## Overview

HPE Cloudline CL2600 Gen10 Server

Need an open system known for its design, reliability, and global support? The HPE Cloudline CL2600 Gen10 Server is the standard of open systems in a 1U Hewlett Packard Enterprise flagship design. From quality controls and rigor in the manufacturing and design, to security controls in the supply chain, this server represents peace of mind. It is ideal for service providers, hyperscalers, and a segment of traditional enterprise customers seeking commonality in the server options and management across vendors. Deploy globally and confidently with HPE's global service and support.
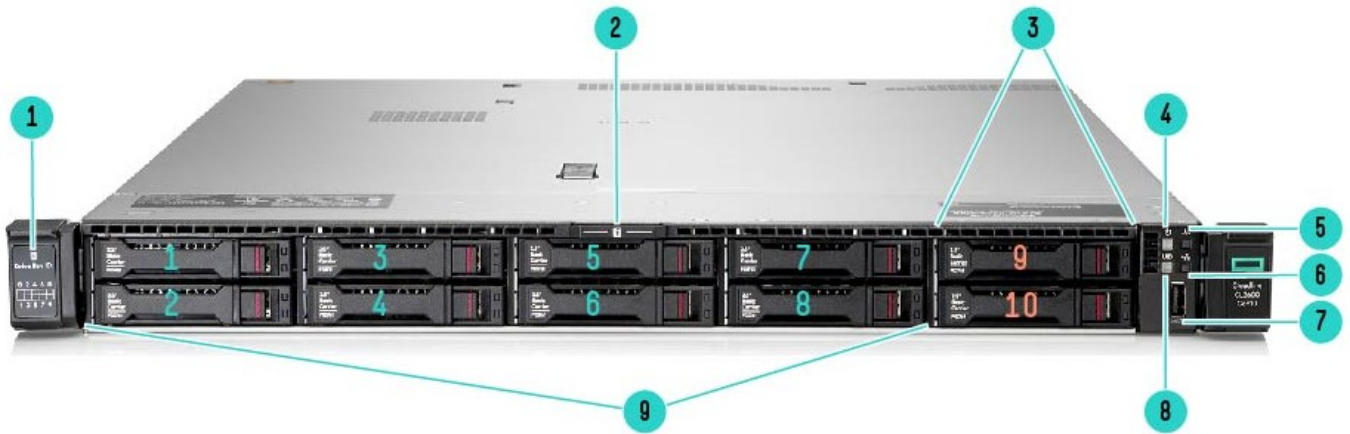
The HPE Cloudline CL2600 Gen10 Server supports Intel® Xeon® Scalable processors, six memory channels per CPU, an AMI BIOS for open systems management, and industry standard options, all in a 1U standard-depth chassis with options for power supplies to support AC and DC power. In addition, the server supports up to 8 SFF SAS/SATA HDD/SSD, making it an excellent choice for standardizing a broad set of workloads.
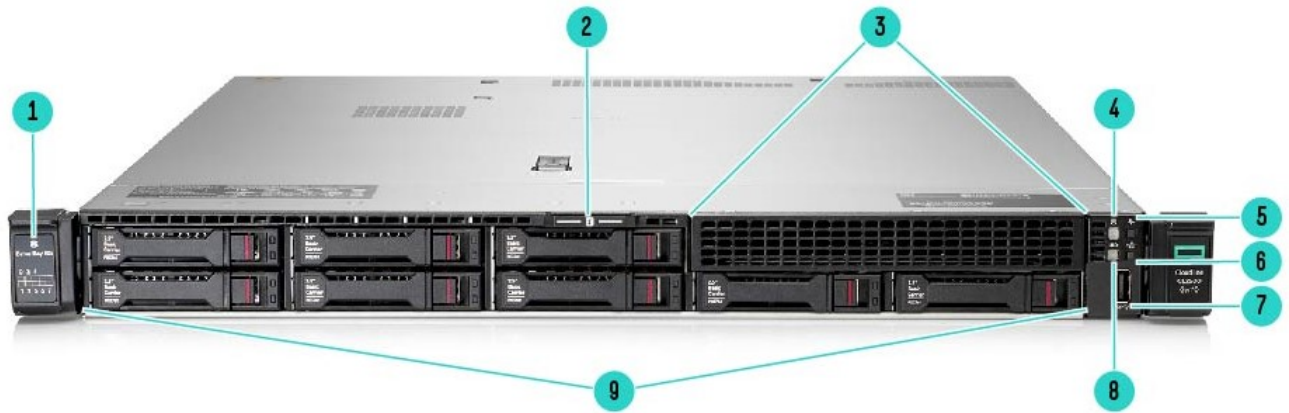
8 SFF– 8SFF Server shown with Optional 2SFF NVMe drives - Front View

| Item	Description	Item	Description
1.	Drive Support Label	6.	NIC Status LED
2.	Serial number label pull tab	7.	USB 3.0 port
3.	Optional: +2 SFF NVMe Option	8.	UID LED
4.	Power On/Standby and system power LED	9.	Up to 8 SFF SAS/SATA HDD/SSD drive bays
5.	Health LED		

Hewlett Packard Enterprise

Overview

Premium 10SFF NVMe Front View

Item	Description	Item	Description
1.	Drive Support Label	6.	NIC Status LED
2.	Serial number label pull tab	7.	USB 3.0 port
3.	2 SFF NVMe drive bays	8.	UID LED
4.	Power On/Standby and system power LED	9.	8 SFF SAS/SATA/NVME HDD/SSD drive bays
5.	Health LED		

Overview
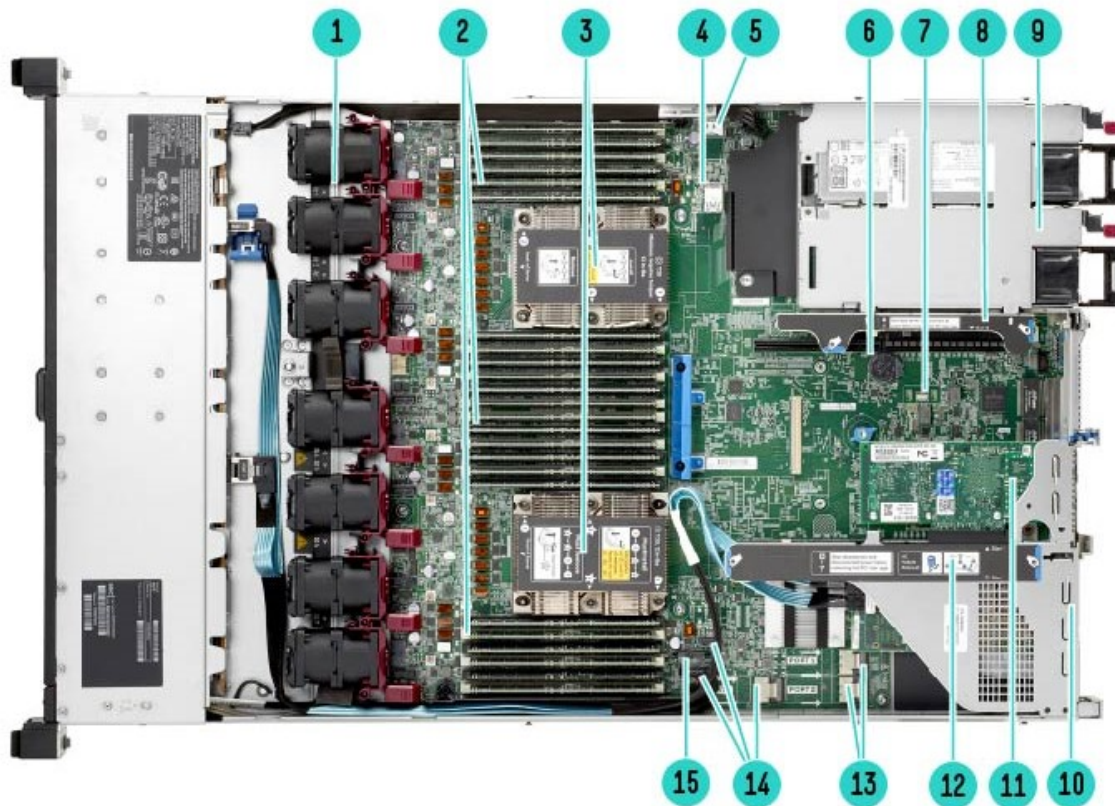
Standard for all CL2600 Gen10 - Internal View

1. Standard single rotor hot plug fans[1]
2. DDR4 DIMM slots (Fully populated 24 DIMMs shown)
3. Up to 2 processors (shown with standard heat sinks)
4. Dual internal USB 3.0 connector (top arrow)
5. Hard Drive backplane power connector
6. System Battery
7. Optional: TPM 2.0
8. Secondary (CPU2) PCIe 3.0 riser [2]

9. Up to 2 Power Supplies for redundant power. [3]
10. Slot 1 from Primary Riser (bottom arrow)
11. Slot 2 from Primary Riser (top arrow; expansion card shown);
12. Primary (CPU1) PCIe 3.0 riser [4]
13. x4 SATA port 1&2
14. Reserved
15. Front Power USB 3.0 connector (bottom arrow)

NOTE 1: 1 CPU – 5 standard fans, 2 CPUs – 7 standard fans. 7 High-Performance Fans (P10544-B21) optional for 8SFF chassis, required upon selecting 2NVMe Backplane kit with 8SFF chassis, and standard for Premium 10SFF chassis
NOTE 2: Not available on Premium 10SFF chassis due to dedicated 10 x4 NVMe direct attach PCIe riser; Optional 1x16 Low Profile Riser for 8SFF Chassis corresponding to Slot 3 in the rear; requires 2 processors for functionality
NOTE 3: Options for 500/800/1600W AC and 800W DC
NOTE 4: Standard: x16/x8. Optional: x16/x16 + Dual M.2 SATA on riser (P10572-B21). OR x16/x8 + Dual x4 NVMe (P09679-B21)

Overview
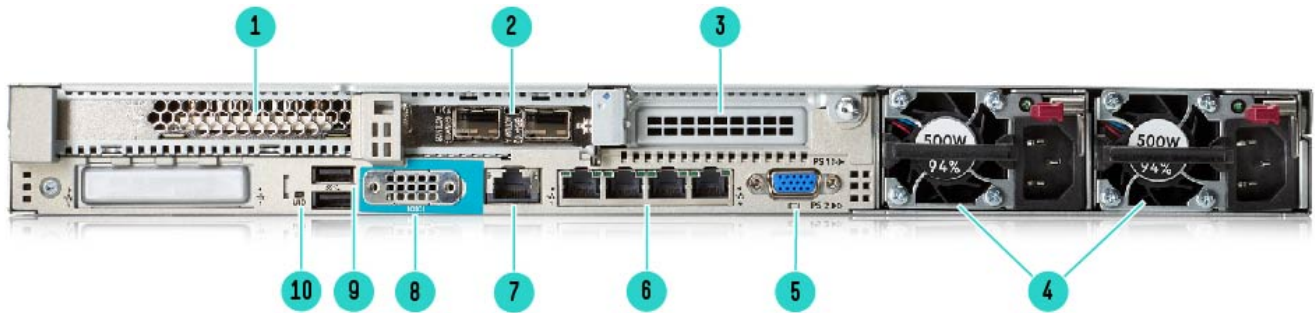
Standard for all CL2600 Gen10 - Rear View

1. Slot 1 from Primary PCIe 3.0 riser (x16)
2. Slot 2 from Primary PCIe 3.0 riser[1]
3. Slot 3 from Secondary PCIe 3.0 riser[2]
4. Power Supply (PS1&PS2)
5. VGA port

6. Embedded 4x 1GbE Adapter
7. BMC Management Port (1Gb)
8. Optional serial port (with serial cable)
9. 2x USB 3.0 Ports
10. Rear UID LED

NOTE 1: 1x8 standard or 1x16 with optional M.2 riser
NOTE 2: Not available on Premium 10SFF chassis due to dedicated 10 x4 NVMe direct attach PCIe riser; Optional 1x16 Low Profile Riser for 8SFF Chassis corresponding; requires 2 processors for functionality

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What's New

- Open standards system in a general purpose 1U design, supporting open, industry-standard options
- Open systems management - Redfish®, BMC®, IPMI 2.0
- Supports Intel Xeon Processor Scalable Family
- Supports up to 8 SFF SAS/SATA HDD/SSD, or up to 10SFF NVMe SSD
- Keep data secure via Intel® Boot Guard and UEFI Secure boot
- BIOS configuration via Redfish API

Overview

Platform Information
Form Factor
1U rack

Chassis Types
8 SFF chassis supporting SAS/SATA HDD/SSD with optional 2 NVMe or dual (2x) M.2 2280 SATA cartridges
10 SFF Premium chassis supporting 2 NVME and up to 8 SFF SAS/SATA/NVME with optional dual (2x) M.2 2280 SATA cartridges

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System Fans
Single rotor hot plug fans will be included
NOTE: The CL2600 Gen10 will support up to 7 fans with fan redundancy built in. One fan rotor failure will place server in degraded mode but fully functional. Two fan rotor failures could provide warning and imminent server shutdown.

For 8 SFF chassis:
1 CPU – Includes 5 standard fans
2 CPUs – Includes 7 standard fans
NOTE: Optional High-Performance Fan Kit (P10544-B21) available (includes 7 fans).

For 10 NVMe Premium chassis:
2 CPUs – Includes 7 high performance fans as standard

Standard Features

Standard Features

Processors – Up to 2 of the following depending on model.

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

NOTE: This table covers the public Intel offering only.

Gold 6152 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6148 Processor	2.4 GHz	20	27.50 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6144 Processor	3.5 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6142 Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6138 Processor	2.0 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6136 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6134 Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6130 Processor	2.1 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6128 Processor	3.4 GHz	6	19.25 MB	115W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6126 Processor	2.6 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5122 Processor	3.6 GHz	4	16.50 MB	105W	2 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5120 Processor	2.2 GHz	14	19.25 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5118 Processor	2.3 GHz	12	16.50 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5115 Processor	2.4 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2400 MT/s	768GB

NOTE: Gold Processors:

- 2 and 4 socket capable, 2S – 2UPI, 4S – 3UPI @ 10.4 GT/s.
- 6-Channel DDR4 @ 2400 MT/s (SKU 5122 - supports 2666 MT/s).
- 768 GB max memory capacity per socket
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA) (SKU 5122 - supports 2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS.

Silver 4116 Processor	2.1 GHz	12	16.50 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4114 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4112 Processor	2.6 GHz	4	8.25 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4110 Processor	2.1 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4108 Processor	1.8 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB

NOTE: Silver Processors:

- 2 socket capable, 2S – 2UPI @ 9.6 GT/s.
- 6-Channel DDR4 @ 2400 MT/s, 768 GB max memory capacity.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.

Bronze 3106 Processor	1.7 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB
Bronze 3104 Processor	1.7 GHz	6	8.25 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB

NOTE: Bronze Processors:

- 2 socket capable, 2S – 2UPI @ 9.6 GT/s.
- 6-Channel DDR4 @ 2133 MT/s, 768 GB max memory capacity.
- Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.

Standard Features

Chipset
Intel C621 Chipset
NOTE: For more information regarding Intel® chipsets, please see the following
URL: **http://www.intel.com/products/server/chipsets/**.

On System Management Chipset
HPE BMC – remote server management processor embedded on the system board of the server

Memory

Type	DDR4	Industry Standard DDR4 Registered (RDIMM), Load Reduced (LRDIMM) Memory
DIMM Slots Available	24	12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel
Maximum capacity (LRDIMM)	1.5 TB	24 x 64 GB LRDIMM @ 2666 MT/s
Maximum capacity (RDIMM)	768 GB	24 x 32 GB RDIMM @ 2666 MT/s

NOTE: Maximum memory per socket is dependent on processor selection. Processors supporting 1.5 TB per CPU is indicated by the "M" in the processor model names (i.e. 6134M).
NOTE: Mixing of RDIMM and LRDIMM memory is not supported.
NOTE: For General Server Memory Population Rules and Guidelines for Gen10 see details here:
http://www.hpe.com/docs/memory-population-rules

Memory Protection

Advanced ECC	Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.
Online Spare	Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

Expansion Slots

Primary Riser	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCIe 3.0	x16	x16	CPU1	Full-height, 3/4 length (up to 9.5in)
	2	PCIe 3.0	x8	x8	CPU1	Low Profile

Primary SATA M.2 Riser	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCIe 3.0	x16	x16	CPU 1	Full-height; 3/4 length (up to 9.5in)
	2	PCIe 3.0	x16	x16	CPU 1	Low Profile

Primary NVMe Riser	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCIe 3.0	x16	x16	CPU 1	Full-height; 3/4 length (up to 9.5")
	2	PCIe 3.0	x8	x8	CPU 1	Low Profile

Secondary Riser*	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	3	PCIe 3.0	x16	x16	CPU 2	Low Profile

Standard Features

Storage Controllers
Software RAID
Intel C621 AHCI SATA RAID with 8 SATA ports (embedded)

RAID Controllers
Broadcom 9460-8i RAID Controller
LSI 9361-8i RAID Controller

HBA Controllers
LSI 9300-8i SAS HBA Card

Internal Storage Devices

Hard Drives   None ship standard

Maximum Storage

Storage	Capacity	Configuration
Hot Plug SFF SAS HDD	19.2 TB	8 x 2.4 TB
Hot Plug SFF SATA SSD	61.44 TB	8 x 7.68 TB
Hot Plug SFF NVMe PCIe SSD	80 TB	10 x 8 TB NVMe

Power Supply
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
NOTE: Available in 94% efficiency.
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
NOTE: Available in 94% and 96% efficiency.
NOTE: Also available in -48VDC and 227VAC/380VDC power inputs.
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
NOTE: Available in 94% efficiency.
NOTE:1600W Power supplies only support high line voltage (200 VAC to 240 VAC).

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE Gen10 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.
The CL2600 Gen10 ships with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A) to support AC power supplies selected. If a different power cord is required, please check the **HPE Power Cables** web page.
To review the power requirements for your selected system, please use the **HPE Power Advisor Tool**.
For information on power specifications and technical content visit **HPE Server Power Supplies**.

Interfaces

Serial	1 Port with cable - Optional
Video	1 Rear - VGA port (standard on all chassis types)
Network Ports	4x 1GbE embedded NIC (standard on all chassis types)
BMC Remote Mgmt Port	1 Gb Dedicated
USB 3.0	Up to 5: 1 front, 2 rear, 2 internal (standard on all chassis types)

Standard Features

Operating Systems and Virtualization Software
- Operating Systems and Virtualization Software Support for ProLiant Servers
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016
- Red Hat Enterprise Linux 6.9, 6.10
- Red Hat Enterprise Linux 7.4, 7.5
- SLES 12 SP3
- VMware vSphere 6.5 U1

NOTE: For more information visit **http://www.hpe.com/info/ossupport**

Industry Standard Compliance
- AMI Aptio 5.12
- UEFI 2.5 Support
- UEFI Shell 2.1 Support
- UEFI PI 1.4 Support
- ACPI 6.1 Compliant
- PCIe 3.0 Compliant
- SMBIOS 3.0
- PXE Support
- WOL Support
- USB 3.0 Compliant
- USB 2.0 Compliant
- Redfish version 1.0
- IPMI 2.0
- DCMI (Data Center Management Interface), version 1.5
- SPS 3.0
- SMBUS 2.0

Graphics
Integrated video standard
- Video modes up to 1920 x 1200 @ 60 Hz (32 bpp)

Standard Features

AMI UEFI BIOS

Unified Extensible Firmware Interface (UEFI) is an industry standard for better manageability and secured configuration than the legacy ROM at boot time. HPE Cloudline Gen10 servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode. Please reference the CL2600 User & Maintenance Guide.

- UEFI enables numerous new capabilities specific to HPE servers such as:
- Secure Boot and Secure Start enable for enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- PXE boot support for IPv6 networks
- UEFI Boot Mode only
- TPM 2.0 Support
- NVMe Boot Support
- iSCSI Software Initiator Support.
- HTTP Boot support
- Boot support for option cards that only support a UEFI option ROM

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

NOTE: Legacy FIO Setting (P11219-B22) can be selected to configure the system in Legacy mode in the factory for your HPE Cloudine Gen10 Server.

Embedded Management
Open Systems BMC

Industry standard baseboard management controller (BMC®) for effective remote management with IPMI / Redfish®, and DCMI/PXE boot standard interfaces allowing simple/scripted integration into an application infrastructure. A user can access the BMC firmware (FW), via a web browser, or scripting for server status configurations, user(s) privilege setup, FW updates, power control, event logging, BMC Network, serial port management, and SOL configuration.

Redfish API

Redfish API conformance and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards.

Security

- UEFI Secure Boot and Secure Start Support
- SECURE FLASH
- SSL (HTTPS) for secured sessions
- TPM (Trusted Platform Module) 2.0 option

NOTE: TPM 2.0 only works when UEFI is set to default

- Bezel Locking Kit

Standard Features

Warranty

Hardware support is available for 3 years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Hard drives have either a one year or three-year warranty; refer to the HPE Cloudline Servers and Options Global Limited Warranty and Technical Support for details.

NOTE: Server Warranty includes 3 Years Parts with five (5) days response time, 0 Years Labor, and 0 Years Onsite Support. Additional information regarding worldwide limited warranty and technical support is available at

http://www.hpe.com/support/cloudline_warranty_en.

Response time

Response times are based on local standard business days and working hours. Unless otherwise stated, all responses are measured from the time the customer calls until Hewlett Packard Enterprise has either established a mutually acceptable time for support to be performed, or Hewlett Packard Enterprise has begun to provide support or remote diagnostics. Response time is based on commercially reasonable effort. In some countries and under certain supplier constraints, response time may vary. If your location is outside the customary service zone, response time may be longer or there may be an additional charge. Contact your local Hewlett Packard Enterprise service organization for response time availability in your area.

Optional Features

Rack and Power Infrastructure
The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We have reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access.

HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10 year Warranty to support higher density computing.

HPE G2 PDUs offer reliable power in flexible form factors that operate at temperatures up to 60°, include color-coded outlets and load segments and a low-profile design for optimal access to the rack and support for dense rack environments.

HPE Uninterruptible Power Systems are cost-effective power protection for any type workload. Some UPSs include options for remote management and extended runtime modules so you're critical dense data center is covered in power outages.

HPE KVM Solutions include a console and switches designed to work with your server and IT equipment reliably. We have got a cost-effective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

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

Service and Support

Protect your business beyond warranty with Foundation Care NBD and Cloudline Support Services

HPE Foundation Care Next Business Day and Cloudline Support Services provide remote diagnosis and support, scheduled onsite hardware repair/troubleshooting, and coverage for replacement components. Also available with defective media retention (DMR) or comprehensive defective media retention (CDMR) services.

Extended support duration for up to 5 years is available on Foundation Care NBD services.
- HPE Cloudline 3 Years Parts + Remote Technical Support + Defective Media Retention
- HPE Cloudline 3 Years Parts + Remote Technical Support + Comprehensive Defective Media Retention
- HPE Foundation Care Next Business Day (3, 4, and 5 years options)
- HPE Foundation Care Next Business Day + Defective Media Retention (3, 4, and 5 years options)
- HPE Foundation Care Next Business Day + Comprehensive Defective Media Retention (3, 4, and 5 years options)

More information on Foundation Care NBD available at: **https://h20195.www2.hpe.com/v2/getpdf.aspx/4aa4-8876enw.pdf**.
More information on Cloudline Support Services available at:
https://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA5-9207ENN.pdf.

Standard Support Recommendation

Connect to Hewlett Packard Enterprise for faster problem resolution. Cloudline Carepack Services provides hardware onsite response. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions.

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 quick-specs, 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.

Datacenter Care for Hyperscale

DC 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. Customers can take advantage of this environment support tailored to their operating model. More information at **https://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA6-3460ENW.pdf**.

Spares Management Service

Provides customers with spare parts inventory for onsite stocking, and access to the HPE Spares Management Tool – an automated inventory management tool that helps enable real-time inventory management. More information at
https://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA1-3116ENW.pdf.

Advisory & Professional Services

Design, strategy, road map, and other services to help enable the digital transformation journey, tuned to IT and business needs. Advisory Services helps customers on their journey to Hybrid IT, Big Data, and the Intelligent Edge. More information at
https://www.hpe.com/us/en/services/consulting.html.

Operational offerings to improve performance and securely handle retirement of customers' IT environments.
Operate & Improve performance, minimize risk of downtime, and reduce security risks.
Retire & Sanitize to safely and securely dispose of retired IT, and ensuring customer data cannot be compromised.
Integrate the new solution with project management, installation and startup, relocation services, and more. We help mitigate risk to the business so there is no interruption when new technology is being integrated in the existing IT environment. More information at
https://www.hpe.com/us/en/services/professional.html.

Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model.
To ensure valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models (FIO) will include the hard drive carriers
4. Some options may not be integrated at the factory. Contact your local sales representative for additional information

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

CTO Server	8SFF	Premium 10SFF
SKU Number	P04359-B21	P09678-B21
Processor	Not included as standard	
DIMM Slots	24-DIMM slots (12 per CPU)	
Storage Controller	Choice of Intel C621 embedded SW RAID with 8 SATA ports or optional PCIe plug-in RAID/HBA controller	
PCIe	2 PCIe slots (1 x16 FH / 1 x8 LP) Optional: 1 x16 FH or LP	2 PCIe slots (1 x16 FH / 1 x8 LP)
Drive Cage - included	8 SFF - SAS/SATA Optional: up to 2 NVMe or 1 Dual (2x) 2280 M.2 cartridges	10 NVMe – 8 SAS/SATA/NVME + 2 NVME Optional: 1 Dual (2x) 2280 M.2 cartridges
Network Controller	1Gb Ethernet 4-Port plus optional PCIe stand up card(s)	
Fans	1 CPU – 5 Standard Fans 2 CPU – 7 Standard Fans Optional: High Performance Fans	2 CPU – 7 High Performance Fans
Management	HPE BMC & AMI Firmware	
USB	Front: 1 USB 3.0 Rear: 2 USB 3.0 Internal: 2 USB 3.0	

Step 2a: Choose Processor Options

Please select a minimum of one or maximum of two –L21 processors below. The Premium 10SFF base server requires two –L21 processors be selected.

NOTE: For first processor selection on the 8SFF chassis, it will include 5 fans; For second processor selection (if applicable), it will add 2 additional fans. For the 8SFF chassis, the high performance fan kit (P10544-B21) is an optional upgrade, but required when selecting the 2NVMe backplane FIO kit (P09679-B21). For the Premium 10SFF chassis, 7 high performance fans come standard.
NOTE: Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except "M" model processors, which will support up to 1.5 TB max memory per processor.
NOTE: Mixing of 2 different processor models is NOT allowed.
NOTE: DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
NOTE: Processors with 130W or higher will ship with a high-performance heatsink plus SKUs 6128, 5122 as noted below. All other will processors will ship with the Standard heat sink.

Configuration Information

Processor Option Kits	Required Processor
Intel Xeon-Gold	
HPE CL Intel Xeon-Gold 6152 (2.1GHz/22-core/140W) FIO Processor Kit	P01905-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6148 (2.4GHz/20-core/150W) FIO Processor Kit	P01747-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6144 (3.5GHz/8-core/150W) FIO Processor Kit	P01743-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6142 (2.6GHz/16-core/150W) FIO Processor Kit	P01746-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6140 (2.3GHz/18-core/140W) FIO Processor Kit	P01904-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6138 (2.0GHz/20-core/125W) FIO Processor Kit	P01903-L21
HPE CL Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) FIO Processor Kit	P01745-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6134 (3.2GHz/8-core/130W) FIO Processor Kit	P01906-L21
NOTE: Ships with High Performance Heatsink.	
HPE CL Intel Xeon-Gold 6130 (2.1GHz/16-core/125W) FIO Processor Kit	P01902-L21
HPE CL Intel Xeon-Gold 6128 (3.4GHz/6-core/115W) FIO Processor Kit	P01742-L21
NOTE: Ships with High Performance Heatsink	
HPE CL Intel Xeon-Gold 6126 (2.6GHz/12-core/125W) FIO Processor Kit	P01744-L21
HPE CL Intel Xeon-Gold 5122 (3.6GHz/4-core/105W) FIO Processor Kit	P01741-L21
NOTE: Ships with High Performance Heatsink	
HPE CL Intel Xeon-Gold 5120 (2.2GHz/14-core/105W) FIO Processor Kit	P01901-L21
HPE CL Intel Xeon-Gold 5118 (2.3GHz/12-core/105W) FIO Processor Kit	P01900-L21
HPE CL Intel Xeon-Gold 5115 (2.4GHz/10-core/105W) FIO Processor Kit	P01795-L21
Intel Xeon-Silver	
HPE CL Intel Xeon-Silver 4114 (2.2GHz/10-core/85W) FIO Processor Kit	P01898-L21
HPE CL Intel Xeon-Silver 4112 (2.6GHz/4-core/85W) FIO Processor Kit	P01794-L21
HPE CL Intel Xeon-Silver 4110 (2.1GHz/8-core/85W) FIO Processor Kit	P01897-L21
HPE CL Intel Xeon-Silver 4108 (1.8GHz/8-core/85W) FIO Processor Kit	P01896-L21
HPE CL Intel Xeon-Silver 4116 (2.1GHz/12-core/85W) FIO Processor Kit	P01899-L21
Intel Xeon-Bronze	
HPE CL Intel Xeon-Bronze 3106 (1.7GHz/8-core/85W) FIO Processor Kit	P01895-L21
HPE CL Intel Xeon-Bronze 3104 (1.7GHz/6-core/85W) FIO Processor Kit	P01894-L21

Step 2b: Choose Memory Options

Please select one or more memory from below.

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go
to: **https://www.hpe.com/docs/memory-population-rules**

Configuration Information
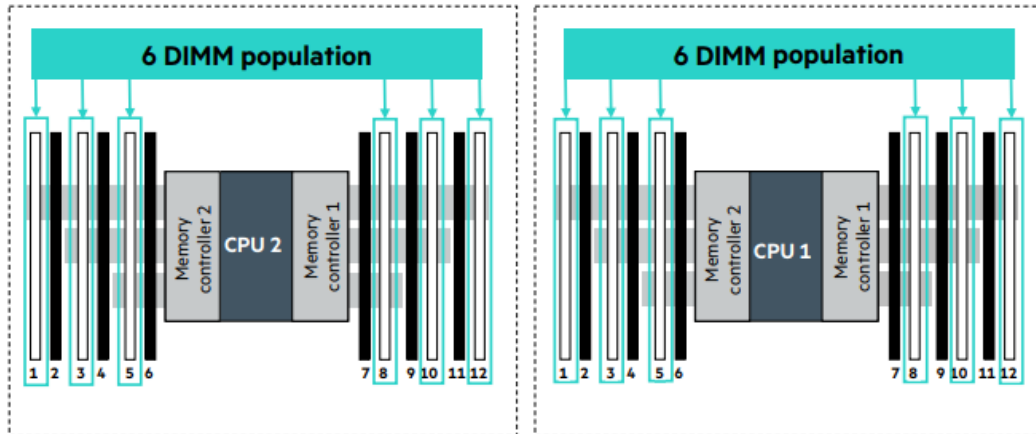
Balanced across two CPUs – 12 DIMMs

NOTE: Maximum memory capacity per processor is dependent on processor model selection or limitation.
NOTE: Maximum memory speed is dependent on processor model selection or limitation.

Registered DIMMs (RDIMMs)

HPE CL 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Memory FIO Kit	880841-B21
HPE CL 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Memory FIO Kit	P07029-B21
HPE CL 16GB (1x16GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Memory FIO Kit	881067-B21

Load Reduced DIMMs (LRDIMMs)

HPE CL 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Memory FIO Kit	880842-B21

Step 2c: Choose Power Supplies

Please select one or two power supplies from below.

NOTE: Mixing of 2 different power supplies is NOT allowed.

HPE Flex Slot Power Supplies

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21

NOTE: 1600W Power supplies only support high line voltage (200 VAC to 240 VAC).

HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21

Step 3: Choose Additional (FIO) Factory Integrated Options

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

HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21

NOTE: HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode, not Legacy Mode.
NOTE: HPE server systems can have a TPM module installed only once. It cannot be replaced with any other TPM module.

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

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Core Options

HPE Unique Options

Risers

HPE CL2600 Gen10 Low Profile FIO Riser Kit	P05476-B21
HPE CL2600 Gen10 SATA M.2 FIO Kit	P10572-B21

Riser Information*

Part number	Description	Riser position		Slot Bus width (Gen3 lanes)			NVMe Direct Connect		SATA m.2 2280
		Primary	Secondary	#1	#2	#3	Connectors	Max SSDs	Max drives
n/a	HPE CL2600 Gen10 x16/x8 Primary Riser	D	N	x16	x8	O			
P10572-B21	HPE CL2600 Gen10 x16/x16 SATA M.2 2280 Riser Kit	O	N	x16	x16	O			2
P05476-B21	HPE CL2600 Gen10 x16 Low-Profile Riser Kit	N	O	O	O	x16			
n/a	HPE CL2600 Gen10 x16/x8 1-port 2SFF NVMe Riser[1]	O	N	x16	x8	O	1	2	
n/a	HPE CL2600 Gen10 5-port 10SFF NVMe Riser Kit[2]	N	D[2]	O	O	O	5	10	

NOTE: D = Default on chassis; O = Optional; N = not supported or slot/connector not present
[1]Included on 2SFF NVMe FIO Backplane Kit P09679-B21; only supported on 8SFF chassis P04359-B21
[2]Standard on Premium 10SFF chassis P09678-B21

Performance Cooling Options

HPE CL2600 Gen10 High Performance FIO Fan Kit	P10544-B21

Universal Media Bay Options

HPE CL2600 Gen10 2NVMe FIO Backplane Kit	P09679-B21

NOTE: Only supported on 8SFF chassis P04359-B21

Security

HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21
HPE 1U Gen10 Bezel Kit	867998-B21
HPE Bezel Lock Kit	875519-B21

NOTE: HPE Bezel Lock Kit (875519-B21) requires selecting HPE 1U Gen10 Bezel Kit (867998-B21)

Cable Kits

HPE CL2600/2800 Gen10 Rear Serial Cbl FIO	P07013-B21

Core Options

Hard Disk Drive (HDD) Selection

Enterprise - 12G SAS - SFF – Hard Disk Drives

HPE CL 300GB 12G SAS 15K rpm SFF (2.5in) Seagate Hard Drive	P01660-B21
HPE CL 600GB 12G SAS 10K rpm SFF (2.5in) Enterprise Hard Drive	848513-B21
HPE CL 1.2TB 12G SAS 10K rpm SFF (2.5in) Enterprise Hard Drive	848505-B21
HPE CL 2.4TB 12G SAS 10K rpm SFF (2.5in) Seagate Enterprise Hard Drive	880853-B21

Solid State Drive (SSD) Selection

Mixed Use - 6G SATA - SFF - Solid State Drives

HPE CL 240GB SATA 6G Mixed Use SFF (2.5in) Micron 5200 FIO SSD	P08787-B21
HPE CL 960GB 6G SATA Mixed Use SFF (2.5in) Micron 5100 3yr Wty Solid State Drive Kit	P01686-B21
HPE CL 960GB SATA 6G Mixed Use SFF (2.5in) Intel S4610 FIO SSD	P08811-B21
HPE CL 1.92TB SATA 6G Mixed Use SFF (2.5in) Intel S4610 FIO SSD	P08814-B21
HPE CL 3.84TB SATA 6G Mixed Use SFF (2.5in) Intel S4610 FIO SSD	P04597-B21

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

HPE CL 240GB SATA 6G Read Intensive SFF (2.5in) Intel S4510 FIO SSD	P08796-B21
HPE CL 480GB SATA 6G Read Intensive SFF (2.5in) Intel S4510 FIO SSD	P08799-B21
HPE CL 960GB SATA 6G Read Intensive SFF (2.5in) Intel S4510 FIO SSD	P08802-B21
HPE CL 1.92TB SATA 6G Read Intensive SFF (2.5in) Intel S4510 FIO SSD	P08805-B21
HPE CL 1.92TB SATA 6G Read Intensive SFF (2.5in) Samsung PM883 FIO SSD	P01680-B21
HPE CL 3.84TB 6G SATA Read Intensive SFF (2.5in) x 15mm Micron 5100 3yr Wty Solid State Drive Kit	P01681-B21
HPE CL 3.84TB SATA 6G Read Intensive SFF (2.5in) Samsung PM883 FIO SSD	879720-B21
HPE CL 3.84TB SATA 6G Read Intensive SFF (2.5in) Intel S4510 FIO SSD	P08808-B21
HPE CL 7.68TB SATA 6G Read Intensive SFF (2.5in) Samsung PM883 FIO SSD	P01684-B21

Read Intensive – PCIe/NVMe - SFF - Solid State Drives

HPE CL 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) Samsung PM983 FIO SSD	P10536-B21
HPE CL 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) Samsung PM983 FIO SSD	P06710-B21
HPE CL 2TB NVMe x4 Lanes Read Intensive SFF (2.5in) Intel P4510 FIO SSD	P04600-B21
HPE CL 2TB NVMe Read Intensive SFF (2.5in) x 7mm Intel P4511 Solid State Drive FIO Kit	P04602-B21
HPE CL 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) Intel P4610 FIO SSD	P06660-B21
HPE CL 3.84TB NVMe x4 Lanes Read Intensive SFF (2.5in) Samsung PM983 FIO SSD	P06713-B21
HPE CL 4TB NVMe x4 Lanes Read Intensive SFF (2.5in) Intel P4510 FIO SSD	P06663-B21
HPE CL 8TB NVMe x4 Lanes Read Intensive SFF (2.5in) Intel P4510 FIO SSD	P04599-B21

Mixed Use – PCIe/NVMe - SFF - Solid State Drives

HPE CL 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) Intel P4610 FIO SSD	P06660-B21
HPE CL 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) Samsung PM1725b FIO SSD	P06726-B21

Mixed Use – PCIe/NVMe – Add-in-card - Solid State Drives

HPE CL 1.6TB NVMe x4 Lanes Mixed Use HHHL Samsung PM1725b FIO SSD	P01676-B21

Core Options

Mixed Use - 6G SATA - M.2 - Solid State Drives

HPE CL 240GB SATA 6G Mixed Use M.2 - UFF to SFF Micron 5100 FIO SSD	P08784-B21

HPE Networking

100 Gigabit Ethernet adapters

HPE CL Ethernet 100Gb 1-port QSFP28 Mellanox ConnectX-5 EN PCIe3 FIO Card	880150-B21

NOTE Mellanox ethernet adapters require Legacy BIOS Mode Setting (P11219-B22)

50 Gigabit Ethernet adapters

HPE CL Ethernet 50Gb 2-port SFP28 Mellanox ConnectX-5 Single Host PCIe 3.0 Card	P01671-B21

NOTE: Mellanox ethernet adapters require Legacy BIOS Mode Setting (P11219-B22)

25 Gigabit Ethernet adapters

HPE CL Ethernet 25Gb 1-port SFP28 Intel XXV710 PCIe 3.0 Card	P01667-B21
HPE CL Ethernet 25Gb 2-port SFP28 Q41212 PCIe 3.0 Card	P01669-B21
HPE CL Ethernet 25Gb 2-port SFP+ Mellanox ConnectX-4 PCIe 3.0 Card	P01670-B21

NOTE: Mellanox ethernet adapters require Legacy BIOS Mode Setting (P11219-B22)

10 Gigabit Ethernet adapters

HPE CL Ethernet 10Gb 4-port Intel X710-T4 PCIe3 FIO Adapter	P10662-B21
HPE CL Ethernet 10Gb 4-port Intel X710D PCIe3 FIO Adapter	P10664-B21
HPE CL Ethernet 10GBASE-T 2-port Q41112 PCIe FIO Adapter	P08550-B21
HPE CL Ethernet 10GBASE-T 2-port Intel X550 PCIe 3.0 Card	P01665-B21
HPE CL Eth 2x10Gb X710 PCIe3 Card	P01666-B21
HPE CL Ethernet 10Gb 2-port SFP+ QLogic Q41132 PCIe 3.0 Card	P01668-B21

Additional Options

HPE Storage Controllers
RAID Array Controllers

HPE CL Broadcom 9460-8i 2G with CVPM05 Tri-Mode RAID Controller   P01726-B21

NOTE: This option does not support HW RAID with SFF NVME SSD

HPE CL LSI Mega RAID SAS 9361-8i Adapter   859912-B21

NOTE: A supercapacitor/battery clip comes standard with the 8SFF Chassis and the Premium 10SFF chassis to avoid blocking PCIe expansion slots

HBA Controllers

HPE CL LSI MegaRAID SAS 9300-8i Host Bus Adapter Kit   859916-B21

HPE Rack Options
Rail Kits

HPE 1U Gen10 SFF Easy Install Rail Kit   874543-B21

HPE 1U Gen10 SFF Ball Bearing Rail Kit   872252-B21

NOTE: HPE rail kits contain telescoping rails which allow for in-rack serviceability.

NOTE: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

HPE 1U Cable Management Arm for Rail Kit   734811-B21

NOTE: Supports both the Easy Install and Ball Bearing Rail Kits.

HPE Racks

NOTE: Please see the **HPE Advanced Series Racks QuickSpecs** for information on additional racks options and rack specifications.

NOTE: Please see the **HPE Enterprise Series Racks QuickSpecs** for information on additional racks options and rack specifications.

NOTE: Please see the **HPE Standard Series Racks QuickSpecs** for information on additional racks options and rack specifications.

HPE Power Distribution Units (PDUs)

NOTE: Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.

NOTE: Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.

NOTE: Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on these products and their specifications.

NOTE: 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)

NOTE: To learn more, please visit the **HPE Uninterruptible Power Systems (UPS) web page**.

NOTE: Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on these products and their specifications.

NOTE: Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on these products and their specifications.

Additional Options

HPE Cloudline Support Services

HPE 3 year Cloudline Parts plus Remote Technical with DMR CL2600 Gen10 Supp	HF8N4E
HPE 3 year Cloudline Parts plus Remote Technical with CDMR CL2600 Gen10 Supp	HF8N5E

HPE Foundation Care 3 Years Next Business Day Services

HPE 3 Year Foundation Care Next Business Day Cloudline 2600 Gen10 Service	HF8N6E
HPE 3 Year Foundation Care Next Business Day with DMR Cloudline 2600 Gen10 Service	HF8N7E
HPE 3 Year Foundation Care Next Business Day with CDMR Cloudline 2600 Gen10 Service	HF8N8E

HPE Foundation Care 4 Years Next Business Day Services

|	
HPE 4 Year Foundation Care Next Business Day Cloudline 2600 Gen10 Service	HF8N9E
HPE 4 Year Foundation Care Next Business Day with DMR Cloudline 2600 Gen10 Service	HF8P0E
HPE 4 Year Foundation Care Next Business Day with CDMR Cloudline 2600 Gen10 Service	HF8P1E

HPE Foundation Care 5 Years Next Business Day Services

HPE 5 Year Foundation Care Next Business Day Cloudline 2600 Gen10 Service	HF8P2E
HPE 5 Year Foundation Care Next Business Day with DMR Cloudline 2600 Gen10 Service	HF8P3E
HPE 5 Year Foundation Care Next Business Day with CDMR Cloudline 2600 Gen10 Service	HF8P4E

NOTE: For a full listing of support services available for this server, please visit **https://ssc.hpe.com/**

Memory

Memory Population guidelines
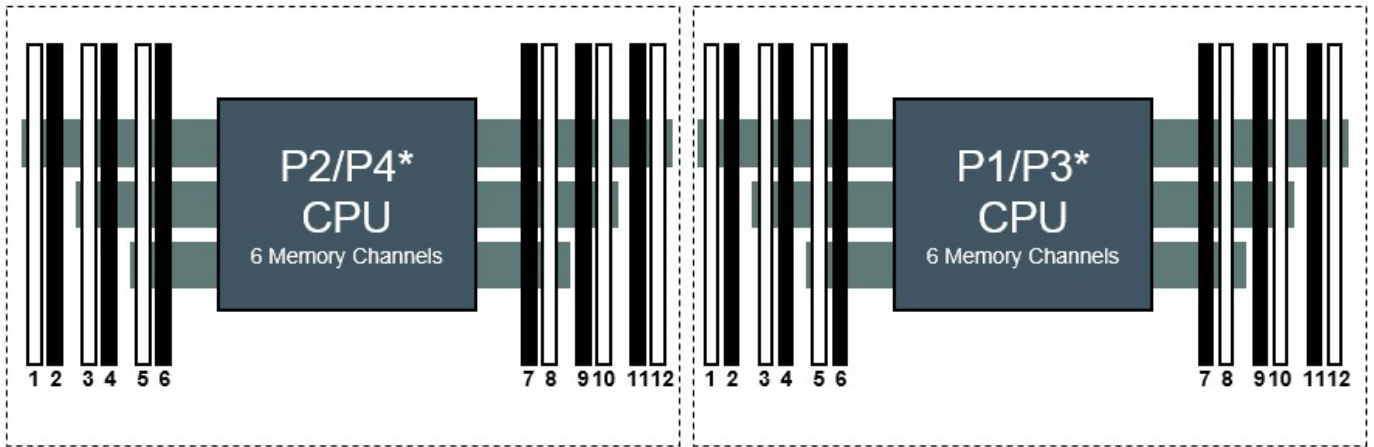
2 Slots per Channel

	1	2	3	4	5	6	7	8	9	10	11	12
1 DIMM								8				
2 DIMMs								8		10		
3 DIMMs								8		10		12
4 DIMMs			3		5			8		10		
5 DIMMs			3		5			8		10		12
6 DIMMs	1		3		5			8		10		12
7 DIMMs	1		3		5		7	8		10		12
8 DIMMs			3	4	5	6	7	8	9	10		
9 DIMMs	1		3		5		7	8	9	10	11	12
10 DIMMs	1		3	4	5	6	7	8	9	10		12
11 DIMMs	1		3	4	5	6	7	8	9	10	11	12
12 DIMMs	1	2	3	4	5	6	7	8	9	10	11	12

DIMM Population Order

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 (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, the number and model of installed processors qualified on the platform.

Memory

DIMM Type	Register DIMM (RDIMM)		
HPE SKU P/N	881067-B21	P07029-B21	880841-B21
SKU Description	HPE CL 16GB (1x16GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Memory FIO Kit	HPE CL 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Memory FIO Kit	HPE CL 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Memory FIO Kit
DIMM Rank	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)
DIMM Capacity	16GB	16GB	32GB
Voltage	1.2V	1.2V	1.2V
DRAM depth [bit]	2G	1G	2G
DRAM Width [bit]	x4	x8	x4
DRAM Density	8Gb	8Gb	8Gb
CAS Latency	19-19-19	19-19-19	19-19-19
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s	2666 MT/s
Intel Xeon®Platinum/Gold 81xx/61xx Processors Officially Supported Memory Speed (MT/s)			
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s
Intel Xeon®Gold/Silver 51xx/41xx Processors Officially Supported Memory Speed (MT/s)			
1 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s
2 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s
Intel Xeon®Bronze 31xx Processors Officially Supported Memory Speed (MT/s)			
1 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s
2 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s
NOTE: The maximum memory speed is a function of the memory type, memory configuration, and processor model. For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**			

Memory

DIMM Type	Load Reduced (LRDIMM)
HPE CL 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Memory FIO Kit	880842-B21
SKU Description	HPE CL 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Memory FIO Kit
DIMM Rank	Quad Rank (4R)
DIMM Capacity	64GB
Voltage	1.2V
DRAM depth [bit]	2G
DRAM Width [bit]	x4
DRAM Density	8Gb
CAS Latency	19-19-19
DIMM Native Speed (MT/s)	2666 MT/s
Intel Xeon® Platinum/Gold 81xx/61xx Processors Officially Supported Memory Speed (MT/s)	
1 DIMM Per Channel	2666 MT/s
2 DIMM Per Channel	2666 MT/s
Intel Xeon® Gold/Silver 51xx/41xx Processors Officially Supported Memory Speed (MT/s)	
1 DIMM Per Channel	2400 MT/s
2 DIMM Per Channel	2400 MT/s
Intel Xeon® Bronze 31xx Processors Officially Supported Memory Speed (MT/s)	
1 DIMM Per Channel	2133 MT/s
2 DIMM Per Channel	2133 MT/s
NOTE: The maximum memory speed is a function of the memory type, memory configuration, and processor model.	

DDR4 memory options part number decoder
NOTE: Capacity references are rounded to the common gigabyte (GB) values.
16GB = 16,384 MB
32GB = 32,768 MB
64GB = 65,536 MB

Storage

8SFF Chassis Drive Bay Numbering

8 SFF Chassis + optional 2 NVMe Drive Bay Numbering

NOTE: Bays 0 and 1 (highlighted) ONLY support NVMe Drives.
The other bays support a mix of SATA and SAS drives.

Premium 10 SFF Chassis Drive Bay Numbering

NOTE: Bays 8 and 9 ONLY support NVMe Drives.
The other bays support a mix of NVMe, SATA, and SAS drives.

Technical Specifications

System Unit

Dimensions (Height x Width x Depth)	4.29 x 43.46 x 70.7 cm 1.69 x 17.11 x 27.83 in	SFF Drives
Weight (approximate)	13.04 kg 28.74 lb	SFF minimum: One drive, one processor, one power supply, two heatsinks, one storage controller, and five fans.
	16.27 kg 35.86 lb	SFF maximum: 10 drives, two processors, two power supplies, two heatsinks, one storage controller and seven fans.
Input Requirements (per power supply)	**Rated Line Voltage**	100 to 120 VAC 200 to 240 VAC
BTU Rating	**Maximum**	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VDC) for China Only
		For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VDC) for China Only
Power Supply Output (per power supply)	**Rated Steady-State Power**	For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
		For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
		For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only
	Maximum Peak Power	For 1600W Power Supply: 1600W (at 200 to 240 1VAC), 1600W (at 240 VDC) input for China only
System Inlet Temperature	**Standard Operating Support**	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F). For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hpe.com/servers/ashrae**
	Extended Ambient Operating Support	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** System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

Technical Specifications

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

Acoustic Noise

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

Example Configuration	8SFF Entry-Level Configuration	Premium 10SFF Performance Configuration
Idle		
LWAd	5.1 B	5.2 B
LpAm	35 dBA	36 dBA
Operating		
LWAd	5.3 B	5.9 B
LpAm	36 dBA	45 dBA

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

Emissions Classification (EMC)

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:
http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

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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
02-Apr-2019	Version 4	Changed	Addition of network card and removed OBS SKUs
04-Mar-2019	Version 3	Changed	Obsolete SKUs were removed
04-Feb-2019	Version 2	Changed	Addition of NVMe-related content. Overview, Standard Features, Configuration Information, Core Options, Storage and Technical Specification sections were updated
03-Dec-2018	Version 1	New	New QuickSpecs.

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