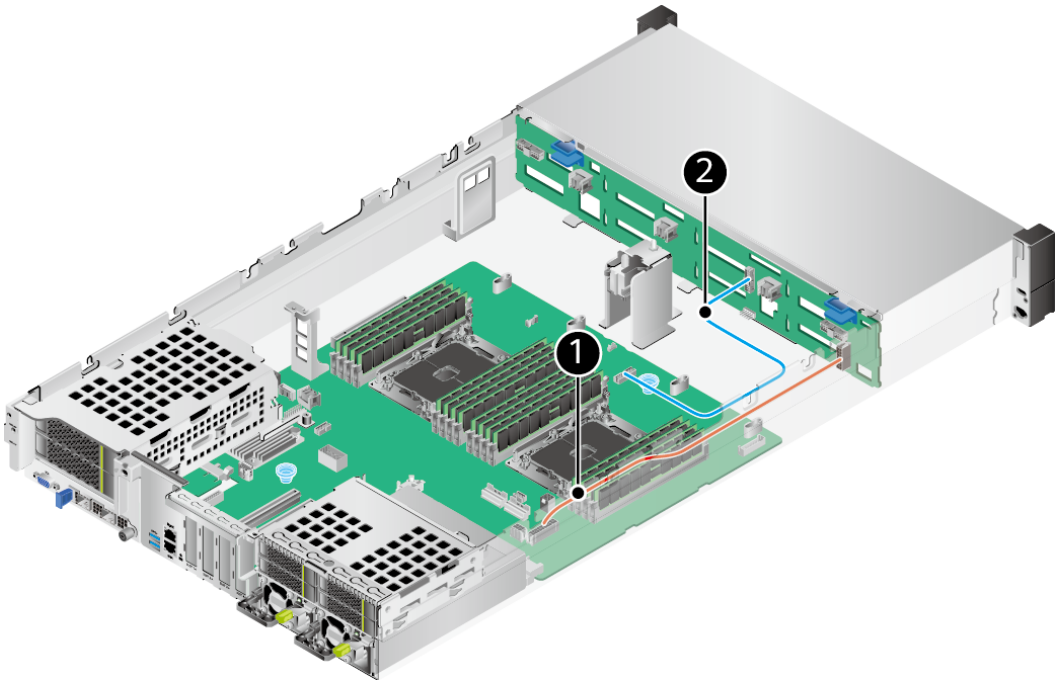

Table 6-552 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J1) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)

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6.5.4.2.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-574 Front-drive backplane SAS high-speed cabling

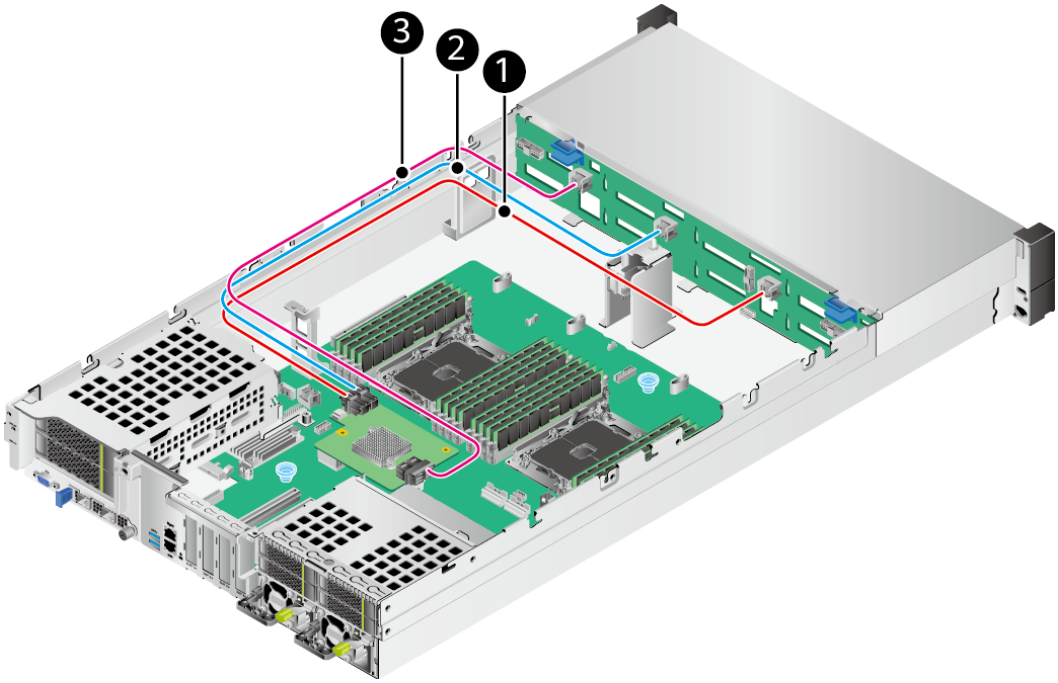

Table 6-553 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the screw-in RAID controller card

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6.5.4.2.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-575 I/O module 1 cabling

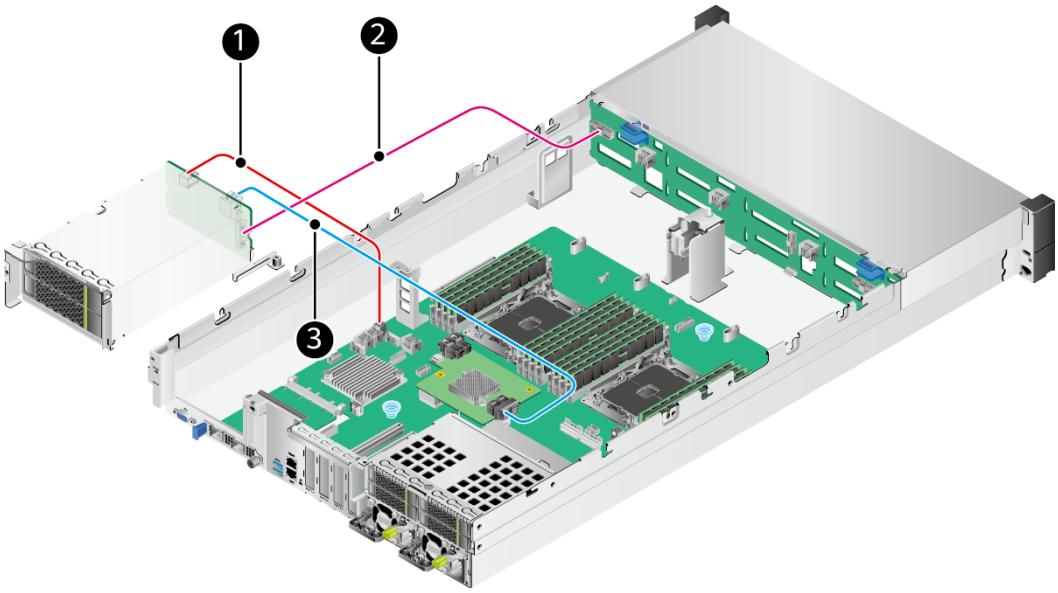

Table 6-554 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448 -001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)	-
3	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

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6.5.4.2.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-576 I/O module 3 cabling

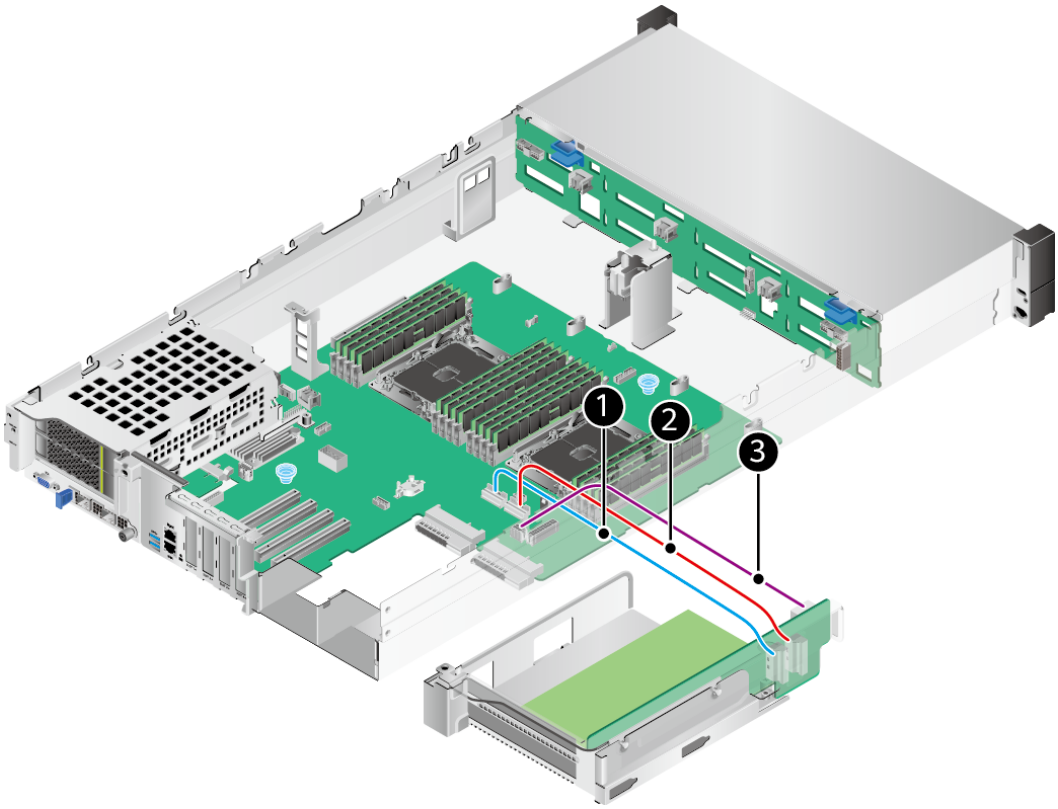

Table 6-555 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	High-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	High-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.4.2.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-577 I/O module 3 cabling

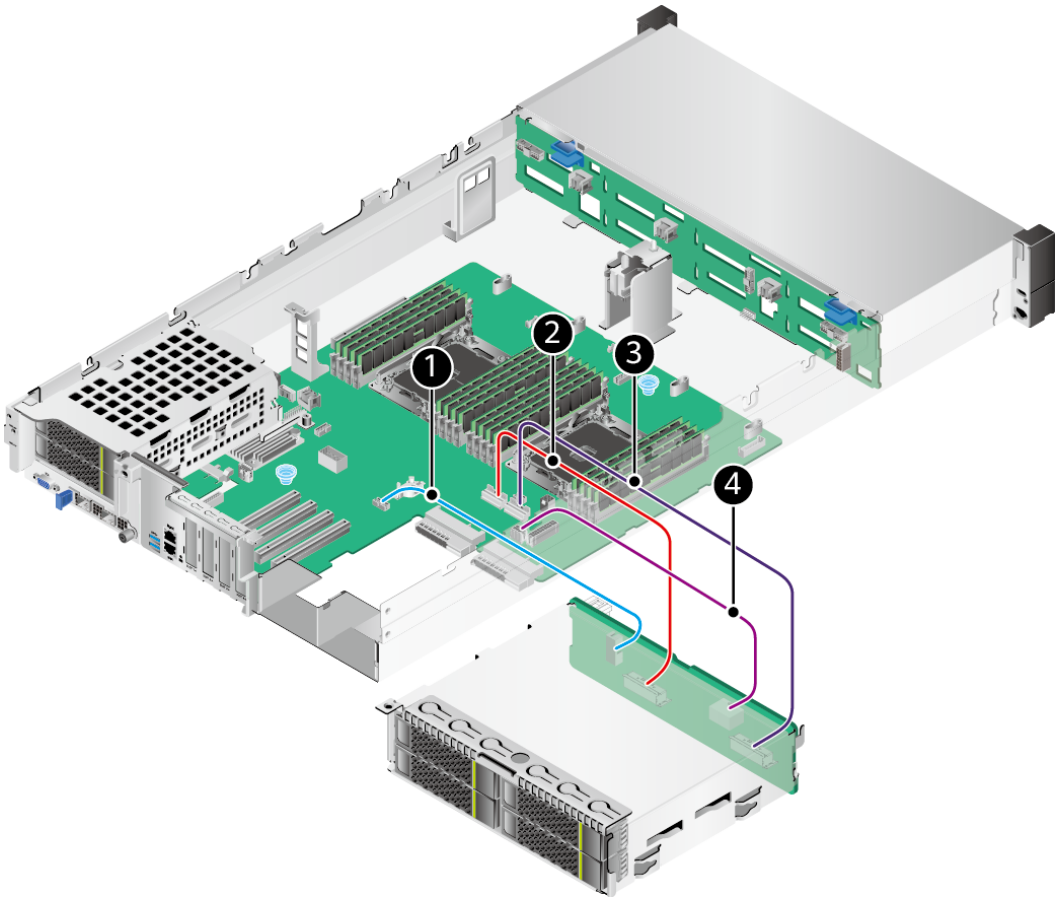

Table 6-556 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.4.3 12 x 3.5" Drive Pass-through Configuration 3

6.5.4.3.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-578 Left mounting ear cabling

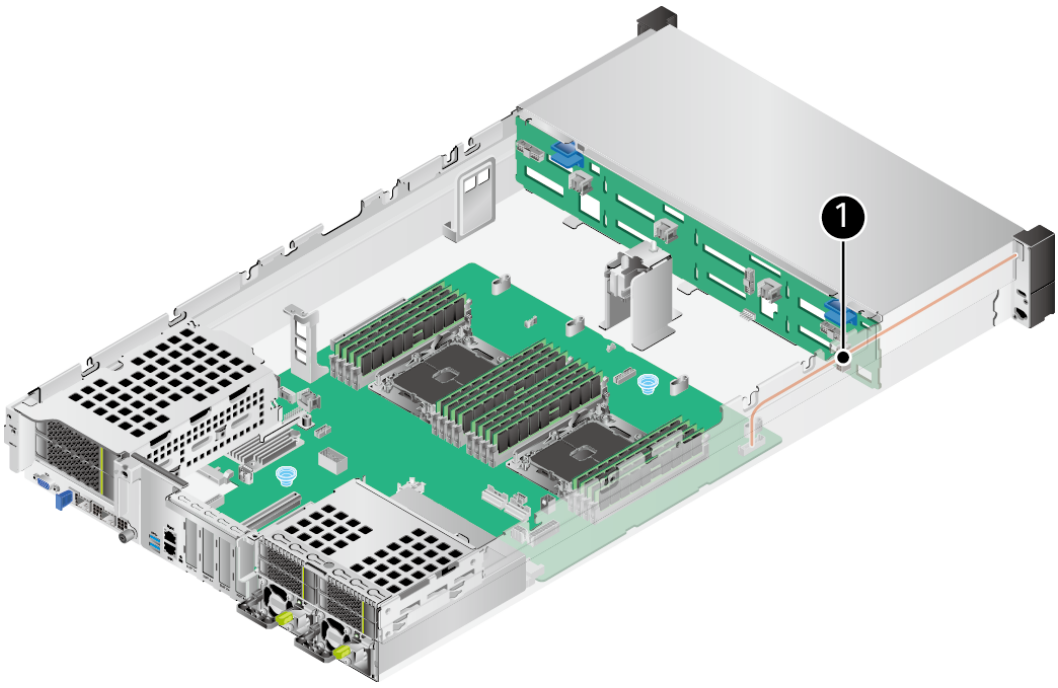

Table 6-557 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.4.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-579 Intrusion sensor cabling

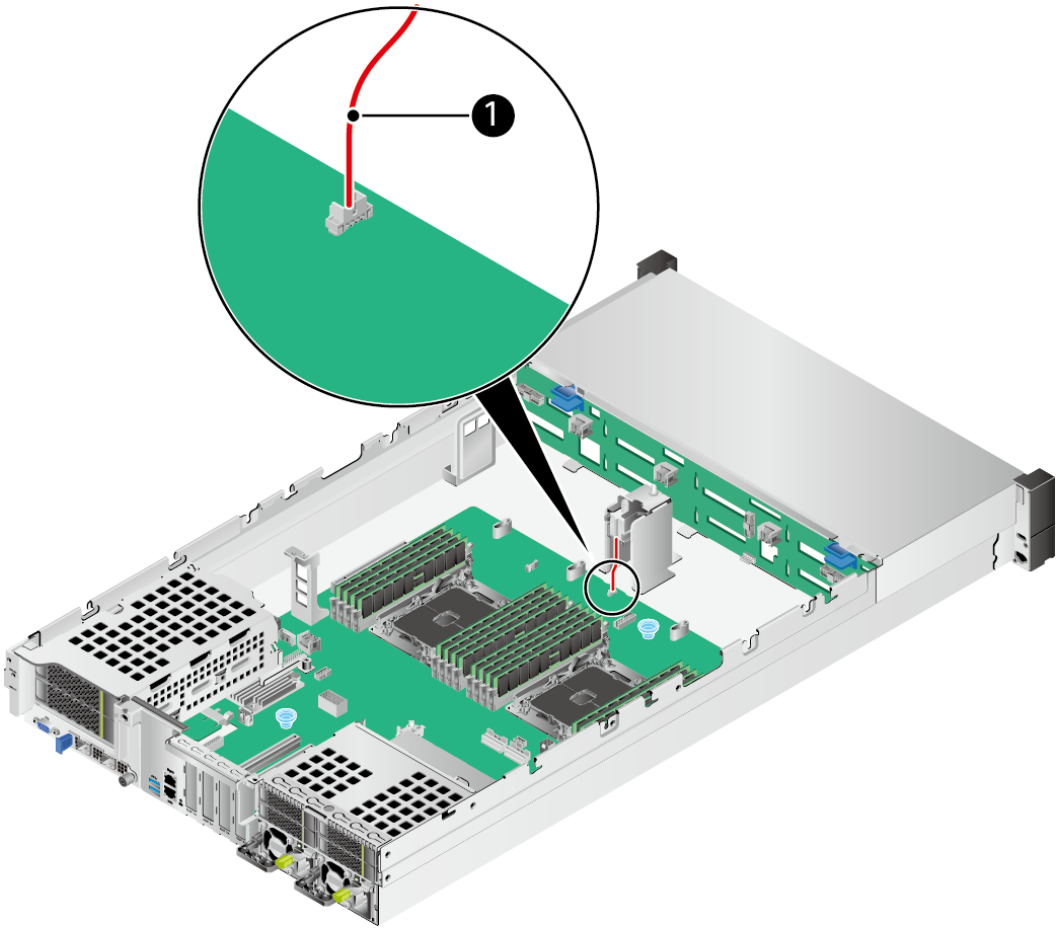

Table 6-558 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-580 Front-drive backplane power and low-speed signal cables

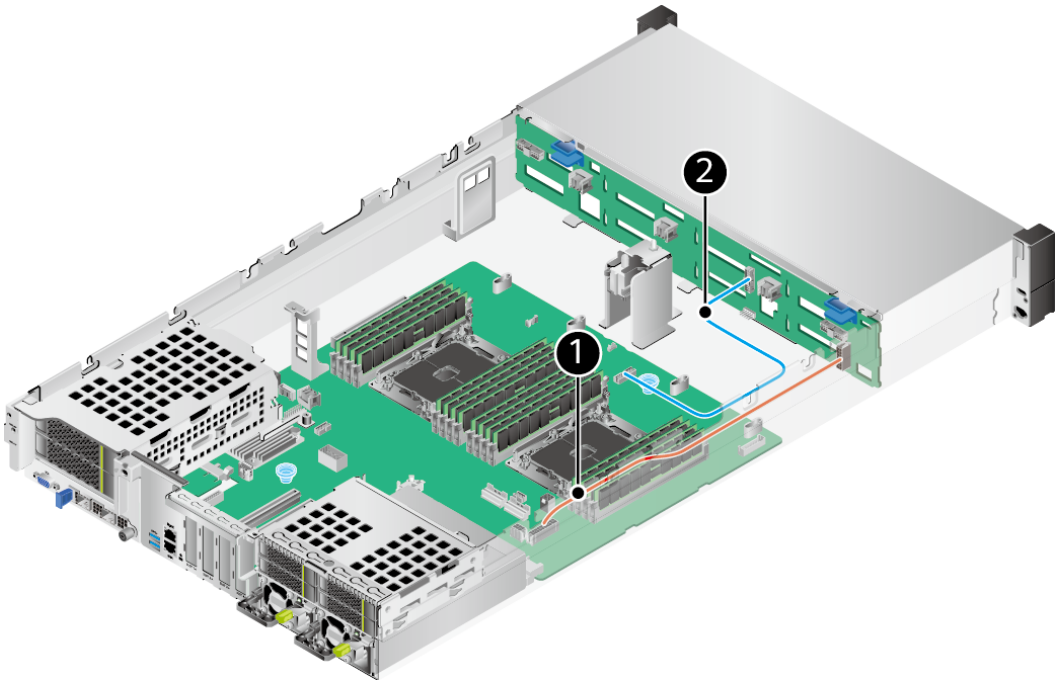

Table 6-559 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J1) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)

6.5.4.3.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-581 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

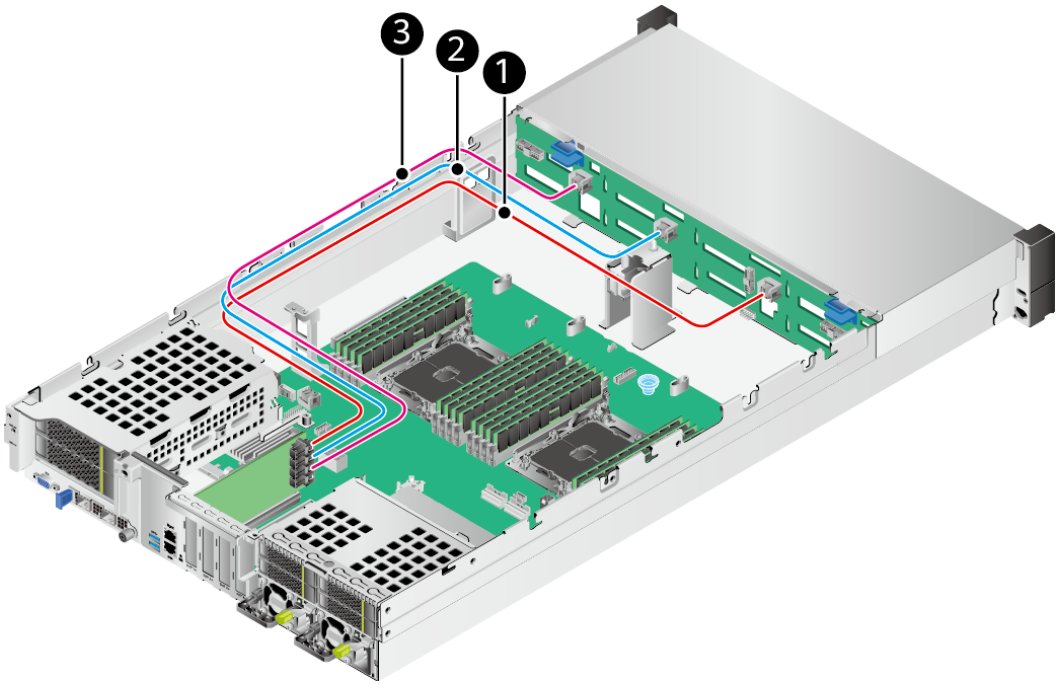

Table 6-560 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051390	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the PCIe RAID controller card
2	04051021	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the PCIe RAID controller card
3	04051020	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the PCIe RAID controller card

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Figure 6-582 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

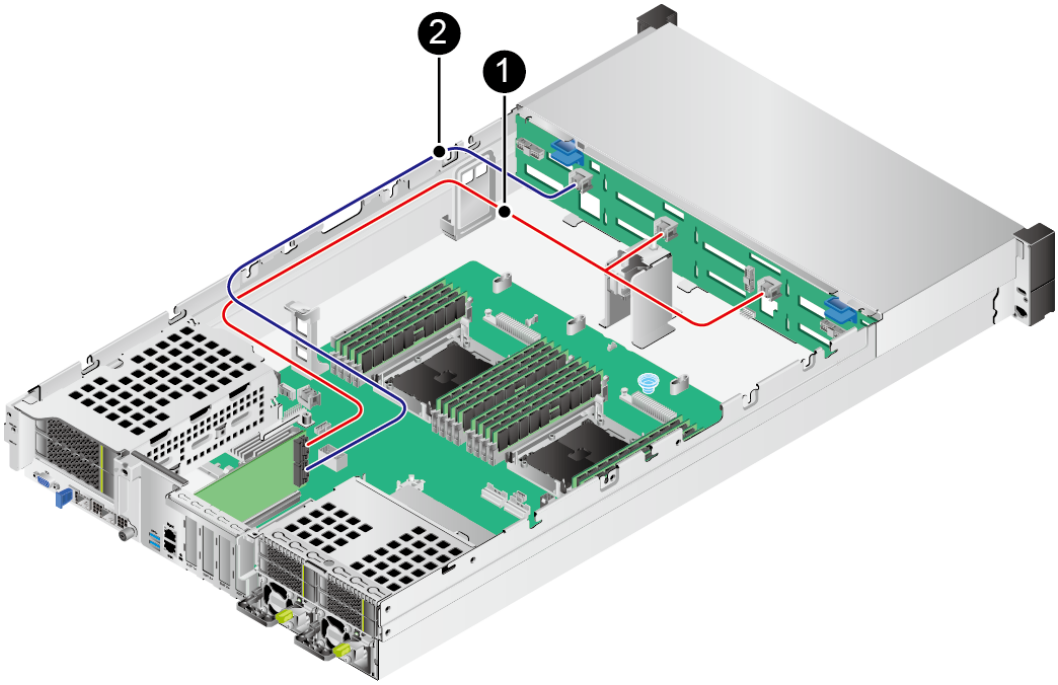

Table 6-561 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y019	SAS high-speed cable for connecting the front-drive backplane (J3/J4) to C0 of the PCIe RAID controller card **NOTE** 0405Y019 is a Y-shaped cable. The PORT A connector is connected to the front drive backplane (J3) , the PORT B connector is connected to the front drive backplane (J4), and another end of the cable is connected to the RAID controller card.
2	0405Y025	SAS high-speed cable for connecting the front-drive backplane (J5) to C1 of the PCIe RAID controller card **NOTE** 0405Y025 is a Y-shaped cable. The PORT A connector is connected to the drive backplane (J2) of I/O module 1, the PORT B connector is connected to the front drive backplane (J5), and another end of the cable is connected to the RAID controller card.

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NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J3) may be C0, PORT A, 0, or CN0. The port number of the PCIe RAID controller card connected to front-drive backplane (J4) may be C1, PORT B, 1, or CN1, and the port number of the PCIe RAID controller card connected to front-drive backplane (J5) may be C2, PORT C, 2, or CN2.

6.5.4.3.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-583 I/O module 1 cabling (Configuring a PCIe RAID controller card with four Mini SAS ports)

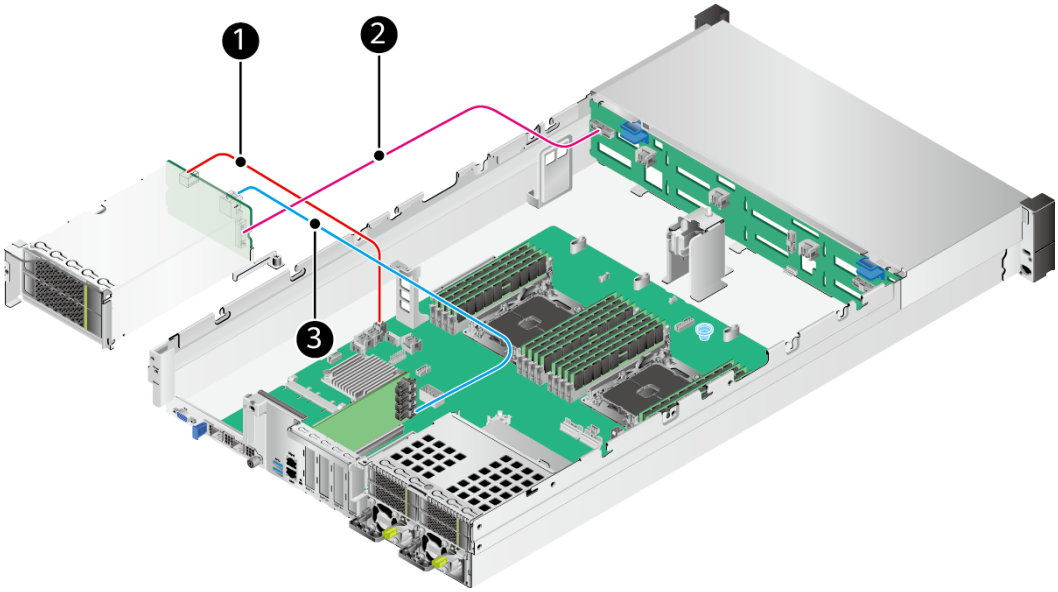

Table 6-562 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)	-
3	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

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Figure 6-584 I/O module 1 cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

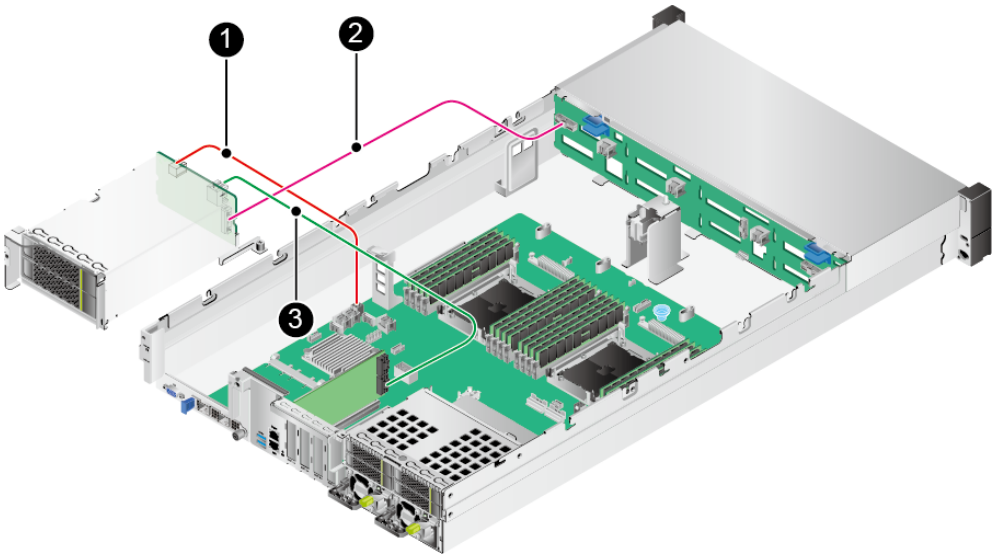

Table 6-563 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)	-
3	0405Y025	SAS high-speed cable for connecting the rear-drive backplane (J2) to C1 of the PCIe RAID controller card **NOTE** 0405Y025 is a Y-shaped cable. The PORT A connector is connected to the drive backplane (J2) of I/O module 1, the PORT B connector is connected to the front drive backplane (J5), and another end of the cable is connected to the RAID controller card.	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

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6.5.4.3.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-585 I/O module 3 cabling

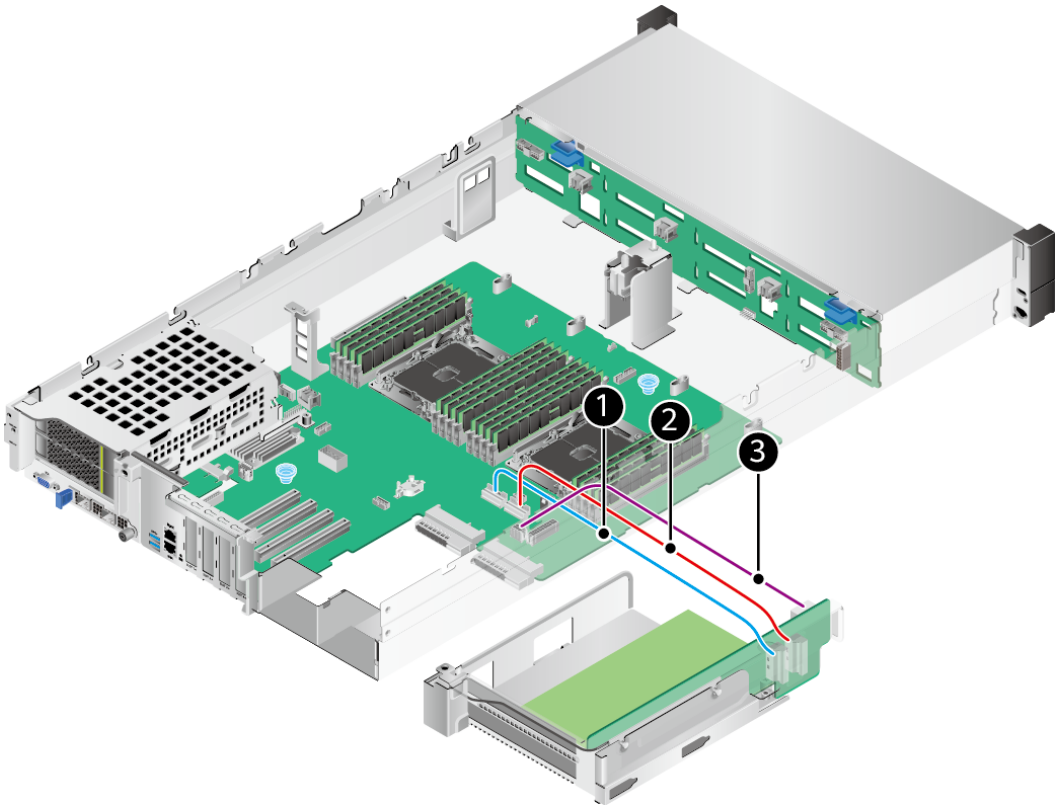

Table 6-564 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	High-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	High-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.4.3.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-586 I/O module 3 cabling

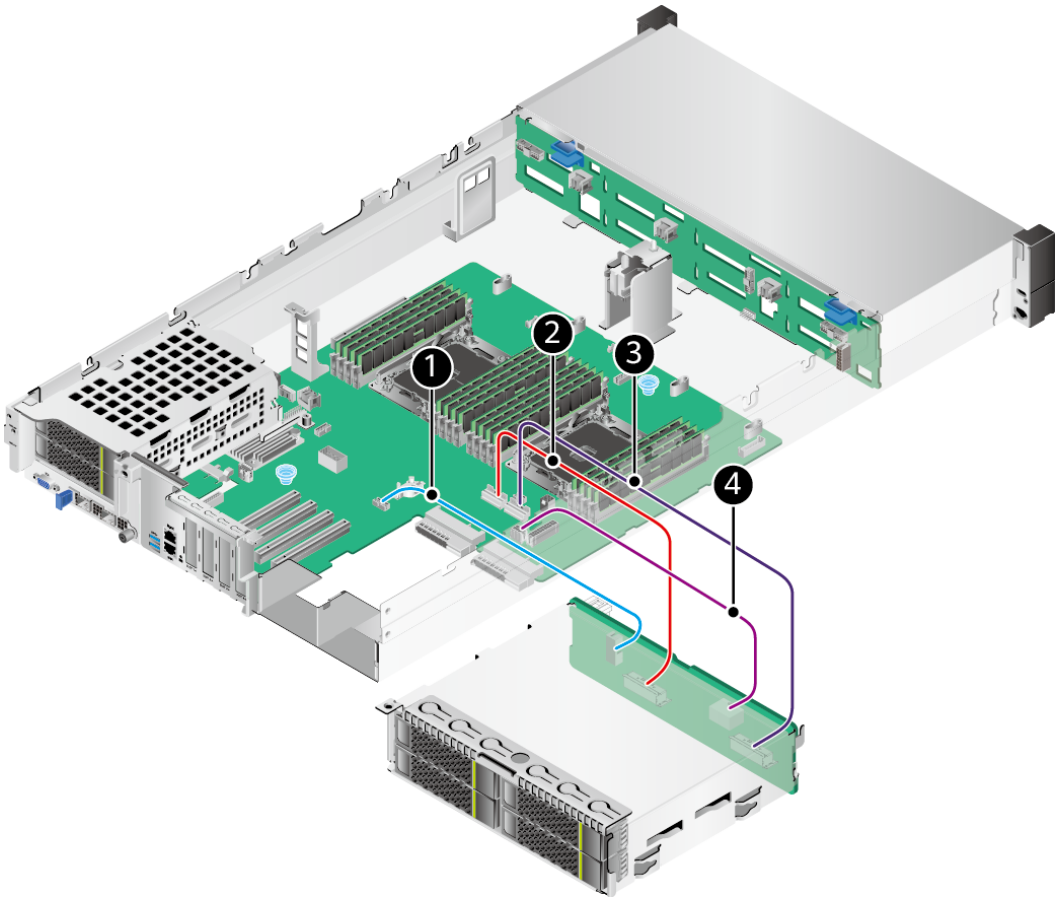

Table 6-565 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.4.4 12 x 3.5" Drive Pass-through Configuration 4 (Dual RAID Controller Cards)

6.5.4.4.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-587 Left mounting ear cabling

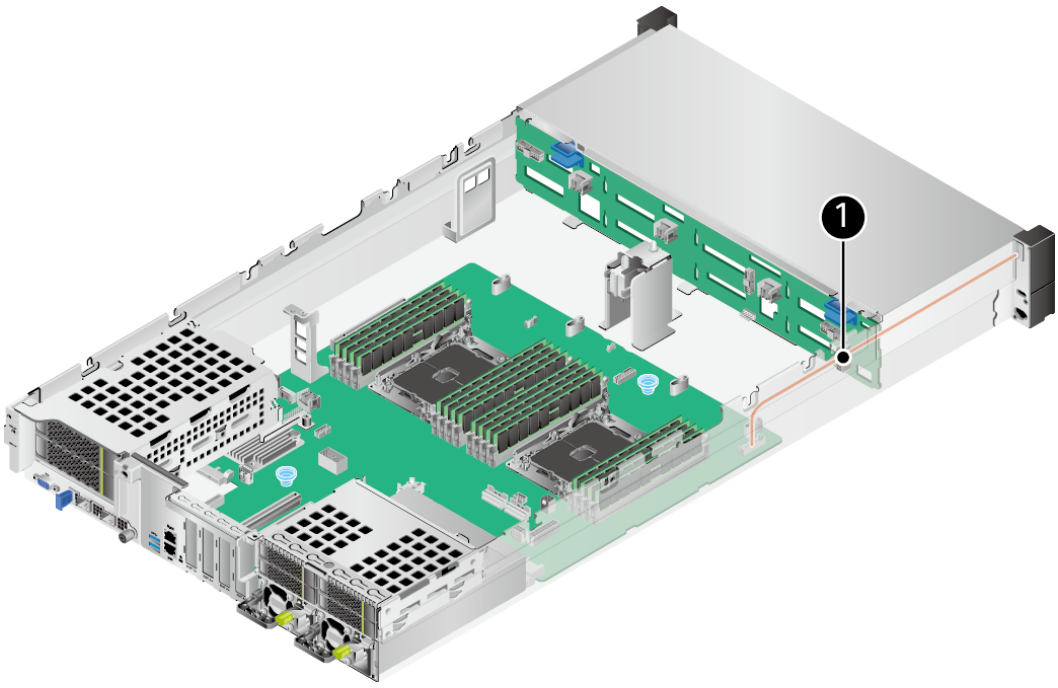

Table 6-566 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.4.4.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-588 Intrusion sensor cabling

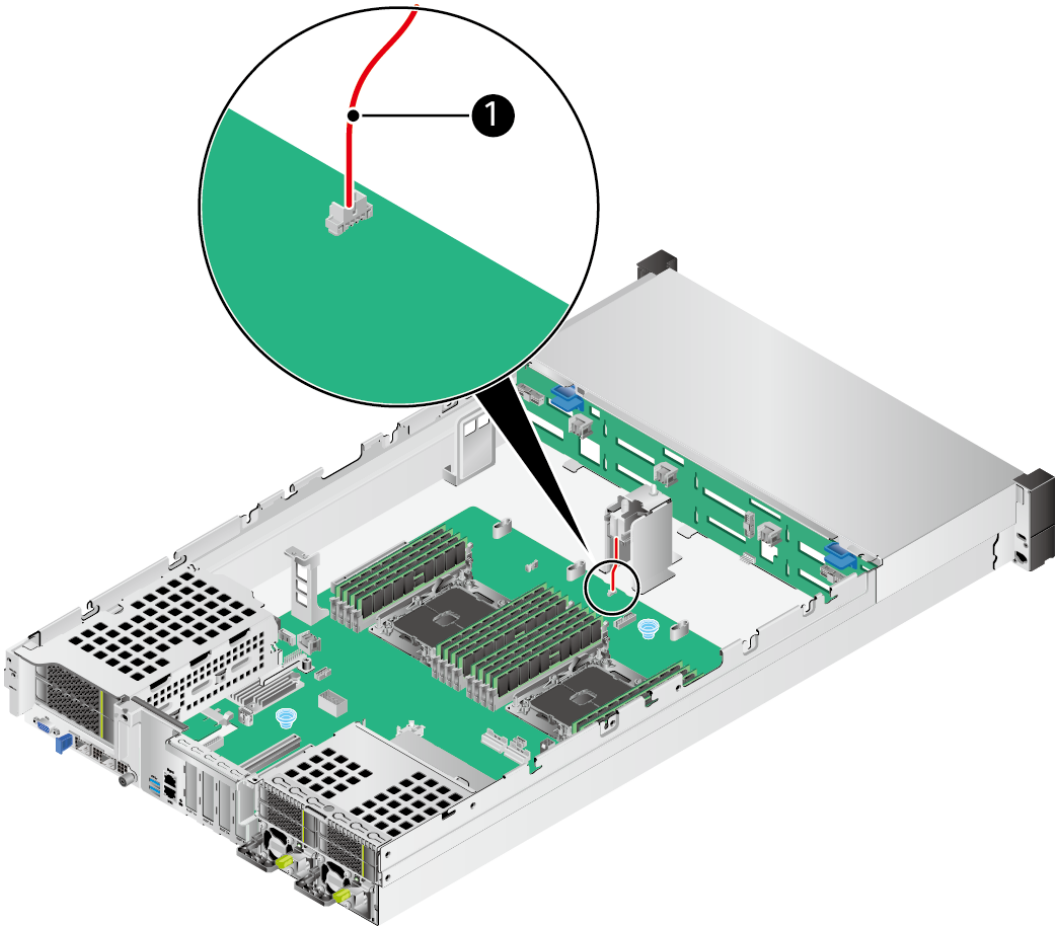

Table 6-567 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.4.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-589 Front-drive backplane power and low-speed signal cables

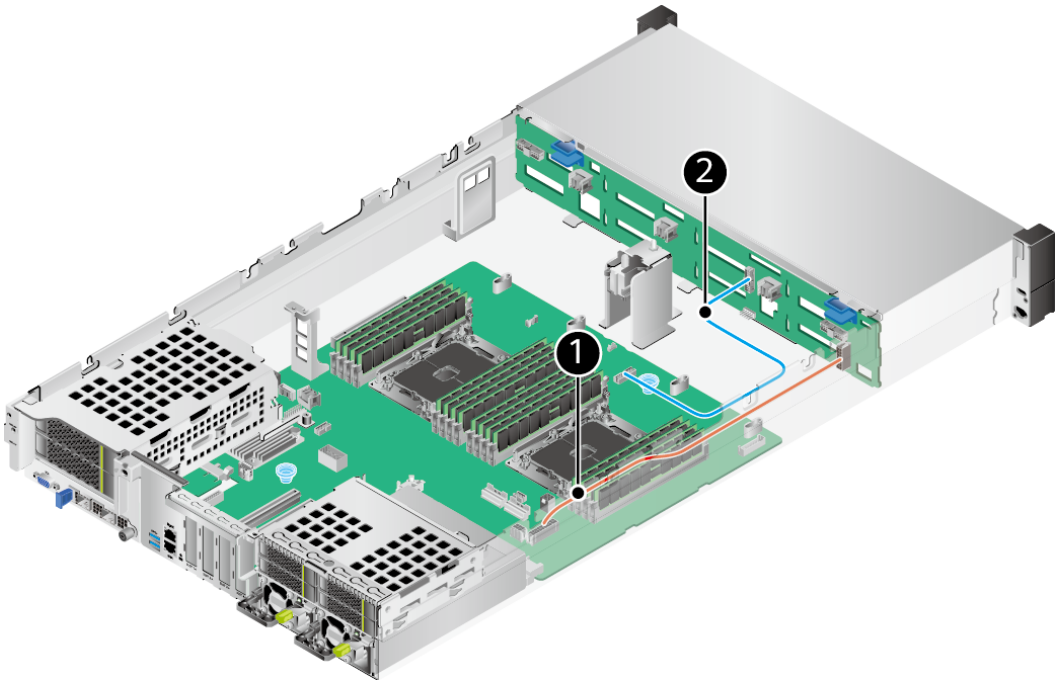

Table 6-568 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J1) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J6) to the mainboard (J75)

6.5.4.4.4 Front-Drive Backplane SAS High-speed Cabling

NOTICE

The PCIe RAID controller card must be configured in the built-in PCIe slot.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-590 Front-drive backplane SAS high-speed cabling

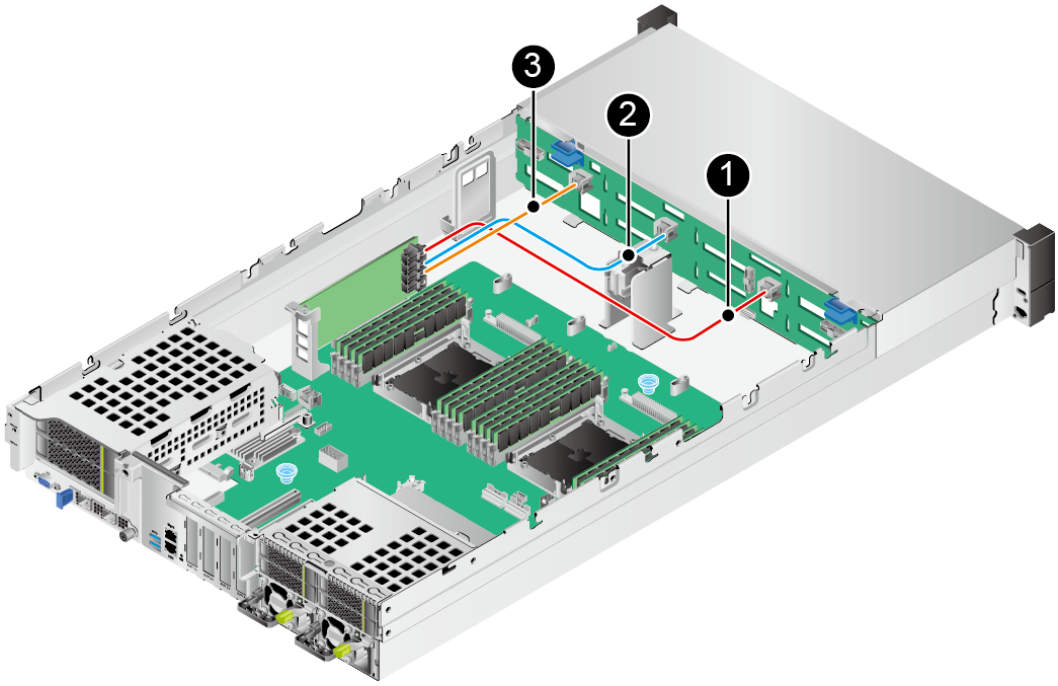

Table 6-569 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J3) to PORT A of the PCIe RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J4) to PORT B of the PCIe RAID controller card
3	04051018	SAS high-speed cable for connecting the front-drive backplane (J5) to PORT C of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J3) may be C0, PORT A, 0, or CN0. The port number of the PCIe RAID controller card connected to front-drive backplane (J4) may be C1, PORT B, 1, or CN1, and the port number of the PCIe RAID controller card connected to front-drive backplane (J5) may be C2, PORT C, 2, or CN2.

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6.5.4.4.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-591 I/O module 1 cabling

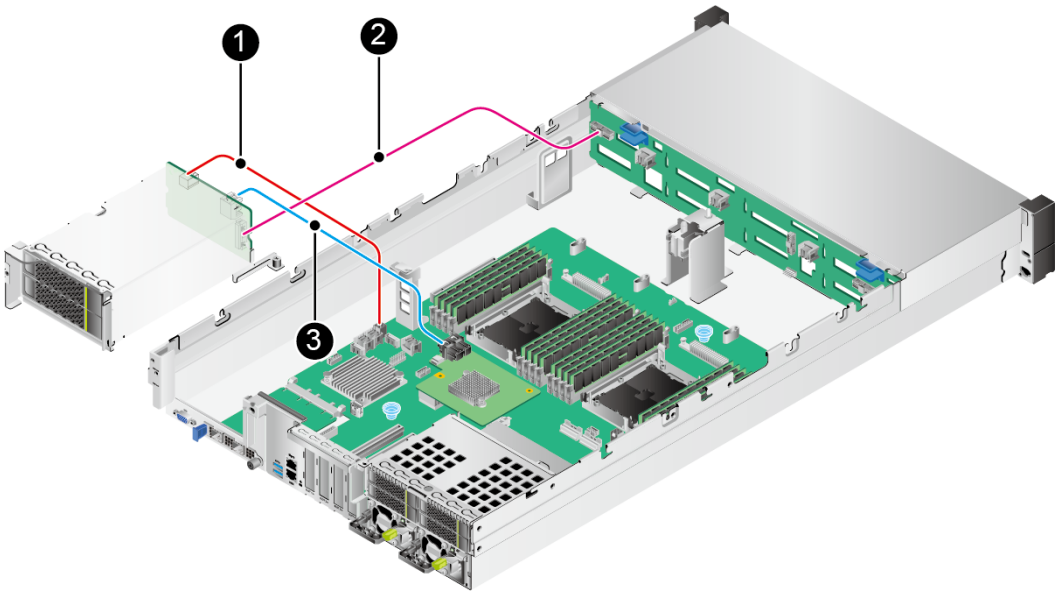

Table 6-570 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448 -001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J7)	-
3	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

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6.5.4.4.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-592 I/O module 3 cabling

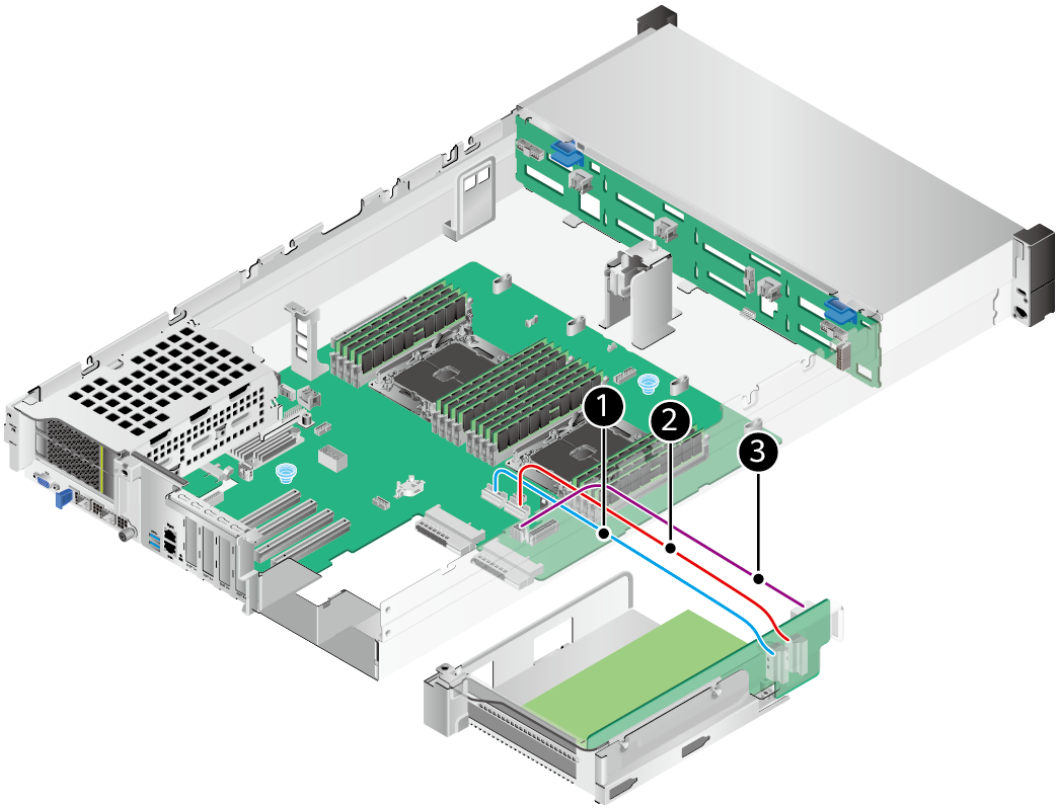

Table 6-571 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	High-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	High-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.4.4.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-593 I/O module 3 cabling

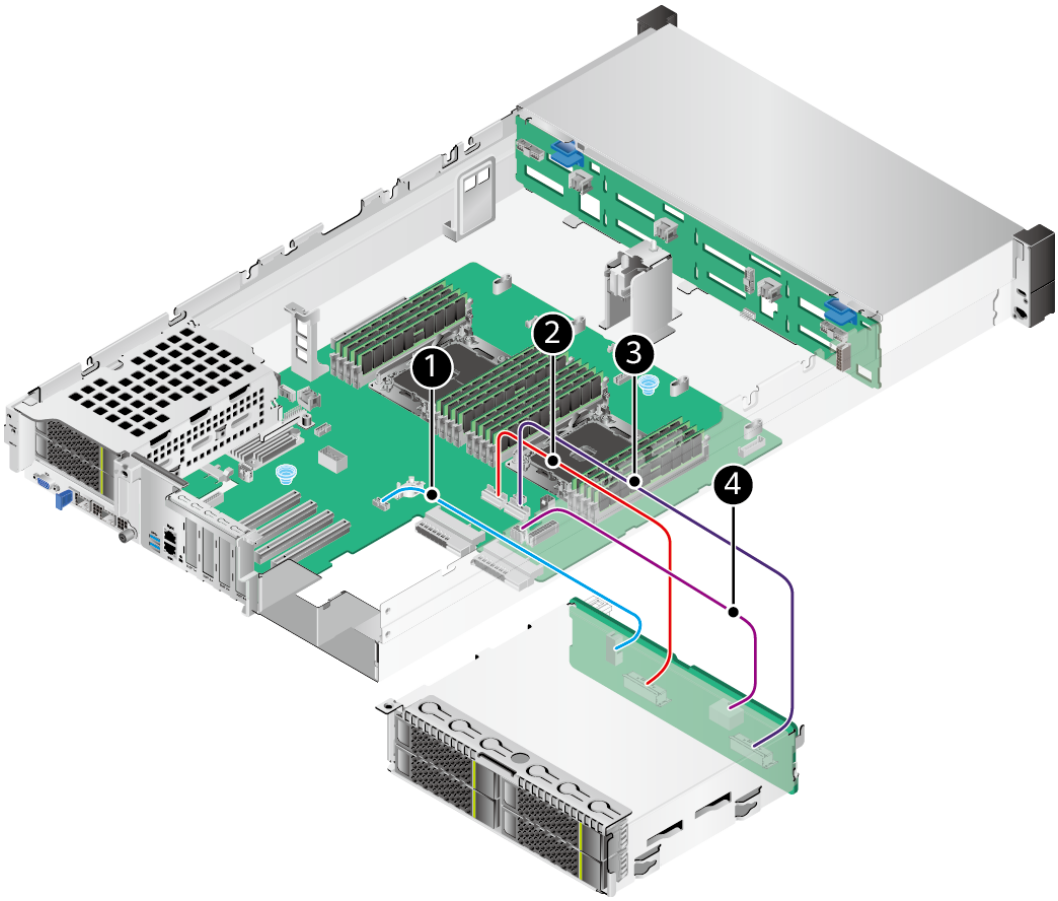

Table 6-572 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.4.5 12 x 3.5" Drive Pass-through Configuration 1 (4 x NVMe)

6.5.4.5.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-594 Left mounting ear cabling

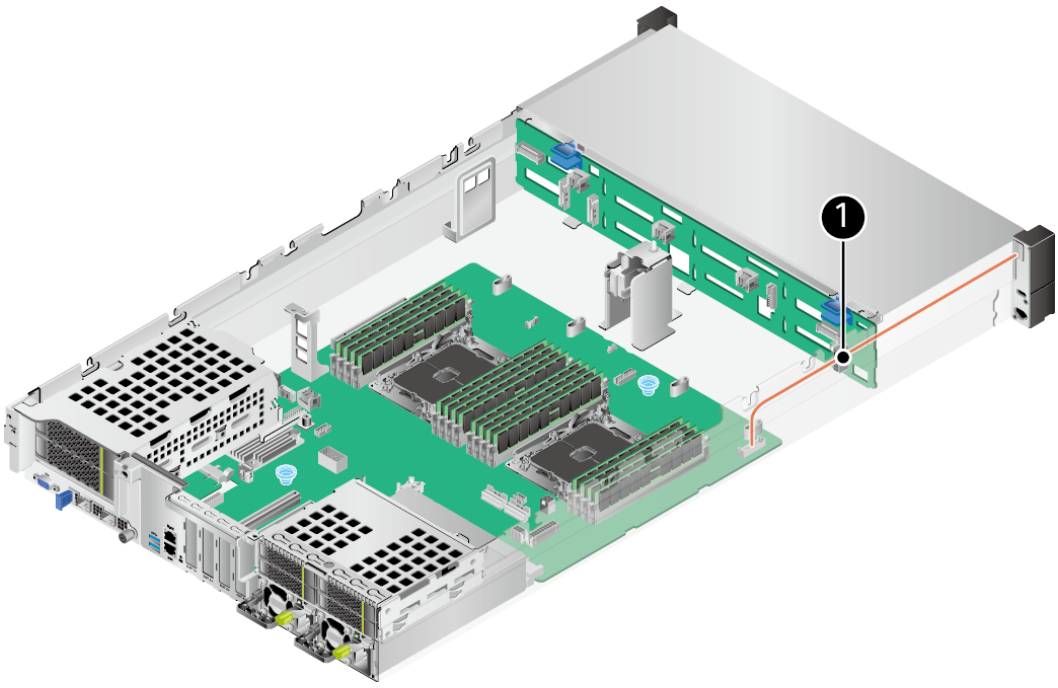

Table 6-573 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.4.5.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-595 Intrusion sensor cabling

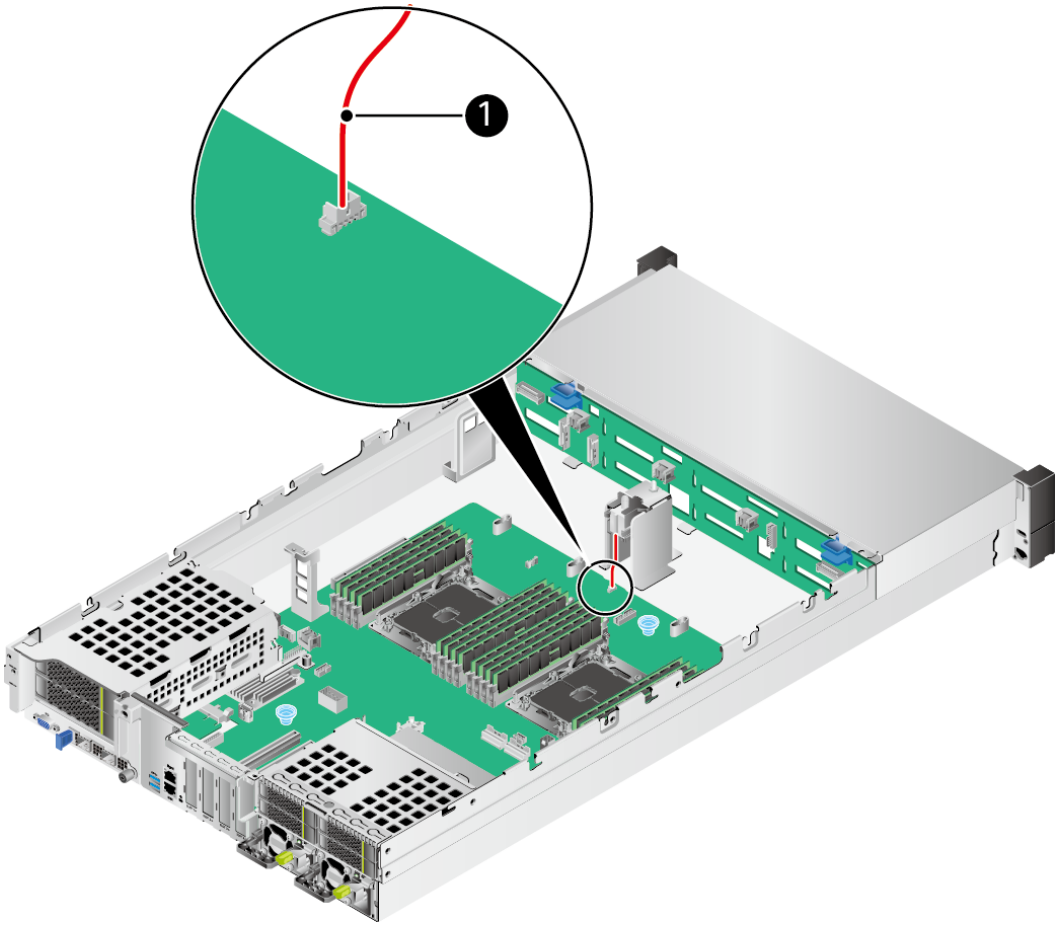

Table 6-574 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.5.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-596 Front-drive backplane power and low-speed signal cables

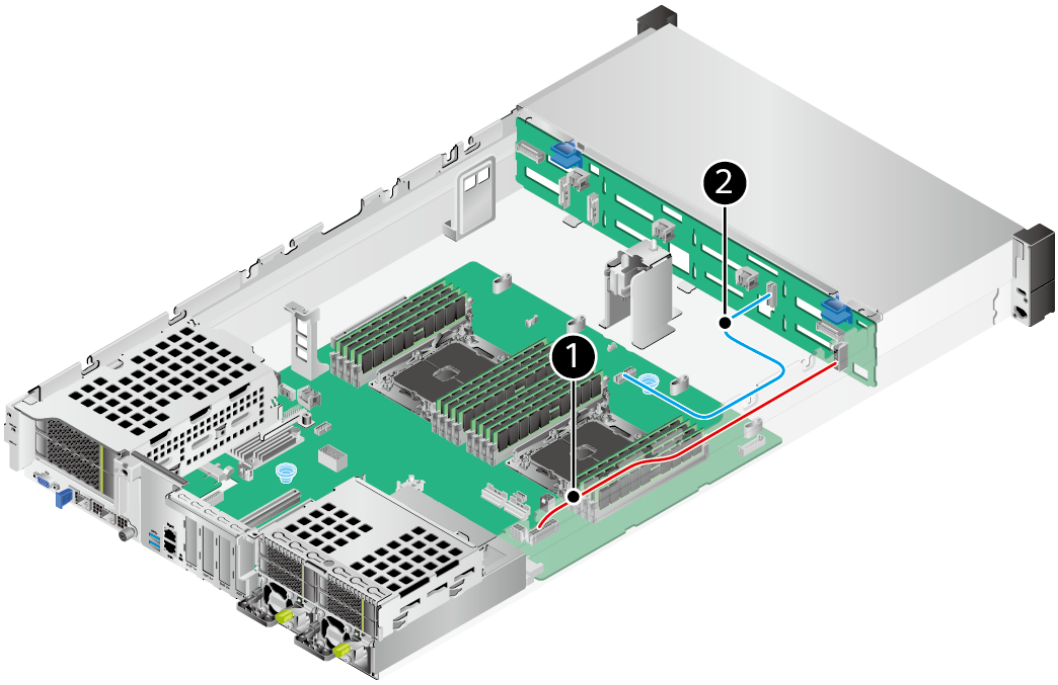

Table 6-575 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

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6.5.4.5.4 Front-Drive Backplane SAS Cable (PCH Pass-through)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-597 Front-drive backplane SAS high-speed cabling

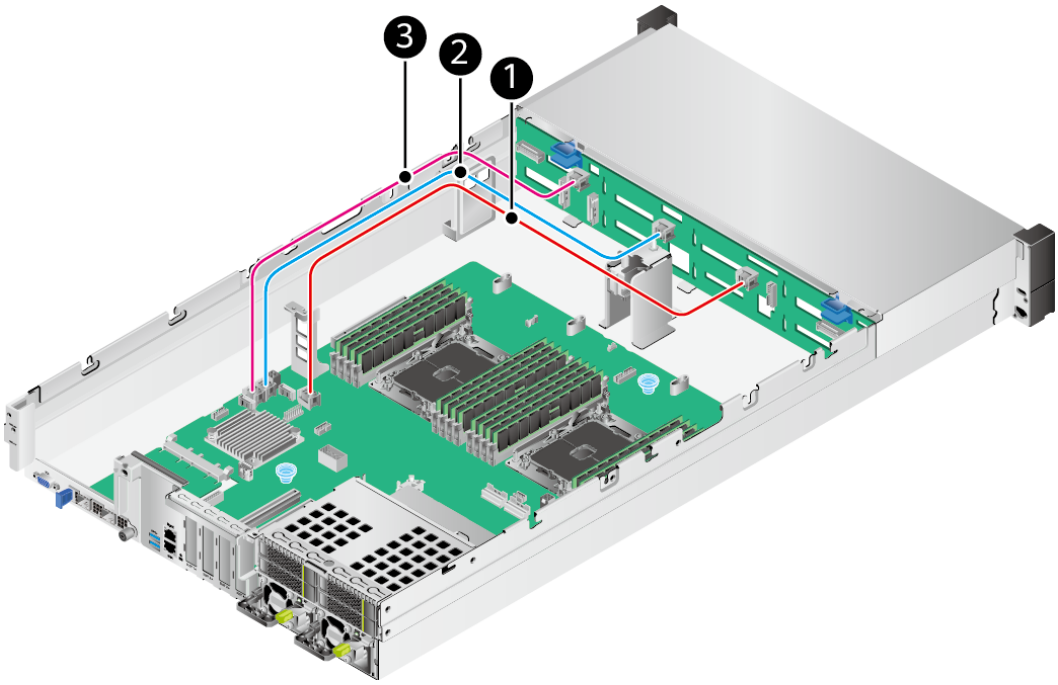

Table 6-576 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051939	SAS high-speed cable for connecting the front-drive backplane (J28) to the mainboard (J6)
2	04051939	SAS high-speed cable for connecting the front-drive backplane (J29) to the mainboard (J5)
3	04051939	SAS high-speed cable for connecting the front-drive backplane (J36) to the mainboard (J4)

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6.5.4.5.5 Front-Drive Backplane LP Slimline Signal Cable

Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-598 Front-drive backplane LP slimline high-speed cable

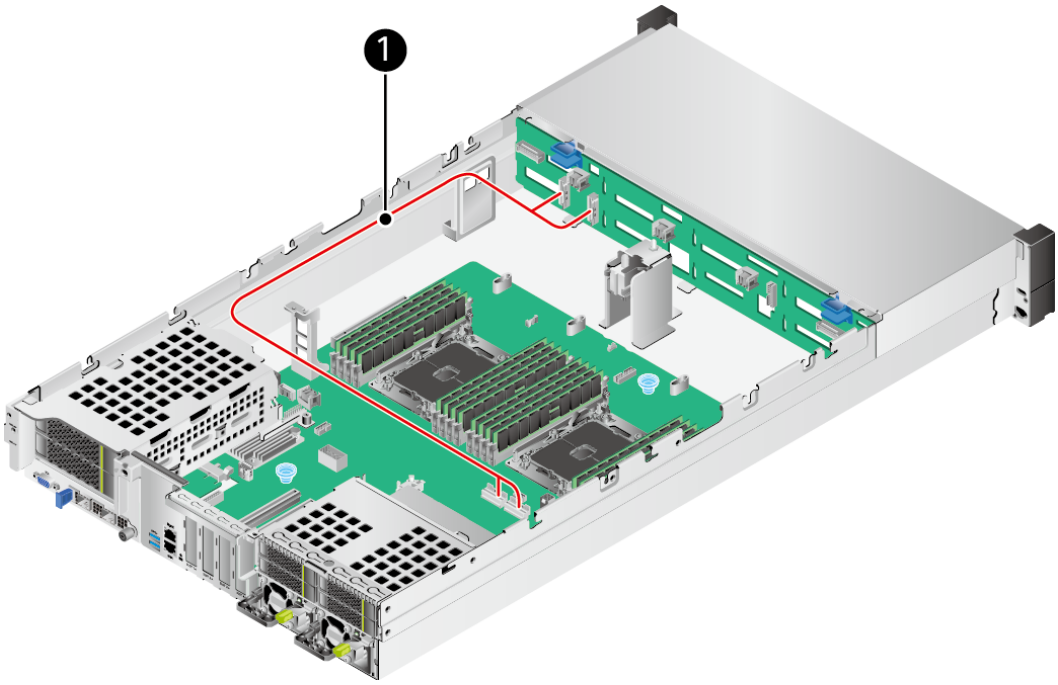

Table 6-577 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	04052926	LP Slimline high-speed cable for connecting the front-drive backplanes (J4 and J37) to the mainboards (J85 and J12)

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6.5.4.5.6 I/O Module 1 Cabling (2 x 3.5" SATA Drives)

NOTICE

There is a small gap between the rear-drive backplane in I/O module 1 and the mainboard (J2). Remove and connect the rear-drive backplane in I/O module 1 in the following sequence:

- Remove the cabling of the rear-drive backplane in I/O module 1:
  1. Remove the cables from the rear-drive backplane in I/O module 1.
  2. Remove I/O module 1.
  3. Remove the cables from the mainboard.
- Connect the cables to the rear-drive backplane in I/O module 1.
  1. Connect the cables to the mainboard.
  2. Install I/O module 1.
  3. Connect the cables to the rear-drive backplane in I/O module 1.

I/O Module 1 Cabling

Figure 6-599 I/O module 1 cabling

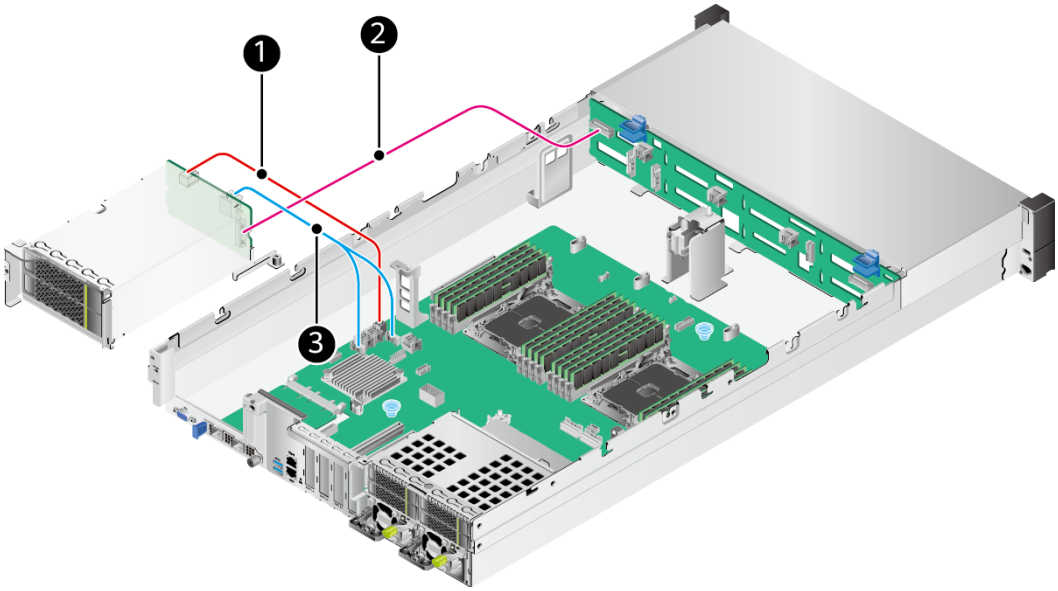

Table 6-578 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)

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No.	P/N Code	Description
3	04051929	SAS high-speed cable for connecting the rear-drive backplane (J2) to the mainboard (J1) and mainboard (J2)

6.5.4.6 12 x 3.5" Drive Pass-through Configuration 2 (4 x NVMe)

6.5.4.6.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-600 Left mounting ear cabling

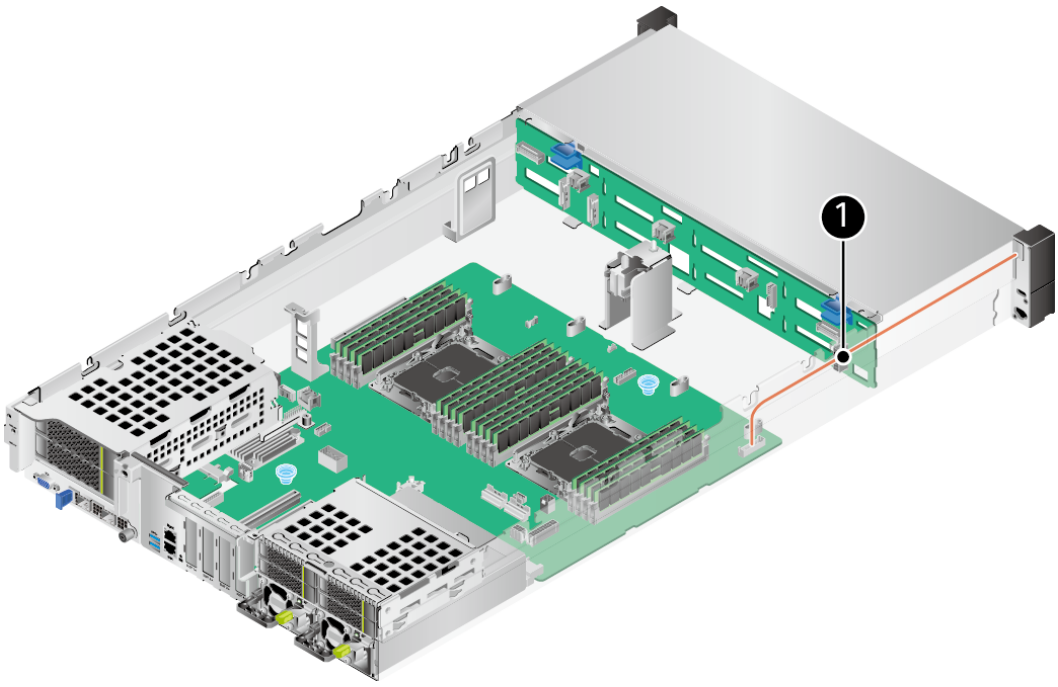

Table 6-579 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.4.6.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-601 Intrusion sensor cabling

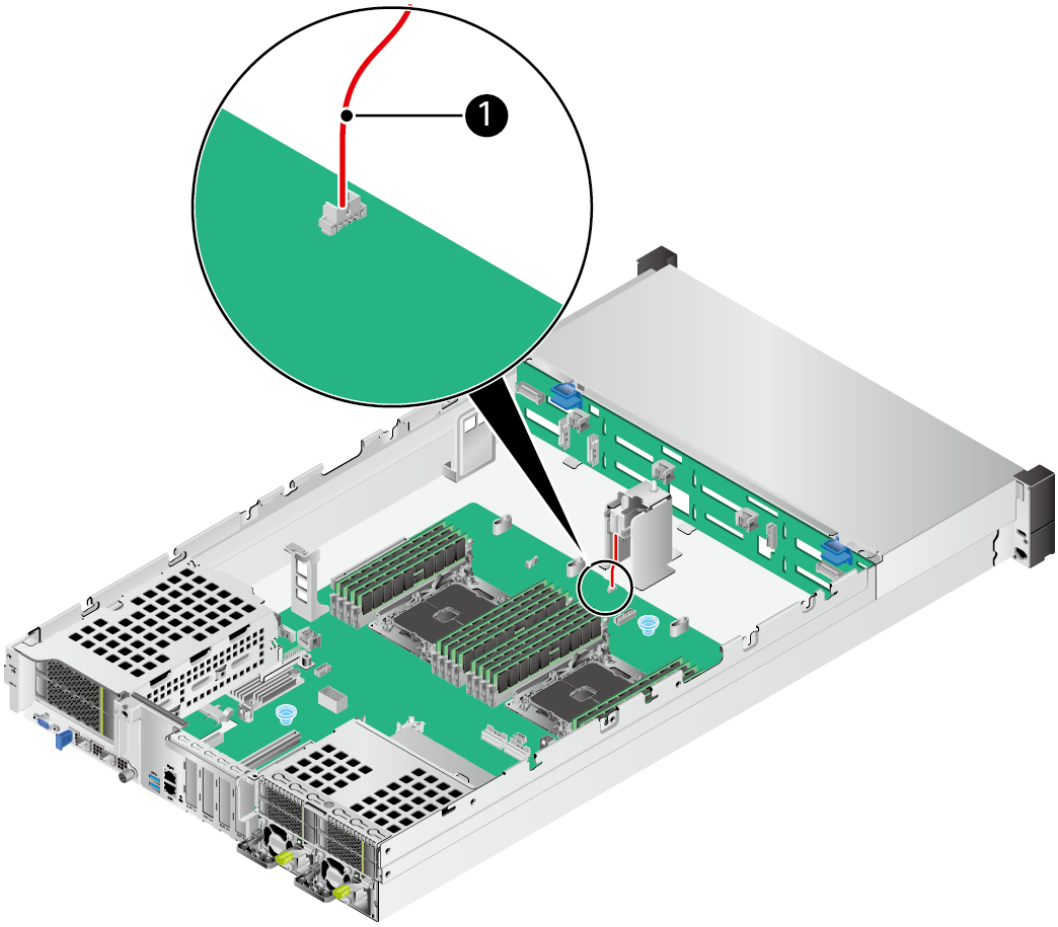

Table 6-580 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.6.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-602 Front-drive backplane power and low-speed signal cables

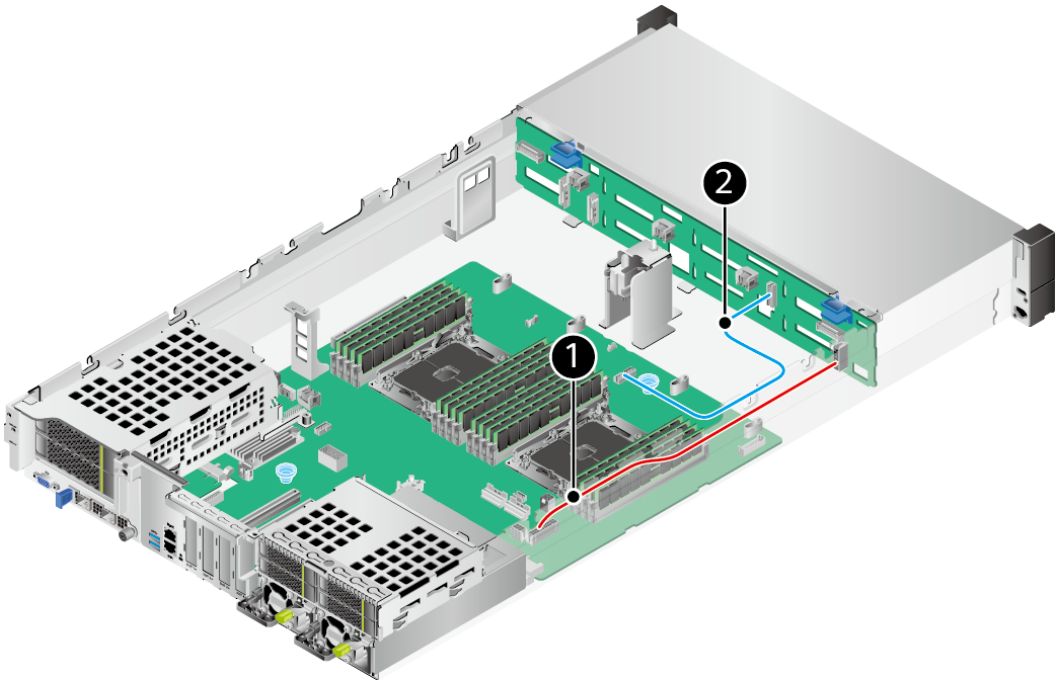

Table 6-581 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

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6.5.4.6.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-drive backplane SAS high-speed cabling

Figure 6-603 Front-drive backplane SAS high-speed cabling

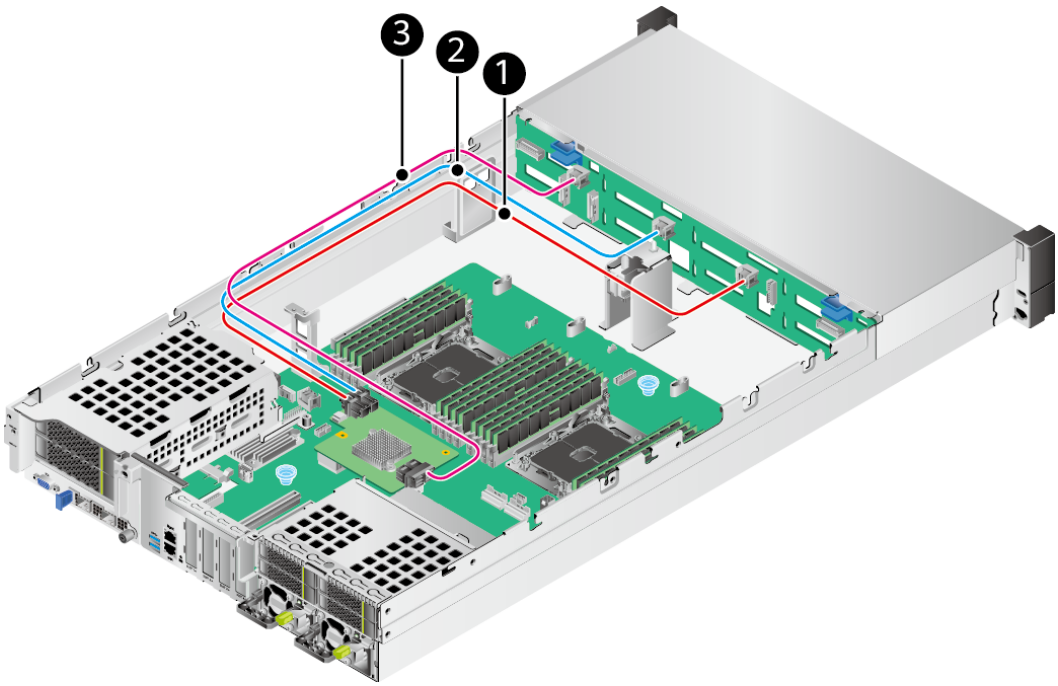

Table 6-582 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card
3	04051916-014	SAS high-speed cable for connecting the front-drive backplane (J36) to PORT C of the screw-in RAID controller card

6.5.4.6.5 Front-Drive Backplane LP Slimline Signal Cable

NOTICE

You need to remove the RAID controller card before removing or installing the LP Slimline high-speed cable of the front drive backplane.

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Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-604 Front-drive backplane LP slimline high-speed cable

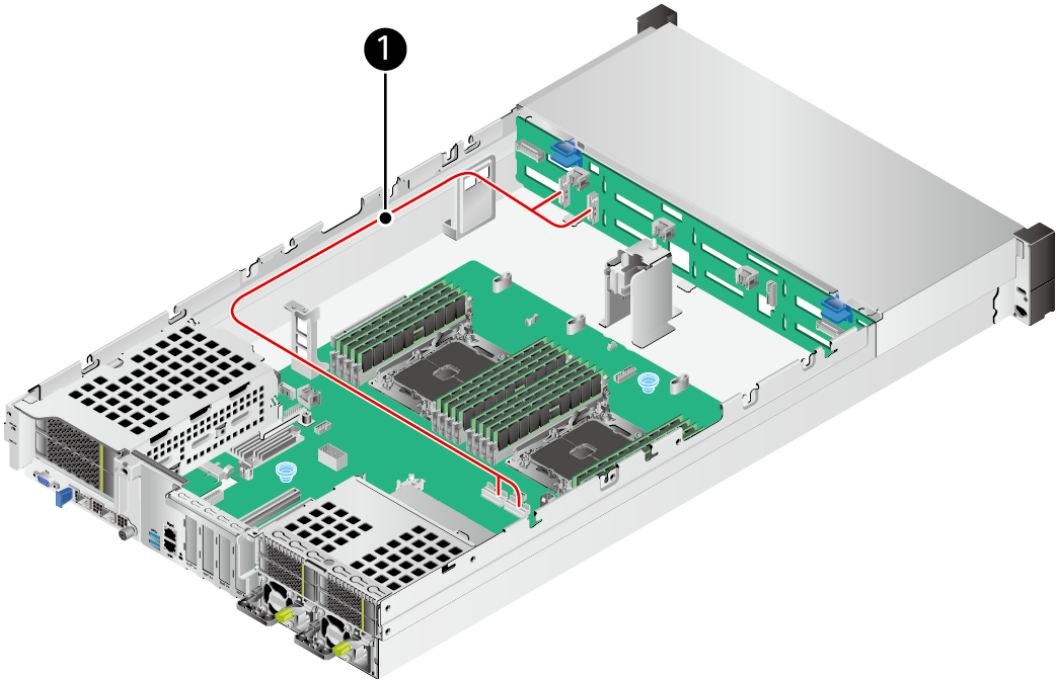

Table 6-583 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	04052926	LP Slimline high-speed cable for connecting the front-drive backplanes (J4 and J37) to the mainboards (J85 and J12)

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6.5.4.6.6 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-605 I/O module 1 cabling

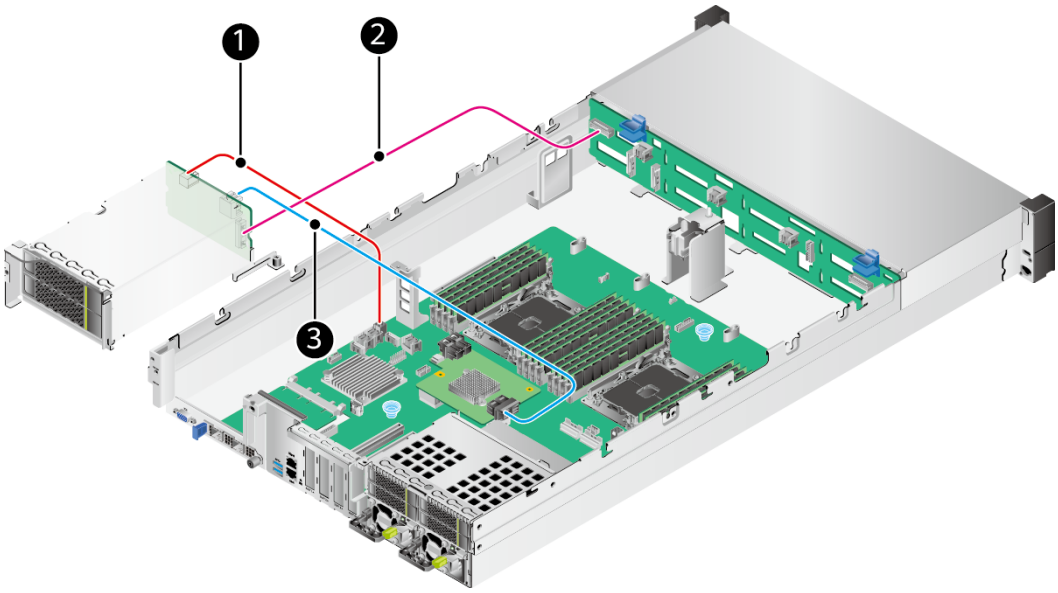

Table 6-584 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448 -001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)	-
3	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

6.5.4.7 12 x 3.5" Drive Pass-through Configuration 3 (4 x NVMe)

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6.5.4.7.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-606 Left mounting ear cabling

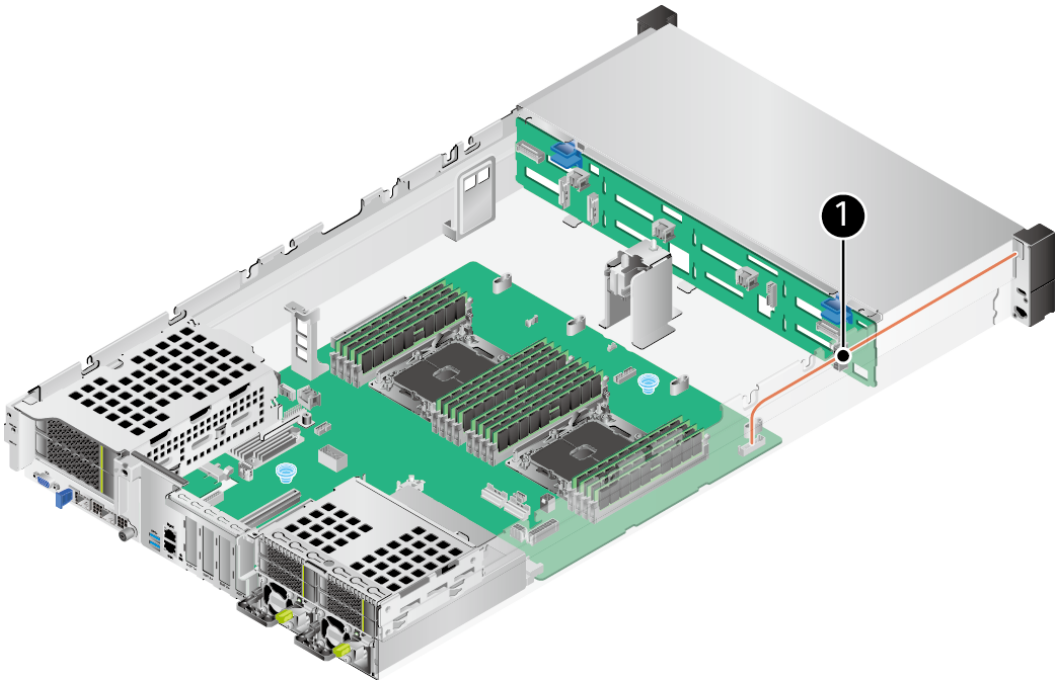

Table 6-585 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.4.7.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-607 Intrusion sensor cabling

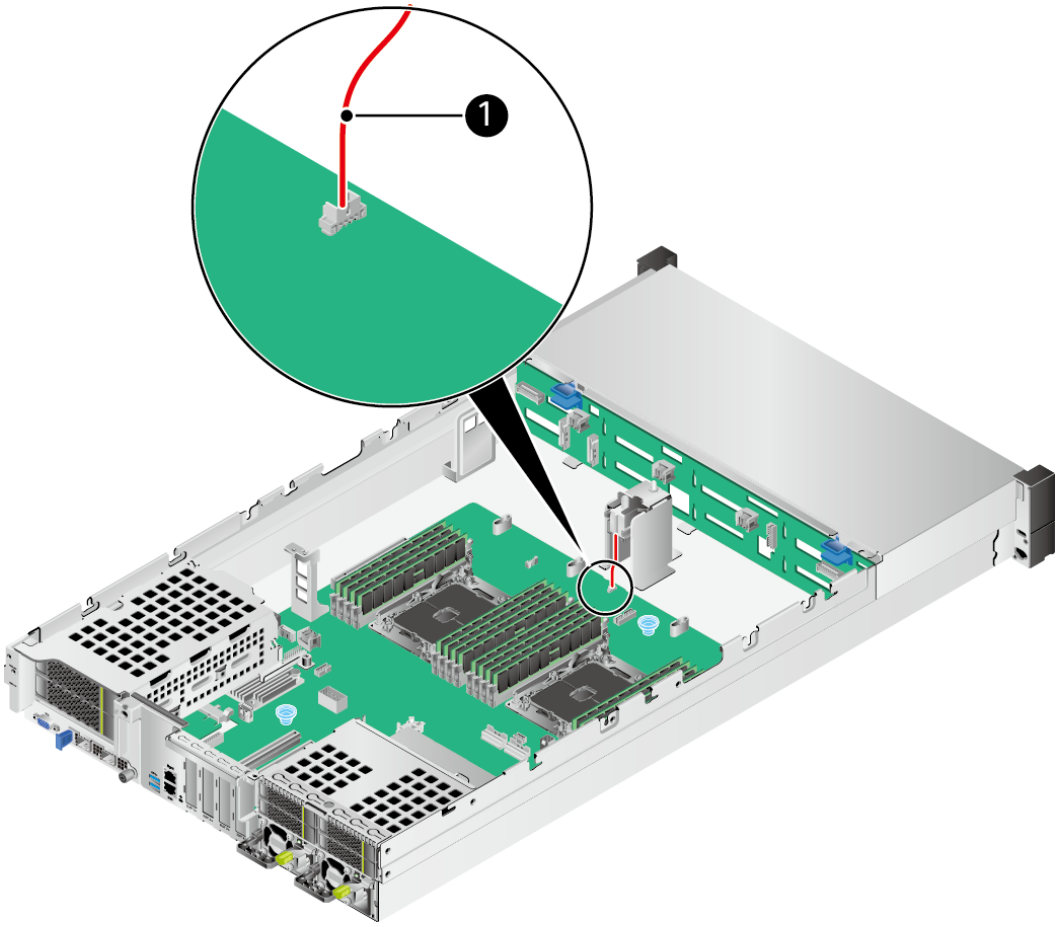

Table 6-586 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.4.7.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-608 Front-drive backplane power and low-speed signal cables

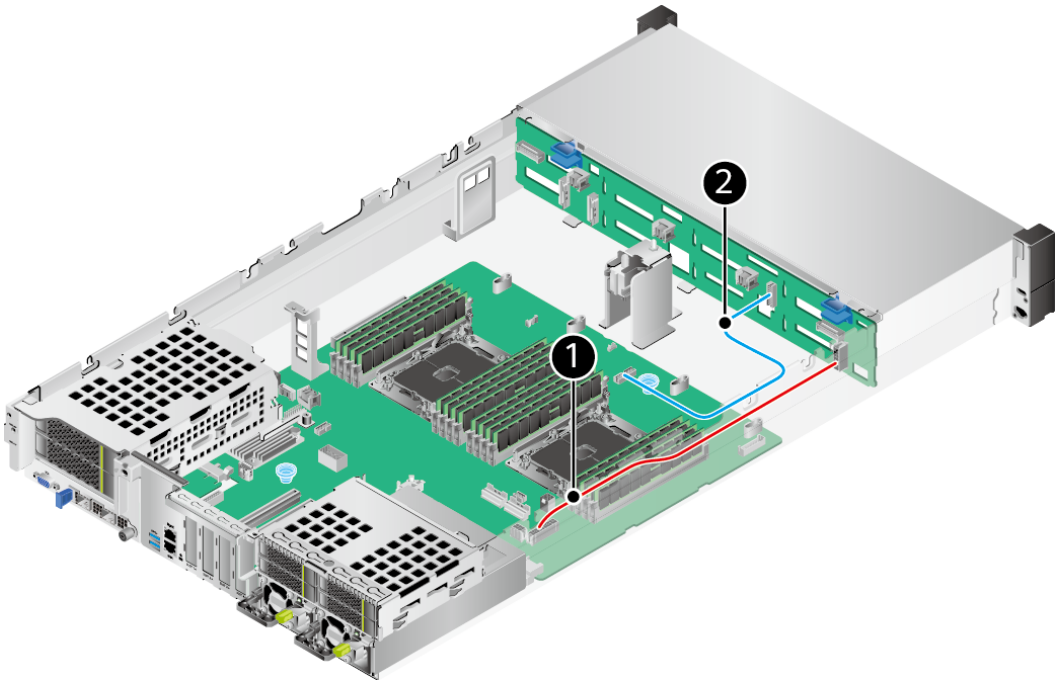

Table 6-587 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080783-001	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

6.5.4.7.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-609 Front-drive backplane SAS high-speed cabling

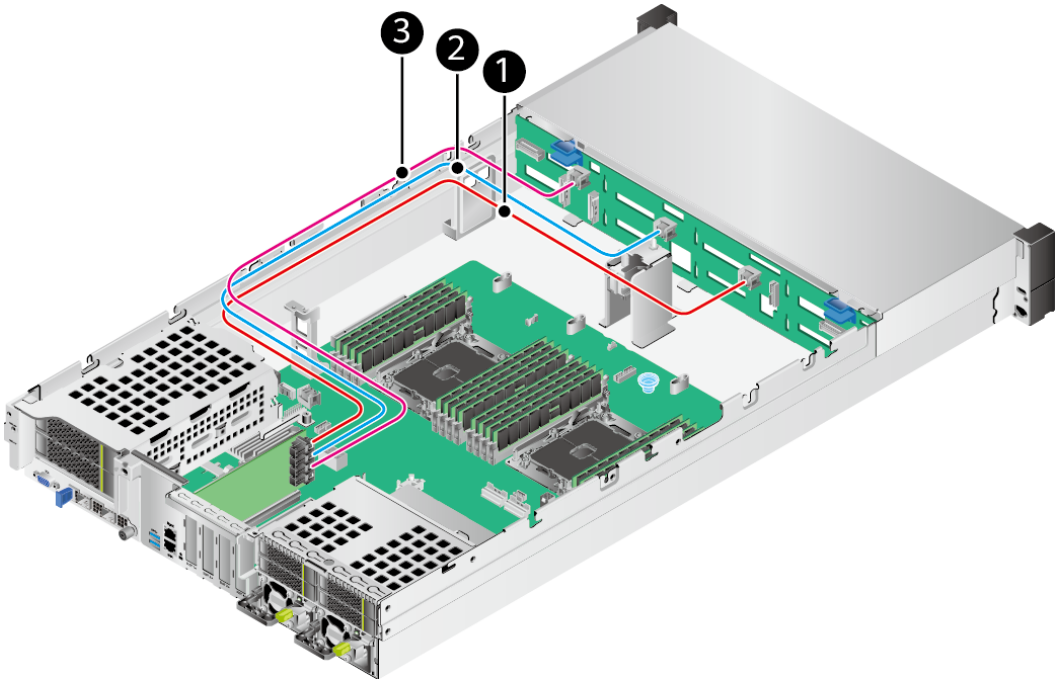

Table 6-588 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051021	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card
3	04051390	SAS high-speed cable for connecting the front-drive backplane (J36) to PORT C of the screw-in RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.4.7.5 Front-Drive Backplane LP Slimline Signal Cable

Front-Drive Backplane LP Slimline High-speed Cable

Figure 6-610 Front-drive backplane LP slimline high-speed cable

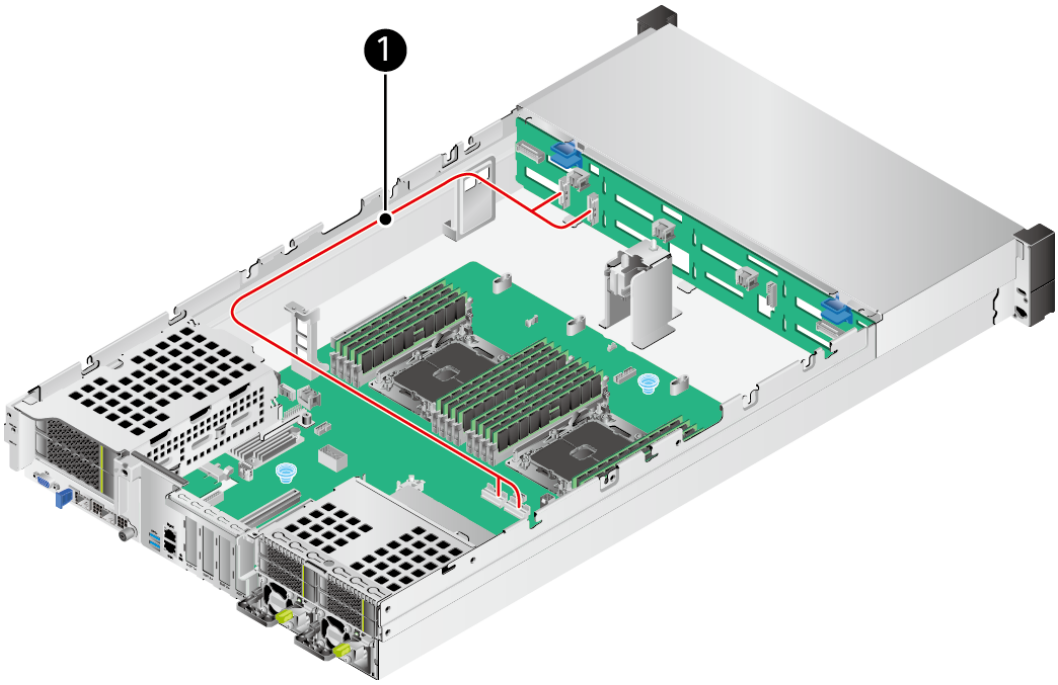

Table 6-589 Front-drive backplane LP slimline high-speed cable

No.	P/N Code	Description
1	04052926	LP Slimline high-speed cable for connecting the front-drive backplanes (J4 and J37) to the mainboards (J85 and J12)

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6.5.4.7.6 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-611 I/O module 1 cabling

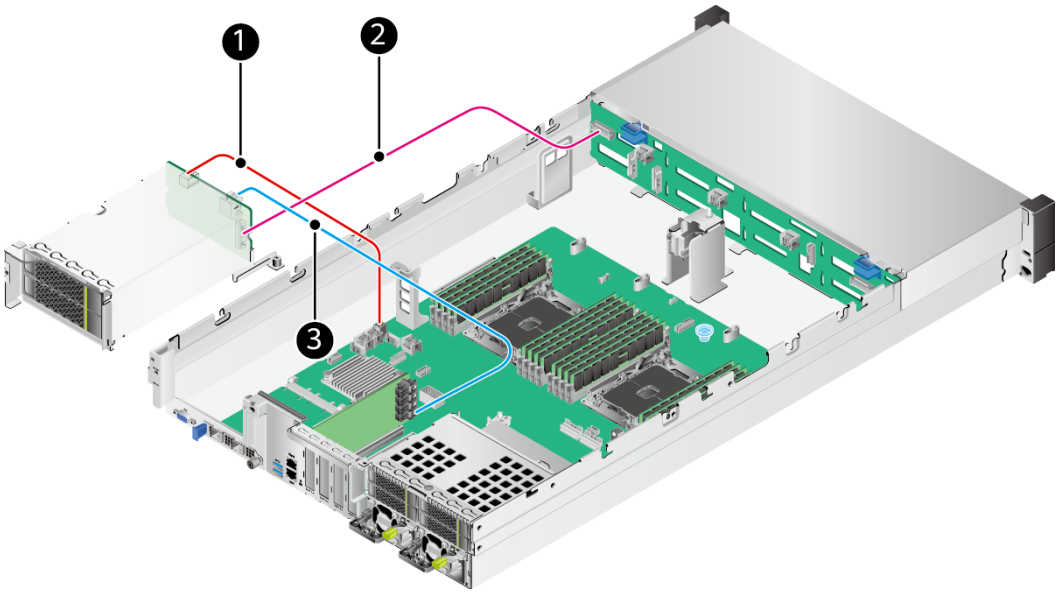

Table 6-590 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448 -001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J30)	-
3	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT D of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J2) may be C3, PORT D, 3, or CN3.

6.5.5 12 x 3.5" Drive EXP Configuration

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6.5.5.1 12 x 3.5" Drive EXP Configuration 1

6.5.5.1.1 Mounting Ear Cabling

Mounting ear cabling

Figure 6-612 Left mounting ear cabling

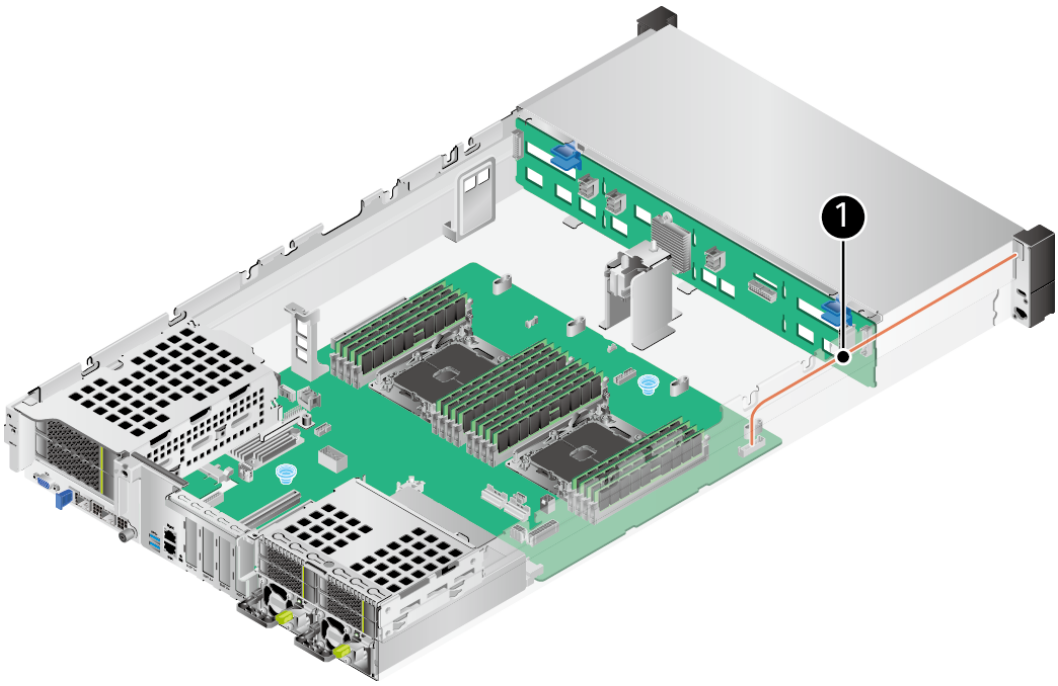

Table 6-591 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.5.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-613 Intrusion sensor cabling

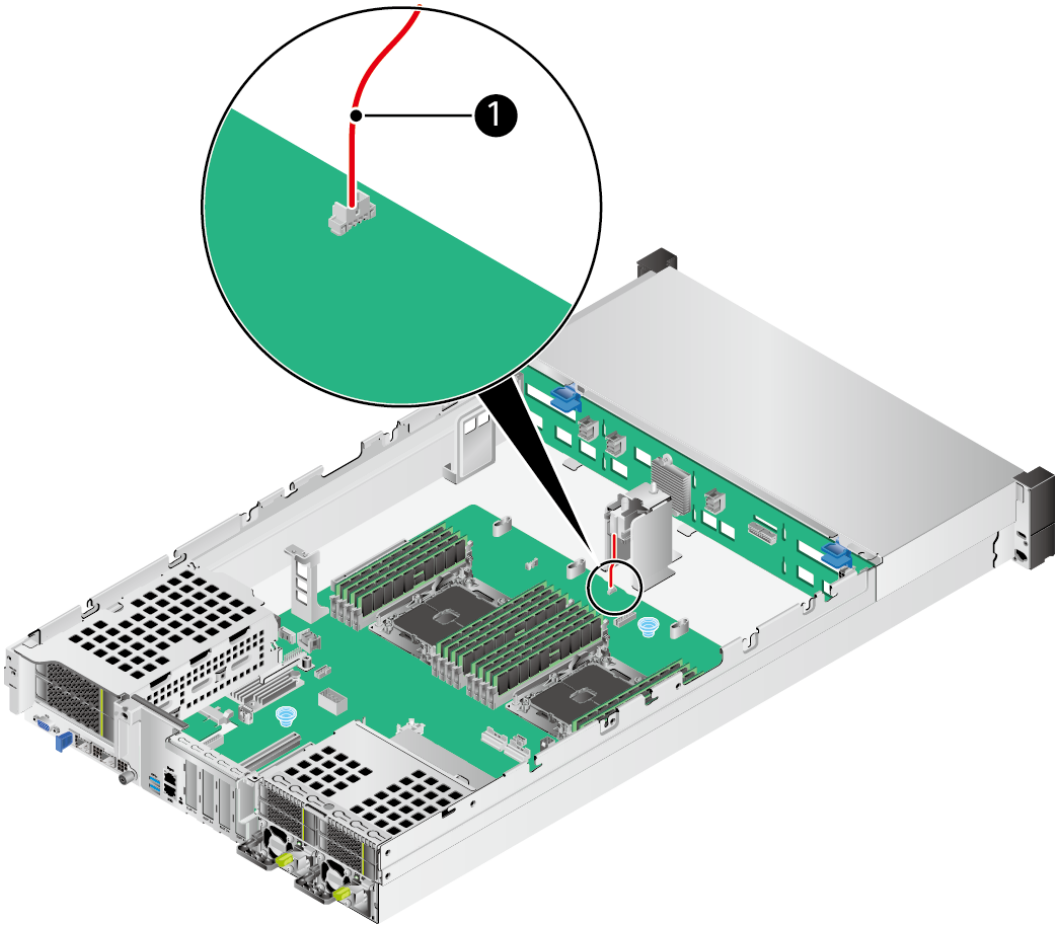

Table 6-592 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.5.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-614 Front-drive backplane power and low-speed signal cables

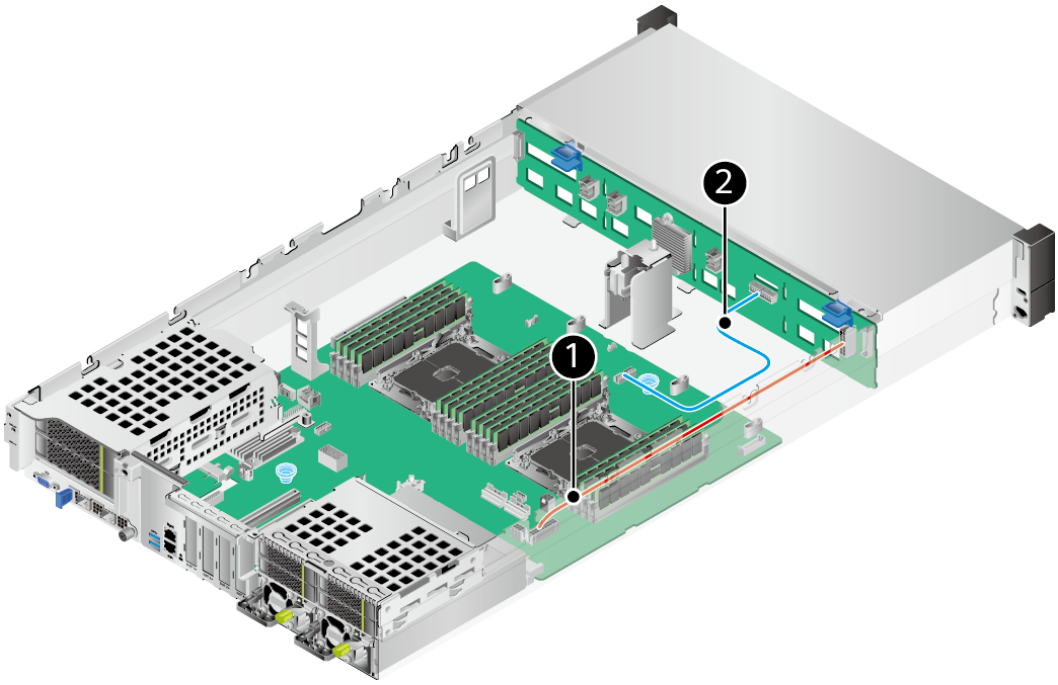

Table 6-593 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	

Table 6-594 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04051989	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.

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No.	P/N Code	Description	Remarks
2	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	

6.5.5.1.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-615 Front-drive backplane SAS high-speed cabling

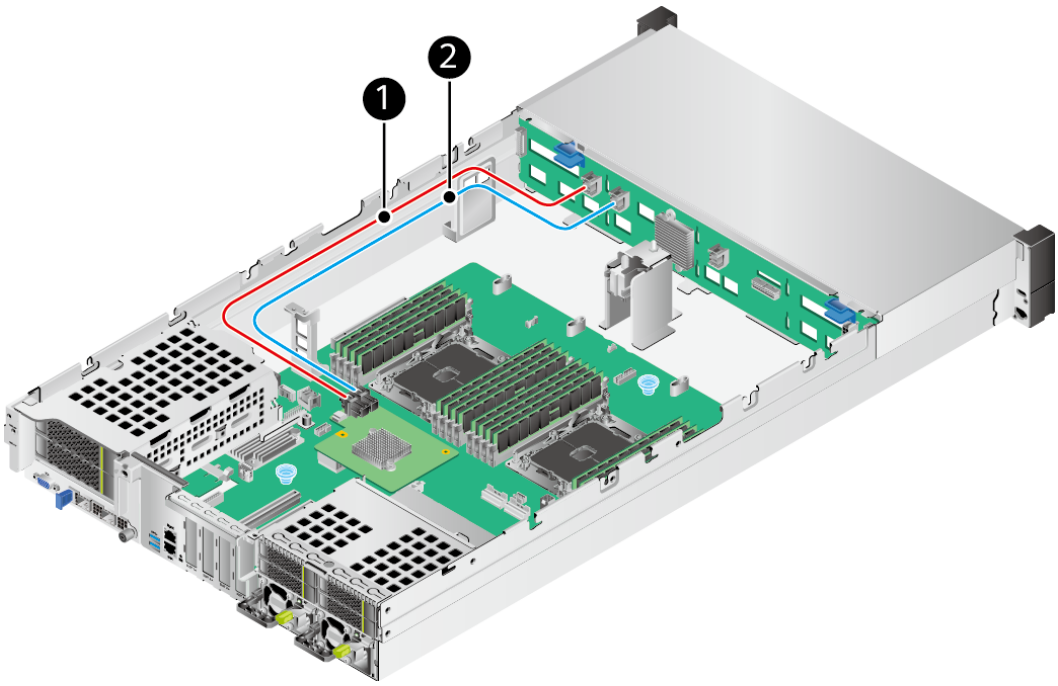

Table 6-595 Front-Drive Backplane SAS High-speed Cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.5.5.1.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-616 I/O module 1 cabling

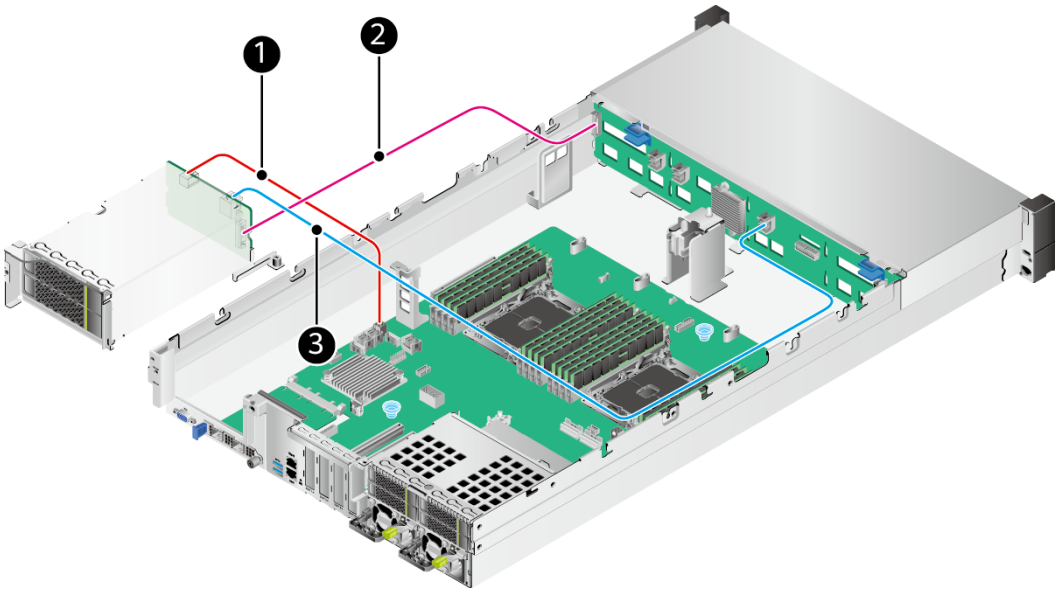

Table 6-596 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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Table 6-597 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.5.5.1.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-617 I/O module 3 cabling

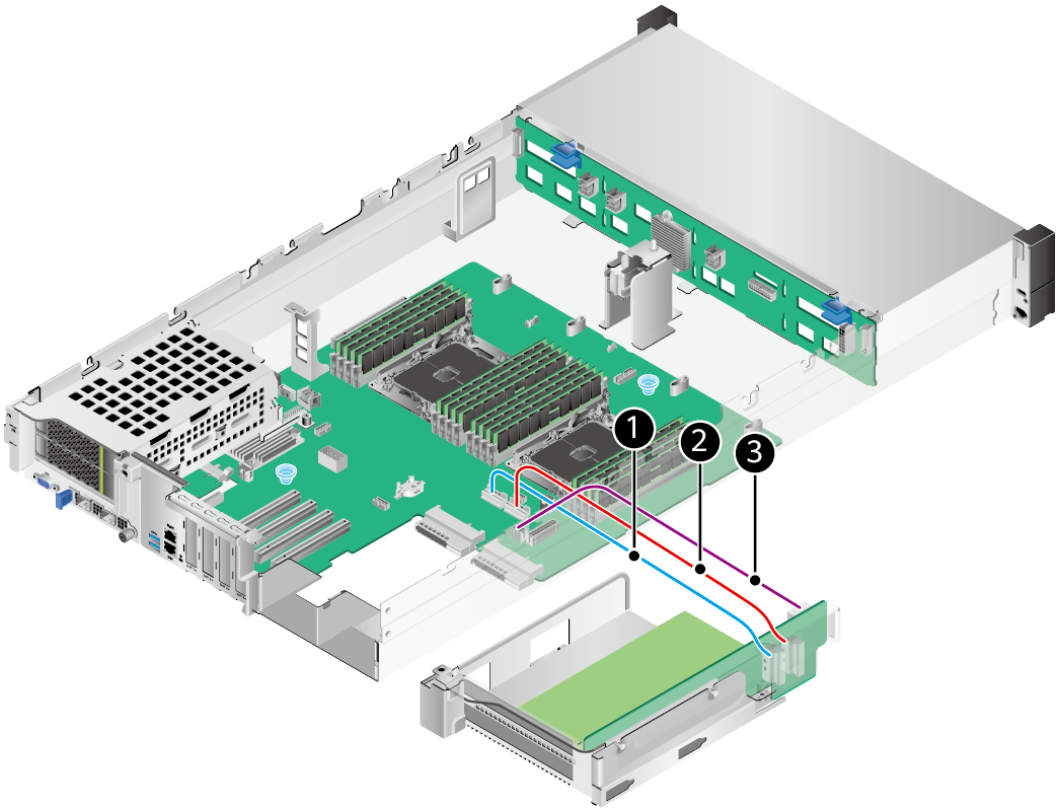

Table 6-598 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.5.1.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-618 I/O module 3 cabling

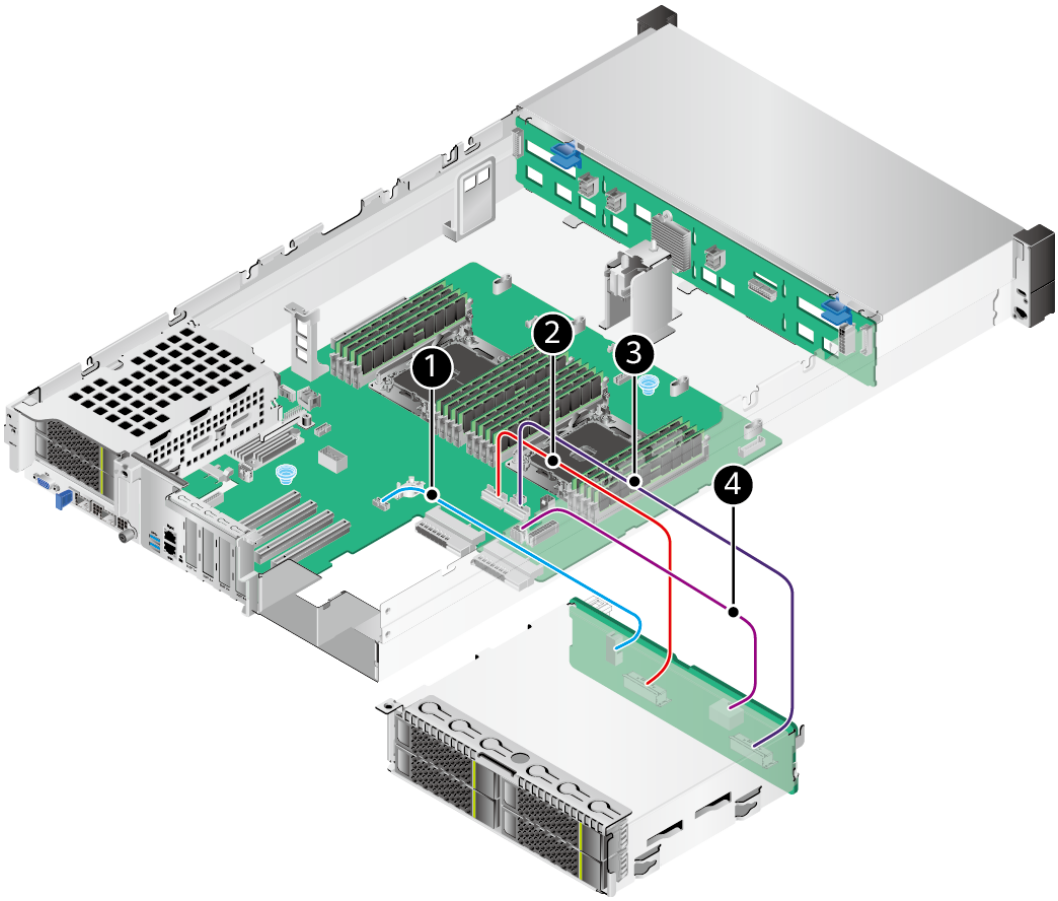

Table 6-599 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.5.2 12 x 3.5" Drive EXP Configuration 2

6.5.5.2.1 Mounting Ear Cabling

Mounting ear cabling

Figure 6-619 Left mounting ear cabling

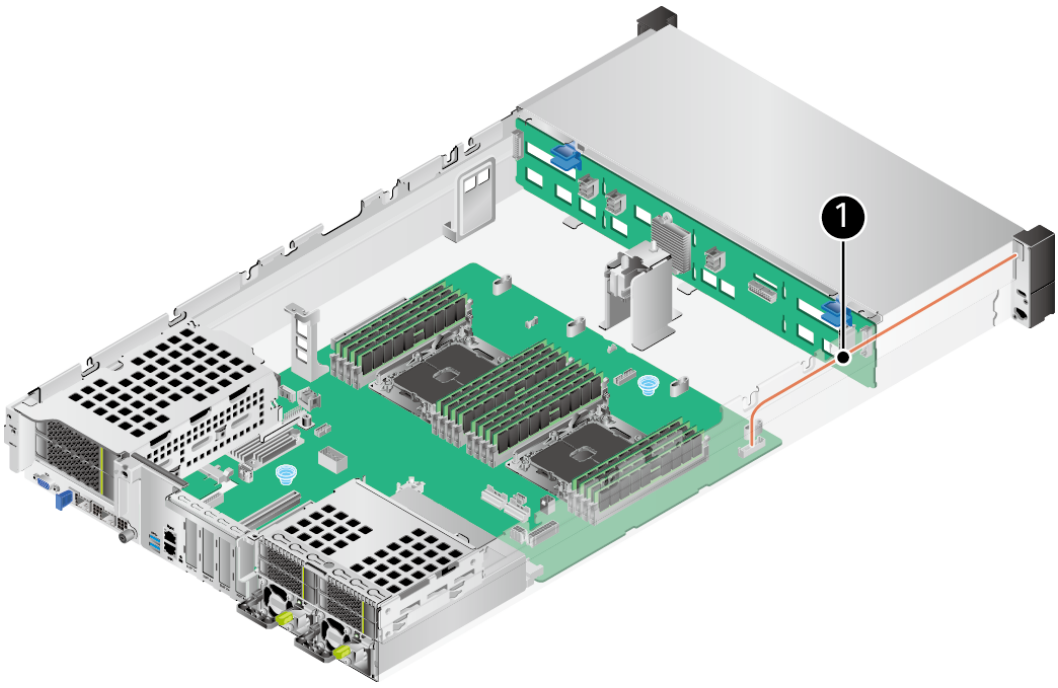

Table 6-600 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.5.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-620 Intrusion sensor cabling

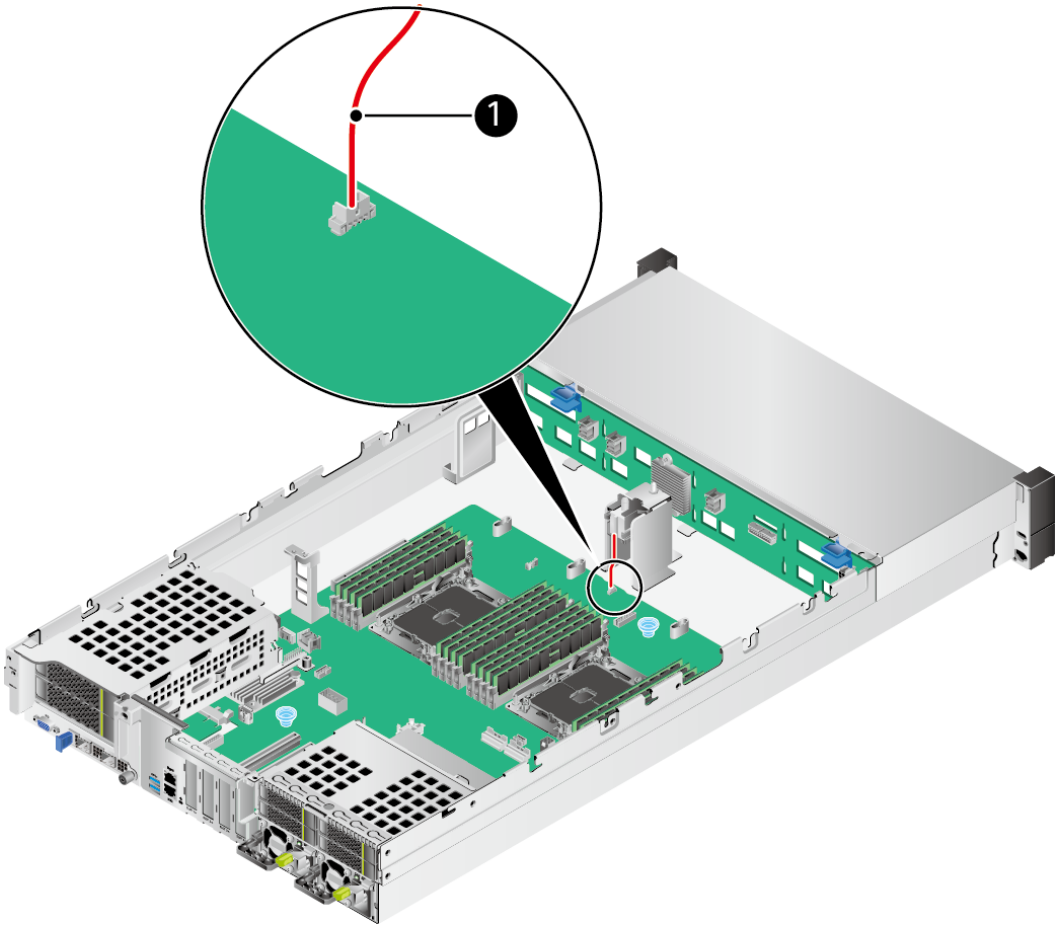

Table 6-601 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.5.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-621 Front-drive backplane power and low-speed signal cables

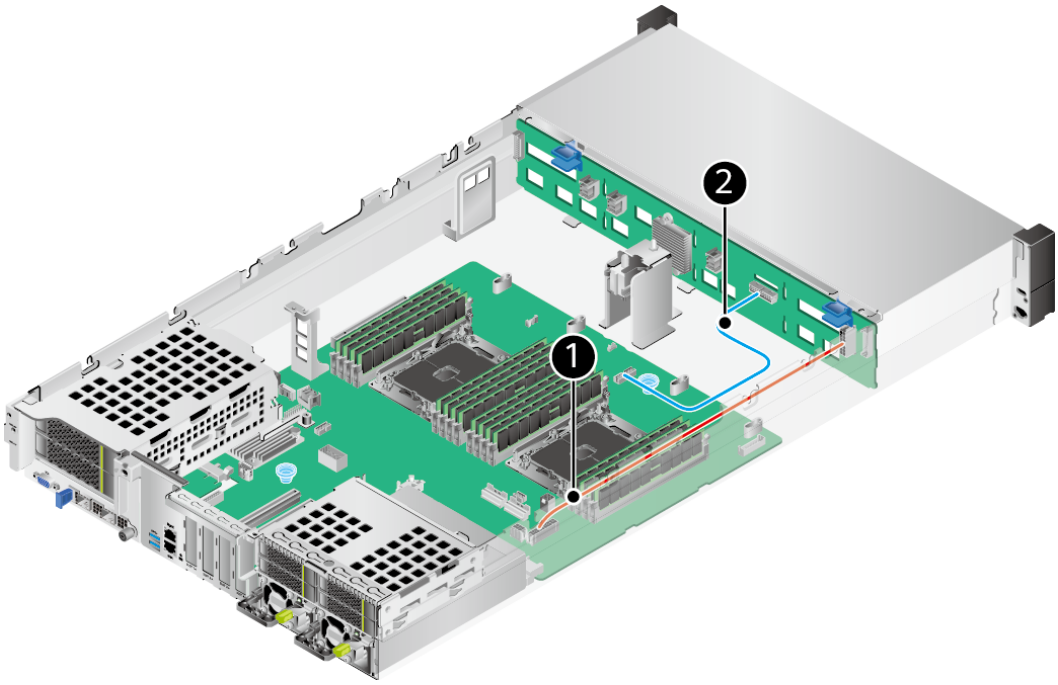

Table 6-602 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	

Table 6-603 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04051989	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.

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No.	P/N Code	Description	Remarks
2	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	

6.5.5.2.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

Front-Drive Backplane SAS High-speed Cabling

Figure 6-622 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with two Mini SAS ports)

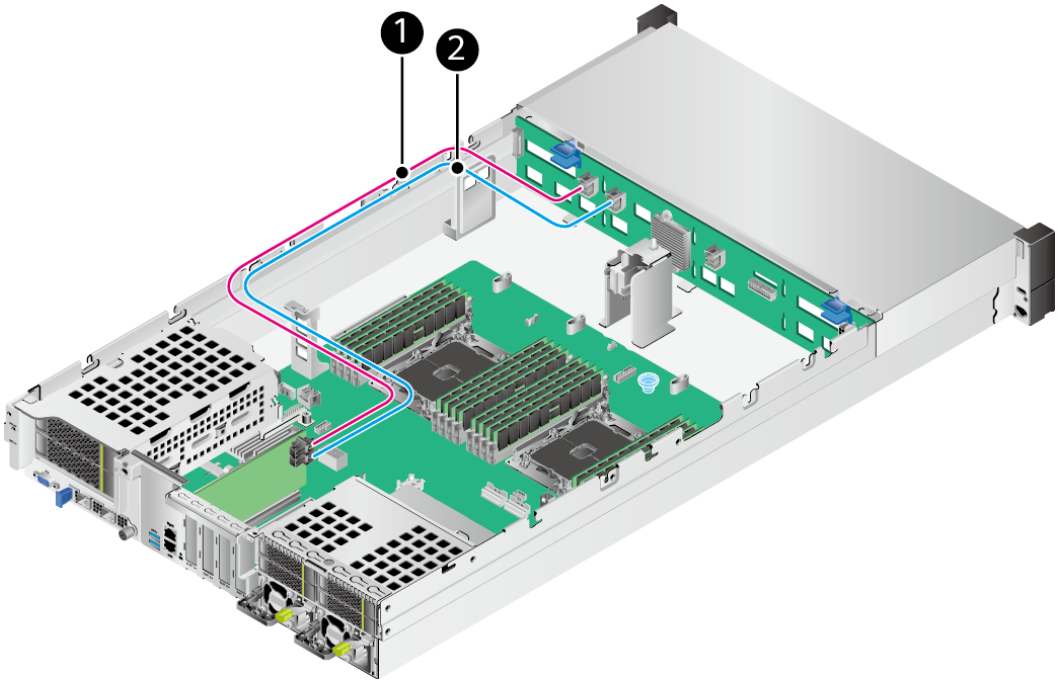

Table 6-604 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card

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No.	P/N Code	Description
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

Figure 6-623 Front-drive backplane SAS high-speed cabling (Configuring a PCIe RAID controller card with one Mini SAS ports)

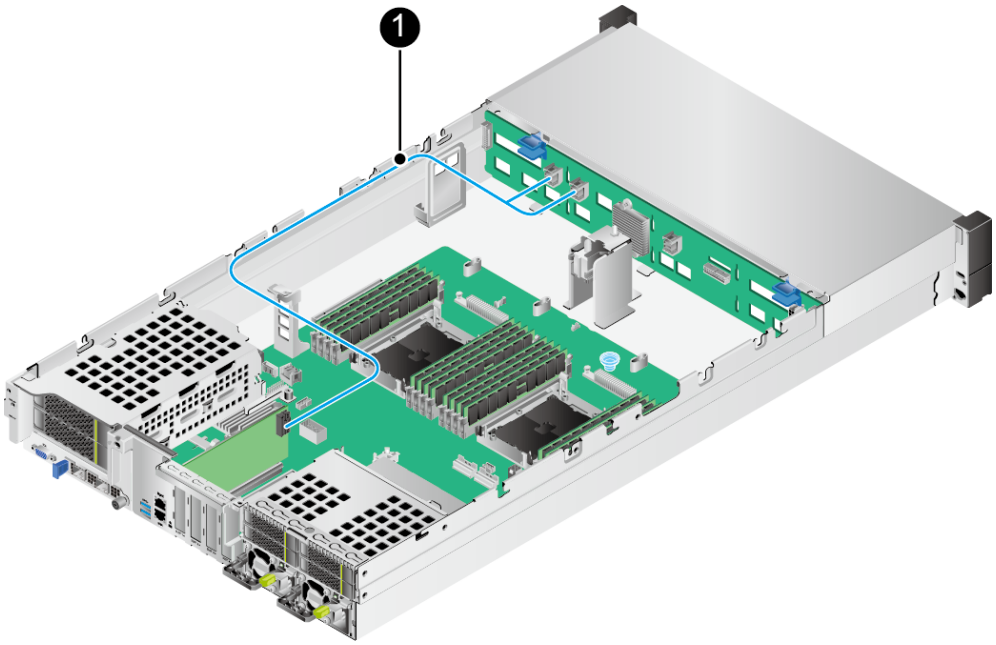

Table 6-605 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.5.2.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-624 I/O module 1 cabling

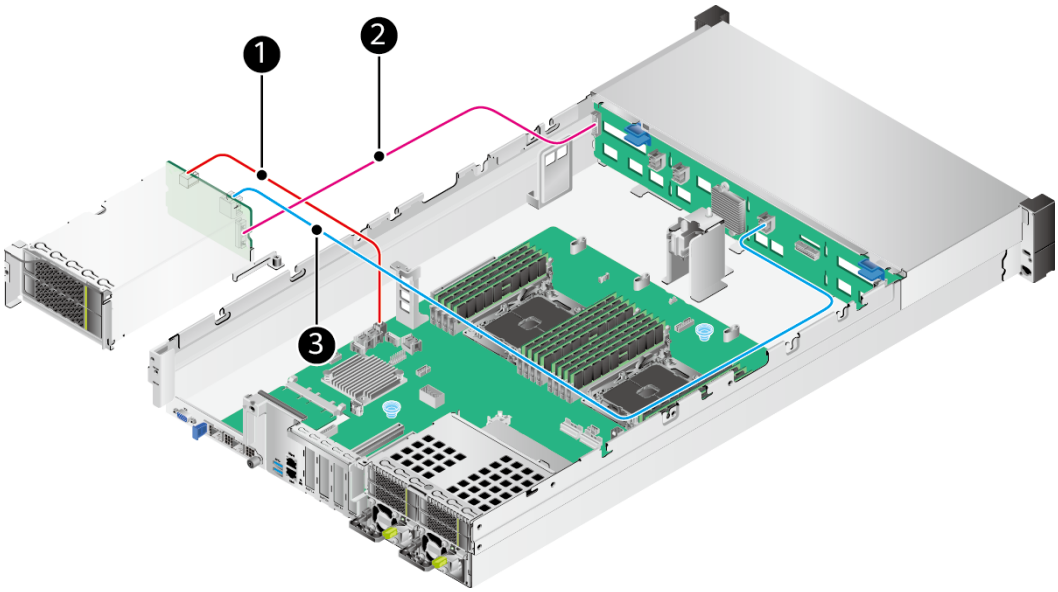

Table 6-606 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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Table 6-607 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.5.5.2.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-625 I/O module 3 cabling

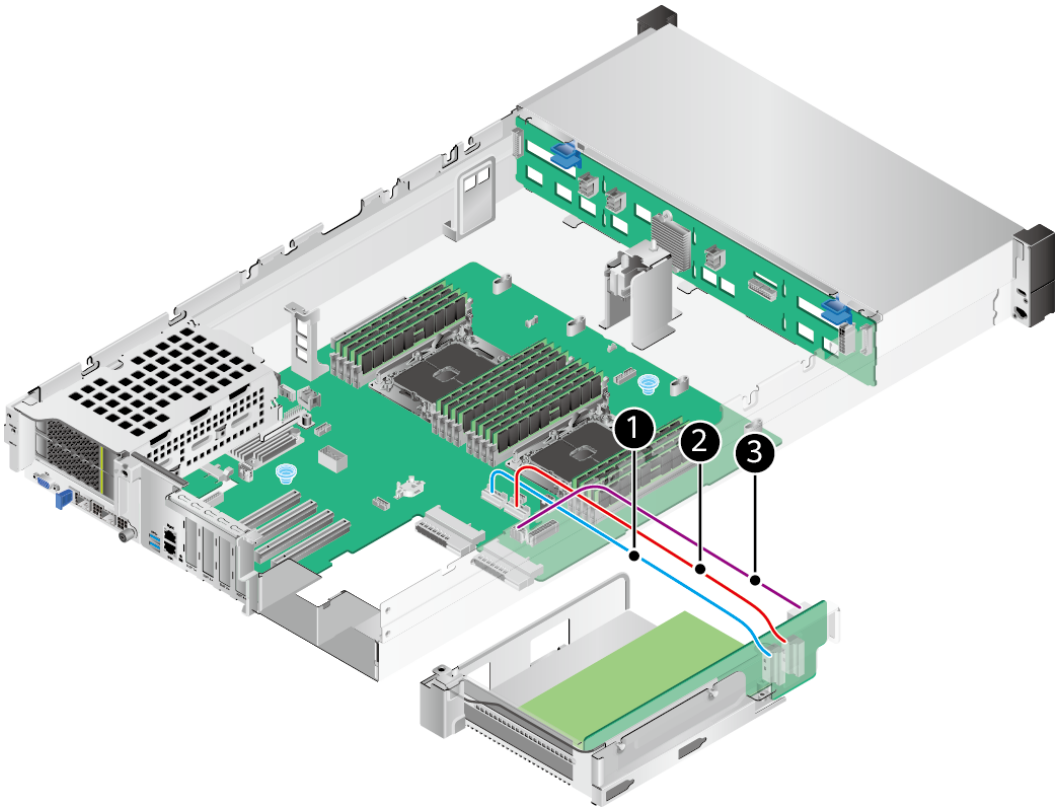

Table 6-608 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.5.2.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-626 I/O module 3 cabling

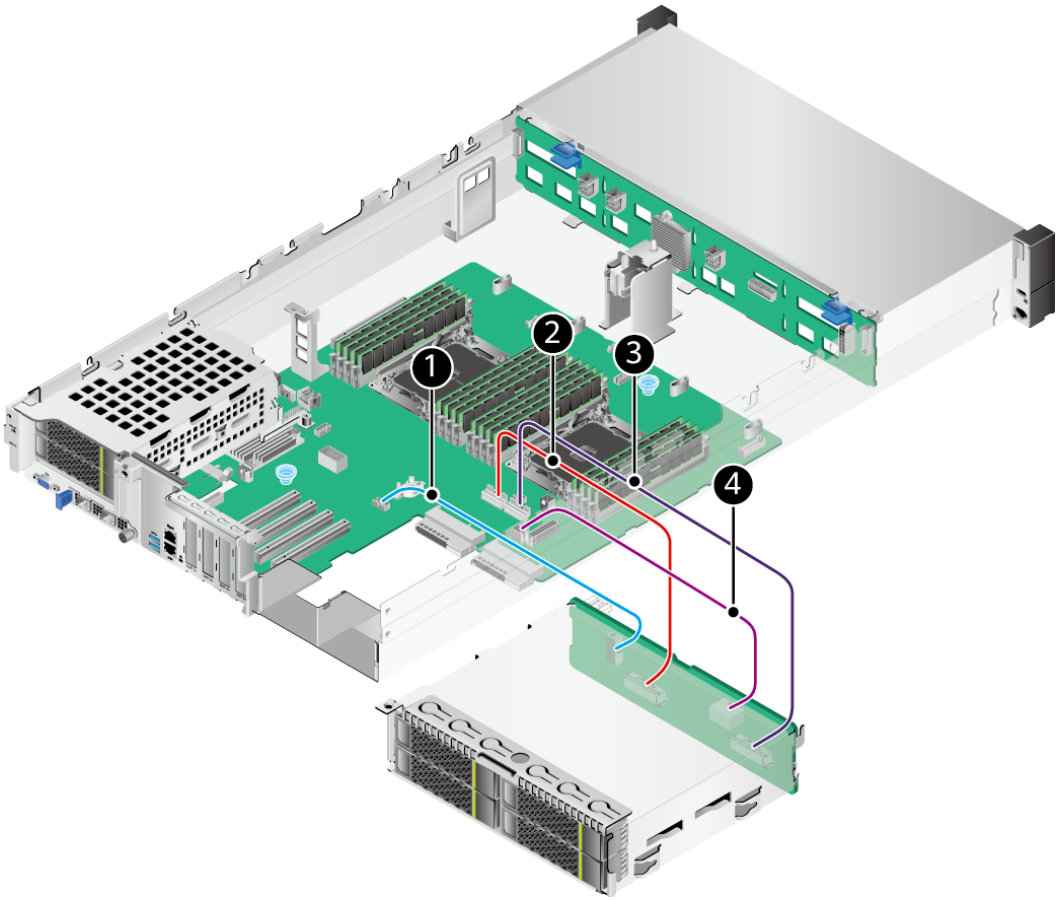

Table 6-609 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.5.3 12 x 3.5" Drive EXP Configuration 3 (Dual RAID Controller Cards)

6.5.5.3.1 Mounting Ear Cabling

Mounting ear cabling

Figure 6-627 Left mounting ear cabling

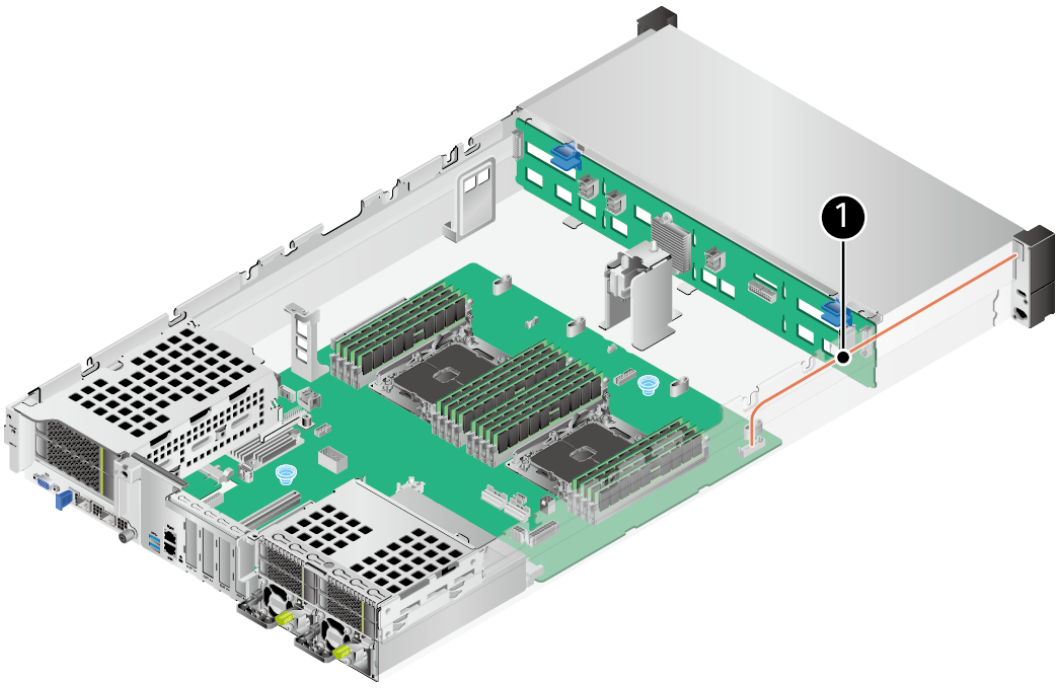

Table 6-610 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.5.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-628 Intrusion sensor cabling

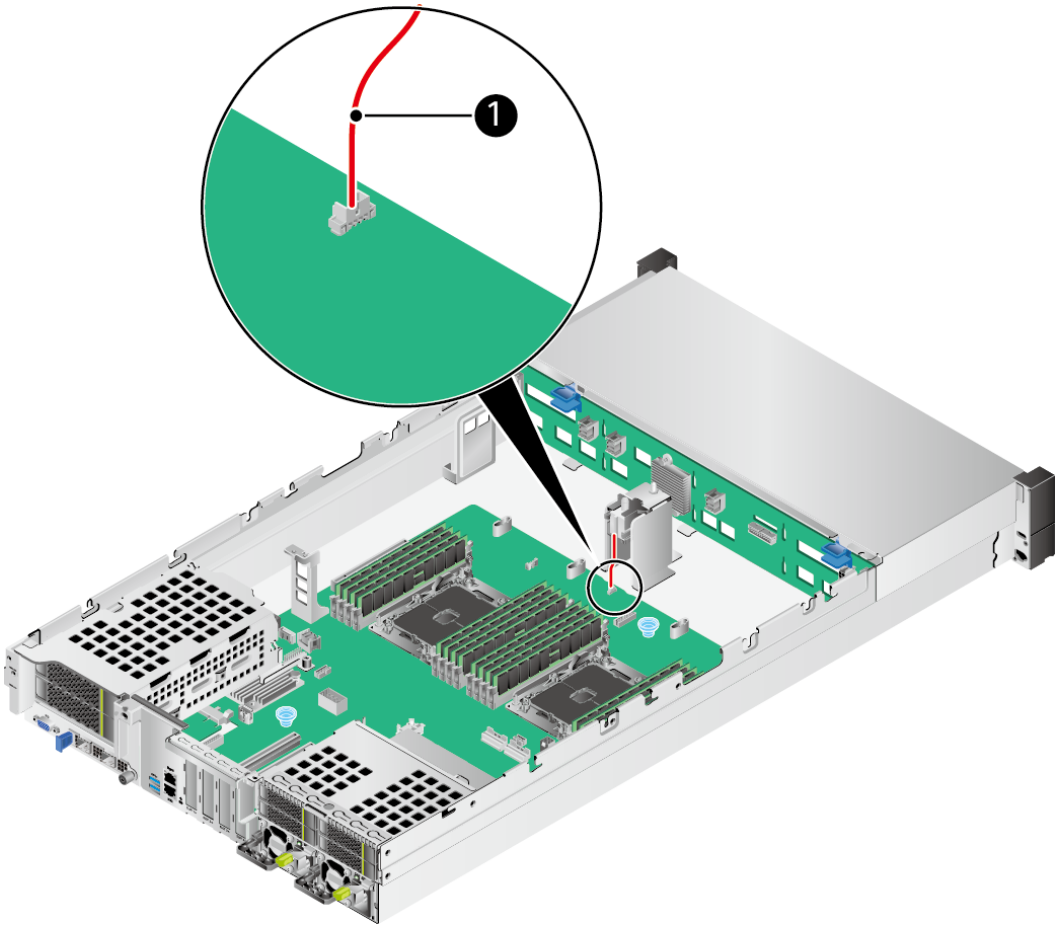

Table 6-611 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.5.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-629 Front-drive backplane power and low-speed signal cables

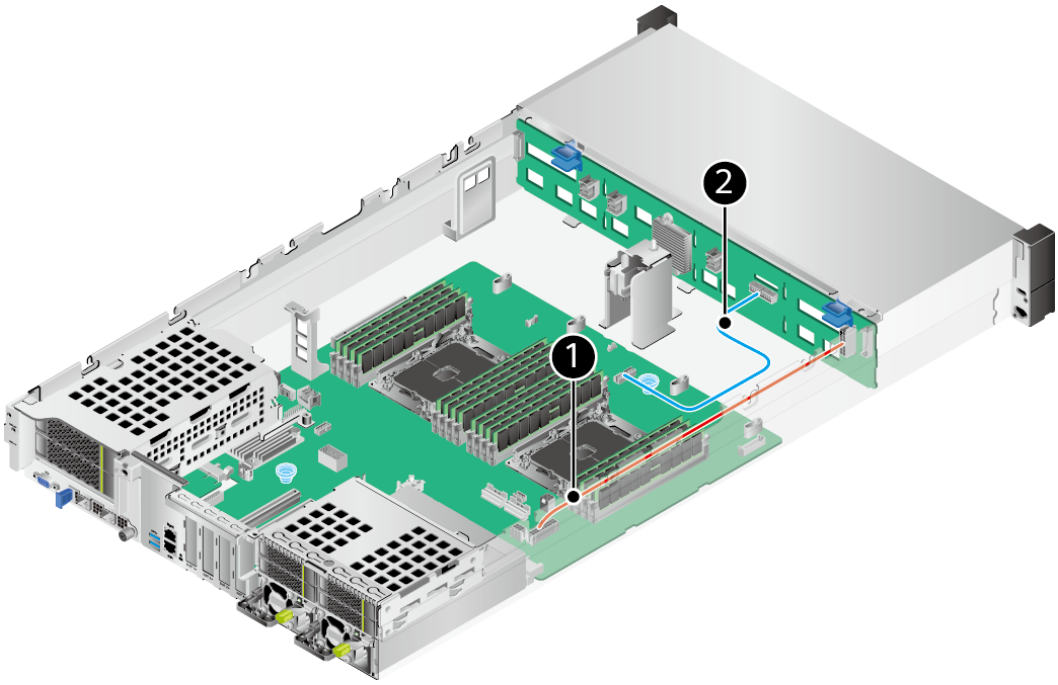

Table 6-612 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	

Table 6-613 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04051989	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.

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No.	P/N Code	Description	Remarks
2	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	

6.5.5.3.4 Front-Drive Backplane SAS Signal Cabling

NOTICE

The PCIe RAID controller card must be configured in the built-in PCIe slot.

Front-Drive Backplane SAS High-speed Cabling

Figure 6-630 Front-drive backplane SAS high-speed cabling

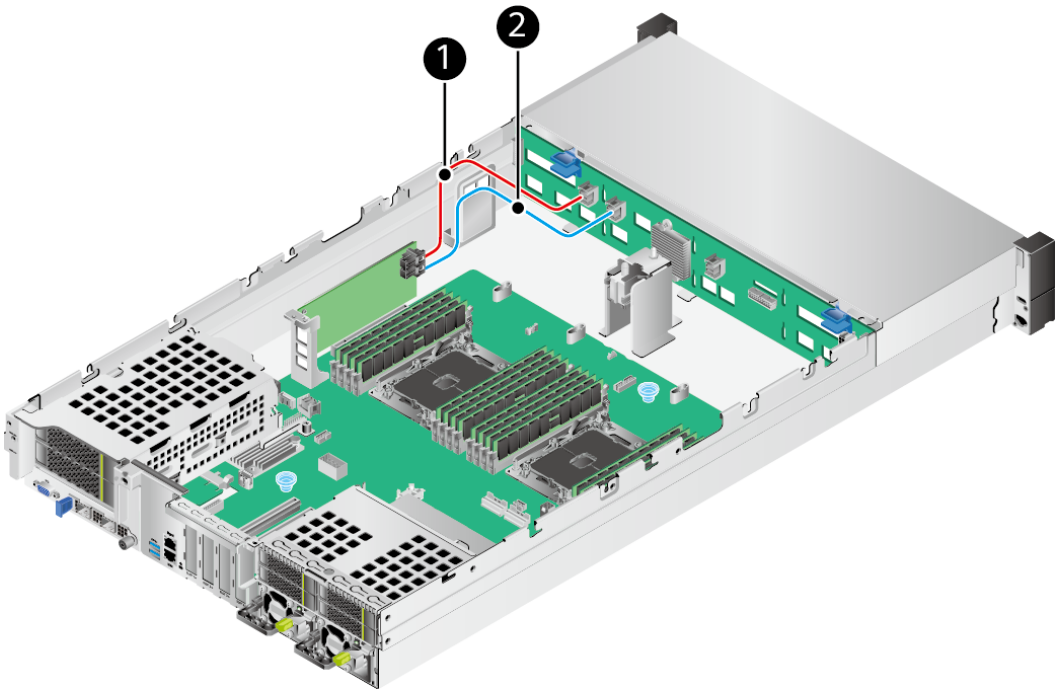

Table 6-614 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description	Remarks
1	04051916-019	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.

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No.	P/N Code	Description	Remarks
2	04051916-019	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card	

Table 6-615 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description	Remarks
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card	

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.5.3.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-631 I/O module 1 cabling

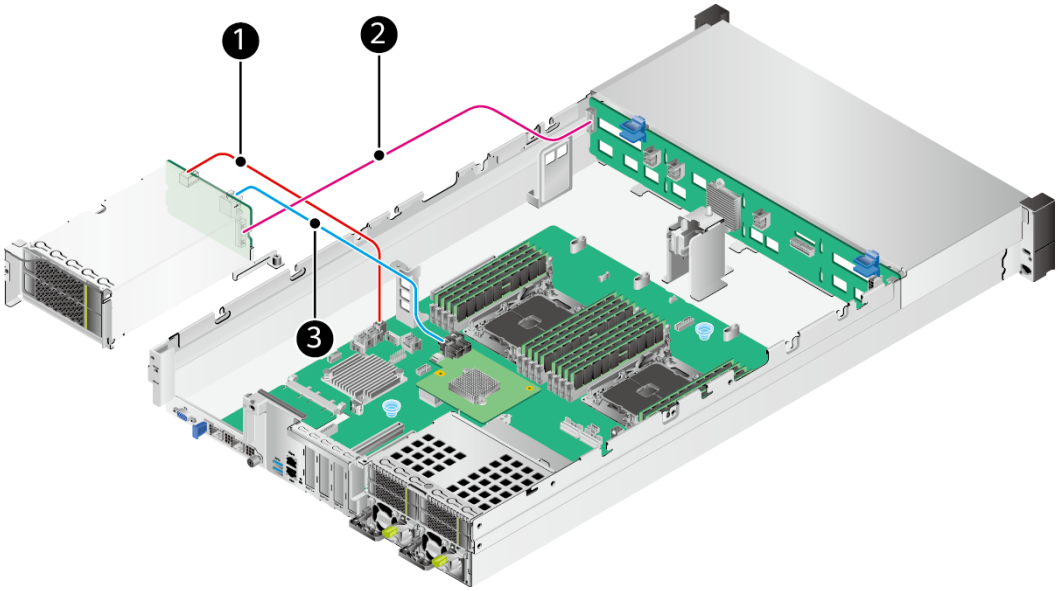

Table 6-616 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**. • The cables (04052363-001) is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	

Table 6-617 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.

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No.	P/N Code	Description	Remarks
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	• The cables (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part. • The cables (04052363-001) is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.
3	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	

6.5.5.3.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-632 I/O module 3 cabling

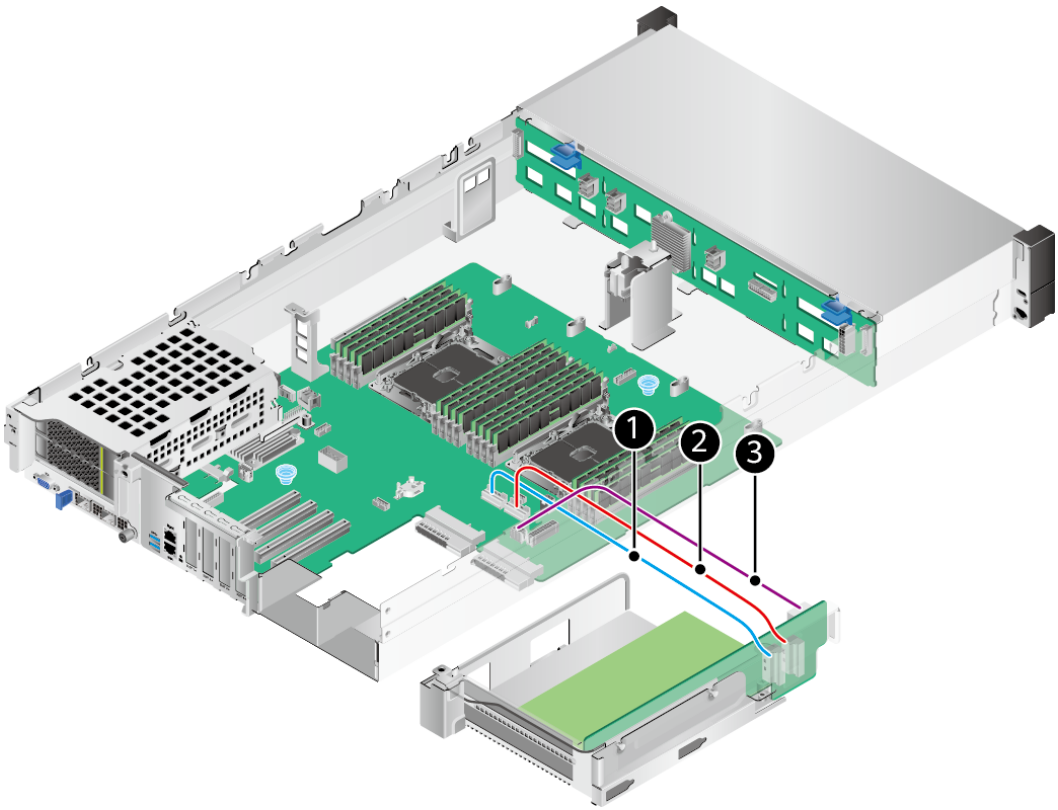

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Table 6-618 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

6.5.5.3.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-633 I/O module 3 cabling

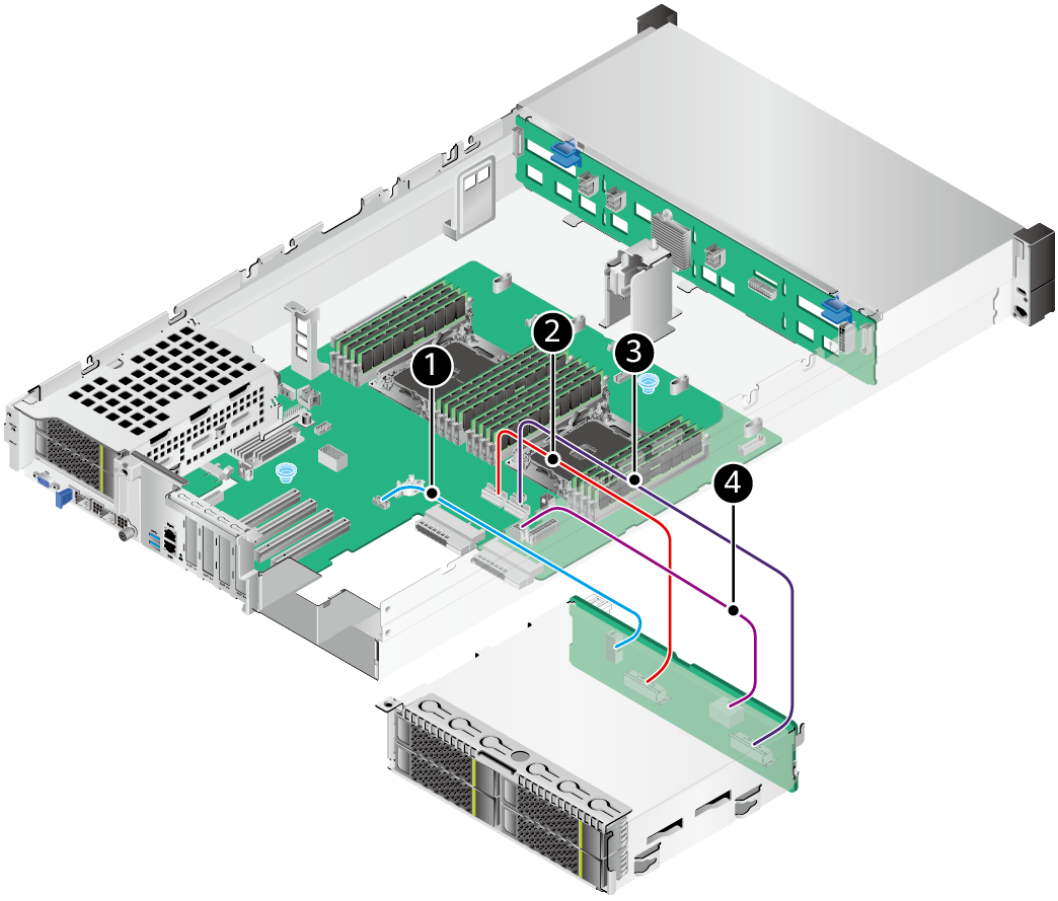

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Table 6-619 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.5.4 12 x 3.5" Drive EXP Configuration 4

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6.5.5.4.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-634 Left mounting ear cabling

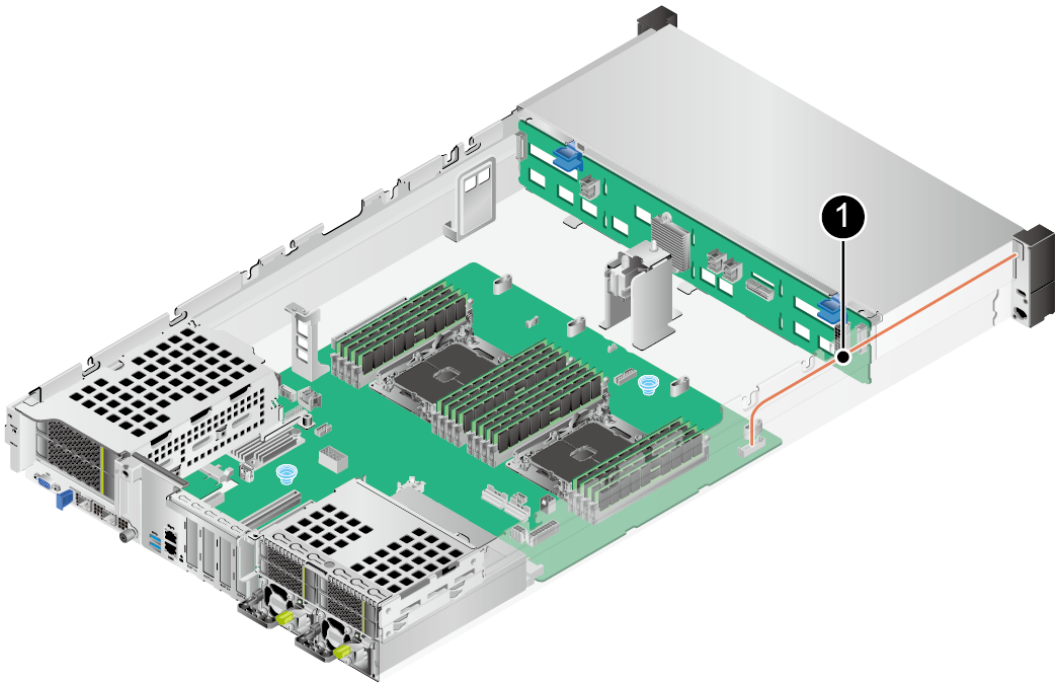

Table 6-620 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.5.4.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-635 Intrusion sensor cabling

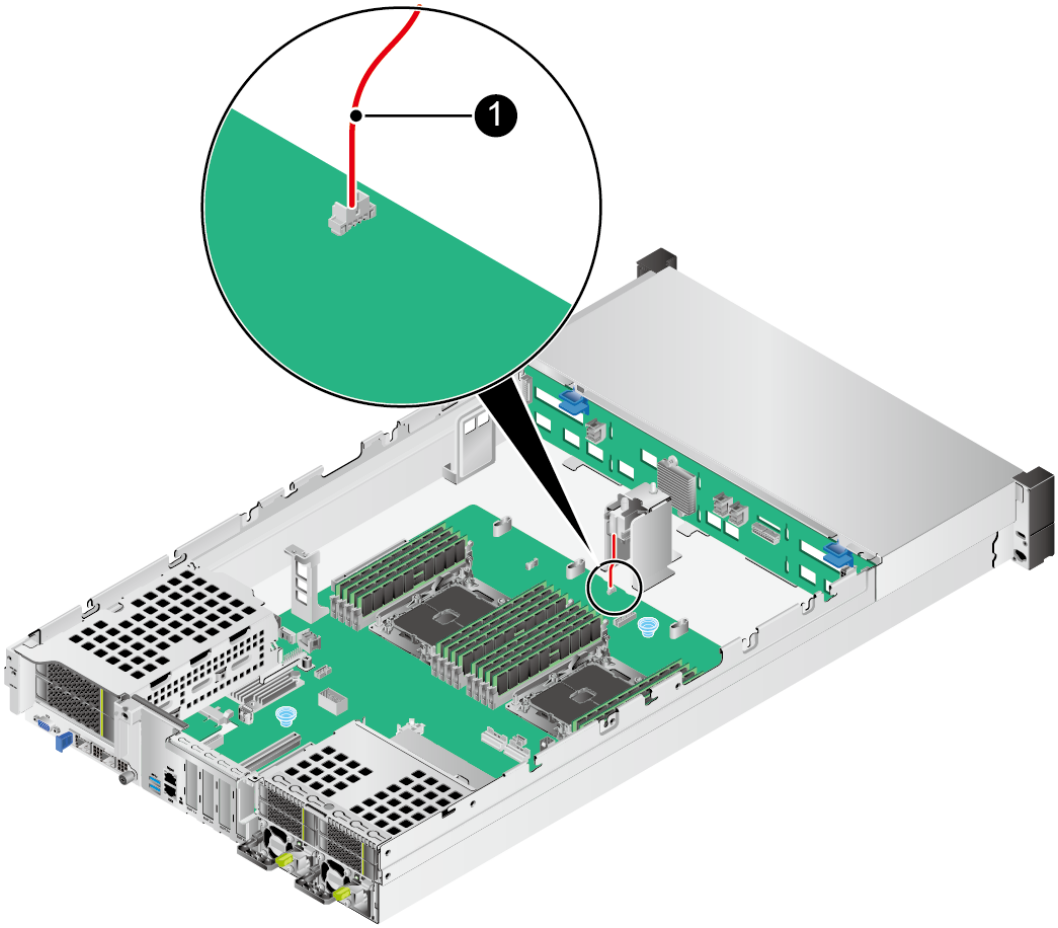

Table 6-621 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.5.4.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-636 Front-drive backplane power and low-speed signal cables

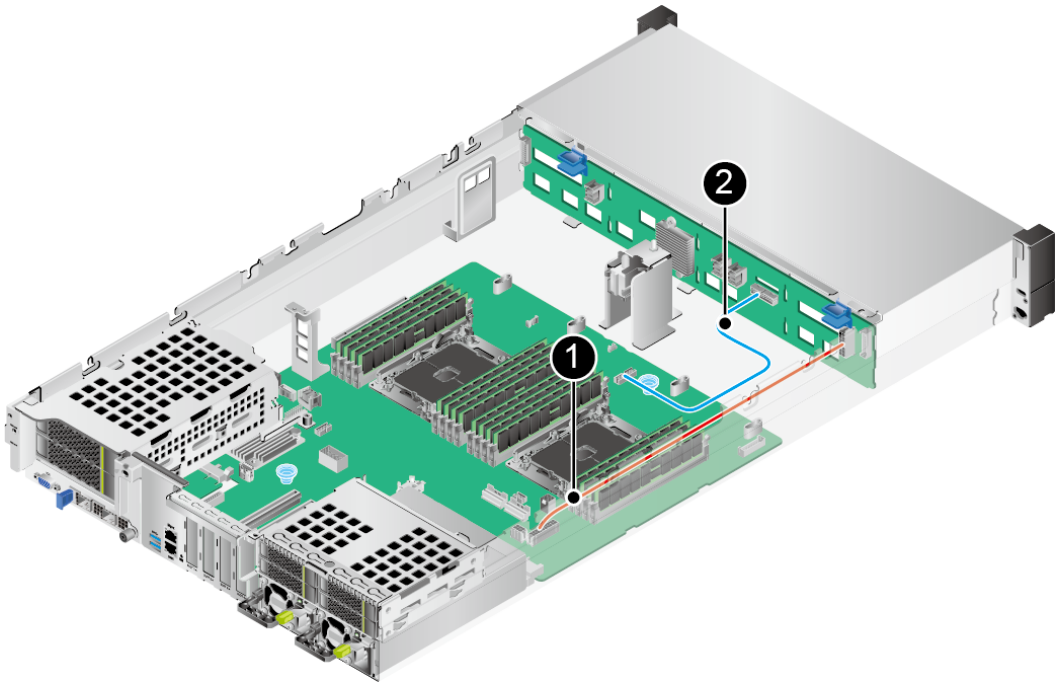

Table 6-622 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)

6.5.5.4.4 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-637 Front-drive backplane SAS high-speed cabling

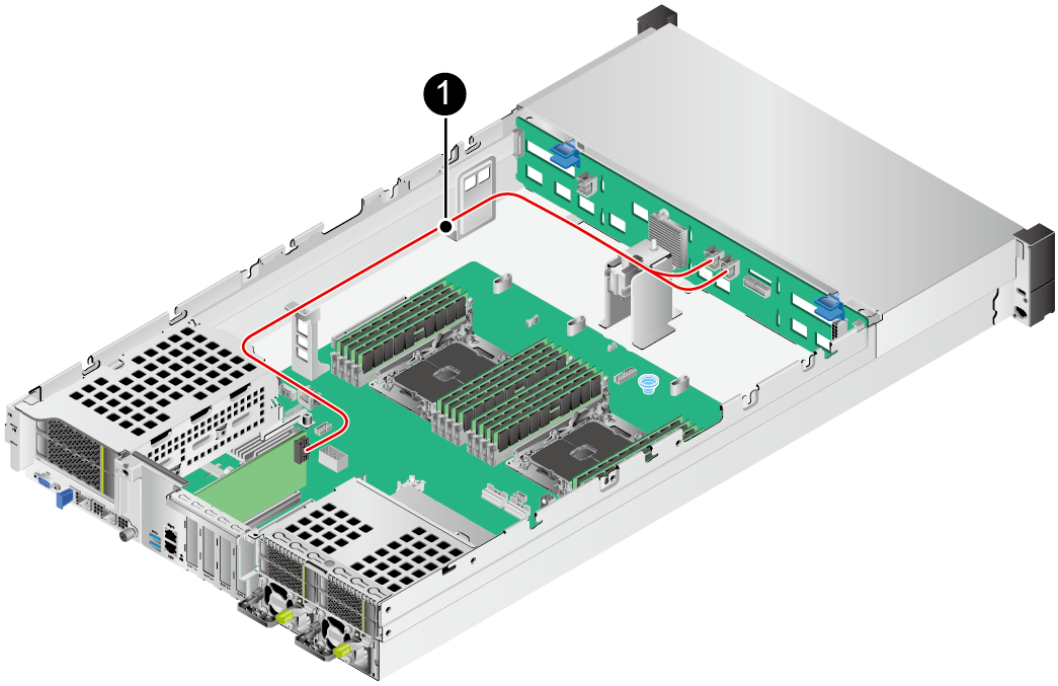

Table 6-623 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y019	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y019 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.5.5.4.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-638 I/O module 1 cabling

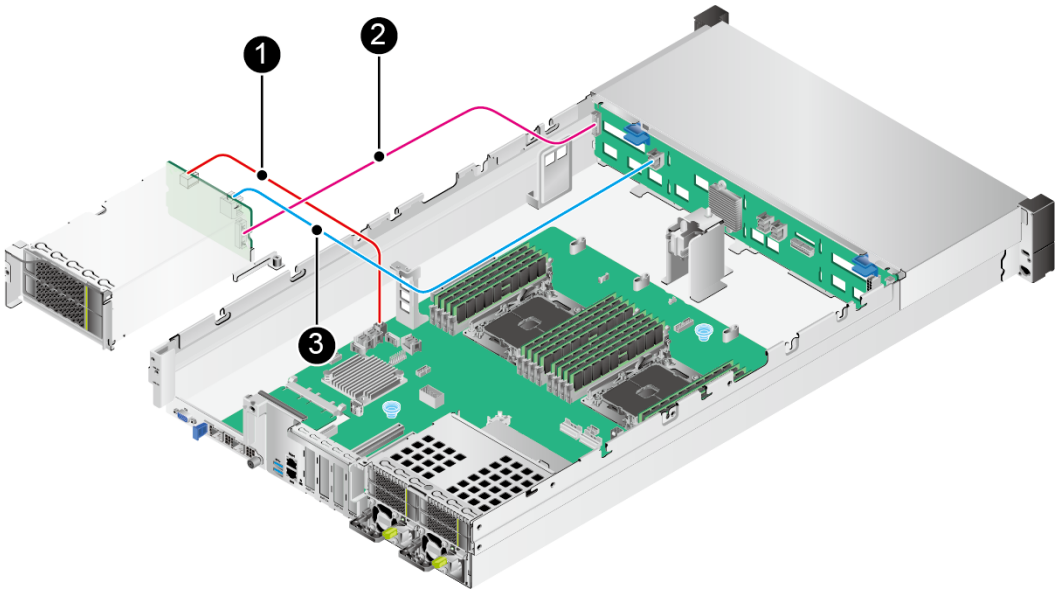

Table 6-624 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD B connector is connected to the backplane of I/O module 1, the HDD A connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.5.5.4.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-639 I/O module 3 cabling

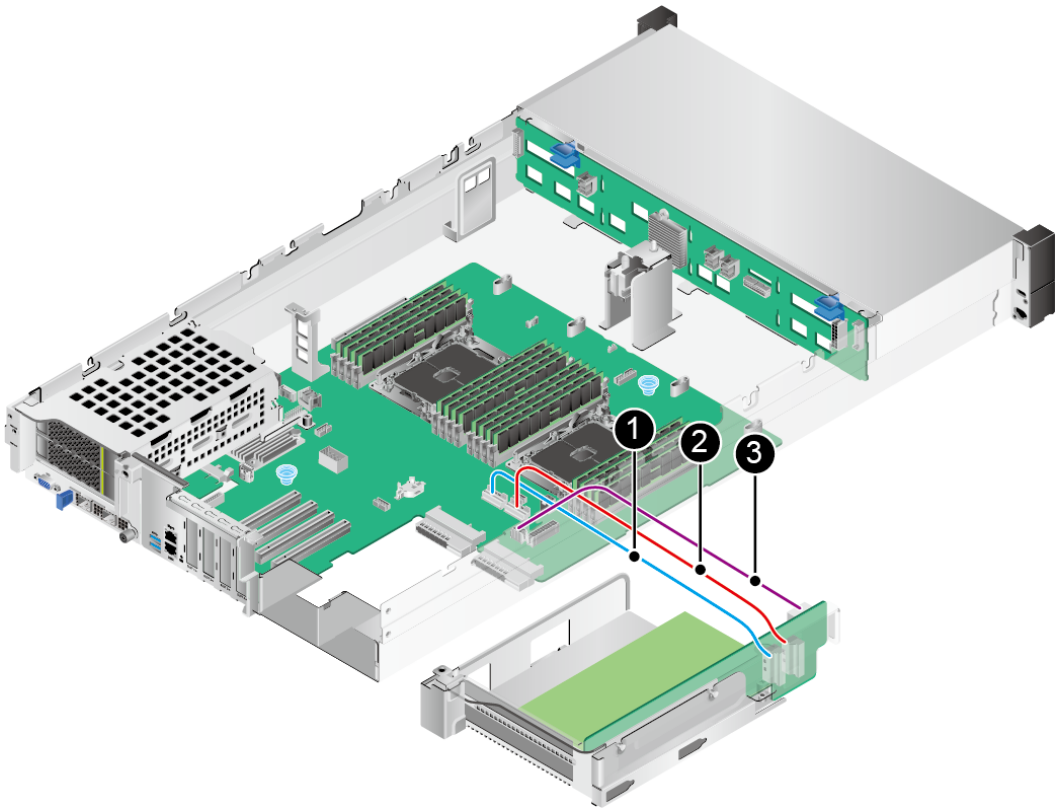

Table 6-625 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.5.4.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-640 I/O module 3 cabling

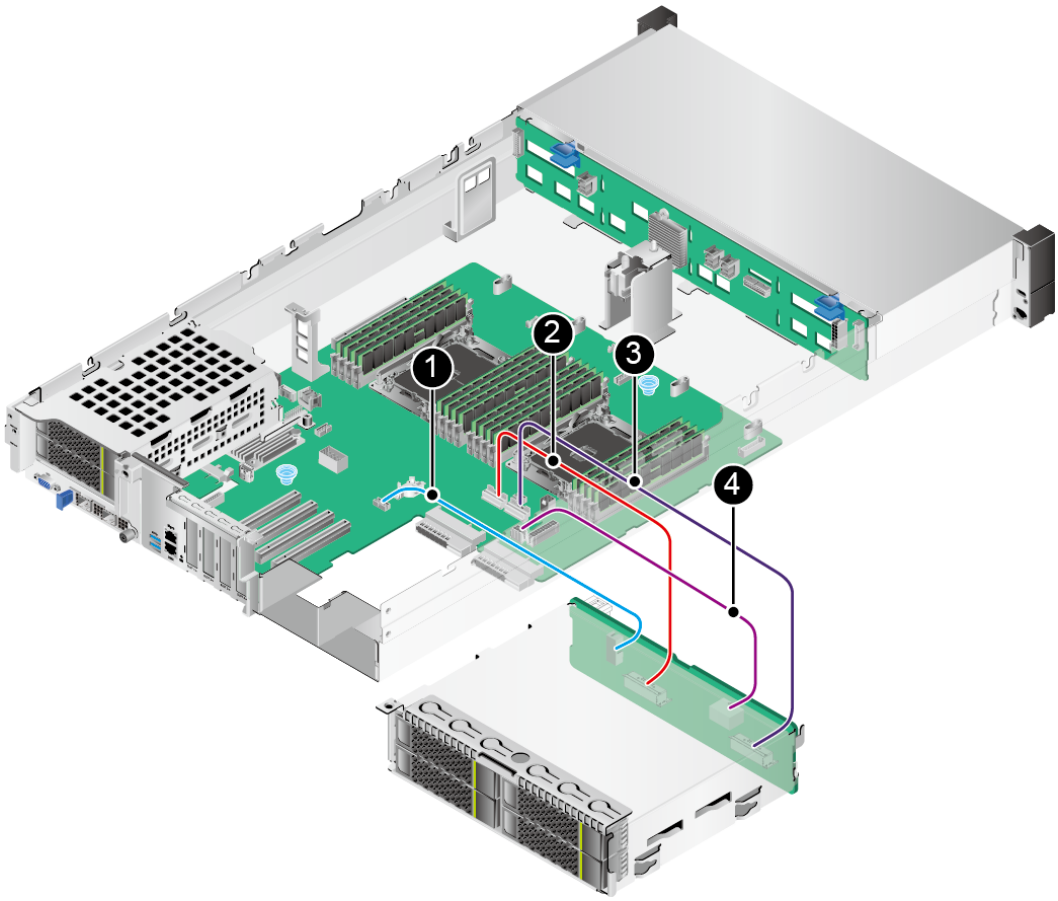

Table 6-626 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.6 16 x 3.5" Drive EXP Configuration

6.5.6.1 16 x 3.5" Drive EXP Configuration 1

6.5.6.1.1 Mounting Ear Cabling

Mounting ear cabling

Figure 6-641 Left mounting ear cabling

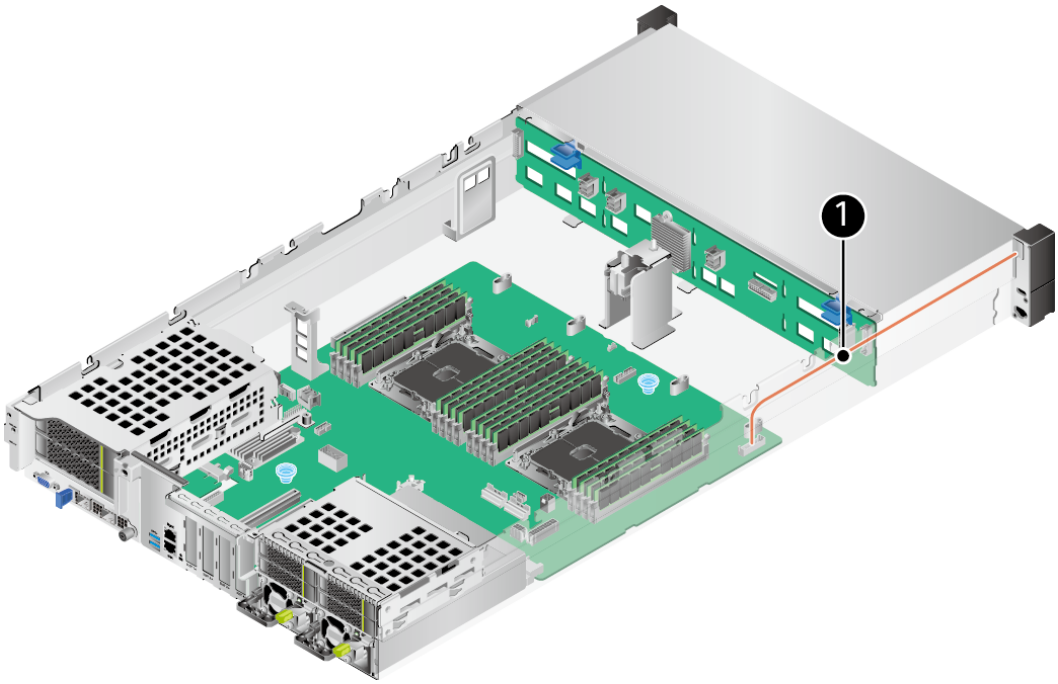

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Table 6-627 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.6.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-642 Intrusion sensor cabling

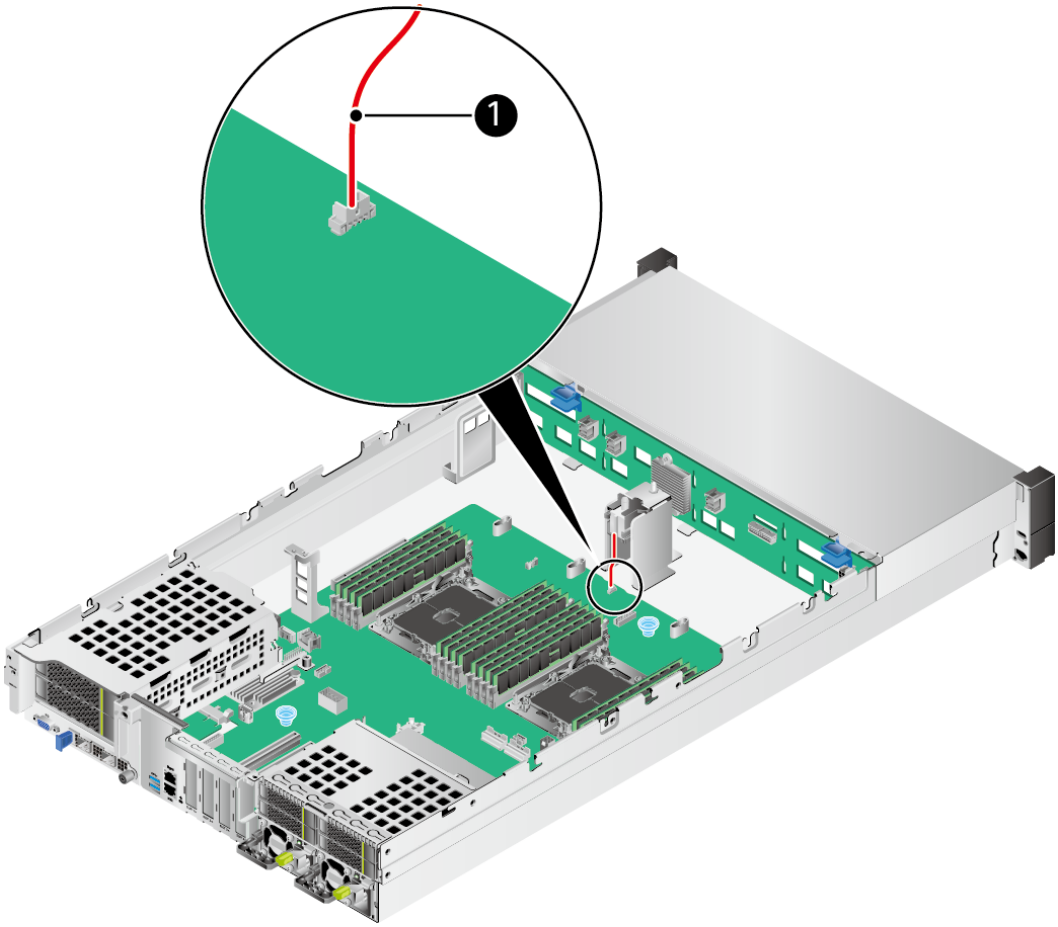

Table 6-628 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.6.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-643 Front-drive backplane power and low-speed signal cables

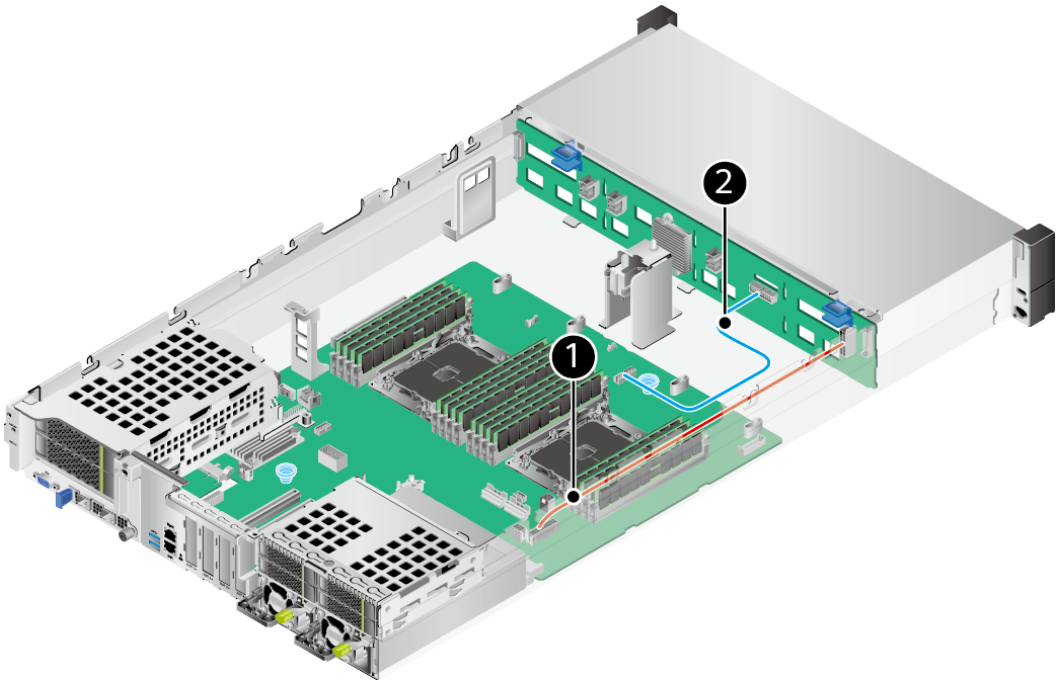

Table 6-629 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	

Table 6-630 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04051989	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.

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No.	P/N Code	Description	Remarks
2	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	

6.5.6.1.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-644 Front-drive backplane SAS high-speed cabling

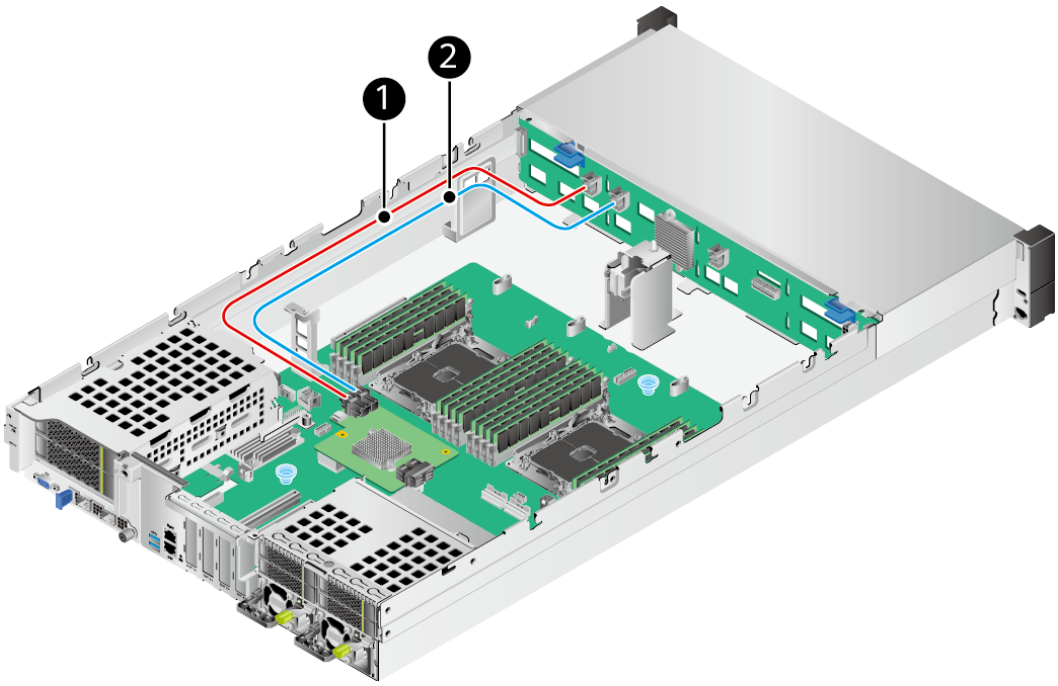

Table 6-631 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051018	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.5.6.1.5 Built-in-Drive Backplane Cabling

NOTICE

Remove and connect cables for the built-in drive backplane in the following sequence:

- Remove the cables:
  1. Remove the cables from the built-in drive backplane.
  2. Remove the entire built-in drive module.
  3. Remove the cables from the mainboard.
- Connect the cables:
  1. Connect the cables to the mainboard.
  2. Install the entire built-in drive module.
  3. Connect the cables to the built-in drive backplane.

Built-in Drive Backplane Cabling

Figure 6-645 Built-in drive backplane cabling

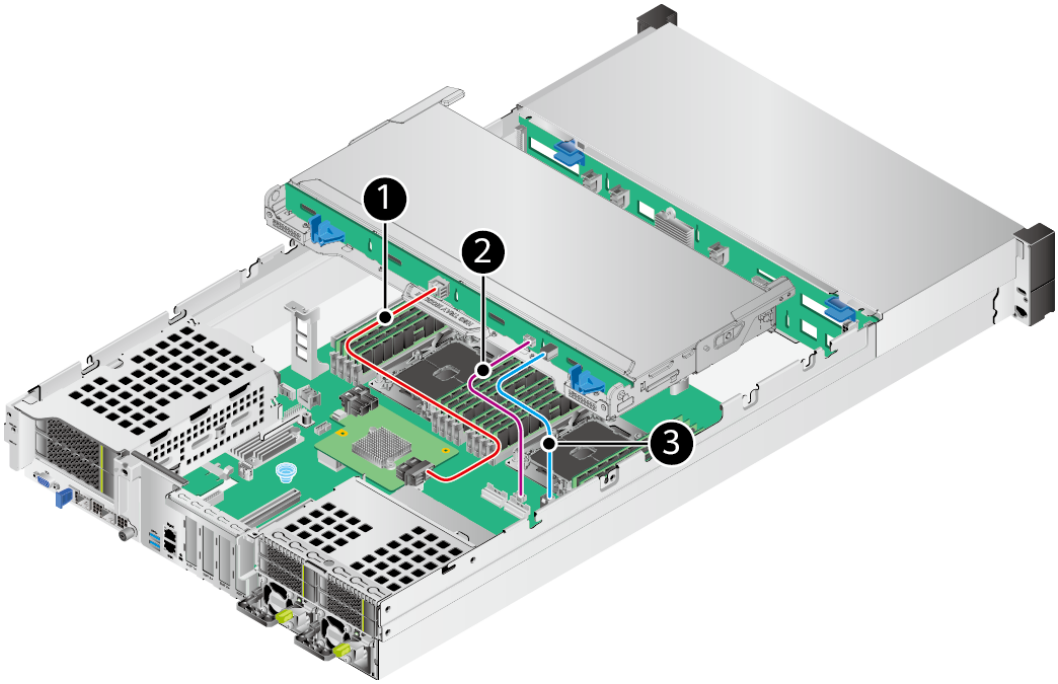

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Table 6-632 Built-in drive backplane cabling

No.	P/N Code	Description	Remarks
1	04052363 -001	SAS high-speed cable for connecting the built-in drive backplane (J3) to PORT C of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the built-in drive module as a spare part.
2	04051948	Low-speed signal cable for connecting the built-in drive backplane (J1) to the mainboard (J27)	The cable is not an independent spare part. It is packed with the built-in drive module as a spare part.
3	04150448 -001	Power cable for connecting the built-in drive backplane (J2) to the mainboard (J22)	-

6.5.6.1.6 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-646 I/O module 1 cabling

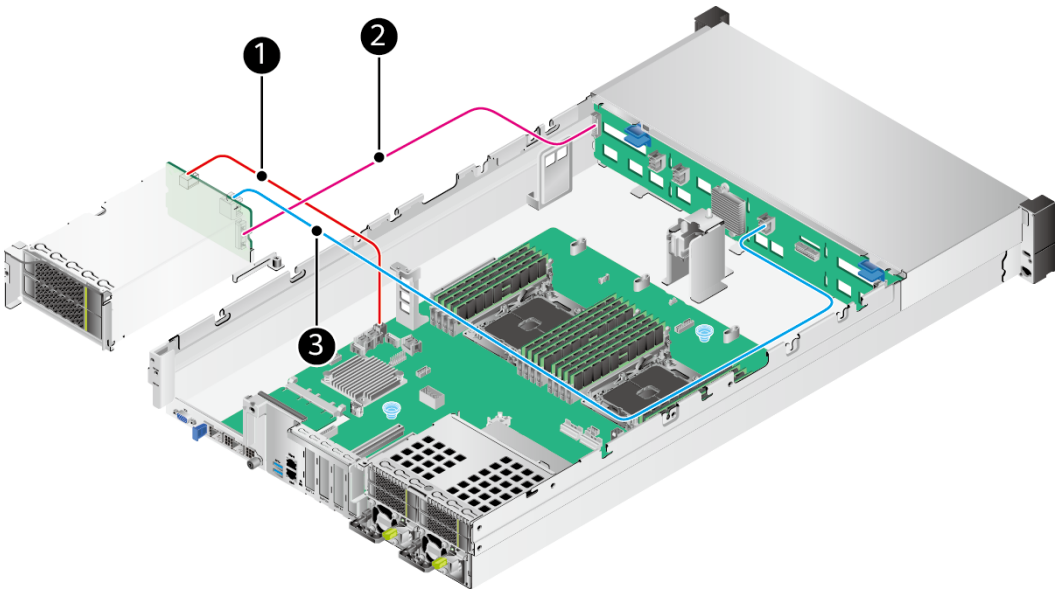

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Table 6-633 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

Table 6-634 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.5.6.1.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-647 I/O module 3 cabling

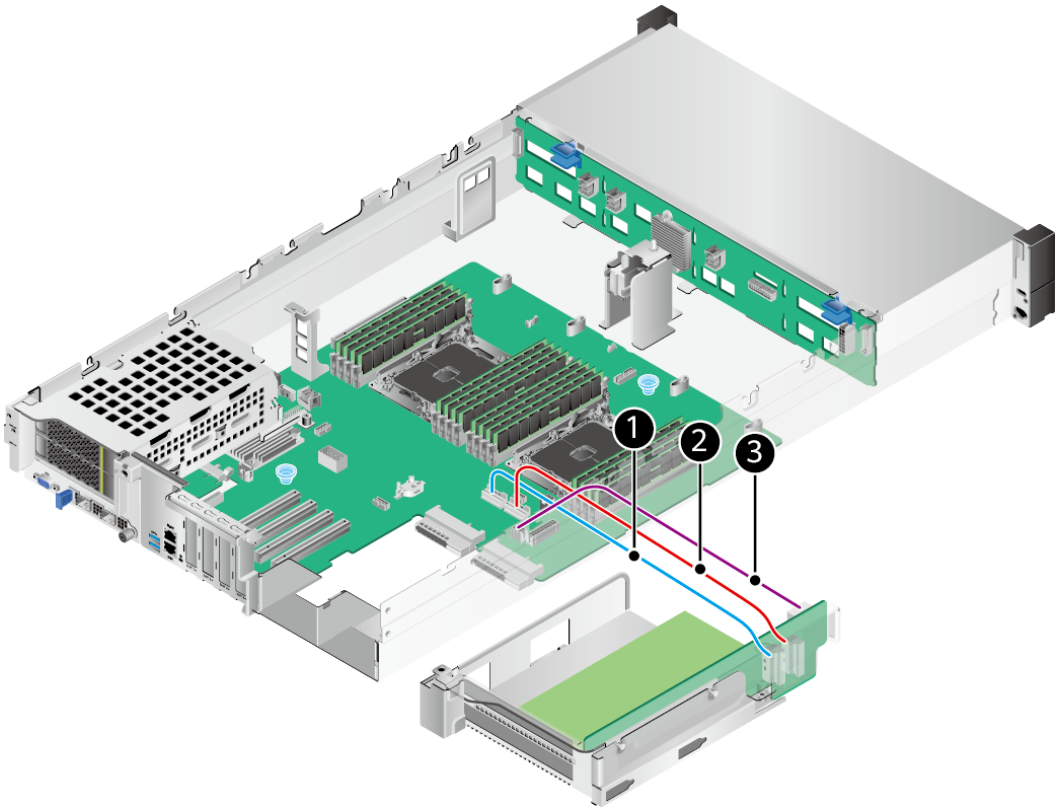

Table 6-635 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.6.1.8 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-648 I/O module 3 cabling

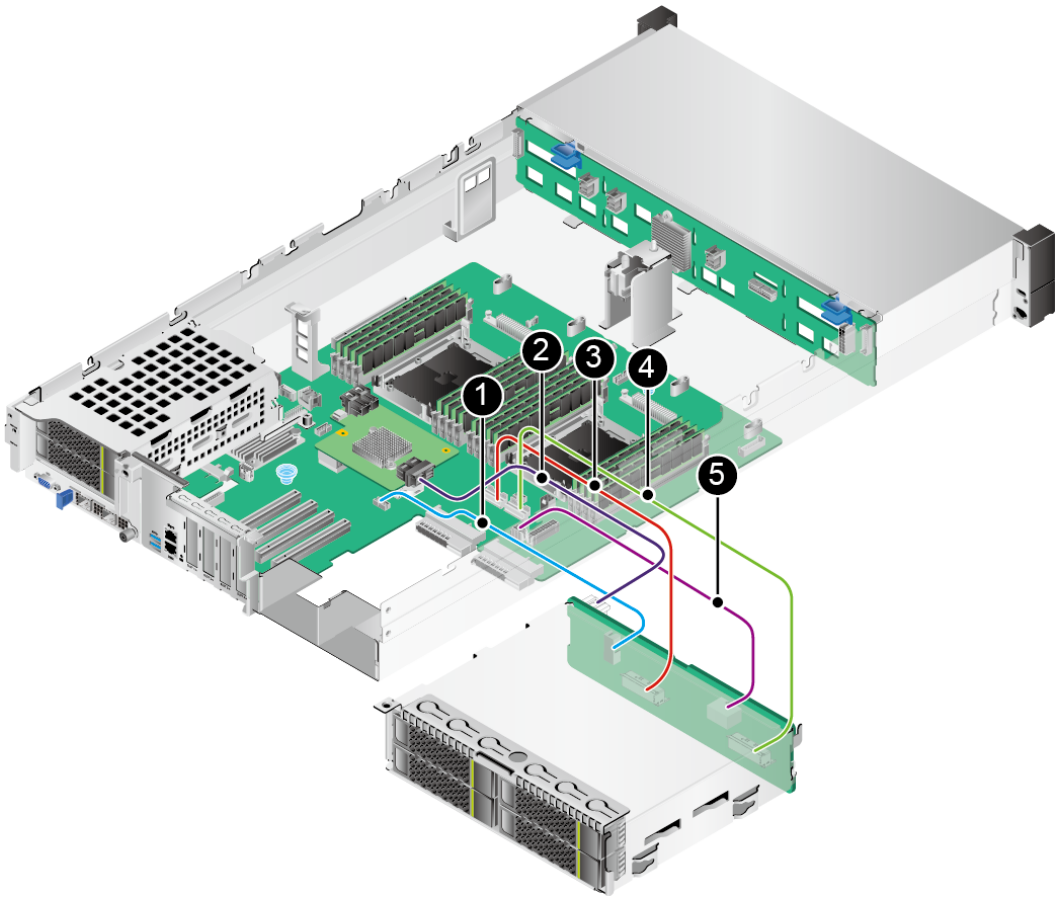

Table 6-636 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT D of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
4	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
5	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.6.2 16 x 3.5" Drive EXP Configuration 2

6.5.6.2.1 Mounting Ear Cabling

Mounting ear cabling

Figure 6-649 Left mounting ear cabling

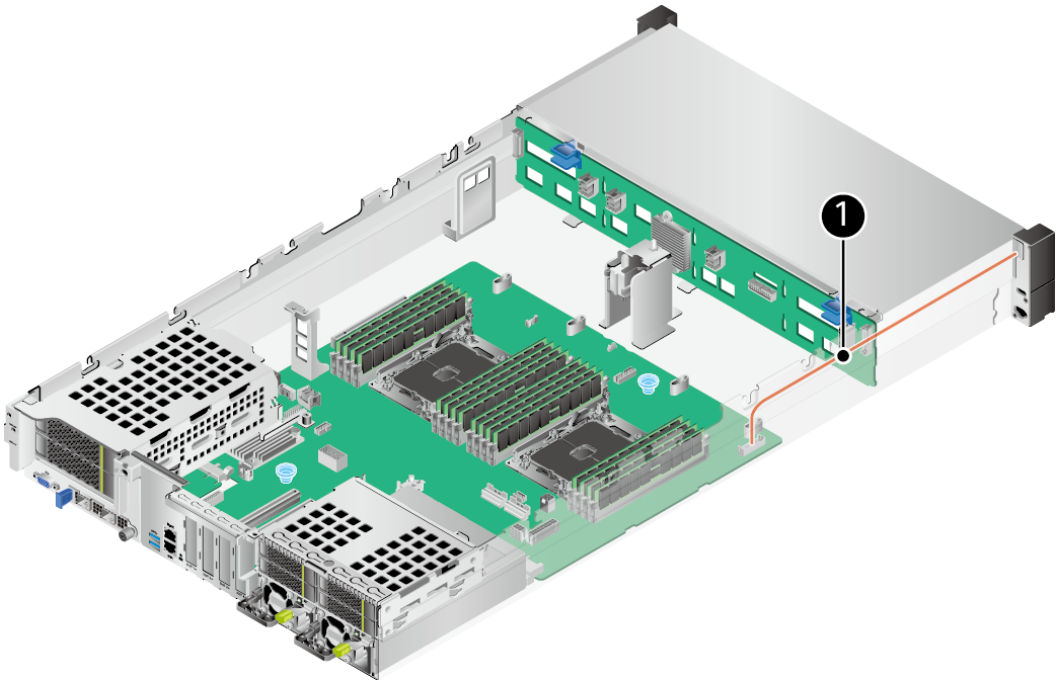

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Table 6-637 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.6.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-650 Intrusion sensor cabling

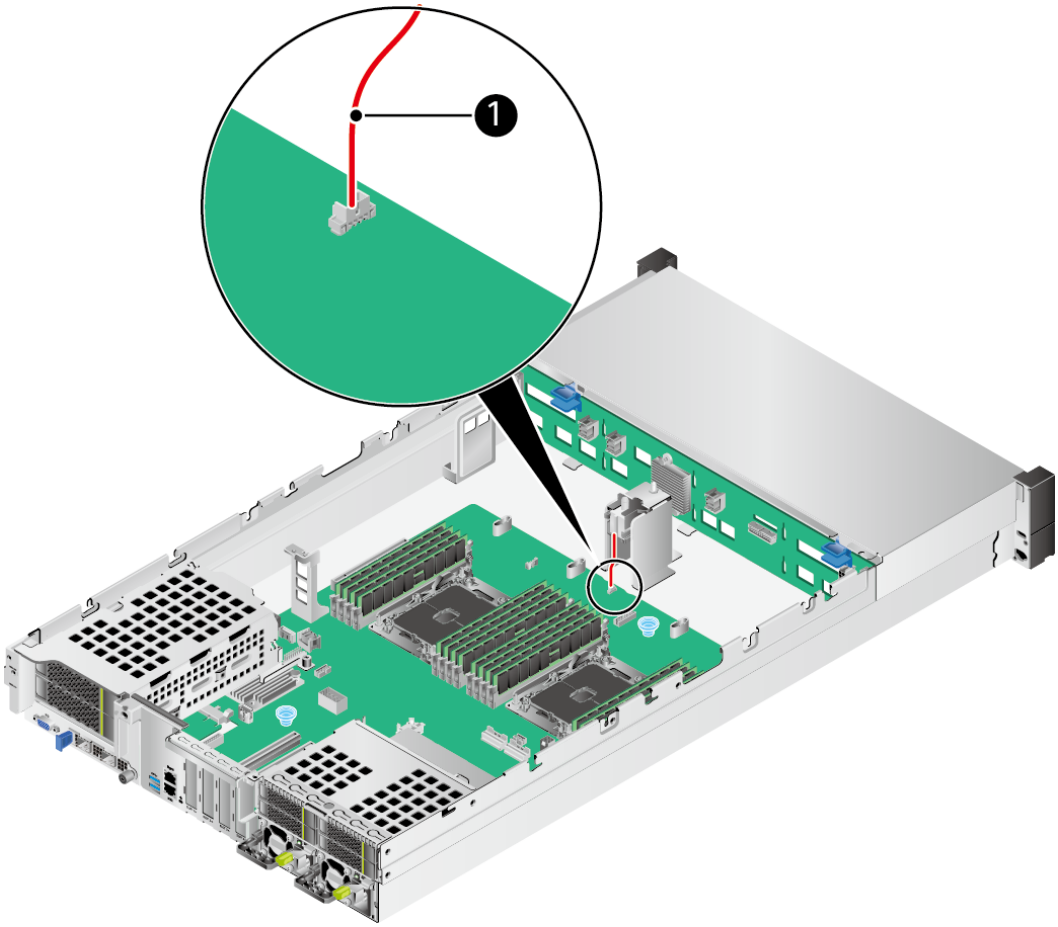

Table 6-638 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.6.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-651 Front-drive backplane power and low-speed signal cables

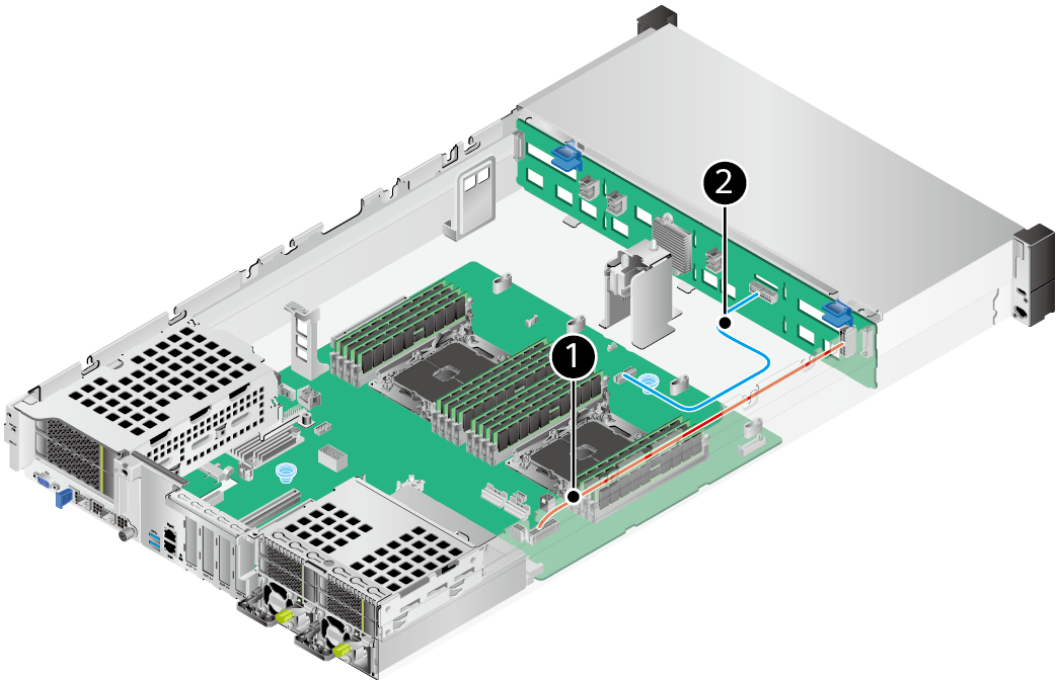

Table 6-639 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)	

Table 6-640 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description	Remarks
1	04051989	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)	The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**.

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No.	P/N Code	Description	Remarks
2	0408Y033	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)	

6.5.6.2.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

Front-Drive Backplane SAS High-speed Cabling

Figure 6-652 Front-drive backplane SAS high-speed cabling

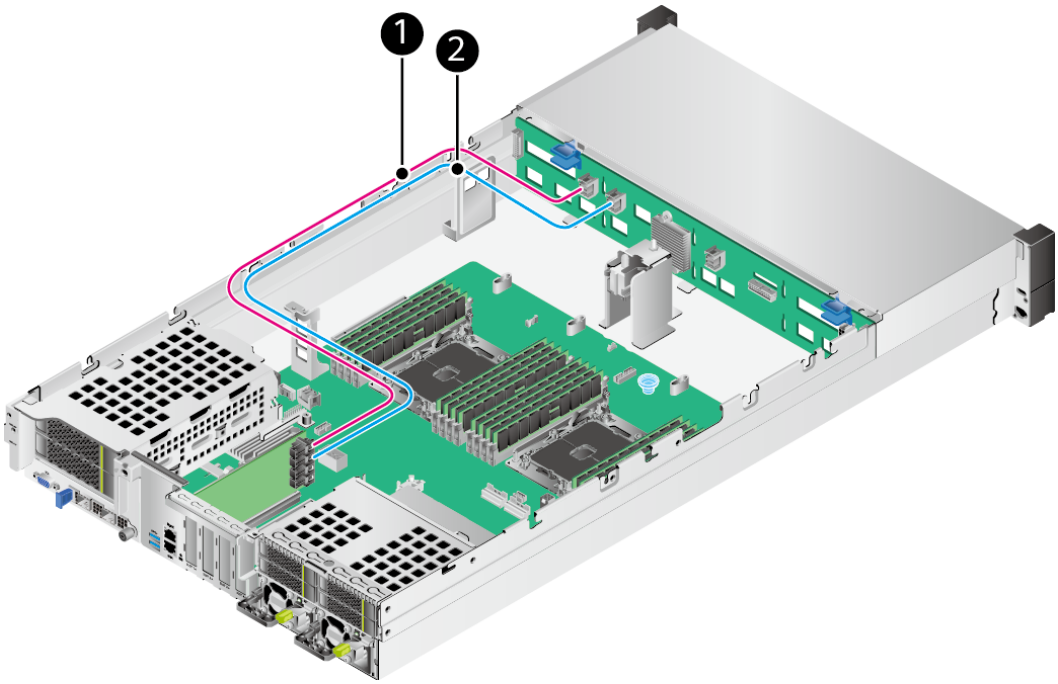

Table 6-641 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card

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No.	P/N Code	Description
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

6.5.6.2.5 Built-in-Drive Backplane Cabling

NOTICE

Remove and connect cables for the built-in drive backplane in the following sequence:

- Remove the cables:
  1. Remove the cables from the built-in drive backplane.
  2. Remove the entire built-in drive module.
  3. Remove the cables from the mainboard.
- Connect the cables:
  1. Connect the cables to the mainboard.
  2. Install the entire built-in drive module.
  3. Connect the cables to the built-in drive backplane.

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Built-in Drive Backplane Cabling

Figure 6-653 Built-in drive backplane cabling

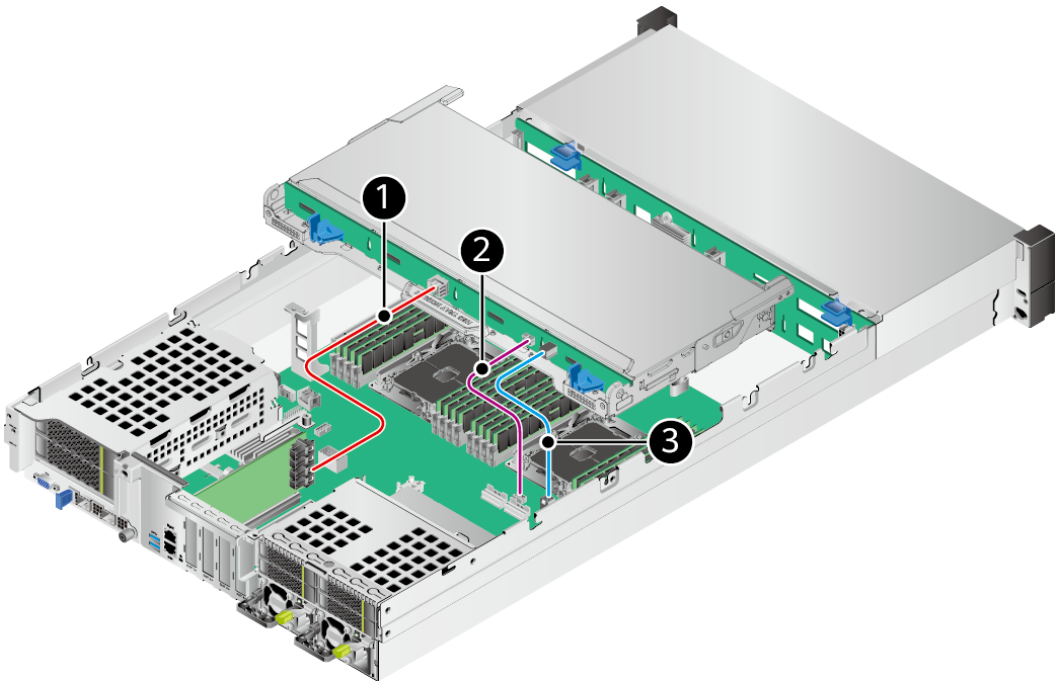

Table 6-642 Built-in drive backplane cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the built-in drive backplane (J3) to PORT C of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the built-in drive module as a spare part.
2	04051948	Low-speed signal cable for connecting the built-in drive backplane (J1) to the mainboard (J27)	The cable is not an independent spare part. It is packed with the built-in drive module as a spare part.
3	04150448-001	Power cable for connecting the built-in drive backplane (J2) to the mainboard (J22)	-

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to built-in drive backplane (J3) may be C2, PORT C, 2, or CN2.

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6.5.6.2.6 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-654 I/O module 1 cabling

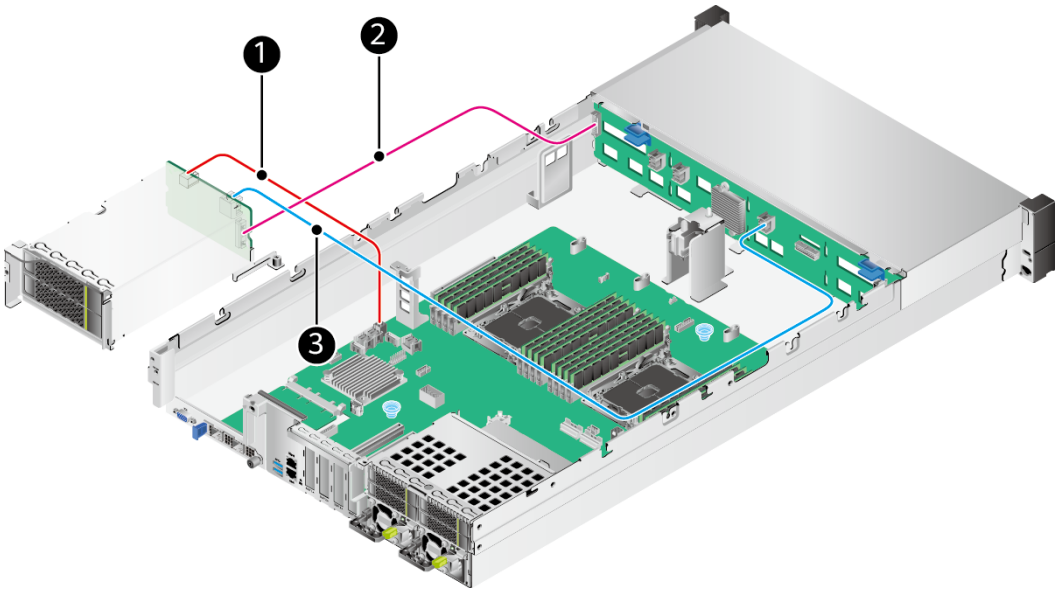

Table 6-643 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	The current backplane is **12 x 3.5" drive EXP backplane 1 (P/N code: 03027FAT)**.
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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Table 6-644 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	• The current backplane is **12 x 3.5" drive EXP backplane 2 (P/N code: 0302Y255)**. • The cable (0408Y034) is not an independent spare part. It is packed with the 2 x 3.5" drive module as a spare part.
2	0408Y034	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.	

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6.5.6.2.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-655 I/O module 3 cabling

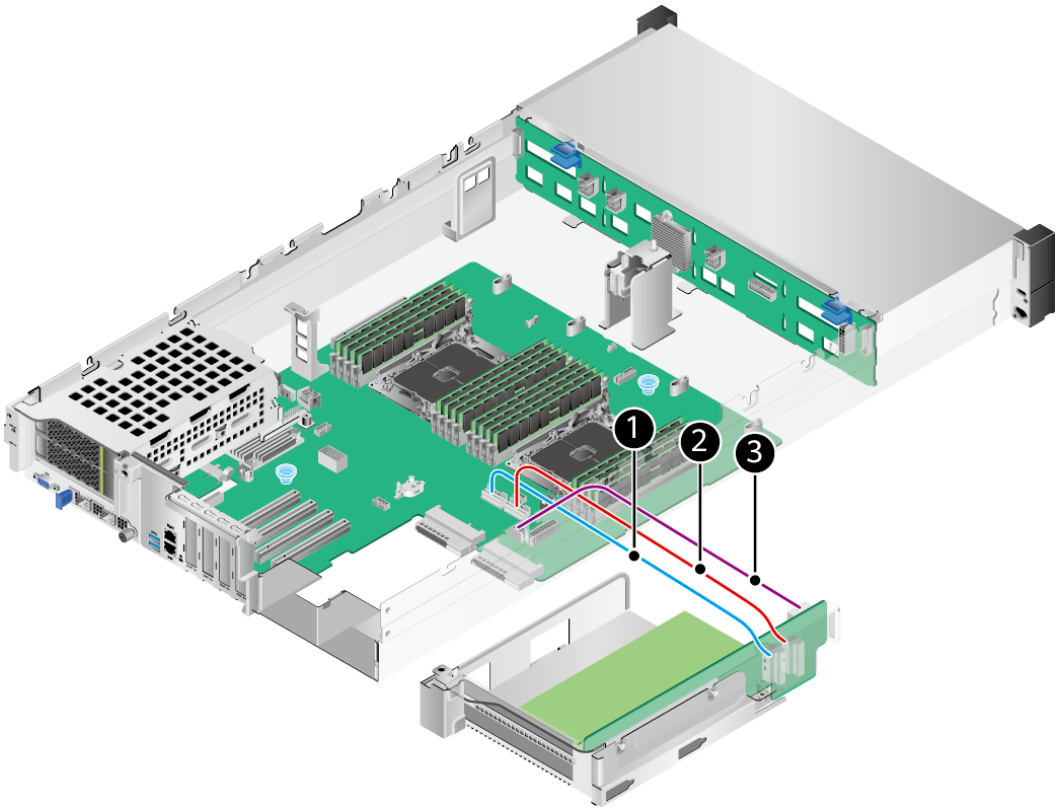

Table 6-645 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.6.2.8 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-656 I/O module 3 cabling

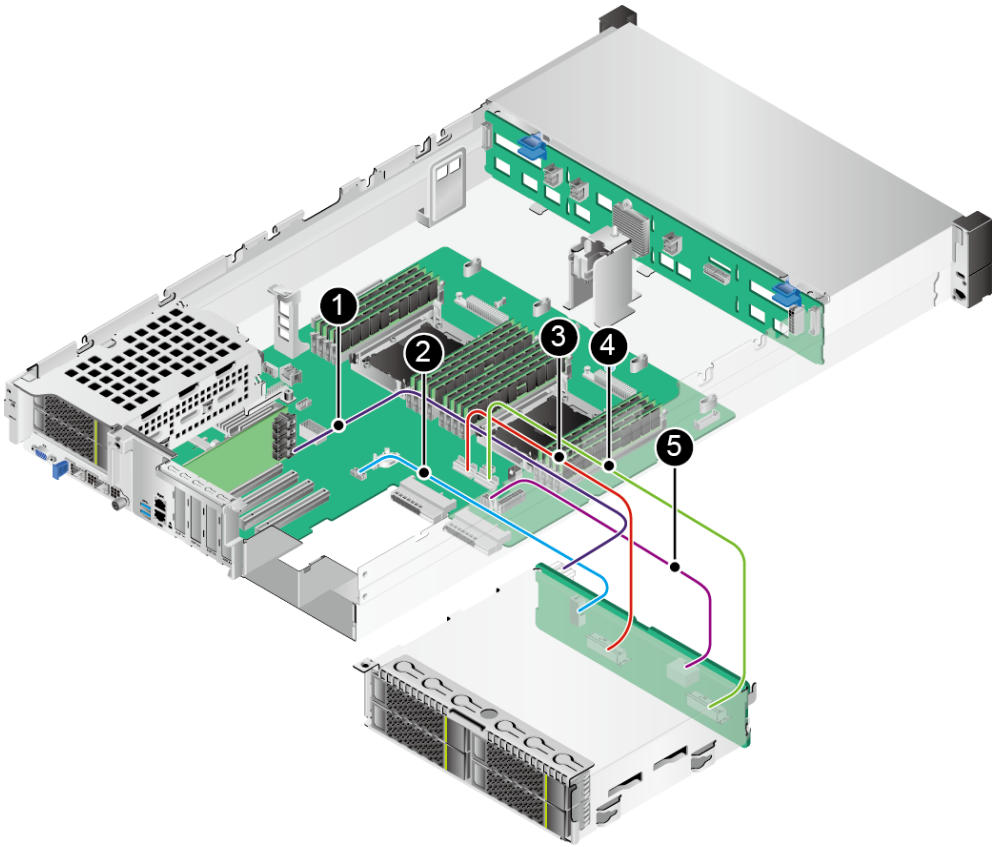

Table 6-646 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT D of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	

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No.	P/N Code	Description	Remarks
4	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
5	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J801) may be C3, PORT D, 3, or CN03.

6.5.6.3 16 x 3.5" Drive EXP Configuration 3

6.5.6.3.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-657 Left mounting ear cabling

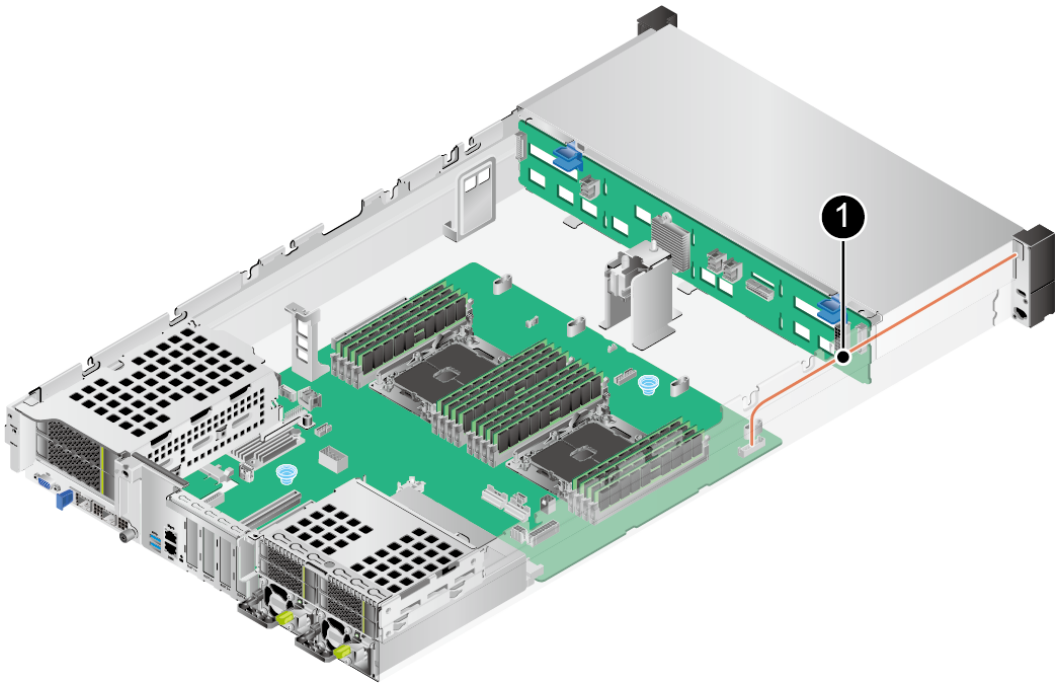

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Table 6-647 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.6.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-658 Intrusion sensor cabling

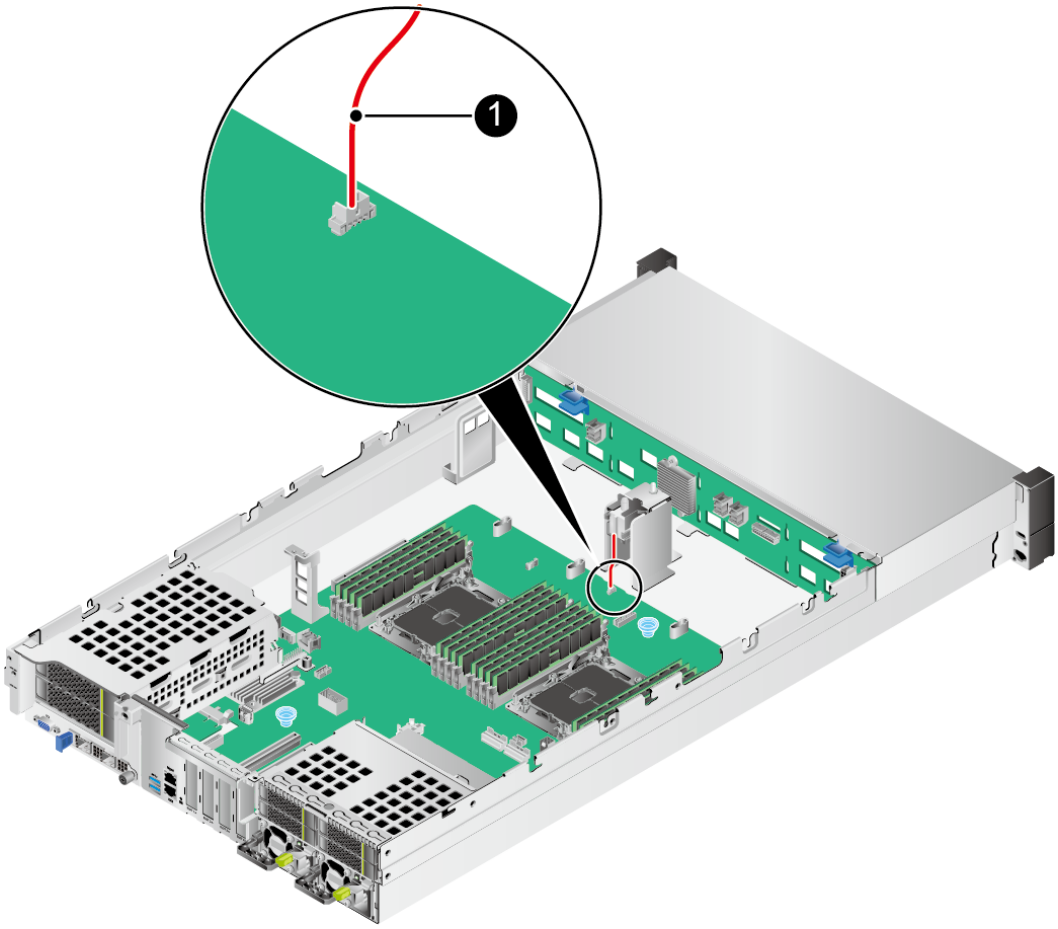

Table 6-648 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.6.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-659 Front-drive backplane power and low-speed signal cables

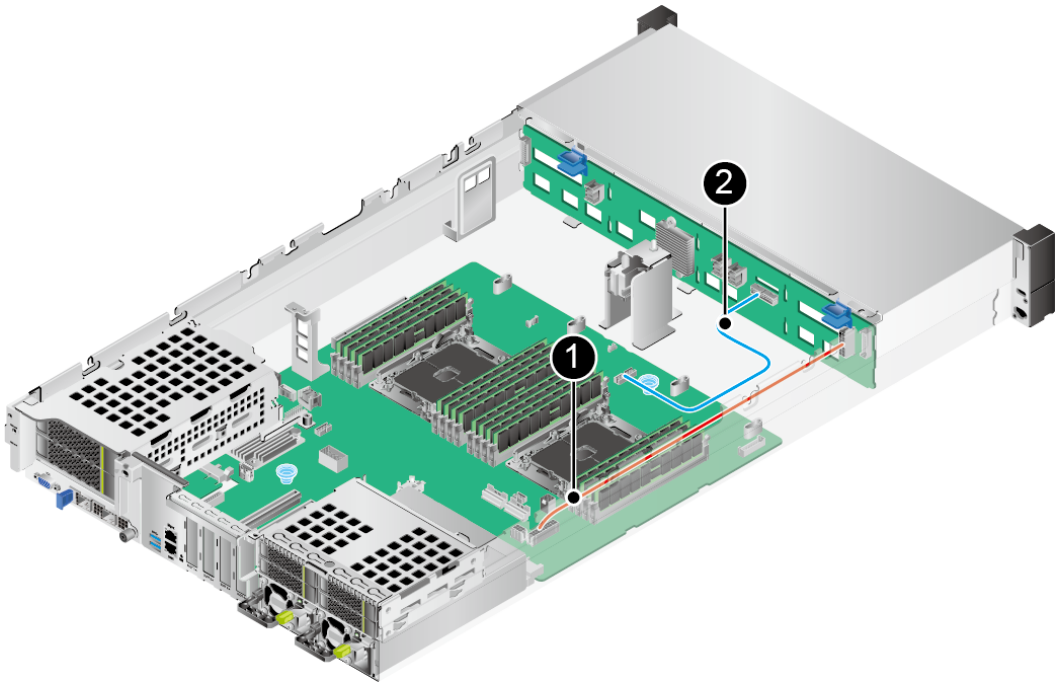

Table 6-649 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152704-001	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J35) to the mainboard (J75)

6.5.6.3.4 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-660 Front-drive backplane SAS high-speed cabling

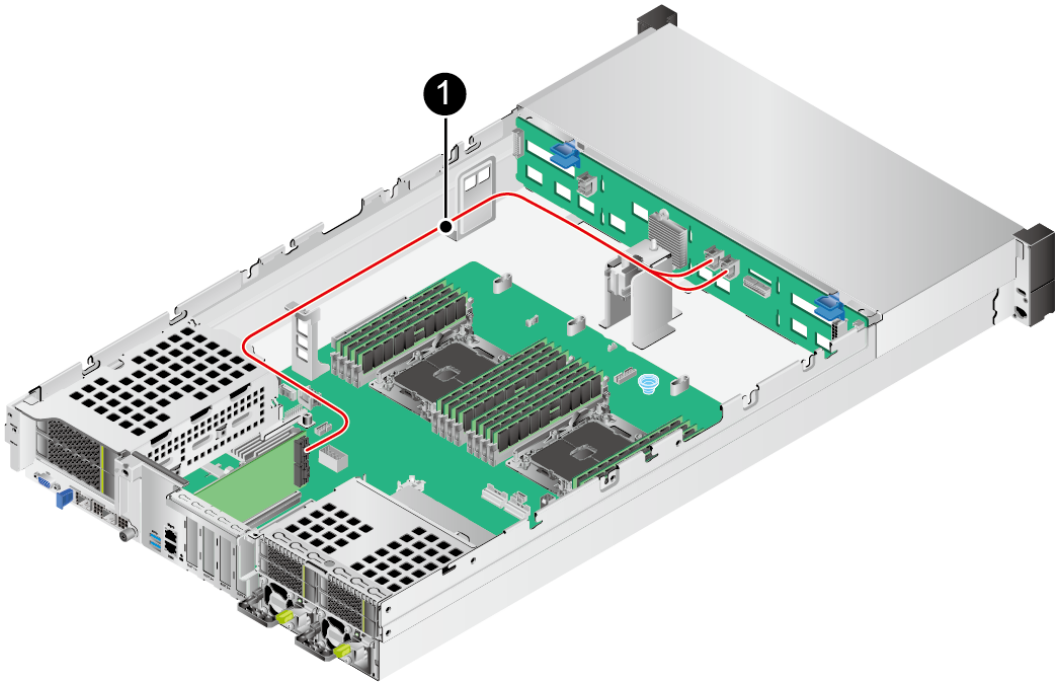

Table 6-650 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y019	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y019 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.5.6.3.5 Built-in Drive Backplane Cabling

NOTICE

Remove and connect cables for the built-in drive backplane in the following sequence:

- Remove the cables:
  1. Remove the cables from the built-in drive backplane.
  2. Remove the entire built-in drive module.
  3. Remove the cables from the mainboard.
- Connect the cables:
  1. Connect the cables to the mainboard.
  2. Install the entire built-in drive module.
  3. Connect the cables to the built-in drive backplane.

Built-in Drive Backplane Cabling

Figure 6-661 Built-in drive backplane cabling

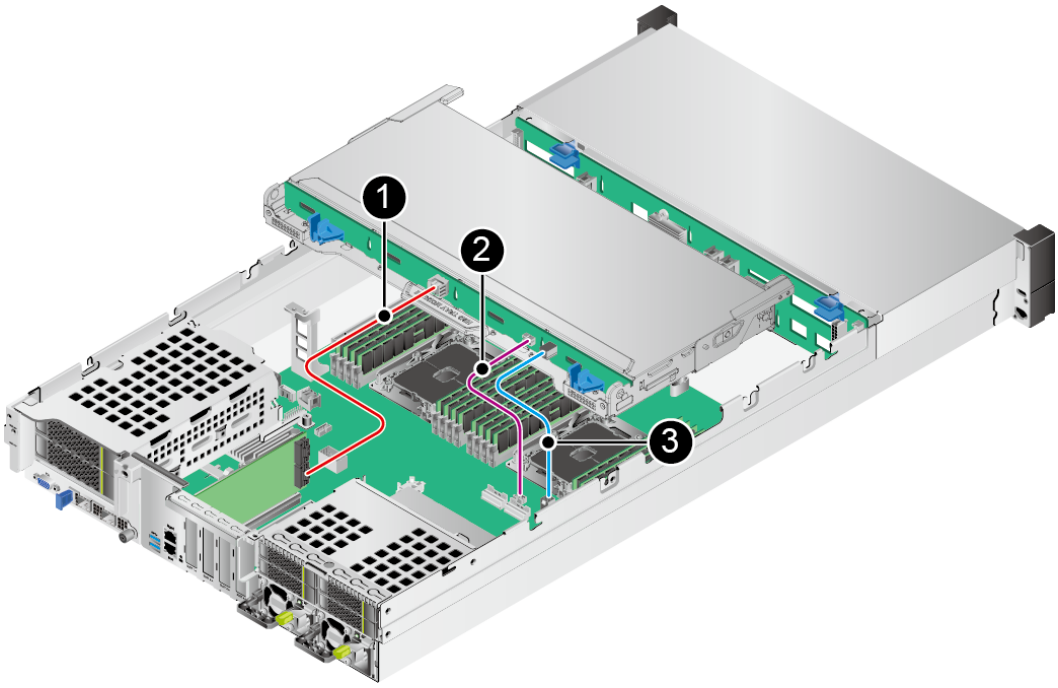

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Table 6-651 Built-in drive backplane cabling

No.	P/N Code	Description	Remarks
1	0405Y029	SAS high-speed cable for connecting the built-in drive backplane (J3) to C1 of the PCIe RAID controller card **NOTE** 0405Y029 is a Y-shaped cable. Connector PORT A corresponds to the built-in drive backplane (J3), connector PORT B corresponds to the rear-drive backplane (J801), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.	-
2	04051948	Low-speed signal cable for connecting the built-in drive backplane (J1) to the mainboard (J27)	The cable is not an independent spare part. It is packed with the built-in drive module as a spare part.
3	04150448-001	Power cable for connecting the built-in drive backplane (J2) to the mainboard (J22)	-

6.5.6.3.6 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-662 I/O module 1 cabling

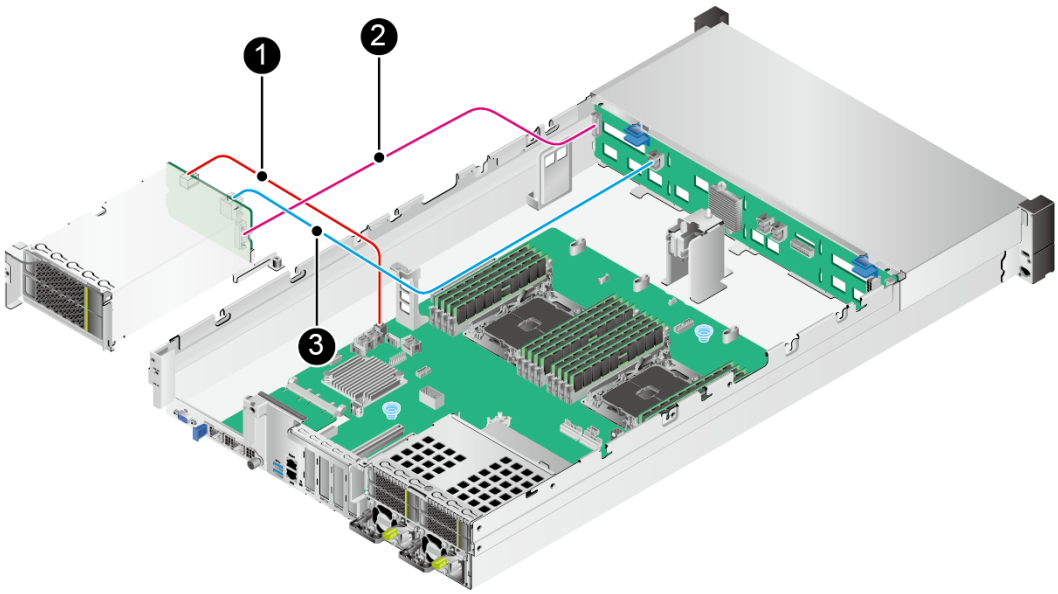

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Table 6-652 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J31)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J34) **NOTE** 04052338 is a Y-shaped cable. The HDD B connector is connected to the backplane of I/O module 1, the HDD A connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

6.5.6.3.7 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-663 I/O module 3 cabling

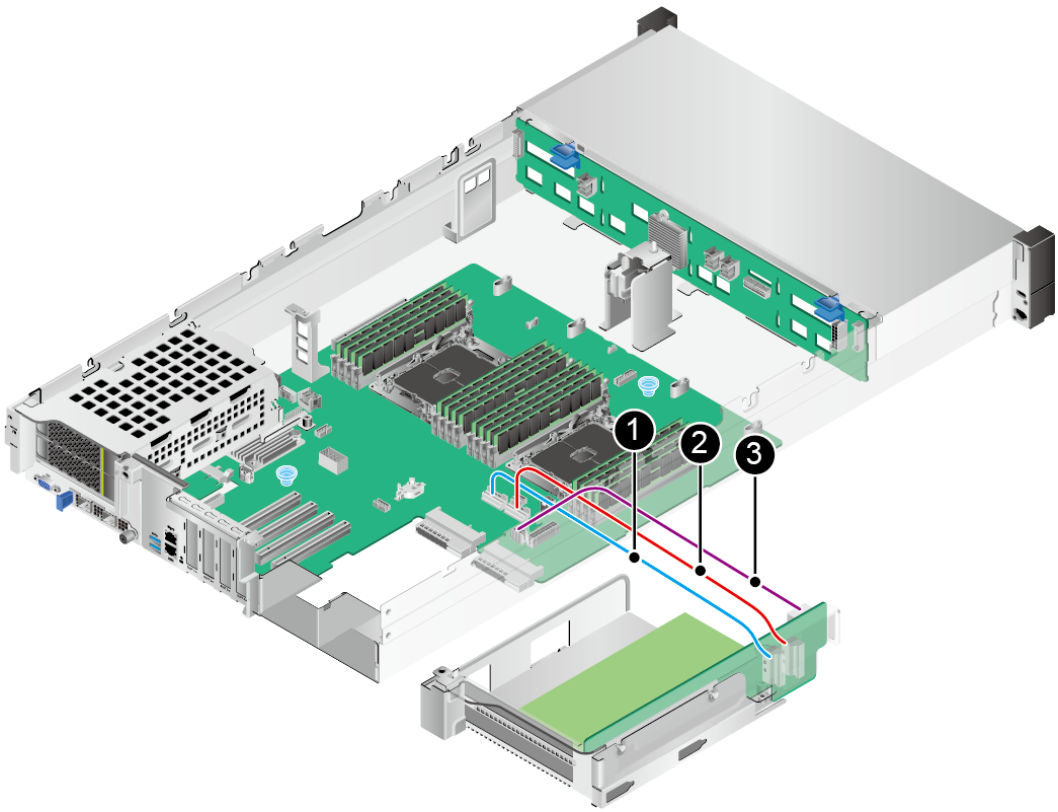

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Table 6-653 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

6.5.6.3.8 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-664 I/O module 3 cabling

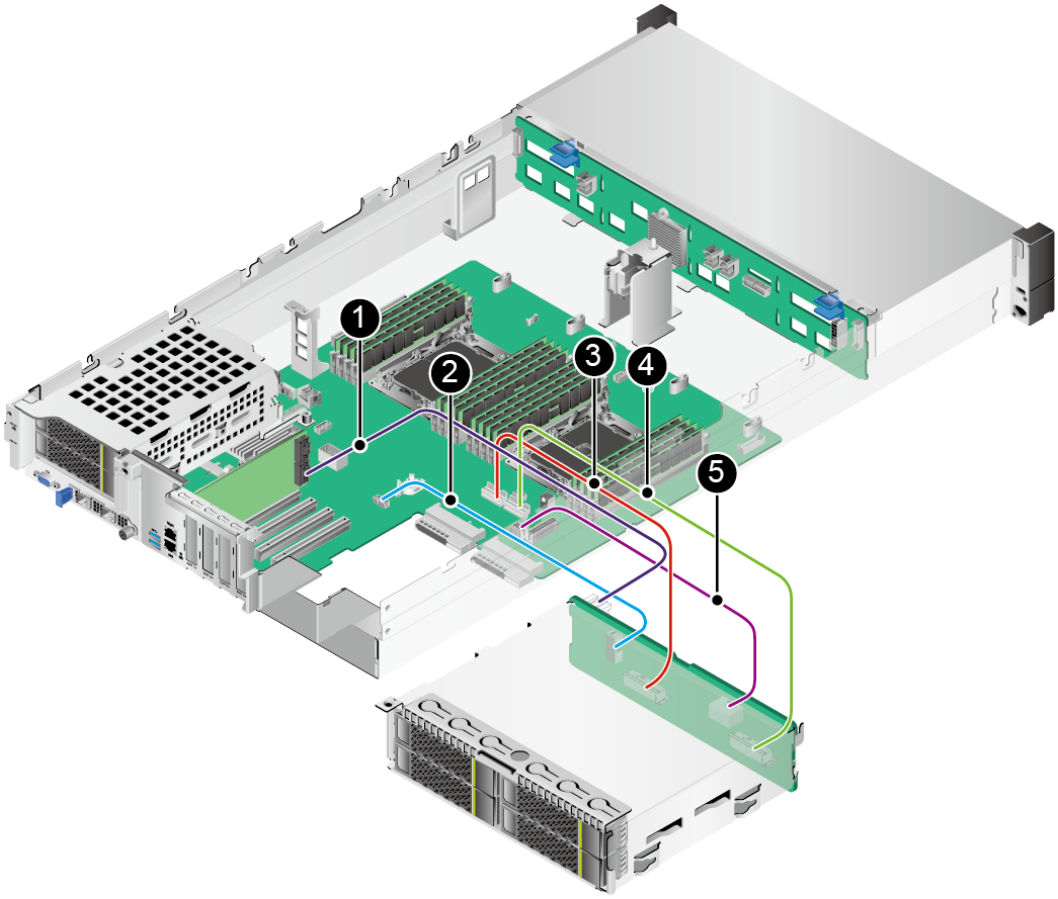

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Table 6-654 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	0405Y029	SAS high-speed cable for connecting the rear-drive backplane (J801) to C1 of the PCIe RAID controller card **NOTE** 0405Y029 is a Y-shaped cable. Connector PORT A corresponds to the built-in drive backplane (J3), connector PORT B corresponds to the rear-drive backplane (J801), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.	-
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
4	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
5	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.7 25 x 2.5" Drive EXP Configuration

6.5.7.1 25 x 2.5" Drive EXP Configuration 1

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6.5.7.1.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-665 Left mounting ear cabling

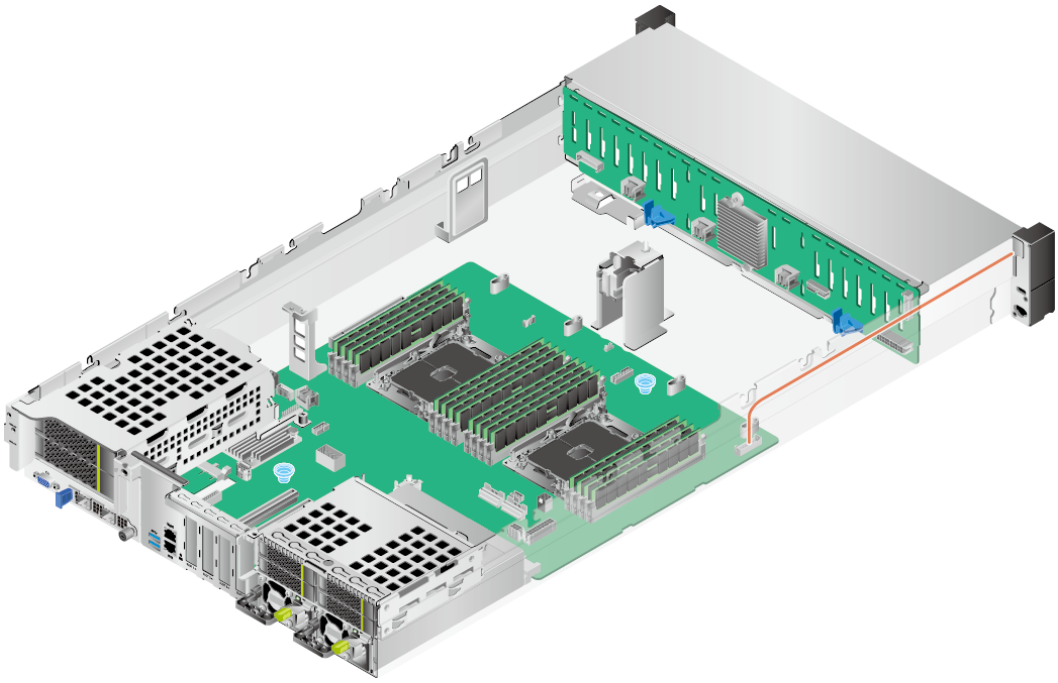

Table 6-655 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.7.1.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-666 Intrusion sensor cabling

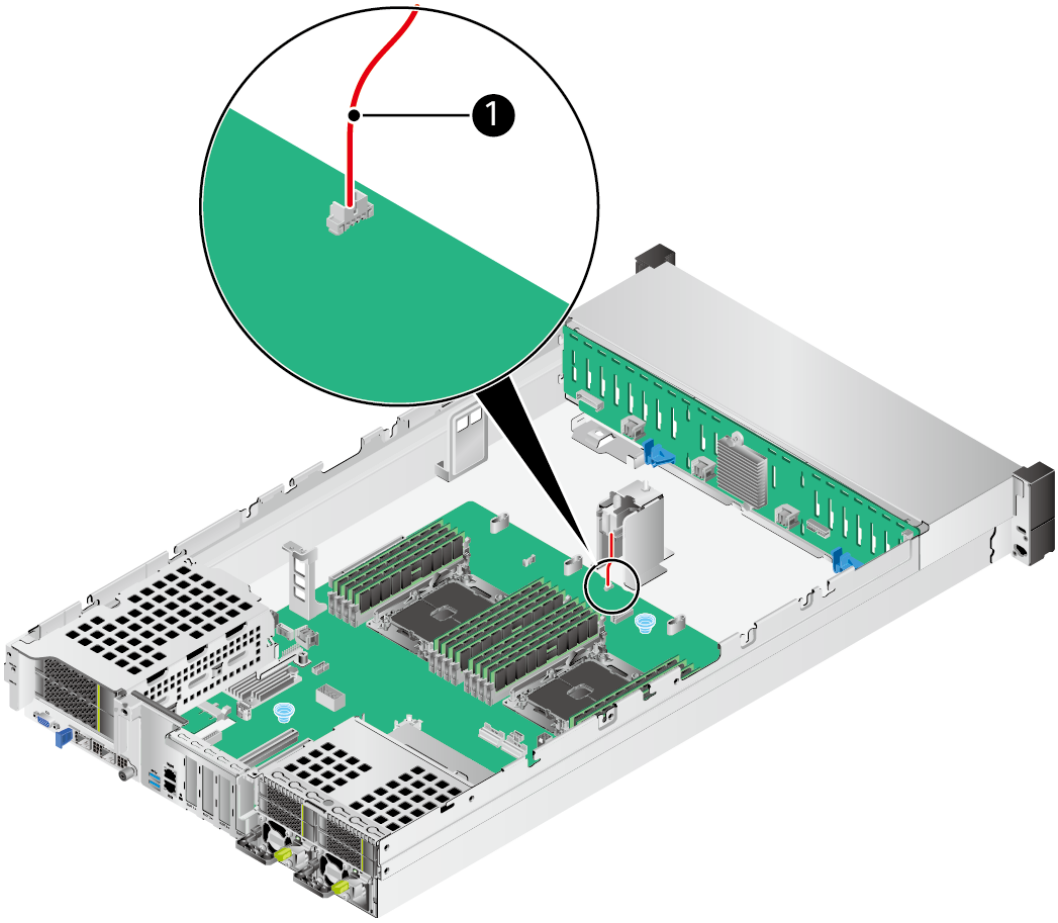

Table 6-656 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.7.1.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-667 Front-drive backplane power and low-speed signal cables

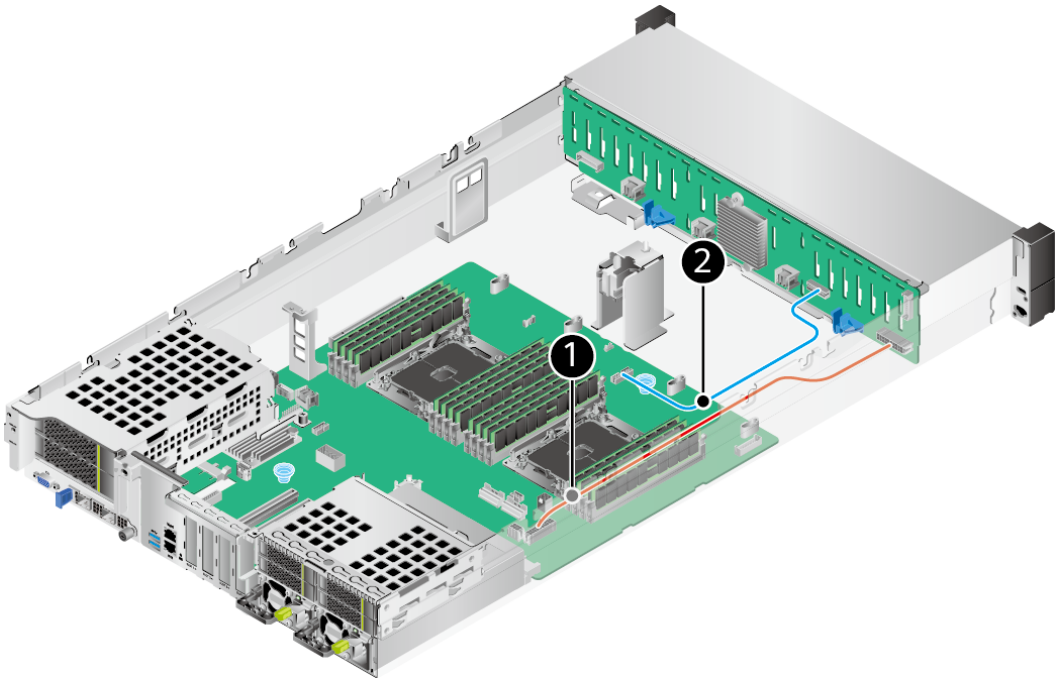

Table 6-657 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

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6.5.7.1.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-Drive Backplane SAS High-speed Cabling

Figure 6-668 Front-drive backplane SAS high-speed cabling

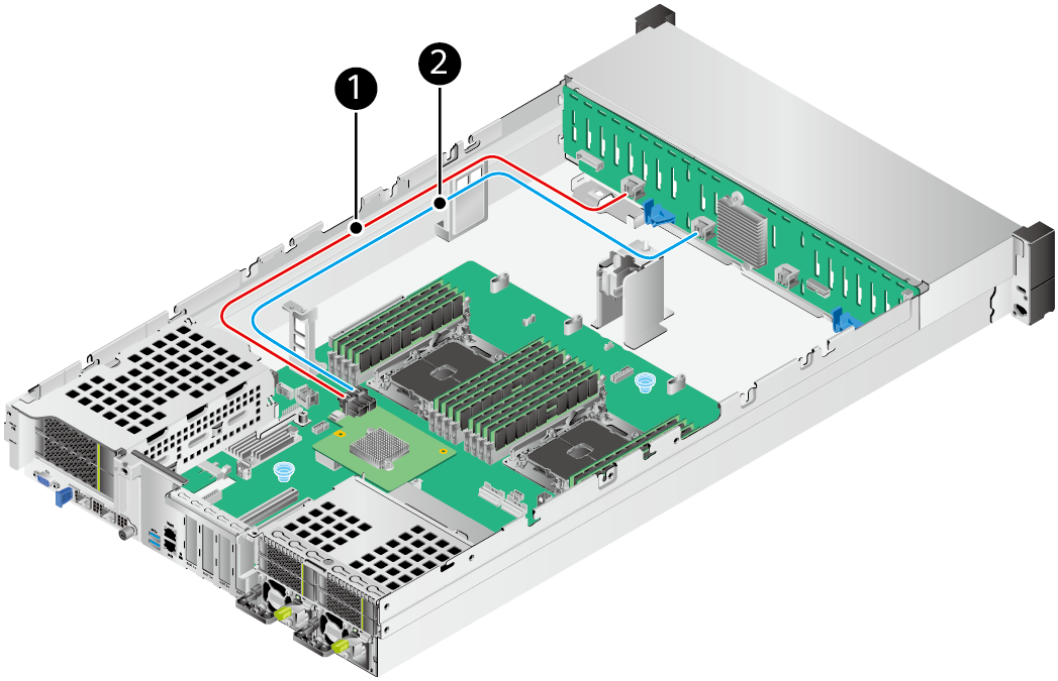

Table 6-658 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.5.7.1.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-669 I/O module 1 cabling

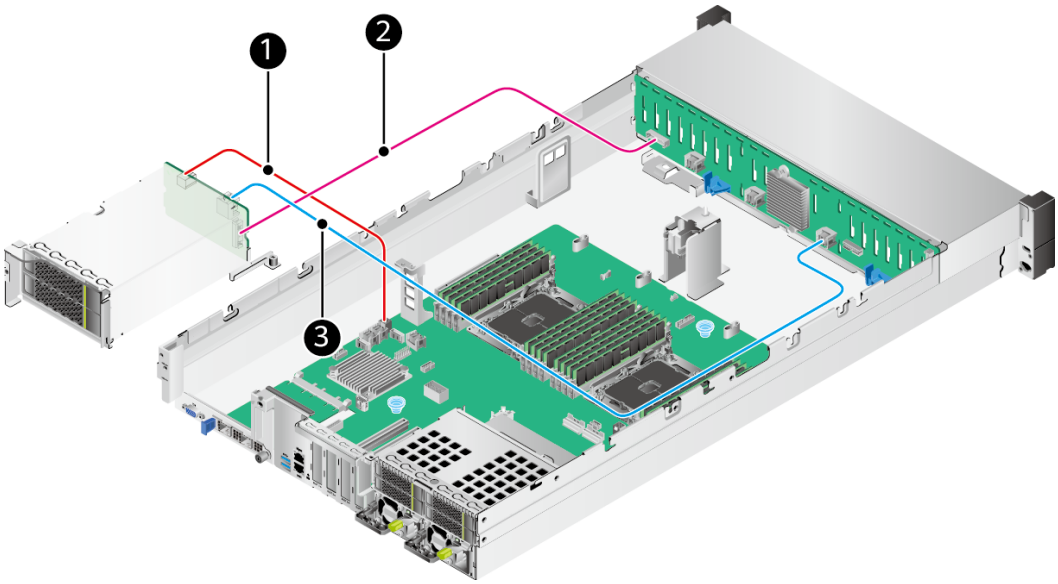

Table 6-659 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.5.7.1.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-670 I/O module 3 cabling

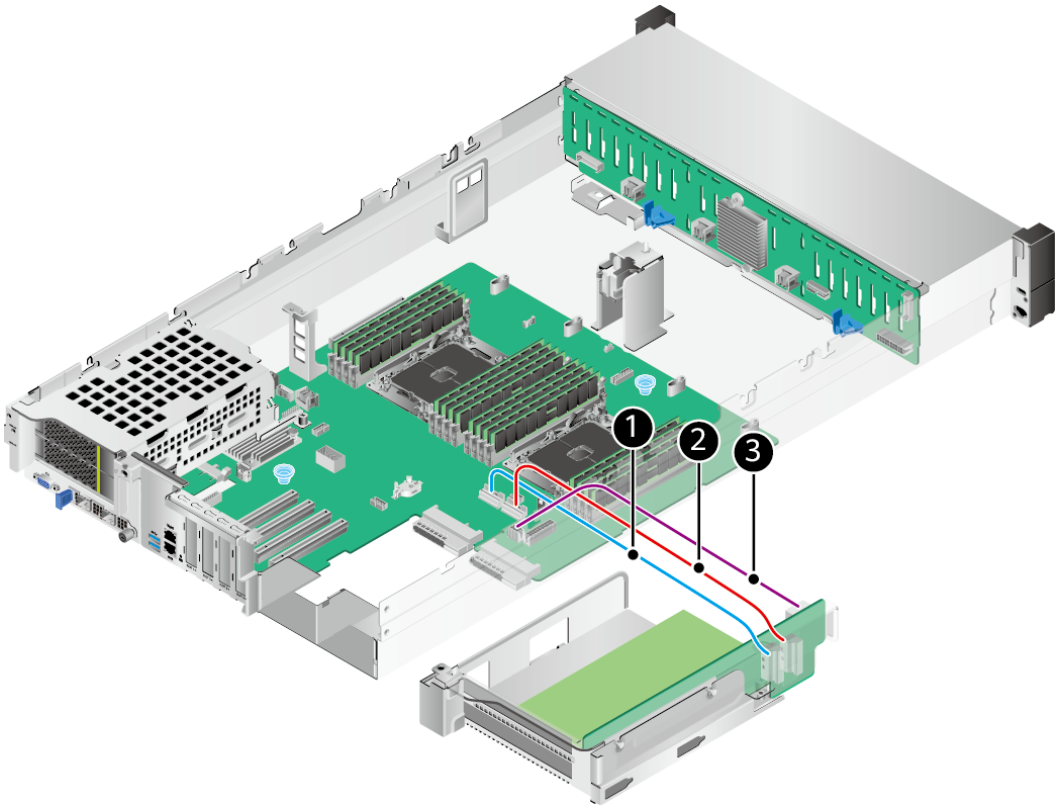

Table 6-660 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.7.1.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-671 I/O module 3 cabling

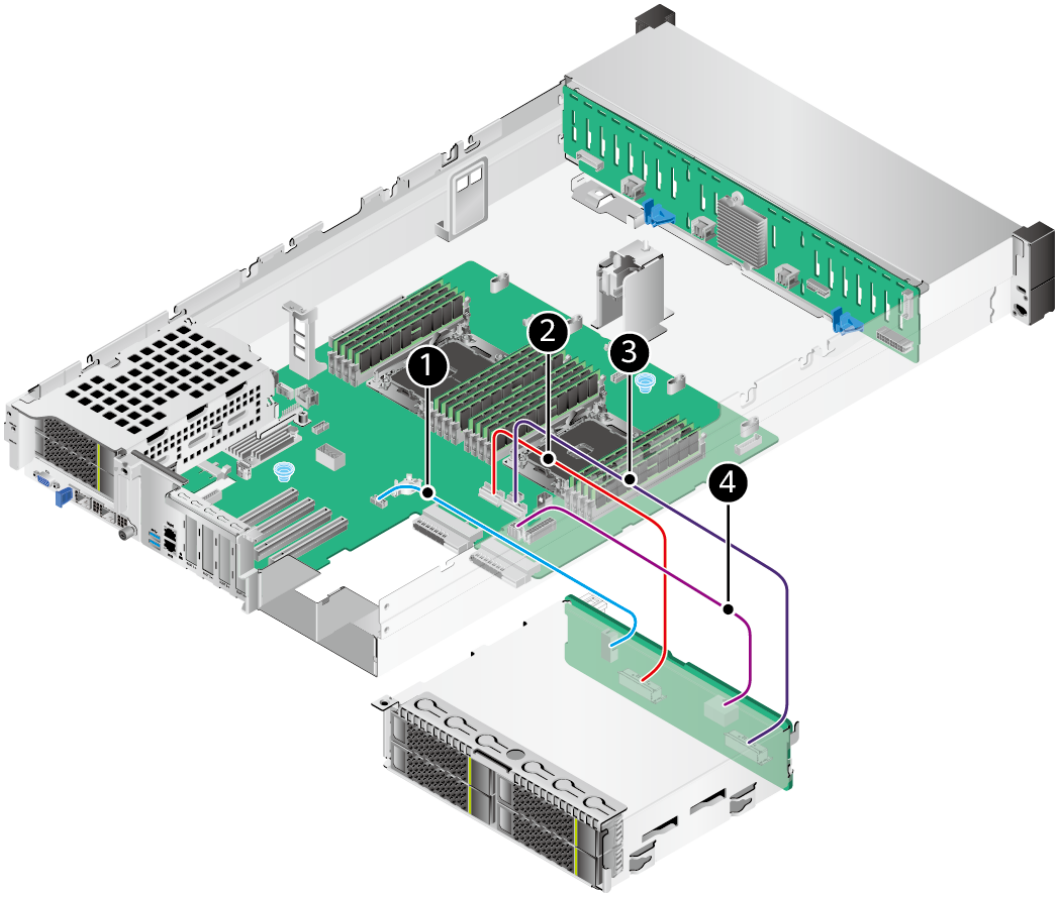

Table 6-661 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	

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No.	P/N Code	Description	Remarks
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.7.2 25 x 2.5" Drive EXP Configuration 2

6.5.7.2.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-672 Left mounting ear cabling

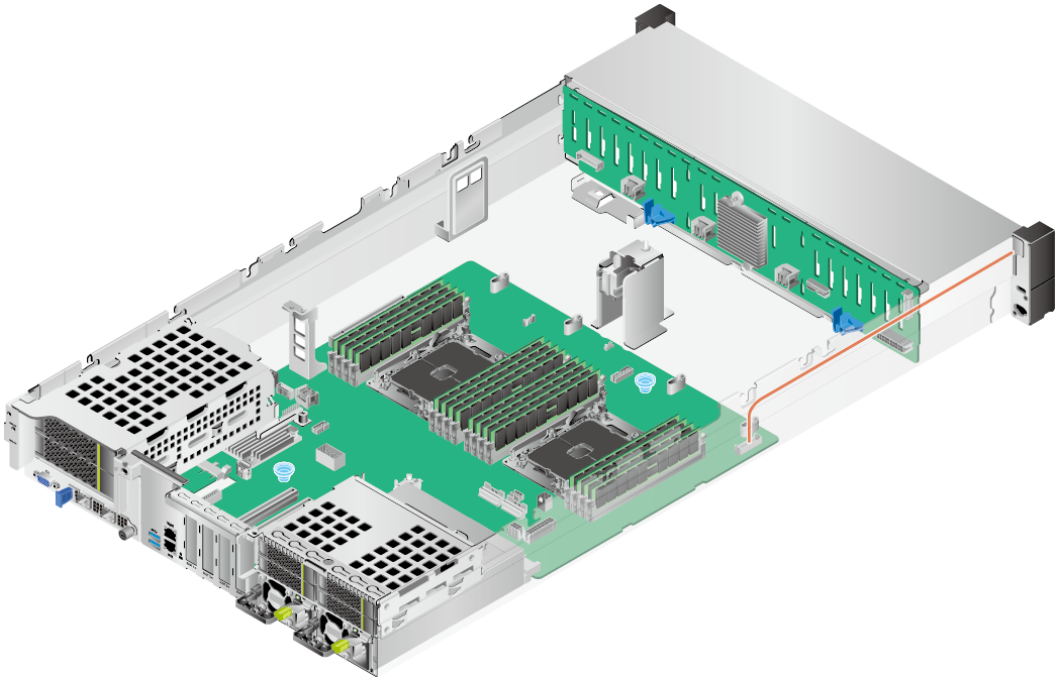

Table 6-662 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.7.2.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-673 Intrusion sensor cabling

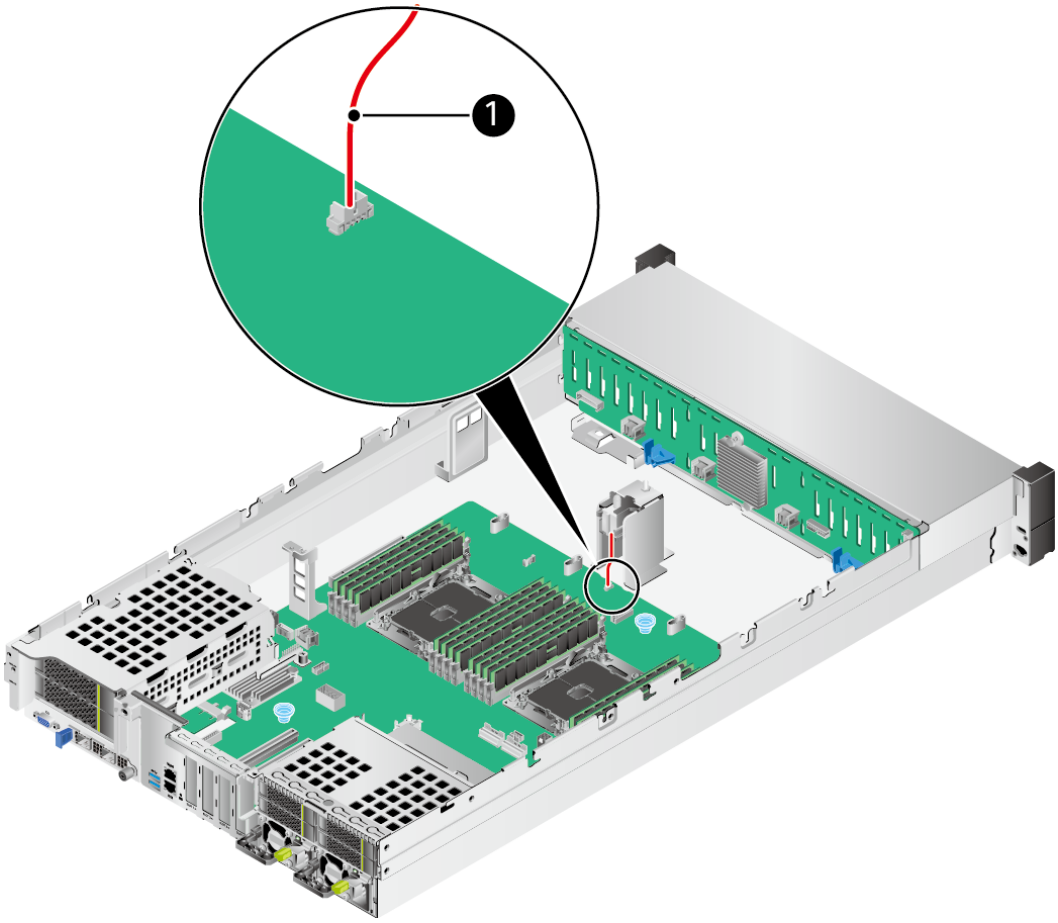

Table 6-663 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.7.2.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-674 Front-drive backplane power and low-speed signal cables

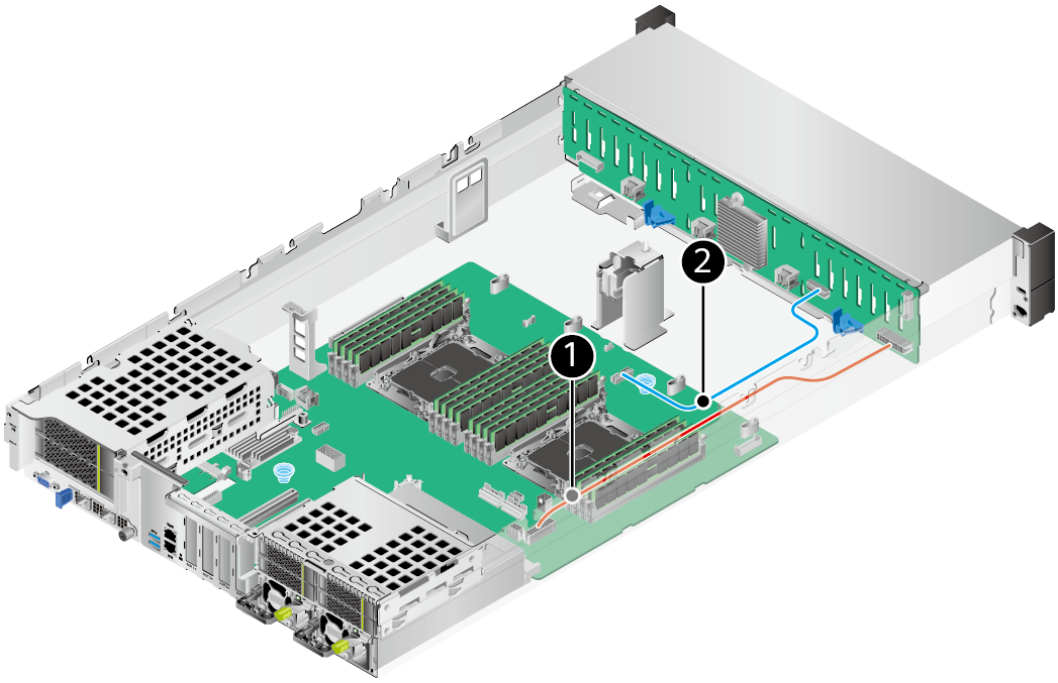

Table 6-664 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

6.5.7.2.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-675 Front-drive backplane SAS high-speed cabling

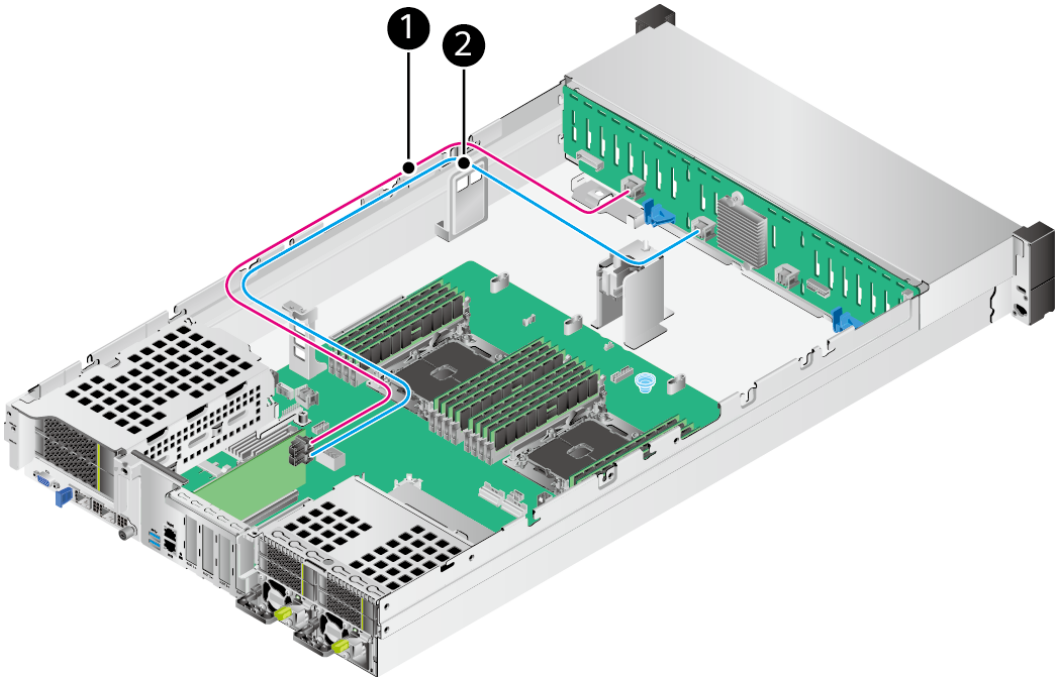

Table 6-665 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051021	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.7.2.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-676 I/O module 1 cabling

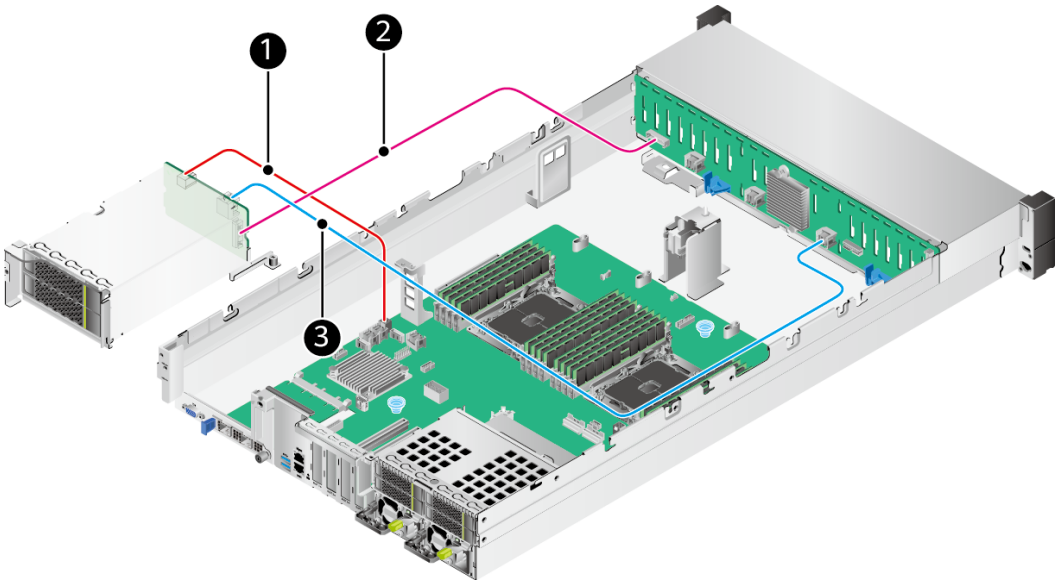

Table 6-666 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.5.7.2.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-677 I/O module 3 cabling

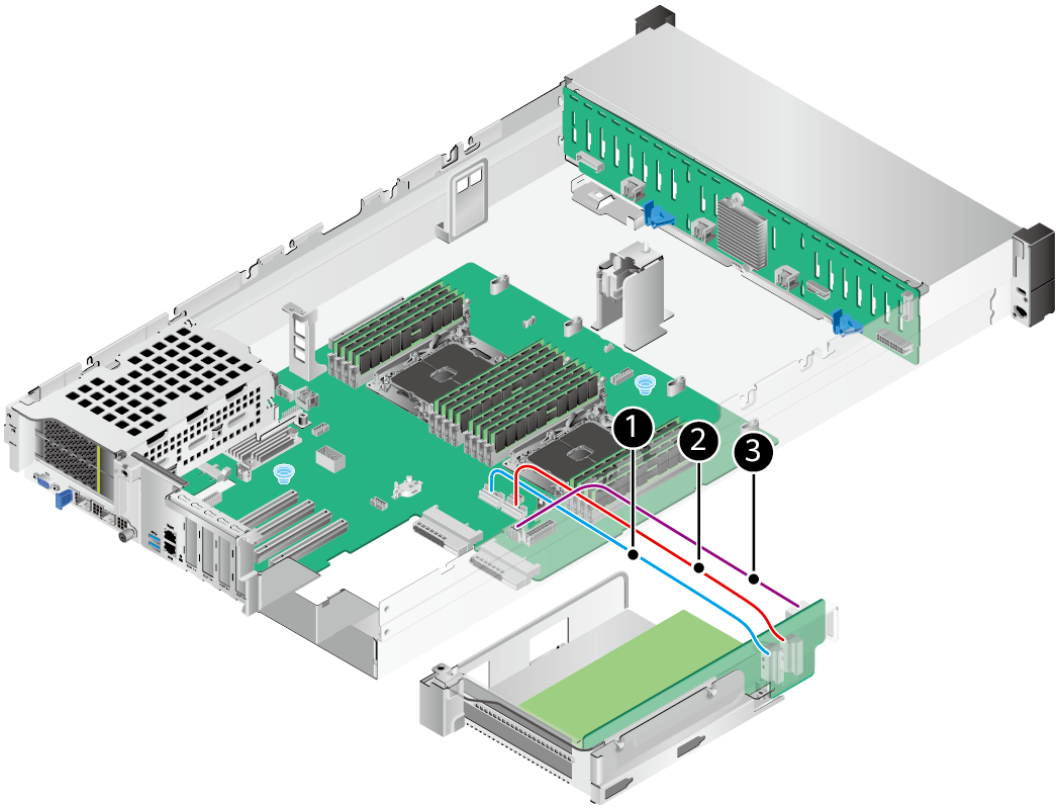

Table 6-667 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.7.2.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-678 I/O module 3 cabling

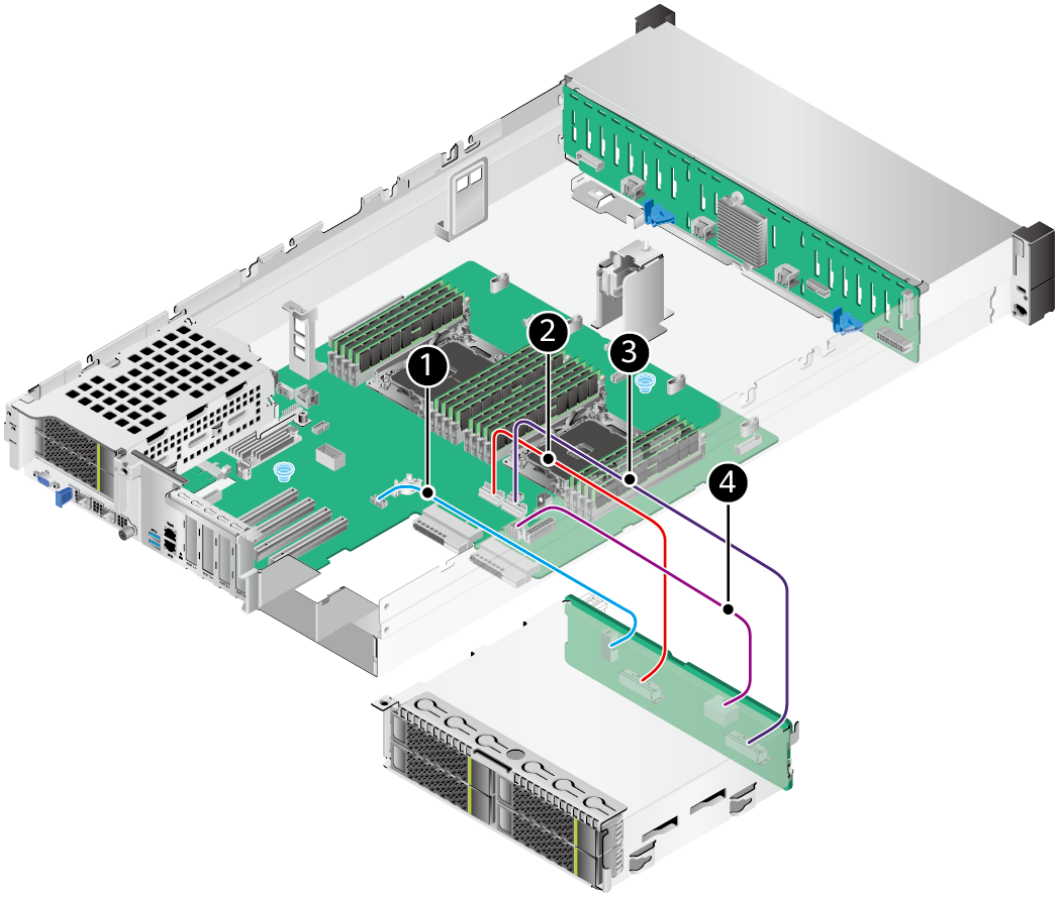

Table 6-668 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	

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No.	P/N Code	Description	Remarks
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.7.3 25 x 2.5" Drive EXP Configuration 3

6.5.7.3.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-679 Left mounting ear cabling

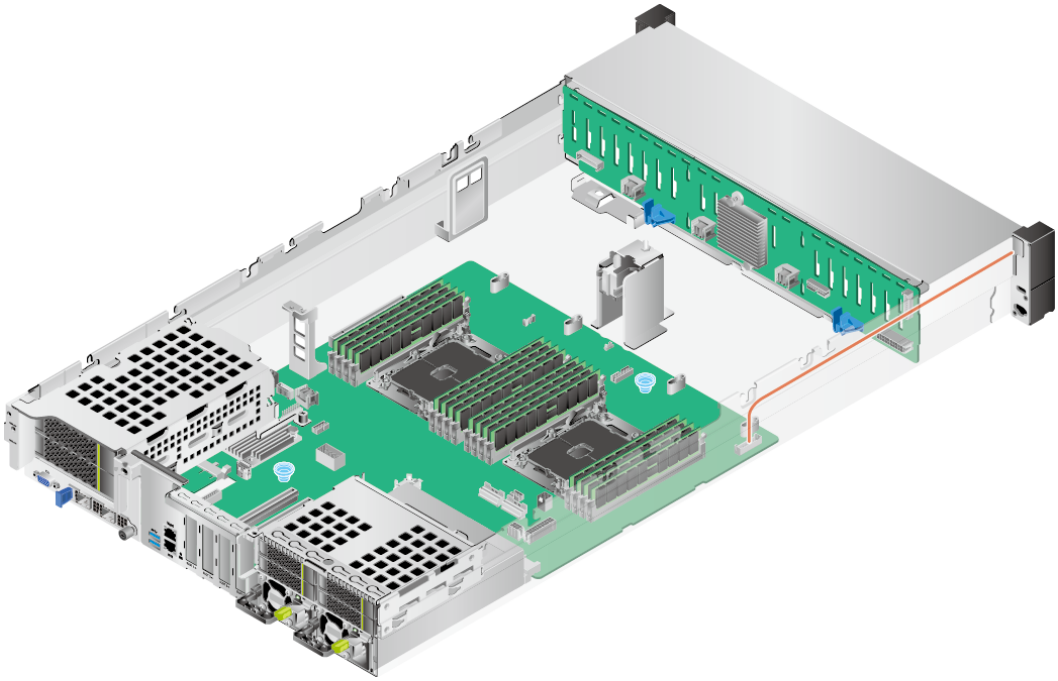

Table 6-669 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.7.3.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-680 Intrusion sensor cabling

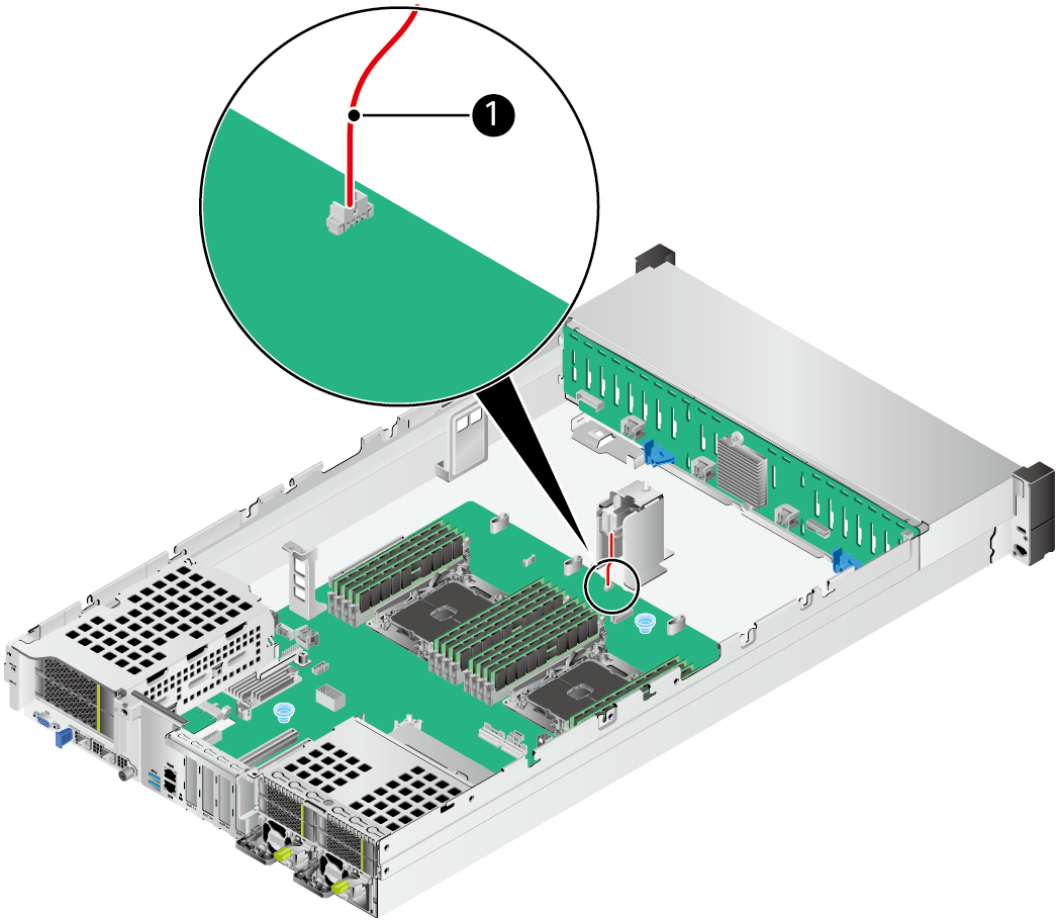

Table 6-670 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.7.3.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-681 Front-drive backplane power and low-speed signal cables

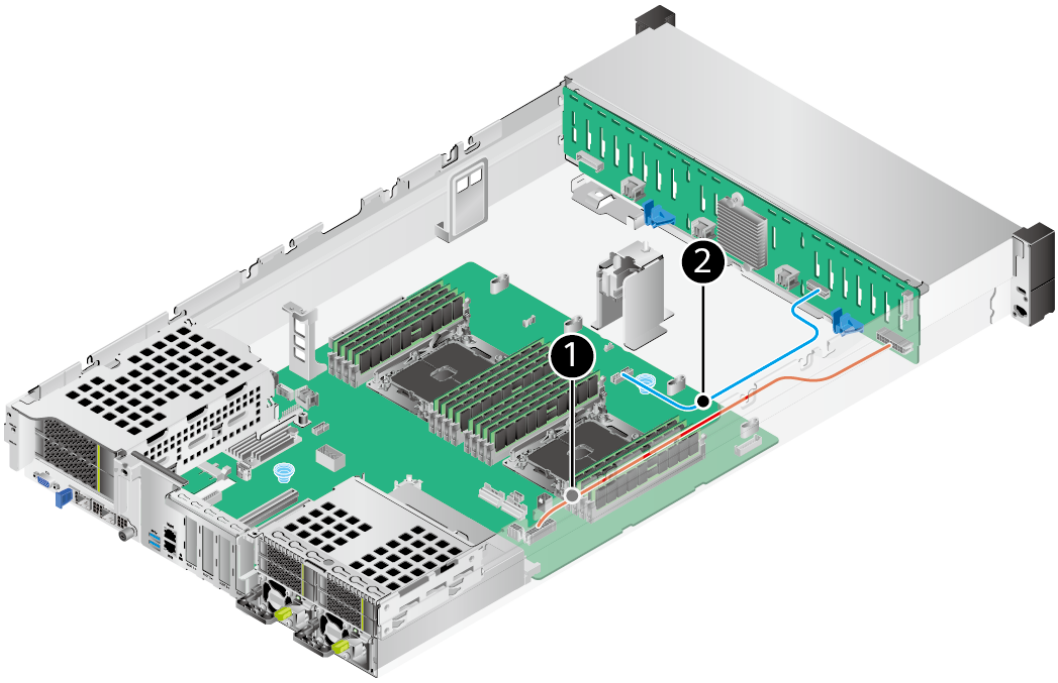

Table 6-671 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

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6.5.7.3.4 Front-Drive Backplane SAS Signal Cabling (Server with a Screw-in RAID Controller Card)

Front-drive backplane SAS high-speed cabling

Figure 6-682 Front-drive backplane SAS high-speed cabling

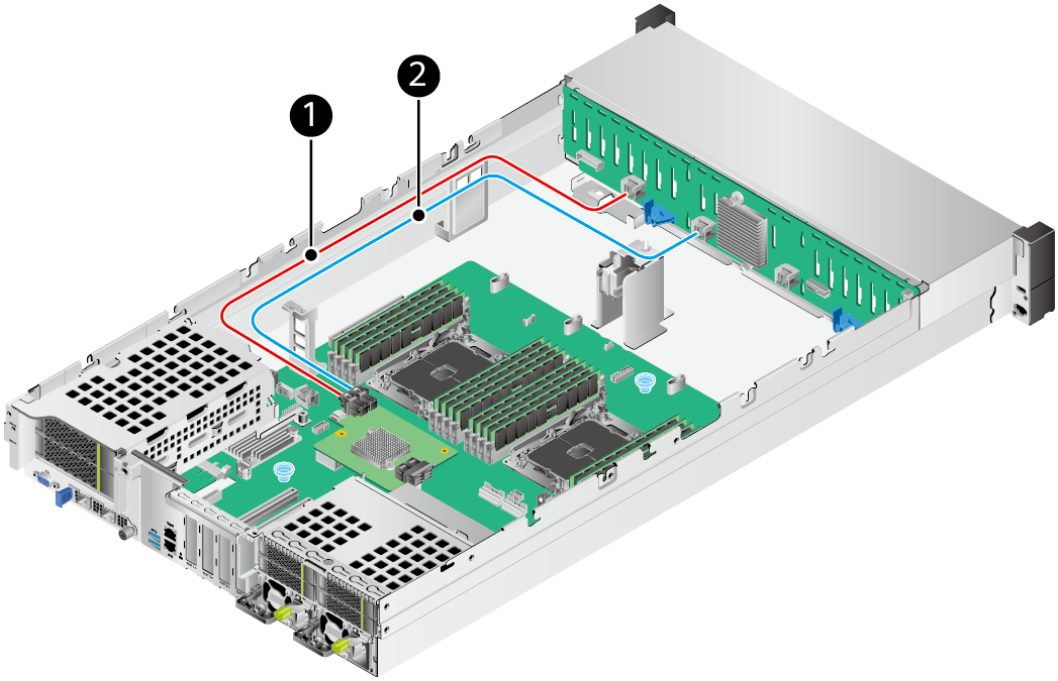

Table 6-672 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051018	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the screw-in RAID controller card
2	04051020	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the screw-in RAID controller card

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6.5.7.3.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-683 I/O module 1 cabling

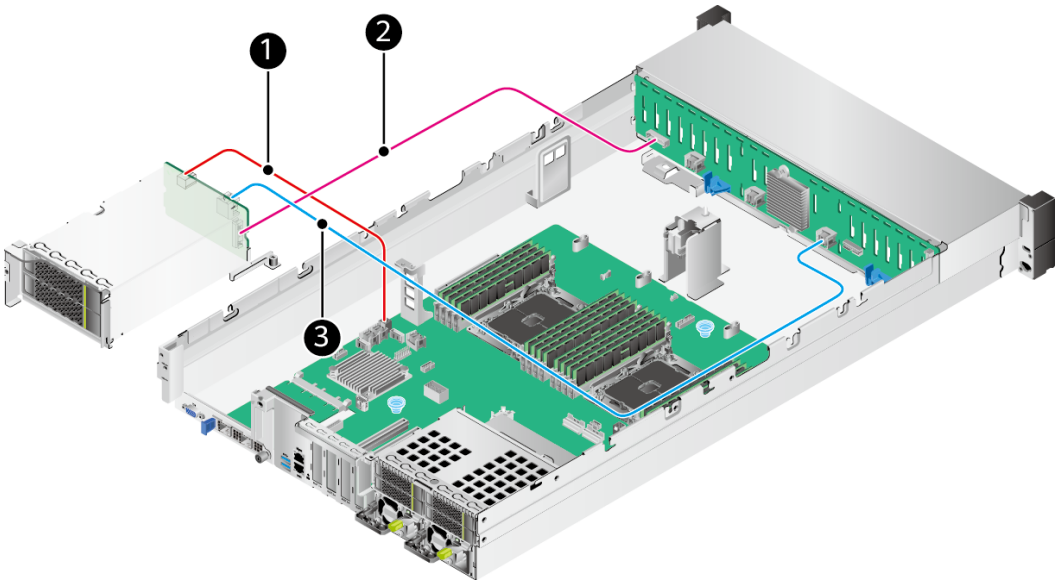

Table 6-673 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.5.7.3.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-684 I/O module 3 cabling

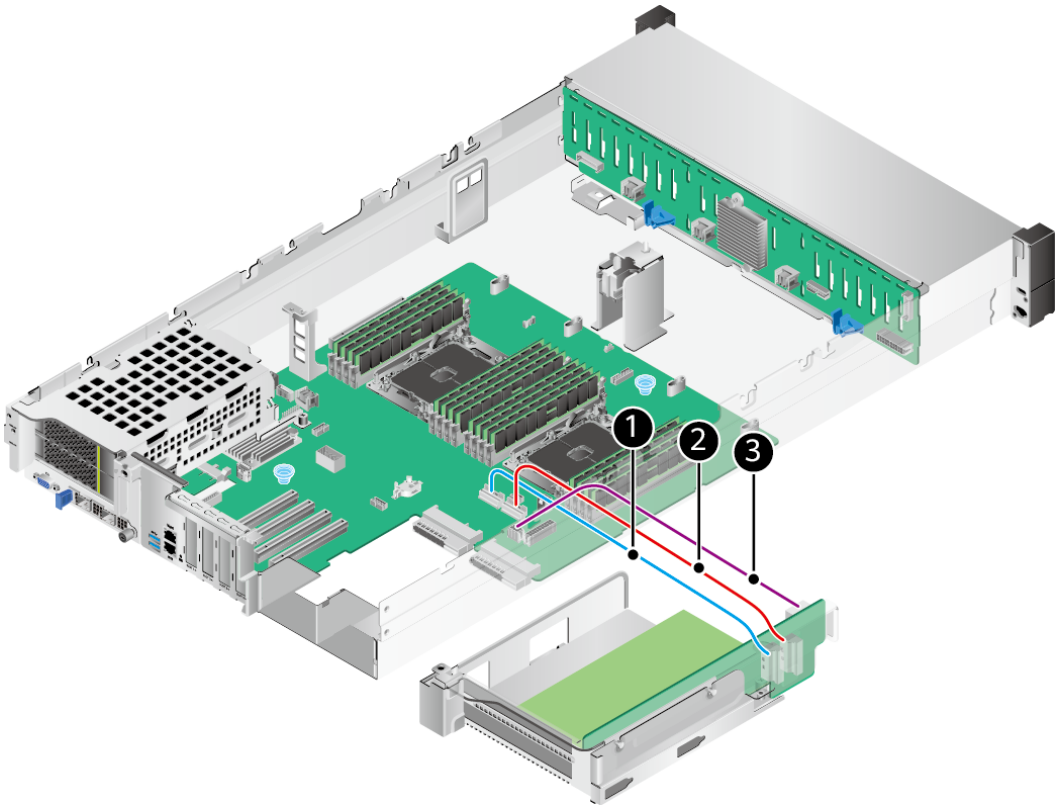

Table 6-674 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.7.3.7 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-685 I/O module 3 cabling

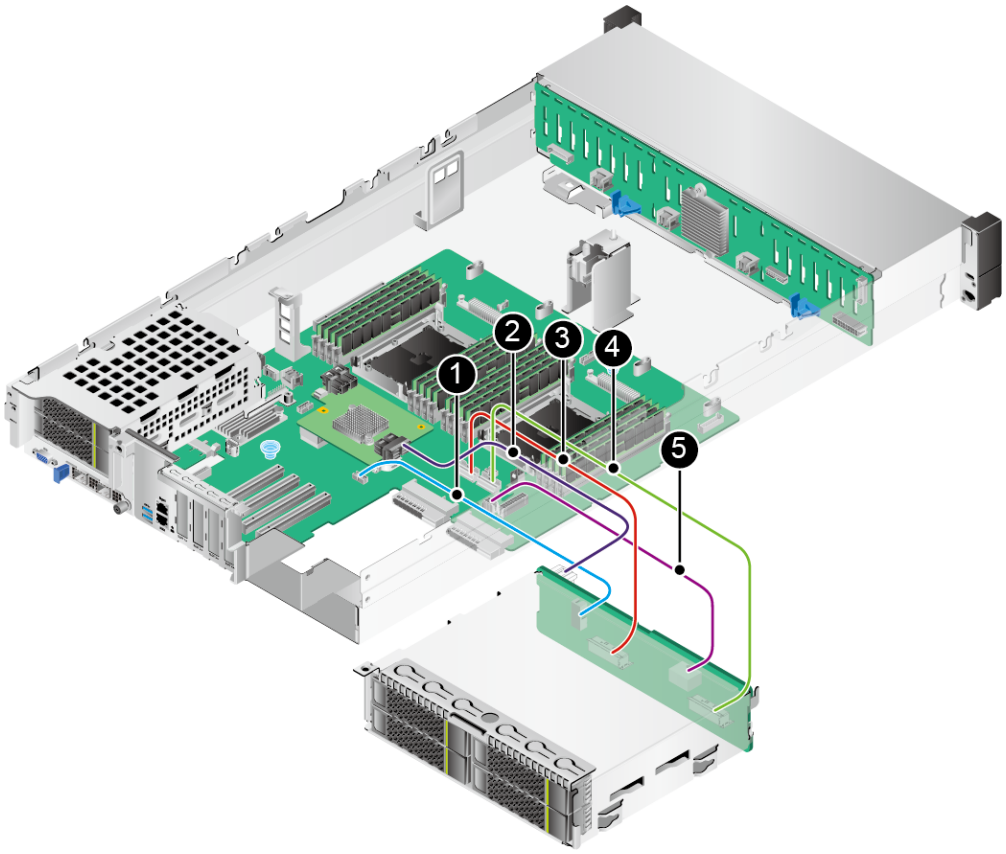

Table 6-675 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT C of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
4	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
5	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.7.4 25 x 2.5" Drive EXP Configuration 4

6.5.7.4.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-686 Left mounting ear cabling

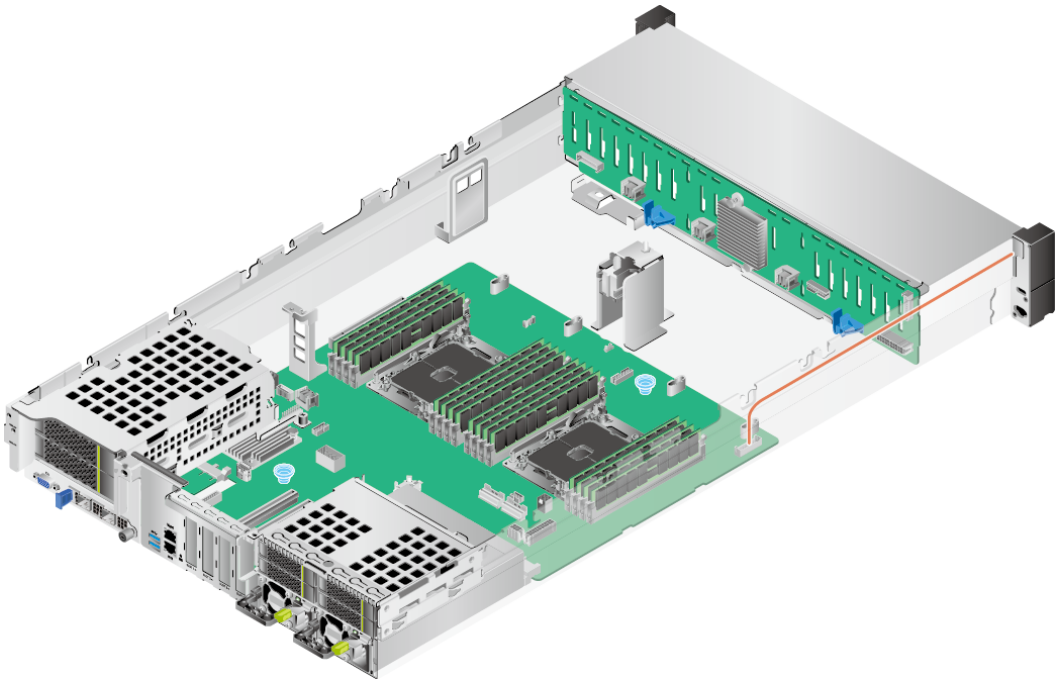

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Table 6-676 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.7.4.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-687 Intrusion sensor cabling

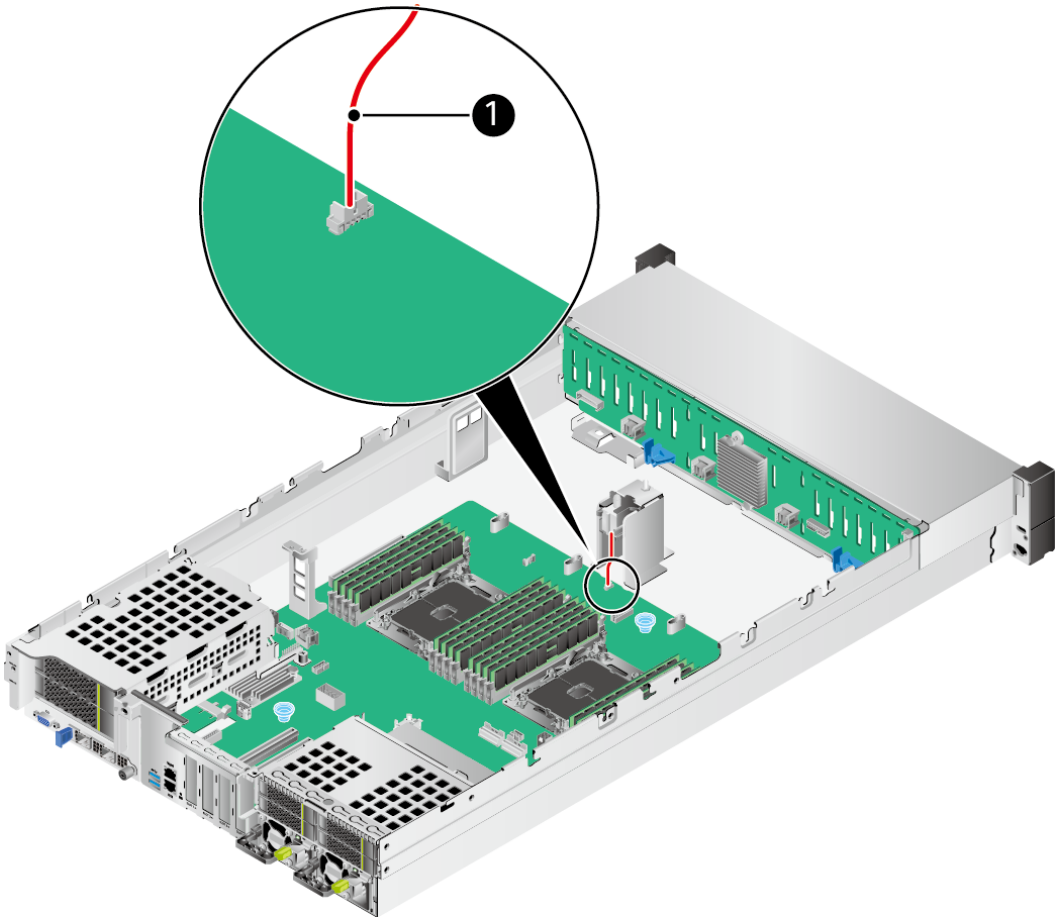

Table 6-677 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.7.4.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-688 Front-drive backplane power and low-speed signal cables

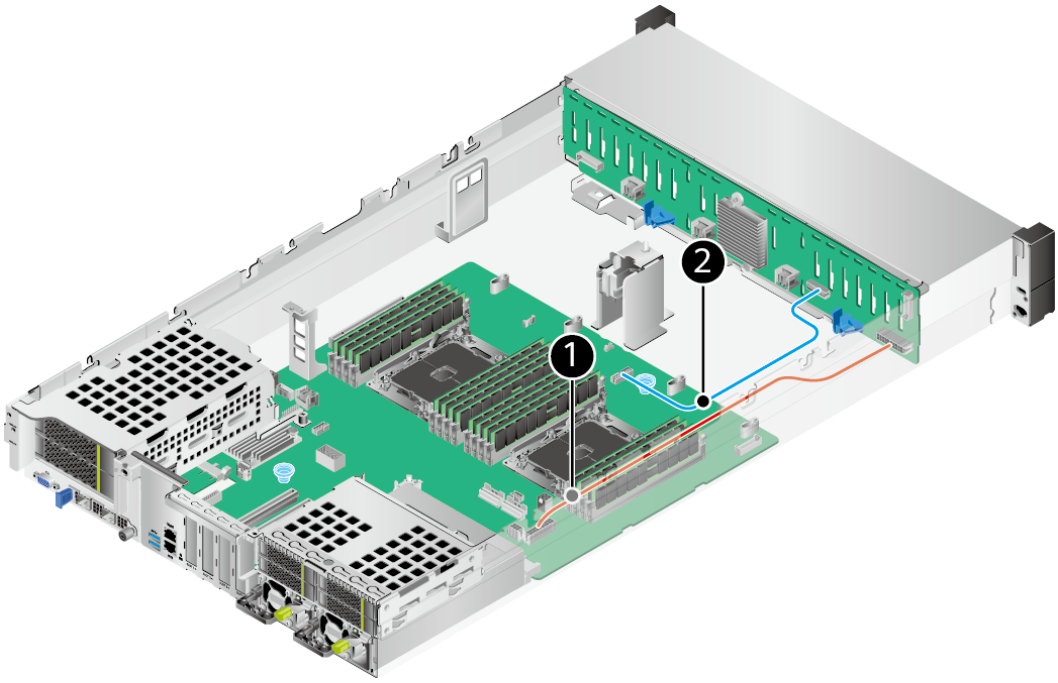

Table 6-678 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

6.5.7.4.4 Front-Drive Backplane SAS Signal Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-689 Front-drive backplane SAS high-speed cabling

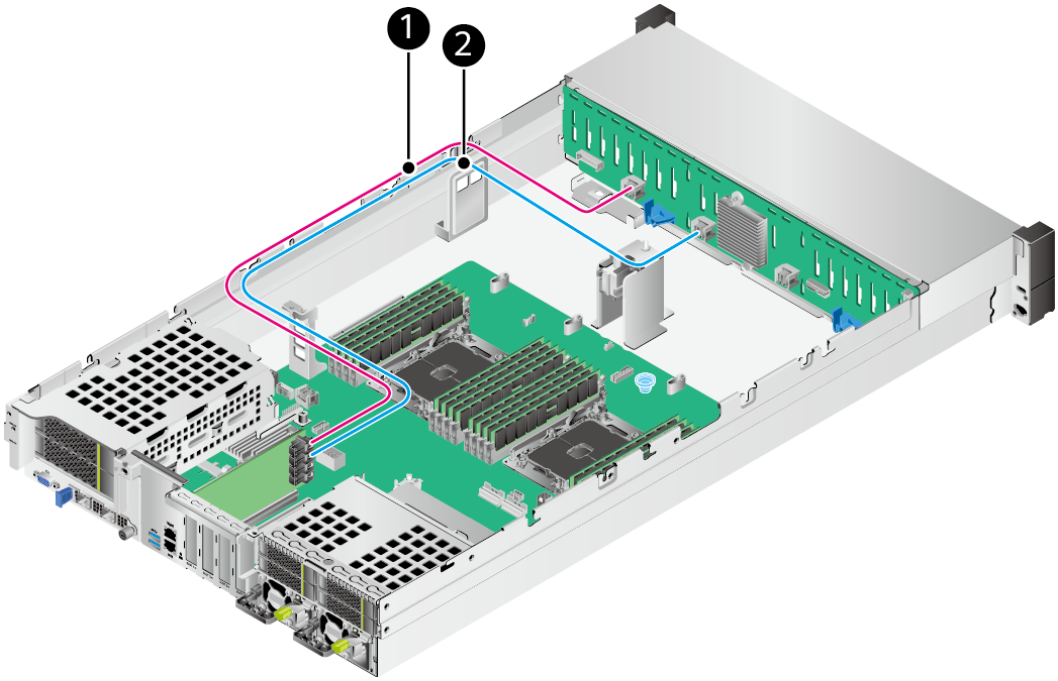

Table 6-679 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051021	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.7.4.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-690 I/O module 1 cabling

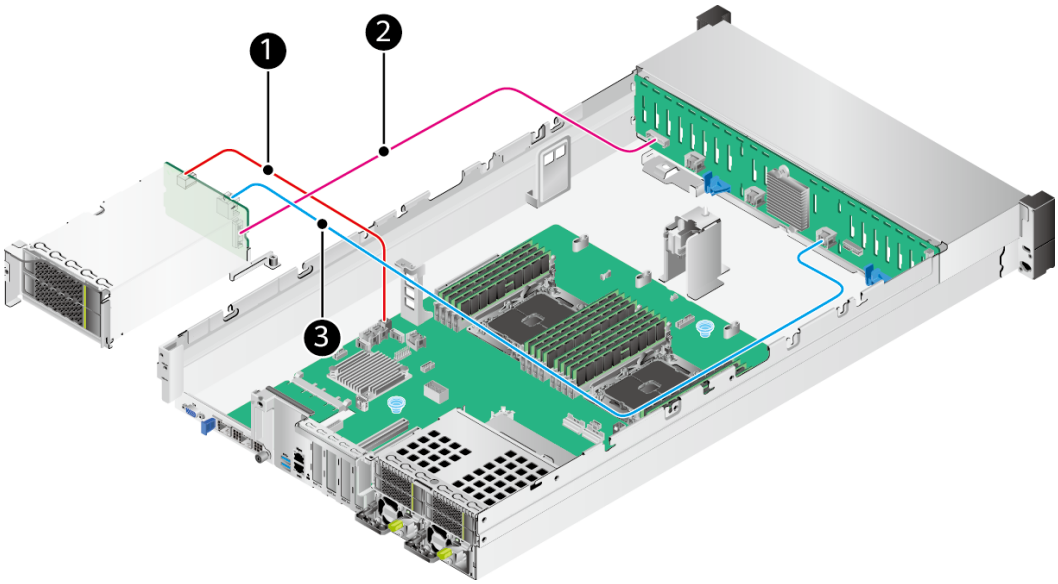

Table 6-680 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04052338	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31) **NOTE** 04052338 is a Y-shaped cable. The HDD A connector is connected to the backplane of I/O module 1, the HDD B connector is not connected and is secured to the cable using cable ties, and another end of the cable is connected to the front drive backplane.

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6.5.7.4.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-691 I/O module 3 cabling

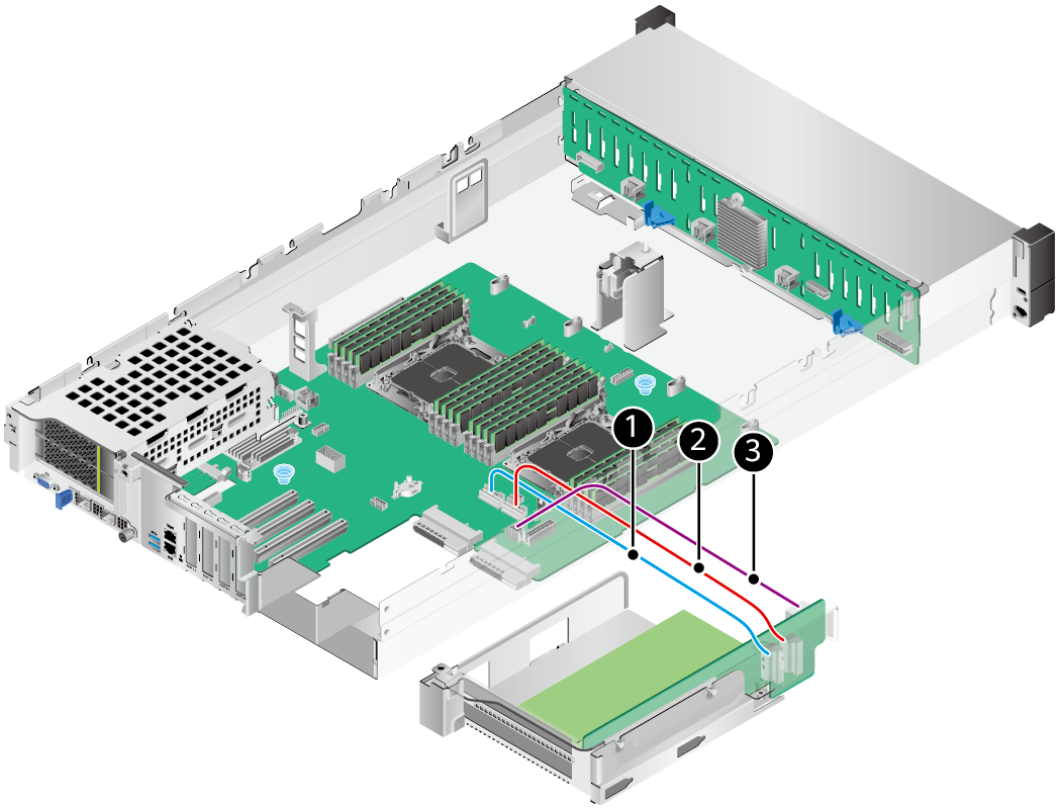

Table 6-681 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.7.4.7 I/O Module 3 Cabling (4 x 2.5" SAS/SATA/NVMe Drives)

I/O Module 3 Cabling

Figure 6-692 I/O module 3 cabling

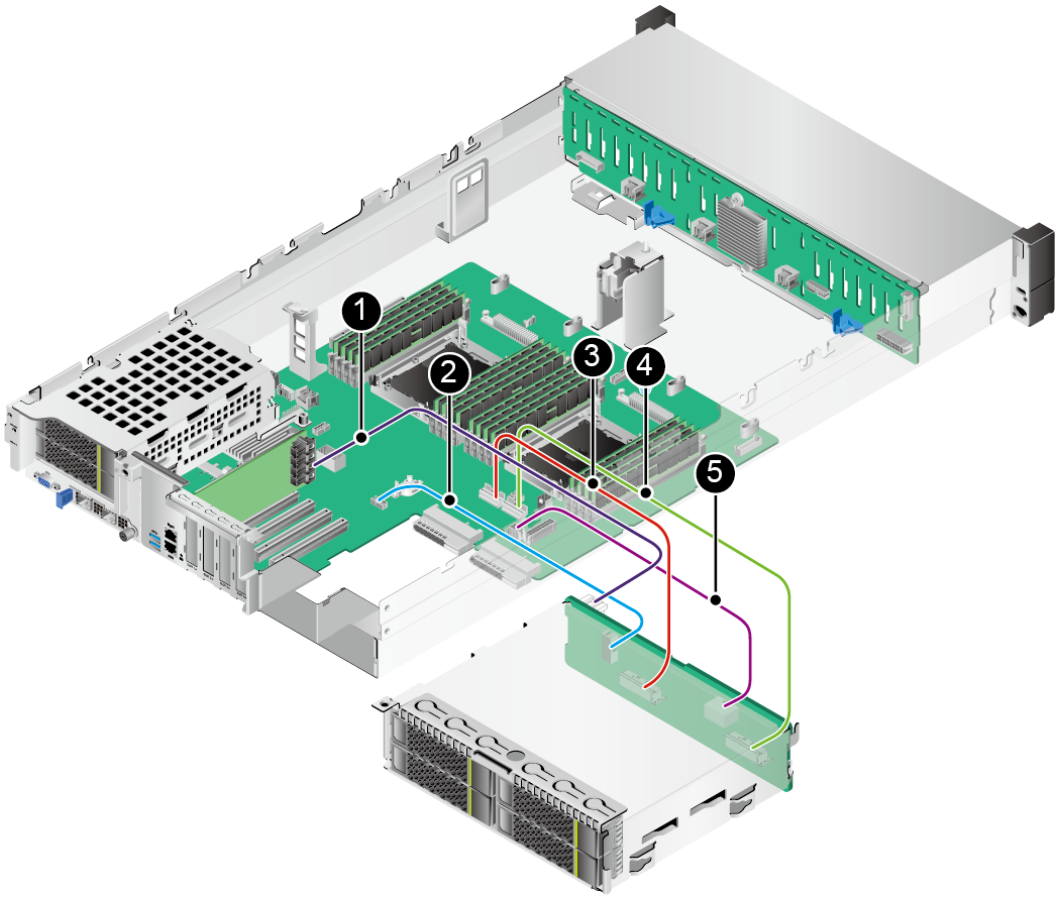

Table 6-682 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052363-001	SAS high-speed cable for connecting the rear-drive backplane (J801) to PORT C of the PCIe RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 4 x 2.5" drive module as a spare part.
2	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.

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No.	P/N Code	Description	Remarks
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
4	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	
5	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to rear-drive backplane (J801) may be C3, PORT D, 3, or CN3.

6.5.7.5 25 x 2.5" Drive EXP Configuration 5 (Dual RAID Controller Cards)

6.5.7.5.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-693 Left mounting ear cabling

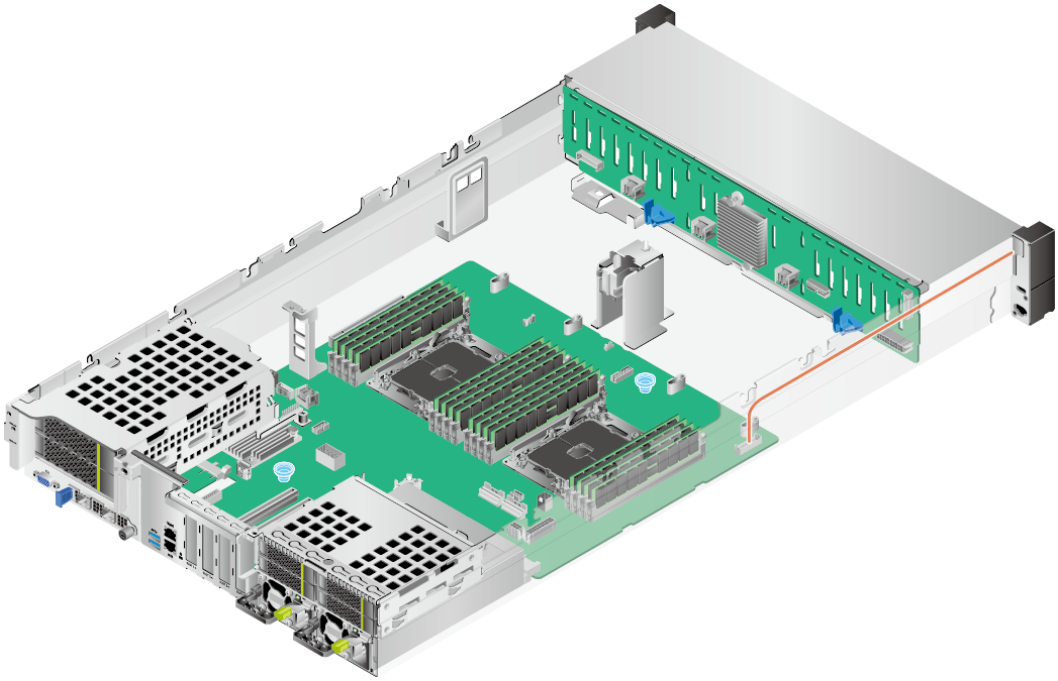

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Table 6-683 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

6.5.7.5.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-694 Intrusion sensor cabling

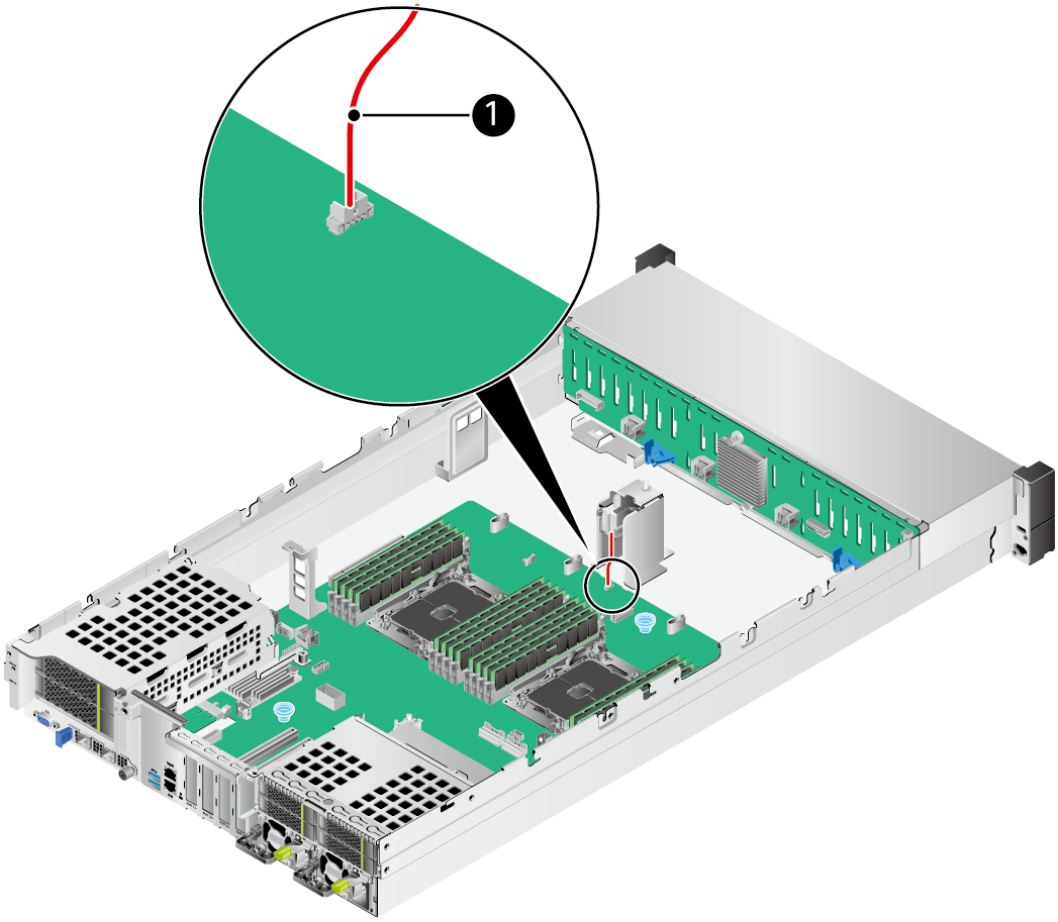

Table 6-684 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.7.5.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-695 Front-drive backplane power and low-speed signal cables

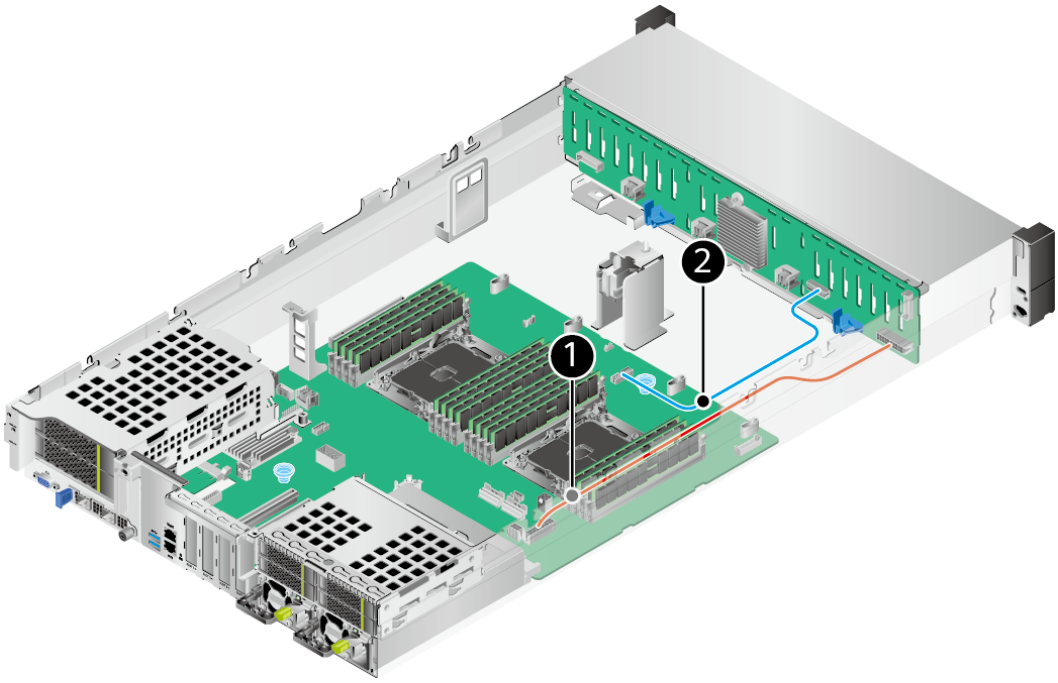

Table 6-685 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J2) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

6.5.7.5.4 Front-Drive Backplane SAS Signal Cabling

NOTICE

The PCIe RAID controller card must be configured in the built-in PCIe slot.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-696 Front-drive backplane SAS high-speed cabling

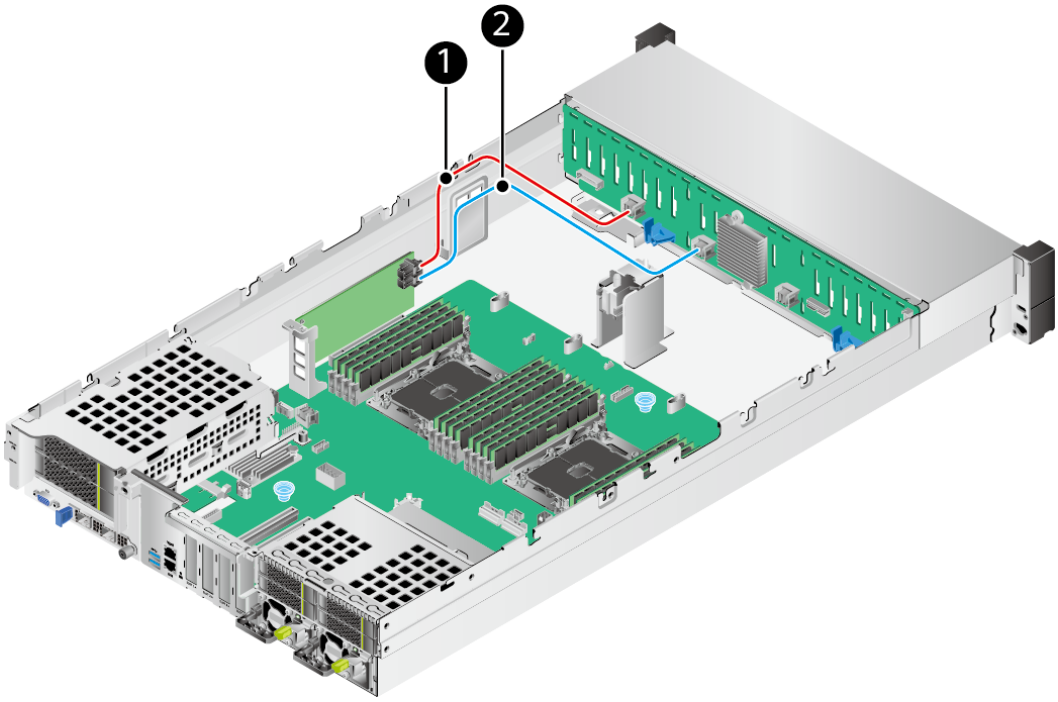

Table 6-686 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	04051916-020	SAS high-speed cable for connecting the front-drive backplane (J28) to PORT A of the PCIe RAID controller card
2	04051916-019	SAS high-speed cable for connecting the front-drive backplane (J29) to PORT B of the PCIe RAID controller card

NOTE

The port numbers vary with the PCIe RAID controller cards. The port number of the PCIe RAID controller card connected to front-drive backplane (J28) may be C0, PORT A, 0, or CN0, and the port number of the PCIe RAID controller card connected to front-drive backplane (J29) may be C1, PORT B, 1, or CN1.

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6.5.7.5.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-697 I/O module 1 cabling

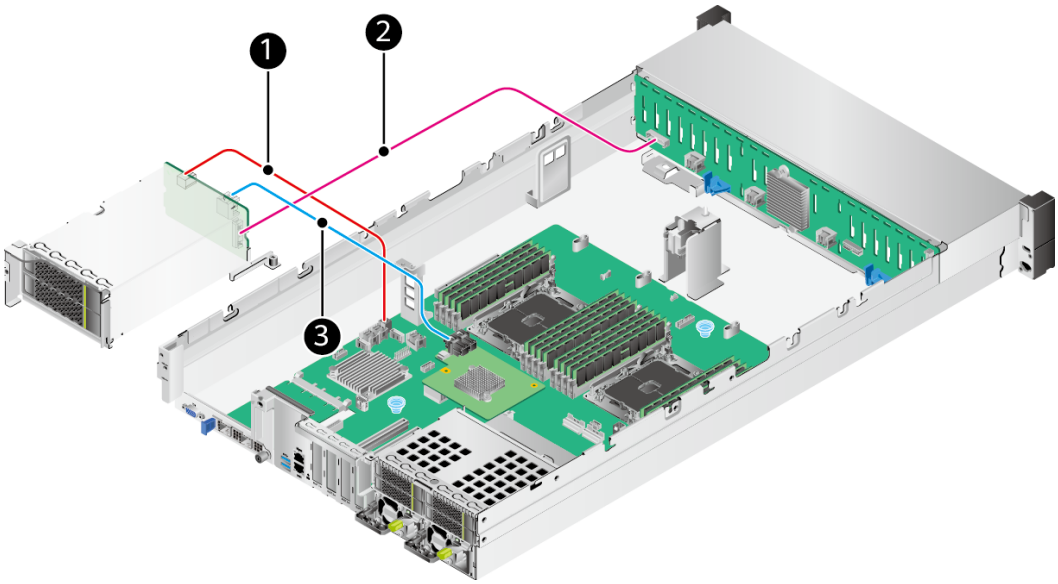

Table 6-687 I/O module 1 cabling

No.	P/N Code	Description	Remarks
1	04150448 -001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)	-
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)	-
3	04052363 -001	SAS high-speed cable for connecting the rear-drive backplane (J2) to PORT A of the screw-in RAID controller card	The cable is not an independent spare part in this configuration. It is packed with the 2 x 3.5" drive module as a spare part.

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6.5.7.5.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-698 I/O module 3 cabling

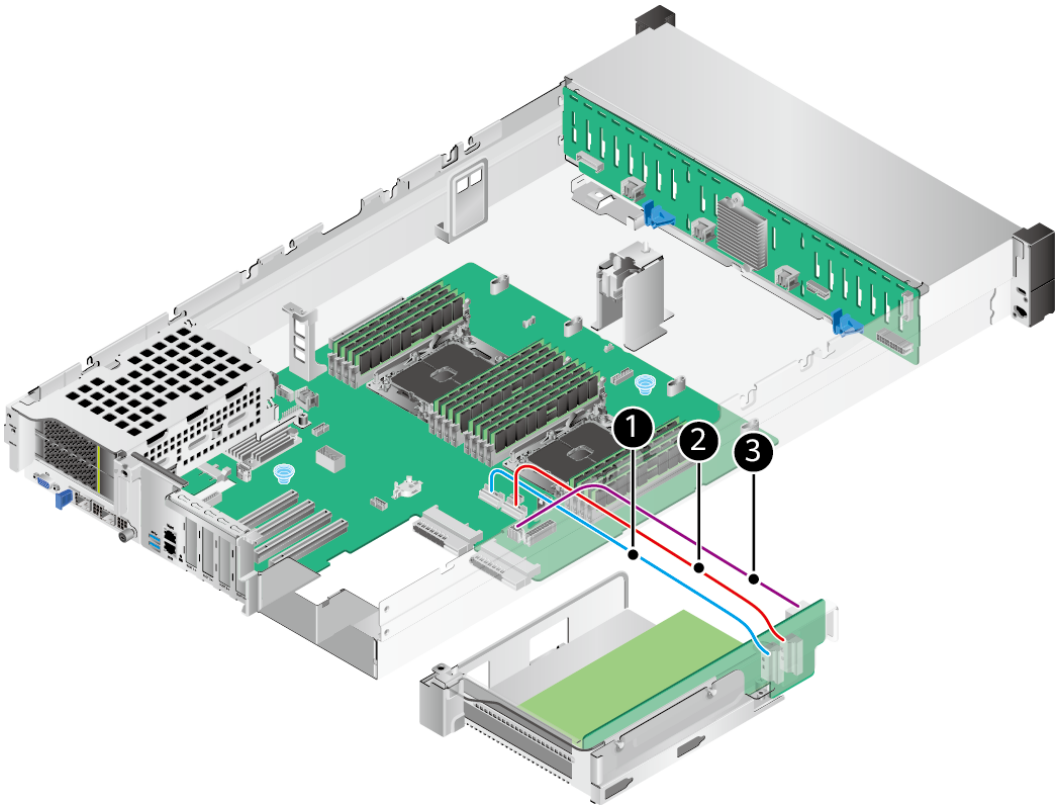

Table 6-688 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.7.5.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-699 I/O module 3 cabling

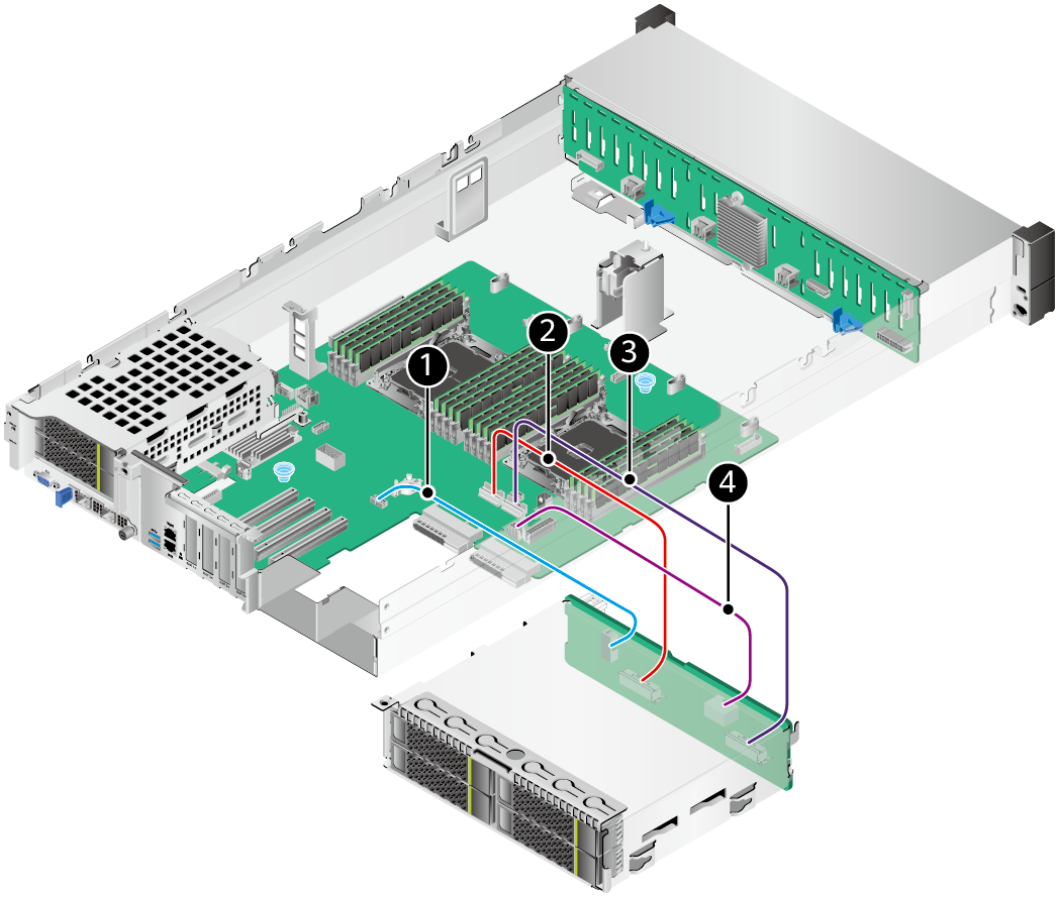

Table 6-689 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	

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No.	P/N Code	Description	Remarks
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.5.7.6 25 x 2.5" Drive EXP Configuration 6

6.5.7.6.1 Mounting Ear Cabling

Mounting Ear Cabling

Figure 6-700 Left mounting ear cabling

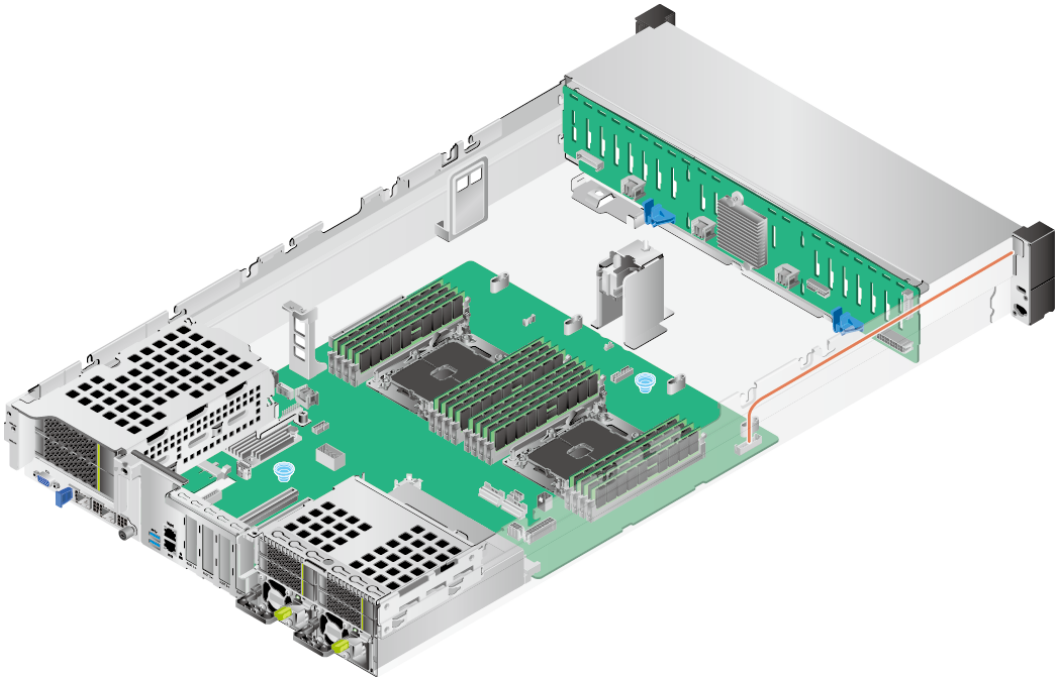

Table 6-690 Mounting ear cabling

No.	P/N Code	Description
1	04080650-005	Low-speed signal cable for connecting the left mounting ear board to the mainboard (J106)

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6.5.7.6.2 Intrusion Sensor Cabling

Intrusion Sensor Cabling

Figure 6-701 Intrusion sensor cabling

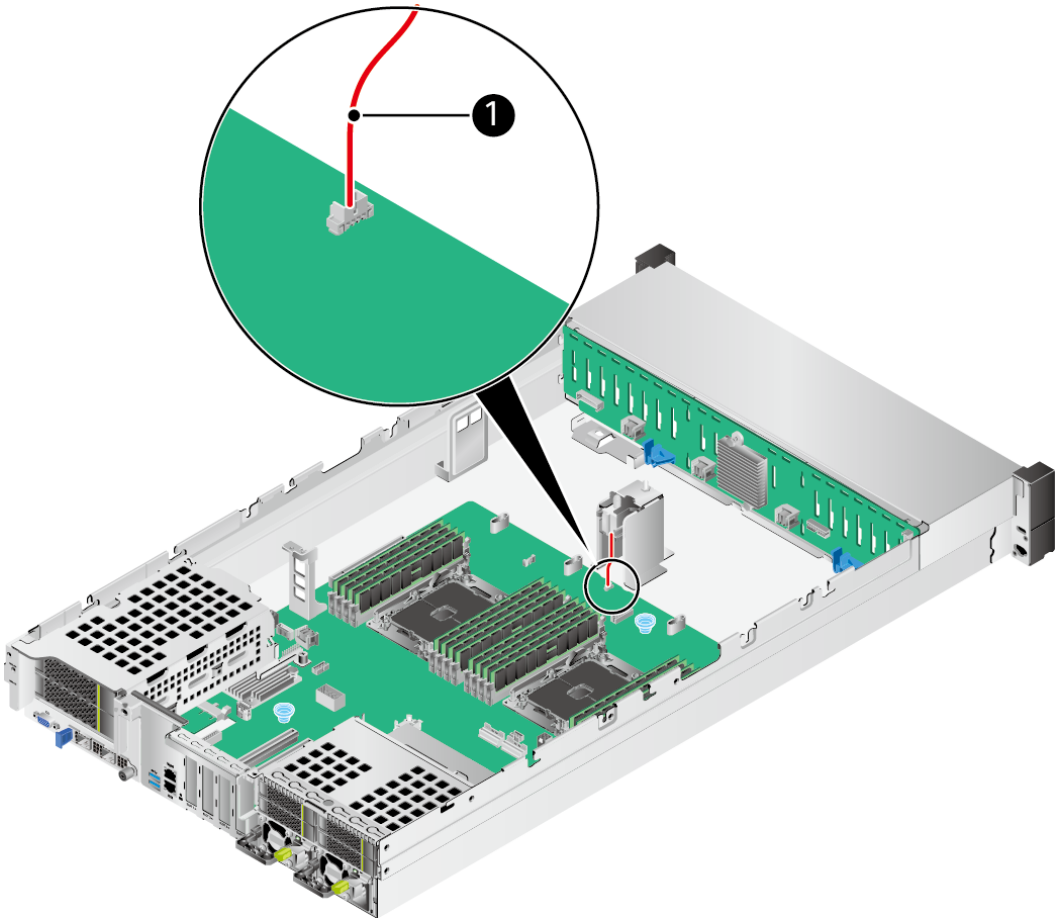

Table 6-691 Intrusion sensor cabling

No.	P/N Code	Description
1	04080771	Low-speed signal cable for connecting the intrusion sensor to the mainboard (S1)

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6.5.7.6.3 Front-Drive Backplane Power and Indicator Signal Cabling

Front-Drive Backplane Power and Low-speed Signal Cabling

Figure 6-702 Front-drive backplane power and low-speed signal cables

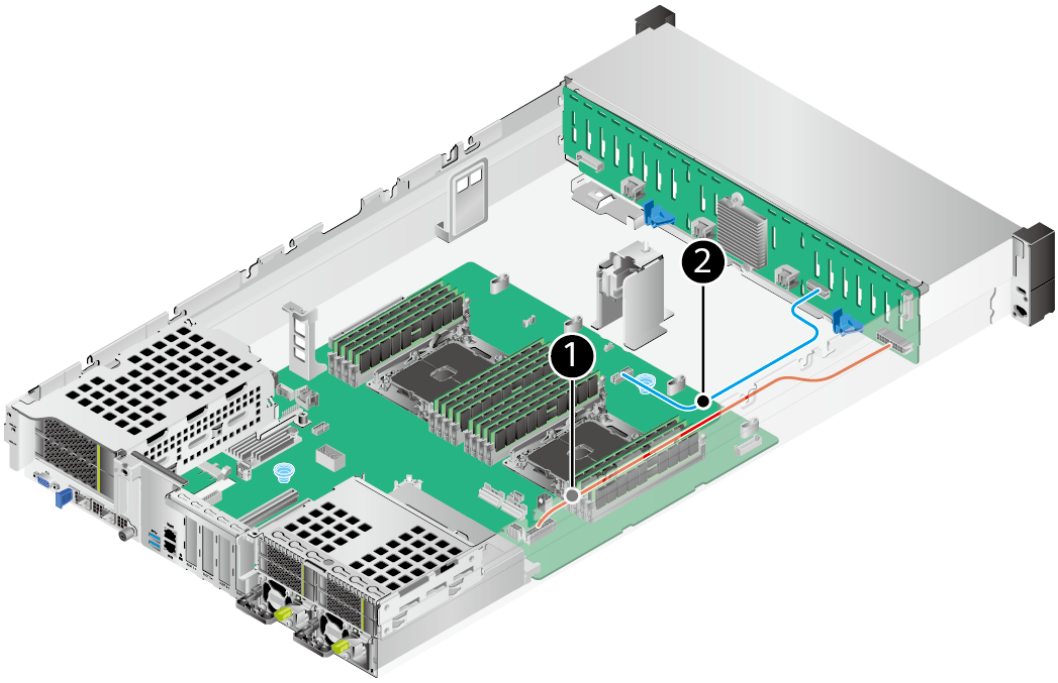

Table 6-692 Front-drive backplane power and low-speed signal cables

No.	P/N Code	Description
1	04152142-011	Power cable for connecting the front-drive backplane (J24) to the mainboard (J88)
2	04080651-007	Low-speed signal cable for connecting the front-drive backplane (J1) to the mainboard (J75)

6.5.7.6.4 Front-Drive Backplane SAS High-speed Cabling (Server with a PCIe RAID Controller Card)

NOTICE

PCIe RAID controller card: must be installed in slot 1.

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Front-Drive Backplane SAS High-speed Cabling

Figure 6-703 Front-drive backplane SAS high-speed cabling

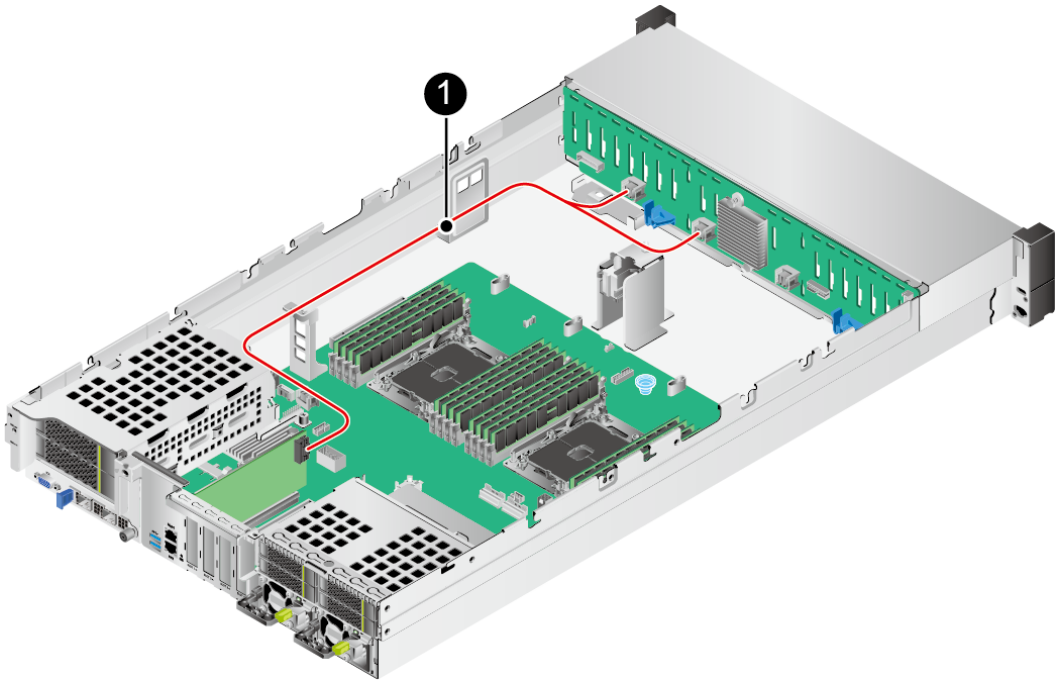

Table 6-693 Front-drive backplane SAS high-speed cabling

No.	P/N Code	Description
1	0405Y020	SAS high-speed cable for connecting the front-drive backplane (J28) and (J29) to C0 of the PCIe RAID controller card **NOTE** 0405Y020 is a Y-shaped cable. Connector PORT A corresponds to the front-drive backplane (J28), connector PORT B corresponds to the front-drive backplane (J29), and another end of the cable is connected to the the RAID controller card. Use cable connectors based on actual situation.

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6.5.7.6.5 I/O Module 1 Cabling (2 x 3.5" SAS/SATA Drives)

I/O Module 1 Cabling

Figure 6-704 I/O module 1 cabling

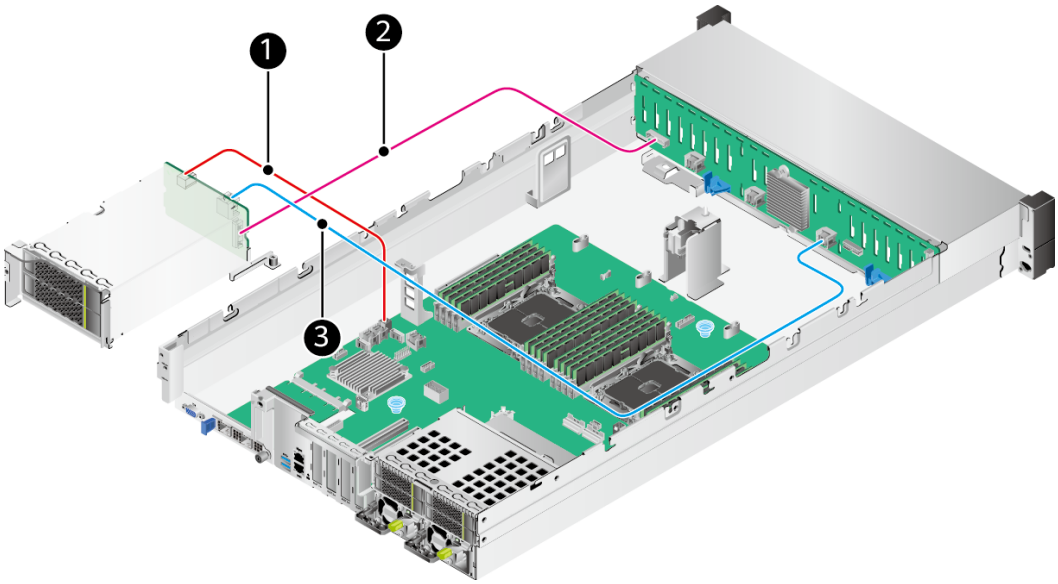

Table 6-694 I/O module 1 cabling

No.	P/N Code	Description
1	04150448-001	Power cable for connecting the rear-drive backplane (J1) to the mainboard (J64)
2	04080650	Low-speed signal cable for connecting the rear-drive backplane (J5) to the front-drive backplane (J32)
3	04051916-015	SAS high-speed cable for connecting the rear-drive backplane (J2) to the front-drive backplane (J31)

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6.5.7.6.6 I/O Module 3 Cabling (PCIe Riser Card)

I/O Module 3 Cabling

Figure 6-705 I/O module 3 cabling

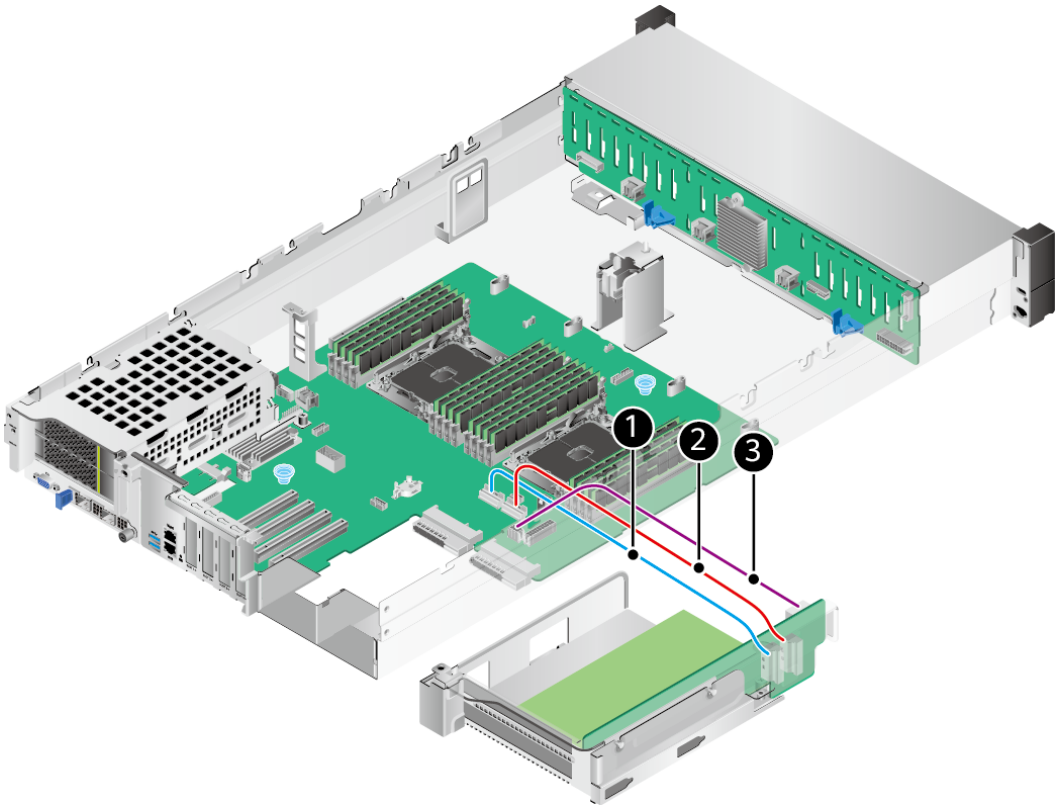

Table 6-695 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 3 of the PCIe riser card to the mainboard (J85)	The cable is not an independent spare part. It is packed with the PCIe riser card as a spare part.
2	04052477-007	LP Slimline high-speed cable for connecting LP Slimline 4 of the PCIe riser card to the mainboard (J12)	
3	04052302	Power cable for connecting the PCIe riser card to the mainboard (J20)	

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6.5.7.6.7 I/O Module 3 Cabling (4 x 2.5" NVMe Drives)

I/O Module 3 Cabling

Figure 6-706 I/O module 3 cabling

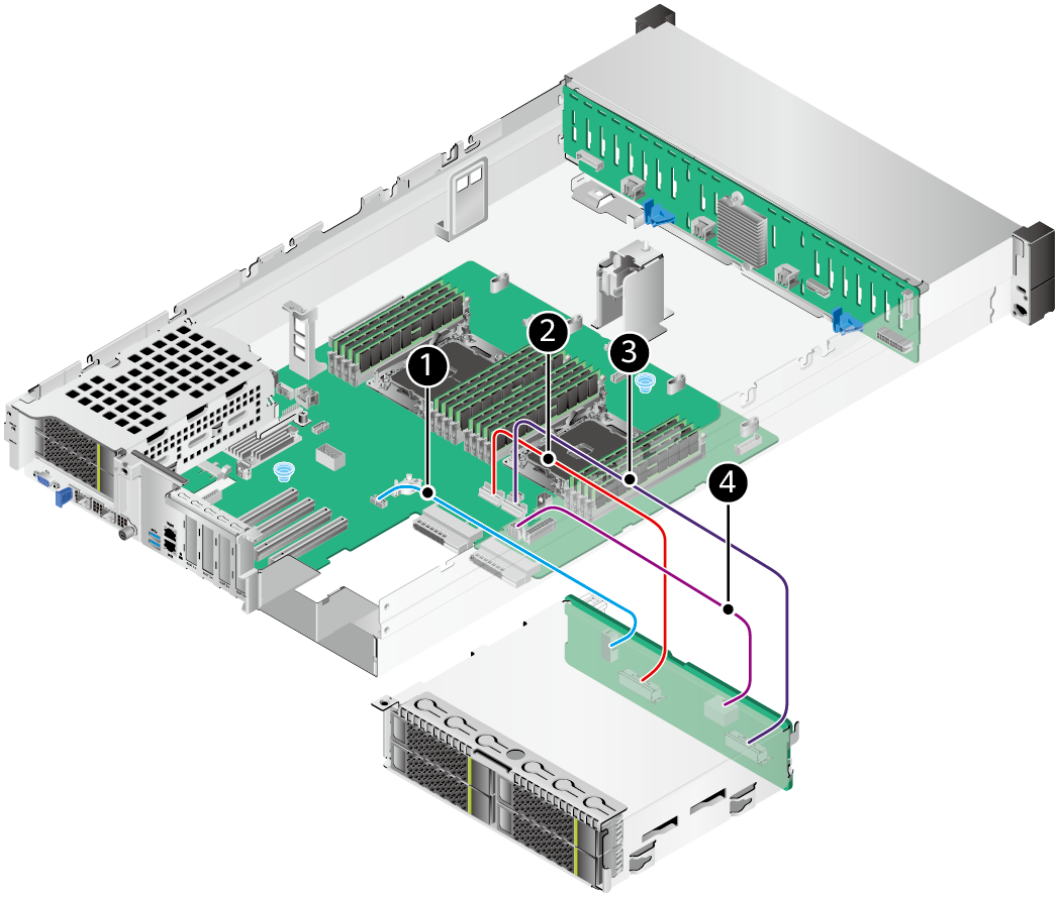

Table 6-696 I/O module 3 cabling

No.	P/N Code	Description	Remarks
1	04080602	Low-speed signal cable for connecting the rear-drive backplane (J2302) to the mainboard (J57)	The cable is not an independent spare part. It is packed with the 4 x 2.5" drive module as a spare part.
2	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J901) to the mainboard (J85)	
3	04052304	LP slimline high-speed cable for connecting the rear-drive backplane (J1001) to the mainboard (J12)	

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No.	P/N Code	Description	Remarks
4	04052302	Power cable for connecting the rear-drive backplane (J2502) to the mainboard (J20)	

6.6 Power-On and Power-Off

6.6.1 Powering On

The methods for powering on the 2288H V6-32DIMM and 2288H V6-16DIMM servers are the same. This section uses the 2288H V6-32DIMM server as an example.

NOTICE

- Before powering on a server, ensure that the server is powered off, all cables are connected correctly, and the power supply voltage meets service requirements.
- During power-on, do not remove or insert server components or cables, such as drive modules, network cables, and console cables.
- If the power supply to a server is disconnected, wait for at least one minute before powering it on again.

The server can be powered on in any of the following ways:

- If PSUs are properly installed but are not connected to an external power supply, the server is powered off.

  Connect the external power supply to the PSUs. Then the server will be powered on with the PSUs.

  NOTE

  System State Upon Power Supply is set to **Power On** by default, which indicates that the server automatically powers on after power is supplied to PSUs. You can log in to the iBMC WebUI, choose **System** > **Power** > **Power Control**, to view and change the setting,
- If the PSUs are powered on and the server is in standby state (the power indicator is steady yellow), use any of the following methods to power on the server:
  - Press the power button on the front panel.

    For details about 2288H V6-32DIMM, see **1.1.1.2 Indicators and Buttons**.

    For details about 2288H V6-16DIMM, see **1.2.1.2 Indicators and Buttons**.
  - Use the iBMC WebUI.
    i. Log in to the iBMC WebUI.

       For details, see **8.2 Logging In to the iBMC WebUI**.

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ii. Choose **System** > **Power** > **Power Control**.

The **Power Control** page is displayed.

iii. Click **Power On**.

A confirmation message is displayed.

iv. Click **OK**.

The server starts to be powered on.

– Use the iBMC CLI.

i. Log in to the iBMC CLI.

For details, see **8.5 Logging In to the Server CLI**.

ii. Run the following command:

ipmcset -d powerstate -v 1

iii. Type **y** or **Y** and press **Enter**.

The server starts to be powered on.

– Use the Remote Virtual Console.

i. Log in to the Remote Virtual Console.

For details, see **8.4 Logging In to the Desktop of a Server**.

ii. On the KVM screen, click or on the toolbar.

iii. Select **Power On**.

A dialog box is displayed.

iv. Click **OK**.

The server starts to be powered on.

6.6.2 Powering Off

The methods for powering off the 2288H V6-32DIMM and 2288H V6-16DIMM servers are the same. This section uses the 2288H V6-32DIMM server as an example.

NOTE

- The "power-off" mentioned here is an operation performed to change the server to the standby state (the power indicator is steady yellow).
- Powering off a server will interrupt all services and programs running on it. Therefore, before powering off a server, ensure that all services and programs have been stopped or migrated to other servers.
- After a server is powered off forcibly, wait for more than 10 seconds for the server to power off completely. Do not power on the server again before it is completely powered off.
- A forced power-off may cause data loss or program damage. Select an appropriate operation based on your actual situation.

The server can be powered off in any of the following ways:

- Connect a keyboard, video, and mouse (KVM) to the server and shut down the operating system of the server using the KVM.
- When the server is in power-on state, pressing the power button on the server front panel can power off the server gracefully.

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NOTE

If the server OS is running, shut down the OS according to the onscreen instructions.

For details about 2288H V6-32DIMM, see **1.1.1.2 Indicators and Buttons**.

For details about 2288H V6-16DIMM, see **1.2.1.2 Indicators and Buttons**.

- When the server is in power-on state, holding down the power button on the server front panel for six seconds can power off the server forcibly.

  For details about 2288H V6-32DIMM, see **1.1.1.2 Indicators and Buttons**.

  For details about 2288H V6-16DIMM, see **1.2.1.2 Indicators and Buttons**.

- Use the iBMC WebUI.

  a. Log in to the iBMC WebUI.

     For details, see **8.2 Logging In to the iBMC WebUI**.

  b. Choose **System** > **Power** > **Power Control**.

     The **Power Control** page is displayed.

  c. Click **Power Off** or **Forced Power Off**.

     A confirmation message is displayed.

  d. Click **OK**.

     The server starts to be powered off.

- Use the iBMC CLI.

  a. Log in to the iBMC CLI.

     For details, see **8.5 Logging In to the Server CLI**.

  b. Run the following command:

     - To power off the compute node gracefully, run the **ipmcset -d powerstate -v 0** command.
     - To power off the compute node forcibly, run the **ipmcset -d powerstate -v 2** command.

  c. Type **y** or **Y** and press **Enter**.

     The server starts to be powered off.

- Use the Remote Virtual Console.

  a. Log in to the Remote Virtual Console.

     For details, see **8.4 Logging In to the Desktop of a Server**.

  b. On the KVM screen, click or on the toolbar.

  c. Choose **Power Off** or **Forced Power Off**.

     A dialog box is displayed.

  d. Click **OK**.

     The server starts to be powered off.

6.7 Initial Configuration

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6.7.1 Default Information

Table 6-697 Default data

Category	Item	Default Value
iBMC management network port data	IP address and subnet mask of the management network port	• Default IP address: **192.168.2.100** **NOTE** If a 2288H V6-32DIMM server is connected to the iBMC direct connect management port using a USB Type-C cable, the IP address of the iBMC management network port is **169.254.1.5**. • Default subnet mask: **255.255.255.0**
iBMC login data	User name and password	• Default user name: **Administrator** • Default password: **Admin@9000**
BIOS data	Password	• Default password: **Admin@9000**

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6.7.2 Configuration Process and Description

Configuration Process

Figure 6-707 Initial configuration process

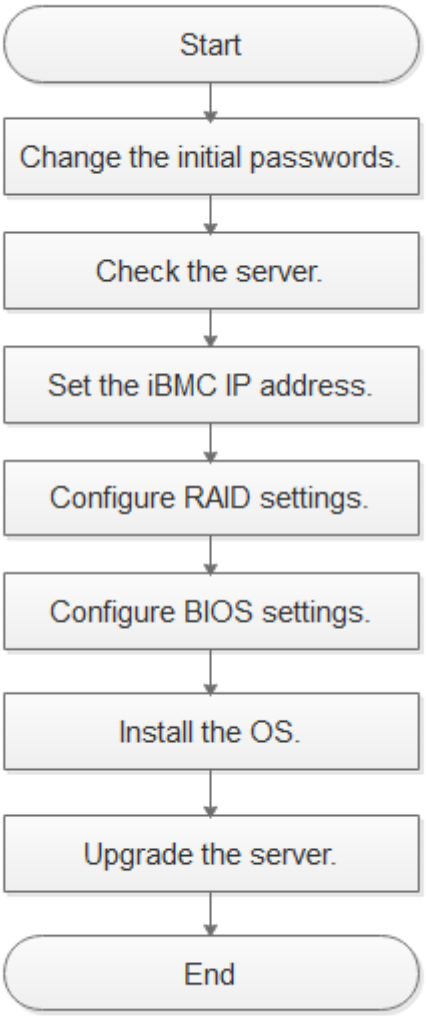

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Table 6-698 Process description

Step	Description	Documents
Change the initial password.	Change the initial password of the iBMC default user. ● Use the iBMC WebUI. ● Use the iBMC CLI. ● Use the BIOS.	● Use the iBMC WebUI or iBMC CLI to change the password. The method for changing the password varies depending on iBMC versions. For details, see the *iBMC User Guide* of the corresponding version. ● Use the BIOS. For details, see the *Whitley Platform BIOS Parameter Reference*.
Check the server.	1. Check the indicators on the panel to ensure that the server is running properly. 2. Check the iBMC or BIOS version of the server to ensure that the version is the same as the target version. The query methods are as follows: ● Use the iBMC WebUI. ● Use the iBMC CLI. 3. Query the health status and alarm information of the server to ensure that the server is running properly. The query methods are as follows: ● Use the iBMC WebUI. ● Use the iBMC CLI.	● Check the status of indicators on the panel. For details, see section "Indicators and Buttons." ● The methods for querying the server version, health status, and alarm information vary depending on the iBMC version. For details, see the *iBMC User Guide* of the corresponding version. ● Upgrade the firmware to the target version. For details, see the *Upgrade Guide*. ● Handle the alarms. For details, see the *iBMC Alarm Handling*.
Configure the iBMC network information.	To configure the iBMC network information, perform the following steps: ● Use the LCD. ● Use the iBMC WebUI. ● Use the iBMC CLI. ● Use the BIOS.	● Use the LCD to configure the iBMC network information. For details, see **8.9 Using the LCD**. ● Use the iBMC WebUI and iBMC CLI to configure the iBMC network information. The configuration mode varies depending on the iBMC version. For details, see the *iBMC User Guide* of the corresponding version. ● Use the BIOS. For details, see the *Whitley Platform BIOS Parameter Reference*.

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Step	Description	Documents
Configure RAID.	Configure the RAID group based on service requirements. **NOTE** When the management mode of common drives is PCH, RAID groups cannot be configured.	Different RAID controller cards have different configuration methods. For details, see the server *RAID Controller Card User Guide*. **NOTE** For details about the compatible RAID controller cards, see the compatibility list on the technical support websit.
Configuring the BIOS.	Configure the BIOS based on the actual service scenario.	For details, see the *Whitley Platform BIOS Parameter Reference*. **NOTE** The common BIOS settings are as follows: ● Set the system boot sequence. ● Set PXE of NIC. ● Set the BIOS password. ● Set the BIOS system language.
Install the OS.	Install an OS for the server.	For details about how to install different OSs, see the *OS Installation Guide*. **NOTE** For details about the compatible OS, see the compatibility list on the technical support websit.

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Step	Description	Documents
Upgrade the system to the latest version.	Upgrade firmware, and install or update drivers to keep the server system up to date.	● Upgrade the iBMC, BIOS, CPLD, and other firmware. For details, see the*Upgrade Guide*. ● For details about how to install or update the driver, see the *OS Installation Guide*. **NOTICE** ● If the driver versions on the server are inconsistent with the driver list, install the drivers of the required versions. Otherwise, the server may operate abnormally. ● Back up the drivers before installing or updating them. ● For details about how to obtain the driver installation package, see the compatibility list on the technical support websit. Take the CentOS 7.8 OS driver package as an example. The driver package name is **FusionServer iDriver-CentOS7.8-Driver-V111.zip**. ● The driver installation package and procedure vary depending on the OS.

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7 Troubleshooting Guide

For details about how to troubleshoot servers, see the *Troubleshooting*. It covers the following content:

- Troubleshooting process

  Use appropriate methods to find the cause of a fault and rectify the fault. Analyze possible causes for a fault and narrow down the scope to reduce troubleshooting complexity, identify the root cause, and rectify the fault.
- Fault information collection

  Collect logs for fault diagnosis when a fault occurs on a server.
- Fault diagnosis

  Fault diagnosis rules and tools help technical support engineers and maintenance engineers to analyze and rectify faults according to alarms and hardware fault symptoms.
- Software and firmware upgrade

  Obtain and install the software and firmware upgrade packages based on the server model.
- Preventive maintenance

  Check for, diagnoses, and rectifies server faults through routine preventive maintenance inspection.

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8 Common Operations

8.1 Querying the iBMC IP Address
8.2 Logging In to the iBMC WebUI
8.3 Log in to the FusionMobile
8.4 Logging In to the Desktop of a Server
8.5 Logging In to the Server CLI
8.6 Managing VMD
8.7 Accessing the BIOS
8.8 Clearing Data from a Storage Device
8.9 Using the LCD

8.1 Querying the iBMC IP Address

8.1.1 2288H V6-32DIMM

Scenario

This section describes how to query the IP address of the iBMC management network port on the BIOS.

You can query the IP address of the iBMC management network port on:

- BIOS
- iBMC WebUI
- iBMC CLI

  Run the **ipmcget -d ipinfo** command.

For details about iBMC, see the *iBMC User Guide*.

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Procedure

Step 1 Access the BIOS.

For details, see **8.7.1 2288H V6-32DIMM BIOS**.

Step 2 Choose **Advanced** > **BMC Configuration** and press **Enter**.

The **BMC Configuration** screen is displayed.

Step 3 Select **BMC IPv4/IPv6 Configuration** and press **Enter**.

The **BMC IPv4/IPv6 Configuration** screen is displayed.

Step 4 Check the IP address of the iBMC management network port.

----End

8.1.2 2288H V6-16DIMM

Scenario

This section describes how to query the IP address of the iBMC management network port on the BIOS.

You can query the IP address of the iBMC management network port on:

- BIOS
- iBMC WebUI
- iBMC CLI
  Run the **ipmcget -d ipinfo** command.

For details about iBMC, see the *iBMC User Guide*.

Procedure

Step 1 Access the BIOS.

For details, see **8.7.2 2288H V6-16DIMM BIOS**.

Step 2 Choose **Server Mgmt**.

The **Server Mgmt** screen is displayed.

Step 3 Select **BMC LAN Configuration** and press **Enter**.

The **BMC LAN Configuration** screen is displayed.

Step 4 Check the IP address of the iBMC management network port.

----End

8.2 Logging In to the iBMC WebUI

Scenario

Log in to the iBMC WebUI. The following uses Internet Explorer 11.0 as an example.

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- A maximum of four users can log in to the WebUI at the same time.
- By default, the system timeout period is 5 minutes. If no operation is performed on the WebUI within 5 minutes, the user will be automatically logged out of the WebUI.
- The system locks a user account if the number of consecutive incorrect password attempts reaches the maximum for the user account. The user account is automatically unlocked after the locking duration reaches the value specified.
- For security purposes, change the initial password upon the first login and change the password periodically.
- If resources fail to be obtained due to unstable network connection, the iBMC WebUI may be displayed abnormally. If this occurs, refresh the browser and log in to the iBMC WebUI again.

  NOTE

  - If TLS version is set to **Only TLS 1.3** on the **User & Security** > **Security Management** page, the following browser versions are not supported:
    - All Internet Explorer versions
    - Safari 11.0 to 12.0
    - Microsoft Edge 12 to 18
  - Before using Internet Explorer to log in to the iBMC WebUI, enable the compatibility view and select "Use TLS 1.2".
    - Enable the compatibility view:
      1. Click in the upper right corner of the browser.
      2. On the shortcut menu displayed, click **Compatibility View Settings**.
      3. In the **Compatibility View Settings** dialog box displayed, enter the iBMC IP address in the **Add this website** text box and click **Add**.
      4. Deselect **Use Microsoft compatibility lists**.

         After the iBMC IP address is added to the compatibility view, improper display on the iBMC WebUI will be rectified.
    - Select "Use TLS 1.2" as follows:
      1. Choose **Internet Options** > **Advanced**.
      2. In the **Security** area, select **Use TLS 1.2**.

Procedure

Step 1 Check that the client (for example, a local PC) used to access the iBMC meets the operating environment requirements.

If you want to use the Java Integrated Remote Console, ensure that the Java Runtime Environment (JRE) meets requirements.

Table 8-1 Operating environment

OS	Web Browser	Java Runtime Environment (JRE)
Windows 7 (32-bit) Windows 7 (64-bit)	Internet Explorer 11.0 or later	AdoptOpenJDK 8u222 JRE

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OS	Web Browser	Java Runtime Environment (JRE)
Windows 8 (32-bit) Windows 8 (64-bit)	Mozilla Firefox 63.0 or later Google Chrome 70.0 or later	AdoptOpenJDK 11.0.6 JRE
Windows Server 2008 R2 (64-bit)		
Windows Server 2012 (64-bit)		
Windows Server 2012 R2 (64-bit)		
Windows Server 2016 (64-bit)		
Windows 10 (64-bit)	Internet Explorer 11.0 or later	
	Microsoft Edge	
	Mozilla Firefox 63.0 or later	
	Google Chrome 70.0 or later	
CentOS 7	Mozilla Firefox 63.0 or later	
MAC OS X v10.7	Safari 11.0 and later	
	Mozilla Firefox 63.0 or later	

Step 2 Configure an IP address and subnet mask or route information for the local PC to enable communication with the iBMC management network port.

Step 3 Connect the local PC to the iBMC using any of the following methods:

- Connect the local PC to the iBMC management network port using a network cable.
- Connect the local PC to the iBMC management network port over a LAN.
- Connect the local PC to the iBMC direct connect management port using a USB Type-C cable.

  NOTE

  – Only servers configured with the iBMC direct management port support this operation.
  – If you use a USB Type-C cable to connect the local PC to the iBMC direct connect management port, the local PC can run only Windows 10.

Step 4 Choose **Control Panel** > **Network and Internet** > **Network Connections**, and check whether the local PC is connected to the iBMC network.

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NOTE

- If the local PC is connected to the iBMC using a USB Type-C cable, the iBMC network name is **Remote NDS Compatible Device**.
- If the local PC is connected to the iBMC using a network cable or over a LAN, the iBMC network name varies depending on the NIC used on the local PC.

- If yes, go to **Step 5**.
- If no, contact technical support for assistance.

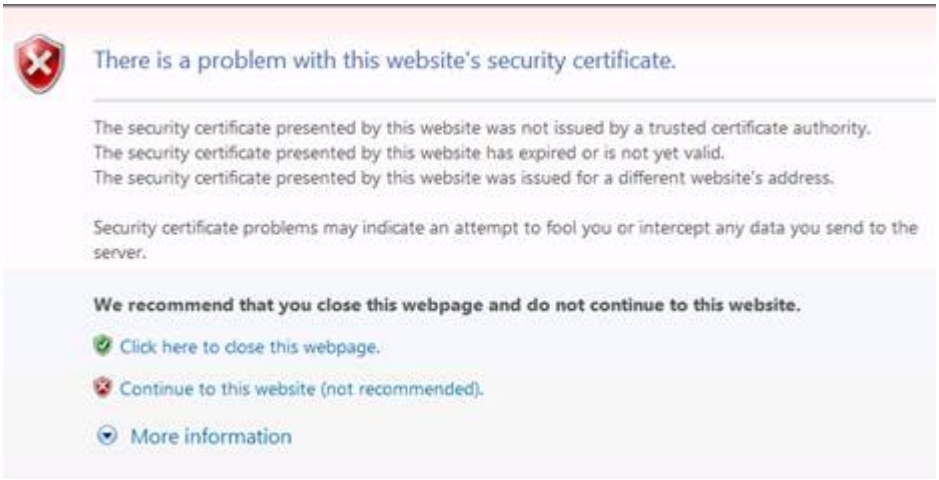
Step 5 Open Internet Explorer, enter **https:**//*iBMC management network port IP address* in the address box, and press **Enter**.

NOTE

- If the local PC is connected to the iBMC direct connect management port using a USB Type-C cable, the IP address of the iBMC management network port is **169.254.1.5**.
- If the local PC is connected to the iBMC management network port using a network cable or over a LAN, the default IP address of the iBMC management network port is **192.168.2.100**.
- Enter the IP address of the iBMC management network port based on actual situation:
  - If an IPv6 address is used, use [] to enclose the IPv6 address, for example, **[fc00::64]**.
  - If an IPv4 address is used, enter the IPv4 address, for example, **192.168.100.1**.

A security alert dialog box is displayed.

Figure 8-1 Security warning



NOTE

- If a security alert is displayed, you can ignore this message or perform any of the following to shield this alert:
  - Import a trust certificate and a root certificate to the iBMC.

    For details, see "Importing the iBMC Trust Certificate and Root Certificate" in the iBMC user guide of the server you use.
  - If no trust certificate is available and network security can be ensured, add the iBMC to the **Exception Site List on Java Control Panel** or reduce the Java security level.

    This operation poses security risks. Exercise caution when performing this operation.

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Step 6 Click **Continue to this website (not recommended)**.

The iBMC login page is displayed.

Figure 8-2 iBMC login page

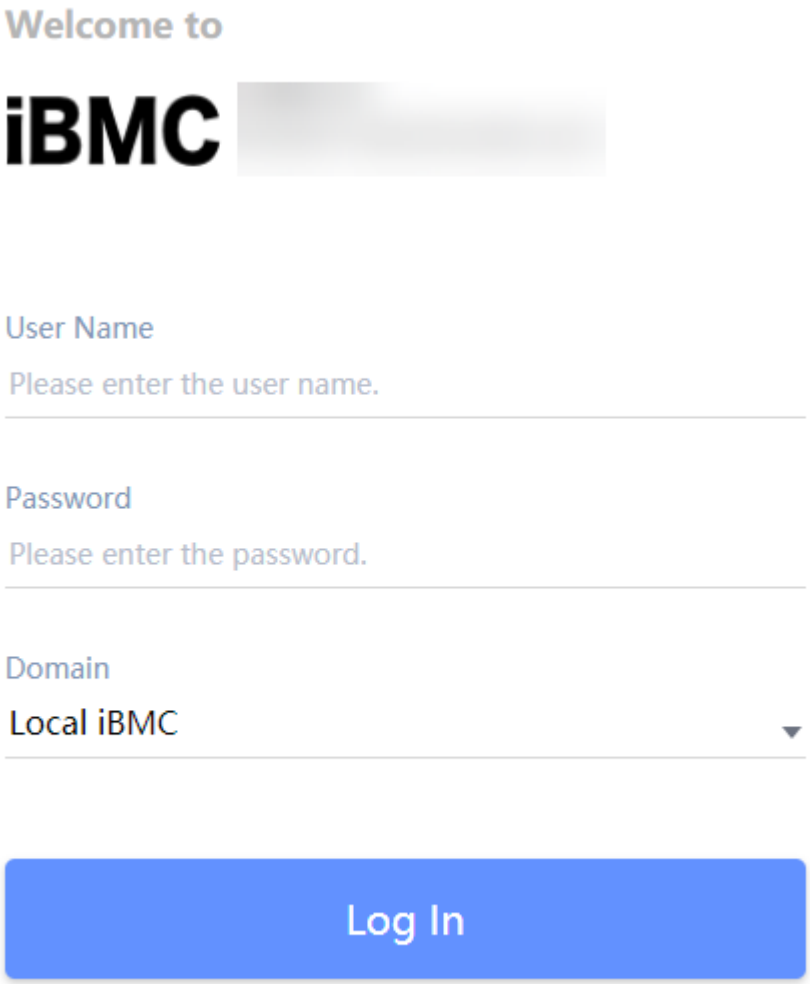

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Table 8-2 User login

Parameter	Description
Username	Username for logging in to the iBMC WebUI. ● When **Domain** is **Local iBMC**, the maximum length of the user name is 20 characters. ● When **Domain** is not **Local iBMC**, the maximum length of the user name is 255 characters. Pay attention to the following points when logging in to the system: ● When you log in to the iBMC as a local user, you can set **Domain** to **Local iBMC** or **Automatic matching**. ● To log in as an LDAP user, the user name can be in either of the following formats: – LDAP user name (In this case, **Domain** can be **Automatic matching** or a specified domain.) – LDAP user name@Domain name (In this case, **Domain** can be **Automatic matching** or a specified domain.) ● To log in as a Kerberos user, the user name can be in either of the following formats: – Kerberos user name (in this case, **Domain** can be **Automatic matching** or a specified domain) – Kerberos user name@domain name (in this case, **Domain** can be **Automatic matching** or a specified domain, and uppercase letters must be used in the domain name) ● Both Kerberos user name and Kerberos user name@Domain name formats support single sign-on (SSO).
Password	Password of the login user. For security purposes, periodically change your login password. **NOTE** When you log in to the iBMC WebUI as an LDAP or Kerberos user, the password can contain a maximum of 255 characters.

Step 7 Log in to the iBMC WebUI.

- **Log in to the WebUI as a local user.**
- **Logging in as a Lightweight Directory Access Protocol (LDAP) User**
- **To log in to the iBMC WebUI as a Kerberos user, perform the following steps:**

----End

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Log in to the WebUI as a local user.

Step 1 (Optional) On the login page, switch to the target language.

Step 2 Enter the user name and password for logging in to the iBMC WebUI. For details, see **Table 8-2**.

NOTE

The default user name for logging in to the iBMC system is **Administrator**, and the default password is **Admin@9000**.

Step 3 Select **Local iBMC** or **Automatic matching** from the **Domain** drop-down list.

Step 4 Click **Log In**.

After the login is successful, the **Home** page is displayed.

NOTE

- If you use Internet Explorer to log in to the iBMC WebUI for the first time after an upgrade, the system may display a message indicating that the login fails due to incorrect user name or password. If this occurs, press **Ctrl+Shift+Delete**, and click **Delete** in the dialog box displayed to clear the cache of Internet Explorer. Then, attempt to log in again.
- If you cannot log in to the iBMC WebUI using Internet Explorer, choose **Tools** > **Internet Options** > **Advanced** and click **Reset**. Then you can log in to the iBMC WebUI.

----End

Logging in as a Lightweight Directory Access Protocol (LDAP) User

Before login, ensure that the following settings meet the requirements:

- A domain controller exists on the network, and a user domain and LDAP users have been created on the domain controller.

  NOTE

  For details about how to create a domain controller, a user domain, and LDAP users who belong to the user domain, see related documents about the domain controller. The iBMC provides only the access function for LDAP users.
- On the **User & Security** > **LDAP** page of the iBMC WebUI, the LDAP function is enabled, and the user domain and the LDAP user who belong to the user domain are set.

Step 1 (Optional) On the iBMC login page, switch to the target language.

Step 2 Enter the LDAP user name and password for logging in to the iBMC WebUI. For details, see **Table 8-2**.

NOTE

- To log in as an LDAP user, the user name can be in either of the following formats:
  - LDAP user name (In this case, **Domain** can be **Automatic matching** or a specified domain.)
  - LDAP user name@Domain name (In this case, **Domain** can be **Automatic matching** or a specified domain.)
- When you log in to the iBMC WebUI over LDAP, the password can contain a maximum of 255 characters.

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Step 3 Select the LDAP user domain from the Domain drop-down list.

NOTE

The Domain drop-down list contains the following options:

- **This iBMC**: Select this option to log in as a local user. The system automatically locates the user from the local user list.
- Configured domain servers: Select a domain server to log in as an LDAP user. The system automatically locates the user from the domain server.
- **Automatic matching**: If this option is selected, the system searches for the user from the local user list first. If no match is found, the system searches from the domain servers in the sequence displayed in the **Domain** drop-down list.

Step 4 Click **Log In**.

After the login is successful, the **Home** page is displayed.

----End

To log in to the iBMC WebUI as a Kerberos user, perform the following steps:

Kerberos environment:

- The client supports the Windows 10 64-bit operating system and the Internet Explorer 11 browser.
- The Kerberos server supports the Windows Server 2012 R2 64-bit and Windows Server 2016 64-bit OSs.

Before login, ensure that the following settings meet the requirements:

- Kerberos is enabled and Kerberos function and user group are configured on the **User & Security** > **Kerberos** page of the iBMC WebUI.
- The Kerberos user group and user have been created on the Kerberos server, and the user has been added to the Kerberos user group. This user is a user of the client OS.

Kerberos users can log in to the WebUI in either of the following modes:

- Logging in as a Kerberos domain user
  a. On the iBMC login page, switch to the target language.
  b. Enter the Kerberos user name and password for logging in to the iBMC WebUI. For details, see **Table 8-2**.
  c. In the **Domain** drop-down list, select a Kerberos user domain (for example, **ADMIN.COM(KRB)**) or **Automatic matching**.
  d. Click **Log In**.
     After the login is successful, the **Home** page is displayed.
- Logging in over SSO
  a. Use the Kerberos user name and password configured on the Kerberos server to log in to the client OS.
  b. Enter the FQDN of the iBMC in the address box of the browser, for example, **https://***host name.domain name*.
     The iBMC login page is displayed.

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c. Click **SSO**.

After the login is successful, the **Home** page is displayed.

8.3 Log in to the FusionMobile

For details about FusionMobile, see the *FusionMobile User Guide*.

8.4 Logging In to the Desktop of a Server

8.4.1 Using the Remote Virtual Console

8.4.1.1 iBMC

Scenario

Log in to the desktop of a server using the iBMC Remote Virtual Console.

Procedure

Step 1 Log in to the iBMC WebUI.

For details, see **8.2 Logging In to the iBMC WebUI**.

Step 2 Choose **Home** from the menu.

The home page is displayed.

Step 3 In the **Virtual Console** area, click **Start** and select **Java Integrated Remote Console** or **HTML5 Integrated Remote Console** from the drop-down list box.

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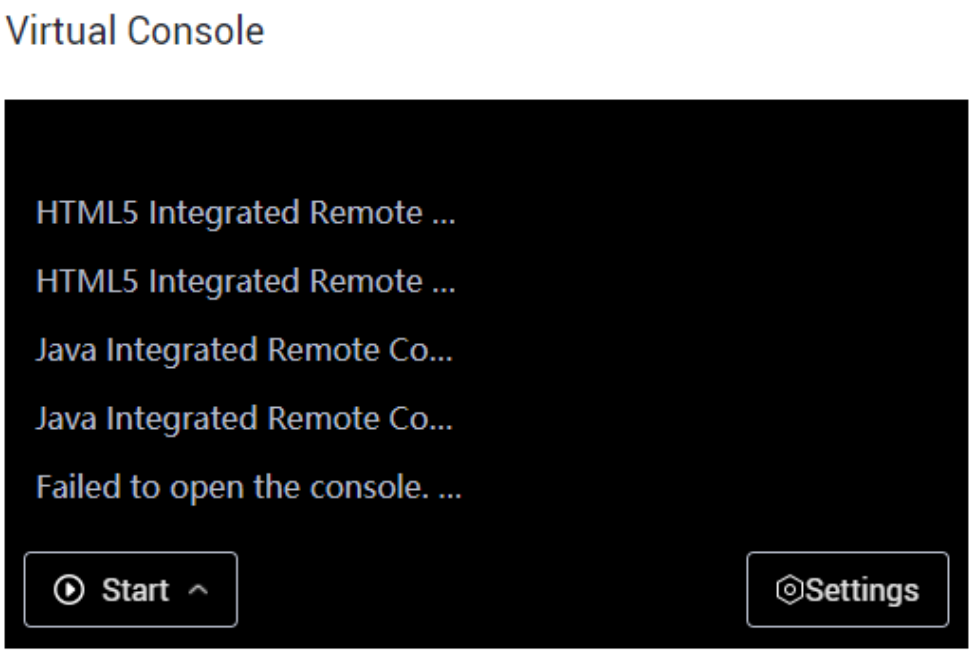
Figure 8-3 Virtual console



NOTE

- **Java Integrated Remote Console (Private)**: allows only one local user or VNC user to access and manage the server at a time.
- **Java Integrated Remote Console (Shared)**: allows two local users or five VNC users to access and manage the server at a time. The users can see each other's operations.
- **HTML5 Integrated Remote Console (Private)**: allows only one local user or VNC user to access and manage the server at a time.
- **HTML5 Integrated Remote Console (Shared)**: allows two local users or five VNC users to access and manage the server at a time. The users can see each other's operations.
- If you want to use the Java Integrated Remote Console, ensure that the Java Runtime Environment (JRE) meets requirements listed in **Table 8-1**. If the JRE is not installed, click **Failed to open the console ...** and click **here** to download the JRE from the official AdoptOpenJDK website. If you still cannot use the console after installing the JRE, click the links under **Troubleshooting Remote Virtual Console Problems** to obtain more information.
- For details about the virtual console, see "Virtual Console" in the iBMC user guide of the server you use.

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Figure 8-4 Java Integrated Remote Console

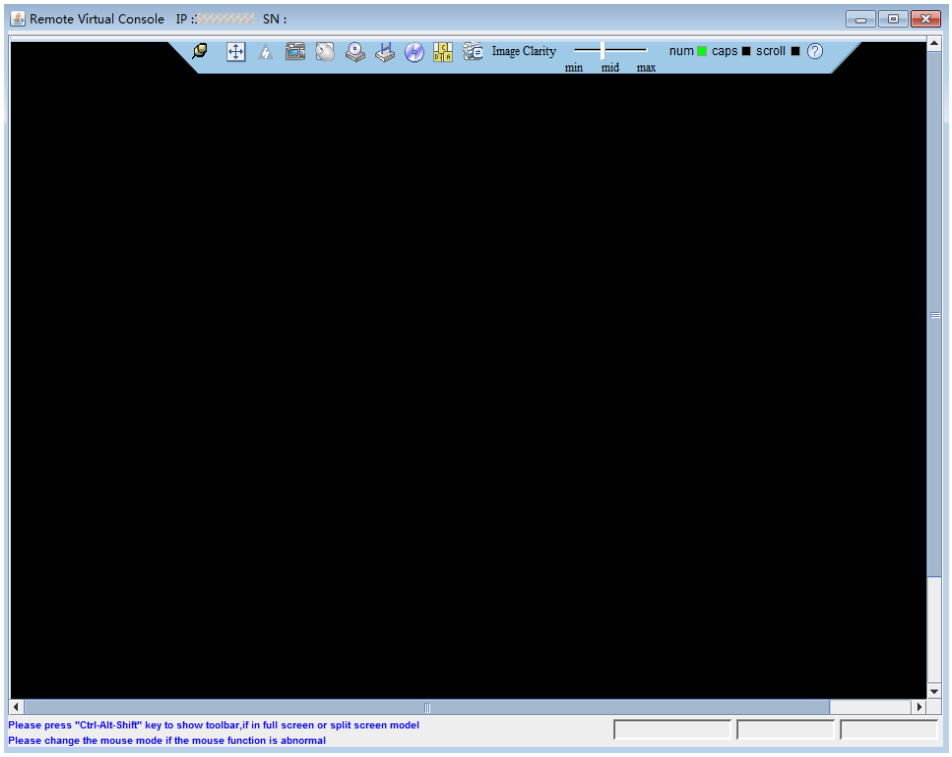
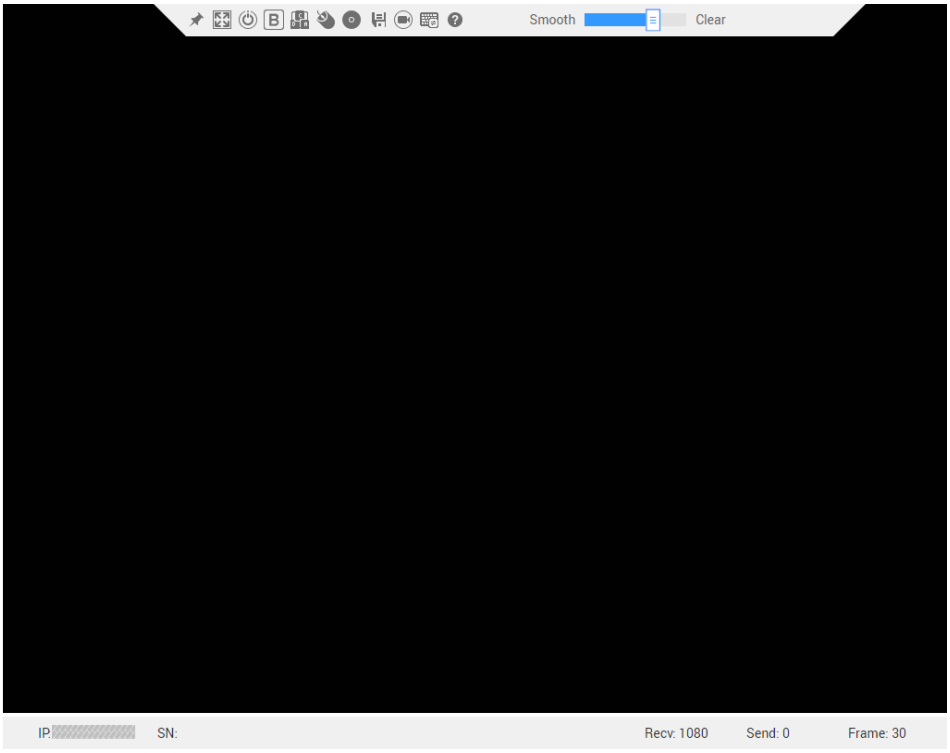


Figure 8-5 HTML5 Integrated Remote Console



----End

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8.4.2 Logging In to the System Using a Standalone Remote Console

Log in to the desktop of a server using the Independent Remote Console.

NOTE

The independent remote console is a remote control tool developed based on the server management software iBMC. It plays the same functions as **Virtual Console** provided by the iBMC WebUI. This tool allows you to remotely access and manage a server, without worrying about the compatibility between the client's browser and the JRE.

8.4.2.1 Windows

The following Windows OS versions are supported:

- Windows 7 (32-bit/64-bit)
- Windows 8 (32-bit/64-bit)
- Windows 10 (32-bit/64-bit)
- Windows Server 2008 R2 (32-bit/64-bit)
- Windows Server 2012 (64-bit)

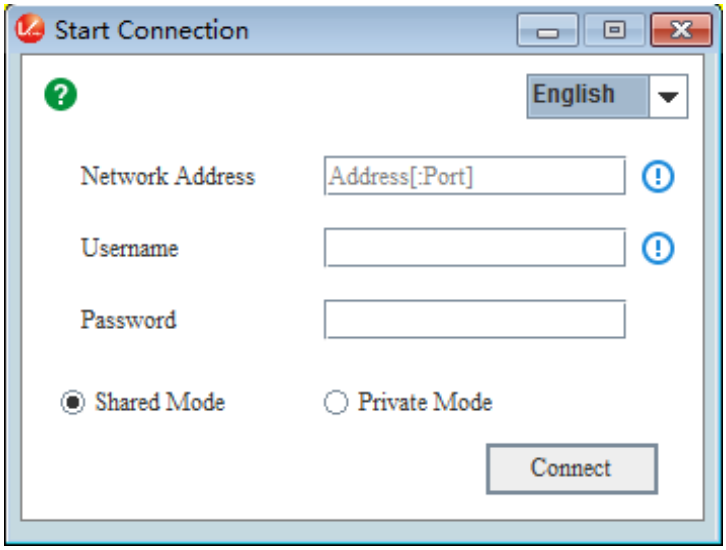
Procedure

Step 1 Configure an IP address for the client (local PC) to enable communication with the iBMC management network port.

Step 2 Double-click **KVM.exe**.

The Independent Remote Console login page is displayed.

Figure 8-6 Independent Remote Console login page



Step 3 Enter the network address, user name, and password.

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NOTE

- Local and LDAP domain users are supported.
- The network address can be in either of the following formats:
  - *iBMC management network port IPv4 or IPv6 address*:*Port number*

    Enter an IPv6 address in brackets or an IPv4 address directly. for example, **[fc00::64]:444** or **192.168.100.1:444**.
  - *iBMC domain name address*:*Port number*
- When the port number is the default port number, the port number can be left blank.
- The preferred port number is the HTTPS service port number, and then the RMCP+ service port number.

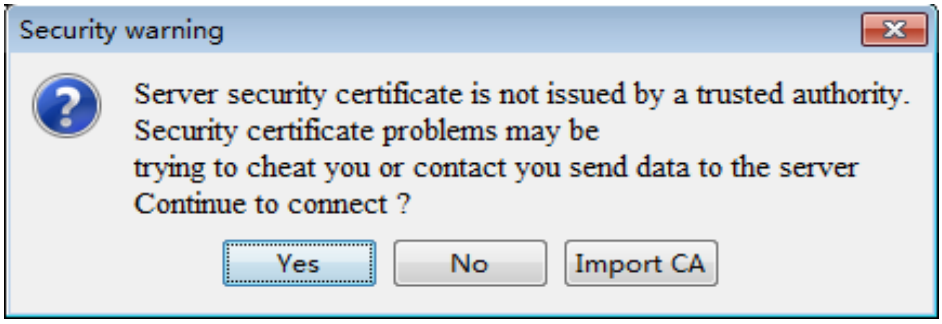
Step 4 Select a login mode.

- **Shared Mode**: allows two users to access and manage a server at the same time. The users can see each other's operations.
- **Private Mode**: allows only one user to access and manage a server at a time.

Step 5 Click **Connect**.

A security warning is displayed.

Figure 8-7 Security warning



Step 6 Click **Yes**.

Ignore the certificate authentication error and go to the real-time desktop.

NOTE

- Click **No** to return to the login interface.
- Click **Import CA** to import a CA certificate (*.cer, *.crt, or *.pem). After the CA certificate is imported, the security warning dialog box will no longer be displayed.
- You are advised to periodically update the certificate for security purposes.

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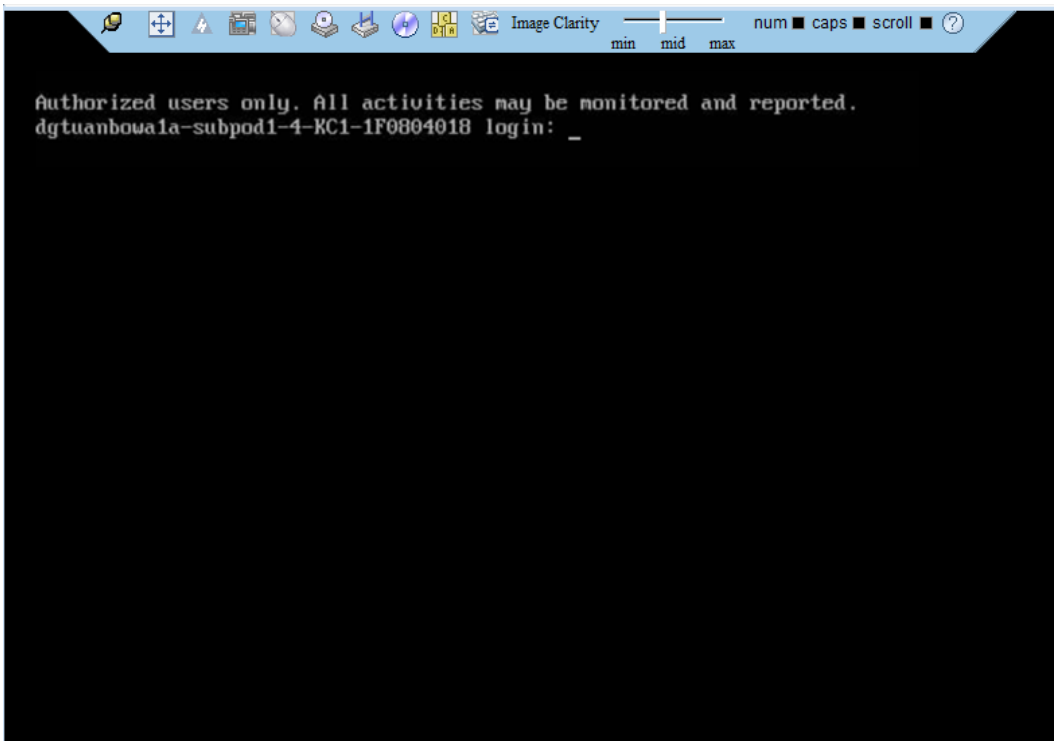
Figure 8-8 Server desktop



----End

8.4.2.2 Ubuntu

The following Ubuntu OS versions are supported:

- Ubuntu 14.04 LTS
- Ubuntu 16.04 LTS

Before the operation, ensure that the IPMItool version later than 1.8.14 has been installed.

Procedure

Step 1 Configure an IP address for the client (local PC) to enable communication with the iBMC management network port.

Step 2 Open the console and set the folder where the Independent Remote Console is stored as the working folder.

Step 3 Set the permissions on the Independent Remote Console.

chmod 777 KVM.sh

Step 4 Open the Independent Remote Console.

./KVM.sh

The Independent Remote Console login page is displayed.

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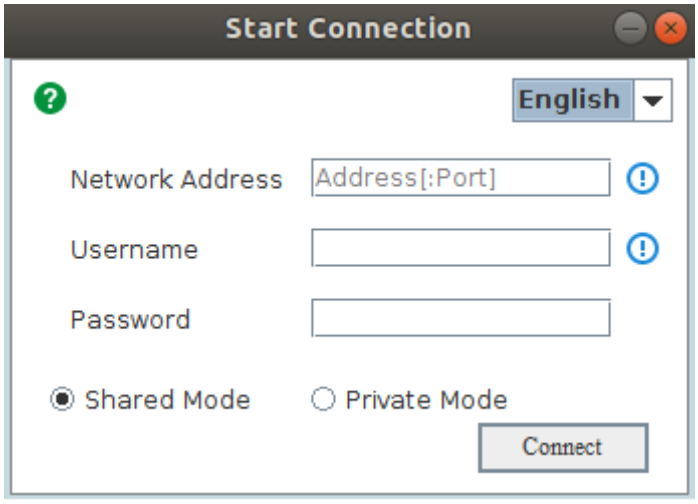
Figure 8-9 Independent Remote Console login page



Step 5 Enter the network address, user name, and password.

NOTE

- Local and LDAP domain users are supported.
- The network address can be in either of the following formats:
  - *iBMC management network port IPv4 or IPv6 address*:*Port number*

    Enter an IPv6 address in brackets or an IPv4 address directly. for example, **[fc00::64]:444** or **192.168.100.1:444**.
  - *iBMC domain name address*:*Port number*
- When the port number is the default port number, the port number can be left blank.
- The preferred port number is the HTTPS service port number, and then the RMCP+ service port number.

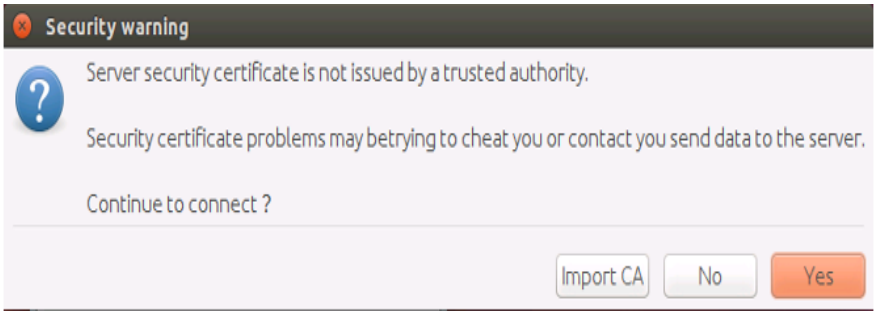
Step 6 Select a login mode.

- **Shared Mode**: allows two users to access and manage a server at the same time. The users can see each other's operations.
- **Private Mode**: allows only one user to access and manage a server at a time.

Step 7 Click **Connect**.

A security warning is displayed.

Figure 8-10 Security warning



Step 8 Click **Yes**.

Ignore the certificate authentication error and go to the real-time desktop.

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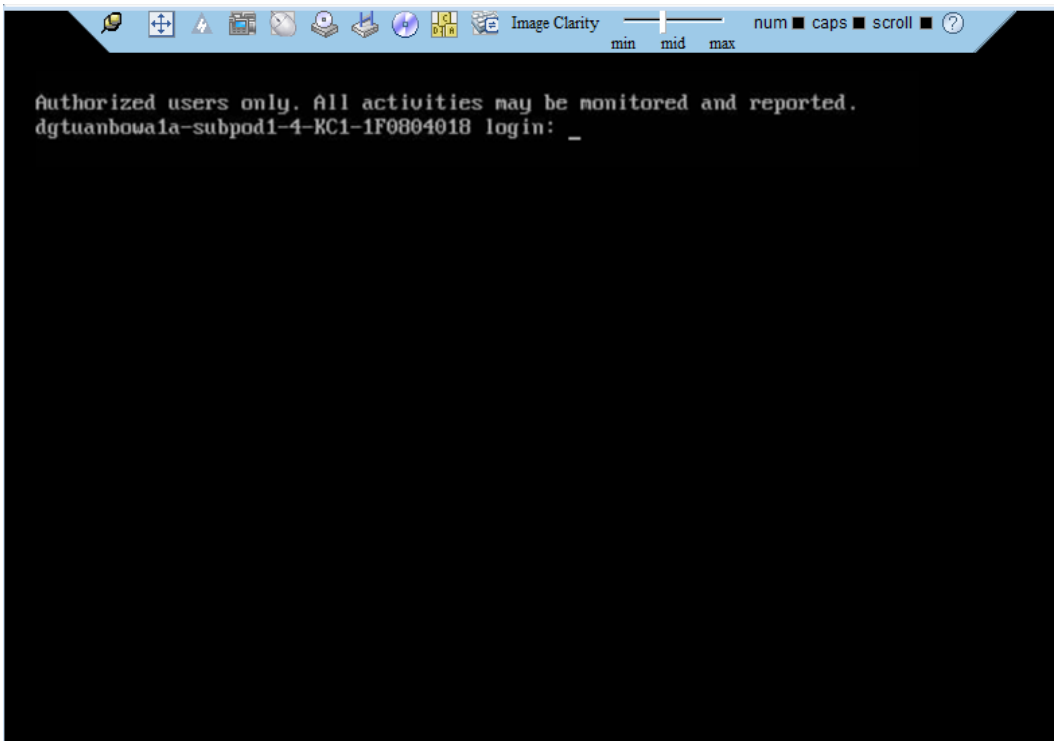
NOTE

- Click **No** to return to the login interface.
- Click **Import CA** to import a CA certificate (*.cer, *.crt, or *.pem). After the CA certificate is imported, the security warning dialog box will no longer be displayed.
- You are advised to periodically update the certificate for security purposes.

Figure 8-11 Server desktop



----End

8.4.2.3 Mac

The following macOS version is supported:

- Mac OS X El Capitan

Before the operation, ensure that the IPMItool version later than 1.8.14 has been installed.

Procedure

Step 1 Configure an IP address for the client (local PC) to enable communication with the iBMC management network port.

Step 2 Open the console and set the folder where the Independent Remote Console is stored as the working folder.

Step 3 Set the permissions on the Independent Remote Console.

chmod 777 KVM.sh

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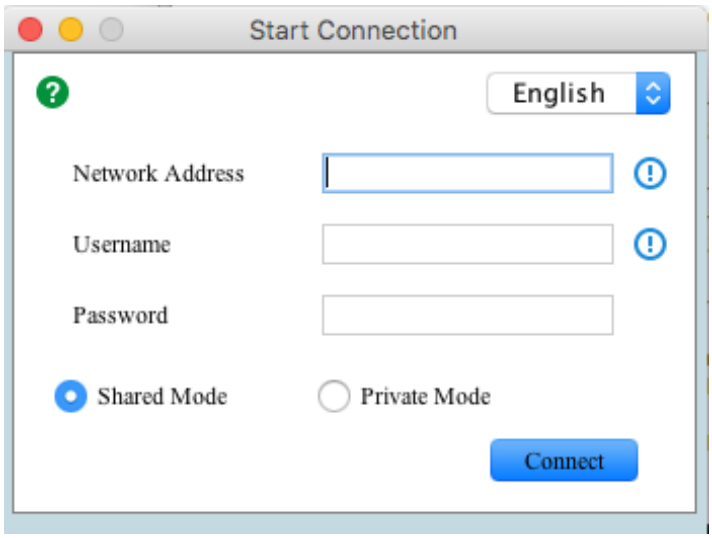
Step 4 Open the Independent Remote Console.

./KVM.sh

The Independent Remote Console login page is displayed.

Figure 8-12 Independent Remote Console login page



Step 5 Enter the network address, user name, and password.

NOTE

- Local and LDAP domain users are supported.
- The network address can be in either of the following formats:
  - *iBMC management network port IPv4 or IPv6 address*:*Port number*

    Enter an IPv6 address in brackets or an IPv4 address directly. for example, **[fc00::64]:444** or **192.168.100.1:444**.
  - *iBMC domain name address*:*Port number*
- When the port number is the default port number, the port number can be left blank.
- The preferred port number is the HTTPS service port number, and then the RMCP+ service port number.

Step 6 Select a login mode.

- **Shared Mode**: allows two users to access and manage a server at the same time. The users can see each other's operations.
- **Private Mode**: allows only one user to access and manage a server at a time.

Step 7 Click **Connect**.

A security warning is displayed.

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Figure 8-13 Security warning

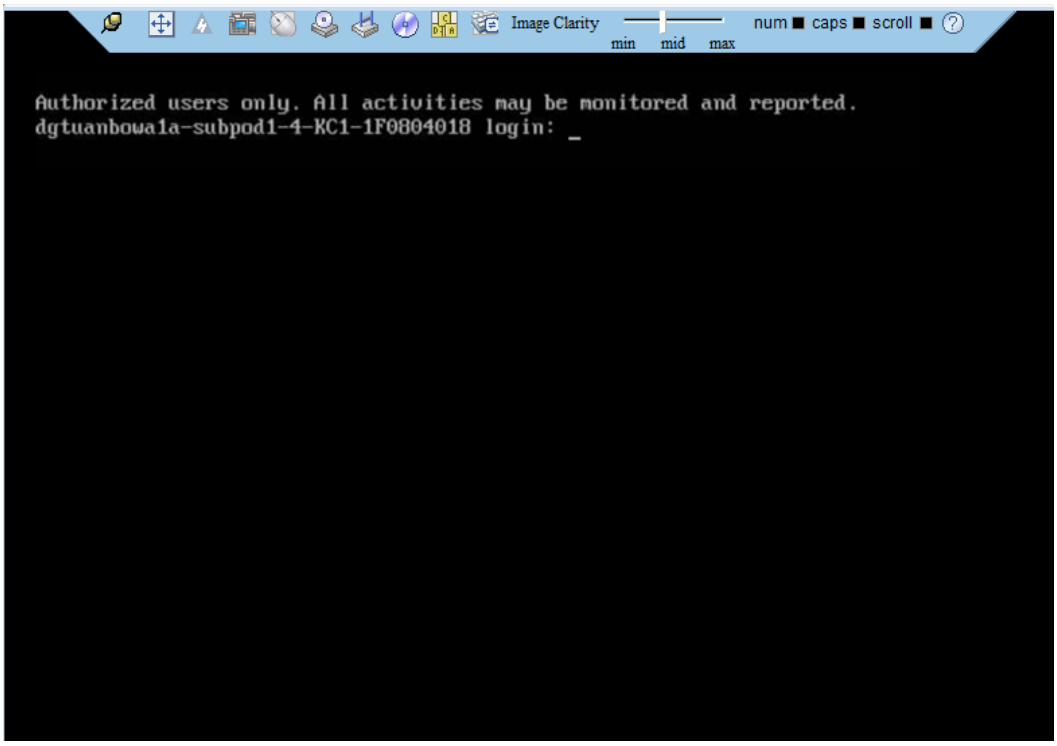
Step 8 Click **Yes**.

Ignore the certificate authentication error and go to the real-time desktop.

NOTE

- Click **No** to return to the login interface.
- Click **Import CA** to import a CA certificate (*.cer, *.crt, or *.pem). After the CA certificate is imported, the security warning dialog box will no longer be displayed.
- You are advised to periodically update the certificate for security purposes.

Figure 8-14 Server desktop



----End

8.4.2.4 Red Hat

The following Red Hat OS versions are supported:

- Red Hat 6.9

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- Red Hat 7.3

Before the operation, ensure that the IPMItool version later than 1.8.14 has been installed.

Procedure

Step 1 Configure an IP address for the client (local PC) to enable communication with the iBMC management network port.

Step 2 Open the console and set the folder where the Independent Remote Console is stored as the working folder.

Step 3 Set the permissions on the Independent Remote Console.

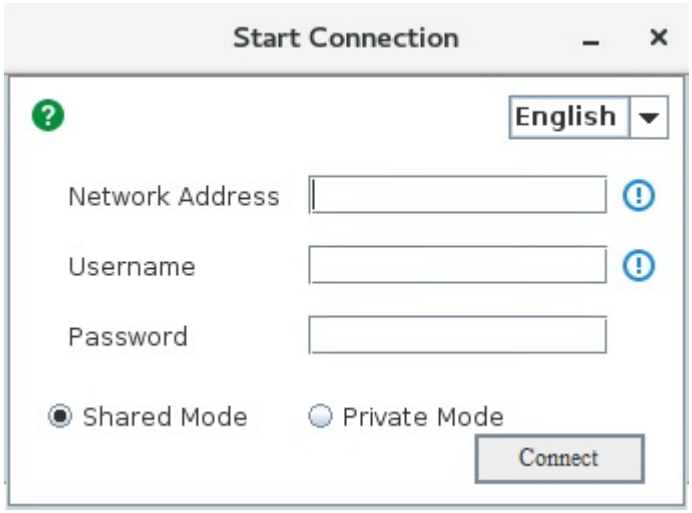
chmod 777 KVM.sh

Step 4 Open the Independent Remote Console.

./KVM.sh

The Independent Remote Console login page is displayed.

Figure 8-15 Independent Remote Console login page



Step 5 Enter the network address, user name, and password.

NOTE

- Local and LDAP domain users are supported.
- The network address can be in either of the following formats:
  - *iBMC management network port IPv4 or IPv6 address*:*Port number*

    Enter an IPv6 address in brackets or an IPv4 address directly. for example, **[fc00::64]:444** or **192.168.100.1:444**.
  - *iBMC domain name address*:*Port number*
- When the port number is the default port number, the port number can be left blank.
- The preferred port number is the HTTPS service port number, and then the RMCP+ service port number.

Step 6 Select a login mode.

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- **Shared Mode**: allows two users to access and manage a server at the same time. The users can see each other's operations.
- **Private Mode**: allows only one user to access and manage a server at a time.

Step 7 Click **Connect**.

A security warning is displayed.

Figure 8-16 Security warning

Step 8 Click **Yes**.

Ignore the certificate authentication error and go to the real-time desktop.

NOTE

- Click **No** to return to the login interface.
- Click **Import CA** to import a CA certificate (*.cer, *.crt, or *.pem). After the CA certificate is imported, the security warning dialog box will no longer be displayed.
- You are advised to periodically update the certificate for security purposes.

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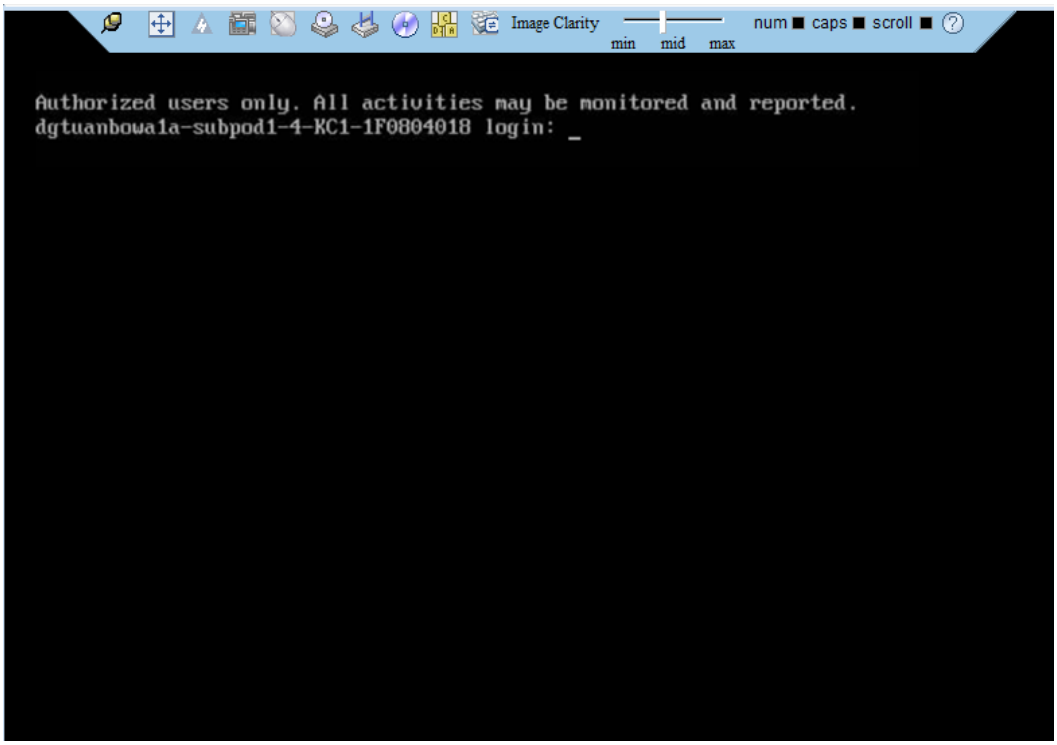
Figure 8-17 Server desktop



----End

8.5 Logging In to the Server CLI

8.5.1 Logging In to the CLI Using PuTTY over a Network Port

Scenario

Use PuTTY to access a server over a local area network (LAN).

NOTE

- PuTTY is free software. You need to obtain it by yourself.
- You are advised to use PuTTY of the latest version. PuTTY of an earlier version may cause login failures.

Procedure

Step 1 Set an IP address and subnet mask or add route information for the PC to communicate with the server.

Step 2 On the PC, double-click **PuTTY.exe**.

The **PuTTY Configuration** window is displayed.

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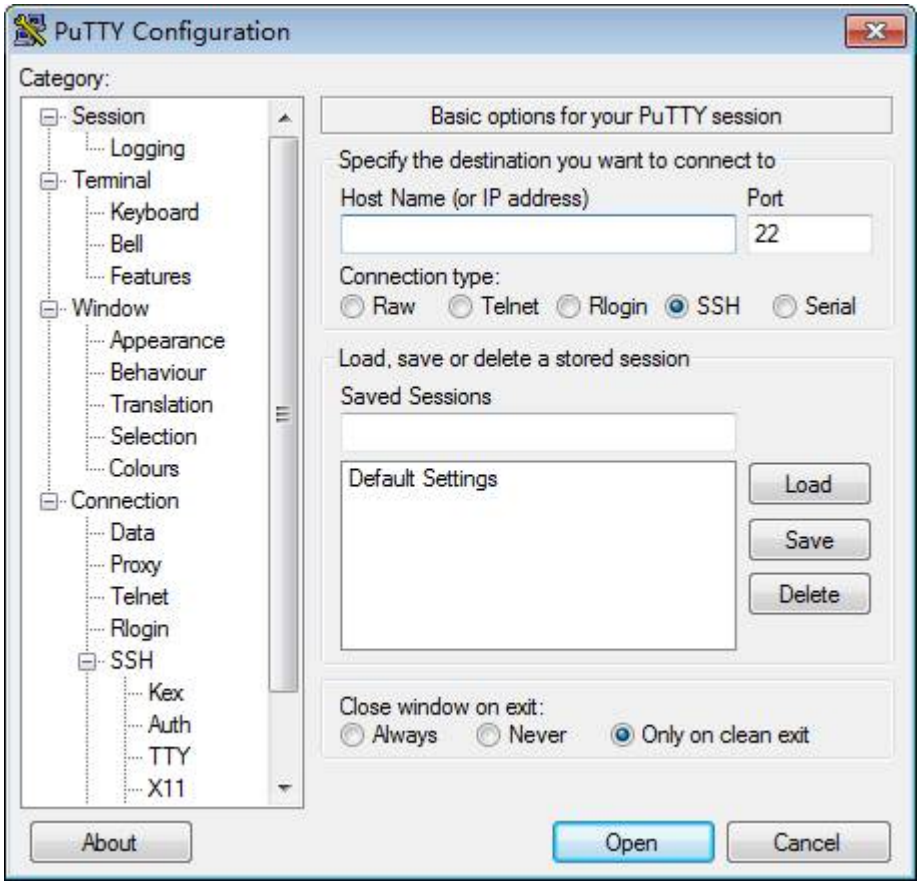
Figure 8-18 PuTTY Configuration



Step 3 In the navigation pane, choose **Session**.

Step 4 Set login parameters.

The parameters are described as follows:

- **Host Name (or IP address)**: Enter the IP address of the server to be accessed, for example, **192.168.34.32**.
- **Port**: Retain the default value **22**.
- **Connection type**: Retain the default value **SSH**.
- **Close window on exit**: Retain the default value **Only on clean exit**.

NOTE

Configure **Host Name** and **Saved Sessions**, and click **Save**. You can double-click the saved record in **Saved Sessions** to log in to the server next time.

Step 5 Click **Open**.

The **PuTTY** window is displayed.

NOTE

- If this is your first login to the server, the **PuTTY Security Alert** dialog box is displayed. Click **Yes** to proceed.
- If an incorrect user name or password is entered, you must set up a new PuTTY session.

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Step 6 Enter the user name and password.

If the login is successful, the server host name is displayed on the left of the prompt.

----End

8.5.2 Logging In to the CLI Using PuTTY over a Serial Port

Scenario

Use PuTTY to log in to a server over a serial port when:

- You want to perform initial configuration of the server.
- The server is inaccessible over a network port.

NOTE

- PuTTY is free software. You need to obtain it by yourself.
- You are advised to use PuTTY of the latest version. PuTTY of an earlier version may cause login failures.

Procedure

Step 1 On the PC, double-click **PuTTY.exe**.

The **PuTTY Configuration** window is displayed.

Step 2 In the navigation tree, choose **Connection** > **Serial**.

Step 3 Set login parameters.

The parameters are described as follows:

- Serial Line to connect to: COM*n*
- Speed (baud): 115200
- Data bits: 8
- Stop bits: 1
- Parity: None
- Flow control: None

NOTE

n indicates the serial port number, which is an integer.

Step 4 In the navigation pane, choose **Session**.

Step 5 Set **Connection type** to **Serial** and **Close window on exit** to **Only on clean exit**.

NOTE

Set **Saved Sessions** and click **Save**. You can double-click the saved record in **Saved Sessions** to log in to the server next time.

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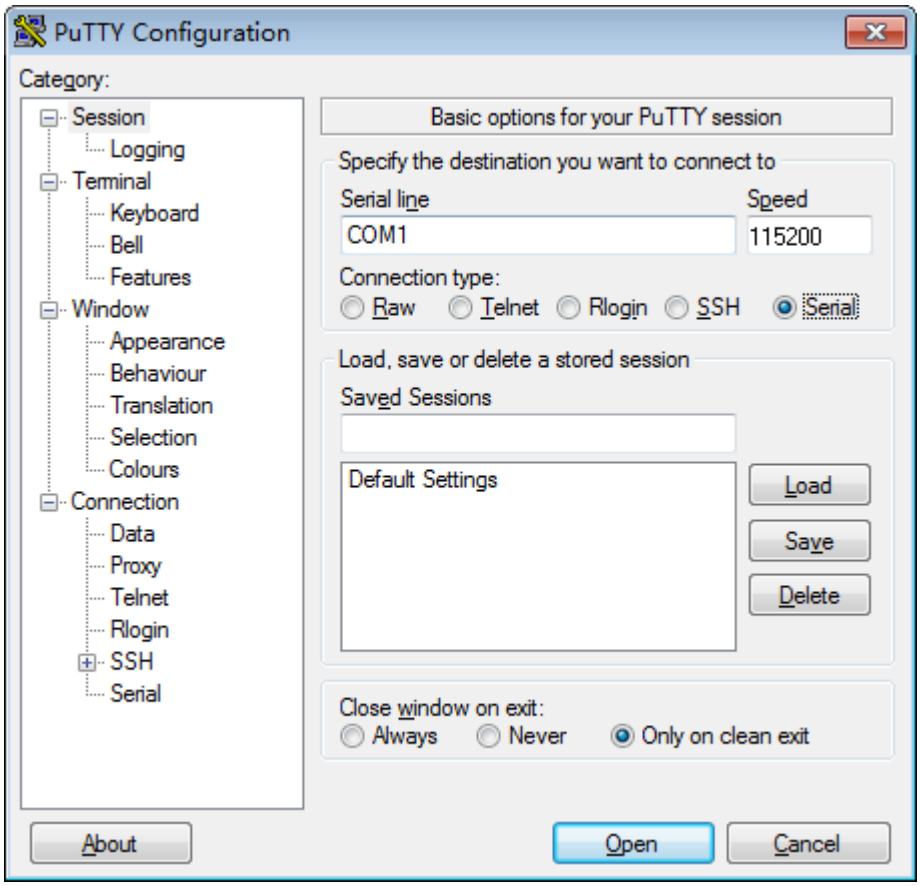
Figure 8-19 PuTTY Configuration



Step 6 Click **Open**.

The **PuTTY** window is displayed.

NOTE

If this is your first login to the server, the **PuTTY Security Alert** dialog box is displayed. Click **Yes** to proceed.

Step 7 Enter the user name and password.

If the login is successful, the server host name is displayed on the left of the prompt.

----End

8.6 Managing VMD

8.6.1 2288H V6-32DIMM

The Intel Volume Management Device (VMD) is a module integrated in the processor on the Whitley platform. It is used for surprise hot plug, management, and error processing of NVMe drives.

- Before using the VMD function, contact technical support engineers of the OS vendor to check whether the OS supports the VMD function. If yes, check

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whether the VMD driver needs to be manually installed and check the installation method.

- The VMD function must be enabled in the BIOS. The function can be enabled only in UEFI mode.
- If the VMD function is enabled and the latest VMD driver is installed, the NVMe drives support surprise hot swap.

8.6.1.1 Enabling VMD

Procedure

Step 1 Access the BIOS.

For details, see **8.7.1 2288H V6-32DIMM BIOS**.

Step 2 Choose **Advanced**.

Step 3 Select **Socket Configuration** and press **Enter**.

Step 4 Select **IIO Configuration** and press **Enter**.

Step 5 Select **Intel(R) VMD Technology** and press **Enter**.

Step 6 Select **Intel(R) VMD Config** and press **Enter**.

Step 7 Select **Enable** and press **Enter**.

NOTE

The VMD function of PCIe devices is disabled by default.

Step 8 Press **F10**.

"Exit Saving Changes?" is displayed.

Step 9 Select **Yes** and press **Enter**.

The server automatically restarts for the settings to take effect.

----End

8.6.1.2 Disabling VMD

Procedure

Step 1 Access the BIOS.

For details, see **8.7.2 2288H V6-16DIMM BIOS**.

Step 2 Choose **Advanced**.

Step 3 Select **Socket Configuration** and press **Enter**.

Step 4 Select **IIO Configuration** and press **Enter**.

Step 5 Select **Intel(R) VMD Technology** and press **Enter**.

Step 6 Select **Intel(R) VMD Config** and press **Enter**.

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Step 7 Select **Disabled** and press **Enter**.

Step 8 Press **F10**.

"Exit Saving Changes?" is displayed.

Step 9 Select **Yes** and press **Enter**.

The server automatically restarts for the settings to take effect.

----End

8.6.1.3 VMD Affiliation

8.6.1.3.1 8 x 2.5" Drive Pass-through Configuration

- VMD of 8 x 2.5" drive pass-through configuration 1, 8 x 2.5" drive pass-through configuration 2, and 8 x 2.5" drive pass-through configuration 3 in **1.1.5.1 Drive Configurations**.

Figure 8-20 Drive slot numbers

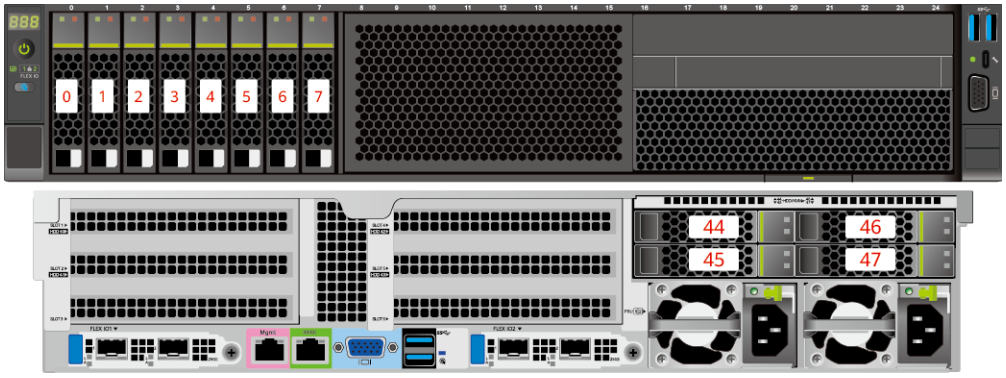

Table 8-3 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 8 x 2.5" drive (4 x SAS/SATA + 4 x SAS/SATA/NVMe) + 4 x GPU configuration in **1.1.5.1 Drive Configurations**.

Figure 8-21 Drive slot numbers

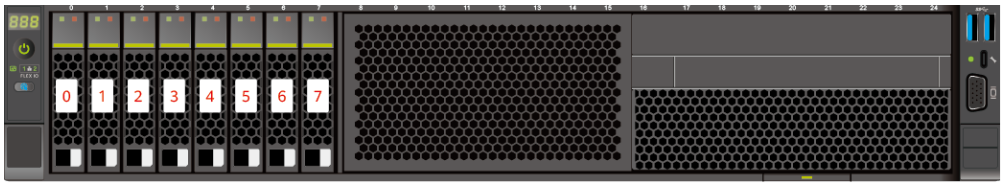

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Table 8-4 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
4-7	4-7	CPU2

8.6.1.3.2 8 x 3.5" Drive Pass-through Configuration

VMD of 8 x 3.5" drive pass-through configuration 1, 8 x 3.5" drive pass-through configuration 2, and 8 x 3.5" drive pass-through configuration 3 in **1.1.5.1 Drive Configurations**.

Figure 8-22 Drive slot numbers

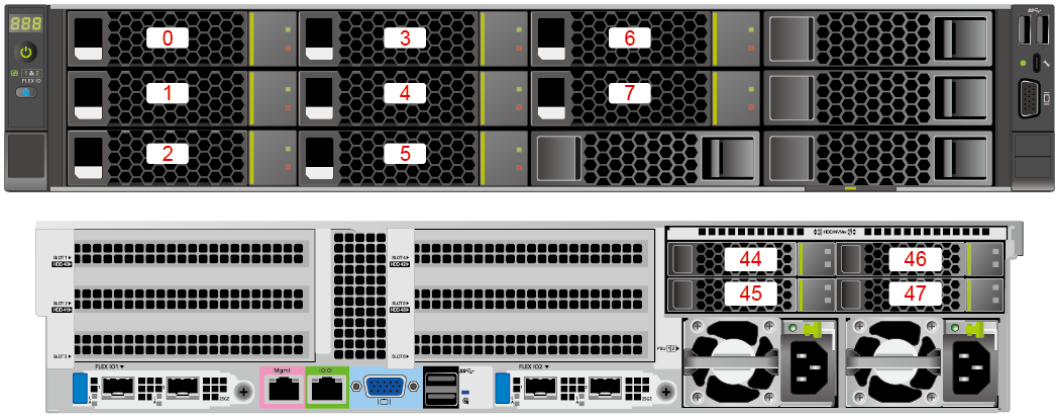

Table 8-5 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.1.3.3 12 x 2.5" Drive Pass-through Configuration

VMD of 12 x 2.5" drive pass-through configuration 1 (4 x SATA + 8 x NVMe), 12 x 2.5" drive pass-through configuration 2 (4 x SAS/SATA + 8 x NVMe), 12 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 8 x NVMe), 12 x 2.5" drive (4 x SATA + 8 x NVMe) + 4 x GPU configuration 1, and 12 x 2.5" drive (4 x SAS/SATA + 8 x NVMe) + 4 x GPU configuration 2 in **1.1.5.1 Drive Configurations**.

Figure 8-23 Drive slot numbers

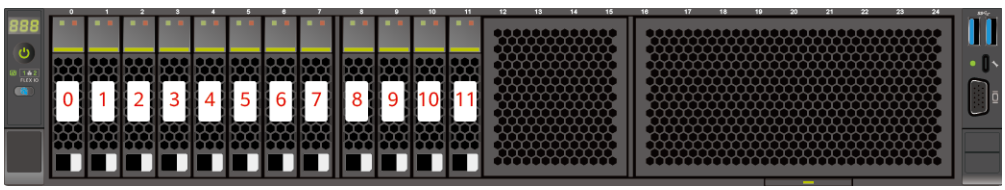

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Table 8-6 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
4-11	4-7	CPU2
	8-11	CPU1

8.6.1.3.4 12 x 3.5" Drive Pass-through Configuration

- VMD of 12 x 3.5" drive pass-through configuration 1 in **1.1.5.1 Drive Configurations**.

Figure 8-24 Drive slot numbers

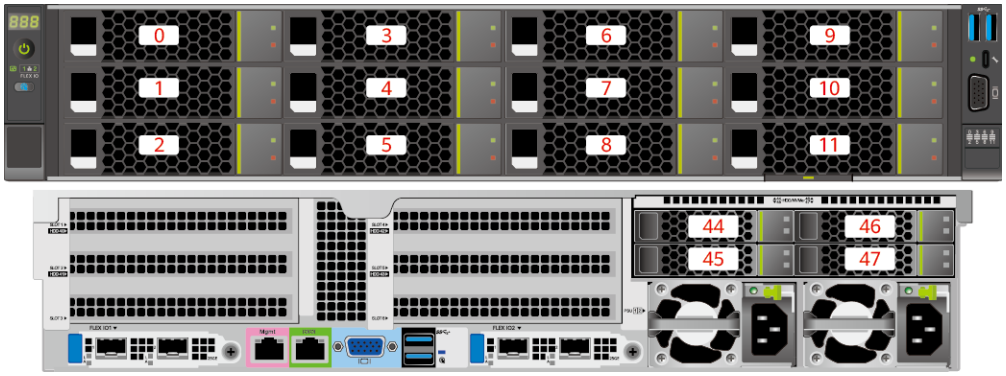

Table 8-7 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 2 in **1.1.5.1 Drive Configurations**.

Figure 8-25 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

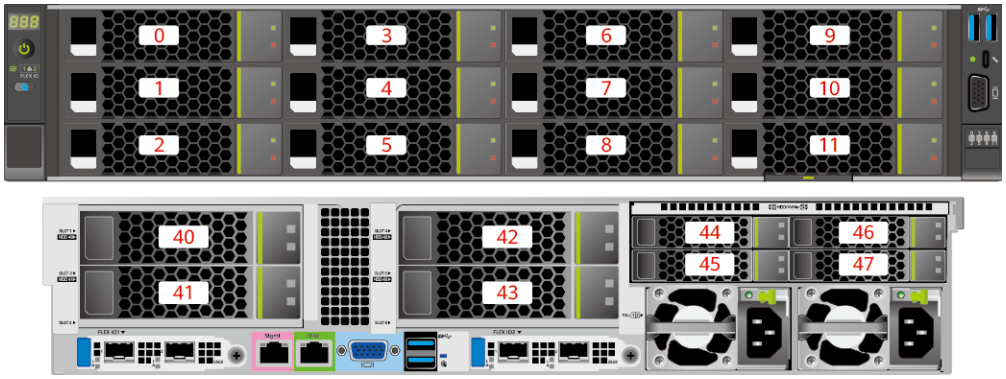

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Figure 8-26 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

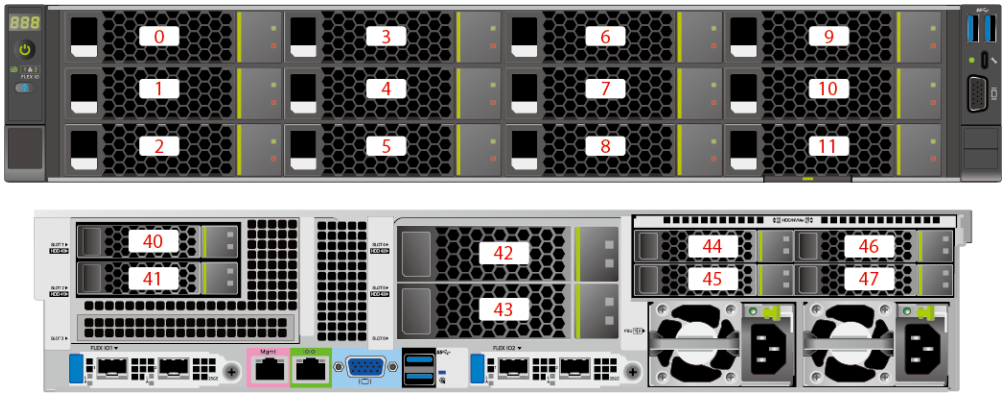

Table 8-8 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 3 in **1.1.5.1 Drive Configurations**.

Figure 8-27 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

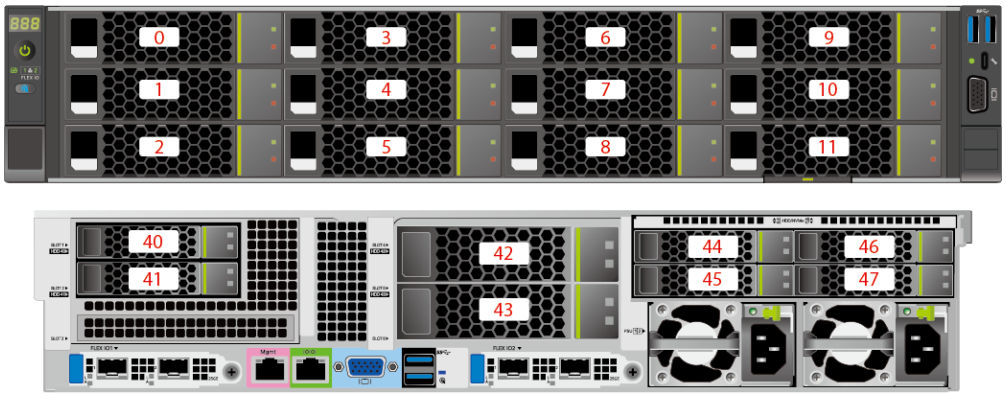

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Figure 8-28 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

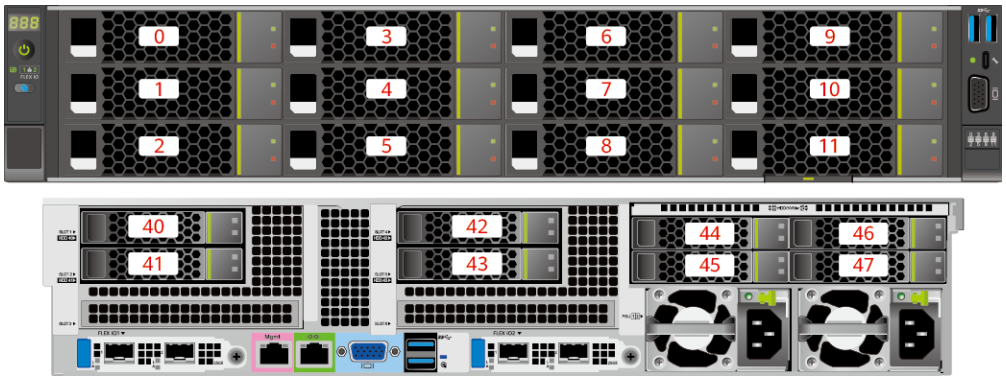

Table 8-9 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 4 and 12 x 3.5" drive pass-through configuration 6 (dual RAID controller cards) in **1.1.5.1 Drive Configurations**.

Figure 8-29 Drive slot numbers

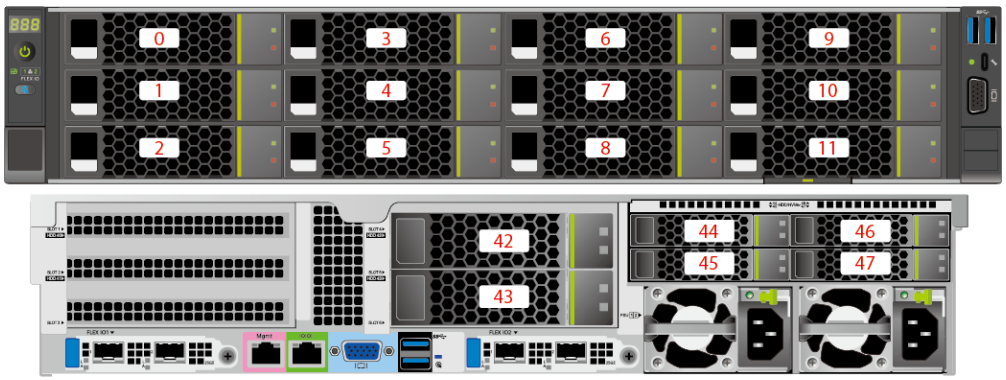

Table 8-10 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 5 (dual RAID controller cards) in **1.1.5.1 Drive Configurations**.

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Figure 8-30 Drive slot numbers

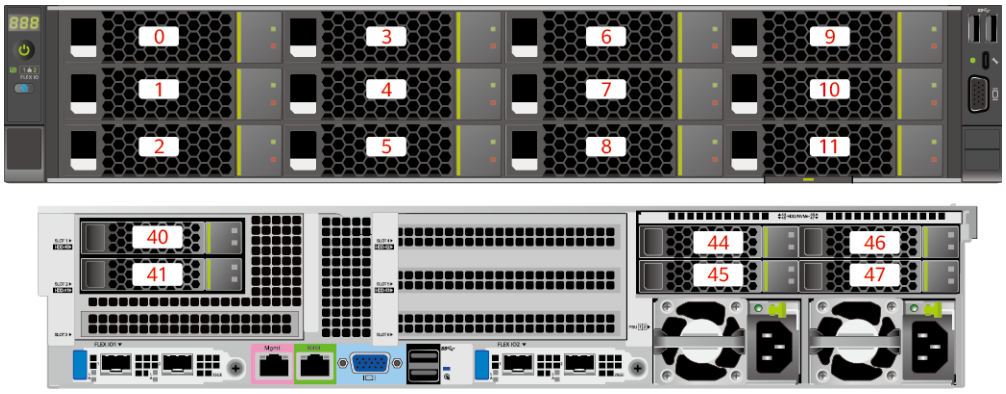

Table 8-11 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 1 (4 x NVMe) in **1.1.5.1 Drive Configurations**.

Figure 8-31 Drive slot numbers

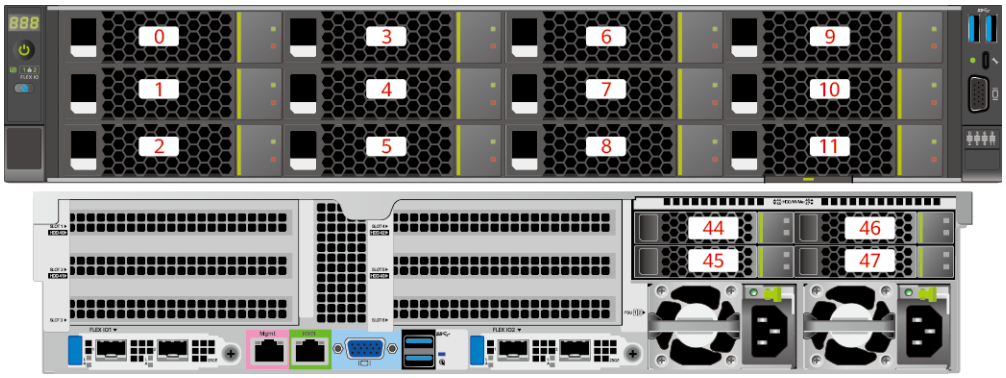

Table 8-12 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
8-11, 44-47	8-11	CPU1
	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 2 (4 x NVMe) in **1.1.5.1 Drive Configurations**.

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Figure 8-32 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

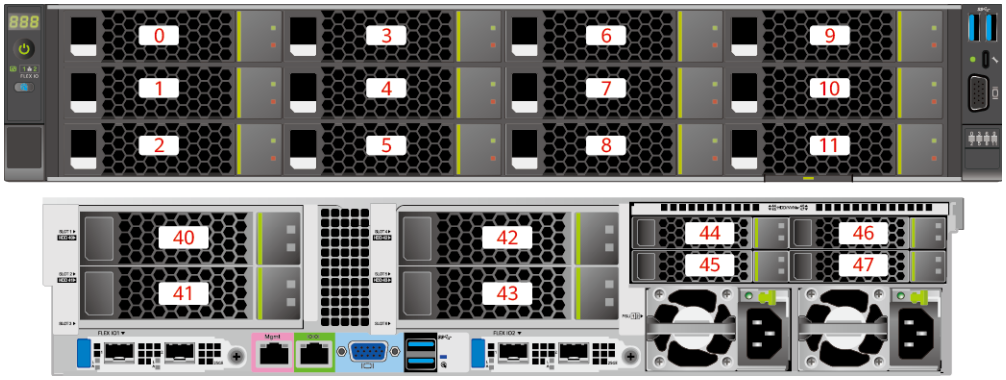

Figure 8-33 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

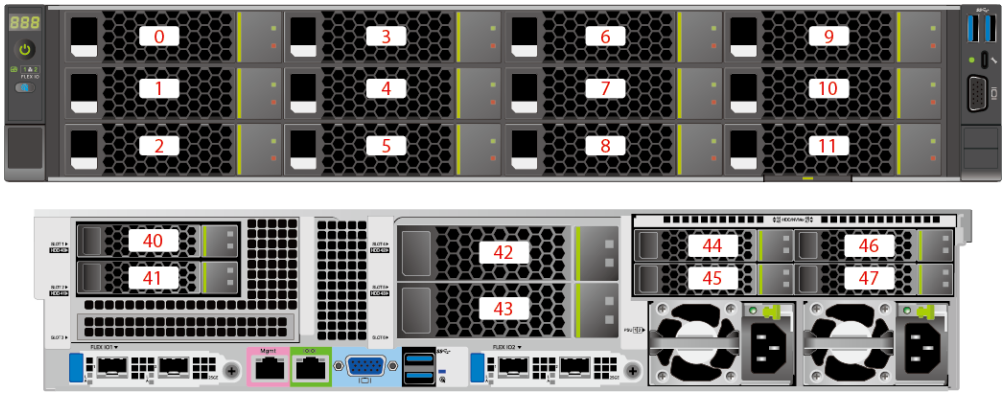

Table 8-13 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
8-11, 44-47	8-11	CPU1
	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 3 (4 x NVMe) in **1.1.5.1 Drive Configurations**.

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Figure 8-34 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

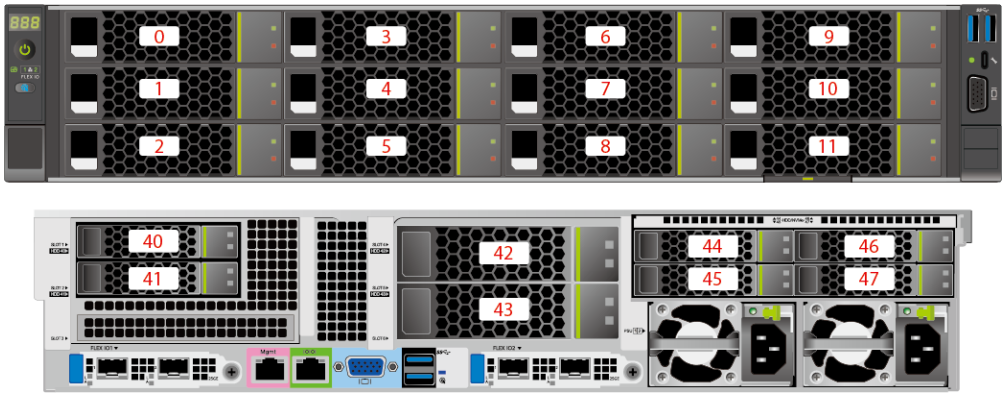

Figure 8-35 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

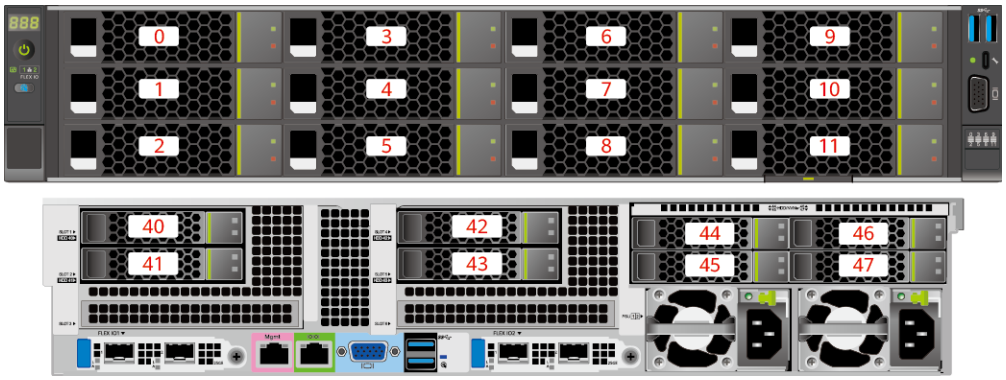

Table 8-14 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
8-11, 44-47	8-11	CPU1
	44-47	CPU2

8.6.1.3.5 12 x 3.5" Drive EXP Configuration

- VMD of 12 x 3.5" drive EXP configuration 1 in **1.1.5.1 Drive Configurations**.

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Figure 8-36 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

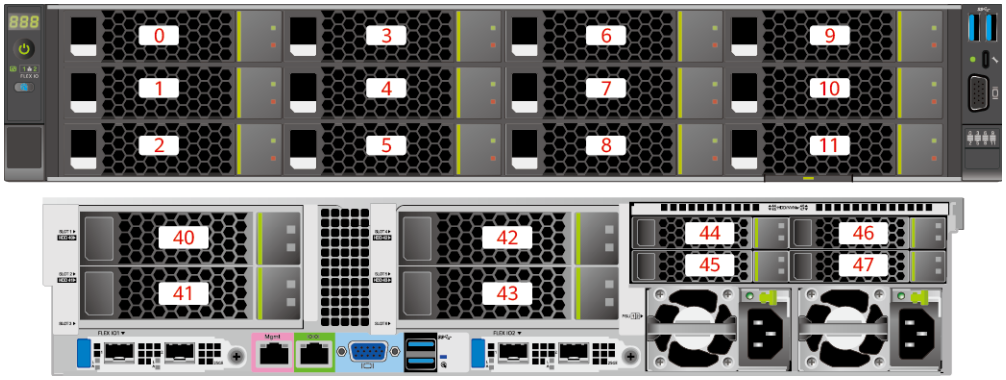

Figure 8-37 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

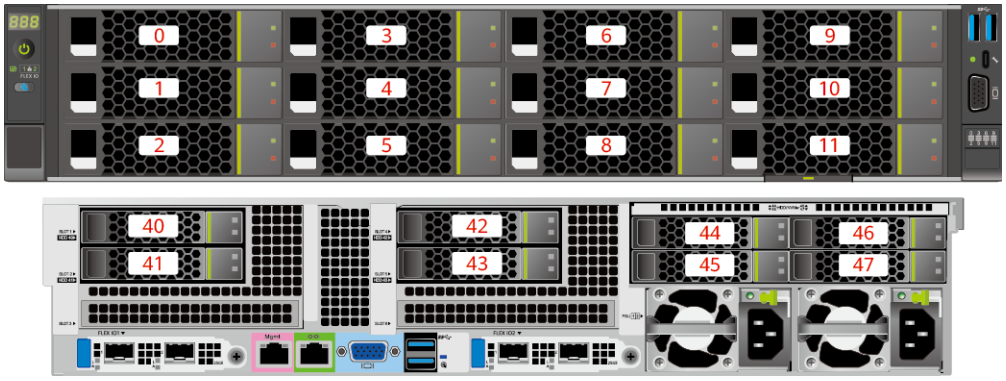

Figure 8-38 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

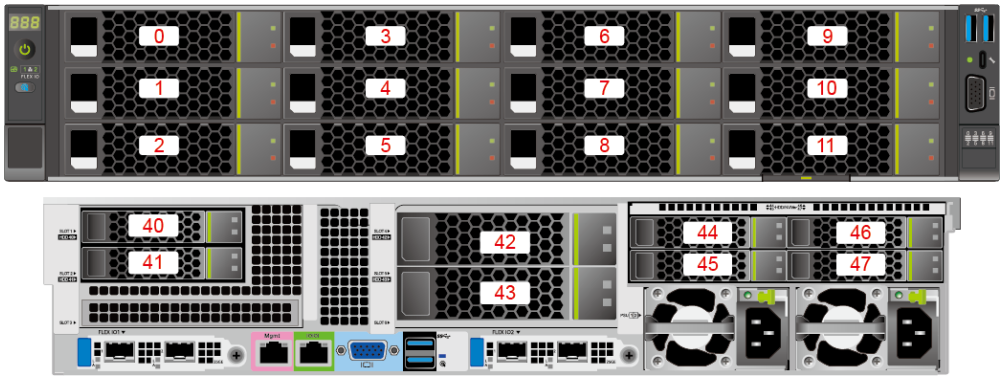

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Figure 8-39 Drive slot numbers (3.5" drives in I/O module 1 and 2.5" drives in I/O module 2)

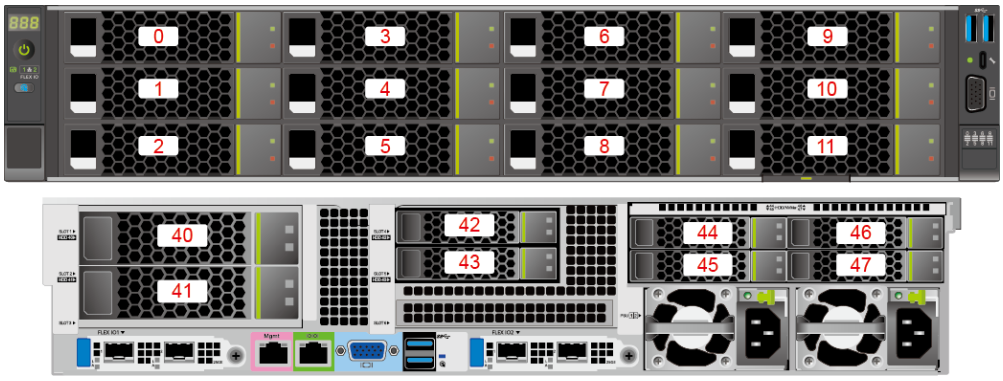

Table 8-15 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive EXP configuration 2 and 12 x 3.5" drive EXP configuration 4 in **1.1.5.1 Drive Configurations**.

Figure 8-40 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

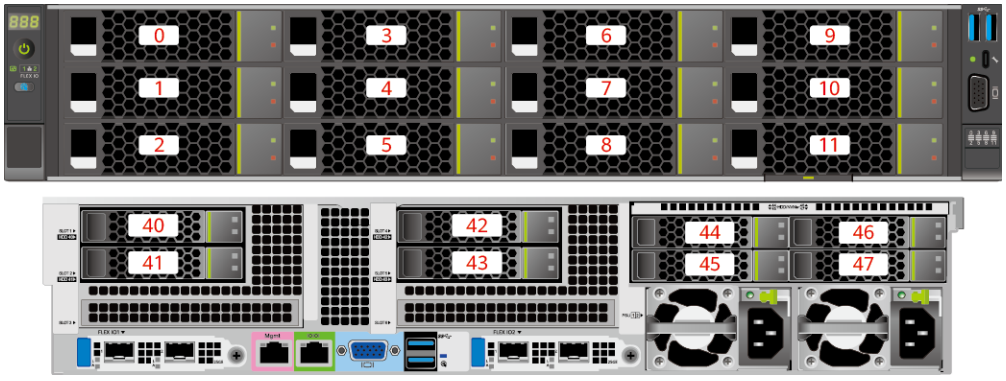

Figure 8-41 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

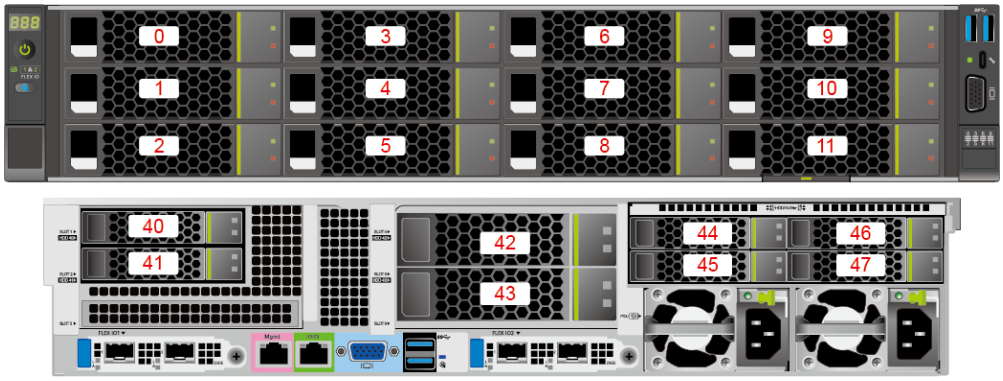

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Table 8-16 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive EXP configuration 3 (dual RAID controller cards) in **1.1.5.1 Drive Configurations**.

Figure 8-42 Drive slot numbers

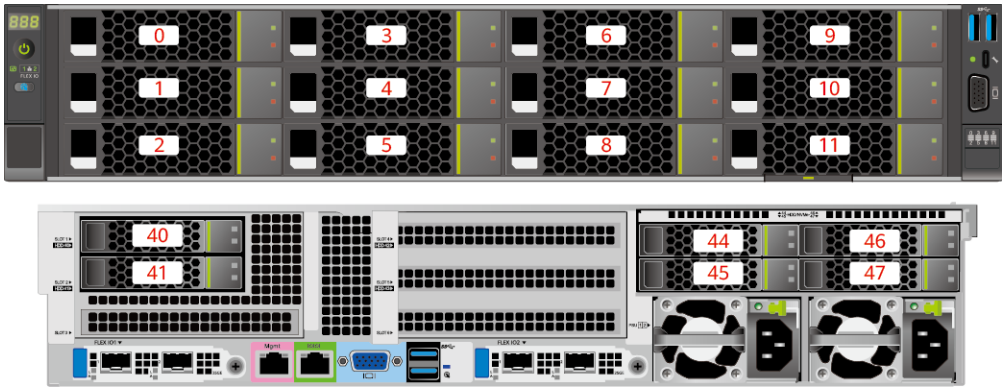

Table 8-17 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.1.3.6 16 x 3.5" Drive EXP Configuration

- VMD of 16 x 3.5" drive EXP configuration 1 in **1.1.5.1 Drive Configurations**.

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Figure 8-43 Drive slot numbers (3.5" drives in I/O module 1 and I/O module 2)

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Figure 8-44 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

Table 8-18 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 16 x 3.5" drive EXP configuration 2 in **1.1.5.1 Drive Configurations**.

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Figure 8-45 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

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Figure 8-46 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

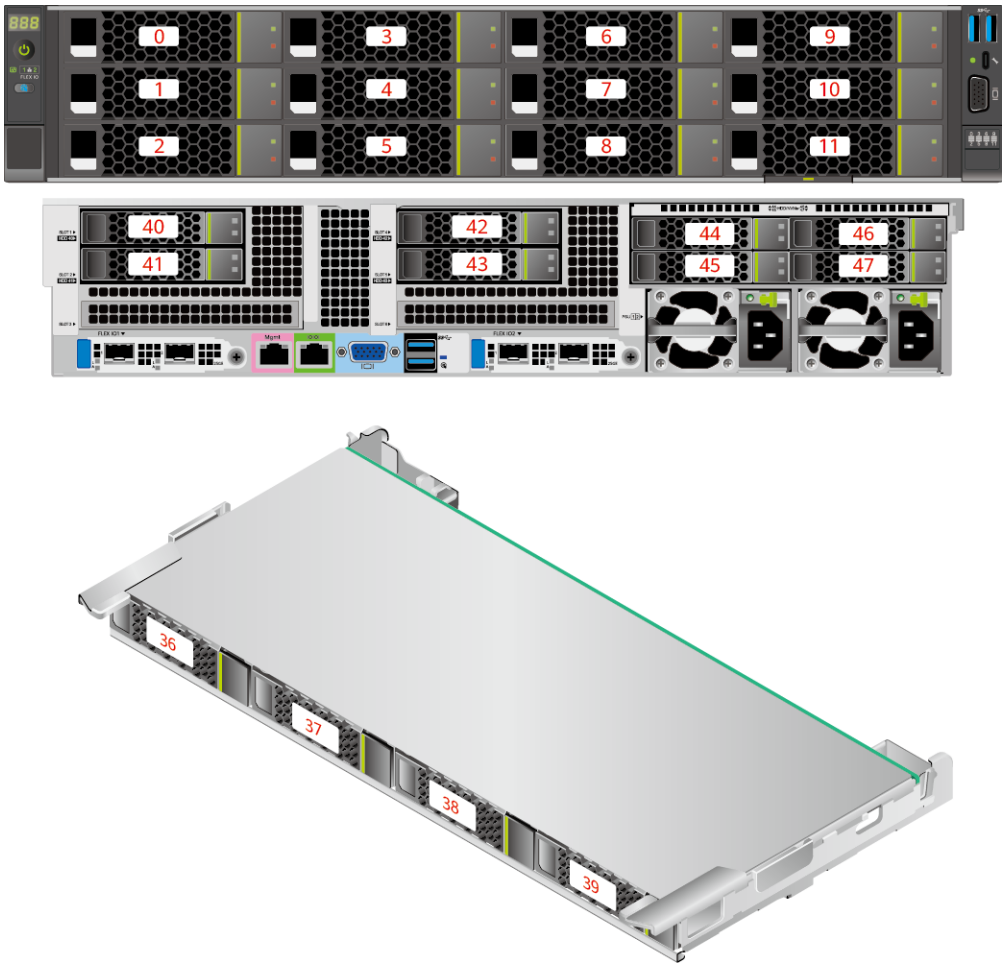

Table 8-19 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.1.3.7 20 x 2.5" Drive Pass-through Configuration

- VMD of 20 x 2.5" drive pass-through configuration 1 (4 x SATA + 16 x NVMe) in **1.1.5.1 Drive Configurations**.

Figure 8-47 Drive slot numbers

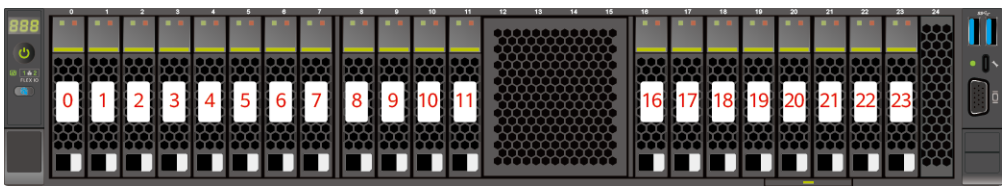

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Table 8-20 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
4-11, 16-23	4-7	CPU2
	8-11	
	16-19	CPU1
	20-23	

- VMD of 20 x 2.5" drive pass-through configuration 2 (4 x SAS/SATA + 16 x NVMe) and 20 x 2.5" drive pass-through configuration 3 (4 x SAS/SATA + 16 x NVMe) in **1.1.5.1 Drive Configurations**.

Figure 8-48 Drive slot numbers

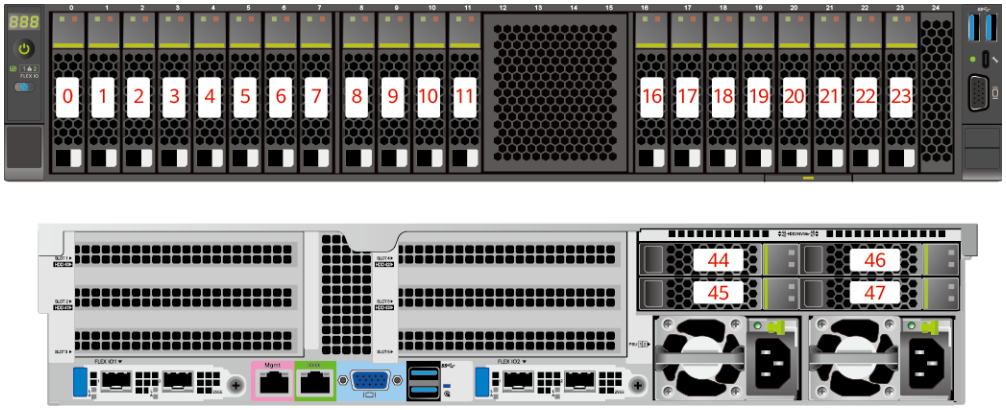

Table 8-21 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
4-11, 16-23	4-7	CPU2
	8-11	
	16-19	CPU1
	20-23	

8.6.1.3.8 24 x 2.5" Drive Configuration

- VMD of 24 x 2.5" drive NVMe configuration 1 in **1.1.5.1 Drive Configurations**.

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Figure 8-49 Drive slot numbers

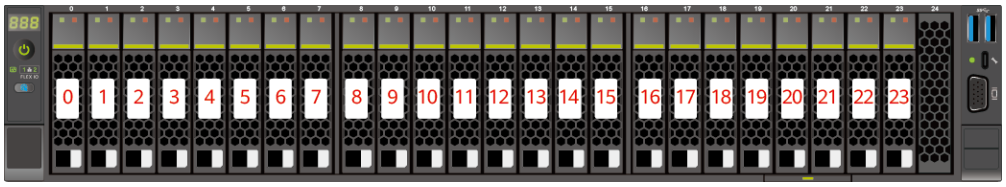

Table 8-22 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
0-23	0-3	CPU2
	4-7	
	8-11	
	12-15	CPU1
	16-19	
	20-23	

- VMD of 24 x 2.5" drive NVMe configuration 2 in **1.1.5.1 Drive Configurations**.

Figure 8-50 Drive slot numbers

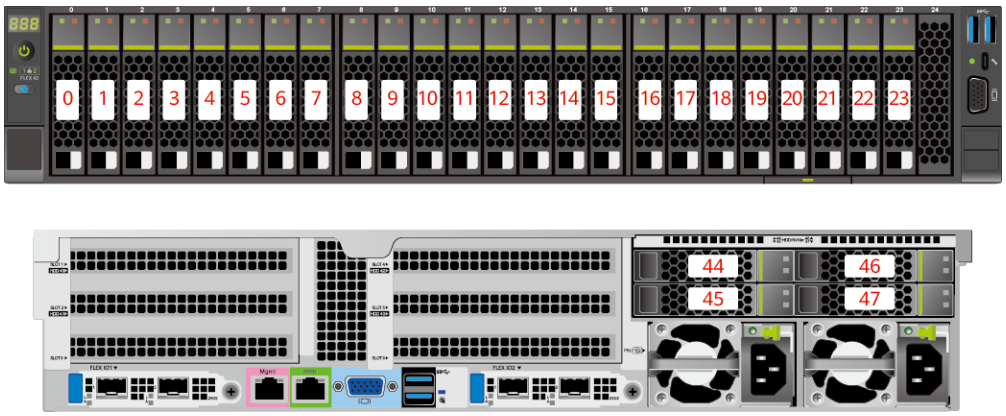

Table 8-23 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
0-23	0-3	CPU2
	4-7	
	8-11	

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Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
	12-15	CPU1
	16-19	
	20-23	

- VMD of 24 x 2.5" drive NVMe configuration 3 in **1.1.5.1 Drive Configurations**.

Figure 8-51 Drive slot numbers

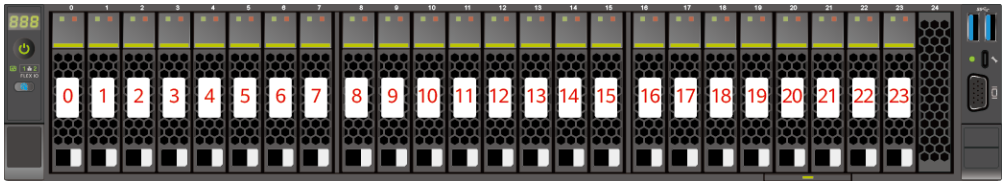

Table 8-24 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
0-23	0-3	CPU1
	4-7	
	8-11	
	12-15	CPU2
	16-19	
	20-23	

- VMD of 24 x 2.5" drive NVMe configuration 4 and 24 x 2.5" drive NVMe configuration 5 in **1.1.5.1 Drive Configurations**.

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Figure 8-52 Drive slot numbers

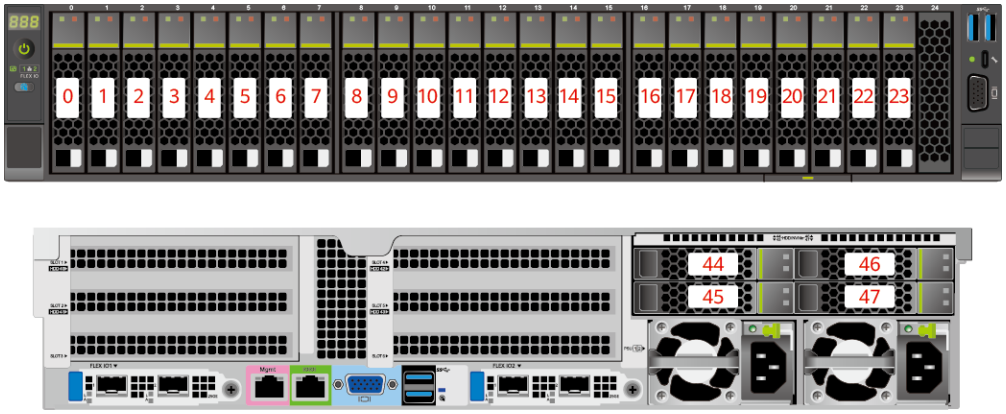

Table 8-25 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
0-23	0-3	CPU1
	4-7	
	8-11	
	12-15	CPU2
	16-19	
	20-23	

- VMD of 24 x 2.5" drive pass-through configuration (three RAID controller cards) in **1.1.5.1 Drive Configurations**.

Figure 8-53 Drive slot numbers

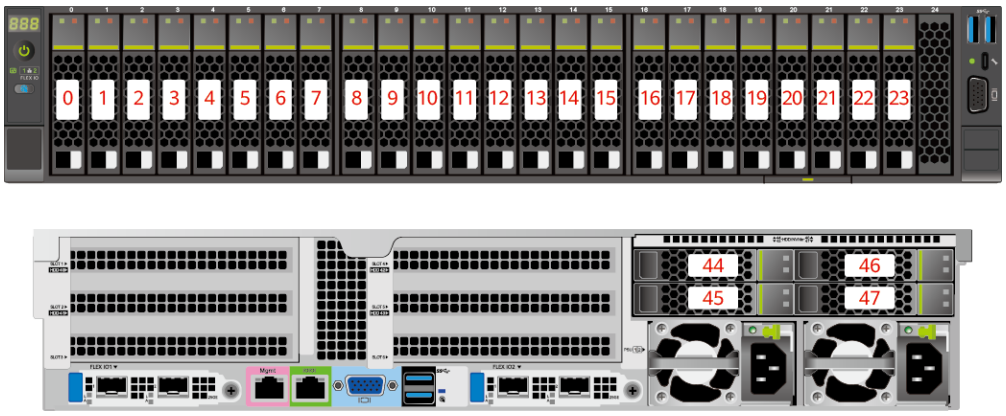

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Table 8-26 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.1.3.9 25 x 2.5" Drive EXP Configuration

- VMD of 25 x 2.5" drive EXP configuration 1 and 25 x 2.5" drive EXP configuration 3 in **1.1.5.1 Drive Configurations**.

Figure 8-54 Drive slot numbers (2.5" drives in I/O module 1)

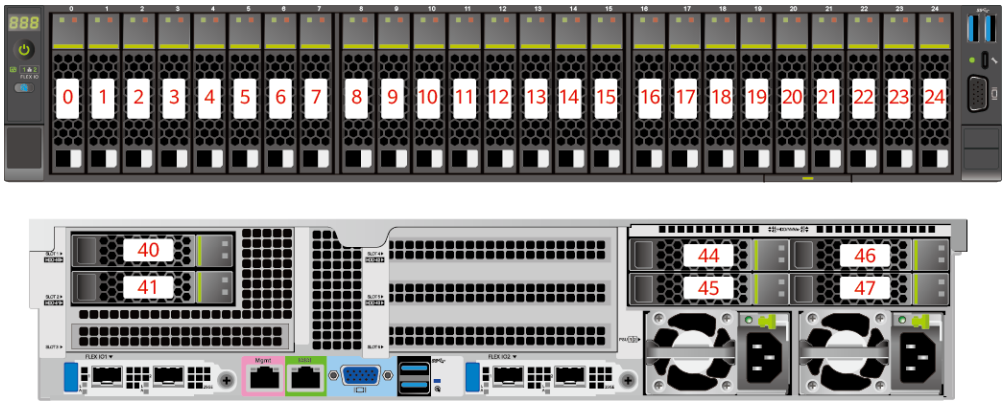

Figure 8-55 Drive slot numbers (3.5" drives in I/O module 1)

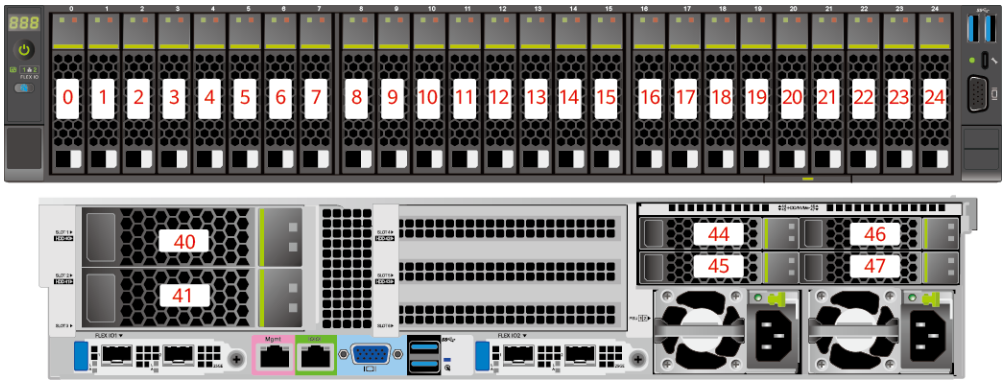

Table 8-27 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 25 x 2.5" drive EXP configuration 2, 25 x 2.5" drive EXP configuration 4, and 25 x 2.5" drive EXP configuration 5 (dual RAID controller cards) in **1.1.5.1 Drive Configurations**.

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Figure 8-56 Drive slot numbers

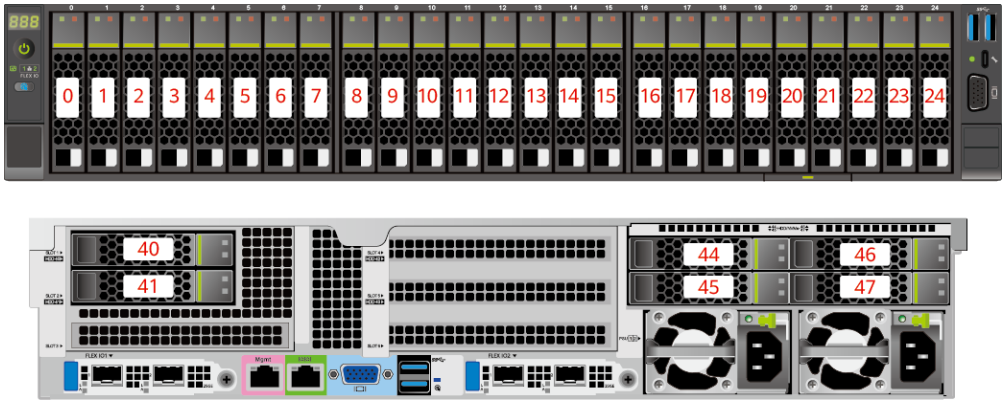

Table 8-28 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 25 x 2.5" drive EXP configuration 6 and 25 x 2.5" drive EXP configuration 7 in **1.1.5.1 Drive Configurations**.

Figure 8-57 Drive slot numbers (2.5" drives in I/O module 1 and I/O module 2)

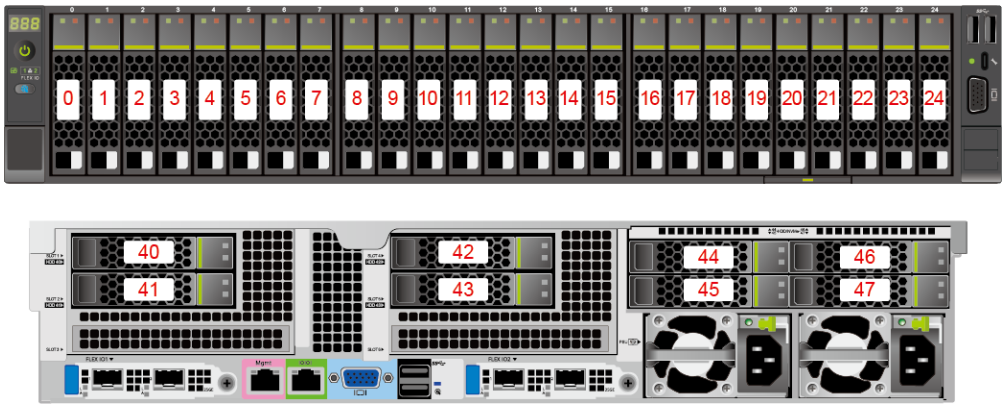

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Figure 8-58 Drive slot numbers (2.5" drives in I/O module 1 and 3.5" drives in I/O module 2)

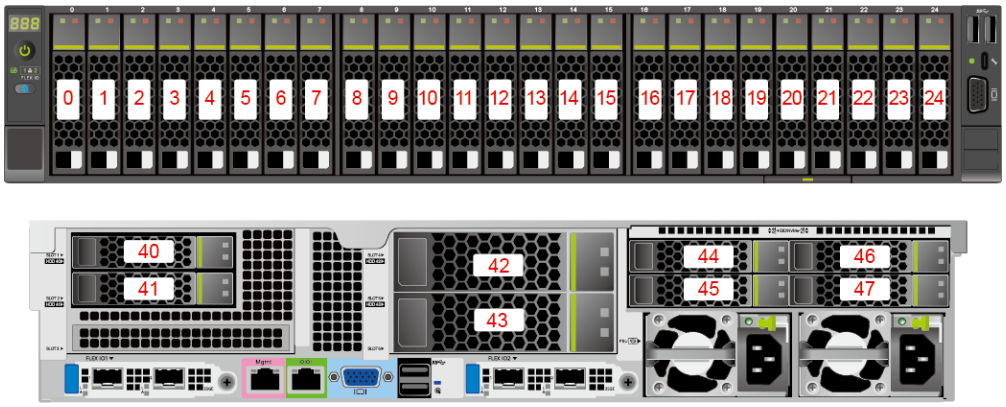

Table 8-29 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.2 2288H V6-16DIMM

The Intel Volume Management Device (VMD) is a module integrated in the processor on the Whitley platform. It is used for surprise hot plug, management, and error processing of NVMe drives.

- Before using the VMD function, contact technical support engineers of the OS vendor to check whether the OS supports the VMD function. If yes, check whether the VMD driver needs to be manually installed and check the installation method.
- The VMD function must be enabled in the BIOS. The function can be enabled only in UEFI mode.
- If the VMD function is enabled and the latest VMD driver is installed, the NVMe drives support surprise hot swap.

8.6.2.1 Enabling VMD

Procedure

Step 1 Access the BIOS.

For details, see **8.7.2 2288H V6-16DIMM BIOS**.

Step 2 Select **Advanced** .

Step 3 Select **CPU Configuration** and press **Enter**.

Step 4 Select **IIO Configuration** and press **Enter**.

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Step 5 Select **Intel(R) VMD Technology** and press **Enter**.

Step 6 Select **Intel(R) VMD Config** and press **Enter**.

Step 7 Select **Auto** and press **Enter**.

NOTE

The VMD function of PCIe devices is disabled by default.

Step 8 Press **F10**.

"Save configuration changes? Press 'Y' to confirm, 'N'/'ESC' to ignore." is displayed.

Step 9 Select **Yes** and press **Enter**.

The server automatically restarts for the settings to take effect.

----End

8.6.2.2 Disabling VMD

Procedure

Step 1 Access the BIOS.

For details, see **8.7.2 2288H V6-16DIMM BIOS**.

Step 2 Select **Advanced** .

Step 3 Select **CPU Configuration** and press **Enter**.

Step 4 Select **IIO Configuration** and press **Enter**.

Step 5 Select **Intel(R) VMD Technology** and press **Enter**.

Step 6 Select **Intel(R) VMD Config** and press **Enter**.

Step 7 Select **Disabled** and press **Enter**.

Step 8 Press **F10**.

"Save configuration changes? Press 'Y' to confirm, 'N'/'ESC' to ignore." is displayed.

Step 9 Select **Yes** and press **Enter**.

The server automatically restarts for the settings to take effect.

----End

8.6.2.3 VMD Affiliation

8.6.2.3.1 8 x 2.5" drive pass-through configuration

VMD of 8 x 2.5" drive pass-through configuration 1, 8 x 2.5" drive pass-through configuration 2, and 8 x 2.5" drive pass-through configuration 3 in **1.2.5.1 Drive Configurations**.

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Figure 8-59 Drive slot numbers

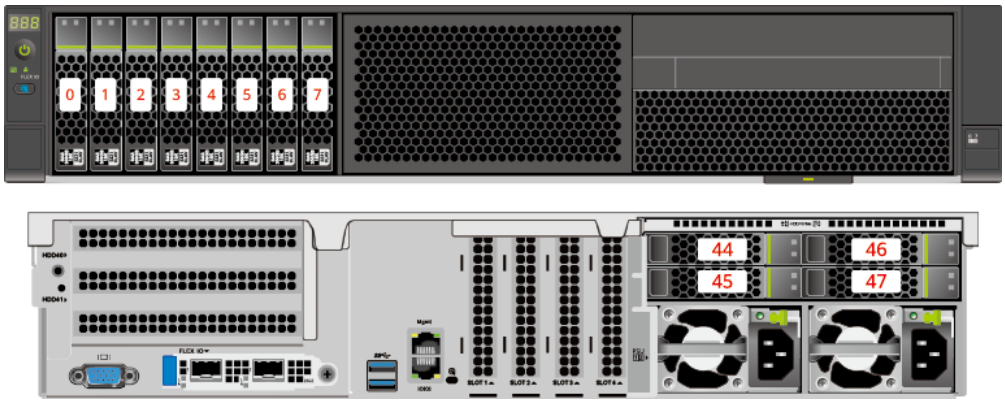

Table 8-30 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.2.3.2 8 x 3.5" drive pass-through configuration

VMD of 8 x 3.5" drive pass-through configuration 1 and 8 x 3.5" drive pass-through configuration 2 in **1.2.5.1 Drive Configurations**.

Figure 8-60 Drive slot numbers

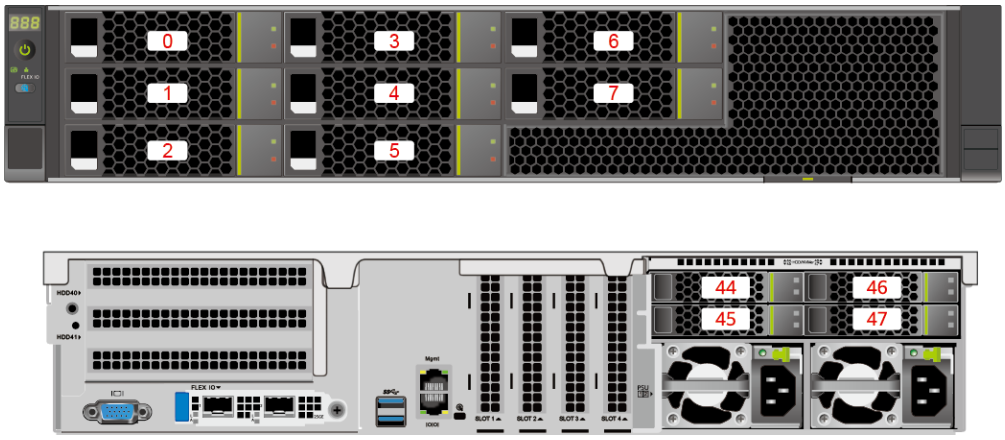

Table 8-31 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

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8.6.2.3.3 12 x 3.5" drive pass-through configuration

- VMD of 12 x 3.5" drive pass-through configuration 1, 12 x 3.5" drive pass-through configuration 2, 12 x 3.5" drive pass-through configuration 3, and 12 x 3.5" drive pass-through configuration 4 (dual RAID controller cards) in **1.2.5.1 Drive Configurations**.

Figure 8-61 Drive slot numbers

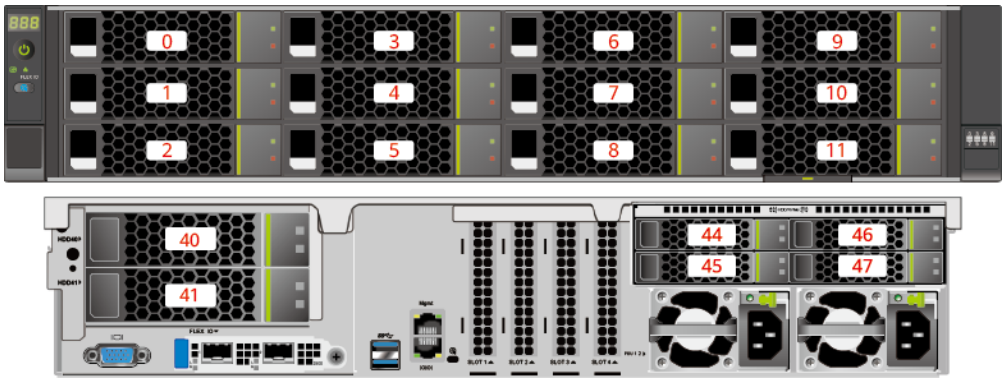

Table 8-32 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

- VMD of 12 x 3.5" drive pass-through configuration 1 (4 x NVMe), 12 x 3.5" drive pass-through configuration 2 (4 x NVMe), and 12 x 3.5" drive pass-through configuration 3 (4 x NVMe) in **1.2.5.1 Drive Configurations**.

Figure 8-62 Drive slot numbers

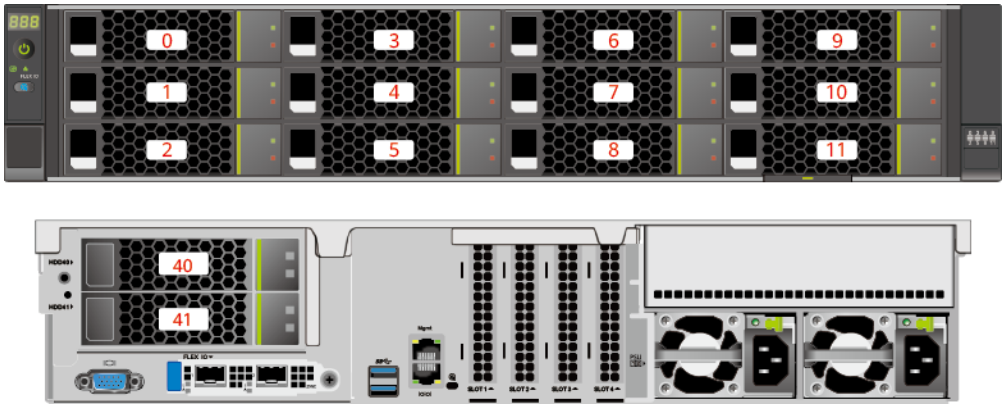

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Table 8-33 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
8-11	8-11	CPU1

8.6.2.3.4 12 x 3.5" drive EXP configuration

- VMD of 12 x 3.5" drive EXP configuration 1, 12 x 3.5" drive EXP configuration 2, 12 x 3.5" drive EXP configuration 3 (dual RAID controller cards), and 12 x 3.5" drive EXP configuration 4 in **1.2.5.1 Drive Configurations**.

Figure 8-63 Drive slot numbers

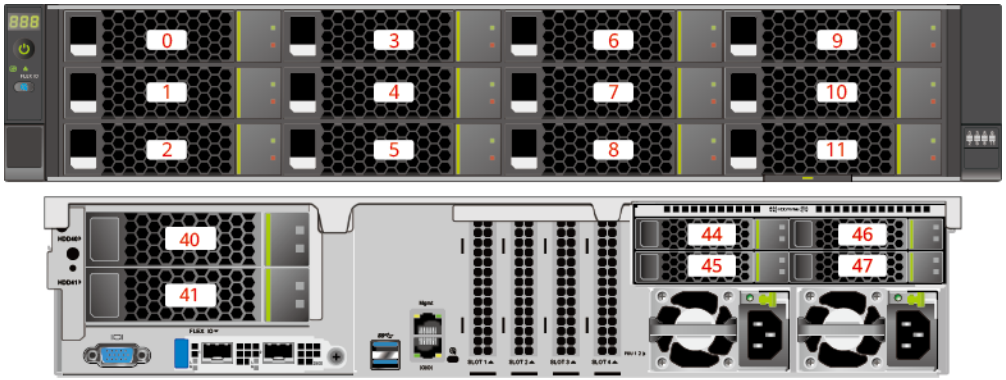

Table 8-34 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.2.3.5 16 x 3.5" drive EXP configuration

- VMD of 16 x 3.5" drive EXP configuration 1, 16 x 3.5" drive EXP configuration 2, and 16 x 3.5" drive EXP configuration 3 in **1.2.5.1 Drive Configurations**.

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Figure 8-64 Drive slot numbers

Table 8-35 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.6.2.3.6 25 x 2.5" drive EXP configuration

VMD of 25 x 2.5" drive EXP configuration 1, 25 x 2.5" drive EXP configuration 2, 25 x 2.5" drive EXP configuration 3, 25 x 2.5" drive EXP configuration 4, 25 x 2.5" drive EXP configuration 5 (dual RAID controller cards), and 25 x 2.5" drive EXP configuration 6 in **1.2.5.1 Drive Configurations**.

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Figure 8-65 Drive slot numbers

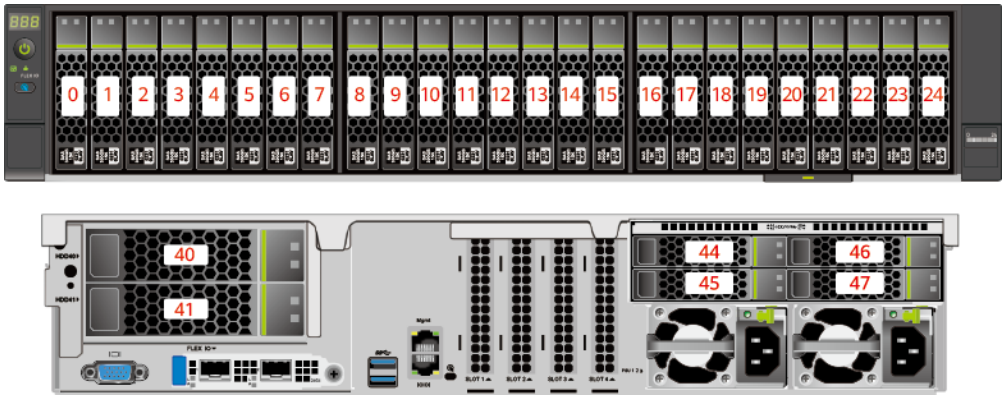

Table 8-36 VMD of NVMe drives

Physical No. of the NVMe Drive	Physical No. of NVMe Drives with the Same VMD	VMD
44-47	44-47	CPU2

8.7 Accessing the BIOS

8.7.1 2288H V6-32DIMM BIOS

Procedure

Step 1 Connect a local PC with the KVM to the server, or access the **Remote Control** page on the iBMC WebUI.

NOTE

For details about how to access the **Remote Control** page on the iBMC WebUI, see *iBMC User Guide* of corresponding server.

Step 2 Power on or restart the server.

NOTE

Restarting the server will interrupt services. Exercise caution when performing this operation.

Step 3 When the screen shown in **Figure 8-66** is displayed, press **Del** or **Delete**.

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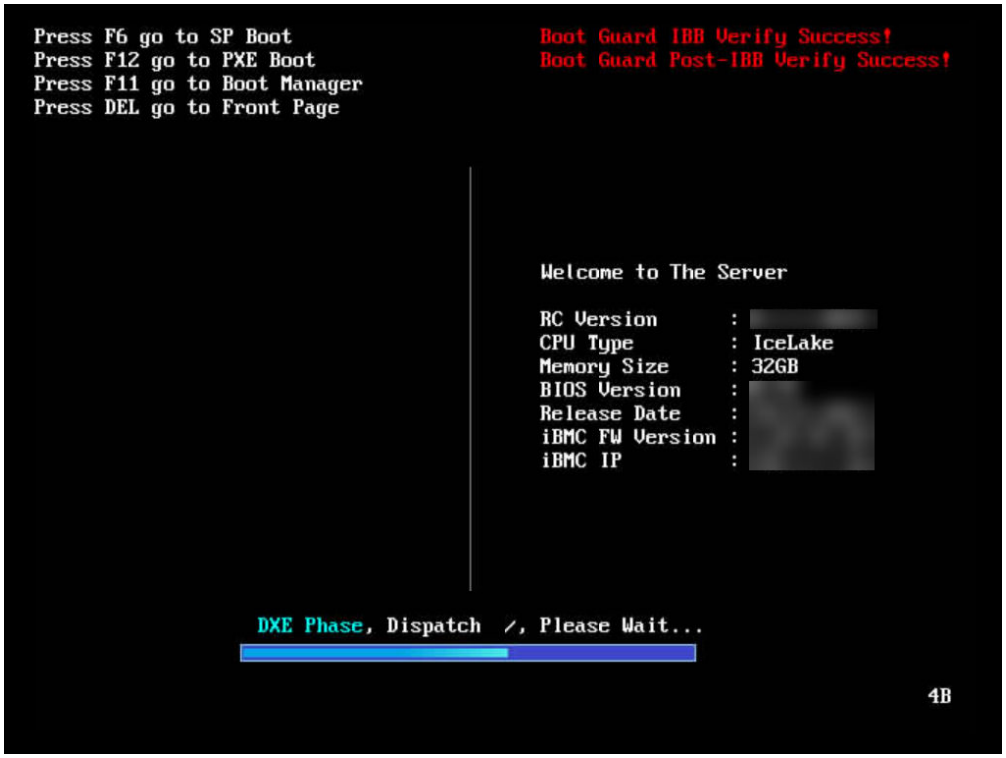
Figure 8-66 BIOS boot screen



NOTE

- To access the Smart Provisioning GUI, press **F6**.
- To switch to the **Boot Manager** screen, press **F11**.
- To boot from the network, press **F12**.

Step 4 Enter the current password.

If you are prompted to enter the current password during the startup, enter the password in the displayed dialog box.

NOTE

- The default BIOS password is **Admin@9000** (administrator password). After the first login, you are advised to set an administrator password immediately. For details, see "Common Operations > Common Operations > Setting the BIOS Password" in the *Whitley Platform BIOS Parameter Reference.*
- Press **F2** to alternate between the English (US), French, and Japanese keyboards.
- Use the mouse to open the on-screen keyboard and enter the password.
- For security purposes, change the administrator password periodically.
- The system will be locked if an incorrect password is entered three consecutive times. Restart the server to unlock it.

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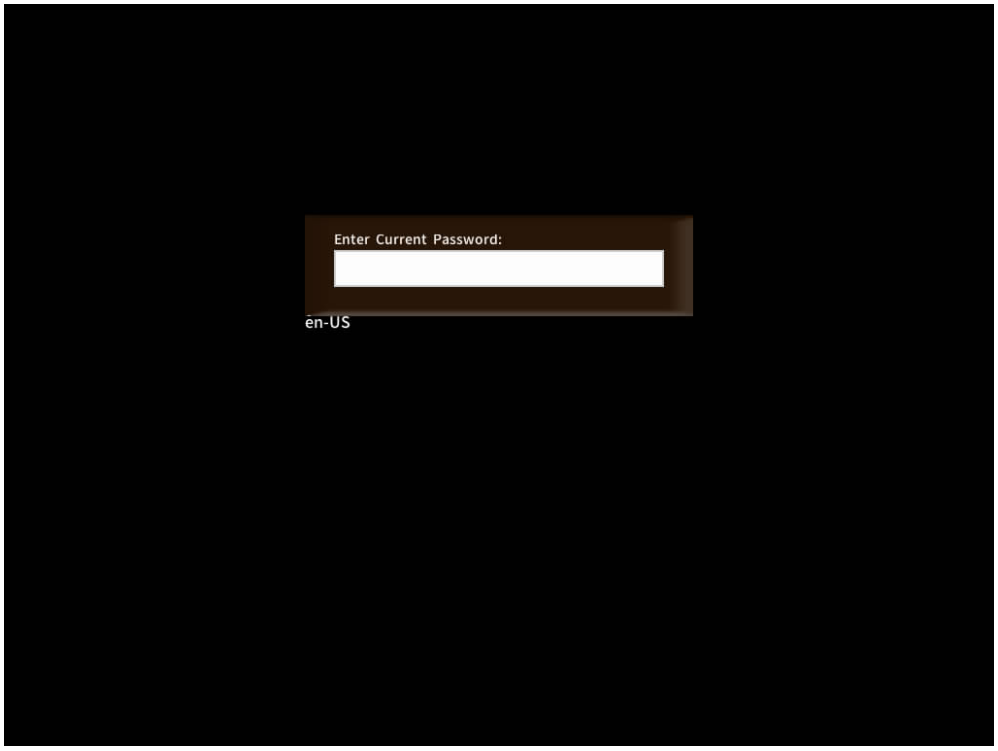
Figure 8-67 Dialog box for entering the current password



Step 5 After the password is entered, press **Enter**.

The front page is displayed.

NOTE

- **Figure 8-68** and **Figure 8-69** show the **Front Page** screen displayed when you log in to the system as the administrator.
- **Figure 8-70** shows the **Front Page** screen displayed when you log in to the system as a common user. In this case, only the **Continue** and **Setup Utility** menus are displayed. On the **Setup Utility** page, a common user can only view menu options, set or change the password of the common user (that is, editing the **Set User Password** option on the **Security** page), set parameters (except **Load Defaults**) on the **Exit** page, press **F10** to save and exit. Other options are all dimmed and cannot be edited. **F9** used to restore the default settings is unavailable.

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Figure 8-68 Front Page screen (UEFI mode)

Figure 8-69 Front Page screen (legacy mode)

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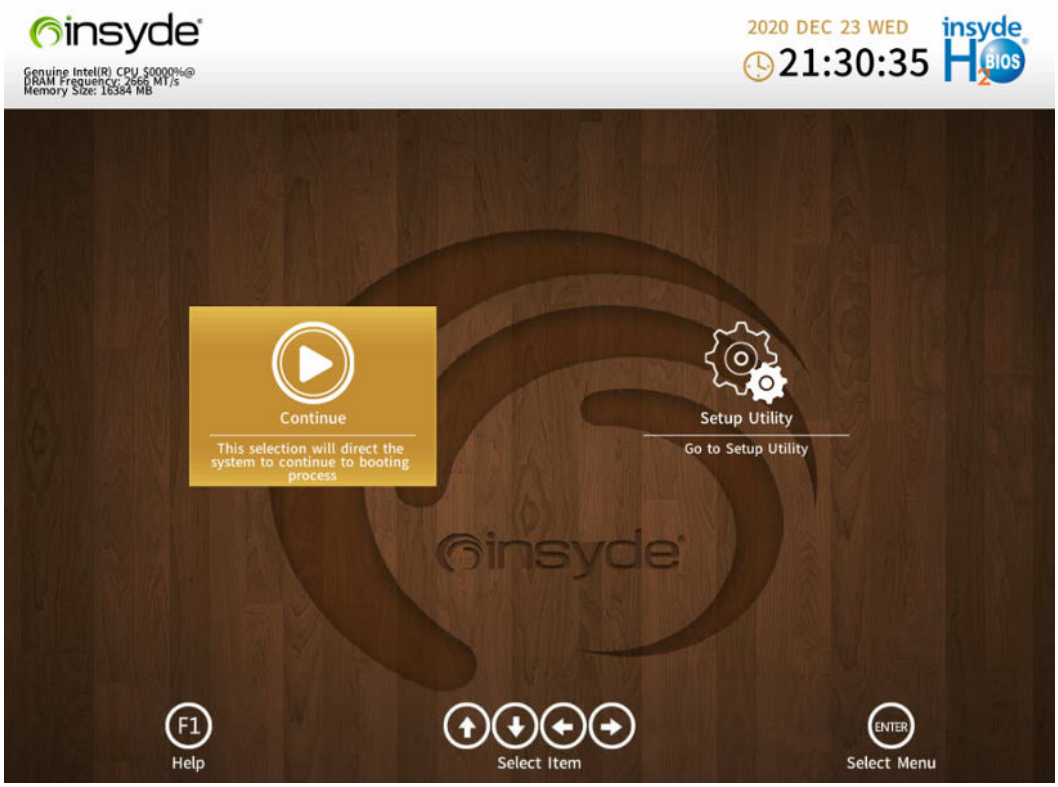
Figure 8-70 Front Page screen (login using a common user password)



Step 6 Use arrow keys to select **Setup Utility** and press **Enter**.

The **Main** screen is displayed.

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Figure 8-71 Main screen 1

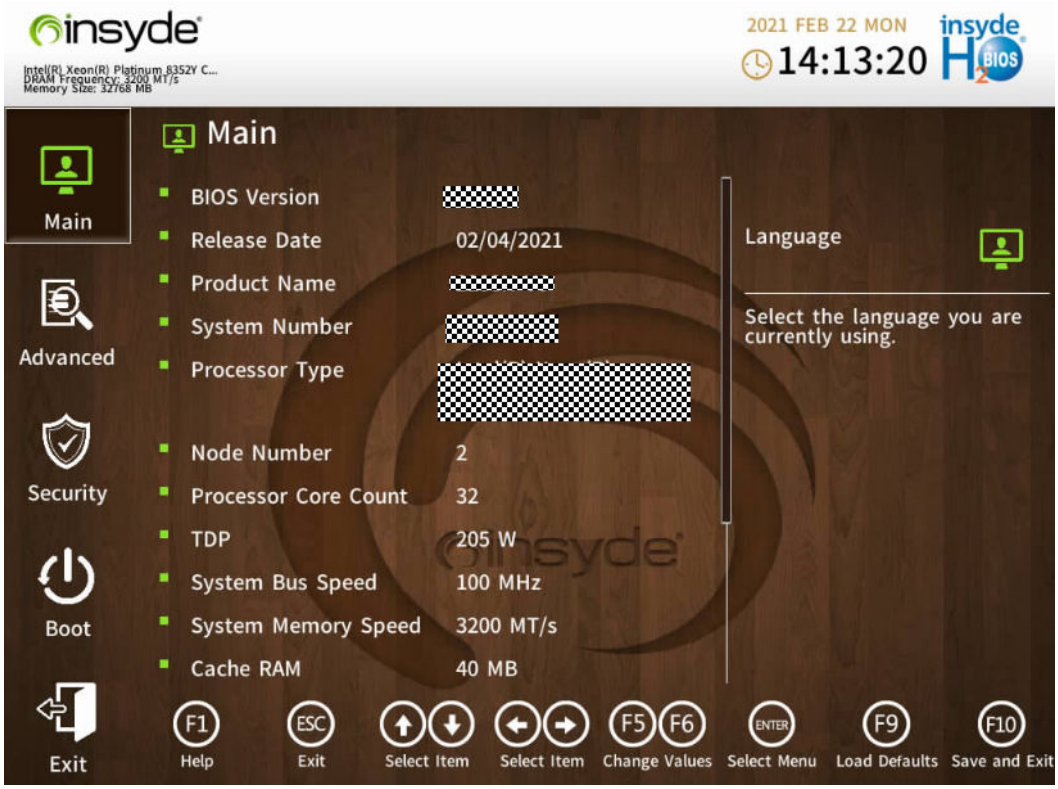
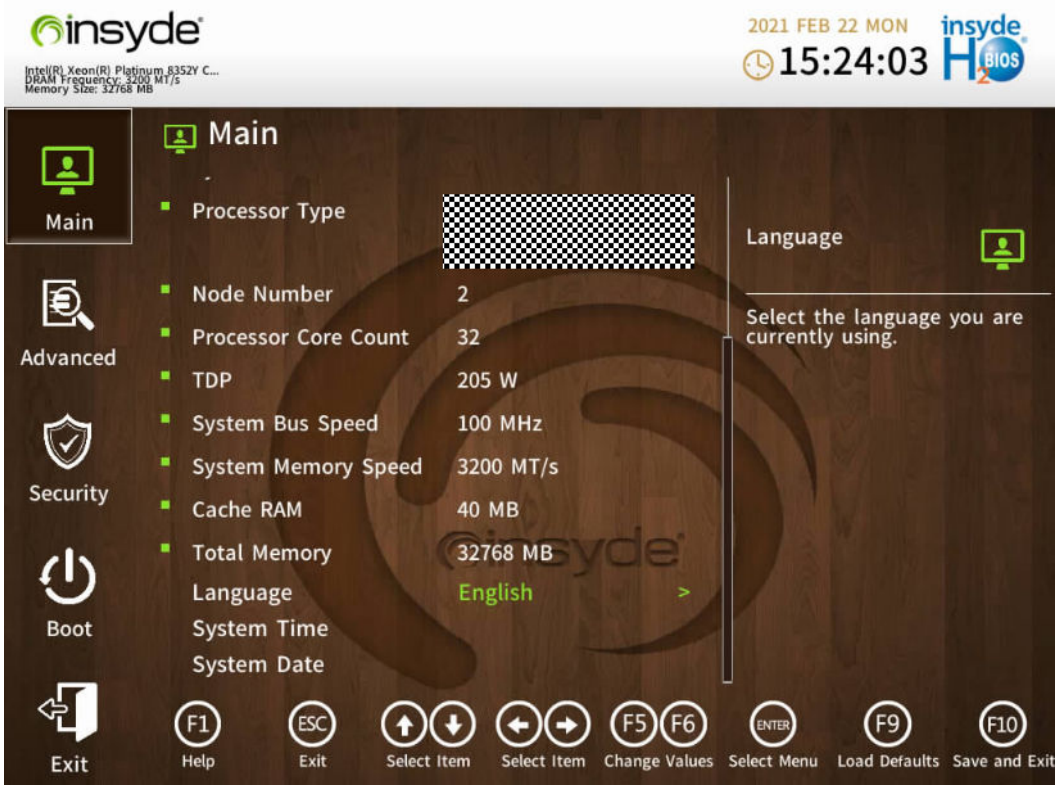


Figure 8-72 Main screen 2



----End

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8.7.2 2288H V6-16DIMM BIOS

Procedure

Step 1 Connect a local PC with the KVM to the server, or access the **Remote Control** page on the iBMC WebUI.

NOTE

For details about how to access the **Remote Control** page on the iBMC WebUI, see *iBMC User Guide* of corresponding server.

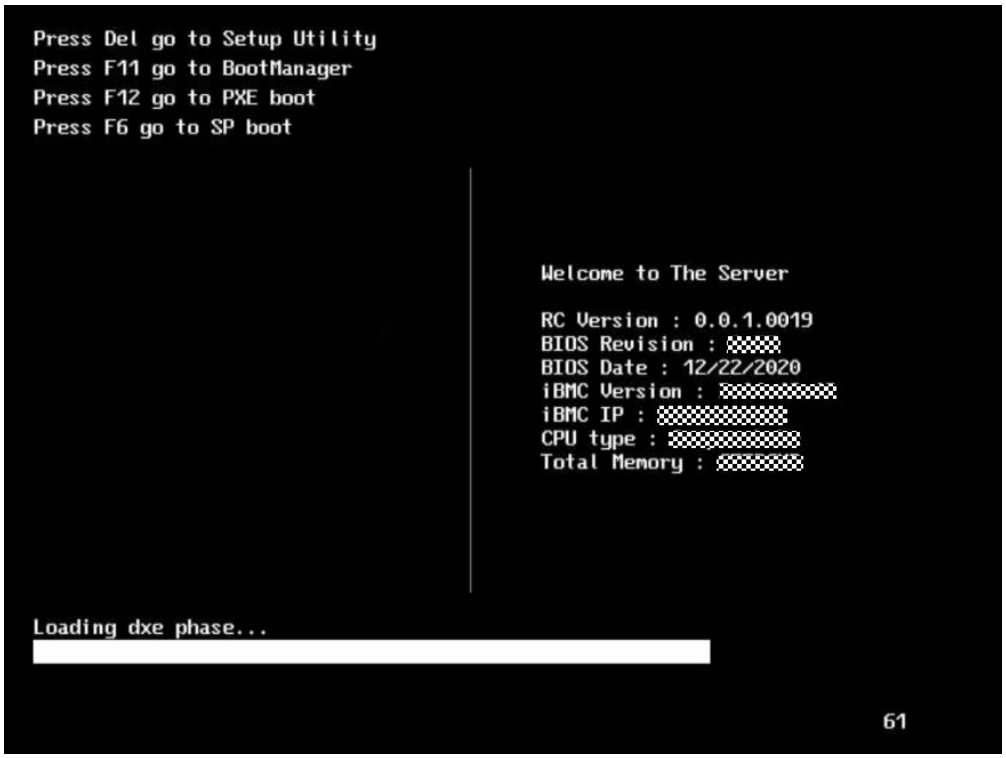
Step 2 Power on or restart the server.

NOTE

Restarting the server will interrupt services. Exercise caution when performing this operation.

Step 3 When the screen shown in **Figure 8-73** is displayed, press **Del** or **Delete**.

Figure 8-73 BIOS boot screen



NOTE

- To access the Smart Provisioning GUI, press **F6**.
- To switch to the **Boot Manager** screen, press **F11**.
- To boot from the network, press **F12**.

Step 4 Enter the current password.

During the startup, if the system prompts you to enter the password, enter the password in the displayed dialog box and press **Enter**.

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NOTE

- The default BIOS password is **Admin@9000** (administrator password). After the first login, you are advised to set an administrator password immediately. For details, see "Common Operations > Common Operations (Only for the 2288H V6-16DIMM) > Setting the BIOS Password" in the *Whitley Platform BIOS Parameter Reference*.
- Press **F2** to alternate between the English (US), French, and Japanese keyboards.
- For security purposes, change the administrator password periodically.
- The system will be locked if an incorrect password is entered three consecutive times. Restart the server to unlock it.

Figure 8-74 Dialog box for entering the current password

Step 5 After entering the password, press **Enter**.

The **Front Page** is displayed.

NOTE

- **Figure 8-75** and **Figure 8-76** show the **Front Page** screen displayed when you log in to the system using the administrator password.
- **Figure 8-77** shows the **Front Page** screen displayed when you log in to the system using a common user password. You can only set the **Continue** and **BIOS Configuration** menu options. Other options are all dimmed and cannot be edited. On the **BIOS Configuration** page, a common user can only view menu options, set or change the password of the common user (that is, editing the **Manage User Password** option on **Security** page), and set parameters (except **Load Defaults**) on the **Exit** page. Other options are all dimmed and cannot be edited.

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Figure 8-75 Front Page screen (UEFI mode)

Figure 8-76 Front Page (legacy mode)

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Figure 8-77 Front Page screen (login using a common user password)

Step 6 Use the arrow keys to select **BIOS Configuration** and press **Enter**.

The **Main** screen is displayed.

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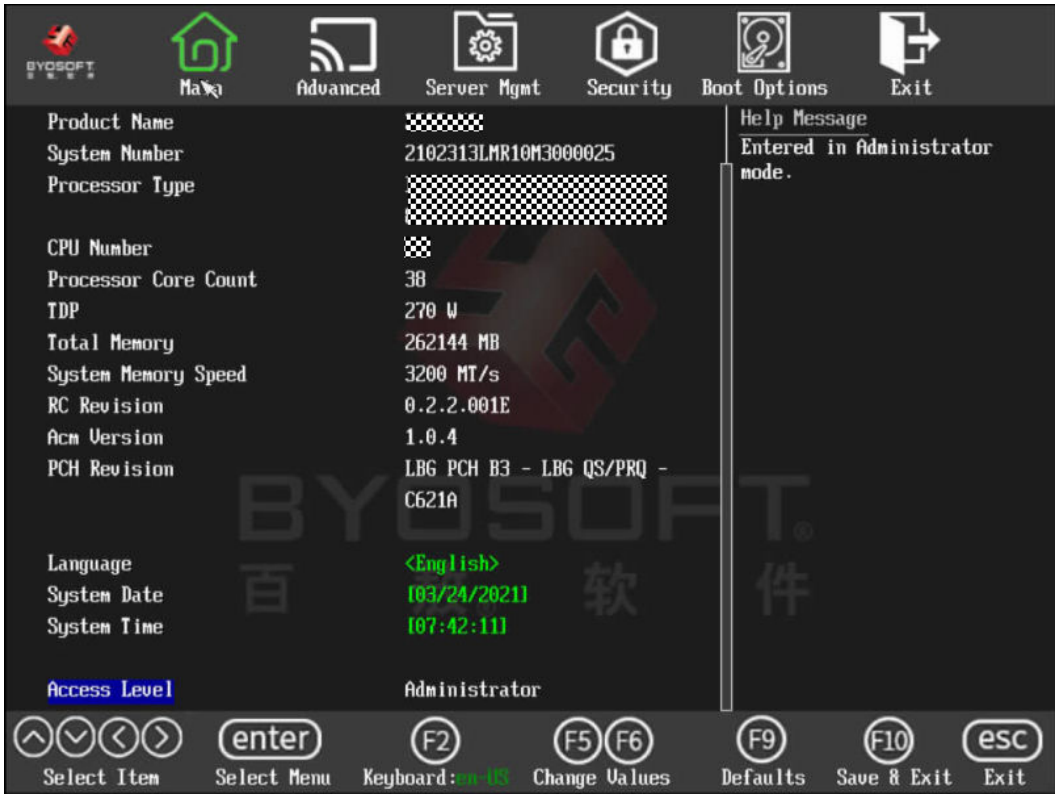
Figure 8-78 Main screen 1

Figure 8-79 Main screen 2



----End

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8.8 Clearing Data from a Storage Device

Scenario

Use the Linux **badblocks** command to clear data on a storage device. When running the **badblocks** command, you need to specify parameters to overwrite data on the storage device.

The following describes how to clear the data on one HDD/SSD as an example. This operation is for reference only. You can also use the disk erasing function of Smart Provisioning to erase data from storage media. This function is not applicable to encrypted drives.

For details, see section "Erasing Hard Disks" in the *Smart Provisioning User Guide*.

NOTICE

The cleared data cannot be restored. Exercise caution when performing this operation.

Procedure

NOTE

Before performing this operation, check that:

- The storage device is not in a RAID array with redundancy, and the server operating system is running properly.
- You have obtained the server No. and the slot No. and location of the storage device to be cleared.

Step 1 You have accessed the desktop of the server where the target drive is located.

For details, see **8.4 Logging In to the Desktop of a Server**.

Step 2 Open the CLI.

Step 3 Query information about drive letters.

lsscsi

Figure 8-80 Querying drive letters

```
linux-hm54:~ # lsscsi
[0:0:0:0]    disk    SEAGATE  ST900MM0006      B001  /dev/sda
[0:0:1:0]    disk    SEAGATE  ST900MM0006      B001  /dev/sdb
```

Step 4 Query drive information.

fdisk -l

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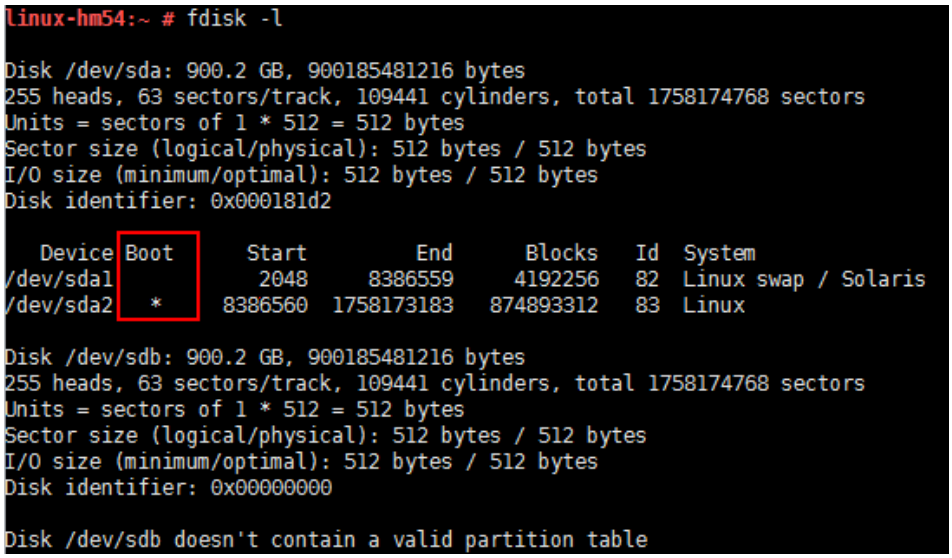
NOTE

- The drive with the * symbol in the **Boot** column is the system drive. As shown in **Figure 8-81**, **sda** is the system drive.
- Do not directly clear system drive data. Before clearing system drive data, clear data from other storage media.

Figure 8-81 Querying drive information

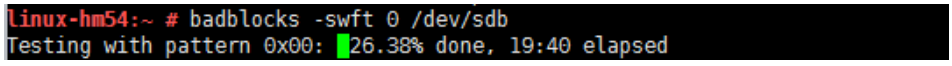


Step 5 Write 0s to the drive to be cleared.

Command: **badblocks -swft 0** ***Drive letter***

Example: **badblocks -swft 0 /dev/sdb**

Figure 8-82 Clearing data (example)



NOTE

- The drive letters vary with the storage media (HDD, SSD, and USB flash drive). Ensure that the drive letter that you entered is correct.
- This operation takes time.
- If the command fails to execute, contact technical support.

Step 6 Remove the drive.

NOTE

After the data is cleared, do not restart or reinstall the server. Otherwise, the system will reload data to the drives during the startup of the server.

----End

8.9 Using the LCD

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8.9.1 Opening and Closing the LCD

8.9.1.1 Opening the LCD

The procedure for opening the LCD on different server models is similar. This section uses the 2488H V6 as an example.

Procedure

Step 1 Determine the position of the LCD.

Figure 8-83 LCD installation position(2288H V6-32DIMM)

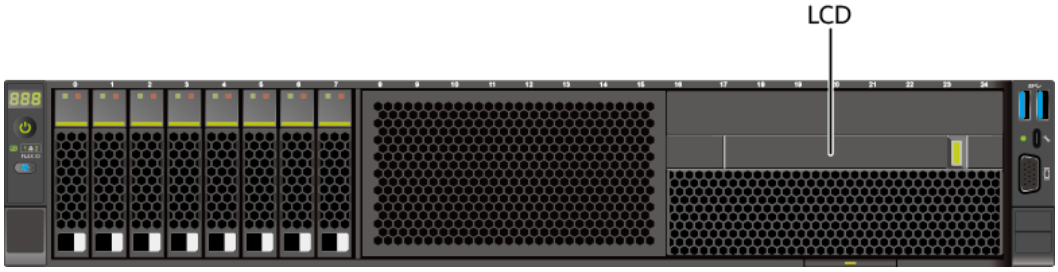
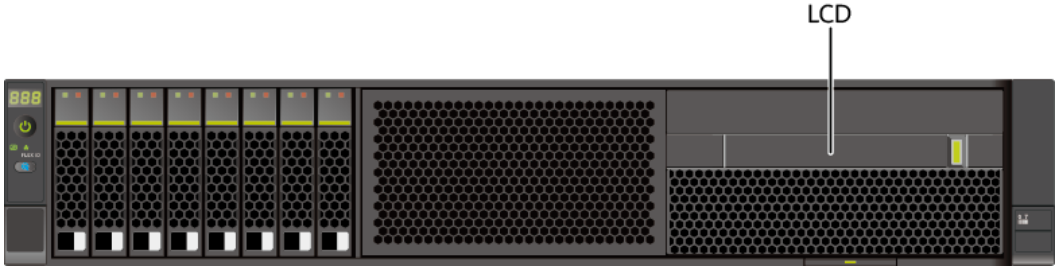


Figure 8-84 LCD installation position (2288H V6-16DIMM)



Step 2 Press the power button on the LCD. See (1) in **Figure 2 Opening the LCD**.

Step 3 Pull out the LCD from the server until the rotating shaft appears. See (2) in **Figure 2 Opening the LCD**.

Step 4 Rotate the LCD into a position for better viewing. See (3) in **Figure 2 Opening the LCD**.

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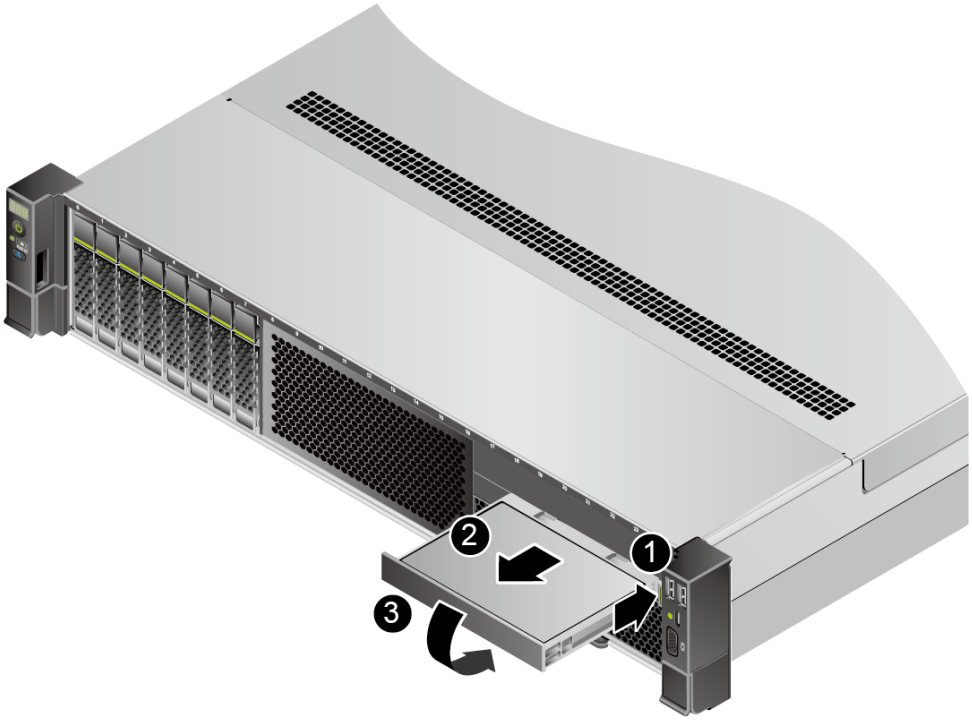
Figure 8-85 Opening the LCD



----End

8.9.1.2 Closing the LCD

Procedure

Step 1 Determine the position of the LCD.

Figure 8-86 LCD installation position(2288H V6-32DIMM)

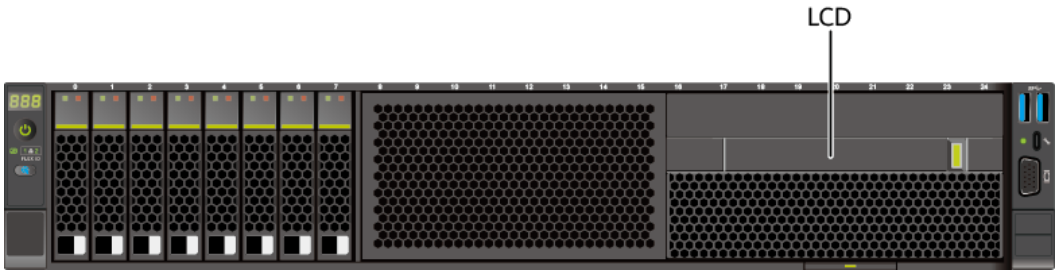


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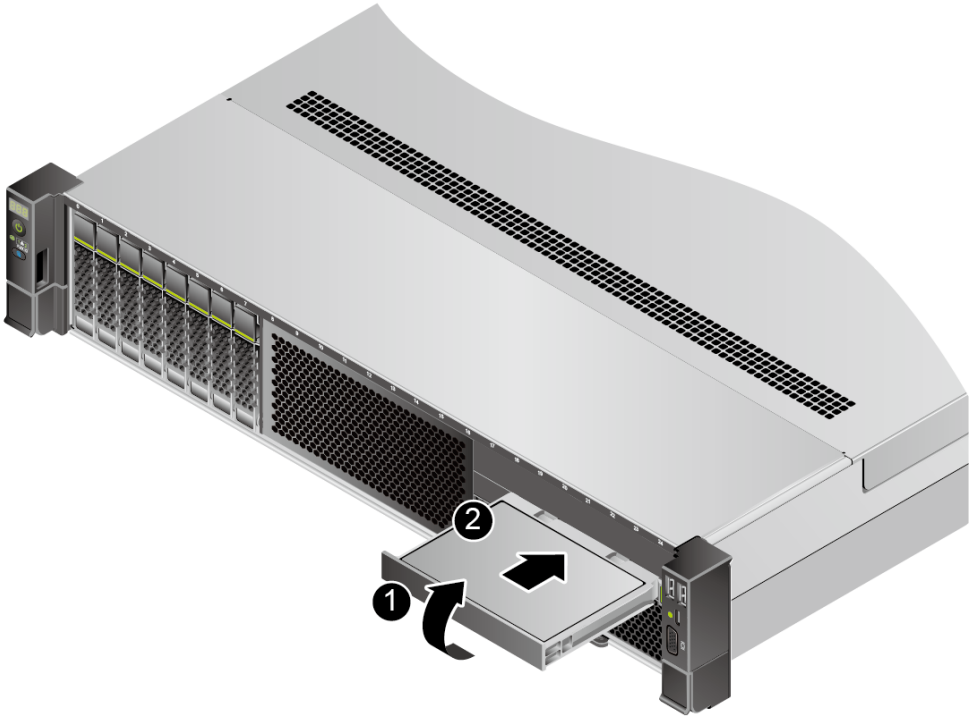
Figure 8-87 LCD installation position (2288H V6-16DIMM)

Step 2 Rotate the LCD to a horizontal position. See (1) in **Figure 2 Closing the LCD**.

Step 3 Push the LCD into the server as far as it will go. See (2) in **Figure 2 Closing the LCD**.

Figure 8-88 Closing the LCD



----End

8.9.2 Configuring the LCD

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8.9.2.1 Default Data

Table 8-37 Default data

Name	Default Value
IP addresses of the iBMC management network port	• IP address: **192.168.2.100** • Subnet mask: **255.255.255.0**
iBMC user name and password	• User name: **Administrator** • Password: **Admin@9000**

8.9.2.2 Logging In to the LCD Home Screen

Procedure

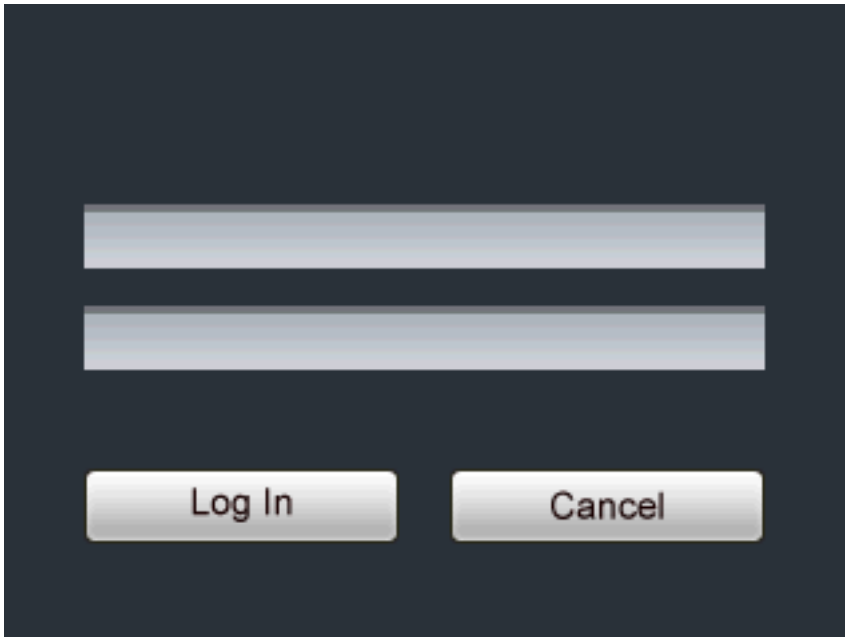
Step 1 Tap any position on the LCD touchscreen to activate the LCD.

The LCD login screen is displayed.

NOTE

If you do not perform any operations on the LCD within 5 minutes, the LCD will automatically hibernate.

Figure 8-89 LCD login screen



Step 2 Enter the iBMC user name and password.

NOTE

The default user name is **Administrator**, and the default password is **Admin@9000**.

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1. Tap a text box to open the soft keyboard.
2. In the first text box, enter the iBMC user name.
3. In the second text box, enter the iBMC password.

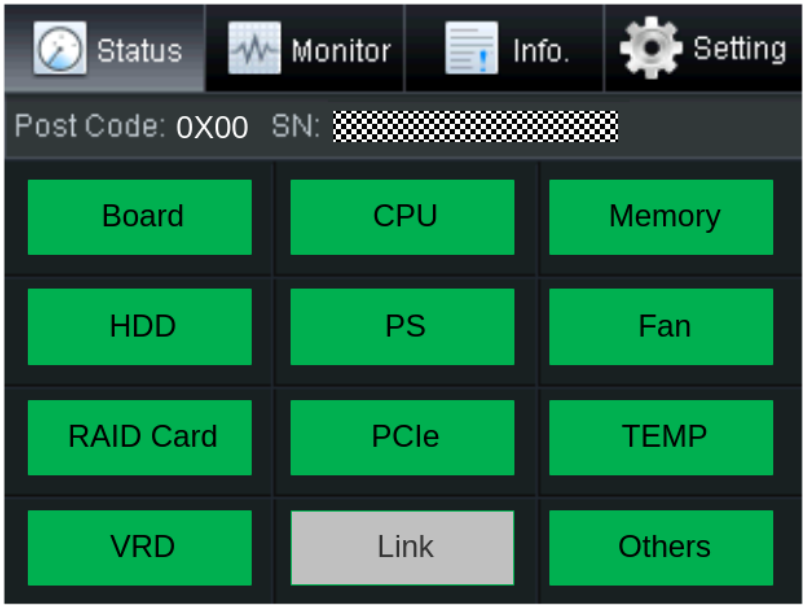
NOTE

To clear the settings, tap **Cancel**.

Step 3 Tap **Log In**.

The LCD home screen is displayed.

Figure 8-90 LCD home screen



----End

8.9.2.3 Changing the Default IP Address of the iBMC Management Network Port

To ensure system security, you are advised to change the default IP address of the iBMC management network port at the first time and periodically update the IP address.

Procedure

Step 1 On the LCD home screen, tap **Setting**. The **Mgmtport** screen is displayed.

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Figure 8-91 Mgmtport screen

Step 2 Change the IP address of the iBMC management network port based on the parameter description .

NOTE

- The default IP address of the iBMC management network port is **192.168.2.100** and the default subnet mask is **255.255.255.0**.
- Tap the text box to display the soft keyboard. Tap **Cancel** to return to the **Mgmtport** screen.

----End

8.9.3 Common Operations

8.9.3.1 Querying the Alarm Status of a Component

Procedure

Step 1 On the LCD home screen, tap **Status**.

The **Status** screen is displayed.

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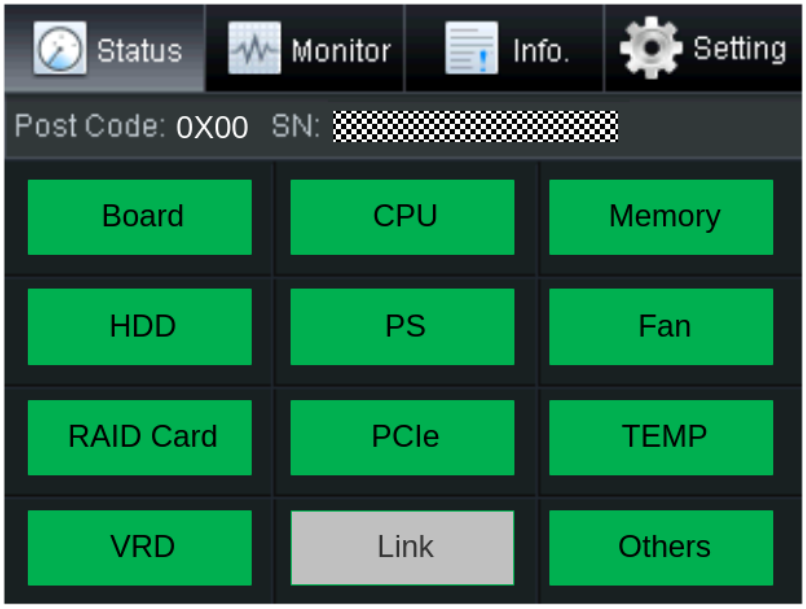
Figure 8-92 Status screen



NOTE

- **Post Code** indicates the status of port 80.
- **SN** indicates the serial number of the server.
- For details about the functions of each tab, see **Table 1-67**.

Step 2 View the status of different components as required.

NOTE

- Components are classified into different categories on the **Status** screen. Tap any component category to enter the component information screen and view the status of all components in this category.
- The status and alarm severity for components are indicated by icons of different colors. For details about the meaning of each icon color, see **1.1.10.1.1 Icon Description**.

----End

8.9.3.2 Viewing the Component Temperature and Server Power

Procedure

Step 1 On the LCD home screen, tap **Monitor**. The **Monitor** screen is displayed.

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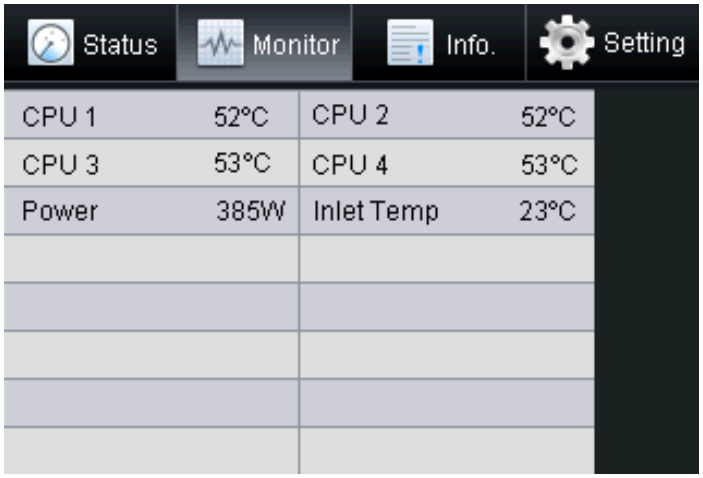
Figure 8-93 Monitor screen



Step 2 View the component temperature and server power.

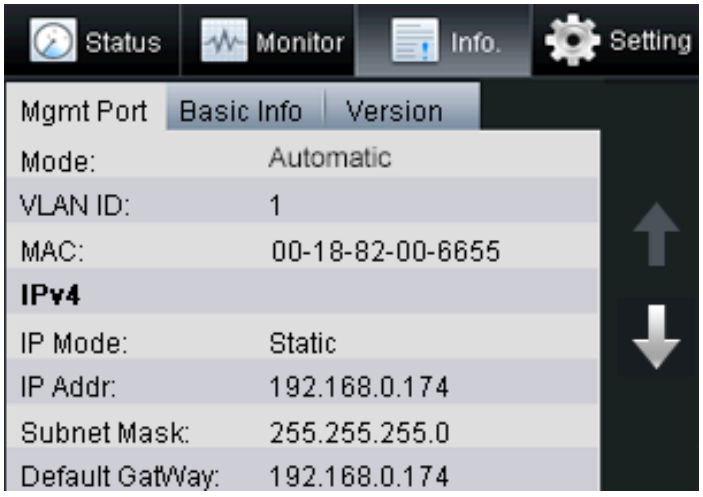
----End

8.9.3.3 Viewing the IP Address of the iBMC Management Network Port

Procedure

Step 1 On the LCD home screen, tap **Info.**. The **Info. > Mgmt Port** screen is displayed.

Figure 8-94 Info. > Mgmt Port screen



Step 2 View the IP address of the iBMC management network port.

The **Info. > Mgmt Port** screen displays the management network port mode, VLAN ID, MAC address, IPv4 address, and IPv6 address.

----End

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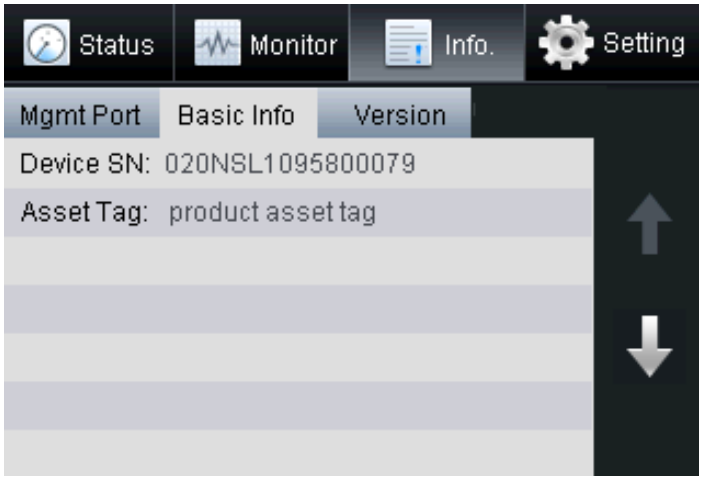
8.9.3.4 Viewing the Basic Server Information

Procedure

Step 1 On the LCD home screen, tap **Info.** > **Basic Info**.

The **Info. > Basic Info** screen is displayed.

Figure 8-95 Info. > Basic Info screen



Step 2 View the basic server information.

Info. > **Basic Info** page displays the device serial number and asset label.

----End

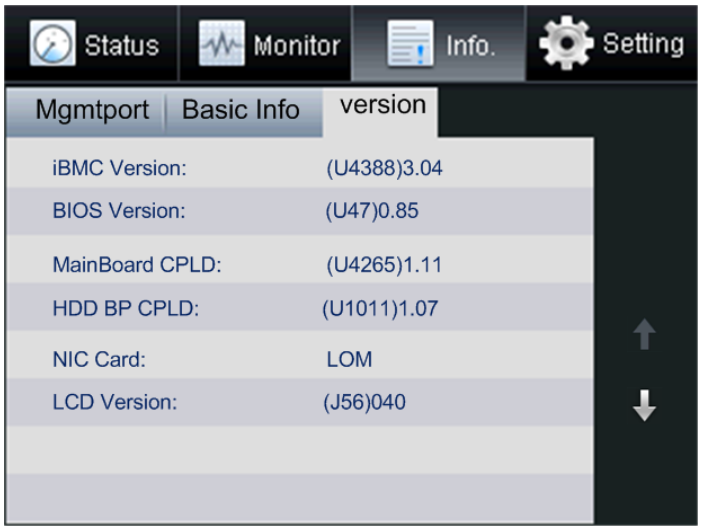
8.9.3.5 Viewing the Firmware Versions

Procedure

Step 1 On the LCD home screen, tap **Info.** > **version**.

The **Info. > version** screen is displayed.

Figure 8-96 Info. > version screen



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Step 2 View the firmware versions of the server.

The **Info. > version** screen displays the version of the iBMC software, BIOS software, mainboard CPLD, drive backplane CPLD, NIC, and LCD software.

----End

8.9.3.6 Setting the IP Address of the iBMC Management Network Port

Procedure

Step 1 On the LCD home screen, tap **Setting**. The **Mgmtport** screen is displayed.

Figure 8-97 Mgmtport screen

Step 2 Change the IP address of the iBMC management network port based on the parameter description in **Table 1-73**.

NOTE

- The default IP address of the iBMC management network port is **192.168.2.100** and the default subnet mask is **255.255.255.0**.
- Tap the text box to display the soft keyboard. Tap **Cancel** to return to the **Mgmtport** screen.

----End

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9 More Information

9.1 Obtaining Technical Support

9.2 Product Information Resources

9.3 Product Configuration Resources

9.4 Maintenance Tool

9.1 Obtaining Technical Support

xFusion Digital Technologies Co., Ltd. provides timely and effective support for users through local branch offices, secondary technical support system, telephone technical support, remote and on-site technical services.

Technical Support Website

Technical documents are available at **xFusion website**.

Knowledge Base

To obtain case study about servers, visit **Knowledge Base**.

Obtaining Technical Support

xFusion provides comprehensive technical support and services. To obtain assistance, contact xFusion technical support as follows:

- Contact Global Technical Assistance Center by phone or email. For the phone number and email address, see **Global Service Hotline**.
- Contact technical support personnel at your local xFusion branch office.

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9.2 Product Information Resources

Table 9-1 Product information resources

Item	Description	How to Obtain
Server Product Documentation	Documents that provide information about the structure, specifications, installation and removal of components, installation of software, and server configuration.	Visit **Technical Support > Documentation**, select the product model, and download the product documentation.
Compatibility List	A tool used to query the OSs, components, and peripherals compatible with a server.	Visit **Compatibility List**.
Warranty Query System	A system used to query service information about servers.	Visit **Maintenance Search**.
Power Calculator	A tool used to calculate server power consumption based on the server configuration.	Visit **Power Calculator**.

9.3 Product Configuration Resources

Table 9-2 Product configuration resources

Tool	Description	How to Obtain
Server removal and installation videos	Show how to remove and install server hardware.	Visit **Multimedia Portal**.
Memory Configuration	An online application that helps you specify the information, such as the product model, CPU quantity, and DIMM quantity. Then, the application displays the DIMM installation sequence in a graphical manner.	Visit **Server Assembly Guide**.

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9.4 Maintenance Tool

Table 9-3 Software tools for routine maintenance

Tool	Server Model and Software Version	Description
FusionServer Tools	**FusionServer Tools**	FusionServer Tools contain tools used for batch deployment, maintenance, and upgrade of servers. Download link: **FusionServer Tools**
Smart Provisioning	For details, see the ***Smart Provisioning User Guide***.	Smart Provisioning is used to install OSs, configure RAID, and upgrade firmware. Download link: **Smart Provisioning**

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10 Software and Configuration Utilities

10.1 iBMC

10.2 BIOS

10.1 iBMC

The intelligent Baseboard Management Controller (iBMC) complies with DCMI 1.5/IPMI 1.5/IPMI 2.0 and SNMP standards and supports various functions, including KVM redirection, text console redirection, remote virtual media, and hardware monitoring and management.

The iBMC offers the following features:

- Various management interfaces

  The iBMC provides IPMI, CLI, Data Center Manageability Interface (DCMI), Redfish interfaces, Hypertext Transfer Protocol Secure (HTTPS), and SNMP.
- Fault detection and alarm management

  The iBMC implements fault detection and alarm management, ensuring stable, uninterrupted 24/7 system operation.
- Virtual KVM and virtual media

  The iBMC provides virtual KVM and virtual media, facilitating remote maintenance.
- WebUI

  The iBMC provides a web-based UI for setting and querying device information.
- System breakdown screenshots and video playback

  The iBMC allows screenshots and videos to be created when the system breaks down. The screenshots and videos help to identify the cause of system breakdown.
- Screen snapshots and videos

  The iBMC offers screen snapshots and videos, which simplify routine preventive maintenance, recording, and auditing.
- Support for DNS and LDAP

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The iBMC supports domain name system (DNS) and Lightweight Directory Application Protocol (LDAP) to implement domain management and directory service.

- Image backup

  The iBMC works in active/standby mode to ensure system reliability. If the active iBMC is faulty, the standby iBMC takes over services immediately.

- Intelligent power management

  The iBMC uses power capping to increase deployment density, and uses dynamic energy saving to reduce operating expenditure.

For details about iBMC, see the *iBMC User Guide.*

10.2 BIOS

The basic input/output system (BIOS) is the most basic software loaded on a computer hardware system. The BIOS provides an abstraction layer for the operating system (OS) and the hardware to interact with the keyboard, display, and other input/output (I/O) devices.

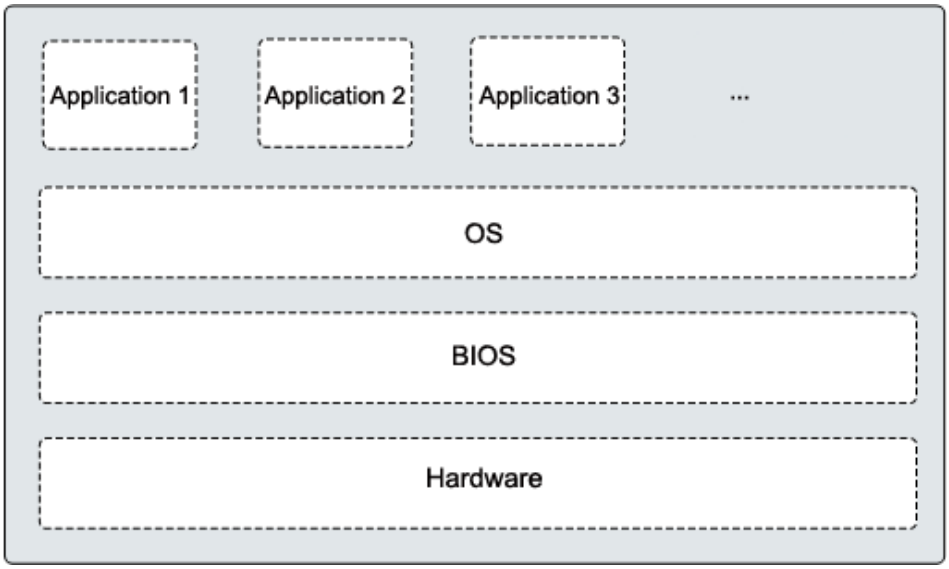
The BIOS data is stored on the Serial Peripheral Interface (SPI) flash memory. The BIOS performs a power-on self-test (POST), initializes CPUs and memory, checks the I/O and boot devices, and finally boots the OS. The BIOS also provides the advanced configuration and power interface (ACPI), hot swap setting, and a management interface in Chinese, English, and Japanese.

The Whitley platform BIOS complies with UEFI 2.7 and ACPI 6.2 specifications.

The BIOS on Whitley-based servers is developed based on the code base of independent BIOS vendors (IBVs). It provides a variety of in-band and out-of-band configuration functions as well as high scalability and supports customization.

For more information about the BIOS, see the *Whitley Platform BIOS Parameter Reference*.

Figure 10-1 BIOS in the system



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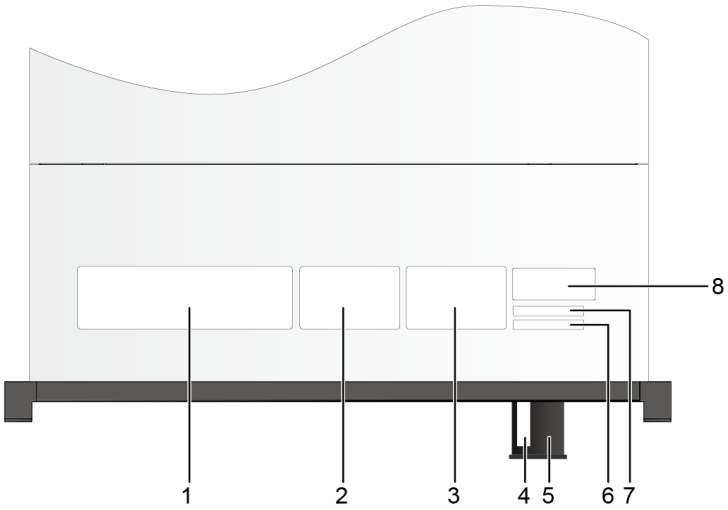
A Appendix

A.1 Chassis Label

Figure A-1 Chassis head label



1	Nameplate	2	Certificate
3	Quick access tag	4	SN **NOTE** For details, see **A.2 Product SN**.
5	Slide-out label plate **NOTE** The label locations vary with server models or configurations. For details, see **2288H V6-32DIMM Appearance** and **2288H V6-16DIMM Appearance**.	6	SN **NOTE** For details, see **A.2 Product SN**.

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7	Reserved space for custom label	8	Pressure-proof label **NOTE** This label indicates that do not place any objects on top of a rack-mounted device.

A.1.1 On the Front Top

A.1.1.1 Nameplate

Figure A-2 Nameplate example

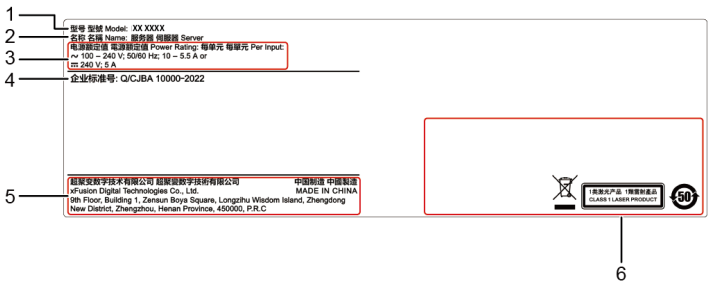

Table A-1 Nameplate description

No.	Description
1	Server Model For details, see **A.4 Nameplate**.
2	Device names
3	Power Supply Requirements
4	Enterprise Standard No.
5	Vendor Information
6	Authentication ID

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A.1.1.2 Certificate

Figure A-3 Sample certificate of conformity

Table A-2 Certificate of conformity description

No.	Description
1	Order
2	No. **NOTE** For details, see **Figure A-4** and **Table A-3**.
3	QC inspector
4	Production date
5	No. Barcode

Figure A-4 Sample certificate number

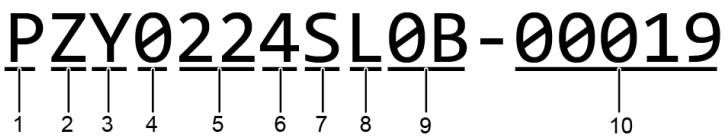

Table A-3 Certificate No. Description

No.	Description
1	"P", fixed
2	"Z", fixed
3	• Y: Server • B: Semi-finished product of the whole machine. • N: Loose spare parts

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No.	Description
4	"0", Reserved bit.
5	Year (2 digits).
6	Month (1 digit). ● Digits 1 to 9 indicate January to September, respectively. ● Letters A to C indicate October to December, respectively.
7	Day (1 digit). ● Digits 1 to 9 indicate the 1st to 9th ● Letters A to H indicate the 10th to 17th. ● Letters J to N indicate the 18th to 22nd. ● Letters P to Y indicate the 23rd to 31st
8	Hour (1 digit). ● Digits 0 to 9 indicate 0 to 9:00. ● Letters A to H indicate 10 to 17:00. ● Letters J to N indicate 18 to 22:00. ● Letters P to Q indicate 23 to 24:00.
9	Serial number (2 digits)
10	Manufacturing serial number (5 digits).

A.1.1.3 Sample Quick Access Tags

Figure A-5 Sample quick access tags

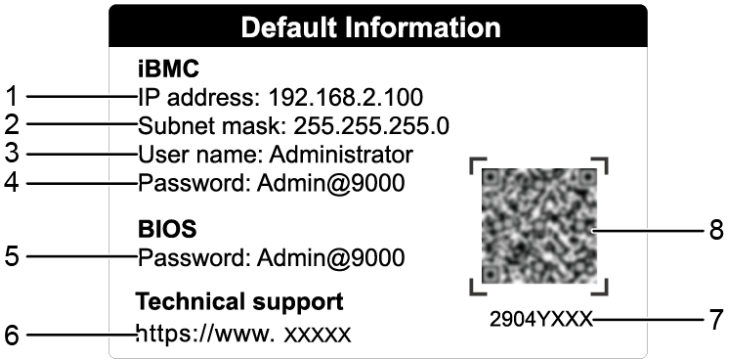

Table A-4 Quick access tab description

No.	Description
1	IP address of the iBMC management network port
2	Subnet mask of the iBMC management network port

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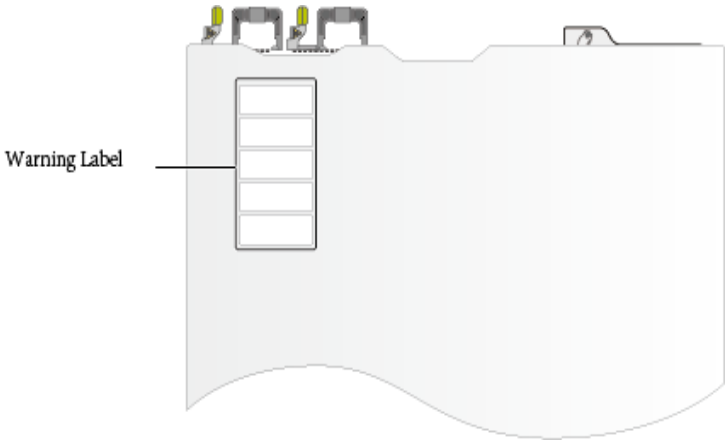
No.	Description
3	Default iBMC user name
4	Default iBMC password
5	Default BIOS password
6	Technical support website
7	P/N Code
8	QR Code **NOTE** Scan the QR code to obtain technical support resources.

A.1.2 Chassis Tail Label

Figure A-6 Chassis tail label



NOTE

For details about the warning label, see server *Safety Information*.

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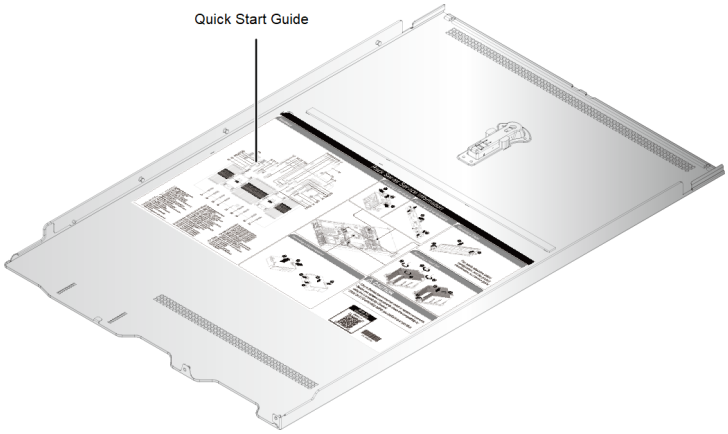
A.1.3 Chassis Internal Label

Figure A-7 Chassis internal label



NOTE

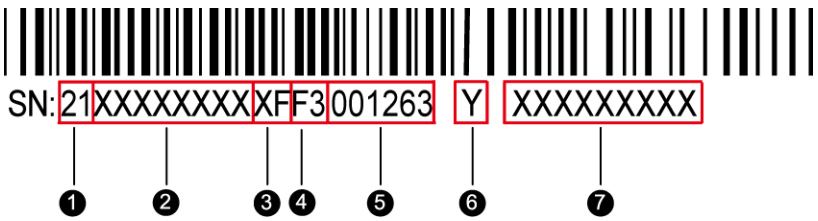
- The quick guide is located on the inside of the chassis cover. It describes how to remove the mainboard components, important components of the chassis, precautions, and QR codes of technical resources. The pictures are for reference only. For details, see the actual product.
- The quick guide is optional. For details, see the actual product.

A.2 Product SN

The serial number (SN) on the slide-out label plate uniquely identifies a device. The SN is required when you contact technical support. **Figure A-8** and **Figure A-9** show the SN formats.

- SN example 1

Figure A-8 SN example 1



- SN example 2

Figure A-9 SN example 2

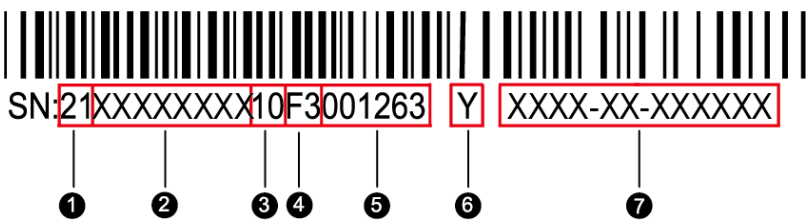


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Table A-5 SN example description

No.	Description
1	ESN ID (two characters), which can only be **21**.
2	Material ID (eight characters), that is, the processing code.
3	Vendor code (two characters), that is, the code of the processing place.
4	Year and month (two characters). ● The first character indicates the year. – Digits 1 to 9 indicate years 2001 to 2009, respectively. – Letters A to H indicate years 2010 to 2017, respectively. – Letters J to N indicate years 2018 to 2022, respectively. – Letters P to Y indicate years 2023 to 2032, respectively. **NOTE** The years from 2010 are represented by upper-case letters excluding I, O, and Z because the three letters are similar to the digits 1, 0, and 2. ● The second character indicates the month. – Digits 1 to 9 indicate January to September, respectively. – Letters A to C indicate October to December, respectively.
5	Serial number (six digits).
6	RoHS compliance (one character). **Y** indicates RoHS compliant.
7	Internal model, that is, product name. The model format varies according to the actual situation.

- SN example 3

Figure A-10 Label example

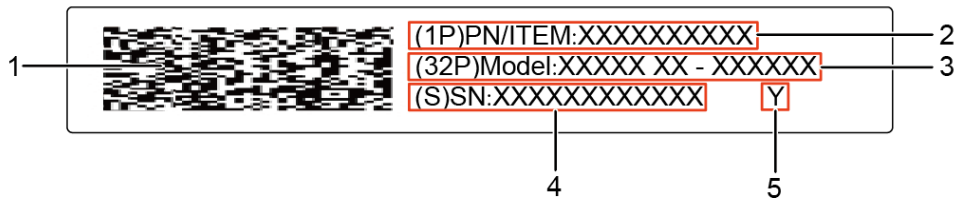

Table A-6 Label example description

No.	Description
1	QR code. For details, see **Figure A-12**.
2	BOM code (10 digits).

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No.	Description
3	Product model (13 characters).
4	Product SN (12 characters). For details, see **Table A-7**.
5	RoHS compliance code (one character).

Figure A-11 SN example

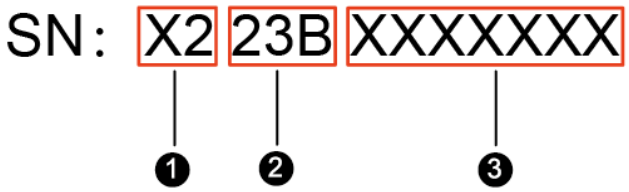

Table A-7 SN example description

No.	Description
1	Manufacturer code (two characters).
2	Year and month (three characters). • The first and second characters indicate the year. **NOTE** A four-digit year is indicated by the last two digits of the year. For example, 23 indicates the year 2023. • The third character indicates the month. – Digits 1 to 9 indicate January to September, respectively. – Letters A to C indicate October to December, respectively.
3	Serial number (seven characters).

Figure A-12 QR code scanning result example

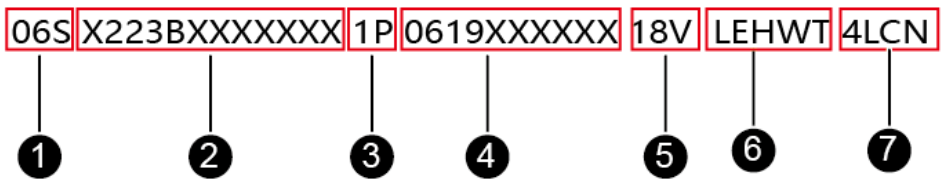

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Table A-8 QR code scanning result example description

No.	Description
1	Fixed representation symbol (three characters).
2	Product SN (12 characters). For details, see **Table A-7**.
3	Data identifier for the material code (two characters).
4	BOM code (10 digits).
5	Data identifier of manufacturer (three characters).
6	Code of device manufacturer (five characters).
7	Data identifier of origin (four characters).

A.3 Operating Temperature Limitations

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A.3.1 2288H V6-32DIMM

Table A-9 Operating temperature limitations

Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
8 x 2.5-inch drive pass-through configuration	• All options supported.	• V100, A40, A16, and A10 GPU cards are not supported.	• Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. • GPU cards are not supported. • DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	• Only 4309Y, 4310, 4310T, 4314, 4316, 5315Y, 5317, 5318N, 5318S, 5318Y, 5320T, and 6338T processors are supported. • DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported. • Rear drives (including HDD/SSD/NVMe SSD/M.2) are	• Only 4309Y, 4310, 4310T, 4314, 4316, 5315Y, 5317, 5318N, 5318S, 5318Y, 5320T, and 6338T processors are supported. • DIMMs whose capacity per module is less than 64 GB are not supported. • Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
				not supported. ● GPU cards are not supported. ● IB cards are not supported. ● NICs whose rate is greater than 25 Gbit/s are not supported. ● CX5/CX6 NICs are not supported. ● OCP 3.0 network adapters with 25GE ports or ports of higher rate are not supported. ● 9460-16i RAID controller cards are not supported.	● GPU cards are not supported. ● NICs whose rate is greater than 25 Gbit/s are not supported. ● OCP 3.0 network adapters with 25GE ports or ports of higher rate are not supported. ● PCIe RAID controller cards are not supported. ● Supercapacitors are not supported. ● PMem modules are not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
8 x 2.5-inch drive + 11 x PCIe card configuration	• All options supported.	• All options supported.	• Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. • GPU cards are not supported. • DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	• Only 4309Y, 4310, 4310T, 4314, 4316, 5315Y, 5317, 5318N, 5318S, 5318Y, 5320T, and 6338T processors are supported. • DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported. • Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported.	• Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
				• GPU cards are not supported. • IB cards are not supported. • NICs whose rate is greater than 25 Gbit/s are not supported. • CX5/CX6 NICs are not supported. • OCP 3.0 network adapters with 25GE ports or ports of higher rate are not supported. • 9460-16i RAID controller cards are not supported.	

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
8 x 2.5-inch drive + 4 GPU configuration	● All options supported.	● All options supported.	● Not supported.	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
8 x 2.5" drive pass-through NVMe hardware RAID configuration	• All options supported.	• V100, A40, A16, and A10 GPU cards are not supported.	• Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. • GPU cards are not supported. • DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	• Only 4309Y, 4310, 4310T, 4314, 4316, 5315Y, 5317, 5318N, 5318S, 5318Y, 5320T, and 6338T processors are supported. • DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported. • Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported.	• Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
				• GPU cards are not supported. • IB cards are not supported. • NICs with rate higher than 25 Gbit/s are not supported. • CX5/CX6 NICs are not supported. • OCP 3.0 network adapters with 25GE ports or ports of higher rate are not supported. • 9460-16i RAID controller cards are not supported.	

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
8 x 3.5-inch drive pass-through configuration	• All options supported.	• Passive-cooled GPU cards such as V100, A800, A100, A40, A16, and A10 are not supported.	• Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. • GPU cards are not supported. • OCP 3.0 network adapters with 100GE ports or ports of higher rate are not supported. • DDR4 memory modules/PMem modules whose capacity per	• Not supported.	• Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
			module is 128 GB or larger are not supported. • Rear drives are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
12 x 2.5-inch drive pass-through configuration (4 x SAS/SATA + 8 x NVMe)	● All options supported.	● V100, A40, A16, and A10 GPU cards are not supported.	● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● GPU cards are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	● Only 4309Y, 4310, 4310T, 4314, 4316, 5315Y, 5317, 5318N, 5318S, 5318Y, 5320T, and 6338T processors are supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
				• GPU cards are not supported. • IB cards are not supported. • NICs whose rate is greater than 25 Gbit/s are not supported. • CX5/CX6 NICs are not supported. • OCP 3.0 network adapters with 25GE ports or ports of higher rate are not supported. • 9460-16i RAID controller cards are not supported.	

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
12 x 2.5-inch (4 x SAS/SATA + 8 x NVMe) + 4 x GPU configuration	● All options supported.	● All options supported.	● Not supported.	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
12 x 3.5-inch drive pass-through configuration.	● V100, A800, A100, A40, A16, and A10 GPU cards are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	● Passive-cooled GPU cards such as V100, T4, A800, A100, A40, A16, A10, and A2 are not supported. ● Built-in drives are not supported when 6314U/6330/6338 processors and other processors of 205 W or higher power are configured. ● 2.5-inch rear drives are not supported when built-in drives are	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Built-in drives are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
		configured. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported. ● I/O module 3 supports neither NVMe drives nor Kioxia PM6 SAS drives. ● Rear drive modules support neither WD Vela-AP	100GE ports or ports of higher rate are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
		(8 TB) drives nor Vela-AX (10 TB) NL SAS drives.			

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
12 x 3.5-inch drives with EXP configuration	● V100, A800, A100, A40, A16, and A10 GPU cards are not supported. ● DDR4 memory modules whose capacity per module is 256 GB or larger are not supported.	● Passive-cooled GPU cards such as V100, T4, A800, A100, A40, A16, A10, and A2 are not supported. ● Built-in drives are not supported when 6314U/6330/6338 processors and other processors of 205 W or higher power are configured. ● 2.5-inch rear drives are not supported when built-in drives are	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Built-in drives are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
		configured. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported. ● I/O module 3 supports neither NVMe drives nor Kioxia PM6 SAS drives. ● Rear drive modules support neither WD Vela-AP	100GE ports or ports of higher rate are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
		(8 TB) drives nor Vela-AX (10 TB) NL SAS drives.			

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
16 x 2.5" drive pass-through NVMe hardware RAID configuration	● GPU cards are not supported.	● GPU cards are not supported. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules /PMem modules whose capacity per module is 256 GB or larger are not supported.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
			not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
20 x 2.5-inch drive pass-through configuration (4 x SAS/SATA + 16 x NVMe)	● GPU cards are not supported.	● GPU cards are not supported. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
			not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
24 x 2.5-inch drive pass-through configuration	● V100, A800, A100, A40, A16, and A10 GPU cards are not supported.	● Passive-cooled GPU cards such as V100, T4, A800, A100, A40, A16, A10, and A2 are not supported. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
			not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
24 x 2.5-inch NVMe drive configuration	● GPU cards are not supported.	● GPU cards are not supported. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules /PMem modules whose capacity per module is 256 GB or larger are not supported.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
			not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 128 GB or larger are not supported.		

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
25 x 2.5-inch drives with EXP configuration	● V100, A800, A100, A40, A16, and A10 GPU cards are not supported.	● Passive-cooled GPU cards such as V100, T4, A800, A100, A40, A16, A10, and A2 are not supported. ● 100GE dual-port OCP 3.0 network adapters are not supported. ● DDR4 memory modules/PMem modules whose capacity per module is 256 GB or larger are not supported.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8362, 8368, and 8380. ● GPU cards are not supported. ● Rear drives (including HDD/SSD/NVMe SSD/M.2) are not supported. ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are	● Not supported.	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)	Maximum Operating Temperature 50°C (122°F)
			not supported. ● DDR4 memory modules /PMem modules whose capacity per module is 128 GB or larger are not supported.		

NOTE

- When a single fan is faulty, the highest operating temperature is 5°C (9°F) lower than the rated value.
- When a single fan is faulty, the system performance may be affected.
- When the 6342, 6348, 8351N, 8358, 8358P, 8360Y, 8362, 8368, or 8380 processors are configured, I/O modules 1, 2, and 3 do not support Tesla T4 GPU cards, and I/O module 3 does not support HDDs.
- In 12 x 3.5-inch drive pass-through configuration and 12 x 3.5-inch drive EXP configuration, the processor TDP is required to be no more than 205 W and the total capacity of DIMMs configured no more than 2048 GB when IO module 3 is configured with 4 x 2.5-inch NVMe drive module.
- It is recommended that servers be deployed at an interval of 1 U to reduce server noise and improve server energy efficiency.
- 8368Q 38c 270 W 2.6 GHz liquid-cooled processors are not supported.
- When the ambient temperature is 50°C (122°F), the CPU heat sink must be configured with a 2 U heat pipe heat sink.

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A.3.2 2288H V6-16DIMM

Table A-10 Operating temperature limitations

Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
8 x 2.5-inch drive pass-through configuration	● All options supported.	● All options supported.	● Rear drives (including HDD/SSD/ PCIe SSD/ NVMe SSD/M.2) are not supported. ● T4 GPU cards are not supported.	● Only 4309Y, 4310, 4310T, 4314, 4316, 5315Y, 5317, 5318N, 5318S, 5318Y, 5320T, and 6338T processors are supported. ● RDIMMs whose capacity per module is less than 64 GB are not supported. ● Rear drives (including HDD/SSD/ PCIe SSD/ NVMe SSD/M.2) are not supported. ● T4 GPU cards are not supported. ● IB cards are not supported. ● NICs whose rate is greater

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
				than 25 Gbit/s are not supported. ● CX5/CX6 NICs are not supported. ● OCP 3.0 network adapters with 25GE ports or ports of higher rate are not supported. ● PCIe RAID controller cards are not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
8 x 3.5-inch drive pass-through configuration	● All options supported.	● T4 GPU cards are not supported. ● I/O module 3 not supported NVMe drives.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8368, and 8380. ● T4 GPU cards are not supported. ● Built-in drives are not supported. ● Rear drives are not supported. (including HDD/SSD/ PCIe SSD/ NVMe SSD/M.2). ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are not supported. ● DDR4 memory modules whose capacity per module	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
			is 128 GB are not supported.	

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
12 x 3.5-inch drive pass-through configuration.	● All options supported.	● T4 GPU cards are not supported. ● I/O module 3 not supported NVMe drives.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8368, and 8380. ● T4 GPU cards are not supported. ● Built-in drives are not supported. ● Rear drives are not supported. (including HDD/SSD/ PCIe SSD/ NVMe SSD/M.2). ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are not supported. ● DDR4 memory modules whose capacity per module	● Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
			is 128 GB or larger are not supported.	

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
12 x 3.5-inch drive EXP configuration	• All options supported.	• T4 GPU cards are not supported. • Built-in drives are not supported when 6314U/ 6330/6338 processors and other processors of 205 W or higher power are configured. • 2.5-inch rear drives are not supported when built-in drives are configured. • I/O module 3 not supported NVMe drives.	• Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8368, and 8380. • T4 GPU cards are not supported. • Built-in drives are not supported. • Rear drives are not supported. (including HDD/SSD/ PCIe SSD/ NVMe SSD/M.2). • OCP 3.0 network adapters with 100GE ports or ports of higher rate are not supported. • DDR4 memory modules whose capacity per module	• Not supported.

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Configuration	Maximum Operating Temperature 30°C (86°F)	Maximum Operating Temperature 35°C (95°F)	Maximum Operating Temperature 40°C (104°F)	Maximum Operating Temperature 45°C (113°F)
			is 128 GB are not supported.	
25 x 2.5-inch drive EXP configuration	● All options supported.	● T4 GPU cards are not supported.	● Processor models not supported include 6334, 6342, 6346, 6348, 8351N, 6354, 8358, 8358P, 8360Y, 8368, and 8380. ● T4 GPU cards are not supported. ● Rear drives are not supported. (including HDD/SSD/ PCIe SSD/ NVMe SSD/M.2). ● OCP 3.0 network adapters with 100GE ports or ports of higher rate are not supported.	● Not supported.

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NOTE

- When a single fan is faulty, the highest operating temperature is 5°C (9°F) lower than the rated value.
- When a single fan is faulty, the system performance may be affected.
- When the 6342, 6348, 8351N, 8358, 8358P, 8360Y, 8368, or 8380 processors are configured, I/O modules do not support Tesla T4 GPU cards, and I/O module 3 does not support HDDs.
- In 12 x 3.5-inch drives pass-through configuration and 12 x 3.5-inch drives EXP configuration, the processor TDP is required to be no more than 205 W and the total capacity of DIMMs configured no more than 2048 GB when IO module 3 is configured with 4 x 2.5-inch NVMe drives module.
- It is recommended that servers be deployed at an interval of 1 U to reduce server noise and improve server energy efficiency.
- 8368Q 38c 270 W 2.6 GHz liquid-cooled processors are not supported.

A.4 Nameplate

Certified Model	Usage Restrictions
H22H-06	Global
2288H V6	Global
Note: The nameplate depends on the actual product.	

A.5 RAS Features

The server supports a variety of Reliability, Availability, and Serviceability (RAS) features. You can configure these features for better performance.

For details about the RAS features, see *Ice Lake Platform RAS Technical White Paper*.

A.6 Sensor List

A.6.1 2288H V6-32DIMM

Sensor	Description	Component
Inlet Temp	Air inlet temperature	Right mounting ear
Outlet Temp	Air outlet temperature	BMC card
PCH Temp	PCH bridge temperature	Mainboard

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Sensor	Description	Component
CPU*N* Core Rem	CPU core temperature	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* DTS	Difference between the real-time CPU temperature and the core CPU temperature threshold	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
Cpu*N* Margin	Difference between the real-time CPU temperature and the CPU Tcontrol threshold	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VDDQ Temp	CPU VDDQ temperature	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VRD Temp	CPU VRD temperature	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* MEM Temp	CPU memory module temperature	Memory module corresponding to CPU *N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* 12V	12 V voltage supplied by the mainboard to the CPU	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
Riser 12V	12 V voltage supplied by the mainboard to the riser card	Mainboard
Disk BP 12V	12 V voltage supplied by the mainboard to the drive backplane	Mainboard
CPU*N* DDR VDDQ	1.2 V memory module voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.

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Sensor	Description	Component
CPU*N* DDR VDDQ2	1.2 V memory module voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VCCIN	CPU VCCIN voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VSA	CPU VSA voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* P1V8	CPU P1V8 voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VCCIO	CPU VCCIO voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VCCANA	CPU VCCANA voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
FAN*N* Speed	Fan speed	Fan module *N* *N* indicates the fan module number. The value ranges from **1** to **4**.
FAN*N* F Speed		
FAN*N* R Speed		
Power	Server input power	Power supply unit (PSU)
PS*N* VIN	PSU *N* input voltage	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
Disks Temp	Maximum drive temperature	Drive
Power*N*	PSU input power	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.

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Sensor	Description	Component
PCH Status	PCH chip fault diagnosis health status	Mainboard
CPU*N* UPI Link	CPU UPI link fault diagnosis health status	Mainboard or CPU *N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* Prochot	CPU Prochot	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* Status	CPU status	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* Memory	Status of the memory corresponding to the CPU	Memory module corresponding to CPU *N* *N* indicates the CPU number. The value is **1** or **2**.
FAN*N* Status	Fan fault status	Fan module *N* *N* indicates the fan module number. The value ranges from **1** to **4**.
FAN*N* F Status		
FAN*N* R Status		
DIMM*N*	DIMM status	DIMM *N* *N* indicates the DIMM slot number.
RTC Battery	RTC battery status. An alarm is generated when the voltage is lower than 1 V.	RTC battery on the mainboard
PCIE Status	PCIe status error	PCIe card
Power Button	Power button pressed	Mainboard and power button
Watchdog2	Watchdog	Mainboard
Mngmnt Health	Management subsystem health status	Management modules
UID Button	UID button status	Mainboard
PwrOk Sig. Drop	Voltage dip status	Mainboard
PwrOn TimeOut	Power-on timeout	Mainboard

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Sensor	Description	Component
PwrCap Status	Power capping status	Mainboard
HDD Backplane	Hardware presence	Drive backplane
HDD BP Status	Drive backplane health status	Drive backplane
Riser*N* Card	Hardware presence	Riser card *N* *N* indicates the riser card slot number. The value ranges from **1** to **3**.
SAS Cable	Hardware presence	SAS high-speed cable on the mainboard
FAN*N* Presence	Fan presence	Fan module *N* *N* indicates the fan module number. The value ranges from **1** to **4**.
FAN*N* F Presence		
FAN*N* R Presence		
RAID Presence	RAID presence	RAID controller card
LCD Status	LCD health status	LCD
LCD Presence	LCD presence	LCD
PS Redundancy	Redundancy failure due to PSU removal	Power supply unit (PSU)
PS*N* Status	PSU status	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
PS*N* Fan Status	PSU fan fault status	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
PS*N* Temp Status	PSU presence	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
DISK$	Disk status	Drive
PCIe RAID$ Temp	Temperature of the PCIe RAID controller card	PCIe RAID controller card
M2 Temp(PCIe$)	Maximum temperature of all M.2 drives of the RAID controller card	PCIe RAID controller card

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Sensor	Description	Component
RAID Temp	Temperature of the RAID controller card	RAID controller card
RAID Status	RAID controller card health status	RAID controller card
RAID PCIE ERR	Health status of the RAID controller card in fault diagnosis	RAID controller card
IB$ Temp	IB NIC temperature	IB card
PCIe$ OP Temp	PCIe card optical module temperature	PCIe card
PCIe NIC$ Temp	PCIe card chip temperature	PCIe card
PCIe FC$ Temp	PCIe card chip temperature	PCIe card
RAID Card BBU	RAID controller card BBU	BBU supercapacitor of RAID controller card
FPGA$ Temp	FPGA card temperature	PCIe card
FPGA$ DDR Temp	FPGA card memory temperature	PCIe card
FPGA$ Power	FPGA card power	PCIe card
FPGA$ OP Temp	FPGA card optical module temperature	PCIe card
PCIe$ Inlet Temp	PCIe smart card air inlet temperature	PCIe smart cards
PCIe$ Cpu Temp	PCIe smart card CPU temperature	PCIe smart cards
1711 Core Temp	Core temperature of the BMC management chip	BMC card
PS$ IIn	PSU input current	Power supply unit (PSU)
PS$ IOut	PSU output current	Power supply unit (PSU)
PS$ Pout	PSU output power	Power supply unit (PSU)
PS$ Temp	Maximum internal temperature of the PSU	Power supply unit (PSU)
PS$ Inlet Temp	PSU air inlet temperature	Power supply unit (PSU)
AreaIntrusion	Listening to the unpacking action	Mainboard

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Sensor	Description	Component
OCP$ OP Temp	OCP card optical module temperature	OCP 3.0 Network Adapters
OCP$ Temp	OCP card chip temperature	OCP 3.0 Network Adapters
CPU*N* PMem Temp	CPU PMem module temperature	PMem module corresponding to CPU *N* *N* indicates the CPU number. The value is **1** or **2**.
Riser$ Temp	Riser card temperature	Riser cards
Disk BP$ Temp	Drive backplane temperature	Drive backplane
SSD Max Temp	Maximum SSD temperature	SSD
RAID BBU Temp	RAID controller card capacitor temperature	Supercapacitor of the RAID controller card
PCIe$ Temp	PCIe card chip temperature	PCIe card
PCIe$ Card BBU	BBU status of the PCIe RAID controller card	PCIe RAID controller card
GPU$ Power	GPU card power	GPU cards
GPU$ Temp	GPU temperature	GPU cards
GPU$ MINI Temp	Mini chip temperature of the GPU card	GPU cards
GPU$ DDR Temp	DDR chip temperature of the GPU card	GPU cards
GPU$ HBM Temp	HBM chip temperature of the GPU card	GPU cards
System Notice	Hot restart reminder and fault diagnosis program information collection	N/A
System Error	System suspension or restart. Check the background logs.	
ACPI State	ACPI status	
SysFWProgress	Software process and system startup errors	
SysRestart	Cause of system restart	

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Sensor	Description	Component
Boot Error	Boot error	
CPU Usage	CPU usage.	
Memory Usage	Memory usage.	
BMC Boot Up	BMC startup events	
BMC Time Hopping	Time hopping	
NTP Sync Failed	NTP synchronization failure and recovery events	
SEL Status	SEL full or clearing events	
Op. Log Full	Operation log full or clearing events	
Sec. Log Full	Security log full or clearing events	
Host Loss	System monitoring software (BMA) link loss detection	
ProductID Status	Product identification status	
OAMPort1_$ Link	Network port OAM link status	
OAMPort2_$ Link	Network port OAM link status	

A.6.2 2288H V6-16DIMM

Sensor	Description	Component
Inlet Temp	Air inlet temperature	Mainboard
Outlet Temp	Air outlet temperature	Mainboard
PCH Temp	PCH bridge temperature	Mainboard
CPU*N* Core Rem	CPU core temperature	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.

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Sensor	Description	Component
CPU*N* DTS	Difference between the real-time CPU temperature and the core CPU temperature threshold	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
Cpu*N* Margin	Difference between the real-time CPU temperature and the CPU Tcontrol threshold	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VDDQ Temp	CPU VDDQ temperature	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VRD Temp	CPU VRD temperature	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* MEM Temp	CPU memory module temperature	Memory module corresponding to CPU *N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* 12V	12 V voltage supplied by the mainboard to the CPU	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
Riser 12V	12 V voltage supplied by the mainboard to the riser card	Mainboard
CPU*N* DDR VDDQ	1.2 V memory module voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* DDR VDDQ2	1.2 V memory module voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VCCIN	CPU VCCIN voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.

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Sensor	Description	Component
CPU*N* VSA	CPU VSA voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* P1V8	CPU P1V8 voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VCCIO	CPU VCCIO voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* VCCANA	CPU VCCANA voltage	Mainboard *N* indicates the CPU number. The value is **1** or **2**.
FAN*N* Speed	Fan speed	Fan module *N* *N* indicates the fan module number. The value ranges from **1** to **4**.
Power	Server input power	Power supply unit (PSU)
PS*N* VIN	PSU *N* input voltage	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
Disks Temp	Maximum drive temperature	Drive
Power*N*	PSU input power	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
PCH Status	PCH chip fault diagnosis health status	Mainboard
CPU*N* UPI Link	CPU UPI link fault diagnosis health status	Mainboard or CPU *N* *N* indicates the CPU number. The value is **1** or **2**.

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Sensor	Description	Component
CPU*N* Prochot	CPU Prochot	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* Status	CPU status	CPU*N* *N* indicates the CPU number. The value is **1** or **2**.
CPU*N* Memory	Status of the memory corresponding to the CPU	Memory module corresponding to CPU *N* *N* indicates the CPU number. The value is **1** or **2**.
FAN*N* Status	Fan fault status	Fan module *N* *N* indicates the fan module number. The value ranges from **1** to **4**.
DIMM*N*	DIMM status	DIMM *N* *N* indicates the DIMM slot number.
RTC Battery	RTC battery status. An alarm is generated when the voltage is lower than 1 V.	RTC battery on the mainboard
PCIE Status	PCIe status error	PCIe card
Power Button	Power button pressed	Mainboard and power button
Watchdog2	Watchdog	Mainboard
Mngmnt Health	Management subsystem health status	Management modules
UID Button	UID button status	Mainboard
PwrOk Sig. Drop	Voltage dip status	Mainboard
PwrOn TimeOut	Power-on timeout	Mainboard
PwrCap Status	Power capping status	Mainboard
HDD Backplane	Hardware presence	Drive backplane
HDD BP Status	Drive backplane health status	Drive backplane
Riser3 Card	Hardware presence	Riser cards

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Sensor	Description	Component
SAS Cable	Hardware presence	SAS high-speed cable on the mainboard
FAN*N* Presence	Fan presence	Fan module *N* *N* indicates the fan module number. The value ranges from **1** to **4**.
RAID Presence	RAID presence	RAID controller card
LCD Status	LCD health status	LCD
LCD Presence	LCD presence	LCD
PS Redundancy	Redundancy failure due to PSU removal	Power supply unit (PSU)
PS*N* Status	PSU status	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
PS*N* Fan Status	PSU fan fault status	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
PS*N* Temp Status	PSU presence	PSU *N* *N* indicates the PSU number. The value is **1** or **2**.
DISK$	Disk status	Drive
PCIe RAID$ Temp	Temperature of the PCIe RAID controller card	PCIe RAID controller card
M2 Temp(PCIe$)	Maximum temperature of all M.2 drives of the RAID controller card	PCIe RAID controller card
RAID Temp	Temperature of the RAID controller card	RAID controller card
RAID Status	RAID controller card health status	RAID controller card
RAID PCIE ERR	Health status of the RAID controller card in fault diagnosis	RAID controller card
IB$ Temp	IB NIC temperature	IB card

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Sensor	Description	Component
PCIe$ OP Temp	PCIe card optical module temperature	PCIe card
PCIe NIC$ Temp	PCIe card chip temperature	PCIe card
PCIe FC$ Temp	PCIe card chip temperature	PCIe card
RAID Card BBU	RAID controller card BBU	BBU supercapacitor of RAID controller card
FPGA$ Temp	FPGA card temperature	PCIe card
FPGA$ DDR Temp	FPGA card memory temperature	PCIe card
FPGA$ Power	FPGA card power	PCIe card
FPGA$ OP Temp	FPGA card optical module temperature	PCIe card
PCIe$ Inlet Temp	PCIe smart card air inlet temperature	PCIe smart cards
PCIe$ Cpu Temp	PCIe smart card CPU temperature	PCIe smart cards
1711 Core Temp	Core temperature of the BMC management chip	BMC card
PS$ IIn	PSU input current	Power supply unit (PSU)
PS$ IOut	PSU output current	Power supply unit (PSU)
PS$ Pout	PSU output power	Power supply unit (PSU)
PS$ Temp	Maximum internal temperature of the PSU	Power supply unit (PSU)
PS$ Inlet Temp	PSU air inlet temperature	Power supply unit (PSU)
AreaIntrusion	Listening to the unpacking action	Mainboard
OCP$ OP Temp	OCP card optical module temperature	OCP 3.0 Network Adapters
OCP$ Temp	OCP card chip temperature	OCP 3.0 Network Adapters
Riser$ Temp	Riser card temperature	Riser cards
Disk BP$ Temp	Drive backplane temperature	Drive backplane

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Sensor	Description	Component
SSD Max Temp	Maximum SSD temperature	SSD
RAID BBU Temp	RAID controller card capacitor temperature	Supercapacitor of the RAID controller card
PCIe$ Temp	PCIe card chip temperature	PCIe card
PCIe$ Card BBU	BBU status of the PCIe RAID controller card	PCIe RAID controller card
NIC1 Presence	Hardware presence	Mainboard
SYS 3.3V	Mainboard 3.3 V voltage	Mainboard
SYS 5V	Mainboard 5.0 V voltage	Mainboard
V_STBY_1V8	Southbridge standby 1.8 V voltage of the mainboard	Mainboard
V_STBY_5V0	Mainboard standby 5.0 V voltage	Mainboard
Stby 3V3	Mainboard standby 3.3 V voltage	Mainboard
PCH VPVNN	PCH VPVNN voltage	Mainboard
PCH VOLT	PCH 1.05 V voltage	Mainboard
PCIe Slot 3V3	Riser card 3.3 V voltage	Mainboard
SYS 5V HDD	5 V voltage of the rear backplane	Mainboard
System Notice	Hot restart reminder and fault diagnosis program information collection	N/A
System Error	System suspension or restart. Check the background logs.	
ACPI State	ACPI status	
SysFWProgress	Software process and system startup errors	
SysRestart	Cause of system restart	
Boot Error	Boot error	
CPU Usage	CPU usage.	
Memory Usage	Memory usage.	

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Sensor	Description	Component
BMC Boot Up	BMC startup events	
BMC Time Hopping	Time hopping	
NTP Sync Failed	NTP synchronization failure and recovery events	
SEL Status	SEL full or clearing events	
Op. Log Full	Operation log full or clearing events	
Sec. Log Full	Security log full or clearing events	
Host Loss	System monitoring software (BMA) link loss detection	
ProductID Status	Product identification status	

A.7 FAQs About Optical Modules

The server NIC must be used with optical modules that have passed the compatibility test of xFusion. With uncertain transmission reliability, optical modules that have not been tested for compatibility may affect service stability. xFusion is not liable for any problems caused by the use of optical modules that have not been tested for compatibility by xFusion and will not fix such problems in principle.

When performing the compatibility tests on the optical modules used by servers, xFusion comprehensively verifies their functions to ensure their quality. The verified items include optical module plugging/unplugging, transmit and receive optical power, signal transmission quality, basic data reading, error tolerance, compatibility, electromagnetic compatibility (EMC), and environmental parameters.

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Table A-11 Problems of using optical modules that have not been tested for compatibility and corresponding causes

Symptom	Cause
Due to non-standard structure and size, an optical module fails to be installed/removed smoothly on/from the optical interface.	Structures or sizes of some optical modules that have not been tested for compatibility do not comply with the Multi-Source Agreement (MSA). When such an optical module is installed on an optical interface, the size of this optical module hinders optical module installation on adjacent optical interfaces. In addition, optical modules can be unlocked through self-unlocking, press-unlocking, push-unlocking, or tilt-unlocking. For optical modules that have not been tested for compatibility, the server may not be able to have the optical modules removed that are not unlocked through press-unlocking.
Data bus defects cause the data bus suspension of a device.	Some optical modules that have not been tested for compatibility have defects in data bus designs. Using such an optical module causes suspension of the connected data bus on the device. As a result, data on the suspended bus cannot be read.
An optical module with improper edge connector size damages electronic components of the optical interface.	If an optical module that has not been tested for compatibility with improper edge connector size is used on an optical interface, electronic components of the optical interface will be damaged by short circuits.
Unnormalized temperature monitoring causes incorrect alarms.	The temperature monitoring systems of some optical modules that have not been tested for compatibility do not comply with industry standards and report temperature values higher than the real temperature. When such optical modules are used, the system will report incorrect temperature alarms.
Improper register settings cause errors or failures in reading parameters or diagnostic information.	Some optical modules that have not been tested for compatibility have improper register values on page A0, which can cause errors or failures when the data bus attempts to read parameters or diagnostic information.
Optical modules bring electromagnetic interference to nearby devices.	Some optical modules that have not been tested for compatibility are not designed in compliance with EMC standards and have low anti-interference capability. Additionally, they bring electromagnetic interference to nearby devices.
Services are interrupted when an optical module is operating under overtemperature.	The operating temperature ranges of optical modules that have not been tested for compatibility cannot meet service requirements. When they are used under a relatively high temperature, the optical power decreases, resulting in service interruption.

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Symptom	Cause
Optical modules cannot work properly when the temperature change rate exceeds the normal range without adapting to the heat dissipation policy of the server.	Some optical modules that are not tested for compatibility have poor heat dissipation. Since they are not adapted to the heat dissipation policy of the server, abnormally high temperatures may occur continuously after they are running for a period of time. As a result, the optical modules cannot work properly.

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B Glossary

B.1 A-E

B

BMC	The baseboard management controller (BMC) complies with the Intelligent Platform Management Interface (IPMI). It collects, processes, and stores sensor signals, and monitors the operating status of components. The BMC provides the hardware status and alarm information about the managed objects to the upper-level management system, so that the management system can manage the objects.

E

ejector lever	A part on the panel of a device used to facilitate installation or removal of the device.
Ethernet	A baseband local area network (LAN) architecture developed by Xerox Corporation by partnering with Intel and DEC. Ethernet uses the Carrier Sense Multiple Access/Collision Detection (CSMA/CD) access method and allows data transfer over various cables at 10 Mbit/s. The Ethernet specification is the basis for the IEEE 802.3 standard.

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B.2 F-J

G

Gigabit Ethernet (GE)	An extension and enhancement of traditional shared media Ethernet standards. It is compatible with 10 Mbit/s and 100 Mbit/s Ethernet and complies with IEEE 802.3z standards.

H

hot swap	Replacing or adding components without stopping or shutting down the system.

B.3 K-O

K

KVM	A hardware device that provides public video, keyboard and mouse (KVM).

B.4 P-T

P

panel	An external component (including but not limited to ejector levers, indicators, and ports) on the front or rear of the server. It seals the front and rear of the chassis to ensure optimal ventilation and electromagnetic compatibility (EMC).
Peripheral Component Interconnect Express (PCIe)	A computer bus PCI, which uses the existing PCI programming concepts and communication standards, but builds a faster serial communication system. Intel is the main sponsor for PCIe. PCIe is used only for internal interconnection. A PCI system can be transformed to a PCIe system by modifying the physical layer instead of software. PCIe delivers a faster speed and can replace almost all AGP and PCI buses.

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R

redundancy	A mechanism that allows a backup device to automatically take over services from a faulty device to ensure uninterrupted running of the system.
redundant array of independent disks (RAID)	A storage technology that combines multiple physical drives into a logical unit for the purposes of data redundancy and performance improvement.

S

server	A special computer that provides services for clients over a network.
system event log (SEL)	Event records stored in the system used for subsequent fault diagnosis and system recovery.

B.5 U-Z

U

U	A unit defined in International Electrotechnical Commission (IEC) 60297-1 to measure the height of a cabinet, chassis, or subrack. 1 U = 44.45 mm
UltraPath Interconnect (UPI)	A point-to-point processor interconnect developed by Intel.

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C Acronyms and Abbreviations

C.1 A-E

A

AC	alternating current
AES	Advanced Encryption Standard New Instruction Set
ARP	Address Resolution Protocol
AVX	Advanced Vector Extensions

B

BBU	backup battery unit
BIOS	Basic Input/Output System
BMC	baseboard management controller

C

CCC	China Compulsory Certification
CD	calendar day
CE	Conformite Europeenne
CIM	Common Information Model
CLI	command-line interface

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D

DC	direct current
DDR4	Double Data Rate 4
DDDC	double device data correction
DEMT	Dynamic Energy Management Technology
DIMM	dual in-line memory module
DRAM	dynamic random-access memory
DVD	digital video disc

E

ECC	error checking and correcting
ECMA	European Computer Manufacturer Association
EDB	Execute Disable Bit
EID	Enclosure ID
EN	European Efficiency
ERP	enterprise resource planning
ETS	European Telecommunication Standards

C.2 F-J

F

FB-DIMM	Fully Buffered DIMM
FC	Fiber Channel
FCC	Federal Communications Commission
FCoE	Fibre Channel over Ethernet
FTP	File Transfer Protocol

G

GE	Gigabit Ethernet

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GPIO	General Purpose Input/Output
GPU	graphics processing unit

H

HA	high availability
HDD	hard disk drive
HPC	high-performance computing
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure

I

iBMC	intelligent baseboard management controller
IC	Industry Canada
ICMP	Internet Control Message Protocol
IDC	Internet Data Center
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IGMP	Internet Group Message Protocol
IOPS	input/output operations per second
IP	Internet Protocol
IPC	Intelligent Power Capability
IPMB	Intelligent Platform Management Bus
IPMI	Intelligent Platform Management Interface

C.3 K-O

K

KVM	keyboard, video, and mouse

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L

LC	Lucent Connector
LRDIMM	load-reduced dual in-line memory module
LED	light emitting diode
LOM	LAN on motherboard

M

MAC	media access control
MMC	module management controller

N

NBD	next business day
NC-SI	Network Controller Sideband Interface

O

OCP	Open Compute Project

C.4 P-T

P

PCIe	Peripheral Component Interconnect Express
PDU	power distribution unit
PHY	physical layer
PMBUS	power management bus
POK	Power OK
PWM	pulse-width modulation
PXE	Preboot Execution Environment

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R

RAID	redundant array of independent disks
RAS	reliability, availability and serviceability
RDIMM	registered dual in-line memory module
REACH	Registration Evaluation and Authorization of Chemicals
RJ45	registered jack 45
RoHS	Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

S

SAS	Serial Attached Small Computer System Interface
SATA	Serial Advanced Technology Attachment
SCM	supply chain management
SDDC	single device data correction
SERDES	serializer/deserializer
SGMII	serial gigabit media independent interface
SMI	serial management interface
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
SOL	serial over LAN
SONCAP	Standards Organization of Nigeria-Conformity Assessment Program
SSD	solid-state drive
SSE	Streaming SIMD Extension

T

TACH	tachometer signal
TBT	Turbo Boost Technology
TCG	Trusted Computing Group
TCM	trusted cryptography module
TCO	total cost of ownership

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TDP	thermal design power
TELNET	Telecommunication Network Protocol
TET	Trusted Execution Technology
TFM	TransFlash module
TFTP	Trivial File Transfer Protocol
TOE	TCP offload engine
TPM	trusted platform module

C.5 U-Z

U

UDIMM	unbuffered dual in-line memory module
UEFI	Unified Extensible Firmware Interface
UID	unit identification light
UL	Underwriter Laboratories Inc.
UPI	UltraPath Interconnect
USB	Universal Serial Bus

V

VCCI	Voluntary Control Council for Interference by Information Technology Equipment
VGA	Video Graphics Array
VLAN	virtual local area network
VRD	voltage regulator-down
VROC	Virtual RAID on CPU

W

WEEE	waste electrical and electronic equipment
WSMAN	Web Service Management

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