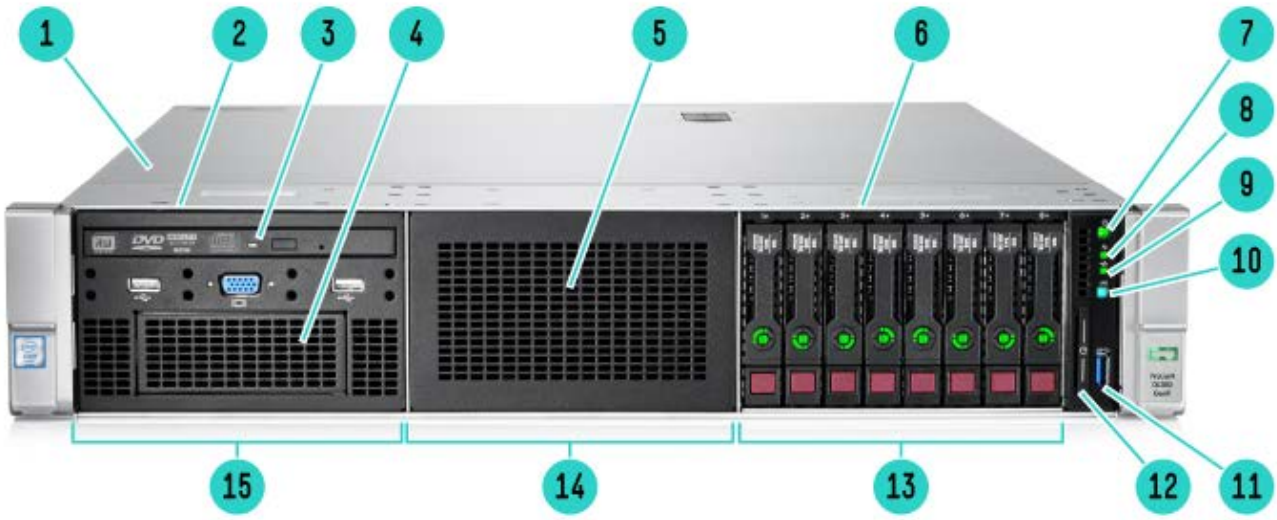
Overview

HPE ProLiant DL380 Gen9 Server

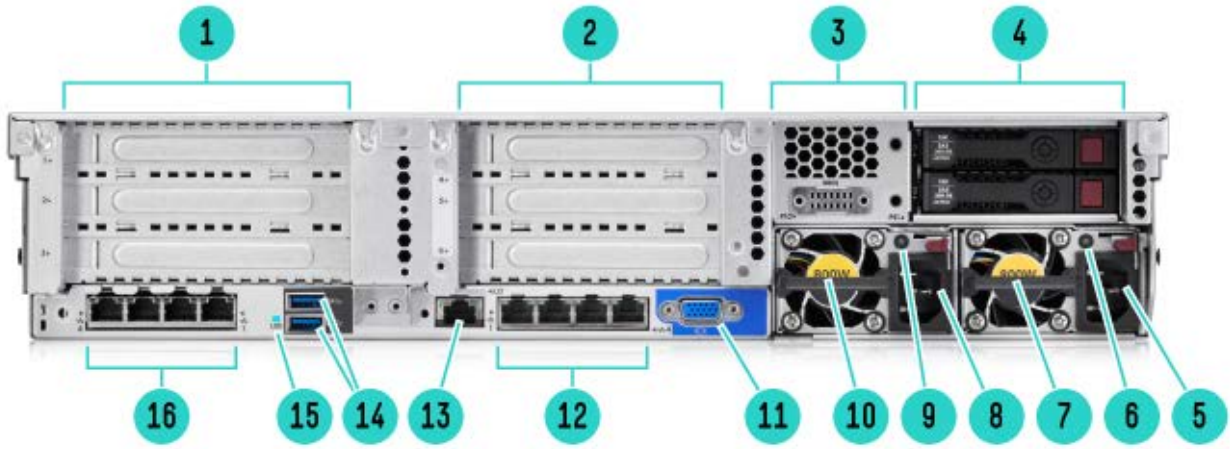
The HPE ProLiant DL380 Gen9 Server delivers the best performance and expandability in the Hewlett Packard Enterprise 2P rack portfolio. Reliability, serviceability and near continuous availability, backed by a comprehensive warranty, make it ideal for any environment. Deploy the data center standard.



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

1. Quick removal access panel
2. Universal Media bay. 2 USB 2.0 and VGA standard (8SFF bay optional)
3. Optional Optical drive. Requires Universal Media bay
4. Optional 2 SFF HDD, blank shown. Requires Universal Media bay
5. Drive Bay 2. Blank shown, 8SFF or 6NVMe optional
6. 8 SFF Drive Cage Bay
7. Power On/Standby button and system power LED button
8. Health LED
9. NIC status
10. UID button
11. USB 3.0
12. Serial label pull tag
13. Bay 3
14. Bay 2
15. Bay 1

Overview

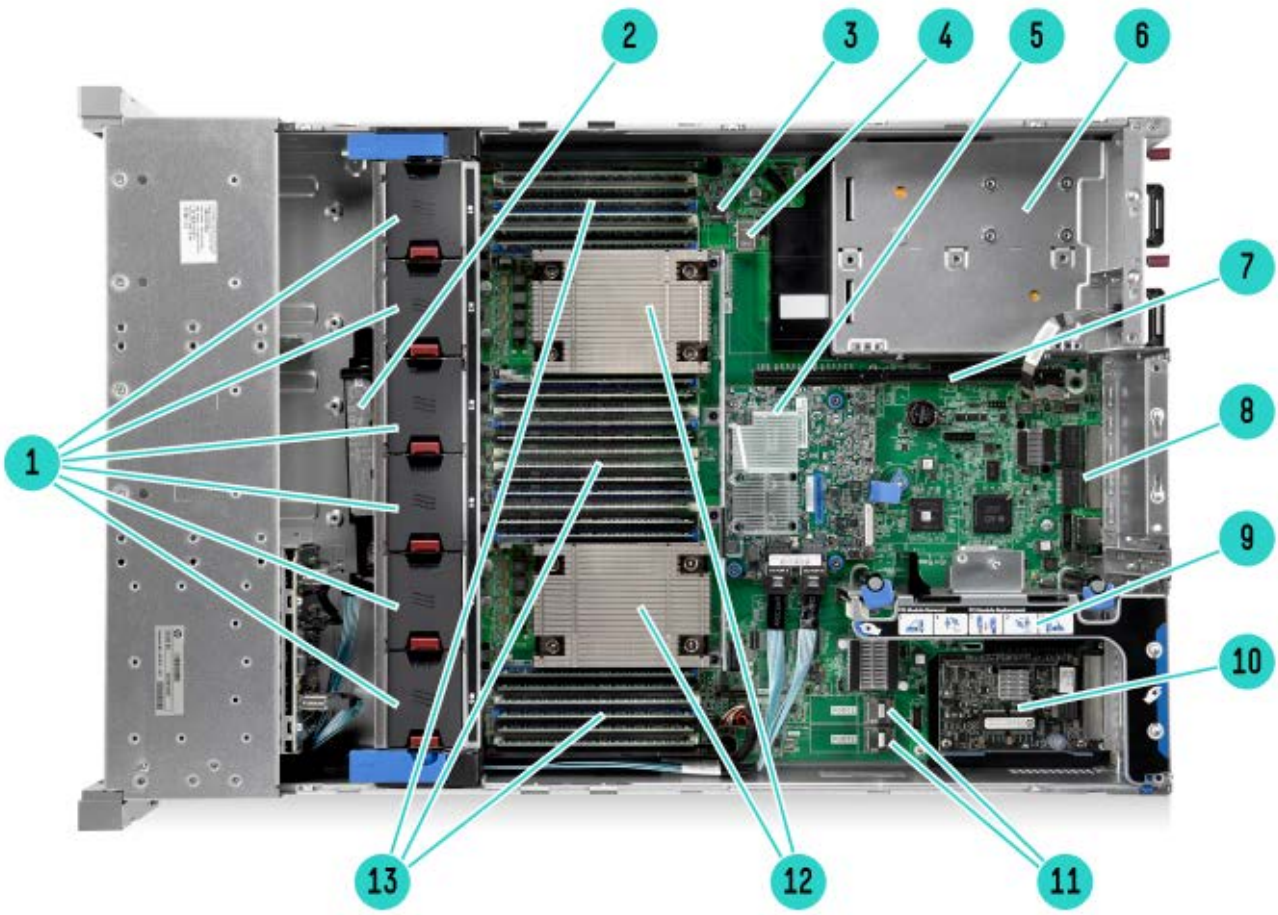


Rear View

1. PCI Slots (Slots 1-3 top to bottom, riser shipped standard)
2. PCI Slots (Slots 4-6top to bottom, requires second riser card, and second processor)
3. Optional serial port
4. Optional rear 2 SFF HDD (supported in 24 SFF or 12 LFF front end)
5. Power supply Power connection
6. Power supply Power LED
7. HPE Flexible Slot Power Supply bay 1 (800w shown)
8. Power supply Power connection
9. Power supply Power LED
10. HPE Flexible Slot Power Supply bay 2 (800w shown)*
11. VGA connector
12. Embedded 4x1GbE Network Adapter
13. Dedicated iLO connector
14. USB 3.0 connectors (2)
15. Unit ID LED
16. Optional FlexibleLOM ports (Shown: 4x1GbE)

NOTE: *Optional Battery Back up option.

Overview



Internal View

1. Fan cage shown with 6 standard Hot-plug fans (High Performance fans optional)
2. Optional HPE Smart Storage Battery
3. MicroSD card slot[3]
4. Internal USB 3.0 connector (2)
5. Optional HPE Flexible Smart Array or Smart HBA (H240ar shown)
6. (Under) Hot Plug redundant HPE Flexible Slot Power supplies[6]
7. Connection for second (optional) riser (Required second CPU)
8. Embedded 4x1Gbe NIC
9. Primary PCIe riser, standard (Optional double wide GPU riser)
10. Optional FlexibleLOM slot
11. X4 SATA ports (1 and 2)
12. 2 Processors, heatsink showing, with HPE Smart Socket Guide
13. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)

[3] **NOTE:** Optional Dual MicroSD.

[6] **NOTE:** Optional Micro UPS Battery Back up option.

What's New

- NVMe 6.4TB to 1.6TB MU HHHL DSF Card
- SAS 12G 3.84TB/1.92TB/960GB MU and 7.68TB/3.84TB/1.92TB/960GB RI -- SFF SC VS DSF SSD
- SAS 12G 1.92TB and 960GB MU LFF SCC VS DSF SSD

Standard Features

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

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

Standard Features

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.
NOTE: Processors consuming up to 120w ship with standard heatsink.
Processors consuming over 120w ship with a High Performance heatsink as standard except the Intel Xeon E5-2690v4.
A High Performance heatsink can be added to help reduce power consumption (795235-B21).

Chipset	Intel® C610 Series Chipset Intel® E5-2600v3 Processor Family Intel® E5-2600v4 Processor Family **NOTE:** For more information regarding Intel® chipsets, please see the following URL: **http://www.intel.com/products/server/chipsets/**
On System Management Chipset	HPE iLO (Firmware HPE iLO4 2.0) 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 (LRDIMM) 3TB (24 x 128GB LRDIMM @2400MHz)* Maximum Capacity (RDIMM) 768GB (24 x 32GB RDIMM @2400MHz) Maximum Capacity (NVDIMM) 128GB (16 x 8GB 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.

Standard Features

Expansion Slots

Primary Riser (Standard)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	X8	X16	7	Full-height, half-length slot	Proc 1
2	PCIe 3.0	X8	X16	10	Full-height, half-length slot	Proc 1
3	PCIe 3.0	X8	X8	13	Half length/full height	Proc 1

NOTE: Bus Width Indicates the number of physical electrical lanes running to the connector.
NOTE: All slots support PCIe cards to 150W or more, but an additional Power Cable Kit is required.
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 PCIe 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, but an additional Power Cable Kit is required.
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 PCIe Riser (Optional 2-slot) 719076-B21

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
2	PCIe 3.0	X16	X16	0x05	Full-height, full-length slot	Proc 1
3	PCIe 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, but an additional Power Cable Kit is required.
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).

Standard Features

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 chassis also supports 2 SFF rear which allows for the second riser. **NOTE:** The 6 NVMe drive option can only be leveraged in the SFF chassis and replaces Bay 2. 4 LFF drive bays total **NOTE:** The Universal Media Bay (724865-B21) not available with the LFF chassis or the 24SFF front end, 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 chassis cannot be upgraded to 12LFF in the field. **NOTE:** All Pre-configured Chassis come with an embedded 10-Port SATA controller. Optional HPE Flexible Smart Array and Smart SAS HBA Controllers can be added.

Maximum Internal Storage		**Capacity**	**Configuration**
	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	180.0TB	12+3 x 12TB (with optional rear LFF drive cage)
	Hot Plug LFF SATA	180.0TB	12+3 x 12TB (with optional rear LFF drive cage)
	Hot Plug SFF SAS SSD	397.8TB	24+2 x 15.3TB (with optional rear SFF drive cage)
	Hot Plug SFF SATA SSD	199.68TB	24+2 x 7.68TB (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 LFF SAS SSD	28.8TB	12+3 x 1.92TB (with optional rear LFF drive cage
	Hot Plug SFF NVMe PCIe SSD	46.08TB NVMe + 36TB SFF	6x7.68TB NVMe plus 36TB with 18 SFF (Bay 1, bay 3 and optional rear drive support)

Standard Features

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

System Fans	**Non-redundant**	**Redundant**
One of the following depending on model	2P model	6 fans

NOTE: 1P models typically ship with 4 standard fans. The second processor option kit contains 2 additional fans.
NOTE: The 12LFF and 24SFF chassis ship with 6 High Performance fans as standard.
NOTE: High Performance Fan Kit is available to meet ambient temperature environments.
NOTE: High Performance Fan Kit is required for Passive GPU support.
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 Bay, 724865-B21), 1 back not active simultaneously
	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

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

	USB 3.0	Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 front via Universal Media Bay
	SID (Systems Insight Display)	Optional

NOTE: Not shipping as standard. Available as a CTO option or as a field upgrade (768900-B21).

Standard Features

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 **http://www.hpe.com/servers/clearos**.

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: **http://www.hpe.com/info/ossupport** and our **driver download page**.

Upgradeability

Upgradeable to 2 processors (36 Cores)

NOTE: Processor upgrade available from Intel® Xeon® Processors E5-2600v3. Please contact Hewlett Packard Enterprise Technology Sales (**http://www.hpe.com/support**), 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 chassis & can be populated in Bay1 only.

HPE Legacy Mode (FIO only, 758959-B22)

NOTE: UEFI is the default mode for CTO and BTO SKUs. Can change default to legacy via CTO.

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)

Form Factor

2U Rack form factor

One of the following depending on model

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.

Standard Features

Industry Standard Compliance

ACPI 2.0b Compliant

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

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).

HPE Server UEFI/Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot Mode.
NOTE: The UEFI System Utilities function is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **http://www.hpe.com/servers/uefi**.

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

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

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

Embedded Management	**HPE Integrated Lights-Out (HPE iLO)**	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at **http://www.hpe.com/info/ilo**.
	UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at **http://www.hpe.com/servers/uefi**.

Standard Features

	RESTful API	RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**.
	Intelligent Provisioning	Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at **http://www.hpe.com/servers/intelligentprovisioning**.
	Embedded Remote Support	The Hewlett Packard **Enterprise** embedded remote support, when used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at **http://www.hpe.com/info/insightonline/explore**.
Server utilities	**Smart Update**	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at **http://www.hpe.com/servers/smartupdatemanager**.
	HPE Systems Insight Manager (HPE SIM)	HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/servers/hpsim**.
	Scripting Tool Kit and Windows PowerShell	Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/powershell**.
	RESTful Interface Tool	RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to discover and deploy servers at scale. Learn more at **http://www.hpe.com/info/resttool**.
	HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hpe.com/info/ilo/mobileapp**.
	HPE Insight Online	HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at **http://www.hpe.com/info/insightonline/explore.**
Security	Power-on password 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	

Standard Features

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

Server Management

HPE Insight Control
HPE Insight Control, lets you deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see **http://www.hpe.com/info/insightcontrol**.
HPE Insight Cluster Management Utility (CMU)
HPE Insight Cluster Management Utility is a Hyper Scale management frameworkthat 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**.

Optional Features

Storage Software

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

- **Data Protection and Recovery Software**
  Whether you're a large enterprise or a smaller business, Hewlett Packard Enterprise data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
  Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.
- **Storage Resource Management Software (SRM)**
  Hewlett Packard Enterprise storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.
- **Data Replication Software**
  Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- **Storage Device Management Software**
  Maximize your investment in Hewlett Packard Enterprise storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HPE StoreVirtual VSA**
  Enable highly available and clustered storage in your HPE ProLiant servers with virtualized storage: Add StoreVirtual VSA to multiple servers, manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. To simplify deployment, 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:
htts://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 **http://www.hpe.com/servers/clearos**.

One Config Simple (SCE)

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

Service and Support

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

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

Recommended Support

Standard: HPE Proactive Care* with 24x7 coverage, three year Support Service
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your 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 HPE-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 quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

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

Service and Support

Related Services

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

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

HPE Technology Services Support Credits
Offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

HPE Education Services
Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. **http://www.hpe.com/ww/learn**

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

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

The Hewlett Packard Enterprise Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Support Service or Hewlett Packard Enterprise contractual support agreement.

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

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

Pre-configured Models

	Base Models
[SKU Number]	826682-B21
Model Name	HPE ProLiant DL380 Gen9 E5-2620v4 1P 16GB-R P440ar 8SFF 500W PS Base Server
Processor	Intel® Xeon® E5-2620v4
Number of Processors	One
Memory	16GB (1x16GB Registered DIMMs, 2400 MHz) **NOTE:** With the E5-2620v4 this memory DIMM will only operate at 2133MHz.
Network Controller	HPE Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HPE FlexibleLOM or stand up card
Storage Controller	HPE Flexible Smart Array P440ar/2GB
Hard Drive	None ship standard
Internal Storage	8 SFF HDD Bays (upgradable to 24)
Optical Drive Bay	Optional Universal Media Bay (724865-B21)
Optical Drive	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 slots available with upgrade option, second processor required)
Power Supply	(1) HPE 500W Flex Slot Platinum Power Supply
Fans	4 hot plug fans, redundant
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional)
Form Factor	Rack (2U), HPE Easy Install Rails with CMA
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response

Pre-configured Models

Performance Models	
[SKU Number]	**826684-B21**
Model Name	HPE ProLiant DL380 Gen9 E5-2650v4 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W Perf Server
Processor	Intel® Xeon® E5-2650v4
Number of Processors	Two
Memory	32GB (2x16GB Registered DIMMs, 2400 MHz)
Network Controller	HPE Embedded 4x1Gb, plus 2x10Gb-T FlexibleLOM
Storage Controller	HPE Flexible Smart Array P440ar/2GB
Hard Drive	None ship standard
Internal Storage	8 SFF HDD Bays (upgradable to 24)
Optical Drive Bay	Universal Media Bay (724865-B21)
Optical Drive	HPE Half-Height SATA DVD-RW Optical Drive
PCI-Express Slots	6 PCIe 3.0 slots
Power Supply	(2) HPE 800W Flex Slot Platinum Power Supply
Fans	6 hot plug fans, redundant
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (optional)
Energy Star	Meets Energy Star requirements
Form Factor	Rack (2U), HPE Easy Install Rails with CMA
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response

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

Country Code Key

xx1 = B21 Worldwide

NOTE: The -B21 WW SKU is to be ordered in all countries other than Japan or PRC.

xx1 = 291 Japan

xx1 = AA1 PRC

Configuration Information - Factory Integrated Models

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

[Chassis]	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
SKU Number	719064-B21	810393-B21	767032-B21	767033-B21	719061-B21
Processor	2 (optional) x HPE Smart Socket Guide				
DIMM Slots	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory				
Storage Controller	HPE Dynamic Smart Array B140i, plus optional HPE Flexible Smart Array or Smart HBA controller				
PCIe	3 PCIe slots (+3 PCI slots available with upgrade option, second processor required)				
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
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	HPE Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HPE FlexibleLOM or stand up card		
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
Management	iLO Management (standard), Intelligent Provisioning (standard)				
USB	1 front, 2 internal, 2 rear	1 front, 1 internal, 2 rear	1 front, 2 internal, 2 rear	No front USB support	
Ears	HPE Quick Release Ears				

NOTE: With the NVMe chassis (810393-B21) there are limitations on GPU support.
NOTE: The NVMe chassis (810393-B21) ships with the standard x8 Risers supporting 6xNVMe drives.

Configuration Information - Factory Integrated Models

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

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

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

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

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

- UDIMM, RDIMM, and LRDIMM are all distinct memory technologies and cannot be mixed within a server.
- HPE memory options from previous generation servers are not qualified or warranted with Hewlett Packard Enterprise Gen9 systems. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9.
- If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors all DIMM slots are available.
- Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz, 1866MHz or 1600MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: **http://www.hpe.com/servers/ddr4memoryconfig**.

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

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

Step 3: Choose Additional Factory Integratable Options

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

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

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

- To take advantage of the additional PCI slot upgrade, the second processor must be installed.
- This section may contain FIO options, please see HPE I/O Expansion Options section below.
- FIO indicates that this option is only available as a factory installable option.

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

- The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
- Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
- The HPE ProLiant Gen9 Smart Storage solutions are equipped with re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HPE Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove."

Configuration Information - Factory Integrated Models

HPE FlexibleLOM

Select a FlexibleLOM from Core Options-Networking section below.

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

HPE Networking

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

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

HPE Storage Controllers

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

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

HPE Graphics Options

Select one or more graphics adapter from Additional Options section below.

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

HPE Cooling Options

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

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

HPE Rail Kits

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

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

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

Core Options

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 Unique Options

HPE DL380 Gen9 Universal Media Bay Kit 724865-B21

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 front end.

HPE 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 apply.
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.

HPE DL380 Gen9 High Performance Fan Kit 719079-B21

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.

HPE 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 chassis or field upgraded) or 12LFF (719061-B21) front end.
NOTE: Rear drives will not support higher than 160W CPUs and other special/unique CPUs.

HPE DL380 Gen9 3LFF Rear SAS/SATA Kit 768856-B21

NOTE: This is only supported in the 12LFF chassis (CTO: 719061-B21 or BTO skus).
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 CPUs.

HPE DL380 Gen9 Primary 2 Slot GPU Ready Riser Kit 719076-B21

Slot1: 1x Gen3 x16 FH/FL, 1xGen3 x8 FH/HL.
NOTE: This replaces the standard Primary riser in slot1.

HPE DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit 719073-B21

Slot2: 2xGen3 x16 FH/FL, 1xGen3 x8 FH/HL.

HPE DL380 Gen9 8SFF Bay1 Cage/Backplane Kit 719067-B21

NOTE: To add an additional 8SFF drive cage in Bay1.
NOTE: To get to 16SFF total please populate bay 2 with 768857-B21 (from an 8SFF starting point).
NOTE: This ships with 6 High Efficiency Fans.
NOTE: Selecting this option does not allow you to select the Universal Media Bay.

HPE 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 upgrade to 16SFF total and allows the flexibility to add the Universal Media Bay (724865-B21) for 2 additional SFF or Optical.

HPE DL380 Gen9 Systems Insight Display Kit 768900-B21

NOTE: The Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field upgrade option.

Core Options

HPE DL380 Gen9 Rear Serial Port and Enablement Kit	768896-B21
HPE 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.	
HPE Legacy FIO Mode Setting	758959-B22
NOTE: UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.	

HPE Processors	**E5-2600v4 series Processors**	
	HPE DL380 Gen9 Intel Xeon E5-2643v4 (3.4GHz/6-core/20MB/135W) Processor Kit	817939-B21
	NOTE: Ships with a High Performance Heatsink.	
	HPE DL380 Gen9 Intel Xeon E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit	817927-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 E5-2680v4 (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.	
	HPE DL380 Gen9 Intel Xeon E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit	817933-B21
	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
	NOTE: This processor does not support Hyper-Threading.	
	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.	
	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 E5-2687Wv4 (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 Kit	817967-B21
	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.	

Core Options

	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 E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit	817953-B21
	NOTE: Ships with a High Performance Heatsink.	
	HPE DL380 Gen9 Intel Xeon E5-2699Av4 (2.4GHz/22-core/55MB/145W) Processor Kit	871026-B21
	NOTE: FIO indicates factory integrated option via CTO.	
	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-L21 is the first processor shipped, 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.	
	NOTE: Processors consuming up to 120w ship with standard heatsink.	
	Processors consuming over 120w ship with a High Performance heatsink as standard except the Intel Xeon E5-2690v4.	
	A High Performance heatsink can be added to help reduce power consumption (795235-B21).	
HPE Memory	**Registered DIMMs (RDIMMs) for E5-2600v3 Series**	
	NOTE: The following memory is supported by the E5-2600v3 series Processors.	
	Registered DIMMs (RDIMMs) for E5-2600v4 Series	
	NOTE: The following memory is supported by the E5-2600v4 series Processor only.	
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347-B21
	HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349-B21
	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2400 CAS-17-17-17 Registered Smart Memory Kit	P00423-B21
	HPE 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 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805358-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.	

Core Options

HPE Optical Drives	HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21
	NOTE: The Universal Media Bay (724865-B21) is required for this option.	
	HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21
	NOTE: The Universal Media Bay (724865-B21) is required for this option.	
	HPE Mobile USB DVD-RW Optical Drive	701498-B21
	NOTE: This is only supported on USB 3.0 ports.	
	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 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
	HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
	HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
	HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-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 HDD	872475-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 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) SCC 3yr Wty Digitally Signed Firmware HDD	P04695-B21
	HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	P04693-B21
	12G SAS Hot Plug LFF (3.5-inch) SC Midline Hard Drives - 1yr Warranty	
	HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819201-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 Digitally Signed Firmware HDD	872487-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 Digitally Signed Firmware HDD	872485-B21
	HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857644-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 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 Digitally Signed Firmware HDD	655710-B21
	SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
	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 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 Digitally Signed Firmware HDD	872491-B21
	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21
	HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	881785-B21

Core Options

HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857648-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 Digitally Signed Firmware HDD	872489-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 6.4TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09096-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09094-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09092-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09090-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09088-B21
HPE 6.4TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04539-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04537-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04533-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04527-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04525-B21
12G SAS Mixed Use SFF (2.5in) SC VS DSF SSD	
HPE 3.84TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10460-B21
HPE 1.92TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10454-B21
HPE 960GB SAS 12G Mixed Use SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10448-B21
12G SAS Mixed Use LFF (3.5in) SCC VS DSF SSD	
HPE 1.92TB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10456-B21
HPE 960GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10450-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	P04523-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04521-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04519-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04517-B21
HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06592-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06590-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06588-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06586-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06584-B21
12G SAS Read Intensive SFF SC VS DSF SSD	
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10446-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10444-B21

Core Options

HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10442-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Value SAS Digitally Signed Firmware SSD	P10440-B21
12G SAS Hot Plug MU-3 LFF (3.5-inch) SC Solid State Drives	
HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P04529-B21
12G SAS Hot Plug SFF (2.5-inch) Write Intensive Solid State Drives	
HPE 3.2TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04547-B21
HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04545-B21
HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09102-B21
HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09100-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09098-B21
HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04543-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04541-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	P04570-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06198-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04566-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06196-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04564-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06194-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04560-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875503-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04556-B21
HPE 7.68TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04482-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04480-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04478-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04476-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04474-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06200-B21
Read Intensive - 6G SATA - M.2 - Solid State Drives	
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875498-B21
HPE 960GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875500-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	P09722-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09716-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09712-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07930-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07926-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07922-B21
HPE 3.84TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P00896-B21

Core Options

Mixed Use - 6G SATA - M.2 - Solid State Drives

HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875488-B21
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

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

HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P09693-B21
HPE 960GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P09689-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P09687-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	P09724-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P09718-B21
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P07932-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P07928-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P07924-B21

HPE NVMe PCIe Read Intensive SFF (2.5 inch) Solid State Drives

HPE 7.68TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10218-B21
HPE 3.84TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10216-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10214-B21
HPE 375GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	878014-B21

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

HPE NVMe PCIe Mixed Use SFF (2.5 inch) Solid State Drives

HPE 6.4TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10226-B21
HPE 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10224-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10222-B21

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

NOTE: The NVMe CTO chassis (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.

HPE NVMe x8 Lanes Mixed Use HHHL

HPE 6.4TB NVMe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	P10268-B21
HPE 3.2TB NVMe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	P10266-B21
HPE 1.6TB NVMe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	P10264-B21

M.2 SSD

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.

Core Options

	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	
	HPE DL380 Gen9 8SFF Bay1 Cage/Backplane Kit	719067-B21
	HPE DL380 Gen9 Additional 8SFF Bay2 Cage/Backplane Kit	768857-B21
	HPE DL380 Gen9 2SFF Front/Rear SAS/SATA Kit	724864-B21
	HPE 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/us/en/pdfViewer.html?resource=%2Fcontent%2Fhpe%2Fcountry%2Fus%2Fen%2Fresources%2Fservers%2Freference-guide%2Ftransceiver-networking-server**	
	Media Bay Kits	
	HPE 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 front end configurations and can only be populated in Bay1.	
HPE Networking	**1 Gigabit Ethernet adapters**	
	HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
	HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HPE Ethernet 1Gb 2-port 361T Adapter	652497-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 562SFP+ Adapter	727055-B21
	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
	HPE Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HPE Ethernet 10Gb 2-port 561T Adapter	716591-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**.	
	25 Gigabit Ethernet adapters	
	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 2-port 534FLR-SFP+ Adapter	700751-B21

Core Options

	HPE FlexFabric 10Gb 4-port 536FLR-T Adapter	764302-B21
	HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
	HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-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
	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://h20565.www2.hpe.com/portal/site/hpsc/**.	
	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
	HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter	829335-B21
	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
	HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	872725-B21
	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-B21
HPE I/O Expansion Options	HPE 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 support please order the GPU enablement kit (719082-B21).	

Core Options

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 Platinum Hot Plug Power Supply Kit	720479-B21
	NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94%.	
	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: Flex Slot Platinum Plus 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%.	
	NOTE: All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.	
	NOTE: Mixing different power supplies in the same server may limit or disable some power supply features including support for power redundancy. To ensure access to all available features, all power supplies within the same server should have the same output and efficiency ratings	

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

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

NOTE: Maximum of 2 Flex Slot PS per platform.

HPE Computation and Graphics Accelerators	HPE 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 **http://www.hpe.com/info/hppoweradvisor**.	
	NOTE: There are limitations on the chassis 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.	

Core Options

NVIDIA Tesla M10 Quad GPU Module Q0J62C

NOTE: This is supported in all chassis, 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 P40 24GB Computational Accelerator Q0V80C

NOTE: There are chassis 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 chassis 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 P2000 Graphics Accelerator Q0V77A

NOTE: Only supported with E5-2600v4 processors.
NOTE: This is supported in all chassis.
NOTE: Support with this card limited to 35C for all chassis permatations.
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**.

HPE NVIDIA Quadro P4000 Graphics Accelerator Q0V78A

NOTE: Only supported with E5-2600v4 processors.
NOTE: This is supported in all chassis.
NOTE: Support with this card limited to 35C for all chassis permatations.
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**.

Core Options

	HPE NVIDIA Quadro P6000 Graphics Accelerator	Q0V76A
	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 20C 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 chassis 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 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 chassis 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 PCIeGen2 speeds. **NOTE:** There are limitations operating this card with operative environment temperature limitations: 12LFF chassis to 30^{0}C **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 chassis 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.	
HPE Cooling Options	HPE 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. **NOTE:** The 12LFF and 24SFF chassis (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**.	

Additional Options

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.

Embedded Management	**HPE iLO Advanced**	
	HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
	HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
	HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE Converged Infrastructure Management Software	**HPE OneView Advanced (with HPE iLO Advanced)**	
	HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
	HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
	HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU	E5Y43A
	HPE OneView Advanced (without HPE iLO Advanced)	
	HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
	HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A
	HPE OneView Physical Media Kit LTU	E5Y37A
	NOTE: Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge. **NOTE:** Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and driver provisioning. 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**.	
High Performance Clusters	**HPE Cluster Management Utility**	
	HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU	QL803B
	HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU	BD476A
	NOTE: These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.	
	HPE Insight Cluster Management Utility Media	BD477A
	NOTE: For additional license kits please see the **HPE Insight Cluster Management Utility QuickSpecs**.	
HPE PCIe Workload Accelerator Options	**NVME PCIe Workload Accelerators**	
	HPE 750GB PCIe x4 Lanes Write Intensive HHHL 3yr Wty Digitally Signed Firmware Card	878038-B21

Additional Options

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 FIO SAS Controller	749974-B21
	NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot. **NOTE:** Includes the HPE Smart Storage Battery. **NOTE:** FIO indicates factory integrated option via CTO.	
	HPE Smart Array Controllers	
	HPE Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller	726897-B21
	NOTE: Provides support for up to 8 internal SAS/SATA drives. **NOTE:** Includes the HPE Smart Storage Battery. **NOTE:** FIO indicates factory integrated option via CTO.	
	HPE Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller	761874-B21
	NOTE: Includes the HPE Smart Storage Battery. **NOTE:** When ordering controllers, please reference the HPE Cable Options below for the required cable. **NOTE:** FIO indicates factory integrated option via CTO.	
	HPE Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21
	HPE Smart Host Bus Adapters	
	HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21
	NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.	
	HPE H240ar 12Gb 2-ports Int FIO Smart Host Bus Adapter	749976-B21
	NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot. **NOTE:** FIO indicates factory integrated option via CTO.	
	HPE H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
	HPE Cable Options	
	HPE 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 PCIe.	

Additional Options

	HPE DL380 Gen9 2SFF Front SAS x4 Cable Kit	783008-B21
	NOTE: For front mount 2SFF to H240/P440ar, H240 or embedded B140i SATA.	
	HPE DL380 Gen9 8SFF SAS Cable Kit	783009-B21
	NOTE: 8/16/24 SFF to P840/440 bay 3.	
	HPE 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.	
	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 Entitlement) E-LTU	Q2F26AAE
	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.	
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 **http://www.hpe.com/storage/BURAcompatibility**.	
	Tape Drives	
	HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
	HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
	HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
	HPE Tape Storage Systems	
	HPE StoreEver MSL6480	
	HPE StoreEver MSL6480 Scalable 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	QU625A
	HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE Disk Backup	**HPE RDX Removable Disk Backup System**	
	HPE RDX 4TB External Disk Backup System	Q2R33A
	HPE RDX 2TB External Disk Backup System	E7X53B
	HPE RDX 1TB External Disk Backup System	B7B69B
	HPE RDX External Docking Station	C8S07B
	HPE D3700 Enclosure	QW967A

Additional Options

	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: **http://www.hpe.com/storage/spock**.	
HPE Storage Options	**NOTE:** For the complete listing of Fibre Channel Converged Network Adapters please see: **https://www.hpe.com/us/en/product-catalog/servers/adapters/pip.models.hpe-storefabric-converged-network-adapters.4118472.html**	
	Emulex Fibre Channel HBAs	
	HPE 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B
	HPE 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
	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 SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
	HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
	HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
	HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A
	HPE StoreFabric 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 StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter	N3U51A
HPE Power Distribution Units (PDUs)	**HPE Basic Power Distribution Units (PDU)**	
	Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.	
	HPE Intelligent Power Distribution Unit (PDU)	
	Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on additional options and product specifications.	

Additional Options

HPE Rack Mount Consoles, KVM Switches, and Keyboards

HPE Location Discovery Services

HPE Rack Mount Consoles

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

HPE KVM Switches

HPE 0x1x8 G3 KVM Console Switch	AF651A
HPE 0x2x16 G3 KVM Console Switch	AF652A
HPE KVM Console USB Interface Adapter	AF628A
HPE KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
HPE USB Remote Access Key for G3 KVM Console Switches	AF650A
HPE 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HPE 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HPE 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A

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

HPE USB Keyboard and Mouse

HPE USB US Keyboard/Mouse Kit	631341-B21
HPE USB UK Keyboard/Mouse Kit	631344-B21
HPE USB FR Keyboard/Mouse Kit	631346-B21
HPE USB ES Keyboard/Mouse Kit	631348-B21
HPE USB DE Keyboard/Mouse Kit	631358-B21
HPE USB JP Keyboard/Mouse Kit	631360-B21
HPE USB IT Keyboard/Mouse Kit	631362-B21
HPE USB CN Keyboard/Mouse Kit	631364-B21
HPE USB AE Keyboard/Mouse Kit	638212-B21
HPE USB RU Keyboard/Mouse Kit	638214-B21
HPE USB IN Keyboard/Mouse Kit	672097-D63
HPE USB AP/INTL Keyboard/Mouse Kit	672097-373
HPE USB INTL Keyboard/Mouse Kit	672097-B33
HPE USB PT Keyboard/Mouse Kit	672097-133
HPE USB TR Keyboard/Mouse Kit	672097-143
HPE USB CZ Keyboard/Mouse Kit	672097-223
HPE USB FI Keyboard/Mouse Kit	672097-353
HPE USB SE Keyboard/Mouse Kit	672097-103
HPE USB CH Keyboard/Mouse Kit	672097-113
HPE USB KR Keyboard/Mouse Kit	672097-KD3

Additional Options

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 (p/n 695539-001).
CAUTION: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

HPE 2U Small Form Factor Easy Install Rail Kit	733660-B21
NOTE: Does not include CMA (733664-B21).	
HPE 2U Large Form Factor Easy Install Rail Kit	733662-B21
NOTE: Does not include CMA (733664-B21).	
HPE 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 Kit LCD 1.83m Latch Display Port Cable	G7T29A

HPE Uninterruptible Power Systems (UPS)

HPE UPS Options

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

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

HPE USB and SD Options

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

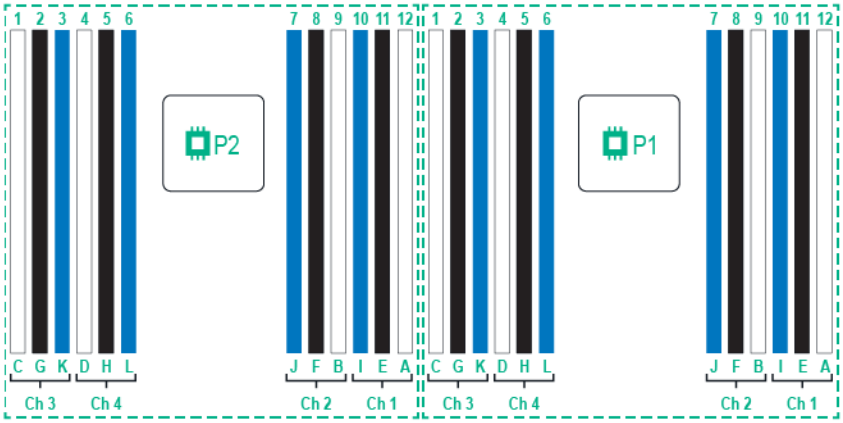
HPE 32GB microSD Flash Memory Card	700139-B21
HPE 8GB microSD Flash Memory Card	726116-B21
HPE 8GB microSD Flash USB Drive	737953-B21
HPE 8GB Dual microSD Flash USB Drive	741279-B21

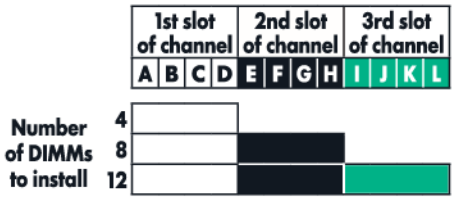
Additional Options

HPE Support Services	**Installation & Start-up Services**	
	HPE Install ProLiant DL38x(p) Service	U4554E
	HPE Installation and Startup DL38x(p) Service	U4555E
	Proactive Care	
	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
	NOTE: For a full listing of support services available for this server, please visit **https://ssc.hpe.com/**	

Memory

Memory Population guidelines





Memory

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 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.

Memory

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

	Memory Bandwidth and Capacity				
[DIMM Type]	**Registered DIMMs (RDIMMs)**				**Load Reduced (LRDIMMs)**
HPE SKU P/N			P00423-B21	728629-B21	726724-B21
DIMM Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank
DIMM Capacity	8GB	16GB	16GB	32GB	64GB
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
DRAM Depth [bit]	1G	1G	1G	1G	2G
DRAM Width [bit]	x4	x4	x8	x4	x4
DRAM Density	4Gb	4Gb	8Gb	4Gb	8Gb
CAS Latency	15-15-15	15-15-15	17-17-17	15-15-15	15-15-15
DIMM Native Speed (MT/s)	2133	2133	2400	2133	2133
SLOTS THAT CAN BE POPULATED					
24 slot servers	24	24	24	24	24
MAXIMUM CAPACITY (GB)					
	192	384	384	768	1536
POPULATED DIMM SPEED (MT/s)					
1 DIMM Per Channel	2133	2133	2400	2133	2133
2 DIMM Per Channel	2133	2133	2400	2133	2133
3 DIMM Per Channel	1600	1600	1866	1600	1866

Memory

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

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

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

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

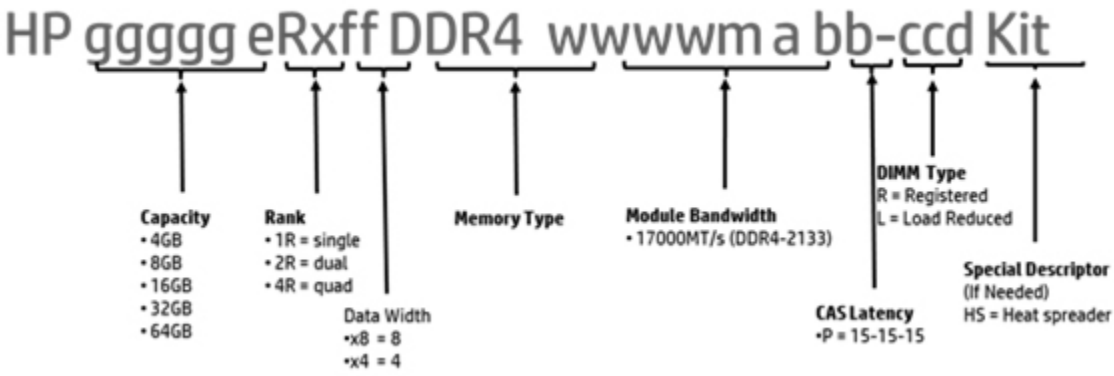
Memory

Standard and Maximum Memory Capacity (Pre-configured Models)	Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E5-2690v3, 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)

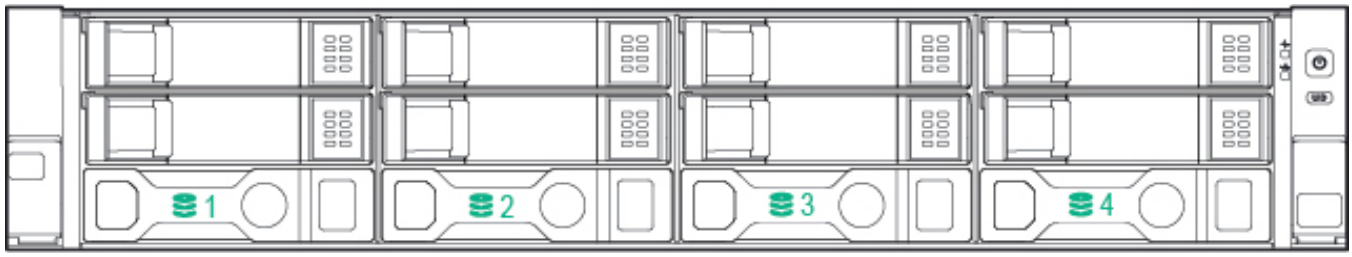
DDR4 memory options part number decoder

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

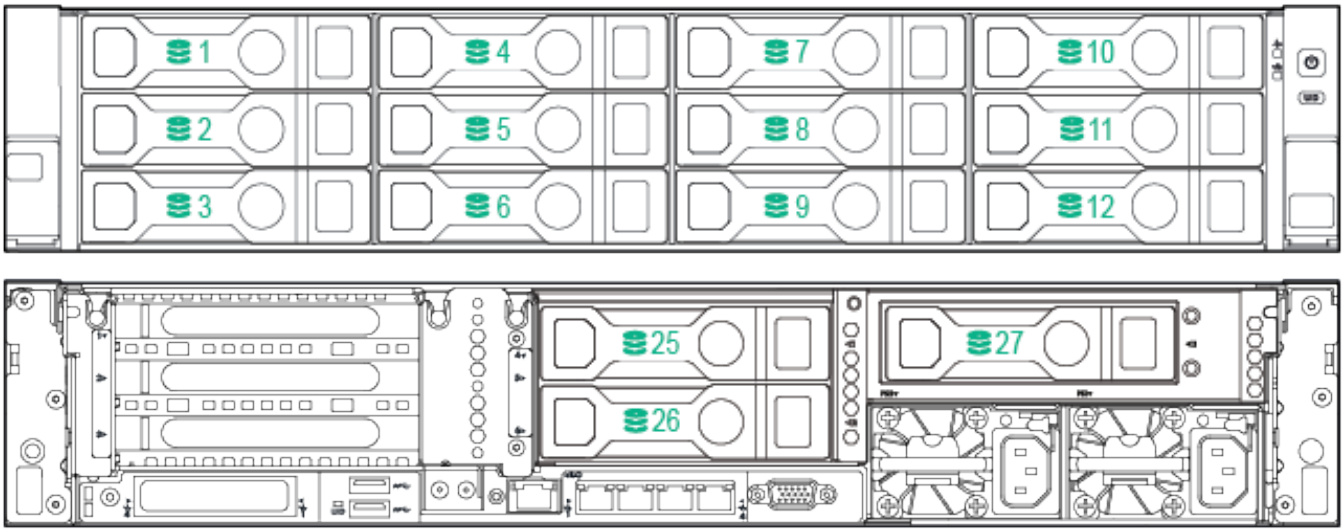


Storage



4 LFF hot-plug drive model

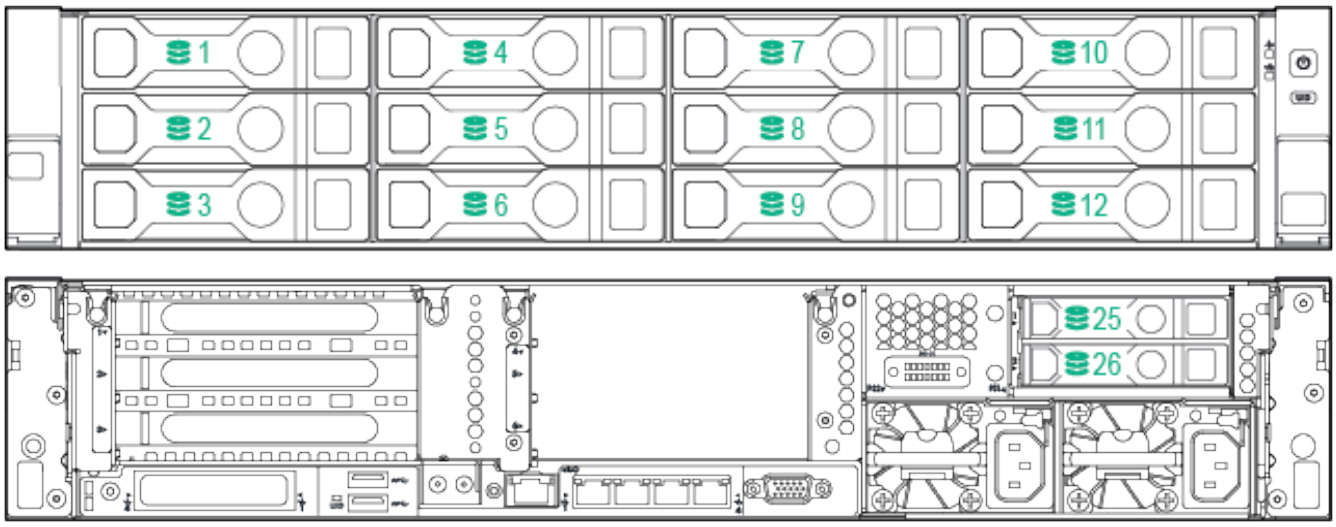
1-4 4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays



12 LFF + 3 rear LFF hot-plug drive model

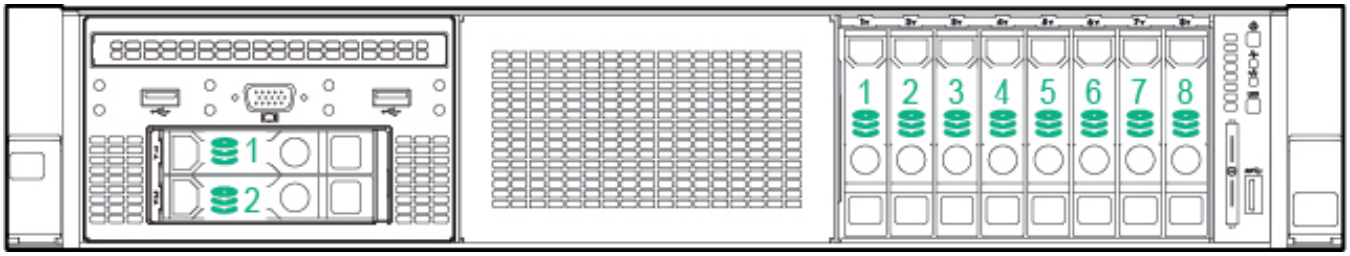
1-12 12 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays 25-27 3 x LFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays

Storage



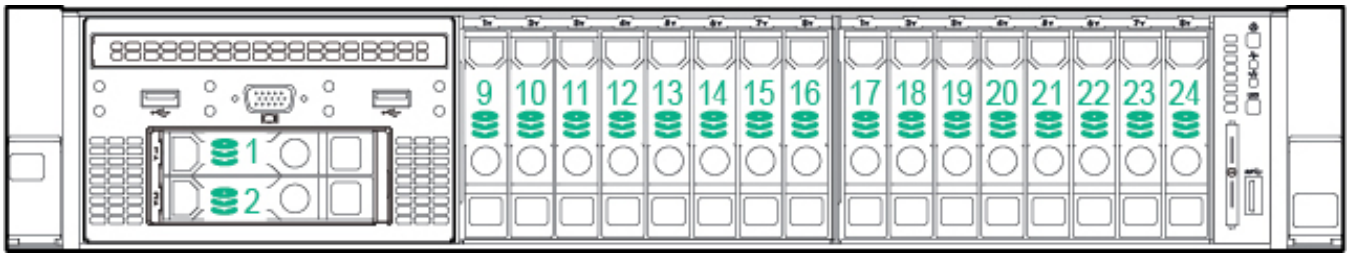
12 LFF + 2 rear SFF hot-plug drive model

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

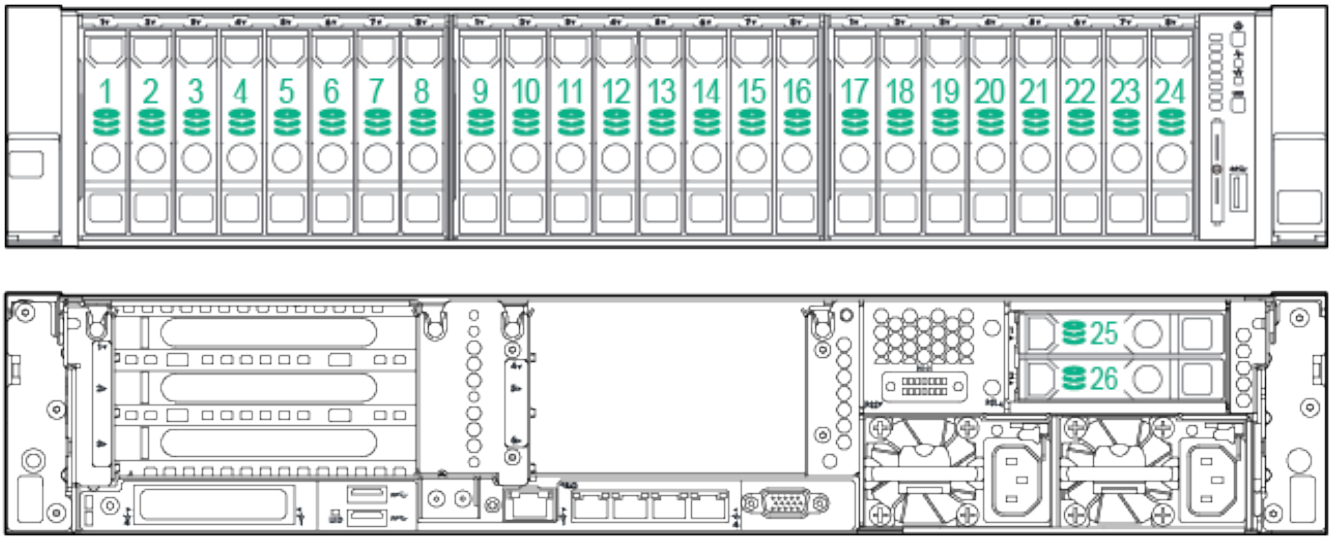
1-2 2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays 1-8 8 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays



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

1-2 2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays 9-24 16 x SFF SATA/SAS/SDD 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.

Technical Specifications

System Unit	**Dimensions**	SFF Drives: 3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm)	
		LFF Drives: 3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)	
	Weight (approximate)	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)	32.6 lb (14.759 kg)
		Maximum: (Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)	51.5 lb (23.6 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC
			200 to 240 VAC
	BTU Rating	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only
			For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only
	Power Supply Output (per power supply)	Rated Steady-State Power	For 1400W Power Supply: 1400W (at 240 VAC), 1400W (at 240 VAC)
			For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only
			For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only
		Maximum Peak Power	For 1400W Power Supply: 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only
			For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only
			For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only

Technical Specifications

System Inlet Temperature	Standard Operating Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).
	Extended Ambient Operating Support	For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hpe.com/servers/ashrae** For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hpe.com/servers/ashrae** System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
Relative Humidity	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
(non-condensing)	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Technical Specifications

Acoustic Noise

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

Idle

LWAd	4.0 B Entry LFF
	4.1 B Entry
	4.2 B Base
	5.7 B Base LFF
	4.3 B Perf
LpAm	23 dBA Entry LFF
	24 dBA Entry
	24 dBA Base
	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
LpAm	25 dBA Entry LFF
	29 dBA Entry
	30 dBA Base
	31 dBA Base LFF
	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.

Technical Specifications

HPE Dynamic Smart Array B140i Controller	**Number of PCI links**	Four	
	PCI link rate	4Gb/s	
	Storage protocol support	SATA	
	SAS/SATA peak data transfer rate	6Gb/s	
	Number of SAS/SATA links	10 links	
	SAS/SATA connectivity	2x4 connectors; 2x1 connectors	
	Expander support	No	
	Drives supported (max)	Up to 10 Internal Drives	
	RAID support	0, 1, 10, 5 SATA	
	Software management	HPE SSA, SMH, SIM	
	Warranty	Server warranty	
	HPE Secure Encryption license	Not Supported	
	HPE SmartCache License	Not Supported	
	HPE Smart Storage Administrator	Supported	
HPE Ethernet 1Gb 4-port 331i Adapter	**Network Interface**	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	PCI Express, two lanes (x2)	
	Controller	BCM5719	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined
		10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined
		100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined
		100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
		1000Base-TX (Half and Full-Duplex)	1000 Mb/s per port, 4000 Mb/s combined
		1000Base-TX (Full-Duplex)	2000 Mb/s per port, 8000 Mb/s combined
	Connector	Four RJ-45	
	Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

Technical Specifications

Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. **http://www.hpe.com/recycle** The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment. **http://www.hpe.com/recycle**

Summary of Changes

Date	Version History	Action	Description of Change
02-Dec-2019	Version 47	Changed	Obsolete SKUs were removed. SKU descriptions were updated under Core Options section.
15-Apr-2019	Version 46	Changed	Core Options sections was updated.
02-Apr-2019	Version 45	Changed	Overview, Core Options and Additional Options sections were updated.
04-Feb-2019	Version 44	Changed	Additional Options section was updated.
03-Dec-2018	Version 43	Changed	Overview, Core Options and Storage sections were Updated
01-Oct-2018	Version 42	Changed	Overview, Configuration Information, Core Option and Additional Options sections were updated. SKU descriptions were updated. Obsolete SKUs were removed.
13-Aug-2018	Version 41	Added	Added new memory option.
		Changed	Memory section was updated.
06-Aug-2018	Version 40	Added	Added new Solid State Drives offering to the HPE Drives section.
		Changed	Core Options and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
04-Jun-2018	Version 39	Added	Added new Solid State Drives offering to the HPE Drives section.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
07-May-2018	Version 38	Changed	Form factor for Base Models was revised.
02-Apr-2018	Version 37	Changed	SKU description from Core Options and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
05-Mar-2018	Version 36	Removed	Obsolete SKUs were removed from the QuickSpecs.
04-Dec-2017	Version 35	Added	Added new higher capacity LFF and SSD drives.
		Changed	Maximum Internal Storage and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
25-Sep-2017	Version 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.
07-Aug-2017	Version 33	Added	Added new Solid State Drives offering to the HPE Drives section.
11-Jul-2017	Version 32	Added	Added new NVIDIA Tesla GPUs.
		Changed	HPE Power Supplies section was revised.
05-Jun-2017	Version 31	Added	Added new Solid State Drives offering to the HPE Drives section. Added new GPU option.
08-May-2017	Version 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.
03-Apr-2017	Version 29	Changed	Smart Buy models section was revised for the NA version only.
27-Mar-2017	Version 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	Version 27	Changed	HPE Memory section under Core Options was revised.
13-Feb-2017	Version 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.

Summary of Changes

16-Dec-2016	Version 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	Version 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	Version 23	Removed	Obsolete Hard Drives were removed from the QuickSpecs.
26-Sep-2016	Version 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	Version 21	Changed	Smart Buy models section was revised for the NA version only.
15-Aug-2016	Version 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.
08-Jul-2016	Version 19	Changed	Smart Buy models section was revised for the NA version only.
06-Jun-2016	Version 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	Version 17	Changed	E5-2600v4 Series Smart Buy Models table was updated in the NA version only.
01-Apr-2016	Version 16	Changed	What's New section was updated. Standard Features/Memory and HPE Memory sections were revised.
31-Mar-2016	Version 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, Pre-Configured Models, HPE Security, and Memory sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
16-Feb-2016	Version 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	Version 13	Changed	Smart Buy models section was revised in the NA version only.
01-Dec-2015	Version 12	Added	New HDD offering was added to HPE Drives. 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.

Summary of Changes

28-Sep-2015	Version 11	Added	Added new 6Gb SATA Solid State Drives. Added new HPE OneView management software.
		Changed	Maximun Internal Storage was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	Version 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.
01-Jun-2015	Version 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	Version 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	Version 7	Added	Added Smart Buy Models to the NA version only.
09-Feb-2015	Version 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.
01-Dec-2014	Version 5	Changed	Changes made throughout the entire QuickSpecs.
13-Oct-2014	Version 4	Changed	Corrected inconsistencies between Product Bulletin and Concentra versions.
13-Oct-2014	Version 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	Version 2	Changed	Changes were made throughout the QuickSpecs.
09-Sep-2014	Version 1	New	New QuickSpecs.

Summary of Changes

hpe.com/qref/dl380gen9

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

c04346247 - 15034 - Worldwide - V47 - 02-December-2019