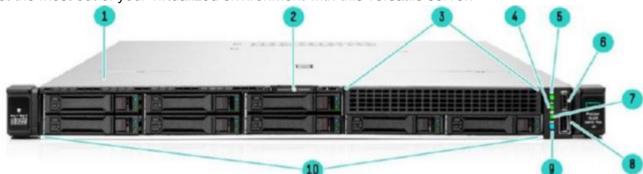
#### Overview

# HPE ProLiant DL325 Gen10 Plus v2 server

The HPE ProLiant DL325 Gen10 Plus v2 is a secure and versatile single socket server for virtualization, I/O intensive and storage intensive workloads.

Powered by the 3<sup>rd</sup> generation AMD® EPYC® 7003 Series processor, the HPE ProLiant DL325 Gen10 Plus v2 offers greater processing power. On top of that, the chassis is smaller compared to the previous generation providing better compatibility to your infrastructure. Tri-mode RAID controller support provides flexibility to support across SAS/SATA/NVMe types of storage options.

This 1P, 1U server delivers an exceptional balance of processor, memory and I/O for 2P performance at 1P TCO. Get the most out of your virtualized environment with this versatile server.



#### 8SFF Front View 6. USB

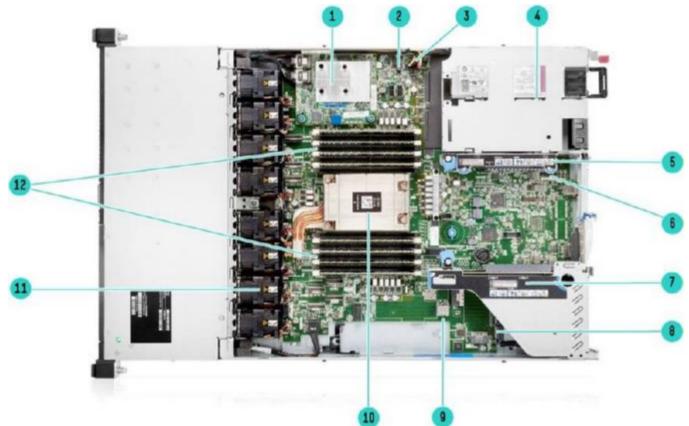
- 1. Quick removal access panel
- 2. Serial no. label pull tab
- 3. Optional Media Bay\*
- 4. Health LED

7. NIC status LED

USB 3.1 Gen1 port

- 8. iLO Service Port
- 9. UID button/LED
- 5. Power On/Standby button and system power LED 10. Standard 8 SAS/SATA/NVMe Hot Plug drive bays **Notes:**
- -\* Option Shown: No media
- -\* Optional: +2SFF U.3 SAS/SATA/NVMe drives (total max 10SFF)
- -\* Optional: +2SFF U.2 NVMe drives (total max 10SFF)
- -\* Optional: 9.5 mm SATA DVD-ROM/RW Optical Drive

# Overview



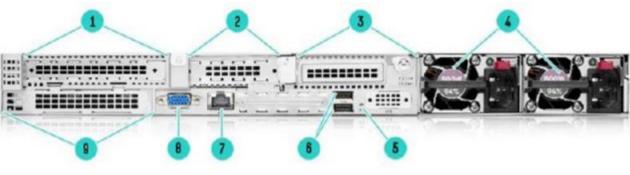
#### **Internal View 8SFF chassis**

7.

- 1. Optional HPE Flexible Smart Array Controller (Type -a shown)
- 2. Chassis intrusion detection connector
- 3. Hard drive backplane power connector
- 4. Hot Plug redundant HPE Flexible Slot Power supplies
- 5. Connection for (optional) secondary riser
- 6. Serial Port Connector

- Primary PCIe riser, standard
- 8. (Under) OCP 3.0 Slot
- 9. Internal USB 3.1 Gen1 connector
- 10. Processor (heatsinks shown)
- 11. Fan cage shown with 8 Performance Hotswappable fans
- 12. DDR4 DIMM slots. Only 8 slots are populated as shown.

### Overview



#### **Rear View**

- 1. Slot 1 PCIe 4.0
- 2. Slot 2 PCIe 4.0
- 3. Optional Slot 3 PCIe 4.0
- 4. Hot-plug Power Supply 1 and 2 (Optional)
- USB 3.1 Gen1 Ports (2)
   iLO Management Port
- 8. VGA port
- 9. Optional: OCP 3.0 Slot (not shown)

5. UID LED

# What's New

- Supports the latest AMD EPYC 7003 Series processor with up to 280W
- Chassis is less than 1 meter of depth
- Support for Tri-mode storage controllers for SAS/SATA/NVMe drives
- New Basic Carrier SAS/SATA/NVMe drives.
- Support for up to 10 SFF/4 LFF drives
- European Union (EU) Lot 9 regulation, please visit: <u>https://www.hpe.com/us/en/about/environment/msds-specs-more.html</u> for more information.

# **Platform Information**

#### Form Factor

• 1U rack

#### Chassis Types

- 4 LFF SAS/SATA, with optional Optical Drive options
- 8 SFF SAS/SATA, with optional 2SFF SAS/SATA or 2 NVMe and Optical Drive options
- 8 SFF NVMe U.2/U.3, with optional 2SFF SAS/SATA or 2 NVMe and Optical Drive options

#### Notes:

- -Mixing LFF & SFF is not supported
- When a 8 SFF chassis is selected, minimum one 8 SFF SAS/SATA, 8 SFF NVMe U.3 or 8 SFF NVMe U.2 backplane kit must be selected
- -When a 4 LFF chassis is selected, one 4 LFF SAS/SATA backplane kit must be selected
- The 8 SFF can be upgraded with either an additional 2 SFF drive kit for a total 10 SAS/SATA drives or 2SFF NVMe Kit for a total of 8 SAS/SATA + 2 NVMe drives or an optional Optical Drive
- The 8 SFF NVMe chassis can be upgraded with either an additional 2SFF NVMe kit for a total of 10 NVMe drives or 2SFF drive kit for a total of 8NVMe + 2 SAS/SATA drives or an optional Optical Drive

#### System Fans

Standard Fan Kit and Maximum Performance Fan Kit are not included in the chassis

# **Standard Features**

#### Processors - One of the following depending on model.

Notes: For more information regarding AMD EPYC processors, please see the following:

#### https://www.amd.com/en/products/epyc.

AMD EPYC Processor	Cores	Base Frequency	Max Frequency	Max Memorv	Wattage	Cache	Memory
EPYC 7763	64	2.45 GHz	3.5 GHz	4TB	280W	256MB	3200MT/s
EPYC 7413	24	2.65 GHz	3.6 GHz	4TB	180W	128MB	3200MT/s

### Chipset

No chipset - System on Chip (SoC) design.

# **On System Management Chipset**

HPE iLO 5 ASIC Notes: Read and learn more in the iLO QuickSpecs.

### Memory

One of the following depending on model

	-	
Туре:	HPE DDR4	Registered (RDIMM)
	SmartMemory	
DIMM Slots Available	16	16 DIMM slots per processor, 8 channels per processor, 2
		DIMMs per channel
Maximum capacity	1.0 TB	16 x 64 GB RDIMM @ 3200 MT/S at 1 or 2 DPC
(RDIMM)		
Maximum capacity	2.0 TB	16 x 128 GB LRDIMM @ 3200 MT/s at 1 or 2 DPC
(LRDIMM)		

#### Notes:

-The maximum memory speed is limited by the processor selection.

# **Expansion Slots**

Default Primary Riser					
Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
1	PCIe 4.0	X16	X16	Full-height, Full-length slot	Proc 1
2	PCIe 4.0	X16	X16	Low Profile	Proc 1

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

Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
1	PCIe 4.0	X16	X16	Low Profile or Full-height, half-length	Proc 1

# **Standard Features**

Notes:

- -Bus width indicated the number of electrical lanes running to the connector.
- -Secondary riser supports both Low Profile or FHHL cards, when FHHL card is installed, slot 2 will not be available.

# **Storage Controllers**

The Gen10/Gen10 Plus controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10/Gen10 Plus Smart Array controllers visit the <u>HPE Smart Array Gen10</u> Controllers Data Sheet.

HPE also launched Tri-Mode controllers which will support NVMe U.3/U.2 drives as wells as SAS/SATA drives. Please see below list for the tri-mode controllers supported on the server. For a more detailed breakout of the available Tri-Mode controllers visit the **HPE Gen10 Plus Tri-Mode Controllers Data Sheet** 

One of the following depending on model **Essential RAID Controller** 

- HPE Smart Array E208i-a SR G10 LH Controller
- HPE Smart Array E208e-p SR Gen10 Controller
- HPE Smart Array E208e-p SR Gen10 Controller

#### Performance RAID Controller

- HPE Smart Array P408i-a SR G10 LH Controller
- HPE Smart Array P408e-p SR Gen10 Controller
- HPE Smart Array P408i-p SR Gen10 Controller
- HPE Smart Array P816i-a SR G10 LH Controller

**Notes:** Performance RAID Controllers require the HPE 12W Smart Storage Battery (782961-B21) which is sold separately.

#### Tri-Mode RAID Controller

- HPE Tri-Mode MR216i-a Gen10 Plus Controller
- HPE Tri-Mode MR216i-p Gen10 Plus Controller
- HPE Tri-Mode MR416i-a Gen10 Plus Controller
- HPE Tri-Mode MR416i-p Gen10 Plus Controller
- HPE Tri-Mode SR416i-a Gen10 Plus Controller
- HPE Tri-Mode SR932i-p Gen10 Plus Controller

Notes: MR216i-a and MR216i-p controllers do not need the support of a smart storage battery.

# **Internal Storage Devices**

One of the following depending on model

#### **Optical Drive**

• None ship standard

#### **Hard Drives**

• None ship standard

### Standard Features

Maximum Internal Sto	Maximum Internal Storage		
	Capacity	Configuration	
Hot Plug LFF SAS HDD	72 TB	4 x 18 TB	
Hot Plug LFF SATA HDD	72 TB	4 x 18 TB	
Hot Plug SFF SAS SSD	153 TB	10 x 15.3 TB	
Hot Plug SFF SATA SSD	76.8 TB	10 x 7.68 TB	
Hot Plug SFF NVMe PCIe U.3 SSD	153.6 TB	10 x 15.36 TB	
Hot Plug SFF NVMe PCIe U.2 SSD	64 TB	10 x 6.4 TB	

#### Interfaces

Serial	Optional, rear
Video Port	1 Rear VGA Port - Standard
HPE iLO Remote Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard
USB 3.1 Gen1	Up to 4 total: 1 front, 2 rear, 1 internal (secure)

# **Power Supply**

• HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

Notes: Available in 94% Power Efficiency.

- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit Notes: Available in 94% Power Efficiency.
- HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit Notes:
  - -Available in 96% Power Efficiency.
  - -200-240VAC power input only.
- HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit Notes:

Available in 94% Power Efficiency.277VAC power input.

• HPE 800W Flex Slot 48VDC Hot Plug Low Halogen Power Supply Kit

Notes:

- Available in 94% Power Efficiency.

--48VDC power input.

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
 Notes:

Available in 94% Power Efficiency.
200-240VAC power input only.

• HPE 1600W 48VDC Power Supply Kit

# Standard Features

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Plus Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

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

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

For information on power specifications and technical content visit HPE Server power supplies.

# **Operating Systems and Virtualization Software Support for ProLiant Servers**

- Windows Server 2016
- Windows Server 2019 (Most Recent Version)
- VMware ESXi 6.7 U3
- VMware ESXi 7.0 U1/U2
- SUSE Linux Enterprise Server (SLES) 12 SP5
- SUSE Linux Enterprise Server (SLES) 15 SP2
- Red Hat Enterprise Linux (RHEL) 8.3

**Notes:** For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server.

#### https://www.hpe.com/us/en/servers/server-operating-systems.html

# Graphics Integrated Video Standard

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

#### HPE iLO 5 on system management memory

- 32 MB Flash
- 4 Gbit DDR 3 with ECC protection

# **Industry Standard Compliance**

- ACPI 6.1 Compliant
- PCIe 4.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- VGA Port
- USB 3.1 Gen1 Compliant (internal)
- Energy Star 3.0
- SMBIOS 3.1
- UEFI 2.6
- Redfish API

# **Standard Features**

- IPMI 2.0
- Secure Digital 2.0
- 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
- European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into
  effect on March 1st, 2020. Among other requirements, for servers this directive establishes power
  thresholds for idle state, as well as efficiency and performance in active state which vary among
  configurations. HPE ProLiant Gen10 Plus servers are compliant with Lot9 requirements. For more
  information regarding HPE Lot 9 conformance, please visit:

#### https://www.hpe.com/us/en/about/environment/msds-specs-more.html

• ASHRAE A3/A4

**Notes:** For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>.

• UEFI (Unified Extensible Firmware Interface Forum)

**Notes:** UEFI is the default for the DL325 Gen10 Plus. Legacy mode can be selected in the field or as a CTO option (758959-B22).

# **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 Redfish API conformance and offer simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at http://www.hpe.com/info/restfulapi.

# HPE Server UEFI/Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen10 Plus servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode.

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

### **Standard Features**

- Secure Boot and Secure Start enable for enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.1 Gen1 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- Workload Profiles for simple performance optimization
- UEFI Boot Mode only
- NVMe Boot Support
- iSCSI Software Initiator Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- · 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.

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

# **Server Utilities**

#### **Active Health System**

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

#### **Active Health System Viewer**

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

#### **Smart Update**

Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at <a href="https://buy.hpe.com/b2c/us/en/enterprise-software/infrastructure-management-software/system-server-management-software/hpe-system-server-software-management-software/smart-update-manager-%28sum%29/p/5182020.">https://buy.hpe.com/b2c/us/en/enterprise-software/infrastructure-management-software/system-server-software-management-software/smart-update-manager-%28sum%29/p/5182020.</a>

#### **iLO Amplifier Pack**

Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9, Gen10 and Gen10 Plus HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.

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

#### **HPE iLO Mobile Application**

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

#### **RESTful Interface Tool**

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

# **Standard Features**

### **Scripting Tools**

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

#### HPE OneView Standard

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

#### HPE Systems Insight Manager (HPE SIM)

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

# Security

- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- FIPS 140-2 validation (iLO 5 certification in progress)
- Common Criteria certification (iLO 5 certification in progress)
- Configurable for PCI DSS compliance
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Support for Commercial National Security Algorithms (CNSA)
- Tamper-free updates components digitally signed and verified
- Secure Recovery recover critical firmware to known good state on detection of compromised firmware
- Ability to rollback firmware
- Secure erase of NAND/User data
- TPM (Trusted Platform Module) 2.0 option
- Bezel Locking Kit option
- Chassis Intrusion detection option

# Warranty

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

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

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

# **Optional Features**

# **Server Management**

#### **HPE iLO Advanced**

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

#### **HPE OneView Advanced**

HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9, Gen10 and Gen10 Plus servers. To learn more visit http://www.hpe.com/info/oneview.

#### **HPE InfoSight for Servers**

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

#### Learn more at https://www.hpe.com/servers/infosight

#### **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.

#### 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



**Optional Features** 

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

#### **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 Pointext 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/h20195/v2/Getdocument.aspx?docname=a00108652enw

# **HPE Datacenter Care**

**HPE Datacenter Care** helps customers address the pressing needs of IT today and smoothly transform to a more agile cloud-like IT operations model. We help run and monitor your IT by offloading the day to day routine tasks, helping customers be more predictive and proactive, and saving time with one place to call with for all of their IT.

Partner with an assigned account team backed by local and global experts, access HPE enhanced call experience with priority access, use specialized support for complex, technologies, choose hardware and software support for your devices, implement proactive monitoring to stay ahead of issues, and access HPE IT best practices and IP. HPE Datacenter Care advantage options are available to add to your agreement to give you specialized expertise for performance, security, back up analysis, and much more. Datacenter Care is available as both tailored statement of work and as a packaged service for 3, 4, and 5 year terms. https://www.hpe.com/us/en/services/datacenter-hybrid-services.html

### 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**

Datacenter 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.

**Notes:** HPE ProLiant DL385 Gen10 Plus Server is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.

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 Packard Enterprise due to malfunction.

# Configuration Information

European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 Plus servers are compliant with Lot9 requirements. For more information regarding HPE Lot 9 conformance, please visit:

#### https://www.hpe.com/us/en/about/environment/msds-specs-more.html

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.

CTO Server	HPE ProLiant DL325 Gen10 Plus v2 8SFF CTO Server	HPE ProLiant DL325 Gen10 Plus v2 4LFF CTO Server
SKU Number	P38471-B21	P38474-B21
Processor	Not included as standard	Not included as standard
DIMM Slots	16-DIMM slots	16-DIMM slots
Storage Controller	Choice of HPE modular Smart Array and PC	Cle plug-in controller
PCIe	Two standard in primary riser	Two standard in primary riser
Drive Cage -	8 SFF (Backplane is not included)	4 LFF (Backplane is not included)
included		
Network Controller	Choice of OCP and stand up card	
Fans	Not included as standard	
Management	HPE iLO with Intelligent Provisioning (standa (optional)	ard), iLO Advances and OneView
USB	Front: 1 USB 3.1 Gen1 + iLO service port	Front: 1 USB 3.1 Gen1 + iLO service port
	Rear: 2 USB 3.1 Gen1	Rear: 2 USB 3.1 Gen1
	Internal: 1 USB 3.1 Gen1	Internal: 1 USB 3.1 Gen1

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

#### Notes:

- 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).

-TAA compliant configuration requires ...

- All CTO servers are Energy Star 3.0 compliant.

-CTO servers do not ship with rail kits, they need to be ordered separately

#### **Configuration Information**

### **Configuration Information**

CTO Server	8 SFF CTO Chassis	4 LFF Chassis
Included Drive	8 SFF	4 LFF
Cage		
Universal Media	Optional	Not Available
Bay		
ODD	1 Optional	1 Optional
4 LFF SAS/SATA	Not Available	1 Optional
8 SFF SAS/SATA	1 Optional	Not Available
8 SFF NVMe	1 Optional	Not Available
2 SFF SAS/SATA	1 Optional	Not Available
2 SFF NVMe	1 Optional	Not Available

#### Notes:

- This applies to CTO configurations, field upgrades may differ depending field configuration.

-Backplane kits need to be ordered separately for CTO servers

#### Step 2: Choose Required Options (only one of the following unless otherwise noted) Please select one -B21 processor required below. Notes: -DDR4 memory speed will depend on the quantity and type of DIMMs installed Step 2a: Choose Processors **Processor Option Kits** SKU AMD EPYC 7763 2.45GHz 64-core 280W Processor for HPE P38696-B21 Notes: -280W processors need Maximum Performance Fan Kit -When this CPU is installed, maximum supported ambient temperature is 25C AMD EPYC 7413 2.65GHz 24-core 180W Processor for HPE P38675-B21 Step 2b: Choose Memory Options Please select one or more memory from below. For new Gen10 Plus memory population rule whitepaper and optimal memory performance guidelines, please go to: http://www.hpe.com/docs/amd-population-rules-Gen10Plus Notes: - Memory DIMM availability with a server platform is dependent upon completion of certification testing. -The maximum memory speed is a function of the memory type, memory configuration, and processor model. **Registered DIMMs (RDIMMs)** HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit P07638-B21 HPE 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22 Registered Smart Memory P07640-B21 Kit.

Load Reduced DIMMs (LRDIMMs)	
HPE 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07650-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07646-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07644-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07642-B21

HPE 128GB (1x128GB) Quad Rank x4 DDR4-3200 CAS-22-22 Load Reduced Smart P07652-B21 Memory Kit

#### Notes:

-Mixing of x4 & x8 memory is not allowed

- 3200 MT/s memory SKUs offer a transfer rate of 3200 MT/s at both 1 DIMM per channel and 2 DIMMs per channel

# **Configuration Information**

### Step 2c: Choose Power Supplies

Select one or two power supplies from below.

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

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38995-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38997-B21
Notes:	
- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is	run to determine the right

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.

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 Unique Options	
HPE DL325 Gen10 Plus x16 Low Profile PCIe Riser Kit	P17264-B21
Notes:	
- This riser sits into the secondary PCIe slot	
- This riser can support only low profile PCIe Cards	
<ul> <li>x16 LP Riser Kit and x16 FHHL Riser Kit cannot be selected together.</li> <li>HPE DL325 Gen10 Plus x16 FHHL PCIe Riser Kit</li> </ul>	P20421-B21
Notes:	F 2042 I-D2 I
– When HPE DL325 Gen10 Plus FHHL PCIe Riser Kit is selected then Slot 2 cannot be used	
- 16 LP Riser Kit and x16 FHHL Riser Kit cannot be selected together.	
<ul> <li>This riser can support only FHHL PCIe Cards</li> </ul>	
HPE ProLiant DL325 Gen10 Plus v2 8SFF SAS/SATA BC Backplane Kit	P38473-B21
Notes:	
– Mixing of LFF & SFF Backplane/Drive cage are not allowed.	
- One Standard Fan Kit (P41471-B21) must be selected if this backplane kit is supported.	
HPE ProLiant DL325 Gen10 Plus v2 8SFF U.3 BC Backplane Kit	P38476-B21
Notes:	
- Mixing of LFF & SFF Backplane/Drive cage are not allowed.	
<ul> <li>If this Backplane Kit is selected along with Tri-mode Controller then SAS/SATA/NVMe U.3 drives can be selected. If this Backplane Kit is selected without Tri-mode Controller then only NVMe U.3 drives can be selected.</li> </ul>	
-2SFF U.2 NVMe backplane kit (P38389-B21) cannot be selected with this backplane kit.	
-One Maximum Performance Fan Kit (P38506-B21) must be selected if this backplane kit is supported.	
HPE ProLiant DL325 Gen10 Plus v2 8SFF U.2 BC Backplane Kit	P38479-B21
Notes:	
– Mixing of LFF & SFF Backplane/Drive cage are not allowed.	
- If 2SFF SAS/SATA/U.3 NVMe backplane kit (P38386-B21) is selected along with this backplane kit, then	
P38386-B21 can support only SFF SAS/SATA drives. – One Maximum Performance Fan Kit (P38506-B21) must be selected if this backplane kit is supported.	
HPE ProLiant DL325 Gen10 Plus v2 2SFF U.3 Enablement Kit	P38386-B21
Notes:	1 00000 021
– Mixing of LFF & SFF Backplane/Drive cage are not allowed.	
<ul> <li>For 8SFF models, customer can select max q'ty=1 of either the 2SFF SAS/SATA/U.3 NVMe Enablement Kit (P38386-B21) or 2SFF U.2 NVMe Enablement Kit (P38389-B21)</li> </ul>	

Configuration Information	
<ul> <li>If this backplane kit is selected along with 8SFF SAS/SATA/U.2 NVMe Basic Carrier Backplane Kit (P38479-B21), then this backplane kit can support only SFF SAS/SATA drives.</li> </ul>	
HPE ProLiant DL325 Gen10 Plus v2 2SFF U.2 Enablement Kit	P38389-B21
Notes:	
<ul> <li>Mixing of LFF &amp; SFF Backplane/Drive cage are not allowed.</li> <li>For 8SFF models, customer can select max q'ty=1 of either the 2SFF SAS/SATA/U.3 NVMe Enablement Kit (P38386-B21) or 2SFF U.2 NVMe Enablement Kit (P38389-B21)</li> <li>This backplane kit cannot be selected with 8SFF SAS/SATA/U.3 NVMe Basic Carrier Backplane Kit (P38476-B21)</li> </ul>	
HPE ProLiant DL325 Gen10 Plus v2 4LFF SAS/SATA LP Backplane Kit	P38470-B21
Notes:	
<ul> <li>Mixing of LFF &amp; SFF Backplane/Drive cage are not allowed.</li> <li>One Standard Fan Kit (P41471-B21) must be selected if this backplane kit is supported.</li> </ul>	
BIOS Mode	
HPE Legacy FIO Mode Setting	758959-B22
Notes:	
<ul> <li>UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.</li> <li>If Legacy FIO Mode Setting (758959-B22) is selected with Embedded controller (in AHCI mode) as primary controller then RAID Setting is not supported.</li> <li>The Legacy Mode Setting (758959-B22) and HPE Dual 8GB microSD EM USB Kit / 32GB microSD CANNOT be selected together.</li> </ul>	
HPE Converged Infrastructure Management Software	
HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A
HPE OneView Standard 1yr 9x5 Support Flexible Quantity E-RTU	K6F98AAE
HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
HPE OneView Upgrade from Insight Management 3yr 24x7 Support 1-server LTU	F6Q91A
HPE OneView including 3yr 24x7 Support Track 1-server LTU	E5Y36A
HPE OneView w/o iLO Advance including 3yr 24x7 Support Track 1-server LTU	E5Y40A
HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1- server LTU	E5Y43A
HPE OneView for ProLiant DL Server including 3yr 24x7 Support Bundle Track 1-server LTU	E5Y44A
HPE OneView Upgrade from Insight Management including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y45AAE

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

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

# **Core Options**

# **HPE Unique Options**

HPE ProLiant DL325 Gen10 Plus v2 Standard Fan Kit	P41471-B21
Notes: This is required if 4 LFF chassis or 8 SFF SAS/SATA backplane is selected.	
HPE ProLiant DL325 Gen10 Plus v2 Max Performance Fan Kit	P38506-B21
Notes: This kit is required when 8 SFF NVMe U.3 or U.2 backplanes are selected or when	
CPU =280W and or when any of the below options are selected:	
<ul> <li>HPE IB HDR/EN 200Gb 1p QSFP56 OCP3 Adptr (P31323-B21)</li> </ul>	
HPE IB HDR/EN 200Gb 2p QSFP56 OCP3 Adptr (P31348-B21)	
<ul> <li>HPE IB HDR/EN 200Gb 2p QSFP56 Adptr (P31324-B21)</li> </ul>	
<ul> <li>HPE 100GbE 1p QSFP28 MCX515A-CCAT Adptr (P31246-B21)</li> </ul>	
<ul> <li>MLX MCX623106AS 100GbE 2p QSFP56 Adptr (P25960-B21)</li> </ul>	
<ul> <li>MLX MCX623105AS 200GbE 1p QSFP56 Adptr (P10180-B21)</li> </ul>	
<ul> <li>INT E810 100GbE 2n OSEP28 OCP3 Adotr (P22767-B21)</li> </ul>	

• INT E810 100GbE 2p QSFP28 OCP3 Adptr (P22767-B21)

# **HPE Optical Drives**

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21
HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21
HPE Mobile USB DVD-RW Optical Drive	701498-B21

#### Notes:

- If optical drive is selected along with 4 LFF chassis then LFF ODD SATA M.2 Cable (P39141-B21) must be selected.

- If optical drive is selected along with 8 SFF chassis then SFF ODD SATA M.2 Cable (P39144-B21) must be selected.

# **Enterprise - 12G SAS - SFF Drives**

HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty HDD	P28028-B21
HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty HDD	P40430-B21
HPE 600GB SAS 12G Mission Critical 15K LFF LPC 3-year Warranty HDD	P40431-B21
HPE 900GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty HDD	P40432-B21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty HDD	P28586-B21
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e HDD	P28352-B21
Midline - 12G SAS - SFF Drives	
HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P28505-B21
Midline - 12G SAS - LFF Drives	
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	833926-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	833928-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861746-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HI	DD 834031-B21
HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed	881781-B21
Firmware HDD	
HPE 14TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	P09155-B21
HPE 16TB SAS 12G Business Critical 7.2K LFF (3.5in) LP 1yr Wty 512e ISE HDD	P23608-B21
HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e ISE HDD	P37669-B21
Midline - 6G SATA - SFF Drives	
HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD	P28610-B21
HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P28500-B21
Midline - 6G SATA - LFF Drives	
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861686-B21

# Core Options

HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861681-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861683-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861742-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	834028-B21
HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed	881787-B21
Firmware HDD	
HPE 14TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	P09165-B21
HPE 16TB SATA 6G Business Critical 7.2K LFF (3.5in) LP 1yr Wty 512e ISE HDD	P23449-B21
HPE 18TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e ISE HDD	P37678-B21
SED (Self-Encryption Drive)	
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting FIPS HDD	P28618-B21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD	P28622-B21

# **SSD Selection**

To streamline the configuration process for HPE ProLiant Gen10 Plus servers and to provide the best product availability, HPE recommends SSDs from the list located here:

http://www.hpe.com/products/recommend. Read Intensive - 12G SAS - SFF - Solid State Drives HPE 960GB SAS 24G Read Intensive SFF BC PM6 SSD P40470-B21 HPE 960GB SAS 12G Read Intensive SFF BC PM1643a SSD P40556-B21 HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD P40506-B21 HPE 1.92TB SAS 24G Read Intensive SFF BC PM6 SSD P40471-B21 HPE 1.92TB SAS 12G Read Intensive SFF BC PM1643a SSD P40557-B21 HPE 1.92TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD P40507-B21 HPE 3.84TB SAS 24G Read Intensive SFF BC PM6 SSD P40472-B21 HPE 3.84TB SAS 12G Read Intensive SFF BC PM1643a SSD P40558-B21 HPE 3.84TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD P40508-B21 HPE 7.68TB SAS 24G Read Intensive SFF BC PM6 SSD P40473-B21 HPE 7.68TB SAS 12G Read Intensive SFF BC PM1643a SSD P40559-B21 HPE 7.68TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD P40509-B21 HPE 15.3TB SAS 24G Read Intensive SFF BC PM6 SSD P40474-B21 Mixed Use - 12G SAS - SFF - Solid State Drives HPE 800GB SAS 24G Mixed Use SFF BC PM6 SSD P40475-B21 HPE 800GB SAS 12G Mixed Use SFF BC PM1645a SSD P40560-B21 HPE 800GB SAS 12G Mixed Use SFF BC SS540 SSD P40573-B21 HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD P40510-B21 HPE 1.6TB SAS 24G Mixed Use SFF BC PM6 SSD P40476-B21 HPE 1.6TB SAS 12G Mixed Use SFF BC PM1645a SSD P40561-B21 HPE 1.6TB SAS 12G Mixed Use SFF BC SS540 SSD P40574-B21 HPE 1.92TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD P40511-B21 HPE 3.2TB SAS 24G Mixed Use SFF BC PM6 SSD P40478-B21 HPE 3.2TB SAS 12G Mixed Use SFF BC PM1645a SSD P40562-B21 HPE 3.2TB SAS 12G Mixed Use SFF BC SS540 SSD P40575-B21 HPE 3.84TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD P40512-B21 HPE 6.4TB SAS 24G Mixed Use SFF BC PM6 SSD P40479-B21 HPE 6.4TB SAS 12G Mixed Use SFF BC PM1645a SSD P40563-B21

# Core Options

Mixed Use SAS- LFF- Solid State Drives	
HPE 1.6TB SAS 24G Mixed Use LFF LPC PM6 SSD	P40477-B21
HPE 960GB SAS 12G Mixed Use LFF LPC Value SAS Multi Vendor SSD	P37009-B21
Write Intensive - 12G SAS - SFF - Solid State Drives	
HPE 400GB SAS 12G Write Intensive SFF BC SS540 SSD	P40576-B21
HPE 400GB SAS 24G Write Intensive SFF BC PM6 SSD	P40480-B21
HPE 800GB SAS 12G Write Intensive SFF BC SS540 SSD	P40577-B21
HPE 800GB SAS 24G Write Intensive SFF BC PM6 SSD	P40481-B21
HPE 1.6TB SAS 24G Write Intensive SFF BC PM6 SSD	P40482-B21
Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40502-B21
HPE 480GB SATA 6G Mixed Use SFF BC S4610 SSD	P40545-B21
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40503-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40504-B21
HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40505-B21
HPE 3.84TB SATA 6G Mixed Use SFF BC S4610 SSD	P40546-B21
Mixed Use - 6G SATA- LFF - Solid State Drives	
HPE 960GB SATA 6G Mixed Use LFF LPC 5300M SSD	P19980-B21
Read Intensive - 6G SATA - SFF - Solid State Drives	
HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40498-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40499-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC S4510 SSD	P40543-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40500-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC S4510 SSD	P40544-B21
HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40501-B21
Read Intensive - 6G SATA - LFF - Solid State Drives	
HPE 480GB SATA 6G Read Intensive LFF LPC 5300P SSD	P19974-B21
VRO - 6G SATA - SFF - Solid State Drives	
HPE 1.92TB SATA 6G Very Read Optimized SFF BC 5210 SSD	P40554-B21
HPE 7.68TB SATA 6G Very Read Optimized SFF BC 5210 SSD	P40555-B21
VRO - 6G SATA - LFF - Solid State Drives	
HPE 3.84TB SATA 6G Very Read Optimized LFF LPC 5210 SSD	P23491-B21
HPE 7.68TB SATA 6G Very Read Optimized LFF LPC 5210 SSD	P23495-B21
Notes: PM6 SSDs can operate at SAS 24G speed with SR series Tri-mode controllers	
installed	
Write Intensive - NVMe - SFF - Solid State Drives	
HPE 375GB NVMe Gen3 High Performance Low Latency Write Intensive SFF BC U.2 P4800X SSD	P40552-B21
HPE 750GB NVMe Gen3 High Performance Low Latency Write Intensive SFF BC U.2 P4800X SSD	P40553-B21
Read Intensive - NVMe - SFF - Solid State Drives	
HPE 960GB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733 SSD	P40564-B21
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 PE8010 SSD	P29161-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733 SSD	P40565-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM6 SSD	P40490-B21

# Core Options

HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 CD6 SSD	P40483-B21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 PE8010	P31185-B21
SSD	D 405 47 D04
HPE 2TB NVMe Gen3 High Performance Read Intensive SFF BC U.2 P4510 SSD	P40547-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733 SSD	P40566-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM6 SSD	P40491-B21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 CD6 SSD	P40484-B21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 PE8010 SSD	P31187-B21
HPE 4TB NVMe Gen3 High Performance Read Intensive SFF BC U.2 P4510 SSD	P40548-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 CD6 SSD	P40485-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733 SSD	P40567-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 PE8010 SSD	P31189-B21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733 SSD	P40568-B21
Mixed Use - NVMe - SFF - Solid State Drives	
HPE 800GB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735 SSD	P40569-B21
HPE 800GB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM6 SSD	P40492-B21
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 CD6 SSD	P40486-B21
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 PE8030 SSD	P29166-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735 SSD	P40570-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM6 SSD	P40493-B21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 CD6 SSD	P40487-B21
HPE 1.6TB NVMe Gen3 High Performance Mixed Use SFF BC U.2 P4610 SSD	P40549-B21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 PE8030 SSD	P31191-B21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 PE8030 SSD	P31193-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735 SSD	P40571-B21
HPE 3.2TB NVMe Gen3 High Performance Mixed Use SFF BC U.2 P4610 SSD	P40550-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM6 SSD	P40494-B21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 CD6 SSD	P40488-B21
HPE 6.4TB NVMe Gen3 High Performance Mixed Use SFF BC U.2 P4610 SSD	P40551-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735 SSD	P40572-B21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 PE8030 SSD	P31195-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM6 SSD	P40495-B21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 CD6 SSD	P40489-B21
SED (Self-Encryption Drive)	
HPE 960GB SATA 6G Mixed Use SFF BC Self-encrypting 5300M SSD	P42128-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC Self-encrypting 5300M SSD	P42132-B21
HPE 480GB SATA 6G Read Intensive SFF BC Self-encrypting 5300P SSD	P42120-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC Self-encrypting 5300P SSD	P42124-B21
Internal Dual M.2 Kit	
HPE Universal SATA 6G AIC HHHL M.2 SSD Enablement Kit	878783-B21
Notes:	
<ul> <li>This M.2 SSD Enablement Kit requires the selection of M.2 SSD Drives (Min 1 // Max 2)</li> </ul>	

o For 4LFF Model:

M.2 kit requires the selection of one qty of LFF ODD SATA M.2 cable (P39141-B21)

o For 8SFF Model:

# Core Options

<ul> <li>M.2 kit requires the selection of one qty of SFF ODD SATA M.2 cable (P39144-B21).</li> <li>One qty of LFF ODD SATA M.2 cable (P39141-B21) or SFF ODD SATA M.2 cable (P39144-B21) can support both HPE Universal SATA HH M.2 Kit and Optical Disk Drive (726536-B21/726537-B21).</li> <li>M.2 kit and 2SFF SATA cable (P39156-B21) cannot be selected together</li> </ul>	
Read Intensive - M.2 - Solid State Drives	
HPE 240GB SATA 6G Read Intensive M.2 2280 5300B SSD	P19888-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 5300P SSD	P19890-B21
HPE 960GB SATA 6G Read Intensive M.2 2280 5300P SSD	P19892-B21
Hard Drive Blank Kits	
HPE Gen9 LFF HDD Spade Blank Kit	807878-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21

### HPE Smart IO

Requirements:

One 3yr/4yr/5yr Silver or 3yr/4yr/5yr Platinum license must be purchased for every DSC-25
card in a server.
<ul> <li>1yr Silver, 1yr Platinum, and 1yr Policy and Services Manager (PSM) licenses are reserved</li> </ul>

for renewals only.
One Policy and Services Manager (PSM) license is required to manage up to 3,000 DSC-25 cards.

Pensando Distributed Services Card (DSC)

Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28	P26966-B21
Card	

# **Notes:** Each card instance requires one RTU license of Silver or Platinum software. In case of more than one adapter, RTU licenses doesn't need to be of the same part number.

Pensando DSP Silver Software Licenses

Pensando Distributed Services Platform Enterprise 1-year Renewal Subscription 24x7 Support E-RTU	R6A06AAE
Pensando Distributed Services Platform Enterprise 3-year Subscription 24x7 Support E-RTU	R6A07AAE
Pensando Distributed Services Platform Enterprise 4-year Subscription 24x7 Support E-RTU	R6F68AAE
Pensando Distributed Services Platform Enterprise 5-year Subscription 24x7 Support E-RTU	R6A08AAE
Pensando DSP Platinum Software Licenses	
Pensando Distributed Services Platform Enterprise Pro 1-year Renewal Subscription 24x7 Support E-RTU	R6A09AAE
Pensando Distributed Services Platform Enterprise Pro 3-year Subscription 24x7 Support E-RTU	R6A10AAE
Pensando Distributed Services Platform Enterprise Pro 4-year Subscription 24x7 Support E-RTU	R6F69AAE
Pensando Distributed Services Platform Enterprise Pro 5-year Subscription 24x7 Support E-RTU	R6A11AAE

# **HPE Networking**

1 Gigabit Ethernet adapters

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

P21106-B21

# Core Options

#### **10 Gigabit Ethernet adapters**

Marvell QL41132HLRJ Ethernet 10Gb 2-port BASE-T Adapter for HPE	P08437-B21
Marvell QL41132HLCU Ethernet 10Gb 2-port SFP+ Adapter for HPE	P21933-B21
Marvell QL41134HLCU Ethernet 10Gb 4-port SFP+ Adapter for HPE	P10094-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P26259-B21
Intel X710-DA2 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P28787-B21
10/25 Gigabit Ethernet adapters	
Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P13188-B21
Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P21109-B21
Marvell QL41232HLCU Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P22702-B21
Xilinx X2522-25G Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P24437-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
100/200 Gigabit Ethernet adapters	
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P21112-B21
HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	P31246-B21
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21
Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	P10180-B21
Notes:	

 Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiberoptic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: https://h20195.www2.hpe.com/v2/getpdf.aspx/A00002507ENW.pdf?

Recommended System Ambient Temperature				
PCIe Slot	P21112-B21	P31246-B21	P25960-B21	P10180-B21
Slot 1	35C	30C	30C	30C
Slot 2	25C	25C	25C	25C
Slot 3	Not Support	Not Support	Not Support	Not Support

#### **OCP Adapters**

Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P08449-B21
Marvell QL41132HQCU Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE	P08452-B21
Marvell QL41132HQRJ Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE	P10103-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
Intel X710-DA2 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE	P28778-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21
Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10112-B21
Marvell QL41232HQCU Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10118-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE	P22767-B21
Notes: Max support ambient temp. = 30C	
HPE DL385 Gen10 Plus OCP Upgrade Cable Kit	P14603-B21

# **HPE InfiniBand**

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

# Core Options

#### **Notes:** Max support ambient temp. = 30C

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 MCX653436A-HDAI O Adapter	CP3 PCle4 x16	P31348-B21
<b>Notes:</b> Max support ambient temp. = 30C		
HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105 Adapter	5A-HDAT	P23664-B21
HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106 Adapter	6A-HDAT	P31324-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653 Adapter	3105A-ECAT	P23665-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653	3106A-ECAT	P23666-B21

Adapter

Recommended System Ambient Temperature				
PCIe Slot	P23664-B21	P31324-B21	P23665-B21	P23666-B21
Slot 1	35C	35C	35C	35C
Slot 2	30C	25C	30C	25C
Slot 3	Not Support	Not Support	25C	Not Support

#### **HPE PCIe Workload Accelerator Options**

HPE 750GB NVMe Gen3 x4 High Performance Low Latency Write Intensive AIC HHHL878038-B21P4800X SSD

HPE 1.6TB NVMe Gen4 x8 High Performance Mixed Use AIC HHHL PM1735 SSDP26934-B21HPE 3.2TB NVMe Gen4 x8 High Performance Mixed Use AIC HHHL PM1735 SSDP26936-B21

**Recommended System Ambient Temperature** PCIe Slot P26936-B21 878038-B21 P26934-B21 (Max =2 in slot1&2) (Max =3) (Max =3) Slot 1 35C 35C 35C 30C 30C Slot 2 25C Not Support 25C 25C Slot 3

# **HPE Cooling Options**

0

0

0

0

0

HPE ProLiant DL325 Gen10 Plus v2 Standard Fan Kit	P41471-B21
Notes:	
– The Standard Fan Kit and the Maximum Performance Fan Kit cannot be selected together	
- Standard Fan Kit must be selected if any of the below options is in the order:	
4 LFF Model, 8SFF SAS/SATA BP (P38473-B21)	
HPE ProLiant DL325 Gen10 Plus v2 Max Performance Fan Kit	P38506-B21
Notes:	
- The Standard Fan Kit and the Maximum Performance Fan Kit cannot be selected together	
– Max Perf Fan Kit (P38506-B21) can also support the configurations supported by a Standard Fan Kit	
(P41471-B21)	
–Max Perf Fan Kit (P38506-B21) must be selected if any of the below options is in the order	
8SFF NVMe U.3 BP (P38476-B21)	
8SFF NVMe U.2 BP (P38479-B21)	
HPE IB HDR/EN 200Gb 1p QSFP56 OCP3 Adptr (P31323-B21)	
HPE IB HDR/EN 200Gb 2p QSFP56 OCP3 Adptr P31348-B21)	
HPE IB HDR/EN 200Gb 2p QSFP56 Adptr (P31324-B21)	
······································	

# **Core Options**

o HPE 100GbE 1p QSFP28 MCX515A-CCAT Adptr (P31246-B21)

o MLX MCX623106AS 100GbE 2p QSFP56 Adptr (P25960-B21)

o MLX MCX623105AS 200GbE 1p QSFP56 Adptr (P10180-B21)

o INT E810 100GbE 2p QSFP28 OCP3 Adptr (P22767-B21)

o Processors with 280W

# **HPE Power Supplies**

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that alle plug, tool-less installation into HPE ProLiant Gen10 Plus Performance Servers. Flex Slot power supplied certified for high-efficiency operation and offer multiple power output options, allowing users to "right- power supply for specific server configurations. This flexibility helps to reduce power waste, lower over energy costs, and avoid "trapped" power capacity in the data center.	olies are ·size" a
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
<b>Notes:</b> Flex Slot Platinum power supplies support power efficiency of up to 94% and include a	
standard C-14 power inlet connector.	
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
<b>Notes:</b> Flex Slot Titanium power supplies support power efficiency of up to 96% and include a	
standard C-14 power inlet connector.	
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38995-B21
<b>Notes:</b> Flex Slot Platinum power supplies support power efficiency of up to 94% and include a	
standard C-14 power inlet connector.	
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
Notes: Flex Slot -48VDC power supplies support power efficiency of up to 94%	
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38997-B21
Notes:	
- Flex Slot universal power supplies support power efficiency of up to 94% and support both	
277VAC/380VDC power inputs.	
-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).	
- 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.	
– Option kits contain the specified power supply and a PDU IEC cable.	
– 1600W power supplies only support high line voltage.	
Upper loss aconstruction with a point ing the contraction and the real mean time with Device Distribution	

 – HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit <u>HPE power cords</u> for a full list of optional HPE power cords.

# **Additional Options**

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

### **Embedded Management**

### HPE iLO Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A
HPE iLO Common Password FIO Setting	P08040-B21

#### HPE Converged Infrastructure Management Software

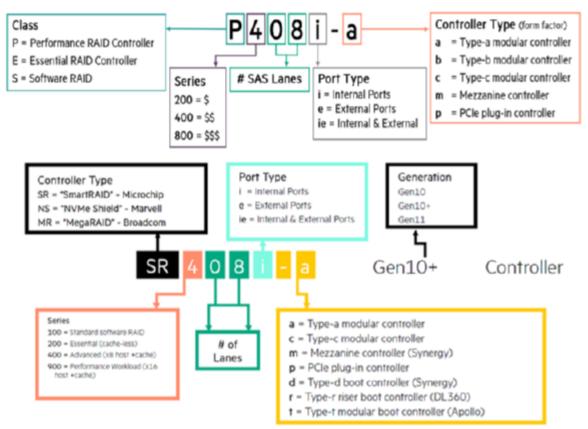
HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
<b>Notes:</b> Licenses ship without media. The HPE OneView Media Kit can be ordered separately, o <u>downloaded</u> .	r can be

# **HPE Security**

HPE DL325 Gen10 Plus Bezel Kit	P18547-B21
HPE Bezel Lock Kit	875519-B21
HPE Gen10 TPM 1.2 FIO Setting	872108-B21
HPE Trusted Platform Module 2.0 Gen10 Plus Black Rivets Kit	P13771-B21
HPE Gen10 Plus Chassis Intrusion Detection Kit	P14604-B21
<b>Notes:</b> 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 Smart Array Controllers**

# Additional Options



#### **Smart Array Controllers**

HPE Smart Array Controller Batteries	782961-B21
<b>Notes:</b> All performance RAID controllers are supported by the HPE Smart Storage Battery (782961-B21), which supports multiple devices and is sold separately	
HPE Smart Array P816i-a SR Gen10 (16 Int Lanes/4GB Cache/SmartCache) 12G SAS Modular LH Controller	869083-B21
Notes: Does not occupy a PCIe expansion slot and includes SmartCache license.	
HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular LH Controller	869081-B21
Notes: Does not occupy a PCIe expansion slot.	
HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21
HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21
Essential RAID Controllers	
HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug- in Controller	804394-B21
HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular LH Controller	869079-B21
Notes: Does not occupy a PCIe expansion slot.	

# **Boot Device**

HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device	P12965-B21
Notes: Need any notes?	

# **Additional Options**

#### **Tri-mode RAID Controllers**

Microchip SmartRAID SR932i-p x32 Lanes 8GB Wide Cache NVMe/SAS 24G Controller for HPE Gen10 Plus	P04220-B21
Microchip SmartRAID SR416i-a x16 Lanes 4GB Cache NVMe/SAS 24G Controller for HPE Gen10 Plus	P12688-B21
Broadcom MegaRAID MR416i-p x16 Lanes 4GB Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P06367-B21
Broadcom MegaRAID MR416i-a x16 Lanes 4GB Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26279-B21
Broadcom MegaRAID MR216i-p x16 Lanes without Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26324-B21
Broadcom MegaRAID MR216i-a x16 Lanes without Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26325-B21
HPE Cable Options	
HPE ProLiant DL325 Gen10 Plus v2 SATA FIO Cable Kit	P39134-B21
HPE ProLiant DL325 Gen10 Plus v2 Smart Array Cable Kit	P39137-B21
<b>Notes:</b> This option kit is required to support AROC type smart array controller with 4LFF/8SFF drive cages	
HPE ProLiant DL325 Gen10 Plus v2 SFF Smart Array PCIe Cable Kit	P39147-B21
<b>Notes:</b> This option kit is required to support E208i-p/P408i-p smart array controller with 8SFF drive cage	
HPE ProLiant DL325 Gen10 Plus v2 10SFF P816i-a Cable Kit	P39151-B21
<b>Notes:</b> This option kit is required to support 10SFF drives connected to P816i-a controller	
HPE ProLiant DL325 Gen10 Plus v2 2SFF SATA Cable Kit	P39156-B21
Notes: This option kit is required to support 2SFF SATA drives	
HPE ProLiant DL325 Gen10 Plus v2 2SFF Smart Array Cable Kit	P39159-B21
Notes: This option kit is required to support 2SFF with E208i-a/P408i-a controller	
HPE ProLiant DL325 Gen10 Plus v2 2SFF Smart Array PCIe Cable Kit	P39162-B21
<b>Notes:</b> This option kit is required to support E208i-p/P408i-p smart array controller with 2SFF drive cage	
HPE ProLiant DL325 Gen10 Plus v2 2SFF NVMe Direct Attach Cable Kit	P39165-B21
<b>Notes:</b> This option kit is required to support direct attach NVMe drives with 2SFF drive cages	
HPE ProLiant DL325 Gen10 Plus v2 2SFF NVMe Tri-Mode Cable Kit	P39168-B21
<b>Notes:</b> This option kit is required to support modular tri-mode controllers with NVMe drives with 2SFF drive cages	
HPE ProLiant DL325 Gen10 Plus v2 2SFF NVMe Tri-Mode PCIe Cable Kit	P39171-B21
<b>Notes:</b> This option kit is required to support PCIe tri-mode controllers with NVMe drives with 2SFF drive cages	
HPE ProLiant DL325 Gen10 Plus v2 8SFF NVMe Direct Attach Cable Kit	P39174-B21
<b>Notes:</b> This option kit is required to support direct attach NVMe drives with 8SFF drive cages	
HPE ProLiant DL325 Gen10 Plus v2 8SFF SR932i-p NVMe Tri-Mode PCIe Cable Kit	P39180-B21
<b>Notes:</b> This option kit is required to support PCIe tri-mode controller "SR932i-p" with NVMe drives with 8SFF drive cages	
HPE ProLiant DL325 Gen10 Plus v2 4SFF NVMe Tri-Mode Cable Kit	P39185-B21

# Additional Options

<b>Notes:</b> This option kit is required to support modular tri-mode controllers with 4x SFF NVMe drives	
HPE ProLiant DL325 Gen10 Plus v2 4SFF NVMe Tri-Mode PCIe Cable Kit	P39189-B21
<b>Notes:</b> This option kit is required to support PCIe tri-mode controllers with 4x SFF NVMe drives	
HPE ProLiant DL325 Gen10 Plus v2 10SFF SR932i-p NVMe Tri-Mode PCIe Cable Kit	P39193-B21
<b>Notes:</b> This option kit is required to support PCIe tri-mode controller "SR932i-p" with 10x SFF NVMe drives	
HPE ProLiant DL325 Gen10 Plus v2 8SFF NVMe Tri-Mode Cable Kit	P39198-B21
HPE ProLiant DL325 Gen10 Plus v2 LFF Optical Disk Drive SATA M.2 Cable Kit	P39141-B21
HPE ProLiant DL325 Gen10 Plus v2 SFF Optical Disk Drive SATA M.2 Cable Kit	P39144-B21
Notes:	
<ul> <li>If optical drive or HPE Universal SATA HH M.2 Kit is selected along with 4 LFF chassis then LFF ODD SATA M.2 Cable (P39141-B21) must be selected.</li> </ul>	
<ul> <li>If optical drive or HPE Universal SATA HH M.2 Kit is selected along with 8 SFF chassis then SFF</li> <li>ODD SATA M.2 Cable (P39144-B21) must be selected.</li> </ul>	
HPE ProLiant DL325 Gen10 Plus v2/DL345 Gen10 Plus OCP Upgrade Cable Kit	P39732-B21
Notes: This cable kit must be selected If any of the below option is selected: – HPE 10/25GbE 2p SFP28 MCX562A OCP3 Adptr (P10112-B21) – HPE IB HDR/EN 200Gb 2p QSFP56 OCP3 Adptr (P31348-B21) – HPE IB HDR/EN 200Gb 1p QSFP56 OCP3 Adptr (P31323-B21) – INT E810 100GbE 2p QSFP28 OCP3 Adptr (P22767-B21)	

#### HPE Tape Backup

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

### **HPE Storage Options**

### **Emulex Fibre Channel HBAs**

HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	Q0L11A
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	Q0L12A
HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	R2J62A
HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter	R2J63A
QLogic Fibre Channel HBAs	
HPE SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	R2E08A
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	R2E09A

#### **HPE Racks**

Additional Options

- Please see the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications.
- Please see the <u>HPE Enterprise Series Racks QuickSpecs</u> 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 <u>HPE Metered Power Distribution Units (PDU) QuickSpecs</u> 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 <u>HPE Line Interactive Single Phase UPS QuickSpecs</u> for information on these products and their specifications.

# **HPE Rack Options**

• Please see the <u>HPE KVM Switches web page</u> for information on these products and their specifications.

# **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 (695539-001).

#### Notes:

-CTO servers do not ship with rail kits ,they need to be ordered seperately

- 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 DL300 Gen10 Plus 1U SFF Easy Install Rail Kit	P26485-B21
HPE ProLiant DL300 Gen10 Plus 1U Cable Management Arm for Rail Kit	P26489-B21

# **HPE USB and SD Options**

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

# Additional Options

HPE 32GB microSD RAID 1 USB Boot Drive

HPE ProLiant DL325 Gen10 Plus v2 server

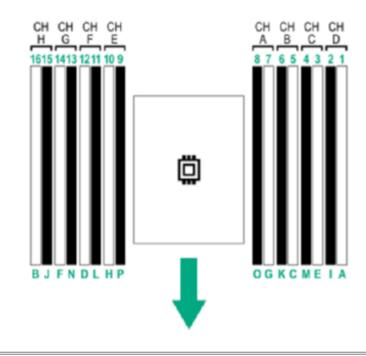
P21868-B21

# **HPE Support Services**

# **Tech Care**

E3E
E4E
G7E
G8E
(

# Memory



# **General Memory Population Rules and Guidelines:**

- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Mixing of DIMM types (RDIMM, and LRDIMM) is not supported.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, the number and model of installed processors qualified on the platform.
- For details on the HPE Server Memory Options Population Rules, visit:
- http://www.hpe.com/docs/amd-population-rules-Gen10Plus
- To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required. For additional information, please see the: <u>HPE DDR4 Smart Memory QuickSpecs</u>
- For details on the HPE Server Memory speed, visit: <u>http://www.hpe.com/docs/amd-speed-table-Gen10Plus</u>

Storage



**4LFF drives** 



8SFF + Optional 2SFF (SAS/SATA or NVMe) Shown

# Technical Specifications

# System Unit

### Dimensions

4.29 X 43.46 X 64.43 cm (1.69 X 17.11 X 25.37 In)

- Weight (approximate)
  - Minimum: 8 SFF chassis with 8 HDD blanks, 1x processor including standard heatsink, 2x DIMMs, 1x power supply (plus blank), 1x Smart Array, 1x Riser installed, cables for the above

12.19 kg 26.86 lb

- Maximum: 10 SFF chassis with 10 SFF hard drives, 1x processors including standard heatsink, 16x DIMMs, 2x power supplies, 1x Smart Array, 2x Risers installed, cables for the above 16.19 kg
  - 35.68 lb

Input Requirements(per power supply) Rated Line Voltage

- 100 to 120 VAC
- 200 to 240 VAC

# **BTU Rating**

#### Maximum

- For 1600W Power Supply: 5918 BTU/hr (at 200 VAC), 5884 BTU/hr (at 240 VAC) for China
- For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only
- For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only

#### Power Supply Output(per power supply)

#### • Rated Steady-State Power

- -For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VAC)
- -For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only
- -For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only

#### Maximum Peak Power

- -For 1600W Power Supply: 1600W (at 200 to 240 1VAC), 1600W (at 240 VAC) input for China only
- For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only
- For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only

# 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

# **Technical Specifications**

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).

#### Relative Humidity(non-condensing)

#### • Operating

8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.

#### • Non-operating

5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

# Altitude

#### • Operating

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

#### • Non-operating

9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

# **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

#### **HPE Smart Array**

For latest information on <u>HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo</u> Servers please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

# Technical Specifications

Environment-friendly Products and Approach - End-of-life Management and Recycling Hewlett Packard Enterprise offers <u>end-of-life product return, trade-in, and recycling programs</u>, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

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

### **Acoustic Noise**

Listed are the declared A-Weighted sound power levels ( $L_{WAd}$ ) and declared average bystander position A-Weighted sound pressure levels ( $L_{pAm}$ ) 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.

ldle				
LWAd	<ul><li>4.8 B Entry</li><li>4.4 B Base</li><li>4.4 B Perf</li></ul>			
LpAm	36 dBA Entry 30 dBA Base 30 dBA Perf			
Operating				
LWAd	<ul><li>4.8 B Entry</li><li>4.5 B Base</li><li>4.8 B Perf</li></ul>			
LpAm	36 dBA Entry 30 dBA Base 35 dBA Perf			

#### Notes:

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

- Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

- The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

# Summary of Changes

	Version History	Action	Description of Change
19-Apr-2021	Version 1	New	New QuickSpecs.

Page 40

# Copyright

Make the right purchase decision. Contact our presales specialists.



Get updates	© Copyright 2021 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.
Hewlett Packard Enterprise	AMD® and EPYC® are registered trademarks of Advanced Micro Devices Corporation in the U.S. and other countries. Microsoft®, Windows®, and Windows Server® are U.S. registered trademarks of the Microsoft group of companies. For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less a50002564enw - 16719 - Worldwide - V1 - 19-April-2021

DA - 16719 Worldwide QuickSpecs — Version 1 — 4.19.2021