# QuickSpecs

Overview

### HPE ProLiant DL360 Generation9 (Gen9)

The Hewlett Packard Enterprise leading server for dense general-purpose computing, the HPE ProLiant DL360 Gen9 Server delivers increased performance with the best memory and I/O expandability packed in a 1U dense rack design. Reliability, serviceability and always on availability, backed by a comprehensive warranty, make it ideal for the most space constrained server workloads.
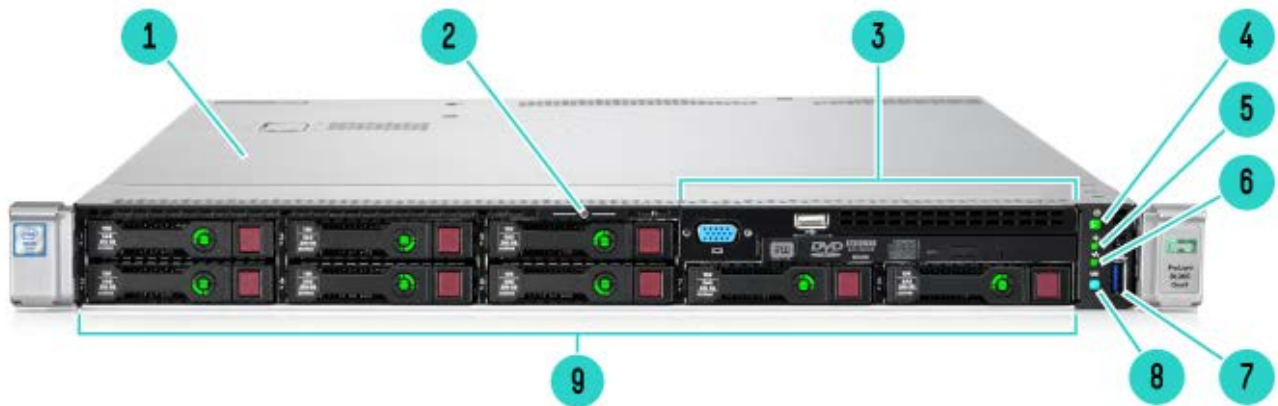
Front View

1. Access Panel
3. HPE Universal Media Bay or NVMe
   NOTE: Shown w/ VGA, USB 2.0 and DVD-ROM or DVD-RW option. Alternative options: NVMe HDD Kits, 2 SFF HDDs or VGA and USB 2.0.

5. Health LED
7. USB 3.0 Connector
9. SAS/SATA/SSD/NVMe Drive Bays
   NOTE: 8SFF Model shown can be configured:
   8 SAS/SATA Drives or 10 SAS/SATA drives
   4 SAS/SATA (Drive 1-4) + 6 NVMe (Drive 5-10)
   8 SAS/SATA + Universal Media Bay
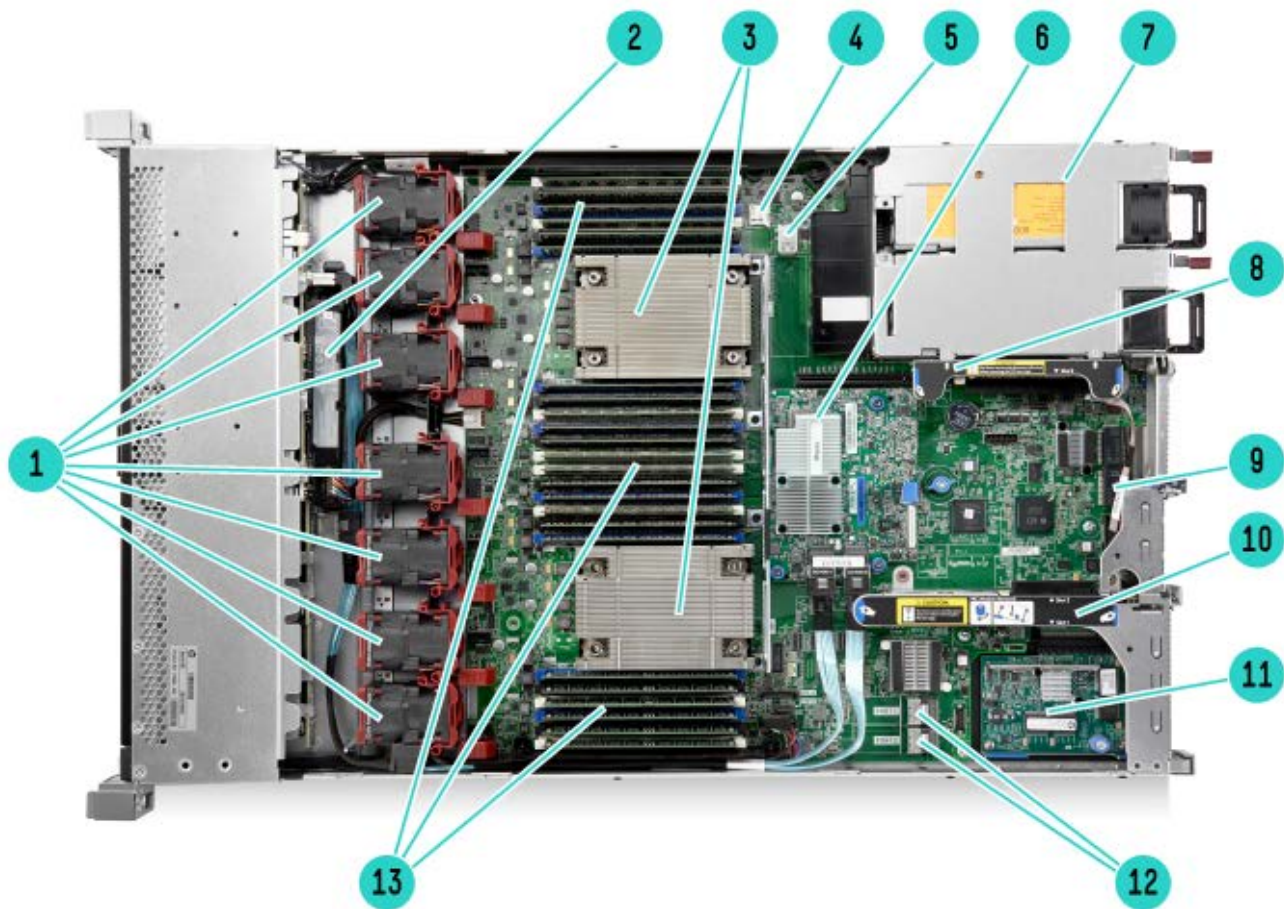   4 LFF Models are also available.

2. Serial Label Pull Tab
4. Power On/Standby button and system power LED button

6. NIC Status LED
8. Unit Identification Button & LED

Overview
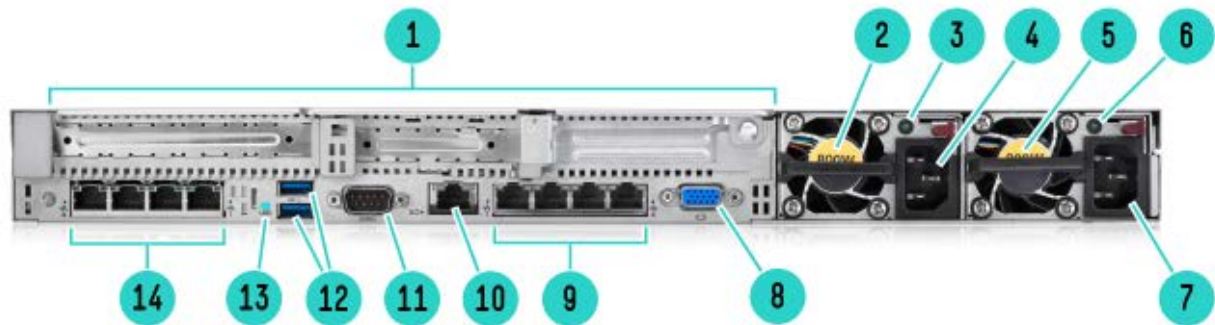
Rear View

1. PCIe 3.0 Slots 1-3
   NOTE: Slot 1 and 2 Riser Ships Standard, Slot 3 Optional one
   FH/ ¾ length and two Low Profile slots available (shown) or
   two FH/ ¾ length slots.
3. Power Supply 2 Status LED
5. HPE Flexible Slot Power Supply Bay 1
7. Power Supply 1 C13 Connection
9. Embedded 4x1GbE Network Adapter
11. Serial Port Connector (Optional)
13. Unit Identification LED

2. HPE Flexible Slot Power Supply Bay 2

4. Power Supply 2 C13 Connection
6. Power Supply 1 Status LED
8. Video Connector
10. Dedicated iLO 4 connector
12. USB 3.0 Connectors (2)
14. FlexibleLOM bay (Optional)
    NOTE: Shown: 4x1Gbe.

Overview

Internal View

1. 5 Standard Fans Ship for 1P and 7 Standard Fans Ship for 2P
   NOTE: High Performance Fans also available as an option.

2. HPE Smart Storage Battery (Optional)

3. 2 Processors with HPE Smart Socket Guide

4. MicroSD card slot
   NOTE: Optional Dual Micro-SD option.

5. Dual Internal USB 3.0 connector

6. HPE Flexible Smart Array or Smart HBA (Optional)
   NOTE: H240ar shown and P440ar available.

7. 2 HPE Flexible Slot Power supplies
   NOTE: Optional Micro UPS option

8. Secondary PCIe 3.0 riser for PCIe slot 3 (requires CPU 2)

9. Embedded 4x1Gbe NIC

10. Primary PCIe 3.0 riser for PCIe slots 1 & 2

11. FlexibleLOM Bay (Optional)

12. Embedded SATA Controller ports

13. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)

Standard Features

Processor Up to two of the following depending on model	**Model**	**CPU frequency**	**Cores**	**L3 Cache**	**Power**	**QPI**	**DDR4 Hz**
	E5-2699v3	2.3GHz	18	45MB	145W	9.6GT/s	2133
	E5-2698v3	2.3GHz	16	40MB	135W	9.6GT/s	2133
	E5-2697v3	2.6GHz	14	35MB	145W	9.6GT/s	2133
	E5-2695v3	2.3GHz	14	35MB	120W	9.6GT/s	2133
	E5-2690v3	2.6GHz	12	30MB	135W	9.6GT/s	2133
	E5-2687Wv3	3.1GHz	10	25MB	160W	9.6GT/s	2133
	E5-2683v3	2.0GHz	14	35MB	120W	9.6GT/s	2133
	E5-2680v3	2.5GHz	12	30MB	120W	9.6GT/s	2133
	E5-2670v3	2.3GHz	12	30MB	120W	9.6GT/s	2133
	E5-2667v3	3.2GHz	8	20MB	135W	9.6GT/s	2133
	E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133
	E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133
	E5-2650Lv3	1.8GHz	12	30MB	65W	9.6GT/s	2133
	E5-2643v3	3.4GHz	6	20MB	135W	9.6GT/s	2133
	E5-2640v3	2.6GHz	8	20MB	90W	8.0GT/s	1866
	E5-2637v3	3.5GHz	4	15MB	135W	9.6GT/s	2133
	E5-2630v3	2.4GHz	8	20MB	85W	8.0GT/s	1866
	E5-2630Lv3	1.8GHz	8	20MB	55W	8.0GT/s	1866
	E5-2623v3	3.0GHz	4	10MB	105W	8.0GT/s	1866
	E5-2620v3	2.4GHz	6	15MB	85W	8.0GT/s	1866
	E5-2609v3	1.9GHz	6	15MB	85W	6.4GT/s	1600
	E5-2603v3	1.6GHz	6	15MB	85W	6.4GT/s	1600
	E5-2699v4	2.2GHz	22	55MB	145W	9.6GT/s	2400
	E5-2698v4	2.2GHz	20	50MB	135W	9.6GT/s	2400
	E5-2697v4	2.3GHz	18	45MB	145W	9.6GT/s	2400
	E5-2697Av4	2.6GHz	16	40MB	145W	9.6GT/s	2400
	E5-2695v4	2.1GHz	18	45MB	120W	9.6GT/s	2400
	E5-2690v4	2.6GHz	14	35MB	135W	9.6GT/s	2400
	E5-2687Wv4	3.0GHz	12	30MB	160W	9.6GT/s	2400
	E5-2683v4	2.1GHz	16	40MB	120W	9.6GT/s	2400
	E5-2680v4	2.4GHz	14	35MB	120W	9.6GT/s	2400
	E5-2667v4	3.2GHz	8	25MB	135W	9.6GT/s	2400
	E5-2660v4	2.0GHz	14	35MB	105W	9.6GT/s	2400
	E5-2650v4	2.2GHz	12	30MB	105W	9.6GT/s	2400
	E5-2650Lv4	1.7GHz	14	35MB	65W	9.6GT/s	2400
	E5-2643v4	3.4GHz	6	20MB	135W	9.6GT/s	2400
	E5-2640v4	2.4GHz	10	25MB	90W	8.0GT/s	2133
	E5-2637v4	3.5GHz	4	15MB	135W	9.6GT/s	2400

Standard Features

E5-2630v4	2.2GHz	10	25MB	85W	8.0GT/s	2133
E5-2630Lv4	1.8GHz	10	25MB	55W	8.0GT/s	2133
E5-2623v4	2.6GHz	4	10MB	85W	8.0GT/s	2133
E5-2620v4	2.1GHz	8	20MB	85W	8.0GT/s	2133
E5-2609v4	1.7GHz	8	20MB	85W	6.4GT/s	1866
E5-2603v4	1.7GHz	6	15MB	85W	6.4GT/s	1866
E5-2699Av4	2.4 GHz	22	55MB	145W	9.6GT/s	2400

NOTE: Mixing of E5-2600 v3 and E5-2600 v4 processors is not supported
NOTE: All processors support Hyper-Threading except E5-2609 v4/v3 and E5-2603 v4/v3.
NOTE: Processors consuming up to 120w ship with standard heat sink.

- Processors consuming over 120w ships with a High Performance heat sink as standard.
- A High Performance heat sink can be added to help reduce power consumption (795235-B21).

Chipset

Intel® C610 Series Chipset

Intel® E5-2600v3 Processor Family

Intel® E5-2600v4 Processor Family

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

On System Management Chipset

HPE iLO (Firmware HPE iLO4 2.0 or later) 4GB NAND
NOTE: 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in the **iLO QuickSpecs**.

Memory
One of the following depending on model

Type:

HPE SmartMemory

DDR4 Registered (RDIMM) or Load Reduced (LRDIMM)

DIMM Slots Available	24	(12 DIMM slots per processor, 4 channels per processor, 3 DIMMs per channel)
Maximum Capacity (LRDIMM)	3TB	(24 x 128GB LRDIMM)
Maximum Capacity (RDIMM)	768GB	(24 x 32GB RDIMM)
Maximum Capacity (NVDIMM)	128GB	(16 x 8GB NVDIMM)*

NVDIMM support only with the E5-2600v4 processors, and RDIMMs only

- 128GB DIMMS cannot be mixed with any other size DIMMs.
- *NVDIMMs cannot be used with LRDIMMs.
- *A maximum of 16 NVDIMMs can be supported.
- NVDIMMs are only supported on factory configured servers with E5-2600 v4 processors, not supported on servers upgraded from E5-2600 v3 to E5-2600 v4 processors.

Standard Features

Memory Protection

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

Expansion Slots

Primary Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	X16	X16	7	Full-height, ¾ length (up to 9.5") Slot	Proc 1
2	PCIe 3.0	X8	X8	10	Low profile	Proc 1

NOTE: Bus Width indicates the number of physical electrical lanes running to the connector.

Secondary Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
3	PCIe 3.0	X16	X16	16	Low profile	Proc 2
3	PCIe 3.0	X16	X16	20	Full-height, ¾ length (up to 9.5") slot	Proc 2*

NOTE: *If secondary FH kit (867249-B21) is installed, then primary PCIe Slot 2 cannot be used. Only 2 FH slots are supported max.

Storage Controller
One of the following depending on model

Entry Models	HPE Dynamic Smart Array B140i Controller
	HPE H240ar Smart Host Bus Adapter

NOTE: For E5-2600v3 Entry models, the embedded B140i will operate in UEFI mode only.
- For legacy mode support an additional controller will be needed.
- For CTO orders please also select "HPE Legacy FIO Mode Setting", 758959-B22.

NOTE: The embedded B140i defaults to AHCI off the chipset. HPE Dynamic Smart Array Controller needs to be enabled on the SATA only models if needed.

Base Models	HPE Flexible Smart Array P440ar/2GB
Performance Models	HPE Flexible Smart Array P440ar/2GB

Internal Storage Devices
One of the following depending on model

Optical Drive	8 SFF with optional Universal Media bay
	Option Kit 764632-B21 VGA, SFF DVD-RW USB Kit
	Option Kit 818213-B21 VGA, SFF DVD-ROM USB Kit

4 LFF
Option Kit 726536-B21 - HPE 9.5mm SATA DVD-ROM Jb Gen9 Kit
Option Kit 726537-B21 - HPE 9.5mm SATA DVD-RW Jb Gen9 Kit
NOTE: Optical cable kit Required for optical drives, 766203-B21.

Hard Drives	None ship standard
Hard Drive Bays	8 SFF with optional Universal Media Bay or NVMe drive support

4 LFF

10 SFF; 8 SFF Model with optional 2 SFF SAS/SATA kit: 764630-B21
NOTE: HPE ProLiant DL360 Servers offer both SFF and LFF versions in CTO.
NOTE: Pre-configured models come populated with some hard drive blanks.
To order additional (single) hard drive blanks, use either:

Standard Features

P/N 666987-B21: HPE SFF Hard Drive Blank Kit or
P/N 666986-B21: HPE LFF Hard Drive Blank Kit.
NOTE: The 2SFF kit comes with cable for internal B140i SATA controller.
For SAS an alternate storage controller and cable kit are required.

Maximum Internal Storage	CAPACITY	CONFIGURATION
Hot Plug SFF SAS SSD	38.4TB	10 x 3.84TB
Hot Plug SFF SATA SSD	38.4TB	10 x 3.84TB
Hot Plug SFF SAS	20.0TB	10 x 2.0TB
Hot Plug SFF SATA	20.0TB	10 x 2.0TB
Hot Plug LFF SAS SSD	6.4TB	4 x 1.6TB
Hot Plug LFF SATA SSD	15.36TB	4 x 3.84TB
Hot Plug LFF SAS	40.0TB	4 x 10TB
Hot Plug LFF SATA	40.0TB	4 x 10TB
Hot Plug SFF NVMe PCIe SSD	27.36TB	6 x 2.0TB NVMe + 4 x 3.84TB SFF SSD

Power Supply
One of the following depending on model

HPE 500W Flex Slot Platinum Hot Plug Power Supply

NOTE: Available in 94% efficiency.

HPE 800W Flex Slot Platinum Hot Plug Power Supply

NOTE: Also available in 96%.
NOTE: Also available in -48VDC and 227VAC/380VDC power inputs 720480-B21 and 720484-B21 Universal PSU.

HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply

NOTE: Available in 94% efficiency.

HPE Flexible Slot Battery Backup Unit Kits

NOTE: Flex Slot Battery Backup provides 750W output and 500W in paralleled configuration.

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 Gen9 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.

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 located at **http://www.hpe.com/info/hppoweradvisor**.

Power specifications and technical content for all HPE Server power supplies can be found at **http://www.hp.com/go/proliant/powersupply**.

Standard Features

System Fans		**Non-redundant**	**Redundant**
One of the following depending on model	1P model	N/A	5 fans
		Non-redundant	**Redundant**
	2P model	N/A	7 fans

NOTE: The second processor option kit contains two fans.

NOTE: High Performance Fan Kit, 766201-B21, is available to meet some extended ambient operating temperatures above 35° C. Qualifications for extended ambient configurations are detailed at: **http://www.hpe.com/servers/ashrae**.

Interfaces	Serial	1

NOTE: Serial Cable Option Kit: 764646-B21.

	Video	1 rear (Standard) 1 front (Optional)

NOTE: Front VGA options available for 8SFF and 4LFF models. See Core Options section of this QuickSpecs for more details.

	Network RJ-45 (Ethernet)	Embedded 4x1GBE + FlexibleLOM bay

NOTE: Both the SFF and LFF chassis have an embedded 4x1GbE NIC and FlexibleLOM bay. See HPE Networking section below for more details.

	HPE iLO Remote Management Network Port	1 Gb Dedicated
	SD Connector	1 micro SD Internal

NOTE: The Micro SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.

	USB 3.0	5 total: 2 rear, 1 front, 2 internal

Operating Systems and Virtualization Software Support for ProLiant Servers	**Microsoft Windows Server**
	Red Hat Enterprise Linux (RHEL)
	SUSE Linux Enterprise Server (SLES)
	Canonical Ubuntu
	Oracle Linux
	CentOS
	VMware
	Citrix XenServer
	Oracle Solaris
	Wind River Linux

NOTE: 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 including how to purchase from Hewlett Packard Enterprise, please visit our OS Support Site at: **http://www.hpe.com/info/ossupport** and our **driver download page**.

Upgradeability	Upgradeable to 2 processors (44 Cores)
	Up to 24 DIMM slots available for higher Memory capacity
	Up to 10 SFF Hard Drive Bays; or 4 LFF Hard Drive Bays

Standard Features

FlexibleLOM slot for 1GbE or 10GbE or QDR/FDR InfiniBand Networking Options

Optional 3 slot riser (x16, x16, x8), or 2 slot primary riser (x16, x8)

3 PCIe 3.0 I/O slots for additional communications and storage expansion

NOTE: Slot 1 and 2 Riser Shipped Standard. Slot 3 Optional 1 FH, ¾ length and 2 Low Profile slots available or two FH, ¾ length slots.

Redundant Power Supplies

Optical Drive supported via Universal Media Bay
8SFF Chassis with:
Option Kit 764632-B21 VGA, SFF DVD-RW USB Kit
Option Kit 818213-B21 VGA, SFF DVD-ROM USB Kit

4LFF Chassis with:
Option Kit 726536-B21 - HPE 9.5mm SATA DVD-ROM Jb Gen9 Kit
Option Kit 726537-B21 - HPE 9.5mm SATA DVD-RW Jb Gen9 Kit
NOTE: Optical cable kit Required for optical drives, 766203-B21.

Industry Standard Compliance

ACPI 2.0b Compliant

PCIe 3.0 Compliant

PXE Support

WOL Support

Microsoft® Logo certifications

USB 3.0 Support

Energy Star

ASHRAE A3/A4

NOTE: The DL360 Gen9 is now one of the first HPE ProLiant Gen9 Servers with Extended Ambient Support up to 45C for data center infrastructures designed for better energy efficiency.

For additional technical thermal details regarding ambient temperatures, humidity and features support please visit **http://www.hpe.com/servers/ashrae**.

Graphics

Integrated Matrox G200 video standard with 16MB of Video RAM
- 1280 x 1024 (32 bpp)
- 1920 x 1200 (16 bpp)

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 Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot Mode.
NOTE: The UEFI System Utilities function 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

- Operating system specific functionality

Standard Features

- Support for > 2.2 TB (using GPT) boot drives

- USB 3.0 Stack

- Embedded UEFI Shell

- Mass Configuration Deployment Tool using RESTful API for iLO 4

- PXE boot support for IPv6 networks

- Boot support for option cards that only support a UEFI option ROM

- Network Stack configurations

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
NOTE: UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen9 Server.

Form Factor One of the following depending on model	1U Rack form factor 8 SFF Drive Bay Version and 10 SFF Drive Bay Version: 1.7" (4.32cm) Height x 17.11" (43.47cm) Width x 27.5" (69.85cm) Length 4 LFF Drive Bay Version: 1.7" (4.32cm) Height x 17.11" (43.47cm) Width x 29.5" (74.67cm) Length **NOTE:** Dimensions without bezel.

Embedded Management	**HPE Integrated Lights-Out (HPE iLO)**	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at **http://www.hpe.com/info/ilo**.
	UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at **http://www.hpe.com/servers/uefi**.
	RESTful API	RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**.
	Intelligent Provisioning	Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at **http://www.hpe.com/servers/intelligentprovisioning**.
	Embedded Remote Support	The Hewlett Packard Enterprise embedded remote support, when used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at **http://www.hpe.com/info/insightonline/explore**.

Standard Features

Server utilities	**Smart Update**	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at **http://www.hpe.com/servers/smartupdatemanager**.
	HPE Systems Insight Manager (HPE SIM)	HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and also provides you with basic support for non-Hewlett Packard Enterprise servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/servers/hpsim**.
	Scripting Tool Kit and Windows PowerShell	Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/proliant/stk** or **http://www.hpe.com/servers/powershell**.
	RESTful Interface Tool	RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to discover and deploy servers at scale. Learn more at **http://www.hpe.com/info/resttool**.
	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**.
	HPE Insight Online	HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at **http://www.hpe.com/info/insightonline/explore**.

Security	Power-on password
	Keyboard password
	QuickLock, Network Server Mode
	Serial interface control
	Administrator's password
	iLO 4 (Integrated Lights-Out 4) has 12 customizable user accounts and SSL encryption
	iLO 4 can be disabled via a Global Setting
	Integrated Lights-Out can be disabled via a Global Setting
	iLO Advanced supports directory services integration
	TPM 2.0
	UEFI

Warranty	This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise 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 Care Pack 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.

Standard Features

NOTE: 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 Insight Control**	HPE Insight Control, lets you deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see **http://www.hpe.com/info/insightcontrol**.
	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**.

Rack and Power Infrastructure	HPE Rack and Power Infrastructure products and services create highly efficient and intelligent solutions for existing or new IT data centers. HPE Rack and Power infrastructure solutions – rack infrastructure, power protection and management, performance optimized data centers (PODs) – are the foundation you are looking for to help secure your long-term IT success. These products are designed to help you react to changes in the industry. They deliver efficient, easy-to-use capabilities to manage, monitor, deploy and provision infrastructure from entry to enterprise. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access. Learn more at **HPE Rack and Power Infrastructure**.

High Performance Clusters	**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.hp.com/go/cmu**.

HPC Interconnects	**NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server under the HPE Cluster Platform product portfolio. These high-speed interconnects are fully supported by Hewlett Packard Enterprise when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPEC Clusters with InfiniBand Interconnects: **http://www.hp.com/techservers/clusters/ucp/index.html**.

Storage Software	Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than Hewlett Packard Enterprise storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities. Storage software that gets the job done:

- **Data Protection and Recovery Software**
  Whether you're a large enterprise or a smaller business, Hewlett Packard Enterprise data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
  Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.
- **Storage Resource Management Software (SRM)**
  Hewlett Packard Enterprise storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.

Optional Features

- **Data Replication Software**
  Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- **Storage Device Management Software**
  Maximize your investment in Hewlett Packard Enterprise storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HPE StoreVirtual VSA**
  Enable highly available and clustered storage in your HPE ProLiant servers with virtualized storage: Add StoreVirtual VSA to multiple servers, manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. To simplify deployment, Hewlett Packard Enterprise offers StoreVirtual Ready Nodes, pre-defined reference configurations for converged vSphere and Hyper-V virtualization solutions. You also have the option to install free 1TB-capacity StoreVirtual VSA software during server setup within Intelligent Provisioning. HPE ProLiant Gen9 servers include a 3-year limited license for this HPE software-defined storage at no extra cost. More information, instructional videos, and free management software are available at **http://www.hpe.com/storage/storevirtual**

NOTE: For more information about Storage Software including QuickSpecs, please see: **http://www.hp.com/go/storage/software**.

One Config Simple (SCE)

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

Service and Support

HPE Support Services
HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement to the support for need for your IT and business.

Connect your devices
Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%[1] reduction in down time, near 100%[2] diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to Hewlett Packard Enterprise support.
1- IDC   2 – HPE CSC reports 2014 - 2015

Recommended Support
Standard: HPE Proactive Care* with 24x7 coverage, three year Support Service
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your Hewlett Packard Enterprise servers.
https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

Optimized HPE Proactive Care* with 6 hour call-to-repair commitment, three year Support Service
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years' proactive reporting and advice with our highest level of hardware support – Hewlett Packard Enterprise 24x7, six hour hardware call-to-repair. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your Hewlett Packard Enterprise servers.
https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

Parts and Materials
Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-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.

Related Services
HPE Server Hardware Installation
Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

Service and Support

HPE Installation and Startup Service
Provides for the installation and startup of Hewlett Packard Enterprise technology including BladeSystems, C-Class enclosure, HPE ProLiant c-Class and Integrity server blades, storage blades, SAN switch blades, HPE Virtual Connect modules (Ethernet and Fibre Channel), Ethernet network interconnects, and InfiniBand, as well as the installation of one supported operating system type (Windows® or Linux).

HPE Technology Services Support Credits
Offer 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**

HPE Support Center

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

Learn more **http://www.hpe.com/support/hpesc**

The Hewlett Packard Enterprise 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 Hewlett Packard Enterprise warranty, HPE Support Service or Hewlett Packard Enterprise contractual support agreement.

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

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

Pre-configured Models

	Entry Models			Base Models		
[SKU Number]	818207-B21	755260-B21	755261-B21	818208-B21	848736-B21	755262-B21
Model Name	HPE ProLiant DL360 Gen9 E5-2603v4 1P 8GB-R H240ar 8SFF 500W PS Entry SAS Server	HPE ProLiant DL360 Gen9 E5-2603v3 1P 8GB-R B140i 500W PS Entry SATA Server	HPE ProLiant DL360 Gen9 E5-2603v3 1P 8GB-R H240ar 500W PS Entry SAS Server	HPE ProLiant DL360 Gen9 E5-2630v4 1P 16GB-R P440ar 8SFF 500W PS Base SAS Server	HPE ProLiant DL360 Gen9 E5-2640v4 1P 16GB-R P440ar 8SFF 500W PS Base Server	HPE ProLiant DL360 Gen9 E5-2630v3 1P 16GB-R P440ar 500W PS Base SAS Server
Processor	Intel® Xeon® E5-2603v4	Intel® Xeon® E5-2603v3		Intel® Xeon® E5-2630v4	Intel® Xeon® E5-2640v4	Intel® Xeon® E5-2630v3
Number of Processors	One					
Memory	8GB (1x8GB Registered DIMMs, 2400 MHz) **NOTE:** With E5-2603 v4 Processor, the actual DIMM speed will operate at 1866 MHz depending on DIMM configuration.	8GB (1x8GB Registered DIMMs, 2133 MHz) **NOTE:** With E5-2603 v3 Processor, the actual DIMM speed will operate at 1600 MHz depending on DIMM configuration.		16GB (1x16GB Registered DIMMs, 2400 MHz) **NOTE:** With E5-2630 v4 Processor, the actual DIMM speed will operate at 2133 MHz depending on DIMM configuration.	16GB (1x16GB Registered DIMMs, 2400 MHz) **NOTE:** With E5-2640 v4 Processor, the actual DIMM speed will operate at 2133 MHz depending on DIMM configuration.	16GB (1x16GB Registered DIMMs, 2133 MHz) **NOTE:** With E5-2630 v3 Processor, the actual DIMM speed will operate at 1866 MHz depending on DIMM configuration.
Network Controller	HPE Embedded 1Gb Ethernet 4-port 331i Adapter					
Storage Controller	HPE H240ar Smart Host Bus Adapter	HPE Dynamic Smart Array B140i **NOTE:** The embedded B140i will operate in UEFI mode only. For legacy support an additional controller will be needed.	HPE H240ar Smart Host Bus Adapter	HPE Flexible Smart Array P440ar/2GB		
Hard Drive	None ship standard	None ship standard **NOTE:** The embedded B140i defaults to AHCI off the chipset. HPE Dynamic Smart Array	None ship standard			

Pre-configured Models

		Controller needs to be enabled on the SATA only models if needed.	
Internal Storage	8 SFF HDD Bays		
Optical Drive Bay	Optional via Universal Media Bay		
PCI-Express Slots	2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0		
Power Supply	(1) HPE 500W Flex Slot Platinum Power Supply		
Fans	5 standard hot plug fans, redundant		
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional)		
Form Factor	Rack (1U), HPE Easy Install Rails		
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response		

Pre-configured Models

[SKU Number]	Performance Models		High Performance Models	
	818209-B21	755263-B21	851937-B21	795236-B21
Model Name	HPE ProLiant DL360 Gen9 E5-2650v4 2P 32GB-R P440ar 8SFF 800W RPS Perf SAS Server	HPE ProLiant DL360 Gen9 E5-2650v3 2P 32GB-R P440ar 800W RPS Performance SAS Server	HPE ProLiant DL360 Gen9 E5-2660v4 2P 64GB-R P440ar 8SFF 800W RPS Perf2 SAS Server	HPE ProLiant DL360 Gen9 E5-2670v3 2P 64GB P440ar 8SFF 2x10Gb-T 2x800W OneView Server
Processor	Intel® Xeon® E5-2650v4	Intel® Xeon® E5-2650v3	Intel® Xeon® E5-2660v4	Intel® Xeon® E5-2670v3
Number of Processors	Two			
Memory	32GB (2x16GB Registered DIMMs, 2400 MHz) **NOTE:** With E5-2650 v4 Processor, the actual DIMM speed will operate at 2400 MHz depending on DIMM configuration.	32GB (2x16GB Registered DIMMs, 2133 MHz) **NOTE:** With E5-2650 v3 Processor, the actual DIMM speed will operate at 2133MHz depending on DIMM configuration.	64GB (4x16GB Registered DIMMs, 2400 MHz) **NOTE:** With E5-2660 v4 Processor, the actual DIMM speed will operate at 2400 MHz depending on DIMM configuration.	64GB (4x16GB Registered DIMMs, 2133 MHz) **NOTE:** With E5-2670 v3 Processor, the actual DIMM speed will operate at 2133 MHz depending on DIMM configuration.
Network Controller	HPE Embedded 4x1Gb, plus 2x10Gb-T Flexible LOM	HPE Embedded 4x1Gb, plus 2x10Gb FLR-T FlexFabric Flexible LOM	HPE Embedded 4x1Gb, plus 2x10Gb SFP+ Flexible LOM	HPE Embedded 4x1Gb, plus 2x10Gb FLR-T FlexFabric Flexible LOM
Storage Controller	HPE Flexible Smart Array P440ar/2GB		HPE Smart Array P440ar/2G Controller	HPE Flexible Smart Array P440ar/2GB
Hard Drive	None ship standard			
Internal Storage	8 SFF HDD Bays			
Optical Drive Bay	Optional via Universal Media Bay			
PCI-Express Slots	2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0		3 Standard (1-FH/HL, 2-LP) PCIe 3.0	
Power Supply	(2) HPE 800W Flex Slot Platinum Power Supply			(1) HPE 800W Flex Slot Platinum Power Supply
Fans	7 standard hot plug fans, redundant			
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (optional)			iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (Standard)
Energy Star	Meets Energy Star requirements			
Form Factor	Rack (1U), HPE Easy Install Rails			
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response			

Country Code Key	xx1 = B21	Worldwide
	xx1 = 291	Japan
	xx1 = AA1	PRC

Configuration Information - Factory Integrated Models

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 Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

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

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

[Chassis]	HPE ProLiant DL360 Gen9 4LFF Configure-to-order Server	HPE ProLiant DL360 Gen9 8SFF Configure-to-order Server
SKU Number	755259-B21	755258-B21
Processor	2 (optional) x HPE Smart Socket Guide	
DIMM Slots	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory	
Storage Controller	HPE Dynamic Smart Array B140i	
PCIe	2 PCIe 3.0 Slots: Slot 1, FH / ¾ Length; Slot 2, Low Profile	
Drive Cage	4LFF Hot Plug	8SFF Hot Plug
Network Controller	HPE Embedded 1Gb Ethernet 4-port 331i Adapter	
Fans	5 standard hot plug fans, redundant	
Management	iLO Management (standard), Intelligent Provisioning (standard)	
USB	1 front, 2 internal, 2 rear	
Ears	HPE Quick Release Ears	

NOTE: 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 Hewlett Packard Enterprise approved configurator.
Contact your local sales representative for information on configurable product offerings and requirements.
NOTE: Factory Integrated Models must start with a CTO Server.
NOTE: FIO indicates that this option is only available as a factory installable option.
NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with server.
NOTE: 4LFF CTO Chassis includes 1 SATA Cable, option kit: 766213-B21, which attaches to the B140i controller.
NOTE: 8SFF CTO Chassis includes two 4 x Mini-SAS Cables, option kit: 766209-B21, which attaches to an optional HPE Smart HBA H240ar or HPE Smart Array P440ar controller.

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

HPE Processors   Select one or two processors from Core Options-Processor section below.

- If one processor is desired, select one xxxxxx-L21
- If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.
- Up to 2 processors supported. Mixing different processor models is not supported.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

Configuration Information - Factory Integrated Models

For the Intel® C600 Chipset E5-2600 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x v#, 2 = number of CPUs in a Node, 6 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) = version number.

HPE Memory   Select one or more memory from Core Options-Memory section below.

- UDIMM, RDIMM, and LRDIMM are all distinct memory technologies and cannot be mixed within a server.
- HPE memory options from previous generation servers are not qualified or warranted with Hewlett Packard Enterprise Gen9 systems. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9.
- If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors all DIMM slots are available.
- Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz, 1866MHz or 1600MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: **http://www.hpe.com/go/ddr4config**

HPE Power Supplies   Select one or more power supplies from Core Options-Power Supplies section below.

- Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: **http://www.hpe.com/info/hppoweradvisor**.
- Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

Step 3: Choose Additional Factory Integratable Options

HPE Unique Options   Select one or more Unique options from Core Options section below.

- This section may contain FIO options, please see the Unique options section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Drives   Select one or more drives from Core Options-HPE Drives section below.

- The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
- Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

The HPE ProLiant Gen9 Smart Storage solutions are equipped with re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HPE Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove."

HPE FlexibleLOM   Select a FlexibleLOM from Core Options-Networking section below.

- Only one FlexibleLOM can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped.

Configuration Information - Factory Integrated Models

- For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
- Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hpe.com/go/ProLiantNICs**.

HPE Networking   Select a standup NIC adapter from Core Options-Networking section below.

- Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hpe.com/go/ProLiantNICs**.
- These options are upgradeable and can be changed from the original configuration after the server is shipped.
- For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

HPE Storage Controllers   Select one or more Storage options from Additional Options section below.

- The embedded B140i controller will operate in UEFI only mode. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.
- This section may contain FIO options, please see HPE Storage Controllers section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Graphics Options   Select one or more graphics adapters from Additional Options section below.

- Please see the HPE Power Advisor for estimated power consumption of your individual system configuration prior to installing GPUs. The HPE Power Advisor is located at: **http://www.hpe.com/info/hppoweradvisor**.
- This section may contain FIO options, please see HPE Computation & Graphics Accelerators section below.

HPE I/O Expansion Options   Select one or more Riser Kit options from Core Options section below.

- To take advantage of the additional PCI slot upgrade, the second processor must be installed.
- This section may contain FIO options, please see HPE I/O Expansion Options section below.

FIO indicates that this option is only available as a factory installable option.

HPE Cooling Options   Select one or more Fan Kits from Core Options section below.

- This section may contain FIO options, please see HPE Cooling Options section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Rail Kits   Select one type of rail kit from Additional Options section below.

- Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen9 server.
- To assist in the installation of the server into the rack, an optional installation tool is available by contacting your local services representative (p/n 695539-001).
- See Hewlett Packard Enterprise Rack Options in Additional Options section of this QuickSpecs for more rack kit choices.

Configuration Information - Factory Integrated Models

CAUTION: 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.

Core Options

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

HPE Unique Options	HP DL360 Gen9 2SFF SAS/SATA Universal Media Bay Kit	764630-B21

NOTE: Required when upgrading from an 8SFF config to a 10SFF config.
This option kit is not supported on the 4LFF Chassis.
This option kit cannot be used with the DVD-ROM or DVD-RW Universal Media Bay option kits.
NOTE: This kit contains a cable to attach the 2 drives to the internal B140i SATA controller.
For SAS, an alternate storage controller and its associated cable kit are required.

HP DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit	764632-B21

NOTE: DVD-RW, USB 2.0 and VGA included.
This option kit cannot be used with the 2 SFF SAS/SATA option kit (764630-B21).

HP DL360 Gen9 SFF DVD/USB Universal Media Bay Kit	818213-B21

NOTE: DVD ROM, USB 2.0 and VGA included.
This option kit cannot be used with the 2 SFF SAS/SATA option kit (764630-B21).

HP DL360 Gen9 SFF USB/VGA Universal Media Bay Kit	764634-B21

NOTE: Adds front VGA and USB 2.0 ports to SFF chassis.
This option kit cannot be used with the 2 SFF SAS/SATA option kit (764630-B21).

HP DL360 Gen9 LFF USB/VGA Kit	764638-B21

NOTE: Adds front VGA and USB 2.0 ports to LFF chassis.
This option kit cannot be used with the 2 SFF SAS/SATA Option Kit (764630-B21).

HP DL360 Gen9 High Performance Heat Sink Kit	795235-B21

NOTE: These are included in some higher Watt processors (see processor section), but may also be added to lower power processors to reduce fan power consumption.

HP DL360 Gen9 Rear Serial Port and Enablement Kit	764646-B21
HP DL360 Gen9 Location Discovery Services Ear Kit	764757-B21

NOTE: Requires ProLiant Location Discovery Services Infrastructure within server racks.

HP DL360 Gen9 SFF Systems Insight Display Kit	764636-B21

NOTE: Adds a System Insight Display for improved diagnosis capabilities on an 8FF or 10SFF model.

HP DL360 Gen9 LFF Systems Insight Display Kit	764640-B21

NOTE: Adds a System Insight Display for improved diagnosis capabilities on a 4LFF model.

HP DL360 Gen9 NVMe 2 Solid State Drive Express Bay Enablement Kit	764628-B21

NOTE: This option provides support for up to 2 NVMe SFF drives.
This option cannot be used with the Universal Media Bay Kit.
NOTE: The HPE DL360 Gen9 High Performance Fan Kit (766201-B21) will be required with this option.
NOTE: The PCIe card in this enablement kit can only be populated in slot1 of primary riser or in slot3 of secondary optional FH riser.

HP DL360 Gen9 6 NVMe + 4 SAS/SATA Express Bay Enablement Kit	817676-B21

NOTE: This option kit provides support for up to 6 NVMe drives (drives 5-10).

Core Options

> **NOTE:** The PCIe card in this enablement kit can only be populated in slot1 of primary riser.

HPE Processors	E5-2600v4 series Processors	
	HPE DL360 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) Processor Kit	818164-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) FIO Processor Kit	818164-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) Processor Kit	818166-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) FIO Processor Kit	818166-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit	818168-B21
	NOTE: This processor does not support Hyper-Threading.	
	HPE DL360 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit	818168-L21
	NOTE: This processor does not support Hyper-Threading.	
	HPE DL360 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit	818170-B21
	NOTE: This processor does not support Hyper-Threading.	
	HPE DL360 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit	818170-L21
	NOTE: This processor does not support Hyper-Threading.	
	HPE DL360 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit	818172-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit	818172-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) Processor Kit	818190-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) FIO Processor Kit	818190-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) Processor Kit	818192-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) FIO Processor Kit	818192-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) Processor Kit	818194-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) FIO Processor Kit	818194-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) Processor Kit	818176-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit	818176-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit	818178-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit	818178-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit	818180-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) FIO Processor Kit	818180-L21

Core Options

HPE DL360 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) Processor Kit	818182-B21
HPE DL360 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) FIO Processor Kit	818182-L21
HPE DL360 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit	818184-B21
HPE DL360 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit	818184-L21
HPE DL360 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) Processor Kit	818186-B21
HPE DL360 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) FIO Processor Kit	818186-L21
HPE DL360 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) Processor Kit	818188-B21
HPE DL360 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) FIO Processor Kit	818188-L21
HPE DL360 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) Processor Kit	818196-B21
HPE DL360 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) FIO Processor Kit	818196-L21
HPE DL360 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit	818198-B21
HPE DL360 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit	818198-L21
HPE DL360 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Processor Kit	818200-B21
HPE DL360 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit	818200-L21
HPE DL360 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) Processor Kit	818202-B21
HPE DL360 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) FIO Processor Kit	818202-L21
HPE DL360 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) Processor Kit	818204-B21
HPE DL360 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) FIO Processor Kit	818204-L21
HPE DL360 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) Processor Kit	818206-B21
HPE DL360 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) FIO Processor Kit	818206-L21
HPE DL360 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit	818174-B21
HPE DL360 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit	818174-L21
HPE DL360 Gen9 Intel® Xeon® E5-2699Av4 (3.6GHz/22-core/55MB/145W) Processor Kit	871580-B21
HPE DL360 Gen9 Intel® Xeon® E5-2699Av4 (3.6GHz/22-core/55MB/145W) FIO Processor Kit	871580-L21

E5-2600v3 series Processors

HPE DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	755374-B21

Core Options

NOTE: This processor does not support Hyper-Threading.

HPE DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit	755374-L21

NOTE: This processor does not support Hyper-Threading.

HPE DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	755378-B21

NOTE: This processor does not support Hyper-Threading.

HPE DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit	755378-L21

NOTE: This processor does not support Hyper-Threading.

HPE DL360 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit	755376-B21
HPE DL360 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit	755376-L21
HPE DL360 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit	755382-B21
HPE DL360 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit	755382-L21
HPE DL360 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit	755384-B21
HPE DL360 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit	755384-L21
HPE DL360 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit	755386-B21
HPE DL360 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	755386-L21
HPE DL360 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) Processor Kit	755404-B21
HPE DL360 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) FIO Processor Kit	755404-L21
HPE DL360 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit	764097-B21
HPE DL360 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit	764097-L21
HPE DL360 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	755388-B21
HPE DL360 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit	755388-L21
HPE DL360 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	755390-B21
HPE DL360 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit	755390-L21
HPE DL360 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit	755392-B21
HPE DL360 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit	755392-L21
HPE DL360 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit	755394-B21
HPE DL360 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit	755394-L21
HPE DL360 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) Processor Kit	755396-B21
HPE DL360 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) FIO Processor Kit	755396-L21

Core Options

HPE DL360 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) Processor Kit	755398-B21
HPE DL360 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) FIO Processor Kit	755398-L21
HPE DL360 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) Processor Kit	755400-B21
HPE DL360 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit	755400-L21
HPE DL360 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) Processor Kit	755402-B21
HPE DL360 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) FIO Processor Kit	755402-L21
HPE DL360 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) Processor Kit	755406-B21
HPE DL360 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) FIO Processor Kit	755406-L21
HPE DL360 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) Processor Kit	755408-B21
HPE DL360 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) FIO Processor Kit	755408-L21
HPE DL360 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) Processor Kit	755410-B21
HPE DL360 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) FIO Processor Kit	755410-L21
HPE DL360 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) Processor Kit	764099-B21
HPE DL360 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit	764099-L21
HPE DL360 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit	764101-B21
HPE DL360 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit	764101-L21
HPE DL360 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) Processor Kit	780003-B21
HPE DL360 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit	780003-L21

NOTE: Mixing of E5-2600 v3 and E5-2600 v4 processors is not supported.
NOTE: All processors support Hyper-Threading *except* E5-2609 v4/v3 and E5-2603 v4/v3.
NOTE: Processors consuming up to 120w ship with standard heat sink.
NOTE: Processors consuming over 120w ships with a High Performance heat sink as standard.
NOTE: A High Performance heat sink can be added to help reduce power consumption (795235-B21).

Memory Selection

To streamline the configuration process for HPE ProLiant Gen9 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.

HPE Memory	**Registered DIMMs (RDIMMs) for E5-2600v4 Series**	
	HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351-B21
	HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220-B21

Core Options

HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349-B21
HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347-B21

Load Reduced DIMMs (LRDIMMs) for E5-2600v4 Series

HPE 128GB (1x128GB) Octal Rank x4 DDR4-2400 CAS-20-18-18 Load Reduced Memory Kit	809208-B21

NOTE: 128GB DIMMs cannot be mixed with any other size DIMMs.

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805358-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805353-B21

Registered DIMMs (RDIMMs) for E5-2600v3 Series

HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	728629-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726719-B21
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	759934-B21
HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726717-B21

Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series

HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726724-B21
HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726720-B21

NOTE: Memory speeds will vary by processor model, please see memory section of QuickSpecs.

HPE Persistent Memory (NVDIMM)

NOTE: The following memory is supported by the E5-2600v4 series Processor only.

HPE 8GB NVDIMM Single Rank x4 DDR4-2133 Module	782692-B21

NOTE: A maximum of 16 NVDIMMs can be supported. NVDIMMs cannot be used with LRDIMMs.
NOTE: NVDIMMs only supported on factory configured servers with E5-2600 v4 processors, not supported on servers upgraded from E5-2600 v3 to E5-2600 v4 processors.

HPE Optical Drives	HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21

NOTE: Supported only with the 4LFF Models & requires cable kit 766203-B21.

HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21

NOTE: Supported only with the 4LFF Models & requires cable kit 766203-B21.

HP DL360 Gen9 LFF Optical Cable	766203-B21
HP DL360 Gen9 SFF DVD/USB Universal Media Bay Kit	818213-B21

NOTE: Front DVD ROM, USB 2.0, and VGA and optical cable.

HP DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit	764632-B21

NOTE: Front DVD-RW, USB 2.0 and VGA, and optical cable.

HP Mobile USB Non Leaded System DVD RW Drive	701498-B21

NOTE: This is only supported on USB 3.0 ports.

HPE Drives   **12G SAS 10K Hot Plug SFF (2.5-inch) SC Enterprise Hard Drives - 3yr Warranty**

Core Options

HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	781518-B21
HPE 900GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	785069-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	781516-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	785067-B21

12G SAS 10K Hot Plug SFF (2.5-inch) SC Hard Drives - 3yr Warranty

HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872475-B21

12G SAS 15K Hot Plug SFF (2.5-inch) SC Hard Drives - 3yr Warranty

HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD	759212-B21
HPE 450GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD	759210-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD	759208-B21

12G SAS 15K Hot Plug SFF (2.5-inch) SC Hard Drives - 3yr Warranty

HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21

12G SAS 7.2K Hot Plug SFF (2.5-inch) SC Midline Hard Drives - 1yr Warranty

HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty HDD	832514-B21

12G SAS 7.2K Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty

HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765464-B21

12G SAS 10K Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty

HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e HDD	791034-B21

12G SAS 15K Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty

HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870763-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870765-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e HDD	748387-B21

12G SAS Hot Plug LFF (3.5-inch) SC 512e Hard Drives- 3yr Warranty

HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	857644-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861590-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	819201-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861754-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861756-B21

12G SAS Hot Plug LFF (3.5-inch) SC Enterprise Hard Drives - 3yr Warranty

HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SC 3yr Wty HDD	765424-B21
HPE 450GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD	737394-B21
HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD	737261-B21

Core Options

12G SAS Hot Plug LFF (3.5-inch) SC Midline Hard Drives - 1yr Warranty

HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	846514-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818367-B21
HPE 3TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	846528-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818365-B21
HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	846524-B21

SSD Selection
To streamline the configuration process for HPE ProLiant Gen9 servers and to provide the best product availability, HPE recommends SSDs 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.

12G SAS Hot Plug SFF (2.5-inch) Mainstream Endurance Solid State Drives - 3yr Warranty

HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	779176-B21
HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	779172-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	779168-B21
HPE 200GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	779164-B21

12G SAS Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives - 3yr Warranty

HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD	802891-B21

12G SAS Hot Plug SFF (2.5-inch) SC Read Intensive-3 Solid State Drives - 3yr Warranty

HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872394-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD	816576-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872392-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD	816572-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872390-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD	816568-B21
HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD	816562-B21

12G SAS Hot Plug SFF (2.5-inch) SC Write Intensive Solid State Drives - 3yr Warranty

HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	802586-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	802582-B21
HPE 200GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD	802578-B21

12G SAS Hot Plug SFF (2.5-inch) SC Mixed Use-3 Solid State Drives - 3yr Warranty

HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872386-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822567-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872382-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822563-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872376-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822559-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872374-B21

Core Options

HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822555-B21

12G SAS Hot Plug SFF (3.5-inch) SC Mixed Use-3 Solid State Drives - 3yr Warranty

HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872378-B21

6G SATA Hot Plug SFF (2.5 inch) SC Midline Hard Drives - 1yr Warranty

HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty HDD	655710-B21

6G SATA Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty

HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861750-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861752-B21
HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765455-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765453-B21

6G SATA Hot Plug LFF (3.5-inch) SC 512e Hard Drives - 1yr Warranty

HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	857648-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861594-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	819203-B21

6G SATA Hot Plug LFF (3.5-inch) SC Midline Hard Drives - 1yr Warranty

HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	846510-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861678-B21
HPE 3TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861693-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861676-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21
HPE 500GB SATA 6G Midline 7.2k LFF (3.5in) SC 1yr Wty HDD	658071-B21

6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives - 1yr Warranty

HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	871770-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD	871768-B21
HPE 480GB 6G SATA Read Intensive SFF (2.5-inch) SC SSD	872855-B21
HPE 240GB 6G SATA Read Intensive SFF (2.5-inch) SC SSD	872853-B21

6G SATA Hot Plug SFF (2.5-inch) SC DS Read Intensive Solid State Drives - 1yr Warranty

HPE 3.84TB 6G SATA Read Intensive SFF (2.5-inch) SC DS SSD	868830-B21
HPE 1.92TB 6G SATA Read Intensive SFF (2.5-inch) SC DS SSD	868826-B21
HPE 1.6TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869386-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869384-B21
HPE 960GB 6G SATA Read Intensive SFF (2.5-inch) SC DS SSD	868822-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869378-B21
HPE 480GB 6G SATA Read Intensive SFF (2.5-inch) SC DS SSD	868818-B21
HPE 240GB 6G SATA Read Intensive SFF (2.5-inch) SC DS SSD	868814-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869376-B21

Core Options

HPE 150GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869374-B21

6G SATA Hot Plug SFF (2.5-inch) SC Write Intensive-2 Solid State Drives - 3yr Warranty

HPE 1.6TB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872363-B21
HPE 1.2TB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD	804677-B21
HPE 800GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD	804671-B21
HPE 800GB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872359-B21
HPE 400GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD	804665-B21
HPE 400GB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872355-B21
HPE 200GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD	804639-B21

6G SATA Hot Plug SFF (2.5-inch) SC DS Mixed Use Solid State Drives - 3yr Warranty

HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872352-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872348-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872344-B21

6G SATA Hot Plug SFF (2.5-inch) SC Mixed Use-2 Solid State Drives - 3yr Warranty

HPE 1.6TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD	804631-B21
HPE 800GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD	804625-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD	832414-B21
HPE 200GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD	804613-B21

6G SATA Hot Plug LFF (3.5-inch) SCC Read Intensive Solid State Drives

HPE 1.6TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	869388-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	869380-B21

6G SATA Hot Plug LFF (3.5-inch) SCC Write Intensive-2 Solid State Drives - 3yr Warranty

HPE 1.6TB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872365-B21
HPE 1.2TB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD	804680-B21
HPE 800GB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872361-B21
HPE 800GB 6G SATA Write Intensive LFF (3.5in) SCC 3yr Wty SSD	804674-B21
HPE 400GB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872357-B21
HPE 400GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD	804668-B21
HPE 200GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD	804642-B21

6G SATA Hot Plug LFF (3.5-inch) SCC DS Mixed Use Solid State Drives - 3yr Warranty

HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872350-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872346-B21

6G SATA Hot Plug LFF (3.5-inch) SC Mixed Use-2 Solid State Drives - 3yr Warranty

HPE 1.6TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD	804634-B21
HPE 800GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD	804628-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD	832417-B21
HPE 200GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD	804616-B21

Core Options

HPE NVMe PCIe Read Intensive SFF (2.5 inch) SC2 Solid State Drives - 3yr Warranty

HPE 2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764908-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875591-B21
HPE 1.2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764906-B21
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875589-B21
HPE 480GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875587-B21
HPE 400GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764904-B21

NOTE: HPE NVMe drives need the enablement kit 764628-B21.
NOTE: Hewlett Packard Enterprise has qualified the NVMe drive portfolio using the Operating System inbox drivers.
NOTE: For full detail please see the **HPE Solid State Drive QuickSpecs**.

HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives - 3yr Warranty

HPE 1.6TB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD	764892-B21
HPE 800GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD	736939-B21
HPE 400GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD	736936-B21

HPE NVMe PCIe Mixed Use SFF (2.5 inch) SC2 Solid State Drives - 3yr Warranty

HPE 2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765044-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875597-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765038-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875595-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765036-B21
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875593-B21
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765034-B21

M.2 SSD

HPE 340GB SATA 6G Read Intensive 3yr Wty Dual M.2 Kit	835565-B21
HPE 340GB SATA 6G Read Intensive 3yr Wty M.2 Kit	835563-B21
HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	777894-B21
HPE 120GB SATA 6G Read Intensive HHHL 3yr Wty M.2 Kit	788028-B21

NOTE: M.2 drives go in PCIe slots and use B140i SATA controller only.
NOTE: M.2 supports Software RAID only.
NOTE: No HPE Flexible Smart Array supported.

Hard Drive Blank Kits

HPE Large Form Factor Hard Drive Blank Kit	666986-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21

Hard Drive Kits

HP DL360 Gen9 2SFF SAS/SATA Universal Media Bay Kit	764630-B21

NOTE: Required when upgrading 8SFF config to 10SFF chassis. Not supported in the 4LFF Chassis.

HP DL360 Gen9 NVMe 2 Solid State Drive Express Bay Enablement Kit	764628-B21

Core Options

NOTE: This option provides support for up to 2NVMe drives in SFF only. This option cannot be used with the Universal Media Bay Kit.
NOTE: The HPE DL360 Gen9 High Performance Fan Kit (766201-B21) is required with the NVMe kit.
NOTE: The PCIe card can only be used in slot1 of primary riser or slot3 of secondary optional FH riser.

HP DL360 Gen9 6 NVMe + 4 SAS/SATA Express Bay Enablement Kit	817676-B21

NOTE: This option provides support for up to 6NVMe drives in SFF only. Adding NVMe drives replaces support for Universal Media Bay.
NOTE: The PCIe card in this enablement kit can only be populated in slot1 of primary riser.

HPE Networking	**25 Gigabit Ethernet adapters**	
	HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter	817762-B21
	HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21
	10 Gigabit Ethernet adapters	
	HPE Ethernet 10Gb 2-port 570SFP+ Adapter	718904-B21
	HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21
	HPE Ethernet 10Gb 2-port 561T Adapter	716591-B21
	HPE Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HPE Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
	HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
	HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21

NOTE: The DL360 Gen9 chassis ships with 4x1Gb Embedded.
NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.
NOTE: Please see NIC QuickSpecs for Technical Specifications and additional information: **http://www.hp.com/go/ProLiantNICs**.

	1 Gigabit Ethernet adapters	
	HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
	HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21
	HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
	FlexibleLOM Adapters	
	HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21
	HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
	HPE Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
	HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
	HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	794525-B21
	HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	727060-B21
	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
	HPE FlexFabric 10Gb 4-port 536FLR-T Adapter	764302-B21

Core Options

	HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
	HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
	HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
	HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22

NOTE: The DL360 Gen9 chassis ships with 4x1Gb Embedded.
NOTE: Only one FlexibleLOM can be added to the server as an upgradeable option.

HPE InfiniBand	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	764286-B21
	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
	HPE 100Gb 1-port OP101 QSFP28 x8 PCIe Gen3 with Intel® Omni-Path Architecture Adapter	829334-B21
	HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel® Omni-Path Architecture Adapter	829335-B21

NOTE: For additional InfiniBand information: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440**.

HPE I/O Expansion Options	HP DL360 Gen9 Low Profile PCIe Slot CPU2 Kit	764642-B21

NOTE: This option kit requires a second CPU and will add an additional Low Profile PCIe 3.0 slot.

	HPE DL360 Gen9 2P Full Height PCIe Slot 2 GPU Enablement Kit	867249-B21

NOTE: This enablement kit can support more than one Full Height/GPU card
NOTE: This option kit requires a second CPU and will add an additional FH / ¾ Length PCIe 3.0 slot.
NOTE: This kit includes GPU power cable and bracket; when this option kit is installed the Low Profile PCIe3.0 riser is not useable.
NOTE: It is not possible to convert a unit with the Full height kit back to dual Low Profile brackets.

HPE Power Supplies	**HPE Flex Slot Platinum Hot-plug Power supplies**	
	HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit	720620-B21

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

	HPE 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21

NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94%. Includes a C-14 power inlet connector.

	HPE 800W Flex Slot Titanium Hot Plug Power Supply Kit	720482-B21

NOTE: Flex Slot Titanium power supplies support power efficiency of up to 96%. Includes a C-14 power inlet connector.

	HPE 800W Flex Slot Universal Hot Plug Power Supply Kit	720484-B21

Core Options

NOTE: Flex Slot Universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs.

HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit   720480-B21

NOTE: Flex Slot -48VDC power supplies support power efficiency of up to 94%.

NOTE: Maximum of 2 Flex Slot power supplies per platform.

NOTE: All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/experience operational issues with your server.

NOTE: Mixing different power supplies in the same server may limit or disable some power supply features including support for power redundancy. To ensure access to all available features, all power supplies within the same server should have the same output and efficiency ratings

NOTE: Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply. The HPE Power Advisor is located at: **http://www.hpe.com/info/hppoweradvisor**.

NOTE: Support for HPE Power Discovery Services is included with the 1400W Flex Slot option. Power specifications and technical content for all HPE Server power supplies can be found at: **http://www.hp.com/go/proliant/powersupply**.

HPE Computation and Graphics Accelerators	HPE NVIDIA Tesla P4 8GB Computational Accelerator	Q0V79A

NOTE: Max of 2 cards can be ordered (Slots 1 and 3).
NOTE: If 2 cards are installed, then 867249-B21 (HPE DL360 Gen9 2P PCIe GPU Enablemnt Kit) is required.

HPE NVIDIA Tesla M4 4GB Computational Accelerator   P9U90A

NOTE: Max of 2 cards can be ordered (Slots 1 and 3).
NOTE: If 2 cards are installed, then 764642-B21 (HPE DL360 Gen9 Low Profile PCIe Slot CPU2 Kit) is required.

HPE NVIDIA Quadro M2000 Graphics Accelerator   P8Y48A

NOTE: Max of 2 cards can be ordered (Slots 1 and 3).
NOTE: If 2 cards are installed, then 867249-B21 (HPE DL360 Gen9 2P PCIe GPU Enablemnt Kit) is required.

HPE NVIDIA Quadro M4000 Graphics Accelerator   M9X58A

NOTE: Max of 2 cards can be ordered (Slots 1 and 3).
NOTE: If 1 card is installed, then 766199-B21 (HPE DL360 Gen9 GPU Cable for CPU1 Kit) is required.
NOTE: If 2 cards are installed, then only 867249-B21 (HPE DL360 Gen9 2P PCIe GPU Enablemnt Kit) is required (GPU cable will be included in kit).

HP DL360 Gen9 GPU Cable for CPU1 Kit   766199-B21

NOTE: This kit is required if one HPE NVIDIA Quadro M4000 Graphics Accelerator card is installed (includes GPU cable and brackets).

NOTE: The NVIDIA Quadro modules are supported only on 64-bit versions of Linux and Windows operating systems as well as on Virtual Machine client operating systems. The supported bare metal operating systems are RHEL6, RHEL7, SLES 11, SLES12 and Windows Server 2012 R2.

HPE Cooling Options	HP DL360 Gen9 High Performance Fan Kit	766201-B21

NOTE: High Performance Fan Kit is required for some supported configurations (10SFF Chassis, 160W CPUs or higher, LRDIMMs, NVMe SSDs) and extended ambient

Core Options

operating temperatures above 35° C. Qualifications for extended ambient configurations are at: **http://www.hpe.com/servers/ashrae**.

NOTE: High performance fan kit increases power consumption. To reduce power consumption use high performance heat sinks (795235-B21).

Additional Options

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

HPE Insight Software	**HPE Insight Control**	
	HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU	C6N27A
	HPE Insight Management Media Kit	C6N31A
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO LTU	C6N36A

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.
NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24x7 HPE Software Technical Support and Update Service.
NOTE: Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: **http://www.hp.com/go/insightupdates**.
NOTE: For additional license options please see the QuickSpecs at: **https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04123391**.

Embedded Management	**HPE iLO Advanced**	
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO LTU	C6N36A

HPE Converged Infrastructure Management Software	**HPE OneView Advanced (with HPE iLO Advanced)**	
	HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
	HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
	HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU	E5Y43A
	HPE OneView Advanced (without HPE iLO Advanced)	
	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 Physical Media Kit LTU	E5Y37A

NOTE: Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge.
NOTE: Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and driver provisioning.
NOTE: Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: **http://www.hpe.com/info/hpeoneview**.
NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.**NOTE:** Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: **http://www.hpe.com/info/hpeoneview**.

Additional Options

High Performance Clusters	**HPE Cluster Management Utility**	
	HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU	QL803B
	HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU	BD476A

NOTE: These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.

	HPE Insight Cluster Management Utility Media	BD477A

NOTE: For additional license kits please see the **HPE Insight Cluster Management Utility QuickSpecs**.

HPE PCIe Workload Accelerator Options	**HPE Read Intensive PCIe Workload Accelerator**	
	HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator	831739-B21
	HPE 3.2TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831737-B21
	HPE 1.6TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831735-B21
	HPE 1.3TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831733-B21
	HPE Write Intensive PCIe Workload Accelerator	
	HPE 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803197-B21
	HPE 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803195-B21
	HPE Mixed Use PCIe Workload Accelerator	
	HPE 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803204-B21
	HPE 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803202-B21
	HPE 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803200-B21

NOTE: Please see the **HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs** for Technical Specifications and additional information.

	Light Endurance (LE) PCIe Workload Accelerators	
	HPE 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator	775672-B21

HPE Security	HPE 1U Security Bezel Kit	664918-B21
	HPE Trusted Platform Module 2.0 Kit	745823-B21

NOTE: This option kit is supported on Gen9 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.
NOTE: HPE Gen9 servers purchased earlier may require latest BIOS update to be compatible.
NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

	HPE Trusted Platform Module Option	488069-B21

NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker

Additional Options

leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: **http://www.hp.com/go/TPM**.

NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.

NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

NOTE: The HPE Trusted Platform Module Option (488069-B21) is the TPM 1.2 version. Compatible server platforms include Gen8 and Gen9 servers.

NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

HPE Storage Controllers

SAS Controllers

HPE Smart Array Controllers

HPE Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21
HPE Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller	726897-B21
HP DL360 Gen9 Smart Array P840 SAS Card with Cable Kit	766205-B21

NOTE: Includes the P840 Smart Array controller with 4GB integrated cache, HPE Smart Storage Battery, and associated cabling required to attach it to a 10SFF chassis configuration.

HPE Smart Array P840ar/2GB FBWC 12Gb 2-port Internal SAS Controller	843199-B21

NOTE: The Smart Array P840ar SAS controller will require the P840ar Cable Kit 843234-B21.

HPE Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21
HPE Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller	726821-B21
HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller	761872-B21

NOTE: The P440/4GB will support up to 8 internal SAS/SATA drives and consume 1 PCIe slot. Also includes the HPE Smart Storage Battery.

HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller	726736-B21
HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller	749974-B21

NOTE: The P440ar/2GB will support up to 8 internal SAS/SATA drives without using a PCIe slot.

HPE DL360 Gen9 Smart Array P440ar Controller for 2 GPU Configurations	726740-B21

NOTE: This controller is specific for the DL360 Gen9 with 2 GPGPUs installed. It has a unique heatsink that will allow the 2nd GPU to fit.

NOTE: When ordering controllers, see HPE Cable Options below for required cable(s). FIO indicates factory integrated option only via CTO.

HPE Smart Host Bus Adapters

HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21
HPE H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter	761873-B21
HPE H240ar 12Gb 2-ports Int Smart Host Bus Adapter	726757-B21
HP H240ar 12Gb 2-ports Int FIO Smart Host Bus Adapter	749976-B21

NOTE: The H240ar will support up to 8 internal SAS/SATA drives without using a PCIe slot.

Additional Options

NOTE: When ordering controllers, see HPE Cable Options below for required cable(s). FIO indicates factory integrated option only via CTO.

HPE Cable Options

HPE DL360 Gen9 Smart Array P840ar Cable Kit	843234-B21
HP DL360 Gen9 SFF Embedded SATA Cable	766207-B21

NOTE: Needed only when attaching drive bays to the B140i controller in an 8 SFF Chassis.

HP DL360 Gen9 SFF Smart Array P440/H240 SAS Cables	775927-B21

NOTE: Required for use with the HPE Smart Array P440 (PCIe Controllers) 726821-B21 or 761872-B21, the option kit documentation details out cable placement with the HPE Smart Array P440 in PCIe 3.0 Slots 1 or 2 connecting to the 8SFF backplane or the 2 SFF SAS/SATA option kit.

HP DL360 Gen9 SFF Smart Array P440ar/H240ar SAS Cable	766209-B21
HP DL360 Gen9 LFF Embedded SATA Cable	766213-B21
HP DL360 Gen9 LFF Smart Array P440/H240 SAS Cables	775929-B21

NOTE: Required for use with the HPE Smart Array P440 (PCIe Controllers) 726821-B21 or 761872-B21, the option kit documentation details out cable placement with the HPE Smart Array P440 in PCIe 3.0 Slots 1 or 2 connecting to the 4LFF backplane.

HP DL360 Gen9 LFF Smart Array P440ar/H240ar SAS Cable	766211-B21

NOTE: Required for an upgrade from a B140i SATA controller to a HPE Smart HBA 240ar or HPE Smart Array P440ar.

NOTE: Options noted "DL360 Gen9 SFF..." are supported on the 8 SFF Chassis only. Options noted "DL360 Gen9 LFF..." are supported on the 4 LFF Chassis only.

Optional Software

HPE SmartCache No Media 24x7 Technical Support 1-server LTU	D7S26A
HPE SmartCache No Media 24x7 Technical Support Flexible LTU	D7S27A
HPE SmartCache No Media 24x7 Technical Support E-LTU	D7S27AAE

NOTE: HPE SmartCache is supported when one of the supported Smart Array Controllers is installed in the server.
NOTE: HPE SmartCache comes standard (no licensing is required) if the HPE Smart Array P840 Controller is installed in the server.

Optional Upgrades

HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21

HPE Tape Backup

NOTE: For the complete range of tape drives, autoloaders, libraries and media see: **http://www.hp.com/go/tape**. For hardware and software compatibility of HPE tape backup products **http://www.hpe.com/storage/BURAcompatibility**.

Rack-Mount Tape Solutions

Tape Drives

HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader	C0H19A
HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit	C0L99A
HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit	EJ014B
HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B

Additional Options

HPE StoreEver LTO-4 Ultrium 1760 SAS (1) in a 1U Rack Mount Kit	EH946C
HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HPE StoreEver 1U SAS Rack Mount Kit	AE459B
HPE Tape Storage Systems	
HPE StoreEver MSL6480	
HPE StoreEver MSL6480 Scaleable Expansion Module	QU626A
HPE StoreEver MSL6480 Scalable Base Module	QU625A
HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE StoreEver MSL4048 0-drive Tape Library	AK381A

NOTE: Please see the **HPE StoreEver MSL6480 Tape Library QuickSpecs** for Technical Specifications and additional information).

HPE Disk Backup	**HPE RDX Removable Disk Backup System**	
	HPE RDX 3TB USB 3.0 Internal Disk Backup System	P9L71A
	HPE RDX+ 3TB USB 3.0 External Disk Backup System	P9L72A
	HP RDX 2TB USB3.0 External Disk Backup System	E7X53B
	HP RDX+ 1TB External Backup System	B7B69B
	HP RDX+ 500GB External Backup System	B7B66B
	HPE RDX+ External Docking System	C8S07B
	HPE D3700 Enclosure	QW967A
	HPE D3600 Enclosure	QW968A
	HPE StoreOnce 5100 48TB System	BB915A
	HPE StoreOnce 3540 24TB System	BB914A
	HPE StoreOnce 3520 12TB System	BB922A
	HPE StoreOnce 3100 8TB System	BB913A

NOTE: For the complete range of RDX drives and media see: **http://www.hp.com/go/rdx**. For hardware and software compatibility of HPE disk backup products see: **http://www.hp.com/storage/SPOCK**.
NOTE: Please see the **HPE RDX Removable Disk Backup System QuickSpecs** for additional part numbers, Technical Specifications, and additional information

---

HPE Storage Options

NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see:
 http://www8.hp.com/us/en/products/data-storage/storefabric.html.

Emulex Fibre Channel HBAs

HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	Q0L11A
HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	Q0L12A
HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A
HPE StoreFabric SN1100E 4-port 16Gb Fibre Channel Host Bus Adapter	P9D99A
HPE StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
HPE StoreFabric 84E 4-port 8Gb Fibre Channel Host Bus Adapter	E7Y63A
HPE 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
HPE 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B

Additional Options

QLogic Fibre Channel HBAs

HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A
HPE StoreFabric 84Q 4-port 8Gb Fibre Channel Host Bus Adapter	P9D91A
HPE 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
HPE 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A

Converged Network Adapter

HPE StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
HPE StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter	N3U51A
HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter	N3U52A

HPE Data Center Racks

HPE Advanced Series Racks

HPE 42U 600mm x 1075mm Advanced Pallet Rack	H6J65A
HPE 42U 600mm x 1075mm Advanced Shock Rack	H6J66A
HPE 42U 600mm x 1200mm Advanced Pallet Rack	H6J67A
HPE 42U 600mm x 1200mm Advanced Shock Rack	H6J68A
HPE 36U 600mm x 1075mm Advanced Pallet Rack	H6J77A
HPE 36U 600mm x 1075mm Advanced Shock Rack	H6J78A
HPE 14U 600mm x 1075mm Advanced Shock Rack	H6J82A
HPE 22U 600mm x 1075mm Advanced Pallet Rack	H6J83A
HPE 22U 600mm x 1075mm Advanced Shock Rack	H6J84A
HPE 48U 600mm x 1075mm Advanced Pallet Rack	H6J87A
HPE 48U 600mm x 1075mm Advanced Shock Rack	H6J88A

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

HPE Enterprise Series Racks

HP 36U 600mm x 1075mm Enterprise Pallet Rack	BW895A
HP 36U 600mm x 1075mm Enterprise Shock Rack	BW896A
HPE 42U 600mm x 1075mm Enterprise Pallet Rack	BW903A
HP 42U 600mm x 1075mm Enterprise Shock Rack	BW904A
HP 42U 600mm x 1200mm Enterprise Pallet Rack	BW907A
HP 42U 600mm x 1200mm Enterprise Shock Rack	BW908A
HP 47U 600mm x 1075mm Enterprise Pallet Rack	BW911A
HP 47U 600mm x 1075mm Enterprise Shock Rack	BW912A
HP 47U 600mm x 1200mm Enterprise Pallet Rack	BW913A
HP 47U 600mm x 1200mm Enterprise Shock Rack	BW914A
HP 42U 800mm x 1075mm Enterprise Pallet Rack	BW917A
HP 42U 800mm x 1075mm Enterprise Shock Rack	BW918A

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

Additional Options

NOTE: Gen9 rail kits have changed significantly from prior generation rail kits. Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen9 server.

NOTE: Rail kits are optional for DL360/380 Gen9 and is no longer standard with the server. Customers have the option to purchase their server without a rail kit.

NOTE: Ball bearing and Easy Install rail kits contain telescoping rails to allow for in-rack servicing.

NOTE: To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001).

CAUTION: 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 Power Distribution Units (PDUs)	**HPE Basic Power Distribution Units (PDU)**	
	HPE Basic 1.9kVA/L5-20P 16A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU	H5M54A
	HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU	H5M56A
	HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical NA/JP PDU	H5M55A
	HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) C13/Vertical WW PDU	H5M57A
	HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU	H5M58A
	HPE Basic 7.3kVA/60309 5-wire 32A/230V Outlets (20) C13/Vertical INTL PDU	H5M68A
	HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical NA/JP PDU	H5M61A
	HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M59A
	HPE Basic 7.3kVA/60309 3-wire 32A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU	H5M70A
	HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) C19/Vertical NA PDU	H5M60A
	HPE Basic 11kVA/60309 63A 3-wire 48A/230V Outlets (30) C13 (6) C19/Vertical INTL PDU	H5M71A
	HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6) C19/Vertical WW PDU	H5M75A
	HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) 5-20R/Vertical NA/JP PDU	H5M63A
	HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	H5M64A
	HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M62A
	HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU	H5M72A
	HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (36) C13 (6) C19/Vertical INTL PDU	H5M73A
	HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) C19/Vertical NA PDU	H5M67A
	HPE Basic Modular 2.8kVA/L5-30P 24A/120V Outlets (4) C19/Horizontal NA/JP PDU	252663-D71
	HPE Basic Modular 4.9kVA/L6-30P 24A/208V Outlets (4) C19/Horizontal NA/JP Core Only PDU	252663-D74
	HPE Basic Modular 8.3kVA/CS8265C 40A/208V Outlets (4) C19/Horizontal NA/JP PDU	252663-D75
	HPE Basic Modular 7.3kVA/60309 3-wire 32A/230V Outlets (4) C19/Horizontal INTL Core Only PDU	252663-B33

Additional Options

HPE Basic Modular 9.2kVA/60309 63A 3-wire 40A/230V Outlets (4) C19/Horizontal INTL PDU	252663-B34
HPE Basic Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF512A
HPE Basic Modular 3Ph 11kVA/60309 5-wire 16A/230V Outlets (6) C19/Horizontal INTL PDU	AF513A
HPE Basic Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF519A
HPE Basic Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF511A
HPE Basic Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF518A
HPE 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A

NOTE: Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

HPE Metered Power Distribution Units (PDU)

HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU	D9N43A
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU	D9N46A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal NA/JP PDU	D9N44A
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU	D9N45A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Vertical NA/JP PDU	G9Z05A
HPE Metered 7.3kVA/60309 3-wire 32A/230V Outlets (12) C13/Vertical INTL PDU	G9Z06A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	D9N47A
HPE Metered 7.3kVA/60309 32A 3-wire/230V Outlets (20) C13 (4) C19/Vertical INTL PDU	D9N48A
HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3) C19/Vertical NA/JP PDU	D9N51A
HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	D9N53A
HPE Metered 3Ph 11kVA/60309 5-wire 16A/230V Outlets (18) C13 (3) C19/Vertical INTL PDU	D9N55A
HPE Metered 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (3) C19/Vertical NA PDU	D9N49A
HPE Metered 7.3kVA/60309 32A 3-wire/230V Outlet (32) C13 (4) C19/Vertical INTL PDU	D9N50A
HPE Metered 3Ph 11kVA/60309 5-wire 16A/230V Outlets (30) C13 (3) C19/Vertical INTL PDU	D9N57A
HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N58A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU	D9N61A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N62A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3) C19/Vertical NA/JP PDU	D9N54A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N59A

Additional Options

HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	G9Z07A
HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical NA PDU	D9N63A
HPE Metered 3Ph 22kVA/60309 5-wire 32A/230V Outlet (30) C13 (3) C19/Vertical INTL PDU	D9N56A
HPE Metered 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C13 (12) C19/Vertical INTL PDU	D9N60A
HPE Metered 3Ph 22kVA/60309 5-wire WT 32A/230V Outlets (12) C13 (12) C19/Vertical INTL PDU	G9Z08A
HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A

NOTE: Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

HPE Intelligent Power Distribution Unit (PDU)

HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF520A
HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A
HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU	AF523A
HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6) C19/Horizontal NA/JP PDU	AF901A
HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF525A
HPE Intelligent Modular 3Ph 11kVA/60309 5-wire 16A/230V Outlets (6) C19/Horizontal INTL PDU	AF526A
HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF527A
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU	AF535A
HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C19/Horizontal INTL PDU	AF538A
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF531A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF532A
HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF533A
HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU Kit	AF534A
HPE 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A

NOTE: Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on additional options and product specifications.

HPE Metered and Switched Power Distribution Units (PDU)

HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU	H8B48A

Additional Options

HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V Outlets (7) C13 (1) C19/Vertical WW PDU	H8B49A
HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	H8B50A
HPE Metered Switched 7.3kVA/60309 3-wire 32A/230V Outlets (20) C13 (4) C19/Vertical INTL PDU	H8B51A
HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (6) C19/Vertical NA/JP PDU	H8B52A
HPE Metered Switched 3Ph 8.6kVA/L21-30P 24A/208V Outlets (20)C13 (3)C19 (1)5-20R/Vertical NA/JP PDU	H8B53A
HPE Metered Switched 3Ph 11kVA/60309 5-wire 16A/230V Outlets (21) C13 (3) C19/Vertical INTL PDU	H8B54A
HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B55A
HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B56A

NOTE: Please see the **HPE Metered and Switched Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

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

HPE Rack Mount Consoles, KVM Switches, and Keyboards	**HPE Location Discovery Services**

HPE Location Discovery Services

HPE 42U Location Discovery Kit	BW946A
HPE 47U Location Discovery Kit	BW947A
HPE Location Discovery Services LCD8500 Kit	TL052A

NOTE: Please see the **HPE Location Discovery Services QuickSpecs** for information on additional options and product specifications.

HPE Rack Mount Consoles

HP LCD8500 1U US Rackmount Console Kit	AF630A
HP LCD8500 1U UK Rackmount Console Kit	AF631A
HP LCD8500 1U DE Rackmount Console Kit	AF632A
HP LCD8500 1U FR Rackmount Console Kit	AF633A
HP LCD8500 1U JP Rackmount Console Kit	AF642A
HP LCD8500 1U RU Rackmount Console Kit	AF643A
HP LCD8500 1U INTL Rackmount Console Kit	AF644A
HP LCD8500 1U US TAA Rackmount Console Kit	AF645A

HPE KVM Switches

HP 0x1x8 G3 KVM Console Switch	AF651A
HP 0x2x16 G3 KVM Console Switch	AF652A
HP TAA 0x2x16 G3 KVM Console Switch	AF653A
HP USB Remote Access Key for G3 KVM Console Switches	AF650A
HP KVM Console USB Interface Adapter	AF628A
HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
HP 1x4 USB/PS2 KVM Console Switch	AF611A

Additional Options

HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A

NOTE: To learn more, please visit the **HPE KVM Switches web page**.

HPE USB Keyboard and Mouse

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 IN Keyboard/Mouse Kit	672097-D63
HPE USB AP/INTL Keyboard/Mouse Kit	672097-373
HPE USB INTL Keyboard/Mouse Kit	672097-B33
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 SE Keyboard/Mouse Kit	672097-103
HPE USB CH Keyboard/Mouse Kit	672097-113
HPE USB KR Keyboard/Mouse Kit	672097-KD3

Rail Kits

HP 1U LFF Gen9 Easy Install Rail Kit	789388-B21
HP 1U Small Form Factor Easy Install Rail Kit	734807-B21
HP 1U Cable Management Arm for Easy Install Rail Kit	734811-B21
HPE 1U Small Form Factor Ball Bearing Rail Kit	663201-B21
HPE 1U Large Form Factor Ball Bearing Rail Kit	663202-B21
HPE 1U Cable Management Arm for Ball Bearing Rail Kit	663203-B21

HPE Other Options

HPE Rack LED Light Kit	BW939A
HP Kit LCD 1.83m Latch Display Port Cable	G7T29A

HPE Uninterruptible Power Systems (UPS)	**HPE DirectFlow Three Phase UPS**	
	Power Unit (1U UPS)	
	HPE R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HPE R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	Input/Output Module Options for 1U UPS	
	HPE 32A 400-415 Volt Three Phase INTL R12000 DirectFlow UPS IEC309 Input/Output Module	AF488A

Additional Options

HPE 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
HPE 32A 380 Volt Three Phase China R12000 DirectFlow UPS Unterminated Input/Output Module	AF490A
HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
HPE 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	G9Y76A
HPE DirectFlow UPS Management Card	AF493A

Power Unit (2U UPS)

HPE R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A

Input/Output Module Options for 2U UPS

HPE 32A 400-415 Volt Three Phase INTL R18000 DirectFlow UPS IEC309 Input/Output Module	AF483A
HPE 30A 380 Volt Three Phase China R18000 DirectFlow UPS Unterminated Input/Output Module	AF485A
HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF486A
HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF487A
HPE 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	D9Q02A
HPE 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module	AF484A

NOTE: All Input/Output Modules support dual output outlets except the AF484A.

Battery Pack Options

HPE DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack	AF480A
HPE DirectFlow UPS - 3U Rackmount VRLA Battery Pack	AF482A
HPE WW DirectFlow Secondary Battery Cable	AF497A

NOTE: Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on additional options and product specifications.

HPE Tower UPS

HPE T750 G4 UPS Models

HPE T750 G4 NA/JP Uninterruptible Power System	J2P85A
HPE T750 G4 INTL Uninterruptible Power System	J2P88A

HPE T1000 G4 UPS Models

HPE T1000 G4 NA/JP Uninterruptible Power System	J2P86A
HPE T1000 G4 INTL Uninterruptible Power System	J2P89A

HPE T1500 G4 UPS Models

HPE T1500 G4 NA/JP Uninterruptible Power System	J2P87A
HPE T1500 G4 INTL Uninterruptible Power System	J2P90A

HPE Rack/Tower UPS

HPE R/T2200 G4 UPS Models

HPE R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A

HPE R/T3000 G4 UPS Models

Additional Options

HPE R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
HPE R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
HPE R/T3000 G4 High Voltage INTL Uninterruptible Power System	J2R04A

R1500 G4 Models

HPE R1500 G4 NA Uninterruptible Power System	J2Q99A
HPE R1500 G4 JP/TWN Uninterruptible Power System	J2R05A
HPE R1500 G4 INTL Uninterruptible Power System	J2R03A

R7000 Uninterruptible Power System (UPS)

HPE R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
HPE R7000 4U IEC-32A High Voltage INTL Uninterruptible Power System	AF463A

R5000 Uninterruptible Power System (UPS)

HPE R5000 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
HPE R5000 3U IEC309-32A High Voltage INTL Uninterruptible Power System	AF461A

NOTE: Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on additional options and product specifications.

HPE UPS Options

HPE R/T2200 G4 Extended Runtime Module	J2R09A
HPE R/T3000 G4 Extended Runtime Module	J2R10A
HPE 2U Rack/Tower UPS Shipping Kit	L4Q11A

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

HPE USB and SD Options	**HPE Enterprise Mainstream Flash Media Kits for Memory Cards**	
	HPE 32GB microSD Mainstream Flash Media Kit	700139-B21
	HP Dual 8GB microSD Enterprise Midline USB Kit	741279-B21
	HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21

HPE Support Services	**Installation & Start-up Services**	
	HPE Install ProLiant DL36x(p) Service	U4506E
	HPE Installation and Startup DL36x(p) Service	U4507E
	Proactive Care	
	HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service	U5HM4E
	HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service	U5HM5E
	HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service	U5HM6E
	HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service	U5HN3E
	HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL360 Gen9 w/IC Service	U5HN4E
	HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service	U5HN5E
	HPE 3 year Proactive Care 24x7 DL360 Gen9 Service	U7AM2E
	HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 Service	U7AM3E
	HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 Service	U7AM4E
	HPE 3 year Proactive Care Call to Repair DL360 Gen9 Service	U7AM8E
	HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL360 Gen9 Service	U7AM9E
	HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 Service	U7AN0E

Memory

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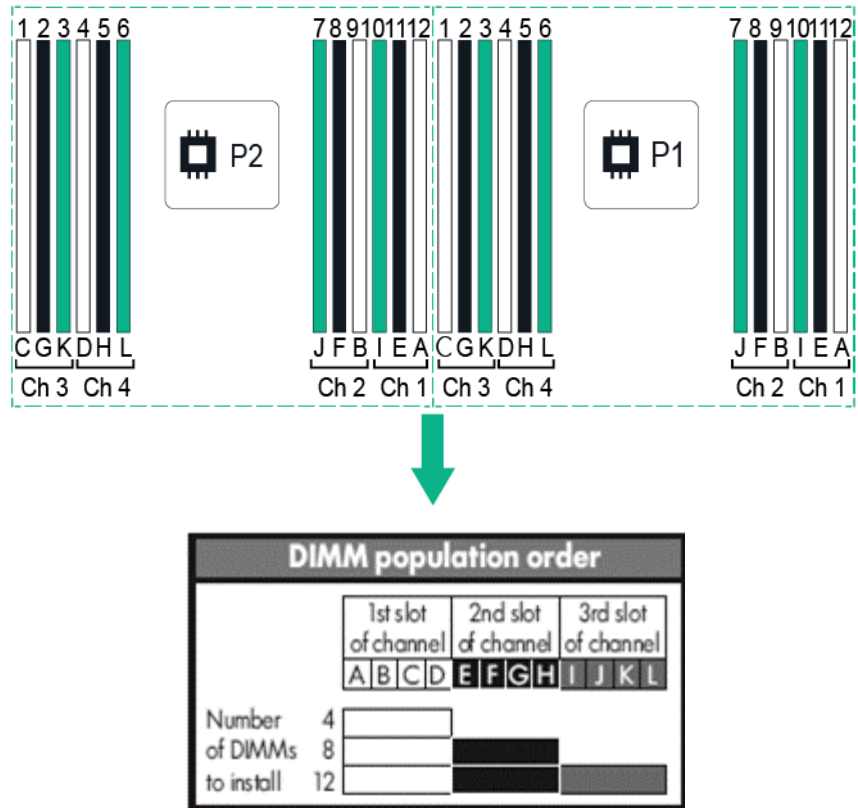
General Memory Population Rules and Guidelines:

. White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.

. A minimum of one DIMM is required per server.

. Install DIMMs only if the corresponding processor is installed.

. When two processors are installed, balance the DIMMs across the two processors

. Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel. Heaviest load (DIMM with most ranks) within a channel goes furthest from the processor.

. Do not mix RDIMMs or LRDIMMs.

. DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed

. 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 memory type and number of installed processors

. HPE memory from previous generation servers is not compatible with the DL360 Gen9 Server.

. For memory population rules and additional memory guidelines, please see the DL360 Gen9 user guide at **http://www.hp.com/support**.

. There are four (4) Memory channels per processor; eight (8) channels per 2 processor server.

. There are three (3) DIMM slots for each memory channel; twenty four (24) total slots for 2 processor server.

Memory

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v4 Series Processor Family

Memory Bandwidth and Capacity							
[DIMM Type]	**Registered DIMMs (RDIMMs)**				**Load Reduced (LRDIMMs)**		
HPE SKU P/N	805347-B21	805349-B21	836220-B21	805351-B21	805353-B21	805358-B21	809208-B21
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank	Octal Rank
DIMM Capacity	8GB	16GB	16GB	32GB	32GB	64GB	128GB
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
DRAM Depth [bit]	1G	2G	1G	2G	2G	2G	2G
DRAM Width [bit]	x8	x4	x4	x4	x4	x4	x4
DRAM Density	8Gb	8Gb	4Gb	8Gb	8Gb	8Gb	8Gb
CAS Latency	17-17-17	17-17-17	17-17-17	17-17-17	17-17-17	17-17-17	20-18-18
DIMM Native Speed (MT/s)	2400	2400	2400	2400	2400	2400	2400
SLOTS THAT CAN BE POPULATED							
24 slot servers	24	24	24	24	24	24	24
MAXIMUM CAPACITY (GB)							
	192	384	384	768	768	1536	3072
POPULATED DIMM SPEED (MT/s)							
1 DIMM Per Channel	2400	2400	2400	2400	2400	2400	2400
2 DIMM Per Channel	2133	2133	2400	2400	2400	2400	2400
3 DIMM Per Channel	1866	1866	1866	1866	2400	2400	2400

NOTE: Mixing the 128GB LRDIMM with other capacities is not supported.

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v3 Series Processor Family

Memory Bandwidth and Capacity							
[DIMM Type]	**Registered DIMMs (RDIMMs)**					**Load Reduced (LRDIMMs)**	
HPE SKU P/N	726717-B21	726718-B21	759934-B21	726719-B21	728629-B21	726720-B21	726722-B21	726724-B21
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank	Quad Rank
DIMM Capacity	4GB	8GB	8GB	16GB	32GB	16GB	32GB	64GB
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V

Memory

DRAM Depth [bit]	512M	1G	512M	1G	1G	2G	2G	2G
DRAM Width [bit]	x8	x4	x8	x4	x4	x4	x4	x4
DRAM Density	4Gb	4Gb	4Gb	4Gb	4Gb	8Gb	8Gb	8Gb
CAS Latency	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15
DIMM Native Speed (MT/s)	2133	2133	2133	2133	2133	2133	2133	2133
SLOTS THAT CAN BE POPULATED								
24 slot servers	24	24	24	24	24	24	24	24
MAXIMUM CAPACITY (GB)								
	96	192	192	384	768	384	768	1536
POPULATED DIMM SPEED (MT/s)								
1 DIMM Per Channel	2133	2133	2133	2133	2133	2133	2133	2133
2 DIMM Per Channel	2133	2133	2133	2133	2133	2133	2133	2133
3 DIMM Per Channel	1600	1600	1600	1600	1600	1866	1866	1866

DIMM slot and configuration diagram

DIMM slot and configuration diagrams

Basic memory slot & population diagram

- Population order; start with "A" first, "B" second, "C" third, etc.
- When one processor is installed, install DIMMs in sequential alphabetic order: A, B, C, D, E, F.
- When two processors are installed, install DIMMs in sequential alphabetic order: CPU1-A, CPU2-A,CPU1-B,CPU2-B,CPU1-C, CP2-C.

		CPU 1		**CPU 2**	
	Slot #	Population order	Slot #	Population order	
Chnl 3	1	C	1	C	Chnl3
	2	G	2	G	
	3	K	3	K	

		CPU 1		**CPU 2**	
	Slot #	Population order	Slot #	Population order	
Chnl 4	4	D	4	D	Chnl 4
	5	H	5	H	
	6	L	6	L	

		CPU 1		**CPU 2**	
	Slot #	Population order	Slot #	Population order	
Chnl 2	7	J	7	J	Chnl 2
	8	F	8	F	
	9	B	9	B	

CPU 1	**CPU 2**

Memory

	Slot #	Population order	Slot #	Population order	
Chnl 1	10	I	10	I	Chnl 1
	11	E	11	E	
	12	A	12	A	

Memory Speed by Processor Model	Processor Models	Supported Memory Speeds
	E5-2603v3, E5-2609v3	1600MT/s
	E5-2623v3, E5-2620v3, E5-2630v3, E5-2640v3, E5-2630Lv3	1866MT/s
	E5-2637v3, E5-2650v3, E5-2660v3, E5-2670v3, E5-2680v3, E5-2690v3, E5-2683v3, E5-2695v3, E5-2697v3, E5-2643v3, E5-2667v3, E5-2687Wv3, E5-2698v3, E5-2650Lv3, E5-2699v3	2133MT/s
	E5-2603v4, E5-2609v4	1866MT/s
	E5-2630Lv4, E5-2620v4, E5-2623v4, E5-2640v4, E5-2630v4	2133MT/s
	E5-2650Lv4, E5-2637v4, E5-2643v4, E5-2650v4, E5-2660v4, E5-2697Av4, E5-2680v4, E5-2690v4, E5-2687Wv4, E5-2667v4, E5-2683v4, E5-2695v4, E5-2697v4, E5-2698v4, E5-2699v4, E5-2699Av4	2400MT/s

| Standard and Maximum Memory Capacity (Pre-configured Models)	Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E5-2670v3	64GB (4x16GB)	704GB (20x32GB, 4x16GB)	1536GB (24x64GB)
	E5-2660v4	64GB (4x16GB)	704GB (20x32GB, 4x16GB)	3072GB (24x128GB)
	E5-2650v4	32GB (2x16GB)	736GB (22x32GB, 2x16GB)	3072GB (24x128GB)
	E5-2650v3	32GB (2x16GB)	736GB (22x32GB, 2x16GB)	1536GB (24x64GB)
	E5-2640v4, E5-2630v4	16GB (1x16GB)	752GB (23x32GB, 1x16GB)	3072GB (24x128GB)
	E5-2630v3	16GB (1x16GB)	752GB (23x32GB, 1x16GB)	1536GB (24x64GB)
	E5-2603v4	8GB (1x8GB)	744GB (23x32GB, 1x8GB)	3072GB (24x128GB)
	E5-2603v3	8GB (1x8GB)	744GB (23x32GB, 1x8GB)	1536GB (24x64GB)

Memory

DDR4 memory options part number decoder

NOTE: Capacity references are rounded to the common gigabyte (GB) values.

- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB
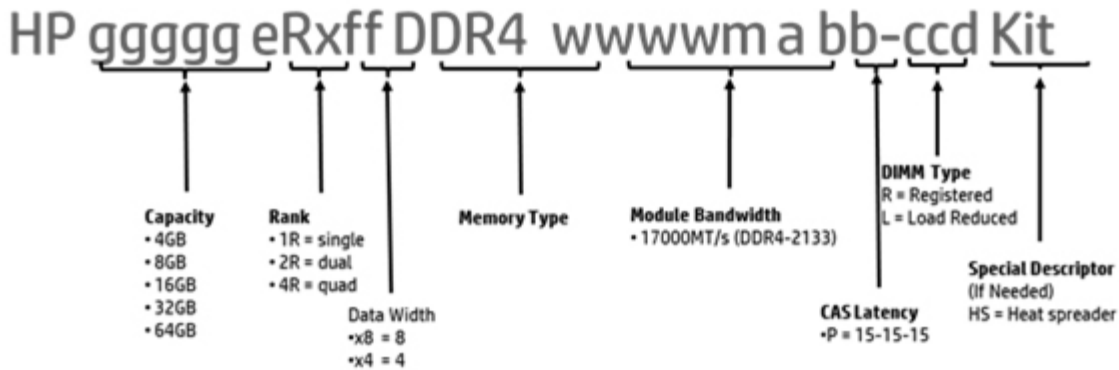
Storage

1-8   8 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

1-4   4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drives Bays

1-10   10 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

Technical Specifications

System Unit			
System Unit	**Dimensions**	8 SFF and 10 SFF 1.7 x 17.1 x 27.5 inches (4.32 x 43.47 x 69.85 cm)	
		4 LFF - 1.7 x 17.1 x 29.5 inches (4.32 x 43.46 x 75.0 cm)	
	Weight (approximate)	Maximum: (all hard drives, power supply, and processor installed)	8 SFF Chassis 33.3 lb. (15.31 kg) **NOTE:** Includes 2 SFF Option for a total of 10 SFF HDD. 4 LFF Chassis 37 lb. (16.78kg)
		Minimum: (one hard drive, power supply, and processor installed)	8SFF Chassis 27 lb. (12.25 kg) 4 LFF Chassis 30.36 lb. (13.77 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
	BTU Rating	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 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 1400W Power Supply: 1400W (at 240 VAC), 1400W (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 1400W Power Supply: 1400W (at 200 to 240 1VAC), 1400W (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 Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. **NOTE:** System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).
		Extended Ambient Operating Support	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

Technical Specifications

		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	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
(non-condensing)	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

Idle

LWAd	(1P non-redundant) 4.6 A Average Bystander
	(2P redundant) 5.5 A Average Bystander
LpAm	(1P non-redundant) 29 dBA
	(2P redundant) 37 dBA

Operating

LWAd	(1P non-redundant) 4.6 A Average Bystander
	(2P redundant) 6.2 C Average Bystander
LpAm	(1P non-redundant) 30 dBA
	(2P redundant) 46 dBA

Technical Specifications

NOTE: 1P Configuration tested included two Intel E5-2630 v3, 2.3GHz processors, one 500GB SAS HDD, five standard hot plug fans, one 8GB DDR4 RDIMM's 2133MHz, one 500W power supply.

NOTE: 2P Configuration tested included two Intel E5-2650 v3, 2.6GHz processors, one 500GB SAS HDD, seven standard hot plug fans, two 16GB DDR4 RDIMM's 2133MHz, one 500W power supply, P440ar HDD controller PCI card with 2GB cache.

NOTE: Values are subject to change without notification and are for reference only.

NOTE: Performance of system, options, and ancillary equipment will vary depending on the system configuration.

NOTE: Levels presented do not account for non-Hewlett Packard Enterprise installed hardware.

Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

NOTE: 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.

HPE Dynamic Smart Array B140i Controller		
Number of PCI links	Four	
PCI link rate	4Gb/s	
Storage protocol support	SATA	
SAS/SATA peak data transfer rate	6Gb/s	
Number of SAS/SATA links	10 links	
SAS/SATA connectivity	2x4 connectors; 2x1 connectors	
Expander support	No	
Drives supported (max)	Up to 10 Internal Drives	
RAID support	0, 1, 10, 5 SATA	
Software management	HPE SSA, SMH, SIM	
Warranty	Server warranty	
HPE Secure Encryption license	Not Supported	
HPE SmartCache License	Not Supported	
HPE Smart Storage Administrator	Supported	

HPE Ethernet 1Gb 4-port 331i Adapter	**Network Interface**	10Base-T/100Base-TX/1000Base-TX
	Compatibility	IEEE 802.3 10Base-T
		IEEE 802.3ab 1000Base-T
		IEEE 802.3u 100Base-TX
	Data Transfer Method	PCI Express, two lanes (x2)

Technical Specifications

Controller	BCM5719	
Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined
	10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined
	100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined
	100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
	1000Base-TX (Half and Full-Duplex)	1000 Mb/s per port, 4000 Mb/s combined
	1000Base-TX (Full-Duplex)	2000 Mb/s per port, 8000 Mb/s combined
Connector	Four RJ-45	
Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
	10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

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.

http://www.hpe.com/recycle

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.

http://www.hpe.com/recycle

Summary of Changes

Date	Version History	Action	Description of Change
20-Jun-2017	From Version 31 to 32	Changed	Expansion Slots section was revised.
5-Jun-2017	From Version 30 to 31	Added	Added new Solid State Drives offering to the HPE Drives section.
		Changed	HPE InfiniBand section was revised.
8-May-2017	From Version 29 to 30	Added	New HPE Computation and Graphics Accelerators options were added.
		Changed	Processor and Power Supply sections under Standard Features were revised. HPE Power Supplies section was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
3-Apr-2017	From Version 28 to 29	Changed	Internal View image call outs were revised.
27-Mar-2017	From Version 27 to 28	Added	Added new Hard Drives and new HPE Networking option.
		Changed	HPE I/O Expansion Options section was revised.
17-Feb-2017	From Version 26 to 27	Changed	HPE Memory section under Core Options was revised.
13-Feb-2017	From Version 25 to 26	Added	Added new HDD and SSD offering to the HPE Drives section.
		Changed	Graphics and HPE StoreVirtual VSA were revised.
28-Nov-2016	From Version 24 to 25	Added	Added new LFF Hard Drives, new Fiber Channel HBAs up to 32Gb, and new E5-2699A v4 processor.
		Changed	Processors, Memory, Maximum Internal Storage, HPE Drives, and HPE Computation and Graphics Accelerators were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
7-Oct-2016	From Version 23 to 24	Changed	Notes under the HPE Computation and Graphics Accelerators section were revised.
26-Sep-2016	From Version 22 to 23	Added	Added new SATA LFF hard drives offering. New NVIDIA Tesla M4 4GB Module was added.
		Changed	Maximum Internal Storage was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
19-Aug-2016	From Version 21 to 22	Changed	Smart Buy models section was revised for the NA version only.
15-Aug-2016	From Version 20 to 21	Added	Added new Networking, Storage, and Unique options.
		Changed	Overview, Memory, Standard Features section, Pre-configured Models, Configuration Information - Factory Integrated Models, HPE Drives, InfiniBand, and Computation and Graphics Accelerators were revised.
8-Jul-2016	From Version 19 to 20	Changed	Smart Buy models section was revised for the NA version only.
6-Jun-2016	From Version 18 to 19	Added	Added new HPE 25GB Ethernet Adapters, HPE 100GB OPA Adapter, HPE 128GB DIMM (8Rx4 PC4-2400T-L) Kit, HPE NVIDIA Quadro M2000 GPU Module, HPE StoreFabric 84Q 4-port 8Gb FC HBA, and new 2TB, 4TB, and 8TB LFF Drives.
		Changed	Memory, Maximum Internal Storage, Pre-configured Models, HPE Unique Options, HPE Memory, HPE Drives,

Summary of Changes

			HPE InfiniBand, HPE Power Supplies, HPE Computation and Graphics Accelerators, HPE Insight Software, HPE PCIe Workload Accelerator Options, HPE Storage Controllers, HPE Disk Backup, and HPE Storage Options were updated.
22-Apr-2016	From Version 17 to 18	Changed	Smart Buy model 800079-S01 was revised.
15-Apr-2016	From Version 16 to 17	Changed	Smart Buy models section was revised for the NA version only.
5-Apr-2016	From Version 15 to 16	Added	Added new NVIDIA Quadro M4000 GPU module.
		Changed	What's New section was updated. Standard Features/Memory and HPE Memory sections were revised.
31-Mar-2016	From Version 14 to 15	Added	Added Intel E5-2600v4 Processors support, new HPE Smart Memory DDR4 2400MHz, new HPE Persistent Memory, new HPE Flexible Smart Array P840ar controller, new NVIDIA Quadro GPU options, and new TPM 2.0 module.
		Changed	Embedded Management, Security, Warranty, Service and Support, Pre-configured Models, Memory, and Storage Options sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
26-Feb-2016	From Version 13 to 14	Changed	Note for front view image – callout #9 was updated.
16-Feb-2016	From Version 12 to 13	Added	New HDD offering was added to HPE Drives.
		Changed	Maximum Internal Storage, HPE Power Supplies, HPE Computation and Graphics Accelerators, HPE Disk Backup, HPE Data Center Racks, and HPE Power Distribution Units (PDUs) were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Dec-2015	From Version 11 to 12	Added	Smart Buy models were added to the NA version.
1-Dec-2015	From Version 10 to 11	Added	New HDD offering was added to HPE Drives. New options added to HPE PCIe Workload Accelerator Options, HPE Tape Backup, and HPE Disk Storage Systems.
		Changed	On System Management Chipset, Embedded Management, and Server utilities were revised. Product images were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Sep-2015	From Version 9 to 10	Added	Added support for PCIe Solid State Drives, additional 6Gb SATA SSD drives, support for new Network adapters, and support for new PCIe workload accelerators. Added new HPE OneView management software.
		Changed	Internal Storage Devices, Maximum Internal Storage, and HPE Drives were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	From Version 8 to 9	Added	Added new Solid State Drives offering.
		Changed	What's New changed to: Support for PCIe Solid State Drives Support for additional 6Gb SATA SSD drives

Summary of Changes

			Maximum Internal Storage and HPE Unique Options were revised.
1-Jun-2015	From Version 7 to 8	Added	New DVD Universal Media Bay option was added. New larger capacity HDDs (up to 8TB LFF), Max capacity 32TB were added. New higher capacity memory (64GB), Max capacity 1.5TB was added. New Networking options were added. Optional Software was added to HPE Storage Controllers.
		Changed	HPE Disk Backup and HPE Uninterruptible Power Systems (UPS) were updated.
30-Mar-2015	From Version 6 to 7	Added	New Hard Drives offering. Added new HPE PCIe Workload Accelerator Options. Optional Software added to HPE Storage Controllers. Added new HPE Care Pack Services.
		Changed	What's New, Core Options, and Additional Options were revised.
		Removed	Removed obsolete HPE Care Pack Services.
17-Feb-2015	From Version 5 to 6	Added	Added Smart Buy Models to the NA version only.
9-Feb-2015	From Version 4 to 5	Added	Added What's New section. Added new HPE Drives, Pre-configured Models, and G4 UPS models.
		Changed	HPE Processors, HPE Disk Backup, HPE Tape Backup, HPE Rack Mount Consoles, KVM Switches, and Keyboards, HPE Uninterruptible Power Systems (UPS), and HPE Computation and Graphics Accelerators sections were revised.
1-Dec-2014	From Version 3 to 4	Changed	Changes were made throughout the QuickSpecs.
13-Oct-2014	From Version 2 to 3	Added	6G SATA Enterprise Value G1 Solid State Drives were added to Core Option section. HPE PCIe Workload Accelerator Options, HPE USB and SD options were added to the Additional Options section. Smart Buys section was added to NA version.
		Changed	Call outs description for images, Standard Features, Optional Features, Pre-Configured Models, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Memory sections were revised.
23-Sep-2014	From version 1 to 2	Changed	Changes were made throughout the QuickSpecs.

Summary of Changes

hpe.com/qref/dl360gen9

f   𝕏   in   ✉
Sign up for updates

Hewlett Packard Enterprise