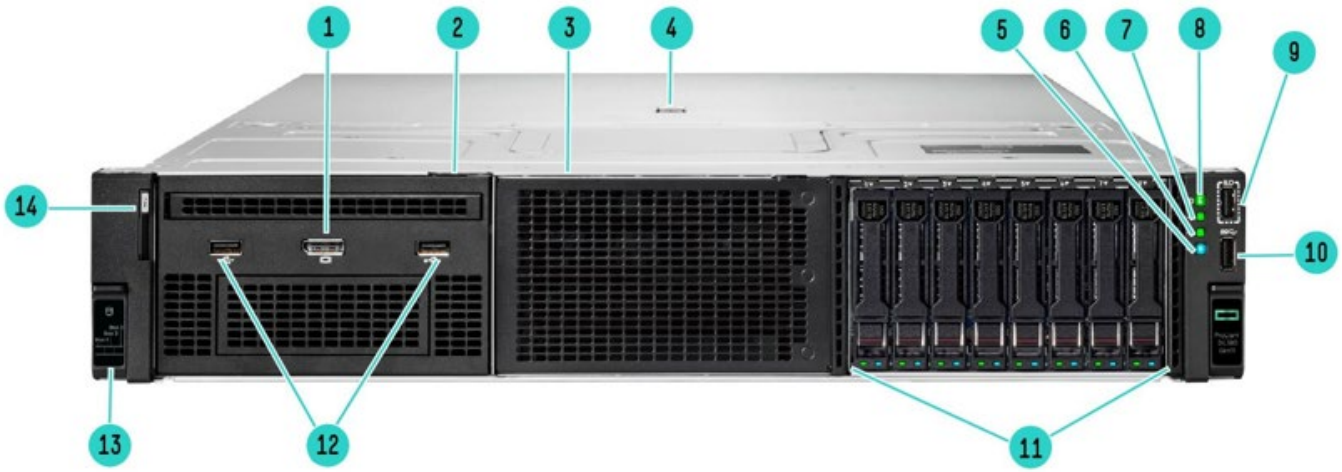
Overview

HPE ProLiant DL380 Gen11

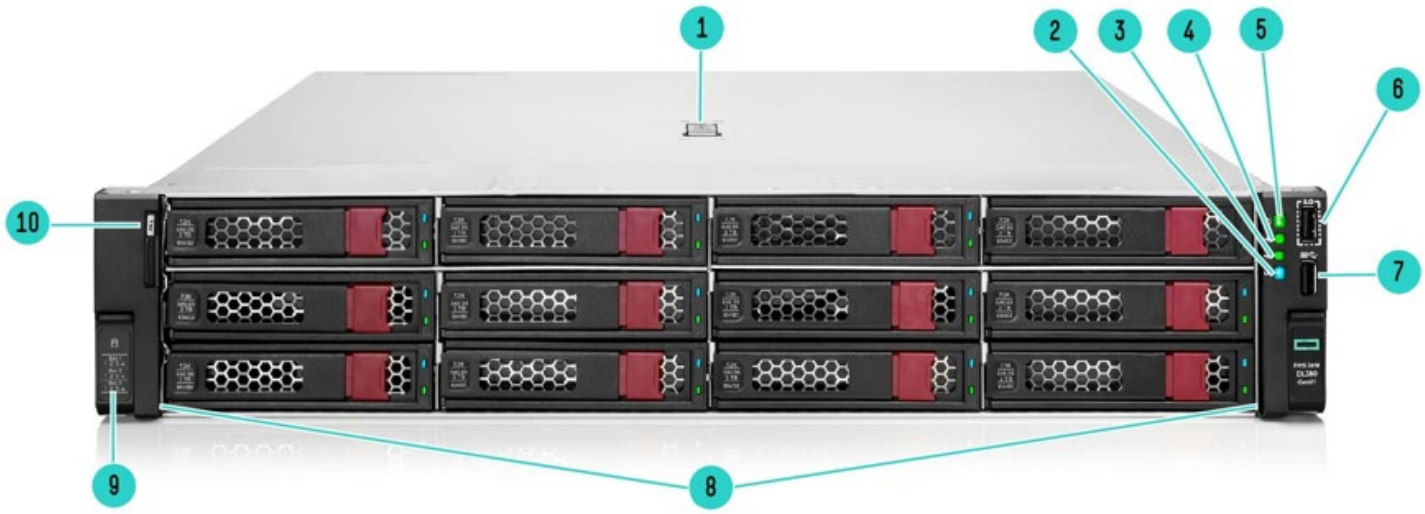
Adaptable for diverse workloads and environments, the secure 2P 2U HPE ProLiant DL380 Gen11 delivers world-class performance with the right balance of expandability and scalability. Designed for supreme versatility and resiliency while being backed by a comprehensive warranty make it ideal for multiple environments from Containers to Cloud to Big Data. Standardize on the industry's most trusted compute platform.



Front View – SFF chassis with optional Universal Media bay shown

1. Optional Front Display Port (via Universal Media Bay)
2. Box 1 (shown with optional Universal Media Bay installed)
3. Box 2 (shown blank)
4. Quick removal access panel
5. UID button/LED
6. NIC Status
7. Health LED
8. Power On / Standby button and LED
9. iLO Service Port
10. USB 3.0
11. Box 3 (shown with 8SFF drives populated)
12. Optional USB 2.0 (via Universal Media Bay)
13. Drive Support Label
14. Serial Number Label Pull Tab

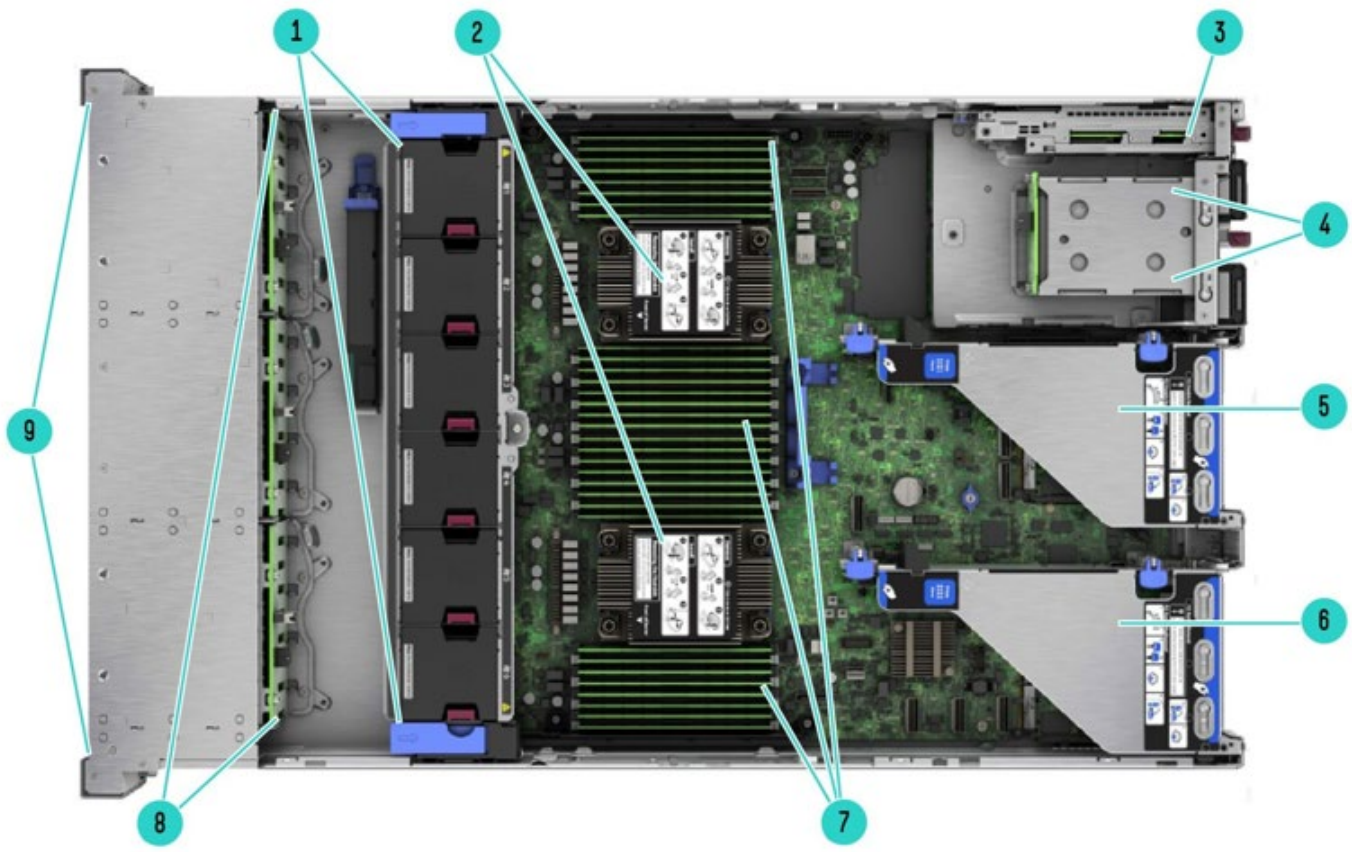
Overview



Front View – 12LFF chassis shown

1. Quick removal access panel
2. UID Button / LED
3. NIC Status
4. Health LED
5. Power On / Standby button and LED
6. iLO Service Port
7. USB 3.0
8. 12 x LFF Media
9. Drive support label
10. Serial Number Label Pull Tab

Overview



Internal View 8SFF chassis

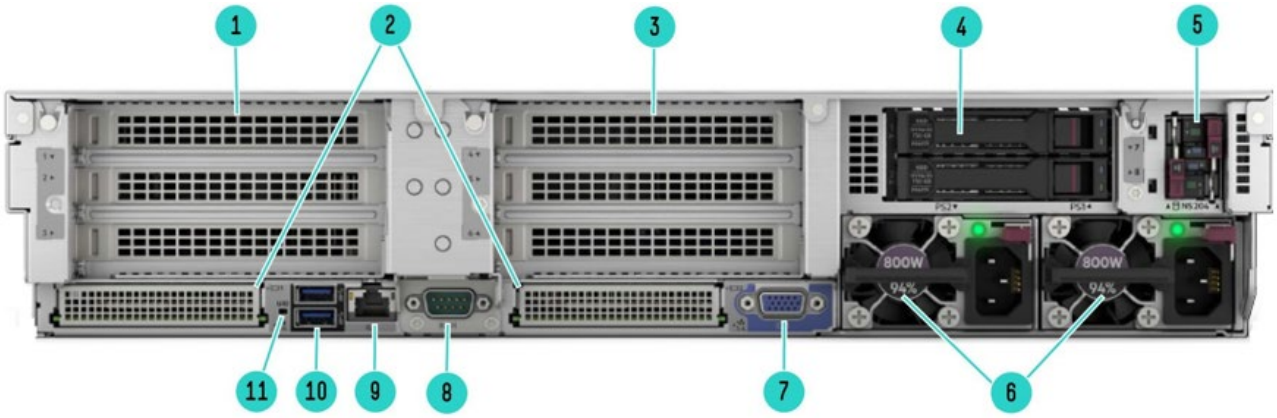
1. Hot Plug Fans[1]
2. Processors, heatsinks showing
3. Optional NS204i-u Boot Device
4. Hot Plug redundant HPE Flexible Slot Power Supplies
5. Secondary Riser (Optional) (Requires second processor)
6. Primary Riser
7. DDR5 DIMM slots, shown fully populated in 32 slots[2]
8. Drive Backplanes
9. Drive Cages

Notes:

– [1]High performance temperature fans optional

– [2]Shown fully populated in 32 slots (16 per processor)

Overview



Rear View – Standard for all DL380 Gen11

1. Primary Riser. PCIe 5.0 Slots (Slots 1-3)
2. OCP 3.0 Slots, shown covered
3.. Secondary Riser. PCIe 5.0 Slots (Slots 4-6)
4. Tertiary Riser (Slots 7-8) shown with optional 2SFF drive cage installed
5. Optional NS204i-u Boot Device
6. Power Supply 1 and 2
7. VGA Connector
8. Optional Serial Port
9. Dedicated iLO Management Port
10 USB 3.0 Connectors (2)
11 UID Indicator LED

Notes: [1] Supports various NICs, and Storage controllers.

What's New

- All new DL380 Gen11
- New 4th Generation Intel Scaleable Processors
- New PCIe 5.0 support
- New DDR5 SmartMemory – 4800MT/s
- New Storage Controllers
- New NS204i-u Boot Device
- New SSDs and HDDs

Overview

Platform Information

Form Factor

- 2U rack

Chassis Types

- 8SFF (SAS/SATA/NVMe) with optional SFF Universal Media Bay (P50728-B21), and/or up to 6SFF rear drive bay options
- 24SFF bay (SAS/SATA/NVMe) with up to 6SFF rear drive bay options to a total 30 SFF drives
- 8LFF supporting 2SFF front, and up to 4LFF rear or 2SFF rear drive bay options
- 12LFF with optional 4LFF rear for a total 16LFF drives

Notes:

- The 8SFF chassis can be upgraded to support up to 24SFF (front) with a variety of 8SFF Drive Cages to select from, including 8SFF U.3 x4/x2 Trimode, 8SFF U.3 (x1 Trimode), and 8SFF SAS/SATA. See “Drive Cages” section within this document for options.
- The 8SFF chassis comes with an 8SFF U.3 x1 drive bay by default in bay 3.
- The Universal Media Bay (P50728-B21) is only available as an option for the 8SFF chassis and can only be populated in Box 1.
- The 2 LFF primary and 2LFF secondary rear cages will consume all PCIe slots for the primary and secondary riser, respectively
- The 8 LFF chassis cannot be upgraded to 12 LFF front in the field.
- The 2 LFF primary and 2LFF secondary rear cages supported in LFF chassis only.

System Fans

- High Performance Fan Kit – required for all CPUs over 205W TDP

Notes:

- On 8SFF CTO server models ship with 4 standard fans.
- The 12 LFF and 8LFF CTO server models ship with 4 standard fans.
- The 24 SFF CTO server model ships with 6 high performance fans.
- The High Performance fan kit (P48820-B21) is available to meet ambient temperature requirements.
- In general, the Maximum Performance fan kit is required when rear drives, or >205W Processors SKUs, or High Performance NVMe drives, three drive cages, mid-tray, GPU card, or certain backplanes are populated. See notes under each option category or each individual option for specifics.

Standard Features

Processors – Up to 2 of the following depending on model.
The 2nd digit of the processor model number "x4xx" is used to denote the processor generation (i.e. 4=4th 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.

Processor Suffix	Description	Offering
H	DB and Analytics	Highest core counts. Database and Analytics usages benefit from DSA and IAA accelerators.
M	Media Transcode	Optimized around AVX frequencies to deliver better performance/watt around Media, AI, and HPC workloads.
N	Network/5G/Edge (High TPT / Low Latency)	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.
S	Storage and HCI	Optimized for Storage UMA use cases with increased UPI Bandwidth for vs Mainline SKUs.
P	Cloud - IAAS	Designed for cloud IaaS environments to deliver higher frequencies at constrained TDPs.
Q	Liquid Cooling	Liquid cooled processors with higher frequency and performance at same TDP.
U	1 Socket Optimized	Optimized for targeted platforms adequately served by the cores, memory bandwidth and IO capacity available from a single processor
V	Cloud - SAAS	Optimized for orchestration efficiency that delivers higher core counts and VMs per rack.
Y	Speed Select	Intel® SST-PP increases base frequency when fewer cores are enabled. Allows greater flexibility, deployment options and platform longevity.

4th Generation Intel® Xeon® Scalable Processor Family (Platinum)							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI Links**	**DDR5**	**SGX Enclave size (GB)**
Platinum 8490H Processor	1.9GHz	60	112.5	350W	4	4800 MT/s	512
Platinum 8480+ Processor	2GHz	56	105	350W	4	4800 MT/s	512
Platinum 8470 Processor	2GHz	52	105	350W	4	4800 MT/s	512
Platinum 8470N Processor	1.7GHz	52	97.5	300W	4	4800 MT/s	128
Platinum 8470Q Processor[1]	2.1GHz	52	105	350W	4	4800 MT/s	512
Platinum 8468 Processor	2.1GHz	48	105	350W	4	4800 MT/s	512
Platinum 8468H Processor	2.1GHz	48	105	330W	4	4800 MT/s	512
Platinum 8468V Processor	2.4GHz	48	97.5	330W	3	4800 MT/s	128
Platinum 8460H Processor	2.2GHz	40	105	330W	4	4800 MT/s	512
Platinum 8460Y+ Processor	2GHz	40	105	300W	4	4800 MT/s	128
Platinum 8458P Processor	2.7GHz	44	82.5	350W	3	4800 MT/s	512
Platinum 8452Y Processor	2GHz	36	67.5	300W	3	4800 MT/s	128
Platinum 8450H Processor	2GHz	28	75	250W	4	4800 MT/s	512
Platinum 8444H Processor	2.9GHz	16	45	270W	4	4800 MT/s	512

Standard Features

Notes:
- Processors with TDP equal to or greater than 150W through 350W require High Performance Heatsink (P48818-B21)
- 8-Channel DDR5 @ 4800 MT/
- 2 socket capable, 4 UPI @ 16 GT/s.
- [1]Liquid cooled CPU. Requires Maximum Performance Heat Sink (P48817-B21). No dual socket support.

4th Generation Intel® Xeon® Scalable Processor Family (Gold)							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI Links**	**DDR4**	**SGX Enclave size**
Gold 6454S Processor	2GHz	32	60	270W	4	4800 MT/s	128
Gold 6430 Processor	2.1GHz	32	60	270W	3	4800 MT/s	128
Gold 6414U Processor[1]	2GHz	32	60	250W	0	4800 MT/s	128

Notes:
- Processors with TDP equal to or greater than 150W through 350W require High Performance Heatsink (P48818-B21)
- 8-Channel DDR5 @ 4800 MT/s
- [1]Single socket processor. No dual socket support.

Chipset
Intel C741 Chipset
Notes: For more information regarding Intel® chipsets, please see the following URL:
https://www.intel.com/content/www/us/en/products/chipsets/server-chipsets.html

On System Management Chipset
HPE iLO 6 ASIC
Read and learn more in the **iLO QuickSpecs**.

Memory
One of the following depending on model.

Type	HPE DDR5 SmartMemory, Registered (RDIMM)
DIMM Slots Available	32 16 DIMM slots per processor, 8channels per processor, 2 DIMMs per channel
Maximum capacity	8.0 TB 32 x 256 GB RDIMM @ 4800 MT/s

Notes: The maximum memory speed is limited by the processor selection.

Expansion Slots

Primary Riser
Notes:
- Bus width indicates the number of physical electrical lanes running to the connector.
- There are 2 types of risers supported on Primary Slot
- x16 cards installed on x8 slots could observe sub-optimal performance.

Standard Features

Primary Riser1					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 5.0	X8	X16	Full-height,full-length slot	Proc 1
2	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 1
3	PCIe 5.0	X8	X16	Full-height,half-length slot	Proc 1

Primary Riser2					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1**	NA	NA	NA	NA	NA
1	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 1
2	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 1
3	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc 1

Notes: ** If Slot 1 of HPE DL380 Gen11 2U 3x16 Prim Riser Kit needs to be enabled then 3 x16 Primary Cable Kit (P56073-B21)must be selected..

Secondary Riser:

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- There are 2 types of risers support on Secondary Slot
- x16 cards installed on x8 slots could observe sub-optimal performance.

Secondary Riser1					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
4	PCIe 5.0	X8	X16	Full-height,full-length slot	Proc 2
5	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 2
6	PCIe 5.0	X8	X16	Full-height,half-length slot	Proc 2

Secondary Riser2					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
4*	NA	NA	NA	NA	NA
4	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 2
5	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 2
6	PCIe 5.0	X16	X16	Full-height,half-length slot	Proc 2

Notes: * If Slot 4 of HPE DL380 Gen11 2U 3x16 Sec Riser Kit needs to be enabled then 3 x16 Secondary Cable Kit (P56074-B21) must be selected.

Tertiary Riser

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- There is 1 type of riser supported on the Tertiary Slot
- x16 cards installed on x8 slots could observe sub-optimal performance.

Standard Features

Tertiary Riser1 (default)					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
7	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 2
8	PCIe 4.0	X16	X16	Full-height,full-length slot	Proc 2

Tertiary Riser1 (with Optional Tertiary Riser FIO x8 Enablement Kit P53632-B21)					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
7	PCIe 5.0	X16	X16	Full-height,full-length slot	Proc 2
8	PCIe 4.0	X8	X16	Full-height,full-length slot	Proc 2

Graphics

Integrated Video Standard

- Video modes up to 1920 x 1200@60Hz (32 bpp)
- 16MB Video Memory

Maximum Internal Storage

Drive	Capacity	Configuration
Hot Plug SFF SAS HDD	72 TB	24+6 x 2.4TB
Hot Plug SFF SAS SSD	460.8 TB	24 + 6 15.35TB
Hot Plug SFF SATA HDD	60 TB	24+6 x 2 TB
Hot Plug SFF SATA SSD	230.4 TB	24 + 6 x 7.68 TB
Hot Plug LFF SAS HDD	288 TB	12+4 x 18 TB (with optional rear LFF drive cage)
Hot Plug LFF SATA HDD	288 TB	12+4 x 18 TB (with optional rear LFF drive cage)
Hot Plug SFF NVMe PCIe SSD	374.4 TB	24 x 15.36TB + 6 x 960GB<10W (with optional rear Primary and Secondary 2SFF and rear 2SFF drive cages)

Internal Storage Devices

- **Optical Drive**
  Optional: DVD-ROM, DVD-RW
- **Hard Drives**
  None ship standard

Standard Features

Power Supply

- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes: 1 available in 94% efficiency.
- HPE 1000W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit
  Notes: 1 available in 96% efficiency.
- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes: 1 available in 94% efficiency.

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 Gen11 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 standard 6-foot IEC C-13/C-14 jumper cord (A0K02A) is included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page. o 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**.

Storage Controllers

The available Gen11 controllers are depicted below.

Essential RAID Controller

- HPE Smart Array E208e-p SR Gen10 Controller

Tri-Mode Controller

- HPE MR416i-p Gen11 Controller
- HPE MR416i-o Gen11 Controller
- HPE MR216i-p Gen11 Controller
- HPE MR216i-o Gen11 Controller
- HPE MR408i-o Gen11 Controller
- HPE SR932i-p Gen11 Controller[1,2]
  Notes:
  - PE80xx NVMe drives are not supported.
  - [1]Requires x16 physical and electrical riser slot
  - [2]If second controller is required, must select secondary riser
  - Controllers with cache require either P02377-B21 HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit or P01366-B21 HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit.

Standard Features

Interfaces

Serial	Optional, rear
Display Port	1 optional front display port via Universal Media Bay
VGA Port	1 standard, rear for all chassis. 1 Optional front display port (Via Universal Media Bay) **Notes**: Both ports are not active simultaneously.
Network Ports	None standard. Choice of OCP networking card or stand-up networking card required. BTO models will come pre-selected with a primary networking card.
HPE iLO Remote Management Network Port	1 Gb Dedicated, rear
Front iLO Service Port	1 standard (Not available when System Insight Display Kit is ordered)
USB 3.0	Up to 5 total: 1 front(3.0), 2 rear(3.0), 2 internal (secure – 1 – 3.0, 1 – 2.0), 1 optional USB 2.0 front via Universal Media Bay
Systems Insight Display (SID)	Optional **Notes:** Not shipping as standard. Available as a CTO option or as a field upgrade (P48819-B21).

Operating Systems and Virtualization Software Support for ProLiant Servers

- 4th Generation Intel® Xeon® Scalable Processor Family
- Windows Server 2019: Essentials, Standard, Datacenter
- **Windows Server 2022**: Essentials, Standard, Datacenter
- Microsoft Hyper-V Server: 2019
- **VMware** vSphere ESXi 7.0 U3 P06 (minimum), VMware ESXi 8.0 EP1 (minimum)
- RHEL (64-bit, includes KVM) : RHEL8.6 rebuild, RHEL8.7GA, RHEL8.8 Beta, RHEL9.0 rebuild, RHEL9.1GA, 9.2 Beta
- SLES (64-bit, includes KVM & Xen) : SLES15 SP5 (beta)
- Ubuntu 22.04.1

HPE Server UEFI

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen11 servers have a UEFI Class 2 implementation to support UEFI Mode.

Notes: The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **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

Standard Features

UEFI Boot Mode only:

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

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

Industry Standard Compliance

- ACPI 6.3 Compliant
- PCIe 5.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- VGA
- Display Port
  Notes: This support is on the optional Universal Media Bay.
- USB 3.0 Compliant
- USB 2.0 Compliant (via Universal Media Bay)
  Notes: This support is on the optional Universal Media Bay.
- Energy Star
- SMBIOS 3.2
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 1.20 and 2.0 Support
- Advanced Encryption Standard (AES)
- Triple Data Encrytion Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
  Notes: For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit **http://www.hpe.com/servers/ashrae**
- EU Lot9
  Notes: 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) 2.7

Standard Features

Embedded Management

HPE Integrated Lights-Out (HPE iLO)

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO.
Learn more at **http://www.hpe.com/info/ilo.**

UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).

Intelligent Provisioning

Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning.
Learn more at **https://support.hpe.com/hpesc/public/docDisplay?docId=c04465280&docLocale=en_US**

iLO RESTful API

iLO RESTful API is DMTF Redfish API implementation 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**.

Active Health System

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

Smart Update

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

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 and Gen10 HPE servers. Use with an iLO Advanced License to unlock full capabilities.

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

RESTful Interface Tool

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

Scripting Tools

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

HPE OneView Standard

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

HPE GreenLake for Compute Ops ManagementHPE is intelligently transforming compute management with a completely new As a Service experience that delivers greater security, simplicity, and efficiency. Discover a completely modernized compute management experience delivered through HPE GreenLake that securely streamlines operations from edge-to-cloud, and automates key lifecycle tasks (onboard, update, manage and monitor HPE servers), bringing the agility and greater efficiencies to wherever compute devices reside via a unified single browser-based interface.

Standard Features

Compute Ops Management is built on a unique cloud-native architecture that abstracts, manages and controls HPE servers regardless of physical location. The management application resides in the HPE GreenLake cloud platform (access via console.greenlake.hpe.com) and leverages the HPE GreenLake architecture, security, and unified operations.

Each HPE ProLiant Gen11 rack, tower and micro server will include a 3-year subscription to HPE GreenLake for Compute Ops Management - Standard Tier. Upgrades to Standard Tier 5 Year term or to an Enhanced Tier, 3 or 5 Year term, subscription can be made at time of order. Upgrades to Enhanced tier can also be made at any time.

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

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
- FIPS 140-2 validation
- Secure erase of NAND/User data
- Common Criteria certification
- TPM (Trusted Platform Module) 1.2 option
- Configurable for PCI DSS compliance
- TPM (Trusted Platform Module) 2.0 option
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Bezel Locking Kit option
- Support for Commercial National Security Algorithms (CNSA)
- Chassis Intrusion detection option
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware

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 Advanced offers a sophisticated level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It builds upon the base features of HPE OpenView Standard, provides full-featured licenses which can be purchased for managing multiple HPE server generations.
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**

HPE Insight Cluster Management Utility (CMU)

HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hpe.com/info/cmu**.

One Config Simple (OCS/SCE)

OCS/SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance.
https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

Rack and Power Infrastructure

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

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

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

HPE Uninterruptible Power Systems are cost-effective power protection for any type 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've 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

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

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

Service and Support

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 MSAxxxx3PAR 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

Smart Templates from HPE

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

Workload Solutions Templates from HPE

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

Mainstream SKUs

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

Mainstream Configurations

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

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

- Factory Integrated Models must start with a CTO Server.
- FIO indicates that this option is only available as a factory installable option.
- All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information.

Configuration Information

Step 1: Base Configuration (choose one (1) of the following four (4) configurable server models from the tables below)
The below (4) CTO server models, denoted with "NC" in the SKU description, provide flexibility in the networking choice and require a network adapter from the "HPE Networking" section be selected.

Networking Choice CTO Server Models	HPE ProLiant DL380 Gen11 Plus 8LFF NC CTO Server	HPE ProLiant DL380 Gen11 Plus 12LFF NC CTO Server	HPE ProLiant DL380 Gen11 Plus 8SFF NC CTO Server	HPE ProLiant DL380 Gen11 Plus 24SFF NC CTO Server
SKU Number	P52532-B21	P52533-B21	P52534-B21	P52535-B21
TAA SKU*	P52532-B21#GTA	P52533-B21#GTA	P52534-B21#GTA	P52535-B21#GTA
HPE Trusted Supply Chain	P36394-B21 – Optional			
Processor	Not included as standard	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	32-DIMM slots	32-DIMM slots	32-DIMM slots	32-DIMM slots
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), choice of HPE modular Smart Array and PCIe plug-in controller.			
PCIe	Three standard in primary riser			
Drive Cage - included	8 LFF	12 LFF	8 SFF	24 SFF
Network Controller	Choice of either OCP 3.0 or select stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters **Notes:** No embedded networking			
Fans	4-Standard	4-Standard	4-Standard	6-High Performance
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)			
USB	5x 3.0 standard plus iLo front service port	5x 3.0 standard plus iLo front service port	5x 3.0 standard plus iLo front service port	5x 3.0 standard plus iLo front service port

Notes:

- Network Choice (NC) server models require a networking selection of a network adapters in the "HPE Networking" section.
- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen11 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen11 is re-branded as a HPE ProLiant DL380T Gen11 to denote the HPE Trusted Supply Chain security enhancements. The DL380T is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at **http://www.hpe.com/security**
- *HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO).
- All CTO servers are Energy Star 3.0 compliant.

Configuration Information

CTO Server	8 SFF CTO Chassis	24 SFF CTO Chassis	8 LFF CTO Chassis	12 LFF CTO Chassis
Included Drive Cage	8SFF U.3 x1 Drive Cage	3x 8SFF U.3 x1 Drive Cage	8 LFF (2x 4LFF Drive Cages)	12 LFF (3x 4LFF Drive Cages)
Universal Media Bay	1 Optional	Not available	Not available	Not available
Optical Disk Drive	1 Optional with UMB	Not available	1 Optional with ODD Enable Kit	Not available
8 SFF NVMe/SAS/SATA Drive Cage	Up to 3 Optional	Not available	Not available	Not available
2 SFF NYMe/SAS/SATA (Front)	1 Optional with UMB	Not available	1 Optional with Side-by-Side Drive Cage	Not available
2 SFF NVMe/SAS/SATA (Rear)	3 Optional	3 Optional	1 Optional	1 Optional
2 LFF SAS/SATA (Rear riser)	Not available	Not available	2 Optional	2 Optional

Notes: This applies to CTO configurations; field upgrades may differ depending on field configuration.

Step 2: Choose Required Options

Please select up to two processors required below.

Notes:

- 8SFF, 8LFF, and 12LFF CTO models ship with 4 standard fans.
- 24 SFF CTO Servers ship with 6 High performance fans included. Maximum Performance fan kit is available to meet ambient temperature environments and are required for rear drives or NVMe configurations.
- Maximum memory capacity per processor is dependent on processor models. All processors support up to 4TB max memory per processor.
- Mixing of 2 different processor models are NOT allowed.
- Processors with TDP greater than 150W require High Performance Heatsink (P48818-B21).
- Q series processors require Max Performance Heat Sink (P48817-B21)
- DDR5 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

Step 2a: Choose Processors

Processor Option Kits (Required Processor)

4th Generation Intel Xeon-Platinum

Notes:

- All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.
- Processors with TDP equal to or greater than 150W require High Performance Heatsink (P48818-B21)
- Q series processors require Max Performance Heat Sink (P48817-B21)
- 8470Q processor is not supported with 12LFF CTO Server and 24SFF CTO Server.

Intel Xeon-Platinum 8480+ 2.0GHz 56-core 350W Processor for HPE P49607-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8470Q 2.1GHz 52-core 350W Processor for HPE P49609-B21

Notes:

- Requires Max Heat Sink
- Requires High Performance Fan Kit

Configuration Information

Intel Xeon-Platinum 8470 2.0GHz 52-core 350W Processor for HPE P49606-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8470N 1.7GHz 52-core 300W Processor for HPE P49649-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8468V 2.4GHz 48-core 330W Processor for HPE P49631-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor for HPE P49605-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8458P 2.7GHz 44-core 350W Processor for HPE P49632-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor for HPE P49604-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor for HPE P49616-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

4th Generation Intel Xeon-Gold

Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor for HPE P49614-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor for HPE P49654-B21

Notes:

- Requires High Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor for HPE P49619-B21

Notes:

- This is a single socket CPU, max allowed = 1
- Requires High Heat Sink
- Requires High Performance Fan Kit

Configuration Information

Step 2b: Choose Memory Options

Please select one or more memory from below.
For new Gen11 memory population rule whitepaper and optimal memory performance guidelines, please go to:
HPE Memory Population Rules
For details on the HPE Server Memory Options Population Rules, please go to:
Memory population rules for HPE Gen11 servers with 4th Generation Intel Scalable Processors

Notes:

- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for an HPE server model or family and yet occasionally not be supported with some configurations within that server family
- Memory should be installed in even quantity of DIMMs
- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- DDR5-4800 Memory Kits are only supported with 4th Generation Intel Xeon Scalable Series Processors.
- Memory compatibility may vary or be limited within a specific server family depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for a server model or family and yet occasionally not be supported with limited configurations within that server family.
- Please consult with the HPE server Quickspecs or your HPE representative if you have any questions regarding memory compatibility with a specific HPE server configuration.

Registered DIMMs DDR5 (RDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43322-B21
HPE 32GB (1x32GB) Single Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43325-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43328-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43331-B21
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43334-B21
HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43337-B21

Notes:

- 4800 MT/s memory SKUs offer a transfer rate of 4800 MT/s at 1 DIMM per channel and 4400 MT/s at 2 DIMMs per channel
- Mixing of 3DS memory and non-3DS memory is not supported
- Memory with larger than 128GB capacity will need High Performance Fan Kit (P48820-B21) and ambient limitation. 256GB DIMM will also need to limit the maximum front-end cage to two.

Memory Blank Kit

HPE DDR4 DIMM Blank Kit	P07818-B21

Step 2c: Choose Power Supplies

Select one or two power supplies from below.
Notes: Mixing of 2 different power supplies is NOT allowed.

HPE Flex Slot Power Supplies

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38997-B21
HPE 1000W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	P03178-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38995-B21

Notes:

- Select a minimum (1), maximum (2) power supplies.
- 1600W Power supplies only support high line voltage (200VAC to 240VAC).

Configuration Information

- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: **http://www.hpe.com/info/hppoweradvisor**.
- All power supplies in a server should match. Mixing Power Supplies is not supported.
- HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit **HPE power cords** for a full list of optional power cords.

Step 3: Choose Additional Factory Integratable Options

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

HPE Security Options

HPE iLO Common Password FIO Setting P08040-B21

Notes:

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

HPE Bezel Lock Kit 875519-B21

Notes: This option can be selected only if HPE Gen11 2U Bezel Kit (P50400-B21) is selected.

HPE ProLiant DL3XX Gen11 Intrusion Cable Kit P48922-B21

Notes: This option must be selected if HPE Trusted Supply Chain SKU (P36394-B21) is selected.

HPE Gen11 2U Bezel Kit P50400-B21

Factory Instructions and Server Settings

HPE ProLiant DL380 Gen11 8NVMe Balanced FIO Bundle Kit P53633-B21

Notes:

- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 8NVMe Bundle is selected then Qty 1 (min) of 8SFF U.3 x4 drive must be selected.
- If NVMe Bundle is selected then 8SFF U.3 x4 Cage is defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If NVMe Bundle is selected then Second Processor must be selected.
- If 8SFF U.3 x1 Cage is selected along with 8 OR 16 NVMe bundle then controller must be selected.

HPE ProLiant DL380 Gen11 16NVMe Balanced FIO Bundle Kit P53634-B21

Notes:

- If NVMe bundle is selected then defaulted Controller has to be deselected.
- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 16NVMe Bundle is selected then Qty 2 (min) of 8SFF U.3 x4 drive cage must be selected.
- If NVMe Bundle is selected then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected then Second Processor must be selected.

Configuration Information

- If Tertiary Riser is selected along with 16NVMe Bundle then 2x16 Tertiary FIO x8 Enable Kit (P53632-B21) must be selected
- If 8SFF U.3 x1 drive cage (P48813-B21) is selected along with 8 OR 16 NVMe bundle then controller must be selected.

HPE ProLiant DL380 Gen11 24NVME Balanced I/O FIO Bundle Kit P53635-B21

Notes:

- If NVMe bundle is selected then defaulted Controller has to be deselected.
- If NVMe Bundle is selected then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 3 (min) of 8SFF U.3 x4 drives must be selected.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Secondary Riser (P51083-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of OCP1 x16 Enablement Kit (P48827-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of OCP2 x16 Enablement Kit (P48828-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 2 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit must be selected and defaulted.
- If NVMe Bundle is selected then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected then Second Processor must be selected.
- If 24NVMe Bundle is selected then Tertiary Riser cannot be selected.
- If 24NVMe Balanced or 24NVMe DIFF IO-3 Bundle is selected then CPU1 OCP2 x8 enablement OR CPU2 OCP2 x8 enablement kit cannot be selected.
- If 24NVMe Bundle is selected then Primary 3 x16 Cable OR Secondary 3 x16 Cable cannot be selected.

HPE ProLiant DL380 Gen11 24NVME Differential I/O OCP1/2 x8 FIO Bundle Kit P53636-B21

Notes:

- If NVMe bundle is selected then defaulted Controller has to be deselected.
- If NVMe Bundle is selected then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 3 (min) of 8SFF U.3 x4 drive cage must be selected.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.

Configuration Information

- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 x8x16x8 Secondary Riser (P48802-B21)must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL300 Gen11 CPU1 OCP2 x8 Enable kit (P51911-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit (P54874-B21) must be selected and defaulted.
- If NVMe Bundle is selected then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected then Second Processor must be selected.
- If Tertiary Riser is selected along with 16NVMe Bundle then 2x16 Tertiary FIO x8 Enable Kit (P53632-B21) must be selected
- If 24NVMe Diff IO-1 bundle is selected then OCP1 x16 enablement Kit and OCP2 x16 enablement kit and CPU2 OCP2 x8 enablement Kit cannot be selected.
- If 24NVMe Bundle is selected then Pri 3 x16 Cable OR Sec 3 x16 Cable cannot be selected.

HPE ProLiant DL380 Gen11 24NVME Differential I/O OCP1 x16 FIO Bundle Kit P53637-B21

Notes:

- If NVMe bundle is selected then defaulted Controller has to be deselected.
- If NVMe Bundle is selected then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 3 (min) of 8SFF U.3 x4 drive cage must be selected.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 x8x16x8 Secondary Riser (P48802-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of OCP1 x16 Enablement Kit (P48827-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit (P54874-B21) must be selected and defaulted.
- If NVMe Bundle is selected then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected then Second Processor must be selected.
- If 24NVMe Bundle is selected then Tertiary Riser cannot be selected.
- If 24NVMe Diff IO-2 bundle is selected then OCP2 x16 enablement kit and CPU2 OCP2 enablement Kit OR CPU1 OCP2 x8 enablement Kit OR OCP2 x16 enablement cannot be selected.

Configuration Information

– If 24NVMe Bundle is selected then Pri 3 x16 Cable OR Sec 3 x16 Cable cannot be selected.

HPE ProLiant DL380 Gen11 24NVME Differential I/O OCP1/2 x16 FIO Bundle Kit P53638-B21

Notes:

– If NVMe bundle is selected then defaulted Controller has to be deselected.
– If NVMe Bundle is selected then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
– If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
– If this NVMe Bundle is selected then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
– If 24NVMe Bundle is selected then Qty 3 (min) of 8SFF U.3 x4 drive cage must be selected.
– If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.
– If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 x8x16x8 Secondary Riser (P51083-B21) must be selected and defaulted.
– If 24NVMe Bundle is selected then Qty 1 of OCP1 x16 Enablement Kit (P48827-B21) must be selected and defaulted.
– If 24NVMe Bundle is selected then Qty 1 of OCP2 x16 Enablement Kit (P48828-B21) must be selected and defaulted.
– If 24NVMe Bundle is selected then Qty 2 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
– If 24NVMe Bundle is selected then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit (P54874-B21) must be selected and defaulted.
– If NVMe Bundle is selected then 8SFF U.3 x4 drive cage will be defaulted.
– NVMe Bundle is supported with 8SFF CTO Server Only.
– If 16NVMe/ 24NVMe Bundle is selected then Universal Media Bay kit cannot be selected.
– If NVMe Bundle is selected then Second Processor must be selected.
– If 24NVMe Bundle is selected then Tertiary Riser cannot be selected.
– If 24NVMe Balanced or 24NVMe DIFF IO-3 Bundle is selected then CPU1 OCP2 x8 enablement OR CPU2 OCP2 x8 enablement kit cannot be selected
– If 24NVMe Bundle is selected then Pri 3 x16 Cable OR Sec 3 x16 Cable cannot be selected.

HPE iLO Common Password FIO Setting P08040-B21

Notes: Sets common iLO password, instead of randomly generated password for each server during Factory Diagnostics.

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

Notes:

– Initial Device Identity (IDevID) certificates are part of a Zero Trust Architecture. This SKU intructs factory to provision IdevID on HPE iLO.
– Directs HPE manufacturing site to create, digitally sign and store a platform certificate on the server.
– Requires HPE Trusted Platform Module (TPM).

Configuration Information

HPE Converged Infrastructure Management Software

HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE

vSAN ReadyNode

- 3, 6, 8 or 16 node vSAN Clusters (3 node minimum)
- HW is optimized for vSAN
- VMware vSAN Advanced LTU bundled

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.

Software as a Service Management

HPE GreenLake for Compute Ops Management

Base SKU

HPE GreenLake for Compute Ops Management Standard 3-year Upfront ProLiant SaaS	R6Z89AAE

Upgrade SKUS

HPE GreenLake for Compute Ops Management Standard 1-year Upfront ProLiant SaaS	R6Z88AAE
HPE GreenLake for Compute Ops Management Standard 5-year Upfront ProLiant SaaS	R6Z90AAE
HPE GreenLake for Compute Ops Management Standard 1-year Monthly ProLiant SaaS	R6Z91AAE
HPE GreenLake for Compute Ops Management Standard 3-year Monthly ProLiant SaaS	R6Z92AAE
HPE GreenLake for Compute Ops Management Standard 5-year Monthly ProLiant SaaS	R6Z93AAE
HPE GreenLake for Compute Ops Management Standard 1-year Quarterly ProLiant SaaS	R6Z94AAE
HPE GreenLake for Compute Ops Management Standard 3-year Quarterly ProLiant SaaS	R6Z95AAE
HPE GreenLake for Compute Ops Management Standard 5-year Quarterly ProLiant SaaS	R6Z96AAE
HPE GreenLake for Compute Ops Management Standard 3-year Annual ProLiant SaaS	R6Z97AAE
HPE GreenLake for Compute Ops Management Standard 5-year Annual ProLiant SaaS	R6Z98AAE
HPE GreenLake for Compute Ops Management Enhanced 1-year Upfront ProLiant SaaS	R7A10AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Upfront ProLiant SaaS	R7A11AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Upfront ProLiant SaaS	R7A12AAE
HPE GreenLake for Compute Ops Management Enhanced 1-year Monthly ProLiant SaaS	R7A13AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Monthly ProLiant SaaS	R7A14AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Monthly ProLiant SaaS	R7A15AAE
HPE GreenLake for Compute Ops Management Enhanced 1-year Quarterly ProLiant SaaS	R7A16AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Quarterly ProLiant SaaS	R7A17AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Quarterly ProLiant SaaS	R7A18AAE
HPE GreenLake for Compute Ops Management Enhanced 3-year Annual ProLiant SaaS	R7A19AAE
HPE GreenLake for Compute Ops Management Enhanced 5-year Annual ProLiant SaaS	R7A20AAE

HPE OneView

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE

Notes: For customers purchasing HPE GreenLake for Compute Ops Management, without a hardware purchase or a BTO purchase, use this base SKU within ASQ order:

HPE GreenLake for Compute Ops Management Base SaaS	R6Z73AAE

For more information, visit the HPE GreenLake for Compute Ops Management QuickSpecs:
https://www.hpe.com/psnow/doc/a50004263enw
Supported Servers – CTO only. No OEM. – Complete list can be found here: Latest Supported Server List:
https://www.hpe.com/info/com-supported-servers

Core Options

HPE Unique Options

HPE ProLiant DL380 Gen11 2SFF U.3 Primary/Secondary Riser Cage Kit P48810-B21

Notes:

- 2SFF drive cage for rear in Primary or Secondary riser position.
- This Drive cage can be selected with 8SFF CTO Server and 24SFF CTO Server Only.
- For 8SFF/ 24SFF CTO Server, Max = 2.

HPE ProLiant DL380 Gen11 2SFF U.3 HDD Stacking Drive Cage Kit P48811-B21

Notes:

- This is a 2SFF drive cage for front or rear. For a front mount it installs into Universal Media Bay.
- This drive cage supports controller and Direct Attach. If Direct Attached then it will support NVMe Drives only
- For 8SFF CTO Server, Max = 2.

HPE ProLiant DL380 Gen11 2SFF U.3 Side-by-Side Drive Cage Kit P48812-B21

Notes:

- This is 2SFF side-by-side drive cage for the 8LFF CTO server only.
- This Drive cage supports controller and Direct Attach. If Direct Attached then it will support NVMe drives only.
- Max = 1

HPE ProLiant DL380 Gen11 2U 8SFF x1 Tri-Mode U.3 Drive Cage Kit P48813-B21

Notes:

- This is a 8SFF U.3 x1 front drive cage.
- This drive cage can be selected with 8SFF CTO Server Only.
- Max = 3
- If Qty3 of 8SFF Front cage is selected then High Performance Fan Kit (P48820-B21) must be selected.
- This Drive cage supports controller and Direct Attach. If Direct Attached then it will support SATA Drives only and connects to SATA port on motherboard.

HPE ProLiant DL380 Gen11 8SFF U.3 Premium Drive Cage Kit P48814-B21

Notes:

- This is a 8SFF U.3 x4 front drive cage.
- This Drive cage can be selected with 8SFF CTO Server Only.
- Max = 3
- If Qty3 is selected then High Performance Fan Kit (P48820-B21) must be selected.
- This drive cage supports controller and Direct Attach. If Direct Attached then it will support NVMe Drives only.

HPE ProLiant DL380 Gen11 2LFF Primary Riser Cage Kit P48823-B21

Notes:

- This is a 2LFF drive cage for the rear Primary Riser position.
- This Drive cage supports controller and Direct Attach. If Direct Attached then it will support SATA Drives only and connects to SATA port on motherboard.
- Max = 1
- This drive cage can be selected with 8LFF CTO Server and 12LFF CTO Server Only.

HPE ProLiant DL380 Gen11 2LFF Tertiary Riser Cage Kit P48826-B21

Notes:

- This is a 2LFF drive cage for the rear Secondary + Tertiary Riser position.
- Max = 1

Core Options

HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit P50728-B21

Notes:

- This is the Universal Media Bay, it occupies an 8SFF drive cage slot on the front of the 8SFF CTO server.
- The Universal Media Bay can be selected with the 8SFF CTO Server only.

HPE ProLiant DL380 Gen11 2LFF LP Secondary Riser Cage Kit P51095-B21

Notes:

- This is a 2LFF drive cage for the rear Primary Riser position.
- Max = 1
- This drive cage can be selected with 8LFF CTO Server and 12LFF CTO Server Only.

HPE ProLiant DL380/DL560 Gen11 2U High Performance Fan Kit P48820-B21

Notes:

- If Processor above 205W is selected then High Performance Fan Kit is required.
- If 128GB or higher memory is selected then High Performance Fan Kit is required.
- If quantity 3 of front drive cage is selected, then High Performance Fan Kit is required.
- If NVMe is selected, then High Performance Fan Kit is required.
- 24SFF CTO server comes with High Perfromance Fan Kit installed.

HPE ProLiant DL380 Gen11 Max Performance Heat Sink Kit P48817-B21

Notes:

- If Q series Processor is selected then Max Performance Heat Sink is required.
- Max = 1

HPE ProLiant DL380/DL560 Gen11 High Performance 2U Heat Sink Kit P48818-B21

Notes:

- If Processor above 150W is selected then High Performance Heat Sink is required.
- Number of Heat Sinks selected must match number of processor(s) selected.

HPE ProLiant DL380/DL560 Gen11 2U Rear Serial Port Cable Kit P48824-B21

HPE ProLiant DL380 Gen11 System Insight Display Kit P48819-B21

Notes: Max = 1

HPE Processors

Processor Option Kits

4th Generation Intel Xeon-Platinum

Notes: All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.

Intel Xeon-Platinum 8480+ 2.0GHz 56-core 350W Processor for HPE P49607-B21

Intel Xeon-Platinum 8470Q 2.1GHz 52-core 350W Processor for HPE P49609-B21

Intel Xeon-Platinum 8470 2.0GHz 52-core 350W Processor for HPE P49606-B21

Intel Xeon-Platinum 8470N 1.7GHz 52-core 300W Processor for HPE P49649-B21

Intel Xeon-Platinum 8468V 2.4GHz 48-core 330W Processor for HPE P49631-B21

Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor for HPE P49605-B21

Intel Xeon-Platinum 8458P 2.7GHz 44-core 350W Processor for HPE P49632-B21

Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor for HPE P49604-B21

Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor for HPE P49616-B21

Core Options

4th Generation Intel Xeon-Gold

Notes: All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.

Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor for HPE	P49614-B21
Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor for HPE	P49654-B21
Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor for HPE	P49619-B21

Notes: Single socket capable, no dual socket support.

Memory Selection

To streamline the configuration process for HPE ProLiant Gen11 servers and to provide the best product availability, HPE recommends memory from the list located here: **http://www.hpe.com/products/recommend**.
Best product availability is limited to US, Canada, and Latin America at this time.

Notes:

- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for an HPE server model or family and yet occasionally not be supported with some configurations within that server family
- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.

HPE DDR5 Memory

Registered DIMMs (RDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43322-B21
HPE 32GB (1x32GB) Single Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43325-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43328-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43331-B21
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43334-B21
HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43337-B21

Notes:

- Memory should be installed in even quantity of DIMMs
- 4800 MT/s memory SKUs offer a transfer rate of 4800 MT/s at 1 DIMM per channel and 4400 MT/s at 2 DIMMs per channel
- Mixing of 3DS memory and non-3DS memory is not supported

HPE DDR Blank Kit

HPE DDR4 DIMM Blank Kit	P07818-B21

HPE Optical Drives

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21

Notes: HPE DL38X Gen11 Universal Media Bay Kit (P50728-B21) is required for this option on a SFF model. No support in 12 LFF or 24 SFF models.

HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21

Notes: HPE DL38X Gen11 Universal Media Bay Kit (P50728-B21) is required for this option on a SFF model. No support in 12 LFF or 24 SFF models.

HPE Mobile USB DVD-RW Optical Drive	701498-B21

Notes: This is only supported on USB 3.0 ports.

Core Options

Media Bay Kits

HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit P50728-B21

Notes:

- The HPE DL380 Gen11 Universal Media bay provides front Display Port and 2xUSB 2.0; plus support for 2x SFF front drives or 2 NVME front drives (riser required) and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.
- This is a SFF model option only.

HPE Hard Disk Drives

Mission Critical - 12G SAS - SFF Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting HDD P28618-B21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting HDD P28622-B21

Enterprise - 12G SAS - SFF Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD P28352-B21
HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD P53562-B21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD P28586-B21
HPE 1TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty HDD P53563-B21
HPE 900GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD P40432-B21
HPE 600GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD P53560-B21
HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD P53561-B21
HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD P28028-B21
HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD P40430-B21

Midline - 12G SAS - SFF Drives

HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD P28505-B21

Midline - 6G SATA - SFF Drives

HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD P28500-B21
HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD P28610-B21

Midline - 12G SAS - LFF Drives

HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD P37669-B21
HPE 16TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD P23608-B21
HPE 14TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD P09155-B21
HPE 12TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD 881781-B21
HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD 834031-B21
HPE 6TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD 861746-B21
HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 833928-B21
HPE 2TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 833926-B21

Midline - 6G SATA - LFF Drives

HPE 18TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD P37678-B21
HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD P23449-B21
HPE 14TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD P09165-B21
HPE 12TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD 881787-B21
HPE 8TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD 834028-B21
HPE 6TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD 861742-B21
HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 861683-B21
HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 861681-B21
HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 861686-B21

Core Options

SSD Selection

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

Read Intensive - 12G SAS - SFF - Solid State Drives

HPE 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49045-B21
HPE 7.68TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40509-B21
HPE 7.68TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49041-B21
HPE 3.84TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40508-B21
HPE 3.84TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49035-B21
HPE 1.92TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40507-B21
HPE 1.92TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49031-B21
HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40506-B21
HPE 960GB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49029-B21

Mixed Use - 12G SAS - SFF - Solid State Drives

HPE 6.4TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49057-B21
HPE 3.84TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40512-B21
HPE 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49053-B21
HPE 1.92TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40511-B21
HPE 1.6TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49049-B21
HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40510-B21
HPE 800GB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49047-B21

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

HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40501-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40500-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC S4520 SSD	P47322-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC PM893 SSD	P44010-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40499-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC S4520 SSD	P47320-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC PM893 SSD	P44009-B21
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21
HPE 480GB SATA 6G Read Intensive SFF BC PM893 SSD	P44007-B21
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40498-B21
HPE 960GB SATA 6G Read Intensive SFF BC PM893 SSD	P44008-B21
HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21

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

HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40505-B21
HPE 3.84TB SATA 6G Mixed Use SFF BC S4620 SSD	P47327-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40504-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC PM897 SSD	P44013-B21
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40503-B21
HPE 960GB SATA 6G Mixed Use SFF BC PM897 SSD	P44012-B21
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40502-B21
HPE 480GB SATA 6G Mixed Use SFF BC S4620 SSD	P47324-B21
HPE 480GB SATA 6G Mixed Use SFF BC PM897 SSD	P44011-B21

Read Intensive - 12G SAS - LFF –Solid State Drives

HPE 7.68TB SAS 24G Read Intensive LFF LPC Multi Vendor SSD	P49040-B21

Core Options

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

HPE 960GB SAS 12G Mixed Use LFF LPC Value SAS Multi Vendor SSD	P37009-B21

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

HPE 960GB SATA 6G Read Intensive LFF LPC Multi Vendor SSD	P47808-B21

Read Intensive - NVMe - SFF - Solid State Drives

HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50224-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50222-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P47847-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50219-B21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P47846-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50216-B21
HPE 1.9TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P47845-B21
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P47844-B21

Mixed Use - NVMe - SFF - Solid State Drives

HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50233-B21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P47840-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50230-B21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P47839-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50227-B21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P47838-B21
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P47837-B21

Hard Drive Blank Kits

HPE Gen9 LFF HDD Spade Blank Kit	807878-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21

Hard Drive Cage Kits

HPE ProLiant DL380 Gen11 2U 8SFF x1 Tri-Mode U.3 Drive Cage Kit	P48813-B21
HPE ProLiant DL380 Gen11 8SFF U.3 Premium Drive Cage Kit	P48814-B21
HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit	P50728-B21
HPE ProLiant DL380 Gen11 2SFF U.3 HDD Stacking Drive Cage Kit	P48811-B21
HPE ProLiant DL380 Gen11 2SFF U.3 Side-by-Side Drive Cage Kit	P48812-B21
HPE ProLiant DL380 Gen11 2SFF U.3 Primary/Secondary Riser Cage Kit	P48810-B21
HPE ProLiant DL380 Gen11 2LFF Primary Riser Cage Kit	P48823-B21
HPE ProLiant DL380 Gen11 2LFF LP Secondary Riser Cage Kit	P51095-B21
HPE ProLiant DL380 Gen11 2LFF Tertiary Riser Cage Kit	P48826-B21

HPE Networking

1 Gigabit Ethernet adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P51178-B21
Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P21106-B21

10 Gigabit Ethernet adapters

Notes: Unless otherwise noted, one of the below 10Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen11 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either a FlexibleLOM or select PCIe networking adapter.

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE	P26253-B21

Core Options

Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE P26259-B21

25 Gigabit Ethernet adapters

Notes: Unless otherwise noted, one of the below 10/25Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen11 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either an OCP3 or select PCIe networking adapter.

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE P26264-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE P26262-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE P08443-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE P08458-B21
Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE P42044-B21

100 Gigabit Ethernet Adapters

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

Recommended System Ambient Temperature	
System Config	**P25960-B21**
8LFF	25C
24SFF	Not support
16SFF	25C
8SFF	25C

Other Restrictions

1. These cards are not supported with 12LFF CTO server and 24SFF CTO server config.
2. Required to use High Performance Fan Kit (P48820-B21)
3. Only supported on x16 physical and electrical slots.

Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE P21112-B21

Recommended System Ambient Temperature	
System Config	**P21112-B21**
8LFF	25C
24SFF	Not supported
16SFF	25C
8SFF	30C

Notes:

- This adapter requires High Performance Fan Kit (P48820-B21).
- Not supported on 8SFF CTO server with 3x drive cages.
- Not Supported with 24SFF and 12LFF CTO Servers.
- Only supported on x16 physical and electrical slots.

Core Options

200 Gigabit Ethernet Adapters

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

Recommended Ambient Temparate	
System Config	**P10180-B21**
8LFF	25C
24SFF	Not supported
16SFF	25C
8SFF	30C

200 Gigabit Slingshot Adapters

HPE Slingshot SA210S Ethernet 200Gb 1-port PCIe NIC R4K46A

Notes:

- Can only be selected or configured for a Cray or Slingshot Solution. Not allowed for a Non-Cray or Non-Slingshot Solution.
- Cannot have the following networking options configured within the same server: Slingshot 11 or Slingshot 22.

400 Gigabit Slingshot Adapters

HPE Slingshot SA410S Ethernet 400Gb 1-port PCIe NIC R9Y95A

Notes:

- Can only be selected or configured for a Cray or Slingshot Solution. Not allowed for a Non-Cray or Non-Slingshot Solution.
- Cannot have the following networking options configured within the same server: Slingshot 11 or Slingshot 22.

OCP 3.0 Adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE P51181-B21
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE P08449-B21
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE P10097-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE P26256-B21
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE P26269-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE P10115-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE P10106-B21
Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE P42041-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE P22767-B21

OCP 3.0 Enablement

HPE ProLiant DL360 Gen11 CPU1 to OCP2 x8 Enablement Kit P51911-B21
HPE ProLiant DL300 Gen11 OCP1 x16 Enablement Kit P48827-B21
HPE ProLiant DL360 Gen11 OCP2 x16 Enablement Kit P48828-B21
HPE ProLiant DL300 Gen11 CPU2 to OCP2 x8 Enablement Kit P48830-B21

DL380 Gen11 OCP 1 and OCP 2 Priority Support Matrix

OCP Slot Location	1 OCP Storage Controller (OROC) + 1OCP NIC	1 OCP NIC	2 OCP NICs	1 OCP Storage Controller (OROC)	2 OCP Storage Controllers (OROC)
OCP 1	OROC	N/A	OCP NIC	OROC (Higher priority)	OROC (Higher priority)
OCP 2 (with shared NIC and WoL)	OCP NIC	NIC (higher priority)	OCP NIC (higher priority)	N/A	OROC

Core Options

HPE InfiniBand

HPE InfiniBand NDR 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter P45641-B21

Notes:

- High Performance Fan Kit is required (P48820-B21).
- Must be populated in x16 physical and electrical slot.
- Ambient temperature should not exceed 25C.

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter P31323-B21

Recommended Ambient Temparate	
System Config	**P31323-B21**
8LFF	25C (only to OCP2)
24SFF	Not supported
16SFF	25C (only to OCP2)
8SFF	30C (only to OCP2)

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter P31348-B21

Recommended Ambient Temparate	
System Config	**P31323-B21**
8LFF	Not supported
24SFF	Not supported
16SFF	Not supported
8SFF	25C (only to OCP2)

Other Restrictions

1. High Performance Fan Kit is required (P48820-B21).
2. Not supported on 24SFF CTO server or 12LFF CTO server.
3. Ambient temperature should not exceed 25C.
4. OCP2 x16 Enablement Kit (P48828-B21) is required.
5. 256GB DIMMs not supported if these adapters are selected.
6. Max = 1Could observe sub-optimal performance if installed in x8 slot.

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter P23664-B21

Recommended Ambient Temparate	
System Config	**P23664-B21**
8LFF	25C
24SFF	Not supported
16SFF	25C
8LFF	30C

Other Restrictions

1. High Performance Fan Kit is required (P48820-B21).
2. Must be populated in x16 physical and electrical slot.
3. Ambient temperature should not exceed 25C.

If configured for a Cray or Slingshot Solution, this option is to be used as the Slingshot 10 networking card.

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter P31324-B21

Recommended System Ambient Temperature	
System Config	**P31324-B21**
8LFF	25C
24SFF	Not supported
16SFF	25C
8SFF	25C

Core Options

Other Restrictions

1. High Performance Fan Kit is required (P48820-B21).
2. Not supported on 24SFF CTO server or 12LFF CTO server.
3. Must be populated in x16 physical and electrical slot.
4. Ambient temperature should not exceed 25C.

If configured for a Cray or Slingshot Solution, this option is to be used as the Slingshot 10 networking card.

HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter 829335-B21

Notes:

- High Performance Fan Kit is required (P48820-B21).
- Must be populated in x16 physical and electrical slot.

HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter P23665-B21

Notes: High Performance Fan Kit is required (P48820-B21).

HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter P23666-B21

Recommended Ambient Temparate		
System Config	**P23665-B21**	**P23666-B21**
8LFF	30C	25C
24SFF	30C	Not supported
16SFF	30C	25C
8SFF	30C	30C

Notes:

- High Performance Fan Kit is required (P48820-B21).
- Must be populated in x16 physical and electrical slot.
- If 2SFF drive cage is selected then Max = 2
- Max = 4

HPE I/O Expansion Options

Notes:

- The Primary Riser shipping default in the CTO server is a x8 FH, FL, x16 FH, FL and x8 FH, HL.
- For a Secondary/Tertiary riser, the second processor is required.
- x16 cards installed on x8 slots could observe sub-optimal performance.

HPE ProLiant DL380 Gen11 2U x16/x16/x16 Primary Riser Kit P48803-B21

Notes:

- Slot 1 - PCIe 5.0 x16 Full Height and Full Length
- Slot 2 - PCIe 5.0 x16 Full Height and Full Length
- Slot 3 - PCIe 5.0 x16 Full Height and Half Length
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Pri Rsr must be selected and defaulted.
- If this Primary Riser is selected then default Primary Riser is replaced with this riser.
- If Slot 1 of HPE DL380 Gen11 2U 3x16 Primary Riser Kit needs to be enabled then 3 x16 Primary Cable Kit (P56073-B21) must be selected.
- If Primary 3 x16 Cable Kit is NOT selected then only Slot 2 and Slot 3 will be available for PCIe card selection and no PCIe cards can be selected for Slot 1.

Core Options

HPE ProLiant DL380 Gen11 2U x16/x16/x16 Secondary Riser Kit P51083-B21

Notes:

- Slot 4 - PCIe 5.0 x16 Full Height and Full Length
- Slot 5 - PCIe 5.0 x16 Full Height and Full Length
- Slot 6 - PCIe 5.0 x16 Full Height and Half Length
- When 2LFF Tertiary Cage is selected then Secondary and Tertiary Riser cannot be selected.
- When 2LFF Secondary Cage is selected then Secondary Riser cannot be selected.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 SEC Rsr must be selected and defaulted.
- If Slot 4 of HPE DL380 Gen11 2U 3x16 Secondary Riser Kit needs to be enabled then 3 x16 Secondary Cable Kit (P56074-B21) must be selected.
- If Secondary 3 x16 Cable Kit is NOT selected then only Slot 5 and Slot 6 will be available and no PCIe cards can be selected for Slot4.
- If Secondary OR Tertiary Riser is selected then Second Processor must be selected.
- Tertiary Riser and Secondary 3 x16 Riser cannot be selected together.

HPE ProLiant DL380 Gen11 2U x8/x16/x8 Secondary Riser Kit P48802-B21

Notes:

- Slot 4 - PCIe 5.0 x8 Full Height and Full Length
- Slot 5 - PCIe 5.0 x16 Full Height and Full Length
- Slot 6 - PCIe 5.0 x8 Full Height and Half Length
- If quantity 1 of 2SFF Primary/Secondary Drive Cage is selected then HPE DL380 Gen11 x8x16x8 secondary riser is required.
- If quantity 1 of 2SFF Primary/Secondary Drive Cage is selected then top two slots (Slot 4 and Slot 5) of HPE DL380 Gen11 x8x16x8 Secondary Riser will be blocked by Drive Cage.
-
- If 2LFF Tertiary Drive Cage is selected then Secondary and Tertiary Riser cannot be selected.
- if 2LFF Secondary Drive Cage is selected then Secondary Riser cannot be selected.
- If 24NVMe Bundle is selected then quantity 1 of HPE DL380 Gen11 x8x16x8 secondary riser must be selected.
- If Secondary OR Tertiary Riser is selected then Second Processor must be selected.

HPE ProLiant DL380 Gen11 2U x16/x16 Tertiary Riser Kit P48804-B21

Notes:

- This is the tertiary riser.
- Slot 7 - PCIe 5.0 x16 Full Height and Full Length
- Slot 8 - PCIe 4.0 x16 Full Height and Full Length

HPE ProLiant DL380 Gen11 x16/x16/x16 Primary Cable Kit P56073-B21

HPE ProLiant DL380 Gen11 x16/x16/x16 Secondary Cable Kit P56074-B21

HPE ProLiant DL380 Gen11 2x16 Tertiary Riser x8 Enablement FIO Bundle Kit P53632-B21

Core Options

Risers

Riser Information*							
Part number	**Description**	**Riser position**			**Bus width (Gen5 lanes)**		
		Primary	**Secondary**	**Tertiary**	**Top slot**	**Middle Slot**	**Bottom slot**
N/A	This is the default riser in the chassis	D	N	N	x8	x16	x8
P48803-B21	HPE DL380 Gen11 x16/x16/x16 Primary Riser Kit	O	N	N	x16	x16	x16[1]
P51083-B21	HPE DL380 Gen11 x16/x16/x16 Secondary Riser Kit	N	O	N	x16	x16	x16[2]
P48802-B21	HPE DL38X Gen11 x8/x16/x8 Sec Riser Kit	N	O	N	x8	x16	x8
P48804-B21	HPE DL38X Gen11 2x16 Tertiary Riser Kit	N	N	O	x16	x16[3]	

Notes:

- D = Default on chassis; O = Optional; N = not supported or slot/connector not present.
- [1]Requires HPE DL380 Gen11 x16/x16/x16 Primary Cable Kit (P56073-B21)
- [2]Requires HPE DL380 Gen11 x16/x16/x16 Secondary Cable Kit (P56074-B21)
- [3]PCIe Gen4 lanes.
- x16 cards installed on x8 slots could observe sub-optimal performance.

HPE Power Supplies

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P38995-B21

Notes: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

HPE 1000W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit P03178-B21

Notes: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P38997-B21

Notes: Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14 power inlet connector that can support HPE Power Discovery Services (blue connector).

HPE Cooling Options

HPE ProLiant DL380/DL560 Gen11 2U High Performance Fan Kit P48820-B21

Notes:

- This kit is required for specific **Ambient temperature environments**.
- High Performance fan kit consists of 6 fans, these will need to replace all the standard fans in the unit, and fill all 6 fan cages.
- The 24 SFF CTO server will already include 6 High Performance fan kits.
- The High Performance fan kit is needed to support certain ASHRAE operating environments.
- For elevated ambient temperature support please see: **http://www.hpe.com/servers/ashrae**.

HPE ProLiant DL380 Gen11 Max Performance Heat Sink Kit P48817-B21

Notes: This kit is required for “Q” series processors.

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.

HPE Computation and Graphics Accelerators

1 NVIDIA A16 64GB PCIe Non-CEC Accelerator for HPE R8T26C

Notes:

- Max = 2
- This GPU requires Pwr Cable Kit (P39102-B21) to also be selected.
- This GPU requires HPE DL380/DL560 G11 2U High Perf Fan Kit P48820-B21.
- [1]Coming to Gen11 by end of April 2023.

1 NVIDIA A100 80GB PCIe Non-CEC Accelerator for HPE R9P49C

Notes:

- Max = 2
- This GPU requires Pwr Cable Kit (P39102-B21) to also be selected.
- This GPU requires HPE DL380/DL560 G11 2U High Perf Fan Kit P48820-B21.
- [1]Coming to Gen11 by end of April 2023.

HPE ProLiant DL300 Gen10 Plus GPU 8-pin Keyed Cable Kit P39102-B21

GPU Information

HPE DL380 Gen11 Configuration

Part number	Card	Qty Supported	PCIe	8SFF	16SFF/8 LFF	24SFF/12LFF
R9P49C	NVIDIA A100 80GB PCIe NonCEC Accelerator	2	Gen4	30C	25C	Not supported
R8T26C	NVIDIA A16 64GB PCIe Non-CEC Accelerator for HPE	2	Gen4	30C	25C	Not supported

Embedded Management

HPE iLO Common Password FIO 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

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

Additional Options

HPE Converged Infrastructure Management Software

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

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

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

HPE Security

HPE Trusted Supply Chain for HPE ProLiant P36394-B21

Notes:

- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen11 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen11 is re-branded as a HPE ProLiant DL380T Gen11 to denote the HPE Trusted Supply Chain security enhancements. The DL380T Gen11 is Trade Agreement Act (TAA) compliant.Learn more at **http://www.hpe.com/security**
- This option requires the selection of HPE Gen11 Intrusion Detection Kit (P48922-B21)
- This option requires the selection of either HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features (BD505A) or HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features (512485-B21)
- This option is limited to stand-alone DL380 Gen11 CTO servers only. The HPE Trusted Supply Chain configuration will not be available if the server is ordered as factory integrated into a rack
- One instance of the following Electronic License to Use is required per order (not per server): R6X85AAE
- HPE Trusted Supply Chain E-LTU
- Logistics delivery speeds and services are available and selectable within Next Gen Quoter.
- This option cannot be selected with TAA instruction SKU nor TAA CTO Models

HPE iLO Common Password FIO Setting P08040-B21

Notes:

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

HPE Gen11 2U Bezel Kit P50400-B21

HPE Bezel Lock Kit 875519-B21

Notes: Requires the bezel kit

HPE Gen10 Plus Chassis Intrusion Detection Kit P14604-B21

Notes: This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.

HPE Boot Controllers

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

Notes:

- This is the NS204i-u hot pluggable boot device
- Max = 1

Additional Options

HPE ProLiant DL380 Gen11 NS204i-u Internal Cable Kit	P52152-B21

Notes:
- If NS204i-u Gen11 Hot Plug Boot Option Device is selected then HPE DL380 Gen11 NS204i-u Internal Cable Kit is required.
- Max = 1

HPE ProLiant DL380 Gen11 NS204i-u FIO Bundle Kit	P54542-B21

Notes: Max = 1

HPE Storage Controllers

The Gen11 storage controller portfolio has been updated to include new technology like OCP3.0 as well as PCIe adapters.. For a more detailed breakout of the available Gen11 controllers visit the storage controllers QuickSpecs site:
HPE MegaRAID Storage Controllers

HPE Tri-Mode Controllers

HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47777-B21
HPE MR416i-o Gen11 x16 Lanes 8GB Cache OCP SPDM Storage Controller	P47781-B21
HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller	P47785-B21
HPE MR216i-o Gen11 x16 Lanes without Cache OCP SPDM Storage Controller	P47789-B21
HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	P58335-B21
HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller	P47184-B21

Notes: Requires x16 riser slot

Essential RAID Controllers

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

NVMe Adapter

HPE DL385 Gen10 Plus 12Gb NVMe 2-port Adapter	P25527-B21

HPE Cable Options

HPE ProLiant DL360 Gen11 Storage Controller Enablement Cable Kit	P48918-B21
HPE ProLiant DL380 Gen11 8SFF CPU1/2 NVMe Cable Kit	P48825-B21
HPE ProLiant DL380 Gen11 8SFF OROC1/2 x2 Cable Kit	P48829-B21
HPE ProLiant DL380 Gen11 2U Tri-Mode Premium Cable Kit	P48831-B21
HPE ProLiant DL380 Gen11 Tri-Mode Splitter Cable Kit	P48832-B21
HPE ProLiant DL380 Gen11 8SFF to Retimer/-P Controller Cable Kit	P54874-B21
HPE ProLiant DL380 Gen11 LFF Front Tri-Mode Cable Kit	P56995-B21

Optional Upgrades

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21
HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21

Notes: Provides backup power for multiple HPE storage controllers or other devices.

Additional Options

HPE Tape Backup

For the complete range of tape drives, autoloaders, libraries and media see: **https://www.hpe.com/us/en/storage/storeever-tape-storage.html** For hardware and software compatibility of Hewlett Packard Enterprise tape backup products **http://www.hpe.com/storage/BURAcompatibility**

HPE Storage Options

Emulex Fibre Channel HBAs

HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	R2J62A
HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter	R2J63A
HPE SN1700E 64Gb 1-port Fibre Channel Host Bus Adapter	R7N77A
HPE SN1700E 64Gb 2-port Fibre Channel Host Bus Adapter	R7N78A

QLogic Fibre Channel HBAs

HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	R2E08A
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	R2E09A

HPE Racks

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

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.

Additional Options

Easy Install Rail Kits

Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.
To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative.
Notes: 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 ProLiant DL380 Gen11 2U SFF Rack Mount Kit	P52341-B21

Notes: Does not include Cable Management Arm (CMA) (P22020-B21).

HPE DL38X Gen10 Plus 2U Cable Management Arm for Rail Kit	P22020-B21

HPE USB and SD Options

Notes: In vSphere 7.0, VMware made changes that impact the use of an SD Card/USB media as a standalone boot device and will be removing support for them after version 7.x.
SD Card/USB media can still be used as a standalone boot option through all 7.x releases via published Customer Advisory **Usage of SD Card/USB Devices As Standalone Boot Devices Has Changed Due to System Storage Changes For VMware ESXi 7.0 (Or Later)**.

For any major release beyond VMware ESXi 7.x, VMware will require M.2 or another local persistent device as the standalone boot option.

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HPE 32GB microSD RAID 1 USB Boot Drive	P21868-B21

HPE USB Keyboard/Mouse Kits

HPE USB US Keyboard/Mouse Kit	631341-B21
HPE USB UK Keyboard/Mouse Kit	631344-B21
HPE USB FR Keyboard/Mouse Kit	631346-B21
HPE USB ES Keyboard/Mouse Kit	631348-B21
HPE USB DE Keyboard/Mouse Kit	631358-B21
HPE USB JP Keyboard/Mouse Kit	631360-B21
HPE USB IT Keyboard/Mouse Kit	631362-B21
HPE USB CN Keyboard/Mouse Kit	631364-B21
HPE USB AE Keyboard/Mouse Kit	638212-B21
HPE USB RU Keyboard/Mouse Kit	638214-B21
HPE USB SE Keyboard/Mouse Kit	672097-103
HPE USB CH Keyboard/Mouse Kit	672097-113
HPE USB PT Keyboard/Mouse Kit	672097-133
HPE USB TR Keyboard/Mouse Kit	672097-143
HPE USB CZ Keyboard/Mouse Kit	672097-223
HPE USB FI Keyboard/Mouse Kit	672097-353
HPE USB AP/INTL Keyboard/Mouse Kit	672097-373
HPE USB INTL Keyboard/Mouse Kit	672097-B33
HPE USB IN Keyboard/Mouse Kit	672097-D63
HPE USB KR Keyboard/Mouse Kit	672097-KD3

Additional Options

HPE Support Services

Installation & Startup Services

HPE Install ProLiant DL38x(p) Service	U4554E
HPE Installation and Startup DL38x(p) Service	U4555E

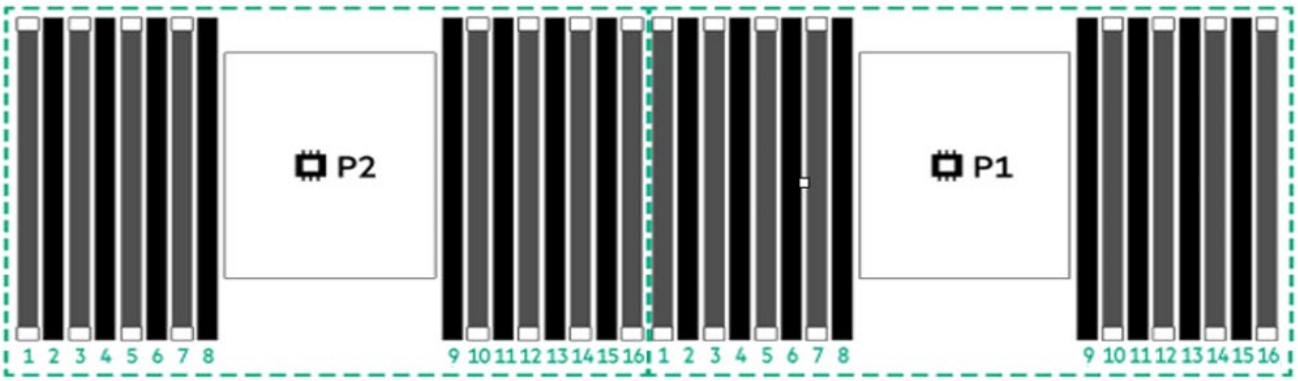
Tech Care Services

HPE 3 Year Tech Care Essential DL380 Gen11 HW Service	H93G4E
HPE 3 Year Tech Care Essential wDMR DL380 Gen11 HW Service	H93G5E
HPE 5 Year Tech Care Essential DL380 Gen11 HW Service	H93J8E
HPE 5 Year Tech Care Essential wDMR DL380 Gen11 HW Service	H93J9E

Notes: For a full listing of support services available for this server, please visit **http://www.hpe.com/services**.

Memory

Memory Population guidelines



HPE ProLiant DL380 Gen11 Plus

HPE ProLiant Gen11 16 slot per CPU DIMM population order																
DIMM population order																
DIMM slot	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
1 DIMM										10						
2 DIMMs[2]			3							10						
4 DIMMs[2]			3				7			10				14		
6 DIMMs			3		5		7			10				14		16
8 DIMMs[1,2]	1		3		5		7			10		12		14		16
12 DIMMs	1	2	3		5	6	7			10	11	12		14	15	16
16 DIMMs[1,2]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Notes:

- Ommited DIMM counts/socket not qualified by Intel.
- [1] Supports SGX (Software Guard Extensions)
- [2] Support Hemi (hemisphere mode).

General Memory Population Rules and Guidelines:

- DIMMs should be installed in quantities of even numbers.
- 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:
  Server memory populations rules for HPE Gen11 servers with 4th Gen Intel Xeon Scalable processors
- To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required.
- For additional information, please see the HPE DDR5 SmartMemory QuickSpecs.

Memory

Registered DIMM (RDIMM)				
HPE SKU P/N	**P43322-B21**	**P43325-B21**	**P43328-B21**	**P43331-B21**
SKU Description	HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	HPE 32GB (1x32GB) Single Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit
DIMM Capacity	16GB	32GB	32GB	64GB
DIMM Rank	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)
Voltage	1.1 V	1.1 V	1.1 V	1.1 V
DRAM Depth [bit]	2G	4G	2G	4G
DRAM Width [bit]	x8	x4	x8	x4
DRAM Density	16Gb	16Gb	16Gb	16Gb
CAS Latency	40-39-39	40-39-39	40-39-39	40-39-39
DIMM Native Speed	4800 MT/s	4800 MT/s	4800 MT/s	4800 MT/s

HPE SKU P/N	**P43334-B21**	**P43337-B21**
SKU Description	HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit
DIMM Capacity	128GB	256GB
DIMM Rank	Quad Rank (4R)	Octal Rank (8R)
Voltage	1.1 V	1.1 V
DRAM Depth [bit]	4G	4G
DRAM Width [bit]	x4	x4
DRAM Density	16Gb	16Gb
CAS Latency	40-39-39	40-39-39
DIMM Native Speed	4800 MT/s	4800 MT/s

Notes: 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**

DDR5 memory options part number decoder

Notes:

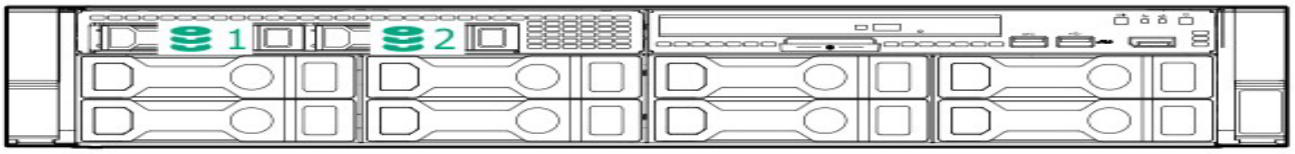
- Capacity references are rounded to the common gigabyte (GB) values.
  - 8GB = 8,192 MB
  - 16GB = 16,384 MB
  - 32GB = 32,768 MB
  - 64GB = 65,536 MB
  - 128GB = 131072 MB
  - 256GB = 262144 MB
  - 512GB = 524288 MB

For more information on memory, please see the Memory Quickspecs: **HPE DDR5 SmartMemory**

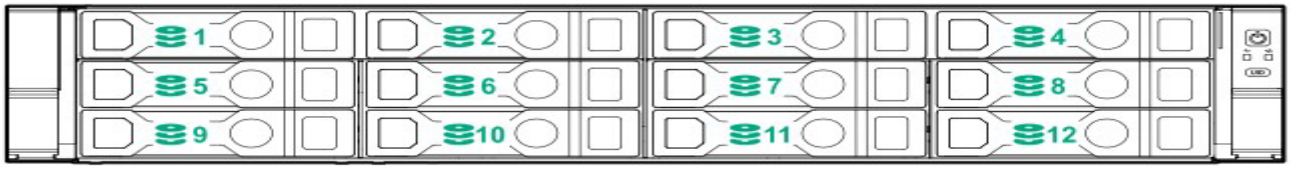
Memory Speed Table for HPE ProLiantDL380 Gen Gen11

For details on the HPE Server Memory speed, please visit: **https://www.hpe.com/docs/memory-speed-table**

Storage



8LFF chassis with Universal media bay and optional 2SFF and optical drive shown



12 LFF chassis

24 SFF + rear 2 SFF drives

Technical Specifications

System Unit

Dimensions

- **SFF CTO servers:**
  8.75 x 44.8 x 72.7. cm / 3.44 x 17.64 x 28.62 in
- **LFF CTO servers:**
  8.75 x 44.8 x 73.25 cm / 3.44 x 17.64 x 28.84 in

Weight (approximate)

- **Maximum:** 8 SFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)
  - **Maximum:** 33kg/72.75 lbs
  - **Minimum:** 16kg/35.27 lbs
- **Maximum:** 12 LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)
  - **Maximum:**
    . 37kg/81.57 lbs
  - **Minimum:**
    18kg/39.68 lbs

Input Requirements (per power supply)

Rated Line Voltage

- For 1600W (Platinum) Power Supply: 200-240 VAC
- For 800W (Titanium) Power Supply: 200-240 VAC
- For 800W (Platinum) Power Supply: 100-240 VAC
- For 800W (Universal) Power Supply: 200-277 VAC
- For 800W (-48VDC) Power Supply: -40 Vdc to -72 Vdc

BTU Rating

Maximum

- For 1600W Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC)
- For 800W (Titanium) Power Supply: 2905 BTU/hr (at 200 VAC), 2899 BTU/hr (at 220 VAC), 2893 BTU/hr (at 240 VAC)
- For 800W (Platium) Power Supply: 3067 BTU/hr (at 100 VAC), 2958 BTU/hr (at 200 VAC), 2949 BTU/hr (at 240 VAC)
- For 800W (Universal) Power Supply: 2964 BTU/hr (at 200 VAC), 2951 BTU/hr (at 230 VAC), 2936 BTU/hr (at 277 VAC)
- For 800W-(48Vdc) Power Supply: 2983 BTU/hr (at -40 Vdc), 2951 BTU/hr (at -48Vdc), 2912 BTU/hr (at -72Vdc)

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

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 (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)

Maximum Peak Power

- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)

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**

  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).

Technical Specifications

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LwA,m) and declared average bystander position A-Weighted sound pressure levels (LpA,m) 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.

Acoustic Noise	
Idle	
LwA,m	4.2 B Entry 4.2 B Base 4.2 B Performance
LpAm	28 dBA Entry 27 dBA Base 30 dBA Performance
Operating	
LwA,m	4.2 B Entry 4.2 B Base 4.2 B Performance
LpAm	29 dBA Entry 27 dBA Base 29 dBA Performance
Kv	0.4 B Entry 0.4 B Base 0.4 B Performance

Notes:

- The declared mean A-weighted sound power level, LwA,m, is computed as the arithmetic average of the measured.
- A-weighted sound power levels for a randomly selected sample, rounded to the nearest 0,1 B.
- The declared mean A-weighted emission sound pressure level, LpA,m, is computed as the arithmetic average of the measured A-weighted emission sound pressure levels at the bystander positions for a randomly selected sample, rounded to the nearest 1 dB.
- The statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LwA,m, such that there will be a 95 % probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6,5 % of the batch of new equipment, has A-weighted sound power levels greater than (LwA,m + Kv).
- The quantity, LwA,c (formerly called LwAd), can be computed from the sum of LWA,m and Kv.
- All measurements made to conform to ISO 7779 / ECMA-74 and declared to conform to ISO 9296 / ECMA-109.
- B, dB, abbreviations for bels and decibels, respectively, where 1 B = 10 dB.
- The results in this declaration apply only to the model numbers listed above when operating and tested according to the indicated modes and standards. A system with additional configuration components or increased operating functionality may increase the noise emission values.
- System under abnormal conditions may increase the noise level, persons in the vicinity of the product [cabinet] for extended periods of time should consider wearing hearing protection or using other means to reduce noise exposure.

Technical Specifications

Emissions Classification (EMC) – Regulatory Information

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

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

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

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

Summary of Changes

Date	Version History	Action	Description of Change
10-Jan-2023	Version 1	New	New QuickSpecs

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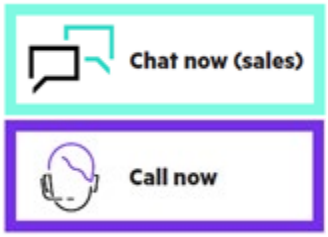

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