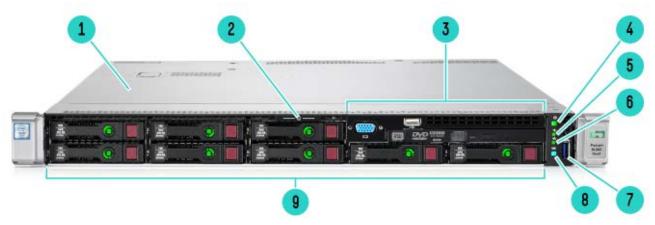


## **HPE ProLiant DL360 Generation9 (Gen9)**

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



#### **Front View**

- 1 Access Panel
- 3 HPE Universal Media Bay or NVMe

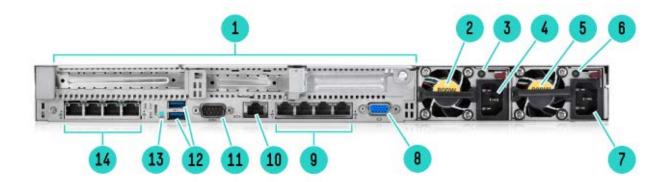
**NOTE:** Shown w/VGA, USB 2.0 and DVD-ROM or DVD-RW option. Alternative options 2 SFF HDDs or VGA and USB 2.0.

- 5 Health LED
- 7 USB 3.0 Connector
- 9 SAS/SATA/SSD/NVMe Drive Bays

NOTE: 8SFF Model shown. 8SFF can be configured as 8 SAS/SATA Drives, 4 SAS/SATA (Drives 1-4) + 6 NVMe (Drives 5-10), 8 SAS/SATA + Universal Media Bay or 10 SAS/SATA drives. 4 LFF Models are also available.

- 2 Serial Label Pull Tab
- 4 Power On/Standby button and system power LED button
- 6 NIC Status LED
- 8 Unit Identification Button & LED





#### Rear view

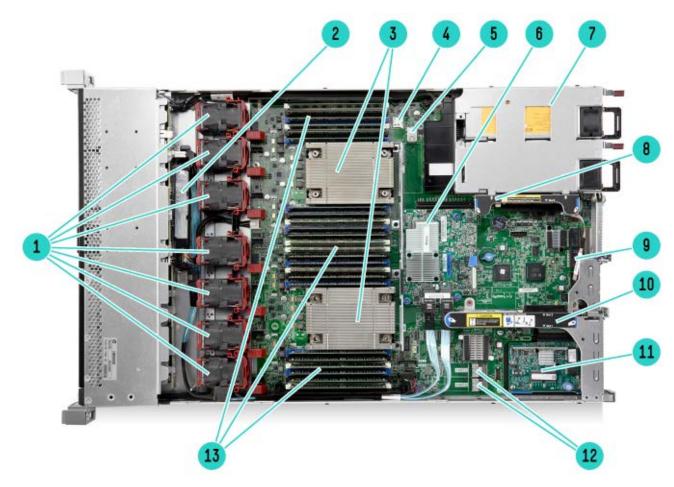
1 PCIe 3.0 Slots 1-3

**NOTE:** Slot 1 and 2 Riser Ships Standard, Slot 3 Optional 1 FH /¾ length and two Low Profile slots available (shown) or two FH/ ¾ length slots.

- 3 Power Supply 2 Status LED
- 5 HPE Flexible Slot Power Supply Bay 1
- 7 Power Supply 1 C13 Connection
- 9 Embedded 4x1GbE Network Adapter
- 11 Serial Port Connector (Optional)
- 13 Unit Identification LED

- 2 HPE Flexible Slot Power Supply Bay 2
- 4 Power Supply 2 C13 Connection
- 6 Power Supply 1 Status LED
- 8 Video Connector
- 10 Dedicated iLO 4 connector
- 12 USB 3.0 Connectors (2)
- 14 FlexibleLOM bay (Optional)

NOTE: Shown: 4x1Gbe.



#### **Internal View**

- 1 5 Standard Fans Ship for 1P and 7 Standard Fans Ship for 2P
  - **NOTE:** High Performance Fans also available as an option.
- 3 2 Processors with HPE Smart Socket Guide
- 5 Dual Internal USB 3.0 connector
- 7 2 HPE Flexible Slot Power supplies
  - **NOTE:** Optional Micro UPS option.
- 9 Embedded 4x1Gbe NIC
- 11 FlexibleLOM Bay (Optional)
- 13 24 DDR4 DIMM slots (12 per processor)

- 2 HPE Smart Storage Battery (Optional)
- 4 MicroSD card slot
  - NOTE: Optional Dual Micro-SD option.
- 6 HPE Flexible Smart Array or Smart HBA (Optional) **NOTE:** H240ar shown and P440ar available.
- 8 Secondary PCle 3.0 riser for PCle slot 3 (requires CPU 2)
- 10 Primary PCle 3.0 riser for PCle slots 1 & 2
- 12 Embedded SATA Controller ports

#### **What's New**

- Intel E5-2600v4 Processors
- HPE Smart Memory DDR4 2400MHz
- 128GB HPE Smart Memory (Available 2Q H1 2016)
- HPE Persistent Memory (NVDIMM), offering unprecedented levels of performance for databases and analytic workloads (Available 2Q-3Q 2016)
- HPE Flexible Smart Array P840ar controller
- New NVIDIA Quadro M4000 GPU module

• Enhanced security with TPM 2.0

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

E5-2637v4	3.5GHz	4	15MB	135W	9.6GT/s	2400
E5-2630v4	2.2GHz	10	25MB	85W	8.0GT/s	2133
E5-2630Lv4	1.8GHz	10	25MB	55W	8.0GT/s	2133
E5-2623v4	2.6GHz	4	10MB	85W	8.0GT/s	2133
E5-2620v4	2.1GHz	8	20MB	85W	8.0GT/s	2133
E5-2609v4	1.7GHz	8	20MB	85W	6.4GT/s	1866
E5-2603v4	1.7GHz	6	15MB	85W	6.4GT/s	1866

**Chipset** Intel® C610 Series Chipset

Intel® E5-2600v3 Processor Family Intel® E5-2600v4 Processor Family

NOTE: For more information regarding Intel® chipsets, please see the following

URL: <a href="http://www.intel.com/products/server/chipsets/">http://www.intel.com/products/server/chipsets/</a>

On System

HPE iLO (Firmware HPE iLO4 2.0 or later), 4GB NAND

Management Chipset NOTE: 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in

the iLO QuickSpecs.

**Memory** Type:

One of the following HPE SmartMemory

depending on

DDR4 Registered (RDIMM) or Load Reduced (LRDIMM)

model DIMM Slots Available 2/ (12 DIMM slots)

DIMM Slots Available 24 (12 DIMM slots per processor, 4 channels per processor, 3 DIMMs

per channel)

Maximum Capacity 3TB (24 x 128GB LRDIMM @2400MHz)\*

(LRDIMM)

Maximum Capacity 768GB (24 x 32GB LRDIMM @2133MHz)

(RDIMM)

Maximum Capacity 128GB (16 x 8GB NVDIMM)\*

(NVDIMM)

**NOTE:** The NVDIMM and 128GB memory will be shipping 2Q-3Q 2016.

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

NOTE: NVDIMMs only supported on factory configured servers with E5-2600 v4 processors (not

supported on field upgraded E5-2600 v3 servers to E5-2600 v4 processors).

NOTE: NVDIMMs can only be mixed with RDIMMs.

Memory Protection

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

single and all multibit error that occurs within a single DRAM chip.

Online spare Memory online spare mode detects a rank that is degrading and switches

operation to the spare rank.

**Expansion Slots** 

Primary Riser **Expansion Technology Connector** Form Factor **Notes** Bus Bus Slots# Width Width Number 1 PCle 3.0 x16 x16 Full-height, ¾ length Processor 1 (up to 9.5") Slot

	2	PCle 3.0	v0	v0		Lawa	rofilo alat	)ro coccer 1
			x8 ates the r	x8 number of phy	vsical electi	· ·	rofile slot	Processor 1
Secondary Riser		Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
	3 3 *PCI-E Slot 2	PCle 3.0 PCle 3.0 2 cannot be u	x16 x16 used in co	x16 x16 njunction with	the FH/¾ L	ength optic	Low profile Full-height, ¾ length (up to 9.5") Slot on kit (744644-B21)	
Storage Controller		ıls HF	E Dynam	ic Smart Array	/ B140i Cont	troller		
One of the following depending on model	Dase Model			r Smart Host E e Smart Array				
Internal Storage Devices One of the following depending on model	Optical Driv	NO NO 4 L NO	TE: Option TE: Option FF TE: Two	on Kit 818213 option kits a	P-B21 VGA, UB21 VGA, UB21 VGA, UB21 VGA, UB21 VGA, UB21 VGA	USB 2.0, an JSB and DV optical driv	d DVD-RW kit. 'D ROM kit. ve: 726536-B21 or 7 :: 766203-B21.	726537-
	Hard Drives Hard Drive I	Bays 8 S	.FF	ptional Univer		·	e drive support  A kit: 764630-B21	
		ver <b>NO</b> bla the Bla nui cus <b>NO</b>	rsions.  TE: All P  nks insta  ey can ord  nk Kit or  mbers for  stomer re  TE: The 2  the interr	re-configured lled. Should t der more usin P/N 666986- single HDD l quire replace 2SFF kit come	I Models co he custome g either P/I B21: HPE L blanks belo ment HDD es with the 'A controlle	me populater need add N 666987-B FF Hard Dri w are also p blanks for t cable need rr. For SAS	ed to attach the 2 an alternate storag	d drive blanks, Drive se part se

ernal	CAPACITY	CONFIGURATION
Hot Plug SFF SAS SSD	38.4TB	10x3.84TB
Hot Plug SFF SATA SSD	38.4TB	10x3.84TB
Hot Plug LFF SATA SSD	15.36TB	4x3.84TB
Hot Plug LFF SAS SSD	6.4TB	4x1.6TB
Hot Plug SFF SAS	20.0TB	10x2.0TB
Hot Plug SFF SATA	20.0TB	10x2.0TB
Hot Plug LFF SAS	32.0TB	4x8TB
Hot Plug LFF SATA	32.0TB	4x8TB
	Hot Plug SFF SAS SSD Hot Plug SFF SATA SSD Hot Plug LFF SATA SSD Hot Plug LFF SAS SSD Hot Plug SFF SAS Hot Plug SFF SATA Hot Plug LFF SAS	Hot Plug SFF SAS SSD 38.4TB Hot Plug SFF SATA SSD 38.4TB Hot Plug LFF SATA SSD 15.36TB Hot Plug LFF SAS SSD 6.4TB Hot Plug SFF SAS 20.0TB Hot Plug SFF SATA 20.0TB Hot Plug LFF SAS 32.0TB

6 NVMe + 4 SAS

#### Standard Features

Hot Plug SFF NVMe PCle 12TB NVMe + 8TB SFF

**SSD** 

HPE 500W Flex Slot Platinum Hot Plug Power Supply

One of the following NOTE: Available in 94% efficiency.

depending on model

**Power Supply** 

HPE 800W Flex Slot Platinum Hot Plug Power Supply

NOTE: Available in 94% and 96% efficiency.

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

HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply

NOTE: Available in 94% efficiency.

HPE Flexible Slot Battery Backup Unit Kits

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

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen9 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (AOK02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page.

To review the power requirements for your selected system, please use the HPE Power Advisor Tool located at <a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a>.

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

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

1

**NOTE:** The second processor option kit contains two fans.

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

**Interfaces** Serial

NOTE: Optional kit: 764646-B21.

Video 1 rear (Standard) 1 front (Optional)

NOTE: Front VGA options available for 8SFF and 4LFF models as detailed in the core options section of this QuickSpecs.

Network RJ-45 (Ethernet) Both the SFF and LFF Model have an embedded 4x1GB NIC and

a FlexibleLOM bay. (See HPE Networking section below for

more details and options).

HPE iLO Remote Management 1Gb Dedicated

Network Port

SD Connector 1 micro SD Internal

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

**Operating** 

**Microsoft Windows Server** 

Systems and Virtualization

**Canonical Ubuntu** 

**Software Support** 

**Red Hat Enterprise Linux (RHEL)** 

**SUSE Linux Enterprise Server (SLES)** 

for ProLiant **Servers** 

**Oracle Solaris** 

**VMware** 

**Citrix XenServer** 

NOTE: For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from Hewlett Packard Enterprise, please visit our OS Support Site

at: http://www.hp.com/go/ossupport and our driver download

page http://h20566.www2.hpe.com/hpsc/swd/public/readIndex?sp4ts.oid=7252838.

#### Upgradeability

Upgradeable to two processors (36 Cores)

Up to 24 DIMM slots available for higher Memory capacity Up to 10 SFF Hard Drive Bays; or 4 LFF Hard Drive Bays

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

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

NOTE: Slot 1 and 2 Riser Shipped Standard, Slot 3 Optional 1 FH / 1/4 length and two Low Profile slots available (shown) or two FH/ ¾ length slots.

Redundant Power Supplies

Optical Drive supported via Universal Media Bay

NOTE: 8SFF CTO Server via VGA, USB 2.0 and DVD-RW Option kit: 764732-B21; 8SFF CTO Server via Option Kit 818213-B21 VGA, USB and DVD ROM kit, 4LFF CTO Server via DVD-RW 726537-B21, DVD 726536-B21 and the Optical Cable: 766203-B21.

Industry Standard ACPI 2.0b Compliant

**Compliance** PCle 3.0 Compliant

**PXE Support** 

**WOL Support** 

Microsoft® Logo certifications

**USB 3.0 Support Energy Star** ASHRAE A3/A4

NOTE: The DL360 Gen9 is now one of the first HPE ProLiant Gen9 Servers with Extended Ambient Support up to 45 C for data center infrastructures designed for better energy efficiency such as but not limited to fresh air cooling.

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

#### **Graphics**

Integrated Matrox G200 video standard

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

# **HPE Server**

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

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

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

- Secure Boot
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- **Embedded UEFI Shell**
- Mass Configuration Deployment Tool using RESTful API for iLO 4
- PXE boot support for IPv6 networks
- Boot support for option cards that only support a UEFI option ROM
- Network Stack configurations

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

NOTE: UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen9 Server.

Form Factor

1U Rack form factor

One of the following 8 SFF Drive Bay Version and 10 SFF Drive Bay Version:

depending on

1.7" (4.32cm) Height x 17.11" (43.47cm) Width x 27.5" (69.85cm) Length

model

4 LFF Drive Bay Version:

1.7" (4.32cm) Height x 17.11" (43.47cm) Width x 29.5" (74.67cm) Length

**Embedded Management** 

HPE Integrated Monitor your servers for ongoing management, service alerting, reporting and

remote management with HPE iLO. Learn more **Lights-Out** 

at http://www.hpe.com/info/ilo. (HPE 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

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

**Provisioning** Provisioning. Learn more

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

**Embedded** 

Remote Support 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

The Hewlett Packard Enterprise embedded remote support, when used with

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). Learn more

at http://www.hpe.com/servers/smartupdatemanager.

**HPE Systems** 

HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE

Insight Manager Integrity Servers, and also provides you with basic support for non-Hewlett

Packard Enterprise servers. (HPE SIM)

HPE SIM also integrates with Smart Update Manager to provide guick and

seamless firmware updates. Learn more at http://www.hpe.com/servers/hpsim.

**Scripting Tool** 

Kit and

Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for

Windows Windows PowerShell Learn more

**PowerShell** 

at http://www.hpe.com/servers/proliant/stk or <a href="http://www.hpe.com/servers/powershell">http://www.hpe.com/servers/powershell</a>.

**RESTful** 

RESTful Interface tool is a scripting tool to provision using RESTful API for iLO

Interface Tool 4 to discover and deploy servers at scale. Learn more

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

Application

HPE iLO Mobile Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information

please visit: <a href="http://www.hpe.com/info/ilo/mobileapp">http://www.hpe.com/info/ilo/mobileapp</a>.

**HPE Insight Online** 

HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more

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

#### Security

Power-on password

Keyboard password

QuickLock, Network Server Mode

Serial interface control Administrator's password

iLO 4 (Integrated Lights-Out 4) has 12 customizable user accounts and SSL encryption

iLO 4 can be disabled via a Global Setting

iLO Advanced supports directory services integration

TPM 2.0 UEFI

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

at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

### **Optional Features**

## Server **Management**

**HPE Insight** Control

HPE Insight Control, lets you deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For

framework that includes software for the centralized provisioning, management

more information, see <a href="http://www.hpe.com/info/insightcontrol">http://www.hpe.com/info/insightcontrol</a>.

**HPE Insight** Cluster **Management** 

HPE Insight Cluster Management Utility is a HyperScale management

and monitoring of nodes and infrastructure. Learn more

**Utility (CMU)** at http://www.hpe.com/info/cmu.

## **Rack and Power** Infrastructure

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

Learn more at HPE Rack and Power Infrastructure.

## High Performance HPE Insight Cluster **Clusters**

# **Management Utility (CMU)**

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

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

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

#### **Storage Software**

Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further 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.

## **Optional Features**

#### Storage Resource Management Software (SRM)

Hewlett Packard Enterprise storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.

#### **Data Replication Software**

Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.

#### **Storage Device Management Software**

Maximize your investment in Hewlett Packard Enterprise storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.

#### **HPE StoreVirtual VSA**

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 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 http://www.hp.com/go/vsa1TB.

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

# (SCE)

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

Page 14

## **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

### Standard: HPE Proactive Care\* with 24x7 coverage, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your Hewlett Packard Enterprise servers.

http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

#### Optimized HPE Proactive Care\* with 6 hour call-to-repair commitment, three year Support Service

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

http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

### Parts and Materials

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

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

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

#### Related Services

#### **HPE Server Hardware Installation**

Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices

## **Service and Support**

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. http://www.hpe.com/ww/learn

### HPE Support Center

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

#### Learn more <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**

Total   Tota			Entry Models		Base Models			
Model Name	「SKU Number1	755260-B21	-	818207-B21	755262-B21	I	848736-B21	
E5-26/30/3 1P   E5-26/30/3 1P   E6-26/30/3 1	Model Name							
SGB-R B140    SOOW PS Entry   SOOW PS Entry   SATA Server   SOOW PS Entry   SATA Server   SAS		DL360 Gen9		DL360 Gen9	DL360 Gen9	DL360 Gen9	DL360 Gen9	
SOOW PS Entry SATA Server   SOOW PS Entry SATS Server   SAS Server SAS Server   SAS Server SErver   SAS SER			E5-2603v3 1P	E5-2603v4 1P	E5-2630v3 1P	E5-2630v4 1P	E5-2640v4 1P	
SATA Server		8GB-R B140i	8GB-R H240ar	8GB-R H240ar	16GB-R P440ar	16GB-R P440ar	16GB-R P440ar	
Processor		500W PS Entry	500W PS Entry	8SFF 500W PS	500W PS Base	8SFF 500W PS	8SFF 500W PS	
Processor   Intel® Xeon® E5-2603v3   Intel® Xeon® E5-2603v4   E5-2630v4   E5-2630v4   E5-2630v4   E5-2630v4   E5-2630v4   E5-2640v4		SATA Server	SAS Server	Entry SAS	SAS Server	Base SAS	Base Server	
Number of Processors				Server		Server		
Number of Processors  Memory  8GB (1x8GB Registered DIMMs, 2133 MHz) NOTE: The DIMM will operate at 1600 MHz with the E5-2603v3 Processor.  Network Controller  Storage Controller  Controller  None ship standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  Optional via Universal Media Bay  PCI-Express Slots  8GB (1x8GB Registered DIMMs, 24:00 MHz)  8Hz Registered DIMMs, 24:00 MHz Processor.  9Hz Registered DIMMs, 24:00 MHz Processor.  9Hz Registered DIMMs, 24:00 MHz Processor.  9Hz Registered DiMMs, 24:00 MHz Proce	Processor	Intel® Xeon	® E5-2603v3	Intel® Xeon®	Intel® Xeon®	Intel® Xeon®	Intel® Xeon®	
Processors     Memory     8GB (1x8GB Reaistered DIMMs, 2133 MHz)     8GB (1x8GB Reaistered DIMMs, 2133 MHz)     16GB (1x16GB Reaistered DIMMs, Reaistered DIMMs, 2133 MHz)     16GB (1x16GB Reaistered DIMMs, 2133 MHz)     16GB (1x16GB Reaistered DIMMs, 2133 MHz)     2400 MHz 2400 MHz)     10Ms, 2400 DIMMs, 2133 MHz, 2133 MHz)     10Ms, 2400 DIMMs, 2133 MHz, 213				E5-2603v4	E5-2630v3	E5-2630v4	E5-2640v4	
Sign (1x8GB Registered DIMMs, 2133 MHz)	Number of				One			
Note: The DIMM will operate at 1600 MHz with the E5-2603v3 Processor.  Network Controller  Storage Controller  None ship standard HPE Dunless HPE Smart Array B140i  Hard Drive Smart Array Controller Smart Array Controller is added.  Note: The DIMM will operate at 1866 MHz with the E5-2603v3 Processor.  Network Controller  Storage Controller  None ship standard HPE Dunless HPE	Processors							
NOTE: The DIMM will operate at 1600 MHz with the E5-2603v3 Processor.  Network Controller  Storage Controller  None ship standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Network Controller  Storage Optical Drive Bay  Optional via Universal Media Bay PCI-Express Slots  DIMMs, 2430 MHz) NOTE: The DIMMs, 2133 MHz) NOTE: NOTE: The DIMM will operate at 1866 MHz with the E5-2603v3 Processor.  HPE Embedded 1Gb Ethernet 4-port 331i Adapter  HPE Flexible Smart Array P440ar/2GB HPE Flexible Smart Array P440ar/2GB None ship standard None ship stan	Memory	8GB (1x8GB Re	egistered DIMMs,	8GB (1x8GB	16GB (1x16GB	16GB (1x16GB Re	egistered DIMMs,	
1600 MHz with the E5-2603v3   Processor.   NoTE: The DIMM will operate at 1866   MHz with the E5-2603v3   Processor.		2133	MHz)	Registered	Registered	2400	MHz)	
Processor.    NoTE: The DIMM will operate at 1866   MHz with the E5-2603v3   Processor.		<b>NOTE:</b> The DIM	M will operate at	DIMMs, 2400	DIMMs, 2133			
DIMM will operate at 1866 MHz with the E5-2603v3 Processor.				MHz)	MHz)			
Network Controller  Storage Controller  None ship standard NOTE: Only Supports SATA HDD unless HPE Smart Array Controller is added.  Internal Storage Optical Drive Bay  Optional via Universal Media Bay  PCI-Express Slots  HPE Dvnamic Smart Array HPE H240ar Smart Host Bus Adapter  HPE H240ar Smart Host Bus Adapter  None ship standard NoTe: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Storage Optical Drive Bay  Standard NoTe: Only Supports SATA HDD Bays  Storage Optical Drive Bay  2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0					NOTE: The			
MHz with the E5-2603v3   Processor.					DIMM will			
MHz with the E5-2603v3   Processor.					operate at 1866			
Network Controller  Storage Controller  None ship standard NOTE: Only Supports SATA HDD unless HPE Smart Array PHDD unless HPE Smart Array PHDD unless HPE Smart Array Controller is added.  Internal Storage Optical Drive Bay  PCI-Express Slots  HPE Dvnamic Smart Array Adapter  HPE H240ar Smart Host Bus HPE Flexible Smart Array P440ar/2GB  HPE Smart Array Controller is added.  ### Adapter  ### Ada					-			
Network Controller  Storage Controller  None ship standard NOTE: Only Supports SATA HDD unless HPE Smart Array PHDD unless HPE Smart Array PHDD unless HPE Smart Array Controller is added.  Internal Storage Optical Drive Bay  PCI-Express Slots  HPE Dvnamic Smart Array Adapter  HPE H240ar Smart Host Bus HPE Flexible Smart Array P440ar/2GB  HPE Smart Array Controller is added.  ### Adapter  ### Ada					E5-2603v3			
Controller         Storage Controller       HPE Dynamic Smart Array B140i       HPE H240ar Smart Host Bus Adapter       HPE Flexible Smart Array P440ar/2GB         Hard Drive MOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart HBA or HPE Smart Array Controller is added.       None ship standard         Internal Storage       Optional via Universal Media Bay       As SFF HDD Bays         Optical Drive Bay       Optional via Universal Media Bay         PCI-Express Slots       Standard (1-FH/¾ L, 1-LP) PCIe 3.0								
Storage Controller Smart Array B140i  Hard Drive None ship standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Storage Optical Drive Bay  PCI-Express Slots  HPE Dynamic Smart Array Adapter  None ship standard Non	Network		HPE	Embedded 1Gb Eth	nernet 4-port 331i A	dapter		
Controller  Smart Array B140i  Hard Drive None ship standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  None ship standard None ship stan	Controller							
Hard Drive None ship standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  None ship standard None ship standard Storage  None ship standard Storage  None ship standard Ship standa	Storage	HPE Dynamic	HPE H240ar S	Smart Host Bus	HPE Flexi	ble Smart Array P4	40ar/2GB	
Hard Drive None ship standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage Optical Drive Bay  Optional via Universal Media Bay PCI-Express Slots  None ship standard None ship standard  None ship standard  None ship standard  None ship standard  Optional via Universal Media Bay SSFF HDD Bays Optional via Universal Media Bay Optional via Universal Media Bay	Controller	Smart Array	Ada	pter				
standard NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  Standard  Optical Standard (1-FH/¾ L, 1-LP) PCIe 3.0		B140i						
NOTE: Only Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  NOTE: Only Supports SATA HDD unless HDD unless HPE Smart Array Controller is added.  8 SFF HDD Bays  Optional via Universal Media Bay  Optional via Universal Media Bay  2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0	Hard Drive	None ship			None ship standard			
Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  Supports SATA HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  8 SFF HDD Bays Optional via Universal Media Bay Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCle 3.0		standard						
HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  HDD unless HPE Smart HBA or HPE Smart Array Controller is added.  8 SFF HDD Bays Optional via Universal Media Bay Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCle 3.0		NOTE: Only						
HPE Smart HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  HPE Smart HBA or HPE Smart Array Controller is added.  8 SFF HDD Bays Optional via Universal Media Bay Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0		Supports SATA						
HBA or HPE Smart Array Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  HBA or HPE Smart Array Controller is added.  8 SFF HDD Bays  Optional via Universal Media Bay  Optional via Universal Media Bay  2 Standard (1-FH/¾ L, 1-LP) PCle 3.0		HDD unless						
Smart Array Controller is added.  Internal Storage Optical Drive Bay PCI-Express Slots Smart Array Controller is added.  8 SFF HDD Bays Optional via Universal Media Bay Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0		HPE Smart						
Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  System of the process of the proc		HBA or HPE						
Controller is added.  Internal Storage  Optical Drive Bay  PCI-Express Slots  System of the process of the proc		Smart Array						
Internal Storage Optical Drive Bay PCI-Express Slots  Added.  8 SFF HDD Bays Optional via Universal Media Bay Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0		-						
Storage  Optical Drive Bay  PCI-Express Slots  Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0								
Storage  Optical Drive Bay  PCI-Express Slots  Optional via Universal Media Bay 2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0	Internal			8 SFF H	HDD Bays			
PCI-Express Slots  2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0	Storage				•			
PCI-Express Slots  2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0	Optical Drive	Optional via Un	l via Universal Media Bay Optional via Universal Media Bav					
Slots	Вау	1					,	
Slots	PCI-Express			2 Standard (1-FH	/¾ L, 1-LP) PCIe 3.0	)		
Power Supply (1) HPE 500W Flex Slot Platinum Power Supply	Slots							
	Power Supply		(1)	HPE 500W Flex Slc	t Platinum Power S	supply		

# **Pre-configured Models**

Fans	5 Standard hot plug fans, redundant	5 standard hot plug fans, redundant	5 Standard hot plug fans, redundant	5 standard hot plug fans, redundant			
Management	iLO Management (standard), Inte	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional)					
Form Factor	Rack (1U), HPE Easy Install Rails						
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response						

	Performance Models						
[SKU Number]	755263-B21	795236-B21	818209-B21	851937-B21			
Model Name	HP ProLiant DL360 Gen9 E5-2650v3 2P 32GB-R P440ar 800W RPS Performance SAS Server	HP ProLiant DL360 Gen9 E5-2670v3 2P 64GB P440ar 8SFF 2x10Gb-T 2x800W OneView Server	HPE ProLiant DL360 Gen9 E5-2650v4 2P 32GB-R P440ar 8SFF 800W RPS Perf SAS Server	HPE ProLiant DL360 Gen9 E5-2660v4 2P 64GB-R P440ar 8SFF 800W RPS Perf2 SAS Server			
Processor	Intel® Xeon® E5-2650v3	Intel® Xeon® E5- 2670v3	Intel® Xeon® E5- 2650v4	Intel® Xeon® E5- 2660v4			
Number of Processor	s	Т	-wo				
Memory	32GB (2x16GB Registered DIMMs, 2133 MHz)	64GB (4x16GB Registered DIMMs, 2133 MHz)	32GB (2x16GB Registered DIMMs, 2400 MHz)	64GB (4x16GB Registered DIMMs, 2400 MHz)			
Network Controller		HPE Embedded 4x1Gb, plus 2x10Gb FLR-T FlexFabric Flexible LOM		HPE Embedded 4x1Gb, plus 2x10Gb SFP+ Flexible LOM			
Storage Controller		HPE Flexible Smar	rt Array P440ar/2GB				
Hard Drive		None shi	ip standard				
Internal Storage		8 SFF H	HDD Bays				
Optical Drive Bay		Optional via Un	iversal Media Bay				
PCI-Express Slots	2 Standard (1-FH/¾ L, 1-LP) PCle 3.0	3 Standard (1-FH/HL, 2-LP) PCIe 3.0	2 Standard (1-FH/¾ L, 1-LP) PCIe 3.0	3 Standard (1-FH/HL, 2-LP) PCIe 3.0			
Power Supply		(2) HPE 800W Flex Slo	ot Platinum Power Supply				
Fans		7 standard hot p	lug fans, redundant				
Management	iLO Management (sta	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional)					
Energy Star		Meets Energy S	Star requirements				
Form Factor		Rack (1U), HPE	Easy Install Rails				
Warranty	Server Warranty includ		abor, 3-Year Onsite suppor ponse	t with next business day			

		E5-2600v4 Series Smart Buys						
[SKU Number]	849455-S01	850365-S01	850366-S01	850367-S01				
Model Name	HP ProLiant DL360 Gen9 E5-2620v4 SFF US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2643v4 SFF US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2680v4 SFF US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2690v4 SFF US Svr/S-Buy				
Processor	Intel® Xeon® E5- 2620v4	Intel® Xeon® E5- 2643v4	Intel® Xeon® E5- 2680v4	Intel® Xeon® E5- 2690v4				
Number of Processors	0	ne	Two	One				
Memory	16GB (2x8GB Registered DIMMs, 2400 MHz)	32GB (2x16GB Registered DIMMs, 2400 MHz)	64GB (4x16GB Registered DIMMs, 2400 MHz)	32GB (2x16GB Registered DIMMs, 2400 MHz)				
Network Controller		Ethernet 4-port 331i pter	HPE Embedded 1Gb Ethernet 4-port 331i Adapter + 2x10 Gb					
Storage Controller	HPE H240ar Smart Host Bus Adapter	HPE Flexible Smart	Array P440ar/2GB + Sn	nart Storage Battery				
Hard Drive		None ship	o standard					
Internal Storage		8 SFF 12G SA	AS HDD Bays					
Optical Drive Bay	None includ	led, (Optional: DVD-RON	И, DVD-RW via Universa	l Media Bay)				
PCI-Express Slots	Three (3) Star	ndard PCIe 3.0	Six (6) Standard PCle 3.0	Three (3) Standard PCle 3.0				
Power Supply	(1) HPE 500W Flex Slot Platinum Power Supplies	Two (2) HPE 550W Flex Slot Platinum Power Supplies	Two (2) HPE 800W Flex Slot Platinum Pow Supplies					
Fans	Five (5) Standard hot	Five (5) Standard hot plug fans, redundant		Five (5) Standard hot plug fans, redundant				
Management		iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional)						
Form Factor	Rack (1U), I	HPE SFF Easy Install Rai	ls without Cable Manage	ement Arms				
Warranty	3-Year Parts, 3-Y	ear Labor, 3-Year Onsite	support with next busin	ness day response				

		E5-2600v3 Series Smart Buys					
[SKU Number]	780017-S01	780018-S01	800079-S01				
Model Name	HP ProLiant DL360 Gen9 E5- 2609v3 SAS US Svr/S-Buy	HP ProLiant DL360 Gen9 E5- 2620v3 SAS US Svr/S-Buy	HP ProLiant DL360 Gen9 E5- 2620v3 SFF US Svr/S-Buy				
Processor	Intel® Xeon® E5-2609v3	Intel® Xeon	® E5-2620v3				
Number of Processors		One					
Memory	8GB (1x8GB Registered DIMMs, 2133 MHz) <b>NOTE:</b> The DIMM will operate at 1600 MHz with this processor.	NOTE: The DIMM will ope	red DIMMs, 2133 MHz) rate at 1866 MHz with this essor.				
Network Controller	HPE Er	nbedded 1Gb Ethernet 4-port 33	1i Adapter				
Storage Controller	HPE H240ar Sma	rt Host Bus Adapter	HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery				
Hard Drive		None ship standard					
Internal Storage		8 SFF HDD Bays					
Optical Drive Bay	None included, (O	otional: DVD-ROM, DVD-RW via	Universal Media Bay)				
PCI-Express Slots	Two	(2) Standard (1-FH/¾ L, 1-LP) P	Cle 3.0				
Power Supply	One (1) HPE 500W Flex Slot Platinum Power Supply	Two (2) HPE 500W Flex S	Slot Platinum Power Supplies				
Fans	Five	e (5) Standard hot plug fans, redu	ındant				
Management		Standard: iLO Management Engine Optional: iLO Advanced, Insight Control, HPE OneView					
Form Factor		Rack (1U), HPE Easy Install Rail	S				
Warranty	3-Year Parts, 3-Year Lak	oor, 3-Year Onsite support with n	ext business day response				

	E5-2600v3 Series Smart Buys						
[SKU Number]	800080-S01	780020-S01	800081-S01	780021-S01			
Model Name	HP ProLiant DL360 Gen9 E5-2643v3 SFF US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2660v3 SAS US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2667v3 SFF US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2690v3 SAS US Svr/S-Buy			
Processor	Intel® Xeon® E5-2643v3	Intel® Xeon® E5- 2660v3	Intel® Xeon® E5- 2667v3	Intel® Xeon® E5- 2690v3			
Number of Processors		O	ne				
Memory	32GB (2x16GB Registered DIMMs, 2133 MHz)	16GB (1x16GB Registered DIMMs, 2133 MHz)	32GB (2x16GB Registered DIMMs, 2133 MHz)				
Network Controller	ŀ	HPE Embedded 1Gb Ethernet 4-port 331i Adapter					
Storage Controller	HPE Fle	exible Smart Array P440	ar/2GB + Smart Storage	Battery			
Hard Drive		None ship	standard				
Internal Storage		8 SFF H	DD Bays				
Optical Drive Bay	None includ	led, (Optional: DVD-ROM	1, DVD-RW via Universa	l Media Bay)			
PCI-Express Slots		Two (2) Standard (1-F	FH/¾ L, 1-LP) PCIe 3.0				
Power Supply	Two (2) HPE 500W Flex Slot Platinum Power Supplies	Two (2) HPE 800W Flex Slot Platinum Power Supplies	Two (2) HPE 500W Flex Slot Platinum Power Supplies	Two (2) HPE 800W Flex Slot Platinum Power Supplies			
Fans		Five (5) Standard hot	plug fans, redundant				
Management	Ор	Standard: iLO Management Engine Optional: iLO Advanced, Insight Control, HPE OneView					
Form Factor		Rack (1U), HPE	Easy Install Rails				
Warranty	3-Year Parts, 3-Y	ear Labor, 3-Year Onsite	support with next busin	ness day response			

	E5-2600v3 Series Smart Buys						
[SKU Number]	780019-S01	780022-S01	800082-S01	784657-S01			
Model Name	HP ProLiant DL360 Gen9 E5-2640v3 SAS US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2670v3 SAS US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2697v3 2P SFF US Svr/S-Buy	HP ProLiant DL360 Gen9 E5-2680v3 SFF US Svr/S-Buy			
Processor	Intel® Xeon® E5- 2640v3	Intel® Xeon® E5- 2670v3	Intel® Xeon® E5- 2697v3	Intel® Xeon® E5- 2680v3			
Number of Processors		Τv	VO				
Memory	16GB (2x8GB Registered DIMMs, 2133 MHz)		6GB Registered DIMMs,	2133 MHz)			
	NOTE: The DIMM will operate at 1866 MHz with this processor						
Network Controller		HPE Embedded 1Gb Ethe	ernet 4-port 331i Adapte	er			
Storage Controller	HPE FI	exible Smart Array P440	ar/2GB + Smart Storage	Battery			
Hard Drive		None ship standard 2x					
Internal Storage		8 SFF H	DD Bays				
Optical Drive Bay	None includ	ded, (Optional: DVD-ROM	1, DVD-RW via Universa	l Media Bay)			
PCI-Express Slots	Three (3) Standard (1-	-FH/HL, 2-LP) PCIe 3.0	Two (2) Standard (1-F	FH/¾ L, 1-LP) PCIe 3.0			
Power Supply	Two (2) HPE 500W Flex Slot Platinum Power Supplies	Two (2) HPE 800W Fle Sup	ex Slot Platinum Power plies	Two (2) HPE 500W Flex Slot Platinum Power Supplies			
Fans		Seven (7) Standard ho	t plug fans, redundant				
Management		ndard: iLO Management Engine  Advanced, Insight Control, HPE OneView  Advanced Optional: Insight Control, HPE OneView  OneView					Advanced Optional: Insight Control, HPE
Form Factor		Rack (1U), HPE	Easy Install Rails				
Warranty	3-Year Parts, 3-Y	ear Labor, 3-Year Onsite	support with next busin	ness 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 Model	HP ProLiant DL360 Gen9 4LFF Configure-to-order Server	HP ProLiant DL360 Gen9 8SFF Configure-to- order Server	
SKU Number	755259-B21	755258-B21	
Processor	2 (optional) x HPE S	2 (optional) x HPE Smart Socket Guide	
DIMM Slots	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory		
Storage Controller	HPE Dynamic Smart Array B140i		
PCle	2 PCIe 3.0 Slots: Slot 1, FH / ¾ Length; Slot 2, Low Profile		
Drive Cage	4LFF Hot Plug	8SFF Hot Plug	
Network Controller	HPE Embedded 1Gb Ethe	HPE Embedded 1Gb Ethernet 4-port 331i Adapter	
Fans	5 Standard hot plug fans, redundant		
Management	iLO Management (standard), Intelligent Provisioning (standard)		
USB	1 front, 2 internal, 2 rear		
Ears	HPE Quick F	HPE Quick Release Ears	

**NOTE:** 4LFF CTO Server includes 1 SATA Cable, option kit: 766213-B21, which attaches to the B140i controller. **NOTE:** 8SFF CTO Server includes two 4 x Mini-SAS Cables, option kit: 766209-B21, which attaches to an optional HPE Smart HBA H240ar or HPE Smart Array P440ar controller.

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

<b>HPE Processors</b>	Entry Processors - E5-2600v4 series Processors	
	HPE DL360 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) FIO Processor Kit	818164-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) FIO Processor Kit	818166-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit	818168-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit	818170-L21
	HPE DL360 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit	818172-L21

HPE DL360 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) FIO Processor Kit	818190-L21
HPE DL360 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) FIO Processor Kit	818192-L21
HPE DL360 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) FIO Processor	818194-L21
Kit	
Entry Processors - E5-2600v3 series Processors	
HP DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15/MB/85W) FIO Processor Kit	755374-L21
HP DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit	755378-L21
Base Processors - E5-2600v3 series Processors	
HP DL360 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit	755376-L21
HP DL360 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit	755382-L21
HP DL360 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit	755384-L21
HP DL360 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	755836-L21
HP DL360 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) FIO Processor Kit	755404-L21
HP DL360 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit	764097-L21
Peformance Processors - E5-2600v4 series Processors	
HPE DL360 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit	818176-L21
HPE DL360 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit	818178-L21
HPE DL360 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) FIO Processor Kit	818180-L21
HPE DL360 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) FIO Processor Kit	818182-L21
HPE DL360 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit	818184-L21
HPE DL360 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) FIO Processor Kit	818186-L21
HPE DL360 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) FIO Processor Kit	818188-L21
HPE DL360 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) FIO Processor Kit	818196-L21
HPE DL360 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit	818198-L21
HPE DL360 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit	818200-L21
HPE DL360 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) FIO Processor Kit	818202-L21
HPE DL360 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) FIO Processor Kit	818204-L21
HPE DL360 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) FIO Processor Kit	818206-L21
HPE DL360 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit	818174-L21

## **Peformance Processors - E5-2600v3 series Processors**

HP DL360 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit	755388-L21
HP DL360 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit	755390-L21
HP DL360 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit	755392-L21
HP DL360 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit	755394-L21
HP DL360 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) FIO Processor Kit	755396-L21
HP DL360 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) FIO Processor Kit	755398-L21
HP DL360 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit	755400-L21
HP DL360 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) FIO Processor Kit	755402-L21
HP DL360 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) FIO Processor Kit	755406-L21
HP DL360 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) FIO Processor Kit	755408-L21
HP DL360 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) FIO Processor	755410-L21
Kit	
HP DL360 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit	764099-L21
HP DL360 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit	764101-L21
HP DL360 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit	780003-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 kits from below.

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

**NOTE:** HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory 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: http://www.hp.com/go/proliant-energy-efficient

**NOTE:** Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz, 1866MHz, 1600MHz or 1333MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: <a href="http://www.hp.com/go/ddr4config">http://www.hp.com/go/ddr4config</a>

#### Registered DIMMs (RDIMMs) for E5-2600v4 Series

HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347-B21
HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220-B21

HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351-B21	
Registered DIMMs (RDIMMs) for E5-2600v3 Series		
HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15 Registered Memory Kit	726717-B21	
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15 Registered Memory Kit	726718-B21	
HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	759934-B21	
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726719-B21	
HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	728629-B21	
Load Reduced DIMMs (RDIMMs) for E5-2600v4 Series		
HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805353-B21	
HP 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805358-B21	
Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series		
HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15 Load Reduced Memory Kit	726724-B21	
HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21	
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726720-B21	
HPE Persistent Memory (NVDIMM)		
HPE 8GB NVDIMM Single Rank x4 DDR4-2133 Module	782692-B21	
NOTE: NVDIMMs available 2Q-3Q 2016.		
NOTE: NVDIMMs only supported on factory configured servers with E5-2600 v4		
processors (not supported on field upgraded E5-2600 v3 servers to E5-2600 v4 processors).		
processors.		

# HPE Power Supplies

**NOTE:** Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located

at: http://www.hp.com/go/hppoweradvisor.

**NOTE:** A maximum of 16 NVDIMMs supported.

**NOTE:** 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.

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

**NOTE:** Maximum of two (2) Flex Slot Power Supplies per platform.

#### **HPE Flex Slot Hot-Plug Power Supplies**

HP 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21
NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and	
include a standard C-14 power inlet connector.	
HP 800W Flex Slot Platinum Hot Plug Power Supply Kit	720479-B21
NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and	
include a standard C-14 power inlet connector.	
HP 800W Flex Slot Titanium Hot Plug Power Supply Kit	720482-B21
NOTE: Flex Slot Titanium power supplies support power efficiency of up to 96% and	
include a standard C-14 power inlet connector.	
HP 800W Flex Slot Universal Hot Plug Power Supply Kit	720484-B21

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

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

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

HP 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit 720620-B21

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

HP 750W Flex Slot Hot Plug Battery Backup Module 738024-B21

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

**NOTE:** Only one Battery Backup module per server, and a Flex Slot Power Supply needed in parallel.

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

HPE Storage Controllers **NOTE:** The embedded B140i controller will be used as the primary controller if no controller is selected from the list below. Embedded SATA controller can support up to 8 SATA hard drives. Cable kit may be required.

#### **HPE Smart Array Controllers**

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

**NOTE:** Provides support for up to 8 internal SAS/SATA drives without using a PCle slot.

HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller 761872-B21

**NOTE:** Provides support for up to 8 internal SAS/SATA drives, consumes one PCle slot

**NOTE:** Includes the HP Smart Storage Battery

**HPE Smart Host Bus Adapters** 

HP H240ar 12Gb 2-ports Int FIO Smart Host Bus Adapter 749976-B21

**NOTE:** Provides support for up to 8 internal SAS/SATA drives without using a PCle slot.

HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter 761873-B21

**HPE Cable Options** 

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

**NOTE:** Required with P/N: 749974-B21 or P/N: 749976-B21 if using the HP ProLiant DL360 Gen9 4LFF CTO Server (P/N: 755259-B21)

HP DL360 Gen9 SFF Embedded SATA Cable 766207-B21

**NOTE:** Required with the HP ProLiant DL360 Gen9 8SFF CTO Server (P/N: 755258-B21) if using the embedded B140i as primary controller

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

**NOTE:** Required with P/N: 761872-B21 or P/N: 761873-B21 if using the HP ProLiant DL360 Gen9 8SFF CTO Server (P/N: 755258-B21)

HP DL360 Gen9 LFF Smart Array P440/H240 SAS Cable 775929-B21

**NOTE:** Required with P/N: 761872-B21 or P/N: 761873-B21 if using the HP ProLiant DL360 Gen9 4LFF CTO Server (P/N: 755259-B21)

**BIOS Mode** 758959-B22 HP Legacy FIO Mode Setting

> NOTE: If selected, then B140i will not be supported and can no longer be a primary controller therefore, SAS internal controller must be selected to be the primary

controller

**Controller State** HP FIO Enable B140i Setting 784308-B21

NOTE: Must be selected when B140i is used as the primary controller and RAID is

HP Mfg FIO Enable HBA Mode Setting 792962-B21

NOTE: When selected if H240ar/H240 are used as the primary controller then RAID is

not allowed.

**HPE Insight HPE iLO Advanced** 

**Control Software** HP Insight Control including 1yr 24x7 support ProLiant ML/DL/BL-bundle Single Server C6N36A

FIO License

HP Insight Control including 1yr 24x7 support ProLiant ML/DL/BL-bundle Single Server

FIO F-I TU

C6N36ABE

**HPE Converged** Infrastructure

HPE OneView Advanced (with HPE iLO Advanced)

Management

**Software** 

HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic

E5Y43A

**HPE OneView Advanced (without HPE iLO Advanced)** 

HP OneView w/o iLO including 3vr 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.

**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.

representative fo	or additional information.	
HPE Unique Options	NOTE: Required when upgrading an 8SFF config to a 10SFF config, not supported in 4LFF CTO Server; when this option kit is installed it cannot be used in conjunction with the optical drive or USB 2.0/VGA option kits.  NOTE: Adds 2SFF drives to the 8SFF model for a total of 10SFF SAS/SATA drives. This kit comes with the cable needed to attach the 2 drives to the internal B140i SATA controller. For SAS, an alternate storage controller and its associated cable kit are required.	764630-B21
	HP DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit  NOTE: DVD RW (Drive Included), USB 2.0, and VGA; when this option kit is installed it cannot be used in conjunction with the 2 SFF SAS/SATA option kit.	764632-B21
	HP DL360 Gen9 SFF USB/VGA Universal Media Bay Kit  NOTE: Front USB 2.0 and VGA, when this option kit is installed it cannot be used in conjunction with the 2 SFF SAS/SATA option kit.	764634-B21
	HP DL360 Gen9 SFF DVD/USB Universal Media Bay Kit  NOTE: DVD ROM (included), USB 2.0, and VGA; when this option kit is installed it cannot be used in conjunction with the 2 SFF SAS/SATA option kit.	818213-B21
	HP DL360 Gen9 Location Discovery Services Ear Kit <b>NOTE:</b> Requires ProLiant Location Discovery Services Infrastructure within server racks.	764757-B21
	HP DL360 Gen9 Rear Serial Port and Enablement Kit HP DL360 Gen9 SFF Systems Insight Display Kit NOTE: For the 8SFF or 10SFF models, adds a System Insight Display for improved diagnosis capabilities.	764646-B21 764636-B21
	HP DL360 Gen9 LFF USB/VGA Kit  NOTE: Adds front VGA and USB 2.0 ports to LFF.	764638-B21
	NOTE: For the 8SFF or 10SFF models, adds a System Insight Display for improved diagnosis capabilities.  NOTE: Options noted with "DL360 Gen9 SFF" are options only compatible with the 8 SFF CTO Server; and Options noted with "DL360 Gen9 LFF" are options only compatible with the 4LFF CTO Server.	764640-B21
	HP DL360 Gen9 High Performance Heat Sink Kit <b>NOTE:</b> These are included in some higher Watt processors (see processor section), but may be added to lower power processors to reduce fan power consumption.	795235-B21
	HP DL360 Gen9 NVMe 2 Solid State Drive Express Bay Enablement Kit	764628-B21

**NOTE:** This option provides support for up to 2NVMe drives in SFF only.

Adding NVMe drives replaces support for Universal media bay. **NOTE:** The HP DL360 Gen9 High Performance Fan Kit (766201-B21) is

required with the NVMe enablement kit.

NOTE: The PCIe card in this enablement kit can only be populated in slot1 of			
primary riser or in slot3 of secondary optional FH riser.			

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

817676-B21

**NOTE:** This option provides support for up to 6 NVMe drives (drives 5-10). **NOTE:** The PCIe card in this enablement kit can only be populated in slot1 of primary riser.

HPE Processors	Entry Processors - E5-2600v4 series Processors	
	HPE DL360 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) Processor Kit	818164-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) Processor Kit	818166-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit	818168-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit	818170-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit	818172-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) Processor Kit	818190-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) Processor Kit	818192-B21
	HPE DL360 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) Processor Kit	818194-B21
	Entry Processors - E5-2600v3 series Processors	
	HP DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	755374-B21
	HP DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	755378-B21
	Base Processors - E5-2600v3 series Processors	
	HP DL360 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit	755376-B21
	HP DL360 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit	755382-B21
	HP DL360 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit	755384-B21
	HP DL360 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit	755386-B21
	HP DL360 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) Processor Kit	755404-B21
	HP DL360 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit	764097-B21

**Performance Processors - E5-2600v4 series Processors** 

Processor Kit

HPE DL360 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W)

818176-B21

HPE DL360 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit	818178-B21
HPE DL360 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit	818180-B21
HPE DL360 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) Processor Kit	818182-B21
HPE DL360 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit	818184-B21
HPE DL360 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) Processor Kit	818186-B21
HPE DL360 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) Processor Kit	818188-B21
HPE DL360 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) Processor Kit	818196-B21
HPE DL360 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit	818198-B21
HPE DL360 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Processor Kit	818200-B21
HPE DL360 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) Processor Kit	818202-B21
HPE DL360 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) Processor Kit	818204-B21
HPE DL360 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) Processor Kit	818206-B21
HPE DL360 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit	818174-B21
Performance Processors - E5-2600v3 series Processors	
HP DL360 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	755388-B21
HP DL360 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	755390-B21
HP DL360 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit	755392-B21
HP DL360 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit	755394-B21
HP DL360 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) Processor Kit	755396-B21
HP DL360 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) Processor Kit	755398-B21
HP DL360 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) Processor Kit	755400-B21
HP DL360 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) Processor Kit	755402-B21
HP DL360 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) Processor Kit	755406-B21

728629-B21

805347-B21

## **Core Options**

HP DL360 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) Processor Kit	755408-B21
HP DL360 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) Processor Kit	755410-B21
HP DL360 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) Processor Kit	764099-B21
HP DL360 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit	764101-B21
HP DL360 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) Processor Kit	780003-B21

NOTE: -B21 Processor option kits include 1 heat sink and two additional fans for 2P configs.

**NOTE:** Processors consuming up to 120w ship with standard heat sink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).

NOTE: Processors consuming over 120w Ships with a performance Heatsink as standard.

HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit

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HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15 Registered Memory Kit	726719-B21
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15 Registered Memory Kit	759934-B21
HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15 Registered Memory Kit	726717-B21
Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series	
HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726724-B21
HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726720-B21

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

HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit

## Registered DIMMs (RDIMMs) for E5-2600v4 Series

HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349-B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351-B21
HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220-B21

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

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

#### **HPE Persistent Memory (NVDIMM)**

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

NOTE: NVDIMMs available 2Q-3Q 2016.

**NOTE:** NVDIMMs only supported on factory configured servers with E5-2600 v4 processors (not supported on field upgraded E5-2600 v3 servers to E5-2600 v4 processors).

**NOTE:** A maximum of 16 NVDIMMs supported.

HPE Optical Dri	ives HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive  NOTE: Supported only with the 4LFF Models & requires cable kit 766203-B21.	726536-B21
	HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive  NOTE: Supported only with the 4LFF Models & requires cable kit 766203-B21.	726537-B21
	HP DL360 Gen9 LFF Optical Cable	766203-B21
	HP DL360 Gen9 SFF DVD/USB Universal Media Bay Kit <b>NOTE:</b> Front DVD ROM, USB 2.0, and VGA and optical cable.	818213-B21
	HP DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit <b>NOTE:</b> Front DVD-RW, USB 2.0 and VGA, and optical cable.	764632-B21
	HP Mobile USB Non Leaded System DVD RW Drive  NOTE: This is only supported on USB 3.0 ports	701498-B21
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 Warranty Hard Drive	791034-B21
	HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
	HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
	HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-B21
	HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
	HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	748387-B21
	HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
	HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
	HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
	HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
	HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
	HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
	HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21
	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

HPE 1TB 12G SAS 7.2K rpm SFF (2.5in) SC Midline 1yr Warranty Hard Drive	832514-B21
HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652749-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Dri	ve 652745-B21
SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives	
HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warı Hard Drive	ranty 765424-B21
HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warr Hard Drive	ranty 737394-B21
HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warr Hard Drive	ranty 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 Hard Drive	761477-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Drive	Hard 793671-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard	Drive 765257-B21
HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Drive	Hard 793669-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Driv	ve 818365-B21
HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Driv	/e 818367-B21
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 Hard Drive	765455-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	e 655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard D	Prive 655708-B21
HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804575-B21
HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804677-B21
HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804581-B21
HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	e 804671-B21
HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	e 804587-B21
HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	e 804665-B21
HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	e 804593-B21
HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	e 804639-B21
HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	e 804599-B21
HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	832414-B21
HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804605-B21

HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21
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 120GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816879-B21
HP 240GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816889-B21
HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816899-B21
HP 960GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816909-B21
HP 1.92TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816919-B21
HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816929-B21
HP 120GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816965-B21
HP 240GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816975-B21
HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816985-B21
HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816995-B21
HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	817011-B21
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 Warranty Hard Drive	793695-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793683-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	753874-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793667-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	693687-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-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 State Drive	804602-B21
HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804608-B21
HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804616-B21
HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804628-B21
HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804634-B21

HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804642-B21
HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804668-B21
HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804674-B21
HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804680-B21
HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	832417-B21
HP 120GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State	816883-B21
Drive	
HP 240GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816893-B21
HP 480GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816903-B21
HP 960GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816913-B21
HP 1.92TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816923-B21
HP 3.84TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816933-B21
HP 120GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816969-B21
HP 240GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816979-B21
HP 480GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816989-B21
HP 960GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816999-B21
HP 1.92TB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	817015-B21
12G SAS Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives	
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802891-B21
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779176-B21
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779172-B21
HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802586-B21
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779168-B21
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802582-B21
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779164-B21
HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802578-B21
HPE 480GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816562-B21
HPE 960GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816568-B21
HPE 1.92TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816572-B21

HPE 3.84TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816576-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-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822559-B21
HPE 1.6TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822563-B21
HPE 3.2TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822567-B21
HPE 800GB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846430-B21
HPE 1.6TB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846432-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
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 3yr Wty Solid State Drive	762263-B21
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762261-B21
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 3yr Wty Solid State Drive	762272-B21
HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762270-B21
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	739898-B21
Solid State Drive	
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) SC Read Intensive Solid State Drives	
HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789145-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1	
Solid State Drives	7//020 D21
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
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 Value 3yr Wty G1 Solid State Drive	756660-B21

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

HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise	
Value M1 Solid State Drives	
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
HPE NVMe PCIe Read Intensive SFF (2.5-inch) Solid State Drives	
HP 400GB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764904-B21
HP 1.2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764906-B21
HPE NVMe PCIe Mixed Use SFF (2.5-inch) Solid State Drives	
HP 400GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765034-B21
HP 800GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765036-B21
HP 1.6TB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765038-B21
HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives	
HP 400GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	736936-B21
HP 800GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	736939-B21
HP 1.6TB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive <b>NOTE:</b> HPE NVMe drives need the enablement kit 764628-B21.	764892-B21
NOTE: Hewlett Packard Enterprise has qualified the NVMe drive portfolio using the	Operating
System inbox drivers. For full detail please see the HPE Solid State Drive QuickSpec	
M.2 SSD	
HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	777894-B21
HP 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	788028-B21
HPE 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	835563-B21
HPE Dual 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	835565-B21
NOTE: M.2 drives go in PCle slots and use B140i SATA controller only.	
NOTE: M.2 supports Software RAID only.	
NOTE: No HPE Flexible Smart Array supported.	
Hard Drive Blank Kits	
HP Large Form Factor Hard Drive Blank Kit	666986-B21
HP Small Form Factor Hard Drive Blank Kit	666987-B21
Hard Drive Kits	
HP DL360 Gen9 2SFF SAS/SATA Universal Media Bay Kit	764630-B21

**NOTE:** Not supported in the 4LFF CTO Server, required for 10SFF config, when added to the 8SFF CTO Server.

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

764628-B21

**NOTE:** This option provides support for up to 2NVMe drives in SFF only.

Adding NVMe drives replaces support for Universal media bay.

**NOTE:** The HP DL360 Gen9 High Performance Fan Kit (766201-B21) is required with the NVMe enablement kit.

**NOTE:** The PCIe card in this enablement kit can only be populated in slot1 of primary riser or in slot3 of secondary optional FH riser.

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

817676-B21

**NOTE:** This option provides support for up to 6NVMe drives in SFF only. Adding NVMe drives replaces support for Universal Media Bay.

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

#### **HPE Networking 1 Gi**

#### 1 Gigabit Ethernet adapters

10 Gigabit Ethernet adapters	
HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21

HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
HP Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP Ethernet 10Gb 2-port 561T Adapter	716591-B21

**NOTE:** The DL360 Gen9 chassis ships with 4x1Gb Embedded.

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: <a href="http://www.hp.com/go/ProLiantNICs">http://www.hp.com/go/ProLiantNICs</a>.

#### FlexibleLOM Adapters

HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	727060-B21
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	794525-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21

HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B21

NOTE: The DL360 Gen9 chassis ships with 4x1Gb Embedded.

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

NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiberoptic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: http://www.hp.com/go/ProLiantNICs.

#### **HPE InfiniBand**

HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21
HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	764286-B21
HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21

NOTE: Please see the QuickSpecs for additional

information: http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04154440.

**Options** NOTE: After installation server will have 1 FH / ¾ Length, and 2 Low Profile

HPE I/O Expansion HP DL360 Gen9 Low Profile PCIe Slot CPU2 Kit

764642-B21

PCIe 3.0 Slots, requires second CPU.

HP DL360 Gen9 Full Height PCle Slot CPU2 Kit with GPU Power Cable

764644-B21

NOTE: After installation the server will have 2 FH / 1/4 Length PCle 3.0 Slots,

requires second CPU.

NOTE: Includes GPU power cable and bracket; when this option kit is installed

the Low Profile PCle3.0 riser is not useable.

#### **HPE Power Supplies**

#### **HPE Flex Slot Platinum Hot-plug Power supplies**

HP 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21
NOTE: Flex Slot Platinum power supplies support power efficiency of up to	

94% and include a standard C-14 power inlet connector. HP 800W Flex Slot Titanium Hot Plug Power Supply Kit

HP 800W Flex Slot Platinum Hot Plug Power Supply Kit

720482-B21

NOTE: Flex Slot Titanium power supplies support power efficiency of up to

96% and include a standard C-14 power inlet connector.

720479-B21

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

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

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

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

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

HP 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit 720620-B21

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

HP 750W Flex Slot Hot Plug Battery Backup Module

738024-B21

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

**NOTE:** Only 1 Battery Backup module per server, and a Flex Slot Power Supply needed in parallel.

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

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

**NOTE:** Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: <a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a>.

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

**NOTE:** Maximum of 2 Flex Slot PS per platform.

## HPE Computation and Graphics Accelerators

**HPE Computation** HPE NVIDIA Quadro M4000 Graphics Accelerator

M9X58A

NOTE: This GPU fits only in Slot 1.

HP NVIDIA Quadro K4200 Graphics Accelerator

JOG90A

**NOTE:** HPE DL360 Gen9 supports up to two K4200 GPU cards. A single K4200 card installed in the primary PCI-e slot requires the Gen9 GPU Cable for CPU1 Kit 766199-B21. Two cards installed in the both the primary and secondary PCI-e slots require an HPE DL360 Gen9 Full Height PCIe Slot CPU2 Kit 764644-B21, and if the HDD need to be RAIDed, the HPE Smart Array P440ar for two GPUS needs to be installed, option kit 726740-B21.

HP NVIDIA Quadro K2200 Graphics Accelerator

JOG89A

**NOTE:** Supports up to two cards. Two cards installed in the both the primary and secondary PCI-e slots require an HPE DL360 Gen9 Full Height PCIe Slot CPU2 Kit 764644-B21. If two K2200 GPU cards are installed it does not require HPE Smart Array P440ar for two GPU option kits for RAIDed HDDs.

HP DL360 Gen9 GPU Cable for CPU1 Kit 766199-B21

**NOTE:** Includes GPU power cable and brackets.

HP DL360 Gen9 SFF USB/VGA Universal Media Bay Kit 764634-B21
HP DL360 Gen9 LFF USB/VGA Kit 764638-B21
HPE NVIDIA Quadro M4000 Graphics Accelerator M9X58A

**NOTE:** This GPU fits only in Slot 1.

**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.

## HPE Cooling Options

HP DL360 Gen9 High Performance Fan Kit

766201-B21

NOTE: High Performance Fan Kit, is available to meet some extended ambient operating temperatures above 35° C. Qualifications for extended ambient configurations are detailed at: <a href="https://www.hp.com/servers/ashrae">https://www.hp.com/servers/ashrae</a>.

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

**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.

HPE	Insigh <sup>®</sup>
Soft	ware

#### **HPE Insight Control**

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

Server License

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

License

HP Insight Management Media Kit C6N31A

**NOTE:** Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

**NOTE:** Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24x7 HPE Software Technical Support and Update Service.

**NOTE:** Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: <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: http://www8.hp.com/h20195/v2/gethtml.aspx?docname=c04123391.

#### Embedded Management

#### **HPE iLO Advanced**

HP ILO Advanced including 3yr 24x/ Technical Support and Updates E-LTU	E6U64ABE
HP iLO Advanced 1 Server License with 3yr 24x7 Tech Support and Updates	BD505A
HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single	512485-B21
Server License	

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

#### HPE Converged Infrastructure Management Software

#### **HPE OneView Advanced (with HPE iLO Advanced)**

HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y34A
HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU	E5Y35AAE

#### **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 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.

<b>High Performance</b>	<b>HPE Cluster Manage</b>	ment Utility
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**Clusters** 

HP Insight Cluster Management Utility 1yr 24x7 Flexible License

QL803B

HP Insight Cluster Management Utility 3yr 24x7 Flexible License

BD476A

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

entitlement certificate must be redeemed online in order to obtain a license

key. Customer also will receive a support agreement.

HP Insight Cluster Management Utility Media BD477A

NOTE: For additional license kits please see the HPE Insight Cluster

**Management Utility QuickSpecs.** 

HPE PCIe Workload Accelerator Options

#### Value Endurance (VE) PCIe Workload Accelerators

HP 6.4TB FH/HL Value Endurance (VE) PCIe Workload Accelerator	763840-B21
HP 3.2TB HH/HL Value Endurance (VE) PCIe Workload Accelerator	763838-B21
HP 1.6TB HH/HL Value Endurance (VE) PCIe Workload Accelerator	763836-B21
HP 1.3TB HH/HL Value Endurance (VE) PCIe Workload Accelerator	763834-B21
HPE 1.3TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831733-B21
HPE 1.6TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831735-B21
HPE 3.2TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831737-B21
HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator	831739-B21

#### **Light Endurance (LE) PCIe Workload Accelerators**

HP 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator	775672-B21
HP 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775670-B21
HP 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775668-B21
HP 10TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775666-B21

#### **NVME PCIe Workload Accelerators**

HP 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803204-B21
HP 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803202-B21
HP 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803197-B21
HP 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803200-B21
HP 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803195-B21

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

**HPE Security** 

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

**NOTE:** HPE Trusted Platform Module 2.0 Option works with Gen9 servers with UEFI Mode not Legacy Mode. It is not compatible with HP 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

488069-B21

726736-B21

843199-B21

NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: http://www.hp.com/go/TPM.

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

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

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

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

HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller

#### HPE Storage Controllers

#### SAS Controllers

#### **HPE Smart Array Controllers**

The Small Array 1 440ai/2001 BWC 1200 2 poins in 3/13 controller	720730 DZ1
NOTE: Provides support for up to 8 internal SAS/SATA drives without using a	
PCIe slot.	
HP DL360 Gen9 Smart Array P840 SAS Card with Cable Kit	766205-B21
NOTE: Includes the P840 Smart Array controller with 4GB integrated cache,	
HPE Smart Storage Battery, and associated cabling to attach it to a 10SFF	
chassis configuration.	
HP DL360 Gen9 Smart Array P440ar Controller for 2 GPU Configurations	726740-B21
NOTE: This controller is specific for the DL360 Gen9 with 2 GPUs installed. It	
has a unique heatsink that will allow the 2 <sup>nd</sup> GPU to fit.	
HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21
HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller	726821-B21
NOTE: Provides support for up to 8 internal SAS/SATA drives, consumes 1	
PCIe slot.	
NOTE: Includes the HPE Smart Storage Battery.	
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

NOTE: Require the cable kit option 843234-B21.

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

**NOTE:** When ordering controllers, please reference the HPE Cable Options below for the required cable.

HPE Smart Host Bus Adapters	
HP H240ar 12Gb 2-ports Int Smart Host Bus Adapter	726757-B21
NOTE: Provides support for up to 8 internal SAS/SATA drives without using a	
PCIe slot.	
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 DL360 Gen9 LFF Smart Array P440ar/H240ar SAS Cable	766211-B21
NOTE: Required for an upgrade from a B140i SATA controller to a HPE Smart	
HBA 240ar or HPE Smart Array P440ar.	
HP DL360 Gen9 SFF Embedded SATA Cable	766207-B21
NOTE: Needed only when attaching drive bays to the B140i controller in an 8	
SFF CTO Server.	
HP DL360 Gen9 SFF Smart Array P440/H240 SAS Cables	775927-B21
NOTE: Required for use with the HPE Smart Array P440 (PCIe	
Controllers) 726821-B21 or 761872-B21, the option kit documentation details	
out cable placement with the HPE Smart Array P440 in PCle 3.0 Slots 1 or 2	
connecting to the 8SFF backplane or the 2 SFF SAS/SATA option kit.	77F020 D21
HP DL360 Gen9 LFF Smart Array P440/H240 SAS Cables  NOTE: Required for use with the HPE Smart Array P440 (PCIe	775929-B21
Controllers) 726821-B21 or 761872-B21, the option kit documentation details	
out cable placement with the HPE Smart Array P440 in PCle 3.0 Slots 1 or 2	
connecting to the 4LFF backplane.	
HP DL360 Gen9 SFF Smart Array P440ar/H240ar SAS Cable	766209-B21
HP DL360 Gen9 LFF Embedded SATA Cable	766213-B21
HPE DL360 Gen9 Smart Array P840ar Cable Kit	843234-B21
NOTE: Options noted with "DL360 Gen9 SFF" are options only compatible with the 8	
Server; and Options noted with "DL360 Gen9 LFF" are options only compatible with	
CTO Server.	
Optional Software	
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
NOTE: HPE SmartCache is supported when one of the supported Smart Array	
Controllers is installed in the server.	
NOTE: HPE SmartCache comes standard (no licensing is required) if the HPE	
Smart Array P840 Controller is installed in the server.	
Optional Upgrades	
HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21

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

#### **Tape Drives**

HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPF StoreEver I TO-7 Liltrium 15000 Internal Tane Drive	RR873A

HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader	COH19A
HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit	COL99A
HP StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HP StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in 1U Rack-mount	EJ014B
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 (1) in 1U Rack-mount Kit	EH946C
HP StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HP StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
HP StoreEver 1U SAS Rack-mount Kit	AE459B
HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 2m	K2R09A
Cable	
HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 4m	K2R10A
Cable	
HPE Tape Storage Systems	
HPE StoreEver MSL6480	
HPE StoreEver MSL6480 Scaleable Expansion Module	QU626A
HPE StoreEver MSL6480 Scalable Base Module	QU625A
HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE StoreEver MSL4048 0-drive Tape Library	AK381A
NOTE: Please see the HPE StoreEver MSL6480 Tape Library QuickSpecs	
for Technical Specifications and additional information.	

#### HPE Disk Backup HPE RDX Removable Disk Backup System

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

NOTE: For the complete range of RDX drives and media see: <a href="http://www.hp.com/go/rdx">http://www.hp.com/go/rdx</a>. For hardware and software compatibility of HPE disk backup products see: <a href="http://www.hp.com/storage/SPOCK">http://www.hp.com/storage/SPOCK</a>.

NOTE: Please see the <a href="http://www.hp.com/storage/SPOCK">HPE RDX Removable Disk Backup System QuickSpecs</a> for additional part numbers, Technical Specifications, and additional information

#### HPE Storage Options

**NOTE:** The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see:

http://www8.hp.com/us/en/products/data-storage/storefabric.html.

#### **Emulex Fibre Channel HBAs**

HP 81E 8Gb 1-port PCle Fibre Channel Host Bus Adapter

	HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
	HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
	HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A
	HP StoreFabric 84E 4-port 8Gb Fibre Channel Host Bus Adapter	E7Y63A
	QLogic Fibre Channel HBAs	
	HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A
	HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
	HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
	HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A
	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 CN1100R Dual Port Converged Network Adapter	QW990A
	HP StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
	HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter	N3U52A
	HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter	N3U51A
HPE Disk Storage	Disk Enclosures	
Systems	HP D6000 Dual I/O Module Disk Enclosure	QQ695A
-,	HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle	E7W30A
	HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle	E7W31A
		QQ697A
	HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	
	HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
	HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
	HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HP D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle	MOT59A
	HP D6000 w/70 6TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 420TB Bundle	МОТ57А
	HP D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 280TB Bundle	МОТ58А
	HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle	E7W32A
HPE Data Center	HPE Advanced Series Racks	
Racks	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 11614 1075mm Shock Universal Rack	H6J82A
	HPE 11622 G2 1075mm Pallet Universal Rack	H6J83A
	HPE 11622 G2 1075mm Shock Universal Rack	H6J84A
	HPE 11648 1075mm Pallet Universal Rack	H6J87A
	HPE 11648 1075mm Shock Universal Rack	H6J88A

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

#### **HPE Enterprise Series Racks**

HPE 636 1075mm Pallet Intelligent Series Rack	BW895A
HPE 636 1075mm Shock Intelligent Series Rack	BW896A
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 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 842 1075mm Pallet Intelligent Series Rack	BW917A
HPE 842 1075mm Shock Intelligent Series Rack	BW918A

#### NOTE: Please see the <u>HPE Enterprise Series Racks QuickSpecs</u> for

information on additional racks options and rack specifications.

#### **HPE Standard Series Rack**

HPE V142 1075mm deep Pallet 100 series Rack

AF046A

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

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

**NOTE:** Rail kits are optional for DL3680 Gen9 and are no longer included standard with the server. Customers have the option to purchase their server without a rail kit.

**NOTE:** Ball bearing and Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.

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

**CAUTION:** Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

# HPE Power Distribution Units (PDUs)

#### **HPE Basic Power Distribution Units (PDU)**

HPE Basic 1.9kVA/L5-20P 16A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU	H5M54A
HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal	H5M56A
WW PDU	
HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical NA/JP PDU	H5M55A
HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) C13/Vertical WW	H5M57A
PDU	
HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU	H5M58A
HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical NA/JP PDU	H5M61A
HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP	H5M59A
PDU	

HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) C19/Vertical NA PDU HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6)	H5M60A H5M75A
C19/Vertical WW PDU  HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) 5-20R/Vertical NA/JP PDU	H5M63A
HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	H5M64A
HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M62A
HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) C19/Vertical NA PDU HPE Basic Modular 2.8kVA/L5-30P 24A/120V Outlets (4) C19/Horizontal NA/JP PDU	H5M67A 252663-D71
HPE Basic Modular 4.9kVA/L6-30P 24A/208V Outlets (4) C19/Horizontal NA/JP Core Only PDU	252663-D74
HPE Basic Modular 8.3kVA/CS8265C 40A/208V Outlets (4) C19/Horizontal NA/JP PDU	252663-D75
HPE Basic Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF512A
HPE Basic Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF519A
HPE Basic Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF511A
HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer  NOTE: Please see the HPE Basic Power Distribution Units (PDU) QuickSpecs	H3X09A
for information on additional options and product specifications.	
HPE Metered Power Distribution Units (PDU)	
HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU	D9N43A
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU	D9N46A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal NA/JP PDU	D9N44A
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU	D9N45A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Vertical NA/JP PDU	G9Z05A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	D9N47A
HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3) C19/Vertical NA/JP PDU	D9N51A
HPE Metered 3Ph 5.7kVA/L21-20P 16A/120-208V Outlets (13) C13 (3)5-20R/Vertical NA/JP PDU	D9N52A
HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	D9N53A
HPE Metered 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (3) C19/Vertical NA PDU	D9N49A
HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N58A

HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU	D9N61A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N62A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3)	D9N54A
C19/Vertical NA/JP PDU  HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12)	D9N59A
C19/Vertical NA/JP PDU  HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12)	G9Z07A
C19/Vertical NA/JP PDU  HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical	D9N63A
NA PDU  HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A
NOTE: Please see the <u>HPE Metered Power Distribution Units (PDU) QuickSpecs</u>	LZDJJ/(
for information on additional options and product specifications.	
HPE Intelligent Power Distribution Unit (PDU)	
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF520A
HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A
HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU	AF523A
HPE Intelligent Modular 3Ph 11kVA/L22-20P 16A/240V Outlets (6) C19/Horizontal NA/JP PDU	AF900A
HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6) C19/Horizontal NA/JP PDU	AF901A
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU	AF535A
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 30A 5-wire 24A/240V (12) C19/Horizontal NA/JP PDU	AF537A
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF531A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF532A
HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF533A
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 Unit (PDU) QuickSpecs	
for information on additional options and product specifications.	
HPE Metered and Switched Power Distribution Units (PDU)	
HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU	H8B48A
HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V Outlets (7) C13 (1) C19/Vertical WW PDU	H8B49A

HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	H8B50A
HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (6) C19/Vertical NA/JP PDU	H8B52A
HPE Metered Switched 3Ph 8.6kVA/L2190-30P 24A/208V Outlets (23) C13 C19 (1) 520R/Vertical NA/JP PDU	H8B53A
HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B55A
HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B56A

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

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

HPE Rack Mount	H
Consoles, KVM	Н
Switches, and	H
Kevboards	L

HPE Location Discovery Services	
HP 36U Location Discovery Kit	BW945A
HP 42U Location Discovery Kit	BW946A
HP 47U Location Discovery Kit	BW947A
HP Location Discovery Services LCD8500 Kit	TL052A
NOTE: Please see the HPE Location Discovery Services QuickSpecs for	
Technical Specifications and additional information	
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 0x1x8 G3 KVM Console Switch	AF651A
HP 0x2x16 G3 KVM Console Switch	AF652A
HP TAA 0x2x16 G3 KVM Console Switch	AF653A
HP USB Remote Access Key for G3 KVM Console Switches	AF650A
HP KVM Console USB Interface Adapter	AF628A
HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
HP 1x4 USB/PS2 KVM Console Switch	AF611A
HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A
<b>NOTE:</b> To learn more, please visit the <b>HPE KVM Switches web page</b> .	
HPE USB Keyboard and Mouse	
HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21
Rail Kits	
HP 1U LFF Gen9 Easy Install Rail Kit	789388-B21
HP 1U Small Form Factor Easy Install Rail Kit	734807-B21

HP 1U Cable Management Arm for Easy Install Rail Kit

HP 1U Small Form Factor Ball Bearing Rail Kit

734811-B21

663201-B21

#### **Additional Options**

	HP 1U Large Form Factor Ball Bearing Rail Kit	663202-B21
	HP 1U Cable Management Arm for Ball Bearing Rail Kit	663203-B21
	HPE Other Options	
	HP Rack LED Light Kit	BW939A
	HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
	HP Advanced Power Manager Kit	741192-B21
HPE Uninterrup	tible HPE DirectFlow Three Phase UPS	
Power Systems	Power Unit (1U UPS)	
(UPS)	HP R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HP R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	Input/Output Module Options for 1U UPS	
	HP 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
	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 IEC309 Input/Output Module	G9Y76A
	HP DirectFlow UPS Management Card	AF493A
	Power Unit (2U UPS)	
	HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	Input/Output Module Options for 2U UPS	
	HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF486A
	HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF487A
	HP 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	D9Q02A
	HP 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module	AF484A
	NOTE: All Input/Output Modules support dual output outlets except the AF484A.	
	Battery Pack Options	
	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
	<b>NOTE:</b> Please see the <u>HPE DirectFlow Three Phase Uninterruptible Power Syste</u> for information on additional options and product specifications.	m QuickSpecs
	HPE Tower UPS	
	HPE T750 G4 UPS Models	
	HP T750 G4 NA/JP Uninterruptible Power System	J2P85A
	HPE T1000 G4 UPS Models	
	HP T1000 G4 NA/JP Uninterruptible Power System	J2P86A

**HPE T1500 G4 UPS Models** 

J2P87A

### **Additional Options**

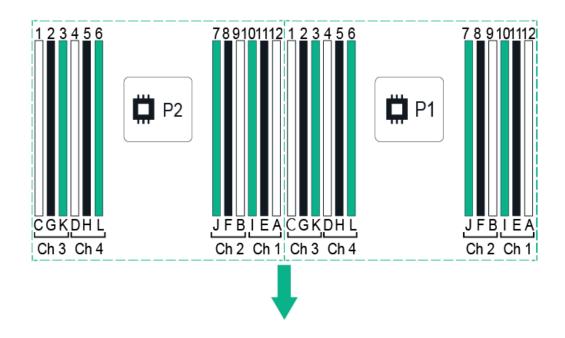
	HPE Rack/Tower UPS	
	HPE R/T2200 G4 UPS Models	
	HP R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A
	HPE R/T3000 G4 UPS Models	
	HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
	HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
	R1500 G4 Models	
	HP R1500 G4 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
	NOTE: Please see the HPE Line Interactive Single Phase UPS QuickSpecs	
	for information on additional options and product specifications.	
	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
	NOTE: To learn more, please visit the HPE Uninterruptible Power Systems (UPS	
	· · · · · · · · · · · · · · · · · · ·	
IPE USB and SD	HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
Options	HP 32GB microSD Enterprise Mainstream Flash Media Kit	700139-B21
	HP 32GB SD Enterprise Mainstream Flash Media Kit	700136-B21
	HP 8GB microSD Enterprise Mainstream Flash Media Kit	707117 D01
		726116-B21
	HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	
	HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit HP Dual 8GB microSD Enterprise Midline USB Kit	737953-B21 741279-B21
IPE Care Pack	HP Dual 8GB microSD Enterprise Midline USB Kit	737953-B21
	HP Dual 8GB microSD Enterprise Midline USB Kit  Installation & Start-up Services	737953-B21 741279-B21
	HP Dual 8GB microSD Enterprise Midline USB Kit  Installation & Start-up Services  HPE Install ProLiant DL36x(p) Service	737953-B21 741279-B21 U4506E
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service	737953-B21 741279-B21
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service Proactive Care	737953-B21 741279-B21 U4506E U4507E
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service Proactive Care HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service	737953-B21 741279-B21 U4506E U4507E U5HM4E
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service Proactive Care HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service Proactive Care HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E U5HM6E
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service Proactive Care HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E
	Installation & Start-up Services  HPE Install ProLiant DL36x(p) Service  HPE Installation and Startup DL36x(p) Service  Proactive Care  HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E U5HM6E U5HN3E U5HN4E
	Installation & Start-up Services HPE Install ProLiant DL36x(p) Service HPE Installation and Startup DL36x(p) Service Proactive Care HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL360 Gen9 w/IC Service HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E U5HM6E U5HN3E U5HN4E U5HN5E
	Installation & Start-up Services  HPE Install ProLiant DL36x(p) Service  HPE Installation and Startup DL36x(p) Service  Proactive Care  HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 DL360 Gen9 Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E U5HM6E U5HN3E U5HN4E U5HN5E U7AM2E
	Installation & Start-up Services  HPE Install ProLiant DL36x(p) Service  HPE Installation and Startup DL36x(p) Service  Proactive Care  HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 DL360 Gen9 Service  HPE 3 year Proactive Care 24x7 bL360 Gen9 Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E U5HN4E U5HN4E U5HN5E U7AM2E U7AM3E
HPE Care Pack Services	Installation & Start-up Services  HPE Install ProLiant DL36x(p) Service  HPE Installation and Startup DL36x(p) Service  Proactive Care  HPE 3 year Proactive Care 24x7 DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 w/IC Service  HPE 3 year Proactive Care 24x7 DL360 Gen9 Service	737953-B21 741279-B21 U4506E U4507E U5HM4E U5HM5E U5HM6E U5HN3E U5HN4E U5HN5E U7AM2E

HP T1500 G4 NA/JP Uninterruptible Power System

HPE 3 year Proactive Care Call to Repair with CDMR DL360 Gen9 Service

U7AN0E

#### Memory Population guidelines



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

- . White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- . A minimum of one DIMM is required per processor
- . Install DIMMs only if the corresponding processor is installed.
- . When two processors are installed, balance the DIMMs across the two processors.
- Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel. Heaviest load (DIMM with most ranks) within a channel goes furthest from the processor.
- . Do not mix RDIMMs or LRDIMMs.
- . DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- . The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the memory type and number of installed processors.
- . HPE memory from previous generation servers is not compatible with the DL360 Gen9 Server.
- . For memory population rules and additional memory guidelines, please see the DL360 Gen9 user guide at <a href="http://www.hpe.com/support/">http://www.hpe.com/support/</a>.
- . There are four (4) Memory channels per processor; eight (8) channels per 2 processor server.
- . There are three (3) DIMM slots for each memory channel; twenty four (24) total slots for 2 processor server.

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

Memory Bandwidth and Capacity

[DIMM Type] Registered DIMMs (RDIMMs)			Load Reduced (LRDIMMs)					
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank	Quad Rank
DIMM Capacity	4GB	8GB	8GB	16GB	32GB	16GB	32GB	64GB
DIMM Native Speed (MT/s)	2133	2133	2133	2133	2133	2133	2133	2133
Voltage	Std Voltage 1.2V							
SLOTS THAT CAN	BE POPUI	ATED						
24 slot servers	24	24	24	24	24	24	24	24
MAXIMUM CAPAC	ITY (GB)						ı	
	96	192	192	384	768	384	768	1536
POPULATED DIMN	1 SPEED (N	MT/s)					<u> </u>	
1 DIMM Per Channel	2133	2133	2133	2133	2133	2133	2133	2133
2 DIMM Per Channel	2133	2133	2133	2133	2133	2133	2133	2133
3 DIMM Per Channel	1600	1600	1600	1600	1600	1866	1866	1866

# DIMM slot and configuration diagram

#### DIMM slot and configuration diagrams

- 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

		CPU1		CPU 2			
	Slot #	population order		Slot # population order			
Chnl 3	1	С		1	С		Chnl 3
	2	G		2	G		
	3	K		3	K		
		CPU1			CPU 2		
	Slot#	population order		Slot # pc	pulation order		
Chnl 4	4	D		4	D		Chnl 4
	5	Н	l	5	Н		

	6	L	6	L	
	CPU1		CPU 2		
	Slot #	population order	Slot # p	opulation order	
Chnl 2	7	J	7	J	Chnl 2
	8	F	8	F	
	9	В	9	В	
		CPU1		CPU 2	
	Slot #	population order	Slot # p	opulation order	
Chnl 1	10	I	10	I	Chnl 1
	11	E	11	E	
	12	А	12	А	

#### Memory Speed by Processor Model

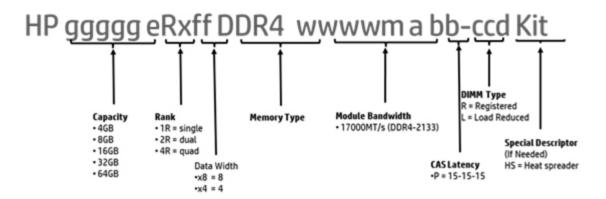
Processor Models	Supported Memory Speeds
E5-2603v3, E5-2609v3	1600MHz
E5-2623v3, E5-2620v3, E5-2630v3, E5-2640v3, E5- 2630Lv3	1866MHz
E5-2637v3, E5-2650v3, E5-2660v3, E5-2670v3, E5-2680v3, E5-2690v3, E5-2683v3, E5-2695v3, E5-2697v3, E5-2643v3, E5-2667v3, E5-2687Wv3, E5-2698v3, E5-2650Lv3, E5-2699v3	2133MHz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

Standard and Maximum Memory Capacity (Preconfigured Models)

Pre Configured Models	Standard Memory	Optional Memory	Standard Memory Replaced with Optional Memory
E5-2603v3, E5-2603v4	8GB (1x8GB)	1480GB (23x64GB, 1x8GB)	1536GB (24x64GB)
E5-2630v3, E5-2630v4, E5-2640v4	16GB (1x16GB)	1488GB (23x64GB, 1x16GB)	1536GB (24x64GB)
E5-2650v3, E5-2650v4	32GB (2x16GB)	1440GB (22x64GB, 2x16GB)	1536GB (24x64GB)
E5-2670v3, E5-2660v4	64GB (4x16GB)	1344GB (20x64GB, 4x16GB)	1536GB (24x64GB)

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

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



#### **Storage**

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



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



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

Drive Bays



System Unit Dimensions	8 SFF and 10 SFF 1.7 x 17.1 x 27.5 inches (4.32 x 43.47 x 69.85 cm)
------------------------	---

 $(H \times W \times D)$ 4 LFF - 1.7 x 17.1 x 29.5 inches (4.32 x 43.46 x 75.0 cm)

Weight 8 SFF Chassis 33.3 lb. (15.31 kg) Maximum:

(all hard drives, NOTE: Includes 2 SFF Option for a total of 10 SFF HDD (approximate)

power supply, and

processor installed)

4 LFF Chassis 37 lb. (16.78kg)

Minimum: 8SFF Chassis 27 lb. (12.25 kg)

(one hard drive. power supply, and

processor installed)

4 LFF Chassis 30.36 lb. (13.77 kg)

Input Range Line 100 to 120 VAC Requirements Voltage 200 to 240 VAC

**BTU Rating** Maximum For 800W Power Supply: 3207 BTU/hr (at 100 VAC). 3071

BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China

Only

For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China

Only

**Power Supply** Rated Steady-State Power **Output** 

For 1400W Power Supply: 1400W (at 240 VAC), 1400W (at

240 VAC

For 800W Power Supply: 800W (at 100 VAC), 800W (at 240

VAC), 800W (at 240 VAC) input for China only

For 500W Power Supply: 500W (at 100 VAC), 500W (at 240

VAC), 500W (at 240 VAC) input for China only

Maximum Peak

Power

For 1400W Power Supply: 1400W (at 200 to 240 1VAC),

1400W (at 240 VAC) input for China only

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

**System Inlet Temperature**  Standard

10° to 35°C (50° to 95°F) at sea level with an altitude derating Operating Support of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea

level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and

number of options installed.

**NOTE:** System performance during standard operating support may be reduced if operating with a fan fault or

above 30°C (86°F).

Extended Ambient For approved hardware configurations, the supported system Operating Support 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:

#### http://www.hp.com/servers/ashrae

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

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

20°C/hr (36°F/hr).

Relative Humidity Operating Minimum to be the higher (more moisture) of -12°C (10.4°F)

dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative

humidity.

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

bulb temperature, non-condensing.

**Altitude** Operating 3050 m (10,000 ft). This value may be limited by the type and

number of options installed. Maximum allowable altitude change

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

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

457 m/min (1500 ft/min).

**Acoustic Noise** 

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

Idle

L WAd (1P non-redundant) 4.6 A Average Bystander

(2P redundant) 5.5 A Average Bystander

L pAm (1P non-redundant) 29 dBA

(2P redundant) 37 dBA

**Operating** 

L WAd (1P non-redundant) 4.6 A Average Bystander

(2P redundant) 6.2 C Average Bystander

L pAm (1P non-redundant) 30 dBA

(2P redundant) 46 dBA

**NOTE:** 1P Configuration tested included two Intel E5-2630 v3, 2.3GHz processors, one 500GB SAS HDD, five standard hot plug fans, one 8GB

DDR4 RDIMM's 2133MHz, one 500W power supply.

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

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

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

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

**Emissions** 

Classification

(EMC)

FCC Rating Class A

2x4 connectors; 2x1 connectors

Normative CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; Standards CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN

60950-1; IEC 60950-1

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

**HPE Dynamic** Smart Array B140i links **Controller** 

**Number of PCI** 

Four

PCI link rate 4 Gb/s

Storage protocol SATA

support

SAS/SATA peak 6 Gb/s

data transfer

rate

Number of 10 links

**SAS/SATA links** 

connectivity

SAS/SATA

**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** 

Storage **Administrator**  Supported

**HPE Ethernet 1Gb** Network 4-port 331i

**Adapter** 

**Interface** 

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

Compatibility IEEE 802.3 10Base-T

> IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX

**Data Transfer Method** 

PCI Express, two lanes (x2)

**Controller** BCM5719 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

1000Base-TX

(Full-Duplex) 2000Mb/s per port, 8000 Mb/s combined

Connector Four RJ-45

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

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

**Environment- End-of-life** friendly **Products and Approach** 

Management and Recycling

Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a>. To recycle your product, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> 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
22-Apr-2016	From Version 17 to 18	Changed	Smart Buy model 800079-S01 was revised.
15-Apr-2016	From Version 16 to 17	Changed	Smart Buy models section was revised for the NA version only.
05-Apr-2016	From Version 15 to 16	Added	Added new NVIDIA Quadro M4000 GPU module.
		Changed	What's New section was updated. Standard Features/Memory and HPE Memory sections were revised.
31-Mar-2016	From Version 14 to 15	Added	Added Intel E5-2600v4 Processors support, new HPE Smart Memory DDR4 2400MHz, new HPE Persistent Memory, new HPE Flexible Smart Array P840ar controller, new NVIDIA Quadro GPU options, and new TPM 2.0 module.
		Changed	Embedded Management, Security, Warranty, Service and Support, Pre-configured Models, Memory, and Storage Options sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
26-Feb-2016	From Version 13 to 14	Changed	Note for front view image – callout #9 was updated.
16-Feb-2016	From Version 12 to 13	Added	New HDD offering was added to HPE Drives.
		Changed	Maximum Internal Storage, HPE Power Supplies, HPE Computation and Graphics Accelerators, HPE Disk Backup, HPE Data Center Racks, and HPE Power Distribution Units (PDUs) were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Dec-2015	From Version 11 to 12	Added	Smart Buy models were added to the NA version.
1-Dec-2015	From Version 10 to 11	Added	New HDD offering was added to HPE Drives.
			New options added to HPE PCIe Workload Accelerator Options, HPE Tape Backup, and HPE Disk Storage Systems.
		Changed	On System Management Chipset, Embedded Management, and Server utilities were revised.
			Product images were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Sep-2015	From Version 9 to 10	Added	Added support for PCIe Solid State Drives, additional 6Gb SATA SSD drives, support for new Network adapters, and support for new PCIe workload accelerators.
			Added new HP OneView management software.
		Changed	Internal Storage Devices, Maximum Internal Storage, and HP Drives were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.

#### **Summary of Changes**

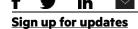
17-Aug-2015	From Version 8 to 9	Added	Added new Solid State Drives offering.
		Changed	What's New changed to: Support for PCIe Solid State Drives Support for additional 6Gb SATA SSD drives
			Maximum Internal Storage and HPE Unique Options were revised.
1-Jun-2015	From Version 7 to 8	Added	New DVD Universal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

#### **Summary of Changes**

		Changed	Call outs description for images, Standard Features, Optional Features, Pre-Configured Models, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Memory sections were revised.
23-Sep-2014	From version 1 to version 2	Changed	Changes were made throughout the QuickSpecs.









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

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