# QuickSpecs

## Overview

### HPE ProLiant DL380 Generation9 (Gen9)

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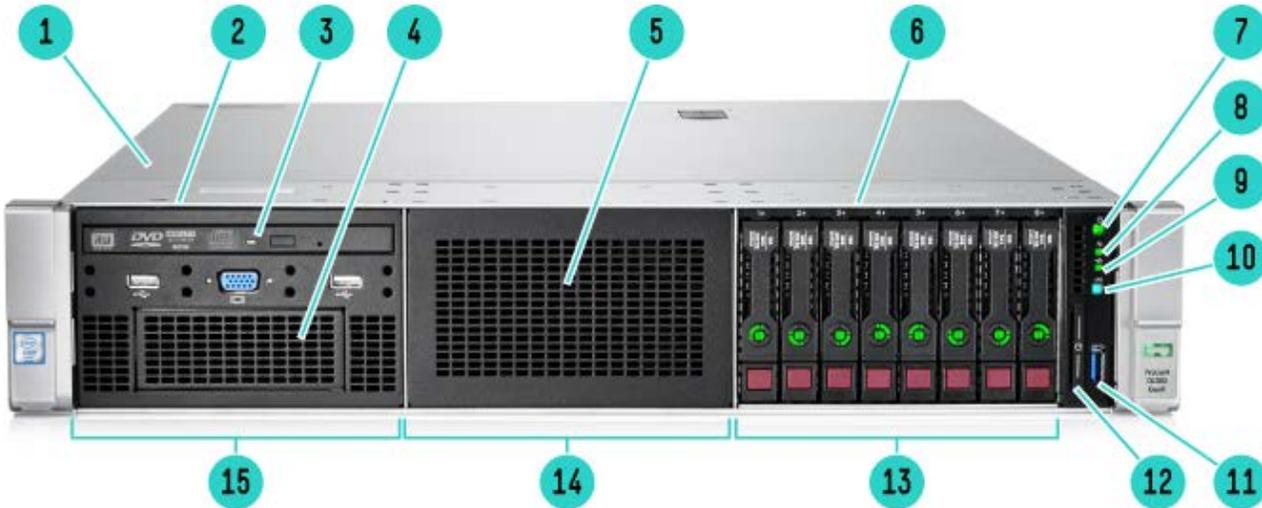


**Front View - 8SFF Chassis with Optional Universal Media Bay shown**

| | | | |
|---|---|---|---|
| 1 | Quick removal access panel | 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
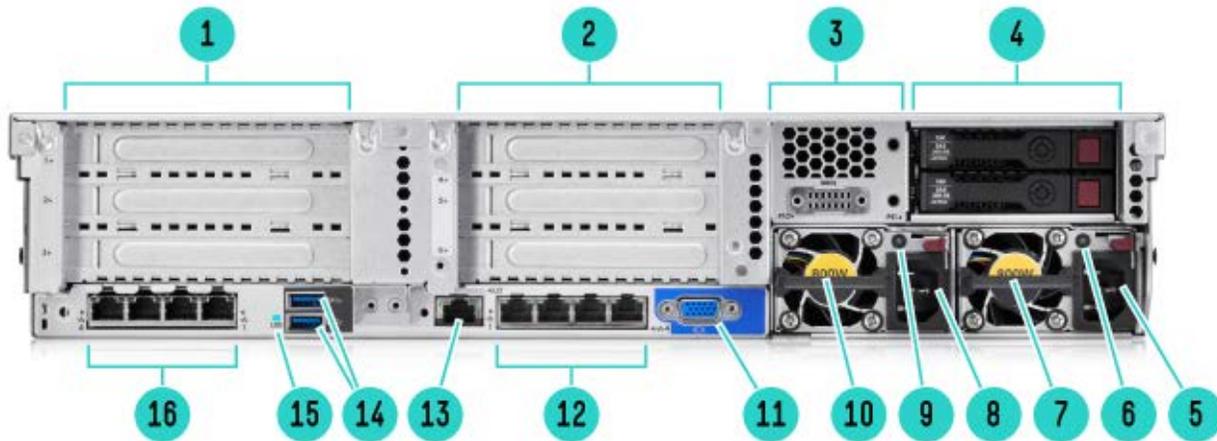


**Rear view**

| | | | |
|---|---|---|---|
| 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 2 (800w shown) | 8 | Power supply Power connection |
| 9 | Power supply Power LED | 10 | HPE Flexible Slot Power Supply bay 1 (800w shown) |
| 11 | VGA connector | | **NOTE:** Optional Micro UPS option. |
| 13 | Dedicated iLO connector | 12 | Embedded 4x1GbE Network Adapter |
| 15 | Unit ID LED | 14 | USB 3.0 connectors (2) |
| | | 16 | Optional FlexibleLOM ports (Shown: 4x1GbE) |

# Overview



## Internal View

| | | | |
|---|---|---|---|
| 1 | Fan cage shown with 6 standard Hot-plug fans (High Performance fans optional) | 2 | Optional HPE Smart Storage Battery |
| 3 | MicroSD card slot **NOTE: Optional Dual MicroSD.** | 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 **NOTE: Optional Micro UPS option.** |
| 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 Flexible LOM 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) | | |

## What's New

- New AMD FirePro S7150x2 GPU support

## Standard Features

| 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 |

## Standard Features

| | | | | | | |
|---|---|---|---|---|---|---|
| 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 |

**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.

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**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/**

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**On System Management Chipset**

HPE iLO (Firmware HPE iLO4 2.0 or later) 2GB NAND
**NOTE:** Read and learn more in the **iLO QuickSpecs**.

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**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)* |

- Note NVDIMM will be shipping later in Q3 2016
- NVDIMM support only with the E5-2600v4 processors
- Note mixing of 2133 and 2400MHzmemory is not supported

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**Memory Protection**

| | |
|---|---|
| Advanced ECC | Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip. |
| Online spare | Memory online spare mode detects a rank that is degrading and switches operation to the spare rank. |

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**Expansion Slots**

Primary Riser (Standard)

| Expansion Technology Slots # | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|
| | | | | | |

# Standard Features

| Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Device 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 depending on card, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

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

| Slot 2 PCIe Riser (Optional 3-slot) 719073-B21 | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Device Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|---|
| | 4 | PCIe 3.0 | x16 | x16 | 16 | | Full-height, full-length slot | Proc 2 |
| | 5 | PCIe 3.0 | x16 | x16 | 20 | | Full-height, full-length slot | Proc 2 |
| | 6 | PCIe 3.0 | x8 | x8 | 23 | | Full-height, half-length slot | Proc 2 |

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

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

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

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

| Slot 1 PCIe Riser (Optional 2-slot) 719076-B21 | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Device 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 depending on card, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

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

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**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.

# Standard Features

|  |  |
|---|---|
| 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 |

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**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 CTO Server also supports 2 SFF rear which allows for the second riser.
**NOTE:** The 6 NVMe drive option can only be leveraged in the SFF CTO Server and replaces Bay 2.

4 LFF drive bays total

**NOTE:** The Universal Media Bay (724865-B21) not available with the LFF CTO Server or the 24SFF CTO Server, and can only be populated in Bay1.
**NOTE:** The 8SFF CTO Server 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 13 the last to be populated for a field upgrade to 24 SFF.
**NOTE:** The 4LFF CTO Server cannot be upgraded to 12LFF in the field.
**NOTE:** All Pre-configured Models come with an embedded 10-Port SATA controller. Optional HPE Flexible Smart Array and Smart SAS HBA Controllers can be added.

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**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 | 120.0TB | 12+3 x 8TB (with optional rear LFF drive cage) |
| Hot Plug LFF SATA | 120.0TB | 12+3 x 8TB (with optional rear LFF drive cage) |
| Hot Plug SFF SAS SSD | 99.84TB | 24+2 x 3.84TB (with optional rear SFF drive cage) |
| Hot Plug LFF SATA SSD | 57.6B | 12+3 x 3.84TB (with optional rear LFF drive cage) |
| Hot Plug SFF NVMe PCIe SSD | 12TB NVMe + 36TB SFF | 6x2TB NVMe plus 36TB with 18 SFF (Bay 1, bay 3 and optional rear drive support) |

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**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.

## Standard Features

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

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

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

To review the power requirements for your selected system, please use the HPE Power Advisor Tool located at **http://www.hp.com/go/hppoweradvisor**.

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

| System Fans | | 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 CTO Servers 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).

| 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** |

## Standard Features

**Citrix XenServer**

**NOTE:** For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: **http://www.hp.com/go/ossupport** and our driver download page: **http://h20566.www2.hpe.com/hpsc/swd/public/readIndex?sp4ts.oid=7271242**.

| | |
|---|---|
| **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 CTO Server & can be populated in Bay1 only.

HPE Legacy Mode (FIO only, 758959-B22)

**NOTE:** UEFI is the default mode for CTO and Pre-configured SKUs. Can change default to legacy via CTO.

| | |
|---|---|
| **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.hp.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).

| | |
|---|---|
| **Graphics** | Integrated Matrox G200eH2 video standard with 16MB of Video RAM |

## Standard Features

- 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)

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**HPE Server UEFI/Legacy ROM**

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

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

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

- Secure Boot

- Operating system specific functionality

- Support for > 2.2 TB (using GPT) boot drives

- USB 3.0 Stack

- Embedded UEFI Shell

- Mass Configuration Deployment Tool using RESTful API for iLO 4

- PXE boot support for IPv6 networks

- Boot support for option cards that only support a UEFI option ROM

- Network Stack configurations

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

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**Form Factor**

One of the following depending on model

2U Rack form factor
8 SFF & 24SFF Drive Bay Version:
3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm)
4 LFF & 12LFF Drive Bay Version:
3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)
**NOTE:** Dimensions without bezel.

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**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/proliant/stk** or **http://www.hpe.com/servers/powershell**. |
| | **RESTful Interface Tool** | RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to discover and deploy servers at scale. Learn more at **http://www.hpe.com/info/resttool**. |
| | **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 |

## Standard Features

UEFI

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

Integrated Lights-Out can be disabled via a Global Setting

iLO Advanced supports directory services integration

TPM 1.2

**Warranty**

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

**NOTE:** Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HPE replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: **http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html**.

## Optional Features

| | | |
|---|---|---|
| **Embedded Management** | **iLO 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 HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hpe.com/info/cmu**. |

**Rack and Power Infrastructure**

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

**High Performance Clusters**

HPE Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPEC Server. A Cluster Platform Configurator simplifies ordering. **http://www.hp.com/go/clusters**.
**NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server as part of the HPE Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by Hewlett Packard Enterprise when integrated within a Hewlett Packard Enterprise cluster. Flexible, validated solutions can be defined with the help of configuration tools. **http://www.hp.com/techservers/clusters/ucp/index.html**.

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

**Storage Software**

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

# Optional Features

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**

  With HPE StoreVirtual VSA you can use the power of virtualization to create a virtual array within your host server. Manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. HPE ProLiant Gen9 servers include a 3-year limited license for HPE StoreVirtual VSA software with 1TB of capacity at no extra cost. Simply select to install HPE StoreVirtual VSA software during server setup within Intelligent Provisioning. More information, instructional videos, and free console management software are available at **http://www.hp.com/go/vsa1TB**.

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

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

# Service and Support

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| **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. |

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| **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.<br>**1- IDC   2 – HP CSC reports 2014 - 2015** |

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| **Recommended Support** | **Standard: HPE Proactive Care\* with 24x7 coverage, three year Support Service**<br>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.<br>**https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf**<br><br>**Optimized HPE Proactive Care\* with 6 hour call-to-repair commitment, three year Support Service**<br>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.<br>**https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf** |

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| **Parts and Materials** | Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.<br><br>Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.<br><br>The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction. |

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| **Related Services** | **HPE Server Hardware Installation**<br>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.<br>**https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf** |

## Service and Support

### HPE Installation and Startup Service

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

### HPE Technology Services Support Credits

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

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| **HPE Education Services** | Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. **http://www.hpe.com/ww/learn** |
| **HPE Support Center** | The HPE Support Center is a personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. |

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

The Hewlett Packard Enterprise Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Support Service or Hewlett Packard Enterprise contractual support agreement.

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

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

## Pre-configured Models

| | Entry Models | | | Base Models | | | | |
|---|---|---|---|---|---|---|---|---|
| **[SKU Number]** | 766342-B21 | 752686-B21 | 826681-B21 | 752688-B21 | 752687-B21 | 826682-B21 | 826683-B21 | 848774-B21 |
| **Model Name** | HP ProLiant DL380 Gen9 E5-2609v3 1P 8GB-R B140i 4LFF SATA 500W PS Entry Server | HP ProLiant DL380 Gen9 E5-2609v3 1P 8GB-R B140i 8SFF SATA 500W PS Entry Server | HPE ProLiant DL380 Gen9 E5-2609v4 1P 8GB-R B140i 8SFF 500W PS Entry SATA Server | HP ProLiant DL380 Gen9 E5-2620v3 2.4GHz 6-core 1P 16GB-R P840/4GB 12LFF 2x800W PS Base Server | HP ProLiant DL380 Gen9 E5-2620v3 1P 16GB-R P440ar 8SFF 500W PS Base Server | HPE ProLiant DL380 Gen9 E5-2620v4 1P 16GB-R P440ar 8SFF 500W PS Base Server | HPE ProLiant DL380 Gen9 E5-2620v4 1P 16GB-R P440ar 12LFF 2x800W PS Base Server | HPE ProLiant DL380 Gen9 E5-2630v4 1P 16GB-R P440ar 8SFF 500W PS Base Server |
| **Processor** | Intel® Xeon® E5-2609v3 | Intel® Xeon® E5-2609v4 | | Intel® Xeon® E5-2620v3 | | Intel® Xeon® E5-2620v4 | | Intel® Xeon® E5-2630v4 |
| **Number of Processors** | One | | | | | | | |
| **Memory** | 8GB (1x8GB Registered DIMMs, 2133 MHz) **NOTE: With the E5-2609v3 this memory DIMM will only operate at 1600MHz.** | 8GB (1x8GB Registered DIMMs, 2400 MHz) **NOTE: With the E5-2609v4 this memory DIMM will only operate at 1866MHz.** | | 16GB (1x16GB Registered DIMMs, 2133 MHz) **NOTE: With the E5-2620v3 this memory DIMM will only operate at 1866MHz.** | | 16GB (1x16GB Registered DIMMs, 2400 MHz) **NOTE: With the E5-2620v4 this memory DIMM will only operate at 2133MHz.** | | 16GB (1x16GB Registered DIMMs, 2400 MHz) **NOTE: With the E5-2630v4 this memory DIMM will only operate at 2133MHz.** |
| **Network Controller** | HPE Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HPE Flexible LOM or stand up card | | | | | | | |
| **Storage Controller** | HPE Dynamic Smart Array B140i, plus optional HPE Flexible Smart Array or Smart HBA controller **NOTE: Default is AHCI off chipset, Smart Array needs to be enabled on SATA model.** | | | HPE Flexible Smart Array P840/4G Controller | HPE Flexible Smart Array P440ar/2GB | | HPE Flexible Smart Array P840ar/2G Controller | HPE Flexible Smart Array P440ar/2GB |
| **Hard Drive** | None ship standard | | | None ship standard; includes 10 LFF hard drive blanks | None ship standard | | | |
| **Internal Storage** | 4 LFF HDD Bays | 8 SFF HDD Bays (upgradable to 24) | | 12 LFF HDD Bays | 8 SFF HDD Bays (upgradable to 24) | | 12 LFF HDD Bays | 8 SFF HDD Bays |

## Pre-configured Models

| | | | | | |
|---|---|---|---|---|---|
| | | | | | (upgradable to 24) |
| **Optical Drive Bay** | Not Available | Optional Universal Media Bay (724865-B21) | Not Available | Optional Universal Media Bay (724865-B21) | Not Available | Optional Universal Media Bay (724865-B21) |
| **Optical Drive** | Optional via HPE Mobile USB DVDRW Drive (701498-B21) | Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | Optional via HPE Mobile USB DVDRW Drive (701498-B21) | Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | Optional via HPE Mobile USB DVDRW Drive (701498-B21) | Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) |
| **PCI-Express Slots** | 3 PCIe slots (+3 PCI slots available with upgrade option, second processor required) | | | | | |
| **Power Supply** | (1) HPE 500W Flex Slot Platinum Power Supply | | (2) HPE 800W Flex Slot Platinum Power Supply | (1) HPE 500W Flex Slot Platinum Power Supply | (2) HPE 800W Flex Slot Platinum Power Supply | (1) HPE 500W Flex Slot Platinum Power Supply |
| **Fans** | 4 hot plug fans, redundant | | 6 hot plug high performance fans, redundant | 4 hot plug fans, redundant | 6 hot plug high performance fans, redundant | 4 hot plug fans, redundant |
| **Management** | iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional) | | | | | |
| **Form Factor** | Rack (2U), HPE Easy Install Rails | | Rack (2U), HPE Easy Install Rails with CMA | | | Rack (2U), HPE Easy Install Rails |
| **Warranty** | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | | | | |

| | **Performance Models** | | | **High Performance Models** | |
|---|---|---|---|---|---|
| **[SKU Number]** | 752689-B21 | 826684-B21 | 852432-B21 | 803860-B21 | 803861-B21 |
| **Model Name** | HP ProLiant DL380 Gen9 E5-2650v3 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W Perf Server | HPE ProLiant DL380 Gen9 E5-2650v4 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W Perf Server | HPE ProLiant DL380 Gen9 E5-2660v4 2P 64GB-R P440ar 8SFF 2x10Gb 2x800W Perf Server | HP ProLiant DL380 Gen9 E5-2690v3 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W High Perf Server | HP ProLiant DL380 Gen9 E5-2690v3 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W OneView Server |
| **Processor** | Intel® Xeon® E5-2650v3 | Intel® Xeon® E5-2650v4 | Intel® Xeon® E5-2660v4 | Intel® Xeon® E5-2690v3 | |

# Pre-configured Models

| Number of Processors | Two | | | |
|---|---|---|---|---|
| **Memory** | 32GB (2x16GB Registered DIMMs, 2133 MHz) | 32GB (2x16GB Registered DIMMs, 2400 MHz) | 64GB (4x16GB Registered DIMMs, 2400 MHz) | 32GB (2x16GB Registered DIMMs, 2133 MHz) |
| **Network Controller** | HPE Embedded 4x1Gb, plus 2x10Gb-T Flexible LOM | | HPE Embedded 4x1Gb, plus 2x10Gb SFP+ Flexible LOM | HPE Embedded 4x1Gb, plus 2x10Gb-T Flexible LOM |
| **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) | Universal Media Bay (724865-B21) | | |
| **Optical Drive** | HPE Half-Height SATA DVD-RW Optical Drive | | | |
| **PCI-Express Slots** | 6 PCIe slots (includes second riser slot upgrade option) | 6 PCIe 3.0 slots | | 6 PCIe slots (includes second riser slot upgrade option) |
| **Power Supply** | (2) HPE 800W Flex Slot Platinum Power Supply | | | |
| **Fans** | 6 hot plug fans, redundant | | 6 hot plug high performance fans, redundant | |
| **Management** | iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (optional) | | | iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HPE OneView (Standard) |
| **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.

## Smart Buy Models

| | E5-2600v4 Series Smart Buy Models | | |
|---|---|---|---|
| **[SKU Number]** | 859085-S01 | 859083-S01 | 859084-S01 |
| **Model Name** | HPE DL380 Gen9 E5-2690v4 2P SFF US Svr/S-Buy | HPE DL380 Gen9 E5-2660v4 2P SFF US Svr/S-Buy | HPE DL380 Gen9 E5-2620v4 24S US Svr/S-Buy |
| **Processor** | Intel® Xeon® E5-2690v4 | Intel® Xeon® E5-2660v4 | Intel® Xeon® E5-2620v4 |
| **Number of Processors** | Two | | One |
| **Memory** | 64GB (4x16GB Registered DIMMs, 2400MHz) **NOTE:** DIMMs will operate at 2400MHz with this processor. | | 64GB (4x16GB Registered DIMMs, 2400MHz) **NOTE:** DIMMs will operate at 2133MHz with this processor. |
| **Network Controller** | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | |
| **Storage Controller** | HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery | | HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery + SAS Expander |
| **Hard Drive** | None ship standard | | |
| **Internal Storage** | 8 SFF SATA/SAS Bays | | 24 SFF SATA/SAS Bays |
| **Optical Drive Bay** | None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | | None Included: Optional external HPE Mobile USB DVDRW Drive (701498-S01) |
| **PCI-Express Slots** | Six (6) PCIe Gen3 Slots | | Three (3) PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required) |
| **Power Supply** | Two (2) HPE 800W Flex Slot Platinum Power Supplies | | |
| **Fans** | Six (6) high performance hot plug fans, redundant | | |
| **Management** | Standard: iLO Advanced Optional: Insight Control, HPE OneView | Standard: iLO Management Optional: iLO Advanced, Insight Control, HPE OneView | |
| **Form Factor** | Rack (2U), HPE Easy Install Rails | | |
| **Warranty** | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | |

## Smart Buy Models

| | E5-2600v4 Series Smart Buy Models | | |
|---|---|---|---|
| **[SKU Number]** | 850520-S01 | 850519-S01 | 850518-S01 |
| **Model Name** | HPE DL380 Gen9 E5-2667v4 SFF US Svr/S-Buy | HPE DL380 Gen9 E5-2650v4 SFF US Svr/S-Buy | HPE DL380 Gen9 E5-2643v4 SFF US Svr/S-Buy |
| **Processor** | Intel® Xeon® E5-2667v4 | Intel® Xeon® E5-2650v4 | Intel® Xeon® E5-2643v4 |
| **Number of Processors** | One | | |
| **Memory** | 32GB (2x16GB Registered DIMMs, 2400 MHz)<br>**NOTE:** DIMMs will operate at 2400MHz with this processor. | | |
| **Network Controller** | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | |
| **Storage Controller** | HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery | | |
| **Hard Drive** | None ship standard | | |
| **Internal Storage** | 8 SFF SATA/SAS Bays | | |
| **Optical Drive Bay** | None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | | |
| **PCI-Express Slots** | 3 PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required) | | |
| **Power Supply** | Two (2) HPE 500W Flex Slot Platinum Power Supplies | One (1) HPE 500W Flex Slot Platinum Power Supply | |
| **Fans** | Four (4) Standard hot plug fans, redundant | | |
| **Management** | Standard: iLO Management<br>Optional: iLO Advanced, Insight Control, HPE OneView | | |
| **Form Factor** | Rack (2U), HPE Easy Install Rails | | |
| **Warranty** | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | |

## Smart Buy Models

| | E5-2600v4 Series Smart Buy Models | | |
|---|---|---|---|
| **[SKU Number]** | 867450-S01 | 867448-S01 | 850517-S01 |
| **Model Name** | HPE DL380 Gen9 E5-2640v4 SFF US Svr/S-Buy | HPE DL380 Gen9 E5-2620v4 SFF US Svr/S-Buy | HPE DL380 Gen9 E5-2609v4 SAS US Svr/S-Buy |
| **Processor** | Intel® Xeon® E5-2640v4 | Intel® Xeon® E5-2620v4 | Intel® Xeon® E5-2609v4 |
| **Number of Processors** | One | | |
| **Memory** | 16GB (1x16GB Registered DIMMs, 2400MHz) **NOTE:** DIMMs will operate at 2133MHz with this processor. | | 8GB (1x8GB Registered DIMMs, 2400MHz) **NOTE:** DIMMs will operate at 1866MHz with this processor. |
| **Network Controller** | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | |
| **Storage Controller** | HPE Flexible Smart Array P440ar/2GB + Smart Storage Battery | | HPE H240ar Smart Host Bus Adapter |
| **Hard Drive** | None ship standard | | |
| **Internal Storage** | 8 SFF SATA/SAS Bays | | |
| **Optical Drive Bay** | None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | | |
| **PCI-Express Slots** | Three (3) PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required) | | |
| **Power Supply** | One (1) HPE 500W Flex Slot Platinum Power Supplies | | |
| **Fans** | Four (4) standard hot plug fans, redundant | | |
| **Management** | Standard: iLO Management Optional: iLO Advanced, Insight Control, HPE OneView | | |
| **Form Factor** | Rack (2U), HPE Easy Install Rails | | |
| **Warranty** | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | |

## Smart Buy Models

| [SKU Number] | E5-2600v3 Series Smart Buy Models | | | |
|---|---|---|---|---|
| | 800078-S01 | 800077-S01 | 784655-S01 | 777338-S01 |
| **Model Name** | HP DL380 Gen9 E5-2697v3 2P SFF US Svr/S-Buy | HP DL380 Gen9 E5-2690v3 2P SFF US Svr/S-Buy | HP DL380 Gen9 E5-2670v3 2P SFF US Svr/S-Buy | HP DL380 Gen9 E5-2640v3 2P SFF US Svr/S-Buy |
| **Processor** | Intel® Xeon® E5-2697v3 | Intel® Xeon® E5-2690v3 | Intel® Xeon® E5-2670v3 | Intel® Xeon® E5-2640v3 |
| **Number of Processors** | Two | | | |
| **Memory** | 64GB (4x16GB Registered DIMMs, 2133 MHz) <br> **NOTE:** DIMMs will operate at 2133MHz with this processor. | | | 16GB (2x8GB Registered DIMMs, 2133 MHz) <br> **NOTE:** DIMMs will operate at 1866MHz with this processor. |
| **Network Controller** | HP Embedded 1Gb Ethernet 4-port 331i Adapter | | HP Embedded 1Gb Ethernet 4-port 331i Adapter plus HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter | HP Embedded 1Gb Ethernet 4-port 331i Adapter |
| **Storage Controller** | HP Flexible Smart Array P440ar/2GB + Smart Storage Battery | | | |
| **Hard Drive** | None ship standard | | | |
| **Internal Storage** | 8 SFF SATA/SAS Bays | | | |
| **Optical Drive Bay** | None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | | | |
| **PCI-Express Slots** | Three (3) PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required) | | Six (6) PCIe Gen3 slots | |
| **Power Supply** | Two (2) HP 800W Flex Slot Platinum Power Supply | | | Two (2) HP 500W Flex Slot Platinum Power Supply |
| **Fans** | Six (6) Standard hot plug fans, redundant | | | |
| **Management** | Standard: iLO Management <br> Optional: iLO Advanced, Insight Control, HP OneView | | Standard: iLO Advanced <br> Optional: Insight Control, HP OneView | Standard: iLO Management <br> Optional: iLO Advanced, Insight Control, HP OneView |
| **Form Factor** | Rack (2U), HP Easy Install Rails | | | |
| **Warranty** | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | | |

## Smart Buy Models

| | E5-2600v3 Series Smart Buy Models | | | |
|---|---|---|---|---|
| **[SKU Number]** | 800076-S01 | 800075-S01 | 800073-S01 | 777336-S01 |
| **Model Name** | HP DL380 Gen9 E5-2667v3 SFF Svr/S-Buy | HP DL380 Gen9 E5-2643v3 SFF Svr/S-Buy | HP DL380 Gen9 E5-2620v3 SFF Svr/S-Buy | HP DL380 Gen9 E5-2609v3 US Svr/S-Buy |
| **Processor** | Intel® Xeon® E5-2667v3 | Intel® Xeon® E5-2643v3 | Intel® Xeon® E5-2620v3 | Intel® Xeon® E5-2609v3 |
| **Number of Processors** | One | | | |
| **Memory** | 32GB (2x16GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 2133MHz with this processor.** | | 16GB (1x16GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 1866MHz with this processor.** | 8GB (1x8GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 1600MHz with this processor.** |
| **Network Controller** | HP Embedded 1Gb Ethernet 4-port 331i Adapter | | | |
| **Storage Controller** | HP Flexible Smart Array P440ar/2GB + Smart Storage Battery | | | HP H240ar Smart Host Bus Adapter |
| **Hard Drive** | None ship standard | | | |
| **Internal Storage** | 8 SFF SATA/SAS Bays | | | |
| **Optical Drive Bay** | None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | | | |
| **PCI-Express Slots** | Three (3) PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required) | | | |
| **Power Supply** | Two (2) HP 500W Flex Slot Platinum Power Supplies | One (1) HP 500W Flex Slot Platinum Power Supply | | |
| **Fans** | Four (4) Standard hot plug fans, redundant | | | |
| **Management** | Standard: iLO Management Optional: iLO Advanced, Insight Control, HP OneView | | | |
| **Form Factor** | Rack (2U), HP Easy Install Rails | | | |
| **Warranty** | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | | |

## Smart Buy Models

| | E5-2600v3 Series Smart Buy Models | | | |
|---|---|---|---|---|
| **[SKU Number]** | 777337-S01 | 792468-S01 | 777339-S01 | 779559-S01 |
| **Model Name** | HP DL380 Gen9 E5-2620v3 SAS US Svr/S-Buy | HP DL380 Gen9 E5-2650v3 24S US Svr/S-Buy | HP DL380 Gen9 E5-2640v3 24S US Svr/S-Buy | HP DL380 Gen9 E5-2620v3 12L US Svr/S-Buy |
| **Processor** | Intel® Xeon® E5-2620v3 | Intel® Xeon® E5-2650v3 | Intel® Xeon® E5-2640v3 | Intel® Xeon® E5-2620v3 |
| **Number of Processors** | One | Two | One | |
| **Memory** | 16GB (1x16GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 1866MHz with this processor.** | 32GB (4x8GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 2133MHz with this processor.** | 32GB (2x16GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 1866MHz with this processor.** | 16GB (1x16GB Registered DIMMs, 2133 MHz) **NOTE: DIMMs will operate at 1866MHz with this processor.** |
| **Network Controller** | HP Embedded 1Gb Ethernet 4-port 331i Adapter | | | |
| **Storage Controller** | HP H240ar Smart Host Bus Adapter | HP Flexible Smart Array P440ar/2GB + Smart Storage Battery | | HP Flexible Smart Array P840/4GB + Smart Storage Battery |
| **Hard Drive** | None ship standard | 2x 300GB 10K SAS 4x 600GB 10K SAS | None ship standard | |
| **Internal Storage** | 8 SFF SATA/SAS Bays | 24 SFF SATA/SAS Bays | | 12 LFF SATA/SAS Bays |
| **Optical Drive Bay** | None Included: Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21) | None Included: Optional external HP Mobile USB DVDRW Drive (701498-B21) | | |
| **PCI-Express Slots** | Three (3) PCIe Gen3 slots (+3 PCIe Gen3 slots available with upgrade option, second processor required) | | | |
| **Power Supply** | One (1) HP 500W Flex Slot Platinum Power Supply | Two (2) HP 800W Flex Slot Platinum Power Supply | | |
| **Fans** | Four (4) Standard hot plug fans, redundant | Six (6) high performance hot plug fans, redundant | | |
| **Management** | Standard: iLO Management Engine Optional: iLO Advanced, Insight Control, HP OneView | Standard: iLO Advanced Optional: Insight Control, HP OneView | Standard: iLO Management Engine Optional: iLO Advanced, Insight Control, HP OneView | |
| **Form Factor** | Rack (2U), HP Easy Install Rails | | | |
| **Warranty** | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | | |

# 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)

| CTO Server Models | HP ProLiant DL380 Gen9 8SFF Configure-to-order Server | HP ProLiant DL380 Gen9 NVMe 6 Solid State Drive Express Bay Configure-to-order Server | HP ProLiant DL380 Gen9 24SFF Configure-to-order Server | HP ProLiant DL380 Gen9 4LFF Configure-to-order Server | HP 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 Flexible LOM or stand up card | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | HPE Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HPE Flexible LOM 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 CTO Server (810393-B21) there are limitations on GPU support.

**NOTE:** The NVMe CTO Server (810393-B21) ships with the standard x8 Risers supporting 2xNVMe drives.

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

| HPE Processors | Entry Processors – E5-2600v4 series Processors |
|---|---|
| | HP DL380 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) FIO Processor Kit      817941-L21 |

## Configuration Information - Factory Integrated Models

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/10-core/25MB/55W) FIO Processor Kit | 817931-L21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) FIO Processor Kit | 817939-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) FIO Processor Kit | 817935-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HP DL380 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) FIO Processor Kit | 817929-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit | 817927-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit | 817925-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit | 817923-L21 |

**Entry Processors- E5-2600v3 series Processors**

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit | 719053-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit | 719052-L21 |

**Base Processors- E5-2600v3 series Processors**

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit | 719051-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit | 779556-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit | 719050-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit | 719060-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) FIO Processor Kit | 719058-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HP DL380 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit | 719049-L21 |

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

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) FIO Processor Kit | 817957-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| **NOTE: This processor is not supported in a 12LFF or 24LFF CTO Server + Rear drive.** | |
| HPE DL380 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) FIO Processor Kit | 817967-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) FIO Processor Kit | 817965-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) FIO Processor Kit | 817963-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) FIO Processor Kit | 817955-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit | 817961-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) FIO Processor Kit | 817959-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit | 817953-L21 |
| **NOTE:** Ships with a High Performance Heatsink. | |
| HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit | 817951-L21 |

## Configuration Information - Factory Integrated Models

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) FIO Processor Kit | 817945-L21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit | 817943-L21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit | 817937-L21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) FIO Processor Kit | 817947-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit | 817933-L21 |

**Performance Processors- E5-2600v3 series Processors**

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) FIO Processor Kit | 719057-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit | 719048-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit | 719059-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit | 762764-L21 |
| HP DL380 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) FIO Processor Kit | 719056-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit | 719046-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit | 762766-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) FIO Processor Kit | 719055-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) FIO Processor Kit | 719044-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit | 762760-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) FIO Processor Kit | 719054-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit | 781913-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit | 781915-L21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) FIO Processor Kit | 762768-L21 |

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

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

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

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

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

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

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

# Configuration Information - Factory Integrated Models

**HPE Memory**

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

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

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

**NOTE:** If only one processor is installed only half of the total DIMM slots are available. When populating with two processors all DIMM slots are available.

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

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

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

| | |
|---|---|
| HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726717-B21 |
| HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726718-B21 |
| HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 759934-B21 |
| HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726719-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 728629-B21 |

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

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

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

| | |
|---|---|
| HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805347-B21 |
| HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805349-B21 |
| HP 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 836220-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805351-B21 |

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

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

**HPE Power Supplies**

**NOTE:** Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

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

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

| | |
|---|---|
| HP 500W Flex Slot Platinum Hot Plug Power Supply Kit | 720478-B21 |
| HP 800W Flex Slot Platinum Hot Plug Power Supply Kit | 720479-B21 |
| HP 800W Flex Slot Titanium Hot Plug Power Supply Kit | 720482-B21 |

**NOTE:** Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.

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

## Configuration Information - Factory Integrated Models

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

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

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

| | |
|---|---|
| HP 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit | 720620-B21 |
| HP 750W Flex Slot Hot Plug Battery Backup Module | 738024-B21 |

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

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

**NOTE:** The above power supply options are all 80Plus Platinum-certified with an efficiency rating of up to 94%. Support for HPE Power Discovery Services is included with the 1400W Flex Slot option. Power specifications and technical content for all HPE Server power supplies can be found at: **http://www.hp.com/go/proliant/powersupply**

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

**HPE Storage Controllers**

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

### HPE Flexible Smart Array Controllers

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

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

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

### HPE Smart Array Controllers

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

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

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

| | |
|---|---|
| HP Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller | 761874-B21 |

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

### HPE Smart Host Bus Adapters

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

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

### HPE Cable Options

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

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

| | |
|---|---|
| HP DL380 Gen9 8SFF SAS Cable Kit | 783009-B21 |

**NOTE:** Required for 8/16/24 SFF models for use with P840/440 controllers

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

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

| | |
|---|---|
| HP DL380 Gen9 12LFF SAS Cable Kit | 785991-B21 |

## Configuration Information - Factory Integrated Models

|  |  |  |
|---|---|---|
|  | **NOTE:** Required for 12LFF models with P440/840 PCIe controllers |  |
|  | HP DL380 Gen9 8SFF H240 Cable Kit | 786092-B21 |
|  | **NOTE:** Required for 8/16/24 SFF models for use with H240/P440ar, H240 PCIe or embedded B140i SATA controller. |  |
|  | HP DL380 Gen9 12LFF H240 SAS Cable Kit | 786215-B21 |
|  | **NOTE:** Required for 12LFF models with H240/P440ar, H240 or embedded B140i SATA controller |  |
| **BIOS Mode** | HP Legacy FIO Mode Setting | 758959-B22 |
|  | **NOTE:** If selected, then B140i will not be supported and can no longer be a primary controller, therefore SAS internal controller must be selected to be the primary controller. |  |
| **Controller State** | HP FIO Enable B140i Setting | 784308-B21 |
|  | **NOTE:** Must be selected when B140i is used as primary controller and RAID is desired. |  |
|  | HP Mfg FIO Enable HBA Mode Setting | 792962-B21 |
|  | **NOTE:** When selected if H240ar/H240 are used as the primary controller then RAID is not allowed. |  |
| **HPE Unique Options** | HP 2SFF Front SPEC Perf FIO Mount | 787945-B21 |
|  | **NOTE:** May only be selected with 8SFF CTO Server and optical media cage kit and 2SFF Drive cage option. When this option is selected, a primary controlleris not required for the 8SFF CTO Server. |  |
| **HPE Insight Software** | **HPE Insight Control** |  |
|  | HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License | C6N36A |
|  | HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO E-LTU | C6N36ABE |
| **HPE Converged Infrastructure Management Software** | **HPE OneView Advanced (with iLO Advanced)** |  |
|  | HP OneView for ProLiant DL Server incl 3 yr 24x7 Supp FIO Bundle Physical 1 Svr Lic | E5Y43A |
|  | **HPE OneView Advanced (without HPE iLO Advanced)** |  |
|  | HP OneView w/o iLO including 3yr 24x7 Support FIO 1 Server LTU | P8B31A |

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

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

# Core Options

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

| | | |
|---|---|---|
| **HPE Unique Options** | HP DL380 Gen9 NVMe 6 Solid State Drive Express Bay Enablement Kit | 774741-B21 |

**NOTE:** This option provides support for up to 6NVMe drives, and can only be populated in BAY2 in SFF CTO Server only, can be used with Bay1 and Bay 3 populated.

**NOTE:** The HPE DL380 Gen9 High Performance Fan Kit is required for NVMe support (719079-B21).

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

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

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

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

HP 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 CTO Server or 8+8SFF CTO Server.

HP DL380 Gen9 Graphics Enablement Kit                                          719082-B21

**NOTE:** This kit includes alternative 2 heatsinks plus6 cables to enable GPU support. Other limitations apply, see Graphic section for more details.

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

HP DL380 Gen9 High Performance Fan Kit                                          719079-B21

**NOTE:** This kit is required for specific Ambient temperature environments, more details here: **http://www.hp.com/servers/Ashrae**.

**NOTE:** This kit is also required to support Passive GPUs.

**NOTE:** This kit provides max cooling for your Server.

HP DL380 Gen9 2SFF Front/Rear SAS/SATA Kit                                      724864-B21

**NOTE:** For 2SFF front the Universal Media Bay (724865-B21) is required.

**NOTE:** 2SFF in the rear is only supported with a 24SFF (CTO Server or field upgraded) or 12LFF (719061-B21) CTO Server.

**NOTE:** Rear drives are only supported with the following processor characteristics: 145W, 22/18/16 Cores; 135W, 20/8/6/4 Cores; 120W, 18/16/14 Cores; 105W, 14/12 Cores; 90W, 10 Cores; 85W, 10/8/6/4 Cores; 65W, 14 Cores and 55W, 10 Cores.

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

**NOTE:** This is only supported in the 12LFF CTO Server (719061-B21).

**NOTE:** 3LFF rear drives will consume the 2nd riser expansion slot.

**NOTE:** 3LFF Rear drives are only supported with the following processor characteristics: 145W, 22/18/16 Cores; 135W, 20/8/6/4 Cores; 120W, 18/16/14

# Core Options

<table>
<tr><td>Cores; 105W, 14/12 Cores; 90W, 10 Cores; 85W, 10/8/6/4 Cores; 65W, 14 Cores and 55W, 10 Cores.</td><td></td></tr>
<tr><td>HP DL380 Gen9 Primary 2 Slot GPU Ready Riser Kit<br>Slot1: 1x Gen3 x16 FH/FL, 1xGen3 x8 FH/HL.<br>NOTE: This replaces the standard Primary riser in slot1.</td><td>719076-B21</td></tr>
<tr><td>HP DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit<br>Slot2: 2xGen3 x16 FH/FL, 1xGen3 x8 FH/HL.</td><td>719073-B21</td></tr>
<tr><td>HP DL380 Gen9 8SFF Bay1 Cage/Backplane Kit<br>NOTE: To add an additional 8SFF drive cage in Bay1.<br>NOTE: To get to 16SFF total please populate bay 2 with 768857-B21 (from an 8SFF CTO Server starting point).<br>NOTE: This ships with 6 High Efficiency Fans.<br>NOTE: Selecting this option does not allow you to select the Universal Media Bay.</td><td>719067-B21</td></tr>
<tr><td>HP DL380 Gen9 Additional 8SFF Bay2 Cage/Backplane Kit<br>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.</td><td>768857-B21</td></tr>
<tr><td>HP 12Gb SAS Expander Card with Cables for DL380 Gen9<br>NOTE: SAS expander to enable 24SFF field upgrade.<br>NOTE: Primary population in slot2 or 3 of the Primary Riser.<br>NOTE: Population in secondary riser required P440ar or P840ar with cable kit (844115-B21).</td><td>727250-B21</td></tr>
<tr><td>HP DL380 Gen9 Systems Insight Display Kit<br>NOTE: The Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field upgrade option.</td><td>768900-B21</td></tr>
<tr><td>HP DL380 Gen9 Rear Serial Port and Enablement Kit</td><td>768896-B21</td></tr>
<tr><td>HPE DL380 12Gb SAS Expander Card Riser 1 Cable Bundle Kit<br>NOTE: Cable kit required to support the SAS Expander (727250-B21) in the secondary riser (719073-B21) without the second processor.</td><td>839786-B21</td></tr>
<tr><td>HPE DL380 Gen9 P440ar/H240ar Riser 2 SAS Expander Kit<br>NOTE: Cable kit required to support the SAS Expander (727250-B21) in the secondary riser (719073-B21) with the P840ar or P440ar.</td><td>844115-B21</td></tr>
</table>

| HPE Processors | E5-2600v4 series Processors | |
|---|---|---|
| | HPE DL380 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) Processor Kit | 817941-B21 |
| | HPE DL380 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) Processor Kit | 817931-B21 |
| | HPE DL380 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit | 817925-B21 |
| | HPE DL380 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit | 817923-B21 |
| | HPE DL380 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) Processor Kit | 817935-B21 |
| | NOTE: Ships with a High Performance Heatsink. | |

## Core Options

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) Processor Kit | 817929-B21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit | 817927-B21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) Processor Kit | 817939-B21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2687Wv4 (3.0GHz/12-core/30MB/160W) Processor Kit | 817957-B21 |

**NOTE:** Ships with a High Performance Heatsink.

**NOTE:** This processor is not supported in a 12LFF or 24LFF CTO Server + Rear drive.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) 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.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) Processor Kit | 817955-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Processor Kit | 817961-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) Processor Kit | 817959-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit | 817953-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit | 817951-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit | 817945-B21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit | 817943-B21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) Processor Kit | 817937-B21 |
| HPE DL380 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) Processor Kit | 817947-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HPE DL380 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit | 817933-B21 |

## Core Options

### E5-2600v3 series Processors

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit | 719052-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit | 719053-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit | 719060-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit | 719049-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) Processor Kit | 719058-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit | 719050-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit | 779556-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit | 719051-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) Processor Kit | 762768-B21 |

**NOTE:** Ships with a High Performance Heatsink.
**NOTE:** This processor is not supported in a 12LFF or 24LFF CTO Server + Rear drive.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) Processor Kit | 781915-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) Processor Kit | 781913-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) Processor Kit | 719054-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) Processor Kit | 762760-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) Processor Kit | 719044-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) Processor Kit | 719055-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit | 762766-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit | 719046-B21 |

# Core Options

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit | 762764-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit | 719059-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit | 719048-B21 |
| HP DL380 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) Processor Kit | 719056-B21 |

**NOTE:** Ships with a High Performance Heatsink.

| | |
|---|---|
| HP DL380 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) Processor Kit | 719057-B21 |

**NOTE:** Ships with a High Performance Heatsink.

**NOTE:** Up to 2 processors supported. Performance and Energy Star Model configurations include two processors.

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

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

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

**NOTE:**  xxxxxx-B21 ship with 2 additional FANs for factory of field installation.

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

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

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

---

**HPE Memory**

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

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

| | |
|---|---|
| HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726717-B21 |
| HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726718-B21 |
| HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 759934-B21 |
| HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726719-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 728629-B21 |

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

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

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

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

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

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

# Core Options

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

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

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

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

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

| | |
|---|---|
| HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805347-B21 |
| HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805349-B21 |
| HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 836220-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805351-B21 |

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

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

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

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

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

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

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

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

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

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

### HPE Persistent Memory (NVDIMM)

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

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

**NOTE:** NVDIMMs are currently only available as field upgrades.

**NOTE:** NVDIMMs are only supported with E5-2600v4 processors, excluding field upgrades from E5-2600v3 to E5-2600v4.

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

**NOTE:** Can only be mixed with RDIMMs.

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

**NOTE:** NVDIMMs shipping in Q2/3 2016.

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

# Core Options

| HPE Drives | **SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives** | |
|---|---|---|
| | HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive | 791034-B21 |
| | HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 781518-B21 |
| | HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive | 718162-B21 |
| | HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 785069-B21 |
| | HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652589-B21 |
| | HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive | 748387-B21 |
| | HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 759212-B21 |
| | HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 781516-B21 |
| | HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652583-B21 |
| | HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 759210-B21 |
| | HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652572-B21 |
| | HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 759208-B21 |
| | HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 785067-B21 |
| | HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652611-B21 |
| | HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652564-B21 |
| | HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652605-B21 |
| | **SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives** | |
| | HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765466-B21 |
| | HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765464-B21 |
| | HPE 1TB 12G SAS 7.2K rpm SFF (2.5in) SC Midline 1yr Warranty Hard Drive | 832514-B21 |
| | HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652749-B21 |
| | HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652745-B21 |
| | **SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives** | |
| | HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive | 765424-B21 |
| | HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive | 737394-B21 |
| | HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive | 737261-B21 |
| | **SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives** | |
| | HPE 8TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 819201-B21 |
| | HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793703-B21 |
| | HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793699-B21 |
| | HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765259-B21 |
| | HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793671-B21 |

# Core Options

| | |
|---|---|
| HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765257-B21 |
| HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 818367-B21 |
| HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793669-B21 |
| HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 818365-B21 |

**SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives**

| | |
|---|---|
| HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765455-B21 |
| HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765453-B21 |
| HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 655710-B21 |
| HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 655708-B21 |

**SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives**

| | |
|---|---|
| HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 819203-B21 |
| HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793695-B21 |
| HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 761477-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793683-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765255-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793667-B21 |
| HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 695510-B21 |
| HPE 4TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 861678-B21 |
| HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765253-B21 |
| HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 693687-B21 |
| HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives | 793665-B21 |
| HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 628061-B21 |
| HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652766-B21 |
| HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 861676-B21 |
| HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652757-B21 |
| HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 658079-B21 |
| HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652753-B21 |
| HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 657750-B21 |
| HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 658071-B21 |

**12G SAS Hot Plug SFF (2.5-inch) SC Write Intensive Solid State Drives**

| | |
|---|---|
| HPE 1.6TB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846432-B21 |
| HPE 800GB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846430-B21 |

**12G SAS Mixed Use Hot Plug SFF (2.5-inch) Solid State Drives**

| | |
|---|---|
| HPE 3.2TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 822567-B21 |
| HPE 1.6TB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846436-B21 |
| HPE 1.6TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 822563-B21 |

# Core Options

| | |
|---|---|
| HPE 800GB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846434-B21 |
| HPE 800GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 822559-B21 |
| HPE 400GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 822555-B21 |
| **6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives** | |
| HPE 3.84TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816576-B21 |
| HPE 1.92TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816572-B21 |
| HPE 960GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816568-B21 |
| HPE 480GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816562-B21 |
| **12G SAS Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives** | |
| HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802891-B21 |
| HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779176-B21 |
| HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802586-B21 |
| HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779172-B21 |
| HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779168-B21 |
| HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779164-B21 |
| HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802578-B21 |
| HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802582-B21 |
| **12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives** | |
| HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive | 762263-B21 |
| **12G SAS Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives** | |
| HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive | 762272-B21 |
| **6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives** | |
| HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764929-B21 |
| HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764927-B21 |
| HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764925-B21 |
| HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764923-B21 |
| **6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives** | |
| HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816929-B21 |
| HP 1.92TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816919-B21 |
| HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804605-B21 |
| HP 960GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816909-B21 |
| HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804599-B21 |
| HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804593-B21 |

# Core Options

| | |
|---|---|
| HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816899-B21 |
| HP 240GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816889-B21 |
| HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804587-B21 |
| HP 120GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816879-B21 |
| HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804581-B21 |
| HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804575-B21 |

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

| | |
|---|---|
| HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804677-B21 |
| HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804671-B21 |
| HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804665-B21 |
| HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804639-B21 |

**6G SATA Hot Plug SFF (2.5-inch) SC Mixed Use Solid State Drives**

| | |
|---|---|
| HP 1.92TB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 817015-B21 |
| HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 817011-B21 |
| HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804631-B21 |
| HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816995-B21 |
| HP 960GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816999-B21 |
| HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804625-B21 |
| HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 832414-B21 |
| HP 480GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816989-B21 |
| HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816985-B21 |
| HP 240GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816979-B21 |
| HP 240GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816975-B21 |
| HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804613-B21 |
| HP 120GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816965-B21 |
| HP 120GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816969-B21 |

**6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value M1 Solid State Drives**

| | |
|---|---|
| HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764945-B21 |
| HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764943-B21 |
| HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764941-B21 |
| HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764939-B21 |

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

| | |
|---|---|
| HP 3.84TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816933-B21 |

# Core Options

| | |
|---|---|
| HP 1.92TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816923-B21 |
| HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804608-B21 |
| HP 960GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816913-B21 |
| HP 800GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804602-B21 |
| HP 480GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816903-B21 |
| HP 480GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804596-B21 |
| HP 240GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816893-B21 |
| HP 240GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804590-B21 |
| HP 120GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816883-B21 |
| HP 120GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804584-B21 |
| HP 80GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804578-B21 |
| **6G SATA Hot Plug LFF (3.5-inch) SC Write Intensive Solid State Drives** | |
| HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804680-B21 |
| HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804674-B21 |
| HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804668-B21 |
| HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804642-B21 |
| **6G SATA Hot Plug LFF (3.5-inch) SC Mixed Use Solid State Drives** | |
| HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804634-B21 |
| HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804628-B21 |
| HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 832417-B21 |
| HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804616-B21 |
| **HPE NVMe PCIe Read Intensive SFF (2.5 inch) Solid State Drives** | |
| HP 2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764908-B21 |
| HP 1.2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764906-B21 |
| HP 400GB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764904-B21 |
| **NOTE:** With NVMe support only 1xDouble Wide Graphics card is supported. | |
| **HPE NVMe PCIe Mixed Use SFF (2.5 inch) Solid State Drives** | |
| HP 2TB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive | 765044-B21 |
| HP 1.6TB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive | 765038-B21 |
| HP 800GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive | 765036-B21 |
| HP 400GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive | 765034-B21 |
| **NOTE:** With NVMe support only 1xDouble Wide Graphics card is supported. | |
| **HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives** | |
| HP 2TB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764894-B21 |
| HP 1.6TB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764892-B21 |
| HP 800GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 736939-B21 |
| HP 400GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 736936-B21 |

## Core Options

**NOTE:** The NVMe CTO Server (810393-B21) or the NVMe Express Bay Enablement kit (774741-B21) are required to support these drives.

**NOTE:** HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on the **HPE Solid State Drive QuickSpecs**.

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

### M.2 SSD

| | |
|---|---|
| HPE Dual 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 835565-B21 |
| HPE 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 835563-B21 |
| HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 777894-B21 |
| HP 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 788028-B21 |

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

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

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

### Hard Drive Blank Kits

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

### Hard Drive Kits

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

**NOTE:** This option provides support for up to 6NVMe drives, and can only be populated in BAY2 in SFF CTO Server only, can be used with Bay1 and Bay 3 populated.

**NOTE:** The HPE DL380 Gen9 High Performance Fan Kit is required for NVMe support (719079-B21).

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

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

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

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

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

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

### Media Bay Kits

| | |
|---|---|
| HP DL380 Gen9 Universal Media Bay Kit | 724865-B21 |

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

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

## Core Options

| | | |
|---|---|---|
| **HPE Networking** | **1 Gigabit Ethernet adapters** | |
| | HP Ethernet 1Gb 4-port 331T Adapter | 647594-B21 |
| | HP Ethernet 1Gb 2-port 332T Adapter | 615732-B21 |
| | HP Ethernet 1Gb 2-port 361T Adapter | 652497-B21 |
| | HP Ethernet 1Gb 4-port 366T Adapter | 811546-B21 |
| | **10 Gigabit Ethernet adapters** | |
| | HP Ethernet 10Gb 2-port 530SFP Adapter | 652503-B21 |
| | HP Ethernet 10Gb 2-port 530T Adapter | 656596-B21 |
| | HP Ethernet 10Gb 2-port 546SFP+ Adapter | 779793-B21 |
| | HP Ethernet 10Gb 2-port 557SFP+ Adapter | 788995-B21 |
| | HP Ethernet 10Gb 2-port 560SFP+ Adapter | 665249-B21 |
| | HP Ethernet 10Gb 2-port 561T Adapter | 716591-B21 |
| | HPE Ethernet 10Gb 2-port 562SFP+ Adapter | 727055-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.hp.com/go/ProLiantNICs**.

| | |
|---|---|
| **25 Gigabit Ethernet adapters** | |
| HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter | 817762-B21 |

**NOTE:** Initially available as a field upgrade option.

| | |
|---|---|
| HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter | 817753-B21 |
| **FlexibleLOM Adapters** | |
| HP Ethernet 1Gb 4-port 331FLR Adapter | 629135-B22 |
| HP Ethernet 1Gb 4-port 366FLR Adapter | 665240-B21 |
| HP FlexFabric 10Gb 2-port 533FLR-T Adapter | 700759-B21 |
| HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter | 700751-B21 |
| HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter | 779799-B21 |
| HPE FlexFabric 10Gb 2-port 556FLR-T Adapter | 794525-B21 |
| HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter | 727060-B21 |
| HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter | 665243-B21 |
| HP Ethernet 10Gb 2-port 561FLR-T Adapter | 700699-B21 |
| HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter | 727054-B21 |
| HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter | 817749-B21 |

**NOTE:** The DL380 Gen9 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.hp.com/go/ProLiantNICs**.

| | | |
|---|---|---|
| **HPE InfiniBand** | HP InfiniBand FDR 2-port 545QSFP Adapter | 702211-B21 |

# Core Options

**NOTE:** The RHEL6.5 driver is not part of SPP, but may be downloaded here: **http://downloads.linux.hp.com/SDR/downloads/MLNX_OFED/**.

| | |
|---|---|
| HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter | 764284-B21 |
| HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter | 764285-B21 |
| HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter | 764286-B21 |
| HPE 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 |
| QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA | 583211-B21 |

**HPE I/O Expansion Options**

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

**NOTE:** This is for slot 1 and supports double wide GPGPUs.

**NOTE:** For Graphics cards please also order the DL380 Gen9 Graphics Enablement kit, 719082-B21

Slot1: 1xGen3 x16 FH/FL, 1xGen3 x8 FH/HL.

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

HP 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).

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

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

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

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

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

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%.

# Core Options

| | | |
|---|---|---|
| | 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% and include a C-14 power inlet connector that can support HPE Power Discovery Services (blue connector).

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

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

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

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

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

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

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

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| | | |
|---|---|---|
| **HPE Computation and Graphics Accelerators** | HP DL380 Gen9 Graphics Enablement Kit | 719082-B21 |

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

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

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

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

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

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

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

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

**NOTE:** All GPU support is limited with 1TB max memory support.

**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.

| | | |
|---|---|---|
| | HP NVIDIA GRID K1 Quad GPU PCIe Graphics Accelerator | J0G94A |

## Core Options

**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.hp.com/go/hppoweradvisor**.

**NOTE:** This card only runs at PCIeGen2 speeds.

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

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

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

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

| | |
|---|---|
| NVIDIA GRID K2 Reverse Air Flow Dual GPU PCIe Graphics Accelerator | 753958-B21 |

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

**NOTE:** This card only runs at PCIeGen2 speeds.

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

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

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

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

**NOTE:** 12LFF model support is restricted to 25C Server Ambient only.

| | |
|---|---|
| NVIDIA Tesla K40C 12GB Computational Accelerator | 753960-B21 |

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

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

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

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

**NOTE:** Only supported with E5-2600v3 processors.

| | |
|---|---|
| HP NVIDIA Tesla K80 Dual GPU PCIe Computational Accelerator | J0G95A |

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

**NOTE:** This card only runs at PCIeGen2 speeds.

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

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

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

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

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

**NOTE:** No support in combination with the 24SFF or 12LFF servers.

| | |
|---|---|
| HP NVIDIA Quadro K2200 Graphics Accelerator | J0G89A |

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

**NOTE:** This card only runs at PCIeGen2 speeds.

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

## Core Options

**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.hp.com/go/hppoweradvisor**.

HP NVIDIA Quadro K5200 GPU Graphics Accelerator                                    J0G91A
**NOTE:** This is supported in all server models.
**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.
**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).
**NOTE:** Only supported with E5-2600v3 processors.
**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at **http://www.hp.com/go/hppoweradvisor**.

NVIDIA Quadro K6000 PCI-E Graphics Adapter                                         730874-B21
**NOTE:** This is supported in all server models.
**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.
**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

HPE NVIDIA Tesla M60 Reverse Air Flow Dual GPU PCIe Graphics Accelerator          M3X67A
**NOTE:** Maximum 2 supported with both risers, support for 2 cards requires the 1400W Power Supply (720620-B21) to be selected.
**NOTE:** This card only runs at PCIeGen2 speeds.
**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.
**NOTE:** This card is limited to Processors running with under 140W power consumption.
**NOTE:** Additional Grid 2.0 Licensing from NVIDIA is required.

HPE NVIDIA Quadro M2000 Graphics Accelerator                                       P8Y48A
**NOTE:** Maximum of 3 cards supported per server.
**NOTE:** This is supported in all server models.
**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.
**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).
**NOTE:** Only supported with E5-2600v4 processors.
**NOTE:** 1x 1400W PS recommended, but this card will work with 1x800W PS (Per GPU). However check the power usage via the HPE Power Advisor Tool located at **http://www.hp.com/go/hppoweradvisor**.
**NOTE:** No GPU enablement kit is required for this option.

HPE NVIDIA Quadro M4000 Graphics Accelerator                                       M9X58A
**NOTE:** Only supported with E5-2600v4 processors.
**NOTE:** This is supported in all server models.
**NOTE:** The Primary GPU riser (719076-B21) is required to support this in slot1.
**NOTE:** The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

## Core Options

**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.hp.com/go/hppoweradvisor**.

HP NVIDIA Quadro M5000 Graphics Accelerator                         M9R60A

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

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

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

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

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

HP NVIDIA Quadro M6000 Graphics Accelerator                         J0G92A

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

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

**NOTE:** This card only runs at PCIeGen2 speeds.

HPE NVIDIA Quadro M6000 24GB Graphics Accelerator                   P8Y47A

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

**NOTE:** This card only runs at PCIeGen2 speeds.

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

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

Intel® Xeon® Phi 7120P (16GB/300W) Coprocessor Kit                  E2M34A

**NOTE:** This card only runs at PCIeGen2 speeds.

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

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

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

**NOTE:** This is supported in an 8SFF server model only.

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

HP AMD FirePro W7100 Accelerator Kit                                J0H10A

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

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

**NOTE:** Up to 3 of these single wide cards are supported.

**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.hp.com/go/hppoweradvisor**.

HP AMD FirePro S9150 Accelerator Kit                                J0H11A

**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).

# Core Options

**NOTE:** There are limitations on the server model and processor supported when adding Graphics accelerators.
**NOTE:** This card will require the addition of the High Performance Fan Kit (719079-B21).
**NOTE:** This card is supported on the E5-2600v3 series processors only.
**NOTE:** 12LFF support is restricted to 30C Server Ambient only.

HP 150W PCI-E Power Cable Kit                                                    669777-B21
**NOTE:** This cable is required for the K1, K4200, K5200, M5000 and W7100 cards.

HPE AMD FirePro S7150x2 Accelerator Kit                                          M3X68A

**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.

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**HPE Cooling Options**

HP DL380 Gen9 High Performance Fan Kit                                           719079-B21
**NOTE:** High Performance Fan kit consists of 6 fans, these will need to replace all the standard Fans in the unit, and fill all 6-Fan cages.
**NOTE:** The 12LFF and 24SFF server models (including field upgrades to 24SFF) will already include 6 High Performance Fan kits.
**NOTE:** The High Performance Fan Kit is needed to support certain Passive GPGPU (Graphics cards) configurations; or ASHRAE operating environments.
**NOTE:** For elevated ambient temperature support please see: **http://www.hp.com/servers/ASHRAE**.

# Additional Options

| HPE Insight Software | **HPE Insight Control** | |
|---|---|---|
| | HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU | C6N27A |
| | HPE Insight Control including 1yr 24x7 TSU E-LTU | C6N28ABE |
| | HPE Insight Management Media Kit | C6N31A |

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

**NOTE:** Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HPE Software Technical Support and Update Service.

**NOTE:** Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: **http://www.hp.com/go/insightupdates**.

**NOTE:** For additional license options please see the **HPE Insight Control QuickSpecs**.

| Embedded Management | **HPE iLO Advanced** | |
|---|---|---|
| | HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU | 512485-B21 |
| | HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU | BD505A |
| | HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU | E6U59ABE |
| | HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU | 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 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 Physical Media Kit LTU | E5Y37A |
| | HPE Operations Analytics for HPE OneView LTU | K8G29A |
| | HPE Operations Analytics for HPE OneView E-LTU | K8G29AAE |

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

**NOTE:** Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and driver provisioning. Media kit #BD883A can be ordered for a physical copy of this software (USB flash drive).

**NOTE:** Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: **http://www.hp.com/go/oneview**.

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

# Additional Options

| | | |
|---|---|---|
| **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** | **Value Endurance (VE) PCIe Workload Accelerators** | |
| | HP 6.4TB FH/HL Value Endurance (VE) PCIe Workload Accelerator | 763840-B21 |
| | HP 3.2TB HH/HL Value Endurance (VE) PCIe Workload Accelerator | 763838-B21 |
| | HP 1.6TB HH/HL Value Endurance (VE) PCIe Workload Accelerator | 763836-B21 |
| | HP 1.3TB HH/HL Value Endurance (VE) PCIe Workload Accelerator | 763834-B21 |
| | **Light Endurance (LE) PCIe Workload Accelerators** | |
| | HP 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator | 775672-B21 |
| | HP 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator | 775670-B21 |
| | HP 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator | 775668-B21 |
| | HP 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator | 775666-B21 |
| | **NVME PCIe Workload Accelerators** | |
| | HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator | 831739-B21 |
| | HPE 3.2TB Read Intensive-2 HH/HL PCIe Workload Accelerator | 831737-B21 |
| | HP 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator | 803204-B21 |
| | HPE 1.6TB Read Intensive-2 HH/HL PCIe Workload Accelerator | 831735-B21 |
| | HP 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator | 803197-B21 |
| | HP 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator | 803202-B21 |
| | HPE 1.3TB Read Intensive-2 HH/HL PCIe Workload Accelerator | 831733-B21 |
| | HP 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator | 803195-B21 |
| | HP 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator | 803200-B21 |

| | | |
|---|---|---|
| **HPE Security** | HP 2U Security Bezel Kit | 666988-B21 |
| | HP 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.

# Additional Options

| | |
|---|---|
| HP 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.

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**HPE Storage Controllers**

### SAS Controllers

### HPE Flexible Smart Array Controllers

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

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

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

| | |
|---|---|
| HPE Smart Array P840ar/2GB FBWC 12Gb 2-port Internal SAS Controller | 843199-B21 |

**NOTE:** Provides support for up to 16 internal SAS/SATA drives without using a PCIe slot.

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

### HPE Smart Array Controllers

| | |
|---|---|
| HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller | 726821-B21 |

**NOTE:** Provides support for up to 8 internal SAS/SATA drives.

| | |
|---|---|
| HP Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller | 726897-B21 |
| HP Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller | 726903-B21 |
| HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller | 726825-B21 |

### HPE Smart Host Bus Adapters

| | |
|---|---|
| HP H241 12Gb 2-ports Ext Smart Host Bus Adapter | 726911-B21 |
| HP H240 12Gb 2-ports Int Smart Host Bus Adapter | 726907-B21 |
| HP H240ar 12Gb 2-ports Int Smart Host Bus Adapter | 726757-B21 |

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

### HPE Cable Options

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

**NOTE:** 12LFF port 3 to 2SFF or 3LFF to P440/840 PCIe.

| | |
|---|---|
| HP DL380 Gen9 2SFF Front SAS x4 Cable Kit | 783008-B21 |

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

| | |
|---|---|
| HP DL380 Gen9 8SFF SAS Cable Kit | 783009-B21 |

**NOTE:** 8/16/24 SFF to P840/440 bay 3.

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

**NOTE:** For front/rear mount 2SFF to P440/840 PCIe).

| | |
|---|---|
| HP DL380 Gen9 12LFF SAS Cable Kit | 785991-B21 |

**NOTE:** For 12LFF to P440/840 PCIe cables- ports 1/2/3.

| | |
|---|---|
| HP DL380 Gen9 8SFF H240 Cable Kit | 786092-B21 |

**NOTE:** 8/16/24SFF to 240/440ar, H240 PCIe or embedded B140i SATA.

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

**NOTE:** For 12LFF ports 1&2 to H240/P440ar, H240 or embedded B140i SATA.

**NOTE:** For details on cabling options, additional information available here: **Cabling Matrix**.

### Optional Software

# Additional Options

| | |
|---|---|
| HPE SmartCache No Media 24x7 Technical Support 1-server LTU | D7S26A |
| HPE SmartCache No Media 24x7 Technical Support Flexible LTU | D7S27A |
| HPE SmartCache No Media 24x7 Technical Support E-LTU | D7S27AAE |

**NOTE:** HPE SmartCache is supported when one of the supported Smart Array Controllers is installed in the server.

**NOTE:** HPE SmartCache comes standard (no licensing is required) if the HPE Smart Array P840 Controller is installed in the server.

### Optional Upgrades

| | |
|---|---|
| HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers | 727258-B21 |

**NOTE:** Provides backup power for multiple HPE Smart Array controllers or other devices (up to 16).

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

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**HPE Tape Backup**

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

### Tape Drives

| | |
|---|---|
| HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive | BB874A |
| HPE StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive | EH964A |
| HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader | C0H19A |
| HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit | C0L99A |
| HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive | EH970A |
| HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit | EJ014B |
| HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive | EH958B |
| HPE StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive | EH900B |
| HPE StoreEver LTO-4 Ultrium 1760 SAS (1) in a 1U Rack Mount Kit | EH946C |
| HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive | EH920B |
| HPE StoreEver LTO-3 Ultrium 920 SAS External Tape Drive | EH848B |
| HPE StoreEver 1U SAS Rack Mount Kit | AE459B |
| HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 2m Cable | K2R09A |
| HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 4m Cable | K2R10A |

### HPE Tape Storage Systems

### HPE StoreEver MSL6480

| | |
|---|---|
| HPE StoreEver MSL6480 Scaleable Expansion Module | QU626A |

**NOTE:** Please see the **HPE StoreEver MSL6480 Tape Library QuickSpecs** for Technical Specifications and additional information.

| | |
|---|---|
| HPE StoreEver MSL6480 Scalable Base Module | QU625A |
| HPE StoreEver MSL2024 0-drive Tape Library | AK379A |
| HPE StoreEver MSL4048 0-drive Tape Library | AK381A |

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

| | |
|---|---|
| HPE RDX+ 3TB USB 3.0 External Disk Backup System | P9L72A |
| HPE RDX 3TB USB 3.0 Internal Disk Backup System | P9L71A |

# Additional Options

| | |
|---|---|
| HP RDX 2TB USB3.0 External Disk Backup System | E7X53B |
| HP RDX+ 1TB External Backup System | B7B69B |
| HP RDX+ 500GB External Backup System | B7B66B |
| HPE RDX+ External Docking System | C8S07B |
| HPE D3700 Enclosure | QW967A |
| HPE D3600 Enclosure | QW968A |

**NOTE:** For the complete range of RDX drives and media see: **http://www.hp.com/go/rdx**. For hardware and software compatibility of Hewlett Packard Enterprise disk backup products see: **http://www.hp.com/storage/SPOCK**.

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**HPE Storage Options**

**NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see: **http://h18006.www1.hp.com/storage/saninfrastructure/hba.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 84E 4-port 8Gb Fibre Channel Host Bus Adapter | E7Y63A |
| 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 |
| HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter | QW971A |
| HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter | P9D93A |
| HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter | QW972A |
| HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter | P9D94A |

**Converged Network Adapter**

| | |
|---|---|
| HP 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 |

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**HPE Disk Storage Systems**

**Disk Enclosures**

| | |
|---|---|
| HP D6000 Dual I/O Module Disk Enclosure | QQ695A |
| HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle | E7W30A |
| HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle | E7W31A |
| HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle | QQ697A |
| HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle | QQ698A |
| HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle | QQ699A |
| HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle | QQ700A |
| HPE D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle | M0T59A |
| HPE D6000 w/70 6TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 420TB Bundle | M0T57A |

# Additional Options

| | |
|---|---|
| HPE D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 280TB Bundle | M0T58A |

| | | |
|---|---|---|
| **HPE Data Center Racks** | **HPE Advanced Series Racks** | |
| | HPE 11648 1075mm Pallet Universal Rack | H6J87A |
| | HPE 11648 1075mm Shock Universal Rack | H6J88A |
| | HPE 11642 1075mm Pallet Universal Rack | H6J65A |
| | HPE 11642 1075mm Shock Universal Rack | H6J66A |
| | HPE 11642 1200mm Pallet Universal Rack | H6J67A |
| | HPE 11642 1200mm Shock Universal Rack | H6J68A |
| | HPE 11636 1075mm Pallet Universal Rack | H6J77A |
| | HPE 11636 1075mm Shock Universal Rack | H6J78A |
| | HPE 11622 G2 1075mm Pallet Universal Rack | H6J83A |
| | HPE 11622 G2 1075mm Shock Universal Rack | H6J84A |
| | HPE 11614 1075mm Shock Universal Rack | H6J82A |
| | **NOTE:** Please see the **HPE Advanced Series Racks QuickSpecs** for information on additional racks options and rack specifications. | |
| | **HPE Enterprise Series Racks** | |
| | HPE 647 1075mm Pallet Intelligent Series Rack | BW911A |
| | HPE 647 1075mm Shock Intelligent Series Rack | BW912A |
| | HPE 647 1200mm Pallet Intelligent Series Rack | BW913A |
| | HPE 647 1200mm Shock Intelligent Series Rack | BW914A |
| | HPE 642 1075mm Pallet Intelligent Series Rack | BW903A |
| | HPE 642 1075mm Shock Intelligent Series Rack | BW904A |
| | HPE 642 1200mm Pallet Intelligent Series Rack | BW907A |
| | HPE 642 1200mm Shock Intelligent Series Rack | BW908A |
| | HPE 636 1075mm Pallet Intelligent Series Rack | BW895A |
| | HPE 636 1075mm Shock Intelligent Series Rack | BW896A |
| | HPE 842 1075mm Pallet Intelligent Series Rack | BW917A |
| | HPE 842 1075mm Shock Intelligent Series Rack | BW918A |
| | **NOTE:** Please see the **HPE Enterprise Series Racks QuickSpecs** for information on additional racks options and rack specifications. | |
| | **HPE Value Series Rack** | |
| | HPE V142 1075mm deep Pallet 100 series Rack | AF046A |
| | **NOTE:** Please see the **HPE Standard Series Racks QuickSpecs** for information on additional racks options and rack specifications. | |
| **HPE Power Distribution Units (PDUs)** | **HPE Basic Power Distribution Units (PDU)** | |
| | HPE Basic 1.9kVA/L5-20P 16A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU | H5M54A |
| | HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU | H5M56A |
| | HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical NA/JP PDU | H5M55A |
| | HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) C13/Vertical WW PDU | H5M57A |
| | HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU | H5M58A |
| | HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical NA/JP PDU | H5M61A |

# Additional Options

| | |
|---|---|
| HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU | H5M59A |
| HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) C19/Vertical NA PDU | H5M60A |
| HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6) C19/Vertical WW PDU | H5M75A |
| HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) 5-20R/Vertical NA/JP PDU | H5M63A |
| HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU | H5M64A |
| HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU | H5M62A |
| HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) C19/Vertical NA PDU | H5M67A |
| HPE Basic Modular 2.8kVA/L5-30P 24A/120V Outlets (4) C19/Horizontal NA/JP PDU | 252663-D71 |
| HPE Basic Modular 4.9kVA/L6-30P 24A/208V Outlets (4) C19/Horizontal NA/JP Core Only PDU | 252663-D74 |
| HPE Basic Modular 8.3kVA/CS8265C 40A/208V Outlets (4) C19/Horizontal NA/JP PDU | 252663-D75 |
| HPE Basic Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF512A |
| HPE Basic Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF519A |
| HPE Basic Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF511A |
| HP 800VA – 277V Input / 230V Output NA Rack Mount Transformer | H3X09A |

**NOTE:** Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

**HPE Metered Power Distribution Units (PDU)**

| | |
|---|---|
| HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU | D9N43A |
| HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU | D9N46A |
| HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal NA/JP PDU | D9N44A |
| HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU | D9N45A |
| HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Vertical NA/JP PDU | G9Z05A |
| HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU | D9N47A |
| HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3) C19/Vertical NA/JP PDU | D9N51A |
| HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU | D9N53A |
| HPE Metered 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (3) C19/Vertical NA PDU | D9N49A |
| HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | D9N58A |
| HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU | D9N61A |

# Additional Options

| | |
|---|---|
| HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | D9N62A |
| HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3) C19/Vertical NA/JP PDU | D9N54A |
| HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | D9N59A |
| HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | G9Z07A |
| HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical NA PDU | D9N63A |
| HP Environmental Sensor for Remote Monitored and Managed PDUs | E2D53A |

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

## HPE Intelligent Power Distribution Unit (PDU)

| | |
|---|---|
| HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF520A |
| HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF521A |
| HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF522A |
| HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU | AF523A |
| HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6) C19/Horizontal NA/JP PDU | AF901A |
| HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU | AF535A |
| HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU | AF531A |
| HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU | AF532A |
| HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF533A |
| HP 5xC13 Intelligent PDU Extension Bar G2 Kit | AF547A |
| HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar | AF528A |

**NOTE:** Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on additional options and product specifications.

## HPE Metered and Switched Power Distribution Units (PDU)

| | |
|---|---|
| HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU | H8B48A |
| HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V Outlets (7) C13 (1) C19/Vertical WW PDU | H8B49A |
| HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU | H8B50A |
| HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (6) C19/Vertical NA/JP PDU | H8B52A |
| HPE Metered Switched 3Ph 8.6kVA/L2190-30P 24A/208V Outlets (23) C13 C19 (1) 520R/Vertical NA/JP PDU | H8B53A |

# Additional Options

| | |
|---|---|
| HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | H8B55A |
| HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | H8B56A |

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

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

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| **HPE Rack Mount Consoles, KVM Switches, and Keyboards** | **HPE Location Discovery Services** | |
|---|---|---|
| | HP 36U Location Discovery Kit | BW945A |
| | HP 42U Location Discovery Kit | BW946A |
| | HP 47U Location Discovery Kit | BW947A |
| | HP DL380 Gen9 Location Discovery Services Ear Kit | 768884-B21 |
| | HP Location Discovery Services LCD8500 Kit | TL052A |

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

**HPE Rack Mount Consoles**

| | |
|---|---|
| HP LCD8500 1U US Rackmount Console Kit | AF630A |
| HP LCD8500 1U US TAA Rackmount Console Kit | AF645A |

**HPE KVM Switches**

| | |
|---|---|
| HP 0x1x8 G3 KVM Console Switch | AF651A |
| HP 0x2x16 G3 KVM Console Switch | AF652A |
| HP TAA 0x2x16 G3 KVM Console Switch | AF653A |
| HP USB Remote Access Key for G3 KVM Console Switches | AF650A |
| HP KVM Console USB Interface Adapter | AF628A |
| HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software | AF618A |
| HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software | AF619A |
| HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter | AF629A |
| HP 1x4 USB/PS2 KVM Console Switch | AF611A |
| HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software | AF620A |
| HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software | AF621A |
| HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software | AF622A |

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

**HPE USB Keyboard and Mouse**

| | |
|---|---|
| HP USB BFR with PVC Free US Keyboard/Mouse Kit | 631341-B21 |

**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

# Additional Options

Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

| | |
|---|---|
| HP 2U Small Form Factor Easy Install Rail Kit | 733660-B21 |

**NOTE:** Does not include CMA (733664-B21).

| | |
|---|---|
| HP 2U Large Form Factor Easy Install Rail Kit | 733662-B21 |

**NOTE:** Does not include CMA (733664-B21).

| | |
|---|---|
| HP 2U Cable Management Arm for Easy Install Rail Kit | 733664-B21 |
| HP 2U Small Form Factor Ball Bearing Rail Kit | 720863-B21 |

**NOTE:** Does not include CMA (720865-B21).

| | |
|---|---|
| HP 2U Large Form Factor Ball Bearing Rail Kit | 720864-B21 |

**NOTE:** Does not include CMA (720865-B21).

| | |
|---|---|
| HP 2U Cable Management Arm for Ball Bearing Rail Kit | 720865-B21 |

**HPE Other Options**

| | |
|---|---|
| HP Rack LED Light Kit | BW939A |
| HP Kit LCD 1.83m Latch Display Port Cable | G7T29A |
| HP Advanced Power Manager Kit | 741192-B21 |

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**HPE Uninterruptible Power Systems (UPS)**

**HPE DirectFlow Three Phase UPS**

**Power Unit (1U UPS)**

| | |
|---|---|
| HP R12000 DirectFlow - 1U Rackmount Uninterruptible Power System | G9Y75A |
| HP R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System | AF478A |

**Input/Output Module Options for 1U UPS**

| | |
|---|---|
| HP 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module | AF489A |
| HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module | AF491A |
| HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module | AF492A |
| HP 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module | G9Y76A |
| HP DirectFlow UPS Management Card | AF493A |

**Power Unit (2U UPS)**

| | |
|---|---|
| HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System | AF479A |

**Input/Output Module Options for 2U UPS**

| | |
|---|---|
| HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module | AF486A |
| HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module | AF487A |
| HP 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module | D9Q02A |
| HP 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module | AF484A |

**NOTE:** All Input/Output Modules support dual output outlets except the AF484A.

**Battery Pack Options**

| | |
|---|---|
| HP DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack | AF480A |
| HP DirectFlow UPS - 3U Rackmount VRLA Battery Pack | AF482A |
| HP WW DirectFlow Secondary Battery Cable | AF497A |

# Additional Options

**NOTE:** Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on additional options and product specifications.

**HPE Tower UPS**

**HPE T750 G4 UPS Models**

| | |
|---|---|
| HP T750 G4 NA/JP Uninterruptible Power System | J2P85A |

**HPE T1000 G4 UPS Models**

| | |
|---|---|
| HP T1000 G4 NA/JP Uninterruptible Power System | J2P86A |

**HPE T1500 G4 UPS Models**

| | |
|---|---|
| HP T1500 G4 NA/JP Uninterruptible Power System | J2P87A |

**HPE Rack-mountable UPS**

**HPE R/T2200 G4 UPS Models**

| | |
|---|---|
| HP R/T2200 G4 NA/JP Uninterruptible Power System | J2R00A |

**HPE R/T3000 G4 UPS Models**

| | |
|---|---|
| HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System | J2R01A |
| HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System | J2R02A |

**R1500 G4 Models**

| | |
|---|---|
| HP R1500 G4 NA Uninterruptible Power System | J2Q99A |

**R7000 Uninterruptible Power System (UPS)**

| | |
|---|---|
| HP R7000 4U 50A High Voltage NA/JP Uninterruptible Power System | AF462A |

**R5000 Uninterruptible Power System (UPS)**

| | |
|---|---|
| HP R5000 3U L630 High Voltage NA/JP Uninterruptible Power System | AF460A |

**NOTE:** Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on additional options and product specifications.

**HPE UPS Options**

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

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

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| **HPE USB and SD Options** | **HPE Enterprise Mainstream Flash Media Kits for Memory Cards** | |
|---|---|---|
| | HP 32GB microSD Enterprise Mainstream Flash Media Kit | 700139-B21 |
| | HP 8GB microSD Enterprise Mainstream Flash Media Kit | 726116-B21 |
| | HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit | 737953-B21 |
| | HP Dual 8GB microSD Enterprise Midline USB Kit | 741279-B21 |

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| **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 w/IC Service | U5HW1E |
| | HPE 3 year Proactive Care 24x7 with DMR DL380 Gen9 w/IC Service | U5HW2E |
| | HPE 3 year Proactive Care 24x7 with CDMR DL380 Gen9 w/IC Service | U5HW3E |
| | HPE 3 year Proactive Care Call to Repair DL380 Gen9 w/IC Service | U5HX0E |
| | HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL380 Gen9 w/IC Service | U5HX1E |

## Additional Options

| | |
|---|---|
| HPE 3 year Proactive Care Call to Repair with CDMR DL380 Gen9 w/IC Service | U5HX2E |
| HPE 3 year Proactive Care 24x7 DL380 Gen9 Service | U7AE8E |
| HPE 3 year Proactive Care 24x7 with DMR DL380 Gen9 Service | U7AE9E |
| HPE 3 year Proactive Care 24x7 with CDMR DL380 Gen9 Service | U7AF0E |
| HPE 3 year Proactive Care Call to Repair DL380 Gen9 Service | U7AF4E |
| HPE 3 year Proactive Care Call to Repair 24x7 with DMR DL380 Gen9 Service | U7AF5E |
| HPE 3 year Proactive Care Call to Repair with CDMR DL380 Gen9 Service | U7AF6E |

# Memory

**Memory Population guidelines**
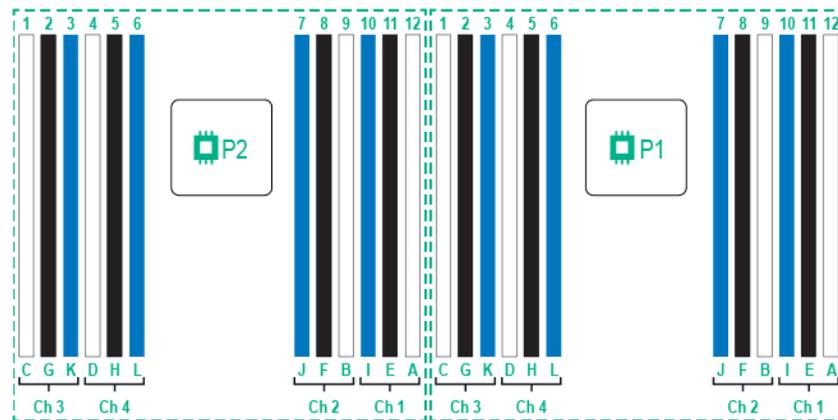


### General Memory Population Rules and Guidelines:

- White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.

- A minimum of one DIMM is required per server.

- Install DIMMs only if the corresponding processor is installed.

- If only one processor is installed in a two processor system, only half of the DIMM slots are available.

- To maximize performance, it is recommended to balance the total memory capacity between all installed processors and to load the channels similarly whenever possible.

- When two processors are installed, balance the DIMMs across the two processors.

- Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel. Heaviest load (DIMM with most ranks) within a channel goes furthest from the processor.

- Do not mix RDIMMs or LRDIMMs.

- LRDIMMs are supported up to 3 DIMMs per channel.

- DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.

- The maximum memory speed is a function of the memory type, memory configuration, and processor model.

- The maximum memory capacity is a function of the memory type and number of installed processors.

- HPE memory from previous generation servers is not compatible with the DL380 Gen9 Server. Certain HPE SmartMemory features such as memory authentication and enhanced performance may not be supported.

- To realize the performance memory capabilities listed in this document, HPE SmartMemory is required. For additional information, please see the HPE SmartMemory QuickSpecs at: **http://h18000.www1.hp.com/products/quickspecs/14225_div/14225_div.html**

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

## Memory

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

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

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

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

| **Memory Bandwidth and Capacity** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **[DIMM Type]** | **Registered DIMMs (RDIMMs)** | | | | **Load Reduced (LRDIMMs)** | | |
| **HPE SKU P/N** | 805347-B21 | 805349-B21 | 836220-B21 | 805351-B21 | 805353-B21 | 805358-B21 | 809208-B21 |

## Memory

| 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 |

| 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 | 2400MT/s |

| Standard and Maximum Memory Capacity (Pre- | Pre Configured Models | Standard Memory | Maximum Memory Plus Optional Memory | Standard Memory Replaced with Optional Memory |
|---|---|---|---|---|
| | | | | |

## Memory

| **configured Models)** | 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



HP ggggg eRxff DDR4 wwwwm a bb-ccd Kit

**Capacity**
- 4GB
- 8GB
- 16GB
- 32GB
- 64GB

**Rank**
- 1R = single
- 2R = dual
- 4R = quad

**Data Width**
- x8 = 8
- x4 = 4

**Memory Type**

**Module Bandwidth**
- 17000MT/s (DDR4-2133)

**CAS Latency**
- P = 15-15-15

**DIMM Type**
R = Registered
L = Load Reduced

**Special Descriptor**
(If Needed)
HS = Heat spreader
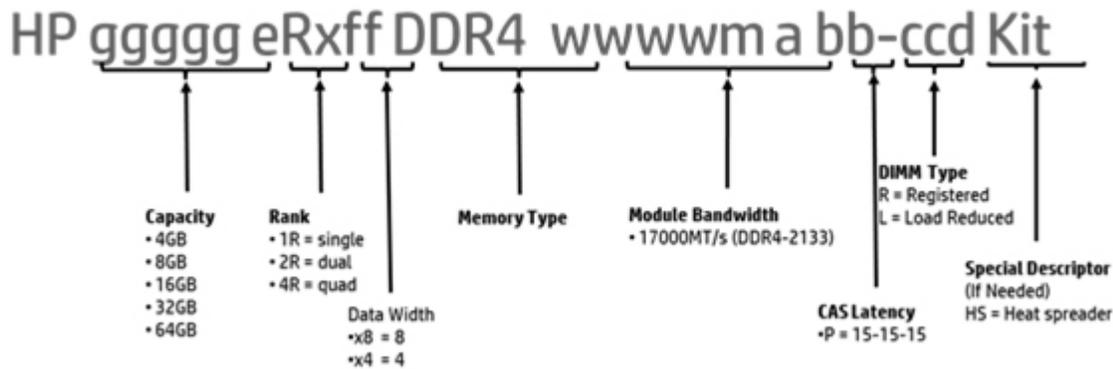
# Storage

4 LFF hot-plug drive model
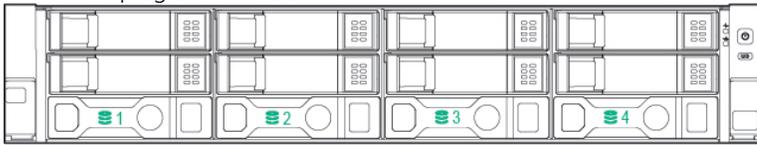


| 1-4 | 4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |

12 LFF + 3 rear LFF hot-plug drive model
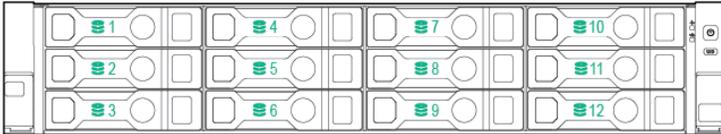


| 1-12 | 12 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |
| 25-27 | 3 x LFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays |
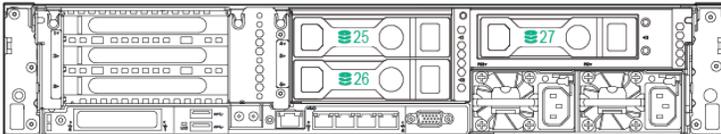
12 LFF + 2 rear SFF hot-plug drive model
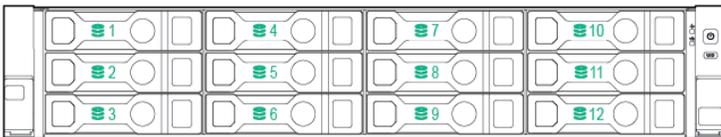


| 1-12 | 12 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays |
| 25-26 | 2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays |
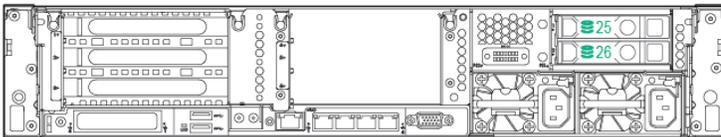
8 SFF (+2 SFF) hot-plug drive model with Universal Media Bay
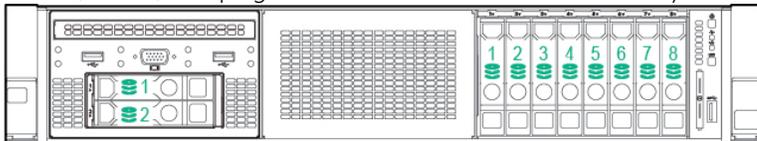


| 1-8 | 8 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays |
| 1-2 | 2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |

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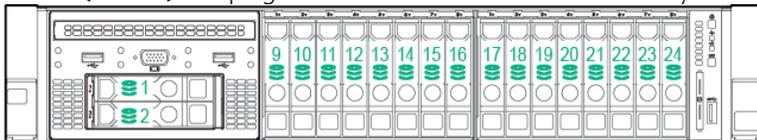


| 9-24 | 16 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays |
| 1-2 | 2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |

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 |

# Storage
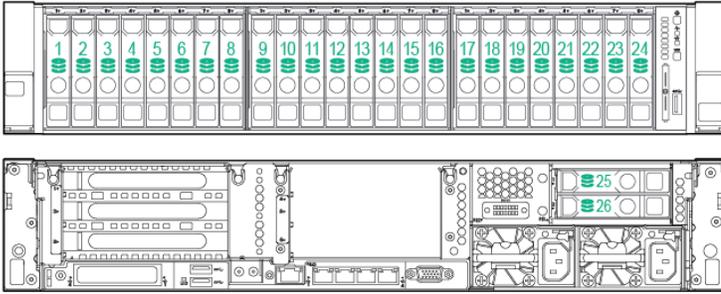


**NOTE:** Drives behind the SAS expander will be labeled continuous, drives behind a controller will be numbered 1-8.

**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) |
| | | **NOTE:** Dimensions without Bezel. |
| | **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) | Range 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 |
| | **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 |

# Technical Specifications

|  |  | number of options installed.   System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F). |
|---|---|---|
|  | Extended Ambient Operating Support | For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hp.com/servers/Ashrae**<br><br>For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hp.com/servers/Ashrae**<br><br>System performance may be reduced if operating in the extended ambient operating range or with a fan fault. |
|  | Non-operating | -30° to 60°C (-22° to 140°F).   Maximum rate of change is 20°C/hr (36°F/hr). |
| **Relative Humidity** | Operating | Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity. |
| (non-condensing) | Non-operating | 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing. |
| **Altitude** | Operating | 3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
|  | Non-operating | 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
| **Acoustic Noise** |  | Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). |
|  | **Idle** |  |
|  | L WAd | 4.0 B Entry LFF<br>4.1 B Entry<br>4.2 B Base<br>5.7 B Base LFF<br>4.3 B Perf |
|  | L pAm | 23 dBA Entry LFF<br>24 dBA Entry<br>24 dBA Base |

## Technical Specifications

|  |  | 39 dBA Base LFF |
|  |  | 25 dBA Perf |
|  | **Operating** |  |
|  | L WAd | 4.3 B Entry LFF |
|  |  | 4.6 B Entry |
|  |  | 4.8 B Base |
|  |  | 5.9 B Base LFF |
|  |  | 5.6 B Perf |
|  | L pAm | 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.

| **HPE Dynamic Smart Array B140i Controller** | **Number of PCI links** | Four |
|  | **PCI link rate** | 4 Gb/s |
|  | **Storage protocol support** | SATA |
|  | **SAS/SATA peak data transfer rate** | 6 Gb/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 |

# Technical Specifications

| | | |
|---|---|---|
| **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 | |

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| | | | |
|---|---|---|---|
| **HPE Ethernet 1Gb 4-port 331i Adapter** | **Network Interface** | 10Base-T/100Base-TX/1000Base-TX | |
| | **Compatibility** | IEEE 802.3 10Base-T<br>IEEE 802.3ab 1000Base-T<br>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) |

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| | | |
|---|---|---|
| **Environment-friendly Products and Approach** | **End-of-life Management and Recycling** | Hewlett-Packard offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: **http://www.hp.com/go/green**. To recycle your product, please go to: **http://www.hp.com/go/green** or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.<br><br>The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information |

## Technical Specifications

(product disassembly instructions) is posted on the Hewlett Packard Enterprise web site at: **http://www.hp.com/go/green**. These instructions may be used by recyclers and other WEEE treatment facilities as well as HPE OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 15-Aug-2016 | From Version 19 to 20 | Added | Added new options to HPE Networking, HPE Infiniband, HPE Computation and Graphics Accelerators, HPE Disk Backup, and HPE Storage Options. |
| | | Changed | HPE Unique Options was revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 8-Jul-2016 | From Version 18 to 19 | Changed | Smart Buy models section was revised for the NA version only. |
| 6-Jun-2016 | From Version 17 to 18 | Added | Added new 25GbE networking options, OneView 3.0, and new NVIDIA Quadro GPU options. |
| | | Changed | Pre-configured Models, HPE Memory, HPE Drives, HPE Computation and Graphics Accelerators, HPE Disk Backup, and HPE Storage Options were updated. |
| 29-Apr-2016 | From Version 16 to 17 | Changed | E5-2600v4 Series Smart Buy Models table was updated in the NA version only. |
| 1-Apr-2016 | From Version 15 to 16 | Changed | What's New section was updated. Standard Features/Memory and HPE Memory sections were revised. |
| 31-Mar-2016 | From Version 14 to 15 | Added | Added new Smart Memory DDR4 2400MHz, Intel Xeon E5-2600v4 processor support, new Flexible Smart Array P840ar controller, new graphic options, new HPE Trusted Platform Module (TPM) 2.0, new HDD offering. |
| | | Changed | Embedded Management, Service and Support, Preconfigured Models, HPE Security, and Memory sections were revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 16-Feb-2016 | From Version 13 to 14 | Added | New HDD offering was added to HPE Drives. |
| | | Changed | HPE Computation and Graphics Accelerators, HPE Data Center Racks, and HPE Power Distribution Units (PDUs) were revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 17-Dec-2015 | From Version 12 to 13 | Changed | Smart Buy models section was revised in the NA version only. |
| 1-Dec-2015 | From Version 11 to 12 | Added | New HDD offering was added to HPE Drives.<br><br>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.<br><br>Product images were updated. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 28-Sep-2015 | From Version 10 to 11 | Added | Added new 6Gb SATA Solid State Drives. |

## Summary of Changes

| | | | |
|---|---|---|---|
| | | | Added new HPE OneView management software. |
| | | Changed | Maximum Internal Storage was revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 17-Aug-2015 | From Version 9 to 10 | Added | Added new Solid State Drives offering.<br><br>Added new graphic options. |
| | | Changed | What's New changed to:<br>New support for NVMe PCIe SSDs<br>New Graphic card options<br><br>Service and Support section was updated.<br><br>Maximum Internal Storage and Core Options were revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 1-Jun-2015 | From Version 8 to 9 | Added | New larger capacity HDDs (up to 8TB LFF), Max capacity 120TB were added.<br><br>New higher capacity memory (64GB), Max capacity 1.5TB was added.<br><br>New Networking options were added.<br><br>Optional Software added to HPE Storage Controllers. |
| | | Changed | Updated max HDD and memory capacity due to new options added.<br><br>HPE SmartCache Software, HPE Disk Backup System, HPE Uninterruptible Power Systems (UPS) were updated. |
| 30-Mar-2015 | From Version 7 to 8 | Added | New Hard Drives offering.<br><br>Optical Software added to HPE Storage Controllers.<br><br>Added new HPE Care Pack Services.<br><br>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 Care Pack Services. |
| 17-Feb-2015 | From Version 6 to 7 | Added | Added Smart Buy Models to the NA version only. |
| 9-Feb-2015 | From Version 5 to 6 | Added | What's new section was added.<br><br>Added new HDD offering, new computational Graphics options, and new G4 UPS models. |

## Summary of Changes

| | | Changed | HPE Drives, HPE Computation and Graphics Accelerators, HPE Tape Backup, HPE Disk Backup, HPE Rack Mount, Consoles, KVM Switches, and Keyboards, and HPE Uninterruptible Power Systems (UPS) sections were revised. |
|---|---|---|---|
| 1-Dec-2014 | From Version 4 to 5 | Changed | Changes made throughout the entire QuickSpecs. |
| 13-Oct-2014 | From Version 3 to 4 | Changed | Corrected inconsistencies between Product Bulletin and Concentra versions. |
| 13-Oct-2014 | From Version 2 to 3 | Added | 6G SATA Enterprise Value G1 Solid State Drives were added to Core Option section.<br><br>HPE PCIe Workload Accelerator Options, HPE USB and SD options, and HPE Care Pack Services were added to the Additional Options section. |
| | | Changed | Standard Features, Optional Features, Pre-Configured Models, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Memory sections were revised. |
| 19-Sep-2014 | From Version 1 to 2 | Changed | Changes were made throughout the QuickSpecs. |

hpe.com/qref/dl380gen9

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