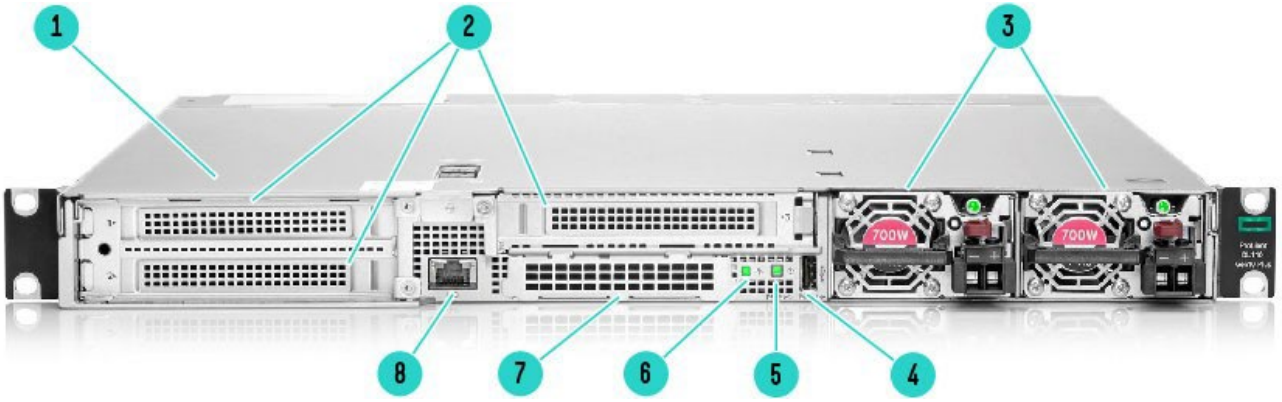
RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HPE ProLiant DL110 Gen10 Plus Telco server

Are you ready for 5G? Customized for edge applications requiring high bandwidth and low latency such as 5G cellular processing (vRAN), the HPE ProLiant DL110 Gen10 Plus Telco server is based on open, standards-compliant infrastructure and offers dense I/O capabilities with PCIe Gen4 speed, acceleration, and powerful compute driven by 3rd Generation Intel® Xeon® Scalable Processors. The HPE ProLiant DL110 Gen10 Plus provides a reduced footprint with a compact, short depth, 1U/1P front accessible chassis and ruggedized with NEBS Level 3 compliance for harsh environments. Delivering the trusted HPE ProLiant experience with embedded HPE Integrated Lights-Out (iLO) management and security via HPE Silicon Root of Trust, the HPE ProLiant DL110 Gen10 Plus is ready for Communication Service Provider's 5G deployments.



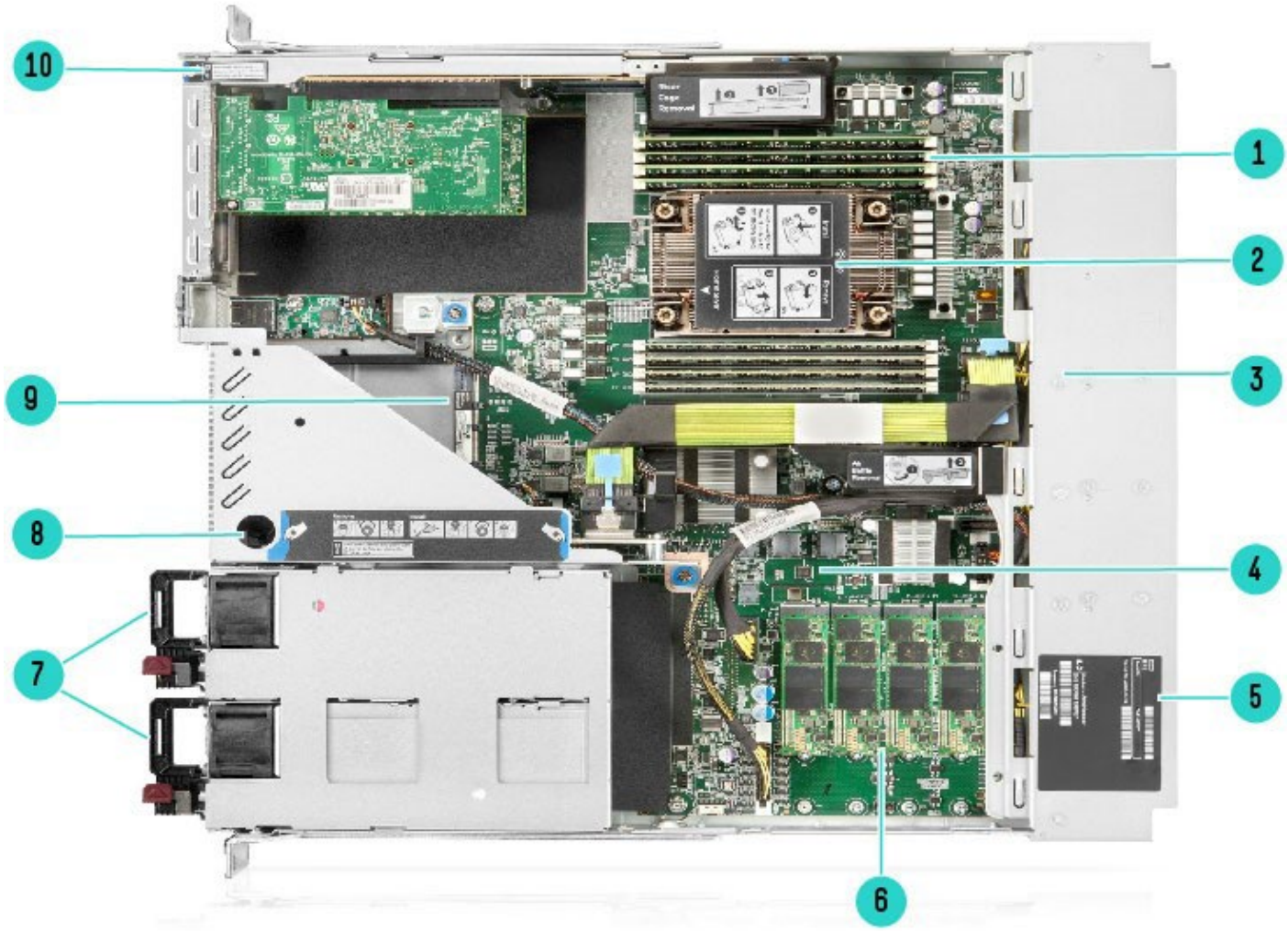
Front View

1. Quick removal access panel
2. Slot 1, 2 and 3 PCIe 4.0 x16 FHHL
3. Flex Slot Power Supply 1 and 22
4. iLO Service Port[1]
5. Power On/Standby button and system power LED
6. Health LED
7. OCP 3.0 slot
8. iLO Management Port

Notes:

- Enabled with x16 FHHL Secondary Riser (P41828-B21)
- Default “L” shaped bracket ears shown. Optional Rail Compatible FIO Ears (P50420-B21) available for use with DL110 Short Friction FIO Rail Kit (P50427-B21)
- [1] For local management, the iLO service port can be used to gain full access to the iLO integrated remote console. Hewlett Packard Enterprise recommends the HPE USB to Ethernet Adapter (part number Q7Y55A).

Overview



Internal View

1. DDR4 DIMM slots (Fully populated 8 DIMMs shown)
2. Processor (3rd Gen Intel Xeon Scalable)
3. Hot plug dual rotor fans (7)
4. Embedded TPM 2.0
5. Serial number label
6. M.2 SSD slots (4)[1]
7. Power Supplies[2]
8. Secondary x16 FHHL PCIe 4.0 riser (optional)
9. x16 OCP connector[3]
10. Primary x16/x16 FHHL PCIe 4.0 riser (standard)

Notes:

- [1]Supports 2280 and 22110 form factor
- [2]Up to 2 for redundant power
- [3]Supports various NICs up to 200GbE

Overview

Rear View
(7 fans, dual rotor hot plug)

What's New

- Intel E810 10/25Gb 4-port SFP28 MCLK Adapter support

Platform Information

Form Factor

- 1U rack

Chassis Types

- Front cabled chassis

System Fans

- 7 dual rotor, hot plug fans included

Standard Features

Processors – Up to 1 of the following
The 2nd digit of the processor model number "x3xx" is used to denote the processor generation (i.e. 3=3rd generation Intel Scalable Series Processors)

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

Intel Xeon processors		
Processor Suffix	**Description**	**Offering**
N	NFV/Networking Optimized	SKUs specifically designed for NFV and networking workloads, such as: L3 fwding, 5G UPF, OVS DPDK, VPP FIB router, VPP Ipsec, web server/NGINX, vEPC, vBNG, and vCMTS. SKUs have higher base frequency with lower TDPs to enable best performance/Watt
T	10-year use and NEBS friendly	Designed for dual thermal profile to allow the system to continue to operate beyond nominal thermal limits for short term excursion (**N**etwork **E**nvironmental-**B**uilding **S**ystem environments). Aimed at long term usage (10-years).
U	1 Socket Optimized	Optimized for single socket (1P) configurations, delivering competitive system perf/$. Does not support two socket (2P) arrangements.
Y	Speed Select	Intel® SST-PP (performance profile) provides the ability to set a guaranteed base frequency for a specific number of cores, and assign this performance profile to a specific application/workload to guarantee performance requirements. Also enables configuration of settings during runtime and provides additional frequency profile configuration opportunities.

3rd Generation Intel® Xeon® Scalable Processor Family								
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**ENERGY STAR Certified**	**UPI**	**DDR4**	**Memory per socket**
Gold 6338T Processor	2.1GHz	24	36	165W	Yes	3 @ 11.2 GT/s	3200 MT/s	6TB
Gold 6338N Processor	2.2GHz	32	48	185W	Yes	3 @ 11.2 GT/s	2667 MT/s	6TB
Gold 6330N Processor	2.2GHz	28	42	165W	Yes	3 @ 11.2 GT/s	2667 MT/s	6TB
Gold 6330 Processor	2.0GHz	28	42	205W	Yes	3 @ 11.2 GT/s	2933 MT/s	6TB
Gold 6314U Processor	2.3GHz	32	48	205W	Yes	N/A	3200 MT/s	6TB
Gold 6312U Processor	2.4GHz	24	36	185W	Yes	N/A	3200 MT/s	6TB

Notes:
- 8-Channel DDR4 @ 3200/2933 MT/s (Lower DDR4 speeds may be used in segment optimized SKUs)
- Advanced RAS
- SGX 64GB enclave size
- AVX512-2 FMA
- Intel SST-CP (Core Power)- Enables flexibility for workloads that benefit from higher base frequency on a subset of the processor's cores. While the max turbo frequency across the cores remain constant across the cores, a subset of the cores can be assigned as to run at a higher base frequency than specified, while the other cores run at lower base frequency.
- Intel SST-TF (Turbo Frequency)- Enables flexibility for workloads that benefit from higher turbo frequency on a subset of the processor's cores. While the base frequency remains constant across the cores, a subset of the cores can be assigned to run at a higher turbo frequency than specified, while the other cores run at lower turbo frequency.
- Intel SST-BF (Base Frequency)- Allows the configuration of a guaranteed higher base frequency, for a specific number of cores, to support those workloads and applications that are not optimized for turbo frequencies.
- TME-MT 64 keys

Standard Features

3rd Generation Intel® Xeon® Scalable Processor Family								
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**ENERGY STAR Certified**	**UPI**	**DDR4**	**Memory per socket**
Gold 5320T Processor	2.3GHz	20	30	150W	Yes	3 @ 11.2 GT/s	2933 MTs	6TB
Gold 5320 Processor	2.2GHz	26	39	185W	Yes	3 @ 11.2 GT/s	2933 MT/s	6TB
Gold 5318Y Processor	2.1GHz 1.9GHz 2.0GHz	24 24 22	36	165W 150W 150W	Yes	3 @ 11.2 GT/s	2933 MT/s	6TB
Gold 5318N Processor	2.1GHz	24	36	150W	Yes	3 @ 11.2 GT/s	2667 MT/s	6TB

Notes:
- 8-Channel DDR4 @ 3200/2933 MT/s (Lower DDR4 speeds may be used in segment optimized SKUs)
- Advanced RAS
- SGX 64GB enclave size
- AVX512-2 FMA
- Intel SST-CP (Core Power)- Enables flexibility for workloads that benefit from higher base frequency on a subset of the processor's cores. While the max turbo frequency across the cores remain constant across the cores, a subset of the cores can be assigned as to run at a higher base frequency than specified, while the other cores run at lower base frequency.
- Intel SST-TF (Turbo Frequency)- Enables flexibility for workloads that benefit from higher turbo frequency on a subset of the processor's cores. While the base frequency remains constant across the cores, a subset of the cores can be assigned to run at a higher turbo frequency than specified, while the other cores run at lower turbo frequency.
- Intel SST-BF (Base Frequency)- Allows the configuration of a guaranteed higher base frequency, for a specific number of cores, to support those workloads and applications that are not optimized for turbo frequencies.
- TME-MT 64 keys
- Speed Select Performance Profile processors ("Y") default to values in bold.

3rd Generation Intel® Xeon® Scalable Processor Family								
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**ENERGY STAR Certified**	**UPI**	**DDR4**	**N s**
Silver 4316 Processor	2.3GHz	20	30	150W	Yes	2 @ 10.4 GT/s	2667 MTs	6
Silver 4314 Processor	2.4GHz	16	24	135W	Yes	2 @ 10.4 GT/s	2667 MTs	6

Notes:
- 8-Channel DDR4 @ 2667 MT/s (Lower DDR4 speeds may be used in segment optimized SKUs)
- Standard RAS
- SGX 8GB enclave size
- AVX512-2 FMA
- TME-MT 64 keys

Chipset

- Intel C621A Chipset

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

Standard Features

On System Management Chipset

- HPE iLO 5 ASIC

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

Memory

One of the following depending on model.

Type	HPE DDR4 Smart Memory	HPE DDR4 Smart Memory, Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	8	8 DIMM slots, 8 channels, 1 DIMM per channel
Maximum capacity (LRDIMM)	1.0TB	8 x 128 GB LRDIMM @ 3200 MT/s
Maximum capacity (RDIMM)	512GB	8 x 64 GB RDIMM @ 3200 MT/s

Notes:

- Mixing of RDIMM and LRDIMM memory is not supported.
- For General Server Memory and HPE NVDIMM Population Rules and Guidelines for Gen10 Plus see details here: **https://psnow.ext.hpe.com/doc/a50003886enw**
- To realize the performance memory capabilities listed in this document, HPE DDR4 Smart Memory is required.
- For additional information, please see the **HPE DDR4 Smart Memory QuickSpecs**.

Memory Protection

For details on the HPE Server Memory Options RAS feature, visit: **http://www.hpe.com/docs/memory-ras-feature**

Expansion Slots

Primary Riser – Ships standard with server				
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**
1	PCIe 4.0	X16	X16	Full-height, half-length slot
2	PCIe 4.0	X16	X16	Full-height, half-length slot

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- The specifications above correspond with the default primary riser.

Secondary Riser				
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**
3	PCIe 4.0	X16	X16	Full-height, half-length slot

Notes: Bus Width Indicates the number of physical electrical lanes running to the connector.

Graphics

HPE iLO 5 on system management memory

- 32 MB Flash
- Shared 512KB NVRAM with BIOS

Maximum Internal Storage

Drive	**Capacity**	**Configuration**
SATA M.2 SSD	3.84 TB	4 x 960 GB

Standard Features

NVMe M.2 SSD	7.68 TB	4 x 1.92 TB

Notes:
- 4x M.2 drives are supported on the Motherboard
- 2280 or 22110 form factor supported

Internal Storage Devices

- **M.2 SSDs**
  None ship standard

Power Supply

- HPE ProLiant DL110 Gen10 Plus 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit
  Notes: Available in 94%efficiency.
- HPE ProLiant DL110 Gen10 Plus 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit
  Notes: Available in 94%efficiency.
- HPE ProLiant DL110 900W-1000W Titanium Hot Plug AC Power Supply Kit.
  Notes:
  - Available in 96% efficiency.
  - All power supply kits have reverse airflow to support front cabled design of DL110

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 and Gen10 Plus 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 required, a different power cord can be selected.

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

Storage Controllers

One of the following offerings

Software RAID

- **Intel VROC NVMe for HPE ProLiant Gen10 Plus**
  Notes:
  - Intel VROC for HPE ProLiant Gen10 Plus is an enterprise, hybrid Software RAID solution specifically designed for NVMe SSDs connected directly to the CPU. Intel VROC is a software-based solution utilizing Intel CPU to RAID or HBA direct connected drives and supports both Intel® SFF SSDs and HPE SFF SSDs.
  - RAID 0/1/5/10, Windows, Linux OS
  - RIAD 1, Vmware OS
  - Host Tools- Windows GUI/CLI, Linux CLI
  - UEFI Support- HII Utility, OBSE
  - Intel VROC NVMe for HPE ProLiant Gen10 Plus will operate in UEFI mode only
  - Intel VROC NVMe is off by default and requires licensing, see options for details

- **Intel VROC SATA for HPE ProLiant Gen10 Plus**
  Notes:
  - Requires AMS & iLO 2.42 (minimum)
  - RAID Support- 0/1/5/10
  - Windows and Linux OS support
  - Host Tools- Windows GUI/CLI, Linux CLI
  - UEFI Support- HII Utility, OBSE

Standard Features

- iLO Support- IML, Alert, SNMP, AHS
- iLO Redfish- Redfish Read
- Intel VROC SATA for HPE ProLiant Gen10 Plus will operate in UEFI mode only.
- Intel VROC SATA is off by default and must be enabled

- **Linux in-distro open-source software RAID**
  Notes: For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit: **https://downloads.linux.hpe.com/SDR/project/lsrrb/**

Interfaces

HPE iLO Remote Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard (Hewlett Packard Enterprise recommends the HPE USB to Ethernet Adapter part number Q7Y55A when using the iLO service port).

Notes: There is no VGA port on DL110 Gen10 Plus. For local management of the server, users should connect to DL110 via the iLO service port with a USB-Ethernet adapater (HPE recommends Q7Y55A).

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/Legacy ROM

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

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

- Secure Boot and Secure Start enable for enhanced security
- 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

UEFI Boot Mode only:

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

Notes:
- For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

Standard Features

– UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 Plus Server.

Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 4.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant (external iLO service port)
- SMBIOS 3.1
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 2.0 Support
- Advanced Encryption Standard (AES)
- Triple Data Encrytion Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
  Notes: For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit **https://support.hpe.com/hpesc/public/docDisplay?docId=a00026969en_us&page=index.html**
- EU Lot9
  Notes: European Union (EU) eco-design regulations for server and storage products, known as Lot 9, went into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 Plus servers are compliant with Lot9 requirements.
  Please visit: **https://www.hpe.com/us/en/about/environment/msds-specs-more.html** for more information regarding HPE Lot 9 conformance.
- UEFI (Unified Extensible Firmware Interface Forum) 2.6
  Notes: UEFI is the default for the DL110 Gen10 Plus. Legacy mode can be selected in the field or as a CTO option (758959-B22); some configuration restrictions apply.

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**

Standard Features

Server Utilities

Active Health System

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

Active Health System Viewer

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

Smart Update

Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP).

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 Gen10 Plus HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.

Learn more at **http://www.hpe.com/servers/iLOamplifierpack**.

HPE iLO Mobile Application

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

RESTful Interface Tool

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

Scripting Tools

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

HPE OneView Standard

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

HPE Systems Insight Manager (HPE SIM)

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

Security

- UEFI Secure Boot and Secure Start support
- Tamper-free updates – components digitally signed and verified
- Immutable Silicon Root of Trust
- Ability to rollback firmware
- Secure erase of NAND/User data
- Common Criteria certification
- Configurable for PCI DSS compliance
- Embedded TPM (Trusted Platform Module) 2.0
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware

Standard Features

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

Optional Features

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 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 Gen10 Plus servers.
To learn more visit **http://www.hpe.com/info/oneview**.

HPE InfoSight for Servers

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

Accelerator and GPGPU Information

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

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#

Rack and Power Infrastructure

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

Service and Support

HPE Services

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

https://www.hpe.com/services

Consulting Services

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

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

HPE Managed Services

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

HPE Managed Services | HPE

Operational services

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

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

HPE Complete Care Service

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

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

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

HPE Tech Care Service

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

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

Service and Support

HPE Lifecycle Services

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

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

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

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

Other Related Services from HPE Services:

HPE Education Services

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

Defective Media Retention

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

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

Parts and Materials

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

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

How to Purchase Services

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

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

Service and Support

AI Powered and Digitally Enabled Support Experience

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

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

Consume IT On Your Terms

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

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

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

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

Configuration Information

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

Step 1: Base Configuration

CTO Server	HPE ProLiant DL110 Gen10 Plus Front Cabled Telco Configure-to-order Server
SKU Number	P39478-B21
Processor	Not included as standard; 1 supported
Heatsink	Included
DIMM Slots	8-DIMM slots
Storage Controller	Embedded SW RAID with Intel VROC SATA for HPE, choice of Intel VROC NVMe for HPE
PCIe	X16/x16 FHHL riser included
Fans	7- dual rotor hot plug
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)
USB	iLO Front Service Port
Mounting	Default: "L" shaped bracket ears- recommended for 2-post rack mounting (includes cage nuts for moutning in square-hole rack Optional: FIO Short Friction Rail Kit- recommended for 4-post rack mounting **Notes:** DL110 Rail Compatible FIO Ear Kit (P50420-B21) required when using Rail Kit

Step 2: Choose Required Options

Please select one processor required below.

Notes: Processors with 185W TDP or higher will require the DIMM Blank kit (P43725-B21) to be selected when all DIMM slots are not fully populated

Step 2a: Choose Processors

Processor Option Kits

3rd Generation Intel Xeon-Gold

Notes: All SKUs below ship with processor only. Fans and heatsink are included in the CTO server.

Intel Xeon-Gold 6338N 2.2GHz 32-core 185W Processor for HPE	P37603-B21
Intel Xeon-Gold 6338T 2.1GHz 24-core 165W Processor for HPE	P37607-B21
Intel Xeon-Gold 6330N 2.2GHz 28-core 165W Processor for HPE	P37604-B21
Intel Xeon-Gold 6330 2.0GHz 28-core 205W Processor for HPE	P36927-B21
Intel Xeon-Gold 6314U 2.3GHz 32-core 205W Processor for HPE	P37610-B21
Intel Xeon-Gold 6312U 2.4GHz 24-core 185W Processor for HPE	P37611-B21
Intel Xeon-Gold 5320T 2.3GHz 20-core 150W Processor for HPE	P37608-B21
Intel Xeon-Gold 5320 2.2GHz 26-core 185W Processor for HPE	P36925-B21
Intel Xeon-Gold 5318Y 2.1GHz 24-core 165W Processor for HPE	P36924-B21
Intel Xeon-Gold 5318N 2.1GHz 24-core 150W Processor for HPE	P37605-B21

3rd Generation Intel Xeon-Silver

Notes: All SKUs below ship with processor only. Fans and heatsink are included in the CTO server.

Intel Xeon-Silver 4316 2.3GHz 20-core 150W Processor for HPE	P36923-B21
Intel Xeon-Silver 4314 2.4GHz 16-core 135W Processor for HPE	P36922-B21

Configuration Information

Step 2b: Choose Memory Options

Please select one or more memory from below.
For new Gen10 Plus memory population rule whitepaper and optimal memory performance guidelines, please go to:
https://psnow.ext.hpe.com/doc/a50003886enw

Notes:
- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- Quantity of memory DIMMs selected must be 1, 2, 4, 6, or 8
- For additional information, please see the **HPE DDR4 Smart Memory QuickSpecs**

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07525-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06031-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06029-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06033-B21
HPE 32GB (1x32GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P40007-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06035-B21

Load Reduced DIMMs (LRDIMMs)

HPE 128GB (1x128GB) Quad Rank x4 DDR4-3200 CAS-22-22-22 Load Reduced Smart Memory Kit	P06037-B21

Step 2c: Choose Power Supplies

Select one or two power supplies from below.

HPE Flex Slot Power Supplies

HPE ProLiant DL110 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	P43150-B21

Notes: Available in 94% efficiency.

HPE ProLiant DL110 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit	P44975-B21

Notes: Available in 94% efficiency.

HPE ProLiant DL110 900W-1000W Titanium Hot Plug Low Halogen AC Power Supply Kit	P54290-B21

Notes:
- Available in 96% efficiency.
- All power supply kits have reverse airflow to support front cabled design of DL110

Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE power supply P54290-B21 is single-output & 96% efficient thus meeting requirements.

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

Configuration Information

Step 3: Choose Additional Factory Integratable Options

One of the following from each list may be selected if desired at time of factory integration

Rail/Ear Kits

HPE ProLiant DL110 Gen10 Plus Short Friction FIO Rail Kit P50427-B21

Notes:
- Requires selection of Rail Compatible FIO Ear Kit
- Not available as a field upgradeable option
- Not NEBS compliant
- 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 ProLiant DL110 Gen10 Plus Rail Compatible FIO Ear Kit P50420-B21

Notes:
- Not available as a field upgradeable option
- Not NEBS compliant

Factory Instructions and Server Settings

HPE Server Identity FIO Setting P41905-B21

Notes: Initial Device Identity (IDevID) certificates are part of a Zero Trust Architecture. This SKU intructs the factory to provision IdevID on HPE iLO.

HPE ProLiant Platform Certificate and IDevID iLO FIO Setting P42104-B21

Notes: Directs HPE manufacturing site to create, digitally sign and store a platform certificate on the server

HPE NEBS-compliant FIO Trigger System Setting P40010-B21

HPE Legacy FIO Mode Setting 758959-B22

Notes: Selecting this option will change the default UEFI BIOS setting into Legacy BIOS setting

HPE iLO Common Password FIO Setting P08040-B21

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

Software RAID- Intel VROC License

Intel Virtual RAID on CPU Premium FIO Software for HPE R7J57A

Notes: Requires UEFI, not supported on Legacy Mode

HPE Converged Infrastructure Management Software

HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU E5Y43A

HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU P8B31A

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

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 an HPE approved configurator. Contact your local sales representative for additional information.

HPE Unique Options

Risers

HPE ProLiant DL110 Gen10 Plus x16 FHHL PCIe Secondary FIO Riser Kit P41828-B21

Notes: Factory integrated only. Enables slot 3.

HPE ProLiant DL110 Gen10 Plus x16 FHHL PCIe Secondary Riser Kit P41827-B21

Notes: For field upgrade only

DDR4 DIMM Blank

HPE ProLiant DL110 Gen10 Plus DDR4 DIMM FIO Blank Kit P43725-B21

Notes: Required when processor with 185W or greater TDP is selected and all DIMM slots are not fully populated

Rail/Ear Kits

HPE ProLiant DL110 Gen10 Plus Short Friction FIO Rail Kit P50427-B21

Notes:

- Requires selection of Rail Compatible FIO Ear Kit
- Not available as a field upgradeable option

HPE ProLiant DL110 Gen10 Plus Rail Compatible FIO Ear Kit P50420-B21

Notes: Not available as a field upgradeable option

Memory Selection

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to:
https://psnow.ext.hpe.com/doc/a50003886enw

Notes:

- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- Quantity of memory DIMMs selected must be 1, 2, 4, 6, or 8
- For additional information, please see the **HPE DDR4 Smart Memory QuickSpecs**

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07525-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06031-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06029-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06033-B21
HPE 32GB (1x32GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P40007-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06035-B21

Load Reduced DIMMs (LRDIMMs)

HPE 128GB (1x128GB) Quad Rank x4 DDR4-3200 CAS-22-22-22 Load Reduced Smart Memory Kit P06037-B21

HPE Boot Controllers

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

Intel VROC NVMe for HPE

Intel Virtual RAID on CPU Premium E-RTU for HPE R7J59AAE

Notes:

- Requires UEFI, not supported on Legacy Mode
- Similar to Intel VROC NVMe FIO SW for HPE (R7J57A), but intended for field deployments

Core Options

HPE Solid State Drives

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

Read Intensive - 6G SATA - M.2 - Solid State Media (2280 type)

HPE 480GB SATA 6G Read Intensive M.2 Multi Vendor SSD	P47818-B21

Read Intesive-PCIe/NVMe-M.2- Solid State Media (22110 type)

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

Notes: Not NEBS Compliant

HPE Networking

Notes: The DL110 Gen10 Plus CTO chassis does not come with embedded networking. A PCIe or OCP networking adapter must be selected.

1 Gigabit Ethernet Adapters

Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P21106-B21

25 Gigabit Ethernet Adapters

Intel E810-XXVDA4T Ethernet 10/25Gb 4-port SFP28 MCLK Adapter for HPE	P41636-B21

Notes:

- Includes GNSS module which provides 1pps signal without the need for an external GNSS appliance. Integrated support for frequency, phase, and time-of-day synchronization with Global Navigation Satellite Systems, including GPS, Galileo, GLONASS, BeiDou, and QZSS.
- Linux support only, VMware ESXi not supported

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
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21

Notes: Not NEBS Compliant

Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P13188-B21

100 Gigabit Ethernet Adapters

Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P41611-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P21112-B21
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21

200 Gigabit Ethernet Adapters

Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	P10180-B21

OCP Adapters

Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P08449-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21

Notes: Not NEBS Compliant

Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10112-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21

Notes: Not NEBS Compliant

Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P41614-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE	P22767-B21

Notes: Not NEBS Compliant

Core Options

HPE Power Supplies

HPE ProLiant DL110 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit P43150-B21

Notes: Available in 94% efficiency.

HPE ProLiant DL110 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit P44975-B21

Notes: Available in 94% efficiency.

HPE ProLiant DL110 900W-1000W Titanium Hot Plug Low Halogen AC Power Supply Kit P54290-B21

Notes:

- Available in 96% efficiency.
- All power supply kits have reverse airflow to support front cabled design of DL110

HPE Computation and Graphics Accelerators

Intel ACC100 vRAN Dedicated Accelerator for HPE R8G90C

NVIDIA T4 16GB Computational Accelerator for HPE R0W29C

GPGPU Information

DL110 Gen10 Plus					
Part Number	**Card**	**Quantity Supported**	**Processor supported**	**PCIe**	**Inlet Temp**
R8G90C	Intel ACC100 vRAN Accelerator	1	3rd Gen	Gen3	40C
R0W29C	HPE NVIDIA Tesla T4 16GB Module	2[1]	3rd Gen	Gen3	40C

Notes:

- The 2nd digit of the processor model number “x3xx” is used to denote the processor generation (i.e. 3=3rd generation)
- When 2x NVIDIA T4 GPUs are selected with a processor TDP equal to or between 136W and 165W, the Enhanced Processor Performance Profile should remain disabled. If it is enabled, processor throttling will occur.
- [1]2x NVIDIA T4 GPUs supported only when processor TDP is equal to or less than 165W

Intel ACC100 vRAN Accelerator for HPE	
Intel ACC100 vRAN Dedicated Accelerator for HPE	R8G90C
System Interface	PCIe 3.0 x16
Power	53W
Form Factor	2.70” H X 6.67” L, Single Slot
OS Support	Linux, Wind River Studio Cloud Platform

Additional Options

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

Embedded Management

HPE iLO Advanced

HPE iLO Advanced 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 Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced 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 Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

HPE Converged Infrastructure Management Software

HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE

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

HPE Tech Care.

HPE 3 Year Tech Care Essential Proliant DL110 Gen10 Plus HW Service	H28RLE
HPE 3 Year Tech Care Essential wDMR Proliant DL110 Gen10 Plus HW Service	H28RME
HPE 5 Year Tech Care Essential Proliant DL110 Gen10 Plus HW Service	H28TME
HPE 5 Year Tech Care Essential wDMR Proliant DL110 Gen10 Plus HW Service	H28SQE

HPE Racks

Notes: DL110 only supports factory integration into racks for shipment with selection of the DL110 Short Friction FIO Rail Kit (P50427-B21) and Rail Compatible FIO Ear Kit (P50420-B21)

- 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.

Additional Options

HPE Uninterruptible Power Systems (UPS)

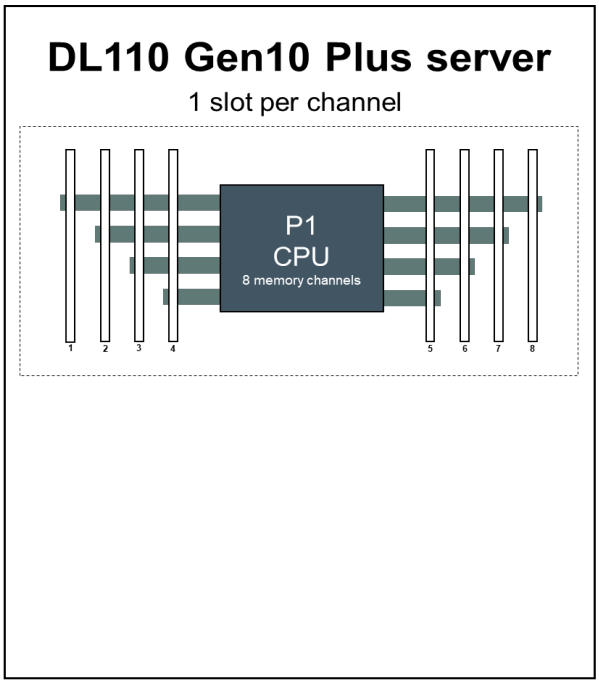
- To learn more, please visit the **HPE Uninterruptible Power Systems (UPS)** web page.
- Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Line Interactive Single Phase UPS QuickSpecs**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

Memory Population guidelines



Front of server

DL110 Gen10 Plus CPU
DIMM population order

1 DIMM		2						
2 DIMMs		2					7	
4 DIMMs		2		4	5		7	
6 DIMMs	1	2		4	5		7	8
8 DIMMs	1	2	3	4	5	6	7	8

Notes: Configurations not listed are not supported and if populated, the server may result in non-optimal memory performance or other unexpected behavior

General Memory Population Rules and Guidelines:

- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, and the number and model of installed processors qualified on the platform.
- For details on the HPE Server Memory Options Population Rules, visit:
  https://psnow.ext.hpe.com/doc/a50003886enw
- To realize the performance memory capabilities listed in this document, HPE DDR4 Smart Memory is required.
  For additional information, please see the **HPE DDR4 Smart Memory QuickSpecs**

Technical Specifications

System Unit

- **Dimensions (Height x Width x Depth)**
  - 4.29 x 44.16 x 43.18 cm
  - 1.69 x 17.39 x 17 in

Weight (approximate)

- **Minimum:** CTO server with 1x processor, 1x primary riser, 1x Memory DIMM, 1x M.2 SSD, and 1x Power Supply
  - 9.62 kg / 21.21 lbs
- **Maximum:** CTO server with all components installed: 1x processor, 2x risers, 8x Memory DIMMs, 4x M.2 SSDs, and 2x Power Supplies
  - 11.4 kg / 25.4 lbs

Input Requirements (per power supply)

Rated Line Voltage

- For 700W (-48VDC): -40 Vdc to -72 Vdc
- For 700W (Platinum): 100-240 VAC
- For 900W-1000W (Titanium): 100-240 VAC

BTU Rating

Maximum

- For 700W (-48VDC) Power Supply: 2593 BTU/hr at -40VDC, 2537 BTU/hr at -72VDC
- For 700W (Platinum) Power Supply: 2660 BTU/hr at 100VAC, 2570 BTU/hr at 200VAC, 2570 BTU/hr at 240VAC
- For 900W-1000W (Titanium) Power Supply: 3368 BTU/hr at 100VAC, 3640 BTU/hr at 200VAC, 3625 BTU/hr at 240 VAC

Power Supply Output (per power supply)

Rated Steady-State Power

- For 700W (-48VDC) Power Supply: 700W at -40VDC, 700W at -72VDC
- For 700W (Platinum) Power Supply: 700W at 100VAC, 700W at 200VAC, 700W at 240VAC
- For 900W-1000W (Titanium) Power Supply: 900W at 100VAC, 1000W at 200VAC, 1000W at 240 VAC

Maximum Peak Power

- For 700W (-48VDC) Power Supply: 700W at -40VDC, 700W at -72VDC
- For 700W (Platinum) Power Supply: 700W at 100VAC, 700W at 200VAC, 700W at 240VAC
- For 900W-1000W (Titanium) Power Supply: 900W at 100VAC, 1000W at 200VAC, 1000W at 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..

Technical Specifications

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: **https://support.hpe.com/hpesc/public/docDisplay?docId=a00026969en_us&page=index.html**
  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: **https://support.hpe.com/hpesc/public/docDisplay?docId=a00026969en_us&page=index.html**
  For NEBS Level 3 and ETSI Certified DL110 configurations please see the **Carrier Grade Supplement**

  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:
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.

Summary of Changes

Date	Version History	Action	Description of Change
16-Sep-2024	Version 18	Changed	Standard Features (Operating Systems and Virtualization Software Support for HPE Servers) section was updated.
04-Mar-2024	Version 17	Changed	Core Options section was updated.
04-Dec-2023	Version 16	Changed	Service and Support and Standard Features sections were updated.
05-Sep-2023	Version 15	Changed	Overview and Configuration options sections were updated.
17-Apr-2023	Version 14	Changed	Overview and Configuration options sections were updated.
24-Oct-2022	Version 13	Changed	Overview and Core Options sections were updated.
01-Aug-2022	Version 12	Changed	Overview and Core Options sections were updated.
25-Apr-2022	Version 11	Changed	Core Options section was updated.
18-Apr-2022	Version 10	Changed	Core Options section was updated.
07-Mar-2022	Version 9	Changed	Core Options section was updated.
22-Feb-2022	Version 8	Changed	Overview, Configuration Information, Core Options and Additional Options sections were updated.
10-Jan-2022	Version 7	Changed	Overview, Service and Support, Standard Features and Core Options sections were updated.
06-Dec-2021	Version 6	Changed	Overview, Standard Features and Core Options sections were updated.
11-Oct-2021	Version 5	Changed	Overview, Standard Features, Core Options and Technical Specifications sections were updated.
17-Aug-2021	Version 4	Changed	Overview, Standard Features, Core Options, Additional Options and Technical Specifications sections were updated.
06-Jul-2021	Version 3	Changed	Overview and Core Options sections were updated.
07-Jun-2021	Version 2	Changed	Overview, Standard Features, Core Options and Technical Specifications sections were updated.
26-Apr-2021	Version 1	New	New Quick Specs

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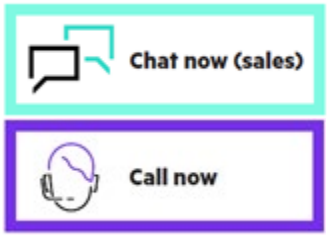

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