Shape the Future of QuickSpecs - Your Input Matters

HPE ProLiant Compute DL110 Gen12

QuickSpecs

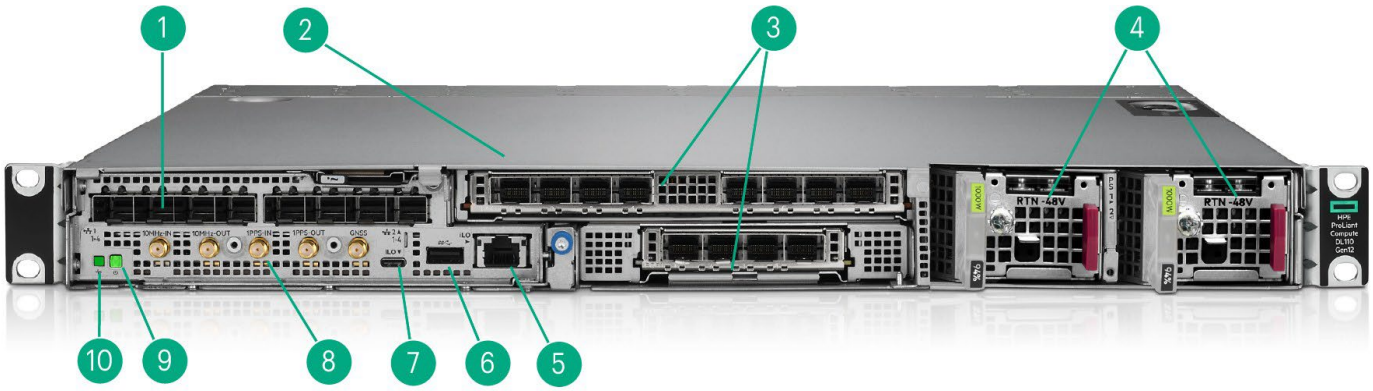
Performant, Secure and Purpose-built for Telco

Customized for edge applications requiring high bandwidth and low latency, such as vRAN, and the 6G future, the HPE ProLiant Compute DL110 Gen12 server is based on open, standards-compliant infrastructure and offers dense I/O capabilities with PCIe Gen5 speed, acceleration, and powerful compute driven by Intel® Xeon® 6 SoC processors

HPE ProLiant Compute DL110 Gen12

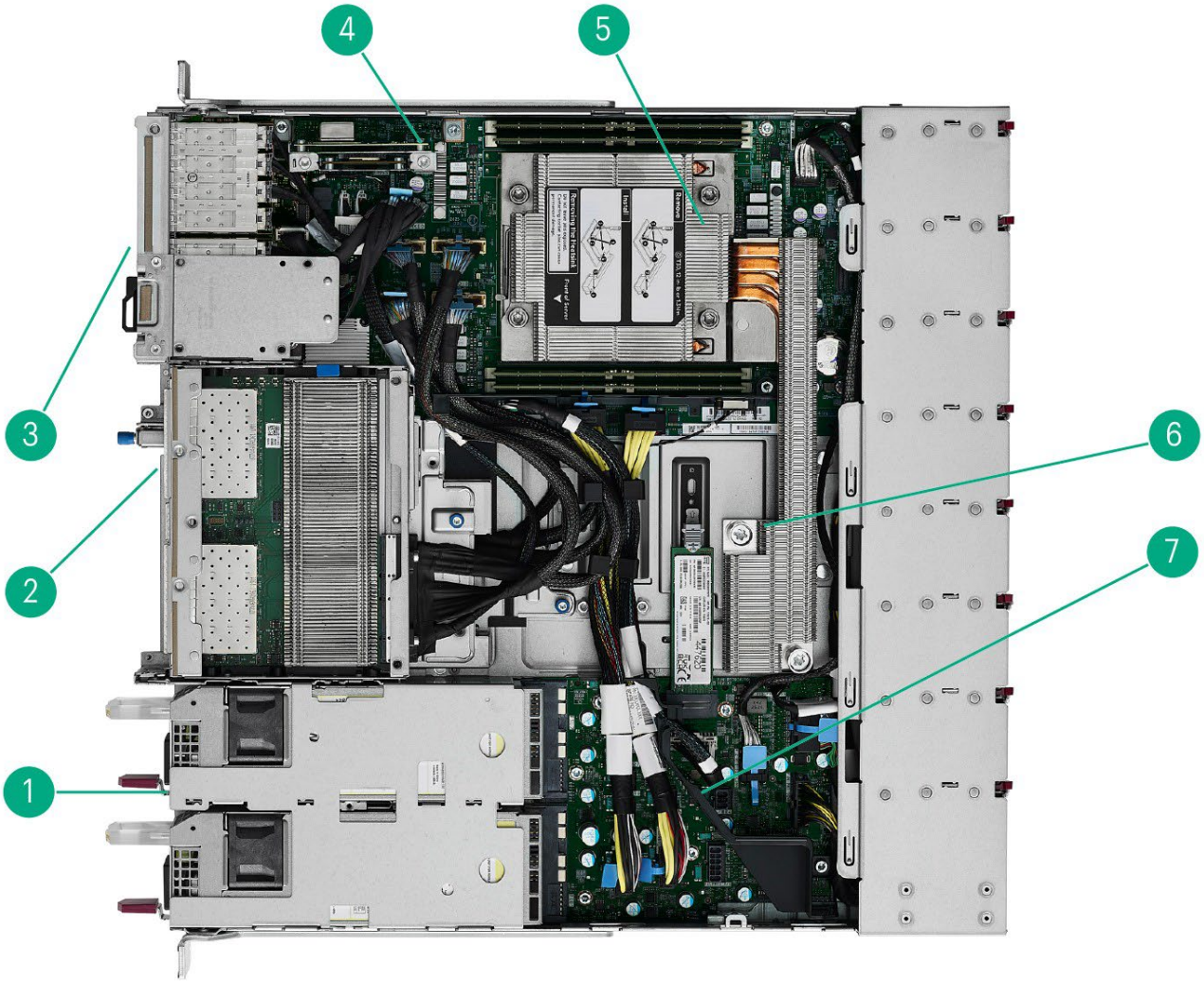
New for this generation are 8x25GbE onboard networking and optional HPE Global Navigation Satellite System (GNSS) with up to a four-hour Digital Phase Lock Loop feature for precision time. HPE ProLiant Compute DL110 Gen12 reduced footprint features a compact, short-depth, 1U/1P front-accessible chassis ruggedized with NEBS* Level 3 compliance for harsh environments. Delivering the trusted HPE ProLiant experience with embedded HPE iLO management and security through HPE silicon root of trust, the HPE ProLiant Compute DL110 Gen12 is ready for communication service providers 5G edge deployments.

Notes: *Typical NEBS certification is 90 days post-production manufacture



Front View			
Item	**Description**	**Item**	**Description**
1.	(8) 10/25Gbps Onboard Network ports	6.	USB 3.0 Type-A.
2.	Quick removal access panels.	7.	USB Type-C iLO Service Port.
3.	Optional adapters – Dual Slot OCP and single slot OCP. [1]	8.	5x Subminiature Version A (SMA) coaxial connectors: 10 MHz in/out, 1PPS in/out, GNSS antenna.
4.	Redundant M-CRPS Power Supply Units.	9.	Power On/Standby button and System Power LED.
5.	RJ45 iLO7 Management Port.	10.	Health LED.

Notes: [1]Optional I/O slots: Dual Slot DSFF OCP and single slot SFF OCP, or 2x PCIe Full Height Half Length (FHHL)

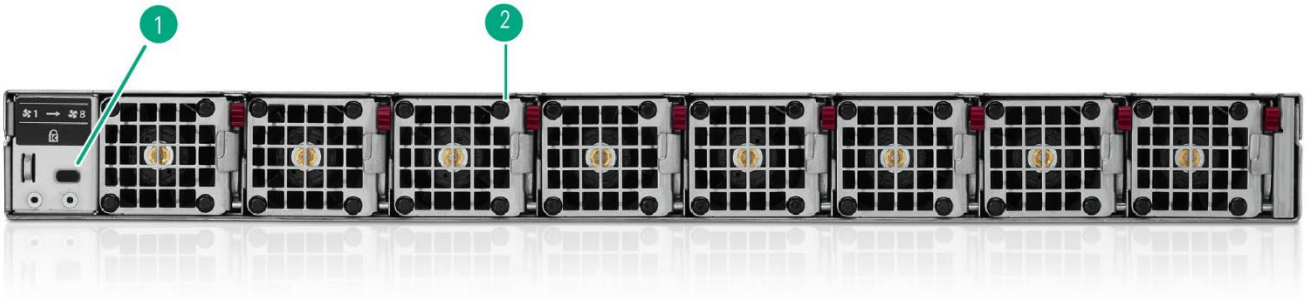


Internal View

Item	Description	Item	Description
1.	Dual M-CPRPS Power Supplies. [2]	5.	Intel Xeon 6 SoC Processor
2.	Double wide OCP riser. [3]	6.	Dual M.2 SSD. [1]
3.	8 x 25 Gbps Onboard NIC.	7.	Power Distribution Board.
4.	M.2 slots for optional GNSS and DPLL modules.		

Notes:

- [1]Supports 2280 and 22110 form factor
- [2]Up to 2 for redundant power
- [3]Supports various NICs up to 200GbE (8X 25Gbps)



Rear View

Item	Description	Item	Description
1.	Kensington Lock, standard 7x3 mm.	2.	8 dual rotor hot-plug fans.

What's New

- Intel® Xeon® 6 SoC processors with Intel® vRAN Boost, media acceleration, and networking
- HPE DDR5 Smart Memory 6400 MT/s
- Support for up to 20 10/25 GbE network ports
- Intel® Advanced Matrix Extensions (AMX) in every core, delivers up to 3.2x increase in RAN AI Perf/core
- HPE iLO 7 and O-RAN security support
- M.2 DPLL timing module and M.2 GNSS receiver module

Platform Information

Form Factor

- 1U rack, reverse airflow system (front to rear) with 17" depth

Chassis Types

- Front cabled chassis

System Fans

- 8 dual rotor, hot plug fans included (individually serviceable)

Processors – Up to 1 of the following

For more information regarding Intel Xeon processors, please see the following http://www.intel.com/xeon.

Intel® Xeon® 6 SoC processors	CPU Frequency	Cores	L3 Cache (MB)	Power	UPI	DDR5
6716P-B Processor	2.1 GHz	40	160	235 W	N/A	6400 MT/s

Chipset

– N/A

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

On System Management Chipset

– HPE iLO 7 ASIC

Read and learn more in the iLO QuickSpecs.

Memory

One of the following depending on the model.

Type	HPE DDR5 Smart Memory	HPE DDR5 Smart Memory, Registered (RDIMM)
DIMM Slots Available	4	4 DIMM slots, 4 channels, 1 DIMM per channel
Maximum capacity (RDIMM)	512 GB	4 x 128 GB RDIMM @ 6400 MT/s

Notes:

– For new Gen12 memory population rule whitepaper and optimal memory performance guidelines, please go to: http://www.hpe.com/docs/memory-population-rules
– To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required.
– The -B21 memory SKUs shown in this document are to be used when ordering stand-alone memory only. For each -B21 SKU, there is a corresponding -F21 SKU which is to be used when configuring servers with integrated memory DIMMs.
– For additional information, please see the HPE DDR5 Smart Memory QuickSpecs.

Memory Protection

For details on the HPE Server Memory Options RAS feature, visit: Memory RAS technologies for HPE ProLiant Gen11

Expansion Slots

HPE ProLiant Compute DL110 Gen12 2x16 FHHL PCIe Riser Kit P86620-B21					
Slots #	**HPE Part Number**	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**
1	P86620-B21	PCIe 5.0	x16	X16	Full-height, half-length slot
2		PCIe 5.0	x16	X16	Full-height, half-length slot

Notes: If the 2x16 riser, P86620-B21, is selected then the OCP IO options are not supported

OCP options					
Slots #	**HPE Part Number**	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**
A	P86621-B21	PCIe 5.0	x16	X32	OCP NIC 3.0 Dual Small Form Factor (DSFF)
B	P86622-B21	PCIe 5.0	x16	X16	OCP NIC 3.0 Small Form Factor (SFF)

Maximum Internal Storage

Drive	Capacity	Configuration
NVMe M.2 SSD	3.84 TB	2 x 1.92 TB

Notes:

- 2x M.2 drives are supported on the Motherboard
- 2280 or 22110 form factor supported

Internal Storage Devices

- **M.2 SSDs**
  None are shipped as standard

Power Supply

HPE 1300W M-CRPS Titanium Hot Plug Reverse Air Flow AC Power Supply Kit P79068-B21

Notes: Available in 96% efficiency (Lot 9 Compliant)

HPE 1000W M-CRPS -48VDC Hot Plug Reverse Air Flow Power Supply Kit P79329-B21

Notes: All power supply kits have reverse airflow (front to rear) to support front cabled design of DL110

To review the power requirements for your selected system, please use the HPE Power Advisor Tool, and to review the power cord requirements please check the ProLiant Power Cables web page.

Software RAID Controller

- Intel® Virtual RAID on CPU (Intel® VROC)
- Intel® VROC NVMe is disabled by default. Requires licensing.
- RAID support – 0/1, depending on licensing options.
- For additional details refer to: Intel VROC for HPE ProLiant QuickSpecs

Interfaces	
HPE iLO Remote Management Network Port	1 Gb Dedicated RJ-45
Front iLO Service Port	1 standard
HPE iLO Remote Management (other)	**Available through any of the Ethernet ports via NC-SI.**

Operating Systems and Virtualization Software Support for HPE Servers

HPE servers are designed for seamless integration with partner Operating Systems and Virtualization Software. By collaborating closely with our partners, we ensure that their products are optimized, certified, and fully supported within your HPE server environment.

Access the certified and supported servers for each of the OS and Virtualization software: HPE Servers Support & Certification Matrices

HPE Server UEFI

Unified Extensible Firmware Interface (UEFI) is an industry-standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen12 servers have a UEFI Class 3 implementation to support UEFI Mode.

Notes: The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit https://www.hpe.com/support/hpeuefisystemutilities-quicklinks.

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

- Secure Boot and Secure Start enabled for enhanced security.

- Embedded UEFI Shell – Operating system-specific functionality
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- Support for > 2.2 TB (using GPT) boot drives.
- PXE boot support for IPv6 networks – USB 3.0 Stack
- Workload Profiles for simple performance optimization
- Embedded TPM Support
- UEFI Boot Mode only:
- iSCSI Software Initiator Support
- NVMe Boot Support
- HTTP/HTTPs Boot support as a PXE alternative
- Boot support for option cards that only support a UEFI option ROM

Industry Standard Compliance

- ACPI 6.3 Compliant
- Advanced Encryption Standard (AES)
- ASHRAE A3/A4

Notes: For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit https://www.hpe.com/support/ASHRAEGen11

- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Energy Star
- EU Lot9 Compliant
- IPMI 2.0
- PCIe 3.0 Compliant
- PCIe 4.0 Compliant
- PCIe 5.0 Compliant
- PXE Support
- Redfish API
- Secure Digital 4.0
- SMBIOS 3.2
- SNMP v3
- TLS 1.2
- TPM 2.0 Support
- Triple Data Encryption Standard (3DES)
- UEFI (Unified Extensible Firmware Interface Forum) 2.7
- USB 2.0 Compliant
- USB 3.0 Compliant

  Notes: For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit: Extended Ambient Temperature Guidelines for HPE Gen12 Servers

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 1 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.

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://buy.hpe.com/us/en/software/infrastructure-management-software/system-server-management-software/smart-update-manager-sum/p/5182020

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, Gen10 Plus, Gen11, and Gen12 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 is an on premises, multi-generational server monitoring and management solution. HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. Customers can upgrade their management experience with an HPE OneView Advanced license, all provided by the same tool. Learn more at: http://www.hpe.com/info/oneview.

HPE Compute Ops Management

Transform compute lifecycle management with a cloud experience that delivers greater simplicity, agility, and speed across your entire server environment, wherever it lives. This software-as-a-service tool provides a dashboard with global visibility and intuitive management of server health, security and compliance status to help you easily identify areas that need immediate attention. Users can update tens to thousands of servers faster through intelligent delta-based firmware downloads and on-demand HPE iLO firmware updates.

HPE Compute Ops Management is cloud-native software that is continually updated with new services, features, patches, and firmware packs. The management application resides in GreenLake cloud (access via https://common.cloud.hpe.com) and leverages the GreenLake architecture, security, and unified operations.
A 3-year subscription to HPE Compute Ops Management is added by default when ordering an HPE ProLiant Gen11 rack, tower, or micro server.

For more information, visit the HPE Compute Ops Management QuickSpecs:
https://www.hpe.com/psnow/doc/a50004263enw

Security

Experience unparalleled security benefits with HPE ProLiant Compute Gen12 servers, designed to enhance your infrastructure's security and performance. These servers come equipped with cutting-edge embedded security features, ensuring robust protection for your critical data and applications. Key features include:

- HPE Integrated Lights-Out (HPE iLO7): This product offers advanced embedded security features for monitoring, service alerting, reporting, and remote management.
- Enhanced Server Data Security: Encryption and key management, iLO Managed Encryption, UEFI-managed encryption, and self-encrypting drives (SED) for enhanced data-at-rest protection.
- Sanitize Data with One-Button Secure Erase: This method complies with NIST SP 800-88 guidelines for media sanitization, ensuring the secure decommissioning of servers.
- Expanded Industry Security Compliance: Adherence to standards such as FIPS 140-3, NIST SP 800-53, NIST SP 800-171, and NIST SP 800-88.
- HPE Compute Ops Management: Provides an intuitive cloud operating experience, ensuring streamlined and highly secure operations.
- Physical Security Options: System maintenance switch, USB security, Kensington lock, rack and power security, and chassis intrusion detection switch

Please refer to the HPE ProLiant Compute Gen12 Embedded Security QuickSpecs document for more detailed information at https://www.hpe.com/psnow/doc/a50009218enw

HPE Trusted Platform Module

HPE Trusted Platform Module 2.0 is embedded on the server motherboard 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.

Warranty

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

Notes: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be completed by 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 https://www.hpe.com/support/ProLiantServers-Warranties

Server Management

HPE iLO Advanced

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

HPE OneView Advanced

HPE OneView Advanced offers a sophisticated 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 multiple HPE server generations.
To learn more visit http://www.hpe.com/info/oneview.

One Config Simple (OCS/SCE)

OCS/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#

Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go - and business grow. We have reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we have 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°C, 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 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 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.

HPE Services

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

Consulting Services

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

HPE Managed Services

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

Operational services

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

HPE Complete Care Service

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

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

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

HPE Tech Care Service

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

HPE Lifecycle Services

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

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

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

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

---

Other Related Services from HPE Services

HPE Education Services

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

Defective Media Retention

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

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

Parts and Materials

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

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

How to Purchase Services

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

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

AI Powered and Digitally Enabled Support Experience

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

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

GreenLake

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

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

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

Configuration Information

Smart Templates from HPE

HPE is releasing new Smart Template technology in the One Config Advanced (OCA) configurator. These Templates represent the CTO equivalents of the top-selling BTO configurations. They are intended to provide simple starting points to assist you in easily creating and customizing your desired Server solutions. HPE Servers that have Platform Templates developed by HPE Product Managers will have a separate tab in the HPE OCA configurator.

Workload Solutions Templates from HPE

The Workload Solutions Templates are built on the Smart Templates technology to easily develop working configurations of the most compelling Workload Solutions. The templates complement the reference Builds developed by HPE. Workload Solutions templates preconfigure some of the key architecture decisions and make it easier for Sellers to get started and complete a differentiated server solution for your ' 'customer's specific workload.

Mainstream SKUs HPE launched the Mainstream SKU initiative as a market-driven approach to Demand Steering. It is a simplified portfolio of our top-selling options that meet the current and future market trends. HPE has committed to providing a more predictable and faster experience for these options. Mainstream SKUs enjoy higher safety stock levels and have higher fulfillment service levels than non-Mainstream SKUs. Mainstream orders are fulfilled +30% faster than non-Mainstream orders, have fewer shortages, and have better recovery dates. This platform has Mainstream SKUs in the options portfolio and is eligible for an improved Mainstream experience. Mainstream SKUs are designated with a Mainstream symbol in our configurators.

Mainstream Configurations

HPE is using the new Smart Templates technology to present Mainstream configurations. All the options in a Mainstream configuration are pre-selected Mainstream SKUs to optimize the performance, predictability, and fulfillment experience. Check the Template section in our configurators for eligible Mainstream configurations.

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

Notes: This document is not intended to be used as a complete configuration guide. For validated configuration an HPE configuration tool must be used to create a valid configuration.

Base Configuration	
CTO Server	HPE ProLiant Compute DL110 Gen12 Front Cabled Configure-to-order Server
SKU Number	P86628-B21
Processor	Included, 1x Intel Xeon 6 6716P-B 2.5GHz 40-core 235W Processor
Heatsink	Included
DIMM Slots	4x DIMM slots
Storage Controller	Embedded SW RAID with Intel VROC
Integrated Ethernet NIC	8x ports 25Gbps
Expansion Slots	Optional: (2x FHHL x16 PCIe Gen5) or (1x OCP DSFF + 1x OCP SFF)
Fans	8- High Performance, hot pluggable and individually serviceable
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)
USB	1x USB 3.2 Gen1, 1x iLO USB C Service Port
Mounting	2-Post and 4-Post rack

Step 2: Choose Required Options

Registered DIMMs (RDIMMs)

HPE 32GB (1x32GB) Dual Rank x8 DDR5-6400 CAS-52-52-52 EC8 Registered Smart Memory Kit	P69727-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-6400 CAS-52-52-52 EC8 Registered Smart Memory Kit	P69728-B21
HPE 96GB (1x96GB) Dual Rank x4 DDR5-6400 CAS-52-52-52 EC8 Registered Smart Memory Kit	P69729-B21
HPE 128GB (1x128GB) Dual Rank x4 DDR5-6400 CAS-52-52-52 EC8 Registered Smart Memory Kit	P69730-B21

Notes:

- Quantity of memory DIMMs selected must be 1 or 4
- Mixing Single Rank and Dual Rank DIMM is not allowed
- For more detailed information regarding memory population rules, please refer to https://www.hpe.com/docs/server-memory
- The -B21 memory SKUs shown in this document are to be used when ordering stand-alone memory only. For each -B21 SKU, there is a corresponding -F21 SKU which is to be used when configuring servers with integrated memory DIMMs.
- For additional information, please see the HPE DDR5 Smart Memory QuickSpecs

Power Supplies

Choose M-CRPS Power Supplies . Select one or two power supplies from below.

HPE 1000W M-CRPS -48VDC Hot Plug Reverse Air Flow Power Supply Kit	P79329-B21
HPE 1300W M-CRPS Titanium Hot Plug Reverse Air Flow AC Power Supply Kit	P79068-B21

Notes:

- All power supply kits have reverse airflow to support front cabled design of DL110
- Mixing power supplies is not supported. Available in 96% efficiency (EU Lot 9 compliant)

Choose DC Power Cord and Lug Kit

HPE Hardwire -48VDC 10AWG 1000W Power Cord	P89826-B21
HPE 1000W -48VDC Power Lug Kit	P89759-B21
HPE Front Cabled Telco 1000W -48VDC Power Lug Kit	P89830-B21

Storage

HPE 480GB NVMe Gen4 Mainstream Performance Read Intensive M.2 2280 PE9010 SSD	P80318-B21
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive M.2 2280 PE9010 SSD	P80321-B21
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive M.2 2280 Self-encrypting PE9010 SSD	P80327-B21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive M.2 2280 PE9010 SSD	P80324-B21

Notes:

- Max QTY = 2
- Mixing of M.2 is not allowed when VROC is selected

CPU-Based RAID Controller (Intel® VROC)

Intel Virtual RAID on CPU RAID 1 FIO Software for HPE	S3Q19A
Intel Virtual RAID on CPU Premium FIO Software for HPE	R7J57A

Notes: Maximum Quantity of one.

RAID Settings

HPE RAID 0 Drive 1 FIO Setting	339777-B21
HPE RAID 1 Drive 1 FIO Setting	339778-B21
HPE Customer Defined RAID Setting Service	389692-B21

Notes:

- RAID must be selected if both Factory Installed OS and VROC is present.
- If Customer defined Raid (389692-B21) is selected, then:
  - At least one NVMe M.2 drive must be included in the order
  - A preinstalled OS must be included in the order
  - A Customer Intent Document must be provided, detailing all aspects of the desired custom RAID configuration

HPE Networking

PCIe Adapters

1 Gigabit Ethernet Adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P51178-B21

10/25 Gigabit Ethernet Adapters

Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42044-B21
Intel E810-XXVDA4T Ethernet 10/25Gb 4-port SFP28 MCLK Adapter for HPE	P41636-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 MCLK Non-GNSS Adapter for HPE	P75068-B21

100 Gigabit Ethernet Adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21

OCP Adapters

SFF OCP 3.0 Adapter

1 Gigabit Ethernet OCP Adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P51181-B21

10/25 Gigabit Ethernet OCP Adapters

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P41614-B21
Intel E830-XXVDA4F Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P86491-B21

100 Gigabit Ethernet OCP Adapters

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

DSFF OCP 3.0 Adapter

10/25 Gigabit 8 Port Ethernet OCP Adapters

Intel E830-XXVDA8F Ethernet 10/25Gb 8-port SFP28 OCP3 Adapter for HPE	P84529-B21

HPE PCIe InfiniBand

HPE Data Processing Unit InfiniBand NDR200/Ethernet 200Gb 2-port QSFP112 FHHL B3220 Adapter	P66386-H21
HPE Data Processing Unit InfiniBand NDR/Ethernet 400Gb 1-port QSFP112 HHHL B3140H Adapter	P66387-H21
HPE ProLiant Compute DL110 Gen12 Adapter Power Cable for NVIDIA BF3	P86625-B21

Notes: If “HPE Data Processing Unit InfiniBand NDR/Ethernet 400Gb 1-port QSFP112 HHHL B3140H Adapter (P66387-H21)“ is selected, then HPE ProLiant Compute DL110 Gen12 Adapter Power Cable for NVIDIA BF3 (P86625-B21) must be selected.

Accelerator Options

NVIDIA L4 24GB PCIe Accelerator for HPE	S0K89C
Qualcomm X100 5G RAN GNSS Accelerator for HPE	S1C90C
Qualcomm X100 5G RAN Accelerator for HPE	S1C91C

Step 3: Choose Additional Options

GNSS Module and Timing Modules

HPE M.2 GNSS Module	P83776-B21
HPE M.2 4-hour DPLL Module	P83777-B21
HPE M.2 8-hour DPLL Module	P87250-B21

Rail/Ear Kits

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

HPE 1U Short Friction Rail Kit	775612-B21

Notes: Requires selection of Rail Compatible Ear Kit

HPE ProLiant Compute DL110 Gen12 Rail Compatible Ear Kit	P86627-B21

Notes: Rail kit and Ear kit must be selected when the server is selected with 2 post and 4 post Racks

Step 4: Choose additional options for Factory Integration from Core and Additional Options sections below

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.

I/O Expansion Slot

PCIe Slot

HPE ProLiant Compute DL110 Gen12 2x16 FHHL PCIe Riser Kit P86620-B21

Notes:

- Includes 2 FHHL x16 PCIe Slots
- Can support up to 2 PCIe Cards (NIC or Accelerator)

OCP Slot

HPE ProLiant Compute DL110 Gen12 DSFF OCP Kit P86621-B21

HPE ProLiant Compute DL110 Gen12 SFF OCP Cable Kit P86622-B21

Notes:

- If DSFF OCP Kit is selected, then min/max 1 of DSFF OCP Card must be selected
- If SFF OCP Kit is selected, then min/max 1 of SFF OCP Card must be selected

Factory Configuration Setting

NEBS-Compliant Setting

HPE NEBS-compliant FIO Trigger System Setting P40010-B21

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

BIOS MODE

HPE ProLiant DL300 Gen10 Plus Platform RAS OS Control FIO Setting P27078-B21

Notes:

Firmware first is ProLiant servers BIOS default selection. In this mode, monitoring functionality built into the design of the server is first on the scene of correctable problems to determine quickly and accurately what's wrong and how to fix it. Firmware first enables many platform-specific actions for errors, including predictive fault analysis. This technology functions independently of the operating system and does not depend on O/S-based tools. – This SKU instructs factories to enable O/S first mode, a BIOS switch that allows experienced customers to have the operating system handle correctable hardware errors. More errors could be observed in this mode, including soft ones that do not necessarily indicate issues with the component or cause warranty replacement.

Disabling USB Port

HPE ProLiant Compute DL110 Gen12 USB FIO Trigger System Setting P87230-B21

Notes: If customer wishes to disable USB Ports for security, then HPE DL110 G12 USB FIO Trig Set needs to be selected.

Embedded Management

HPE iLO Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
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 Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
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 Converged Infrastructure Management Software

HPE OneView Advanced (with HPE iLO Advanced)

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

HPE OneView Advanced (without HPE iLO Advanced)

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

Notes: Licenses ship without media. The HPE OneView Media Kit can be ordered separately or can be downloaded.

HPE Tech Care

HPE 3 Year Tech Care Telco 24x7 Remote Technical Support DL110 Gen11 Service	H79U8E
HPE 3 Year Tech Care Essential DL110 Gen12 HW Service	H56GJE
HPE 3 Year Tech Care Essential wDMR DL110 Gen12 HW Service	H56GKE
HPE 3 Year Tech Care Essential wCDMR DL110 Gen12 HW Service	H56GLE
HPE 5 Year Tech Care Essential DL110 Gen12 HW Service	H56HGE
HPE 5 Year Tech Care Essential wDMR DL110 Gen12 HW Service	H56HHE
HPE 5 Year Tech Care Essential wCDMR DL110 Gen12 HW Service	H56HJE

HPE Racks

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

HPE Power Distribution Units (PDUs)

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

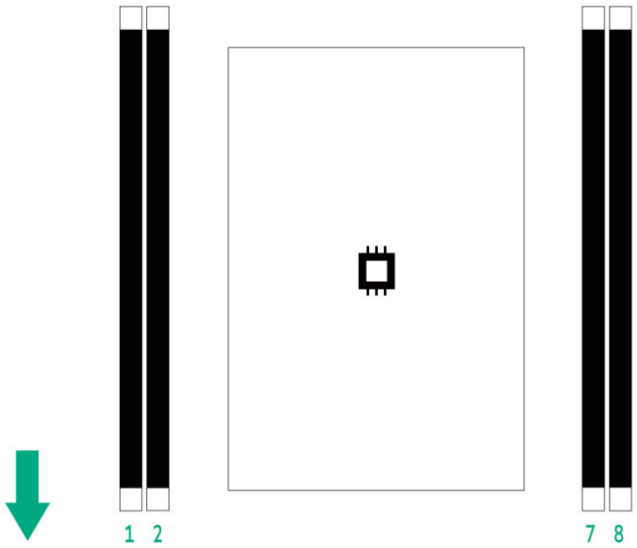
HPE Uninterruptible Power Systems (UPS)

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

HPE Rack Options

- Please see the HPE KVM Switches web page for information on these products and their specifications.

Memory Population guidelines



General Memory Population Rules and Guidelines:

- Quantity of memory DIMMs selected must be 1, 2 or 4.
- Mixing Single Rank and Dual Rank DIMM is not allowed.
- For details on the HPE Server Memory Options Population Rules, visit: https://www.hpe.com/docs/server-memory
- To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required.

For additional information, please see the HPE DDR5 Smart Memory QuickSpecs

---

Notes:

- Quantity of memory DIMMs selected must be 1, 2, or 4.
- Mixing Single Rank and Dual Rank DIMM is not allowed.
- For more detailed information regarding memory population rules, please refer to: https://www.hpe.com/docs/server-memory

---

System Unit

Dimensions (Height x Width x Depth)

- 4.29 x 43.46 x 47.28 cm
- 1.69 x 17.11 x 18.61 in

Weight (approximate)

- Minimum: CTO server with 1x processor, 1x 2-slot riser, 1x Memory DIMM, 1x M.2 SSD, and 1x Power Supply
  10.66 kg / 23.5 lbs.
- Maximum: CTO server with all components installed: 1x processor, 1x 2-slot riser, 4x Memory DIMMs, 2x M.2 SSDs, and 2x Power Supplies
  12.13 kg / 25.4 lbs.

Input Requirements (per power supply)

Rated Line Voltage

- For 1000W (-48VDC): -40 Vdc to -72 Vdc
- For 1300W (Titanium): Low-line input voltage: 100 VAC to 120 VAC, High-line input voltage: 200 VAC to 240 VAC, 240 VDC

BTU Rating

Maximum

- For 1000W (-48VDC) Power Supply: 3736 BTU/hr. at -40VDC, 3703 BTU/hr. at -48VDC , 3672 BTU/hr. at -72VDC
- For 1300W (Titanium) Power Supply: 3324 BTU/hr. at 100VAC, 3296 BTU/hr. at 115VAC, 3283 BTU/hr. at 127 VAC, 4741 BTU/hr. at 200VAC, 4736 BTU/hr. at 208VAC, 4727 BTU/hr. at 230VAC, 4725 BTU/hr. at 240VAC, 4712 BTU/hr. at 240VDC,

Power Supply Output (per power supply)

Rated Steady-State Power

- For 1000W (-48VDC) Power Supply: 1000W at -40VDC, 1000W at -72VDC
- For 1300W (Titanium) Power Supply: Low-line: 900W, High-line: 1300W

Maximum Peak Power

- For 1000W (-48VDC) Power Supply: 1000W at -40VDC, 1000W at -72VDC
- For 1300W (Titanium) Power Supply: 900 W at 100 VAC to 120 VAC, 1300 W at 200 VAC to 240 VAC

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.

System Inlet Temperature

- **Standard Operating Temperature**
  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).

- **Extended Ambient Operating Temperature**
  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

  For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft.) above 900 m (2953 ft.) to a maximum of 3050 m (10,000 ft.). The approved hardware configurations for this system are listed at the URL:
  http://www.hpe.com/servers/ashrae

  This document will be updated as we achieve certifications for NEBS Level 3 and ETSI with configuration rules for compliant systems.

  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

- **Non-operating**
  -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr. (36°F/hr.).

Altitude

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

Emissions Classification (EMC) – Regulatory Information

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center: https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=c03471072

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

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

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

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, is a quantity to be added to the declared mean A-weighted sound power
level, LWA,m when the product is operating in a 23± 2°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.

Idle	
LWA,m	4.5 B SKU1, Entry SKU-PCI 4.5 B SKU2, Performance SKU-PCI 4.5 B SKU3, Entry SKU-DSFF OCP 4.5 B SKU4, Performance SKU-DSFF OCP
LpAm	31 dBA SKU1, Entry SKU-PCI 31 dBA SKU2, Performance SKU-PCI 32 dBA SKU3, Entry SKU-DSFF OCP 31 dBA SKU4, Performance SKU-DSFF OCP
Kv	0.4 B SKU1, Entry SKU-PCI 0.4 B SKU2, Performance SKU-PCI 0.4 B SKU3, Entry SKU-DSFF OCP 0.4 B SKU4, Performance SKU-DSFF OCP
Operating	
LWA,m	4.5 B SKU1, Entry SKU-PCI 4.5 B SKU2, Performance SKU-PCI 4.5 B SKU3, Entry SKU-DSFF OCP 4.5 B SKU4, Performance SKU-DSFF OCP
LpAm	31 dBA SKU1, Entry SKU-PCI 31 dBA SKU2, Performance SKU-PCI 32 dBA SKU3, Entry SKU-DSFF OCP 31 dBA SKU4, Performance SKU-DSFF OCP
Kv	0.4 B SKU1, Entry SKU-PCI 0.4 B SKU2, Performance SKU-PCI 0.4 B SKU3, Entry SKU-DSFF OCP 0.4 B SKU4, Performance SKU-DSFF OCP

Notes:

- All measurements made to conform to ISO 7779 / ECMA-74 and declared to conform to ISO 9296 / ECMA-109. Operating mode is represented by 50% of CPU TDP.
- The results in this declaration apply only to the specific configuration listed below when operating and tested according to the indicated modes and standards. A system with additional configuration components or increased operating functionality may increase the noise emission values.

- SKU1, Entry SKU-PCI: 1x Intel 6716P-B CPU _CPU power adjust to 175W, 2x 16GB DIMM, 1x 1000W - 48VDC PSU, 8x STD Fan, 1x 10/25GbE 2p SFP28 Adptr, 1x M.2 Timing module/GNSS module, 2x 480GB M.2 SSD
- SKU2, Performance SKU-PCI: 1x Intel 6716P-B CPU, 4x 64GB DIMM, 2x 1000W -48VDC PSU, 8x STD fan, 2x 100GbE 2p QSFP28 Adptr, 1x M.2 Timing module/GNSS module, 2x 960GB M.2 SSD.
- SKU3, Entry SKU-DSFF OCP: 1x Intel 6716P-B _CPU power adjust to 175W, 2x 16GB DIMM, 1x 1000W - 48VDC PSU, 8x STD fan, 1x 10/25GbE 2p SFP28 OCP3 Adptr, 1x M.2 Timing module/GNSS module, 2x 480GB M.2 SSD.
- SKU4, Performance SKU-DSFF OCP: 1x Intel 6716P-B, 4x 64GB DIMM, 2x 1000W -48VDC PSU, 8x STD fan, 1x 10/25GbE 8p SFP28, 1x 100GbE 2p QSFP28 OCP3 Adpt, 1x M.2 Timing module/GNSS module, 2x 960GB M.2 SSD.

– The declared mean A-weighted sound power level, LWA,m, is computed as the arithmetic average of the measured.
– A-weighted sound power levels for a randomly selected sample, rounded to the nearest 0,1 B.
– The declared mean A-weighted emission sound pressure level, LpA,m, is computed as the arithmetic average of the measured A-weighted emission sound pressure levels at the bystander positions for a randomly selected sample, rounded to the nearest 1 dB.
– The statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LWA,m, such that there will be a 95% probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6,5 % of the batch of new equipment, has A-weighted sound power levels greater than (LWA,m + Kv).
– The quantity, LWA,c (formerly called LWAd), can be computed from the sum of LWA,m and Kv.
– B, dB, abbreviations for bels and decibels, respectively, where 1 B = 10 dB.
– Systems under abnormal conditions may increase the noise level, people in the vicinity of the product [cabinet] for extended periods of time should consider wearing hearing protection or using other means to reduce noise exposure.

Summary of Changes

Date	Version History	Action	Description of Change
06-Apr-2026	Version 3	Changed	Overview, Standard Features, and Additional Options sections were updated.
		Added	Interfaces specs, DC Cord and Lug Kit, GNSS Module and Timing Modules, and HPE Tech Care SKUs.
02-Mar-2026	Version 2	Changed	Service and Support, Configuration Information
		Added	Updated GreenLake statement. DSFF OCP 3.0 Adapter and 10/25 Gigabit 4 Port Ethernet OCP Adapters SKUs.
02-Feb-2026	Version 1	New	New QuickSpecs

Copyright

Shape the Future of QuickSpecs - Your Input Matters

Chat now

a50009248enw - 17280 - Worldwide - V3 - 06-April-2026
HEWLETT PACKARD ENTERPRISE
HPE.com