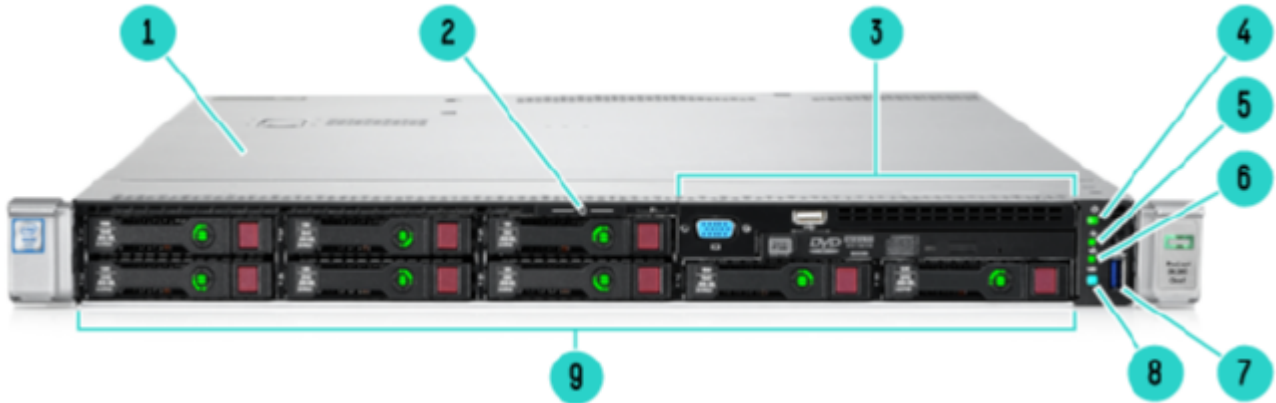


### Overview

### ProLiant DL360 Generation9 (Gen9)

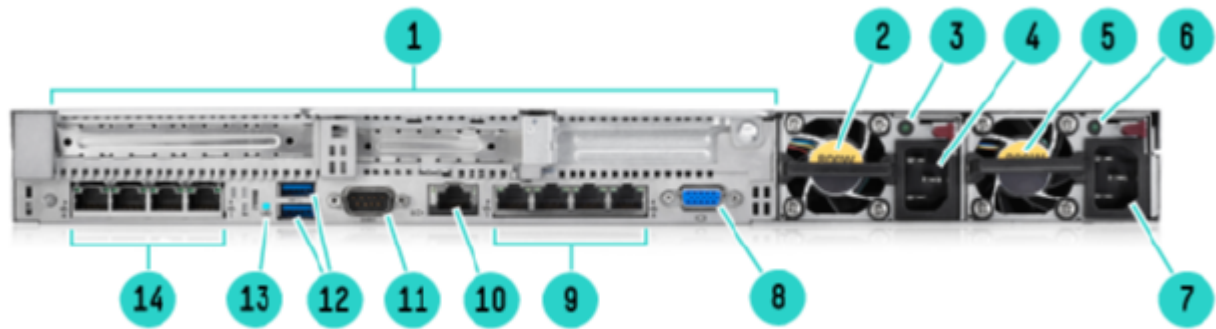
The Hewlett Packard Enterprise leading server for dense general-purpose computing, the HPE ProLiant DL360 Gen9 Server delivers increased performance with the best memory and I/O expandability packed in a 1U dense rack design. Reliability, serviceability and always on availability, backed by a comprehensive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



### Front View

1. Access Panel
2. Serial Label Pull Tab
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.
4. Power On/Standby button and system power LED button
5. Health LED
6. NIC Status LED
7. USB 3.0 Connector
8. Unit Identification Button & LED
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.

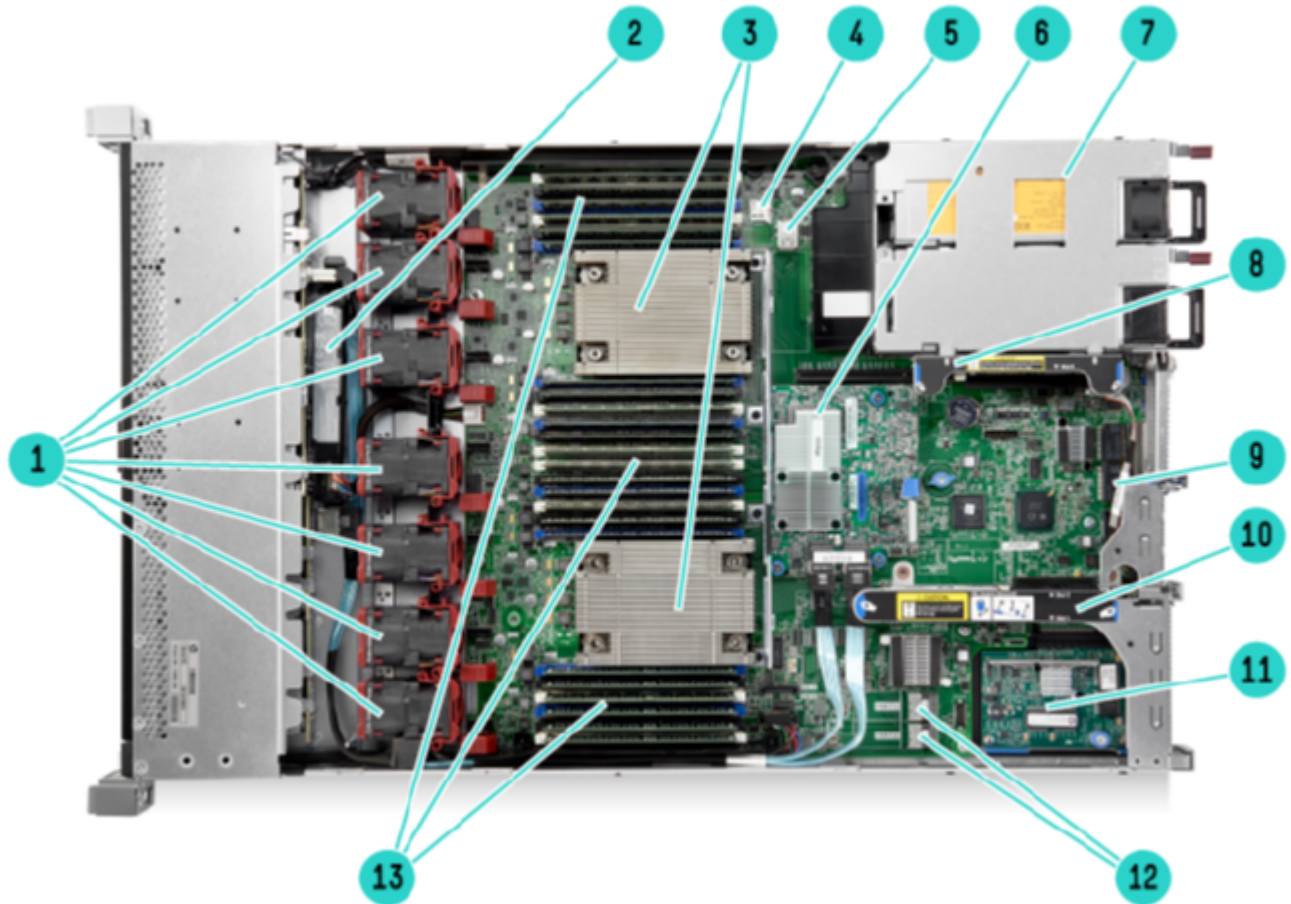
### Overview



### Rear View

1. PCIe 3.0 Slots 1-3  
**NOTE:** Slot 1 and 2 Riser Ships Standard, Slot 3 Optional one FH/  $\frac{3}{4}$ length and two Low Profile slots available (shown) or two FH/  $\frac{3}{4}$ length slots.
2. HPE Flexible Slot Power Supply Bay 2
3. Power Supply 2 Status LED
4. Power Supply 2 C13 Connection
5. HPE Flexible Slot Power Supply Bay 1
6. Power Supply 1 Status LED
7. Power Supply 1 C13 Connection
8. Video Connector
9. Embedded 4x1GbE Network Adapter
10. Dedicated iLO 4 connector
11. Serial Port Connector (Optional)
12. USB 3.0 Connectors (2)
13. Unit Identification LED
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

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

**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
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

### Standard Features

E5-2699Av4	3.6GHz	22	55MB	145W	9.6GT/s	2400
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**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

<b>Memory Protection</b>	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	X16	10	Full-height, half-length slot	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	Full-height, full-length slot	Proc 2
	3	PCIe 3.0	X16	X16	20	Full-height, full-length 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.

### 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

### Standard Features

<p><b>Internal Storage Devices</b> One of the following depending on model</p>	<p>Optical Drive</p>	<p>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 <b>NOTE:</b> Optical cable kit Required for optical drives, 766203-B21.</p>
	<p>Hard Drives</p>	<p>None ship standard</p>
	<p>Hard Drive Bays</p>	<p>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 <b>NOTE:</b> HPE ProLiant DL360 Servers offer both SFF and LFF versions in CTO. <b>NOTE:</b> Pre-configured models come populated with some hard drive blanks. To order additional (single) hard drive blanks, use either: P/N 666987-B21: HPE SFF Hard Drive Blank Kit or P/N 666986-B21: HPE LFF Hard Drive Blank Kit. <b>NOTE:</b> The 2SFF kit comes with cable for internal B140i SATA controller. For SAS an alternate storage controller and cable kit are required.</p>

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

### Standard Features

#### 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:** Available in 94% and 96% efficiency.

**NOTE:** Also available in -48VDC and 227VAC/380VDC power inputs, 720480-B21.

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>.

#### System Fans

One of the following depending on model

1P model

**Non-redundant**

N/A

**Redundant**

5 fans

2P model

**Non-redundant**

N/A

**Redundant**

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>

### Standard Features

#### 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.hp.com/go/ossupport> and our driver download page: <http://h20566.www2.hpe.com/hpsc/swd/public/readIndex?sp4ts.oid=7252838>.

### Standard Features

<b>Upgradeability</b>	<p>Upgradeable to 2 processors (44 Cores)</p> <p>Up to 24 DIMM slots available for higher Memory capacity</p> <p>Up to 10 SFF Hard Drive Bays; or 4 LFF Hard Drive Bays</p> <p>FlexibleLOM slot for 1GbE or 10GbE or QDR/FDR InfiniBand Networking Options</p> <p>Optional 3 slot riser (x16, x16, x8), or 2 slot primary riser (x16, x8)</p> <p>3 PCIe 3.0 I/O slots for additional communications and storage expansion</p> <p><b>NOTE:</b> 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.</p> <p>Redundant Power Supplies</p> <p>Optical Drive supported via Universal Media Bay</p> <p>8SFF Chassis with:</p> <p>Option Kit 764632-B21 VGA, SFF DVD-RW USB Kit</p> <p>Option Kit 818213-B21 VGA, SFF DVD-ROM USB Kit</p> <p>4LFF Chassis with:</p> <p>Option Kit 726536-B21 - HPE 9.5mm SATA DVD-ROM Jb Gen9 Kit</p> <p>Option Kit 726537-B21 - HPE 9.5mm SATA DVD-RW Jb Gen9 Kit</p> <p><b>NOTE:</b> Optical cable kit Required for optical drives, 766203-B21.</p>
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<b>Industry Standard Compliance</b>	<p>ACPI 2.0b Compliant</p> <p>PCIe 3.0 Compliant</p> <p>PXE Support</p> <p>WOL Support</p> <p>Microsoft® Logo certifications</p> <p>USB 3.0 Support</p> <p>Energy Star</p> <p>ASHRAE A3/A4</p> <p><b>NOTE:</b> 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.</p>
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For additional technical thermal details regarding ambient temperatures, humidity and features support please visit <http://www.hpe.com/servers/ashrae>.

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<b>Graphics</b>	<p>Integrated Matrox G200 video standard with 16MB of Video RAM</p> <ul style="list-style-type: none"><li>• 1280 x 1024 (32 bpp)</li><li>• 1920 x 1200 (16 bpp)</li></ul>
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### Standard Features

#### 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
- 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.

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#### 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.

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### Standard Features

<b>Embedded Management</b>	<b>HPE Integrated Lights-Out (HPE iLO)</b>	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at <a href="http://www.hpe.com/info/ilo">http://www.hpe.com/info/ilo</a> .
	<b>UEFI</b>	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at <a href="http://www.hpe.com/servers/uefi">http://www.hpe.com/servers/uefi</a> .
	<b>RESTful API</b>	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 <a href="http://www.hpe.com/info/restfulapi">http://www.hpe.com/info/restfulapi</a> .
	<b>Intelligent Provisioning</b>	Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at <a href="http://www.hpe.com/servers/intelligentprovisioning">http://www.hpe.com/servers/intelligentprovisioning</a> .
	<b>Embedded Remote Support</b>	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 <a href="http://www.hpe.com/info/insightonline/explore">http://www.hpe.com/info/insightonline/explore</a> .
<b>Server utilities</b>	<b>Smart Update</b>	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at <a href="http://www.hpe.com/servers/smartupdatemanager">http://www.hpe.com/servers/smartupdatemanager</a>
	<b>HPE Systems Insight Manager (HPE SIM)</b>	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 <a href="http://www.hpe.com/servers/hpsim">http://www.hpe.com/servers/hpsim</a> .
	<b>Scripting Tool Kit and Windows PowerShell</b>	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 <a href="http://www.hpe.com/servers/proliant/stk">http://www.hpe.com/servers/proliant/stk</a> or <a href="http://www.hpe.com/servers/powershell">http://www.hpe.com/servers/powershell</a> .
	<b>RESTful Interface Tool</b>	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 <a href="http://www.hpe.com/info/resttool">http://www.hpe.com/info/resttool</a> .
	<b>HPE iLO Mobile Application</b>	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: <a href="http://www.hpe.com/info/ilo/mobileapp">http://www.hpe.com/info/ilo/mobileapp</a> .

### Standard Features

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**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>.

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### 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

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### 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.

**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

<b>Server Management</b>	<b>HPE Insight Control</b>	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 <a href="http://www.hpe.com/info/insightcontrol">http://www.hpe.com/info/insightcontrol</a> .
	<b>HPE Insight Cluster Management Utility (CMU)</b>	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 <a href="http://www.hpe.com/info/cmu">http://www.hpe.com/info/cmu</a> .

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<b>Rack and Power Infrastructure</b>	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 <a href="#">HPE Rack and Power Infrastructure</a> .
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<b>High Performance Clusters</b>	<b>HPE Insight Cluster Management Utility (CMU)</b>	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 <a href="http://www.hp.com/go/cmu">http://www.hp.com/go/cmu</a> .
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<b>HPC Interconnects</b>	<b>NOTE:</b> 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: <a href="http://www.hp.com/techservers/clusters/ucp/index.html">http://www.hp.com/techservers/clusters/ucp/index.html</a> .
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### Optional Features

#### 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.

- **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. <https://h22174.www2.hp.com/SimplifiedConfig/Index>.

### 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%<sup>1</sup> reduction in down time, near 100%<sup>2</sup> diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7 monitoring, 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 HPE 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.

### Service and Support

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

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#### **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>

#### **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.

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#### **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>

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#### **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		
<b>[SKU Number]</b>	818207-B21	755260-B21	755261-B21	818208-B21	848736-B21	755262-B21
<b>Model Name</b>	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
<b>Processor</b>	Intel® Xeon® E5-2603v4	Intel® Xeon® E5-2603v3		Intel® Xeon® E5-2630v4	Intel® Xeon® E5-2640v4	Intel® Xeon® E5-2630v3
<b>Number of Processors</b>	One					
<b>Memory</b>	8GB (1x8GB Registered DIMMs, 2400 MHz) <b>NOTE:</b> With E5-2603 v4 Processor, the actual DIMM speed will operate at 1866 MHz depending on DIMM configuration.	8GB (1x8GB Registered DIMMs, 2133 MHz) <b>NOTE:</b> With E5-2603 v3 Processor, the actual DIMM speed will operate at 1600 MHz depending on DIMM configuration.		16GB (1x16GB Registered DIMMs, 2400 MHz) <b>NOTE:</b> With E5-2630 v4 Processor, the actual DIMM speed will operate at 2133 MHz depending on DIMM configuration.	16GB (1x16GB Registered DIMMs, 2400 MHz) <b>NOTE:</b> With E5-2640 v4 Processor, the actual DIMM speed will operate at 2133 MHz depending on DIMM configuration.	16GB (1x16GB Registered DIMMs, 2133 MHz) <b>NOTE:</b> With E5-2630 v3 Processor, the actual DIMM speed will operate at 1866 MHz depending on DIMM configuration.
<b>Network Controller</b>	HPE Embedded 1Gb Ethernet 4-port 331i Adapter					
<b>Storage Controller</b>	HPE H240ar Smart Host Bus Adapter	HPE Dynamic Smart Array B140i <b>NOTE:</b> 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		
<b>Hard Drive</b>	None ship standard	None ship standard	None ship standard			



### Pre-configured Models

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

	Performance Models		High Performance Models	
[SKU Number]	818209-B21	755263-B21	851937-B21	795236-B21
<b>Model Name</b>	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
<b>Processor</b>	Intel® Xeon® E5-2650v4	Intel® Xeon® E5-2650v3	Intel® Xeon® E5-2660v4	Intel® Xeon® E5-2670v3
<b>Number of Processors</b>	Two			
<b>Memory</b>	32GB (2x16GB Registered DIMMs, 2400 MHz) <b>NOTE:</b> With E5-2650 v4 Processor, the actual DIMM	32GB (2x16GB Registered DIMMs, 2133 MHz) <b>NOTE:</b> With E5-2650 v3 Processor, the actual DIMM	64GB (4x16GB Registered DIMMs, 2400 MHz) <b>NOTE:</b> With E5-2660 v4 Processor, the actual DIMM	64GB (4x16GB Registered DIMMs, 2133 MHz) <b>NOTE:</b> With E5-2670 v3 Processor, the actual DIMM



# QuickSpecs

## HPE ProLiant DL360 Generation9 (Gen9)

### Pre-configured Models

	speed will operate at 2400 MHz depending on DIMM configuration.	speed will operate at 2133MHz depending on DIMM configuration.	speed will operate at 2400 MHz depending on DIMM configuration.	speed will operate at 2133 MHz depending on DIMM configuration.
<b>Network Controller</b>	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
<b>Storage Controller</b>	HPE Flexible Smart Array P440ar/2GB		HPE Smart Array P440ar/2G Controller	HPE Flexible Smart Array P440ar/2GB
<b>Hard Drive</b>	None ship standard			
<b>Internal Storage</b>	8 SFF HDD Bays			
<b>Optical Drive Bay</b>	Optional via Universal Media Bay			
<b>PCI-Express Slots</b>	2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0		3 Standard (1-FH/HL, 2-LP) PCIe 3.0	
<b>Power Supply</b>	(2) HPE 800W Flex Slot Platinum Power Supply			(1) HPE 800W Flex Slot Platinum Power Supply
<b>Fans</b>	7 standard hot plug fans, redundant			
<b>Management</b>	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (optional)			iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (Standard)
<b>Energy Star</b>	Meets Energy Star requirements			
<b>Form Factor</b>	Rack (1U), HPE Easy Install Rails			
<b>Warranty</b>	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response			

<b>Country Code</b>	xx1 = B21	Worldwide
<b>Key</b>	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)

<b>[Chassis]</b>	HPE ProLiant DL360 Gen9 4LFF Configure-to-order Server	HPE ProLiant DL360 Gen9 8SFF Configure-to-order Server
<b>SKU Number</b>	755259-B21	755258-B21
<b>Processor</b>	2 (optional) x HPE Smart Socket Guide	
<b>DIMM Slots</b>	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory	
<b>Storage Controller</b>	HPE Dynamic Smart Array B140i	
<b>PCIe</b>	2 PCIe 3.0 Slots: Slot 1, FH / $\frac{3}{4}$ Length; Slot 2, Low Profile	
<b>Drive Cage</b>	4LFF Hot Plug	8SFF Hot Plug
<b>Network Controller</b>	HPE Embedded 1Gb Ethernet 4-port 331i Adapter	
<b>Fans</b>	5 standard hot plug fans, redundant	
<b>Management</b>	iLO Management (standard), Intelligent Provisioning (standard)	
<b>USB</b>	1 front, 2 internal, 2 rear	
<b>Ears</b>	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.

### Configuration Information - Factory Integrated Models

#### 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.

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

### Configuration Information - Factory Integrated Models

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.
- 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.

### Configuration Information - Factory Integrated Models

#### 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.

**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.

<b>HPE Unique Options</b>	<p>HP DL360 Gen9 2SFF SAS/SATA Universal Media Bay Kit <span style="float: right;">764630-B21</span></p> <p><b>NOTE:</b> 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. <b>NOTE:</b> 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.</p>
	<p>HP DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit <span style="float: right;">764632-B21</span></p> <p><b>NOTE:</b> DVD-RW, USB 2.0 and VGA included. This option kit cannot be used with the 2 SFF SAS/SATA option kit (764630-B21).</p>
	<p>HP DL360 Gen9 SFF DVD/USB Universal Media Bay Kit <span style="float: right;">818213-B21</span></p> <p><b>NOTE:</b> DVD ROM, USB 2.0 and VGA included. This option kit cannot be used with the 2 SFF SAS/SATA option kit (764630-B21).</p>
	<p>HP DL360 Gen9 SFF USB/VGA Universal Media Bay Kit <span style="float: right;">764634-B21</span></p> <p><b>NOTE:</b> 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).</p>
	<p>HP DL360 Gen9 LFF USB/VGA Kit <span style="float: right;">764638-B21</span></p> <p><b>NOTE:</b> 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).</p>
	<p>HP DL360 Gen9 High Performance Heat Sink Kit <span style="float: right;">795235-B21</span></p> <p><b>NOTE:</b> 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.</p>
	<p>HP DL360 Gen9 Rear Serial Port and Enablement Kit <span style="float: right;">764646-B21</span></p>
	<p>HP DL360 Gen9 Location Discovery Services Ear Kit <span style="float: right;">764757-B21</span></p> <p><b>NOTE:</b> Requires ProLiant Location Discovery Services Infrastructure within server racks.</p>
	<p>HP DL360 Gen9 SFF Systems Insight Display Kit <span style="float: right;">764636-B21</span></p> <p><b>NOTE:</b> Adds a System Insight Display for improved diagnosis capabilities on an 8FF or 10SFF model.</p>
	<p>HP DL360 Gen9 LFF Systems Insight Display Kit <span style="float: right;">764640-B21</span></p> <p><b>NOTE:</b> Adds a System Insight Display for improved diagnosis capabilities on a 4LFF model.</p>
	<p>HP DL360 Gen9 NVMe 2 Solid State Drive Express Bay Enablement Kit <span style="float: right;">764628-B21</span></p> <p><b>NOTE:</b> This option provides support for up to 2 NVMe SFF drives. This option cannot be used with the Universal Media Bay Kit. <b>NOTE:</b> The HPE DL360 Gen9 High Performance Fan Kit (766201-B21)</p>

### Core Options

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).

**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

### Core Options

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
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

### Core Options

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
<b>E5-2600v3 series Processors</b>	
HPE DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	755374-B21
<b>NOTE: This processor does not support Hyper-Threading.</b>	
HPE DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit	755374-L21
<b>NOTE: This processor does not support Hyper-Threading.</b>	
HPE DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	755378-B21
<b>NOTE: This processor does not support Hyper-Threading.</b>	
HPE DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit	755378-L21
<b>NOTE: This processor does not support Hyper-Threading.</b>	
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

### Core Options

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
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

### Core Options

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
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
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

### Core Options

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
<b>Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series</b>	
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
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**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
<b>NOTE:</b> Supported only with the 4LFF Models & requires cable kit 766203-B21.	
HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
<b>NOTE:</b> 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
<b>NOTE:</b> Front DVD ROM, USB 2.0, and VGA and optical cable.	
HP DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit	764632-B21
<b>NOTE:</b> Front DVD-RW, USB 2.0 and VGA, and optical cable.	
HP Mobile USB Non Leaded System DVD RW Drive	701498-B21
<b>NOTE:</b> This is only supported on USB 3.0 ports.	

### HPE Drives

<b>12G SAS 10K Hot Plug SFF (2.5-inch) SC Enterprise Hard Drives - 3yr Warranty</b>	
HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21

### Core Options

HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-B21
HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21
<b>12G SAS 10K Hot Plug SFF (2.5-inch) SC Hard Drives - 3yr Warranty</b>	
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
<b>12G SAS 15K Hot Plug SFF (2.5-inch) SC Hard Drives - 3yr Warranty</b>	
HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
<b>12G SAS 15K Hot Plug SFF (2.5-inch) SC Hard Drives - 3yr Warranty</b>	
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty DS 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
<b>12G SAS 7.2K Hot Plug SFF (2.5-inch) SC Midline Hard Drives - 1yr Warranty</b>	
HPE 1TB 12G SAS 7.2K rpm SFF (2.5in) SC Midline 1yr Warranty Hard Drive	832514-B21
<b>12G SAS 7.2K Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty</b>	
HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765466-B21
HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765464-B21
<b>12G SAS 10K Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty</b>	
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
<b>12G SAS 15K Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty</b>	
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870763-B21

### Core Options

HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870765-B21
HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	748387-B21
<b>12G SAS Hot Plug LFF (3.5-inch) SC 512e Hard Drives- 3yr Warranty</b>	
HPE 10TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	857644-B21
HPE 8TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	861590-B21
HPE 8TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	819201-B21
HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793703-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793699-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	861754-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	861756-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793669-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-B21
<b>12G SAS Hot Plug LFF (3.5-inch) SC Enterprise Hard Drives - 3yr Warranty</b>	
HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737394-B21
HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737261-B21
<b>12G SAS Hot Plug LFF (3.5-inch) SC Midline Hard Drives - 1yr Warranty</b>	
HPE 6TB 12G SAS 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	846514-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	818367-B21
HPE 3TB 12G SAS 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	846528-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21
HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	818365-B21

### Core Options

HPE 1TB 12G SAS 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive 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.

To further assist with configuration, HPE also offers an SSD Selector Tool located here: <http://ssd.hpe.com>.

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

HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive 779176-B21

HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive 779172-B21

HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive 779168-B21

HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive 779164-B21

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

HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive 802891-B21

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

HPE 3.84TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive 816576-B21

HPE 1.92TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive 816572-B21

HPE 960GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive 816568-B21

HPE 480GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive 816562-B21

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

HPE 1.6TB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive 846432-B21

HPE 800GB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive 846430-B21

HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive 802586-B21

HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive 802582-B21

HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive 802578-B21

#### 12G SAS Hot Plug SFF (2.5-inch) SC Mixed Use-1 Solid State Drives - 3yr Warranty

### Core Options

HPE 1.6TB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846436-B21
HPE 800GB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846434-B21
<b>12G SAS Hot Plug SFF (2.5-inch) SC Mixed Use-3 Solid State Drives - 3yr Warranty</b>	
HPE 3.2TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822567-B21
HPE 1.6TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822563-B21
HPE 800GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822559-B21
HPE 400GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822555-B21
<b>12G SAS Hot Plug SFF (2.5-inch) SC Enterprise Solid State Drives - 3yr Warranty</b>	
HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762263-B21
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762261-B21
<b>12G SAS Hot Plug LFF (3.5-inch) SC Enterprise Solid State Drives - 3yr Warranty</b>	
HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762272-B21
HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762270-B21
<b>6G SAS Hot Plug SFF (2.5-inch) SC Enterprise Hard Drives - 3yr Warranty</b>	
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
<b>6G SATA Hot Plug SFF (2.5 inch) SC Midline Hard Drives - 1yr Warranty</b>	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC 512e Hard Drives - 1yr Warranty</b>	
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	861750-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	861752-B21
HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SC 512e Hard Drives - 1yr Warranty</b>	
HPE 10TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	857648-B21

### Core Options

HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	861594-B21
HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	819203-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793683-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793667-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SC Midline Hard Drives - 1yr Warranty</b>	
HPE 6TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	846510-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21
HPE 4TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861678-B21
HPE 3TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861693-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861676-B21
HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861691-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives - 1yr Warranty</b>	
HPE 1.92TB 6G SATA Read Intensive SFF (2.5in) SC 1yr Warranty Solid State Drive	871770-B21
HPE 960GB 6G SATA Read Intensive SFF (2.5in) SC 1yr Warranty Solid State Drive	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
<b>6G SATA Hot Plug SFF (2.5-inch) SC DS Read Intensive Solid State Drives - 1yr Warranty</b>	
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

### Core Options

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
HPE 150GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869374-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive-2 Solid State Drives - 3yr Warranty</b>	
HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804605-B21
HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804599-B21
HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804593-B21
HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804587-B21
HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804581-B21
HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804575-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC Write Intensive-2 Solid State Drives - 3yr Warranty</b>	
HPE 1.6TB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872363-B21
HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804677-B21
HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804671-B21
HPE 800GB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872359-B21
HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804665-B21
HPE 400GB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872355-B21
HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804639-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC DS Mixed Use Solid State Drives - 3yr Warranty</b>	
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
<b>6G SATA Hot Plug SFF (2.5-inch) SC Mixed Use-2 Solid State Drives - 3yr Warranty</b>	
HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21

### Core Options

HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804625-B21
HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	832414-B21
HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804613-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SCC Read Intensive Solid State Drives</b>	
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
<b>6G SATA Hot Plug LFF (3.5-inch) SCC Read Intensive-2 Solid State Drives</b>	
HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804608-B21
HP 800GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804602-B21
HP 480GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804596-B21
HP 240GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804590-B21
HP 120GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804584-B21
HP 80GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804578-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SCC Write Intensive-2 Solid State Drives - 3yr Warranty</b>	
HPE 1.6TB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872365-B21
HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804680-B21
HPE 800GB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872361-B21
HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804674-B21
HPE 400GB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872357-B21
HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804668-B21
HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804642-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SCC DS Mixed Use Solid State Drives - 3yr Warranty</b>	
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
<b>6G SATA Hot Plug LFF (3.5-inch) SC Mixed Use-2 Solid State Drives - 3yr Warranty</b>	

### Core Options

HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804634-B21
HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804628-B21
HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	832417-B21
HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804616-B21
<b>HPE NVMe PCIe Read Intensive SFF (2.5 inch) SC2 Solid State Drives - 3yr Warranty</b>	
HP 2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764908-B21
HP 1.2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764906-B21
HP 400GB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764904-B21
<b>NOTE:</b> HPE NVMe drives need the enablement kit 764628-B21.	
<b>NOTE:</b> Hewlett Packard Enterprise has qualified the NVMe drive portfolio using the Operating System inbox drivers.	
<b>NOTE:</b> For full detail please see the <a href="#">HPE Solid State Drive QuickSpecs</a> .	
<b>HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives - 3yr Warranty</b>	
HP 1.6TB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764892-B21
HP 800GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	736939-B21
HP 400GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	736936-B21
<b>HPE NVMe PCIe Mixed Use SFF (2.5 inch) SC2 Solid State Drives - 3yr Warranty</b>	
HP 2TB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765044-B21
HP 1.6TB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765038-B21
HP 800GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765036-B21
HP 400GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765034-B21
<b>M.2 SSD</b>	
HPE Dual 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	835565-B21
HPE 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	835563-B21
HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	777894-B21
HP 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	788028-B21

### Core Options

**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

HP Large Form Factor Hard Drive Blank Kit 666986-B21

HP 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

**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

HP 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

### Core Options

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
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP 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.

<b>HPE InfiniBand</b>	QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21
	HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21
	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
	HP 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>

### Core Options

<b>HPE I/O Expansion Options</b>	<p>HP DL360 Gen9 Low Profile PCIe Slot CPU2 Kit <span style="float: right;">764642-B21</span></p> <p><b>NOTE:</b> This option kit requires a second CPU and will add an additional Low Profile PCIe 3.0 slot.</p> <p>HPE DL360 Gen9 2P Full Height PCIe Slot 2 GPU Enablement Kit <span style="float: right;">867249-B21</span></p> <p><b>NOTE:</b> This enablement kit can support more than one Full Height/GPU card</p> <p><b>NOTE:</b> This option kit requires a second CPU and will add an additional FH / <math>\frac{3}{4}</math>Length PCIe 3.0 slot.</p> <p><b>NOTE:</b> This kit includes GPU power cable and bracket; when this option kit is installed the Low Profile PCIe3.0 riser is not useable.</p> <p><b>NOTE:</b> It is not possible to convert a unit with the Full height kit back to dual Low Profile brackets.</p>
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<b>HPE Power Supplies</b>	<p><b>HPE Flex Slot Platinum Hot-plug Power supplies</b></p> <p>HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit <span style="float: right;">720620-B21</span></p> <p><b>NOTE:</b> 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.</p> <p>HPE 500W Flex Slot Platinum Hot Plug Power Supply Kit <span style="float: right;">720478-B21</span></p> <p><b>NOTE:</b> Flex Slot Platinum power supplies support power efficiency of up to 94%. Includes a C-14 power inlet connector.</p> <p>HPE 800W Flex Slot Titanium Hot Plug Power Supply Kit <span style="float: right;">720482-B21</span></p> <p><b>NOTE:</b> Flex Slot Titanium power supplies support power efficiency of up to 96%. Includes a C-14 power inlet connector.</p> <p>HPE 800W Flex Slot Universal Hot Plug Power Supply Kit <span style="float: right;">720484-B21</span></p> <p><b>NOTE:</b> Flex Slot Platinum power supplies support power efficiency of up to 94%. Includes a C-14 power inlet connector.</p> <p>HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit <span style="float: right;">720480-B21</span></p> <p><b>NOTE:</b> Flex Slot -48VDC power supplies support power efficiency of up to 94%. <b>NOTE:</b> Maximum of 2 Flex Slot power supplies per platform. <b>NOTE:</b> 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. <b>NOTE:</b> 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 <b>NOTE:</b> 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: <a href="http://www.hpe.com/info/hppoweradvisor">http://www.hpe.com/info/hppoweradvisor</a>.</p>
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### Core Options

**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>.

<b>HPE Computation and Graphics Accelerators</b>	HPE NVIDIA Tesla M4 4GB Computational Accelerator	P9U90A
	<b>NOTE:</b> Max of 2 cards can be ordered (Slots 1 and 3).	
	<b>NOTE:</b> 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
	<b>NOTE:</b> Max of 2 cards can be ordered (Slots 1 and 3).	
<b>NOTE:</b> 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
	<b>NOTE:</b> Max of 2 cards can be ordered (Slots 1 and 3).	
	<b>NOTE:</b> If 1 card is installed, then 766199-B21 (HPE DL360 Gen9 GPU Cable for CPU1 Kit) is required.	
	<b>NOTE:</b> 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 NVIDIA Quadro K2200 Graphics Accelerator	J0G89A
	<b>NOTE:</b> Max of 2 cards can be ordered (Slots 1 and 3).	
	<b>NOTE:</b> If 2 cards are installed, then 867249-B21 (HPE DL360 Gen9 2P PCIe GPU Enablemnt Kit) is required.	
	HP DL360 Gen9 GPU Cable for CPU1 Kit	766199-B21
<b>NOTE:</b> This kit is required if one HPE NVIDIA Quadro M4000 Graphics Accelerator card is installed (includes GPU cable and brackets).		
<b>NOTE:</b> 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.		

<b>HPE Cooling Options</b>	HP DL360 Gen9 High Performance Fan Kit	766201-B21
	<b>NOTE:</b> High Performance Fan Kit is required for some supported configurations (10SFF Chassis, 160W CPUs or higher, LRDIMMs, NVMe SSDs) and extended ambient operating temperatures above 35° C. Qualifications for extended ambient configurations are at: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>	
<b>NOTE:</b> 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.

<b>HPE Insight Software</b>	<b>HPE Insight Control</b>	
	HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU	C6N27A
	HPE Insight Control including 1yr 24x7 TSU E-LTU	C6N28ABE
	HPE Insight Management Media Kit	C6N31A
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO E-LTU	C6N36ABE
	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	<b>HPE iLO Advanced</b>	
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO E-LTU	C6N36ABE
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO LTU	C6N36A

<b>HPE Converged Infrastructure Management Software</b>	<b>HPE OneView Advanced (with HPE iLO Advanced)</b>	
	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
	<b>HPE OneView Advanced (without HPE iLO Advanced)</b>	
	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
	HPE Operations Analytics for HPE OneView LTU	K8G29A
	HPE Operations Analytics for HPE OneView E-LTU	K8G29AAE

**NOTE:** Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge.

### Additional Options

**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.hp.com/go/oneview>.

**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.hp.com/go/oneview>.

#### 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. G2E81A

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 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator 775670-B21

HPE 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator 775668-B21

HPE 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator 775666-B21

### Additional Options

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<b>HPE Security</b>	HP 1U Security Bezel Kit	664918-B21
	HP Trusted Platform Module 2.0 Kit	745823-B21
	<p><b>NOTE:</b> 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.</p> <p><b>NOTE:</b> HPE Gen9 servers purchased earlier may require latest BIOS update to be compatible.</p> <p><b>NOTE:</b> HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.</p>	
	HP Trusted Platform Module Option	488069-B21
	<p><b>NOTE:</b> 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 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: <a href="http://www.hp.com/go/TPM">http://www.hp.com/go/TPM</a>.</p> <p><b>NOTE:</b> ProLiant OS pre-installed units will come with the partition required for TPM deployment.</p> <p><b>NOTE:</b> The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.</p> <p><b>NOTE:</b> The HPE Trusted Platform Module Option (488069-B21) is the TPM 1.2 version. Compatible server platforms include Gen8 and Gen9 servers.</p> <p><b>NOTE:</b> HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.</p>	

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<b>HPE Storage Controllers</b>	<b>SAS Controllers</b>	
	<b>HPE Smart Array Controllers</b>	
	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
	<p><b>NOTE:</b> 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.</p>	
	HPE Smart Array P840ar/2GB FBWC 12Gb 2-port Internal SAS Controller	843199-B21
	<p><b>NOTE:</b> The Smart Array P840ar SAS controller will require the P840ar Cable Kit 843234-B21.</p>	
	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

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### Additional Options

**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 2<sup>nd</sup> 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.

**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

### Additional Options

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
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### 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 LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
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
HPE StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive	EH900B
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 LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
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).

### Additional Options

#### 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

#### 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

### Additional Options

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
<b>Converged Network Adapter</b>	
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 Disk Storage **Disk Enclosures**

HPE Disk Storage Systems	HP D6000 Dual I/O Module Disk Enclosure	QQ695A
	HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle	E7W30A
	HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle	E7W31A
	HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	QQ697A
	HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
	HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
	HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HPE D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle	M0T59A
	HPE D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 280TB Bundle	M0T58A

### HPE Data Center **HPE Advanced Series Racks**

HPE 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

### Additional Options

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.

HP 42U 600mm x 1075mm Standard Pallet Rack	AF046A
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**NOTE:** Please see the [HPE Standard Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

**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



### Additional Options

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
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

### Additional Options

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
HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
<b>NOTE: Please see the <a href="#">HPE Basic Power Distribution Units (PDU) QuickSpecs</a> for information on additional options and product specifications.</b>	
<b>HPE Metered Power Distribution Units (PDU)</b>	
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
<b>NOTE: Please see the <a href="#">HPE Metered Power Distribution Units (PDU) QuickSpecs</a> for information on additional options and product specifications.</b>	
<b>HPE Intelligent Power Distribution Unit (PDU)</b>	
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
HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A
<b>NOTE: Please see the <a href="#">HPE Intelligent Power Distribution Unit (PDU) QuickSpecs</a> for information on additional options and product specifications.</b>	

### Additional Options

#### 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
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 HPE Location Discovery Services

##### Consoles, KVM Switches, and Keyboards

HPE 36U Location Discovery Kit	BW945A
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

### Additional Options

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
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

HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21
HP USB BFR with PVC Free UK Keyboard/Mouse Kit	631344-B21
HP USB BFR with PVC Free FR Keyboard/Mouse Kit	631346-B21
HP USB BFR with PVC Free ES Keyboard/Mouse Kit	631348-B21
HP USB BFR with PVC Free DE Keyboard/Mouse Kit	631358-B21
HP USB BFR with PVC Free JP Keyboard/Mouse Kit	631360-B21
HP USB BFR with PVC Free IT Keyboard/Mouse Kit	631362-B21
HP USB BFR with PVC Free CN Keyboard/Mouse Kit	631364-B21
HP USB BFR with PVC Free AE Keyboard/Mouse Kit	638212-B21
HP USB BFR with PVC Free RU Keyboard/Mouse Kit	638214-B21
HP USB BFR with PVC Free IN Keyboard/Mouse Kit	672097-D63
HP USB BFR with PVC Free AP-Intl Keyboard/Mouse Kit	672097-373
HP USB BFR with PVC Free Intl Keyboard/Mouse Kit	672097-B33
HP USB BFR with PVC Free PT Keyboard/Mouse Kit	672097-133
HP USB BFR with PVC Free TR Keyboard/Mouse Kit	672097-143
HP USB BFR with PVC Free CZ Keyboard/Mouse Kit	672097-223
HP USB BFR with PVC Free FI Keyboard/Mouse Kit	672097-353
HP USB BFR with PVC Free SE Keyboard/Mouse Kit	672097-103
HP USB BFR with PVC Free CH Keyboard/Mouse Kit	672097-113
HP USB BFR with PVC Free 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
HP 1U Small Form Factor Ball Bearing Rail Kit	663201-B21
HP 1U Large Form Factor Ball Bearing Rail Kit	663202-B21
HP 1U Cable Management Arm for Ball Bearing Rail Kit	663203-B21

#### HPE Other Options

### Additional 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

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

### Additional Options

**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
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##### HPE R/T3000 G4 UPS Models

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](#).

### Additional Options

#### HPE USB and SDHPE Enterprise Mainstream Flash Media Kits for Memory Cards

<b>Options</b>	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

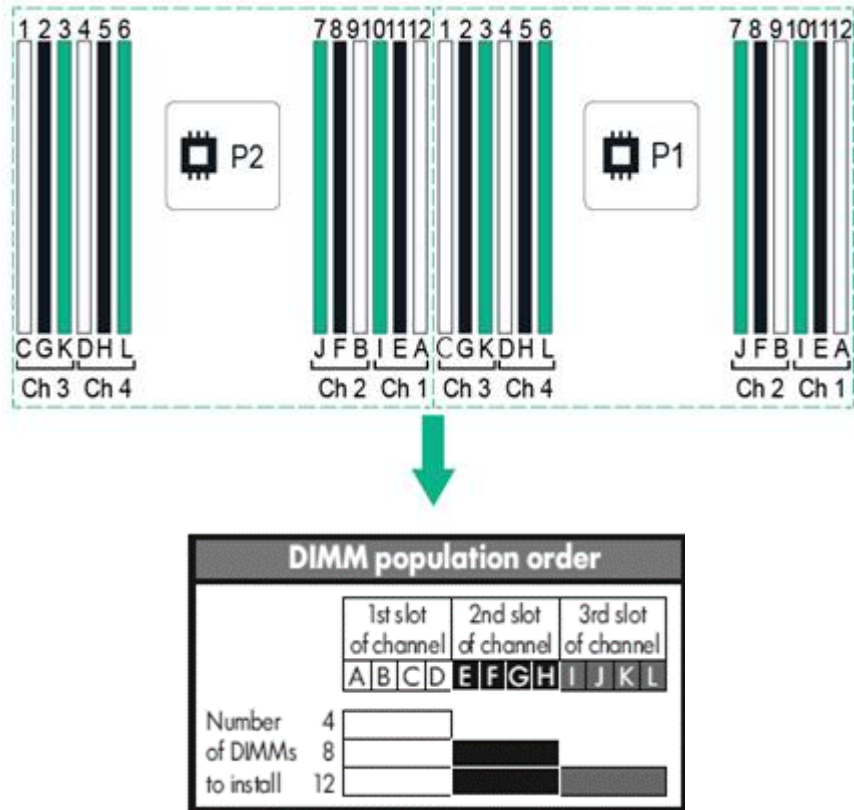
HPE Install ProLiant DL36x(p) Service	U4506E
HPE Installation and Startup DL36x(p) Service	U4507E

##### 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	<b>Std Voltage 1.2V</b>	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
<b>SLOTS THAT CAN BE POPULATED</b>							
24 slot servers	24	24	24	24	24	24	24
<b>MAXIMUM CAPACITY (GB)</b>							
	192	384	384	768	768	1536	3072
<b>POPULATED DIMM SPEED (MT/s)</b>							
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

Memory Bandwidth and Capacity								
[DIMM Type]	Registered DIMMs (RDIMMs)					Load Reduced (LRDIMMs)		
<b>HPE SKU P/N</b>	726717-B21	726718-B21	759934-B21	726719-B21	728629-B21	726720-B21	726722-B21	726724-B21
<b>DIMM Rank</b>	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank	Quad Rank
<b>DIMM Capacity</b>	4GB	8GB	8GB	16GB	32GB	16GB	32GB	64GB
<b>Voltage</b>	Std Voltage 1.2V	<b>Std Voltage 1.2V</b>	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
<b>DRAM Depth [bit]</b>	512M	1G	512M	1G	1G	2G	2G	2G
<b>DRAM Width [bit]</b>	x8	x4	x8	x4	x4	x4	x4	x4
<b>DRAM Density</b>	4Gb	4Gb	4Gb	4Gb	4Gb	8Gb	8Gb	8Gb
<b>CAS Latency</b>	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15
<b>DIMM Native Speed (MT/s)</b>	2133	2133	2133	2133	2133	2133	2133	2133
<b>SLOTS THAT CAN BE POPULATED</b>								
24 slot servers	24	24	24	24	24	24	24	24
<b>MAXIMUM CAPACITY (GB)</b>								
	96	192	192	384	768	384	768	1536
<b>POPULATED DIMM SPEED (MT/s)</b>								
<b>1 DIMM Per Channel</b>	2133	2133	2133	2133	2133	2133	2133	2133
<b>2 DIMM Per Channel</b>	2133	2133	2133	2133	2133	2133	2133	2133
<b>3 DIMM Per Channel</b>	1600	1600	1600	1600	1600	1866	1866	1866

### Memory

#### 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, CPU2-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		
	Slot #	Population order	Slot #	Population order	
Chnl 1	10	I	10	I	Chnl 1
	11	E	11	E	
	12	A	12	A	

### Memory

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

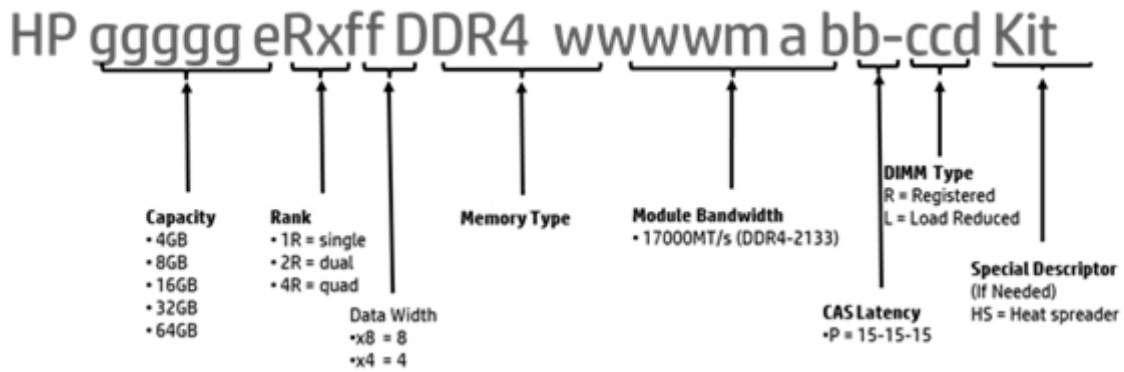
Standard and Maximum Memory Capacity (Pre-configured Models)	Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E5-2670v3	64GB (4x16GB)	704GB (20x32GB, 4x16GB)	1536GB (24x64GB)
	E5-2660v4	64GB (4x16GB)	704GB (20x32GB, 4x16GB)	3072GB (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 Drive Bays



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

### Technical Specifications

<b>System Unit</b>	<b>Dimensions</b>	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)
	<b>Weight</b> (approximate)	Maximum: (all hard drives, power supply, and processor installed) 8 SFF Chassis 33.3 lb. (15.31 kg) <b>NOTE: Includes 2 SFF Option for a total of 10 SFF HDD.</b> 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)
	<b>Input Requirements</b> (per power supply)	Rated Line Voltage 100 to 120 VAC 200 to 240 VAC
	<b>BTU Rating</b>	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
	<b>Power Supply Output</b> (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
	<b>System Inlet Temperature</b>	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. <b>NOTE: System performance during</b>

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 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.

<b>Relative Humidity</b>	Non-operating	-30° to 60° C (-22° to 140° F). Maximum rate of change is 20° C/hr (36° F/hr).
	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.
<b>Altitude</b>	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).
<b>Acoustic Noise</b>		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).

### Technical Specifications

#### 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

**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.

### Technical Specifications

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

HPE Ethernet 1Gb 4-port 331i Adapter	<b>Network Interface Compatibility</b>	10Base-T/100Base-TX/1000Base-TX		
	<b>Data Transfer Method Controller</b>	IEEE 802.3 10Base-T		
		IEEE 802.3ab 1000Base-T		
		IEEE 802.3u 100Base-TX		
	<b>Network Transfer Rate</b>	PCI Express, two lanes (x2)		
		BCM5719		
		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		
<b>Connector</b>	Four RJ-45			
<b>Cable Support</b>	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
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, HPE InfiniBand, HPE Power Supplies, HPE Computation and Graphics Accelerators, HPE Insight

### Summary of Changes

			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.

### Summary of Changes

			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  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.

### Summary of Changes

			<p>HPE PCIe Workload Accelerator Options, HPE USB and SD options were added to the Additional Options section.</p> <p>Smart Buys section was added to NA version.</p>
		Changed	<p>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.</p>
23-Sep-2014	From version 1 to version 2	Changed	<p>Changes were made throughout the QuickSpecs.</p>



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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less

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