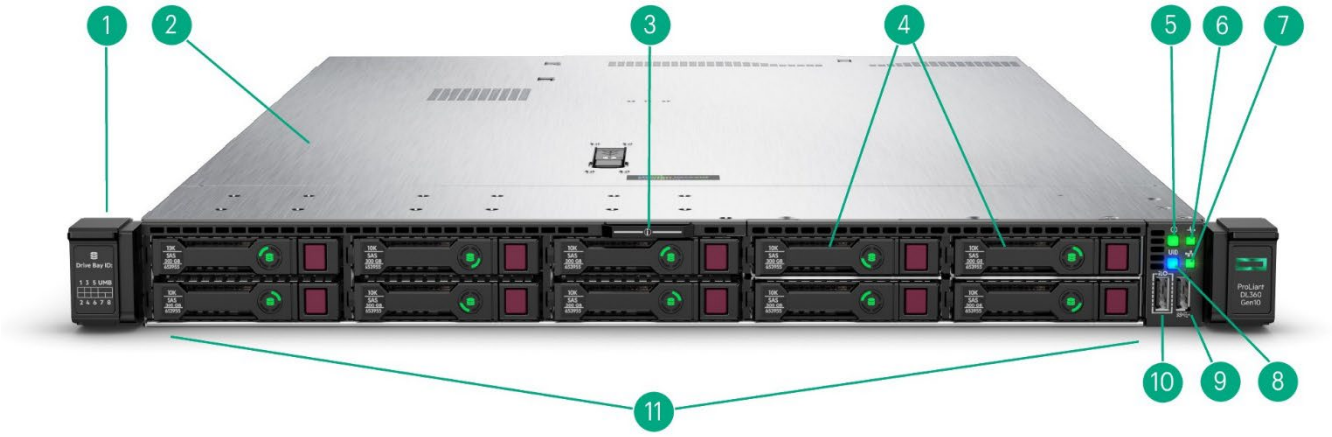
Shape the Future of QuickSpecs - Your Input Matters

# HPE ProLiant DL360 Gen10 Server QuickSpecs

## Does your data center need a secure, performance driven dense server that you can confidently deploy for virtualization, database, or high-performance computing? The HPE ProLiant DL360 Gen10 server delivers security, agility and flexibility without compromise.

The HPE ProLiant DL360 Gen10 Server supports the Intel® Xeon® Scalable Processor Family with up to 28 cores, plus 2933 MT/s HPE DDR4 Smart Memory supporting up to 3.0 TB max. With the added performance that HPE Persistent Memory and 10 NVMe bring, the HPE ProLiant DL360 Gen10 means business. Deploy this dense platform for diverse workloads in space constrained environments and maintain it with ease by automating the most essential server lifecycle management tasks with HPE OneView and HPE iLO 5.

## Overview



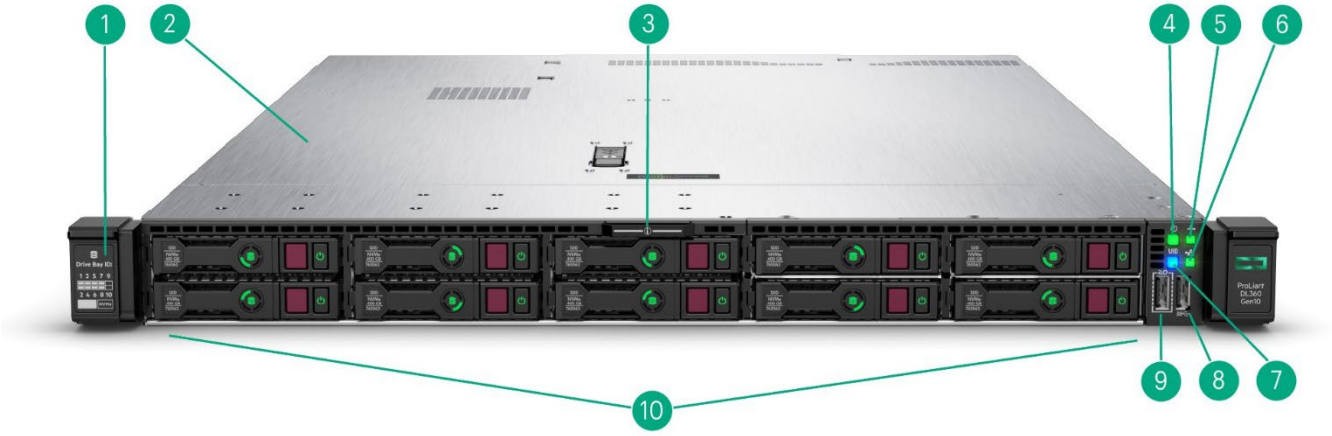

**8 SFF Front View – 8 SFF + 2 SFF- Universal Media Bay option shown**

| Item | Description | Item | Description |
|---|---|---|---|
| 1. | Drive support label | 5. | Power On/Standby button and system power LED |
| 2. | Quick removal access panel | 6. | Health LED |
| 3. | Serial no. label pull tab | 7. | NIC status LED |
| 4. | Universal Media Bay: +2 SFF SAS/SATA shown<br>Option: +2 SFF NVMe drives<br>Option: DVD-RW or DVD-ROM + Display port & USB 2.0 port Kit<br>Option: +2 Dual uFF (4x M.2 cartridges)<br>Option: Display port + USB 2.0 port Kit + Blank | 8. | UID button/LED |
| | | 9. | USB 3.0 port |
| | | 10. | iLO Service Port |
| | | 11. | Standard 8 SAS/SATA drive bays |

**Notes:**

- Rear drive option allows for an additional + 1 SFF or +1 Dual uFF (2x M.2 cartridges).
- System Insight Display (SID) module will include #5-9 above (will not include #10 - iLO Service Port).

## Overview



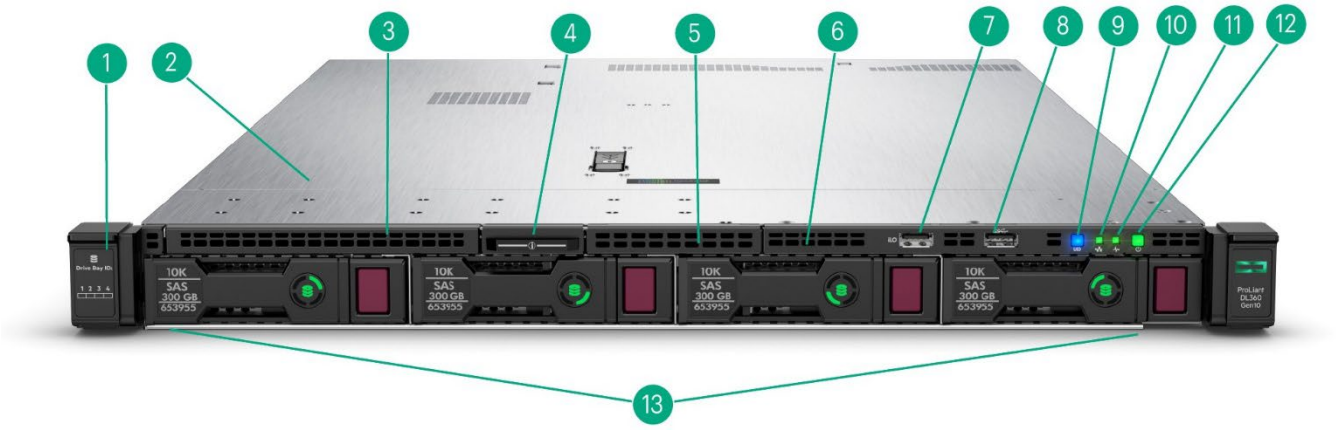

**Premium 10SFF NVMe Front View**

| Item | Description | Item | Description |
|---|---|---|---|
| 1. | Drive support label | 6. | NIC status LED |
| 2. | Quick removal access panel | 7. | UID button/LED |
| 3. | Serial no. label pull tab | 8. | USB 3.0 port |
| 4. | Power On/Standby button and system power LED | 9. | iLO Service Port |
| 5. | Health LED | 10. | Max up to 10 NVMe drives (PCIe direct attached) or 8 SAS/SATA/NVMe + 2 NVMe |

**Notes:**

- Rear drive option allows for an additional + 1 SFF or +1 Dual uFF (2x M.2 cartridges).
- System Insight Display (SID) module will include #4-8 above (will not include #9 - iLO Service Port).
- Does not support the Xeon-Gold 6250L or Gold 6250 processors.

## Overview




**4 LFF Front View – Standard 4 LFF shown**

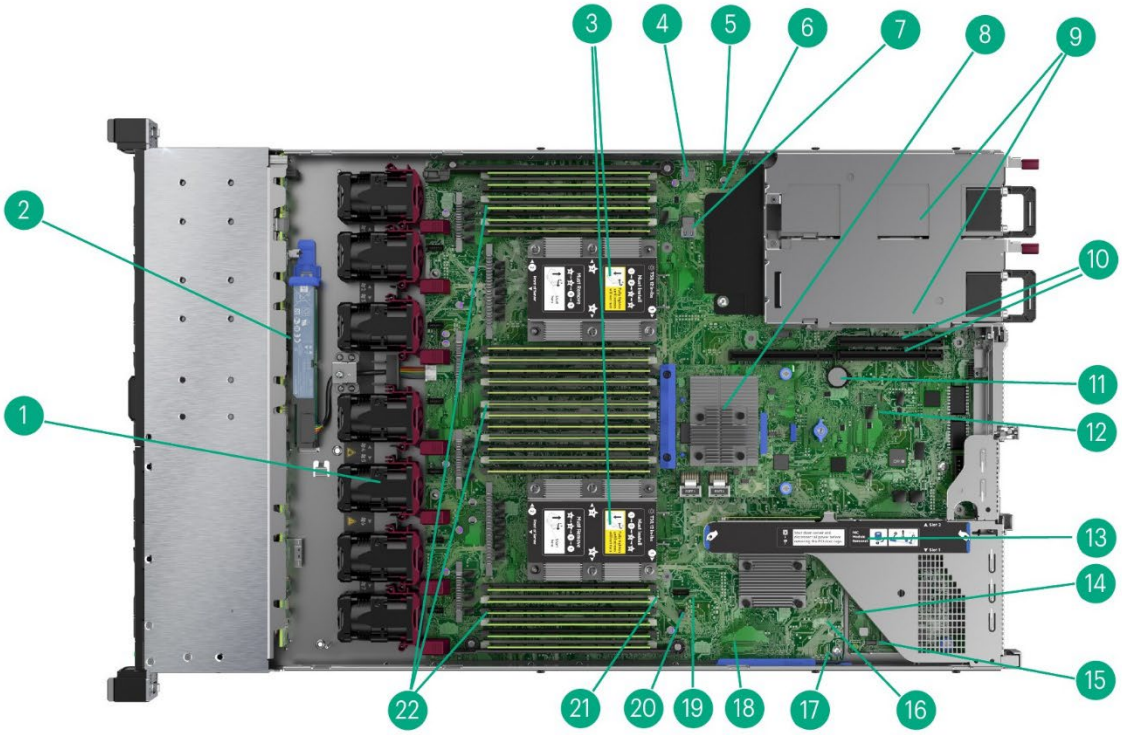
| Item | Description | Item | Description |
|---|---|---|---|
| 1. | Drive support label | 8. | USB 3.0 Port |
| 2. | Quick removal access panel | 9. | UID button/LED |
| 3. | Option: DVD-RW or DVD-ROM (blank shown) | 10. | Power On/Standby button and system power LED |
| 4. | Serial no. label pull tab | 11. | Health LED |
| 5. | Option: Display port & USB 2.0 port Kit (blank shown) | 12. | NIC status LED |
| 6. | Option: System insight Display (SID) - standard shown[6] | 13. | SAS/SATA drive bays |
| 7. | iLO Service Port | | |

**Notes:**

– [6] This option will lose #7 iLO Service Port.

– Rear drive option allows for additional + 1 SFF or +1 Dual uFF (2x M.2 cartridges), will lose one FH PCIe slot.

## Overview




**Internal View - Standard for all DL360 Gen10**

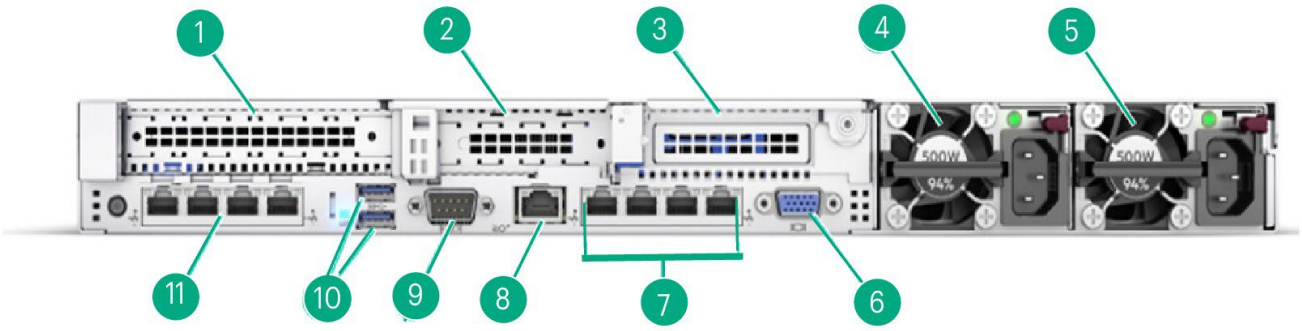
| Item | Description | Item | Description |
|---|---|---|---|
| 1. | For 8 SFF or 4 LFF - Standard single rotor hot plug fans[1]<br>1 CPU – 5 standard fans<br>2 CPUs – 7 standard fans<br>Option: High Performance fans | 13. | Primary (CPU1) PCIe 3.0 riser (Standard: GPU power connector + 1x 16 and 1x 8)<br>Option: 2 SATA M.2 + 2x 16<br>Option: (8 SFF only): 2x 4 NVMe + 1x 16 and 1x 8 |
| 2. | Option: HPE Smart Hybrid Capacitor or HPE Smart Storage Battery | 14. | Option: Front Display port / USB 2.0 |
| 3. | Up to 2 processors (shown with standard heat sinks) | 15. | FlexibleLOM (supports various NICs up to 25GbE) |
| 4. | MicroSD card slot | 16. | x4 SATA port 1 |
| 5. | Option: Chassis Intrusion Detection | 17. | x4 SATA port 2 |
| 6. | Hard Drive backplane power connector | 18. | x2 SATA port 3 |
| 7. | Dual internal USB 3.0 connector | 19. | x1 SATA port 4 |
| 8. | Smart Array Controller (Type -a shown) | 20. | Front Power USB 3.0 connector |
| 9. | Up to 2 Power Supplies for redundant power | 21. | Optical/SATA port 5 |
| 10. | Secondary (CPU2) PCIe 3.0 riser<br>Option: Full Height x16 (Lose slot 2 on Primary riser)[10] | 22. | DDR4 DIMM slots (Fully populated 24 DIMMs shown) |
| 11. | System Battery | | |
| 12. | Optional: TPM 2.0 | | |

**Notes:**

– [1] For 10 NVMe chassis - 7 High Performance fans

– [10] For 10 NVMe chassis – Secondary Riser is not available due to 10 x4 NVMe riser for PCIe direct attached

## Overview




**Rear View – Standard for all DL360 Gen10**

| Item | Description | Item | Description |
|---|---|---|---|
| 1. | Slot 1 PCIe 3.0<br>Option: Rear Drive +1 SFF or 1 uFF SSD (2x M.2 cartridges)[1] | 7. | Embedded 4x 1GbE Adapter (if equipped)[7] |
| | | 8. | iLO Management Port |
| 2. | Slot 2 PCIe 3.0 | 9. | Option: Serial Port |
| 3. | Option: Slot 3 PCIe 3.0 (Requires 2nd processor) | 10. | USB 3.0 Ports |
| 4. | Power Supply 2 | 11. | Option: FlexibleLOM (Shown: 4x 1GbE)[11] |
| 5. | Power Supply 1 | | |
| 6. | VGA port | | |

**Notes:**

- [1] Will lose FH x16 PCIe slot1 with this option.
- [7] Network Choice (NC) models do not include embedded LOM. Customer choice of FlexibleLOM for networking capability.
- [11] Supports Various NICs up to 25GbE.

## What's New

- BTO SKUs with Broadcom controller support

Overview

## Platform Information

**Form Factor**

- 1U rack

**Chassis Types**

- 8 SFF with options supporting: +2 SFF or 2 NVMe or 2 Dual uFF (4x M.2 cartridges)
- 10 SFF NVMe Premium
- 4 LFF

**Notes:** Rear drive option available on all DL360 Gen10 chassis types for additional boot/storage: +1SFF or 1 Dual uFF (2x M.2 cartridges).

**System Fans**

Single rotor hot plug fans will be included

- **For 4 LFF and 8 SFF chassis:**
  - 1 CPU – Includes 5 standard fans
  - 2 CPUs – Includes 7 standard fans
- **For 10 NVMe Premium chassis:**
  - 2 CPUs – Includes 7 high performance fans as standard

**Notes:**

- Optional High Performance Fan Kit available (includes 7 fans).
- The DL360 Gen10 will support up to 7 fans with fan redundancy built in. One fan rotor failure will place server in degraded mode but fully functional. Two fan rotor failures could provide warning and imminent server shutdown.

Standard Features

## Processors – Up to 2 of the following depending on model.

**Notes:**

- The 2nd digit of the processor model number "x1xx" and "x2xx" is used to denote the processor generation (i.e. 1=1st generation and 2=2nd generation)
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- "U" processors (i.e. 6212U) only supported in single socket configurations
- This table covers the public Intel offering only.
- For more information regarding Intel Xeon processors, please see the following http://www.intel.com/xeon.

| Intel Xeon Processor | | |
|---|---|---|
| **Processor Suffix** | **Description** | **Offering** |
| L | Large memory tier | Up to 4.5 TB addressable memory per socket |
| M | Medium memory tier | Up to 2.0 TB addressable memory per socket |
| N | NFV Optimized | Targeted at Network Function Virtualization (NFV) workloads. Intel® SST-BF improves performance by directing base frequency to high priority/bottleneck cores, other workloads may see throttling. |
| R | Refresh | Improved price/performance over equivalent "non-R" 2nd generation processors |
| S | Search Optimized | Optimized base frequency to address 'search' workloads, other workloads may see throttling. |
| U | 1 Socket Optimized | Focused on single socket (1P) configurations deliver performance at competitive price points. Does not support two socket (2P) arrangements. |
| V | VM Density Optimized | Fosters enhanced VM density, allowing to support more/larger virtual machines per host. |
| Y | Speed Select | Intel® SST-PP increases base frequency when fewer cores are enabled. Allows greater flexibility, deployment options and platform longevity. |

**Notes:** More than 1.5 TB memory per socket requires HPE Persistent Memory

## Standard Features

| 2nd Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Platinum 8280 Processor | 2.7 GHz | 28 | 38.50 MB | 205 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8280L Processor | 2.7 GHz | 28 | 38.50 MB | 205 W | 3 @ 10.4 GT/s | 2933 MT/s | 4.5 TB |
| Platinum 8280M Processor | 2.7 GHz | 28 | 38.50 MB | 205 W | 3 @ 10.4 GT/s | 2933 MT/s | 2 TB |
| Platinum 8276 Processor | 2.2 GHz | 28 | 38.50 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8276L Processor | 2.2 GHz | 28 | 38.50 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 4.5 TB |
| Platinum 8276M Processor | 2.2 GHz | 28 | 38.50 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 2 TB |
| Platinum 8270 Processor | 2.7 GHz | 26 | 35.75 MB | 205 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8268 Processor | 2.9 GHz | 24 | 35.75 MB | 205 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8260 Processor | 2.4 GHz | 24 | 35.75 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8260L Processor | 2.4 GHz | 24 | 35.75 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 4.5 TB |
| Platinum 8260M Processor | 2.4 GHz | 24 | 35.75 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 2 TB |
| Platinum 8260Y Processor | 2.4 GHz<br>2.5 GHz<br>2.7 GHz | 24<br>20<br>16 | 35.75 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8256 Processor | 3.8 GHz | 4 | 16.50 MB | 105 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Platinum 8253 Processor | 2.2 GHz | 16 | 22.00 MB | 125 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |

**Notes:**

- 6-Channel DDR4 @ 2933 MT/s.
- 6TB max RAM (larger than 2TB memory per socket on select SKUs)
- Support for: HPE Persistent Memory, Vector Neural Network Instructions (VNNI) for inference acceleration.
- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 10.4 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS

## Standard Features

| 1st Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Platinum 8180M Processor | 2.5 GHz | 28 | 38.50 MB | 205 W | 3 @ 10.4 GT/s | 2666 MT/s | 1.5 TB |
| Platinum 8180 Processor | 2.5 GHz | 28 | 38.50 MB | 205 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8176 Processor | 2.1 GHz | 28 | 38.50 MB | 165 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8170 Processor | 2.1 GHz | 26 | 35.75 MB | 165 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8168 Processor | 2.7 GHz | 24 | 33.00 MB | 205 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8165 Processor | 2.3 GHz | 24 | 33.00 MB | 205 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8164 Processor | 2.0 GHz | 26 | 35.75 MB | 150 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8160M Processor | 2.1 GHz | 24 | 33.00 MB | 150 W | 3 @ 10.4 GT/s | 2666 MT/s | 1.5 TB |
| Platinum 8160 Processor | 2.1 GHz | 24 | 33.00 MB | 150 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8158 Processor | 3.0 GHz | 12 | 24.75 MB | 150 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8156 Processor | 3.6 GHz | 4 | 16.50 MB | 105 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |
| Platinum 8153 Processor | 2.0 GHz | 16 | 22.00 MB | 125 W | 3 @ 10.4 GT/s | 2666 MT/s | 768 GB |

**Notes:**

- 6-Channel 1DPC DDR4 @ 2666 MT/s.
- 768 GB max memory capacity (1.5 TB on select skus)
- 2 and 4 socket capable, 2S - 2UPI, 4S - 3UPI, 8S - 3UPI @ 10.4 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS.

## Standard Features

| 2nd Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Gold 6262V Processor | 1.9 GHz | 24 | 33.00 MB | 135 W | 3 @ 10.4 GT/s | 2933 MT/s | 1TB |
| Gold 6258R Processor | 2.7 GHz | 28 | 38.50 MB | 205 W | 2 @ 10.4 GT/s | 2933 MT/s | 1TB |
| Gold 6256 Processor | 3.6 GHz | 12 | 33.00 MB | 205 W | 3 @ 10.4 GT/s | 2933 MT/s | 1TB |
| Gold 6254 Processor | 3.1 GHz | 18 | 24.75 MB | 200 W | 3 @ 10.4 GT/s | 2933 MT/s | 1TB |
| Gold 6252 Processor | 2.1 GHz | 24 | 35.75 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1TB |
| Gold 6252N Processor | 2.3 GHz | 24 | 35.75MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1TB |
| Gold 6250L Processor | 3.9 GHz | 8 | 35.75MB | 185 W | 3 @ 10.4 GT/s | 2933 MT/s | 4.5TB |
| Gold 6250 Processor | 3.9 GHz | 8 | 35.75MB | 185 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6248R Processor | 3.0 GHz | 24 | 35.75 MB | 205 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6248 Processor | 2.5 GHz | 20 | 27.5 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6246R Processor | 3.4 GHz | 16 | 35.75 MB | 205 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6246 Processor | 3.3 GHz | 12 | 24.75 MB | 165 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6244 Processor | 3.6 GHz | 8 | 24.75 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6242R Processor | 3.1 GHz | 20 | 35.75 MB | 205 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6242 Processor | 2.8 GHz | 16 | 22 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6240R Processor | 2.4 GHz | 24 | 35.75 MB | 165 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6240 Processor | 2.6 GHz | 18 | 24.75 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6240Y Processor | 2.6 GHz<br>2.8 GHz<br>3.1 GHz | 18<br>14<br>8 | 24.75 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6240L Processor | 2.6 GHz | 18 | 24.75 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 4.5 TB |
| Gold 6240M Processor | 2.6 GHz | 18 | 24.75 MB | 150 W | 3 @ 10.4 GT/s | 2933 MT/s | 2 TB |

## Standard Features

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gold 6238R Processor | 2.2 GHz | 28 | 38.50 MB | 165 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6238 Processor | 2.1 GHz | 22 | 30.25 MB | 140 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6238L Processor | 2.1 GHz | 22 | 30.25 MB | 140 W | 3 @ 10.4 GT/s | 2933 MT/s | 4.5 TB |
| Gold 6238M Processor | 2.1 GHz | 22 | 30.25 MB | 140 W | 3 @ 10.4 GT/s | 2933 MT/s | 2 TB |
| Gold 6234 Processor | 3.3 GHz | 8 | 24.75 MB | 130 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6230R Processor | 2.1 GHz | 26 | 35.75 MB | 150 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6230 Processor | 2.1 GHz | 20 | 27.5 MB | 125 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6230N Processor | 2.3 GHz | 20 | 27.50 MB | 125 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6226R Processor | 2.9 GHz | 16 | 22 MB | 150 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6226 Processor | 2.7 GHz | 12 | 19.25 MB | 125 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6222V Processor | 1.8 GHz | 20 | 27.50 MB | 115 W | 3 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 6212U Processor | 2.4 GHz | 24 | 35.75 MB | 165 W | N/A | 2933 MT/s | 1 TB |
| Gold 6210U Processor | 2.5 GHz | 20 | 27.50 MB | 150 W | N/A | 2933 MT/s | 1 TB |
| Gold 6209U Processor | 2.1 GHz | 20 | 27.50 MB | 125 W | N/A | 2933 MT/s | 1 TB |
| Gold 6208U Processor | 2.9 GHz | 16 | 22 MB | 150 W | N/A | 2933 MT/s | 1 TB |
| Gold 5222 Processor | 3.8 GHz | 4 | 16.5 MB | 105 W | 2 @ 10.4 GT/s | 2933 MT/s | 1 TB |
| Gold 5220R Processor | 2.2 GHz | 24 | 35.75 MB | 150 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5220 Processor | 2.2 GHz | 18 | 24.75 MB | 125 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5220S Processor | 2.7 GHz | 18 | 24.75 MB | 125 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5218R Processor | 2.1 GHz | 20 | 27.50 MB | 125 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5218 Processor | 2.3 GHz | 16 | 22 MB | 125 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5218N Processor * | 2.3 GHz | 16 | 22 MB | 110 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5218B Processor * | 2.3 GHz | 16 | 22 MB | 125 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5217 Processor | 3.0 GHz | 8 | 11 MB | 115 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |

## Standard Features

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gold 5215 Processor | 2.5 GHz | 10 | 13.75 MB | 85 W | 2 @ 10.4 GT/s | 2666 MT/s | 1 TB |
| Gold 5215L Processor | 2.5 GHz | 10 | 13.75 MB | 85 W | 2 @ 10.4 GT/s | 2666 MT/s | 4.5 TB |
| Gold 5215M Processor | 2.5 GHz | 10 | 13.75 MB | 85 W | 2 @ 10.4 GT/s | 2666 MT/s | 2 TB |

**Notes:**

- * 5218B has consistent features with the 5218 processor but from a different die. Mixing both 5218B & 5218 in a system is not supported
- 6-Channel DDR4 @ 2933 MT/s (Gold 6200 & 5222 skus only), 2666 MT/s on all Gold 5200 skus (except 5222 @ 2933 MT/s).
- 6TB max RAM (larger than 2TB memory per socket on select SKUs)
- Support for: HPE Persistent Memory, Vector Neural Network Instructions (VNNI) for inference acceleration.
- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 10.4 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS

| 1st Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Gold 6154 Processor | 3.0 GHz | 18 | 24.75 MB | 200W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6152 Processor | 2.1 GHz | 22 | 30.25 MB | 140W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6150 Processor | 2.7 GHz | 18 | 24.75 MB | 165W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6148 Processor | 2.4 GHz | 20 | 27.50 MB | 150W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6146 Processor | 3.2 GHz | 12 | 24.75 MB | 165W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6144 Processor | 3.5 GHz | 8 | 24.75 MB | 150W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6143 Processor | 2.8 GHz | 16 | 22.00 MB | 205W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6142 Processor | 2.6 GHz | 16 | 22.00 MB | 150W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6140 Processor | 2.3 GHz | 18 | 24.75 MB | 140W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6138 Processor | 2.0 GHz | 20 | 27.50 MB | 125W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6136 Processor | 3.0 GHz | 12 | 24.75 MB | 150W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6134M Processor | 3.2 GHz | 8 | 24.75 MB | 130W | 3 @ 10.4 GT/s | 2666 MT/s | 1.5TB |

## Standard Features

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gold 6134 Processor | 3.2 GHz | 8 | 24.75 MB | 130W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6132 Processor | 2.6 GHz | 14 | 19.25 MB | 140W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6130 Processor | 2.1 GHz | 16 | 22.00 MB | 125W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6128 Processor | 3.4 GHz | 6 | 19.25 MB | 115W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 6126 Processor | 2.6 GHz | 12 | 19.25 MB | 125W | 3 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 5122 Processor | 3.6 GHz | 4 | 16.50 MB | 105W | 2 @ 10.4 GT/s | 2666 MT/s | 768GB |
| Gold 5120 Processor | 2.2 GHz | 14 | 19.25 MB | 105W | 2 @ 10.4 GT/s | 2400 MT/s | 768GB |
| Gold 5118 Processor | 2.3 GHz | 12 | 16.50 MB | 105W | 2 @ 10.4 GT/s | 2400 MT/s | 768GB |
| Gold 5117 processor | 2.0GHz | 14 | 19.25 MB | 105W | 2 @ 10.4 GT/s | 2400 MT/s | 768GB |
| Gold 5115 Processor | 2.4 GHz | 10 | 13.75 MB | 85W | 2 @ 10.4 GT/s | 2400 MT/s | 768GB |

**Notes:**

- 6-Channel 1DPC DDR4 @ 2400 MT/s (SKU 5122 - supports 2666 MT/s).
- 768 GB max memory capacity (1.5 TB on select skus).
- 2 and 4 socket capable, 2S - 2UPI, 4S - 3UPI @ 10.4 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA) (SKU 5122 - supports 2x 512 bit FMA).
- 48 lanes PCIe 3.0, advanced RAS.

## Standard Features

| Intel Xeon Models | CPU Frequency | Cores | L3 Cache | Power | UPI | DDR4 | Memory per socket |
|---|---|---|---|---|---|---|---|
| Silver 4216 Processor | 2.1 GHz | 16 | 22 MB | 100W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4215R Processor | 3.2 GHz | 8 | 11 MB | 130W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4215 Processor | 2.5 GHz | 8 | 11 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4214R Processor | 2.4 GHz | 12 | 16.5 MB | 100W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4214Y Processor | 2.2 GHz<br>2.3 GHz<br>2.4 GHz | 12<br>10<br>8 | 16.5 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4214 Processor | 2.2 GHz | 12 | 16.5 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4210R Processor | 2.4 GHz | 10 | 13.75 MB | 100W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4210 Processor | 2.2 GHz | 10 | 13.75 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |
| Silver 4208 Processor | 2.1 GHz | 8 | 11 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 1TB |

**Notes:**

- 6-Channel DDR4 @ 2400 MT/s.
- 2TB max RAM
- Support for: HPE Persistent Memory (Silver 4215 and 4215R only), Intel® Vector Neural Network Instructions (VNNI) for inference acceleration.
- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 9.6 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS

| 1st Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Silver 4116 Processor | 2.1 GHz | 12 | 16.50 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 768GB |
| Silver 4114 Processor | 2.2 GHz | 10 | 13.75 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 768GB |
| Silver 4112 Processor | 2.6 GHz | 4 | 8.25 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 768GB |
| Silver 4110 Processor | 2.1 GHz | 8 | 11.00 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 768GB |
| Silver 4108 Processor | 1.8 GHz | 8 | 11.00 MB | 85W | 2 @ 9.6 GT/s | 2400 MT/s | 768GB |

**Notes:**

- 6-Channel DDR4 @ 2400 MT/s, 768 GB max memory capacity.
- 2 socket capable, 2S - 2UPI @ 9.6 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.

## Standard Features

| 2nd Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Bronze 3204 Processor | 1.9 GHz | 6 | 8.25 MB | 85W | 2 @ 9.6 GT/s | 2133 MT/s | 1 TB |
| Bronze 3206R Processor | 1.9 GHz | 8 | 11 MB | 85W | 2 @ 9.6 GT/s | 2133 MT/s | 1 TB |

**Notes:**
- 6-Channel DDR4 @ 2133 MT/s.
- 2TB max RAM
- Support for: Intel® Vector Neural Network Instructions (VNNI) for inference acceleration..
- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 9.6 GT/s.
- Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS

| 1st Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache** | **Power** | **UPI** | **DDR4** | **Memory per socket** |
| Bronze 3106 Processor | 1.7 GHz | 8 | 11.00 MB | 85W | 2 @ 9.6 GT/s | 2133 MT/s | 768GB |
| Bronze 3104 Processor | 1.7 GHz | 6 | 8.25 MB | 85W | 2 @ 9.6 GT/s | 2133 MT/s | 768GB |

**Notes:**
- 6-Channel DDR4 @ 2133 MT/s, 768 GB max memory capacity.
- 2 socket capable, 2S - 2UPI @ 9.6 GT/s.
- Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.

## Chipset

Intel C621 Chipset

**Notes:** For more information regarding Intel® chipsets, please see the following URL:
https://www.intel.com/content/www/us/en/products/chipsets/server-chipsets.html

**System Management Chipset**

HPE iLO 5 ASIC

**Notes:** Read and learn more in the iLO QuickSpecs.

Standard Features

| Memory | | |
|---|---|---|
| **Type** | **HPE DDR4 Smart Memory** | **Registered (RDIMM), Load Reduced (LRDIMM)** |
| **DIMM Slots Available** | 24 | 12 DIMM slots per processor, 6 channels per processor, 2DIMMs per channel |
| **Maximum capacity LRDIMM)** | 3.0 TB | 24 x 128 GB LRDIMM @ 2933 MT/s |
| **Maximum capacity RDIMM)** | 1.54 TB | 24 x 64 GB RDIMM @ 2933 MT/s |
| **Maximum capacity (HPE Persistent Memory)** | 6.0 TB | 12 X 512 GB HPE Persistent Memory Kit @ 2666 MT/s |
| **Maximum capacity (NVDIMM)** | 192 GB | 12 x 16 GB NVDIMM @ 2666 MT/s |

**Notes:**
- NVDIMMs can only be mixed with RDIMMs.
- A maximum of 12 NVDIMMs supported with 1st generation Intel Xeon Scalable processors.
- HPE Persistent Memory only supported on 2nd generation Intel Xeon Scalable Processor series (Platinum 8200, Gold 6200, Gold 5200, Silver 4215 and 4215R)
- Maximum memory per socket is dependent on processor selection. 2nd generation processors supporting 2 TB or 4.5 TB per CPU are indicated by the “M” and “L” in the processor model names (i.e. 8276M and 8276L). 1st generation processors supporting 1.5 TB per CPU are indicated by the “M” in the processor model names (i.e. 8160M)
- Mixing of RDIMM and LRDIMM memory is not supported.
- For General Server Memory and Persistent Memory Population Rules and Guidelines for Gen10 see details here: http://www.hpe.com/docs/memory-population-rules

## Memory Protection

**Advanced ECC**

Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

**Online Spare**

Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

**Notes:** For more information see our Memory RAS feature technical whitepaper.

## Expansion Slots

| Primary GPU Riser | | | | | |
|---|---|---|---|---|---|
| **Expansion Slots #** | **Technology** | **Bus Width** | **Connector Width** | **Processor** | **Slot Form Factor** |
| 1 | PCIe 3.0 | x16 | x16 | CPU1 | Full-height, 3/4 length (up to 9.5in) |
| 2 | PCIe 3.0 | x8 | x8 | CPU1 | Low Profile |

| Primary SATA M.2 Riser | | | | | |
|---|---|---|---|---|---|
| **Expansion Slots #** | **Technology** | **Bus Width** | **Connector Width** | **Processor** | **Slot Form Factor** |
| 1 | PCIe 3.0 | x16 | x16 | CPU 1 | Full-height; 3/4 length (up to 9.5in) |
| 2 | PCIe 3.0 | x16 | x16 | CPU 1 | Low Profile |

| Primary NVMe Riser | | | | | |
|---|---|---|---|---|---|
| **Expansion Slots #** | **Technology** | **Bus Width** | **Connector Width** | **Processor** | **Slot Form Factor** |
| 1 | PCIe 3.0 | x16 | x16 | CPU 1 | Full-height; 3/4 length (up to 9.5") |
| 2 | PCIe 3.0 | x8 | x8 | CPU 1 | Low Profile |

| Secondary Riser* | | | | | |
|---|---|---|---|---|---|
| **Expansion Slots #** | **Technology** | **Bus Width** | **Connector Width** | **Processor** | **Slot Form Factor** |
| 3 | PCIe 3.0 | x16 | x16 | CPU 2 | Low Profile or Full-height; 3/4 length (up to 9.5") |

**Notes:** If secondary full height kit is installed, then primary PCIe Slot #2 cannot be used. Only 2 full height slots are supported.

## Internal Storage Devices

- **Optical Drive**
  Available on 8 SFF and 4 LFF CTO Servers as an option (DVD-ROM or DVD-RW)
- **Hard Drives**
  None ship standard

## Storage Controllers

**NVMe Boot Device**

- HPE NS204i-p NVMe PCIe3 OS Boot Device

**Software RAID**

- HPE Smart Array S100i SR Gen10 SW RAID

**Notes:**

- All models come with the S100i Smart Array Controller with embedded software RAID support for up to 12 bays. The S100i uses 14 embedded SATA ports, but only 12 are available for bays as 2 are leveraged to support the M.2 connectors on the optional SATA M.2 capable primary riser (867978-B21).
- HPE Smart Array S100i SR Gen10 SW RAID will operate in UEFI mode only. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.
- HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled.
- The S100i supports Microsoft Windows Server only.
- For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit: https://downloads.linux.hpe.com/SDR/project/lsrrb/

**Essential RAID Controllers**

- HPE Smart Array E208i-a SR Gen10 Controller
- HPE Smart Array E208i-a SR G10 LH Controller
- HPE Smart Array E208i-p SR Gen10 Controller
- HPE Smart Array E208e-p SR Gen10 Controller

**Performance RAID Controllers**

- Broadcom MegaRAID MR416i-a Controller for HPE
- Broadcom MegaRAID MR416i-p Controller for HPE
- Broadcom MegaRAID MR216i-a Controller for HPE
- Broadcom MegaRAID MR216i-p Controller for HPE
- HPE Smart Array P408i-a SR Gen10 Controller
- HPE Smart Array P408i-a SR G10 LH Controller
- HPE Smart Array P408i-p SR Gen10 Controller
- HPE Smart Array P408e-p SR Gen10 Controller
- HPE Smart Array P816i-a SR Gen10 Controller
- HPE Smart Array P816i-a SR G10 LH Controller

**Notes:**

- If GPGPU is needed then the LH controller (low profile heatsink) should be ordered to allow GPU to fit in the chassis.
- For additional details, please see HPE Smart Array SR Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers.

Standard Features

## Maximum Storage

| Storage | Capacity | Configuration |
|---|---|---|
| Hot Plug SFF SAS HDD | 26.4 TB | 8+2+1 x 2.4 TB (with optional UMB + rear drive option) |
| Hot Plug SFF SATA HDD | 22 TB | 8+2+1 x 2.0 TB (with optional UMB + rear drive option) |
| Hot Plug SFF SAS SSD | 168.3 TB | 8+2+1 x 15.3 TB (with optional UMB + rear drive option) |
| Hot Plug SFF SATA SSD | 84.48 TB | 8+2+1 x 7.68 TB (with optional UMB + rear drive option) |
| Hot Plug SFF NVMe PCIe SSD | 153.6 TB | 10 x 15.36 TB NVMe |
| Hot Plug LFF SAS HDD | 72 TB | 4 x 18 TB |
| Hot Plug LFF SATA HDD | 72 TB | 4 x 18 TB |
| Hot Plug LFF SAS SSD | 7.68 TB | 4 x 1.92 TB |
| Hot Plug LFF SATA SSD | 7.68 TB | 4 x 1.92 TB |

## Graphics

- Integrated video standard
- Video modes up to 1920 x 1200 @ 60 Hz (32 bpp)
- 16 MB Video Memory
- HPE iLO 5 on system management memory
- 32 MB Flash
- 4 Gbit DDR3 with ECC protection

## Power Supply

- HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  **Notes:** Available in 94% efficiency.
- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  **Notes:**
  - Available in 94% and 96% efficiency.
  - Also available in -48VDC and 227VAC/380VDC power inputs.
- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  **Notes:**
  - Available in 94% efficiency.
  - 1600W Power supplies only support high line voltage (200 VAC to 240 VAC).

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

## Standard Features

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the ProLiant Power Cables web page.

To review the power requirements for your selected system, please use the HPE Power Advisor Tool.

For information on power specifications and technical content visit HPE Flexible Slot power supplies.

| Interfaces | |
|---|---|
| **Serial** | 1 port - Optional |
| **Video** | 1 Front - Display port (optional 8 SFF and 4 LFF only)<br>1 Rear - VGA port (standard on all chassis types)<br>**Notes:** Both ports are not active simultaneously. |
| **Network Ports** | 4x 1GbE embedded NIC (if equipped/depending on model) |
| | 1 FlexibleLOM slot available on all chassis types (supporting various NICs adapters) |
| **iLO Remote Mgmt Port** | 1 Gb Dedicated |
| **MicroSD Slot** | 1 MicroSD slot<br>**Notes:** The MicroSD slot is not hot-pluggable, server must be powered down before removal. |
| **USB 3.0** | Up to 5 total: 1 front, 2 rear, 2 internal (standard on all chassis types)<br>+1 optional USB 2.0 front (on 8 SFF and 4 LFF only) |
| **SID (Systems Insight Display)** | Optional for all chassis types<br>**Notes:** Will lose iLO Service Port if selecting this option. |

## Operating Systems and Virtualization Software Support for HPE Servers

HPE servers are designed for seamless integration with partner Operating Systems and Virtualization Software. By collaborating closely with our partners, we ensure that their products are optimized, certified, and fully supported within your HPE server environment.
Access the certified and supported servers for each of the OS and Virtualization software: HPE Servers Support & Certification Matrices

## Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant
- USB 2.0 Compliant (only on optional Universal Media Bay)
- SMBIOS 3.1
- UEFI 2.6 (Unified Extensible Firmware Interface Forum)
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 1.2 and 2.0 support
- Advanced Encryption Standard (AES)
- Triple Data Encryption Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
- Energy Star
  For new Energy Star 4.0 compliance, please go to HPE One Config Advanced for details. Compliant skus are listed within P68503-B21 (ENERGY STAR 4.0 FIO Trigger Configuration Kit for HPE)
- European Union Erp Lot 9
  European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot 9 requirements. For more information regarding HPE Lot 9 conformance, please visit:
  https://www.hpe.com/us/en/about/environment/msds-specs-more/erp-lot9-servers.html

  Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements.

  HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.

**Notes:** For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: http://www.hpe.com/servers/ashrae.

## HPE Server UEFI/Legacy ROM

**UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:**

- Secure Boot and Secure Start enable for enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- Workload Profiles for simple performance optimization

**UEFI Boot Mode only:**

- TPM 2.0 Support
- NVMe Boot Support
- Platform Trust Technology (PTT) can be enabled.
- iSCSI Software Inhhhhor Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- Boot support for option cards that only support a UEFI option ROM

**Notes:**

- For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
- UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 Server.

## Embedded Management

**HPE Integrated Lights-Out (HPE iLO)**

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at http://www.hpe.com/info/ilo**.**

**UEFI**

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at http://www.hpe.com/servers/uefi.

**Intelligent Provisioning**

Hassle free server and OS provisioning for one or more servers with Intelligent Provisioning. Learn more at http://www.hpe.com/servers/intelligentprovisioning.

**iLO RESTful API**

iLO RESTful API is Redfish API conformance and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at http://www.hpe.com/info/restfulapi.

## Server Utilities

**Active Health System**
The HPE Active Health System (AHS) is an essential component of the iLO management portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more at http://www.hpe.com/servers/ahs.

**Active Health System Viewer**
Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations, to learn more visit: http://www.hpe.com/servers/ahsv.

**Smart Update**
Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at https://www.hpe.com/us/en/servers/smart-update.html.

**iLO Amplifier Pack**
Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.
Learn more at http://www.hpe.com/servers/iLOamplifierpack.

**HPE iLO Mobile Application**
Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: http://www.hpe.com/info/ilo/mobileapp.

**RESTful Interface Tool**
RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. Learn more at http://www.hpe.com/info/resttool.

**Scripting Tools**
Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell.
Learn more at http://www.hpe.com/servers/powershell.

**HPE OneView Standard**
HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not available. Learn more at http://www.hpe.com/info/oneview.

## Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Services operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

**Notes:** Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: https://www.hpe.com/support/ProLiantServers-Warranties.

## Security

- HPE Trusted Supply Chain
- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- FIPS 140-2 validation
- Common Criteria certification
- Configurable for PCI DSS compliance
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Support for Commercial National Security Algorithms (CNSA)
- iLO Security Modes
- Granular control over iLO interfaces
- Smart card (PIV/CAC) and Kerberos based 2-factor Authentication
- Tamper-free updates – components digitally signed and verified
- Secure Recovery – recover critical firmware to known good state on detection of compromised FW
- Ability to rollback firmware
- Secure erase of NAND
- TPM (Trusted Platform Module) 1.2 option
- TPM (Trusted Platform Module) 2.0 option
- Bezel Locking Kit
- Chassis Intrusion detection option

## Server Management

**HPE iLO Advanced**

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality.

**HPE Compute Ops Management**

HPE is intelligently transforming compute management with an intuitive cloud operating experience through GreenLake cloud platform to streamline and secure operations. Automated key lifecycle tasks, for onboarding, updating, managing, and monitoring HPE servers, brings agility and greater efficiencies to wherever compute devices reside via a unified single browser-based interface. Manage single locations or multiple, distributed sites. Keep tens to thousands of servers secure with batch policy controls and automated updates.

Compute Ops Management is cloud-native software that is continually updated with new services, features, patches, and fixes. The management application resides in the GreenLake cloud platform (access via https://console.greenlake.hpe.com**)** and leverages the GreenLake architecture, security, and unified operations.

For a complete list of software as-a-service subscription SKUs and more information, visit the HPE Compute Ops Management QuickSpecs: https://www.hpe.com/psnow/doc/a50004263enw

For information on supported HPE servers, the complete list can be found here: https://www.hpe.com/info/com-supported-servers

**HPE OneView Advanced**

HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9 and Gen10 servers. To learn more visit http://www.hpe.com/info/oneview.

**HPE InfoSight for Servers**

HPE InfoSight for Servers combines the cloud-based machine learning of InfoSight with the health and performance monitoring of Active Health System (AHS) and iLO to optimize performance and predict and prevent problems. The end result is an intelligent environment that modernizes IT operations and enhances the support experience by predicting and preventing the infrastructure issues that lead to application disruptions, wasted IT staff time and missed business opportunities.
Learn more at https://www.hpe.com/servers/infosight

**Accelerator and GPGPU Information**

Hewlett Packard Enterprise supports various accelerators on select HPE Proliant servers to support different workloads. The accelerators enable seamless integration of GPU computing with HPE ProLiant servers for high-performance computing, large data center graphics, deep learning and virtual desktop deployments. These accelerators deliver all of the standard benefits of GPU computing while enabling maximum reliability and tight integration with system monitoring and management tools such as HPE Insight Cluster Management Utility.

## Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We've reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access.

HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10 year Warranty to support higher density computing.
HPE G2 PDUs offer reliable power in flexible form factors that operate at temperatures up to 60°, include color-coded outlets and load segments and a low-profile design for optimal access to the rack and support for dense rack environments.
HPE Uninterruptible Power Systems are cost-effective power protection for any type workload. Some UPSs include options for remote management and extended runtime modules so you're critical dense data center is covered in power outages.

HPE KVM Solutions include a console and switches designed to work with your server and IT equipment reliably. We've got a cost-effective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

Learn more about HPE Racks, KVM, PDUs and UPSs at HPE Rack and Power Infrastructure

## One Config Simple (SCE)

SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance.
https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

Service and Support

## HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.
https://www.hpe.com/services

## Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.
https://www.hpe.com/services/consulting

## HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.
HPE Managed Services | HPE

## Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.
https://www.hpe.com/services/operational

## HPE Complete Care Service

HPE Complete Care Service is a modular, IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

Service and Support

## HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/services/techcare

## HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

**Notes:** To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle

For a list of the most frequently purchased services using service credits, see the HPE Service Credits Menu

## Other Related Services from HPE Services

**HPE Education Services**

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.
https://www.hpe.com/services/training

**Defective Media Retention**

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

**Parts and Materials**

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

**How to Purchase Services**

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at https://ssc.hpe.com/portal/site/ssc/

**AI Powered and Digitally Enabled Support Experience**

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.
https://support.hpe.com/hpesc/public/home/signin

## GreenLake

GreenLake is the cloud to run and manage your entire hybrid landscape—private, public, and edge. It helps you to:

- Streamline IT Operations across compute, storage, and networking without the chaos
- Unify and secure data, as you move faster
- Accelerate AI, from pilot to production

The result: greater operational efficiency, lower TCO, and faster AI delivery—all from one unified, intelligent platform built for today's hybrid enterprise.

## Pre-Configured Models

### HPE Smart Choice purchase program

The HPE Smart Choice purchase program features popular fully configured products that can be quoted in minutes and shipped quickly through HPE Authorized Partners. Products are configured and tested in an HPE factory and stocked at HPE Authorized Distributors and Partners. The products arrive in a single box, making onsite integration easier and more efficient for partners and customers. Additionally, there are aggressively priced HPE Tech Care Services available only through the HPE Smart Choice program when you purchase an HPE Smart Choice product.

For additional information on the HPE Smart Choice purchase program, please visit:
https://www.hpe.com/psnow/doc/a50009219enw

## Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model.
To ensure valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

- Factory Integrated Models must start with a CTO Server.
- FIO indicates that this option is only available as a factory installable option.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information

European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot 9 requirements.
For more information regarding HPE Lot 9 conformance, please visit:
https://www.hpe.com/us/en/about/environment/msds-specs-more/erp-lot9-servers.html

Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements.

HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.

Configuration Information

## Step 1: Base Configuration (choose one of the following configurable models)

**Network Choice (NC) Models**

Network Choice models do not include embedded LOM. To enable networking capability please select either a FlexibleLOM NIC or a validated alternative from the Core Options section.

| CTO Server | HPE DL360 Gen10 8SFF BC NC CTO Server |
|---|---|
| **SKU Number** | P56949-B21 |
| **HPE Trusted Supply Chain FIO Configuration** | P36394-B21 |
| **Processor** | Not included as standard |
| **DIMM Slots** | 24-DIMM slots (12 can be used for NVDIMMs or 12 can be used for HPE Persistent Memory) |
| **Storage Controller** | Embedded SW RAID (S100i) with 14 SATA ports<br>Optional: Choice of Broadcom tri-mode controller |
| **PCIe** | 2 PCIe slots (1 x16 FH / 1 x8 LP)<br>Optional: 1 x16 FH or LP |
| **Drive Cage - included** | 8 SFF - SAS/SATA<br>Optional: up to 2 NVMe or 2 Dual uFF (4x M.2 cartridges) |
| **Network Controller** | Choice of HPE FlexibleLOM for primary NIC and stand up card for additional NICs.<br>**Notes:** No embedded networking. Minimum 1 quantity of select Networking (FlexibleLOM or PCIe) cards must be ordered to fulfill base model factory diagnostics. See<br>QuickSpecs for valid options. |
| **Fans** | 1 CPU – 5 Standard Fans<br>2 CPU – 7 Standard Fans<br>Optional: High Performance Fans |
| **Management** | HPE iLO with Intelligent Provisioning (standard)<br>Optional: iLO Advanced and OneView |
| **USB** | Front: 1 USB 3.0 + iLO service port<br>Rear: 2 USB 3.0<br>Internal: 2 USB 3.0<br>Optional: 1 USB 2.0 (lose iLO serv. Port) |
| **Rail Kit** | Easy Install w/o CMA<br>**Notes:** Server does not support shelf mounted rail kits (“L” brackets). |
| **Form Factor** | 1U Rack |
| **Warranty** | 3-year parts, 3-year labor, 3-year onsite support with next business day response. |

## Configuration Information

| CTO Server | HPE DL360 Gen10 4LFF NC CTO Server | HPE DL360 Gen10 8SFF NC CTO Server |
|---|---|---|
| **SKU Number** | P19765-B21 | P19766-B21 |
| **TAA SKU*** | P19768-B21 | P19769-B21 |
| **HPE Trusted Supply Chain for HPE ProLiant** | P36394-B21 | |
| **Processor** | Not included as standard | |
| **DIMM Slots** | 24-DIMM slots (12 can be used for NVDIMMs or 12 can be used for HPE Persistent Memory) | |
| **Storage Controller** | Embedded SW RAID (S100i) with 14 SATA ports<br>Optional: Choice of HPE modular Smart Array and PCIe plug-in controller | |
| **PCIe** | 2 PCIe slots (1 x16 FH / 1 x8 LP)<br>Optional: 1 x16 FH or LP | |
| **Drive Cage - included** | 4 LFF - SAS/SATA | 8 SFF - SAS/SATA<br>Optional: up to 2 NVMe or 2 Dual uFF (4x M.2 cartridges) |
| **Network Controller** | Choice of HPE FlexibleLOM for primary NIC and stand up card for additional NICs.<br>**Notes:** No embedded networking. Minimum 1 quantity of select Networking (FlexibleLOM or PCIe) cards must be ordered to fulfill base model factory diagnostics. See<br>QuickSpecs for valid options. | |
| **Fans** | 1 CPU – 5 Standard Fans<br>2 CPU – 7 Standard Fans<br>Optional: High Performance Fans | 2 CPU – 7 High Performance Fans |
| **Management** | HPE iLO with Intelligent Provisioning (standard)<br>Optional: iLO Advanced and OneView | |
| **USB** | Front: 1 USB 3.0 + iLO service port<br>Rear: 2 USB 3.0<br>Internal: 2 USB 3.0<br>Optional: 1 USB 2.0 (lose iLO serv. Port) | Front: 1 USB 3.0 + iLO service port<br>Rear: 2 USB 3.0<br>Internal: 2 USB 3.0 |
| **Rail Kit** | Easy Install w/o CMA<br>**Notes:** Server does not support shelf mounted rail kits (“L” brackets). | |
| **Form Factor** | 1U Rack | |
| **Warranty** | 3-year parts, 3-year labor, 3-year onsite support with next business day response. | |

**Notes:**

– HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries with enhanced security and compliance needs. Applying this option to a DL360 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL360 Gen10 server is re-branded as a HPE ProLiant DL360T Gen10 to denote the HPE Trusted Supply Chain security enhancements. The DL360T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at http://www.hpe.com/security

## Configuration Information

- *HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO). For compliance, select a TAA CTO server model from list above.
- HPE Persistent Memory is only supported on 2nd generation Intel Xeon Scalable processor series (Platinum 8200, Gold 6200, Gold 5200, Silver 4215 and 4215R).
- SKUs P19767-B21 & P19770-B21 do not support the Xeon-Gold 6250L or Gold 6250 processors.

## CTO Models with embedded LOM

| CTO Server | HPE DL360 Gen10 4LFF CTO Server | HPE DL360 Gen10 8SFF CTO Server | HPE DL360 Gen10 8SFF BC CTO System |
|---|---|---|---|
| **SKU Number** | 867958-B21 | 867959-B21 | P56950-B21 |
| **TAA SKU*** | 875965-B21 | 875966-B21 | N/A |
| **HPE Trusted Supply Chain FIO Configuration** | P36394-B21 | | |
| **Processor** | Not included as standard | | |
| **DIMM Slots** | 24-DIMM slots (12 can be used for NVDIMMs or 12 can be used for HPE Persistent Memory) | | |
| **Storage Controller** | Embedded SW RAID (S100i) with 14 SATA ports<br>Optional: Choice of HPE modular Smart Array and PCIe plug-in controller | | Embedded SW RAID (S100i) with 14 SATA ports<br>Optional: Choice of Broadcom tri-mode controller |
| **PCIe** | 2 PCIe slots (1 x16 FH / 1 x8 LP)<br>Optional: 1 x16 FH or LP | | |
| **Drive Cage - included** | 4 LFF - SAS/SATA | 8 SFF - SAS/SATA<br>Optional: up to 2 NVMe or 2 Dual uFF (4x M.2 cartridges) | 8 SFF - SAS/SATA |
| **Network Controller** | HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card | | |
| **Fans** | 1 CPU – 5 Standard Fans<br>2 CPU – 7 Standard Fans<br>Optional: High Performance Fans | | |
| **Management** | HPE iLO with Intelligent Provisioning (standard)<br>Optional: iLO Advanced and OneView | | |
| **USB** | Front: 1 USB 3.0 + iLO service port<br>Rear: 2 USB 3.0<br>Internal: 2 USB 3.0<br>Optional: 1 USB 2.0 (lose iLO serv. Port) | | |
| **Rail Kit** | SFF Easy Install w/o CMA<br>**Notes:** Server does not support shelf mounted rail kits (“L” brackets). | | |
| **Form Factor** | 1U Rack | | |
| **Warranty** | 3-year parts, 3-year labor, 3-year onsite support with next business day response. | | |

**Notes:**

– HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries with enhanced security and compliance needs. Applying this option to a DL360 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL360 Gen10 server is re-branded as a HPE ProLiant DL360T Gen10 to denote the HPE Trusted Supply Chain security enhancements. The DL360T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at http://www.hpe.com/security

- *HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO). For compliance, select a TAA CTO server model from list above.
- *TAA chassis are only orderable in North America and Canada.
- HPE Persistent Memory is only supported on 2nd generation Intel Xeon Scalable processor series (Platinum 8200, Gold 6200, Gold 5200, Silver 4215 and 4215R).

## Step 2: Choose Options

Please select one –L21 processor required below.

For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section.

For example: first processor, select P02679-L21 then for second processor, select P02679-B21.

**Notes:**

- Mixing of 2 different processor models is not supported.
- For first processor, -L21 kit will include 5 fans. With the exception of Xeon-Gold 6256, Gold 6250L, Gold 6250, Gold 6212U, Gold 6210U, Gold 6209U & Gold 6208U processors, -B21 kits include 2 fans (for 4 LFF and 8 SFF CTO Server, 10 NVMe CTO Server always includes 7 High Performance fans).
- Processors with 130W or higher will ship with the High Performance heat sink plus SKUs 8256, 5222, 8156, 6128, 5122 as noted below. All other processors will ship with the Standard heat sink.
- When 2nd Generation Intel Xeon Scalable Processor is slected, then only DDR4-2933 Memory Kit can be selected; When 1st Generation Intel Xeon Scalable Processor is selected, then only DDR4-2666 Memory Kit can be selected.

**Step 2a: Choose Processor Options**

| **Processor Option Kits** (Required Processor) | **SKU** |
|---|---|
| **2nd Generation Intel Xeon- Platinum** | |
| Intel Xeon-Platinum 8268 (2.9GHz/24-core/205W) FIO Processor Kit for HPE ProLiant DL360 Gen10 | P02670-L21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) FIO Processor Kit for HPE ProLiant DL360 Gen10 | P02661-L21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6258R (2.7GHz/28-core/205W) FIO Processor Kit for HPE ProLiant DL360 Gen10 | P24488-L21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) FIO Processor Kit for HPE ProLiant DL360 Gen10 | P02649-L21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit for HPE ProLiant DL360 Gen10 | P02646-L21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6250 (3.9GHz/8-core/185W) FIO Processor Kit for HPE ProLiant DL360 Gen10 | P23741-L21 |

**Notes:**

- Ships with High Performance Heatsink.
- NVMe SSDs not supported with this processor.
- Not supported on Premium 10SFF NVMe chassis.
- Ambient temperature support up to 25C on 4LFF and 8SFF configurations. 2SFF cages not supported.
- High performance fans are required.

## Configuration Information

Intel Xeon-Gold 6248R (3.0GHz/24-core/205W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24487-L21
**Notes:**Ships with High Performance Heatsink.
Intel Xeon-Gold 6246R (3.4GHz/16-core/205W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24486-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6246 (3.3GHz/12-core/165W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P15443-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6242R (3.1GHz/20-core/205W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24485-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02628-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02625-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24483-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02604-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24482-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02607-L21
Intel Xeon-Gold 6230N (2.3GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P11848-L21
Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24481-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02601-L21
Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02709-L21
**Notes:** Ships with High Performance Heatsink.
Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24480-L21
Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02592-L21
Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02589-L21
Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02586-L21

**2nd Generation Intel Xeon- Silver**

Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02583-L21
Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P24479-L21
**Notes:** Ships with Performance Heatsink.
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P15977-L21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02580-L21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P02574-L21

**2nd Generation Intel Xeon- Bronze**

Intel Xeon-Bronze 3206R (1.9GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL360 Gen10 P15968-L21

**1st Generation Intel Xeon:**

For information on obsolete 1st Generation Xeon processors, please visit
HPE DL360 Gen10 QuickSpecs version 43

Configuration Information

**Step 2b: Choose Memory Options**

Please select one or more memory from below.

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to: https://www.hpe.com/docs/memory-population-rules

For Gen10 memory speed table, please go to: https://www.hpe.com/docs/memory-speed-table

For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: https://www.hpe.com/psnow/doc/a50004620enw.

**Notes:**

- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors and DDR4-2666 Memory Kits are only supported with 1st Generation Intel Xeon Scalable Series Processors.

**Registered DIMMs (RDIMMs) for 2nd Generation Intel Xeon Scalable Series**

| | |
|---|---|
| HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit | P00924-B21 |
| HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit | P00920-B21 |

**HPE Persistent Memory (NVDIMM)**

**Step 2c: Choose Power Supplies**

Please select one or two power supplies from below.

**Notes:** Mixing of 2 different power supplies is NOT supported.

**HPE Flex Slot Power Supplies**

| | |
|---|---|
| HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | 865408-B21 |
| HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit | 865438-B21 |
| HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | 865414-B21 |
| HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit | 865434-B21 |
| HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | 830272-B21 |

**Notes:** 1600W Power supplies only support high line voltage (200 VAC to 240 VAC).

## Step 3: Choose Additional (FIO) Factory Integratable Options

Each of the following may be selected if desired at time of factory integration

| | |
|---|---|
| HPE Trusted Platform Module 2.0 Gen10 Option | 864279-B21 |

**Notes:**

- HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.
- HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

| | |
|---|---|
| HPE CE Mark Removal FIO Enablement Kit | P35876-B21 |

**Notes:**

Correlated to the new EU Lot9 Regulation addressed in the Power Supplies section.

For EU Lot9 out-of-scope countries, incl. rest of EMEA, the Americas, Asia-Pacific & Japan and China.

- Users will be able to select non-compliant Power Supplies on this server.
- If a non-compliant PSU is selected as FIO/0D1, the Configurator will auto populate SKU P35876-B21 [HPE CE Mark Removal FIO Enable Kit] which directs to use the non-CE bearing variant of agency and COO labels. Then the unit is not-importable into the EU Lot9 in scope countries.

– If CE Mark Removal SKU is deleted from configuration, without removing non-compliant Power Supply, this will be identified as unbuildable configuration, until the 96% efficient (Titanium) FlexSlot power supply is mandated to meet the Lot9 requirements.

**HPE Security Options**

HPE Server Security Optimized Service for HPE ProLiant (R9S59A) is an optional security upgrade intended for agencies and regulated industries with enhanced security and compliance needs. Applying this option to a DL3XX Gen10/Gen10 Plus CTO server ensures it is hardened by turning on advanced safeguards in place against cyber-exploits throughout the server lifecycle. An iLO Advanced License required for High Security Mode and compatible intrusion detection device option kits are prerequisites for the full optimization service.

## Step 4: Choose Additional Options for Factory Integration from Core and Additional Option sections below

| | |
|---|---|
| HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU | E5Y43A |
| HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU | P8B31A |

## Core Options

Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

# HPE Unique Options

**Risers**

| | |
|---|---|
| HPE DL360 Gen10 Low Profile Riser Kit | 867982-B21 |
| HPE DL360 Gen10 SATA M.2 2280 Riser Kit | 867978-B21 |
| HPE DL360 Gen10 2P FH GPU Enablement v2 Kit | P23271-B21 |

**Notes:**

- Replaces 867980-B21. Enhanced to support additional GPUs and compatible with all GPUs qualified on DL360 Gen10.
- This kit is not available on the 10 NVMe model.

**Riser Information*,****

| Part number | Description | Riser position | | Slot Bus width (Gen3 lanes) | | | NVMe Direct Connect | |
|---|---|---|---|---|---|---|---|---|
| | | Primary | Secondary | #1 | #2 | #3 | Connectors | Max SSDs |
| N/A | HPE DL360 Gen10 x16/x8 Primary GPU Riser | D | N | x16 | x8 | O | N/A | N/A |
| 867978-B21 | HPE DL360 Gen10 x16/x16 SATA M.2 2280 Riser Kit | O | N | x16 | x16 | O | N/A | N/A |
| P23271-B21 | HPE DL360 Gen10 x16 FH GPU v2 Riser Kit | N | O | O | N/A[4] | x16 | N/A | N/A |
| 867982-B21 | HPE DL360 Gen10 x16 LP Riser Kit | N | O | O | O | x16 | N/A | N/A |
| N/A | HPE DL360 Gen10 x16/x8 1-port 2SFF NVMe Riser[1] | O | N | x16 | x8 | O | 1 | 2 |
| N/A | HPE DL360 Gen10 5-port 10SFF NVMe Riser Kit[2] | N | D[3] | O | O | O | 5 | 10 |
| 867972-B21 | HPE DL360 Gen10 1SFF SAS/SATA Rear Backplane Kit | O | N | O | x8 | O | N/A | N/A |

**Notes:**

- D = Default on chassis; O = Optional; N = not supported or slot/connector not present.
- [1]Included on 2SFF NVMe Backplane Kit (871242-B21)
- [2]Included on 10SFF chassis (867960-B21, 875967-B21, P19767-B21 & P19770-B21) or 10SFF Premium backplane kit (867974-B21)
- [3]Included on 10SFF chassis (867960-B21, 875967-B21, P19767-B21 & P19770-B21)
- [4]When secondary full height kit is installed, then primary PCIe Slot #2 cannot be used. Only 2 full height slots are supported.
- *For additional details on ProLiant DL Gen10 server risers. please visit: https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw

Core Options

## Performance Cooling Options

| | |
|---|---|
| HPE DL360 Gen10 High Performance Heat Sink Kit | 871246-B21 |
| HPE DL360 Gen10 High Performance Fan Kit | 871244-B21 |

## Universal Media Bay Options

**Notes:** https://support.hpe.com/hpesc/public/docDisplay?docId=a00105399en_us&page=GUID-983C6798-FD82-45D6-96EE-114EB0620273.html&docLocale=en_US can help to explain the cable routing for each option listed below

| | |
|---|---|
| HPE DL360 Gen10 2SFF SAS/SATA Backplane Kit | 867966-B21 |

**Notes:** Not supported on Xeon-Gold 6250L or Gold 6250 processor based configurations.

| | |
|---|---|
| HPE DL360 Gen10 2SFF NVMe Backplane Kit | 871242-B21 |

**Notes:** Not supported on Xeon-Gold 6250L or Gold 6250 processor based configurations.

| | |
|---|---|
| HPE DL360 Gen10 2SFF SATA UFF Backplane Kit | 867970-B21 |

**Notes:** Not supported on Xeon-Gold 6250L or Gold 6250 processor based configurations.

| | |
|---|---|
| HPE DL360 Gen10 8SFF Display Port/USB/Optical Drive Blank Kit | 868000-B21 |

**Notes:** This kit is required for Optical Drive option (8SFF model only).

| | |
|---|---|
| HPE DL360 Gen10 LFF Display Port and USB Kit | 868004-B21 |

## Optical Drive Options

| | |
|---|---|
| HPE Mobile USB DVD-RW Optical Drive | 701498-B21 |

**Notes:** This kit is supported on USB 3.0 ports only.

| | |
|---|---|
| HPE 9.5mm SATA DVD-ROM Optical Drive | 726536-B21 |
| HPE 9.5mm SATA DVD-RW Optical Drive | 726537-B21 |

## Configuring Broadcom MegaRAID Tri-mode controllers and required components on DL360 Gen10

**Notes:**

- DL360 Gen10 with Broadcom MegaRAID controllers only support Basic Carrier SFF SAS/SATA storage devices listed below and require Basic Carrier drive cage(s) with cables needed for MegaRAID controllers.
- Do not attempt to use Smart Carrier storage devices in these DL360 models with MegaRAID controllers. Mixing of BC and SC carrier types is not allowed.
- NVMe is not supported with DL360 Gen10 with MegaRAID storage controllers.

**Select CTO Server – One from below**

HPE DL360 Gen10 NC 8SFF BC CTO Svr P56949-B21

**Notes:** This CTO Server contains default SAS/SATA drive cage/backplane and tri-mode to SAS/SATA cables.

HPE DL360 Gen10 8SFF BC CTO Svr P56950-B21

**Notes:** This CTO Server contains default SAS/SATA drive cage/backplane and tri-mode to SAS/SATA cables.

**Select Broadcom MegaRAID Controller – Shown below**

Broadcom MegaRAID MR416i-p x16 Lanes 4GB Cache NVMe/SAS 12G Controller for HPE Gen10 Plus P06367-B21
Broadcom MegaRAID MR416i-a x16 Lanes 4GB Cache NVMe/SAS 12G Controller for HPE Gen10 Plus P26279-B21
Broadcom MegaRAID MR216i-p x16 Lanes without Cache NVMe/SAS 12G Controller for HPE Gen10 Plus P26324-B21
Broadcom MegaRAID MR216i-a x16 Lanes without Cache NVMe/SAS 12G Controller for HPE Gen10 Plus P26325-B21

**Select Any Additional Backplane & Drive Cage Kit – Shown below**

HPE ProLiant DL360 Gen10 Plus 8SFF SAS/SATA 12G BC Backplane Kit P26427-B21
HPE ProLiant DL360 Gen10 Plus 8SFF x1 Tri-Mode 24G U.3 BC Backplane Kit P26431-B21
HPE ProLiant DL360 Gen10 Plus 2SFF SAS/SATA 12G BC Drive Cage Kit P26435-B21
HPE ProLiant DL360 Gen10 Plus 2SFF x4 Tri-Mode 24G BC Drive Cage Kit P26437-B21
HPE ProLiant DL360 Gen10 Plus 2SFF x4 NVMe 16G U.2 BC Drive Cage Kit P26439-B21
HPE ProLiant DL360 Gen10 Plus 8SFF x4 Tri-Mode 24G U.3 BC Backplane Kit P26429-B21
HPE ProLiant DL360 Gen10 Plus 8SFF x4 NVMe 16G U.2 BC Backplane Kit P26433-B21
HPE ProLiant DL360 Gen10 Plus 8SFF Display Port/USB/Optical Drive Blank Kit P40003-B21

**Notes:** All kits shown above contain the required drive cage/backplane and tri-mode to SAS/SATA cables.

**Select Basic Carrier Drives**

Enterprise - 12G SAS – Basic Carrier SFF Drives
Midline - 12G SAS – Basic Carrier SFF Drives
Read Intensive - 12G SAS - SFF – Basic Carrier SSD
Mixed Use - 12G SAS – Basic Carrier SFF SSD
Mixed Use - 12G SAS - SFF – Basic Carrier Value SAS Digitally Signed Firmware SSD
Read Intensive - 6G SATA – Basic Carrier SFF - Solid State Drives
Mixed Use - 6G SATA – Basic Carrier SFF - Solid State Drives

**Notes:** Only Basic Carrier (BC) drives listed in above sections of Quickspecs will function with Broadcom MegaRAID controllers. Smart carrier (SC) drives will not function with Broadcom controllers. Configurations must not mix BC and SC drives.

Core Options

## System Insight Display Options

HPE DL360 Gen10 SFF System Insight Display Power Module Kit 867996-B21

## Rear Drive Option Kit

HPE DL360 Gen10 1SFF Rear SAS/SATA/UFF Backplane Kit 867972-B21

## Security

HPE Trusted Supply Chain for HPE ProLiant P36394-B21

**Notes:**

- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries with enhanced security and compliance needs. Applying this option to a DL360 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL360 Gen10 server is re-branded as a HPE ProLiant DL360T Gen10 to denote the HPE Trusted Supply Chain security enhancements. The DL360T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at http://www.hpe.com/security
- This option requires the selection of HPE Gen10 Intrusion Detection Kit (867984-B21)
- This option requires the selection of either HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features (BD505A) or HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features (512485-B21)
- This option is limited to stand-alone DL360 Gen10 CTO servers only. The HPE Trusted Supply Chain configuration will not be available if the server is ordered as factory integrated into a rack
- One instance of the following Electronic License to Use is required per order (not per server): R6X85AAE - HPE Trusted Supply Chain E-LTU
- Logistics delivery speeds and services are available and selectable within Next Gen Quoter.
- This option cannot be selected with TAA CTO Models

HPE Trusted Platform Module 2.0 Gen10 Option 864279-B21

HPE DL360 Gen10 Chassis Intrusion Detection Kit 867984-B21

HPE 1U Gen10 Bezel Kit 867998-B21

HPE Bezel Lock Kit 875519-B21

**Notes:** Requires bezel kit (867998-B21).

Core Options

## HPE Processors

Please select one –L21 processor required above.
For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section below.
For example: first processor, select P02679-L21 then for second processor, select P02679-B21.

**Notes:**

- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- Upgrades to two processors must be performed by HPE Services or an approved Service Delivery Partner.
- Mixing of 2 different processor models is not supported.
- For first processor, -L21 kit will include 5 fans. With the exception of Xeon-Gold 6256, Gold 6250L, Gold 6250, Gold 6212U, Gold 6210U, Gold 6209U & Gold 6208U processors, -B21 kits include 2 fans (for 4 LFF and 8 SFF CTO Server, 10 NVMe CTO Server always includes 7 High Performance fans).
- Processors with 130W or higher will ship with the High Performance heat sink plus SKUs 8256, 5222, 8156, 6128, 5122 as noted below. All other processors will ship with the Standard heat sink.
- When 2nd Generation Intel Xeon Scalable Processor is slected, then only DDR4-2933 Memory Kit can be selected; When 1st Generation Intel Xeon Scalable Processor is selected, then only DDR4-2666 Memory Kit can be selected

**2nd Generation Intel Xeon-Platinum**

Intel Xeon-Platinum 8268 (2.9GHz/24-core/205W) Processor Kit for HPE ProLiant DL360 Gen10 P02670-B21

**Notes:** Ships with High Performance Heatsink.

Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) Processor Kit for HPE ProLiant DL360 Gen10 P02661-B21

**Notes:** Ships with High Performance Heatsink.

**2nd Generation Intel Xeon-Gold**

Intel Xeon-Gold 6258R (2.7GHz/28-core/205W) Processor Kit for HPE ProLiant DL360 Gen10 P24488-B21

**Notes:** Ships with High Performance Heatsink.

Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) Processor Kit for HPE ProLiant DL360 Gen10 P02649-B21

**Notes:** Ships with High Performance Heatsink.

Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE ProLiant DL360 Gen10 P02646-B21

**Notes:** Ships with High Performance Heatsink.

Intel Xeon-Gold 6250 (3.9GHz/8-core/185W) Processor Kit for HPE ProLiant DL360 Gen10 P23741-B21

**Notes:**

- Ships with High Performance Heatsink.
- NVMe SSDs not supported with this processor.
- Not supported on Premium 10SFF NVMe chassis.
- Ambient temperature support up to 25C on 4LFF and 8SFF configurations. 2SFF cages not supported.
- High performance fans are required.

Intel Xeon-Gold 6248R (3.0GHz/24-core/205W) Processor Kit for HPE ProLiant DL360 Gen10 P24487-B21

**Notes:** Ships with High Performance Heatsink.

Intel Xeon-Gold 6246R (3.4GHz/16-core/205W) Processor Kit for HPE ProLiant DL360 Gen10 P24486-B21

**Notes:** Ships with High Performance Heatsink.

Intel Xeon-Gold 6246 (3.3GHz/12-core/165W) Processor Kit for HPE ProLiant DL360 Gen10 P15443-B21

**Notes:** Ships with High Performance Heatsink.

## Core Options

| | |
|---|---|
| Intel Xeon-Gold 6242R (3.1GHz/20-core/205W) Processor Kit for HPE ProLiant DL360 Gen10 | P24485-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) Processor Kit for HPE ProLiant DL360 Gen10 | P02628-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) Processor Kit for HPE ProLiant DL360 Gen10 | P02625-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) Processor Kit for HPE ProLiant DL360 Gen10 | P24483-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) Processor Kit for HPE ProLiant DL360 Gen10 | P02604-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) Processor Kit for HPE ProLiant DL360 Gen10 | P24482-B21 |
| **Notes:**Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL360 Gen10 | P02607-B21 |
| Intel Xeon-Gold 6230N (2.3GHz/20-core/125W) Processor Kit for HPE ProLiant DL360 Gen10 | P11848-B21 |
| Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) Processor Kit for HPE ProLiant DL360 Gen10 | P24481-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) Processor Kit for HPE ProLiant DL360 Gen10 | P02601-B21 |
| Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) Processor Kit for HPE ProLiant DL360 Gen10 | P02709-B21 |
| Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) Processor Kit for HPE ProLiant DL360 Gen10 | P15995-B21 |
| **Notes:** Ships with High Performance Heatsink. | |
| Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) Processor Kit for HPE ProLiant DL360 Gen10 | P02595-B21 |
| Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL360 Gen10 | P24480-B21 |
| Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) Processor Kit for HPE ProLiant DL360 Gen10 | P02592-B21 |
| Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) Processor Kit for HPE ProLiant DL360 Gen10 | P02589-B21 |
| Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) Processor Kit for HPE ProLiant DL360 Gen10 | P02586-B21 |
| **2nd Generation Intel Xeon-Silver** | |
| Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) Processor Kit for HPE ProLiant DL360 Gen10 | P02583-B21 |
| Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) Processor Kit for HPE ProLiant DL360 Gen10 | P24479-B21 |
| **Notes:** Ships with Performance Heatsink. | |
| Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) Processor Kit for HPE ProLiant DL360 Gen10 | P15977-B21 |
| Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) Processor Kit for HPE ProLiant DL360 Gen10 | P02580-B21 |
| Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) Processor Kit for HPE ProLiant DL360 Gen10 | P02574-B21 |
| **2nd Generation Intel Xeon- Bronze** | |
| Intel Xeon-Bronze 3206R (1.9GHz/8-core/85W) Processor Kit for HPE ProLiant DL360 Gen10 | P15968-B21 |

**1st Generation Intel Xeon:**

For information on obsolete 1st Generation Xeon processors, please visit

HPE DL360 Gen10 QuickSpecs version 43

Core Options

## HPE Memory

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to: https://www.hpe.com/docs/memory-population-rules
For Gen10 memory speed table, please go to: https://www.hpe.com/docs/memory-speed-table
For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: https://www.hpe.com/psnow/doc/a50004620enw

**Notes:**

- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors and DDR4-2666 Memory Kits are only supported with 1st Generation Intel Xeon Scalable Series Processors.

## HPE DDR4 Memory

**Registered DIMMs (RDIMMs) for 2nd Generation Intel Xeon Scalable Series**

| | |
|---|---|
| HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit | P00924-B21 |
| HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit | P00920-B21 |

## HPE Boot Controllers

| | |
|---|---|
| HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device | P12965-B21 |

## HPE Storage Controllers

**Notes:** For additional details, please see HPE Smart Array Gen10 Controllers Data Sheet at:

HPE Smart Array SR Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers

**HPE Flexible Smart Array Controllers**

**Notes:** https://support.hpe.com/hpesc/public/docDisplay?docId=a00105399en_us&page=GUID-983C6798-FD82-45D6-96EE-114EB0620273.html&docLocale=en_US can help to explain the cable routing for each option below,

| | |
|---|---|
| HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller | 804338-B21 |
| HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller | 804331-B21 |
| HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller | 804326-B21 |

**Notes:** The Low Height (LH) controller is required when a PCIe card that exceeds half-length is used in slots 2 or 3.

Core Options

**HPE Smart Array Controllers**

**Notes:** https://support.hpe.com/hpesc/public/docDisplay?docId=a00105399en_us&page=GUID-983C6798-FD82-45D6-96EE-114EB0620273.html&docLocale=en_US can help to explain the cable routing for each option below.

| | |
|---|---|
| HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller | 804405-B21 |
| HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller | 830824-B21 |

**Notes:** Not supported on slot 3.

| | |
|---|---|
| HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller | 804398-B21 |
| HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller | 804394-B21 |

**Notes:** Not supported on slot 3.

| | |
|---|---|
| HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit | P01366-B21 |

**Notes:** Supports up to 6 P-class Smart Array controllers

| | |
|---|---|
| HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit | P02377-B21 |

**Notes:** Supports up to 3 P-class Smart Array controllers

## Cable Kits

| | |
|---|---|
| HPE DL360 Gen10 SFF Internal Cable Kit | 867990-B21 |
| HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit | 873770-B21 |

## HPE Hard Disk Drives

For HDDs with optimal product availability, HPE advocates HDDs from the list located here:

**Enterprise - 12G SAS - SFF Basic Carrier Drives (Only for use with Broadcom MegaRAID)**

| | |
|---|---|
| HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD | P28352-B21 |
| HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD | P53562-B21 |
| HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD | P28586-B21 |
| HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD | P53561-B21 |
| HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD | P40430-B21 |

**Notes:** Basic Carrier drives support on 8SFF Basic Carrier CTO Server only

**Enterprise - 12G SAS - SFF Drives**

| | |
|---|---|
| HPE 2.4TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD | 881457-B21 |
| HPE 1.8TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD | 872481-B21 |
| HPE 1.2TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD | 872479-B21 |
| HPE 600GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD | 872477-B21 |
| HPE 300GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD | 872475-B21 |

## HPE Solid State Drives

For SSD selection guidance, please visit https://ssd.hpe.com/

For SSDs with optimal product availability, HPE advocates SSDs from the list located here:

**Read Intensive - 24G SAS - SFF – Basic Carrier Solid State Drives (Only for use with Broadcom MegaRAID)**

| | |
|---|---|
| HPE 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor SSD | P49045-B21 |
| HPE 3.84TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-2 PM7 SSD | P63875-B21 |
| HPE 1.6TB SAS Mixed Use SFF BC Self-encrypting FIPS 140-2 PM7 SSD | P63871-B21 |

**Notes:** Basic Carrier drives support on 8SFF Basic Carrier CTO Server only

**Read Intensive - 12G SAS - SFF - Solid State Drives**

| | |
|---|---|
| HPE 15.36TB SAS 12G Read Intensive SFF SC Multi Vendor SSD | P49044-B21 |
| HPE 3.84TB SAS 12G Read Intensive SFF SC Multi Vendor SSD | P49034-B21 |
| HPE 1.92TB SAS 12G Read Intensive SFF SC Multi Vendor SSD | P49030-B21 |
| HPE 960GB SAS 12G Read Intensive SFF SC Multi Vendor SSD | P49028-B21 |

**Mixed Use - 12G SAS - SFF – Basic Carrier Solid State Drives (Only for use with Broadcom MegaRAID)**

| | |
|---|---|
| HPE 3.84TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD | P40508-B21 |
| HPE 3.84TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD | P40512-B21 |
| HPE 1.92TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD | P40511-B21 |
| HPE 1.92TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD | P40507-B21 |
| HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD | P40510-B21 |

**Notes:** Basic Carrier drives support on 8SFF Basic Carrier CTO Server only

**Mixed Use - 12G SAS - SFF - Solid State Drives (Only for use with Broadcom MegaRAID)**

| | |
|---|---|
| HPE 6.4TB SAS 24G Mixed Use SFF BC Multi Vendor SSD | P49057-B21 |
| HPE 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor SSD | P49053-B21 |
| HPE 1.6TB SAS 24G Mixed Use SFF BC Multi Vendor SSD | P49049-B21 |
| HPE 800GB SAS 24G Mixed Use SFF BC Multi Vendor SSD | P49047-B21 |

**Notes:** Basic Carrier drives support on 8SFF Basic Carrier CTO Server only

**Read Intensive - 12G Value SAS - SFF - Solid State Drives**

| | |
|---|---|
| HPE 3.84TB SAS 24G Read Intensive SFF BC Multi Vendor SSD | P49035-B21 |
| HPE 1.92TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD | P36999-B21 |

**Mixed Use - 12G Value SAS - SFF - Solid State Drives**

**Mixed Use - 12G SAS - SFF - Solid State Drives**

| | |
|---|---|
| HPE 6.4TB SAS 12G Mixed Use SFF SC Multi Vendor SSD | P49056-B21 |
| HPE 1.6TB SAS 12G Mixed Use SFF SC Multi Vendor SSD | P49048-B21 |
| HPE 800GB SAS 12G Mixed Use SFF SC Multi Vendor SSD | P49046-B21 |

**Read Intensive – 6G SATA – SFF Basic Carrier Self-encrypting Solid State Drives**

| | |
|---|---|
| HPE 480GB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD | P58236-B21 |

**Read Intensive – 6G SATA - SFF – Basic Carrier - Solid State Drives (Only for use with Braodcom MegaRAID)**

| | |
|---|---|
| HPE 3.84TB SATA 6G Read Intensive SFF BC PM893a SSD | P63910-B21 |
| HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD | P40500-B21 |
| HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD | P40499-B21 |

Core Options

| | |
|---|---|
| HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD | P40498-B21 |
| HPE 480GB SATA 6G Read Intensive SFF BC PM893a SSD | P63886-B21 |
| HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD | P40497-B21 |
| HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD | P40496-B21 |
| **Notes:** Basic Carrier drives support on 8SFF Basic Carrier CTO Server only | |
| **Read Intensive – 6G SATA - SFF - Solid State Drives** | |
| HPE 1.92TB SATA 6G Read Intensive SFF SC Multi Vendor SSD | P18426-B21 |
| HPE 960GB SATA 6G Read Intensive SFF SC Multi Vendor SSD | P18424-B21 |
| HPE 480GB SATA 6G Read Intensive SFF SC Multi Vendor SSD | P18422-B21 |
| HPE 240GB SATA 6G Read Intensive SFF SC Multi Vendor SSD | P18420-B21 |
| **Mixed Use – 6G SATA – SFF Basic Carrier Self-encrypting Solid State Drives** | |
| HPE 960GB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD | P58244-B21 |
| **Mixed Use – 6G SATA - SFF – Basic Carrier Solid State Drives (Only for use with Broadcom MegaRAID)** | |
| HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD | P40505-B21 |
| HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD | P40504-B21 |
| HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD | P40503-B21 |
| HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD | P40502-B21 |
| **Notes:** Basic Carrier drives support on 8SFF Basic Carrier CTO Server only | |
| **Mixed Use – 6G SATA - SFF - Solid State Drives** | |
| HPE 1.92TB SATA 6G Mixed Use SFF SC Multi Vendor SSD | P18436-B21 |
| HPE 960GB SATA 6G Mixed Use SFF SC Multi Vendor SSD | P18434-B21 |
| HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD | P18432-B21 |
| **Mixed Use - PCIe/NVMe - SFF - Solid State Drives** | |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.2 P5620 SSD | P51458-B21 |
| **Read Intensive – 6G SATA - M.2 - Solid State Media (2280 type)** | |
| HPE 480GB SATA 6G Read Intensive M.2 Multi Vendor SSD | P47818-B21 |
| **Internal - 6G SATA - Dual M.2 Enabling Kits** | |
| HPE DL360 Gen10 SATA M.2 2280 Riser Kit | 867978-B21 |
| **Notes:** The DL360 SATA M.2 Riser Kit above is part of the Primary Riser so it will not take up a PCIe slot and will support up to two of the same 2280 M.2 media cards. | |
| **Mixed Use – 6G SATA - LFF - Solid State Drives** | |
| HPE 480GB SATA 6G Read Intensive LFF SCC Multi Vendor SSD | P47807-B21 |

## Hard Drive Blank Kits

| | |
|---|---|
| HPE Small Form Factor Hard Drive Blank Kit | 666987-B21 |

## HPE Smart IO

**Pensando Distributed Services Card (DSC)**

| | |
|---|---|
| Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card | P26966-B21 |

**Requirements:**

- High Performance Fan Kit (871244-B21) is required.
- One 3yr/4yr/5yr Silver or 3yr/4yr/5yr Platinum license must be purchased for every DSC-25 card in a server.
- 1yr Silver, 1yr Platinum licenses are reserved for renewals only.

**Notes:**

- DSC card must be installed in slot 1 when used in combination with ALOM Module for iLO Management.
- Each card instance requires one RTU license of Silver or Platinum software. In case of more than one adapter, RTU licenses doesn't need to be of the same part number.

| | |
|---|---|
| Pensando Distributed Services Platform for HPE iLO Sideband Management Adaptive LOM Module | P26969-B21 |

**Pensando DSP Silver Software Licenses**

| | |
|---|---|
| Pensando Distributed Services Platform Enterprise 1-year Renewal Subscription 24x7 Support E-RTU | R6A06AAE |
| Pensando Distributed Services Platform Enterprise 3-year Subscription 24x7 Support E-RTU | R6A07AAE |
| Pensando Distributed Services Platform Enterprise 4-year Subscription 24x7 Support E-RTU | R6F68AAE |
| Pensando Distributed Services Platform Enterprise 5-year Subscription 24x7 Support E-RTU | R6A08AAE |

**Pensando DSP Platinum Software Licenses**

| | |
|---|---|
| Pensando Distributed Services Platform Enterprise Pro 1-year Renewal Subscription 24x7 Support E-RTU | R6A09AAE |
| Pensando Distributed Services Platform Enterprise Pro 3-year Subscription 24x7 Support E-RTU | R6A10AAE |
| Pensando Distributed Services Platform Enterprise Pro 4-year Subscription 24x7 Support E-RTU | R6F69AAE |
| Pensando Distributed Services Platform Enterprise Pro 5-year Subscription 24x7 Support E-RTU | R6A11AAE |

## HPE Networking

**100 Gigabit Ethernet adapters**

| | |
|---|---|
| HPE Ethernet 100Gb 1-port QSFP28 MCX515A-CCAT Adapter | 874253-B21 |

**25 Gigabit Ethernet adapters**

| | |
|---|---|
| Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE | P08443-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE | P08458-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis
If quantity 2 is selected then riser P23271-B21 HPE DL360 Gen10 2P FH GPU Enablement v2 Kit must be selected

**FlexibleLOM Adapters**

| | |
|---|---|
| HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter | 817709-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| HPE Ethernet 10Gb 2-port 537FLR-SFP+ Adapter | P08440-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter | 727054-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| HPE Ethernet 10Gb 2-port FLR-T X550-AT2 Adapter | 817745-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| HPE Ethernet 10Gb 2-port FLR-T BCM57416 Adapter | 817721-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| HPE Ethernet 1Gb 4-port FLR-T BCM5719 Adapter | 629135-B22 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

| | |
|---|---|
| HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter | 665240-B21 |

**Notes:** Alternative to FlexLOM requirement on Network Choice (NC) chassis

## HPE InfiniBand

| | |
|---|---|
| HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter | 829335-B21 |

**Notes:** For additional InfiniBand information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440

## European Union Erp Lot 9 Regulation

Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements.

HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.

## HPE Power Supplies

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the HPE power cords **and cables** web page.

To review the power requirements for your selected system, please use the HPE Power Advisor Tool.
For information on power specifications and technical content visit HPE Flexible Slot power supplies.

Please refer to “Choose Additional (FIO) Factory Integratable Options” section regarding “HPE CE Mark Removal FIO Enablement Kit (P35876-B21)” for non- EU Erp Lot 9 configuration.

**HPE Flex Slot Platinum Hot-plug Power supplies**

| | |
|---|---|
| HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | 830272-B21 |
| **Notes:** 1600W Power supplies only support high line voltage (200 VAC to 240 VAC). | |
| HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit | P03178-B21 |
| HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | 865414-B21 |
| HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit | 865438-B21 |
| HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit | 865434-B21 |
| HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | 865408-B21 |

**Notes:** According to The Bureau of Indian Standards Act, 2016, BIS certification is required by every manufacturer (Indian or foreign) of those who are manufacturing products under Compulsory Certification.
DL360 Gen10 CTO Servers menufactured in Singapore with below Power Supplies are certified with BIS: 865408-B21, P38995-B21, P03178-B21, P865434-B21, P865438-B21, and P38997-B21.
For information on BIS Certification requirment visit BIS Certification - BIS Certificate for Import (indianchemicalregulation.com)

## HPE Computation and Graphics Accelerators

HPE DL360 Gen10 GPU CPU1 v2 Cable Kit P23272-B21

**Notes:** Replaces 871248-B21. Enhanced to support additional GPUs and compatible with all GPUs qualified on DL360 Gen10.

## GPGPU Information

| HPE DL360 Configuration* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Part number** | **Card** | **Qty supp.** | **Processor supported** | **PCIe** | **4LFF** | **8SFF** | **8+2SFF SAS/ SATA/ Dual M.2**[1] | **8+2SFF SAS/ SATA/ Dual M.2**[2] | **8+2SFF NVMe**[3] | **10SFF Premium**[4] |
| Q9B37C | Intel Arria 10GX FPGA Accelerator | 2 | 1st & 2nd Gen | Gen3 | 35C | 35C | ≤25C | ≤30C | ≤30C | ≤30C |
| R2U55C | NVIDIA Quadro P2200 GPU Module | 2 | 2nd Gen | Gen3 | 35C | 35C | 35C | 35C | 35C | 35C |
| R1F95C | NVIDIA Quadro RTX4000 GPU Module | 2 | 2nd Gen | Gen3 | 35C | 35C | 25C/30C* | 30C/35C* | 25C/30C* | 35C[5] |

## Core Options

| Part number | Card | Qty supp. | Processor supported | PCIe | 4LFF | 8SFF | 8+2SFF SAS/ SATA/ Dual M.2[1] | 8+2SFF SAS/ SATA/ Dual M.2[2] | 8+2SFF NVMe[3] | 10SFF Premium [4] |
|---|---|---|---|---|---|---|---|---|---|---|
| R0W29C[4] | NVIDIA Tesla T4 16GB Module | 2 | 1st & 2nd Gen | Gen3 | 30C | 30C | Not Supp. | 20C | 20C | 20C |
| R9H23C[4] | NVIDIA A2 GPU Accelerator | 2 | 2nd Gen | Gen3 | 30C | 20C (STD fan) 30C (perf. fan) | Not Supp. | 25C | 25C | 30C |

**Notes:**

- The 2nd digit of the processor model number “x1xx” and “x2xx” is used to denote the processor generation (i.e. 1=1st generation and 2=2nd generation)
- When NVMe drives are installed you will be limited to Slot 1 only for any Accelerator module.
- Requires increased cooling to be selected in BIOS settings
- [1] - With standard system fans
- [2] - With High Performance system fans
- [3] - Requires high performance fans with 2SFF NVMe configuration.
- [4] - Requires high performance fans (Note these ship standard on 10SFF models).
- [5] - Limited to 1 GPU
- There is no Energy Star certification with Graphic cards.
- *For information on obsolete P2000 & P4000 GPUs please visit HPE DL360 Gen10 QuickSpecs version 37

Additional Options

Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additional information.

## Embedded Management

**HPE iLO Advanced**

| | |
|---|---|
| HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features | 512485-B21 |
| HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features | 512487-B21 |
| HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features | BD505A |
| HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features | BD507A |
| HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features | E6U59ABE |
| HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features | E6U64ABE |

## Software as a Service Management

**HPE Compute Ops Management**

| | |
|---|---|
| HPE Compute Ops Management Standard 3-year Upfront ProLiant SaaS | R7A11AAE |

**Additional Options**

| | |
|---|---|
| HPE Compute Ops Management Standard 1-year Upfront ProLiant SaaS | R7A10AAE |
| HPE Compute Ops Management Standard 5-year Upfront ProLiant SaaS | R7A12AAE |

**Notes:** For customers purchasing HPE Compute Ops Management, without a hardware purchase or a BTO purchase, use this base SKU within ASQ order:

| | |
|---|---|
| HPE Compute Ops Management Base SaaS | R6Z73AAE |

## HPE iLO Common Password Setting

| | |
|---|---|
| HPE iLO Common Password FIO Setting | P08040-B21 |

**Notes:**

- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

Additional Options

## HPE Converged Infrastructure Management Software

**HPE OneView Advanced (with HPE iLO Advanced)**

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU E5Y35AAE

**HPE OneView Advanced (without HPE iLO Advanced)**

HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU P8B25A

HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU P8B26AAE

**Notes:**

- Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: https://www.hpe.com/us/en/integrated-systems/software.html
- Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.
- Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: https://www.hpe.com/us/en/integrated-systems/software.html

## HPE Security

HPE Trusted Supply Chain for HPE ProLiant P36394-B21

**Notes:**

- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries with enhanced security and compliance needs. Applying this option to a DL360 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL360 Gen10 server is re-branded as a HPE ProLiant DL360T Gen10 to denote the HPE Trusted Supply Chain security enhancements. The DL360T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at http://www.hpe.com/security
- This option requires the selection of HPE Gen10 Intrusion Detection Kit (867984-B21)
- This option requires the selection of either HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features (BD505A) or HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features (512485-B21)
- This option is limited to stand-alone DL360 Gen10 CTO servers only. The HPE Trusted Supply Chain configuration will not be available if the server is ordered as factory integrated into a rack
- One instance of the following Electronic License to Use is required per order (not per server): R6X85AAE - HPE Trusted Supply Chain E-LTU
- Logistics delivery speeds and services are available and selectable within Next Gen Quoter.
- This option cannot be selected with TAA CTO Models

HPE 1U Gen10 Bezel Kit 867998-B21

HPE Bezel Lock Kit 875519-B21

**Notes:** Requires bezel kit (867998-B21).

## Additional Options

| | |
|---|---|
| HPE DL360 Gen10 Chassis Intrusion Detection Kit | 867984-B21 |

**Notes:** This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.

| | |
|---|---|
| HPE Trusted Platform Module 2.0 Gen10 Option | 864279-B21 |

**Notes:**

- HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.
- HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

# HPE Storage Options

**Emulex Fibre Channel HBAs**

| | |
|---|---|
| HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter | Q0L13A |
| HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter | Q0L14A |
| HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter | Q0L11A |
| HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter | Q0L12A |
| HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter | R2J62A |
| HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter | R2J63A |

**QLogic Fibre Channel HBAs**

| | |
|---|---|
| HPE SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter | P9D93A |
| HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter | P9D94A |
| HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter | R2E08A |
| HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter | R2E09 |

# HPE Rack Options

**Rail Kits**

**Notes:** HPE rail kits are designed to work with HPE racks in compliance with industry standard EIA-310-E. In the event a customer elects to purchase a third-party rack for use with an HPE rail kit, any such use is at customer's own risk. HPE makes no express or implied warranties with respect to such third-party racks and specifically disclaims any implied warranties of merchantability and fitness for a particular purpose. Furthermore, HPE has no obligation and assumes no liability for the materials, design, specifications, installation, safety, and compatibility of any such third-party racks with any rail kits, including HPE rail kits.

| | |
|---|---|
| HPE Gen10 1U SFF Easy Install Rail Kit | 874543-B21 |
| HPE 1U LFF Gen9 Easy Install Rail Kit | 789388-B21 |
| HPE 1U Cable Management Arm for Rail Kit | 734811-B21 |

**Notes:** Supports both the Easy Install and Ball Bearing Rail Kits.

Additional Options

## HPE Racks

- Please see the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications. HPE G2 Advanced Series Racks
- Please see the HPE Enterprise Series Racks QuickSpecs for information on additional racks options and rack specifications. HPE G2 Enterprise Series Racks

## HPE Power Distribution Units (PDUs)

- Please see the HPE Basic Power Distribution Units (PDU) QuickSpecs for information on these products and their specifications.
- Please see the HPE Metered Power Distribution Units (PDU) QuickSpecs for information on these products and their specifications. Please see the HPE Intelligent Power Distribution Unit (PDU) QuickSpecs for information on these products and their specifications.
- Please see the HPE Metered and Switched Power Distribution Units (PDU) QuickSpecs for information on these products and their specifications.

## HPE Uninterruptible Power Systems (UPS)

- To learn more, please visit the HPE Uninterruptible Power Systems (UPS) web page.
- Please see the HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs for information on these products and their specifications.
- Please see the HPE Line Interactive Single Phase UPS QuickSpecs for information on these products and their specifications.

## HPE USB and SD Options

**Notes:** In vSphere 7.0, VMware made changes that impacted the usage of USB/SD Cards as standalone boot devices, and will be removing support for them with upcoming versions after 7.x.

SD Cards/USB media can still be used as a standalone boot option through all 7.x releases via published published Customer Advisory Usage of SD Card/USB Devices As Standalone Boot Devices Has Changed Due to System Storage Changes For VMware ESXi 7.0 (Or Later).

For any major release beyond VMware ESXi 7.x, VMware will require M.2 or another local persistent device as the standalone boot option.

**HPE Enterprise Mainstream Flash Media Kits for Memory Cards**

| | |
|---|---|
| HPE 32GB microSD RAID 1 USB Boot Drive | P21868-B21 |

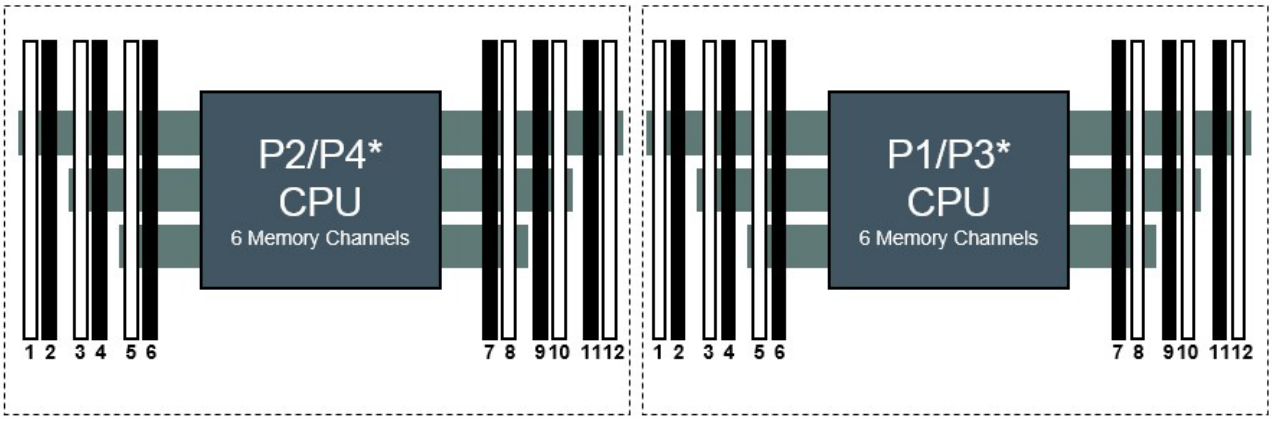
## HPE Support Services

**Tech Care**

| | |
|---|---|
| HPE 5 Year Tech Care Essential DL360 Gen10 Service | HS7U4E |
| HPE 5 Year Tech Care Essential wDMR DL360 Gen10 Service | HS7U9E |
| HPE 3 Year Tech Care Essential DL360 Gen10 Service | HS7U2E |
| HPE 3 Year Tech Care Essential wDMR DL360 Gen10 Service | HS7U7E |

**Notes:** For a full listing of support services available for this server, please visit http://www.hpe.com/services.

## Memory Population guidelines




**HPE Gen10 DL360 / DL380 / DL560**

**Notes:*** Servers Front Server2 Slots per Channel

| HPE ProLiant Gen10 12 slot per CPU DIMM population order | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DIMM population order** | | | | | | | | | | | | |
| **1 DIMM** | | | | | | | | 8 | | | | |
| **2 DIMM s** | | | | | | | | 8 | | 10 | | |
| **3 DIMM s** | | | | | | | | 8 | | 10 | | 12 |
| **4 DIMM s** | | | 3 | | 5 | | | 8 | | 10 | | |
| **5 DIMM s** | | | 3 | | 5 | | | 8 | | 10 | | 12 |
| **6 DIMM s** | 1 | | 3 | | 5 | | | 8 | | 10 | | 12 |
| **7 DIMM s** | 1 | | 3 | | 5 | | 7 | 8 | | 10 | | 12 |
| **8 DIMM s** | | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| **9 DIMM s** | 1 | | 3 | | 5 | | 7 | 8 | 9 | 10 | 11 | 12 |
| **10 DIMM s** | 1 | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 12 |
| **11 DIMM s** | 1 | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **12 DIMM s** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

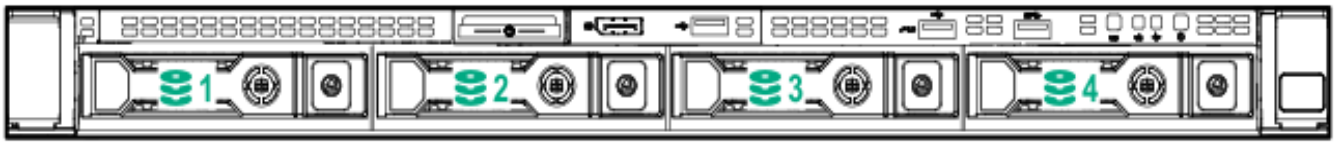
## General Memory Population Rules and Guidelines

- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, the number and model of installed processors qualified on the platform.
- For details on the HPE Server Memory Options Population Rules, visit: http://www.hpe.com/docs/memory-population-rules
- To realize the performance memory capabilities listed in this document, HPE DDR4 Smart Memory is required. For additional information, please see the HPE DDR4 Smart Memory QuickSpecs.

**Notes:** The maximum memory speed is a function of the memory type, memory configuration, and processor model

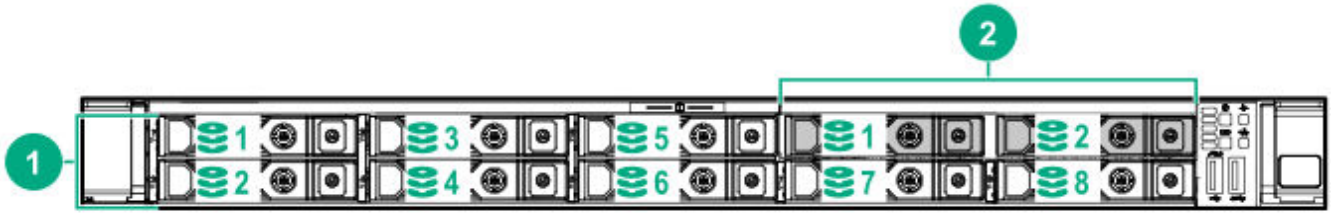
For details on the HPE Server Memory speed, visit: https://www.hpe.com/docs/memory-speed-table

## Storage



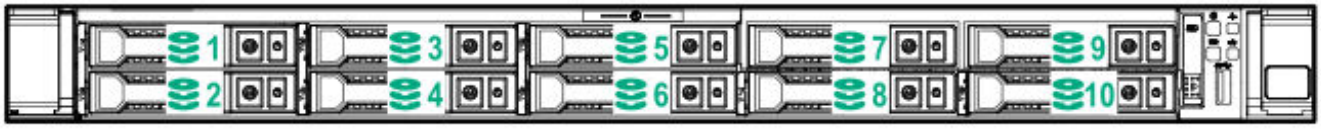

**4 LFF device bay numbering**


**8 SFF + ODD device bay numbering**



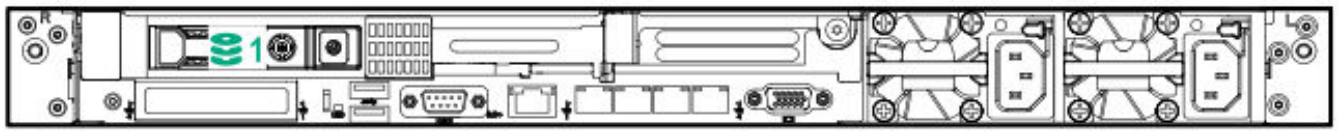

**8 SFF + 2 SFF device bay numbering**

| Item | Description |
|---|---|
| 1 | Bays 1-8 |
| 2 | Bays 1 and 2 |




**10 SFF NVMe/SAS backplane option device bay numbering**

**Notes:** When the 10SFF NVMe/SAS backplane option is installed, bays 9 and 10 ONLY support NVMe Drives.The other bays support a mix of NVMe and SAS drives




**Optional rear device bay numbering**

**Notes:**

- The optional rear device bay supports either 1 SFF drive or 1 Dual uFF (2x M.2 drives) in an HPE SmartCarrier M.2 (SCM).
- When the Dual uFF is installed, the M.2 drives are recognized as 101 and 102.
- Embedded 1Gb Ethernet 4-Port 331i Adapter shown above is not available on all models

## System Unit

**Dimensions** (Height x Width x Depth)

**SFF Drives**

– 4.29 x 43.46 x 70.7 cm
1.69 x 17.11 x 27.83 in

**LFF Drives**

– 4.29 x 43.46 x 74.98 cm
1.69 x 17.11 x 29.5 in

## Weight (approximate)

– **13.04 kg (28.74 lb)**
- **SFF minimum**: One drive, one processor, one power supply, two heatsinks, one Smart Array controller, and five fans.

– **16.27 kg (35.86 lb)**
- **SFF maximum:** 10 drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.

– **13.77 kg (30.36 lb)**
- **LFF minimum:** one drive, one processor, one power supply, two heatsinks, one Smart Array controller and five fans.

– **16.78 kg (37 lb)**
- **LFF maximum:** Four drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.

## Input Requirements (per power supply)

**Rated Line Voltage**

– For 1600W (Platinum): 200-240 VAC
– For 1000W (Titanium): 100 to240 VAC
– For 800W (Titanium) Power Supply: 200-240 VAC
– For 800W (Platinum): 100-240 VAC
– For 800W (Universal) Power Supply: 200-277 VAC
– For 800W (-48VDC): -40 Vdc to -72 Vdc
– 500W (Platinum) Power Supply: 100-240 VAC

## BTU Rating

**Maximum**

– For 1600W (Platinum) Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC)
– For 1000W (Titanium) Power Supply: 3741 BTU/hr (at 100 VAC), 3596 BTU/hr (at 200 VAC), 3582 BTU/hr (at 240 VAC)
– For 800W (Titanium) Power Supply: 2905 BTU/hr (at 200 VAC), 2899 BTU/hr (at 220 VAC), 2893 BTU/hr (at 240 VAC)

- For 800W (Platium) Power Supply: 3067 BTU/hr (at 100 VAC), 2958 BTU/hr (at 200 VAC), 2949 BTU/hr (at 240 VAC)
- For 800W (Universal) Power Supply: 2964 BTU/hr (at 200 VAC), 2951 BTU/hr (at 230 VAC), 2936 BTU/hr (at 277 VAC)
- For 800W-(48Vdc) Power Supply: 2983 BTU/hr (at -40 Vdc), 2951 BTU/hr (at -48Vdc), 2912 BTU/hr (at -72Vdc)
- For 500W (Platinum) Power Supply: 1902 BTU/hr (at 100 VAC), 1840 BTU/hr (at 200 VAC), 1832 BTU/hr (at 240 VAC)

## Power Supply Output (per power supply)

**Rated Steady-State Power**

- For 1600W (Platinum) Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1000W (Titanium) Power Supply: 1000W (at 100 VAC), 1000W (at 240 VAC), 1000W (at 240 VDC) input for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)
- For 500W (Platinum) Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only

**Maximum Peak Power**

- For 1600W (Platinum) Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1000W (Titanium) Power Supply: 1000W (at 100 VAC), 1000W (at 240 VAC), 1000W (at 240 VDC) input for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)
- For 500W (Platinum) Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only

## System Inlet Temperature

- **Standard Operating Support**
  10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.
  System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).
  For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL:http://www.hpe.com/servers/ashrae
- **Extended Ambient Operating Support**
  For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL:http://www.hpe.com/servers/ashrae
  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
- **Non-operating**
  -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).

## Relative Humidity (non-condensing)

- **Operating**
  8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
- **Non-operating**
  5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

## Altitude

- **Operating**
  3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
- **Non-operating**
  9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

## Emissions Classification (EMC)

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center: http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

## HPE Smart Array

For latest information on HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

## Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

| Configuration SKU | Entry | Base | Performance |
|---|---|---|---|
| **Idle** | | | |
| LWAd | 5.1 B | 5.1 B | 5.2 B |
| LpAm | 35 dBA | 35 dBA | 36 dBA |
| **Operating** | | | |
| LWAd | 5.3 B | 5.2 B | 5.9 B |
| LpAm | 36 dBA | 38 dBA | 45 dBA |

**Notes:** Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.

## Environment-friendly Products and Approach - End-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 16-Mar-2026 | Version 73 | Changed | Service and Support, Pre-Configured Models, Configuration Information and Core Options sections were updated. |
| 28-Jul-2025 | Version 72 | Changed | Updated survey link. |
| 18-Feb-2025 | Version 71 | Changed | Survey added. |
| 03-Sep-2024 | Version 70 | Changed | Standard Features (Operating Systems and Virtualization Software Support for HPE Servers), Pre-Configured Models, Configuration Information and Core Options sections were updated. |
| 03-Jun-2024 | Version 69 | Changed | Pre-Configured Models section was updated |
| 18-Mar-2024 | Version 68 | Changed | Pre-Configured Models section was updated |
| 05-Feb-2024 | Version 67 | Changed | Additional Options section was updated. |
| 11-Dec-2023 | Version 66 | Changed | Pre-Configured Models section was updated |
| 04-Dec-2023 | Version 65 | Changed | Standrad Features, Service and Support and Core Options sections were updated. |
| 05-Sep-2023 | Version 64 | Changed | Optional Options, Additional Options and Standard Features were updated. |
| 05-Jun-2023 | Version 63 | Changed | Core Options, Standard Features and Technical Specifications were updated. |
| 01-May-2023 | Version 62 | Changed | Optional Options and Additional Options sections were updated. |
| 13-Mar-2023 | Version 61 | Changed | Pre-configured Models |
| 10-Jan-2023 | Version 60 | Changed | Core Options section was updated.<br>Obsolete SKUs were removed. |
| 05-Dec-2022 | Version 59 | Changed | Core Options section was updated.<br>Obsolete SKUs were removed. |
| 21-Nov-2022 | Version 58 | Changed | Update Pre-Configured Models, Configuration Informaion, Core Options |
| 06-Sep-2022 | Version 57 | Changed | Overview, Pre-Configured Models, Core Options and Configuration Information sections were updated.<br>Obsolete SKUs were removed. |
| 01-Aug-2022 | Version 56 | Changed | Overview, Pre-Configured Models, Core Options and Configuration Information sections were updated.<br>Obsolete SKUs were removed. |
| 05-Jul-2022 | Version 55 | Changed | Standard Features section was updated.<br>Obsolete SKUs were removed. |
| 06-Jun-2022 | Version 54 | Changed | Configuration Information , Pre-Configured Models and Core Options sections were updated.<br>Obsolete SKUs were removed. |
| 02-May-2022 | Version 53 | Changed | Core Options section was updated.<br>Obsolete SKUs were removed |
| 07-Feb-2022 | Version 52 | Changed | Core Options section was updated.<br>Obsolete SKUs were removed |
| 13-Dec-2021 | Version 51 | Changed | Additional Options section was updated. |
| 06-Dec-2021 | Version 50 | Changed | Additional Options section was updated.<br>Obsolete SKUs were removed |

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 01-Nov-2021 | Version 49 | Changed | Configuration Information, Core Options, Service and Support, and Technical Specifications sections were updated.<br>Obsolete SKUs were removed |
| 07-Sep-2021 | Version 48 | Changed | Core Options section was updated.<br>Obsolete SKUs were removed |
| 02-Aug-2021 | Version 47 | Changed | Configuration Information, Core Options and Technical Specifications sections were updated. |
| 06-Jul-2021 | Version 46 | Changed | Overview, re-Configured Models, Configuration Information, Core Options and additional Options sections were updated.<br>Obsolete SKUs were removed. |
| 07-Jun-2021 | Version 45 | Changed | Configuration Information section was updated.<br>Obsolete SKUs were removed |
| 06-Apr-2021 | Version 44 | Changed | Overview, Configuration Information, Service and Support, Core Options and additional Options sections were updated.<br>Obsolete SKUs were removed. |
| 01-Mar-2021 | Version 43 | Changed | Overview, Configuration Information and Core Options sections were updated.<br>Obsolete SKUs were removed.<br>Added HPE Trusted Supply Chain/HPE ProLiant DL360T Gen10. |
| 01-Feb-2021 | Version 42 | Changed | Overview, Pre-Configured Models, Standard Features and Core Options sections were updated.<br>Obsolete SKUs were removed.<br>Added new Read Intensive, Mixed Use & Write Intensive SAS SSDs<br>Added 18TB SAS & SATA drives |
| 04-Jan-2021 | Version 41 | Changed | Overview and Pre-Configured Models sections were updated.<br>Added four new Pre-Configured Models.<br>Obsolete SKUs were removed. |
| 07-Dec-2020 | Version 40 | Changed | Overview, Pre-Configured Models and Core Options sections were updated.<br>Obsolete SKUs were removed.<br>Added support for 32GB Single Rank x4 DDR4-2933 Registered Smart Memory<br>Added new NVMe RI & MU Value SAS SSD SKUs |
| 02-Nov-2020 | Version 39 | Changed | Overview, Pre-Configured Models, Core Options and Additional Options sections were updated.<br>New Pre-Configured Models with 10GbE NICs were added.<br>Full Pre-Configured Models SKUs are now listed.<br>Obsolete SKUs were removed. |

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 05-Oct-2020 | Version 38 | Changed | Overview, Standard Features, Pre-Configured Models, Configuration Information and Core Options sections were updated.<br>Added HPE NS204i-p NVMe PCIe3 OS Boot Device.<br>Added new NVMe RI & MU SCN SSD SKUs<br>Updated 2nd Gen. Intel® Xeon® Scalable Refresh Processors chassis support.<br>Obsolete SKUs were removed. |
| 08-Sep-2020 | Version 37 | Changed | Overview, Standard Features, Configuration Information and Core Options sections were updated.<br>Updated Operating Systems and Virtualization Software section<br>Obsolete SKUs were removed |
| 03-Aug-2020 | Version 36 | Changed | Overview, Pre-Configured Models, Core Options and Additional Options sections were updated.<br>Added Pensando DSP for HPE iLO Management ALOM Module<br>Added new NVMe RI & MU SSD SKUs<br>Added SN1610E 32Gb Fibre Channel HBAs<br>Obsolete SKUs were removed from the QuickSpecs. |
| 06-Jul-2020 | Version 35 | Changed | Standard Features, Additional Options and Core Options sections were updated.<br>Renamed Network Interface Card descriptions to include chipset<br>Corrected UPI link quantity for Gold 6xxx-R refresh processors |
| 15-Jun-2020 | Version 34 | Changed | Core Options section was updated. |
| 01-Jun-2020 | Version 33 | Changed | Overview, Configuration Information, Core Options, Standard Features and Additional Options sections were updated.<br>Obolete SKUs were removed |
| 06-Apr-2020 | Version 32 | Changed | Overview, Standard Features, Pre-Configured Models, Configuration Information, Core Options and Additional Options sections were updated. |
| 16-Mar-2020 | Version 31 | Changed | Standard Features, Configuration Information and Core Options sections were updated. |
| 24-Feb-2020 | Version 30 | Changed | Overview, Pre-Configured Models,Service and Support, Configuration Information, Core Options and Additional Options sections were updated.<br>Additional 2nd Generation Intel® Xeon® Scalable Processors and pre-configured models powered by them were added. |
| 03-Feb-2020 | Version 29 | Changed | Overview, Standard Features, Core Options, Pre-configured Models and Configuration Information and Additional Options sections were updated.<br>European Union (EU) Lot 9 regulation information was added.<br>Obolete SKUs were removed |

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 02-Dec-2019 | Version 28 | Changed | Overview, Pre-configured Models, Configuration Information, Core Options, Additional Options and Technical Specifications sections were updated.<br>Obolete SKUs were removed |
| 07-Oct-2019 | Version 27 | Changed | Overview, Pre-configured Models, Core Options, and Additional Options sections were updated. |
| 03-Sep-2019 | Version 26 | Changed | Overview, Standard Features, Pre-configured Models, SMB Models, China Specific, Configuration Information - Factory Integrated Models and Core Options sections were updated. |
| 12-Aug-2019 | Version 25 | Changed | Overview, Standard, Features, Optional Features, SMB Models, Configuration Information-Factory Integrated Models, China Specific, Core Options, Storage sections were updated. |
| 01-Jul-2019 | Version 24 | Changed | The 5218N wattage has changed from 105 to 110W TDP<br>The U.S. version of QuickSpecs is no longer being updated, please reference the Worldwide QuickSpecs for latest information. |
| 03-Jun-2019 | Version 23 | Changed | Standard Features, SMB Models, Pre-configured Models, China Specific, Configuration Information, Additional Options and Core Options sections were updated.<br>New SKUs were added and Obolete SKUs were removed. |
| 15-Apr-2019 | Version 22 | Changed | Overview, Standard Features, SMB Models, Pre-configured Models, China Specific, Configuration Information and Core Options sections were updated. |
| 02-Apr-2019 | Version 21 | Changed | Overview, Standard Features and Pre-configured Models sections were updated. |
| 04-Feb-2019 | Version 20 | Changed | Overview, Standard Features, Configuration Information, Core Options and Optional Features sections were updated. |
| 03-Dec-2018 | Version 19 | Changed | Overview, Standard Features, Pre-configured Models, Core Options and Storage sections were Updated. |
| 15-Oct-2'018 | Version 18 | Changed | SKUs descriptions were updated in Core Options section<br>Obsolete SKUs were removed from Core Options section, |
| 01-Oct-2018 | Version 17 | Changed | Overview, Standard Features, Configuration Information, Core Options, Additional Options, and Memory sections were updated.<br>SKU descriptions were updated. |
| 13-Aug-2018 | Version 16 | Changed | Maximum Storage and Additional Options were revised. |
| 06-Aug-2018 | Version 15 | Changed | Added new AMD and NVIDIA Graphics card options.<br>Added new Smart Array P824i-p MR Gen10 (24 Internal Lanes/4GB Cache/CacheCade) 12G SAS PCIe Controller.<br>Added new Solid State Drives offering.<br>Pre-Confifured Models, Core Options, and Additional Options were revised.<br>Obsolete SKUs were removed from the QuickSpecs. |

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 11-Jun-2018 | Version 14 | Changed | Smart Buy Models section for the NA version was revised. |
| 04-Jun-2018 | Version 13 | Changed | New SSD offering was added to the HPE Drivers section.<br>Core Options, Additional Options, and Memory were revised.<br>Obsolete SKUs were removed from the QuickSpecs. |
| 07-May-2018 | Version 12 | Changed | New SMB models offering was added.<br>Riser Information and power supply section were revised.<br>Obsolete SKUs were removed from the QuickSpecs. |
| 02-Apr-2018 | Version 11 | Changed | Standard Features, Core Options and Additional Options were revised.<br>Obsolete SKUs were removed from the QuickSpecs. |
| 05-Mar-2018 | Version 10 | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 05-Feb-2018 | Version 9 | Added | Added new SATA SSDs, NVMe drives and PCIe accelerator cards. |
| 18-Dec-2017 | Version 8 | Changed | Network controller under Configuration Information – Factory Integrated Models section was revised. |
| 04-Dec-2017 | Version 7 | Changed | Added new Entry level WW Model-1 sku.<br>HPE Specific IST Processor offering Gold 6143 and Platinum 8165 bins were added.<br>Added new High capacity 12TB LFF drives and Large capacity 15.3TB SSDs.<br>Standard Features, Pre-configured Models, Core Options, Additional Options, Memory, and Acoustic Noise were revised. |
| 23-Oct-2017 | Version 6 | Changed | Memory speed table was updated to display the 61XX processors running at 2666MT/s. |
| 16-Oct-2017 | Version 5 | Changed | 128GB Memory was added Riser table was added under Core Options. Platform Information, Processors table under Standard Features, FlexibleLOM Adapters, GPU table under Core Options, HPE Storage Controllers, and Rail Kits were revised. |
| 25-Sep-2017 | Version 4 | Changed | New Gold Processors were added.Added new Hard Drive and SSD offering.<br>GPU information table was added.<br>Platform Information, Core Options, Additional Options, and Storage section were revised.<br>Obsolete SKUs were removed from the QuickSpecs. |
| 14-Aug-2017 | Version 3 | Changed | Smart Buy Models section was revised (NA version only). |
| 07-Aug-2017 | Version 2 | Changed | Added new Solid State Drives offering to the HPE Drives section.<br>Added Support Services under Additional Options.<br>Platform Information, Optional Features, Core Options, Additional Options, Memory, and Storage section were revised. |
| 11-Jul-2017 | Version 1 | New | New QuickSpecs. |

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