QuickSpecs

Overview

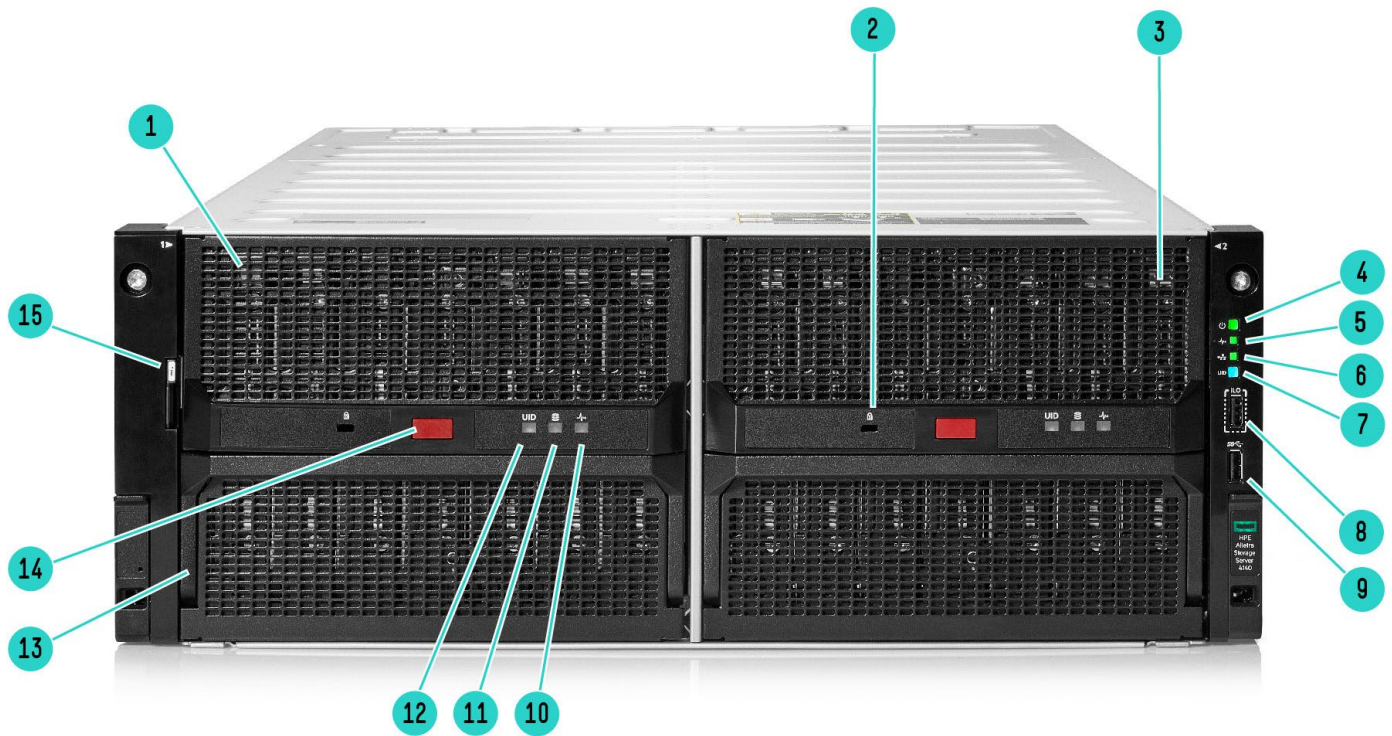### HPE Alletra Storage Server 4140

Are you looking for server-based data infrastructure with the highest density of storage capacity and balanced performance for bulk data-driven initiatives?

The HPE Alletra Storage Server 4140 is specifically designed to provide high throughput for the largest storage-centric workloads to power your data-driven initiatives. From deep archives and data protection to active analytics data lakes, file and object Software-Defined Storage, and so much more, the two chassis deliver the capabilities you need at ideal economics with trusted security and a cloud operating experience. Designed for high-density hybrid bulk storage, the HPE Alletra Storage Server 4140 supports up to 2,2 PB of storage in 4U. It includes the option to consume bulk storage as-a-service via HPE GreenLake, enabling you to shift from owning and maintaining to simply utilizing it. The HPE Alletra Storage Server 4000 family of storage servers provide the data infrastructure for any successful data-driven organization.

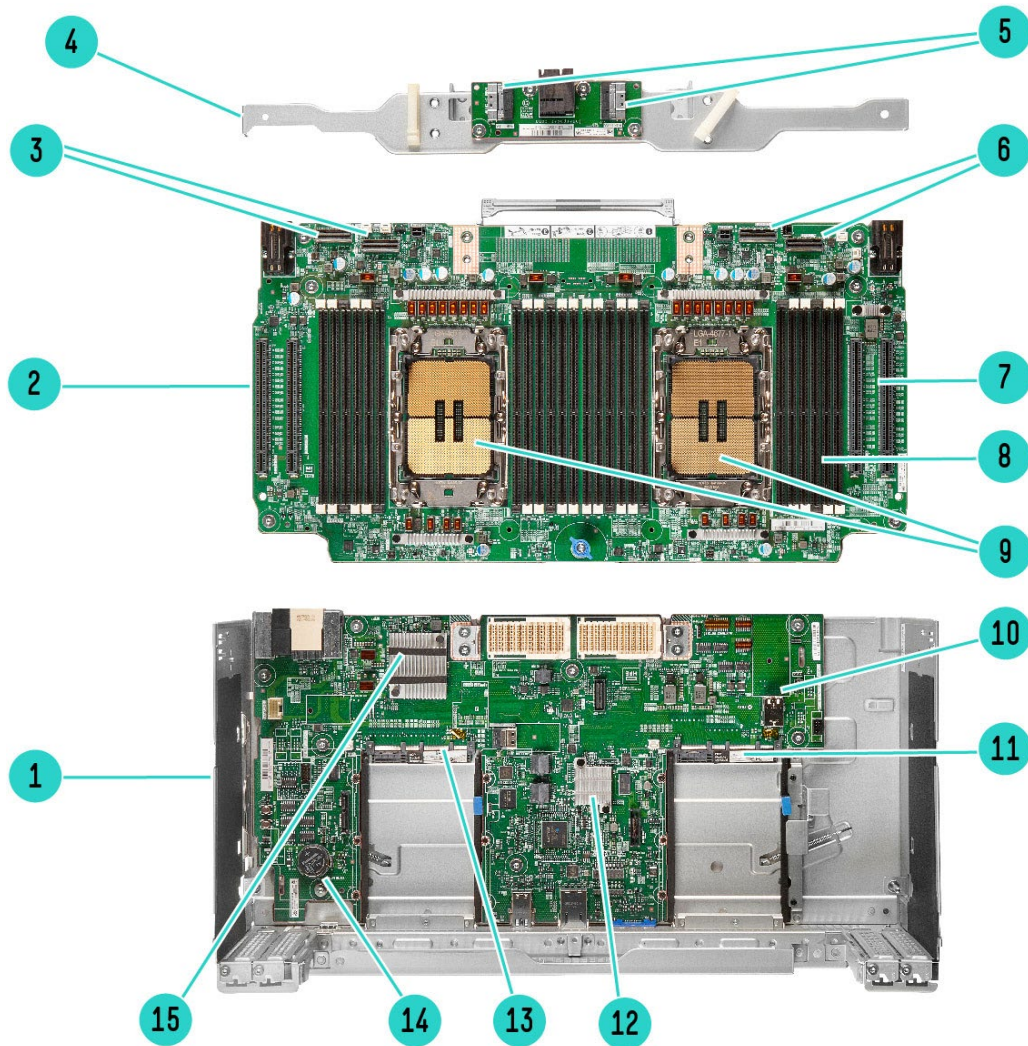**HPE Alletra Storage Server 4140 (68 LFF system shown)**

Overview

HPE Alletra Storage Server 4140 Configure-to-order System Front View

1. Drive Drawer 1
2. Drive Drawer Lock slot
3. Drive Drawer 2
4. Power On/Standby button and system power LED
5. System Health LED
6. NIC Status LED
7. System UID LED
8. iLO Service Port

9. USB 3.0 Port
10 Backplane Health LED
11. Drive Health LED
12. Drive Drawer UID LED
13. Drawer handle
14. Drawer Handle Release Button
15. System information pull tab

Overview

HPE Alletra Storage Server 4140 Configure-to-order System Exploded Server Node View

1. Management Board
2. CPU Board
3. MCIO connectors left
4. SAS Interposer Board
5. SAS connectors
6. MCIO connectors right
7. PCIe x16 slots
8. Up to 24 DDR5 DIMM slots
9. Up to 2 processors
10. Internal USB connector
11. OCP 3.0 connector
12. iLO
13. OCP 3.0 connector
14. System battery
15. Platform Control Hub

Overview
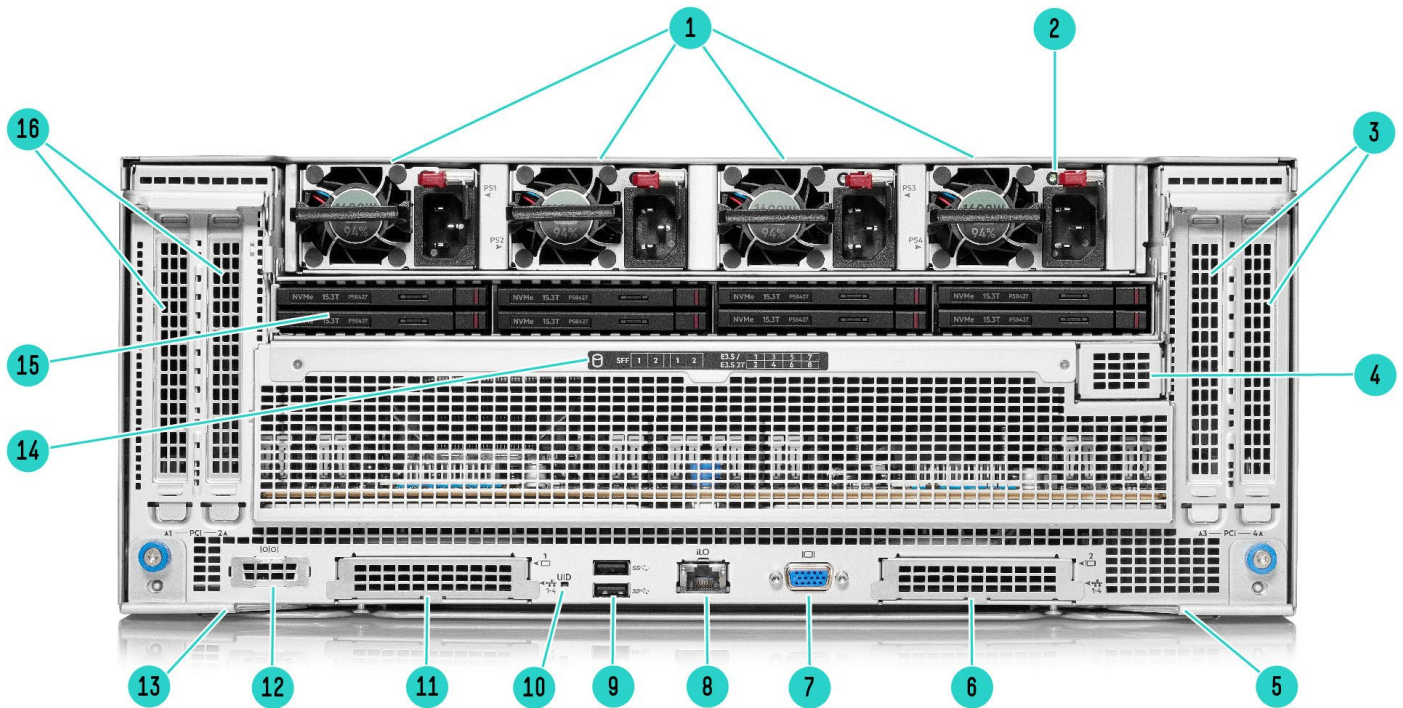
HPE Alletra Storage Server 4140 Configure-to-order System Rear View

1.	Flex Slot power supply bays 1 through 4	9.	USB 3.0 ports
2.	Power Supply LEDs	10.	UID LED
3.	PCIe FHHL slots 3 and 4	11.	OCP 3.0 slot 1 (Slot ID 14)
4.	Location for NS204i-u or M.2 boot devices	12.	Location for serial port option
5.	Server node release handles 1	13.	Server node release handles 2
6.	OCP 3.0 slot 2 (Slot ID 15)	14.	Rear drive numbering label
7.	Video port	15.	8 EDSFF rear drive cage option
8.	iLO NIC port	16.	PCIe FHHL slots 1 and 2

Overview

What's New

- New 24TB SAS/SATA Hard Disk Drives
- New 1.6TB, 1.92TB, 3.2TB and 3.84TB SAS Mixed Use Solid State Disk Drives in Low Profile Carrier
- Successor to the industry leading HPE Apollo 4510 Gen10 server. Completes the family of HPE Alletra Storage Servers 41xx with 1U, 2U and now 4U solutions.
- The HPE Storage Server 4140 includes two chassis; the Base model with up to 68LFF drives and the Extended model with up to 92LFF drives in two pull out drawers plus the option for a rear drive cage with either 8 EDSFF NVMe SSDs or 4 SFF NVMe SSDs
- More data throughput with up to 2X 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% [1] 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: [1] 4800 MT/s versus 3200 MT/s for the 3rd generation Intel® Xeon® Scalable processors.

Platform Information

Form Factor

- 4U rack

Chassis Types

- Base model with 60 or 68 LFF SAS 24Gb/SATA 6Gb slots, depending on whether a rear drive cage is installed
- Extended model with 84 or 92 LFF SAS 24Gb/SATA 6Gb slots, depending on whether a rear drive cage is installed

Notes:

− Optional Rear Drive Cages:
  - o 8 EDSFF E3S EC1 EDSFF NVMe x4 Rear Drive Cage
  - o 4 SFF NVMe U.3 x4 Rear Drive Cage

System Fans

- 6 system quad-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**.

5th Generation Intel® Xeon® Scalable Processor Family (Gold 6)							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Gold 6538N Processor	2.1 GHz	32	60MB	205 W	3 @ 20 GT/s	5200 MT/s	128GB
Gold 6526Y Processor	2.8 GHz	16	37.5 MB	195 W	3 @ 20 GT/s	5200 MT/s	128GB

5th Generation Intel® Xeon® Scalable Processor Family (Gold 5)							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Gold 5520+ Processor	2.2 GHz	28	52.5 MB	205W	3 @ 20 GT/s	4800 MT/s	128GB
Gold 5515+ Processor	3.2 GHz	8	22.5MB	165W	3 @ 20 GT/s	4800 MT/s	128GB
Gold 5512U Processorx	2.1 GHz	28	52.5 MB	185W	N/A	4800 MT/s	128GB

4th Generation Intel® Xeon® Scalable Processor Family (Gold)							
CPU Frequency	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Gold 6438Y+ Processor	2.0 GHz	32	60 MB	205 W	3 @ 16 GT/s	4800 MT/s	128GB
Gold 6426Y Processor	2.5 GHz	16	37.5 MB	185 W	3 @ 16 GT/s	4800 MT/s	128GB
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 @ 20 or16 GT/s, except U SKUs
- 4th and 5th Generation: 8-Channel DDR5 1DPC @ 5200 – 4000 MT/s
- 80 lanes PCIe 5.0, advanced RAS.
- Y SKUs support Intel Speed Select Technology – Performance Profile 2.0 (Intel SST-PP).
- U SKUs supported in one-socket configurations only.
- S SKUs are storage & hyperconverged infrastructure (HCI) optimized SKUs
- N SKUs support Intel QuickAssist Technology (QAT)
- + Feature Plus: Support AMX, DLB, DSA, IAA and QAT additionally

Standard Features

5th Generation Intel® Xeon® Scalable Processor Family (Silver)

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Silver 4516Y+ Processor	2.2 GHz	24	45 MB	185 W	2 @ 16 GT/s	4400 MT/s	64GB
Silver 4514Y Processor	2.0 GHz	16	30 MB	150 W	2 @ 16 GT/s	4400 MT/s	64GB
Silver 4510 Processor	2.0 GHz	12	30 MB	150W	2 @ 16 GT/s	4400 MT/s	64GB
Silver 4509Y Processor	2.6GHz	8	22.5 MB	125W	2 @ 16 GT/s	4400 MT/s	64GB

4th Generation Intel® Xeon® Scalable Processor Family (Silver)

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 SKUs supports Intel Speed Select Technology – Performance Profile 2.0 (Intel SST-PP).

− + Feature Plus: Support AMX, DLB, DSA, IAA and QAT additionally

5th Generation Intel® Xeon® Scalable Processor Family (Bronze)

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size
Bronze 3508U Processor	2.1 GHz	8	22.5 MB	125 W	N/A	4400 MT/s	64GB

4th Generation Intel® Xeon® Scalable Processor Family (Bronze)

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 SKUs 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**.

Standard Features

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)	1.5 TB 24 x 64 GB RDIMM @ 5200 or 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.

Memory Protection

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

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.
  – Two 480GB M.2 NVMe SSD drives are included in the NS204i-u Hot Plug Boot Device
  – Hardware 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 integration
- **HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage**
  Notes: Suggested for field upgrade only
- **HPE Smart Array E208e-p SR Gen10 Storage Controller**
  Notes: Used for attaching external storage devices such as JBODs and tape drives.

Notes: For additional details, please visit: **HPE Compute SR Gen11 Controllers Quick Spec**

Standard Features

Maximum Internal Storage

Maximum Storage		
Storage	**Capacity**	**Configuration**
68 LFF with no rear cage	1,632 TB	68 x 24TB SAS/SATA
60 LFF with 8 EDSFF NVMe rear cage	1,562 TB	60 x 24TB SAS/SATA + 8 x 15.36TB EDSFF
60 LF with 4 SFF NVMe rear cage	1,501 TB	60 x 24TB SAS/SATA + 4 x 15.35TB NVMe
92 LFF with no rear cage	2,208 TB	92 x 24TB SAS/SATA
84 LFF with 8 EDSFF NVMe rear cage	2,138 TB	84 x 24TB SAS/SATA + 8 x 15.36TB EDSFF
84 LFF with 4 SFF NVMe rear cage	2,077 TB	84 x 24TB SAS/SATA + 4 x 15.36TB NVMe

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

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

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

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

For information on power specifications and technical content visit **HPE Server power supplies.**

Standard Features

Interfaces

Serial	1 port – Optional, rear
VGA Port	1 port – Standard, rear
Network Ports	None. Choice of OCP or stand up PCIe card, supporting a wide range of NIC adapters
HPE iLO Remote Management Network Port	1 GbE Dedicated
Front iLO Service Port	1 standard
USB 3.0	5 standard on all models: 1 front, 2 rear, 2 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**
- **Red Hat Enterprise Linux (RHEL) 10.0**
- **SUSE Linux Enterprise Server (SLES) 15 SP4**
- **VMware 7.0 U3**
- **VMware 8.0**
- **Canonical Ubuntu 22.04**

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

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

Standard Features

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 Operating System provisioning for one or more servers with Intelligent Provisioning. Learn more at
http://www.hpe.com/servers/intelligentprovisioning.

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

Server Utilities

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

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

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

iLO Amplifier Pack
Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free,
downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9, Gen10 and
Gen11 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**.

Standard Features

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.

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

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.

Standard Features

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 Service 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**.

Server Management

HPE iLO Advanced

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

HPE iLO Advanced Premium Security Edition

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

HPE OneView Advanced

HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9, Gen10 and Gen11 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**.

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.

Standard Features

HPE Uninterruptible Power Systems are cost-effective power protection for any type of 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 have a cost-effective KVM switch for your first rack and multiple connection IP (Idle Power) switches with remote management and security capabilities to keep your data center rack up and running.

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

One Config Simple (SCE)

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

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

Service and Support

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

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

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

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

HPE Complete Care Service
HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:
- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

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

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

Service and Support

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

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

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

Other Related Services from HPE Services:

HPE 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.hpe.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 include 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 Alletra Storage Servers, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

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

Service and Support

Defective Media Retention

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

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

Parts and Materials

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

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

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:
- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

AI Powered and Digitally Enabled Support Experience

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

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

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.
- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

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

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

Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model.
To ensure valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator.
Contact your local sales representative for information on configurable product offerings and requirements.
- 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 Storage Server 4140 68 LFF Configure-to-order System	HPE Alletra Storage Server 4140 92 LFF Configure-to-order System
SKU Number	P63103-B21	P63253-B21
TAA SKU*	P63103-B21#GTA	P63253-B21#GTA
Processor	Not included as standard	
DIMM Slots	24-DIMM slots	
Storage Controller	One or two SR 32-Port PCIe FIO Storage Controllers are required	One or Two SR 32-Port PCIe FIO Storage Controllers are required
PCIe	Up to 4 PCIe slots	
Rear Drive Cage Options	P63129-B21 - HPE Alletra Storage Server 4140 8EDSFF E3.S Thin Carrier Rear Drive Cage FIO Kit P63131-B21 - HPE Alletra Storage Server 4140 4SFF PCIe x4 U.3 BC Rear Drive Cage FIO Enablement Kit	
Network Controller	Choice of OCP or stand-up PCIe cards **Notes:** No embedded networking.	
Fans	6 quad-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: 2 USB 3.0	
Form Factor	4U 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 either Alletra Storage Server 4140 system.

Notes:
- Mixing of 2 different processor models is not supported.
- All Processors require the Alletra Storage Server 4140 CPU Heat Sink (P64001-B21).

Step 2a: Choose Processor Options

Processor Option Kits

5th Generation Intel Xeon-Gold

Description	SKU
Intel Xeon-Gold 6538N 2.1GHz 32-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P67412-B21
Intel Xeon-Gold 6526Y 2.8GHz 16-core 195W Processor Kit for HPE Alletra Storage Server 41X0	P67418-B21
Intel Xeon-Gold 5520+ 2.2GHz 28-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P67413-B21
Intel Xeon-Gold 5515+ 3.2GHz 8-core 165W Processor Kit for HPE Alletra Storage Server 41X0	P67402-B21
Intel Xeon-Gold 5512U 2.1GHz 28-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P67414-B21

5th Generation Intel Xeon-Silver

Intel Xeon-Gold 5512U 2.1GHz 28-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P67414-B21
Intel Xeon-Silver 4516Y+ 2.2GHz 24-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P67416-B21
Intel Xeon-Silver 4514Y 2.0GHz 16-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P67419-B21
Intel Xeon-Silver 4510 2.4GHz 12-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P67420-B21
Intel Xeon-Silver 4509Y 2.6GHz 8-core 125W Processor Kit for HPE Alletra Storage Server 41X0	P67403-B21

5th Generation Intel Xeon-Bronze

Intel Xeon-Bronze 3508U 2.1GHz 8-core 125W Processor Kit for HPE Alletra Storage Server 41X0	P67404-B21

Notes: U Supported in one-socket configurations only.

4th Generation Intel Xeon-Gold

Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P50806-B21
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P50794-B21
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P50804-B21
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P50803-B21
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor Kit for HPE Alletra Storage Server 41X0	P50816-B21
Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P50808-B21
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P50793-B21
Intel Xeon-Gold 5412U 2.1GHz 24-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P50812-B21

Notes: U Supported in one-socket configurations only.

4th Generation Intel Xeon-Silver

Notes: All SKUs below ship with processor only. 4000 MT/s maximum memory speed unless otherwise noted.

Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor Kit for HPE Alletra Storage Server 41X0	P50802-B21
Intel Xeon-Silver 4410Y 2.0GHz 12-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P50801-B21

4th Generation Intel Xeon-Bronze

Notes: All SKUs below ship with processor only. 4000 MT/s maximum memory speed unless otherwise noted.

Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor Kit for HPE Alletra Storage Server 41X0	P50811-B21

Notes: U Supported in one-socket configurations only.

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.
- Mixing of 3DS and non-3DS DIMMs not allowed.
- The 5600 MT/s Memory SKUs are supported for 5th Gen processors only
- The 4800 MT/s Memory SKUs are supported for 4th Gen processors only

Registered DIMMs (RDIMMs)
Notes:
- The mixing of 3DS and non-3DS DIMMs is not allowed
- Rank Mixing is not supported

Description	SKU
HPE 16GB (1x16GB) Single Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64705-K21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64706-K21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64707-K21

Notes: Mixing of different DDR5-5600 DIMM capacities is 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

Notes: Mixing different DDR5-4800 DIMM capacities is NOT allowed.

Step 2c: Choose Power Supplies
Please select up to 4 power supplies from below.
Notes: Mixing different power supplies is NOT allowed.

HPE Flex Slot Power Supplies

Description	SKU
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).

Step 3: Choose Additional (FIO) Factory Integratable Options
Each of the following may be selected if desired at time of factory integration

Description	SKU
HPE Smart Memory Fast Fault Tolerance FIO Setting	875293-B21

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**.

Configuration Information

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.

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 of Alletra Storage Servers, as well as ProLiant servers. The SKUs below are for Alletra Storage Servers specifically, and are billed upfront. If you want to be billed monthly or annually, please order R6Z73AAE standalone.

Recommended SKU

Description	SKU
HPE Compute Ops Management Enhanced 5-year Upfront Alletra 4000 SaaS	S1E13AAE

Alternative SKUs

HPE Compute Ops Management Enhanced 3-year Upfront Alletra 4000 SaaS	S1E12AAE

Required SKU when ordering through GreenLake Flex:

HPE Compute Ops Management Flex with Alletra 4000 Tracking	S4P39AAE

Notes: Both the tracking SKU above as well as one of the COM SaaS SKUs (S1E13AAE or S1E12AAE) are needed to allow COM to be included and transacted as part of a GL Flex solution and contracts.

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

Heat Sink

Description	SKU
HPE Alletra Storage Server 4140 CPU Heat Sink Kit	P64001-B21

Notes: Required for all processors

System FIO Storage Controllers

HPE Alletra Storage Server 41X0 SR 32-port PCIe FIO Storage Controller	P61479-B21

Notes: Minimum of one is required to connect to LFF drives in the drawers.

Optional Rear Drive Cage
If desired, please select one of the two optional NVMe rear drive cages available from below. These rear drive cages must be installed in the factory. The NVMe SSDs in either of these cages can be directly connected to the processors or can be connected through one or two storage controllers.

HPE Alletra Storage Server 4140 8EDSFF E3.S Thin Carrier Rear FIO Drive Cage Kit	P63129-B21

Notes: Initially, this rear cage option will not support VROC with only one processor and direct attached drives. Use either two processors or connect the EDSFF drives through a storage controller.

HPE Alletra Storage Server 4140 4SFF PCIe x4 U.3 BC Rear Drive Cage FIO Enablement Kit	P63131-B21

Rear Drive Cage Cables

Notes:
– One of the Rear Drive Cage Cable must be selected when Rear Drive Cage Upgrade SKU is selected.
– If no rear cage is selected, no cable is required
– Choose a cable based on the rear cage type, whether there is 1 processor or two, and if the rear drives are to be directly connected to the processor(s) or through storage controller(s) as indicated in the description

HPE Alletra Storage Server 4140 1P 4SFF Rear Drive Cage Controller Attached Cable Kit	P64677-B21
HPE Alletra Storage Server 4140 1P 4SFF Rear Drive Cage Direct Attached Cable Kit	P64679-B21
HPE Alletra Storage Server 4140 1P 8EDSFF Rear Drive Cage Controller Attached Cable Kit	P64683-B21
HPE Alletra Storage Server 4140 1P 8EDSFF Rear Drive Cage Direct Attached Cable Kit	P64685-B21

Notes: Initially, this rear cage cable option will not support VROC.

HPE Alletra Storage Server 4140 2P 8EDSFF Rear Drive Cage Direct Attached Cable Kit	P65897-B21
HPE Alletra Storage Server 4140 2P 4SFF Rear Drive Cage Balanced Controller Attached Cable Kit	P64687-B21

Notes: When this SKU is selected, the 2nd processor and two storage controllers are required.

HPE Alletra Storage Server 4140 2P 4SFF Rear Drive Cage Balanced Direct Attached Cable Kit	P64689-B21

Notes: When this SKU is selected, the 2nd processor and two storage controllers are required.

HPE Alletra Storage Server 4140 2P 8EDSFF Rear Drive Cage Balanced Controller Attached Cable Kit	P64691-B21

Notes: When this SKU is selected, the 2nd processor and two storage controllers are required.

Core Options

Description	SKU
HPE Alletra Storage Server 4140 2P 8EDSFF Rear Drive Cage Direct Attached Cable Kit	P65897-B21

Notes: When this SKU is selected, the 2nd processor and two storage controllers are required.

HPE Alletra Storage Server 4140 1P 4SFF Rear Drive Cage 2x Controller Attached Cable Kit	P65899-B21

Notes: When this SKU is selected, two storage controllers are required.

HPE Alletra Storage Server 4140 1P 8EDSFF Rear Drive Cage 2x Controller Attached Cable Kit	P65901-B21

Notes: When this SKU is selected, two storage controllers are required

HPE Alletra Storage Server 4140 2P 8EDSFF Rear Cage 4x Backplane 2x Drawer Controller Cable Kit	P67633-B21

Notes: When this SKU is selected, the 2nd processor and four storage controllers are required

System Racking Options

HPE Alletra Storage Server 4140 Serial Port FIO Enablement Kit	P64208-B21
HPE s6500 Chassis Handles Kit	608477-B21

Notes: This SKU includes 4 handles and is used when installing an Alletra 4140 without the use of a server lift. Empty the Alletra 4140 enclosure (including hard-drives) before lifting, installing and removing from a rack.

System NVMe Boot Device Enablement Options

HPE Alletra Storage Server 4140 NS204i-u FIO Enablement Kit	P64210-B21

Notes:
- This FIO SKU is required when HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device (P48183-B21) or Alletra 41X0 NVMe M.2 Boot Device (P60350-B21) is installed.
- Because this is an FIO SKU, the installation of either boot device and this enablement kit must all be done in the factory

Security

Description	SKU
HPE Bezel Lock Kit	875519-B21

Notes: This SKU is needed for each drive drawer in the Alletra 4140 to be secured

HPE Processors

Please select one or two matching processors.
Notes:
- Mixing of 2 different processor models is not supported.
- All Processors require Heat Sink Kit (P64001-B21).

Processor Option Kits

5th Generation Intel Xeon-Gold

Description	SKU
Intel Xeon-Gold 6538N 2.1GHz 32-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P67412-B21
Intel Xeon-Gold 6526Y 2.8GHz 16-core 195W Processor Kit for HPE Alletra Storage Server 41X0	P67418-B21
Intel Xeon-Gold 5520+ 2.2GHz 28-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P67413-B21
Intel Xeon-Gold 5515+ 3.2GHz 8-core 165W Processor Kit for HPE Alletra Storage Server 41X0	P67402-B21
Intel Xeon-Gold 5512U 2.1GHz 28-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P67414-B21

Core Options

5th Generation Intel Xeon-Silver

Description	SKU
Intel Xeon-Gold 5512U 2.1GHz 28-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P67414-B21
Intel Xeon-Silver 4516Y+ 2.2GHz 24-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P67416-B21
Intel Xeon-Silver 4514Y 2.0GHz 16-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P67419-B21
Intel Xeon-Silver 4510 2.4GHz 12-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P67420-B21

5th Generation Intel Xeon-Bronze

Description	SKU
Intel Xeon-Bronze 3508U 2.1GHz 8-core 125W Processor Kit for HPE Alletra Storage Server 41X0	P67404-B21

Notes: U Supported in one-socket configurations only.

4th Generation Intel Xeon Gold

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-Gold 6438Y+ 2.0GHz 32-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P50806-B21
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P50794-B21
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor Kit for HPE Alletra Storage Server 41X0	P50804-B21
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P50803-B21
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor Kit for HPE Alletra Storage Server 41X0	P50816-B21
Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P50808-B21
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P50793-B21
Intel Xeon-Gold 5412U 2.1GHz 24-core 185W Processor Kit for HPE Alletra Storage Server 41X0	P50812-B21

Notes: U Supported in one-socket configurations only.

4th Generation Intel Xeon-Silver

Notes:
– All SKUs below ship with processor only. Adequate heatsinks must be selected.
– 4000 MT/s maximum memory speed unless otherwise noted.

Description	SKU
Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor Kit for HPE Alletra Storage Server 41X0	P50802-B21
Intel Xeon-Silver 4410Y 2.0GHz 12-core 150W Processor Kit for HPE Alletra Storage Server 41X0	P50801-B21

4th Generation Intel Xeon-Bronze

Notes:
– All SKUs below ship with processor only. Adequate heatsinks must be selected.
– 4000 MT/s maximum memory speed unless otherwise noted.

Description	SKU
Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor Kit for HPE Alletra Storage Server 41X0	P50811-B21

Notes: 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.

Core Options

HPE DDR5 Memory

Notes:
- DIMMs must be selected in quantities of 1, 2, 4, 6, 8, or 12 per socket.
- The 5600 MT/s Memory SKUs are supported for 5th Gen processors only.
- The 4800 MT/s Memory SKUs are supported for 4th Gen processors only
- Mixing of 3DS and non-3DS DIMMs not allowed.
- Rank and capacity mixing of DIMMs is not supported

Registered DIMMs (RDIMMs)

Description	SKU
HPE 16GB (1x16GB) Single Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64705-K21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64706-K21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64707-K21
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 Boot Device

Description	SKU
HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21

Notes: Two 480GB NVMe M.2 SSDs included

Description	SKU
HPE Alletra Storage Server 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.
- No hardware RAID is included with this option. If mirroring is required, consider Intel VROC or OS utilities.

Description	SKU
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 Storage Server 4140 NS204i-u FIO Enablement Kit	P64210-B21

Notes:
- This SKU required when either NS204i-u or Direct Attach NVMe M.2 Boot Device is selected.
- Because this is an FIO SKU, the installation of either boot device and this enablement kit must be done in the factory.

HPE Drives

Midline - 12G SAS - LFF Drives

Description	SKU
HPE 24TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P68583-K21
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 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

Core Options

Description	SKU
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

Description	SKU
HPE 24TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P68585-K21
HPE 20TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P53554-K21
HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P23449-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

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.

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

Description	SKU
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57799-K21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57803-K21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57807-K21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70392-K21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70395-K21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70397-K21

Notes: When used in the HPE Alletra Storage Server 4140, the PM1743 SSD will exhibit lower performance for some metrics compared to the values in the HPE SSD QuickSpecs.

High Performance Mixed Use – PCIe/NVMe EDSFF - E3S EC1 SED FIPS 140-2 Solid State Drives

HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 Self-encrypting FIPS 140-3 CM7 SSD	P70674-K21

High Performance Mixed Use – PCIe/NVMe EDSFF - E3S EC1 EDSFF Solid State Drives

HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70399-K21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70401-K21
HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70403-K21

Core Options

High Performance Mixed Use – PCIe/NVMe EDSFF - E3S EC1 SED FIPS 140-2 Solid State Drives

Description	SKU
HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 Self-encrypting FIPS 140-3 CM7 SSD	P70669-K21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 Self-encrypting FIPS 140-3 CM7 SSD	P70672-K21

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

HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69234-K21
HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69237-K21
HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69239-K21
HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69546-K21
HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD	P77269-K21
HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD	P77271-K21
HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD	P77273-K21
HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD	P77275-K21

Mainstream Performance Mixed Use – PCIe/NVMe EDSFF - E3S EC1 EDSFF Solid State Drives

HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69241-K21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69243-K21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69245-K21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 EDSFF SPDM PE1030 SSD	P77262-K21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 EDSFF SPDM PE1030 SSD	P77265-K21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 EDSFF SPDM PE1030 SSD	P77267-K21

Mainstream Performance Mixed Very Read Optimized – PCIe/NVMe EDSFF - E3S EC1 EDSFF Solid State Drives

HPE 3.84TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63930-K21
HPE 7.68TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63934-K21
HPE 15.36TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63938-K21

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

HPE 7.68TB SAS 24G Read Intensive LFF LPC Multi Vendor SSD	P49040-K21

Mixed Use - 12G SAS - LFF –Solid State Drives

HPE 960GB SAS 12G Mixed Use LFF LPC Value SAS Multi Vendor SSD	P37009-K21
HPE Alletra Storage Server 4XXX 1.92TB SAS Mixed Use LFF LPC Value SAS Multi Vendor SSD	S3T31A
HPE Alletra Storage Server 4XXX 3.84TB SAS Mixed Use LFF LPC Value SAS Multi Vendor SSD	S3T32A
HPE Alletra Storage Server 4XXX 1.6TB SAS Mixed Use LFF LPC Multi Vendor SSD	S3T29A
HPE Alletra Storage Server 4XXX 3.2TB SAS Mixed Use LFF LPC Multi Vendor SSD	S3T30A

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

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

High Performance Read Intensive - NVMe - SFF - Solid State Drives

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

Core Options

Description	SKU
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50222-K21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PS1010 SSD	P70434-K21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PS1010 SSD	P70436-K21

High Performance Read Intensive - NVMe - SFF - Self-encrypting FIPS - Solid State Drives

HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD	P61019-K21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD	P61027-K21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD	P61035-K21

High Performance 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 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70426-K21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70428-K21

High Performance Mixed Use - NVMe - SFF – Self Encrypting FIPS - Solid State Drives

HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD	P61051-K21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD	P61059-K21

Mainstream Performance Read Intensive - NVMe - SFF – SPDM - Solid State Drives

HPE 15.36TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static SPDM Multi Vendor SSD	P69255-K21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PS1010 SSD	P70434-K21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PS1010 SSD	P70436-K21

Mixed Use - NVMe - SFF - Solid State Drives

HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70426-K21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70428-K21

HPE Networking

100 Gigabit PCI-e Ethernet adapters

Description	SKU
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P21112-B21

Notes: Only Direct Attached Cables (DAC) are supported when these SKUs are used

25 Gigabit PCI-e 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

Core Options

10 Gigabit PCI-e Ethernet adapters

Description	SKU
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 PCI-e 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

Notes:
- All listed PCIe NICs connected via Direct Attach Cables (DAC) are supported in both 68LFF and 92LFF chassis, with or without rear drive cage kits
- All listed PCIe 1GbE, 10GbE and 10/25GbE NICs connected via Active Optical Cables (AOC) are supported in both 68LFF and 92LFF chassis, with or without rear drive cage kits
- The PCIe NIC configurations listed above applies to a maximum 30°C ambient temperature environment

OCP 3.0 Adapters

Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE	P22767-B21
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

Notes:
- All listed OCP NICs connected via Direct Attach Cables (DAC) or Active Optical Cables (AOC) are supported in the 68LFF chassis, with or without rear drive cage kits
- All listed OCP NICs connected via Direct Attached Cables (DAC) are supported in the 92LFF chassis, with or without rear drive cage kits
- All listed OCP 1GbE, 10GbE,10/25GbE and 100GbE NICs connected via Active Optical Cables (AOC) are supported in the 92LFF chassis, with or without rear drive cage kits
- The OCP NIC configurations listed above applies to a maximum 30°C ambient temperature environment

Storage Offload Adapters

HPE NV60100M 100Gb 2-port Storage Offload Adapter	R8M41A

Notes: Only Direct Attached Cables (DAC) are supported when these SKUs are used

HPE InfiniBand

Description	SKU
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter	P23665-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter	P23666-B21

Notes: Only Direct Attached Cables (DAC) are supported when these SKUs are used. For additional InfiniBand information: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440.**

Core Options

HPE Power Supplies

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

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

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

For information on power specifications and technical content visit **HPE Server power supplies**

HPE Flex Slot Platinum Hot-plug Power supplies

Description	SKU
HPE 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).
— Power supplies can only be ordered as Qty = 2 or Qty = 4.

Additional Options

HPE Greenlake for Compute Ops Management
Notes: HPE Greenlake for Compute Ops Management Enhanced for cloud-native management provides for management of multiple systems. Billing frequency is available as upfront payments.

Description	SKU
HPE Compute Ops Management Enhanced 3-year Upfront Alletra 4000 SaaS	S1E12AAE
HPE Compute Ops Management Enhanced 5-year Upfront Alletra 4000 SaaS	S1E13AAE
HPE Compute Ops Management Enhanced 1-year Upfront Alletra 4000 SaaS	S1E11AAE

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

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

HPE iLO Common Password

HPE iLO Common Password FIO Setting	P08040-B21

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

HPE Converged Infrastructure Management Software

HPE OneView Advanced (with HPE iLO Advanced)

Description	SKU
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

Additional Options

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

HPE Security

Description	SKU
HPE Bezel Lock Kit	875519-B21

HPE Smart Array Controllers
Notes: For more information on the HPE Gen11 Storage Controller, please refer to:
HPE Compute SR Gen11 Controllers Quick Spec

Essential RAID Controllers

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

Notes:
- This controller is used to connect external storage devices such as JBODs and tape drives to the Alletra Storage Server 4140. Even though it has Gen10 in the name, it is supported in Gen11.
- 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 Smart Storage Battery

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

Notes: Required when more than two controllers are selected.

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

Notes: Required when two controllers are selected and no rear cage option is selected.

HPE NVMe OS Boot Device

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

Optional Software

Description	SKU
HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE

Intel VROC for HPE

Intel VROC for HPE is an enterprise, hybrid RAID solution, specifically designed for NVMe SSDs connected directly to the CPU. Intel® VROC is made possible by the new CPU feature Intel® Volume Management Device, Intel® VMD, a new hardware architecture on Intel® Xeon® Scalable Processors. Intel® VMD enhances drive performance as drives are directly connect to the Intel CPU enabling the lowest latency. Intel® VROC capitalizes on Intel® VMD for a simple software RAID solution that requires no additional hardware.

Additional Options

Description	SKU
Intel Virtual RAID on CPU Premium E-RTU for HPE	R7J59AAE
Intel Virtual RAID on CPU Premium FIO Software for HPE	R7J57A
Intel Virtual RAID on CPU RAID 1 E-RTU for HPE	S3Q39AAE
Intel Virtual RAID on CPU RAID 1 FIO Software for HPE	S3Q19A

Notes: For more information on features and specifications of Intel VROC for HPE see:
https://www.hpe.com/psnow/doc/a50002570enw?ver=7

HPE Storage Options

Emulex Fibre Channel HBAs

Description	SKU
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

Description	SKU
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

Description	SKU
HPE Alletra Storage Server 4140 Rail Kit	P64970-B21
HPE Alletra Storage Server 4140 Serial Port FIO Enablement Kit	P64208-B21
HPE s6500 Chassis Handles Kit	608477-B21

Notes: SKU 608477-B21 is used when installing an Alletra Storage Server 4140 in a rack and a server lift is not available. All HDDs and SSDs should be removed from server prior to lifting. The handles are removed once the server is installed.

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.

Technical Specifications

System Unit

CTO Model	68 LFF Standard Rack Depth	92 LFF Extended Rack Depth
Dimensions (Height x Width x Depth)	175.80 x 448.00 x 860.94 mm 6.92 x 17.64 x 33.90 in	175.80 x 448.00 x 1076.94 mm 6.92 x 17.64 x 42.40 in
Shipping Container Dimensions (including pallet)	611 x 625 x 1100 mm 24 x 25 x 43 in	594 x 625 x 1350 mm 23 x 25 x 53 in
Weight (approximate)		
System Maximum	117.53 kg 259.11 lb	147.47 kg 325.42 lb
Shipping Maximum:	139 kg 306 lb	181 kg 399 lb
Input Requirements (per power supply)		
Rated Line Voltage	100 to 120 VAC 200 to 240 VAC	
BTU Rating		
Maximum	• For 1800-2200W (Titanium) Power Supply: 6497 BTU/hr (at 200 VAC), 7230 BTU/hr (at 220 VAC), 7962 BTU/hr (at 240 VAC) Rated line voltage: 200 to 240VAC • For 1600W (Platinum) Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC) Rated line voltage: 200 to 240VAC • For 1000W (Titanium) Power Supply: 3753 BTU/hr (at 100 VAC), 3620 BTU/hr (at 200 VAC), 3605 BTU/hr (at 240 VAC) Rated line voltage: 100 to 120VAC/ 200 to 240VAC	• For 1800-2200W (Titanium) Power Supply: 6497 BTU/hr (at 200 VAC), 7230 BTU/hr (at 220 VAC), 7962 BTU/hr (at 240 VAC) Rated line voltage: 200 to 240VAC • For 1600W (Platinum) Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC) Rated line voltage: 200 to 240VAC • For 1000W (Titanium) Power Supply: 3753 BTU/hr (at 100 VAC), 3620 BTU/hr (at 200 VAC), 3605 BTU/hr (at 240 VAC) Rated line voltage: 100 to 120VAC/ 200 to 240VAC
Power Supply Output (per power supply)		
Rated Steady-State Power	For 1800-2200W Power Supply: 2200W (at 240 VAC) For 1600W Power Supply: 1600W (at 240 VAC) For 1000W Power Supply: 1000W (at 120 or 240 VAC)	
Maximum Peak Power	For 1800-2200W Power Supply: 2200W (at 200 to 240 VAC) For 1600W Power Supply: 1600W (at 200 to 240 VAC) or 1000W Power Supply: 1000W (at 120 or 240 VAC)	
System Inlet Temperature		
Standard Operating Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F). For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hpe.com/servers/ashrae**	

Technical Specifications

Relative Humidity (non-condensing)	
Operating	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	
Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise	

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

Configuration SKU	Entry	Typical	Performance
Idle			
LWA,m	6.8 B	6.8 B	6.8 B
LpAm	TBD dBA	TBD dBA	TBD dBA
Kv	0.4 B	0.4 B	0.4 B
Operating			
LWA,m	7.7 B	7.4B	7.3 B
LpAm	62 dBA	59 dBA	61 dBA
Kv	0.4 B	0.4 B	0.4 B

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

Emissions Classification (EMC)

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:
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 Storage Server 4140 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
03-Feb-2025	Version 14	Changed	Core Options section was updated Obsolete SKU removed - P37678-K21
06-Jan-2025	Version 13	Changed	Core Options section was updated Obsolete SKU removed - P31246-B21
18-Nov-2024	Version 12	Changed	Core Options and Additional Options sections were updated
04-Nov-2024	Version 11	Changed	Obsolete SKU removed - P56585-K21
07-Oct-2024	Version 10	Changed	Overview, Standard Features Configuration Information and Core Options sections were updated
03-Sep-2024	Version 9	Changed	Overview, Standard Features Configuration Information and Core Options sections were updated
05-Aug-2024	Version 8	Changed	Configuration Information and Core Options sections were updated
01-Jul-2024	Version 7	Changed	Core Options section was updated
20-May-2024	Version 6	Changed	Configuration Information and Core Options sections were updated
06-May-2024	Version 5	Changed	Overview, Standard Features Configuration Information and Core Options sections were updated Obsolete SKUs removed
18-Mar-2024	Version 4	Changed	Configuration Information and Core Options sections were updated
04-Mar-2024	Version 3	Changed	Overview and Core Options sections were updated
08-Jan-2024	Version 2	Changed	Overview, Standard Features and Configuration Information sections were updated
04-Dec-2023	Version 1	New	New QuickSpecs

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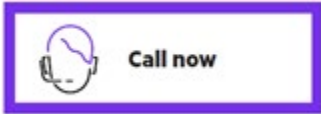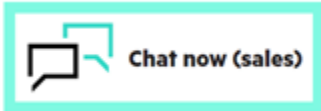
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