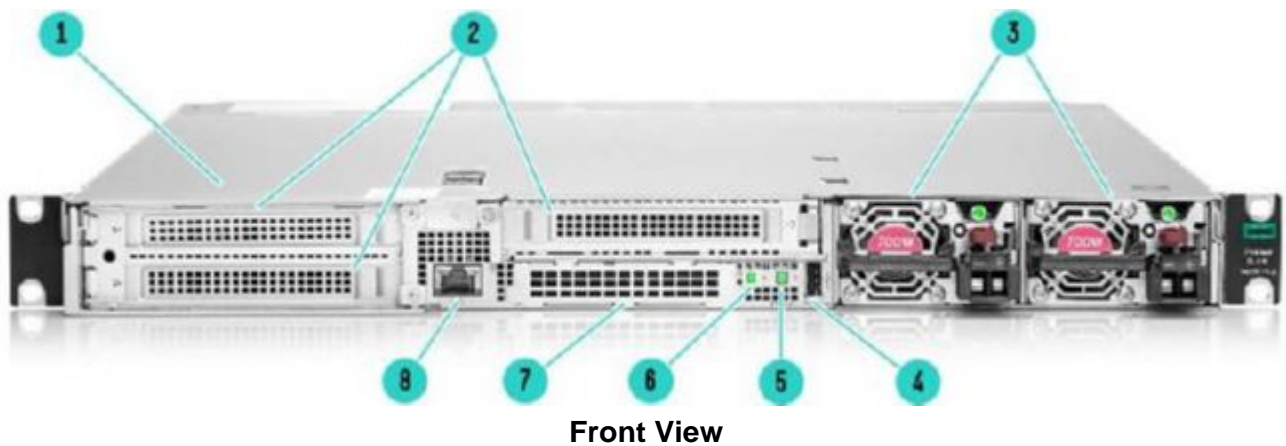


Overview

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.



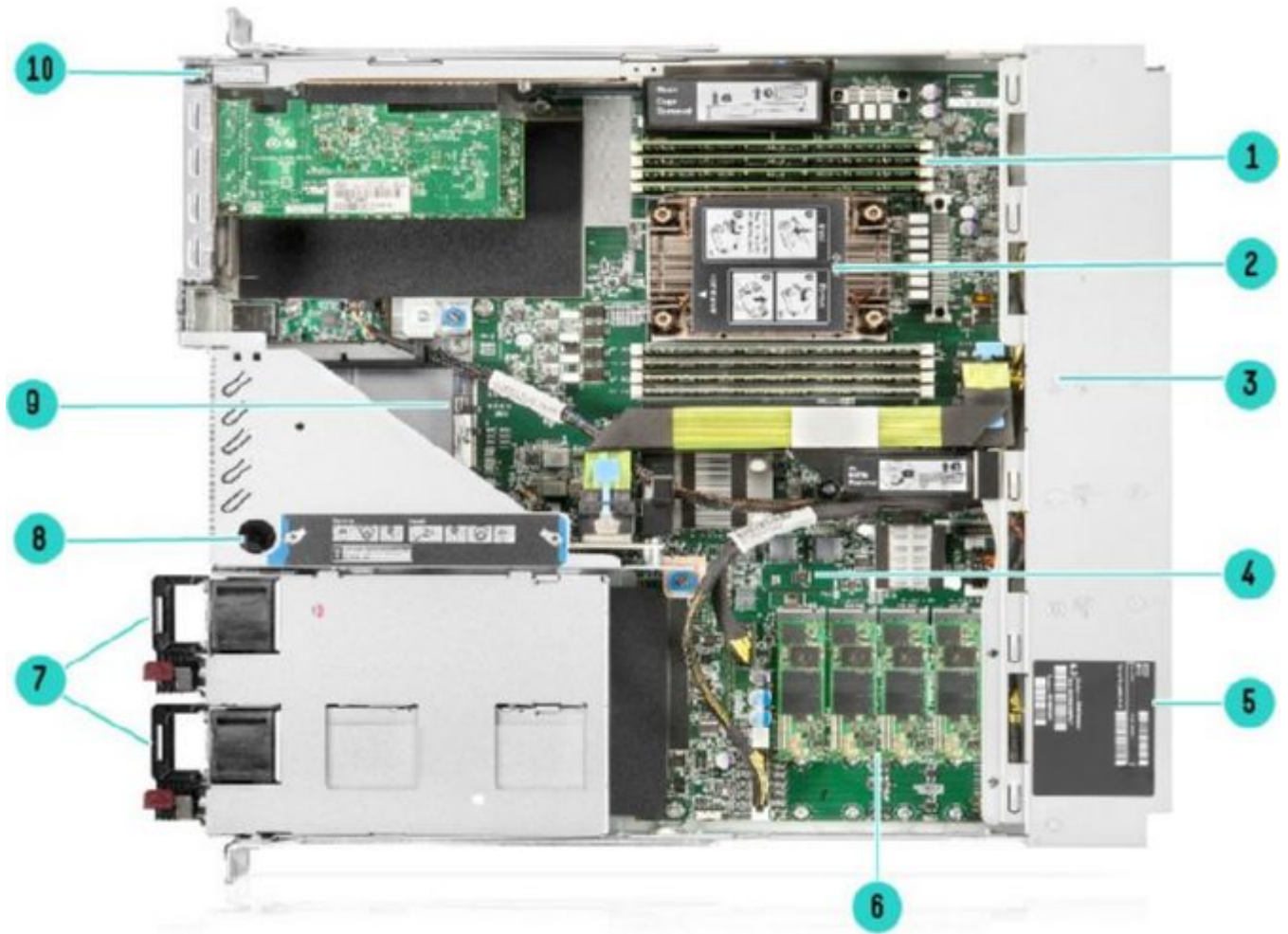
Front View

- | | | | |
|----|-----------------------------------|----|--|
| 1. | Quick removal access panel | 5. | Power On/Standby button and system power LED |
| 2. | Slot 1, 2 and 3 PCIe 4.0 x16 FHHL | 6. | Health LED |
| 3. | Flex Slot Power Supply 1 and 22 | 7. | OCP 3.0 slot |
| 4. | iLO Service Port ¹ | 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) | 6. M.2 SSD slots (4) ¹ |
| 2. Processor (3 rd Gen Intel Xeon Scalable) | 7. Power Supplies ² |
| 3. Hot plug dual rotor fans (7) | 8. Secondary x16 FHHL PCIe 4.0 riser (optional) |
| 4. Embedded TPM 2.0 | 9. x16 OCP connector ³ |
| 5. Serial number label | 10. Primary x16/x16 FHHL PCIe 4.0 riser (standard) |

Notes:

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

Overview



Rear View

(7 fans, dual rotor hot plug)

What's New

- DL110 Short Friction Rail Kit (FIO) and Rail Compatible Ear Kit (FIO)- recommended for 4-post rack mounting
- New certified operating system- VMware vSphere
- 240GB & 480GB SATA RI Multi Vendor M.2 SSDs

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.

Standard Features

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

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

Standard Features

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.

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

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/>

On System Management Chipset

- HPE iLO 5 ASIC

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

Standard Features

Memory

One of the following depending on model.

Type	HPE DDR4 SmartMemory	HPE DDR4 SmartMemory, 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 SmartMemory is required.

For additional information, please see the [HPE DDR4 SmartMemory 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.

Standard Features

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
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: Reverse airflow to support front cabled design of DL110

HPE ProLiant DL110 Gen10 Plus 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit

Notes: 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

Standard Features

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 Support- 0/1/5/10

Windows, Linux, Vmware OS support

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

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

Standard Features

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 adapter (HPE recommends Q7Y55A).

Operating Systems and Virtualization Software Support for HPE ProLiant DL110 Gen10 Plus Telco Server

3rd Generation Intel® Xeon® Scalable Processor Family

- **Red Hat Enterprise Linux (RHEL)** 7.9¹, 8.2, 8.3 (64 bit, includes KVM)
- VMware vSphere: 6.7 U3¹, 7.0 U3
- Wind River Studio Cloud Platform 20.06, 21.05

Notes:

– ¹Minimum required OS

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

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

Standard Features

Notes:

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

UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 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 Encryption 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 <http://www.hpe.com/servers/ashrae>
 - 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>.

Standard Features

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>.

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

Standard Features

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

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

<http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/>.

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#>

Optional Features

Rack and Power Infrastructure

Learn more about HPE Racks, KVM, PDUs and UPSs at [HPE Rack and Power Infrastructure](#).

Service and Support

HPE Pointnext - Service and Support

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

Consume IT on your terms

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

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

Managed services to run your IT operations

HPE GreenLake Management Services provides services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

Recommended Services

HPE Pointnext Tech Care.

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

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

HPE Pointnext Complete Care

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

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

Service and Support

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

Other related Services

HPE Server Hardware Installation

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

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

HPE Installation and Startup Service

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

DC for Hyperscale

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

HPE Factory Express for Servers and storage

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

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAXXX3PAR suite, XP, rackable tape libraries and configurable network switches.

HPE Service Credits

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

HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment.

<http://www.hpe.com/ww/learn>

Service and Support

HPE Support Center

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

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

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

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

Notes: *HPE Support Center Mobile App is subject to local availability.

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

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support [here](#).

Parts and Materials

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

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

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

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	<p>Default: "L" shaped bracket ears- recommended for 2-post rack mounting (includes cage nuts for mounting in square-hole rack)</p> <p>Optional: FIO Short Friction Rail Kit- recommended for 4-post rack mounting</p> <p>Notes: DL110 Rail Compatible FIO Ear Kit (P50420-B21) required when using Rail Kit</p>

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

Configuration Information

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

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 SmartMemory 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
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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
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Notes: Reverse airflow to support front cabled design of DL110

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

Notes: Reverse airflow to support front cabled design of DL110

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 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 Rail Compatible FIO Ear Kit P50420-B21

Notes: Not available as a field upgradeable option

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 instructs 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 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 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 SmartMemory 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

Core Options

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

Intel VROC NVMe for HPE

Intel Virtual RAID on CPU Premium Software E-RTU for HPE ProLiant DL360/380 Gen10 Plus R7J59AAE

Notes:

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

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 240GB SATA 6G Read Intensive M.2 Multi Vendor SSD P47817-B21

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

HPE 960GB SATA 6G Read Intensive M.2 2280 5300P SSD P19892-B21

Read Intensive-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

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-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

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

Core Options

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
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
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

HPE Power Supplies

HPE ProLiant DL110 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	P43150-B21
Notes: Reverse airflow to support front cabled design of DL110	
HPE ProLiant DL110 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit	P44975-B21
Notes: 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	3 rd Gen	Gen3	40C
R0W29C	HPE NVIDIA Tesla T4 16GB Module	2 ¹	3 rd 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.

¹2x 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

Core Options

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

Additional Options

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.
 - Please see the [HPE Enterprise Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.
 - Please see the [HPE Standard Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.
-

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)

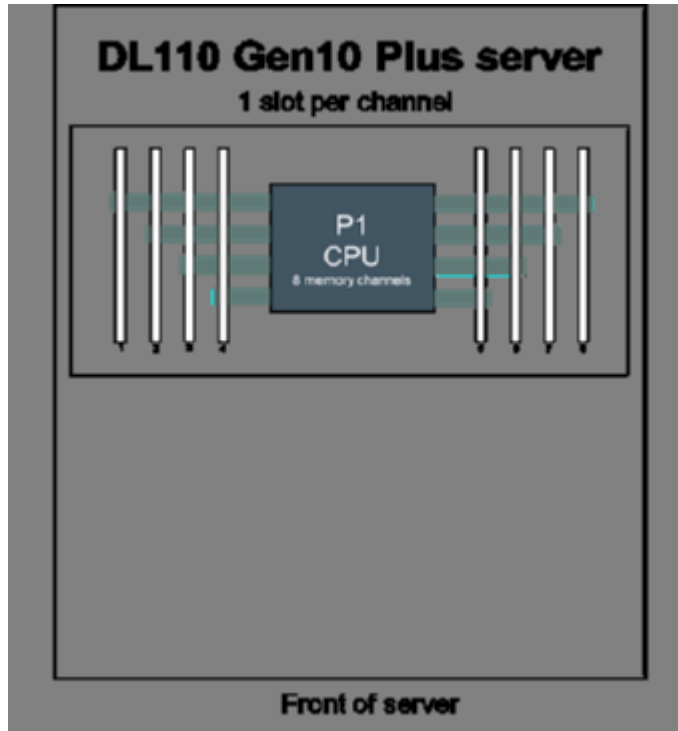
- To learn more, please visit the [HPE Uninterruptible Power Systems \(UPS\) web page](#).
 - Please see the [HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs](#) for information on these products and their specifications.
 - Please see the [HPE Line Interactive Single Phase UPS QuickSpecs](#)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

Memory Population guidelines



**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 SmartMemory

Memory

is required.

For additional information, please see the [HPE DDR4 SmartMemory 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

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

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

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

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: <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>

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

Technical Specifications

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.

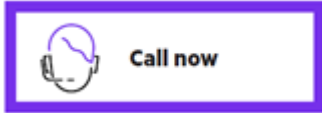
The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other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