Overview

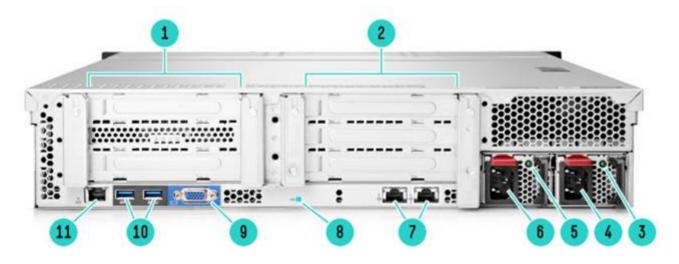
## HPE ProLiant DL180 Generation9 (Gen9)

The new standard for growing data center needs. Delivering an optimized 2U server, designed with the right balance of expandability, performance, reliability, and manageability-all in a new compact chassis. The ideal platform for SMBs and enterprises running applications, which need the right mix of compute and storage.



Front View

- 1 Access Panel (Top Cover)
- 3 Health LED
- 5 UID button/LED
- 7 Serial label pull tab
- 9 8-bay SFF drive cage bay (box 2, for the second 8-bay SFF drive cage option)
- 2 Power On/Standby button and system power LED
- 4 NIC status LED
- 6 USB 2.0 connector
- 8 Fixed 8-bay SFF drive cage (box 3)
- 10 HPE Media Bay (box 1, for the optical drive cage option)



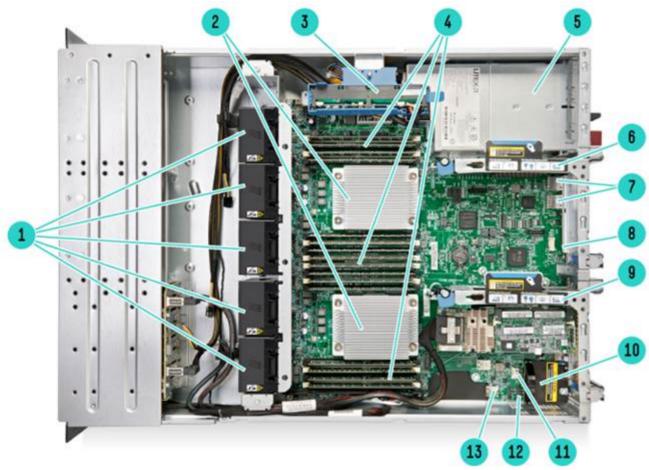
Rear view



#### Overview

- 1 PCle3 slots 1-3 (primary, associated with processor 1)
- 3 Power Supply 2 LED (Optional)
- 5 Power Supply 1 LED (Optional)
- 7 NIC connectors
- 9 Video Connector
- 11 Dedicated iLO connector (optional)

- 2 PCle3 slots 4-6 (secondary, associated with processor 2)
- 4 Power Supply 2 Power Connector (Optional)
  - **NOTE:** RPS shown in the picture.
- 6 Power Supply 1 Power Connector (Optional)
- 8 UID LED
- 10 USB 3.0 Connectors



### Internal View

- 1 Fan cage shown with 5 Hot-swap fans (for 2P Redundancy)
- 3 Optional HPE Smart Storage Battery
- 5 Entry level power supply bay (1x900W shown)

**NOTE:** RPS (with one module) shown in the picture above.

- 7 Embedded 2x1GbE NIC
- 9 Primary PCIe riser, standard
- 11 MicroSD card slot
- 13 Internal USB 3.0 connector (for USB flash devices)

- 2 2 Processors, heatsink showing, with HPE Smart Socket Guide
- 4 DDR4 DIMM slots. Shown fully populated in 16 slots (8 per processor)
- 6 Connection for second (optional) riser (Required second CPU)
- 8 Flexible LOM sideband signal connector
- 10 Dedicated iLO module connector
- 12 SATA optical drive connector



### Overview

### What's New

- HPE Smart Memory 2400 MHz memory (up to 64GB)
- Intel Xeon E5-2600v4 processor support (up to 120W)
- HPE Trusted Platform Module (TPM) 2.0
- New 900W AC/ 240VDC power supply
- New HDD offerings



Standard Features

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

Processor	Model	CPU	Cores	L3 Cache	Power	QPI	DDR4 Hz	
One of the		frequency						
following	E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133	
depending 	E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133	
on model	E5-2650Lv3	1.8GHz	12	30MB	65W	9.6GT/s	2133	
	E5-2640v3	2.6GHz	8	20MB	90W	8.0GT/s	1866	
	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	
	E5-2695v4	2.1GHz	18	45MB	120W	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	
	E5-2660v4	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	
	E5-2640v4	2.4GHz	10	25MB	90W	8.0GT/s	2133	
	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	

Chipset Intel® C610 Series Chipset

One of the Intel® E5-2600v3 Processor Family following 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 HPE iLO4 (Firmware HPE iLO4 2.0 or later), 2GB NAND.

Management NOTE: Read and learn more in the <u>iLO QuickSpecs</u>.

Chipset

Management Chipset One of the following depending on model

depending on

model

C+3	nd	ard	Fea	+111	n
ЭLa	пu	aı u	rec	ıtuı	25

Memory

Type:

One of the

**HPE SmartMemory** 

following depending on DDR4 Registered (RDIMM) or Load Reduced (LRDIMM) **DIMM Slots Available** 

model

16 (8 DIMM slots per processor, 4 channels per

processor, 2 DIMMs per channel)

Maximum Capacity

(LRDIMM)

Online spare

1TB (16 x 64GB LRDIMM @2400MHz)

**Maximum Capacity** 512GB (16 x 16GB RDIMM @2133MHz)

(RDIMM)

Memory

following

Advanced ECC Advanced ECC uses single device data correction to detect and

Protection One of the correct single and all multibit error that occurs within a single

DRAM chip.

depending on

model

Memory online spare mode detects a rank that is degrading and

switches operation to the spare rank.

Network

Controller One of the following

depending on

model

HPE 1Gb 361i Ethernet Adapter

E	xpans	ion	Slots
_	-		

Primary Riser	Expansion	Technology	Bus	Connector	Bus	Form Factor	Notes
(Optional)	Slots#		Width	Width	Number		
	1	PCle 3.0	x8	<b>x8</b>		Full-height, full-	
						length slot	
	2	PCIe 3.0	x8	<b>x8</b>		Full-height, half-	
						length slot	
	3	PCIe 3.0	x8	<b>x8</b>		Full-height, half-	
						length slot	

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

**Primary Riser** (Optional)

Expansion	Technology	Bus	Connector	Bus	Form Factor	Notes
Slots #		Width	Width	Number		
1	PCIe 3.0	x16	x16		Full-height, full- length slot	
2	PCIe 3.0	x8	<b>x8</b>		Full-height, half-	
					length slot	



Standard	Features
----------	----------

Riser with	Expansion	Technology	Bus	Connector	Bus	Form Factor	Notes
Flexible LOM	Slots#		Width	Width	Number		
(Optional)	1	PCIe 3.0	x8	<b>x8</b>		Full-height, full-	
						length slot	
	2	PCIe 3.0	x8	<b>x8</b>		Full-height, half-	
						length slot	
	3	Flexible				Full-height, half-	Can only be used
		LOM				length slot	for flexibleLOMs
NOTE: This riser is mandatory for installing Flexible LOMs & has to be installed in Primary							

riser slot.

**NOTE:** When populating slots on second riser, a second processor must be installed.

Storage Controller One of the following depending on model

**Entry Models** HPE Dynamic Smart Array B140i Controller

NOTE: Provides support for up to 10 SATA drives and data transmission speeds up to 6Gb/s and supports RAID 0, 1 & 5.

**Base Models** HPE Dynamic Smart Array B140i Controller

HPE H240 FIO Smart Host Bus Adapter

NOTE: H240 Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 12Gb/s and supports RAID 0, 1 & 5.

Storage Models HPE Flexible Smart Array P840/4G FIO Controller

NOTE: P840 Provides support for up to 16 SAS/SATA drives, data transmission

speeds up to 12Gb/s.

Performance HPE Flexible Smart Array P840/4G FIO Controller

Models

NOTE: P840 Provides support for up to 16 SAS/SATA drives, data transmission

speeds up to 12Gb/s.

**Devices** One of the following depending on model

Internal Storage Optical Drives Optional: DVD-ROM, DVD-RW

NOTE: This option available with all 8SFF drive bay models only.

**Hard Drives** None ship standard

Hard Drive Bays 8 SFF drive bays total with Optical Bay

Optional: +8SFF drive bay (total of 16SFF drive bays)

NOTE: The Optical Drive bay is not available with +8SFF drive

bay optional upgrade.

8 LFF drive bays total without Optical Bay

**NOTE:** Optical drive is not supported on LFF Model.

12 LFF drive bays total without Optical Bay Up to 4 Non-hot plug SATA 3.5" drives



Standard Features							
Maximum		CAPACITY	CONFIGURATION				
Internal Storage	Hot Plug SFF SAS	32TB	16x2TB (with 16SFF drive cage)				
One of the	Hot Plug SFF SATA	32TB	16x2TB (with 16SFF drive cage)				
following	Hot Plug LFF SAS	96.0TB	12x8TB (with 12LFF drive cage)				
depending on	Hot Plug LFF SATA	96.0TB	12x8TB (with 12LFF drive cage)				
model	Hot Plug SFF SAS SSD	30.7TB	16x1.92TB (with 16SFF drive cage)				
	Hot Plug SFF SATA SSD	25.6TB	16x1.6TB (with 16SFF drive cage)				
	Hot Plug LFF SATA SSD	19.2TB	12x1.6TB (with 12LFF drive cage)				
	Non-Hot Plug LFF SATA	32TB	8x4TB (with 8LFF drive cage)				
One of the following depending on model	HPE 550W FIO Power Supply Looking for high-efficiency power solutions at an entry-level price for your ProLiant Gen9 Essential Server? Hewlett Packard Enterprise entry-level Power Supplies offer an optimized set of features with options for both redundant and non-redundant power configurations.  The HPE 550W FIO Power Supply offers Silver-certified 80 Plus power efficiency (up to 89%) with an optimized set of features for non-redundant power configurations.  The HPE 900W AC 240VDC Power Input Module with Power Backplane can be configured to support power redundancy in ProLiant servers that offer only a single power supply bay, providing additional protection against power loss. With an 80 Plus Gold power efficiency rating (up to 92%), this power option helps to reduce operating expenses while protecting against trapped power capacity in the data center. Hot-plug AC power input modules allow for better serviceability with fast and easy deployment and replacement.						
System Fans		Non-redu	ndant Redundant				
One of the	1P model	2 fan					
following		Non-redu					
depending on	2P model	4 fan	s 5 fans				
model	NOTE: Customers may	separately purchase	e redundant fans with the 725571-B21 option				



kit. Additional fans (two) are also included in -B21 processor option kits when upgrading

from one processor to two processors.

**Standard Features** 

Interfaces Video 1 (Vaux Support)

LOM Network Ports 2x1GbE ports
HPE iLO Remote 1 GbE (Optional)

Management Network Port

SD Slot 1 Micro SD

NOTE: The 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 Up to 4 USB ports (standard);

Front: 1xUSB 2.0 std; (1xUSB3.0 optional upgrade with

quick release ears)
Rear: 2xUSB 3.0
Internal: 1xUSB 3.0

NOTE: 8LFF & 12LFF drive cage models with Quick release latch rack ears supports

front USB 3.0.

Operating <u>Microsoft Windows Server</u>

Systems and Red Hat Enterprise Linux (RHEL)

Virtualization SUSE Linux Enterprise Server (SLES)

Software Support Oracle Solaris

for ProLiant <u>VMware</u>

Servers NOTE: For more information on Hewlett Packard Enterprise's Certified and Supported

ProLiant Servers for OS and Virtualization Software and latest listing of software drivers

available for your server, please visit our Support Matrix at: <a href="http://www.hp.com/go/ossupport">http://www.hp.com/go/ossupport</a> and our driver download page

http://h20566.www2.hpe.com/hpsc/swd/public/readIndex?sp4ts.oid=7252825.

Upgradeability Upgradeable to two processors (36 Cores)

One of the following

NOTE: Processor upgrade from E5-2600v3 to E5-2600v4 is supported for processors

up to 105W.

depending on model

Up to 16 DIMM slots available

**NOTE:** To take advantage of DIMMs 9-16, a second processor must be installed.

FlexibleLOM slot for 1Gigabit or 10 Gigabit Ethernet or QDR/FDR InfiniBand

networking options

Optional 2 slot riser (x16, x8)

NOTE: To take advantage of the additional 2 PCI slot upgrade, a second processor

must be installed.

Redundant Power Supply

Redundant Fan

Optical Drive (8 SFF/16 SFF only)



#### **Standard Features**

Industry Standard ACPI 2.0b Compliant

Compliance

PCle 3.0 Compliant

PXE Support WOL Support

Microsoft® Logo certifications

USB 3.0 Support ASHRAE A3/A4

NOTE: Supports A3 & A4 extended ambience.

NOTE: Refer to technical specifications section for more details.

### Graphics

Integrated Matrox G200eH2 video standard

- 1280 x 1024 (32 bpp)
- 1920 x 1200 (16 bpp)

## HPE Server UEFI/Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot Mode.

**NOTE:** The UEFI System Utilities function is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit <a href="http://www.hpe.com/servers/uefi">http://www.hpe.com/servers/uefi</a>.

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.

Form Factor
One of the

2U Rack form factor

following depending on

model

8 SFF Drive Bay Version:

3.44 (8.75 cm) Height x 17.54" (44.55 cm) Width x 23.9" (60.70 cm) Length

8 LFF Drive Bay Version:

3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 23.9" (60.70 cm) Length

12 LFF Drive Bay Version:

3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 23.9" (60.70 cm) Length

16 SFF Drive Bay Version:

3.44 (8.75 cm) Height x 17.54" (44.55 cm) Width x 23.9" (60.70 cm) Length



Standard Features

Embedded Management **HPE Integrated** 

iLO)

Monitor your servers for ongoing management, service alerting, Lights-Out (HPE reporting and remote management with HPE iLO. Not available on

ML10 Gen9. Learn more at http://www.hpe.com/info/ilo.

**UEFI** Configure and boot your servers securely with industry standard

Unified Extensible Firmware Interface (UEFI). Learn more at

http://www.hpe.com/servers/uefi.

RESTful API RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server

management such as configuration and maintenance tasks based on

modern industry standards. Learn more at

http://www.hpe.com/info/restfulapi.

Intelligent Provisioning Hassle free server and OS provisioning for 1 or few servers with

Intelligent Provisioning. Learn more at

http://www.hpe.com/servers/intelligentprovisioning.

Embedded

Hewlett Packard Enterprise embedded remote support, when used Remote Support with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to

Hewlett Packard Enterprise or a Hewlett Packard Enterprise

Authorized Partner for automated phone home support. Learn more at

http://www.hpe.com/info/insightonline/explore.

Server utilities **Smart Update** 

Optimize firmware and driver updates with Smart Update solutions

including Smart Update Manager (SUM) and Service Pack for

ProLiant (SPP) and smart components. Learn more at http://www.hpe.com/servers/smartupdatemanager.

**HPE Systems** (HPE SIM)

HPE SIM allows you to monitor the health of your HPE ProLiant Insight Manager Servers and HPE Integrity Servers, and also provides you with basic

support for non-Hewlett Packard Enterprise servers.

HPE SIM also integrates with Smart Update Manager to provide quick

and seamless firmware updates. Learn more at

http://www.hpe.com/servers/hpsim.

Scripting Tool Kit Provision 1 to many servers using your own scripts to discover and

and Windows **PowerShell** 

deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at

http://www.hpe.com/servers/proliant/stkor http://www.hpe.com/servers/powershell.

**RESTful** 

RESTful Interface tool is a scripting tool to provision using

Interface Tool RESTful API for iLO 4 to discover and deploy servers at scale. Learn

more at http://www.hpe.com/info/resttool.



#### Standard Features

HPE iLO Mobile Enables the ability to access, deploy, and manage your server anytime

from anywhere from select smartphones and mobile devices. For Application

additional information please visit:

http://www.hpe.com/info/ilo/mobileapp.

**HPE Insight** Online

HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty, Care Pack or contractual

support agreement with Hewlett Packard Enterprise, is a personalized

dashboard for simplified tracking of IT operations and support

information from anywhere, anytime. Learn more at

http://www.hpe.com/info/insightonline/explore.

Security Power-on password

> Serial interface control Administrator's password

**UEFI** 

**TPM 1.2** 

**TPM 2.0** 

**NOTE:** TPM 1.2 is not upgradable to TPM 2.0.

### Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE 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, 1-Year Labor, 1-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://h18004.www1.hp.com/products/servers/platforms/warranty/index.html.



**Optional Features** 

## **Embedded** Management

#### iLO Essentials

HPE iLO Essentials is the preferred license for small and medium business that offers full remote server management capabilities for small and medium business via the Integrated Remote Console (IRC), virtual media, and e-mail based alerts. Learn more about HPE iLO Essentials at <a href="http://www.hpe.com/servers/iLO/essentials">http://www.hpe.com/servers/iLO/essentials</a>.

#### iLO Scale-Out

HPE iLO Scale-Out is the preferred license built for web hosting, cloud service providers, and high performance computing data centers, managing massive scale out environments for the DL 100 and 10 series servers, not available for ML servers. This license offers sophisticated scripting tools that provides remote access through Text Console via SSH, Dynamic power capping, Emailbased Alerting and proactive notifications. For more information, visit http://www.hpe.com/servers/iLO/scale-out.

### iLO Advanced

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

http://www.hpe.com/servers/iloadvanced.

## Server Management

## **HPE Insight** Control

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

# Infrastructure

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

Learn more at HPE Rack and Power Infrastructure.

**Optional Features** 

High Performance Clusters

HPE Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPEC Server. A Cluster Platform Configurator simplifies ordering. http://www.hp.com/go/clusters. HPE Insight Cluster Management Utility (CMU) is a Hewlett Packard Enterprise licensed and supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. http://www.hp.com/go/cmu.

NOTE: High Performance Computing (HPC) interconnect technologies are available for this server as part of the HPE Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by Hewlett Packard Enterprise when integrated within a Hewlett Packard Enterprise cluster. Flexible, validated solutions can be defined with the help of configuration tools.

http://www.hp.com/techservers/clusters/ucp/index.html.

### **HPC** Interconnects

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

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 tha 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



#### **Optional Features**

software that enables hardware-specific configuration, performance tuning and connectivity management.

• HPE StoreVirtual VSA With HPE StoreVirtual VSA you can use the power of virtualization to create a virtual array within your host server. Manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. HPE ProLiant Gen9 servers include a 3year limited license for HPE StoreVirtual VSA software with 1TB of capacity at no extra

and scale it to match your evolving needs. HPE ProLiant Gen9 servers include a 3-year limited license for HPE StoreVirtual VSA software with 1TB of capacity at no extra cost. Simply select to install HPE StoreVirtual VSA software during server setup within Intelligent Provisioning. More information, instructional videos, and free console management software are available at <a href="http://www.hp.com/go/vsa1TB">http://www.hp.com/go/vsa1TB</a>.

**NOTE:** For more information about Storage Software including QuickSpecs, please see: <a href="http://www.hp.com/go/storage/software">http://www.hp.com/go/storage/software</a>.

## 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. <a href="https://h22174.www2.hp.com/SimplifiedConfig/Index">https://h22174.www2.hp.com/SimplifiedConfig/Index</a>.



Service and Support

# HPE Support Services

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

# Connect your devices

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

## Recommended Support

8876ENW&cc=us&lc=en

Standard: HPE Foundation Care 24x7, three-year Support Service
HPE Foundation Care 24x7 gives you access to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. In addition, collaborative software support is included in this service that provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems.

http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA4-

Optimized: 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. <a href="http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf">http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf</a>

# Parts and Materials

Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

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



Service and Support

#### 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.

http://h20195.www2.hp.com/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.

# 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. <a href="http://www.hpe.com/ww/learn">http://www.hpe.com/ww/learn</a>

# 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 <a href="http://www.hpe.com/support/hpesc">http://www.hpe.com/support/hpesc</a>

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: <a href="http://www.hpe.com/services">http://www.hpe.com/services</a>



**Pre-configured Models** 

	Entry Models					Base Models			
[SKU	833970-	833971-	778452-	778453-	833972-	833973-	778454-	778455-	
Number]	B21	B21	B21	B21	B21	B21	B21	B21	
Model Name	HPE	HPE	HP	HP	HPE	HPE	HP	HP	
	ProLiant	ProLiant	ProLiant	ProLiant	ProLiant	ProLiant	ProLiant	ProLiant	
	DL180	DL180	DL180	DL180	DL180	DL180	DL180	DL180	
	Gen9 E5-	Gen9 E5-	Gen9 E5-	Gen9 E5-	Gen9 E5-	Gen9 E5-	Gen9 E5-	Gen9 E5-	
	2603v4	2603v4	2603v3 1P	2603v3 1P	2609v4	2609v4	2609v3 1P	2609v3 1F	
	8GB-R	8GB-R	8GB-R	8GB-R	8GB-R	8GB-R	8GB-R	8GB-R	
	B140i	B140i	B140i	B140i	H240	H240 8SFF	H240	H240	
	4LFF NHP	8LFF	4LFF NHP	8LFF Hot	8LFF	550W PS	8LFF SAS	8SFF SAS	
	550W PS	550W PS	SATA	Plug SATA	550W PS	Base	550W PS	550W PS	
	Entry	Entry	550W PS	550W PS	Base	Server	Base	Base	
	Server	Server	Entry	Entry	Server		Server	Server	
	33.73.		Server	Server					
Processor	Intel® Xe	eon® E5-	Intel® Xeon®		Intel®	Intel®	Xeon® E5-26	09v3	
		)3v4			Xeon®				
	200				E5-				
					2609v4				
Number of				0	ne				
Processors				O	110				
	0CD (1v0CE	B Registered	8GB (1x8GB	Degistered	9CB (1v9CI	2 Pagistared	9GB (1v9GE	2 Pagistares	
Memory	•	400 MHz)	`	(1x8GB Registered 8GB (1x8GB Registered MMs, 2133 MHz) DIMMs, 2400 MHz)		•	8GB (1x8GB Registerec DIMMs, 2133 MHz)		
		: Due to	NOTE: Due to processor		NOTE: Due to processor		NOTE: Due to		
			limitation, these DDR4		limitation, these DDR4		processor limitation,		
	-	limitation,				IMMs will operate at these DDR4 DIMMs will			
		1 DIMMs will	DIMMs will	-		•			
	•	1866 MHz in	1600 MHz in	tnis modei.	1866 MHZ I	n this model.	operate at 1		
	tnis n	nodel.					this m	iodei.	
Network		F	IPE Embedded	d Dual Port 36	61i Adapter N	letwork Interfac	ce		
Controller									
Storage	HF	PE Dynamic S	mart Array B1	40i	HPE H	H240 FIO Sma	rt Host Bus Ad	dapter	
Controller									
Hard Drive	None ship	o standard	None ship	None ship	None shi	o standard	None ship	None ship	
			standard;	standard;			standard;	standard;	
			includes 4	includes 6			includes 6	includes 6	
			LFF hard	LFF hard			LFF hard	SFF hard	
			drive	drive			drive	drive	
			blanks	blanks			blanks	blanks	
Internal	4 LFF	8 LFF HDD	4 LFF	8 LFF HD	D Bays	8 SFF HDD	8 LFF	8 SFF	
Storage	HDD Bays	Bays	HDD Bays			Bays	<b>HDD</b> Bays	<b>HDD</b> Bays	
_	(Non Hot		(Non Hot						
	Plug)		Plug)						
Optical Drive			Not Available			1;	Not	1;	
Bay						(Optional:	Available	(Optional:	
,						DVD-ROM,	_	DVD-	
						DVD-RW)		ROM,	
						,			



DVD-RW)

**Pre-configured Models** 

None **Optical Drive** 

**PCI-Express** 3 Standard (1-FL/FH, 2-FH/HL)

**Slots** 

Power (1) HPE 550W FIO Power Supply

Supply

Fans 2 hot swap fans, non-redundant

Management iLO Management (standard), Intelligent Provisioning (standard), iLO Essentials (optional), iLO Scale-ou

(optional only for DL), iLO Advanced (optional)

Form Factor Rack (2U), HPE Easy Install Rails

Warranty Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day

response.

**Energy Star Models** Storage Models 833974-B21 778456-B21 778457-B21 [SKU Number] HP ProLiant DL180 Gen9 HP ProLiant DL180 Gen9 Model Name **HPE ProLiant DL180** E5-2623v3 1P 16GB-R E5-2630v3 2P 32GB-R Gen9 E5-2623v4 16GB-R P840 12LFF SAS 900W PS P840/4G 16SFF SAS 800W P840 12LFF 900W PS Server Storage Server **RPS ES Server** Intel® Xeon® E5-2623v3 Intel® Xeon® E5-2630v3 Intel® Xeon® E5-2623v4 Processor

**Number of Processors** One Two

32GB (2x16GB Registered 16GB (1x16GB 16GB (2x8GB Registered Memory DIMMs, 2133 MHz) DIMMs, 2133 MHz)

Registered DIMMs, 2400

MHz)

**NOTE:** Due to processor limitation, these DDR4 DIMMs will operate at 2133 MHz in this model.

HPE Ethernet 1Gb 2-port i350 Adapter **Network Controller HPE Embedded Dual Port** 

361i Adapter Network

Interface

**HPE Flexible Smart Array** HPE Smart Array P840/4G **HPE Flexible Smart Array** Storage Controller

> P840/4G Controller P840/4G FIO Controller Controller

Hard Drive None ship standard

Internal Storage 12 LFF HDD Bays 16 SFF HDD Bays 1; (Optional: DVD-ROM, Optical Drive Bay Not Available

DVD-RW)

**PCI-Express Slots** 3 Standard (1-FL/FH, 2-FH/HL)

(1) HPE 900W Redundant Power Supply (2) HPE 900W Redundant **Power Supply** 

**Power Supply** 

5 hot plug fans, redundant Fans 4 hot plug fans, redundant

Management iLO Management (standard), Intelligent Provisioning (standard), iLO Essentials

(optional), iLO Scale-out (optional only for DL), iLO Advanced (optional)

Meets Energy Star **Energy Star** 

requirements

Rack (2U), HPE Easy Install Form Factor Rack (2U), HPE Easy Install Rails

Rails with CMA



**Pre-configured Models** 

Warranty

Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.



**Smart Buy Models** 

		E5-2600v3 Smart E	Buy Models	
[SKU Number]	784099-S01	784100-S01	784101-S01	784102-S01
Model Name	HP ProLiant DL180 Gen9 E5-2603v3 1.6GHz 6-core 8GB-R B140i 8LFF 550W PS Server/S-Buy	HP ProLiant DL180 Gen9 E5-2609v3 1.9GHz 6- core 8GB-R H240 8SFF 550W PS Server/S-Buy	HP ProLiant DL180 Gen9 E5- 2620v3 2.4GHz 6- core 8GB-R P440/4G 8SFF 900W PS Server/S-Buy	HP ProLiant DL180 Gen9 E5- 2640v3 2.6GHz 8- core 32GB-R P840/4G 8SFF 800W RPS Server/S-Buy
Processor	Intel® Xeon® E5- 2603v3	Intel® Xeon® E5-2609v3	Intel® Xeon® E5- 2620v3	Intel® Xeon® E5- 2640v3
Number of Processors		One		Two
Memory	NOTE: Due to proces	ered DIMMs, 2133 MHz) sor limitation, these DDR4 t 1600 MHz in this model.	8GB (1x8GB Registered DIMMs, 2133 MHz) NOTE: Due to processor limitation, these DDR4 DIMMs will operate at 1866 MHz in this model.	32GB (1x32GB Registered DIMMs, 2133 MHz) NOTE: Due to processor limitation, these DDR4 DIMMs will operate at 1866 MHz in this model.
Network Controller		HPE Ethernet 1Gb 2-po	ort i350 Adapter	
Storage Controller	HPE Dynamic Smart Array B140i	HPE H240 FIO Smart Host Bus Adapter	HPE Smart Array P440/4G FIO Controller + Smart Storage Battery	HPE Smart Array P840/4G FIO Controller + Smart Storage Battery
Hard Drive		None ship sta	ındard	·
Internal Storage	8 LFF HDD Bays	8	SFF HDD Bays	
Optical Drive Bay PCI-Express Slots	Not Available	None included; ( 3 Standard (1-FL/F	Optional: DVD-ROM, I H, 2-FH/HL)	DVD-RW)
Power Supply	One (1) HPE 550	W FIO Power Supply	One (1) 900W Power Supply	Two (2) 800W Redundant Power Supplies
Fans	2 h	not swap fans, non-redunda	nt	5 hot swap fans, redundant
Management	Opti	Standard: iLO Ma onal: iLO Essentials, iLO Ad	•	<sup>-</sup> ol
Form Factor		Rack (2U), HPE Eas		
Marranty	2 Voor Dorto 1 Vo	or Lobor 1 Voor Opoito aur	anast with payt busing	



Warranty

3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.

**Smart Buy Models** 

E5-2600v4 Smart Buy Models

[SKU Number] 833976-S01 833978-S01

Model Name HP ProLiant DL180 Gen9 E5-2609v4 HP ProLiant DL180 Gen9 E5-2620v4

1.7GHz 8-core 8GB-R B140i 8LFF 550W 2.1GHz 8-core 8GB-R P440/2G 8SFF 900W

PS Server/S-Buy PS Server/S-Buy

Processor Intel® Xeon® E5-2609v4 Intel® Xeon® E5-2620v4

Number of One

Processors

Memory 8GB (1x8GB Registered DIMMs, 2400 8GB (1x8GB Registered DIMMs, 2400 MHz)

MHz) **NOTE:** Due to processor limitation, these

NOTE: Due to processor limitation, these DDR4 DIMMs will operate at 2133MHz in

DDR4 DIMMs will operate at 1866MHz in this model.

this model.

Network Controller HPE Ethernet 1Gb 2-port i350 Adapter

Storage Controller HPE Dynamic Smart Array B140i Controller HPE Smart Array P440/2G Controller

Hard Drive None ship standard

Internal Storage 8 LFF 6G SATA HDD Bays 8 SFF 6G SAS HDD Bays

Optical Drive Bay None included; (Optional: DVD-ROM, DVD-RW)

PCI-Express Slots 3 Standard (1-FL/FH, 2-FH/HL)

Power Supply One (1) HPE 550W FIO Power Supply One (1) 900W Power Supply

Fans 2 hot swap fans, non-redundant Management Standard: iLO Management

Optional: iLO Essentials, iLO Advanced, Insight Control

Form Factor Rack (2U), HPE Easy Install Rails without Cable Management Arms

Warranty 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.



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 a 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)

CTO Server	HP ProLiant DL180	HP ProLiant DL180	HP ProLiant DL180	HP ProLiant DL180
Models	Gen9 Non-hot Plug	Gen9 Hot Plug 8LFF	Gen9 Hot Plug 8SFF	Gen9 Hot Plug
	LFF Configure-to-	Configure-to-order	Configure-to-order	12LFF Configure-to-
	order Server	Server	Server	order Server
SKU Number	754525-B21	754524-B21	754523-B21	775506-B21

Processor 2 (optional) x HPE Smart Socket Guide
DIMM Slots 16 DIMM slots for RDIMM, LRDIMM DDR4 Memory

Storage HPE Dynamic Smart Array B140i

Controller

PCIe 3 PCIe slots (+3 PCI slots available with upgrade option, second processor required)

Drive Cage 4LFF or 8LFF Non 8LFF Hot Plug (+4LFF 8SFF Hot Plug (+8SFF 12LFF Hot Plug

Hot Plug optional field Optional)

upgradable)

Network HPE Ethernet 1Gb 2-port i350 Adapter

Controller

Fans 2 hot swap fans, non-redundant

Management iLO Management (standard), Intelligent Provisioning (standard)

USB 1 front, 1 internal, 2 rear

Ears Optional HPE Quick Release HPE Thumbscrew Ears HPE Quick Release

Ears Ears

**NOTE:** HPE ProLiant DL180 Gen9 Non-hot plug CTO Server (P/N- 754525-B21) supports both 4LFF and 8LFF configurations.

**NOTE:** Thumb screw ears are not supported on Hot Plug LFF CTO Servers.

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

HPE Processors Entry Processors - E5-2600v3 series Processors

 HP DL180 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO
 733925 

 Processor Kit
 L21

 HP DL180 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO
 733929 

 Processor Kit
 L21

Base Processors - E5-2600v3 series Processors



HP DL180 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	733916 L21
HP DL180 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO	733918
Processor Kit	733310 L21
HP DL180 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO	763226 L21
Processor Kit  HP DL180 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO	733921
Processor Kit	L21
HP DL180 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit	779830 L21
Performance Processors - E5-2600v3 series Processors	
HP DL180 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit	733912 L21
HP DL180 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit	733914 L21
HP DL180 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit	763222 L21
E5-2600v4 series Processors	
HP DL180 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit	801240 L21
HP DL180 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit	801241 L21
HP DL180 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit	801237 L21
HP DL180 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO	801238 L21
Processor Kit	
HP DL180 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) FIO Processor Kit	801244 L21
HP DL180 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit	801239 L21
HP DL180 Gen9 Intel® Xeon® E5-2623v4 (2,6GHz/4-core/10MB/85W) FIO Processor Kit	801249 L21
HP DL180 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit	825510 L21
HP DL180 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit	825512 L21
HP DL180 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit	825506 L21
HP DL180 Gen9 Intel® Xeon® E5-2660v4 (2GHz/14-core/35MB/105W) FIO Processor Kit	801235 L21
HP DL180 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit	801236 L21
HP DL180 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W)	801243
FIO Processor Kit	L21
NOTE: If two processors are desired, select one xxxxxx-L21 and one	
corresponding xxxxxx-B21.	



**NOTE:** Up to two processors supported. Mixing different processor models is not supported.

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

NOTE: When v4 Processor is selected, then only PC4-2400T Memory Kit can be selected.

NOTE: When v3 Processor is selected, then only PC4-2133P Memory Kit can be selected.

**NOTE:** 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** 

NOTE: Select one or more memory from below

**NOTE:** LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen9 servers support LRDIMM and RDIMM.

**NOTE:** HP memory from previous generation servers are not qualified or warranted with this HP ProLiant server. HP SmartMemory is required to realize the performance improvements and enhanced functionality listed in this document for Gen9.

**NOTE:** 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.

**NOTE:** Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: <a href="http://www.hp.com/go/proliant-energy-efficient">http://www.hp.com/go/proliant-energy-efficient</a>.

**NOTE:** Depending on the memory configuration and processor model, the memory speed may run at 2133MHz, 1866MHz, 1600MHz or 1333MHz. Please see Memory Population Table or Online Memory Configuration Tool at: <a href="http://www.hp.com/go/ddr4config">http://www.hp.com/go/ddr4config</a>.

Registered DIMMs (RDIMMs) for E5-2600v3 Series

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered	726717-
Memory Kit	B21
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered	726718-
Memory Kit	B21
HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15 Registered	759934-
Memory Kit	B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered	726719-
Memory Kit	B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered	728629-
Memory Kit	B21
Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series	
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced	726720-
Memory Kit	B21
HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load	726722-
Reduced Memory Kit	B21
HPE Standard Memory for E5-2600v3 Series	
HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered	803026-
Standard Memory Kit	B21



mation - I actory integrated models	
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803028- B21
<b>NOTE:</b> These are standard memory DIMMs with no SmartMemory features. Registered DIMMs (RDIMMs) for E5-2600v4 Series	
HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347- B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349- B21
HPE 16GB (1x8GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220- B21
HPE 32GB (1x8GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351- B21
Load Reduced DIMMs (LRDIMMs) for E5-2600v4 Series	
HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Registered Memory Kit	805353- B21
HP 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Registered Memory Kit	805358- B21
HPE Standard Memory for E5-2600v4 Series	
HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Standard Memory Kit	851353- B21
NOTE: These are standard memory DIMMs with no SmartMemory features.	
HP DL180 Gen9 3 Slot x8 PCI-E Riser Kit	725569- B21
HP DL180 Gen9 x16 PCI-E Riser Kit	725570-
NOTE: Must be selected to support x16 options.	B21
HP DL180 Gen9 FlexibleLOM Enablement Kit	780965-
<b>NOTE:</b> No other FlexibleLOM options may be selected if this Enablement Kit is selected.	B21
<b>NOTE:</b> 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.	
<b>NOTE:</b> Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HP Power Advisor tool to determine the right size power supply for your server configuration. The HP Power Advisor is located at: http://www.hp.com/go/hppoweradvisor	
HP Entry-Level Power Supplies	
HP 550W FIO Power Supply Kit	730941-
<b>NOTE:</b> Only one may be selected. The above power supply option is 80Plus Silver-certified with an efficiency rating of up to 89%. Power specifications and technical content for all HP Server power supplies can be found at: <a href="http://www.hp.com/go/proliant/powersupply">http://www.hp.com/go/proliant/powersupply</a> .	B21
HP 800W Gold (Redundant)/900W (Non-Redundant) AC Power Input FIO	813534-
Module  NOTE: HP Server RPS FIO Backplane Kit (P/N: 813535-B21) is required for this power supply.	B21



HPE I/O Expansion Options

HPE Power Supplies

**NOTE:** Up to two of these option kits can be installed in one system.

**NOTE:** With just one power supply module installed, up to 900W is supported while with both power supply modules installed in RPS mode, up to 800W is supported.

HP Server Redundant Power Supply Backplan FIO Kit

813535-

**NOTE:** Required for RPS capability.

B21

**NOTE:** The above power supply option is 80Plus Gold-certified with an efficiency rating of up to 92%. Each power backplane kit (P/N: 813535-B21) can support up to two (2) AC Power input modules (P/N: 813534-B21) Power specifications and technical content for all HP Server power supplies can be found at: <a href="http://www.hp.com/go/proliant/powersupply">http://www.hp.com/go/proliant/powersupply</a>

HPE Storage Controllers

**NOTE:** One of the cable options below is required to be selected depending on combination of CTO Server and Storage Controller. If not using the embedded B140i controller, must select one of the following HP Storage Controllers and Cable options noted below.

**NOTE:** HP ProLiant DL180 Gen9 12LFF CTO Server (P/N: 775506-B21) includes P840 Controller Cable Kit and therefore no cable option is required with that model.

**HPE Smart Array Controllers** 

HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller 761872
NOTE: May be selected to support SAS Hard Drives if HP ProLiant DL180 B21

Gen9 8SFF CTO Server (P/N: 754523-B21) or HP ProLiant DL180 Gen9

8LFF CTO Server (P/N: 754524-B21) is selected in Step 1 above.

**NOTE:** This controller includes the HP Smart Storage Battery.

HP Smart Array P840/4GB FBWC 12Gb 2-port Int FIO SAS Controller 761874
NOTE: Must be selected if HP ProLiant DL180 Gen9 12LFF CTO Server B21

(P/N: 775506-B21) is selected and may be selected if HP ProLiant DL180

Gen9 8SFF CTO Server (P/N: 754523-B21) or HP ProLiant DL180 Gen9

8LFF CTO Server (P/N: 754524-B21) is selected in Step 1 above.

**NOTE:** This controller includes the HP Smart Storage Battery.

**HPE Smart Host Bus Adapters** 

HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter 761873-**NOTE:** May be selected to support SAS Hard Drives if HP ProLiant DL180 B21

Gen9 8SFF CTO Server (P/N: 754523-B21) or HP ProLiant DL180 Gen9 8LFF CTO Server (P/N: 754524-B21) is selected in Step 1 above.

**HPE Cable Options** 

HP DL180 Gen9 8LFF Smart Array Cable Kit 725557-

**NOTE:** Required if P/N: 761872-B21 or if P/N: 761874-B21 is selected with B21

the HP ProLiant DL180 Gen9 8LFF CTO Server.

HP DL180 Gen9 8SFF Smart Array Cable Kit 725578-

**NOTE:** Required if P/N: 761872-B21 or if P/N: 761874-B21 is selected with B21

the HP ProLiant DL180 Gen9 8SFF CTO Server.

HP DL180 Gen9 8LFF Hot Plug FIO Cable Kit 774868-

**NOTE:** Required if P/N: 761873-B21 is selected or if using embedded B140i

with the HP ProLiant DL180 Gen9 8LFF CTO Server.



**B21** 

Configuration Information - Factory Integrated Models

HP DL180 Gen9 8LFF Non-Hot Plug FIO Cable Kit	774869-
NOTE: Required with the HP ProLiant DL180 Gen9 NHP LFF CTO Server	B21
and supporting more than four (4) NHP Hard Drives.	
HP DL180 Gen9 8SFF Hot Plug FIO Cable Kit	774870-
NOTE: Required if P/N: 761873-B21 is selected or if using embedded B140i	B21
with the HP ProLiant DL180 Gen9 8SFF CTO Server.	
HP DL180 Gen9 4LFF Non-Hot Plug FIO Cable Kit	776447-
NOTE: Required with the HP ProLiant DL180 Gen9 NHP LFF CTO Server	B21
and supporting four (4) or fewer NHP Hard Drives.	
tep 3: Choose Additional Factory Integratable Options (only one of the followi	na

# Step 3: Choose Additional Factory Integratable Options (only one of the following from each list unless otherwise noted)

	,	
BIOS Mode	HP Legacy FIO Mode Setting	758959-
	<b>NOTE:</b> If B140i is the primary controller, then this option cannot be selected.	B22
	NOTE: Selecting this option will change the default UEFI BIOS setting into	
	Legacy BIOS Setting.	
Controller State	HP Mfg FIO Enable HBA Mode Setting	792962-
	NOTE: Can only be selected with H240 FIO Smart Host Bus Adapter.	B21
	NOTE: If H240 is the primary controller then RAID is not allowed with this	
	selection.	
	HP AHCI-Enable FIO Setting	801845-
	NOTE: If B140i is the primary controller then RAID is not allowed with this	B21
	selection.	
HPE Cooling	HP DL180 Gen9 Redundant Fan FIO Kit	779841-
Options	NOTE: Upgrades a non-redundant server with one additional hot-plug fan.	B21
HPE Security	HP DL180 Gen9 Thumbscrew Ear FIO Kit	782641-
	NOTE: Thumbscrew ears are available with SFF model only.	B21
	HPE Quick-Release Latch Rack Ears FIO Kit	725579-
	NOTE: This option is availafle for both SFF and LFF models. For 12LFF	B21
	Model, Quick-Release Ears are mandatory.	
	NOTE: This option is required for Security Bezel. This option also provides	
	one front USB 3.0 upgrade.	
HPE Insight	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle	C6N36A
Control	Single Server FIO License	
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO	C6N36ABE
	Electronic License	
HPE Converged	HPE OneView Advanced (with HPE iLO Advanced)	
Infrastructure	HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical	E5Y43A
Management	1 Svr Lic	
Software	HPE OneView Advanced (without HPE iLO Advanced)	
	HP OneView w/o iLO including 3yr 24x7 Support FIO 1 Server LTU	P8B31A

Step 4: Choose Additional Options for Factory Integration from Core and Additional Options Sections below.



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 a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

local sales repi	escribility for additional information.	
HPE Unique	HP DL180 Gen9 Dedicated iLO Management Port Kit	725581-B21
Options	HP DL180 Gen9 8SFF Hard Drive Cage/Backplane Kit	725572-B21
	HP DL180 Gen9 12LFF Hot Plug Enablement Kit	725574-B21
	NOTE: This can be used only with 8LFF Hot Plug CTO Server and	
	contains the controller cables required for upgrade.	
	HP DL180 Gen9 3 Slot x8 PCI-E Riser Kit	725569-B21
	HP DL180 Gen9 x16 PCI-E Riser Kit	725570-B21
HPE Processor	s Entry Processors - E5-2600v4 series Processors	
	HPE DL180 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-	801238-B21
	core/20MB/85W) Processor Kit	
	HPE DL180 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-	801240-B21
	core/20MB/85W) Processor Kit	
	HPE DL180 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-	801241-B21
	core/15MB/85W) Processor Kit	
	HPE DL180 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-	801243-B21
	core/35MB/65W) Processor Kit	
	HPE DL180 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-	801244-B21
	core/25MB/55W) Processor Kit	
	HPE DL180 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-	801249-B21
	core/10MB/85W) Processor Kit	
	Entry Processors - E5-2600v3 series Processors	
	HP DL180 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W)	733925-B21
	Processor Kit	
	HP DL180 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W)	733929-B21
	Processor Kit	
	Base Processors - E5-2600v3 series Processors	
	HP DL180 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W)	733916-B21
	Processor Kit	
	HP DL180 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W)	733918-B21
	Processor Kit	
	HP DL180 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W)	733921-B21
	Processor Kit	
	HP DL180 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-	763226-B21
	core/20MB/55W) Processor Kit	
	HP DL180 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W)	779830-B21
	Processor Kit	
	Performance Processors - E5-2600v4 series Processors	



Core (	,,,,,,,,	1115

**HPE Memory** 

	HPE DL180 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit	801235-B21
	HPE DL180 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-	801236-B21
	core/30MB/105W) Processor Kit HPE DL180 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-	801237-B21
	core/25MB/90W) Processor Kit HPE DL180 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-	825506-B21
	core/35MB/120W) Processor Kit HPE DL180 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-	825510-B21
	core/45MB/120W) Processor Kit HPE DL180 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-	825512-B21
	core/40MB/120W) Processor Kit HPE DL180 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-	801238-B21
	core/25MB/85W) Processor Kit Performance Processors - E5-2600v3 series Processors	
	HP DL180 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	733912-B21
	HP DL180 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	733914-B21
	HP DL180 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit	763222-B21
	NOTE: Processor upgrade from E5-2600v3 to E5-2600v4 is supported for	processors up to
	105W. Please refer to DL180 Gen9 User Guide for more details.	
,	Registered DIMMs (RDIMMs) for E5-2600v4 Series	
,	Registered DIMMs (RDIMMs) for E5-2600v4 Series HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17	805347-B21 805349-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17	
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17	805349-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors.	805349-B21 836220-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series	805349-B21 836220-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	805349-B21 836220-B21 805351-B21 726717-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	805349-B21 836220-B21 805351-B21 726717-B21 726718-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15	805349-B21 836220-B21 805351-B21 726717-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered	805349-B21 836220-B21 805351-B21 726717-B21 726718-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15	805349-B21 836220-B21 805351-B21 726717-B21 726718-B21 759934-B21
,	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit NOTE: These DIMMs can only be used with E5-2600v4 processors. Registered DIMMs (RDIMMs) for E5-2600v3 Series HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15	805349-B21 836220-B21 805351-B21 726717-B21 726718-B21 759934-B21 726719-B21



Core Options		
	HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load	805353-B21
	Registered Memory Kit	
	HP 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load	805358-B21
	Registered Memory Kit	
	NOTE: These DIMMs can only be used with E5-2600v4 processors.	
	Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load	726720-B21
	Reduced Memory Kit	720720-B21
	HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load	726722-B21
	Reduced Memory Kit	720722-021
	HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load	726724-B21
	Reduced Memory Kit	12012 <del>1</del> -021
	NOTE: These DIMMs can only be used with E5-2600v3 processors.	
	HPE Standard Memory for E5-2600v4 Series	
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17	851353-B21
	Registered Standard Memory Kit	
	NOTE: These DIMMs can only be used with E5-2600v4 processors.	
	HPE Standard Memory	
	HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15	803026-B21
	Registered Standard Memory Kit	
	HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15	803028-B21
	Registered Standard Memory Kit	
	NOTE: These DIMMs can only be used with E5-2600v3 processors.	
HPE Optical	HP DL180 Gen9 Optical Disk Drive Enablement Kit	725582-B21
Drives	HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
	HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
	HP Mobile USB Non Leaded System DVD RW Drive	701498-B21
	NOTE: Optical drive is not supported on LFF models.	
HPE Drives	SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives	
	HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr	791034-B21
	Warranty Hard Drive	
	HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr	781518-B21
	Warranty Hard Drive	
	HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise	718162-B21
	3yr Warranty Hard Drive	
	HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr	785069-B21
	111 0000B 120 0,10 1011 (2.0 mon) 00 Enterprise 0,1	. 00000 52.
	Warranty Hard Drive	. 66666 52 .
	Warranty Hard Drive HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr	652589-B21
	Warranty Hard Drive	
	Warranty Hard Drive HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr	
	Warranty Hard Drive HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	652589-B21 748387-B21
	Warranty Hard Drive HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr	652589-B21
	Warranty Hard Drive HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21 748387-B21 759212-B21
	Warranty Hard Drive HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr	652589-B21 748387-B21



HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr	652583-B21
Warranty Hard Drive HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr	759210-B21
Warranty Hard Drive HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr	652572-B21
Warranty Hard Drive HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr	759208-B21
Warranty Hard Drive HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr	785067-B21
Warranty Hard Drive	
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
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
HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty	652749-B21
Hard Drive HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty	652745-B21
Hard Drive	
SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives	
	765424-B21
HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	705424-621
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
SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
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
HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	761477-B21
Hard Drive HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr	793671-B21
Warranty Hard Drive HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	818367-B21
Hard Drive HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr	765257-B21
Warranty Hard Drive HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	695510-B21
Hard Drive	333010 021



	700000 004
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793669-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	652766-B21
Hard Drive	002700 B21
HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	818365-B21
Hard Drive	
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	652757-B21
Hard Drive	
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	652753-B21
Hard Drive	
SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty	765455-B21
Hard Drive	
HPE 1TB 12G SAS 7.2K rpm SFF (2.5in) SC Midline 1yr Warranty	832514-B21
Hard Drive	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty	765453-B21
Hard Drive	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty	655710-B21
Hard Drive	
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty	655708-B21
Hard Drive	
SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr	793695-B21
Warranty Hard Drive	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr	793683-B21
Warranty Hard Drive	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr	765255-B21
Warranty Hard Drive	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	753874-B21
Hard Drive	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr	793667-B21
Warranty Hard Drive	705050 D04
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty	693687-B21
Hard Drive	093007-621
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr	793665-B21
Warranty Hard Drives	7 33003-B2 1
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	628061-B21
Hard Drive	020001-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	658079-B21
Hard Drive	000073 B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	657750-B21
Hard Drive	007700 B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty	658071-B21
Hard Drive	
SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
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HP 4TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr	801888-B21
Warranty Hard Drive	
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr	628065-B21
Warranty Hard Drive	
HP 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr	801886-B21
Warranty Hard Drive	
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr	659339-B21
Warranty Hard Drive	
HP 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr	801884-B21
Warranty Hard Drive	
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr	659337-B21
Warranty Hard Drive	
HP 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr	801882-B21
Warranty Hard Drive	
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr	659341-B21
Warranty Hard Drive	
12G SAS Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drive	S
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT	779176-B21
Mainstream SC 3yr Wty H2 Solid State Drive	
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT	779172-B21
Mainstream SC 3yr Wty H2 Solid State Drive	
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT	779168-B21
Mainstream SC 3yr Wty H2 Solid State Drive	
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT	779164-B21
Mainstream SC 3yr Wty H2 Solid State Drive	
HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid	802578-B21
State Drive	
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid	802582-B21
State Drive	
HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid	802586-B21
State Drive	
HPE 800GB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid	846430-B21
State Drive	
HPE 1.6TB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid	846432-B21
State Drive	
12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value	762263-B21
3yr Wty Solid State Drive	
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise	762261-B21
Value 3yr Wty Solid State Drive	
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid	802891-B21
State Drive	
12G SAS Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value	762272-B21
3yr Wty Solid State Drive	
HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value	762270-B21
3yr Wty Solid State Drive	
12G SAS Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid	State





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) MU-3 SC SSD	
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
HPE 800GB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846434-B21
HPE 1.6TB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846436-B21
6G SATA Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drive	S
HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804639-B21
HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804665-B21
HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804671-B21
HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804677-B21
HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691862-B21
HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691866-B21
HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise	691868-B21
Mainstream 3yr Wty Solid State Drive	30.000 021
6G SATA Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives	





HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739898-B21
HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789145-B21
HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804575-B21
HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804581-B21
HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804587-B21
HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804593-B21
HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804599-B21
HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804605-B21
6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid	816929-B21
State Drive HP 1.92TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816919-B21
HP 960GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816909-B21
HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816899-B21
HP 240GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816889-B21
HP 120GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816879-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value G1 Solid State Drives	
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756657-B21
6G SATA Hot Plug SFF (2.5-inch) Enterprise Light G1 Solid State Drives HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804613-B21
HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804625-B21
HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21
HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	832414-B21
6G SATA Hot Plug MU-3 SFF (2.5-inch) SC Solid State Drives	





**Core Options** 

HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	817011-B21
HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816995-B21
HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816985-B21
HP 240GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816975-B21
HP 120GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816965-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives	
HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764929-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764927-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764925-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764923-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise	756636-B21
Value 3yr Wty G1 Solid State Drive	
Value 3yr Wty G1 Solid State Drive 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive	
Value 3yr Wty G1 Solid State Drive	s 804642-B21
Value 3yr Wty G1 Solid State Drive 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid	
Value 3yr Wty G1 Solid State Drive 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid	804642-B21
Value 3yr Wty G1 Solid State Drive  6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid	804642-B21 804668-B21
Value 3yr Wty G1 Solid State Drive  6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid	804642-B21 804668-B21 804674-B21
Value 3yr Wty G1 Solid State Drive 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	804642-B21 804668-B21 804674-B21 804680-B21
Value 3yr Wty G1 Solid State Drive 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise	804642-B21 804668-B21 804674-B21 804680-B21 691856-B21
Value 3yr Wty G1 Solid State Drive 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	804642-B21 804668-B21 804674-B21 804680-B21 691856-B21
Value 3yr Wty G1 Solid State Drive  6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drive HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value G1 Solid State Drives HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT	804642-B21 804668-B21 804674-B21 804680-B21 691856-B21 691860-B21





### **Core Options**

HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764945-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764943-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764941-B21
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764939-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
HP 80GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804578-B21
HP 120GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804584-B21
HP 240GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804590-B21
HP 480GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804596-B21
HP 800GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid	804602-B21
State Drive	
HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid	804608-B21
State Drive	
6G SATA Hot Plug LFF (3.5-inch) RI-3 SCC SSD	
HP 3.84TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr	816933-B21
Wty Solid State Drive	040000 004
HP 1.92TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816923-B21
HP 960GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr	816913-B21
Wty Solid State Drive	
HP 480GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr	816903-B21
Wty Solid State Drive	
HP 240GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr	816893-B21
Wty Solid State Drive HP 120GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr	816883-B21
Wty Solid State Drive	010003-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Light G1 Solid State Drives	
HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State	804616-B21
Drive	
HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State	804628-B21
Drive	
HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State	804634-B21
Drive	022447 D24
HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State  Drive	832417-B21
6G SATA Hot Plug LFF (3.5-inch) MU-3 SCC SSD	
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**Core Options** 

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	HP 1.92TB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty	817015-B21
	Solid State Drive HP 960GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty	816999-B21
	Solid State Drive	
	HP 480GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816989-B21
	HP 240GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty	816979-B21
	Solid State Drive	0.0070 52.
	HP 120GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty	816969-B21
	Solid State Drive	
	M.2 SSD	
	HPE 340GB Read Intensive-2 Solid State M.2 Enablement Kit for	835563-B21
	ProLiant ML/DL Servers	
	HPE Dual 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	835565-B21
	HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for	777894-B21
	ProLiant ML/DL Servers	777004 021
	HP 120GB Value Endurance Solid State M.2 Enablement Kit for	788028-B21
	ProLiant ML/DL Servers	
	NOTE: M.2 drives go in PCIe slot and use B140i SATA controller only.	
	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 DL180 Gen9 8SFF Hard Drive Cage/Backplane Kit	725572-B21
	HP DL180 Gen9 12LFF Hot Plug Enablement Kit	725574-B21
HPE Networking	1 Gigabit Ethernet adapters	
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
	HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
	10 Gigabit Ethernet adapters	
	HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
	HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
	HP Ethernet 10Gb 2-port 561T Adapter	716591-B21
	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
	HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21
	FlexibleLOM Adapters	



Core Options		
	HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
	HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
	HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
	HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
	HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
	HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
	HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
	HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	794525-B21
	HPE Flexfbrc 10Gb 2P 556FLR-T FIO Adptr	794526-B21
HPE InfiniBand	HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21
	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	764286-B21
HPE I/O	HP DL180 Gen9 3 Slot x8 PCI-E Riser Kit	725569-B21
Expansion	HP DL180 Gen9 x16 PCI-E Riser Kit	725570-B21
Options	HP DL180 Gen9 FlexibleLOM Enablement Kit	780965-B21
HPE Power	HPE ProLiant Gen9 Essential Server Power Supplies - Redundant	
Supplies	HPE 900W AC 240VDC Power Input Module	775595-B21
	<b>NOTE:</b> This part number can only be bought standalone and is for field integration only.	
	<b>NOTE:</b> RPS Backplane is mandatorily needed with this power input module.	
	HPE 900W AC 240VDC RPS Power Backplane	814835-B21
	<b>NOTE:</b> This part number can only be bought standalone and is for field integration only.	
	NOTE: This RPS backplane is mandatorily needed with 900W RPS	
	input module.	
	HPE 900W AC 240VDC Redundant Power Supply Kit	820792-B21
	<b>NOTE:</b> This Redundant Power supply kit includes 2 power supply input module and 1 backplane kit.	
	<b>NOTE:</b> This part number is both factory installed option and field integrable option.	

NOTE: This Power supply supports both 100-240V AC and 240V DC.

**NOTE:** Supports Gold-level efficiency (92%) with a standard C14 inlet connector. No support for HPE Power Discovery Services. Only compatible with select HPE ProLiant Gen9 Essential servers.

**NOTE:** HPE 900W Gold (Redundant) AC 240VDC Power Input Module (775595-B21) must be used with Power Backplane (814835-B21).

**NOTE:** Each Redundant Power Supply Backplane can support up to two (2) power input modules.

**NOTE:** Redundant AC Power Input Modules do not share power. Redundant AC Power Input Module #1 is the primary AC Power Input Module. Redundant AC Power Input Module #2 is the



**Core Options** 

backup AC Power Input Module.

HPE Computation HP NVIDIA Quadro K2200 Graphics Accelerator

J0G89A

and Graphics

HP NVIDIA Quadro K4200 Graphics Accelerator

J0G90A

Accelerators

NOTE: 1 Graphics Adapter Kit 725576-B21 must be selected per

K4200.

HP DL180 Gen9 Graphic Card Adapter Kit

725576-B21

NOTE: Must select 2 processors if 2 graphic cards are selected.

**NOTE:** Must select 900W non-redundant power supply when 2 graphic cards are selected. **NOTE:** Only the above listed Graphics cards are HPE standard supported options in this

server.

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

**NOTE:** 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.hp.com/go/hppoweradvisor.

**HPE Cooling** 

HP DL180 Gen9 Redundant Fan Kit

725571-B21

Options

NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of above option kit (contains 2 Fans).



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

HPE Insight HPE Insight Control

Software HP Insight Control including 1yr 24x7 Technical Support and Updates C6N27A

Single Server License

HP Insight Control including 1yr 24x7 Technical Support and Updates C6N28ABE

**Electronic License** 

HP Insight Management Media Kit

C6N31A

HP Insight Control Upgrade from iLO Advanced including 1yr 24x7

464063-B21

Support Flexible Quantity License

**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 24 x 7 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: <a href="http://www.hp.com/go/insightupdates">http://www.hp.com/go/insightupdates</a>.

**NOTE:** For additional license options please see the QuickSpecs at: <a href="http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04123391">http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04123391</a>.

Embedded
Management

HPE iLO Advanced

HP iLO Advanced including 1yr 24x7 Technical Support and Updates 512485-B21

Single Server License

HP iLO Advanced 1 Server License with 3yr 24x7 Tech Support and BD505A

**Updates** 

HP iLO Advanced including 1yr 24x7 Technical Support and Updates E6U59ABE

E-LTU

HP iLO Advanced including 3yr 24x7 Technical Support and Updates E6U64ABE

E-LTU

**HPE iLO Essentials** 

HP Integrated Lights-Out Essentials including 3yr 24x7 Tech Support BD774A

and Updates Single Svr License

HP Integrated Lights-Out Essentials including 1yr 24x7 Tech Support BD775A

and Updates Single Svr License

HP Integrated Lights-Out Essentials including 3yr 24x7 Technical E6U61ABE

Support and Updates E-LTU

HP Integrated Lights-Out Essentials including 1yr 24x7 Technical E6U62ABE

Support and Updates E-LTU

HPE iLO Scale-out



Additional Options			
	HP Integrated Lights-Out Scale-Out 3yr 24x7 Tech Support and Updates Flex Quantity License	BD776A	
	HP Integrated Lights-Out Scale-Out including 3yr 24x7 Tech Support and Updates Flex Qty E-LTU	BD776AAE	
	HP Integrated Lights-Out Scale-Out including 3yr 24x7 Tech Support and Updates Tracking License	BD777A	
	HP Integrated Lights-Out Scale-Out 1yr 24x7 Tech Support and Updates Flex Quantity License	BD778A	
	HP Integrated Lights-Out Scale-Out including 1yr 24x7 Tech Support and Updates Flex Qty E-LTU	BD778AAE	
	HP Integrated Lights-Out Scale-Out including 1yr 24x7 Tech Support and Updates Tracking License	BD779A	
HPE Converged	HPE OneView Advanced (with HPE iLO Advanced)		
Infrastructure	HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y34A	
Management	HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU	E5Y35AAE	
Software	HPE OneView Advanced (without HPE iLO Advanced)		
	HP OneView w/o iLO including 3yr 24x7 Support 1 Server LTU	P8B24A	
	HP OneView w/o iLO including 3yr 24x7 Support Track 1 Server LTU	P8B25A	
	HP OneView w/o iLO including 3yr 24x7 Support Flex Quantity E-LTU	P8B26AAE	
	HP OneView Media Kit Phys No Lic	E5Y37A	
	HP Operations Analytics for HP OneView LTU	K8G29A	
	HP Operations Analytics for HP OneView E-LTU	K8G29AAE	
	NOTE: Full licenses of HPE OneView Advanced also provide the right-		
	to-use HPE Insight Control without additional charge.		
	NOTE: Server provisioning (via 'HPE Insight Control server		
	provisioning') is licensed as part of HPE OneView Advanced and		
	provides multi-server OS and driver provisioning. Media kit #BD883A		
	can be ordered for a physical copy of this software (USB flash drive).		
	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.

HPE Cluster Management Utility HP Insight Cluster Management Utility 1yr 24x7 Flexible License HP Insight Cluster Management Utility 3yr 24x7 Flexible License 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. HP Insight Cluster Management Utility Media	QL803B BD476A BD477A
http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04111735.	
Value Endurance (VE) PCIe Workload Accelerators HP 6.4TB FH/HL Value Endurance (VE) PCIe Workload Accelerator HP 3.2TB HH/HL Value Endurance (VE) PCIe Workload Accelerator HP 1.6TB HH/HL Value Endurance (VE) PCIe Workload Accelerator HP 1.3TB HH/HL Value Endurance (VE) PCIe Workload Accelerator HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator HPE 3.2TB Read Intensive-2 HH/HL PCIe Workload Accelerator HPE 1.6TB Read Intensive-2 HH/HL PCIe Workload Accelerator HPE 1.3TB Read Intensive-2 HH/HL PCIe Workload Accelerator Light Endurance (LE) PCIe Workload Accelerators	763840-B21 763838-B21 763836-B21 763834-B21 831739-B21 831737-B21 831735-B21 831733-B21
HP 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator HP 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator HP 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator NOTE: Please see the QuickSpecs for Technical Specifications and addithttp://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04123190	775672-B21 775670-B21 775668-B21 775666-B21 itional information:
HP 2U Security Bezel Kit  NOTE: Quick Release Ear option kit (P/N 725579-B21) is required for installing security bezel	666988-B21
HP Trusted Platform Module 2.0 Kit  NOTE: HPE Trusted Platform Module 2.0 Option works with Gen9 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.  NOTE: HPE Gen9 servers purchased earlier may need the latest firmware update to be compatible with the TPM 2.0 Option.  NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module. HP Trusted Platform Module Option  NOTE: The HPE Trusted Platform Module Option (488069-B21) is the TPM 1.2 version. Compatible server platforms include Gen8 and Gen9 servers.	745823-B21 488069-B21
	HPE Cluster Management Utility HP Insight Cluster Management Utility 1yr 24x7 Flexible License HP Insight Cluster Management Utility 3yr 24x7 Flexible License 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. HP Insight Cluster Management Utility Media NOTE: For additional license kits please see the QuickSpecs at: http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04111735.  Value Endurance (VE) PCle Workload Accelerator HP 6.4TB FH/HL Value Endurance (VE) PCle Workload Accelerator HP 3.2TB HH/HL Value Endurance (VE) PCle Workload Accelerator HP 1.6TB HH/HL Value Endurance (VE) PCle Workload Accelerator HP 1.3TB HH/HL Value Endurance (VE) PCle Workload Accelerator HP 6.4TB Read Intensive-2 FH/HL PCle Workload Accelerator HPE 3.2TB Read Intensive-2 HH/HL PCle Workload Accelerator HPE 1.3TB HH/HL Light Endurance (LE) PCle Workload Accelerator HPE 1.3TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.3TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.3TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HL Light Endurance (LE) PCle Workload Accelerator HP 1.0TB HH/HD Ligh



### **Additional Options**

PE Storage SAS Controllers			
ontrollers HPE Smart Array Controllers			
HP Smart Array P440/2GB FBWC 12Gb 1-port Int SAS Controller	820834-B21		
HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller	726821-B21		
HP Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller	726897-B21		
HP Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21		
HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21		
HPE Smart Host Bus Adapters			
HP H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21		
HP H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21		
HPE Cable Options			
HP DL180 Gen9 8LFF Smart Array Cable Kit	725577-B21		
HP DL180 Gen9 8SFF Smart Array Cable Kit	725578-B21		
NOTE: One of the above cables is required to be selected depending	NOTE: One of the above cables is required to be selected depending on the		
combination of server and storage controller. Cable option kit descripti	ons include the		
right server and storage controllers names.			
Optional Upgrades			
HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL	727258-B21		
Servers			
NOTE: This option is mandatorily required with HPE Smart Array			
controllers. One server can accommodate only 1 Smart Storage			
Battery that would suffice the requirement of all HPE Smart Array			
controllers.			
HP SmartCache No Media 24x7 Technical Support 1 Svr License	D7S26A		
HP SmartCache No Media 24x7 Technical Support Flexible License	D7S27A		
HP SmartCache No Media 24x7 Technical Support Electronic License	D7S27AAE		

### HPE Tape Backup

**NOTE:** For the complete range of tape drives, autoloaders, libraries and media see: <a href="http://www.hp.com/go/tape">http://www.hp.com/go/tape</a>. For hardware and software compatibility of HPE tape backup products see: <a href="http://www.hp.com/storage/SPOCK">http://www.hp.com/storage/SPOCK</a> and <a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a>.

**NOTE:** For Internal drives to be connected to DL servers please make sure that you order rack mount kit as well.

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Tape		ih	rar	ide
1005				12.3

HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE StoreEver MSL4048 0-drive Tape Library	AK381A
Tape Drives	
HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPE StoreEver LTO-7 Ultrium 15000 Internal Tape Drive	BB873A
HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
HP StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HP StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
HP StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive	EH900B
HP StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HP StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
HPE Tape Storage Systems	



Additional Options		
	HP StoreEver 1U SAS Rack-mount Kit	AE459B
	HP StoreEver LTO-4 Ultrium 1760 SAS (1) in 1U Rack-mount Kit	EH946C
	HP StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in 1U Rack-mount	EJ014B
	HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit	C0L99A
	HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape	C0H19A
	Autoloader	
	HPE StoreEver MSL6480	
	HPE StoreEver MSL6480 Scalable Base Module	QU625A
	HPE StoreEver MSL6480 Scaleable Expansion Module	QU626A
HPE Disk Backı	upHPE RDX Removable Disk Backup System	
	HP D3700 Enclosure	QW967A
	HP D3600 Enclosure	QW968A
	HP RDX+ 500GB External Backup System	B7B66B
	HP RDX+ 1TB External Backup System	B7B69B
	HP RDX+ External Docking System	C8S07B
	HP RDX 2TB USB3.0 External Disk Backup System	E7X53B
	HPE StoreOnce 3540 24TB System	BB914A
	HPE StoreOnce 3100 8TB System	BB913A
	HPE StoreOnce 3520 12TB System	BB922A
	HPE StoreOnce 5100 48TB System	BB915A
HPE Storage	Emulex Fibre Channel HBAs	
Options	HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B
•	HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
	HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus	C8R38A
	Adapter	
	HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A
	QLogic Fibre Channel HBAs	
	HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
	HP 81Q 8Gb 1-port PCle Fibre Channel Host Bus Adapter	AK344A
	HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
	HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus	QW972A
	Adapter	
	HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
	HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
	Converged Network Adapter	
	HP StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
	HP StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
	HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network	N3U51A
	Adapter	NJUJIA
	HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged	N3U52A



Additional Options	
Additional Options	

Additional Options		
HPE Disk	Disk Enclosures	
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	E7W30A
	Bundle	
	HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB	E7W31A
	Bundle	
	HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB	QQ698A
	Bundle	
	HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB	QQ699A
	Bundle	
	HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB	QQ697A
	Bundle	
	HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB	E7W32A
	Bundle  HD D6000 w/70 9TD 13C SAS 7 3K LEE (3 5in) Dual Bort MDL HDD	MOTEOA
	HP D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle	M0T59A
	HP D6000 w/70 6TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD	M0T57A
	420TB Bundle	1010171
	HP D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD	M0T58A
	280TB Bundle	
HPE Data Center	· HPE Advanced Series Racks	
Racks	HPE 11648 1075mm Pallet Universal Rack	H6J87A
	HPE 11648 1075mm Shock Universal Rack	H6J88A
	HPE 11642 1075mm Pallet Universal Rack	H6J65A
	HPE 11642 1075mm Shock Universal Rack	H6J66A
	HPE 11642 1200mm Pallet Universal Rack	H6J67A
	HPE 11642 1200mm Shock Universal Rack	H6J68A
	HPE 11636 1075mm Pallet Universal Rack	H6J77A
	HPE 11636 1075mm Shock Universal Rack	H6J78A
	HPE 11622 G2 1075mm Pallet Universal Rack	H6J83A
	HPE 11622 G2 1075mm Shock Universal Rack	H6J84A
	HPE 11614 1075mm Shock Universal Rack	H6J82A
	NOTE: Please see the HPE Advanced Series Racks QuickSpecs for information	on on

**NOTE:** Please see the <u>HPE Advanced Series Racks QuickSpecs</u> for information or additional racks options and rack specifications.

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**HPE Enterprise Series Racks** 





HPE 647 1075mm Pallet Intelligent Series Rack	BW911A						
HPE 647 1075mm Shock Intelligent Series Rack	BW912A						
HPE 647 1200mm Pallet Intelligent Series Rack	BW913A						
HPE 647 1200mm Shock Intelligent Series Rack	BW914A						
HPE 642 1075mm Pallet Intelligent Series Rack	BW903A						
HPE 642 1075mm Shock Intelligent Series Rack	BW904A						
HPE 642 1200mm Pallet Intelligent Series Rack	BW907A						
HPE 642 1200mm Shock Intelligent Series Rack	BW908A						
HPE 636 1075mm Pallet Intelligent Series Rack	BW895A						
HPE 636 1075mm Shock Intelligent Series Rack	BW896A						
HPE 842 1075mm Pallet Intelligent Series Rack	BW917A						
HPE 842 1075mm Shock Intelligent Series Rack	BW918A						
NOTE: Please see the HPE Enterprise Series Racks QuickSpecs for informati	on on						
additional racks options and rack specifications.							
HPE Standard Series Rack							
HPE V142 1075mm deep Pallet 100 series Rack	AF046A						
NOTE: Please see the HPE Standard Series Racks QuickSpecsfor information on							

HPE Power
Distribution Units
(PDUs)

HPE Basic Power Distribution Units (PDU)

additional racks options and rack specifications.

Distribution Units HPE Basic 1.9kVA/L5-20P 16A/120V Outlets (12) 5-20R/Horizontal H5M54A

NA/JP PDU

HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical H5M55A

NA/JP PDU

HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) H5M56A

C13/Horizontal WW PDU

HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) H5M57A

C13/Vertical WW PDU

HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP H5M58A

PDU

HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical H5M61A

NA/JP PDU

HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical H5M59A

NA/JP PDU

HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) H5M60A

C19/Vertical NA PDU

HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6) H5M75A

C19/Vertical WW PDU

HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) H5M63A

5-20R/Vertical NA/JP PDU

HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) H5M64A

C19 (3) 5-20R/Vertical NA/JP PDU

HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) H5M62A

C19/Vertical NA/JP PDU

HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) H5M67A

C19/Vertical NA PDU

HPE Basic Modular 2.8kVA/L5-30P 24A/120V Outlets (4) 252663-D71

C19/Horizontal NA/JP PDU





	050000 574
HPE Basic Modular 4.9kVA/L6-30P 24A/208V Outlets (4)	252663-D74
C19/Horizontal NA/JP Core Only PDU  HPE Basic Modular 8.3kVA/CS8265C 40A/208V Outlets (4)	252663-D75
C19/Horizontal NA/JP PDU	252003-D75
HPE Basic Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6)	AF512A
C19/Horizontal NA/JP PDU	AFSTZA
HPE Basic Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6)	AF519A
C19/Horizontal NA/JP PDU	AI 519A
HPE Basic Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets	AF511A
(6) C19/Horizontal NA/JP PDU	711 31 171
HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
NOTE: Please see the HPE Basic Power Distribution Units (PDU) QuickS	
information on additional options and product specifications.	<u> </u>
HPE Metered Power Distribution Units (PDU)	
HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal	D9N43A
NA/JP PDU	20111071
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12)	D9N46A
C13/Horizontal WW PDU	20111071
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal	D9N44A
NA/JP PDU	2011111
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16)	D9N45A
C13/Vertical WW PDU	
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Vertical	G9Z05A
NA/JP PDU	
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4)	D9N47A
C19/Vertical NA/JP PDU	
HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3)	D9N51A
C19/Vertical NA/JP PDU	
HPE Metered 3Ph 5.7kVA/L21-20P 16A/120-208V Outlets (13) C13	D9N52A
(3)5-20R/Vertical NA/JP PDU	
HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3)	D9N53A
C19 (3) 5-20R/Vertical NA/JP PDU	
HPE Metered 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (3)	D9N49A
C19/Vertical NA PDU	
HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12)	D9N58A
C19/Vertical NA/JP PDU	
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets	D9N61A
(30) C13 (3) C19/Vertical NA/JP PDU	
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets	D9N62A
(12) C13 (12) C19/Vertical NA/JP PDU	
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24)	D9N54A
C13 (3) C19/Vertical NA/JP PDU	
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12)	D9N59A
C13 (12) C19/Vertical NA/JP PDU	
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12)	G9Z07A
C13 (12) C19/Vertical NA/JP PDU	
HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-	D9N63A
HP/Vertical NA PDU	





HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A
NOTE: Please see the HPE Metered Power Distribution Units (PDU) QuickSpo	ecs
for information on additional options and product specifications.	
HPE Intelligent Power Distribution Unit (PDU)	455004
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6)	AF520A
C19/Horizontal NA/JP PDU	A E E O 4 A
HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
	AF522A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AFSZZA
HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6)	AF523A
C19/Horizontal NA/JP PDU	AI 323A
HPE Intelligent Modular 3Ph 11kVA/L22-20P 16A/240V Outlets (6)	AF900A
C19/Horizontal NA/JP PDU	7 0007 .
HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6)	AF901A
C19/Horizontal NA/JP PDU	
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V	AF535A
(12) C19/Horizontal NA/JP PDU	
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 30A 5-wire 24A/240V	AF537A
(12) C19/Horizontal NA/JP PDU	
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6)	AF531A
C19/Horizontal NA/JP PDU	
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20)	AF532A
C13 (6) C19/Horizontal NA/JP PDU	
HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6)	AF533A
C19/Horizontal NA/JP PDU	
HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A
NOTE: Please see the HPE Intelligent Power Distribution Units QuickSpecs	
for information on additional options and product specifications.	
HPE Metered and Switched Power Distribution Units (PDU)	
HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R	H8B48A
/Vertical NA/JP PDU	
HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V	H8B49A
Outlets (7) C13 (1) C19/Vertical WW PDU	
HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4)	H8B50A
C19/Vertical NA/JP PDU	LIODEOA
HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18)	H8B52A
C13 (6) C19/Vertical NA/JP PDU HPE Metered Switched 3Ph 8.6kVA/L2190-30P 24A/208V Outlets (23)	LIODE2A
C13 C19 (1) 520R/Vertical NA/JP PDU	H8B53A
HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12)	H8B55A
C13 (12) C19/Vertical NA/JP PDU	HODOOA
HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets	H8B56A
(12) C13 (12) C19/Vertical NA/JP PDU	
NOTE: Please see the <u>HPE Metered and Switched Power Distribution Units</u> (F	PDU)
QuickSpecs	<del></del>



for information on additional options and product specifications.

**Additional Options** 

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

HPE Rack Moun	t HPE Location Discovery Services	
Consoles, KVM	HP Location Discovery Services LCD8500 Kit	TL052A
Switches, and	NOTE: Please see the HPE Location Discovery Services QuickSpecs	
Keyboards	for information on additional options and product specifications.	
	HPE Rack Mount Consoles	
	HP LCD8500 1U US Rackmount Console Kit	AF630A
	HP LCD8500 1U US TAA Rackmount Console Kit	AF645A
	HPE KVM Switches	
	HP 0x2x16 G3 KVM Console Switch	AF652A
	HP TAA 0x2x16 G3 KVM Console Switch	AF653A
	HP USB Remote Access Key for G3 KVM Console Switches	AF650A
	HP KVM Console USB Interface Adapter	AF628A
	HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
	HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
	HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
	HP 1x4 USB/PS2 KVM Console Switch	AF611A
	HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC	AF620A
	Software	
	HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
	HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC	AF622A
	Software	711 02271
	<b>NOTE:</b> To learn more, please visit the <u>HPE KVM Switches web page</u> .	
	HPE USB Keyboard and Mouse	
	HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21
	Rail Kits	
	HP 2U Small Form Factor Easy Install Rail Kit	733660-B21
	NOTE: This applies for both LFF & SFF models and it does not include	
	cable management arm.	
	HP 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
	HPE Other Options	
	HP Rack LED Light Kit	BW939A
	HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
	HP Advanced Power Manager Kit	741192-B21
	HP ConvergedSystem Door Branding Kit	TK815A
	HP ConvergedSystem Rack Light Kit	TK816A
	HP ConvergedSystem Rack Side Panel 1075mm Kit	TK817A

HPE UninterruptibleHPE DirectFlow Three Phase UPS



<b>Additional Options</b>		
Power Systems	Power Unit (1U UPS)	
(UPS)	HP R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HP R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power	AF478A
	System	
	Input/Output Module Options for 1U UPS	. –
	HP 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS	AF489A
	IEC309 Input/Output Module	A E 404 A
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30	AF491A
	Input/Output Module	Λ <b>Γ</b> 4 Ο Ο Λ
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
	HP 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS	G9Y76A
	IEC309 Input/Output Module	GSTTOA
	Power Unit (2U UPS)	
	HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	Input/Output Module Options for 2U UPS	7 07 .
	HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309	AF486A
	Input/Output Module	
	HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309	AF487A
	Input/Output Module	
	HP 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309	D9Q02A
	Input/Output Module	
	HP 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1	AF484A
	IEC309 Input/Output Module	
	NOTE: All Input/Output Modules support dual output outlets except the AF484	٨.
	Battery Pack Options	
	HP DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack	AF480A
	HP DirectFlow UPS - 3U Rackmount VRLA Battery Pack	AF482A
	HP WW DirectFlow Secondary Battery Cable	AF497A
	NOTE: Please see the HPE DirectFlow Three Phase Uninterruptible Power Sy	<u>/stem</u>
	QuickSpecs	
	for information on additional options and product specifications.	
	HPE Tower UPS	
	HPE T750 G4 UPS Models	100054
	HP T750 G4 NA/JP Uninterruptible Power System	J2P85A
	HPE T1000 G4 UPS Models	100064
	HP T1000 G4 NA/JP Uninterruptible Power System HPE T1500 G4 UPS Models	J2P86A
		120274
	HP T1500 G4 NA/JP Uninterruptible Power System	J2P87A



HPE Rack/Tower UPS

### **Additional Options**

	HPE R/T2200 G4 UPS Models	
	HP R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A
	HP DirectFlow UPS Management Card	AF493A
	HPE R/T3000 G4 UPS Models	
	HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
	HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
	R1500 G4 Models	
	HP R1500 G4 NA Uninterruptible Power System	J2Q99A
	R7000 Uninterruptible Power System (UPS)	
	HP R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
	R5000 Uninterruptible Power System (UPS)	
	HP R5000 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
	HPE UPS Options	
	HP R/T2200 G4 Extended Runtime Module	J2R09A
	HP R/T3000 G4 Extended Runtime Module	J2R10A
	HP 2U Rack/Tower UPS Shipping Kit	L4Q11A
	<b>NOTE:</b> To learn more, please visit the HPE Uninterruptible Power Syste	ms (UPS) web page.
HPE USB and S	SDHPE Flash Media Kits for USB Drives	
Options	HP 32GB microSD Enterprise Mainstream Flash Media Kit	700139-B21
	HP 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	HP Dual 8GB microSD Enterprise Midline USB Kit	741279-B21

### **HPE Care Pack**

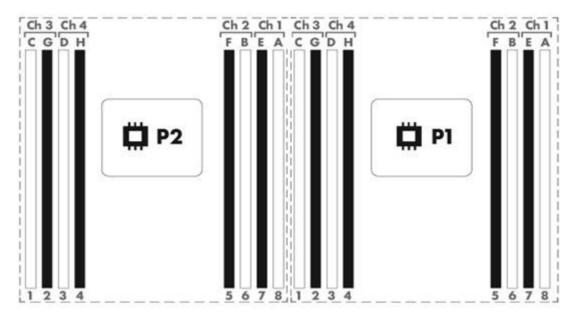
Services

Foundation Care	
HPE 3 year Foundation Care 24x7 DL180 Gen9 Service	U7AT3E
HPE 3 year Foundation Care 24x7 wDMR DL180 Gen9 Service	U7AT4E
HPE 3 year Foundation Care 24x7 wCDMR DL180 Gen9 Service	U7AT5E
Proactive Care	
HPE 3 year Proactive Care 24x7 DL180 Gen9 Service	U7AT6E
HPE 3 year Proactive Care 24x7 with DMR DL180 Gen9 Service	U7AT7E
HPE 3 year Proactive Care 24x7 with CDMR DL180 Gen9 Service	U7AT8E
Installation & Start-up Services	
HPE Installation ProLiant DL180/DL380e Service	U6E81E
HPE Installation and Startup DL180 DL380e Service	U6E83E



Memory

Memory Population guidelines



General Memory Population Rules and Guidelines:

- . Install DIMMs only if the corresponding processor is installed.
- . If only one processor is installed in a two processor system, only half of the DIMM slots are available.
- . To maximize performance, it is recommended to balance the total memory capacity between all installed processors and load the channels similarly whenever possible.
- . When two processors are installed, balance the DIMMs across the two processors.
- . White DIMM slots denote the first slot to be populated in a channel.
- . Place the DIMMs with the highest number of ranks in the white slot when mixing DIMMs of different ranks on the same channel.
- . Do not mix RDIMMs or LRDIMMs.
- . Quad rank RDIMMs are not supported in HPE ProLiant DL180 Gen9 servers.
- . Quad rank LRDIMMs are capable of up to two DIMMs per channel.
- . 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.
- . To realize the performance memory capabilities listed in this document, HPE SmartMemory is required.

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



Memory

Memory Bandwid	th and Ca	pacity						
[DIMM Type]	Regis	stered DIN	Load Reduced (LRDIMMs)					
DIMM Rank	Single	Single	Dual	Dual	Dual	Quad		
	Rank	Rank	Rank	Rank	Rank	Rank		
DIMM Capacity	8GB	16GB	16GB	32GB	32GB	64GB		
DIMM Native	2400	2400	2400	2400	2400	2400		
Speed (MT/s)								
Voltage	Std	Std	Std	Std	Std	Std		
	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage		
	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V		
SLOTS THAT CAN BE POPULATED								
16 slot servers	16	16	16	16	16	16		
MAXIMUM CAPA	CITY (GB	)						
	128	256	256	512	512	1024		
POPULATED DIN	им spee	D (MT/s)						
1 DIMM Per	2400	2400	2400	2400	2400	2400		
Channel								
2 DIMM Per	2133	2133	2133	2133	2400	2400		
Channel								
3 DIMM Per	1866	1866	1866	1866	2400	2400		
Channel								

NOTE: DL160 has 2 DIMMs per channel and hence 3 DIMMs per channel memory speeds are not applicable on DL180

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

### Memory Bandwidth and Capacity

•									
[DIMM Type]	i	Registere	d DIMMs	(RDIMMs	)	Load Re	Reduced (LRDIMMs)		
DIMM Rank	Single	Single	Dual	Dual	Dual	Dual	Quad	Quad	
	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	
DIMM Capacity	4GB	8GB	8GB	16GB	32GB	16GB	32GB	64GB	
DIMM Native	2133	2133	2133	2133	2133	2133	2133	2133	
Speed (MT/s)									
Voltage	Std	Std	Std	Std	Std	Std	Std	Std	
	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	
	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	
SLOTS THAT CA	N BE PO	PULATE	)						
16 slot servers	16	16	16	16	16	16	16	16	

MAXIMUM CAPACITY (GB)



Memory				_				
	64	128	128	256	512	256	512	1024
POPULATED DI	MM SPEE	D (MT/s)						
1 DIMM Per	2133	2133	2133	2133	2133	2133	2133	2133
Channel								
2 DIMM Per	2133	2133	2133	2133	2133	2133	2133	2133
Channel								
3 DIMM Per	1600	1600	1600	1600	1600	1866	1866	1866
Channel								

NOTE: DL160 has 2 DIMMs per channel and hence 3 DIMMs per channel memory speeds are not applicable on DL10.

DIMM slot and configuration diagram

DIMM slot and configuration diagrams

Basic memory slot & population diagram

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

CPU #1 IS PROCESSOR ON RIGHT - LOOKING FROM FRONT OF SERVER

Slot population order # population order  # Population order  Chnl 3 1 C 1 C 2 G  CPU 1 CPU 2  Slot population order # population order  # Chnl 4 3 D 3 D 4 H  CPU 1 CPU 2	
Chnl 3 1 C 1 C 2 G	
CPU 1   CPU 2	
CPU 1	
Slot population order # Population order # Slot population order # Dopulation order # CPU 1  Slot population order # Dopulation order	
# # # Chnl 4 3 D 3 D 4 H CPU 2	
Chnl 4 3 D 3 D 4 H CPU 2	
4 H 4 H CPU 2	
4 H 4 H CPU 2	
CPU 1 CPU 2	
Slot population order Slot population order	
# #	
Chnl 2 5 F 5 F	
6 B 6 B	
CPU 1 CPU 2	
	—
Slot population order Slot population order #	
π	
Chnl 1 7 E 7 E	
8 A 8 A	
8 A 8 A	



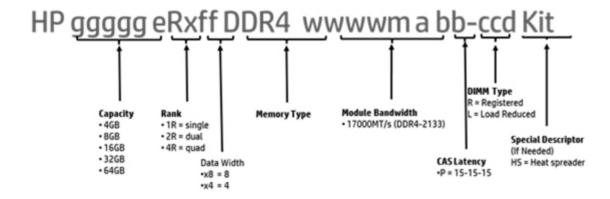
Memory					
Memory Speed by Processor Model	Processor Models		Supported Memory Speeds		
	E5-2609v3, E5-2603v3		1600MHz		
	E5-2640v3, E5-2630v3, E5-2620v3, E5- 2630Lv3, E5-2623v3		1866MHz		
	E5-2660v3, E5-2650v3, E5-2650Lv3		2133MHz		
	E5-2609v4, E5-2603v4		1866MHz		
	E5-2620v4, E5-2630Lv4, E5-2623v4, E5-2640v4, E5-2630v4		2133MHz		
	E5-2650Lv4, E5-2660v4, E5-2650v4, E5- 2680v4, E5-2695v4, E5-2683v4		2400MHz		
Standard and Maximum Memory Capacity					
	Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory	
Maximum	Models	Standard Memory 8GB (1x8GB)	•	Replaced with Optional	
Maximum Memory Capacity (Pre-configured	Models / E5-2603v4, E5- 2603v3, E5-2609v4,	Ź	Plus Optional Memory 968GB (15x64GB,	Replaced with Optional Memory	
Maximum Memory Capacity (Pre-configured	Models / E5-2603v4, E5- 2603v3, E5-2609v4, E5-2609v3	8GB (1x8GB)	Plus Optional Memory  968GB (15x64GB, 1x8GB)  976GB (15x64GB,	Replaced with Optional Memory 1024GB (16x64GB)	

DDR4 memory options part number decoder

2x16GB)

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

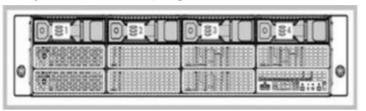
- 2GB = 2,048MB
- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB





Storage

4-bay LFF non-hot-plug drive model



1-4

1-8

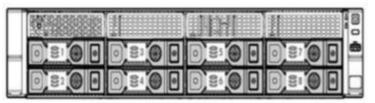
1-12

1-8

1-16

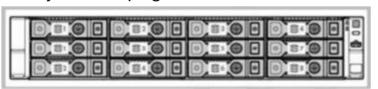
4 x LFF SATA Non-Hot Pluggable Hard Drive Bays

8-bay LFF hot-plug drive model



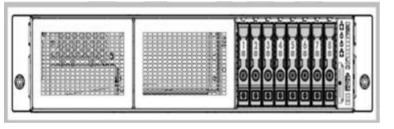
8 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays

12-bay LFF hot-plug drive model



12 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays

8-bay SFF hot-plug drive model



8 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays

16-bay SFF hot-plug drive model



16 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays

System Unit Dimensions SFF Drives: 3.44 x 17.54 x 23.9 in (8.75 x 44.55 x 60.7cm)

(with bezel) LFF Drives: 3.44 x 17.54 x 23.9 in (8.75 x 44.55 x 60.7 cm)

Weight Maximum: 47/6 lb (21.59 kg)

(approximate) (all hard drives:

front + rear, full power supply, and processor

installed)

Minimum: 36.58 lb (16.59 kg)

(one SFF hard drive, single power supply, and processor installed. HDD not installed)

Input Rated Line 100 to 240 VAC

Requirements Voltage

Rated Input For 550W Power Supply:

Current 6.7 A (at 100 VAC)

3.3 A (at 200 VAC)

Rated Input 47 to 63 Hz

Frequency

Rated Input For 550 W Power Supply: < 670 W (at 100 VAC),

< 660 W (at 200 VAC),

BTU Rating Maximum For 550 W Power Supply:

2201 BTU/hr (at 100 VAC), 2153 BTU/hr (at 200 VAC)

Power To review typical system power ratings use the Power Advisor which is available Specifications via the online tool located at URL: <a href="http://www.hp.com/go/proliant-energy-efficient">http://www.hp.com/go/proliant-energy-efficient</a>

or <a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a> - Click on the system of interest.

Example: DL180 Gen9- Follow the instructions of the next screens.

Power Supply Rated Steady- For 550 W Power Supply:

Output State Power 550 W (at 100 VAC),

550 W (at 200 VAC),

Maximum For 550 W Power Supply:

Peak Power 550 W (at 100 VAC),

550 W (at 200 VAC),



System Inlet Standard
Temperature Operating
Support

10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

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.hp.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: <a href="http://www.hp.com/servers/ashrae">http://www.hp.com/servers/ashrae</a>

System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

**NOTE:** Supports A3 and A4 extended ambience.

Non-operating -30° to 60°C (-22° to 140°F). Maximum rate of change

is 20°C/hr (36°F/hr).

Relative 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- Non-operating 5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet

condensing) bulb temperature, non-condensing.

Altitude Operating 3048 m (10,000 ft). This value may be limited by the type and

number of options installed. Maximum allowable altitude change

rate is 457 m/min (1500 ft/min).

Non-operating 9144 m (30,000 ft). Maximum allowable altitude change rate is 457

m/min (1500 ft/min).

Acoustic Noise

Humidity

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were

measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

Idle

L WAd Entry: 5.3 B

Base LFF: 5.3 B
Base SFF: 5.2 B
Storage: 4.9 B

Energy Star: 5.5 B

L pAm Entry: 37 dBA

Base: 37 dBA Storage: 36 dBA Energy Star: 38 dBA

Operating

L WAd Entry: 5.3 B

Base LFF: 5.3 B
Base SFF: 5.2 B
Storage: 4.9 B
Energy Star: 5.5 B
NHP Entry: 38 dBA

LFF Entry: 37 dBA Base: 37 dBA Storage: 33 dBA Energy Star: 38 dBA

**NOTE:** The listed sound levels apply to standard shipping configurations.

Additional options may result in increased sound levels.

Emissions FCC Rating Class A

L pAm

Classification Normative CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; (EMC) Standards CNS14336-1; CNS13438; GB4943; GB9254; 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.

**NOTE:** The listed sound levels apply to standard shipping configurations.

Additional options may result in increased sound levels.



HPE Dynamic Number of PCI Four

Smart Array links

B140i PCI link rate 4 Gb/s Controller Storage SATA

protocol support

SAS/SATA 6 Gb/s

peak data transfer rate

Number of 10 links

SAS/SATA links

SAS/SATA 2x4 connectors; 2x1 connectors

connectivity

Expander No

support

Drives Up to 10 Internal Drives

supported (max)

RAID support 0, 1, 10, 5 SATA

Software HPE SSA, SMH, SIM

management

Warranty Server warranty
HPE Secure Not Supported

Encryption license

HPE SmartCache Not Supported

License

HPE Smart Supported

Storage Administrator

HPE Network 10Base-T/100Base-TX/1000Base-TX

Embedded Interface

Dual Port 361i Compatibility

Adapter

IEEE 802.3 10Base-T

IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 1588, IEEE 802.1AS

IEEE 802.3az - Energy Efficient Ethernet (EEE)

**Ports** 

Data Transfer

PCI Express v 2.0, 5.0 GT/s, two lanes (x2)

Method

Controller Intel I350 Powerville
Network 10Base-T (Half-

Transfer Rate 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) 1000Mb/s per port, 4000 Mb/s combined

Connector Two RJ-45

Cable Support 10 Base-T Categories 3, 4 or 5 UTP; up to 328 ft (100 m)

10/100/1000 Base- Category 5 or higher UTP; up to 328 ft (100 m)

 $\mathsf{TX}$ 

Environment- End-of-life

friendly

Management and Enterprise product return, trade-in, and recycling programs in many

Products and Recycling

Approach

Hewlett Packard Enterprise offers end-of-life Hewlett Packard

geographic areas. For trade-in information, please go to:

http://www.hp.com/qo/green. To recycle your product, please go to:

http://www.hp.com/go/green or contact your nearest Hewlett Packard

Enterprise sales office. Products returned to Hewlett Packard

Enterprise will be recycled, recovered or disposed of in a responsible

manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by

treatment facilities. This information (product disassembly instructions)

is posted on the Hewlett Packard Enterprise web site at:

http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett

Packard Enterprise equipment.



### **Summary of Changes**

Date	Version History	Action	Description of Change
08-Apr-2016	From Version 12 to 13	Changed	HPE Processors section was revised.
31-Mar-2016	From Version 11 to 12	Added	Added new HPE Smart Memory 2400 MHz memory,
			Intel Xeon E5-2600v4 processor support, new HPE Trusted Platform Module (TPM) 2.0, new 900W AC/ 240VDC power supply, and new HDD offerings.
		Changed	Power Supplies, Upgradeability, Embedded Management, Service and Support, Preconfigured Models, HPE Security, and Memory sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
16-Feb-2016	From Version 10 to 11	Added	New HDD offering was added to HPE Drives.
		Changed	HPE Power Supplies, HPE Computation and Graphics Accelerators, HPE Tape Backup, HPE Disk Backup, HPE Data Center Racks, and HPE Power Distribution Units (PDUs) were revised.
'	•	Removed	Obsolete SKUs were removed from the QuickSpecs.
1-Dec-2015	From Version 9 to 10	Added	New HDD offering was added to HPE Drives.
			New options added to HPE PCIe Workload Accelerator Options.
		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 8 to 9	Added	Added new 6Gb SATA Solid State Drives.
			Added new HPE OneView management software.
	•	Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	From Version 7 to 8	Added	New Solid State Drives offering was added to Core Options.
		Changed	Maximum Internal Storage was revised.
	ı	Removed	Obsolete SKUs were removed from the QuickSpecs.
1-Jun-2015	From Version 6 to 7	Added	New Hard Drives offering.
<u> </u>		 	
L			

Summary of Chang	ges		
			New HPE OneView licenses added to HPE Converged Infrastructure Management Software.
			New RDX+ external backup options were added.
		Changed	Maximum Internal Storage was revised.
			Core options and Additional Options were revised.
•	•	Removed	Obsolete SKUs were removed from the QuickSpecs.
30-Mar-2015	From Version 5 to 6	Added	New Hard Drives offering.
			Optional Software added to HPE Storage Controllers.
	•	Changed	HPE Memory, HPE Power Supplies, HPE Storage Controllers, and HPE Disk Storage Systems were revised.
9-Feb-2015	From Version 4 to 5	Added	Added Network controller, new HPE Drives, and new G4 UPS models.
•		<b>C</b> hanged	HPE Drives, HPE Computation and Graphics Accelerators, HPE Tape Backup, HPE Disk Backup, HPE Rack Mount Consoles, KVM Switches, and Keyboards, HPE Uninterruptible Power Systems (UPS), HPE Networking, and HPE Power Distribution Units (PDUs) sections were revised.
1-Dec-2014	From Version 3 to 4	Changed	Changes made throughout the entire QuickSpecs.
13-Oct-2014	From Version 2 to 3	Added	6G SATA Enterprise Value G1 Solid State Drives were added to Core Option section. HPE PCIe Workload Accelerator Options, HPE USB and SD options were added to the Additional Options section.
I	1	I Changed	Standard Features, Optional Features, Configuration Information - Factory Integrated Models, and Memory sections were revised. Warranty was revised in Standard Features section.
19-Sep-2014	From Version 1 to 2	Changed	Changes made throughout the entire QuickSpecs.



**Summary of Changes** 





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

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