RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HPE Apollo 4200 Gen10 Server

Are you looking for a 2U ultra-dense and rack-scale system providing the right balance of capacity, performance, and security for your data storage intensive workloads?

The HPE Apollo 4200 Gen10 Server offers an architecture optimized for Big Data Analytics, Software-Defined Storage, backup and archive, and other data storage intensive workloads. Its unique, easily serviceable 2U design saves data center space with up to 28 LFF or 54 SFF hot-plug drives. It delivers accelerated performance with a superior bandwidth and balanced architecture, Intel Xeon Scalable Processor Family, and NVMe connected SSDs. The focus on security extends from FIPS 140-2 Level 1 validated storage controllers down to the system silicon level, taking full advantage of HPE innovations in firmware protection, malware detection, and recovery. With HPE GreenLake Flex Capacity and HPE Financial Services, you can combine the economic agility benefits of consumption-based IT with the performance and security of on-premise.

HPE Apollo 4200 Gen10 Server

Overview

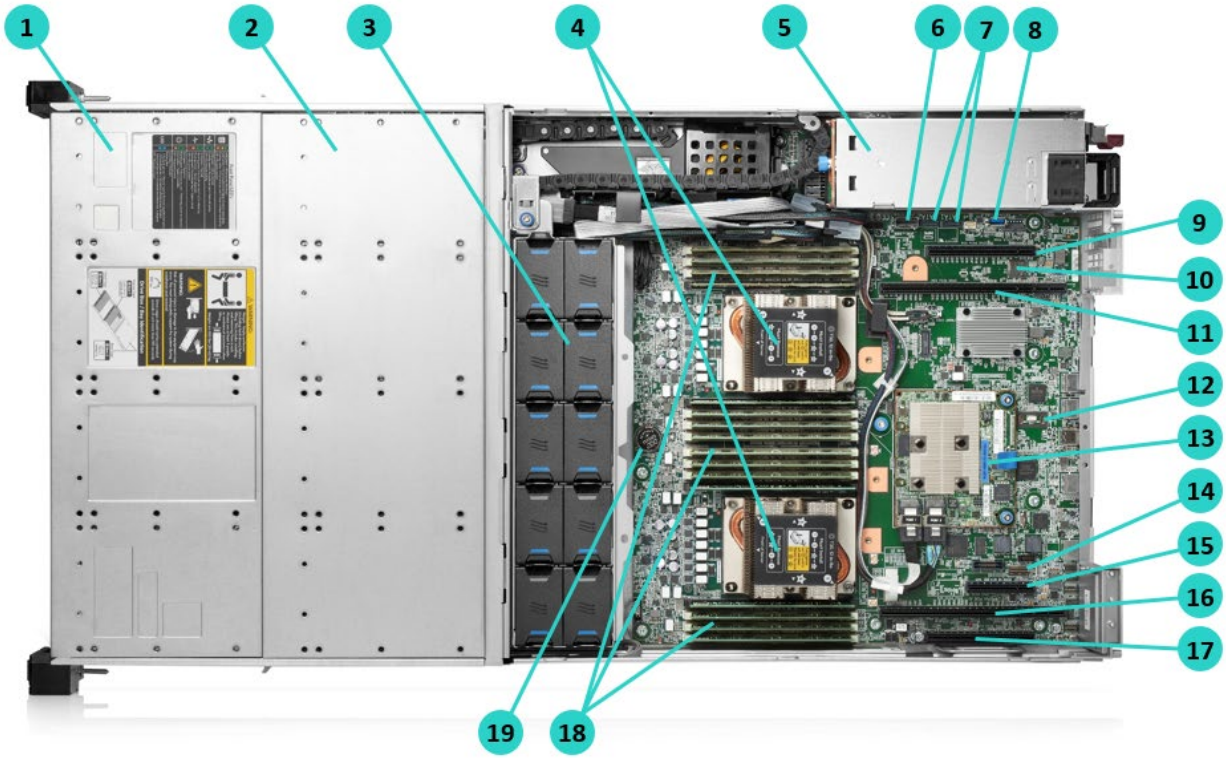
HPE Apollo 4200 Gen10 24LFF Configure to order Server Front View

1. Drive support label
2. Power On/Standby button and system power LED
3. Health LED
4. NIC status LED
5. Front drive health/thermal LED
6. UID button/LED
7. USB 2.0 connector
8. iLO Service Port
9. Front LFF SAS/SATA/SSD hot-plug drive bays

HPE Apollo 4200 Gen10 48SFF Configure to order Server Front View

1. Drive support label
2. Power On/Standby button and system power LED
3. Health LED
4. NIC status LED
5. Front drive health/thermal LED
6. UID button/LED
7. USB 2.0 connector
8. iLO Service Port
9. Front SFF SAS/SATA/SSD hot-plug drive bays

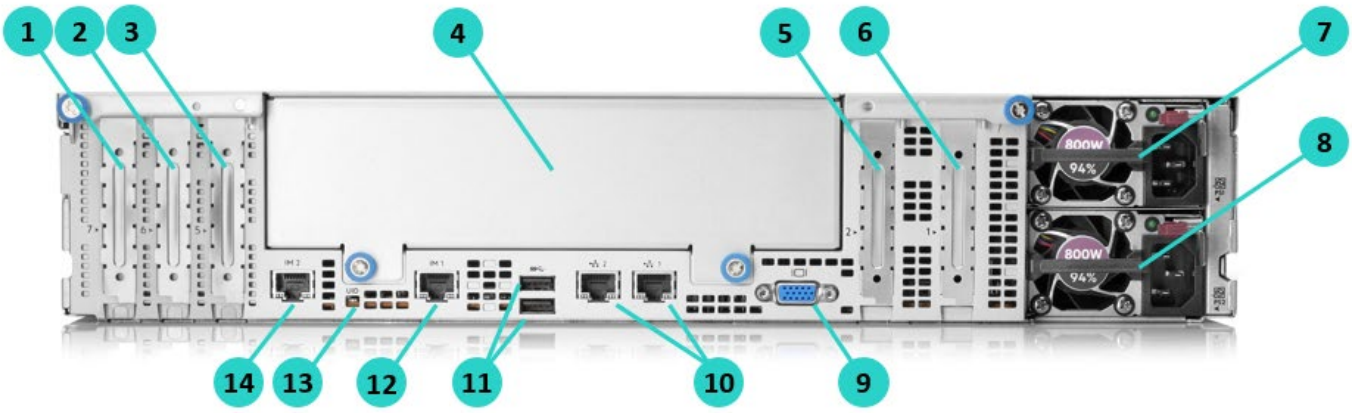
Overview



Standard for all Apollo 4200 Gen10 - Internal View

1. Front drive bay 1
2. Front drive bay 2
3. System fans (10 fans shipped as default)
4. Up to 2 processors (2 processors installed shown)
5. Up to 2 power supplies for redundant power
6. Mini SAS connector
7. SATA connectors
8. Internal USB 3.0 connector
9. PCIe3 x16 slot 1 for low-profile, standup expansion board (Processor 1)
10. microSD card slot
11. PCIe3 x24 slot 2 for low-profile, standup expansion board, riser cage option, or NVMe pass-through board (Processor 1)
12. TPM 2.0 connector
13. Flexible Smart Array Controller slot (type –a shown)
14. System maintenance switch
15. PCIe3 x8 slot 5 for low-profile, standup expansion board (Processor 2)
16. PCIe3 x24 slot 6 for low-profile, standup expansion board or NVMe pass-through board (Processor 2)
17. PCIe3 x16 slot 7 for low-profile, standup expansion board (Processor 2)
18. DDR4 DIMM slots (Fully populated 16 DIMMs shown)
19. System Battery

Overview



Standard for all Apollo 4200 Gen10 - Rear View

1. PCIe3 x16 slot 7 for low-profile, standup expansion board (Processor 2)
2. PCIe3 x24 slot 6 for low-profile, standup expansion board or NVMe pass-through board (Processor 2)
3. PCIe3 x8 slot 5 for low-profile, standup expansion board (Processor 2)
4. Rear drive cage blank (space for rear drive cages upgrade)
5. PCIe3 x24 slot 2 for low-profile, standup expansion board, riser cage option, or NVMe pass-through board (Processor 1)
6. PCIe3 x16 slot 1 for low-profile, standup expansion board (Processor 1)
7. Hot-plug power supply bay 1 (800W shown)
8. Hot-plug power supply bay 2 (800W shown)
9. Video connector
10. NIC ports (2x 1GbE)
11. USB 3.0 ports
12. iLO Management Port
13. UID LED
14. iLO Management Port

Notes: Optional Rear Drive Cages: 6 SAS/SATA SSD (SFF), 6 NVMe SSD (SFF), 4 LFF (only for 24LFF), or 2 SFF + 2 FHHL Riser kit

Overview

What's New

- The new HPE NS204i-p OS Boot Device is a dedicated hardware RAID1 solution that enables automatic operating system mirroring on the two included M.2 NVMe SSDs
- Support for Intel® Xeon® Scalable Processor Family, including R series, and HPE DDR4 Smart Memory up to 2933/2666 MT/s
- Optional rear storage upgrade to support up to 6 SFF NVMe solid state drives (SSDs).
- Higher bandwidth and more balanced system architecture design, and without trade-offs between drive bays and I/O slots.
- Firmware-level security and optional chassis intrusion options.
- Flexible HPE Smart Array Gen10 Controllers support and encryption features to meet different performance requirements for storage solutions.
- Sort for daisy-chaining of out-of-band management network ports.
- Support for HPE Smart Array P824i-p MR Gen10 12G SAS PCIe Controller.
- New HPE Persistent Memory 128GB/256GB/512GB 2666 featuring Intel® Optane™ DC persistent memory
- Support for HPE 16TB SAS and SATA Business Critical 7.2K HDDs increases the maximum raw capacity to 448TB
- Support for HPE Very Read Optimized (VRO) SATA SFF and LFF SSDs. VRO SSDs are QLC NAND-based and have variable endurance levels optimized to certain workloads that are very read-centric. In those cases, VRO drives can act as HDD replacements for environments looking to standardize on flash storage.
- The new Pensando Distributed Services Platform (DSP) for HPE systems delivers a powerful and scalable suite of software-defined network and security services like firewall, micro-segmentation, and telemetry to the server edge, where the transition between network and server occurs.

Platform Information

Form Factor

- 2U rack

Chassis Types

- 24 LFF
- 48 SFF

Notes: Optional Rear Drive Cages: 6 SFF NVMe SSD, 6 SFF SAS/SATA Drives, 4 LFF Drives (only for 24LFF), or 2 SFF Drives + 2 FHHL Riser kit

System Fans

- 10 system fans shipped as standard

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)
- For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon**
- This table covers the public Intel offering only.

Platinum Processors							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Platinum 8276 Processor	2.2 GHz	28	38.50 MB	165 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8260 Processor	2.4 GHz	24	35.75 MB	165 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8160 Processor	2.1 GHz	24	33.00 MB	150 W	3 @ 10.4 GT/s	2666 MT/s	768 GB

Notes:

- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI, 8S - 3UPI @ 10.4 GT/s.
- 6-Channel DDR4 @ 2933/2666 MT/s.
- 1st Generation: 768 GB max memory capacity (1.5 TB on select skus).
- 2nd Generation: 1TB max memory capacity, HPE Persistent Memory featuring Intel® Optane™ DC persistent memory (select skus)
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS.

Gold Processors							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Gold 6240R Processor	2.4 GHz	24	35.75 MB	165 W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6238R Processor	2.2 GHz	28	38.50 MB	165 W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6230R Processor	2.1 GHz	26	35.75 MB	150 W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6226R Processor	2.9 GHz	16	22.00 MB	150 W	2 @ 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 6248 Processor	2.5 GHz	20	27.50 MB	150 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6242 Processor	2.8 GHz	16	22.00 MB	150 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6240 Processor	2.6 GHz	18	24.75 MB	150 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6238 Processor	2.1 GHz	22	30.25 MB	140 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6234 Processor	3.3 GHz	8	24.70 MB	130 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6230 Processor	2.1 GHz	20	27.50 MB	125 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6226 Processor	2.7 GHz	12	19.25 MB	125 W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6148 Processor	2.4 GHz	20	27.50 MB	150 W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140 W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6134 Processor	3.2 GHz	8	24.75 MB	130 W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6132 Processor	2.6 GHz	14	19.25 MB	140 W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6130 Processor	2.1 GHz	16	22.00 MB	125 W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 5220R Processor	2.2 GHz	24	35.75 MB	150 W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5218R Processor	2.1 GHz	20	27.50 MB	150 W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5220 Processor	2.2 GHz	18	24.75 MB	125 W	2 @ 10.4 GT/s	2666 MT/s	1TB

Standard Features

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR4	Memory per socket
Gold 5218 Processor	2.3 GHz	16	22.00 MB	125 W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5215 Processor	2.5 GHz	10	13.75 MB	85 W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5118 Processor	2.3 GHz	12	16.50 MB	105 W	2 @ 10.4 GT/s	2400 MT/s	768 GB

Notes:

- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 10.4 GT/s.
- 6-Channel DDR4 @ 2933/2666/2400 MT/s (SKU 5122 - supports 2666 MT/s).
- 1st Generation: 768 GB max memory capacity (1.5 TB on select skus).
- 2nd Generation: 1 TB max memory capacity, HPE Persistent Memory featuring Intel® Optane™ DC persistent memory (select skus)
- 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.

Silver Processors							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Silver 4215R Processor	3.2 GHz	8	11.00 MB	130 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214R Processor	2.4 GHz	12	16.50 MB	100 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210R Processor	2.4 GHz	10	13.75 MB	100 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4216 Processor	2.1 GHz	16	22.00 MB	100 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4215 Processor	2.5 GHz	8	11.00 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214 Processor	2.2 GHz	12	16.50 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210 Processor	2.2 GHz	10	13.75 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4208 Processor	2.1 GHz	8	11.00 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4116 Processor	2.1 GHz	12	16.50 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	768 GB
Silver 4114 Processor	2.2 GHz	10	13.75 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	768 GB
Silver 4110 Processor	2.1 GHz	8	11.00 MB	85 W	2 @ 9.6 GT/s	2400 MT/s	768 GB

Notes:

- 2 socket capable, 2S - 2UPI @ 9.6 GT/s.
- 1st Generation: 6-Channel DDR4 @ 2400 MT/s, 768 GB max memory capacity.
- 2nd Generation: 6-Channel DDR4 @ 2400 MT/s, 1TB max memory capacity.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.
- 4 Silver Processor 4215 supports HPE Persistent Memory featuring Intel® Optane™ DC persistent memory

Chipset

Intel C621 Chipset

Notes: For more information regarding Intel® chipsets, please see the following URL: **http://www.intel.com/products/server/chipsets/**.

Standard Features

On System Management Chipset

HPE iLO 5 ASIC

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

System Board

HPE ProLiant XL420 Gen10 Server

Notes:

- As a reminder that the Apollo 4200 Gen10 Server offers familiar management tools, the motherboard carries a ProLiant name.
- In boot-up, the "HPE ProLiant XL420 Gen10 Server" name will appear.
- The official product name remains HPE Apollo 4200 Gen10 Server, while the motherboard name is "HPE ProLiant XL420 Gen10 Server"

Memory

Type		HPE DDR4 Smart Memory Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	16	8 DIMM slots per processor, 6 channels per processor, 2-1-1 deployment
Maximum capacity (LRDIMM)	2.0 TB	16 x 128 GB LRDIMM @ 2933 MT/s
Maximum capacity (RDIMM)	1.0 TB	16 x 64 GB RDIMM @ 2933 MT/s
Maximum capacity (HPE Persistent Memory)	512GB per processor/socekt	

Notes:

- HPE Persistent Memory featuring Intel® Optane™ DC persistent memory only supported with select 2nd generation Intel Xeon Scalable Series Processors ONLY ((82xx/62xx/52xx/4215) and can only be mixed with either RDIMMs or LRDIMMs.
- Maximum memory per socket is dependent on processor selection. Processors supporting 1.5 TB per CPU is 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 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.

Standard Features

Expansion Slots

Default Expansion Slots	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCIe 3.0	x16	x16	CPU1	Low Profile
	2	PCIe 3.0	x24	x24	CPU1	Low Profile
	5	PCIe 3.0	x8	x8	CPU2	Low Profile
	6	PCIe 3.0	x24	x24	CPU2	Low Profile
	7	PCIe 3.0	x16	x16	CPU2	Low Profile
2 SFF + 2FHHL Riser Kit	**Expansion Slots #**	**Technology**	**Bus Width**	**Connector Width**	**Processor**	**Slot Form Factor**
	3	PCIe 3.0	x16	x16	CPU 1	Full-height; half length
	4	PCIe 3.0	x8	x8	CPU 1	Full-height; half length

Notes: If 2 SFF + 2 FHHL Riser Kit is installed, the Pcie slot 2 will be unavailable due to occupation of the riser.

Storage Controllers

Software RAID

- HPE Smart Array S100i SR Gen10 SW RAID

Notes:

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

Performance RAID Controllers

- 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 LH Controller
- HPE Smart Array P824i-p MR Gen10 Controller

NVMe OS Boot Device

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

Notes: For additional details, please see **HPE Smart Array Gen10 Controllers QuickSpecs**.

Internal Storage Devices

- Hard Drives
- None ship standard

Standard Features

Maximum Storage		
Storage	**Capacity**	**Configuration**
Hot Plug SFF SAS HDD	129.6 TB	48+6 x 2.4 TB (with rear drive cage option)
Hot Plug SFF SATA HDD	108 TB	48+6 x 2.0 TB (with rear drive cage option)
Hot Plug SFF SAS SSD	829.44 TB	48+6 x 15.36 TB (with rear drive cage option)
Hot Plug SFF SATA SSD	414.72 TB	48+6 x 7.68 TB (with rear drive cage option)
Hot Plug LFF SAS HDD	560 TB	24 + 4 x 20 TB (with rear drive cage option)
Hot Plug LFF SATA HDD	560 TB	24 + 4 x 20 TB (with rear drive cage option)
Hot Plug LFF SAS SSD	107.52 TB	24 + 4 x 3.84 TB (with rear drive cage option)
Hot Plug LFF SATA SSD	215.04 TB	24 + 4 x 7.68 TB (with rear drive cage option)
Hot Plug SFF NVMe PCIe SSD (Rear drive cage only)	92.16 TB	6 x 15.36 TB NVMe

Notes:
- SFF NVMe PCIe SSD is only supported in the optional rear dirve cage
- Only 1 optional rear dirve cage can be installed per server

Interfaces

Video	1 Rear - VGA port
Network Ports	2x 1GbE embedded NIC
iLO Remote Mgmt Port	2x 1 Gb Dedicated
MicroSD Slot	1 MicroSD slot
Notes: The MicroSD slot is not hot-pluggable, please power down server before removal.	
USB 2.0	1 front (standard on all chassis types)
USB 3.0	Up to 3 total: 2 rear, 1 internal

Power Supply

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.

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 Server power supplies**.

Standard Features

Operating Systems and Virtualization Software

- **Windows Server 2016** and 2109
- **VMware ESXi 6.0 U3**
- **VMware ESXi 6.5 and U2** upon release
- **VMware ESXi 6.7 and U1** upon release
- **VMware ESXi 7.0**
- **Red Hat Enterprise Linux (RHEL) 7 64-bit and 8 64-bit**
- **SUSE Linux Enterprise Server (SLES) 12 64-bit and 15 64-bit**
- **Ubuntu 16.04 and 18.04**
- **Oracle Linux ver. 7.6**
- **CentOS**

Notes: For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server. **http://www.hpe.com/info/ossupport**

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

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
- SMBIOS 3.1
- UEFI 2.6 (Unified Extensible Firmware Interface Forum)
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 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

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

Standard Features

HPE Server UEFI/Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen10 servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode.
Notes: The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **http://www.hpe.com/servers/uefi**

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 Initiator 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 manañgement, 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**.

Standard Features

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**.

HPE Systems Insight Manager (HPE SIM)

Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/info/hpesim**.

Security

- 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 including a New iLO Advanced Premium Security License

Standard Features

- 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) 2.0 option
- Bezel Locking Kit

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE 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: **http://www.hpe.com/support/ProLiantServers-warranties**.

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 iLO Advanced Premium Security Edition

HPE iLO Advanced Premium Security Edition for iLO 5 includes iLO Advanced License plus high-end security modes, unique security capabilities, like Automatic FW recovery; Runtime FW verification, and Secure erase. Learn more about HPE iLO Advanced Premium Security Edition at: **https://h20195.www2.hpe.com/v2/default.aspx?cc=us&lc=en&oid=1010025876**.

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 Insight Cluster Management Utility (CMU)

HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hpe.com/info/cmu**.

Standard Features

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**.

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, edge-to-cloud 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 -- edge to cloud
- 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

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

Service and Support

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 quick-specs, 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/**

Service and Support

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

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"
https://www.hpe.com/us/en/contact-hpe.html

For more information
http://www.hpe.com/services

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.
1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models will be populated with sufficient hard drive blanks based on number of drives ordered with server.
4. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

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

CTO Server	**24 LFF**	**48 SFF**
SKU Number	P07244-B21	P07246-B21
Processor	Not included as standard	
DIMM Slots	16-DIMM slots	
Storage Controller	At least one type i-a controller needs to be installed for the front drives Choice of HPE modular Smart Array and PCIe plug-in controller up to three per server Embedded SW RAID (S100i) for M.2 or rear drive cages only	
PCIe	5 PCIe slots (2 x24 LP / 2 x16 LP / 1 x8 LP)	
Drive Cage - included	24 LFF - SAS/SATA Optional: 6 SAS/SATA, 6 NVMe, 4 LFF, or 2 SFF + 2 FHHL Riser rear drive cage kits	48 SFF - SAS/SATA Optional: 6 SAS/SATA, 6 NVMe or 2 SFF + 2 FHHL Riser rear drive cage kits
Network Controller	HPE 1Gb Ethernet 2-Port 332i Adapter plus stand up card	
Fans	10 system fans shipped as default	
Management	HPE iLO with Intelligent Provisioning (standard) Optional: iLO Advance and OneView	
USB	Front: 1 USB 2.0 + iLO service port Rear: 2 USB 3.0 Internal: 1 USB 3.0	

Step 2 Choose Required Options

Step 2a: Choose Processor 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 P08054-L21 then for second processor, select P08054-B21.

Notes:

- Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except "M" model processors will support up to 1.5 TB max memory per processor.
- Mixing of 2 different processor models are NOT allowed.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

Description	**SKU**
Processor Option Kits (Required Processor)	
Intel Xeon-Platinum	
Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07918-L21
Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07917-L21

Configuration Information

Processor Option Kits

Intel Xeon-Gold

Description	SKU
Intel Xeon-Gold 6240R (2.4GHz/24-core/165W) FIO Processor Kit for HPE Apollo 4200 Gen10	P24706-L21
Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) FIO Processor Kit for HPE Apollo 4200 Gen10	P24705-L21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) FIO Processor Kit for HPE Apollo 4200 Gen10	P24704-L21
Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) FIO Processor Kit for HPE Apollo 4200 Gen10	P24703-L21
Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07916-L21
Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07915-L21
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07914-L21
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) FIO Processor Kit for Apollo 4200 Gen10	P07913-L21
Intel Xeon-Gold 6238 (2.1GHz/22-core/140W) FIO Processor Kit for Apollo 4200 Gen10	P12710-L21
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) FIO Processor Kit for Apollo 4200 Gen10	P12709-L21
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) FIO Processor Kit for Apollo 4200 Gen10	P07912-L21
Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) FIO Processor Kit for Apollo 4200 Gen10	P12708-L21
Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) FIO Processor Kit for HPE Apollo 4200 Gen10	P19705-L21
Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) FIO Processor Kit for HPE Apollo 4200 Gen10	P24702-L21
Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) FIO Processor Kit for Apollo 4200 Gen10	P07911-L21
Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) FIO Processor Kit for Apollo 4200 Gen10	P07910-L21
Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) FIO Processor Kit for Apollo 4200 Gen10	P07908-L21
Intel Xeon-Silver	
Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) FIO Processor Kit for HPE Apollo 4200 Gen10	P24701-L21
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) FIO Processor Kit for HPE Apollo 4200 Gen10	P19701-L21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) FIO Processor Kit for HPE Apollo 4200 Gen10	P19703-L21
Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07907-L21
Intel Xeon-Silver 4215 (2.5GHz/8-core/85W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07906-L21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07905-L21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07904-L21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) FIO Processor Kit for HPE Apollo 4200 Gen10	P07903-L21

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/us/en/resources/servers/rowhammer-memory-ras.html**.

Notes:

- 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.
- Maximum memory capacity per processor is dependent on processor model selection or limitation.
- Maximum memory speed is dependent on processor model selection or limitation.

Configuration Information

Registered DIMMs (RDIMMs)	
Description	**SKU**
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-K21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-K21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-K21
Registered DIMMs (RDIMMs)	
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-K21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-K21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-K21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-K21
Load Reduces DIMMs (LRDIMMs)	
HPE 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P11040-K21
HPE Persistent Memory (Intel Optane)	
Intel Optane 512GB persistent memory 100 Series for HPE	835810-B21
Intel Optane 256GB persistent memory 100 Series for HPE	835807-B21
Intel Optane 128GB persistent memory 100 Series for HPE	835804-B21

Notes:
- HPE Persistent Memory (Intel Optane) support on Apollo 4200 Gen10 is CTO only.
- A maximum 512GB per processor/socket HPE Persistent Memory DIMMs supported with select 2nd Generation Intel Xeon Scalable Series Processors ONLY (82xx/62xx/52xx/4215) and can only be mixed with either RDIMMs or LRDIMMs.
- For information regarding HPE Persistent Memory visit: **http://www.hpe.com/info/persistentmemory**

Step 2c: Choose Power Supplies

Please select one or two power supplies from below.
Notes: Mixing of 2 different power supplies are NOT allowed.

HPE Flex Slot Power Supplies	
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 Universal Hot Plug Low Halogen Power Supply Kit	865428-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

Description	SKU
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.

Configuration Information

HPE Legacy FIO Mode Setting	758959-B22

Notes: UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.

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

HPE Apollo 4200 Unique Options

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

Rear Storage Upgrades

Description	SKU
HPE Apollo 4200 Gen10 4LFF Rear Drive Cage Kit	P07943-B21

Notes: When this SKU is selected, one of the following 3 FIO controller modes must be selected: HPE 2nd Cage FIO Controller Mode for Rear Storage (813546-B21), HPE Software RAID FIO Controller Mode for Rear Storage (P09655-B21), or HPE Smart Array E/P SR FIO Controller Mode for Rear Storage (P09656-B21).

HPE Apollo 4200 Gen10 2SFF Rear Drive Cage and 2 Full Height Half Length PCIe Riser Kit	P07248-B21

Notes:

- When this kit is installed, the PCIe slot 2 will be unavailable due to occupation of the riser
- When this SKU is selected, one of the following 3 FIO controller modes must be selected: HPE 2nd Cage FIO Controller Mode for Rear Storage (813546-B21), HPE Software RAID FIO Controller Mode for Rear Storage (P09655-B21), or HPE Smart Array E/P SR FIO Controller Mode for Rear Storage (P09656-B21)

HPE Apollo 4200 Gen10 6SFF NVMe Rear Drive Cage Kit	P07250-B21

Notes:

- This SKU only supports up to 6 NVMe SFF (2.5in) SCN SSD options.
- When this SKU is selected, one of the following 2 FIO controller modes can be selected: HPE NVMe CPU2 x6 FIO Controller Mode for Rear Storage (P09657-B21) or HPE NVMe CPU1 x4/CPU2 x2 FIO Controller Mode for Rear Storage (P09658-B21)
- When no controller mode is selected, all 6 SFF NVMe will be connected to processor 1 through PCIe slot 2.
- When HPE NVMe CPU2 x6 FIO Controller Mode for Rear Storage (P09657-B21) is selected, all 6 SFF NVMe SSDs will be connected to processor 2 through PCIe slot 6.
- When HPE NVMe CPU1 x4/CPU2 x2 FIO Controller Mode for Rear Storage (P09658-B21) is selected, 4 SFF NVMe SSDs will be connected to processor 1 through PCIe slot 2 and 2 SFF NVMe SSDs will be connected to processor 2 through PCIe slot 6.

HPE Apollo 4200 Gen10 6SFF SAS/SATA Rear Drive Cage Kit	P14010-B21

Notes:

- This SKU only supports up to 6 SAS or SATA SFF (2.5in) SC HDD or SSD options.
- When this SKU is selected, only the following FIO controller mode can be selected: HPE Smart Array E/P SR FIO Controller Mode for Rear Storage (P09656-B21).

HPE Blanking Special Panel Kit	P08010-B21

Rear Storage Upgrade

(Rear Drive Cages) Support Matrix		P14010-B21	P07250-B21	P07943-B21	P07248-B21
		HPE Apollo 4200 Gen10 6SFF SAS/SATA Rear Drive Cage Kit	HPE Apollo 4200 Gen10 6SFF NVMe Rear Drive Cage Kit	HPE Apollo 4200 Gen10 4LFF Rear Drive Cage Kit	HPE Apollo 4200 Gen10 2SFF Rear Drive Cage and 2 Full Height Half Length Riser Kit
P07244-B21	HPE Apollo 4200 Gen10 24LFF Configure-to-order Server	Supported	Supported	Supported	Supported
P07246-B21	HPE Apollo 4200 Gen10 48SFF Configure-to-order Server	Supported	Supported	Not supported	Supported

Core Options

Rear Drive Cage Controller Mode

Description	SKU
HPE 2nd Cage FIO Controller Mode for Rear Storage	813546-B21

Notes:
- When this SKU is selected, the rear drive cage will be connected to front 2nd drive bay and under the same controller as the front 2nd drive bay.
- Mixed drive form factor is not supported. When this SKU is selected, the from factor of the rear drive and the front 2nd drive bay has to be the same (all SFF or all LFF).

HPE Software RAID FIO Controller Mode for Rear Storage	P09655-B21

Notes: When this SKU is selected, the rear dirve cage will be connected to onboard S100i SW RAID controller.

HPE Smart Array E/P SR FIO Controller Mode for Rear Storage	P09656-B21

Notes: When this SKU is selected, the rear drive cage will be connected to indenpendet type i-p controller.

HPE NVMe CPU2 x6 FIO Controller Mode for Rear Storage	P09657-B21

Notes: When this SKU is selected, all 6 SFF NVMe SSDs will be connected to processor 2 through PCIe slot 6.

HPE NVMe CPU1 x4/CPU2 x2 FIO Controller Mode for Rear Storage	P09658-B21

Notes: When this SKU is selected, 4 SFF NVMe SSDs will be connected to processor 1 through PCIe slot 2 and 2 SFF NVMe SSDs will be connected to processor 2 through PCIe slot 6.

Storage Controller Enablement Kit

HPE Apollo 4200 P824i-p Enablement Kit	P11274-B21

Notes:
- This SKU is only supported with HPE Apollo 4200 Gen10 24LFF Configure-to-order Server (P07244-B21)
- When this SKU is selected, HPE Apollo 4200 Gen10 2SFF Rear Drive Cage and 2 Full Height Half Length PCIe Riser Kit (P07248-B21) must be selected.
- HPE Smart Array P824i-p MR Gen10 (24 Internal Lanes/4GB Cache/CacheCade) 12G SAS PCIe Controller (870658-B21) is inclided in this kit.
- When this SKU is selected, the Flexible Smart Array Controller slot will not be availavle for any other type -a controllers.

Security

HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21
HPE Gen10 2U Bezel Kit	867809-B21
HPE Bezel Lock Kit	875519-B21

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 876099-L21 then for second processor, select 876099-B21.

Notes:
- Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except “M” model processors will support up to 1.5 TB max memory per processor.
- Mixing of 2 different processor models are NOT allowed.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

Core Options

Intel Xeon-Platinum

Description	SKU
Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) Processor Kit for HPE Apollo 4200 Gen10	P07918-B21
Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) Processor Kit for HPE Apollo 4200 Gen10	P07917-B21
Intel Xeon-Gold	
Intel Xeon-Gold 6240R (2.4GHz/24-core/165W) Processor Kit for HPE Apollo 4200 Gen10	P24706-B21
Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) Processor Kit for HPE Apollo 4200 Gen10	P24705-B21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P24704-B21
Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P24703-B21
Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P07916-B21
Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P07915-B21
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P07914-B21
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P07913-B21
Intel Xeon-Gold 6238 (2.1GHz/22-core/140W) Processor Kit for Apollo 4200 Gen10	P12710-B21
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) Processor Kit for Apollo 4200 Gen10	P12709-B21
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) Processor Kit for Apollo 4200 Gen10	P07912-B21
Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) Processor Kit for Apollo 4200 Gen10	P12708-B21
Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) Processor Kit for HPE Apollo 4200 Gen10	P19705-B21
Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) Processor Kit for HPE Apollo 4200 Gen10	P24702-B21
Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) Processor Kit for Apollo 4200 Gen10	P07911-B21
Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) Processor Kit for Apollo 4200 Gen10	P07910-B21
Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) Processor Kit for Apollo 4200 Gen10	P07908-B21
Intel Xeon-Silver	
Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) Processor Kit for HPE Apollo 4200 Gen10	P24701-B21
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) Processor Kit for HPE Apollo 4200 Gen10	P19701-B21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) Processor Kit for HPE Apollo 4200 Gen10	P19703-B21
Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) Processor Kit for HPE Apollo 4200 Gen10	P07907-B21
Intel Xeon-Silver 4215 (2.5GHz/8-core/85W) Processor Kit for HPE Apollo 4200 Gen10	P07906-B21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) Processor Kit for HPE Apollo 4200 Gen10	P07905-B21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) Processor Kit for HPE Apollo 4200 Gen10	P07904-B21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) Processor Kit for HPE Apollo 4200 Gen10	P07903-B21

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: **http://www.hpe.com/docs/memory-ras-feature**

Notes:

- 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.
- Maximum memory capacity per processor is dependent on processor model selection or limitation.
- Maximum memory speed is dependent on processor model selection or limitation.

Core Options

HPE DDR4 Memory

Registered DIMMs (RDIMMs)

Description	SKU
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-K21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-K21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-K21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-K21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-K21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-K21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-K21
Load Reduced DIMMs (LRDIMMs)	
HPE 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P11040-K21

Notes: For General Server Memory Population Rules and Guidelines for Gen10 see details here: **http://www.hpe.com/docs/memory-population-rules**

HPE Persistent Memory (Intel Optane)

Intel Optane 512GB persistent memory 100 Series for HPE	835810-B21
Intel Optane 256GB persistent memory 100 Series for HPE	835807-B21
Intel Optane 128GB persistent memory 100 Series for HPE	835804-B21

Notes:

- HPE Persistent Memory (Intel Optane) support on Apollo 4200 Gen10 is CTO only.
- A maximum 512GB per processor/socket HPE Persistent Memory DIMMs supported with select 2nd Generation Intel Xeon Scalable Series Processors ONLY (82xx/62xx/52xx/4215) and can only be mixed with either RDIMMs or LRDIMMs.
- For information regarding HPE Persistent Memory visit: **http://www.hpe.com/info/persistentmemory**

HPE Drives

Enterprise - 12G SAS - SFF Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	881457-K21
HPE 1.8TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	872481-K21
HPE 1.2TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	872479-K21
HPE 900GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	870759-K21
HPE 600GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	872477-K21
HPE 600GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	870757-K21
HPE 300GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	872475-K21
HPE 300GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	870753-K21

Midline - 6G SATA - LFF Drives

HPE 20TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P53554-K21
HPE 18TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P37678-K21
HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P23449-K21
HPE 14TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	P09165-K21
HPE 12TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	881787-K21
HPE 10TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e ISE Multi Vendor HDD	P53557-K21
HPE 8TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	834028-K21
HPE 6TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	861742-K21

Core Options

Description	SKU
HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	861683-K21
HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	861681-K21
HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	861686-K21
Midline 6G SATA - SFF Drives	
HPE 2TB SATA 6G Business Critical 7.2K SFF SC 1-year Warranty 512e HDD	765455-K21
HPE 1TB SATA 6G Business Critical 7.2K SFF SC 1-year Warranty HDD	655710-K21
Midline - 12G SAS - LFF Drives	
HPE 20TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P53553-K21
HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P37669-K21
HPE 16TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P23608-K21
HPE 14TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	P09155-K21
HPE 12TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	881781-K21
HPE 10TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e ISE Multi Vendor HDD	P53556-K21
HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	834031-K21
HPE 6TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	861746-K21
HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	833928-K21
HPE 2TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	833926-K21
Midline - 12G SAS - SFF Drives	
HPE 2TB SAS 12G Business Critical 7.2K SFF SC 1-year Warranty 512e HDD	765466-K21
HPE 1TB SAS 12G Business Critical 7.2K SFF SC 1-year Warranty HDD	832514-K21

SSD Selection

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

For SSDs with optimal product availability, HPE advocates SSDs from the list located here: **https://ssd.hpe.com/recommendation**.

Read Intensive - 12G SAS - SFF - Solid State Drives	
HPE 7.68TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37003-K21
HPE 3.84TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37001-K21
HPE 1.92TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36999-K21
HPE 960GB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36997-K21
HPE 960GB SAS 12G Read Intensive SFF SC Multi Vendor SSD	P49028-K21
HPE 1.92TB SAS 12G Read Intensive SFF SC Multi Vendor SSD	P49030-K21
HPE 3.84TB SAS 12G Read Intensive SFF SC Multi Vendor SSD	P49034-K21
HPE 7.68TB SAS 12G Read Intensive SFF SC Multi Vendor SSD	P49039-K21
HPE 15.36TB SAS 12G Read Intensive SFF SC Multi Vendor SSD	P49044-K21
Mixed Use - 12G SAS - SFF - Solid State Drives	
HPE 3.84TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37017-K21
HPE 1.92TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37011-K21
HPE 960GB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37005-K21
HPE 800GB SAS 12G Mixed Use SFF SC Multi Vendor SSD	P49046-K21
HPE 1.6TB SAS 12G Mixed Use SFF SC Multi Vendor SSD	P49048-K21

Core Options

Description	SKU
HPE 3.2TB SAS 12G Mixed Use SFF SC Multi Vendor SSD	P49052-K21
HPE 6.4TB SAS 12G Mixed Use SFF SC Multi Vendor SSD	P49056-K21
Read Intensive - 24G SAS - LFF - Solid State Drives	
HPE 7.68TB SAS 24G Read Intensive LFF LPC Multi Vendor SSD	P49040-K21
Mixed Use - 12G SAS - LFF - Solid State Drives	
HPE 960GB SAS 12G Mixed Use LFF LPC Value SAS Multi Vendor SSD	P37009-K21
Read Intensive - PCIe/NVMe - SFF - Solid State Drives	
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a SSD	P50220-K21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a SSD	P50217-K21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a SSD	P50214-K21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44572-K21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44580-K21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44572-K21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44580-K21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN U.2 P5520 SSD	P51452-K21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.2 P5520 SSD	P51454-K21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF SCN U.2 P5520 SSD	P51456-K21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.2 V2 Multi Vendor SSD	P64874-K21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.2 V2 Multi Vendor SSD	P64882-K21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.2 V2 Multi Vendor SSD	P64890-K21
Read Intensive - SATA - SFF - Solid State Drives	
HPE 7.68TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18430-K21
HPE 3.84TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18428-K21
HPE 1.92TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18426-K21
HPE 960GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18424-K21
HPE 480GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18422-K21
HPE 240GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18420-K21
HPE 480GB SATA 6G Read Intensive SFF SC PM893 SSD	P47810-K21
HPE 960GB SATA 6G Read Intensive SFF SC PM893 SSD	P47811-K21
HPE 1.9TB SATA 6G Read Intensive SFF SC PM893 SSD	P47812-K21
HPE 3.84TB SATA 6G Read Intensive SFF SC PM893 SSD	P47813-K21
HPE 480GB SATA 6G Read Intensive SFF SC PM893a SSD	P63890-K21
HPE 3.84TB SATA 6G Read Intensive SFF SC PM893a SSD	P63914-K21
Read Intensive - SATA - LFF - Solid State Drives	
HPE 960GB SATA 6G Read Intensive LFF LPC Multi Vendor SSD	P47808-K21
HPE 7.68TB SATA 6G Very Read Optimized LFF LPC 5400 SSD	P58232-K21
Mixed Use - PCIe/NVMe - SFF - Solid State Drives	
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a SSD	P50231-K21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a SSD	P50228-K21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a SSD	P50225-K21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44588-K21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44596-K21

Core Options

HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44588-K21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN Self-encrypting FIPS U.3 CM6 SSD	P44596-K21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.2 P5620 SSD	P51458-K21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN U.2 P5620 SSD	P51460-K21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF SCN U.2 P5620 SSD	P51462-K21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.2 V2 Multi Vendor SSD	P64870-K21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.2 V2 Multi Vendor SSD	P64878-K21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.2 V2 Multi Vendor SSD	P64886-K21
Mixed Use - SATA - SFF - Solid State Drives	
HPE 3.84TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18438-K21
HPE 1.92TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18436-K21
HPE 960GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18434-K21
HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18432-K21
HPE 480GB SATA 6G Mixed Use SFF SC PM897 SSD	P47814-K21
HPE 960GB SATA 6G Mixed Use SFF SC PM897 SSD	P47815-K21
HPE 1.92TB SATA 6G Mixed Use SFF SC PM897 SSD	P47816-K21
Read Intensive - M.2 - Solid State Drives (2280 type)	
HPE 240GB SATA 6G Read Intensive M.2 Multi Vendor SSD	P47817-K21
HPE 480GB SATA 6G Read Intensive M.2 Multi Vendor SSD	P47818-K21
Hard Drive Blank Kits	
HPE Gen9 LFF HDD Spade Blank Kit	807878-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21

HPE Networking

100 Gigabit Ethernet adapters	
HPE Ethernet 100Gb 1-port QSFP28 MCX515A-CCAT Adapter	874253-B21
25 Gigabit Ethernet adapters	
HPE Ethernet 10/25Gb 2-port SFP28 MCX4121A-ACUT Adapter	817753-B21
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21
10 Gigabit Ethernet adapters	
HPE Ethernet 10Gb 2-port BASE-T X550-AT2 Adapter	817738-B21
HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	727055-B21
HPE Ethernet 10Gb 2-port BASE-T BCM57416 Adapter	813661-B21
1 Gigabit Ethernet adapters	
HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter	811546-B21
HPE Ethernet 1Gb 4-port BASE-T BCM5719 Adapter	647594-B21
HPE Ethernet 1Gb 2-port BASE-T BCM5720 Adapter	615732-B21
Storage Offload Adapters	
HPE NV60100M 100Gb 2-port Storage Offload Adapter	R8M41A

Core Options

HPE InfiniBand

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe3 x16 MCX653105A-HDAT Adapter	P06154-B21
HPE InfiniBand HDR PCIe3 Auxiliary Card with 350mm Cable Kit	P06154-B23

Notes: The P06154-B21 and P06154-B23 have to be selected together. One SKU has to be installed into PCIe slot 2 or slot 3, and the other SKU has to be installed into PCIe slot 6 or slot 7.

HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe3 x16 MCX653105A-ECAT Adapter	P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe3 x16 MCX653106A-ECAT Adapter	P06251-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-B21
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**.

Distributed Services Platform (DSP)

Requirements

- 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, and 1yr Policy and Services Manager (PSM) licenses are reserved for renewals only.
- One Policy and Services Manager (PSM) license is required to manage up to 3,000 DSC-25 cards.

Distributed Services Card (DSC)

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

DSP Silver Software Licenses

Pensando Distributed Services Platform Silver 1yr Subscription 24x7 Support E-RTU	R6A06AAE
Pensando Distributed Services Platform Silver 3yr Subscription 24x7 Support E-RTU	R6A07AAE
Pensando Distributed Services Platform Silver 4yr Subscription 24x7 Support E-RTU	R6F68AAE
Pensando Distributed Services Platform Silver 5yr Subscription 24x7 Support E-RTU	R6A08AAE

DSP Platinum Software Licenses

Pensando Distributed Services Platform Platinum 1yr Renewal Subscription 24x7 Support E-RTU	R6A09AAE
Pensando Distributed Services Platform Platinum 3yr Subscription 24x7 Support E-RTU	R6A10AAE
Pensando Distributed Services Platform Platinum 4yr Subscription 24x7 Support E-RTU	R6F69AAE
Pensando Distributed Services Platform Platinum 5yr Subscription 24x7 Support E-RTU	R6A11AAE

Policy and Services Manager Licenses (PSM)

Pensando Distributed Services Platform Policy and Services Manager 1yr License E-RTU	R6A45AAE
Pensando Distributed Services Platform Policy and Services Manager 3yr License E-RTU	R6A46AAE
Pensando Distributed Services Platform Policy and Services Manager 4yr License E-RTU	R6F70AAE
Pensando Distributed Services Platform Policy and Services Manager 5yr License E-RTU	R6A47AAE

Core Options

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 **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 Server power supplies**.

HPE Flex Slot Platinum Hot-plug Power supplies

Description	SKU
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
Notes: Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14 power inlet connector that can support HPE Power Discovery Services (blue connector).	
HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit	P44712-B21
Notes: Flex Slot Titanium power supplies support power efficiency of up to 96%.	
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
Notes: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.	
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
Notes: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.	
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
Notes: Flex Slot universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs.	
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
Notes: Flex Slot -48VDC power supplies support power efficiency of up to 94%.	

Additional Options

Embedded Management

Notes: 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.

HPE iLO Advanced

SKU Description	SKU
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-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 Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
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

HPE iLO Common Password

HPE iLO Common Password FIO Setting	P08040-B21

HPE Converged Infrastructure Management Software

HPE OneView Advanced (with HPE iLO Advanced)

HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
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 1-server LTU	P8B24A
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.

HPE PCIe Workload Accelerator Options

Please see the **HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs** for Technical Specifications and additional information.

Additional Options

HPE Security

Description	SKU
HPE Gen10 2U Bezel Kit	867809-B21
HPE Bezel Lock Kit	875519-B21
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 Controllers

Notes: For additional details, please see HPE Smart Array Gen10 Controllers QuickSpecs at:
https://h20195.www2.hpe.com/v2/getpdf.aspx/a00047736enw.pdf

HPE Flexible Smart Array Controllers

HPE Smart Array P816i-a SR Gen10 (16 Int Lanes/4GB Cache/SmartCache) 12G SAS Modular LH Controller	869083-B21
HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular LH Controller	869081-B21
HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular LH Controller	869079-B21

HPE Smart Array Controllers

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
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

HPE Smart Storage Battery

HPE 96W Smart Storage Lithium-ion Battery with 260mm Cable Kit	P01367-B21

HPE NVMe OS Boot Device

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

Notes: Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.

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)

Additional Options

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 2-port Fibre Channel Host Bus Adapter	R2J63A
HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	R2J62A

QLogic Fibre Channel HBAs

Description	SKU
HPE SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	R2E08A
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	R2E09A

Notes: For the complete listing of Fibre Channel Converged Network Adapters please see: **https://www.hpe.com/us/en/product-catalog/servers/adapters/pip.models.hpe-storefabric-converged-networkadapters.4118472.html**

HPE Rack Options

Rail Kits

HPE 2U Shelf-Mount Adjustable Rail Kit	822731-B21

Shipping Bracket

HPE Apollo 4200 Gen9 FIO Strap Shipping Bracket	822640-B21

Notes: This SKU is used for shipping servers that are integrated in a rack.

HPE Optical Drives

HPE Mobile USB DVD-RW Optical Drive	701498-B21

Notes: This is only supported on USB 3.0 ports.

HPE Racks

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

Additional Options

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

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

Description	SKU
HPE 32GB microSD Flash Memory Card	700139-B21
HPE 32GB microSD RAID 1 USB Boot Drive	P21868-B21

Memory

Memory Population guidelines

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.**

General Memory Population Rules and Guidelines:		
DIMM Type	**Register DIMM (RDIMM)**	
HPE SKU	**835955-K21**	**815100-K21**
SKU Description	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit
DIMM Rank ->	Dual Rank (2R)	Dual Rank (2R)
DIMM Capacity ->	16GB	32GB
Voltage	1.2V	1.2V
DRAM depth [bit]	1G	2G
DRAM Width [bit]	x8	x4
DRAM Density	8Gb	8Gb
CAS Latency	19-19-19	19-19-19
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s
1 DIMM Per Channel	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s
1 DIMM Per Channel	2400 MT/s	2400 MT/s
2 DIMM Per Channel	2400 MT/s	2400 MT/s
1 DIMM Per Channel	2133 MT/s	2133 MT/s
2 DIMM Per Channel	2133 MT/s	2133 MT/s
1 DIMM Per Channel	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s
1 DIMM Per Channel	2400 MT/s	2400 MT/s
2 DIMM Per Channel	2400 MT/s	2400 MT/s
1 DIMM Per Channel	2133 MT/s	2133 MT/s
2 DIMM Per Channel	2133 MT/s	2133 MT/s

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**

Memory

DIMM Type	Load Reduced (LRDIMM)
Intel Xeon® Platinum/Gold 81xx/61xx Processors Officially Supported Memory Speed (MT/s)	
1 DIMM Per Channel	2666 MT/s
2 DIMM Per Channel	2666 MT/s
Intel Xeon® Gold/Silver 51xx/41xx Processors Officially Supported Memory Speed (MT/s)	
1 DIMM Per Channel	2400 MT/s
2 DIMM Per Channel	2400 MT/s
Intel Xeon® Bronze 31xx Processors Officially Supported Memory Speed (MT/s)	
1 DIMM Per Channel	2133 MT/s
2 DIMM Per Channel	2133 MT/s
HPE Server Memory Speed (MT/s): Intel Xeon® Platinum/Gold 81xx/61xx Processors *	
1 DIMM Per Channel	2666 MT/s
2 DIMM Per Channel	2666 MT/s
HPE Server Memory Speed (MT/s): Intel Xeon® Gold/Silver51xx/41xx Processors *	
1 DIMM Per Channel	2400 MT/s
2 DIMM Per Channel	2400 MT/s
HPE Server Memory Speed (MT/s): Intel Xeon® Bronze 31xx Processors *	
1 DIMM Per Channel	2133 MT/s
2 DIMM Per Channel	2133 MT/s

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**

- When HPE Persistent Memory for second-generation Intel Xeon Scalable processors is installed, the maximum supported memory speed is 2666 MT/s.

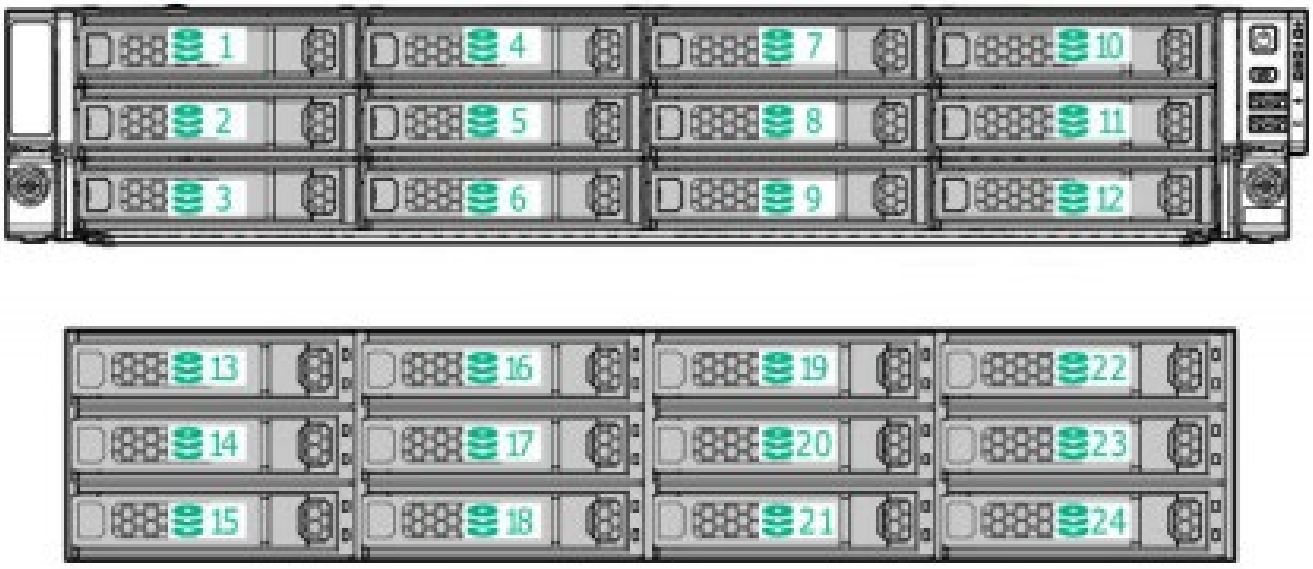
DDR4 memory options part number decoder

Notes:

- Capacity references are rounded to the common gigabyte (GB) values.
  - 8GB = 8,192 MB
  - 16GB = 16,384 MB
  - 32GB = 32,768 MB
  - 64GB = 65,536 MB

For more information on memory, please see the Memory Quickspecs: **HPE DDR4 Smart Memory**

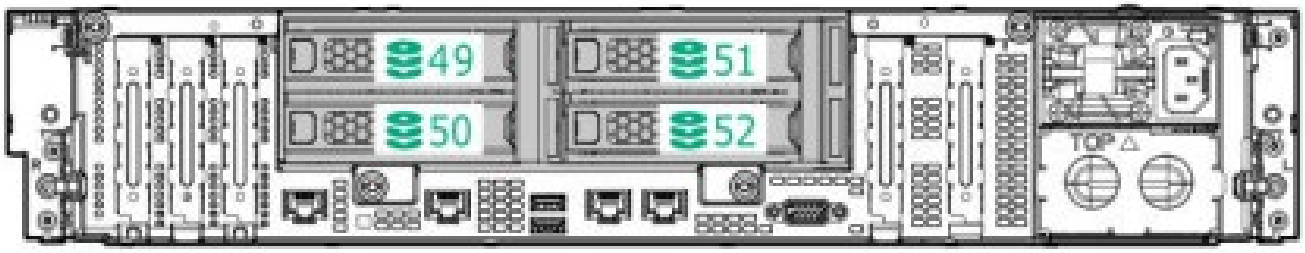
Storage



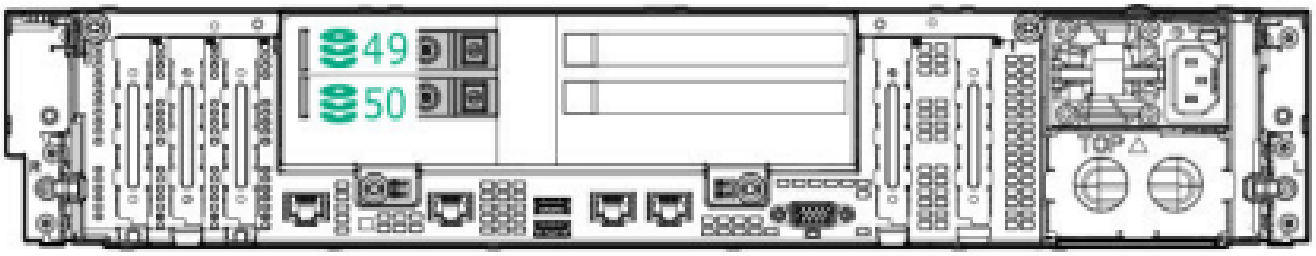
24LFF hot-plug front drive numbering

48SFF hot-plug front drive numbering

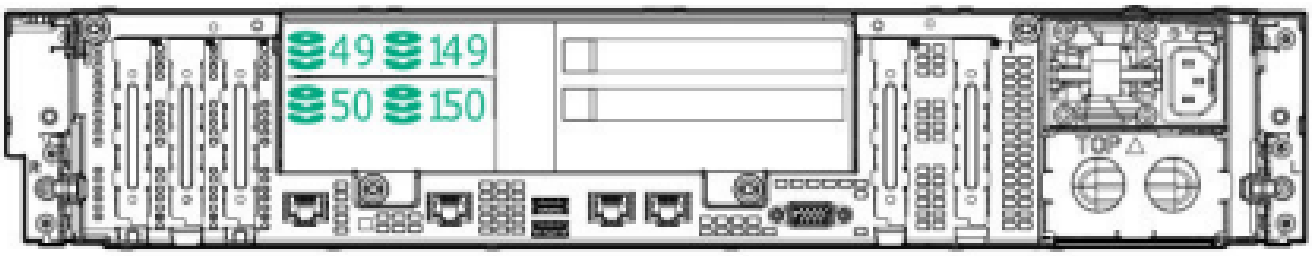
Storage



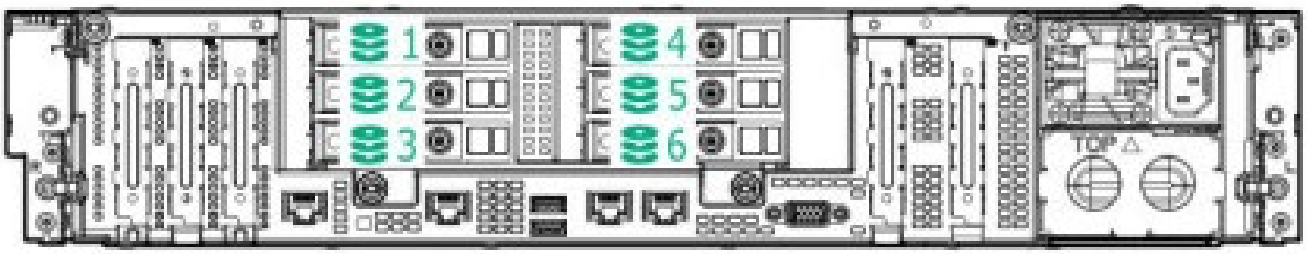
4LFF hot-plug rear drive numbering



2SFF hot-plug rear drive numbering



2uFF hot-plug rear drive numbering



6SFF NVMe rear drive numbering

Technical Specifications

System Unit

Dimensions (Height x Width x Depth)	8.75 x 44.80 x 82.55 cm 3.44 x 17.63 x 32.50 in
Weight (approximate)	
Minimum	22.34 kg 49.25 lbs
Maximum.	40.60 kg 89.51 lbs
Input Requirements (per power supply)	
Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
BTU Rating	
Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only
Power Supply Output (per power supply)	
Rated Steady-State Power	For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
	For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
Maximum Peak Power	For 1600W Power Supply: 1600W (at 200 to 240 1VAC), 1600W (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.

Technical Specifications

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).

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.

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:
https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=c03471072

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
05-Feb-2024	Version 31	Changed	Core Option section was updated. Obsolete SKUs were removed.
18-Dec-2023	Version 30	Changed	HPE Services Rebranding Obsolete SKUs were removed.
05-Sep-2023	Version 29	Changed	Core Option section was updated. Obsolete SKUs were removed.
06-Mar-2023	Version 28	Changed	Core Option section was updated. Obsolete SKUs were removed.
05-Dec-2022	Version 27	Changed	SKU P58232-K21 was added
01-Aug-2022	Version 26	Changed	Core Option section was updated.
05-Jul-2022	Version 25	Changed	Configuration Information and Core Options sections were updated. Obsolete SKUs were removed
06-Jun-2022	Version 24	Changed	Standard Features and Core Options sections were updated. Obsolete SKU was removed
02-May-2022	Version 23	Changed	Core Option section was updated.
07-Feb-2022	Version 22	Changed	Core Option section was updated. Obsolete SKUs were removed.
06-Dec-2021	Version 21	Changed	Core Option section was updated. Obsolete SKUs were removed.
01-Nov-2021	Version 20	Changed	Core Option section was updated. Obsolete SKUs were removed.
07-Sep-2021	Version 19	Changed	Core Option section was updated. Obsolete SKUs were removed.
02-Aug-2021	Version 18	Changed	Core Options and Service and Support sections were updated. Obsolete SKUs were removed.
07-Jun-2021	Version 17	Changed	Standard Features and Configuration Information sections were updated.
19-Apr-2021	Version 16	Changed	Configuration Information section was updated.
01-Feb-2021	Version 15	Changed	Core Option section was updated.
07-Dec-2020	Version 14	Changed	Configuration Information and Core Options sections were updated.
05-Oct-2020	Version 13	Changed	Overview, Standard Features, Configuration Information, Core Options, Additional Options sections were updated.
03-Aug-2020	Version 12	Changed	Overview, Standard Features, Configuration Information, Core Options, Additional Options sections were updated.
01-Jun-2020	Version 11	Changed	Overview, Standard Features and Core Options, sections were updated.
02-Mar-2020	Version 10	Changed	Standard Features, Configuration Information and Core Options, sections were updated.
02-Dec-2019	Version 9	Changed	Configuration Information and Core Options sections were updated.
04-Nov-2019	Version 8	Changed	Standard Features, Configuration Information, Core Options, and Memory sections were updated.
07-Oct-2019	Version 7	Changed	Core Options section was updated.
05-Aug-2019	Version 6	Added	Platform Information, Standard Features, Core Options sections were updated.
03-Jun-2019	Version 5	Changed	Overview, Standard Features, Configuration Information, Core Options, Additional Options sections were updated.
06-May-2019	Version 4	Changed	Core Options and Standard Features sections were updated.
02-Apr-2019	Version 3	Changed	Overview, Standard Features, Configuration Information,Core Options and Aditional Options sections were updated.
17-Dec-2018	Version 2	Changed	SKUs in Additional Option section were updated.
26-Nov-2018	Version 1	New	New QuickSpecs

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less

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