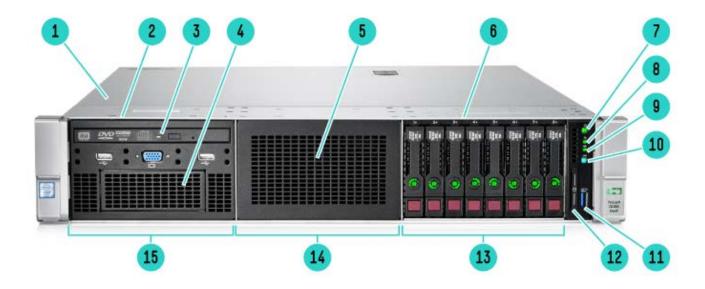
## QuickSpecs

#### **Overview**

#### HPE ProLiant DL380 Generation9 (Gen9)

The HPE ProLiant DL380 Gen9 Server delivers the best performance and expandability in the Hewlett Packard Enterprise 2P rack portfolio. Reliability, serviceability and near continuous availability, backed by a comprehensive warranty, make it ideal for any environment. Deploy the data center standard.



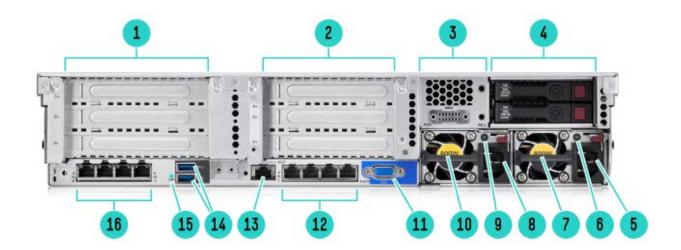
#### Front View - 8SFF Chassis with Optional Universal Media Bay shown

- 1. Quick removal access panel
- 3. Optional Optical drive. Requires Universal Media bay
- 5. Drive Bay 2. Blank shown, 8SFF or 6NVMe optional
- 7. Power On/Standby button and system power LED button
- 9. NIC status
- 11. USB 3.0
- 13. Bay 3
- 15. Bay 1

- 2. Universal Media bay. 2 USB 2.0 and VGA standard (8SFF bay optional)
- 4. Optional 2 SFF HDD, blank shown. Requires Universal Media bay
- 6. 8 SFF Drive Cage Bay
- 8. Health LED
- 10. UID button
- 12. Serial label pull tag
- 14. Bay 2



#### **Overview**

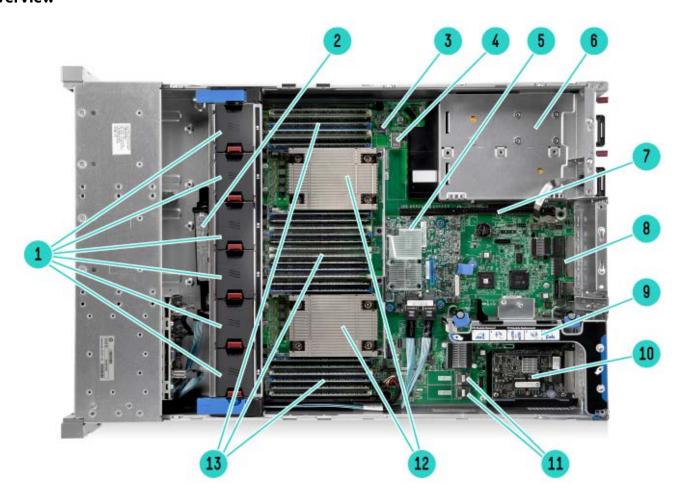


#### **Rear View**

- 1. PCI Slots (Slots 1-3 top to bottom, riser shipped standard)
- 3. Optional serial port
- 5. Power supply Power connection
- 7. HPE Flexible Slot Power Supply bay 2 (800w shown)
- 9. Power supply Power LED
- 11. VGA connector
- 13. Dedicated iLO connector
- 15. Unit ID LED

- 2. PCI Slots (Slots 4-6top to bottom, requires second riser card, and second processor)
- 4. Optional rear 2 SFF HDD (supported in 24 SFF or 12 LFF front end)
- 6. Power supply Power LED
- 8. Power supply Power connection
- 10. HPE Flexible Slot Power Supply bay 1 (800w shown) **NOTE:** Optional Battery Back up option.
- 12. Embedded 4x1GbE Network Adapter
- 14. USB 3.0 connectors (2)
- 16. Optional FlexibleLOM ports (Shown: 4x1GbE)

#### **Overview**



#### **Internal View**

- 1. Fan cage shown with 6 standard Hot-plug fans (High Performance fans optional)
- 3. MicroSD card slot

#### NOTE: Optional Dual MicroSD.

- 5. Optional HPE Flexible Smart Array or Smart HBA (H240ar shown)
- 7. Connection for second (optional) riser (Required second CPU)
- 9. Primary PCIe riser, standard (Optional double wide GPU riser)
- 11. X4 SATA ports (1 and 2)
- 13. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)

- 2. Optional HPE Smart Storage Battery
- 4. Internal USB 3.0 connector (2)
- 6. (Under) Hot Plug redundant HPE Flexible Slot Power supplies

#### **NOTE:** Optional Micro UPS Battery Back up option.

- 8. Embedded 4x1Gbe NIC
- 10. Optional FlexibleLOM slot
- 12. 2 Processors, heatsink showing, with HPE Smart Socket Guide

#### What's New

- New SSD and NVMe drive options
- New NVIDIA Tesla GPU

## 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

Up to two of the following depending on model

Model	CPU frequency	Cores	L3 Cache	Power	QPI	DDR4 Hz
E5-2699v3	2.3GHz	18	45MB	145W	9.6GT/s	2133
E5-2698v3	2.3GHz	16	40MB	135W	9.6GT/s	2133
E5-2697v3	2.6GHz	14	35MB	145W	9.6GT/s	2133
E5-2695v3	2.3GHz	14	35MB	120W	9.6GT/s	2133
E5-2690v3	2.6GHz	12	30MB	135W	9.6GT/s	2133
E5-2687Wv3	3.1GHz	10	25MB	160W	9.6GT/s	2133
E5-2683v3	2.0GHz	14	35MB	120W	9.6GT/s	2133
E5-2680v3	2.5GHz	12	30MB	120W	9.6GT/s	2133
E5-2670v3	2.3GHz	12	30MB	120W	9.6GT/s	2133
E5-2667v3	3.2GHz	8	20MB	135W	9.6GT/s	2133
E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133
E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133
E5-2650Lv3	2.3GHz 1.8GHz	12	30MB	65W	9.6GT/s	2133
E5-2643v3	3.4GHz	6	20MB	135W	9.6GT/s	2133
		8		90W	9.0GT/s 8.0GT/s	
E5-2640v3	2.6GHz	4	20MB 15MB	135W		1866 2133
E5-2637v3 E5-2630v3	3.5GHz	8	20MB	85W	9.6GT/s	
E5-2630Lv3	2.4GHz	8			8.0GT/s	1866
	1.8GHz	1	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
E5-2699Av4	2.4GHz	22	55MB	145W	9.6GT/s	2400

**NOTE:** All processors above 120W use a high efficiency Heatsink. Doublewide PCIe cards are only supported with this Heatsink. For processors with a standard Heatsink that require double wide PCIe cards, the Graphics Enablement kit option is also required (719082-B21).

NOTE: Mixing of E5-2600v3 and E5-2600v4 processors is not supported.

**NOTE:** Field upgrade from E5-2600v3 to E5-2600v4 is supported.

NOTE: All processors support Hyper-Threading except E5-2609 v4/v3 and E5-2603 v4/v3.

**Chipset** Intel® C610 Series Chipset

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

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

http://www.intel.com/products/server/chipsets/

On System Management Chipset HPE iLO (Firmware HPE iLO4 2.0) 4GB NAND

NOTE: Read and learn more in the iLO QuickSpecs.

Memory

One of the following depending on model

Type:

**HPE SmartMemory** 

DDR4 Registered (RDIMM), Load Reduced (LRDIMM) or Persistent Memory (NVDIMM)

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

channel)

Maximum Capacity

3ТВ

(24 x 128GB LRDIMM @2400MHz)\*

(LRDIMM)

Maximum Capacity

768GB

(24 x 32GB RDIMM @2400MHz)

(RDIMM)

(KDIIVIIVI)

128GB

(16 x 8GB NVDIMM)\*

Maximum Capacity

(NVDIMM)

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

- Note mixing of 2133 and 2400MHz memory is not supported
- Note mixing of RDIMM and LRDIMM memory is not supported
- Note the 128GB LRDIMM may not be mixed with other DIMM capacities/types

**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.

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Primary Riser (Standard)	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
	1	PCle 3.0	X8	X16	7	Full-height, half-length slot	Proc 1
	2	PCIe 3.0	X8	X16	10	Full-height.	Proc 1

1 16 1 11

#### Standard Features

					half-length slot	
3	PCIe 3.0	X8	X8	13	Half length/full	Proc 1
					height	

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

**NOTE:** All slots support PCIe cards to 150W or more depending on card, but an additional Power Cord Option is required (669777-B21). See Option Section below for offering.

**NOTE:** Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU support please order the GPU enablement kit (719082-B21).

Slot 2 PCle Riser
(Optional 3-slot)
719073-B21

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
4	PCIe 3.0	X16	X16	16	Full-height, full-length slot	Proc 2
5	PCIe 3.0	X16	X16	20	Full-height, full-length slot	Proc 2
6	PCIe 3.0	X8	X8	23	Full-height, half-length slot	Proc 2

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

NOTE: When populating the second optional riser slot, the second processor must be installed.

**NOTE:** All slots support PCIe cards to 150W or more depending on card but an additional Power Cord Option is required (669777-B21). See Option Section below for offering.

**NOTE:** Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU support please order the GPU enablement kit (719082-B21).

Slot 1 PCle Riser
(Optional 2-slot)
719076-B21

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
2	PCle 3.0	X16	X16	0x05	Full-height, full-length slot	Proc 1
3	PCle 3.0	X8	X8	0x08	Full-height, half-length slot	Proc 1

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

**NOTE:** This will replace the standard primary riser and supports double wide cards.

**NOTE:** All slots support PCIe cards to 150W or more depending on card, but an additional Power Cord Option is required (669777-B21). See Option Section below for offering.

**NOTE:** Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU support please order the GPU enablement kit (719082-B21).

### Storage Controller

One of the following depending on model

Entry Models HPE Dynamic Smart Array B140i Controller

**NOTE:** The embedded B140i controller will operate in UEFI only mode. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.

NOTE: The B140i defaults to AHCI off the chipset. Smart array needs to be enables on the SATA only

models if required.

NOTE: The B140i will not operate in Legacy mode.

Base Models HPE Dynamic Smart Array B140i Controller

HPE Flexible Smart Array P440ar/2G FIO Controller HPE Flexible Smart Array P840/4G FIO Controller

HPE Smart Array P840ar/2G Controller

Performance Models HPE Dynamic Smart Array B140i Controller

HPE Flexible Smart Array P440ar/2GB

Internal Storage Devices

One of the following depending on model

Optical Drive Ships standard in Performance Models

Optional: DVD-ROM, DVD-RW

Hard Drives None ship standard

Hard Drive Bays 8 SFF with optional Universal Media Bay, 8 SFF bay or 6 NVME drive options

24 SFF plus optional 2 SFF drives rear 12 LFF plus optional 3 LFF drives rear

**NOTE:** The 3 LFF rear drives will consume space for the secondary riser. **NOTE:** The 12 LFF model also supports 2 SFF rear which allows for the second

riser.

**NOTE:** The 6 NVMe drive option can only be leveraged in the SFF model and

replaces Bay 2.

4 LFF drive bays total

NOTE: The Universal Media Bay (724865-B21) not available with the LFF

model or the 24SFF model, and can only be populated in Bay1.

**NOTE:** The 8SFF can be upgraded with a drive cage to 16 or 24 SFF with field upgrades. For optimal upgrade Bay2 should be populated second, with Bay 3

the last to be populated for a field upgrade to 24 SFF.

**NOTE:** The 4LFF model cannot be upgraded to 12LFF in the field.

**NOTE:** All Pre-configured servers come with an embedded 10-Port SATA controller. Optional HPE Flexible Smart Array and Smart SAS HBA Controllers

can be added.

<b>Maximum Internal</b>		CAPACITY	CONFIGURATION
Storage	Hot Plug SFF SAS	52.0TB	24+2 x 2TB (with optional rear SFF drive cage)
	Hot Plug SFF SATA	52.0TB	24+2 x 2TB (with optional SFF drive cage)
	Hot Plug LFF SAS	150.0TB	12+3 x 10TB (with optional rear LFF drive cage)
	Hot Plug LFF SATA	150.0TB	12+3 x 10TB (with optional rear LFF drive cage)
	Hot Plug SFF SATA SSD	99.84TB	24+2 x 3.84TB (with optional rear SFF drive cage)
	Hot Plug LFF SATA SSD	57.6B	12+3 x 3.84TB (with optional rear LFF drive cage)
	Hot Plug SFF NVMe PCle SSD	12TB NVMe + 36TB SFF	6x2TB NVMe plus 36TB with 18 SFF (Bay 1, bay 3 and optional rear drive support)

**Power Supply** HPE 500W Flex Slot Platinum Hot Plug Power Supply

**NOTE:** Available in 94% efficiency.

HPE 800W Flex Slot Platinum Hot Plug Power Supply

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

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

HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply

NOTE: Available in 94% efficiency.

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

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

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

Power specifications and technical content for all HPE Server power supplies can be found at <a href="http://www.hpe.com/info/proliant/powersupply">http://www.hpe.com/info/proliant/powersupply</a>.

System Fans		Non-redundant	Redundant					
One of the following depending on model	2P model		6 fans					
depending on model	<b>NOTE:</b> 1P models typically sadditional fans.	hip with 4 standard fans. The second p	processor option kit contains 2					
	NOTE: The 12LFF and 24SF	F models ship with 6 High Performanc	e fans as standard.					
	NOTE: High Performance Fa	n Kit is available to meet ambient temp	perature environments.					
	NOTE: High Performance Fa	n Kit is required for Passive GPU supp	ort.					
	NOTE: The 8SFF Bay1 kit (719067-B21) will ship with 6 High efficiency fans.							
Interfaces	Serial	Optional						
	Video	2 (1 front, optional via Universal Media active simultaneously	a Bay, 724865-B21), 1 back not					
	FlexibleLOM Network Ports	4 x 1Gb ports shipping standard with optional FlexibleLOM						
	HPE iLO Remote Management Network Port	1 Gb Dedicated						
	Micro SD Slot	1 Micro SD						
	<b>NOTE:</b> The Micro SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.							
	USB 3.0 Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 Universal Media Bay							
	SID (Systems Insight Display)	SID (Systems Insight Display) Optional						
	NOTE: Not shipping as stand	dard. Available as a CTO option or as a	field upgrade (768900-B21).					

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server

**Canonical Ubuntu** 

Red Hat Enterprise Linux (RHEL)
SUSE Linux Enterprise Server (SLES)

Oracle Solaris VMware

#### Citrix XenServer

#### ClearOS

**NOTE:** ClearOS allows you to build a fully functional server that is just right for you at no upfront cost. It is available via CTO preload, Intelligent Provisioning or via download. For more information on ClearOS, please visit <a href="http://www.hpe.com/servers/clearos">http://www.hpe.com/servers/clearos</a>.

**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, please visit our Support Matrix at: <a href="http://www.hpe.com/info/ossupport">http://www.hpe.com/info/ossupport</a> and our <a href="http://www.hpe.com/info/ossupport">driver download page</a>.

#### Upgradeability

Upgradeable to 2 processors (36 Cores)

**NOTE:** Processor upgrade available from Intel® Xeon® Processors E5-2600v3. Please contact Hewlett Packard Enterprise Technology Sales (<a href="http://www.hpe.com/support">http://www.hpe.com/support</a>), your local Hewlett Packard Enterprise Re-seller.

Up to 24 DIMM slots available for higher Memory capacity

FlexibleLOM connector for 1 Gigabit or 10 Gigabit networking options

HPE Flexible Smart Array or Smart HBA Controllers

Embedded 10-Port SATA, B140i as standard

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

NOTE: To take advantage of the additional 3 PCI slot upgrade, the second processor must be installed.

Redundant Power Supply

Optical Drive supported via Universal Media Bay

**NOTE:** The Universal Media bay provides front VGA and 2xUSB 2.0, plus ability to add 2SFF and Optical.

NOTE: Universal Media bay is only available with 8 or 8+8SFF model & can be populated in Bay1 only.

HPE Legacy Mode (FIO only, 758959-B22)

NOTE: UEFI is the default mode for all server models. Can change default to legacy via CTO.

#### Industry Standard Compliance

ACPI 2.0b Compliant

PCle 3.0 Compliant

**PXE Support** 

**WOL Support** 

Microsoft® Logo certifications

USB 3.0 Support

USB 2.0 Support

**NOTE:** This support is on the optional Universal Media Bay.

**Energy Star** 

ASHRAE A3/A4

**NOTE:** The DL380 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="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>.

UEFI (Unified Extensible Firmware Interface Forum)

**NOTE:** UEFI is the default for the DL380 Gen9. Legacy model can be selected in the field or as a CTO option (758959-B22).

#### **Graphics**

Integrated Matrox G200eH2 video standard with 16MB of Video RAM

• 1280 x 1024 (32 bpp)

• 1920 x 1200 (16 bpp)

HPE iLO 4 On System Management Memory

- 16 MB Flash
- 256 MB DDR3 with ECC (112 MB after ECC and video)

#### **HPE Server UEFI/Legacy ROM**

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

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

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

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

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

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

#### Form Factor

One of the following depending on model 2U Rack form factor

8 SFF & 24SFF Drive Bay Version:

3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm)

4 LFF & 12LFF Drive Bay Version:

3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)

NOTE: Dimensions without bezel.

#### **Embedded** Management

**Lights-Out** (HPE iLO)

HPE Integrated Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at http://www.hpe.com/info/ilo.

**UEFI** 

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at <a href="http://www.hpe.com/servers/uefi">http://www.hpe.com/servers/uefi</a>.

**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 <a href="http://www.hpe.com/info/restfulapi">http://www.hpe.com/info/restfulapi</a>.

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

Learn more at <a href="http://www.hpe.com/servers/intelligentprovisioning">http://www.hpe.com/servers/intelligentprovisioning</a>.

**Embedded** 

The Hewlett Packard **Enterprise** embedded remote support, when used with Insight Remote Support Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at

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

Server utilities

**Smart Update** 

Optimize firmware and driver updates with Smart Update solutions including Smart

Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at

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

**HPE Systems** (HPE SIM)

HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE **Insight Manager** Integrity Servers, and also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless

firmware updates. Learn more at <a href="http://www.hpe.com/servers/hpsim">http://www.hpe.com/servers/hpsim</a>.

**Scripting Tool** Kit and **Windows PowerShell** 

Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at <a href="http://www.hpe.com/servers/proliant/stk">http://www.hpe.com/servers/proliant/stk</a> or

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

**RESTful** Interface Tool RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to

discover and deploy servers at scale. Learn more at

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

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:

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

**HPE Insight Online** 

HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise,

is a personalized dashboard for simplified tracking of IT operations and support

information from anywhere, anytime. Learn more at http://www.hpe.com/info/insightonline/explore.

Security

Power-on password

Serial interface control Administrator's password

UEFI

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

Integrated Lights-Out can be disabled via a Global Setting iLO Advanced supports directory services integration

**TPM 1.2** 

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available

for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

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

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

#### **Optional Features**

### Embedded Management

#### iLO Advanced

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. Learn more about HPE iLO Advanced at <a href="http://www.hpe.com/servers/iloadvanced">http://www.hpe.com/servers/iloadvanced</a>.

#### Server Management HPE Insight

## HPE Insigh

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

#### HPE Insight Cluster Management Utility (CMU)

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

#### Rack and Power Infrastructure

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

#### High Performance Clusters

HPE Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPEC Server. A Cluster Platform Configurator simplifies ordering. https://www.hpe.com/us/en/solutions/hpc-high-performance-computing/hpc-software.html.

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

https://www.hpe.com/info/hpc/solutions.

#### **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.

https://www.hpe.com/info/hpc/solutions.

#### Storage Software

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

#### Data Protection and Recovery Software

Whether you're a large enterprise or a smaller business, Hewlett Packard Enterprise data protection and recovery software will cost-effectively protect you against disaster and ensure

#### **Optional Features**

business continuity.

#### • Data Archive and Migration Software

Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.

#### • Storage Resource Management Software (SRM)

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

#### • Data Replication Software

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

#### Storage Device Management Software

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

#### • HPE StoreVirtual VSA

Enable highly available and clustered storage in your HPE ProLiant servers with virtualized storage: Add StoreVirtual VSA to multiple servers, manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. To simplify deployment, HPE offers StoreVirtual Ready Nodes, pre-defined reference configurations for converged vSphere and Hyper-V virtualization solutions. You also have the option to install free 1TB-capacity StoreVirtual VSA software during server setup within Intelligent Provisioning. HPE ProLiant Gen9 servers include a 3-year limited license for this HPE software-defined storage at no extra cost. More information, instructional videos, and free management software are available at http://www.hpe.com/storage/storevirtual.

NOTE: For more information about Storage Software including QuickSpecs, please see:

https://www.hpe.com/us/en/storage/software-defined.html.

#### **ClearOS**

HPE and ClearCenter will help you lower the cost of building on-premise solutions without sacrificing security and ease of use. HPE ProLiant servers with ClearOS give you a simple, secure, and affordable operating system with an intuitive web based graphical user interface that provides a cloud-like experience on- premise, and an Application Marketplace with over 100 apps and growing. Whether you're starting out or scaling, you decide what applications you need and pay as you grow.

NOTE: For more information on ClearOS, please visit <a href="http://www.hpe.com/servers/clearos">http://www.hpe.com/servers/clearos</a>.

## One Config Simple (SCE)

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

#### Service and Support

#### HPE Support Services

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

## Connect your devices

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

#### 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 HPE servers.

https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

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

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

https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

#### Parts and Materials

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

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

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

#### **Related Services**

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

Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

#### **HPE Installation and Startup Service**

Provides for the installation and startup of Hewlett Packard Enterprise technology including BladeSystems,

#### Service and Support

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: http://www.hpe.com/services

### **Pre-configured Models**

For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

- 1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
- 2. Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
- 3. If you desire a custom configuration please see "Configuration Information Factory Integrated Models" section of this QuickSpecs.

**NOTE:** All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using HPE LFF Hard Drive Blank Kit (666986-B21).

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

**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.

		Entry Mode	ls	Base Models				
[SKU Number]	766342- B21	752686- B21	826681- B21	752688- B21	752687- B21	826682- B21	826683- B21	848774- B21
Model Name	ProLiant DL380 Gen9 E5- 2609v3 1P 8GB-R B140i 4LFF SATA 500W PS Entry Server	HPE ProLiant DL380 Gen9 E5- 2609v3 1P 8GB-R B140i 8SFF SATA 500W PS Entry Server	HPE ProLiant DL380 Gen9 E5- 2609v4 1P 8GB-R B140i 8SFF 500W PS Entry SATA Server	HPE ProLiant DL380 Gen9 E5-2620v3 2.4GHz 6- core 1P 16GB-R P840/4GB 12LFF 2x800W PS Base Server	HPE ProLiant DL380 Gen9 E5- 2620v3 1P 16GB- R P440ar 8SFF 500W PS Base Server	HPE ProLiant DL380 Gen9 E5- 2620v4 1P 16GB- R P440ar 8SFF 500W PS Base Server	HPE ProLiant DL380 Gen9 E5-2620v4 1P 16GB-R P440ar 12LFF 2x800W PS Base Server	HPE ProLiant DL380 Gen9 E5-2630v4 1P 16GB-R P440ar 8SFF 500W PS Base Server
Processor	Intel® Xeon® E5-2609v3		Intel <sup>®</sup> Xeon <sup>®</sup> E5-2620v3		Intel <sup>®</sup> Xeon <sup>®</sup> E5-2620v4		Intel® Xeon® E5-2630v4	
Number of Processors				(	One			
Memory	DIMMs, 2 NOTE: W 2609v3 th DIMM will d	B Registered (133 MHz) (ith the E5- his memory (only operate ()OMHz.	8GB (1x8GB Registered DIMMs, 2400 MHz) NOTE: With the E5-2609v4 this memory DIMM will only operate at 1866MHz.	16GB (1x16G DIMMs, 21 NOTE: Wit 2620v3 thi DIMM will onl 1866N	33 MHz) h the E5- s memory y operate at	16GB (1x16GB Registered DIMMs, 2400 MHz)  NOTE: With the E5- 2620v4 this memory DIMM will only operate at 2133MHz.		16GB (1x16GB Registered DIMMs, 2400 MHz) NOTE: With the E5- 2630v4 this memory DIMM will only operate at 2133MHz.

## **Pre-configured Models**

Network Controller	HPE Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HPE FlexibleLOM or stand u				up card	
Storage Controller	HPE Dynamic Smart Array B140i, plus optional HPE Flexible Smart Array or Smart HBA controller  NOTE: Default is AHCI off chipset, Smart Array needs to be enabled on SATA model.		HPE Flexible Smart Array P840/4G Controller	HPE Flexible Smart Array P440ar/2GB	HPE Flexible Smart Array P840ar/2G Controller	HPE Flexible Smart Array P440ar/2GB
Hard Drive	None ship standard		None ship standard; includes 10 LFF hard drive blanks	None ship standard		
Internal Storage	4 LFF HDD Bays	8 SFF HDD Bays (upgradable to 24)	12 LFF HDD Bays	8 SFF HDD Bays (upgradable to 24)	12 LFF HDD Bays	8 SFF HDD Bays (upgradable to 24)
Optical Drive Bay	Not Available	Optional Universal Media Bay (724865-B21)	Not Available	Optional Universal Media Bay (724865- B21)	Not Available	Optional Universal Media Bay (724865- B21)
Optical Drive	Optional via HPE Mobile USB DVDRW Drive (701498- B21)	Optional DVD-ROM (726536-B21) or DVD- RW (726537-B21) via the Universal Media Bay (724865-B21)	Optional via HPE Mobile USB DVDRW Drive (701498- B21)	Optional DVD-ROM (726536-B21) or DVD- RW (726537-B21) via the Universal Media Bay (724865-B21)	Optional via HPE Mobile USB DVDRW Drive (701498- B21)	Optional DVD-ROM (726536- B21) or DVD-RW (726537- B21) via the Universal Media Bay (724865- B21)
PCI-Express Slots		3 PCIe slots (+3 PCI slot	s available with (	upgrade option, second prod	cessor required)	·
Power Supply	(1) HPE 500W Flex Slot Platinum Power Supply		(2) HPE 800W Flex Slot Platinum Power Supply	(1) HPE 500W Flex Slot Platinum Power Supply	(2) HPE 800W Flex Slot Platinum Power Supply	(1) HPE 500W Flex Slot Platinum Power Supply
Fans	4 hot plug fans, redundant		6 hot plug high performance fans, redundant	4 hot plug fans, redundant	6 hot plug high performance fans, redundant	4 hot plug fans, redundant
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Co (optional), HPE OneView (optional)			ht Control		
Form Factor	Rack (2U), HPE Easy Install Rails		Rack (2U), HPE Easy Install Rails with CMA		Rack (2U), HPE Easy Install Rails	
Warranty	Server W	Varranty includes 3-Year Part	ts, 3-Year Labor,	3-Year Onsite support with	n next business c	lay response

## **Pre-configured Models**

	Performance Models		High Performance Models			
[SKU Number]	752689-B21	826684-B21	852432-B21	803860-B21 803861-B21		
Model Name	HPE ProLiant DL380 Gen9 E5- 2650v3 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W Perf Server	HPE ProLiant DL380 Gen9 E5- 2650v4 2P 32GB- R P440ar 8SFF 2x10Gb 2x800W Perf Server	HPE ProLiant DL380 Gen9 E5- 2660v4 2P 64GB- R P440ar 8SFF 2x10Gb 2x800W Perf Server	HPE ProLiant DL380 Gen9 E5- 2690v3 2P 32GB- R P440ar 8SFF 2x10Gb 2x800W High Perf Server	HPE ProLiant DL380 Gen9 E5- 2690v3 2P 32GB- R P440ar 8SFF 2x10Gb 2x800W OneView Server	
Processor	Intel® Xeon® E5- 2650v3	Intel® Xeon® E5- 2650v4	Intel® Xeon® E5- 2660v4	Intel® Xeon® E5-2690v3		
Number of Processors			Two			
Memory	32GB (2x16GB Registered DIMMs, 2133 MHz)	32GB (2x16GB Registered DIMMs, 2400 MHz)	64GB (4x16GB Registered DIMMs, 2400 MHz)	32GB (2x16GB Registered DIMMs, 213: MHz)		
Network Controller		ded 4x1Gb, plus FlexibleLOM	HPE Embedded 4x1Gb, plus 2x10Gb SFP+ FlexibleLOM	HPE Embedded 4x1Gb, plus 2x10Gb-T FlexibleLOM		
Storage Controller		HPE Flexible Smart Array P440ar/2GB				
Hard Drive			None ship standar	d		
Internal Storage	8 SFF HDD Bays (upgradable to 24)					
Optical Drive Bay	Optional Universal Media Bay		Universal Media B	Bay (724865-B21)		
Optical Drive		HPE Half-	Height SATA DVD-RV	V Optical Drive		
PCI-Express Slots	6 PCIe slots (includes second riser slot upgrade option)	6 PCle 3	3.0 slots	6 PCIe slots (includes second riser slot upgrade option)		
Power Supply		(2) HPE 80	00W Flex Slot Platinun	n Power Supply		
Fans			6 hot plug fans, redun	dant		
Management	(standard), HPE OneView (optional)  (standard), HPE OneView (optional)  (standard), Provisioni (standard), Advance (standard), OneView		iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (Standard)			
Energy Star		Me	ets Energy Star requir	ements		
Form Factor		Rack (2l	J), HPE Easy Install Ra	ils with CMA		
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response			n next business day		

**NOTE:** UEFI is the standard default for all Predefined models.

## **Smart Buy Models**

	E5-2600v4 Series Smart Buy Models				
[SKU Number]	859085-S01	859083-S01	850520-S01 850519-S01		
Model Name	HPE DL380 Gen9 E5- 2690v4 2P SFF US Svr/S-Buy	HPE DL380 Gen9 E5- 2660v4 2P SFF US Svr/S-Buy	HPE DL380 Gen9 E5- 2667v4 2P SFF US Svr/S-Buy	HPE DL380 Gen9 E5- 2650v4 2P SFF US Svr/S-Buy	
Processor	Intel® Xeon® E5-2690v4	Intel® Xeon® E5- 2660v4	Intel® Xeon® E5- 2667v4	Intel® Xeon® E5- 2650v4	
Number of Processors	Tv	VO	0	ne	
Memory	64GB (4x16GB Registe NOTE: DIMMs will opera proce	te at 2400MHz with this	32GB (2x16GB Registered DIMMs, 2400MHz)  NOTE: DIMMs will operate at 2400MHz with this processor.		
Network Controller		HPE Embedded 1Gb Ethernet 4-port 331i Adapter			
Storage Controller	HPE I	HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery			
Hard Drive	None ship standard				
Internal Storage	8 SFF SATA/SAS Bays				
Optical Drive Bay	None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Medi Bay (724865-B21)			1) via the Universal Media	
PCI-Express Slots	Six (6) PCle	Gen3 Slots	Three (3) PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required)		
Power Supply	Two (2) HPE 800W Flex Slot Platinum Power Supplies		Two (2) HPE 500W Flex Slot Platinum Power Supplies		
Fans	Six (6) Standard hot	plug fans, redundant	Four (4) Standard hot plug fans, redundant		
Management	Standard: iLO Advanced Optional: Insight Control, HPE OneView		Standard: iLO Management O Advanced, Insight Control, HPE OneView		
Form Factor		Rack (2U), HPE	Easy Install Rails		
Warranty	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response			ss day response	

	E5-2600v4 Series Smart Buy Models			
[SKU Number]	850518-S01	867450-S01	850517-S01	
Model Name	HPE DL380 Gen9 E5-2643v4 SFF US Svr/S-Buy	HPE DL380 Gen9 E5-2640v4 SFF US Svr/S-Buy	HPE DL380 Gen9 E5-2609v4 SAS US Svr/S-Buy	
Processor	Intel® Xeon® E5-2643v4	Intel® Xeon® E5-2640v4	Intel® Xeon® E5-2609v4	
Number of Processors		One		
Memory	32GB (2x16GB Registered DIMMs, 2400 MHz) NOTE: DIMMs will operate at 2400MHz with this processor	16GB (1x16GB Registered DIMMs, 2400 MHz) NOTE: DIMMs will operate at 2133MHz with this processor	8GB (1x8GB Registered DIMMs, 2400 MHz) NOTE: DIMMs will operate at 1866MHz with this processor	
Network Controller	HPE Em	nbedded 1Gb Ethernet 4-port 331i	Adapter	
Storage Controller	HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery  HPE H240ar Smart F  Adapter		HPE H240ar Smart Host Bus Adapter	
Hard Drive	None ship standard			
Internal Storage	8 SFF SATA/SAS Bays			
Optical Drive Bay	None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media			

## **Smart Buy Models**

	Bay (724865-B21)	
PCI-Express Slots	press Slots 3 PCle Gen3 slots (+3 PCle Gen3 slots available with upgrade option, second processor required)	
Power Supply	One (1) HPE 500W Flex Slot Platinum Power Supply	
Fans	Four (4) Standard hot plug fans, redundant	
Management	Standard: iLO Management	
	Optional: iLO Advanced, Insight Control, HPE OneView	
Form Factor	Factor Rack (2U), HPE Easy Install Rails	
Warranty	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response	

	E5-2600v4 Series Smart Buy Models			
[SKU Number]	867448-S01	859084-S01	867449-S01	
Model Name	HPE DL380 Gen9 E5-2620v4	HPE DL380 Gen9 E5-2620v4	HPE DL380 Gen9 E5-2620v4	
	SFF US Svr/S-Buy	24S US Svr/S-Buy	12LFF US Svr/S-Buy	
Processor Intel® Xeon® E5-2620v4				
Number of Processors		One		
Memory	16GB (1x16GB Registered	64GB (4x16GB Registered	16GB (1x16GB Registered	
	DIMMs, 2400 MHz)	DIMMs, 2400 MHz)	DIMMs, 2400 MHz)	
	NOTE: DIMMs will operate at	NOTE: DIMMs will operate at	<b>NOTE:</b> DIMMs will operate at	
	2133MHz with this processor	2133MHz with this processor	2133MHz with this processor	
Network Controller	HPE Em	bedded 1Gb Ethernet 4-port 331i	Adapter	
Storage Controller	HPE Flexible Smart Array	HPE Flexible Smart Array	HPE Flexible Smart Array	
	P440ar/2GB + Smart Storage	P440ar/2GB + Smart Storage	P840ar/2GB Controller + Smart	
	Battery	Battery + SAS Expander	Storage Battery	
Hard Drive		None ship standard		
Internal Storage	8 SFF SATA/SAS Bays	24 SFF SATA/SAS Bays	12 LFF SATA/SAS Bays	
Optical Drive Bay	None Included: Optional DVD-	None Included: Optional externa	HPE Mobile USB DVDRW Drive	
	ROM (726536-B21) or DVD-RW	(70149	8-B21)	
	(726537-B21) via the Universal			
	Media Bay (724865-B21)			
PCI-Express Slots	Three (3) PCIe Gen3 slots (+3	PCle Gen3 slots available with upg	rade option, second processor	
		required)		
Power Supply	One (1) HPE 500W Flex Slot	Two (2) HPE 800W Flex SI	ot Platinum Power Supplies	
,	Platinum Power Supply			
Fans	Four (4) Standard hot plug fans, redundant			
Management	Standard: iLO Management Engine			
	Optional: iLO Advanced, Insight Control, HPE OneView			
Form Factor		Rack (2U), HPE Easy Install Rails		
Warranty	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response			

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE 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)

Ears	HPE Quick Release Ears				
	rear	rear	rear		
USB	1 front, 2 internal, 2	1 front, 1 internal, 2	1 front, 2 internal, 2	No front U	SB support
Management	iLO Management (standard), Intelligent Provisioning (standard)				
Fans	4 hot plug fans, redundant	6 hot plug high p redur		4 hot plug fans, redundant	6 hot plug high performance fans, redundant
Network Controller	HPE Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HPE FlexibleLOM or stand up card	HPE Embedded 1Gb Ethernet 4- port 331i Adapter		Ethernet 4-port 331i Adapter, plus optional FlexibleLOM or stand up card	
Drive Cage	8SFF Hot Plug (+8SFF and Universal Media Bay Optional)	8SFF +6NVMe Hot Plug (+8SFF or Universal Media Bay Optional)	24SFF Hot Plug	4LFF Hot Plug	12LFF Hot Plug
PCle	3 PCIe slots (+3 PCI slots available with upgrade option, second processor required)			equired)	
Storage Controller	HPE Dynamic	Smart Array B140i, plu	plus optional HPE Flexible Smart Array or Smart HBA controller		
DIMM Slots		24 DIMM slots	for RDIMM, LRDIMM I	DDR4 Memory	
Processor		2 (optio	nal) x HPE Smart Sock	et Guide	
SKU Number	719064-B21	810393-B21	767032-B21	767033-B21	719061-B21
CTO Server	HPE ProLiant DL380 Gen9 8SFF Configure- to-order Server	HPE ProLiant DL380 Gen9 NVMe 6 Solid State Drive Express Bay Configure-to-order Server	HPE ProLiant DL380 Gen9 24SFF Configure- to-order Server	HPE ProLiant DL380 Gen9 4LFF Configure-to-order Server	HPE ProLiant DL380 Gen9 12LFF Configure-to-order Server

NOTE: With the NVMe CTO Server (810393-B21) there are limitations on GPU support.

NOTE: The NVMe CTO Server (810393-B21) ships with the standard x8 Risers supporting 6xNVMe drives.

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

**HPE Processors** E5-2600v4 series Processors

HP DL380 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) FIO Processor Kit 817941-L21 HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/10-core/25MB/55W) FIO Processor Kit 817931-L21

HPE DL380 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817939-L21
HPE DL380 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) FIO Processor Kit NOTE: Ships with a High Performance Heatsink.	817935-L21
HP DL380 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) FIO Processor Kit	817929-L21
HP DL380 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit	817927-L21
HP DL380 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit	817925-L21
HP DL380 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit	817923-L21
HPE DL380 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) FIO Processor	817957-L21
Kit	01/73/ LZI
NOTE: Ships with a High Performance Heatsink.	
<b>NOTE:</b> This processor is not supported in a 12LFF or 24LFF CTO Server + Rear drive.	
HPE DL380 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817967-L21
HPE DL380 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) FIO Processor Kit	817965-L21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817963-L21
HPE DL380 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) FIO Processor Kit	817955-L21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817961-L21
HPE DL380 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817959-L21
HPE DL380 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817953-L21
HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817951-L21
HPE DL380 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) FIO Processor Kit	817945-L21
HPE DL380 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit	817943-L21
HPE DL380 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit	817937-L21
HPE DL380 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	817947-L21
HPE DL380 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit	817933-L21
E5-2600v3 series Processors	
HP DL380 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit	719053-L21
HP DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit	719052-L21
HP DL380 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit	719051-L21
HP DL380 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit	779556-L21
HP DL380 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit	719050-L21
HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit	719060-L21
HP DL380 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) FIO Processor Kit NOTE: Ships with a High Performance Heatsink.	719058-L21
HP DL380 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	719049-L21
HP DL380 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) FIO Processor Kit	719057-L21
NOTE: Ships with a High Performance Heatsink.	
HP DL380 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit	719048-L21

HP DL380 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit	719059-L21
HP DL380 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit	762764-L21
HP DL380 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	719056-L21
HP DL380 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	719046-L21
HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	762766-L21
HP DL380 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	719055-L21
HP DL380 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	719044-L21
HP DL380 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	762760-L21
HP DL380 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	719054-L21
HP DL380 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	781913-L21
HP DL380 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit <b>NOTE:</b> Ships with a High Performance Heatsink.	781915-L21
HP DL380 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) FIO Processor Kit	762768-L21
NOTE: 2SEE rear drives are not supported with this processor in a 12LEE model	

NOTE: 2SFF rear drives are not supported with this processor in a 12LFF model.

NOTE: If two processors are desired, select one xxxxxx-L21 and one corresponding xxxxxx-B21.

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

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

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

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

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

#### **HPE Memory**

**NOTE:** Select one or more memory from below

**NOTE:** LRDIMM and RDIMM are 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. HP Smart Memory 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: <a href="http://www.hp.com/go/proliant-energy-efficient">http://www.hp.com/go/proliant-energy-efficient</a>.

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

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

HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-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
Load Reduced DIMMs (LRDIMMs) 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
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2400 CAS-20-18-18 Load Reduced Memory Kit	809208-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 Registered Memory Kit	759934-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15 Registered Memory Kit	726719-B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15 Registered Memory Kit	728629-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 Load Reduced Memory Kit	726720-B21
<b>NOTE:</b> Mixing of power supplies in the same server is not supported. All power supplies mus	t be of the

#### **HPE Power Supplies**

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: 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.

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

parallel.

HP 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21
HP 800W Flex Slot Platinum Hot Plug Power Supply Kit	720479-B21
HP 800W Flex Slot Titanium Hot Plug Power Supply Kit	720482-B21
<b>NOTE:</b> 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
<b>NOTE:</b> 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
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: The above power supply options are all 80Plus Platinum-certified with an efficiency rating of up to 94%. 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: Only 1 Battery Backup module per server, and a Flex Slot Power Supply needed in

# 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 Flexible Smart Array Controllers**

HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller	749974-B21
<b>NOTE:</b> Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.	

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

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

HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller	761872-B21
<b>NOTE:</b> Provides support for up to 8 internal SAS/SATA drives without using a PCle slot.	
NOTE: Includes the HP Smart Storage Battery.	

HP Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller

761874-B21

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

#### **HPE Cable Options**

HP DL380 Gen9 12LFF Rear 2SFF or 3LFF P840/440 SAS Cable Kit	783007-B21
HP DL380 Gen9 2SFF Front SAS x4 Cable Kit	783008-B21

**NOTE:** Required for front mount 2SFF to H240/P440ar, H240 or embedded B140i SATA controller.

HP DL380 Gen9 8SFF SAS Cable Kit	/83009-B21
NOTE: Required for 8/16/24 SFF models for use with P840/440 controllers.	

LID DI 700 C. O 2005 O. D. C. L. C. L. L. C.

HP DL380 Gen9 2SFF x8 Front Cable Kit 785989-B21

NOTE: Required for front/rear mount 2SFF to P440/840 PCIe controller.

HP DL380 Gen9 12LFF SAS Cable Kit 785991-B21

**NOTE:** Required for 12LFF models with P440/840 PCIe controllers.

HP DL380 Gen9 8SFF H240 Cable Kit 786092-B21

**NOTE:** Required for 8/16/24 SFF models for use with H240/P440ar, H240 PCIe or embedded B140i SATA controller.

HP DL380 Gen9 12LFF H240 SAS Cable Kit 786215-B21

**NOTE:** Required for 12LFF models with H240/P440ar, H240 or embedded B140i SATA

controller.

BIOS Mode HP Legacy FIO Mode Setting 758959-B22

**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 primary controller and RAID is desired.

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 Unique Options

HP 2SFF Front SPEC Perf FIO Mount 787945-B21

NOTE: May only be selected with 8SFF CTO Server and optical media cage kit and 2SFF

Drive cage option. When this option is selected, a primary controlleris not required for the

8SFF CTO Server.

**HPE Insight HPE Insight Control** 

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

License

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

Infrastructure HP OneView for ProLiant DL Server incl 3 yr 24x7 Supp FIO Bundle Physical 1 Svr Lic E5Y43A

Management HPE OneView Advanced (without HPE iLO Advanced)

**Software** HP OneView w/o iLO including 3yr 24x7 Support FIO 1 Server LTU P8B31A

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

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

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

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CPUs.

HP DL380 Gen9 Primary 2 Slot GPU Ready Riser Kit

HP DL380 Gen9 NVMe 6 Solid State Drive Express Bay Enablement Kit 774741-B21 **NOTE:** This option provides support for up to 6NVMe drives, and can only be populated in BAY2 in SFF models only, can be used with Bay1 and Bay 3 populated. NOTE: The HPE DL380 Gen9 High Performance Fan Kit is required for NVMe support (719079-B21). **NOTE:** The PCIe card in this enablement kit can only be populated in slot2 (primary) or slot 5 (secondary). **NOTE:** For true x16 support with this option a secondary riser (719073-B21) is needed (second processor required). NOTE: Kit includes Mylar film for Universal Media Bay (724865-B21) support to ensure optimal airflow. NOTE: For NVME CTO support, please use the NVME model (810393-B21), this kit is for field upgrades only. NOTE: There are limitations on GPU support with the NVMe bay installed. 724865-B21 HP DL380 Gen9 Universal Media Bay Kit NOTE: The HPE DL380 Gen9 Universal Media bay provides front VGA and 2xUSB 2.0: plus support for 2xSFF front drives (724864-B21) and ODD support (No. included); and can only be located in Bay1 in either an 8SFF or 8+8SFF model. HP DL380 Gen9 Graphics Enablement Kit 719082-B21 NOTE: This kit includes alternative 2 heatsinks plus6 cables to enable GPU support. Other limitations apply, see Graphic section for more details. **NOTE:** We support up to 2 Double wide and 3 single wide Graphics cards, limitations NOTE: Double Wide GPUs will occupy slots 2 and 5 and will leave only 2 slots left **NOTE:** There are limitations on GPU support with the NVMe bay installed. 719079-B21 HP DL380 Gen9 High Performance Fan Kit NOTE: This kit is required for specific Ambient temperature environments, more details here: http://www.hpe.com/servers/ashrae. **NOTE:** This kit is also required to support Passive GPUs. **NOTE:** This kit provides max cooling for your Server. HP DL380 Gen9 2SFF Front/Rear SAS/SATA Kit 724864-B21 NOTE: For 2SFF front the Universal Media Bay (724865-B21) is required. **NOTE:** 2SFF in the rear is only supported with a 24SFF (CTO Server or field upgraded) or 12LFF (719061-B21) model. NOTE: Rear drives will not support higher than 160W CPUs and other special/unique CPUs. HP DL380 Gen9 3LFF Rear SAS/SATA Kit 768856-B21 NOTE: This is only supported in the 12LFF model (CTO Server: 719061-B21 or Pre-Configured server models). **NOTE:** 3LFF rear drives will consume the 2nd riser expansion slot. NOTE: Rear drives will not support higher than 160W CPUs and other special/unique

719076-B21

**HPE Processors** 

Slot1: 1x Gen3 x16 FH/FL, 1xGen3 x8 FH/HL.	
NOTE: This replaces the standard Primary riser in slot1.	710077 001
HPE DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit Slot2: 2xGen3 x16 FH/FL, 1xGen3 x8 FH/HL.	719073-B21
HPE DL380 Gen9 8SFF Bay1 Cage/Backplane Kit	719067-B21
NOTE: To add an additional 8SFF drive cage in Bay1.	717007 BZ1
NOTE: To get to 16SFF total please populate bay 2 with 768857-B21 (from an 8SFF	
starting point).	
<b>NOTE:</b> This ships with 6 High Efficiency Fans. <b>NOTE:</b> Selecting this option does not allow you to select the Universal Media Bay.	
HP DL380 Gen9 Additional 8SFF Bay2 Cage/Backplane Kit	768857-B21
NOTE: To add an additional 8SFF drive cage in Bay 2. This is the optimal solution to apprade to 16SFF total and allows the flexibility to add the Universal Media Bay 724865-B21) for 2 additional SFF or Optical.	700037-021
HP 12Gb SAS Expander Card with Cables for DL380 Gen9	727250-B21
NOTE: SAS expander to enable 24SFF field upgrade.	
NOTE: Primary population in slot2 or 3 of the Primary Riser.	
HP DL380 Gen9 Systems Insight Display Kit	768900-B21
<b>NOTE:</b> The Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field upgrade option.	
HP DL380 Gen9 Rear Serial Port and Enablement Kit	768896-B21
HPE DL380 Gen9 P440ar/H240ar Riser 2 SAS Expander Kit	844115-B21
<b>NOTE:</b> Cable kit required to support the SAS Expander (727250-B21) in the secondary riser (719073-B21) with the P840ar or P440ar.	
E5-2600v4 series Processors	
HPE DL380 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) Processor Kit	817941-B21
HPE DL380 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) Processor Kit	817931-B21
HPE DL380 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit	817925-B21
NOTE: This processor does not support Hyper-Threading.	
HPE DL380 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit	817923-B21
NOTE: This processor does not support Hyper-Threading.	
HPE DL380 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) Processor Kit	817935-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) Processor Kit	817929-B21
HPE DL380 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit	817927-B21
HPE DL380 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) Processor Kit	817939-B21
HPE DL380 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) Processor Kit	817957-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) Processor	817967-B21
Kit	
NOTE: Ships with a High Performance Heatsink.	

HPE DL380 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) Processor Kit	817965-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) Processor Kit	817963-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) Processor Kit	817955-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Processor Kit	817961-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) Processor Kit	817959-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit	817953-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit	817951-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit	817945-B21
HPE DL380 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit	817943-B21
HPE DL380 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) Processor Kit	817937-B21
HPE DL380 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) Processor Kit	817947-B21
NOTE: Ships with a High Performance Heatsink.	0.40
HPE DL380 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit	817933-B21
HPE DL380 Gen9 Intel® Xeon® E5-2699Av4 (2.4GHz/22-core/55MB/145W) Processor Kit	871026-B21
E5-2600v3 series Processors	
HPE DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	719052-B21
NOTE: This processor does not support Hyper-Threading.	74.0057.504
HPE DL380 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	719053-B21
NOTE: This processor does not support Hyper-Threading.  HPE DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor	719060-B21
Kit	
HPE DL380 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit HPE DL380 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) Processor	719049-B21 719058-B21
Kit	/ 17UJO-DZI
NOTE: Ships with a High Performance Heatsink.	710050 024
HPE DL380 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit HPE DL380 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit	719050-B21 779556-B21
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HPE DL380 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit HPE DL380 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) Processor Kit	719051-B21 762768-B21
NOTE: Ships with a High Performance Heatsink.	
<b>NOTE:</b> This processor is not supported in a 12LFF or 24SFF models + Rear drive.	
HPE DL380 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) Processor Kit	781915-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) Processor Kit	781913-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) Processor Kit	719054-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) Processor Kit	762760-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) Processor Kit	719044-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) Processor Ki	t 719055-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit	762766-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit	719046-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	762764-B21
HPE DL380 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit	719059-B21
HPE DL380 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	719048-B21
HPE DL380 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) Processor Kit	719056-B21
NOTE: Ships with a High Performance Heatsink.	
HPE DL380 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) Processor Kit	719057-B21
NOTE: China with a High Dayformana Hastaink	

**NOTE:** Ships with a High Performance Heatsink. **NOTE:** Up to 2 processors supported. Performance and Energy Star Model configurations include two processors.

**NOTE:** HT indicates that the processor model supports Intel® Hyper-Threading Technology.

**NOTE:** Turbo2: Intel® Turbo Boost Technology 2.0 provides more computing power when you need it with performance that adapts to spikes in your workload and delivers more performance upside than then previous generation turbo technology.

**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:** The xxxxxx-B21 is the 2nd processor and ships with 2 additional FANs for factory of field installation

**NOTE:** Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU support please order the GPU enablement kit (719082-B21).

**NOTE:** Mixing of E5-2600v3 and E5-2600v4 Processors is not supported.

**NOTE:** Field upgrade from E5-2600v3 to E5-2600v4 is supported.

#### **HPE Memory**

#### Registered DIMMs (RDIMMs) for E5-2600v3 Series

**NOTE:** The following memory is supported by the E5-2600v3 series Processors.

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 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 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

NOTE: Depending on Processor selected this memory will run at 1600, 1866 or 2133MHz.

**NOTE:** Mixing of DIMM types is not supported.

**NOTE:** Mixing of 2133 and 2400MHz DIMMs is not supported.

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

**NOTE:** The following memory is supported by the E5-2600v3 series Processors.

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

NOTE: Depending on Processor selected this memory will run at 1600, 1866 or 2133MHz.

**NOTE:** Mixing of DIMM types is not supported.**NOTE:** Mixing of 2133 and 2400MHz DIMMs is not supported.

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

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

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
HPE 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

NOTE: Depending on Processor selected this memory will run at 1866, 2133 or 2400MHz.

**NOTE:** Mixing of DIMM types is not supported.

**NOTE:** Mixing of 2133 and 2400MHz DIMMs is not supported.

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

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

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805353-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805358-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2400 CAS-20-18-18 Load Reduced Memory Kit	809208-B21

NOTE: Depending on Processor selected this memory will run at 1866, 2133 or 2400MHz.

**NOTE:** These LRDIMMs do not support NVDIMMs.

**NOTE:** Mixing of DIMM types is not supported.

**NOTE:** Mixing of 2133 and 2400MHz DIMMs is not supported.

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

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

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

HPE 8GB NVDIMM Single Rank x4 DDR4-2133 Module

782692-B21

NOTE: NVDIMMs are only supported with E5-2600v4 processors, excluding field upgrades from E5-

2600v3 to E5-2600v4.

**HDD** 

NOTE: A maximum of 16 NVDIMMs supported.

NOTE: Can only be mixed with RDIMMs.

NOTE: Depending on Processor selected this memory will run at 2133MHz maximum.

HPE	<b>Optical Drives</b>	
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HPE 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
NOTE: The Universal Media Bay (724865-B21) is required for this option.	
HPE 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
NOTE: The Universal Media Bay (724865-B21) is required for this option.	
HPE Mobile USB Non Leaded System DVD RW Drive	701498-B21
NOTE: This is only supported on USB 3.0 ports.	

#### **HPE Drives**

SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives	
HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e HDD	791034-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	781518-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870765-B21
HPE 900GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	785069-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870763-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e HDD	748387-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD	759212-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in ) SC 3yr Wty HDD	781516-B21
HPE 450GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD	759210-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware	872475-B21

LIDE 700CD CAC 10C Fatavaria 1FK CFF (0.5) A CC 7 a West IDD	750200 D21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD	759208-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	785067-B21
SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765464-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	832514-B21
12G SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives	
HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SC 3yr Wty HDD	765424-B21
HPE 450GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD	737394-B21
HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD	737261-B21
12G SAS Hot Plug LFF (3.5-inch) SC Midline Hard Drives - 1yr Warranty	
HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857644-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861590-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819201-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846514-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861754-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818367-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861756-B21
HPE 3TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846528-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818365-B21
HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846524-B21
SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765455-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765453-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-B21
SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857648-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861594-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819203-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846510-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861750-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861678-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861752-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21

HPE 3TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	861693-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861676-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21
SSD Selection	
To streamline the configuration process for HPE ProLiant Gen9 servers and to provide the best product availability, HPE recommends SSDs from the list located here:	
http://www.hpe.com/products/recommend.	
12G SAS Mixed Use Hot Plug SFF (2.5-inch) Solid State Drives	
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873367-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872386-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873365-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872382-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822563-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873363-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872376-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822559-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873359-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872374-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD	822555-B21
12G SAS Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives	
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	870144-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872394-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875330-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872392-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875326-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872390-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875313-B21
HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875311-B21
12G SAS Hot Plug MU-3 SFF (3.5-inch) SC Solid State Drives	
HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872378-B21
12G SAS Hot Plug SFF (2.5-inch) Write Intensive Solid State Drives	
HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873357-B21
HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873355-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873351-B21

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

HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877764-B21
HPE 3.8TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868830-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877758-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868826-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	871770-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875513-B21
HPE 1.6TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869386-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877752-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869384-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868822-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875511-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD	871768-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877746-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869378-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868818-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875509-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877740-B21
HPE 240GB 6G SATA Read Intensive SFF (2.5-inch) SC DS SSD	868814-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869376-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875503-B21
HPE 150GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869374-B21
Read Intensive - 6G SATA - M.2 - Solid State Drives	
HPE 960GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875500-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875319-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875498-B21
HPE 150GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875317-B21

6G SATA Hot Plug SFF (2.5-inch) SC Write Intensive Solid State Drives	
HPE 1.6TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Digitally Signed Firmware SSD	872363-B21
HPE 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Digitally Signed Firmware SSD	872359-B21
HPE 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Digitally Signed Firmware SSD	872355-B21
6G SATA Hot Plug SFF (2.5-inch) SC Mixed Use Solid State Drives	
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877788-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872352-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875478-B21
HPE 1.6TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD	804631-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877782-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872348-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875474-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877776-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872344-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875470-B21
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	880295-B21
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875483-B21
Mixed Use - 6G SATA - M.2 - Solid State Drives	
HPE 960GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875492-B21
HPE 480GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875490-B21
HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875488-B21
6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives	
HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877760-B21
HPE 1.6TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	869388-B21
HPE 960GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877754-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877748-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	869380-B21
6G SATA Hot Plug LFF (3.5-inch) SC Write Intensive Solid State Drives	
HPE 1.6TB 6G SATA Write Intensive-2 LFF 2.5-in SC 3yr Wty Digitally Signed Firmware SSD	872365-B21
HPE 800GB 6G SATA Write Intensive-2 LFF 2.5-in SC 3yr Wty Digitally Signed Firmware SSD	872361-B21
HPE 400GB 6G SATA Write Intensive-2 LFF 2.5-in SC 3yr Wty Digitally Signed Firmware SSD	872357-B21
6G SATA Hot Plug LFF (3.5-inch) SC Mixed Use Solid State Drives	
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877790-B21
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875480-B21
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HPE 1.6TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD	804634-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware	877784-B21
SSD	
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875476-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872350-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875472-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872346-B21
HPE NVMe PCIe Read Intensive SFF (2.5 inch) Solid State Drives	
HPE 2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877986-B21
HPE 2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764908-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875591-B21
HPE 1.2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764906-B21
HPE 1TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877984-B21
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875589-B21
HPE 480GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875587-B21
HPE 400GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764904-B21
<b>NOTE:</b> With NVMe support only 1xDouble Wide Graphics card is supported.	
HPE NVMe PCIe Mixed Use SFF (2.5 inch) Solid State Drives	
HPE 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877998-B21
HPE 2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765044-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877994-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875597-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765038-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875595-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765036-B21
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875593-B21
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765034-B21
<b>NOTE:</b> With NVMe support only 1xDouble Wide Graphics card is supported.	
HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives	
HPE 2TB NVMe x4 Lanes Write Intensive SFF(2.5in) SCN 3yr Wty SSD	764894-B21
HPE 1.6TB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD	764892-B21
HPE 800GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD	736939-B21
HPE 400GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD	736936-B21
NOTE: The NVMe CTO Server (810393-B21) or the NVMe Express Bay Enablement	

kit (774741-B21) are required to support these drives.

NOTE: HPE has qualified the NVMe drive portfolio using the Operating System inbox

drivers, full detail on the **HPE Solid State Drive QuickSpecs**.

**NOTE:** With NVMe support only 1xDouble Wide Graphics card is supported.

#### M.2 SSD

HPE 340GB SATA 6G Read Intensive 3yr Wty Dual M.2 Kit	835565-B21
HPE 340GB SATA 6G Read Intensive 3yr Wty M.2 Kit	835563-B21
HPE Universal SATA HHHL 3yr Wty M.2 Kit	878783-B21

NOTE: M.2 drives go in PCIe slots and use B140i SATA controller only.

**NOTE:** M.2 supports Software RAID only.

**NOTE:** No HPE Flexible Smart Array supported.

#### **Hard Drive Blank Kits**

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

#### **Hard Drive Kits**

HP DL380 Gen9 NVMe 6 Solid State Drive Express Bay Enablement Kit 774741-B21

**NOTE:** This option provides support for up to 6NVMe drives, and can only be populated in BAY2 in SFF model only, can be used with Bay1 and Bay 3 populated. **NOTE:** The HPE DL380 Gen9 High Performance Fan Kit is required for NVMe support (719079-B21).

**NOTE:** The PCIe card in this enablement kit can only be populated in slot2 (primary) or slot 5 (secondary).

**NOTE:** For true x16 support with this option a secondary riser (719073-B21) is needed (second processor required).

**NOTE:** Kit includes Mylar film for Universal Media Bay (724865-B21) support to ensure optimal airflow.

HPE DL380 Gen9 8SFF Bay1 Cage/Backplane Kit	719067-B21
HP DL380 Gen9 Additional 8SFF Bay2 Cage/Backplane Kit	768857-B21
HP DL380 Gen9 2SFF Front/Rear SAS/SATA Kit	724864-B21
HP DL380 Gen9 3LFF Rear SAS/SATA Kit	768856-B21

**NOTE:** For a complete list of the drive, controller and cable options please check the compatibility matrix:

# https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA5-4154ENW&cc=us&lc=en

### **Media Bay Kits**

HP DL380 Gen9 Universal Media Bay Kit 724865-B21

**NOTE:** The Universal Media Bay offers front VGA and 2xUSB 2.0, plus ability to add optional Optical drive, and 2SFF.

**NOTE:** This is only compatible with the 8SFF or 8+8 SFF configurations and can only be populated in Bay1.

#### HPE Networking 1 Gig

#### 1 Gigabit Ethernet adapters

HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21

#### 10 Gigabit Ethernet adapters

HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21
HPE Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
HPE Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HPE Ethernet 10Gb 2-port 561T Adapter	716591-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21
HPE Ethernet 10Gb 2-port 570SFP+ Adapter	718904-B21

NOTE: The DL380 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:

### http://www.hpe.com/servers/ProLiantNICs.

HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter

HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

#### 25 Gigabit Ethernet adapters

HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter	817762-B21
HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21
FlexibleLOM Adapters	
HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21

HPE FlexFabric 10Gb 4-port 536FLR-T Adapter 764302-B21
HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter 779799-B21

HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter 727060-B21
HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter 665243-B21

HPE Ethernet 10Gb 2-port 561FLR-T Adapter 700699-B21

HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter 727054-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter 817749-B21

**NOTE:** The DL380 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 fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information:

# http://www.hpe.com/servers/ProLiantNICs

#### **HPE InfiniBand**

#### **NOTE:** The RHEL6.5 driver is not part of SPP, but may be downloaded here:

#### http://downloads.linux.hp.com/SDR/downloads/MLNX\_OFED/

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

700751-B21

794525-B21

**HPE I/O Expansion** 

**Options** 

Adapter HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter 872725-B21 HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter 825110-B21 HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter 825111-B21 HP DL380 Gen9 Primary 2 Slot GPU Ready Riser Kit 719076-B21 **NOTE:** This is for slot 1 and supports double wide GPGPUs. NOTE: For Graphics cards please also order the DL380 Gen9 Graphics Enablement kit, 719082-B21. Slot1: 1xGen3 x16 FH/FL, 1xGen3 x8 FH/HL. **NOTE:** Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU support please order the GPU enablement kit (719082-B21). HPE DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit 719073-B21 **NOTE:** This is for slot 2 and supports double wide GPGPUs. NOTE: For Graphics cards please also order the DL380 Gen9 Graphics Enablement kit, 719082-B21 Slot2: 2xGen3 x16 FH/FL, 1xGen3 x8 FH/HL. **NOTE:** Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU

# HPE Power Supplies

#### **HPE Flex Slot Platinum Hot-plug Power supplies** HPE 500W Flex Slot Platinum Hot Plug Power Supply Kit 720478-B21 **NOTE:** Flex Slot Platinum power supplies support power efficiency of up to 94%. HPE 800W Flex Slot Titanium Hot Plug Power Supply Kit 720482-B21 **NOTE:** Flex Slot Titanium power supplies support power efficiency of up to 96%. HPE 800W Flex Slot Platinum Hot Plug Power Supply Kit 720479-B21 **NOTE:** Flex Slot Platinum power supplies support power efficiency of up to 94%. 720484-B21 HPE 800W Flex Slot Universal Hot Plug Power Supply Kit NOTE: Flex Slot universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs. HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit 720480-B21 **NOTE:** Flex Slot -48VDC power supplies support power efficiency of up to 94%. HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit 720620-B21

**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: Flex Slot Platinum Plus power supplies support power efficiency of up to 94%.

**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.hpe.com/info/hppoweradvisor">http://www.hpe.com/info/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

### http://www.hpe.com/info/proliant/powersupply.

support please order the GPU enablement kit (719082-B21).

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

# HPE Computation and Graphics Accelerators

HP DL380 Gen9 Graphics Enablement Kit

719082-B21

**NOTE:** This GPU enablement kit includes 2 Heatsinks and 8 cables to enable double wide GPUs to be supported.

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card for cards over 150W. Cards 150W or under can used 800W Power Supplies; however check the power usage via the HPE Power Advisor Tool located at <a href="http://www.hpe.com/info/hppoweradvisor">http://www.hpe.com/info/hppoweradvisor</a>.

**NOTE:** There are limitations on the server model and processor supported when adding Graphics accelerators.

**NOTE:** Passive cards will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** We support up to 2 Double wide and 3 single wide Graphics cards, limitations apply.

**NOTE:** This kit support up to 2 double wide Graphics cards.

**NOTE:** Double Wide GPUs will occupy slots 2 and 5 and will leave only 2 slots left open.

**NOTE:** There are limitations on GPU support (1x double wide) with the NVMe bay installed.

**NOTE:** All Accelerators are restricted to less than 1024GB for system host memory, with the exception of the Tesla P100, AMD and Intel cards.

**NOTE:** This kit includes PCIe GPU Retention Brackets that need to be installed on the air baffle to support FL cards.

NOTE: Not required for M2000.

NVIDIA Tesla K40C 12GB Computational Accelerator

753960-B21

**NOTE:** This is supported in all server models.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1. **NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** Double-wide cards require the addition of the High Performance Fan Kit (719079-B21).

NOTE: Only supported with E5-2600v3 processors.

HP NVIDIA Tesla K80 Dual GPU PCIe Computational Accelerator

JOG95A

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** This card only runs at PCleGen2 speeds.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: PCIe accelerators are not supported in conjunction with this card.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-

**NOTE:** Max cooling setting required to support in RSBU.

**NOTE:** There are limitations operating this card with operative environment temperature limitations: 24SFF to 30°C and 12LFF to <25°C

HPE NVIDIA Tesla M4 4GB Computational Accelerator

**NOTE:** Maximum of 3 cards supported per server.

**NOTE:** This is supported in all server models.

P9U90A

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at

#### http://www.hpe.com/info/hppoweradvisor.

**NOTE:** No GPU enablement kit is required for this option.

**NOTE:** Only supported with E5-2600v4 processors.

NVIDIA Tesla M10 Quad GPU Module

Q0J62A

NOTE: This is supported in all server models, however with the following limitations:

4LFF supported to 35C, 8SFF supported to 35C, 12LFF supported to 30C,

16SFF+Universal Media bay supported to 35C, 16SFF+NVMe cage supported to 35C and 24SFF+2SFF supported to 35C.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** Double-wide cards require the addition of the High Performance Fan Kit (719079-B21).

NOTE: Only supported with E5-2600v4 processors.

HPE NVIDIA Tesla M40 24GB Computational Accelerator

P8Y46A

**NOTE:** Maximum 2 supported with both risers, support for 2 cards requires the 1400W Power Supply (720620-B21) to be selected.

**NOTE:** Double-wide cards require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** Only supported with E5-2600v4 processors.

**NOTE:** There are limitations operating this card with operative environment temperature limitations: 24SFF to 30°C and 12LFF to 25°C

HPE NVIDIA Tesla M60 Reverse Air Flow Dual GPU PCIe Graphics Accelerator

M3X67A

**NOTE:** Maximum 2 supported with both risers, support for 2 cards requires the 1400W Power Supply (720620-B21) to be selected.

**NOTE:** Double-wide cards require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card only runs at PCleGen2 speeds.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations operating this card with a 160W processor with operative environment temperature limitations: 8SFF to 35°C, 16 SFF to 25°C and 24SFF/12LFF to 20°C

**NOTE:** Additional Grid 2.0 Licensing from NVIDIA is required.

HPE NVIDIA Tesla P4 8GB Computational Accelerator

Q0V79A

**NOTE:** Maximum of 3 cards supported per server.

**NOTE:** This is supported in all server models.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2

(2nd processor required).

**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at

#### http://www.hpe.com/info/hppoweradvisor.

**NOTE:** No GPU enablement kit is required for this option.

NOTE: Only supported with E5-2600v4 processors.

HPE NVIDIA Tesla P40 24GB Computational Accelerator

Q0V80A

**NOTE:** There are server model limitations with this card: 4LFF supported to 35C, 8SFF supported to 35C, 12LFF supported to 25C, 16SFF+Universal Media bay supported to 30C, 16SFF+NVMe cage supported to 30C and 24SFF+2SFF supported to 30C.

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations on the server models and processor supported when adding Graphics accelerators.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card is supported on the E5-2600v4 series processors only.

HPE NVIDIA Tesla P100 PCIe 16GB Computational Accelerator

Q0E21A

**NOTE:** There are server model limitations with this card: 4LFF supported to 25C, 8SFF supported to 30C, 12LFF not supported, 16SFF+Universal Media bay supported to 30C, 16SFF+NVMe cage supported to 30C and 24SFF+2SFF supported to 20C. **NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations on the server models and processor supported when adding Graphics accelerators.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card is supported on the E5-2600v4 series processors only.

HPE NVIDIA Tesla P100 PCIe 12GB Computational Accelerator

Q2S42A

**NOTE:** There are chassis limitations with this card: 4LFF supported to 25C, 8SFF supported to 30C, 12LFF not supported, 16SFF+Universal Media bay supported to 30C, 16SFF+NVMe cage supported to 30C and 24SFF+2SFF supported to 20C.

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations on the server models and processor supported when adding Graphics accelerators.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card is supported on the E5-2600v4 series processors only.

HPE NVIDIA Quadro P6000 Graphics Accelerator

Q0V76A

**NOTE:** There are server model limitations with this card: 4LFF supported to 25C, 8SFF supported to 30C, 12LFF not supported, 16SFF+Universal Media bay supported to 30C, 16SFF+NVMe cage supported to 20C and 24SFF+2SFF supported to 20C. **NOTE:** For doublewide GPU support you are required to have at least 1x1400W

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1. **NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations on the server models and processor supported when adding Graphics accelerators.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card is supported on the E5-2600v4 series processors only.

HPE NVIDIA Quadro M2000 Graphics Accelerator

P8Y48A

**NOTE:** Maximum of 3 cards supported per server.

**NOTE:** This is supported in all server models.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1. **NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** Only supported with E5-2600v4 processors.

**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at

#### http://www.hpe.com/info/hppoweradvisor.

**NOTE:** No GPU enablement kit is required for this option.

HPE NVIDIA Quadro M4000 Graphics Accelerator

M9X58A

NOTE: Only supported with E5-2600v4 processors.

**NOTE:** This is supported in all server models.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1. **NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at

### http://www.hpe.com/info/hppoweradvisor.

HP NVIDIA Quadro M5000 Graphics Accelerator

M9R60A

**NOTE:** Only supported with E5-2600v4 processors.

**NOTE:** This is supported in all server models.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at

#### http://www.hpe.com/info/hppoweradvisor.

**NOTE:** Double-wide cards require the addition of the High Performance Fan Kit (719079-B21).

HPE NVIDIA Quadro M6000 24GB Graphics Accelerator

P8Y47A

**NOTE:** Maximum 2 supported with both risers, support for 2 cards requires the 1400W Power Supply (720620-B21) to be selected.

NOTE: Double-wide cards require the addition of the High Performance Fan Kit

(719079-B21).

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1. **NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2

(2nd processor required).

**NOTE:** Only supported with E5-2600v4 processors.

HP AMD FirePro S9150 Accelerator Kit

JOH11A

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1. **NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations on the server models and processor supported when adding Graphics accelerators.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card is supported on the E5-2600v3 series processors only.

**NOTE:** 12LFF support is restricted to 30C Server Ambient only.

HPE AMD FirePro S7150x2 Accelerator Kit

M3X68A

**NOTE:** For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.

**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

**NOTE:** There are limitations on the server models and processor supported when adding Graphics accelerators.

**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).

**NOTE:** This card is supported on the E5-2600v4 series processors only.

**NOTE:** This card only runs at PCleGen2 speeds.

**NOTE:** There are limitations operating this card with operative environment temperature limitations: 12LFF to 30°C

HPE 150W PCI-E Power Cable Kit

669777-B21

NOTE: This cable is required for the K1, K4200, K5200, M5000 and W7100 cards.

**NOTE:** Each DL380 Gen9 server will accommodate up to three single-width or two double width PCIe cards for Computational Graphics support. Note that 11.25" is the max length for a card to also allow for cabling. This applies to primary slots 1 & 2 or secondary slots 4 & 5.

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

**NOTE:** There are limitations on fan types, setting, and server model support by card.

**NOTE:** Mixing of GPUs is not supported.

**NOTE:** All NVIDIA, Intel and AMD cards limit configurations to having less than 1TB memory installed.

**NOTE:** Double Wide GPUs will occupy slots 2 and 5 and will leave only 2 slots left open.

**NOTE:** There are limitations on GPU support with the NVMe bay installed.

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# HPE Cooling Options

HP DL380 Gen9 High Performance Fan Kit

719079-B21

**NOTE:** High Performance Fan kit consists of 6 fans, these will need to replace all the standard Fans in the unit, and fill all 6-Fan cages.

 $\textbf{NOTE:} \ \text{The 12LFF and 24SFF server models (including field upgrades to 24SFF) will}$ 

already include 6 High Performance Fan kits.

**NOTE:** The High Performance Fan Kit is needed to support certain Passive GPGPU (Graphics cards) configurations; or ASHRAE operating environments.

**NOTE:** For elevated ambient temperature support please see:

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

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

HPE Insight Software	HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU HPE Insight Control including 1yr 24x7 TSU E-LTU HPE Insight Control Upgrade from iLO Advanced including 1yr 24x7 Support E-LTU NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key. NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HPE Software Technical Support and Update Service. NOTE: Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: https://www.hpe.com/info/insightmanagement. NOTE: For additional license options please see the HPE Insight Control QuickSpecs. NOTE: For additional license options please see the QuickSpecs at: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123391	C6N27A C6N28ABE C6N38ABE
Embedded Management	HPE iLO Advanced  HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU  HPE iLO Advanced including 3yr 24x7 Technical Support and Updates 1-server LTU  HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU  HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	512485-B21 BD505A E6U59ABE E6U64ABE
HPE Converged Infrastructure Management Software	HPE OneView Advanced (with HPE iLO Advanced)  HPE OneView including 3yr 24x7 Support Physical 1-server LTU  HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU  HPE OneView Advanced (without HPE iLO Advanced)  HPE OneView Advanced (without HPE iLO Advanced)  HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU  HPE OneView Physical Media Kit LTU  HPE OneView Physical Media Kit LTU  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.hpe.com/info/hpeoneview.	E5Y34A E5Y35AAE P8B24A P8B26AAE E5Y37A
High Performance Clusters	HPE Cluster Management Utility  HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU	QL803B

HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU

**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).

BD476A

Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.

HPE Insight Cluster Management Utility Media

BD477A

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

**Utility QuickSpecs.** 

#### HPE PCIe Workload Accelerator Options

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

**Accelerator Options** HPE 5.2TB FH/HL Light Endurance (LE) PCle Workload Accelerator 775672-B21

NVME PCIe Workload Accelerators	
HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator	831739-B21
HPE 6.4TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877829-B21
HPE 4TB PCIe x4 RI HH DS Card	877831-B21
HPE 3.2TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831737-B21
HPE 3.2TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877827-B21
HPE 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803204-B21
HPE 1.6TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831735-B21
HPE 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803197-B21
HPE 1.6TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877825-B21
HPE 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803202-B21
HPE 1.3TB Read Intensive-2 HH/HL PCIe Workload Accelerator	831733-B21
HPE 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803195-B21
HPE 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803200-B21

#### **HPE Security**

HPE 2U Security Bezel Kit

666988-B21

HPE Trusted Platform Module 2.0 Kit

745823-B21

**NOTE:** If the TPM Module (488069-B21) is installed, then there is no support for TPM 2.0.

**NOTE:** This is supported on both the E5-2600v3 and E5-2600v4 processors.

**NOTE:** HPE Trusted Platform Module 2.0 Option works with Gen9 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.

**NOTE:** HPE Gen9 servers purchased earlier may need the latest firmware update to be compatible with the TPM 2.0 Option.

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

HPE Trusted Platform Module Option

488069-B21

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

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

#### HPE Storage Controllers

#### **SAS Controllers**

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

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

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

**NOTE:** Includes the HPE Smart Storage Battery.

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

843199-B21

NOTE: Provides support for up to 16 internal SAS/SATA drives without using a PCle **NOTE:** Includes the HPE Smart Storage Battery. **HPE Smart Array Controllers** HPE Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller 726821-B21 NOTE: Provides support for up to 8 internal SAS/SATA drives. HPE Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller 726897-B21 HPE Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller 726903-B21 HPE Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller 726825-B21 **HPE Smart Host Bus Adapters** HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter 726911-B21 HPE H240 12Gb 2-ports Int Smart Host Bus Adapter 726907-B21 726757-B21 HPE H240ar 12Gb 2-ports Int Smart Host Bus Adapter NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCle slot. **HPE Cable Options** HP DL380 Gen9 12LFF Rear 2SFF or 3LFF P840/440 SAS Cable Kit 783007-B21 NOTE: 12LFF port 3 to 2SFF or 3LFF to P440/840 PCle. HP DL380 Gen9 2SFF Front SAS x4 Cable Kit 783008-B21 NOTE: For front mount 2SFF to H240/P440ar, H240 or embedded B140i SATA. HP DL380 Gen9 8SFF SAS Cable Kit 783009-B21 NOTE: 8/16/24 SFF to P840/440 bay 3. HP DL380 Gen9 2SFF x8 Front Cable Kit 785989-B21 NOTE: For front/rear mount 2SFF to P440/840 PCle). HP DL380 Gen9 12LFF SAS Cable Kit 785991-B21 NOTE: For 12LFF to P440/840 PCIe cables- ports 1/2/3. HPE DL380 SFF Smart Array HBA H200/P400 Series SAS Cable Kit 786092-B21 NOTE: 8/16/24SFF to 240/440ar, H240 PCIe or embedded B140i SATA. HP DL380 Gen9 12LFF Smart HBA H240 SAS Cable Kit 786215-B21 NOTE: For 12LFF ports 1&2 to H240/P440ar, H240 or embedded B140i SATA. **NOTE:** For details on cabling options, additional information available here: Cabling Matrix **Optional Software** HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Q2F26AAE Entitlement) E-LTU HPE Smart Array SR SmartCache (Single Key/Single Server) LTU D7S26A HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU D7S27A HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU D7S27AAE **NOTE:** HPE SmartCache is supported when one of the supported Smart Array Controllers is installed in the server. NOTE: HPE SmartCache comes standard (no licensing is required) if the HPE Smart Array P840 Controller is installed in the server. **Optional Upgrades** HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers 727258-B21 NOTE: Provides backup power for multiple HPE Smart Array controllers or other

devices (up to 16).

**NOTE:** Ships as standard with some HPE Flexible Smart Array Controllers.

#### **HPE Tape Backup**

**NOTE:** For the complete range of tape drives, autoloaders, libraries and media see:

http://www.hpe.com/storage/storeever. For hardware and software compatibility of Hewlett Packard

Enterprise tape backup products <a href="http://www.hpe.com/storage/BURAcompatibility">http://www.hpe.com/storage/BURAcompatibility</a>.

#### **Tape Drives**

HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader	COH19A
HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit	COL99A
HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit	EJ014B
HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
HPE StoreEver LTO-4 Ultrium 1760 SAS (1) in a 1U Rack Mount Kit	EH946C
HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HPE StoreEver 1U SAS Rack Mount Kit	AE459B
HPE Tape Storage Systems	

#### HPE Tape Storage Systems

#### **HPE StoreEver MSL6480**

HPE StoreEver MSL6480 Scaleable Expansion Module QU626A

# NOTE: Please see the HPE StoreEver MSL6480 Tape Library QuickSpecs for

Technical Specifications and additional information).

HPE StoreEver MSL6480 Scalable Base Module

HPE StoreEver MSL2024 O-drive Tape Library	AK379A
HPE StoreEver MSL4048 0-drive Tape Library	AK381A

#### **HPE Disk Backup**

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

· ·	
HPE RDX 4TB USB 3.0 External Disk Backup System	Q2R33A
HPE RDX+ 3TB USB 3.0 External Disk Backup System	P9L72A
HPE RDX 3TB USB 3.0 Internal Disk Backup System	P9L71A
HPE RDX 2TB USB3.0 External Disk Backup System	E7X53B
HP RDX+ 1TB External Backup System	B7B69B
HP RDX+ 500GB External Backup System	B7B66B
HPE RDX+ External Docking System	C8S07B
HPE D3700 Enclosure	QW967A
HPE D3600 Enclosure	QW968A

**NOTE:** For the complete range of RDX drives and media see:

https://www.hpe.com/us/en/product-catalog/storage/disk-based-backup-

systems.html. For hardware and software compatibility of Hewlett Packard

Enterprise disk backup products see: <a href="http://www.hpe.com/storage/spock">http://www.hpe.com/storage/spock</a>.

QU625A

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**NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see: <a href="https://www.hpe.com/us/en/product-catalog/storage/storage-adapters.html">https://www.hpe.com/us/en/product-catalog/storage/storage-adapters.html</a>.

# Emulex Fibre Channel HBAs

Zindick Fibre Chainer Fibres	
HPE 81E 8Gb 1-port PCle Fibre Channel Host Bus Adapter	AJ762B
HPE 82E 8Gb 2-port PCle Fibre Channel Host Bus Adapter	AJ763B
HPE StoreFabric 84E 4-port 8Gb Fibre Channel Host Bus Adapter	E7Y63A
HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	Q0L11A
HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	Q0L12A
HPE StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
HPE StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A
HPE StoreFabric SN1100E 4-port 16Gb Fibre Channel Host Bus Adapter	P9D99A
QLogic Fibre Channel HBAs	
HPE 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A
HPE 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
HPE StoreFabric 84Q 4-port 8Gb Fibre Channel Host Bus Adapter	P9D91A
HPE StoreFabric SN1000Q 16GB 1-port PCle Fibre Channel Host Bus Adapter	QW971A
HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE StoreFabric SN1000Q 16GB 2-port PCle Fibre Channel Host Bus Adapter	QW972A
HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
Converged Network Adapter	
HPE StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter	N3U52A
HPE StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A

### HPE Data Center Racks

### **HPE Advanced Series Racks**

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

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

HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter

N3U51A

HPE Power
Distribution Units

(PDUs)

# **Additional Options**

HPE Enterprise Series Racks	
HP 47U 600mm x 1075mm Enterprise Pallet Rack	BW911A
HP 47U 600mm x 1075mm Enterprise Shock Rack	BW912A
HP 47U 600mm x 1200mm Enterprise Pallet Rack	BW913A
HP 47U 600mm x 1200mm Enterprise Shock Rack	BW914A
HPE 42U 600mm x 1075mm Enterprise Pallet Rack	BW903A
HP 42U 600mm x 1075mm Enterprise Shock Rack	BW904A
HP 42U 600mm x 1200mm Enterprise Pallet Rack	BW907A
HP 42U 600mm x 1200mm Enterprise Shock Rack	BW908A
HP 42U 800mm x 1075mm Enterprise Pallet Rack	BW917A
HP 42U 800mm x 1075mm Enterprise Shock Rack	BW918A
NOTE: Please see the HPE Enterprise Series Racks QuickSpecs for information	
on additional racks options and rack specifications.	
HPE Basic Power Distribution Units (PDU)	
HPE 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
NOTE: Please see the HPE Basic Power Distribution Units (PDU) QuickSpecs	
for information on additional options and product specifications.	
HPE Metered Power Distribution Units (PDU)	
HPE Metered 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 (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 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	D9N53A
HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N58A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU	D9N61A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N62A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3) C19/Vertical NA/JP PDU	D9N54A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N59A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	G9Z07A
HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical NA PDU	D9N63A
HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A
NOTE: Please see the HPE Metered Power Distribution Units (PDU) QuickSpecs	
for information on additional options and product specifications.	
HPE Intelligent Power Distribution Unit (PDU)	
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP	AF520A

PDU	
HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A
HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU	AF523A
HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6) C19/Horizontal NA/JP PDU	AF901A
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU	AF535A
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF531A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF532A
HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF533A
HPE 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A
NOTE: Please see the HPE Intelligent Power Distribution Unit (PDU) QuickSpecs for	
information on additional options and product specifications.	
HPE Metered and Switched Power Distribution Units (PDU)	
HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU	H8B48A
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/L21-30P 24A/208V Outlets (20)C13 (3)C19 (1)5-20R/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 HPE Metered and Switched Power Distribution Units (PDU)	
QuickSpecs for information on additional options and product specifications.	
NOTE: To learn more, please visit the HPE Uninterruptible Power Systems (UPS)	
web page.	

HPE Rack Mount Consoles, KVM Switches, and Keyboards

### **HPE Location Discovery Services**

HPE 42U Location Discovery Kit

HPE 47U Location Discovery Kit

HP DL380 Gen9 Location Discovery Services Ear Kit

HPE Location Discovery Services LCD8500 Kit

TL052A

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

**HPE Rack Mount Consoles** 

HP LCD8500 1U US Rackmount Console Kit	AF630A
HP LCD8500 1U 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

# HPE USB Keyboard and Mouse

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

HPE USB US Keyboard/Mouse Kit

631341-B21

#### **Rail Kits**

**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 DL380 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 (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.

HP 2U Small Form Factor Easy Install Rail Kit	733660-B21
NOTE: Does not include CMA (733664-B21).	
HP 2U Large Form Factor Easy Install Rail Kit	733662-B21
NOTE: Does not include CMA (733664-B21).	
HP 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
HPE 2U Small Form Factor Ball Bearing Rail Kit	720863-B21
NOTE: Does not include CMA (720865-B21).	
HPE 2U Large Form Factor Ball Bearing Rail Kit	720864-B21
NOTE: Does not include CMA (720865-B21).	
HPE 2U Cable Management Arm for Ball Bearing Rail Kit	720865-B21
HPE Other Options	
HPE Rack LED Light Kit	BW939A

HPE Uninterruptible HPE DirectFlow Three Phase UPS Power Systems Power Unit (1U UPS)

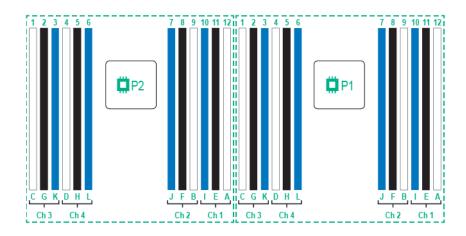
HP Kit LCD 1.83m Latch Display Port Cable

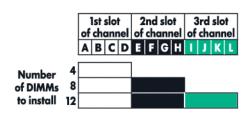
G7T29A

4170		COV/75 A
(UPS)	HPE R12000 DirectFlow - 1U Rackmount Uninterruptible Power System  HPE R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	G9Y75A AF478A
	Input/Output Module Options for 1U UPS	AF470A
	HPE 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output	AF489A
	Module	AF489A
	HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
	HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
	HPE 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	G9Y76A
	HPE DirectFlow UPS Management Card	AF493A
	Power Unit (2U UPS)	
	HPE R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	Input/Output Module Options for 2U UPS	
	HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF486A
	HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF487A
	HPE 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	D9Q02A
	HPE 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module	AF484A
	NOTE: All Input/Output Modules support dual output outlets except the AF484A.	
	Battery Pack Options	
	HPE DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack	AF480A
	HPE DirectFlow UPS - 3U Rackmount VRLA Battery Pack	AF482A
	HPE WW DirectFlow Secondary Battery Cable	AF497A
	NOTE: Please see the HPE DirectFlow Three Phase Uninterruptible Power System	
	<b>QuickSpecs</b> for information on additional options and product specifications.	
	HPE Tower UPS	
	HPE T750 G4 UPS Models	
	HPE T750 G4 NA/JP Uninterruptible Power System	J2P85A
	HPE T1000 G4 UPS Models	
	HPE T1000 G4 NA/JP Uninterruptible Power System	J2P86A
	HPE T1500 G4 UPS Models	
	HPE T1500 G4 NA/JP Uninterruptible Power System	J2P87A
	HPE Rack-mountable UPS	
	HPE R/T2200 G4 UPS Models	
	HPE R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A
	HPE R/T3000 G4 UPS Models	
	HPE R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
	HPE R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A

	R1500 G4 Models	
	HPE R1500 G4 NA Uninterruptible Power System	J2Q99A
	R7000 Uninterruptible Power System (UPS)	
	HPE R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
	R5000 Uninterruptible Power System (UPS)	
	HPE 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	
	HPE R/T2200 G4 Extended Runtime Module	J2R09A
	HPE R/T3000 G4 Extended Runtime Module	J2R10A
	HPE 2U Rack/Tower UPS Shipping Kit	L4Q11A
	NOTE: To learn more, please visit the HPE Uninterruptible Power Systems (UPS)	
	web page.	
HPE USB and SD	HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
Options	HPE 32GB microSD Mainstream Flash Media Kit	700139-B21
	HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HPE Dual 8GB microSD Enterprise Midline USB Kit	741279-B21
HPE Support	Installation & Start-up Services	
Services	HPE Install ProLiant DL38x(p) Service	U4554E
	HPE Installation and Startup DL38x(p) Service	U4555E
	Proactive Care	0.0002
	HPE 3 year Proactive Care 24x7 DL380 Gen9 w/IC Service	U5HW1E
	HPE 3 year Proactive Care 24x7 with DMR DL380 Gen9 w/IC Service	U5HW2E
	HPE 3 year Proactive Care 24x7 with CDMR DL380 Gen9 w/IC Service	U5HW3E
	HPE 3 year Proactive Care Call to Repair DL380 Gen9 w/IC Service	U5HX0E
	HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL380 Gen9 w/IC Service	U5HX1E
	HPE 3 year Proactive Care Call to Repair with CDMR DL380 Gen9 w/IC Service	U5HX2E
	HPE 3 year Proactive Care 24x7 DL380 Gen9 Service	U7AE8E
	HPE 3 year Proactive Care 24x7 with DMR DL380 Gen9 Service	U7AE9E
	HPE 3 year Proactive Care 24x7 with CDMR DL380 Gen9 Service	U7AF0E
	HPE 3 year Proactive Care Call to Repair DL380 Gen9 Service	U7AF4E
	HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL380 Gen9 Service	U7AF5E
	HPE 3 year Proactive Care Call to Repair with CDMR DL380 Gen9 Service	U7AF6E

# Memory Population guidelines





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

- . White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- . A minimum of one DIMM is required per server.
- . Install DIMMs only if the corresponding processor is installed.
- . If only one processor is installed in a two processor system, only half of the DIMM slots are available.
- . To maximize performance, it is recommended to balance the total memory capacity between all installed processors and to load the channels similarly whenever possible.
- . 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.
- . LRDIMMs are supported up to 3 DIMMs per channel.
- . DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- . The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- . The maximum memory capacity is a function of the memory type and number of installed processors.
- . HPE memory from previous generation servers is not compatible with the DL380 Gen9 Server. Certain HPE SmartMemory features such as memory authentication and enhanced performance may not be supported.
- . To realize the performance memory capabilities listed in this document, HPE SmartMemory is required. For additional information, please see the HPE SmartMemory QuickSpecs at:

#### https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111535

. For memory population rules and additional memory guidelines, please see the DL380 Gen9 user guide at http://www.hpe.com/support.

- . There are four (4) Memory channels per processor; eight (8) channels per 2 processor server.
- . There are three (3) DIMM slots for each memory channel; twenty four (24) total slots for 2 processor server.
- . Memory channels1 and 3 consists of the three (3) DIMMs that are furthest from the processor.
- . Memory channel 2 and 4 consists of the three (3) DIMMs that are closest to the processor.

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

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

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

Memory Bandwidth and Capacity							
[DIMM Type]	F	Registered DII	MMs (RDIMMs	)	Load F	Reduced (LRD	IMMs)
HPE SKU P/N	805347-B21	805349-B21	836220-B21	805351-B21	805353-B21	805358-B21	809208-B21
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank	Octal Rank

				1	1	1	
DIMM Capacity	8GB	16GB	16GB	32GB	32GB	64GB	128GB
Voltage	Std Voltage 1.2V						
DRAM Depth [bit]	1G	2G	1G	2G	2G	2G	2G
DRAM Width [bit]	х8	x4	x4	x4	x4	x4	x4
DRAM Density	8Gb	8Gb	4Gb	8Gb	8Gb	8Gb	8Gb
CAS Latency	17-17-17	17-17-17	17-17-17	17-17-17	17-17-17	17-17-17	20-18-18
DIMM Native Speed (MT/s)	2400	2400	2400	2400	2400	2400	2400
SLOTS THAT CAN BE POPULATED							
24 slot servers	24	24	24	24	24	24	24
MAXIMUM CAPACITY (GB)							
	192	384	384	768	768	1536	3072
POPULATED DIMM SPEED (MT/s)							
1 DIMM Per Channel	2400	2400	2400	2400	2400	2400	2400
2 DIMM Per Channel	2133	2133	2400	2400	2400	2400	2400
3 DIMM Per Channel	1866	1866	1866	1866	2400	2400	2400

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

# Memory Speed by Processor Model

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

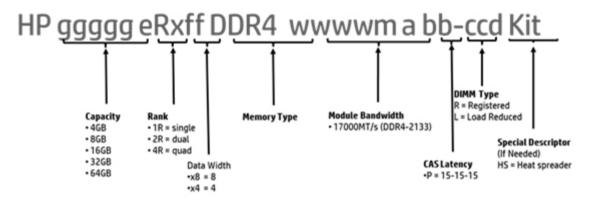
Standard and Maximum Memory Capacity (Preconfigured Models)

Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
E5-2690v3, E5-2650v3	32GB (2x16GB)	736GB (22x32GB, 2x16GB)	1536GB (24x64GB)
E5-2660v4	64GB (4x16GB)	704GB (20x32GB, 4x16GB)	3072GB (24x128GB)
E5-2650v4	32GB (2x16GB)	736GB (22x32GB, 2x16GB)	3072GB (24x128GB)
E5-2630v4, E5-2620v4	16GB (1x16GB)	752GB (23x32GB, 1x16GB)	3072GB (24x128GB)
E5-2620v3	16GB (1x16GB)	752GB (23x32GB, 1x16GB)	1536GB (24x64GB)
E5-2609v4	8GB (1x8GB)	744GB (23x32GB, 1x8GB)	3072GB (24x128GB)
E5-2609v3	8GB (1x8GB)	744GB (23x32GB, 1x8GB)	1536GB (24x64GB)

#### DDR4 memory options part number decoder

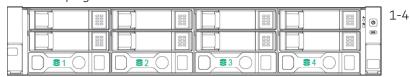
NOTE: Capacity references are rounded to the common gigabyte (GB) values.

- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB
- 128GB = 13,072MB



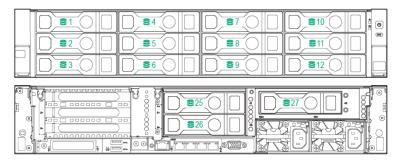
# **Storage**

#### 4 LFF hot-plug drive model



4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

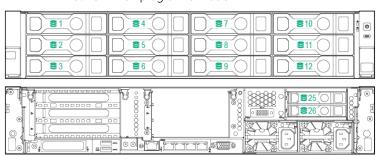
#### 12 LFF + 3 rear LFF hot-plug drive model



1-12 12 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

25-27 3 x LFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays

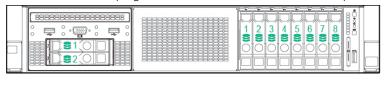
### 12 LFF + 2 rear SFF hot-plug drive model



1-12 12 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays

25-26 2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays

#### 8 SFF (+2 SFF) hot-plug drive model with Universal Media Bay



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

1-8

1-2

2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

#### 16 SFF (+2 SFF) hot-plug drive model with Universal Media Bay

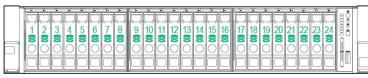


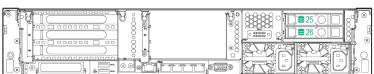
16 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays

2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

# Storage

24 SFF + rear 2 SFF hot-plug drive model





- 1-24 24 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays
- 25-26 2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays

**NOTE:** Drives behind the SAS expander will be labeled continuous, drives behind a controller will be numbered 1-8. **NOTE:** With a SAS Expander and rear drive support the 2SFF rear will be labeled 25 & 26, for 3LFF they will be numbered 25-27.

(at 240 VAC) for China Only For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/h (at 240 VAC) for China Only  Power Supply Output (per power supply) Rated Steady-State Power Power For 1400W Power Supply: 1400W (at 240 VAC) For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 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 Maximum Peak Power For 1400W Power Supply: 1400W (at 200 to 240 VAC) input for China on For 800W Power Supply: 800W (at 100 to 127 VAC), 1400W (at 200 to 240 VAC), 800W (at 240 VAC), 500W (at 240 VAC),				
Minimum:   32.6 lb (14.759 kg)   Minimum:   (Minimum - 8SFF chassis with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (plus blank), 1x Flexible Smart Array, 1x Riser installed)   Maximum:   (Maximum - 12 LFF hard drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)   Maximum   S1.5 lb (23.6 kg)   Maximum   Maximum   S1.5 lb (23.6 kg)   Maximum	System Unit	Dimensions		
(Minimum - 8SFF chassis with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (blus blank), 1x Flexible Smart Array, 1x Riser installed)  Maximum: (Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)  Input Requirements (per power supply)  BTU Rating  Maximum  For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/h (at 240 VAC) for China Only For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/h (at 240 VAC) for China Only For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/h (at 240 VAC) for China Only For 500W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC) For 800W Power Supply: 500W (at 100 VAC), 800W (at 240 VAC) For 800W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC) input for China only For 500W Power Supply: 1940W (at 240 VAC) For 800W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC) input for China only For 500W Power Supply: 1400W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 to 127 VAC), 800W (at 240 VAC) input for China only For 500W Power Supply: 1400W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 to 127 VAC), 800W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 to 127 VAC), 800W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 to 127 VAC), 800W (at 200 to 240 VAC), 500W (at 240 VAC), 500W (a				
(Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)  Input Requirements (per power supply)  Rated Line Voltage (per power supply)  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/h (at 240 VAC) for China Only For 500W Power Supply: 1400W (at 240 VAC) (per power supply)  Power  Power  Rated Steady-State Power  For 400W Power Supply: 1400W (at 240 VAC) B00W (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 For 500W Power Supply: 1400W (at 200 to 240 VAC), 1400W (at 200 to 240 VAC), 1400W (at 200 to 240 VAC), 800W (at 200 to 240 VAC), 500W (at 200		Weight (approximate)	(Minimum - 8SFF chassis with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (plus blank), 1x Flexible Smart Array, 1x	-
(per power supply)  BTU Rating  Maximum  For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only  For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only  Power Supply Output (per power supply)  Rated Steady-State Power  Power  Rated Steady-State Power  For 1400W Power Supply: 1400W (at 240 VAC)  For 800W Power Supply: 800W (at 100 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 24 1VAC), 1400W (at 240 VAC) input for China only  For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 VAC), 800W (at 240			(Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x	51.5 lb (23.6 kg)
BTU Rating			Rated Line Voltage	100 to 120 VAC
VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/h		1 1 7		
VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/h (at 240 VAC) for China Only  Power Supply Output (per power supply)  Rated Steady-State Power  Rated Steady-State Power  For 1400W Power Supply: 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 24 1VAC), 1400W (at 240 VAC) input for China on 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), 800W (at 200 to 240 1VAC), 800W (at 240 VAC), 500W (at		BTU Rating	Maximum	VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr
(per power supply)  Power  1400W (at 240 VAC)  For 800W Power Supply: 800W (at 100 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), 500W (at 240 VAC) input for China only  Maximum Peak Power  For 1400W Power Supply: 1400W (at 200 to 24 1VAC), 1400W (at 240 VAC) input for China on 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 200 to 240 VAC), 500W (at				VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr
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), 500W (at 240 VAC) input for China only  Maximum Peak Power For 1400W Power Supply: 1400W (at 200 to 24 1VAC), 1400W (at 240 VAC) input for China on 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			•	For 1400W Power Supply: 1400W (at 240 VAC), 1400W (at 240 VAC)
500W (at 240 VAC), 500W (at 240 VAC) input for China only  Maximum Peak Power  For 1400W Power Supply: 1400W (at 200 to 24 1VAC), 1400W (at 240 VAC) input for China on 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 200 to 240 VAC), 500W (at				800W (at 240 VAC), 800W (at 240 VAC) input
1VAC), 1400W (at 240 VAC) input for China on 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 24				500W (at 240 VAC), 500W (at 240 VAC) input
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 2			Maximum Peak Power	For 1400W Power Supply: 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only
VAC), 500W (at 200 to 240 VAC), 500W (at 24				VAC), 800W (at 200 to 240 1VAC), 800W (at
>/				For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only
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 option installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).		System Inlet Temperature		altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating

**Relative Humidity** 

Altitude

Extended Ambient **Operating Support**  For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the **URL**:

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

For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed

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

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

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

change is 20°C/hr (36°F/hr).

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

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

LpAm

Operating

LWAd 4.0 B Entry LFF

> 4.1 B Entry 4.2 B Base 5.7 B Base LFF

23 dBA Entry LFF

24 dBA Entry 24 dBA Base

4.3 B Perf

39 dBA Base LFF

25 dBA Perf

**Operating** 

LWAd 4.3 B Entry LFF

> 4.6 B Entry 4.8 B Base 5.9 B Base LFF 5.6 B Perf

25 dBA Entry LFF LpAm

> 29 dBA Entry 30 dBA Base 31 dBA Base LEF 39 dBA Perf

**NOTE:** The Listed sound levels apply to standard shipping configurations (Entry LFF, Entry, Base, Base LFF and Performance models) additional options may result in increased sound levels. The Base LFF model leverages our High Efficiency Fans, other models are shipping with standard fan options.

**Emissions Classification** (EMC)

FCC Rating Class A

Normative Standards CISPR 22; EN55022; EN55024; FCC CFR 47, Pt

15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC

60950-1

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

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

**HPE Dynamic Smart** Number of PCI links Array B140i Controller

Four 4Gb/s

Storage protocol support

SATA

SAS/SATA peak data transfer rate

PCI link rate

6Gb/s

Number of SAS/SATA links

10 links

SAS/SATA connectivity

2x4 connectors; 2x1 connectors

Expander support

No

Drives supported (max)

Up to 10 Internal Drives

**RAID** support

0, 1, 10, 5 SATA

Software management

HPE SSA, SMH, SIM

Warranty

Server warranty

**HPE Secure Encryption** 

license

Not Supported

Not Supported

**HPE SmartCache License** 

Supported

**HPE Smart Storage** 

Administrator

**HPE Ethernet 1Gb** 4-port 331i Adapter Compatibility

Network Interface

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

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 Transfer Rate** 

10Base-T (Half-Duplex) 10 Mb/s per port, 40 Mb/s combined

10Base-T (Full-Duplex) 20 Mb/s per port, 80 Mb/s combined

100Base-TX (Half-

Duplex) 100 Mb/s per port, 400 Mb/s combined 100Base-TX (Full-Duplex) 200 Mb/s per port, 800 Mb/s combined

1000Base-TX (Half and

Full-Duplex) 1000 Mb/s per port, 4000 Mb/s combined

1000Base-TX (Full-

Duplex) 2000 Mb/s per port, 8000 Mb/s combined

Connector Four RJ-45

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

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

**Environment**friendly Products and Approach

Recycling

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

#### http://www.hpe.com/recycle

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

# http://www.hpe.com/recycle

Date	Version History	Action	Description of Change
25-Sep-2017	From Version 33 to 34	Added	Added new Solid State Drives offering to the HPE Drives section. Added new PCIe Accelerators options. Added new InfiniBand option.
		Changed	Core Options and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
7-Aug-2017	From Version 32 to 33	Added	Added new Solid State Drives offering to the HPE Drives section.
11-Jul-2017	From Version 31 to 32	Added	Added new NVIDIA Tesla GPUs.
		Changed	HPE Power Supplies section was revised.
5-Jun-2017	From Version 30 to 31	Added	Added new Solid State Drives offering to the HPE Drives section.  Added new GPU option.
8-May-2017	From Version 29 to 30	Added	Support for ClearOS was added under Operating Systems and Virtualization Software Support for ProLiant Servers and Optional Features sections.
			Added new HPE Computation and Graphics Accelerators options.
		Changed	HPE Unique Options section was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
3-Apr-2017	From Version 28 to 29	Changed	Smart Buy models section was revised for the NA version only.
27-Mar-2017	From Version 27 to 28	Added	Added new Hard Drives and new HPE Networking option.
		Changed	Base Configuration, HPE Unique Options, HPE Computation and Graphics Accelerators, and HPE Storage Options were revised.
17-Feb-2017	From Version 26 to 27	Changed	HPE Memory section under Core Options was revised.
13-Feb-2017	From Version 25 to 26	Added	Added new HDD and SSD offering to HPE Drives section.
		Changed	Processors and Memory under Standard Features were revised.
			Storage Software, HPE Unique Options, HPE Processors, and HPE Memory were revised.
16-Dec-2016	From Version 24 to 25	Added	Availability note was added to the HPE Drives section.
		Changed	Overview, Storage Software, and HPE Computation and Graphics Accelerators were revised.
28-Nov-2016	From Version 23 to 24	Added	Added new NVIDIA Tesla M10 and P100 cards new Virtualization and High-End General Compute GPU offering. Added new LFF HDDs up to 10TB capacity now bring the DL380 max storage capacity to 150TB SAS. Added new Fiber Channel HBA's up to 32Gb.

			Added new E5-2699Av4 processor.
		Changed	Processors, Memory, Maximum Internal Storage, HPE Drives, HPE Computation and Graphics Accelerators and HPE Storage Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Oct-2016	From Version 22 to 23	Removed	Obsolete Hard Drives were removed from the QuickSpecs.
26-Sep-2016	From Version 21 to 22	Added	Added new NVIDIA Tesla M4/M40 GPUs and new 10TB LFF hard drives offering.
		Changed	Memory, Maximum Internal Storage, HPE Computation and Graphics Accelerators, and HPE Storage Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
19-Aug-2016	From Version 20 to 21	Changed	Smart Buy models section was revised for the NA version only.
15-Aug-2016	From Version 19 to 20	Added	Added new options to HPE Networking, HPE Infiniband, HPE Computation and Graphics Accelerators, HPE Disk Backup, and HPE Storage Options.
		Changed	HPE Unique Options was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
8-Jul-2016	From Version 18 to 19	Changed	Smart Buy models section was revised for the NA version only.
6-Jun-2016	From Version 17 to 18	Added	Added new 25GbE networking options, OneView 3.0 and new NVIDIA Quadro GPU options.
		Changed	Pre-configured Models, HPE Memory, HPE Drives, HPE Computation and Graphics Accelerators, HPE Disk Backup, and HPE Storage Options were updated.
29-Apr-2016	From Version 16 to 17	Changed	E5-2600v4 Series Smart Buy Models table was updated in the NA version only.
1-Apr-2016	From Version 15 to 16	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 new Smart Memory DDR4 2400MHz, Intel Xeon E5-2600v4 processor support, new Flexible Smart Array P840ar controller, new graphic options, new HPE Trusted Platform Module (TPM) 2.0, new HDD offering.
		Changed	Embedded Management, Service and Support, Preconfigured Models, HPE Security, and Memory sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
16-Feb-2016	From Version 13 to 14	Added	New HDD offering was added to HPE Drives.
		Changed	HPE Computation and Graphics Accelerators, 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 12 to 13	Changed	Smart Buy models section was revised in the NA
17-Dec-2015			version only.

			New options added to Graphics Options, HPE PCIe Workload Accelerator Options, and HPE Tape Backup.
		Changed	On System Management Chipset, Maximum Internal Storage, Embedded Management, and Server utilities were revised.
			Product images were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Sep-2015	From Version 10 to 11	Added	Added new 6Gb SATA Solid State Drives.
			Added new HPE OneView management software.
		Changed	Maximun Internal Storage was revised.
47.4 2045	F 1/ : 0 / 40	Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	From Version 9 to 10	Added	Added new Solid State Drives offering.
			Added new graphic options.
		Changed	What's New changed to: New support for NVMe PCIe SSDs New Graphic card options
			Service and Support section was updated.
			Maximun Internal Storage and Core Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
1-Jun-2015	From Version 8 to 9	Added	New larger capacity HDDs (up to 8TB LFF), Max capacity 120TB were added.
			New higher capacity memory (64GB), Max capacity 1.5TB was added.
			New Networking options were added.
			Optional Software added to HPE Storage Controllers.
		Changed	Updated max HDD and memory capacity due to new options added.
			HPE SmartCache Software, HPE Disk Backup System, HPE Uninterruptible Power Systems (UPS) were updated.
30-Mar-2015	From Version 7 to 8	Added	New Hard Drives offering.
			Optical Software added to HPE Storage Controllers.
			Added new HPE Pointnext operational services.
			Added new HPE PCIe Workload Accelerator Options.
		Changed	What's New, Standard Features, Unique Options, Power Supplies, HPE Storage Controllers, HPE Disk Storage Systems, and Technical Specifications were revised.
		Removed	Removed obsolete HPE Pointnext operational services.

17-Feb-2015	From Version 6 to 7	Added	Added Smart Buy Models to the NA version only.
9-Feb-2015	From Version 5 to 6	Added	What's new section was added.
			Added new HDD offering, new computational Graphics options, and new G4 UPS models.
		Changed	HPE Drives, HPE Computation and Graphics Accelerators, HPE Tape Backup, HPE Disk Backup, HPE Rack Mount, Consoles, KVM Switches, and Keyboards, and HPE Uninterruptible Power Systems (UPS) sections were revised.
1-Dec-2014	From Version 4 to 5	Changed	Changes made throughout the entire QuickSpecs.
13-Oct-2014	From Version 3 to 4	Changed	Corrected inconsistencies between Product Bulletin and Concentra versions.
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, and HPE Pointnext operational services were added to the Additional Options section.
		Changed	Standard Features, Optional Features, Pre- Configured Models, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Memory sections were revised.
19-Sep-2014	From Version 1 to 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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