

### Overview

#### HPE Alletra 4120

Are you looking for server-based data infrastructure with an optimal balance of economic capacity and performance for data-driven initiatives?

The HPE Alletra 4120 data storage server is specifically designed to run the broadest range of data storage-centric workloads to power your data-driven initiatives to success. From deep archives and data protection to active analytics data lakes, file and object Software-Defined Storage, and so much more, it delivers the capabilities you need at ideal economics with trusted security and a cloud operating experience. This includes the option to consume as-a-service via HPE GreenLake enabling you to shift from owning and maintaining to simply utilizing it. HPE Alletra 4000 data storage servers provide the data infrastructure for any successful data driven organization.



HPE Alletra 4120 (24LFF SKU shown)

## Overview

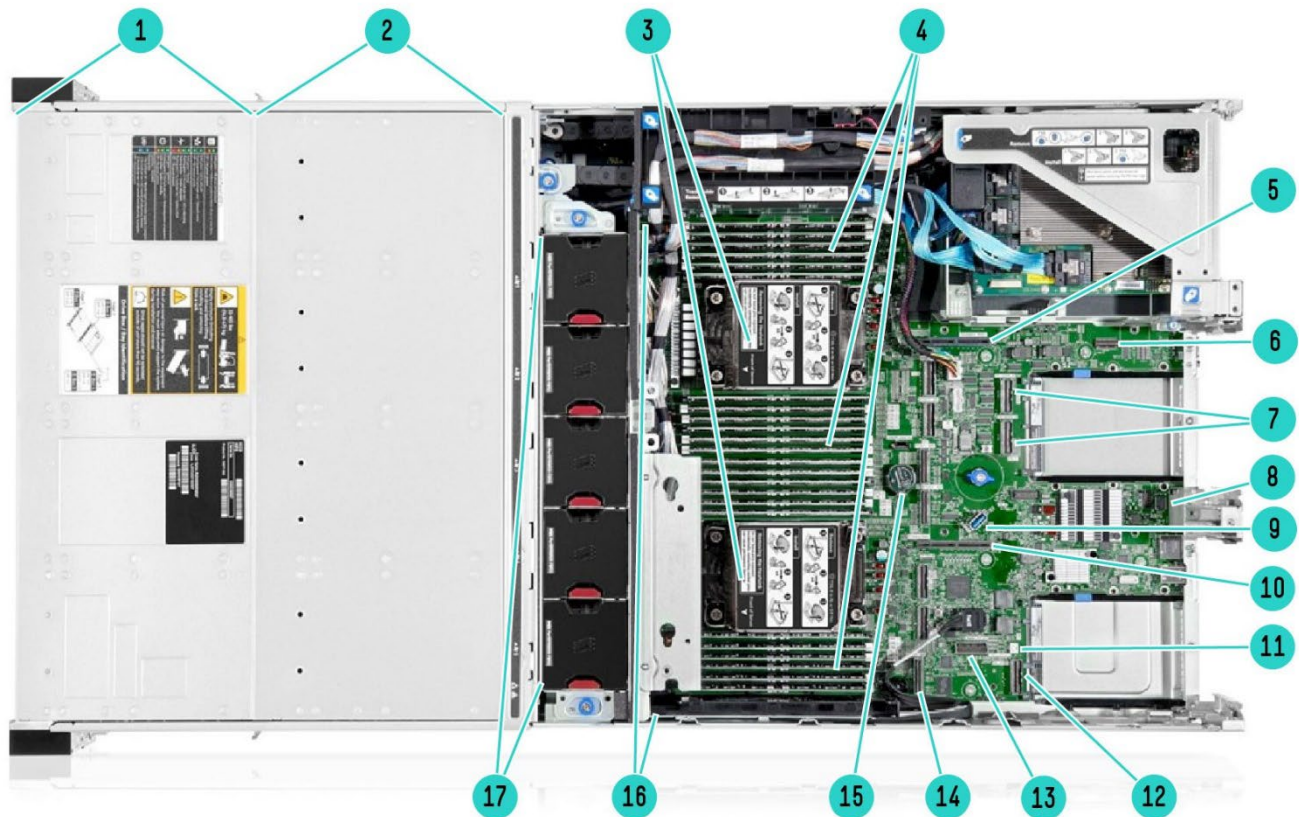


**HPE Alletra 4120 Configure-to-order System Front View (24LFF SKU shown)**

- |   |                                 |
|---|---------------------------------|
| 1. Health LED                                   | 5. USB 3.0 port                 |
| 2. Power On/Standby button and system power LED | 6. UID button/LED               |
| 3. iLO Service Port                             | 7. Drive cage 1 release latches |
| 4. NIC status LED                               |                                 |



## Overview

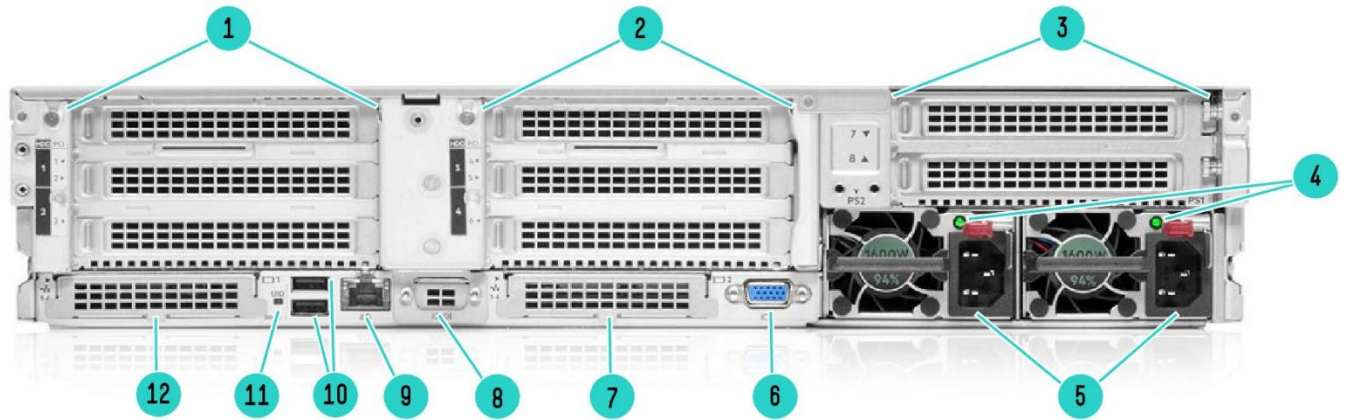


**HPE Alletra 4120 Configure-to-order System Internal View**

- |  |                             |
|--|-----------------------------|
| 1. Drive Cage 1  | 10. Primary riser connector |
| 2. Drive Cage 2  | 11. VBU connector (OCP1)    |
| 3. Up to 2 processors (2 processors installed with standard heat sink shown) | 12. OCP1 connector          |
| 4. DDR5 DIMM slots (Fully populated 24 DIMMs shown)                          | 13. PCIe Gen3 connector     |
| 5. Secondary riser connector   | 14. MCI/O connectors        |
| 6. System maintenance switch   | 15. System battery          |
| 7. OCP2 connectors   | 16. MCI/O 1A connector      |
| 8. Serial port connector   | 17. System fans             |
| 9. Internal USB connector  |                             |



## Overview



**HPE Alletra 4120 Configure-to-order System Rear View**

- |  |                           |
|--|---------------------------|
| 1. Primary riser or drive cage 4 (riser shown)   | 7. OCP NIC 3.0 slot 2     |
| 2. Secondary riser or drive cage 5 (riser shown) | 8. Serial port (optional) |
| 3. Tertiary riser                                | 9. iLO management port    |
| 4. Power supply LED (bay 1 & 2)                  | 10. USB 3.0 ports         |
| 5. Flex Slot power supply bay 1 & 2              | 11. UID LED               |
| 6. Video port                                    | 12. OCP NIC 3.0 slot 1    |



## Overview

### What's New

- Successor to the industry leading HPE Apollo 4200 Gen10 server. Complement to the differentiated HPE Apollo 4200 Gen10 Plus server.
- More data throughput with up to 109%<sup>1</sup> more bandwidth, double the now PCIe Gen5 NVMe SSDs for cache and metadata, and up to four new generation tri-mode storage controllers.
- More data processing with latest 4th generation Intel® Xeon® Scalable processors delivering more performance plus DDR5 memory with up to 50%<sup>2</sup> more bandwidth.
- Enhanced zero trust security from silicon to software and factory to cloud with HPE Integrated Lights Out 6, including new support for the DMTF Security Protection Data Model.
- HPE Greenlake for Compute Ops Management offers cloud-native control and operations for simplified and automated lifecycle management, including dramatically easier firmware management.

#### Notes:

- <sup>1</sup> Based on 24 LFF and 12 EDSFF configuration comparing to HPE Apollo 4200 Gen10 Plus.
- <sup>2</sup> 4800 MT/s versus 3200 MT/s for the 3rd generation Intel® Xeon® Scalable processors.

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## Platform Information

### Form Factor

- 2U rack

### Chassis Types

- 24 LFF SAS 24Gb/SATA 6Gb
- 48 SFF SAS 24Gb/SATA 6Gb

#### Notes:

- Optional Rear Drive Cages:
  - 2 + 2 LFF SAS 12Gb/SATA 6Gb Drive Cages (only for 24LFF chassis),
  - 6 SFF SAS 24Gb/SATA 6Gb/NVMe U.3 x4 Tri-mode Drive Cage
  - 12 EDSFF E3S EC1 EDSFF NVMe x4 Drive Cage

### System Fans

- 5 system dual-fan modules shipped as standard
- 



## Standard Features

### Processors

Up to 2 of the following depending on model.

#### Notes:

- The 2nd digit of the processor model number “x4xx” is used to denote the processor generation (i.e. 4 = 4th generation)
- This table covers the public Intel offering only.
- For more information regarding Intel Xeon processors, please see the following <http://www.intel.com/xeon>.

Platinum Processors							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Platinum 9468 Processor	2.1 GHz	48	105 MB	350 W	4 @ 16 GT/s	4800 MT/s	512GB
Platinum 9462 Processor	2.7 GHz	32	75 MB	350 W	3 @ 16 GT/s	4800 MT/s	128GB
Platinum 9460 Processor	2.2 GHz	40	97.5 MB	350 W	3 @ 16 GT/s	4800 MT/s	128GB
Platinum 8468 Processor	2.1 GHz	48	105 MB	350 W	4 @ 16 GT/s	4800 MT/s	512GB
Platinum 8462+ Processor	2.8 GHz	32	60 MB	300 W	3 @ 16 GT/s	4800 MT/s	128GB
Platinum 8460Y+ Processor	2.0 GHz	40	105 MB	300 W	4 @ 16 GT/s	4800 MT/s	128GB
Platinum 8452Y Processor	2.0 GHz	36	67.5 MB	300 W	4 @ 16 GT/s	4800 MT/s	128GB

#### Notes:

- 2 socket capable, 2S – 4 or 3 UPI @ 16 GT/s.
- 4th Generation: 8-Channel DDR5 @ 4800 MT/s (2DPC @ 4400 MT/s).
- 80 lanes PCIe 5.0, advanced RAS.
- Y Supports Intel Speed Select Technology – Performance Profile 2.0 (Intel SST-PP).

Gold Processors							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Gold 6454S Processor	2.2 GHz	32	60 MB	270 W	4 @ 16 GT/s	4800 MT/s	128GB
Gold 6448Y Processor	2.1 GHz	32	60 MB	225 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6444Y Processor	3.6 GHz	16	45 MB	270 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6442Y Processor	2.6 GHz	24	60 MB	225 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6438Y+ Processor	2.0 GHz	32	60 MB	205 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6434 Processor	3.7 GHz	8	22.5 MB	195 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6430 Processor	2.1 GHz	32	60 MB	270 W	3 @ 16 GT/s	4400 MT/s	128GB
Gold 6426Y Processor	2.5 GHz	16	37.5 MB	185 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6414U Processor	2.0 GHz	32	60 MB	250 W	N/A	4800 MT/s	512GB
Gold 5420+ Processor	2.0 GHz	28	52.5 MB	205 W	3 @ 16 GT/s	4400 MT/s	128GB
Gold 5418Y Processor	2.0 GHz	24	45 MB	185 W	3 @ 16 GT/s	4400 MT/s	128GB
Gold 5418N Processor	1.8 GHz	24	45 MB	165 W	3 @ 16 GT/s	4000 MT/s	128GB
Gold 5416S Processor	2.0 GHz	16	30 MB	150 W	3 @ 16 GT/s	4400 MT/s	128GB
Gold 5415+ Processor	2.9 GHz	8	22.5 MB	150 W	3 @ 16 GT/s	4400 MT/s	128Gb
Gold 5412U Processor	2.1 GHz	24	45 MB	185 W	N/A	4400 MT/s	128GB

#### Notes:

- 2 socket capable, 2S - 4 or 3 UPI @ 16 GT/s, except U SKUs
- 4th Generation: 8-Channel DDR5 @ 4000-4800 MT/s (2DPC @ 4400 MT/s).
- 80 lanes PCIe 5.0, advanced RAS.
- Y Supports Intel Speed Select Technology – Performance Profile 2.0 (Intel SST-PP).





## Standard Features

- U Supported in one-socket configurations only.
- S SKUs are storage & hyperconverged infrastructure (HCI) optimized SKUs

Silver Processors							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Silver 4416+ Processor	2.0 GHz	20	37.5 MB	165 W	2 @ 16 GT/s	4000 MT/s	64GB
Silver 4410Y Processor	2.0 GHz	12	30 MB	150 W	2 @ 16 GT/s	4000 MT/s	64Gb

### Notes:

- 2 socket capable, 2S - 2 UPI @ 16 GT/s, except U SKUs
- 4th Generation: 8-Channel DDR5 @ 4000 MT/s
- 80 lanes PCIe 5.0, advanced RAS.
- Y Supports Intel Speed Select Technology – Performance Profile 2.0 (Intel SST-PP).

Bronze Processors							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Bronze 3408U Processor	1.8 GHz	8	22.5 MB	125 W	N/A	4000 MT/s	64GB

### Notes:

- 4th Generation: 8-Channel DDR5 @ 4000 MT/s
- 80 lanes PCIe 5.0, advanced RAS.
- U Supported in one-socket configurations only.

## Chipset

Intel C741 Chipset

**Notes:** For more information regarding Intel® chipsets, please see the following URL:

<http://www.intel.com/products/server/chipsets/>.

## On System Management Chipset

HPE iLO 6 ASIC

**Notes:** Read and learn more in the [iLO QuickSpecs](#).

## Memory

Type	HPE DDR5 Smart Memory Registered (RDIMM)
DIMM Slots Available	24 12 DIMM slots per processor, 8 channels per processor, 2-2-1-1 deployment
Maximum capacity (RDIMM)	6 TB 24 x 256 GB RDIMM @ 4800 MT/s

### Notes:

- The maximum memory speed is limited by the processor selection.
- The maximum capacity per system is limited by the overall configuration selection due to thermal capacity. Contact HPE representative for 6TB configuration details.



## Standard Features

### Memory Protection

#### Advanced ECC

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

#### Online Spare

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

**Notes:** For more information see our [Memory RAS feature technical whitepaper](#).

### Expansion Slots

#### Primary Riser

**Notes:** Bus width indicates the number of physical electrical lanes running to the connector.

PCIe Primary Riser Kit					
Slot#	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
1	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc1
2	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc1
3	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc1

#### Secondary Riser

##### Notes:

- Bus width indicates the number of physical electrical lanes running to the connector.
- When 4th UPI enabled, Slot 4 is running PCIe 4.0 performance. The 4th UPI is disabled by default.

PCIe Secondary Riser Kit					
Slot#	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
4	PCIe 5.0*	X16	X16	Full-height,half-length slot	Proc2
5	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc2
6	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc2

#### Primary and Secondary 1U Riser

##### Notes:

- Bus width indicates the number of physical electrical lanes running to the connector.
- Primary and secondary 1U riser is included in 6SFF x4 Tri-Mode U.3 BC Rear Drive Cage (P51784-B21) and 12EDSFF E3.5 1T x4 Rear Drive Cage (P50875-B21) Upgrade Kit .

PCIe Primary and Secondary 1U Riser Kit					
Slot#	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
3	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc1
6	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc2

#### Tertiary Riser

##### Notes:

- Tertiary riser is shipped as standard
- Bus width indicates the number of physical electrical lanes running to the connector.
- When 4th UPI enabled, Slot 8 is running PCIe 4.0 performance. The 4th UPI is disabled by default.

PCIe Tertiary Riser					
Slot#	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
7	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc2
8	PCIe 5.0*	X16	X16	Full-height,half-length slot	Proc1





## Standard Features

### Internal Storage Devices

- **Hard Drives**  
None ship standard
- 

### Storage Controllers

#### NVMe Boot Devices

- **Optional HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device**  
**Notes:**
  - NS204i-u does not occupy a PCIe slot and internal only for Alletra 4120.
  - 2pcs of 480GB M.2 NVMe SSD are included in the NS204i-u Hot Plug Boot Device
  - RAID 1 supported on the NS204i-u Hot Plug Boot Device.

#### Smart Array Controller

- **HPE Alletra 41X0 SR 32-port PCIe FIO Storage Controller**  
**Notes:**
  - Only available for factory integrated
  - Required 1 or 2 for 24LFF CTO SKU
  - Required 2 for 48SFF CTO SKU
- **HPE Alletra 41X0 MR 16-port PCIe FIO Storage Controller**  
**Notes:**
  - Only available for factory integrated
  - Only available for 24LFF CTO SKU
  - Required 2 for 24LFF CTO SKU
- **HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage**  
**Notes:** suggested for field upgrade only
- **HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller**  
**Notes:** suggested for field upgrade only

**Notes:** For additional details, please visit:

[\*\*HPE Compute MR Gen11 Controllers Quick Spec\*\*](#)

[\*\*HPE Compute SR Gen11 Controllers Quick Spec\*\*](#)

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## Standard Features

### Maximum Internal Storage

Maximum Storage		
Storage	Capacity	Configuration
Standard Cage 1/2 Hot Plug 24LFF SAS HDD	480 TB	24 x 20 TB
Standard Cage 1/2 Hot Plug 24LFF SATA HDD	480 TB	24 x 20 TB
Standard Cage 1/2 Hot Plug 24LFF SAS SSD	184.32 TB	24 x 7.68 TB
Standard Cage 1/2 Hot Plug 24LFF SATA SSD	21.98 TB	24 x 960 GB
Standard Cage 1/2 Hot Plug 48SFF SAS HDD	115.2 TB	48 x 2.4 TB
Standard Cage 1/2 Hot Plug 48SFF SATA HDD	96 TB	48 x 2 TB
Standard Cage 1/2 Hot Plug 48SFF SAS SSD	734.4 TB	48 x 15.36 TB
Standard Cage 1/2 Hot Plug 48SFF SATA SSD	368.64 TB	48 x 7.68 TB
Optional Cage 3 Hot Plug 2LFF SAS HDD	40 TB	2 x 20 TB
Optional Cage 3 Hot Plug 2LFF SATA HDD	40 TB	2 x 20 TB
Optional Cage 3 Hot Plug 2LFF SAS SSD	15.36 TB	2 x 7.68 TB
Optional Cage 3 Hot Plug 2LFF SATA SSD	1.83 TB	2 x 960 GB
Optional Cage 3 Hot Plug 6SFF SAS SSD	92.16 TB	6 x 15.36 TB
Optional Cage 3 Hot Plug 6SFF SATA SSD	46.08 TB	6 x 7.68 TB
Optional Cage 3 Hot Plug 6SFF NVMe SSD	92.16 TB	6 x 15.36 TB
Optional Cage 3 Hot Plug 12EDSFF NVMe SSD	184.32 TB	12 x 15.36 TB
Optional Cage 4 Hot Plug 2LFF SAS HDD	40 TB	2 x 20 TB
Optional Cage 4 Hot Plug 2LFF SATA HDD	40 TB	2 x 20 TB
Optional Cage 4 Hot Plug 2LFF SAS SSD	15.36 TB	2 x 7.68 TB
Optional Cage 4 Hot Plug 2LFF SATA SSD	1.83 TB	2 x 960 GB

#### Notes:

- SFF NVMe PCIe SSD is only supported in the optional SFF Drive Cage 3
- SFF Drive Cage 3 support SSD only
- Only 1 optional SFF drive cage or 2 optional LFF drive cages can be installed on the rear

#### Internal Storage Devices

- Hard Drives
- None ship standard.

#### Graphics

- Integrated video standard
  - Video modes up to 1920 x 1200 @ 60 Hz (32 bpp)
  - 16 MB Video Memory
- HPE iLO 6 on system management memory
  - 32 MB Flash
  - 4 Gbit DDR3 with ECC protection



## Standard Features

### Power Supply

- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit  
**Notes:** Available in 94% efficiency.
- HPE 1000W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit  
**Notes:** Available in 96% efficiency.
- 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 1800-2200W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit  
**Notes:**
  - Available in 96% efficiency.
  - 1800-2200W Power supplies only support high line voltage (200 VAC to 240 VAC).
- HPE 1600W ~48VDC Power Supply Kit

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 Plus 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](#).

### Interfaces

<b>Serial</b>	1 port – Optional, rear
<b>VGA Port</b>	1 port – Standard, rear
<b>Network Ports</b>	None. Choice of OCP or stand up card, supporting a wide range of NIC adapters
<b>HPE iLO Remote Management Network Port</b>	1 GbE Dedicated
<b>Front iLO Service Port</b>	1 standard
<b>USB 3.0</b>	4 standard on all models: 1 front, 2 rear, 1 internal

### Operating Systems and Virtualization Software

- [Windows Server 2019](#)
- [Windows Server 2022](#)
- [Red Hat Enterprise Linux \(RHEL\) 8.6](#)
- [Red Hat Enterprise Linux \(RHEL\) 9.0](#)
- [SUSE Linux Enterprise Server \(SLES\) 15 SP4](#)
- [VMware 7.0 U3](#)
- [VMware 8.0](#)
- [Canonical Ubuntu 22.04](#)

#### Notes:

- Pending Canonical Ubuntu 20.04 certification, available post launch
- 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 visit <http://www.hpe.com/info/ossupport>



## Standard Features

### Industry Standard Compliance

- ACPI 6.4 Compliant
- PCIe 5.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.2 Gen1 Compliant
- SMBIOS 3.4
- 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)
- One Button Secure Erase Enhancements

#### Notes:

- For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit <http://www.hpe.com/servers/ashrae>
- At Standard Operating Support conditions, there is no time limitation for operating the servers in ASHRAE Class A2 conditions, unless otherwise specified in the applicable product information.
- UEFI (Unified Extensible Firmware Interface Forum) 2.7red hat

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## Embedded Management

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

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

### UEFI

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

### Intelligent Provisioning

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

### iLO RESTful API

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

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## 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>.



## Standard Features

### 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 GreenLake for Compute Ops Management

HPE is intelligently transforming compute management with a completely new as a service experience that delivers greater security, simplicity, and efficiency. Discover a completely modernized compute management experience delivered through HPE GreenLake that securely streamlines operations from edge-to-cloud, and automates key lifecycle tasks (onboard, update, manage and monitor HPE servers), bringing the agility and greater efficiencies to wherever compute devices reside via a unified single browser-based interface.

Compute Ops Management is built on a unique cloud-native architecture that abstracts, manages and controls HPE servers regardless of physical location. The management application resides in the HPE GreenLake cloud platform (access via <https://console.greenlake.hpe.com>) and leverages the HPE GreenLake architecture, security, and unified operations.



## Standard Features

### 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
- 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
- Chassis Intrusion detection

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### HPE Trusted Platform Module

HPE Trusted Platform Module 2.0 is included on Pre-Configured models and can be enabled and disabled using the BIOS.

**Notes:** The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys.

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### 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 Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

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

<https://www.hpe.com/us/en/search-results.html?page=1&q=servers%20warranty&autocomplete=0>.

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### 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>



## Standard Features

### 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>.

### Accelerator and GPGPU Information

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

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## 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 your 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](#).

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## One Config Simple (SCE)

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

<https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#>





## Service and Support

### HPE Pointnext - Service and Support

**Get the most from your HPE Products.** Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services** focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business.. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

### Consume IT on your terms

**HPE GreenLake** 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 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

### Managed services to run your IT operations

**HPE GreenLake Management Services** provides 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.

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## Recommended Services

### HPE Pointnext Tech Care.

HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care 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 Pointnext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext Tech Care is available in three response levels. Basic, which provides 9x5 business hour availability and a 2 hour response time. Essential which provides a 15 minute response time 24x7 for most enterprise level customers, and Critical which includes a 6 hour repair commitment where available and outage management response for severity 1 incidents.

<https://www.hpe.com/services/techcare>

### HPE Pointnext Complete Care

HPE Pointnext Complete Care is a modular, edge-to-cloud IT environment service that provides a holistic approach to optimizing your entire IT environment and achieving agreed upon IT outcomes and business goals through a personalized and customer-centric experience. All delivered by an assigned team of HPE Pointnext Services experts. HPE Pointnext Complete Care 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/completecure>

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## Service and Support

### Other related Services

#### HPE Server Hardware Installation

Provides for the basic hardware installation of HPE branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

<https://h20195.www2.hp.com/v2/Getdocument.aspx?docname=5981-9356enw>

#### HPE Installation and Startup Service

Provides for the installation of your HPE hardware according to product specifications including options. The HPE service delivery technician will connect the product to a LAN as appropriate and enable remote support to allow for automatic case creation for hardware failures. Installation and start up services also includes the installation of one supported operating system type (Windows® or Linux).

#### DC for Hyperscale

Complete Care for Hyperscale is available for Service Providers and HPC customers who use a scale out approach to computing with a high volume homogenous infrastructure and resilient architecture can take advantage of this environment support tailored to their operating model.

#### HPE Factory Express for Servers and storage

HPE Factory Express offers configuration, customization, integration and deployment services for HPE servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

#### HPE Service Credits

HPE Service Credits offers flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

#### HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. <http://www.hp.com/ww/learn>

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#### HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers.

Learn more <http://www.hp.com/support/hpesc>.

The HPE Support Center Mobile App\* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

#### Notes:

- \*HPE Support Center Mobile App is subject to local availability. For more information: <http://www.hp.com/services>.
- HPE Apollo 4200 Gen10 Plus is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.



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## Service and Support

### Warranty and Support Services

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed.

To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support [here](#).

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### Parts and Materials

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

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

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

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## Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model.

To ensure valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator.

Contact your local sales representative for information on configurable product offerings and requirements.

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

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

#### Network Choice (NC) Models

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

CTO Models	HPE Alletra 4120 24LFF Configure-to-order System	HPE Alletra 4120 48SFF Configure-to-order System
SKU Number	P46252-B21	P46253-B21
TAA SKU*	P46252-B21#GTA	P46253-B21#GTA
Processor	Not included as standard	
DIMM Slots	24-DIMM slots	
Storage Controller	One or two SR 32-Port or two MR 16-port PCIe FIO Storage Controllers are required for the Cage 1 and Cage 2 drives and up to four per system for the upgrade drive cage(s).	Two SR 32-Port PCIe FIO Storage Controllers are required for the Cage 1 and Cage 2 drives and up to four per system for the upgrade drive cage
PCIe	Up to 8 PCIe slots	
Drive Cage - included	24 LFF – SAS 24Gb/SATA 6Gb	48 SFF – SAS 24Gb/SATA 6Gb
Network Controller	Choice of OCP or stand up cards <b>Notes: No embedded networking.</b>	
Fans	5 dual-rotor fan modules	
Management	Default: HPE iLO Standard with Intelligent Provisioning, HPE OneView Standard (requires download), HPE GreenLake for Compute Ops Management (subscription included)	
USB	Front: 1 USB 3.0 + iLO service port Rear: 2 USB 3.0 Internal: 1 USB 3.0	
Form Factor	2U Rack	
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.	

**Notes:** \* HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country.



## Configuration Information

### Step 2: Choose Required Options

Please select one or two matching processors for the 24LFF model, and two matching processors for the 48SFF model.

#### Notes:

- Mixing of 2 different processor models is not supported.
- Processors with TDP equal to or greater than 270W require High Performance Heat Sink Kit (P51832-B21).
- Processors with TDP lower than 270W require Standard Heat Sink Kit (P51833-B21).

### Step 2a: Choose Processor Options

#### Processor Option Kits

##### 4th Generation Intel Xeon-Platinum

#### Notes:

- All SKUs below ship with processor only. Adequate heatsinks (standard or high performance) must be selected.
- 4800 MT/s maximum memory speed unless otherwise noted.

#### Description

	SKU
Intel Xeon-Platinum 9468 2.1GHz 48-core 350W Processor Kit for HPE Alletra 41X0	P50810-B21
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 512GB SGX Enclave.	
Intel Xeon-Platinum 9462 2.7GHz 32-core 350W Processor Kit for HPE Alletra 41X0	P50814-B21
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Platinum 9460 2.2GHz 40-core 350W Processor Kit for HPE Alletra 41X0	P50815-B21
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor Kit for HPE Alletra 41X0	P51959-B21
<b>Notes:</b>	
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 512GB SGX Enclave.	
Intel Xeon-Platinum 8462Y+ 2.8GHz 32-core 300W Processor Kit for HPE Alletra 41X0	P50799-B21
<b>Notes:</b>	
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor Kit for HPE Alletra 41X0	P50800-B21
<b>Notes:</b>	
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor Kit for HPE Alletra 41X0	P50807-B21
<b>Notes:</b>	
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	

##### 4th Generation Intel Xeon-Gold

#### Notes:

- All SKUs below ship with processor only. Adequate fans and heatsinks (standard or high performance) must be selected.
- 4800 - 4400 MT/S maximum memory speed unless otherwise noted.



## Configuration Information

Description	SKU
Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50809-B21
Intel Xeon-Gold 6448Y 2.1GHz 32-core 225W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50796-B21
Intel Xeon-Gold 6444Y 3.6GHz 16-core 270W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50798-B21
Intel Xeon-Gold 6442Y 2.6GHz 24-core 225W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50795-B21
Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50806-B21
Intel Xeon-Gold 6434 3.7GHz 8-core 205W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50797-B21
Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50805-B21
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50794-B21
Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> <li>– U Supported in one-socket configurations only.</li> </ul>	P50813-B21
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50804-B21
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50803-B21

## Configuration Information

Description	SKU
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50816-B21
Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50808-B21
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50793-B21
Intel Xeon-Gold 5412U 2.1GHz 24-core 185W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> <li>– U Supported in one-socket configurations only.</li> </ul>	P50812-B21
<b>4th Generation Intel Xeon-Silver</b>	
<b>Notes:</b> <ul style="list-style-type: none"> <li>– All SKUs below ship with processor only. Adequate fans and heatsinks (Standard or high performance) must be selected.</li> <li>– 4000 MT/s maximum memory speed unless otherwise noted.</li> </ul>	
Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50802-B21
Intel Xeon-Silver 4410Y 2.0GHz 12-core 150W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50801-B21
<b>4th Generation Intel Xeon-Bronze</b>	
<b>Notes:</b> <ul style="list-style-type: none"> <li>– All SKUs below ship with processor only. Adequate fans and heatsinks (Standard or high performance) must be selected.</li> <li>– 4000 MT/s maximum memory speed unless otherwise noted.</li> </ul>	
Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 64GB SGX Enclave.</li> <li>– U Supported in one-socket configurations only.</li> </ul>	P50811-B21





## Configuration Information

### Step 2b: Choose Memory Options

Please select one or more memory from below.

For additional information, please see the [HPE DDR5 Smart Memory QuickSpecs](#).

#### Notes:

- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- Quantity of memory DIMMs selected per socket must be 1, 2, 4, 6, 8, or 12.

### Registered DIMMs (RDIMMs)

**Notes:** Mixing of 3DS and non-3DS DIMMs not allowed.

#### Description

	SKU
HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43322-K21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43328-K21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43331-K21
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43334-K21
HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43337-K21

**Notes:** Support limited to 25°C maximum inlet temperature.

### 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	P38995-B21
HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P03178-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38997-B21
HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit	P44712-B21
<b>Notes:</b> Only supports high line voltage (200 VAC to 240 VAC).	
HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit	P17023-B21

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

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

HPE Smart Memory Fast Fault Tolerance FIO Setting	875293-B21
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#### Notes:

- Enables Fast Fault Tolerance mode, an HPE Memory RAS feature introduced in HPE Gen10 servers that survives up to two DRAM failures.
- This RAS feature combines Adaptive Double DRAM Device Correction (ADDC) with HPE Advanced Error Detection Technology, resulting in significantly better memory reliability and availability than what ADDDC provides on its own. For more information see our [Memory RAS feature technical whitepaper](#).

### HPE Security Options

HPE Server Security Optimized Service for HPE ProLiant (R9S59A) is an optional security upgrade intended for agencies and regulated industries with enhanced security and compliance needs. Applying this option to a HPE Alletra 41X0 CTO system ensures it is hardened by turning on advanced safeguards in place against cyber-exploits throughout the server lifecycle. An iLO Advanced License required for High Security Mode and compatible intrusion detection device option kits are prerequisites for the full optimization service.



## Configuration Information

### Step 4: Management software

Select your choice of cloud-native management or on-premises management software.

#### HPE Greenlake for Compute Ops Management for cloud-native management

**Notes:** HPE Greenlake for Compute Ops Management for cloud-native management is available in two tiers: Standard, for managing systems individually, or Enhanced for management of multiple systems. Billing frequency is available as upfront, monthly, quarterly, or annual payments.

#### Recommended SKU

##### Description

HPE GreenLake for Compute Ops Management Enhanced 5-year Upfront Alletra 4000 SaaS

##### SKU

S1E13AAE

#### Alternative SKUs

HPE GreenLake for Compute Ops Management Enhanced 3-year Upfront Alletra 4000 SaaS

S1E12AAE

#### HPE OneView

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

E5Y35AAE

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

P8B26AAE



## Core Options

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

### HPE Unique Options

#### Cooling Options

Description	SKU
HPE Alletra 4120 High Performance Heat Sink Kit	P51832-B21
<b>Notes:</b> Required for processors with a TDP equal or greater than 270W.	
HPE Alletra 4120 Standard Heat Sink Kit	P51833-B21

#### System FIO Storage Controllers

HPE Alletra 41X0 SR 32-port PCIe FIO Storage Controller	P61479-B21
HPE Alletra 41X0 MR 16-port PCIe FIO Storage Controller	P61480-B21

#### System FIO Storage Controller Mode for 24LFF Cage2

HPE Alletra 4120 24LFF Cage 2 to CPU1 Slot 8 FIO Controller Mode	P59379-B21
<b>Notes:</b> Required for single 32-port controller configured for drive cage1 and cage2 in one system.	
HPE Alletra 4120 24LFF Cage 2 to CPU2 Slot 7 FIO Controller Mode	P59380-B21
<b>Notes:</b> Required for two processors and two controllers configured for drive cage1 and cage2 in one system.	

#### Primary Risers

**Notes:** The Primary location can be either PCIe Primary Riser Kit (P50871-B21) or 2LFF SAS/SATA LP Primary Drive Cage Kit ( P50873-B21).

HPE Alletra 4120 PCIe Primary Riser Kit	P50871-B21
HPE Alletra 4120 2LFF SAS/SATA LP Primary Drive Cage Kit	P50873-B21

#### Secondary Risers

**Notes:** The Secondary location can be either PCIe Secondary Riser Kit (P50872-B21) or 2LFF SAS/SATA LP Secondary Drive Cage Kit ( P51783-B21).

HPE Alletra 4120 PCIe Secondary Riser Kit	P50872-B21
HPE Alletra 4120 2LFF SAS/SATA LP Secondary Drive Cage Kit	P51783-B21

#### Rear Drive Cage Storage Upgrades

HPE Alletra 4120 6SFF x4 Tri-Mode U.3 BC Rear Drive Cage Upgrade Kit	P51784-B21
<b>Notes:</b> The 6SFF x4 Tri-Mode U.3 BC Rear Drive Cage Upgrade Kit (P51784-B21) occupies both the Primary and Secondary locations and includes 1U Primary and Secondary Riser.	

#### Rear Drive Cage Cables

**Notes:** One of the Rear Drive Cage Cable must be selected when Rear Drive Cage Upgrade SKU is selected.

HPE Alletra 4120 6SFF Rear Drive Cage Balanced NVMe Direct Attach Cable Kit	P50876-B21
<b>Notes:</b> When this SKU is selected, the 2nd processor is required.	
HPE Alletra 4120 6SFF Rear Drive Cage CPU1 NVMe Direct Attach Cable Kit	P50877-B21
HPE Alletra 4120 6SFF Rear Drive Cage CPU1 Controller Cable Kit	P50878-B21
<b>Notes:</b> When this SKU is selected, additional one storage controller is required.	
HPE Alletra 4120 6SFF Rear Drive Cage Balanced Slot 3/6 Controller Cable Kit	P50879-B21
<b>Notes:</b> When this SKU is selected, the 2nd processor and additional two storage controllers are required.	
HPE Alletra 4120 6SFF Rear Drive Cage Balanced Slot 7/8 Controller Cable Kit	P50880-B21
<b>Notes:</b> When this SKU is selected, the 2nd processor and two storage controllers are required.	



## Core Options

### System OCP Options

Description	SKU
HPE Alletra 4120 OCP2 x8 CPU1 Enablement Kit <b>Notes:</b> This SKU can enable OCP2 slot bandwidth X8 PCIe Gen5 from the 1st processor.	P51944-B21
HPE Alletra 4120 OCP2 x8 CPU2 Enablement Kit <b>Notes:</b> This SKU can enable OCP2 slot bandwidth X8 PCIe Gen5 from the 2nd processor, and the 2nd processor is required.	P51945-B21
HPE Alletra 4120 OCP1 Upgrade Cable Kit <b>Notes:</b> This SKU can improve the OCP1 slot bandwidth from X8 to X16 PCIe Gen5.	P51942-B21
HPE Alletra 4120 OCP2 Upgrade Cable Kit <b>Notes:</b> This SKU can improve the OCP2 slot bandwidth from X8 to X16 PCIe Gen5, and the 2nd processor is required.	P51943-B21
HPE OCP Thermal Enhancement Kit <b>Notes:</b> This SKU is required when OCP options requiring better thermal condition and the PCIe slot above the OCP slot will be occupied by this SKU.	P28727-B21

### System Racking Options

HPE 2U Shelf-Mount Adjustable Rail Kit	822731-B21
HPE Apollo 4200 Gen9 FIO Strap Shipping Bracket <b>Notes:</b> This SKU is used for shipping servers that are integrated in a rack.	822640-B21

### System NVMe Boot Device Enablement Options

HPE Alletra 4120 NVMe M.2 Enablement Kit <b>Notes:</b> This SKU is required when HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device (P48183-B21) is installed.	P50885-B21
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### Security

HPE Gen11 2U Storage Bezel Kit	P51688-B21
HPE Bezel Lock Kit	875519-B21

### HPE Processors

Please select one or two matching processors.

#### Notes:

- Mixing of 2 different processor models is not supported.
- Processors with TDP equal to or greater than 270W require High Performance Heat Sink Kit (P51832-B21).
- Processors with TDP lower than 270W require Standard Heat Sink Kit (P51833-B21).

### Processor Option Kits

#### 4th Generation Intel Xeon-Platinum

#### Notes:

- All SKUs below ship with processor only. Adequate heatsinks (standard, or high performance) must be selected.
- 4800 MT/S maximum memory speed unless otherwise noted.

#### Description

Description	SKU
Intel Xeon-Platinum 9468 2.1GHz 48-core 350W Processor Kit for HPE Alletra 41X0 – Requires High Performance Heat Sink Kit (P51832-B21). – 512GB SGX Enclave.	P50810-B21



## Core Options

Description	SKU
Intel Xeon-Platinum 9462 2.7GHz 32-core 350W Processor Kit for HPE Alletra 41X0 <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50814-B21
Intel Xeon-Platinum 9460 2.2GHz 40-core 350W Processor Kit for HPE Alletra 41X0 <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50815-B21
Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 512GB SGX Enclave.</li> </ul>	P51959-B21
Intel Xeon-Platinum 8462Y+ 2.8GHz 32-core 300W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50799-B21
Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50800-B21
Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50807-B21
<b>4th Generation Intel Xeon-Gold</b> <b>Notes:</b> <ul style="list-style-type: none"> <li>– All SKUs below ship with processor only. Adequate fans and heatsinks (standard, or high performance) must be selected.</li> <li>– 44800 MT/S maximum memory speed unless otherwise noted.</li> </ul>	
Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50809-B21
Intel Xeon-Gold 6448Y 2.1GHz 32-core 225W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50796-B21
Intel Xeon-Gold 6444Y 3.6GHz 16-core 270W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires High Performance Heat Sink Kit (P51832-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50798-B21
Intel Xeon-Gold 6442Y 2.6GHz 24-core 225W Processor Kit for HPE Alletra 41X0 <b>Notes:</b> <ul style="list-style-type: none"> <li>– Requires Standard Heat Sink Kit (P51833-B21).</li> <li>– 128GB SGX Enclave.</li> </ul>	P50795-B21



## Core Options

Description	SKU
Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor Kit for HPE Alletra 41X0	P50806-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 6434 3.7GHz 8-core 205W Processor Kit for HPE Alletra 41X0	P50797-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor Kit for HPE Alletra 41X0	P50805-B21
<b>Notes:</b>	
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor Kit for HPE Alletra 41X0	P50794-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor Kit for HPE Alletra 41X0	P50813-B21
<b>Notes:</b>	
– Requires High Performance Heat Sink Kit (P51832-B21).	
– 128GB SGX Enclave.	
– U Supported in one-socket configurations only.	
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor Kit for HPE Alletra 41X0	P50804-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor Kit for HPE Alletra 41X0	P50803-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor Kit for HPE Alletra 41X0	P50816-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor Kit for HPE Alletra 41X0	P50808-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor Kit for HPE Alletra 41X0	P50793-B21
<b>Notes:</b>	
– Requires Standard Heat Sink Kit (P51833-B21).	
– 128GB SGX Enclave.	



## Core Options

### Description

Intel Xeon-Gold 5412U 2.1GHz 24-core 185W Processor Kit for HPE Alletra 41X0

**SKU**  
P50812-B21

#### Notes:

- Requires Standard Heat Sink Kit (P51833-B21).
- 128GB SGX Enclave.
- U Supported in one-socket configurations only.

### 4th Generation Intel Xeon-Silver

#### Notes:

- All SKUs below ship with processor only. Adequate fans and heatsinks (Standard or high performance) must be selected.
- 4000 MT/s maximum memory speed unless otherwise noted.

Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor Kit for HPE Alletra 41X0

P50802-B21

#### Notes:

- Requires Standard Heat Sink Kit (P51833-B21).
- 128GB SGX Enclave.

Intel Xeon-Silver 4410Y 2.0GHz 12-core 150W Processor Kit for HPE Alletra 41X0

P50801-B21

#### Notes:

- Requires Standard Heat Sink Kit (P51833-B21).
- 128GB SGX Enclave.

### 4th Generation Intel Xeon-Bronze

#### Notes:

- All SKUs below ship with processor only. Adequate fans and heatsinks (Standard or high performance) must be selected.
- 4000 MT/s maximum memory speed unless otherwise noted.

Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor Kit for HPE Alletra 41X0

P50811-B21

#### Notes:

- Requires Standard Heat Sink Kit (P51833-B21).
- 64GB SGX Enclave.
- U Supported in one-socket configurations only.

## HPE Memory

Please select two or more memory DIMMs from below.

For additional information, please see the [HPE DDR5 Smart Memory QuickSpecs](#).

#### Notes:

- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- Quantity of memory DIMMs selected per socket must be 1, 2, 4, 6, 8, or 12.

### HPE DDR5 Memory

**Notes:** DIMMs must be selected in quantities of 1, 2, 4, 6, 8, or 12 per socket.

#### Registered DIMMs (RDIMMs)

**Notes:** Mixing of 3DS and non-3DS DIMMs not allowed.

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit

P43322-K21

HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit

P43328-K21

HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit

P43331-K21





## Core Options

### Description

	<b>SKU</b>
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43334-K21
HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43337-K21

**Notes:** Support limited to 25°C maximum inlet temperature.

### HPE Boot Device

HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21
HPE Alletra 41X0 Direct Attach NVMe M.2 OS Boot Device	P60350-B21

**Notes:** No NVMe M.2 SSD included and requires at least one NVMe SSD.

HPE 480GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD	P40513-B21
HPE 960GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD	P40514-B21
HPE 1.92TB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD	P40515-B21
HPE Alletra 4120 NVMe M.2 Enablement Kit	P50885-B21

**Notes:** Required when NVMe Boot Device is selected.

## HPE Drives

### Midline - 12G SAS - LFF Drives

#### Description

	<b>SKU</b>
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 - 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
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

## Core Options

### Enterprise - 12G SAS - SFF Drives

#### Description

	<b>SKU</b>
HPE 900GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P40432-K21
HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P28028-K21
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P28352-K21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P28586-K21
HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P40430-K21
HPE 600GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P53560-K21
HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P53561-K21
HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P53562-K21

#### SED (Self-Encryption Drive)

HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting HDD	P28618-K21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD	P28622-K21

#### Midline - 12G SAS - SFF Drives

HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P28505-K21
HPE 1TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty HDD	P53563-K21

#### Midline 6G SATA - SFF Drives

HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P28500-K21
HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD	P28610-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:

<http://www.hpe.com/products/recommend>.

### Read Intensive – PCIe/NVMe EDSFF - E3S EC1 EDSFF Solid State Drives

HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF CD7 SSD	P56585-K21
HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF CD7 SSD	P56586-K21
HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF CD7 SSD	P56587-K21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57799-K21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57803-K21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57807-K21

### Read Intensive – 24G/12G SAS - SFF - Solid State Drives

HPE 7.68TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40509-K21
HPE 3.84TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40508-K21
HPE 1.92TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40507-K21
HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40506-K21
HPE 3.84TB SAS 24G Read Intensive SFF BC Self-encrypting FIPS PM6 SSD	P41398-K21
HPE 7.68TB SAS 24G Read Intensive SFF BC Self-encrypting FIPS PM6 SSD	P41399-K21
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting HDD	P28618-K21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD	P28622-K21
HPE 960GB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49029-K21
HPE 1.92TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49031-K21



## Core Options

Description	SKU
HPE 3.84TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49035-K21
HPE 7.68TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49041-K21
HPE 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49045-K21
<b>Mixed Use – 24G/12G SAS - SFF - Solid State Drives</b>	
HPE 3.84TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40512-K21
HPE 1.92TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40511-K21
HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40510-K21
HPE 800GB SAS 24G Mixed Use SFF BC Self-encrypting FIPS PM6 SSD	P41400-K21
HPE 1.6TB SAS 24G Mixed Use SFF BC Self-encrypting FIPS PM6 SSD	P41401-K21
HPE 800GB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49047-K21
HPE 1.6TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49049-K21
HPE 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49053-K21
HPE 6.4TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49057-K21
<b>Very Read Optimized (VRO) - 6G SATA - SFF - Solid State Drives</b>	
HPE 7.68TB SATA 6G Very Read Optimized SFF BC 5400 SSD	P58228-K21
<b>Read Intensive - 6G SATA - SFF - Solid State Drives</b>	
HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40501-K21
HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40500-K21
HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40499-K21
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-K21
HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-K21
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40498-K21
HPE 480GB SATA 6G Read Intensive SFF BC PM893 SSD	P44007-K21
HPE 960GB SATA 6G Read Intensive SFF BC PM893 SSD	P44008-K21
HPE 1.92TB SATA 6G Read Intensive SFF BC PM893 SSD	P44009-K21
HPE 3.84TB SATA 6G Read Intensive SFF BC PM893 SSD	P44010-K21
<b>SED (Self-Encryption Drive)</b>	
HPE 1.92TB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD	P58240-K21
HPE 480GB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD	P58236-K21
<b>Mixed Use - 6G SATA - SFF - Solid State Drives</b>	
HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40505-K21
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40504-K21
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40503-K21
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40502-K21
HPE 480GB SATA 6G Mixed Use SFF BC PM897 SSD	P44011-K21
HPE 960GB SATA 6G Mixed Use SFF BC PM897 SSD	P44012-K21
HPE 1.92TB SATA 6G Mixed Use SFF BC PM897 SSD	P44013-K21
<b>SED (Self-Encryption Drive)</b>	
HPE 1.92TB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD	P58248-K21
HPE 960GB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD	P58244-K21

## Core Options

### Read Intensive - 24G SAS - LFF –Solid State Drives

#### Description

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

### Very Read Optimized (VRO) - 6G SATA - LFF - Solid State Drives

HPE 7.68TB SATA 6G Very Read Optimized LFF LPC 5400 SSD P58232-K21

### Read Intensive - 6G SATA - LFF - Solid State Drives

HPE 960GB SATA 6G Read Intensive LFF LPC Multi Vendor SSD P47808-K21

### Read Intensive - NVMe - SFF - Solid State Drives

HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC Self-encrypting FIPS U.3 CM6 SSD P41402-K21

HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC Self-encrypting FIPS U.3 CM6 SSD P41403-K21

HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD P47844-K21

HPE 1.9TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD P47845-K21

HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD P47846-K21

HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD P47847-K21

HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD P50216-K21

HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD P50219-K21

HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD P50222-K21

HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD P50224-K21

HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64848-K21

HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64846-K21

HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64844-K21

HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64842-K21

### Mixed Use - NVMe - SFF - Solid State Drives

HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD P50227-K21

HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD P50230-K21

HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD P50233-K21

HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC Self-encrypting FIPS U.3 CM6 SSD P41404-K21

HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC Self-encrypting FIPS U.3 CM6 SSD P41405-K21

HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD P47837-K21

HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD P47838-K21

HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD P47839-K21

HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD P47840-K21

HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD P50227-K21

HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD P50230-K21

HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD P50233-K21

HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P65023-K21

HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P65015-K21

HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P64999-K21

HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P65007-K21



## Core Options

### HPE Networking

#### 200 Gigabit Ethernet adapters

##### Description

Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE

**SKU**  
P10180-B21

**Notes:** Not supported if processors equal or greater than 270W

#### 100 Gigabit Ethernet adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE

P25960-B21

**Notes:** Not supported if processors equal or greater than 270W

Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE

P21112-B21

**Notes:** Not supported if processors equal or greater than 270W

HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter

P31246-B21

#### 25 Gigabit Ethernet adapters

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE

P26264-B21

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

P26262-B21

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

P08443-B21

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

P08458-B21

Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

P42044-B21

#### 10 Gigabit Ethernet adapters

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE

P26253-B21

Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE

P26259-B21

#### 1 Gigabit Ethernet adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE

P51178-B21

Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE

P21106-B21

#### OCP 3.0 Adapters

Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE

P08449-B21

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE

P10097-B21

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

P10115-B21

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

P10106-B21

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

P26269-B21

Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE

P26256-B21

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE

P51181-B21

#### Storage Offload Adapters

HPE NV60100M 100Gb 2-port Storage Offload Adapter

R8M41A

### HPE InfiniBand

**Notes:** Recommended system Ambient temperature: 25C.

HPE InfiniBand NDR 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter

P45641-B21

HPE InfiniBand NDR200 1-port OSFP PCIe5 x16 MCX75310AAS-HEAT Adapter

P45642-B21

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter

P23664-B21

**Notes:** Not supported if processors equal or greater than 270W

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter

P31324-B21

**Notes:** Not supported if processors equal or greater than 270W



## Core Options

### Description

### SKU

HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter P23665-B21

**Notes:** Not supported if processors equal or greater than 270W

HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter P23666-B21

**Notes:** Not supported if processors equal or greater than 270W

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter P31323-B21

**Notes:** HPE OCP Thermal Enhancement Kit (P28727-B21) is required.

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter P31348-B21

### Notes:

– HPE OCP Thermal Enhancement Kit (P28727-B21) is required.

– For additional InfiniBand information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440>.

## 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 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P38995-B21

HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit P03178-B21

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P38997-B21

HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit P44712-B21

**Notes:** Only supports high line voltage (200 VAC to 240 VAC).

HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit P17023-B21



## Additional Options

### HPE Greenlake for Compute Ops Management

**Notes:** HPE Greenlake for Compute Ops Management for cloud-native management is available in two tiers: Standard, for managing systems individually, or Enhanced for management of multiple systems. Billing frequency is available as upfront, monthly, quarterly, or annual payments.

Description	SKU
HPE GreenLake for Compute Ops Management Enhanced 3-year Upfront Alletra 4000 SaaS	S1E12AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Upfront Alletra 4000 SaaS	S1E13AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Monthly Alletra 4000 SaaS	S1E15AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Monthly Alletra 4000 SaaS	S1E16AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Quarterly Alletra 4000 SaaS	S1E18AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Quarterly Alletra 4000 SaaS	S1E19AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Annual Alletra 4000 SaaS	S1E20AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Annual Alletra 4000 SaaS	S1E21AAE
HPE GreenLake for Compute Ops Management Standard 3-year Upfront Alletra 4000 SaaS	S1E01AAE
HPE GreenLake for Compute Ops Management Standard 5-year Upfront Alletra 4000 SaaS	S1E02AAE
HPE GreenLake for Compute Ops Management Standard 3-year Monthly Alletra 4000 SaaS	S1E04AAE
HPE GreenLake for Compute Ops Management Standard 5-year Monthly Alletra 4000 SaaS	S1E05AAE
HPE GreenLake for Compute Ops Management Standard 3-year Quarterly Alletra 4000 SaaS	S1E07AAE
HPE GreenLake for Compute Ops Management Standard 5-year Quarterly Alletra 4000 SaaS	S1E08AAE
HPE GreenLake for Compute Ops Management Standard 3-year Annual Alletra 4000 SaaS	S1E09AAE
HPE GreenLake for Compute Ops Management Standard 5-year Annual Alletra 4000 SaaS	S1E10AAE

### 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

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
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#### Notes:

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





## Additional Options

### HPE Converged Infrastructure Management Software

#### HPE OneView Advanced (with HPE iLO Advanced)

##### Description

	<b>SKU</b>
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.
- Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: <https://www.hpe.com/us/en/integrated-systems/software.html>.

### HPE Security

HPE Gen11 2U Storage Bezel Kit	P51688-B21
HPE Bezel Lock Kit	875519-B21

### HPE Smart Array Controllers

##### Notes:

- MR (MegaRAID) series controllers are not supported with Intelligent Provisioning feature
- For more information on the HPE Gen11 Storage Controller, please refer to:
  - [HPE Compute MR Gen11 Controllers Quick Spec](#)
  - [HPE Compute SR Gen11 Controllers Quick Spec](#)

#### Essential RAID Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
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##### Notes:

- This controller supports up to 8 SAS/SATA Drives (external)
- For more information on the HPE Smart Array E208i-p SR Gen10 Controller, please refer to the [QuickSpecs](#)

#### HPE Tri-Mode Controllers

HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller	P47184-B21
HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47777-B21

#### HPE Smart Storage Battery

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21
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##### Notes: Required when more than two controllers are selected.

HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21
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#### HPE NVMe OS Boot Device

HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21
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## Additional Options

### Optional Software

Description	SKU
HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU	D7S27A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU	D7S27AAE

### 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 SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	R2J62A
HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter	R2J63A
HPE SN1700E 64Gb 1-port Fibre Channel Host Bus Adapter	R7N77A
HPE SN1700E 64Gb 2-port Fibre Channel Host Bus Adapter	R7N78A

#### QLogic Fibre Channel HBAs

HPE SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	R2E08A
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	R2E09A
HPE SN1700Q 64Gb 1-port Fibre Channel Host Bus Adapter	R7N86A
HPE SN1700Q 64Gb 2-port Fibre Channel Host Bus Adapter	R7N87A

### HPE Racking Options

#### Rail Kits

HPE 2U Shelf-Mount Adjustable Rail Kit	822731-B21
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
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**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 RAID 1 USB Boot Drive	P21868-B21



## Technical Specifications

<b>System Unit</b>	
<b>Dimensions</b> (Height x Width x Depth)	87.5 x 448.0 x 812.80 mm 3.44 x 17.63 x 32.00 in
<b>Weight</b> (approximate)	
Minimum	21.28 kg 46.91 lb
Maximum.	42.84 kg 94.45 lb
<b>Input Requirements</b> (per power supply)	
Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
<b>BTU Rating</b>	
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
<b>Power Supply Output</b> (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
<b>System Inlet Temperature</b>	
<b>Standard Operating Support</b>	<p>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.</p> <p>System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).</p> <p>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: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a></p>
<b>Extended Ambient Operating Support</b>	<p>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: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a></p> <p>System performance may be reduced if operating in the extended ambient operating range or with a fan fault.</p>



## Technical Specifications

<b>Relative Humidity</b> (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.		
<b>Altitude</b>			
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).		
<b>Acoustic Noise</b>			
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.			
<b>Configuration SKU</b>	<b>Entry</b>	<b>Base</b>	<b>Performance</b>
<b>Idle</b>			
LWAd	5.9 B	6.4 B	5.4 B
LpAm	35 dBA	35 dBA	36 dBA
<b>Operating</b>			
LWAd	6.0 B	7.1 B	6.3 B
LpAm	36 dBA	38 dBA	45 dBA
<b>Notes:</b> 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:

<http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

### 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.

### TCO Certified

The HPE Alletra 4120 has been TCO Certified. All HPE TCO Certified products can be found on

**TCO Certified Product Finder**. More information on TCO Certified can be downloaded here:

<https://www.hpe.com/us/en/about/environment/eco-labels.html>



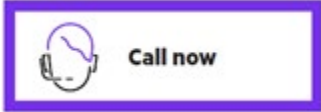
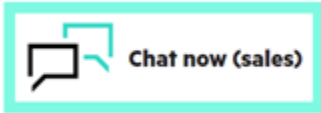
## Summary of Changes

Date	Version History	Action	Description of Change
05-Sep-2023	Version 8	Changed	Core Options section was updated
07-Aug-2023	Version 7	Changed	Standard Features, Configuration Information and Core Options sections were updated
10-Jul-2023	Version 6	Changed	Standard Features and Configuration Information sections were updated
05-Jun-2023	Version 5	Changed	Standard Features and Configuration Information sections were updated
03-Apr-2023	Version 4	Changed	Overview, Standard Features, Configuration Information, Core Options and Technical Specifications sections were updated
06-Mar-2023	Version 3	Changed	Configuration Information and Core Options sections were updated Add SKU – P44712-B21
06-Feb-2023	Version 2	Changed	Additional Options section was updated Add SKUs – R7N86A and R7N87A
10-Jan-2023	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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