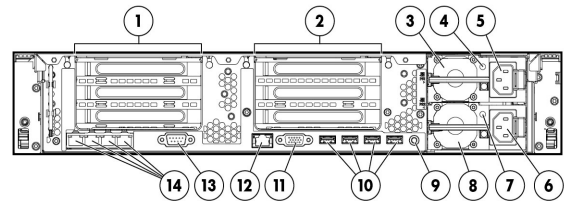
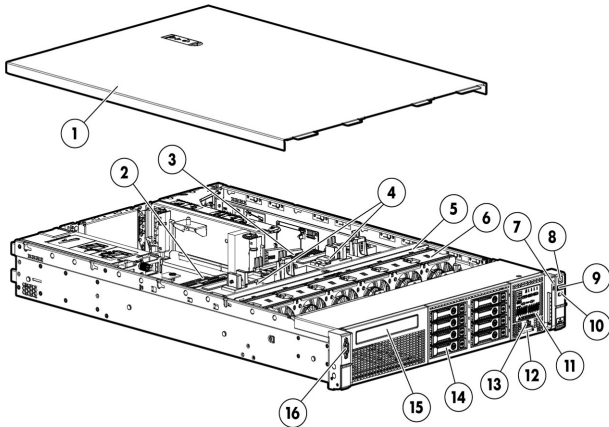


Overview

The HP ProLiant DL380p Gen8 sets the next generation standards of 2U 2-socket rack servers for the industry. With enhanced configuration flexibility, unmatched performance, and leading energy efficient design the DL380p Gen8 offers the perfect solution for the dynamic compute requirements of today's demanding datacenters.



Front View:

1. Quick removal access panel
2. Second Intel Processor
3. First Intel Processor
4. 24 DIMM slots: DDR3 Registered (RDIMM), Load Reduced (LRDIMM), or Unbuffered (UDIMM) memory
5. Air Baffle
6. Hot-plug fans, full N+1 redundancy
7. Health LED
8. Power On /Standby button and system power LED button
9. USB connector
10. Unit ID LED
11. Systems Insight Display
12. Asset Tag
13. USB connector
14. Drive Bays
15. Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
16. Video connector

Rear View:

1. PCIe 3.0 Slots 1, 2, 3-PCIe 2.0 top to bottom
2. PCIe 3.0 Slots 4-6 top to bottom
3. Power supply 1
4. Power supply 1 Power LED
5. Power supply 1 Power connection (with Intelligent PDU communication)
6. Power supply 2 Power connection (with Intelligent PDU communication)
7. Power supply 2 Power LED
8. Power supply 2
9. Unit ID LED/Button
10. USB connectors (4)
11. Video connector
12. iLO connector
13. Serial connector
14. FlexibleLOM ports (Shown: 4 ports 1Gb each /Optional: 2 ports 10Gb each)

What's New

- New Primary Riser for GPU support and additional GPU options
- HP 2U Easy Install Rail Kits

Standard Features

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

Processor

One of the following depending on Model

E5-2600 v2 series Processors

Entry Processors

NOTE: All support up to 1333MHz DDR3 memory speeds.

Intel® Xeon® E5-2609 v2 (2.5GHz/4-core/10MB/6.4GT-s QPI/80W)

Intel® Xeon® E5-2603 v2 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W)

Base Processors

NOTE: All support up to 1600MHz DDR3 memory speeds.

Intel® Xeon® E5-2640 v2 (2.0GHz/8-core/20MB/7.2GT-s QPI/95W, DDR3-1600, HT, Turbo2-3/3/3/3/3/4/5)

Intel® Xeon® E5-2630 v2 (2.6GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2-3/3/3/3/4/5)

Intel® Xeon® E5-2620 v2 (2.1GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2-3/3/3/3/4/5)

Intel® Xeon® E5-2650L v2 (1.7GHz/10-core/25MB/8.0GT-s QPI/70W, DDR3-1600, HT, Turbo2-2/2/2/2/2/2/3/4)

Intel® Xeon® E5-2630L v2 (2.4GHz/6-core/15MB/7.2GT-s QPI/60W, DDR3-1600, HT, Turbo2-2/2/2/2/3/4)

Performance Processors

NOTE: All support up to 1866MHz DDR3 memory speeds.

Intel® Xeon® E5-2697 v2 (2.7GHz/12-core/30MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2-3/3/3/3/3/3/4/5/6/7/8)

Intel® Xeon® E5-2695 v2 (2.4GHz/12-core/30MB/8.0GT-s QPI/115W, DDR3-1866, HT, Turbo2-4/4/4/4/4/4/4/5/6/7/8)

Intel® Xeon® E5-2690 v2 (3.0GHz/10-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2-3/3/3/3/3/3/4/5/6)

Intel® Xeon® E5-2680 v2 (2.8GHz/10-core/25MB/8.0GT-s QPI/115W, DDR3-1866, HT, Turbo2-3/3/3/3/3/4/5/6/7/8)

Intel® Xeon® E5-2670 v2 (2.5GHz/10-core/25MB/8.0GT-s QPI/115W, DDR3-1866, HT, Turbo2-4/4/4/4/4/4/5/6/7/8)

Intel® Xeon® E5-2667 v2 (3.3GHz/8-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2-3/3/3/3/4/5/6/7)

Intel® Xeon® E5-2660 v2 (2.2GHz/10-core/25MB/8.0GT-s QPI/95W, DDR3-1866, HT, Turbo2-4/4/4/4/4/4/5/6/7/8)

Intel® Xeon® E5-2650 v2 (2.6GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1866, HT, Turbo2-4/4/4/4/5/6/7/8)

Intel® Xeon® E5-2643 v2 (3.5GHz/6-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2-1/1/1/1/2/3)

Intel® Xeon® E5-2637 v2 (3.5GHz/4-core/15MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2-1/1/2/3)

E5-2600 series Processors

Entry Processors

NOTE: All support up to 1066MHz memory speeds.

Intel® Xeon® E5-2609 (2.4GHz/4-core/10MB/6.4GT-s QPI/80W)

Intel® Xeon® E5-2603 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W)

Base Processors

NOTE: All support up to 1333MHz DDR3 memory speeds.

Standard Features

Intel® Xeon® E5-2640 (2.5GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)
Intel® Xeon® E5-2630 (2.3GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)
Intel® Xeon® E5-2620 (2.0GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)
Intel® Xeon® E5-2630L (2.0GHz/6-core/15MB/8.0GT-s QPI/60W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)

Performance Processors

NOTE: All support up to 1600MHz DDR3 memory speeds.

Intel® Xeon® E5-2690 (2.9GHz/8-core/20MB/8.0GT-s QPI/135W, DDR3-1600, HT, Turbo2- 4/4/4/5/5/7/7/9)

Intel® Xeon® E5-2680 (2.7GHz/8-core/20MB/8.0GT-s QPI/130W, DDR3-1600, HT, Turbo2- 4/4/5/5/5/7/8/8)

Intel® Xeon® E5-2670 (2.6GHz/8-core/20MB/8.0GT-s QPI/115W, DDR3-1600, HT, Turbo2- 4/4/5/5/6/6/7/7)

Intel® Xeon® E5-2667 (2.9GHz/6-core/15MB/8.0GT-s QPI/130W, DDR3-1600, HT, Turbo2- 3/3/3/4/5/6)

Intel® Xeon® E5-2665 (2.4GHz/8-core/20MB/8.0GT-s QPI/115W, DDR3-1600, HT, Turbo2- 4/4/5/5/6/6/7/7)

Intel® Xeon® E5-2660 (2.2GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1600, HT, Turbo2- 5/5/6/6/7/7/8/8)

Intel® Xeon® E5-2650 (2.0GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1600, HT, Turbo2- 4/4/5/5/5/7/8/8)

Intel® Xeon® E5-2650L (1.8GHz/8-core/20MB/8.0GT-s QPI/70W, DDR3-1600, HT, Turbo2- 2/2/3/3/4/4/5/5)

Intel® Xeon® E5-2643 (3.3GHz/4-core/10MB/8.0GT-s QPI/130W, DDR3-1600, HT, Turbo2- 1/1/2/2)

Intel® Xeon® E5-2637 (3.0GHz/2-core/5MB/8.0GT-s QPI/80W, DDR3-1600, HT, Turbo2- 5/5)

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

NOTE: Turbo indicates the maximum potential frequency increment when using Intel® Turbo Boost Technology, with 8, 7, 6, 5, 4, 3, 2 or 1 core(s) active.

NOTE: DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

NOTE: Up to 2 processors supported. Mixing different processor models is not supported.

NOTE: For the Intel® C600 Chipset E5-2600 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x, 2 = number of CPUs in a Node, 6 is socket/segment designation, 00 = Processor SKU, and x = L for low power SKUs.

Standard Features

Cache Memory

One of the following depending on Model

30MB (1x30MB) Level 3

NOTE: For Twelve-core processors.

25MB (1x25MB) Level 3

NOTE: For Ten-core processors.

20MB (1x20MB) Level 3

NOTE: For Eight-core processors.

15MB (1x15MB) Level 3

NOTE: For Six-core processors.

10MB (1x10MB) Level 3

NOTE: For Quad-core processors.

5MB (1x5MB) Level 3

NOTE: For Dual-core processors.

NOTE: All processor models above list the L3 Cache associated with that particular processor.

Chipset

Intel® C600 Series Chipset

Intel® E5-2600 and E5-2600 v2 Processor Families

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

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

Upgradeability

Upgradeable to 2 processors (24 Cores)

NOTE: Processor upgrade available from Intel® Xeon® Processors E5-2600 to E5-2600 v2. Please contact HP Technology Sales (<http://www.hp.com/support>), your local HP Re-seller, or reference the following Customer Advisory: [ProLiant Servers-Instructions for Upgrading an HP ProLiant Gen8 Server from an Intel Xeon Processor E5-2600 to an Intel Xeon Processor E5-2600 v2](#), regarding critical details before upgrading. An explanation of requirements and limitations are provided.

Up to 24 DIMM slots available for higher Memory capacity

FlexibleLOM connector for 1 Gigabit or 10 Gigabit networking options

8SFF Hard drive bays (16SFF with optional upgrade), 8LFF, 12LFF, or 25SFF

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

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

Redundant Power Supply

Optical Drive (8SFF/8LFF only)

On System Management

Chipset

HP iLO (Firmware: HP iLO 4)

NOTE: For more information, visit: <http://www.hp.com/go/ilo>

Standard Features

Memory Protection

Advanced ECC

NOTE: Advanced ECC uses single device data correction (SDDC) to detect and correct single and all multi-bit error that occurs within a single DRAM chip. Both x4 and x8 SDDC are supported (x8 requires lockstep mode).

Online Spare

NOTE: Memory online spare mode (also known as rank spare mode) detects a rank that is degrading and switches operation to the spare rank.

Lock-step mode

NOTE: Memory Lockstep mode is used to correct a single x8 DRAM device failure on a DIMM. The DIMMs in each paired memory channel must have identical HP part numbers.

Memory

One of the following depending on Model

Type	HP SmartMemory DDR3 Load Reduced (LRDIMM), Registered (RDIMM) or Unbuffered (UDIMM)
DIMM Slots Available	24 (12 DIMM slots per processor /4 channels per processor/3 DIMMs per channel)
Maximum Capacity (LRDIMM)	768GB (24 x 32GB LRDIMM @1066MHz)
Maximum Capacity (RDIMM)	384GB (24x 16GB RDIMM @1333MHz)
Maximum Capacity (UDIMM)	128GB (16 x 8GB UDIMM @1600MHz)
Maximum Capacity (HDIMM)	768GB (24 x 32GB HDIMM @1333MHz)

NOTE: HP memory from previous generation servers are not qualified or warranted with this HP ProLiant Server. HP SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen8. For additional information, please see the HP SmartMemory QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html

NOTE: LRDIMM, RDIMM, UDIMM, and HDIMMs are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen8 servers support RDIMM, UDIMM and LRDIMM.

NOTE: If only one processor is installed, only half the DIMM slots are available.

NOTE: UDIMM max DIMM population is 16.

NOTE: Depending on the memory configuration and processor model, the memory speed may run at 1866MHz, 1600MHz, 1333MHz, or 1066MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: www.hp.com/go/ddr3memory-configurator.

Standard Features

Network Controller
One of the following depending on Model

HP ProLiant Gen8 servers offer a new flexible network technology - FlexibleLOMs. The HP ProLiant DL380p Gen8 server offers the customer the choice of 1Gb, 10Gb, or 10Gb base-T networking solutions. For additional details see the Networking Section of this document.

Entry Models	HP Ethernet 1Gb 4-port 331FLR Adapter
Base Models	HP Ethernet 1Gb 4-port 331FLR Adapter
25SFF Models	HP FlexFabric 10Gb 2-port 533FLR-T Adapter
Performance Models	HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter
One of the following depending on Model	HP Ethernet 1Gb 4-port 331FLR Adapter HP FlexFabric 10Gb 2-port 533FLR-T Adapter
Energy Star Models	HP Ethernet 1Gb 4-port 331FLR Adapter

Expansion Slots

Primary Riser
(Standard)

Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
1	PCIe 3.0	X16	X16	7	Full Length, Full Height Slot	Proc 1
2	PCIe 3.0	X8	X8	10	Half Length, Full Height Slot	Proc 1
3	PCIe 2.0	X4	X8	13	Half Length, Full Height Slot	Chipset

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** 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 up to 150w PCIe cards, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

PCIe Riser
(Optional 3-slot)

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

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** 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 up to 150w PCIe cards, but an additional Power Cord Option is required (669777-B21). See Option Section below for offering

Standard Features

PCIe Riser (Optional 2-slot)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	4	PCIe 3.0	X16	X16	16	Full length, Full height slot	Proc 2
	5	PCIe 3.0	X16	X16	16	Half Length, Full Height	Proc 2

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** Indicates the number of physical electrical lanes running to the connector.

HP Server ROM

HP ROM (Read Only Memory) is now digitally signed using HP's Corporate Signing Service. This signature is verified before the flash process starts, reducing accidental programming and preventing malicious efforts to corrupt system ROM.

HP ROM provides for essential initialization and validation of hardware components before control is passed to the customer-installed operating system. The ROM also provides the capability of booting from various fixed media (HDD, CD-ROM) and removable media (USB), to continue operation to the operating system.

HP ROM performs very early configuration of the video controller, to allow monitoring of initialization progress via an attached monitor. If configuration or hardware errors are discovered during this early phase of hardware initialization, suitable messages are now displayed on the connected monitor. Additionally, these configuration or hardware errors are logged to the Integrated Management Log (IML) to assist in diagnosis.

HP's ProLiant ROM is used to configure the following:

- Processor and chipset status registers
- System memory, memory map, and memory initialization
- System hardware configuration (Integrated PCI devices and optional PCIe cards).
- Customer-specific BIOS configuration (using the HP ROM-Based Setup Utility (RBSU)).

NOTE: For further information, please refer to HP's RBSU (ROM based setup utility) user guide: www.hp.com/support/rbsu.

Storage Controller One of the following depending on Model

Entry Models	HP Smart Array P420i/ZM (RAID 0/1/1+0)
Base Models	HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
25SFF Models	HP Smart Array P420i/2GB with FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
Performance Models	HP Smart Array P420i/2GB with FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
Energy Star Models	HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0/6/6+0)

Standard Features

Internal Storage Devices	Diskette Drive	None
	Optical Drive	Ships standard in Performance Models Optional: DVD-ROM, DVD-RW
	Hard Drives	None ship standard
	Drive Bays	Standard: 8SFF drive bays total with Optical Bay, 8 LFF drive bays total with Optical Bay, 12LFF drive bays total, or 25SFF drive bays total Optional: +8SFF drive bay (total of 16SFF drive bays) NOTE: The Optical drive bay is not available with the 12LFF model, 25SFF model, or +8SFF drive bay optional upgrade. NOTE: The 8LFF, 12LFF, and 25SFF drive cage versions are not field upgradeable options from the 8SFF model. NOTE: The optional +8SFF drive bay requires an additional internal storage controller be selected. HP recommends the HP Smart Array P420/1GB FBWC 6Gb 2-ports Int SAS Controller (P/N 631670-B21). NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HP SFF Gen8 Hard Drive Blank Kit or P/N 666986-B21: HP LFF Gen8 Hard Drive Blank Kit. The part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server.

Maximum Internal Storage	Hot Plug SFF SAS	30.0TB	25 x 1.2TB (with optional SFF drive cage)
	Hot Plug SFF SATA	25.0TB	25 x 1TB (with optional SFF drive cage)
	Hot Plug LFF SAS	36.0TB	12 x 3TB (with optional LFF drive cage)
	Hot Plug LFF SATA	48.0TB	12 x 4TB (with optional LFF drive cage)
	Hot Plug SFF SAS SSD	20.0TB	25 x 800GB (with optional SFF drive cage)
	Hot Plug LFF SATA SSD	9.6TB	12 x 800GB (with optional LFF drive cage)

Interfaces	Serial	1
	Video	2 (1 front, 1 back) not active simultaneously
	FlexibleLOM Network Ports	Some models come standard with 4 x 1Gb ports while others come with 2 x 10Gb or 2 x 10Gb base-T ports (See HP Networking section below for more details and options).
	HP iLO Remote Management Network Port	1 Gb Dedicated
	SD slot	1 Internal Secure NOTE: The SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.
	USB 2.0 Ports	Up to 7 total: up to 2 front, 4 back, 1 internal NOTE: Only 1 front USB port available for 12LFF and 25SFF models.

Standard Features

Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 2.0 Compliant
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Server Power Cords

All Pre-configured servers ship with a high voltage server-to-PDU power cord.

NOTE: HP ProLiant DL servers no longer ship standard with a 12-foot NEMA 5-15P to C13 power cord that connects to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to power distribution units (PDUs) in data center racks and now ship standard with a PDU 6-foot C-14 to C13 power cord (AOK02A). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the 6-foot NEMA 5-15 to C13 power cord must be ordered separately (AF556A). See Power Cords section for Power Cord options.

Power Specifications

To review typical system power ratings use the HP Power Advisor which is available via the online tool located at URL: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor.

NOTE: Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html

Common Slot Power Supply

NOTE: Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

HP's Common Slot (CS) power supplies allow for commonality of power supplies across a wide range of ProLiant and Integrity servers, as well as HP Storage solutions, and are designed to provide the highest power supply efficiency without degrading system performance. HP CS power supplies are tested by the Electric Power Research Institute (EPRI) and certified through the ECOS 80 Plus power supply program. HP CS power supply options provide efficiency ratings of up to 94% (80 Plus Platinum) and are available in three power output options - 460W, 750W, and 1200W - allowing the customer to "right-size" a power supply for their specific server configuration. All HP Common Slot power sources are UL, CE Mark Compliant, hot-plug and support redundant configurations.

NOTE: Mixing of power supplies in the same server is not supported. All power supplies must be of the same output and efficiency rating. If non-matched power supplies are inserted you will get errors and operation will fail.

HP CS Platinum Plus power supplies are required when enabling HP's Intelligent Power Discovery (IPD) solution. IPD is the first technology to create an automated, energy-aware network between IT systems and facilities. This allows your company to reclaim millions of dollars in wasted power capacity and downtime costs across data centers. For more information on HP's IPD solution, go to www.hp.com/go/ipd.

It is highly recommended that you use the HP Power Advisor in defining the "Right-Size" power supply for your needs. HP Power Advisor can be accessed at: www.hp.com/go/hppoweradvisor.

NOTE: The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 Plus

Standard Features

independently tests power supply efficiency and publicly posts the results on 80Plus.org.

Redundant Power: Optional (1+ 1 or n+n redundant) power supplies can be purchased through power supply option kits (see Power Supplies for part numbers).

NOTE: Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html

System Fans

One of the following depending on Model

2P Models have (6) (N+1 redundancy standard)

1P Models have (4) (N+1 redundancy standard)

Required Cabling

For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl380p-gen8.

Operating Systems and Virtualization Software Support for ProLiant Servers

[Microsoft Windows Server](#)
[Canonical Ubuntu](#)
[Red Hat Enterprise Linux \(RHEL\)](#)
[SUSE Linux Enterprise Server \(SLES\)](#)
[Oracle Solaris](#)
[VMware](#)
[Citrix XenServer](#)

NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: <http://www.hp.com/go/ossupport> and our driver download page: <http://www.hp.com/support/DL380pGen8>

Graphics

Integrated Matrox G200 video standard

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

HP iLO 4 On System Management Memory

- 16 MB Flash
- 256 MB DDR 3 with ECC (112 MB after ECC and video)

Form Factor

One of the following depending on Model

2U Rack form factor

8 SFF & 25SFF Drive Bay Version:

3.44 (8.74 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) Length

8 LFF & 12LFF Drive Bay Version:

3.44 (8.74 cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length

Standard Features

On System Management HP iLO Management Engine

- HP iLO Management Engine is a comprehensive set of embedded management features supporting the complete lifecycle of the server, from initial deployment, through ongoing management, to service alerting and remote support. HP iLO Management Engine comes standard on all HP ProLiant Gen8 servers. The HP iLO Management Engine portfolio includes:
 - **HP iLO:** The HP iLO (Integrated Lights-Out) management processor is the core foundation for the HP iLO Management Engine
 - **HP Agentless Management:** Provides built in server health monitoring and alerting capability without OS agents, that starts working the moment a power cord and an Ethernet cable are connected.
 - **HP Active Health System:** Always on, continuous monitoring for increased stability and shorter downtimes; 100% configuration history; Health and service alerts and easy export and upload to Service and Support.
 - **HP Intelligent Provisioning:** Lets customers provision and configure a single server without any separate media. No more SmartStart CDs or Smart Update Firmware DVD are needed.
 - To start Intelligent Provisioning:
 - Press the F10 key during the ProLiant Gen8 server boot process (also known as power on self test or POST).
 - Please go to the Intelligent Provisioning website at www.hp.com/go/intelligentprovisioning for additional information and to view usage videos.
 - Use the Service Pack for ProLiant (SPP) at www.hp.com/go/spp to get firmware and software updates.
 - **HP iLO Mobile App:** Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: www.hp.com/go/ilo/mobileapp

NOTE: For more information, visit: <http://www.hp.com/go/ilo> or HP iLO Management Engine technologies whitepaper

Standard Features

HP Insight management HP Service Pack for ProLiant (SPP)

HP Service Pack for ProLiant (SPP) and HP Smart Update Manager (HP SUM) provide a comprehensive approach to firmware and system software maintenance. Together they provide better operating stability and ensure maximum uptime. The SPP will be updated at a predictable cadence, typically coinciding with new HP server hardware launches. By enabling firmware to be updated online and integrating firmware and system software updates in one operation, HP SUM and the SPP offer faster updates of individual servers and dramatically faster updates of entire BladeSystem enclosures. Further improving system uptime and stability is the fact that HP provides 12 months of support for each Service Pack for ProLiant release.

The user experience around HP SUM and the SPP has been improved in several ways, starting with the web download. A single web page provides access to a single download containing both the latest version of HP SUM and the latest SPP. Optional smaller subsets with only specific types of servers or specific operating systems are offered to save on download time. The HP SUM application provides a straightforward, intuitive user interface that guides the user through the steps of discovery, analyses and update, providing comprehensive information on available updates, criticality and interdependencies. This information is also available in reports. By providing the option of multiple local or shared repositories which can be easily updated from hp.com, HP SUM provides the tools to optimize stability and consistency throughout the company. While HP SUM and the SPP recommend the combinations of firmware and system software that HP has found to be the best practice, the application gives customers the flexibility to set their own specific baseline.

The Service Pack for ProLiant has been rigorously tested with specific attention for interaction between firmware, drivers and agents both within the server as well as in interaction with the BladeSystem enclosure components (Onboard Administrator and Virtual Connect). This testing ensures the highest quality as well as providing the input for HP SUM to deploy updates taking into account all interdependencies, when determining the correct updates and order of update deployment.

NOTE: The Service Pack for ProLiant (which includes HP SUM) can be downloaded from www.hp.com/go/spp/download. More information can be found: <http://www.hp.com/go/SmartUpdate>, www.hp.com/go/spp and <http://www.hp.com/go/hpsum>

Security	Power-on password
	Serial interface control
	Administrator's password

Standard Features

Warranty

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP 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 HP 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 HP 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

HP Insight management	HP Insight Control	HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. HP Insight Control also supports Location and Power Discovery Services to automate many configuration, asset tracking, and power management tasks to speed implementation and prevent downtime. For more information, see http://www.hp.com/go/insightcontrol .
	HP iLO Advanced	HP Insight Control includes one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, see: http://www.hp.com/services/insight .
	HP Matrix Operating Environment	HP Integrated Lights-Out Advanced License a product option, providing smart remote server management without compromise. iLO Advanced unlocks the full set of remote administration functionality for all HP ProLiant servers by activating the full Virtual Keyboard Video and Mouse remote console, multi-user collaboration, console record and replay, GUI-based and scripted virtual media and virtual folders, and enhanced security and power management functionality. For more information, see: http://www.hp.com/go/iloadvanced The HP Matrix Operating Environment (Matrix OE) for ProLiant and Integrity servers is an integrated command center that helps you instantly adjust to dynamic business demands. This advanced infrastructure management software lets you reduce the cost of common data center tasks by up to 40 percent while keeping pace with your changing business. The HP Matrix OE includes the automated provisioning, optimization, and recovery management capabilities for HP CloudSystem Matrix, the ideal platform for private cloud and Infrastructure as a Service (IaaS).

NOTE: For more information, visit: <http://www.hp.com/go/matrixoe>

High Performance Clusters

HP Cluster Platforms	HP 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 HPC Server. A Cluster Platform Configurator simplifies ordering. http://www.hp.com/go/clusters
HP HPC Interconnects	High Performance Computing (HPC) interconnect technologies are available for this server as part of the HP Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by HP when integrated within an HP cluster. Flexible, validated solutions can be defined with the help of configuration tools. http://www.hp.com/techservers/clusters/ucp/index.html
HP Insight Cluster Management Utility	HP Insight Cluster Management Utility (CMU) is an HP-licensed and HP-supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. http://www.hp.com/go/cmu

Optional Features

Storage Software

Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than HP 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, HP data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
HP's 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)**
HP's 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**
HP 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 HP storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HP StoreVirtual VSA**
With HP StoreVirtual VSA you can use the power of virtualization to turn a set of heterogeneous and disconnected physical disk drives in your servers and storage devices into a single pool of logical storage capacity.

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

HP Insight Online

HP Insight Online is a new addition to the HP Support Center for one stop, secure access to product and HP support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HP Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime.

www.hp.com/go/insightonline

HP Proactive Insight experience

Prevent problems with innovative, automated monitoring tools and proactive services. The HP Proactive Insight experience consists of using Insight Online, Insight Remote Support, and Proactive Care Support Service as one integrated solution. The Proactive Insight experience provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: www.hp.com/go/proactiveinsightexperience

Optional Features

Factory Express Portfolio for Servers and Storage HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, EVA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: <http://www.hp.com/go/factory-express>.

HP Simple Configurator 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 HP's Customer Business Center or an Authorized Partner for assistance. <http://www.hp.com/products/configurator>

Service and Support

Service and Support

HP Technology Services for Industry Standard Servers

Capitalizing on HP ProLiant server capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know HP infrastructure hardware and software best - the experienced professionals at HP Services.

Protect your business beyond warranty with HP Care Pack Services

HP Care Pack services offer complete care and support expertise with committed response choices designed to meet your IT and business needs.

HP Foundation Care services offer scalable reactive support-packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your IT and business needs. HP Proactive Care delivers high levels of system availability through proactive service management and advanced technical response.

Optimized Care

Supports maintaining servers at optimum performance availability

3-Year HP 6 hour Call to Repair Response, Proactive Care*

Combined reactive and proactive support for hardware and software helping optimize your systems and delivering high levels of availability through proactive service management and advanced technical response. Hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request. A Technical Account Manager, as your single point of contact, will own your call or issue end to end until resolved.

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

HP ProLiant Server Hardware Installation

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

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>

Standard Care

Service recommendation that maintains high level of server availability

3-Year HP 24x7 4 hour response, Proactive Care Service*

This service gives you combined reactive and proactive support including rapid access to our Advanced Solution Center to manage and prevent problems and a Technical Support Specialist with a broad level of technical knowledge that will engage with additional technical expertise as needed from HP's vast global resources.

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

HP ProLiant Server Hardware Installation

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

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>

Service and Support

Related Services

HP Proactive Care Personalized Support - Environmental Option

The Personalized Support option provides an assigned Account Support Manager who can bring best practices from across the industry plus extra technical skills to your IT team. This option is only available as an add-on to HP Proactive Care Support.

HP Proactive Select Service

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf>

Additional HP Care Pack services can be found at:

<http://www.hp.com/go/cpc>

Insight Online/Insight Remote Support

HP Insight Remote Support provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. This comes at no additional cost with your HP solution*. Learn more about Insight Remote Support <http://www.hp.com/go/insightremotesupport> and Insight Online <http://www.hp.com/go/insightonline>

* Insight Remote Support is a prerequisite for Proactive Care.

HP Support Center

Personalized online support portal with access to information, tools and experts to support HP business products. Submit support cases online, chat with HP experts, access support resources or collaborate with peers. Learn more <http://www.hp.com/go/hpsc>

HP's 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.

HP Insight Remote Support and HP Support Center are available at no additional cost with a HP warranty, HP Care Pack, or HP contractual support agreement.

*HP' Support Center Mobile App is subject to local availability

Parts and Material

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

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

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

For more information

To learn more on HP ProLiant servers, please contact your HP sales representative or HP Authorized ServiceOne Channel Partner. Or visit: <http://www.hp.com/services/proliant>

Pre-configured Models

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

NOTE: Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

NOTE: HP does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

NOTE: If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HP SFF Gen8 Hard Drive Blank Kit or P/N 666986-B21: HP LFF Gen8 Hard Drive Blank Kit.

Entry Models

E5-2600 v2 series Processors

<p>HP ProLiant DL380p Gen8</p> <p>E5-2609v2 1P 4GB-R</p> <p>P420i/ZM 460W PS Server</p> <p>704560-001</p>	<p>Processor(s)</p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> <p>Internal Storage</p> <p>Optical Drive Bay</p> <p>PCI-Express Slots</p> <p>Power Supply</p> <p>Fans</p> <p>Management</p> <p>Energy Star</p> <p>Form Factor</p> <p>Warranty</p>	<p>(1) Intel® Xeon® E5-2609 v2 (2.5GHz/4-core/10MB/6.4GT-s QPI/80W)</p> <p>10MB (1x10MB) Level 3</p> <p>4GB (1x4GB) PC3L-12800R (DDR3-1600LV) Registered DIMMs</p> <p>NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)</p> <p>HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>HP Smart Array P420i/ZM (RAID 0/1/1+0)</p> <p>None ship standard</p> <p>Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p> <p>Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)</p> <p>3 PCIe slots (+3 PCIe slots available with upgrade option)</p> <p>(1) HP 460W Common Slot Gold Hot Plug Power Supply (92% Efficient)</p> <p>(4) (N+1 redundancy standard)</p> <p>HP iLO Management Engine (standard) Optional: HP Insight Control</p> <p>N/A</p> <p>Rack (2U), HP Friction Rail Kit</p> <p>NOTE: The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails.</p> <p>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).</p> <p>Caution: HP 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.</p> <p>Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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E5-2600 series Processors



Pre-configured Models

<p>HP ProLiant DL380p Gen8 E5-2609 1P 4GB-R P420i SFF 460W PS Entry Server 642121-001</p>	<p>Processor(s) (1) Intel® Xeon® E5-2609 (2.4GHz/4-core/10MB/6.4GT-s QPI/80W) Processor</p> <p>Cache Memory 10MB (1x10MB) Level 3</p> <p>Memory 4GB (1x4GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)</p> <p>Network Controller HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>Storage Controller HP Smart Array P420i/ZM (RAID 0/1/1+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p> <p>Optical Drive Bay Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)</p> <p>PCI-Express Slots 3 PCIe slots (+3 PCI slots available with upgrade option)</p> <p>Power Supply (1) HP 460W Common Slot Gold Hot Plug Power Supply (92% Efficient)</p> <p>Fans (4) (N+1 redundancy standard)</p> <p>Management HP iLO Management Engine (standard) Optional: HP Insight Control</p> <p>Energy Star Meets Energy Star requirements</p> <p>Form Factor Rack (2U), HP Friction Rail Kit NOTE: The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails. 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: HP 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.</p> <p>Warranty Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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Base Models

E5-2600 v2 series Processors

<p>HP ProLiant DL380p Gen8 E5-2620v2 1P 16GB-R P420i/512MB FBWC 460W PS Server 748593-001</p>	<p>Processor(s) Intel® Xeon® E5-2620 v2 (2.1GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2- 3/3/3/3/4/5)</p> <p>Cache Memory 15MB (1x15MB) Level 3</p> <p>Memory 16GB (2x8GB) PC3L-12800R (DDR3-1600) Registered DIMMs NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)</p> <p>Network Controller HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>Storage Controller HP Smart Array P420i/512MB FBWC (RAID 0/1/1+0/5/5+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p> <p>Optical Drive Bay Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)</p>
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Pre-configured Models

PCI-Express Slots	6 PCIe slots
Power Supply	HP 460W CS Platinum Plus Hot Plug Power Supply (94% Efficient)
Fans	(4) (N+1 redundancy standard)
Management	HP iLO Management Engine (standard) Optional: HP Insight Control
Form Factor	Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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.
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2630v2 1P 16GB-R P420i/1GB FBWC 460W PS Server 704559-001	Processor(s)	(1) Intel® Xeon® E5-2630 v2 (2.6GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2- 3/3/3/3/4/5)
	Cache Memory	15MB (1x15MB) Level 3
	Memory	16GB (1x16GB) PC3L-12800R (DDR3-1600LV) Registered DIMMs NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)
	Network Controller	HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots (+3 PCIe slots available with upgrade option)
	Power Supply	(1) HP 460W CS Platinum Plus Hot Plug Power Supply (94% Efficient)
	Fans	(4) (N+1 redundancy standard)
	Management	HP iLO Management Engine (standard) Optional: HP Insight Control
	Energy Star	N/A
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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.
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Pre-configured Models

<p>HP ProLiant DL380p Gen8 E5-2640v2 1P 16GB-R P420i/1GB FBWC 460W PS Server 748594-001</p>	<p>Processor(s) Cache Memory Memory Network Controller Storage Controller Hard Drive Internal Storage Optical Drive Bay PCI-Express Slots Power Supply Fans Management Form Factor Warranty</p>	<p>Intel® Xeon® E5-2640 v2 (2.0GHz/8-core/20MB/7.2GT-s QPI/95W, DDR3-1600, HT, Turbo2- 3/3/3/3/3/4/5) 20MB (1x20MB) Level 3 16GB (1x16GB) PC3L-12800R (DDR3-1600) Registered DIMMs NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration) HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0) None ship standard Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive) 6 PCIe slots HP 460W CS Platinum Plus Hot Plug Power Supply (94% Efficient) (4) (N+1 redundancy standard) HP iLO Management Engine (standard) Optional: HP Insight Control Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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. Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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E5-2600 series Processors

<p>HP ProLiant DL380p Gen8 E5-2640 1P 16GB-R P420i SFF 460W PS Base Server 642107-001</p>	<p>Processor(s) Cache Memory Memory Network Controller Storage Controller Hard Drive Internal Storage</p>	<p>(1) Intel® Xeon® E5-2640 (2.5GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Processor (1) Intel® Xeon® E5-2630 (2.3GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Processor (1) Intel® Xeon® E5-2620 (2.0GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Processor 15MB (1x15MB) Level 3 16GB (4x4GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration) HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6 0) None ship standard Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p>
<p>HP ProLiant DL380p Gen8 E5-2630 1P 16GB-R P420i SFF 460W PS Base Server 642119-001</p>	<p>Cache Memory Memory</p>	<p>15MB (1x15MB) Level 3 16GB (4x4GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)</p>
<p>HP ProLiant DL380p Gen8 E5-2620 1P 16GB-R P420i SFF 460W PS Base Server 642120-001</p>	<p>Network Controller Storage Controller Hard Drive Internal Storage</p>	<p>HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6 0) None ship standard Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p>

Pre-configured Models

Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)
PCI-Express Slots	3 PCIe slots (+3 PCI slots available with upgrade option)
Power Supply	(1) HP 460W CS Platinum Plus Hot Plug Power Supply (94% Efficient)
Fans	(4) (N+1 redundancy standard)
Management	HP iLO Management Engine (standard) Optional: HP Insight Control
Energy Star	Meets Energy Star requirements
Form Factor	Rack (2U), HP Ball Bearing Rail Kit/Cable Management Arm standard 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: HP 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.
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

25SFF Models

NOTE: This Model is Energy Star Certified.

E5-2600 v2 series Processors

HP ProLiant DL380p Gen8 Processor(s) E5-2650v2 2P 32GB-R P420i/2GB FBWC 750W RPS Server 704558-001	(2) Intel® Xeon® E5-2650 v2 (2.6GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1866, HT, Turbo2- 4/4/4/4/5/6/7/8)
Cache Memory	20MB (1x20MB) Level 3
Memory	32GB (2x16GB) PC3-14900R (DDR3-1866) Registered DIMMs NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)
Network Controller	HP FlexFabric 10Gb 2-port 533FLR-T Adapter
Storage Controller	HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
Hard Drive	None ship standard
Internal Storage	Standard: 25 SFF SAS/SATA HDD Bays; includes 23 SFF hard drive blanks
Optical Drive Bay	Not available in 25 SFF model
PCI-Express Slots	6 PCIe slots
Power Supply	(2) HP 750W CS Platinum Plus Hot Plug Power Supply (94% Efficient)
Fans	(6) (N+1 redundancy standard)
Management	HP iLO Management Engine (standard) Optional: HP Insight Control
Energy Star	Meets Energy Star requirements
Form Factor	Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for

Pre-configured Models

Warranty

proper tools and number of people to use for any installation.

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

Performance Models

NOTE: These Models are Energy Star Certified.

E5-2600 v2 series Processors

HP ProLiant DL380p Gen8 Processor(s)

(2) Intel® Xeon® E5-2667 v2 (3.3GHz/8-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2- 3/3/3/3/4/5/6/7)

E5-2667v2 2P 32GB-R

P420i/1GB FBWC 460W

RPS Server

748595-001

Cache Memory

25MB (1x25MB) Level 3

Memory

32GB (2x16GB) PC3-14900R (DDR3-1866) Registered DIMMs

NOTE: Total 24 DIMM slots available

Network Controller

HP Ethernet 1Gb 4-port 331FLR Adapter

Storage Controller

HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)

Hard Drive

None ship standard

Internal Storage

Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks

Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays

Optical Drive Bay

Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)

PCI-Express Slots

6 PCIe slots

Power Supply

(2) HP 460W CS Platinum Plus Hot Plug Power Supply (94% Efficient)

Fans

(6) (N+1 redundancy standard)

Management

HP iLO Management Engine (standard)

Optional: HP Insight Control

Form Factor

Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm

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: HP 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.

Warranty

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

Pre-configured Models

<p>HP ProLiant DL380p Gen8 E5-2690v2 2P 32GB-R P420i/2GB FBWC 750W RPS Server 709943-001</p>	<p>Processor(s) (2) Intel® Xeon® E5-2690 v2 (3.0GHz/10-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2- 3/3/3/3/3/3/4/5/6)</p> <p>Cache Memory 25MB (1x25MB) Level 3</p> <p>Memory 32GB (2x16GB) PC3-14900R (DDR3-1866) Registered DIMMs NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)</p> <p>Network Controller HP FlexFabric 10Gb 2-port 533FLR-T Adapter</p> <p>Storage Controller HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p> <p>Optical Drive Bay DVD-RW standard</p> <p>PCI-Express Slots 6 PCIe slots</p> <p>Power Supply (2) HP 750W CS Platinum Plus Hot Plug Power Supply (94% Efficient)</p> <p>Fans (6) (N+1 redundancy standard)</p> <p>Management HP iLO Management Engine (standard) Optional: HP Insight Control</p> <p>Energy Star Meets Energy Star requirements</p> <p>Form Factor Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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.</p> <p>Warranty Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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<p>HP ProLiant DL380p Gen8 E5-2690v2 2P 64GB-R P420i/1GB FBWC 750W RPS Server 748596-001</p>	<p>Processor(s) (2) Intel® Xeon® E5-2690 v2 (3.0GHz/10-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2- 3/3/3/3/3/3/4/5/6)</p> <p>Cache Memory 25MB (1x25MB) Level 3</p> <p>Memory 64GB (4x16GB) PC3-14900R (DDR3-1866) Registered DIMMs NOTE: Total 24 DIMM slots available</p> <p>Network Controller HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>Storage Controller HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p> <p>Optical Drive Bay Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)</p> <p>PCI-Express Slots 6 PCIe slots</p> <p>Power Supply (2) HP 750W CS Platinum Plus Hot Plug Power Supply (94% Efficient)</p> <p>Fans (6) (N+1 redundancy standard)</p>
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Pre-configured Models

Management	HP iLO Management Engine (standard) Optional: HP Insight Control
Form Factor	Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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.
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2695v2 2P 64GB-R P420i/1GB FBWC 750W RPS Server 748597-001	Processor(s)	(2) Intel® Xeon® E5-2695 v2 (2.4GHz/12-core/30MB/8.0GT-s QPI/115W, DDR3-1866, HT, Turbo2- 4/4/4/4/4/4/4/5/6/7/8)
	Cache Memory	30MB (1x30MB) Level 3
	Memory	64GB (4x16GB) PC3-14900R (DDR3-1866) Registered DIMMs NOTE: Total 24 DIMM slots available
	Network Controller	HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)
	PCI-Express Slots	6 PCIe slots
	Power Supply	(2) HP 750W CS Platinum Plus Hot Plug Power Supply (94% Efficient)
	Fans	(6) (N+1 redundancy standard)
	Management	HP iLO Management Engine (standard) Optional: HP Insight Control
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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.
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Pre-configured Models

<p>HP ProLiant DL380p Gen8 E5-2697v2 2P 64GB-R P420i/1GB FBWC 750W RPS Server 748598-001</p>	<p>Processor(s) (2) Intel® Xeon® E5-2697 v2 (2.7GHz/12-core/30MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2- 3/3/3/3/3/3/3/4/5/6/7/8)</p> <p>Cache Memory 30MB (1x30MB) Level 3</p> <p>Memory 64GB (4x16GB) PC3-14900R (DDR3-1866) Registered DIMMs NOTE: Total 24 DIMM slots available</p> <p>Network Controller HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>Storage Controller HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p> <p>Optical Drive Bay Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)</p> <p>PCI-Express Slots 6 PCIe slots</p> <p>Power Supply (2) HP 750W CS Platinum Plus Hot Plug Power Supply (94% Efficient)</p> <p>Fans (6) (N+1 redundancy standard)</p> <p>Management HP iLO Management Engine (standard) Optional: HP Insight Control</p> <p>Form Factor Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP 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.</p> <p>Warranty Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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E5-2600 series Processors

<p>HP ProLiant DL380p Gen8 E5-2690 2P 32GB-R P420i SATA SFF 750W PS High Perf Server 662257-001</p>	<p>Processor(s) (2) Intel® Xeon® E5-2690 (2.9GHz/8-core/20MB/8GT-s QPI/135W, DDR3-1600, HT, Turbo2- 4/4/4/5/5/7/7/9) Processor (2) Intel® Xeon® E5-2665 (2.4GHz/8-core/20MB/8GT-s QPI/115W, DDR3-1600, HT, Turbo2- 4/4/5/5/6/6/7/7) Processor (2) Intel® Xeon® E5-2650 (2.0GHz/8-core/20MB/8GT-s QPI/95W, DDR3-1600, HT, Turbo2- 4/4/5/5/5/7/8/8) Processor</p> <p>Cache Memory 20MB (1x20MB) Level 3</p> <p>Memory 32GB (4x8GB) PC3-12800R (DDR3-1600) Registered DIMMS NOTE: Total 24 DIMM slots available.</p> <p>Network Controller HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter (on E5-2690/E5-2665 Models) NOTE: SFP Transceivers for the 530FLR-SFP+ are not included with the server and must be purchased separately.</p> <p>Storage Controller HP Ethernet 1Gb 4-port 331FLR Adapter (on E5-2650 Model) HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p>
<p>HP ProLiant DL380p Gen8 E5-2665 2P 32GB-R P420i SFF 750W PS High Perf Server 642105-001</p>	<p>Processor(s) One of the following depending on Model</p> <p>Cache Memory 20MB (1x20MB) Level 3</p> <p>Memory 32GB (4x8GB) PC3-12800R (DDR3-1600) Registered DIMMS NOTE: Total 24 DIMM slots available.</p> <p>Network Controller HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter (on E5-2690/E5-2665 Models) NOTE: SFP Transceivers for the 530FLR-SFP+ are not included with the server and must be purchased separately.</p> <p>Storage Controller HP Ethernet 1Gb 4-port 331FLR Adapter (on E5-2650 Model) HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p>
<p>HP ProLiant DL380p Gen8 E5-2650 2P 32GB-R P420i SFF 750W PS High Perf Server 642106-001</p>	<p>Processor(s) One of the following depending on Model</p> <p>Cache Memory 20MB (1x20MB) Level 3</p> <p>Memory 32GB (4x8GB) PC3-12800R (DDR3-1600) Registered DIMMS NOTE: Total 24 DIMM slots available.</p> <p>Network Controller HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter (on E5-2690/E5-2665 Models) NOTE: SFP Transceivers for the 530FLR-SFP+ are not included with the server and must be purchased separately.</p> <p>Storage Controller HP Ethernet 1Gb 4-port 331FLR Adapter (on E5-2650 Model) HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>Hard Drive None ship standard</p> <p>Internal Storage Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays</p>

Pre-configured Models

Optical Drive Bay	DVD-RW standard
PCI-Express Slots	6 PCIe slots (includes second riser slot upgrade option)
Power Supply	(2) HP 750W CS Platinum Plus Hot Plug Power Supplies (94% Efficient)
Fans	(6) (N+1 redundancy standard)
Management	HP iLO Management Engine (standard) HP Insight Control Standard
Energy Star	Meets Energy Star requirements
Form Factor	Rack (2U), HP Ball Bearing Rail Kit/Cable Management Arm standard 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: HP 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.
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Energy Star Models

NOTE: These Models are Energy Star Certified.

E5-2600 v2 series Processors

HP ProLiant DL380p Gen8 Processor(s)	(2) Intel® Xeon® E5-2630 v2 (2.6GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2- 3/3/3/3/4/5)
E5-2630v2 2P 32GB-R	
P420i/1GB FBWC 460W PS Cache Memory	15MB (1x15MB) Level 3
Server Memory	32GB (2x16GB) PC3L-12800R (DDR3-1600LV) Registered DIMMs NOTE: Total 24 DIMM slots available with processor upgrade (2P configuration)
709942-001	
Network Controller	HP Ethernet 1Gb 4-port 331FLR Adapter
Storage Controller	HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)
Hard Drive	None ship standard
Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays
Optical Drive Bay	Optional: Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)
PCI-Express Slots	6 PCIe slots
Power Supply	(1) HP 460W CS Platinum Plus Hot Plug Power Supply (94% Efficient)
Fans	(6) (N+1 redundancy standard)
Management	HP iLO Management Engine (standard) Optional: HP Insight Control
Energy Star	Meets Energy Star requirements
Form Factor	Rack (2U), HP Ball Bearing Rail Kit without Cable Management Arm 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: HP recommends that a minimum of two people are required for all

Pre-configured Models

Warranty

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

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

E5-2600 series Processors

**HP ProLiant DL380p Gen8
E5-2630 2P 16GB-R P420i**

**Hot Plug SFF 460W PS
Server**
677278-001

Cache Memory Memory

(2) Intel® Xeon® E5-2630 (2.3GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)

15MB (1x15MB) Level 3

16GB (4x4GB) PC3L-10600R (DDR3-1333) Registered DIMMS

NOTE: Total 24 DIMM slots.

Network Controller

HP Ethernet 1Gb 4-port 331FLR Adapter

Storage Controller

HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0/6/6+0)

Hard Drive

None ship standard

Internal Storage

Standard: 8 SFF SAS/SATA HDD Bays; includes 6 SFF hard drive blanks

Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays

Optical Drive Bay

Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive)

PCI-Express Slots

3 PCIe slots (+3 PCI slots available with upgrade option)

Power Supply

(1) 460W HP CS Platinum Plus Hot Plug Power Supply (94% Efficient)

Fans

(6) (N+1 redundancy standard)

Management

HP iLO Management Engine (standard)

Optional: HP Insight Control

Energy Star

Meets Energy Star requirements

Form Factor

Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard

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: HP 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.

Warranty

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

Smart Buys

<p>HP ProLiant DL380p Gen8 E5-2609 1P Svr/S-Buy 670857-S01</p>	<p>Processor(s) Cache Memory Memory</p> <p>Network Controller Storage Controller Hard Drive Internal Storage Optical Drive Bay PCI-Express Slots Power Supply Fans Management Form Factor Warranty</p>	<p>Intel® Xeon® E5-2609 (2.40GHz/4-core/10MB/6.4GT-s QPI/80W) 10MB (1x10MB) Level 3 8GB (1x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor One HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/ZM (RAID 0/1/1+0) None ship standard Standard: 8 SFF SAS/SATA HDD Bays Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive) 3 PCIe slots 2 x HP 460W CS Platinum Plus Hot Plug Redundant Power Supply (4) (N+1 redundancy standard) iLO Management Engine Standard Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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<p>HP ProLiant DL380p Gen8 E5-2620 1P Svr/S-Buy 670856-S01</p>	<p>Processor(s) Cache Memory Memory</p> <p>Network Controller Storage Controller Hard Drive Internal Storage Optical Drive Bay PCI-Express Slots Power Supply Fans Management Form Factor Warranty</p>	<p>Intel® Xeon® E5-2620 (2.0GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) 15MB (1x15MB) Level 3 16GB (2x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots available with upgrade to 2nd processor One HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/with 512MB FBWC (RAID 0/1/1+0/5/5+0) None ship standard Standard: 8 SFF SAS/SATA HDD Bays Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive) 3 PCIe slots 2 x HP 460W CS Platinum Plus Hot Plug Redundant Power Supply (4) (N+1 redundancy standard) iLO Management Engine Standard Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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Smart Buys

<p>HP ProLiant DL380p Gen8 E5-2640 2P Svr/S-Buy 670854-S01</p>	<p>Processor(s)</p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> <p>Internal Storage</p> <p>Optical Drive Bay</p> <p>PCI-Express Slots</p> <p>Power Supply</p> <p>Fans</p> <p>Management</p> <p>Form Factor</p> <p>Warranty</p>	<p>(2) Intel® Xeon® E5-2640 (2.50GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)</p> <p>15MB (1x15MB) Level 3</p> <p>16GB (2x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots</p> <p>One HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0)</p> <p>None ship standard</p> <p>Standard: 8 SFF SAS/SATA HDD Bays</p> <p>Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)</p> <p>3 PCIe slots</p> <p>2 x HP 460W CS Platinum Plus Hot Plug Redundant Power Supply</p> <p>(6) (N+1 redundancy standard)</p> <p>iLO Management Engine Standard</p> <p>Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard</p> <p>Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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<p>HP ProLiant DL380p Gen8 E5-2660 2P Svr/S-Buy 670853-S01</p>	<p>Processor(s)</p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> <p>Internal Storage</p> <p>Optical Drive Bay</p> <p>PCI-Express Slots</p> <p>Power Supply</p> <p>Fans</p> <p>Management</p> <p>Form Factor</p> <p>Warranty</p>	<p>(2) Intel® Xeon® E5-2660 (2.20GHz/8-core/20MB/8GT-s QPI/95W, DDR3-1600, HT, Turbo2- 5/5/6/6/7/7/8/8)</p> <p>20MB (1x20MB) Level 3</p> <p>32GB (4x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots</p> <p>One HP Ethernet 1Gb 4-port 331FLR Adapter</p> <p>HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0)</p> <p>None ship standard</p> <p>Standard: 8 SFF SAS/SATA HDD Bays</p> <p>Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)</p> <p>3 PCIe slots</p> <p>2 x HP 750W CS Platinum Plus Hot Plug Redundant Power Supply</p> <p>(6) (N+1 redundancy standard)</p> <p>iLO Management Engine Standard Also includes HP Insight Control Control including 1yr 24x7 Technical Support and Updates Single Server License</p> <p>Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard</p> <p>Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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Smart Buys

HP ProLiant DL380p Gen8 E5-2670 2P Svr/S-Buy 670852-S01	Processor(s)	(2) Intel® Xeon® E5-2670 (2.60GHz/8-core/20MB/8GT-s QPI/115W, DDR3-1600, HT, Turbo2- 4/4/5/5/6/6/7/7)
	Cache Memory	20MB (1x20MB) Level 3
	Memory	32GB (4x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	2 x HP 750W CS Platinum Plus Hot Plug Redundant Power Supply
	Fans	(6) (N+1 redundancy standard)
	Management	iLO Management Engine Standard Also includes HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2690 2P Svr/S-Buy 742818-S01	Processor(s)	(2) Intel® Xeon® E5-2690 (2.9GHz/8-core/20MB/8GT-s QPI/135W, DDR3-1600, HT, Turbo2- 4/4/4/5/5/7/7/9)
	Cache Memory	20MB (1x20MB) Level 3
	Memory	32GB (4x8GB) PC3L-12800R (DDR3-1600) Registered DIMMS NOTE: Total 24 DIMM slots
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	2 x HP 750W CS Platinum Plus Hot Plug Redundant Power Supply
	Fans	(6) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Smart Buys

HP ProLiant DL380p Gen8 E5-2620 1P LFF Svr/S-Buy 697494-S01	Processor(s)	Intel® Xeon® E5-2620 (2.0GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)
	Cache Memory	15MB (1x15MB) Level 3
	Memory	16GB (2x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/512MB FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 LFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	2 x HP 460W CS Platinum Plus Hot Plug Redundant Power Supply
	Fans	(4) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2640 1P 25SFF Svr/S-Buy 706539-S01	Processor(s)	Intel® Xeon® E5-2640 (2.50GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)
	Cache Memory	15MB (1x15MB) Level 3
	Memory	16GB (2x8GB) PC3L-10600R (DDR3-1333) Registered DIMMS NOTE: Total 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 25 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Not available
	PCI-Express Slots	3 PCIe slots
	Power Supply	2 x HP 750W CS Platinum Plus Hot Plug Redundant Power Supply
	Fans	(4) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit /Cable Management Arm standard
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Smart Buys

HP ProLiant DL380p Gen8 E5-2609 v2 1P SFF Svr/S-Buy 734789-S01	Processor(s)	(1) Intel® Xeon® E5-2609 v2 (2.5GHz/4-core/10MB/6.4GT-s QPI/80W)
	Cache Memory	10MB (1x10MB) Level 3
	Memory	8GB (1x8GB) PC3L-12800R (DDR3-1600) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/ZM (RAID 0/1/1+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	HP 460W CS Platinum Plus Hot Plug Power Supply
	Fans	(4) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2620 v2 1P SFF Svr/S-Buy 734790-S01	Processor(s)	(1) Intel® Xeon® E5-2620 v2 (2.1GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2- 3/3/3/3/4/5)
	Cache Memory	15MB (1x15MB) Level 3
	Memory	16GB (1x16GB) PC3L-12800R (DDR3-1600) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/512MB FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	HP 460W CS Platinum Plus Hot Plug Power Supply
	Fans	(4) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Smart Buys

HP ProLiant DL380p Gen8 E5-2640 v2 2P SFF Svr/S-Buy 734791-S01	Processor(s)	(2) Intel® Xeon® E5-2640 v2 (2.0GHz/8-core/20MB/7.2GT-s QPI/95W, DDR3-1600, HT, Turbo2- 3/3/3/3/3/3/4/5)
	Cache Memory	20MB (1x20MB) Level 3
	Memory	32GB (2x16GB) PC3L-12800R (DDR3-1600) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	6 PCIe slots
	Power Supply	2 x HP 460W CS Platinum Plus Hot Plug Redundant Power Supplies
	Fans	(6) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2660 v2 1P SFF Svr/S-Buy 734792-S01	Processor(s)	Intel® Xeon® E5-2660 v2 (2.2GHz/10-core/25MB/8.0GT-s QPI/95W, DDR3-1866, HT, Turbo2- 4/4/4/4/4/4/5/6/7/8)
	Cache Memory	25MB (1x25MB) Level 3
	Memory	16GB (1x16GB) PC3L-14900R (DDR3-1866) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	HP 460W CS Platinum Plus Hot Plug Power Supply
	Fans	(4) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Smart Buys

HP ProLiant DL380p Gen8 E5-2670v2 2P SFF Svr/S-Buy 734793-S01	Processor(s)	(2) Intel® Xeon® E5-2670 v2 (2.5GHz/10-core/25MB/8.0GT-s QPI/115W, DDR3-1866, HT, Turbo2- 4/4/4/4/4/4/5/6/7/8)
	Cache Memory	25MB (1x25MB) Level 3
	Memory	32GB (2x16GB) PC3L-14900R (DDR3-1866) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	HP FlexFabric 10Gb 2-port 533FLR-T Adapter
	Storage Controller	HP Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	6 PCIe slots
	Power Supply	2x HP 750W CS Platinum Plus Hot Plug Redundant Power Supplies
	Fans	(6) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL380p Gen8 E5-2690 v2 2P SFF Svr/S-Buy 748303-S01	Processor(s)	(2) Intel® Xeon® E5-2690 v2 (3.0GHz/10-core/25MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2- 3/3/3/3/3/3/3/4/5/6)
	Cache Memory	25MB (1x25MB) Level 3
	Memory	32GB (2x16GB) PC3-14900R (DDR3-1866) Registered DIMMS
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays
	Optical Drive Bay	Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
	PCI-Express Slots	3 PCIe slots
	Power Supply	(2) HP 750W CS Platinum Plus Hot Plug Redundant Power Supplies
	Fans	(6) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Smart Buys

<p>HP ProLiant DL380p Gen8 E5-2697 v2 2P SFF Svr/S-Buy 748304-S01</p>	<p>Processor(s) Cache Memory Memory Network Controller Storage Controller Hard Drive Internal Storage Optical Drive Bay PCI-Express Slots Power Supply Fans Management Form Factor Warranty</p>	<p>(2) Intel® Xeon® E5-2697 v2 (2.7GHz/12-core/30MB/8.0GT-s QPI/130W, DDR3-1866, HT, Turbo2- 3/3/3/3/3/3/3/4/5/6/7/8) 30MB (1x30MB) Level 3 32GB (2x16GB) PC3-14900R (DDR3-1866) Registered DIMMS One HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/1GB with FBWC (RAID 0/1/1+0/5/5+0) None ship standard Standard: 8 SFF SAS/SATA HDD Bays Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive) 3 PCIe slots (2) HP 750W CS Platinum Plus Hot Plug Redundant Power Supplies (6) (N+1 redundancy standard) iLO Management Engine Standard Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm) Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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<p>HP ProLiant DL380p Gen8 E5-2640 v2 1P 25-SFF Svr/S-Buy 734794-S01</p>	<p>Processor(s) Cache Memory Memory Network Controller Storage Controller Hard Drive Internal Storage Optical Drive Bay PCI-Express Slots Power Supply Fans Management Form Factor Warranty</p>	<p>(1) Intel® Xeon® E5-2640 v2 (2.0GHz/8-core/20MB/7.2GT-s QPI/95W, DDR3-1600, HT, Turbo2- 3/3/3/3/3/3/4/5) 20MB (1x20MB) Level 3 32GB (2x16GB) PC3L-12800R (DDR3-1600) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor One HP Ethernet 1Gb 4-port 331FLR Adapter HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0) None ship standard Standard: 25 SFF SAS/SATA HDD Bays Not available 3 PCIe slots 2x HP 750W CS Platinum Plus Hot Plug Redundant Power Supplies (4) (N+1 redundancy standard) iLO Management Engine Standard Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm) Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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Smart Buys

HP ProLiant DL380p Gen8 E5-2620 v2 1P 12-LFF Svr/S-Buy 742132-S01	Processor(s)	(1) Intel® Xeon® E5-2620 v2 (2.1GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600, HT, Turbo2- 3/3/3/3/4/5)
	Cache Memory	15MB (1x15MB) Level 3
	Memory	16GB (1x16GB) PC3L-12800R (DDR3-1600) Registered DIMMS NOTE: Total 12 DIMM slots. 24 DIMM slots available with upgrade to 2nd processor
	Network Controller	One HP Ethernet 1Gb 4-port 331FLR Adapter
	Storage Controller	HP Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0)
	Hard Drive	None ship standard
	Internal Storage	Standard: 12 LFF SAS/SATA HDD Bays
	Optical Drive Bay	Not available
	PCI-Express Slots	3 PCIe slots
	Power Supply	2 x HP 750W CS Platinum Plus Hot Plug Redundant Power Supplies
	Fans	(4) (N+1 redundancy standard)
	Management	iLO Management Engine Standard
	Form Factor	Rack (2U), HP Ball Bearing Rail Kit (does not include cable mgmt arm)
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Configuration Information - Factory Integrated Models

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

NOTE: Factory Integrated Models must start with a CTO Server.

NOTE: FIO indicates that this option is only available as a factory installable option.

NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

Step 1: Base Configuration (choose one of the following configurable models)

HP Models

HP ProLiant DL380p Gen8 8 LFF Configure-to-order Server

665553-B21

Factory Integrated Model ships with:

2 x HP Smart Socket Guides for fast processor installation.

24 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation

1 FlexibleLOM connector: (see Step2: HP FlexibleNIC section below for NIC choices to populate the embedded connector)

Smart Array P420i Controller w/ Zero Memory (ZM)

I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x16 PCIe 3.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (2 additional fans included with second processor)

Drive Cage - 8LFF (Optical media drive optional)

USB - 4 Rear, 2 Front, 1 Internal, 1 SD slot

HP iLO Management Engine (standard)

NOTE: Power Supply & Rail Kit not included - choose from Step 2 & 3 sections below

NOTE: If a P430 controller is required, it cannot be populated in slots 3 or 4.

HP ProLiant DL380p Gen8 8 SFF Configure-to-order Server

653200-B21

Factory Integrated Model ships with:

1 FlexibleLOM connector: (see Step 2: HP FlexibleLOM section below for NIC choices to populate the embedded connector)

Smart Array P420i Controller w/ Zero Memory (ZM)

I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x16 PCIe 3.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (2 additional fans included with second processor)

Drive Cage - 8SFF (Optical media drive OR Second 8SFF drive cage optional)

USB - 4 Rear, 2 Front, 1 Internal, 1 SD slot

HP iLO Management Engine (standard)

NOTE: Power Supply & Rail Kit not included - choose from Step 2 & 3 sections below

NOTE: If a P430 controller is required, it cannot be populated in slots 3 or 4.

Configuration Information - Factory Integrated Models

HP ProLiant DL380p Gen8 12 LFF Configure-to-order Server

665552-B21

Factory Integrated Model ships with:

1 FlexibleLOM connector: (see Step 2: HP FlexibleLOM section below for NIC choices to populate the embedded connector)

Smart Array P420i Controller w/ Zero Memory (ZM)

I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x16 PCIe 3.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (2 additional fans included with second processor)

Drive Cage - 12LFF (with built-in expander)

USB - 4 Rear, 1 Front, 1 Internal, 1 SD slot

HP iLO Management Engine (standard)

NOTE: Power Supply & Rail Kit not included - choose from Step 3 & 4 sections below

NOTE: Customers can only choose from 115W or lower E5-2600 and E5-2600 v2 processors in this configure-to-order model.

NOTE: Processors consuming 115W power or greater require the use of DIMM blanks and do not support LR or HC-DIMMs

NOTE: This chassis comes with a built-in expander. All drives can be driven off of the embedded P420i controller.

NOTE: Customers must add a minimum of a 512MB controller cache module when choosing this CTO server.

NOTE: If a P822 controller is required, it cannot be populated in slot 3.

NOTE: If a P421 controller is required, it cannot be populated in slot 1.

NOTE: If a P430 controller is required, it cannot be populated in slots 3 or 4.

NOTE: HyperCloud DIMMs, Q4000, and Q6000 options are not supported in this CTO server.

NOTE: Customer will not be able to get an optical drive, SID, second front USB, and ID label.

HP ProLiant DL380p Gen8 25 SFF Configure-to-order Server

665554-B21

Factory Integrated Model ships with:

1 FlexibleLOM connector: (see Step 2: HP FlexibleLOM section below for NIC choices to populate the embedded connector)

Smart Array P420i Controller w/ Zero Memory (ZM)

I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x16 PCIe 3.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (2 additional fans included with second processor)

Drive Cage - 25SFF (with built-in expander)

USB - 4 Rear, 1 Front, 1 Internal, 1 SD slot

HP iLO Management Engine (standard)

Configuration Information - Factory Integrated Models

- NOTE:** Power Supply & Rail Kit not included - choose from Step 3 & 4 sections below
- NOTE:** Customers cannot select the E5-2643 nor the E5-2637 v2 processor in this configure-to-order model.
- NOTE:** Processors consuming 115W power or greater require the use of DIMM blanks and do not support LR or HC-DIMMs
- NOTE:** This chassis comes with a built-in expander. All drives can be driven off of the embedded P420i controller.
- NOTE:** Customers must add a minimum of a 512MB controller cache module when choosing this CTO server.
- NOTE:** If a P822 controller is required, it cannot be populated in slot 3.
- NOTE:** If a P430 controller is required, it cannot be populated in slots 3 or 4.
- NOTE:** HyperCloud DIMMs, Q4000, and Q6000 options are not supported in this CTO server.
- NOTE:** Customer will not be able to get an optical drive, SID, second front USB, and ID label.

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

HP Processors

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

Entry Processors - E5-2600 v2 series Processors

NOTE: All support up to 1333MHz memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2609v2 (2.5GHz/4-core/10MB/80W) FIO Processor Kit	715222-L21
HP DL380p Gen8 Intel® Xeon® E5-2603v2 (1.8GHz/4-core/10MB/80W) FIO Processor Kit	715223-L21

Base Processors - E5-2600 v2 series Processors

NOTE: All support up to 1600MHz DDR3 memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2640v2 (2.0GHz/8-core/20MB/95W) FIO Processor Kit	715219-L21
HP DL380p Gen8 Intel® Xeon® E5-2630v2 (2.6GHz/6-core/15MB/80W) FIO Processor Kit	715220-L21
HP DL380p Gen8 Intel® Xeon® E5-2620v2 (2.1GHz/6-core/15MB/80W) FIO Processor Kit	715221-L21
HP DL380p Gen8 Intel® Xeon® E5-2650Lv2 (1.7GHz/10-core/25MB/70W) FIO Processor Kit	715229-L21
HP DL380p Gen8 Intel® Xeon® E5-2630Lv2 (2.4GHz/6-core/15MB/60W) FIO Processor Kit	715230-L21

Performance Processors - E5-2600 v2 series Processors

NOTE: All support up to 1866MHz DDR3 memory speeds

HP DL380p Gen8 Intel® Xeon® E5-2697v2 (2.7GHz/12-core/30MB/130W) FIO Processor Kit	715224-L21
HP DL380p Gen8 Intel® Xeon® E5-2695v2 (2.4GHz/12-core/30MB/115W) FIO Processor Kit	715225-L21
HP DL380p Gen8 Intel® Xeon® E5-2690v2 (3.0GHz/10-core/25MB/130W) FIO Processor Kit	715214-L21
HP DL380p Gen8 Intel® Xeon® E5-2680v2 (2.8GHz/10-core/25MB/115W) FIO Processor Kit	715215-L21
HP DL380p Gen8 Intel® Xeon® E5-2670v2 (2.5GHz/10-core/25MB/115W) FIO Processor Kit	715216-L21

Configuration Information - Factory Integrated Models

HP DL380p Gen8 Intel® Xeon® E5-2667v2 (3.3GHz/8-core/25MB/130W) FIO Processor Kit	715226-L21
HP DL380p Gen8 Intel® Xeon® E5-2660v2 (2.2GHz/10-core/25MB/95W) FIO Processor Kit	715217-L21
HP DL380p Gen8 Intel® Xeon® E5-2650v2 (2.6GHz/8-core/20MB/95W) FIO Processor Kit	715218-L21
HP DL380p Gen8 Intel® Xeon® E5-2643v2 (3.5GHz/6-core/25MB/130W) FIO Processor Kit	715227-L21
HP DL380p Gen8 Intel® Xeon® E5-2637v2 (3.5GHz/4-core/15MB/130W) FIO Processor Kit	715228-L21

Entry Processors - E5-2600 series Processors

NOTE: All support up to 1066MHz memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2609 (2.40GHz/4-core/10MB/80W) FIO Processor Kit	662252-L21
HP DL380p Gen8 Intel® Xeon® E5-2603 (1.80GHz/4-core/10MB/80W) FIO Processor Kit	662254-L21

Base Processors - E5-2600 series Processors

NOTE: All support up to 1333MHz DDR3 memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2640 (2.5GHz/6-core/15MB/95W) FIO Processor Kit	662246-L21
HP DL380p Gen8 Intel® Xeon® E5-2630 (2.3GHz/6-core/15MB/95W) FIO Processor Kit	662248-L21
HP DL380p Gen8 Intel® Xeon® E5-2620 (2.0GHz/6-core/15MB/95W) FIO Processor Kit	662250-L21
HP DL380p Gen8 Intel® Xeon® E5-2630L (2.0GHz/6-core/15MB/60W) FIO Processor Kit	675092-L21

Performance Processors - E5-2600 series Processors

NOTE: All support up to 1600MHz DDR3 memory speeds

HP DL380p Gen8 Intel® Xeon® E5-2690 (2.9GHz/8-core/20MB/135W) FIO Processor Kit	662226-L21
HP DL380p Gen8 Intel® Xeon® E5-2680 (2.7GHz/8-core/20MB/130W) FIO Processor Kit	662228-L21
HP DL380p Gen8 Intel® Xeon® E5-2670 (2.6GHz/8-core/20MB/115W) FIO Processor Kit	662240-L21
HP DL380p Gen8 Intel® Xeon® E5-2667 (2.9GHz/6-core/15MB/130W) FIO Processor Kit	662214-L21
HP DL380p Gen8 Intel® Xeon® E5-2665 (2.4GHz/8-core/20MB/115W) FIO Processor Kit	666509-L21
HP DL380p Gen8 Intel® Xeon® E5-2660 (2.2GHz/8-core/20MB/95W) FIO Processor Kit	662242-L21
HP DL380p Gen8 Intel® Xeon® E5-2650 (2.0GHz/8-core/20MB/95W) FIO Processor Kit	662244-L21
HP DL380p Gen8 Intel® Xeon® E5-2650L (1.8GHz/8-core/20MB/70W) FIO Processor Kit	662256-L21
HP DL380p Gen8 Intel® Xeon® E5-2643 (3.3GHz/4-core/10MB/130W) FIO Processor Kit	662216-L21
HP DL380p Gen8 Intel® Xeon® E5-2637 (3.0GHz/2-core/5MB/80W) FIO Processor Kit	662224-L21

HP Memory

NOTE: HP memory from previous generation servers are not qualified or warranted with this HP ProLiant Server. HP SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen8. For additional information, please see the HP SmartMemory QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html

NOTE: LRDIMM, RDIMM, UDIMM, and HDIMMs are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen8 servers support LRDIMM, RDIMM and UDIMMs.

Registered DIMMs (RDIMMs)

NOTE: The following memory is supported by the E5-2600 v2 series Processors.

HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713981-B21
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Configuration Information - Factory Integrated Models

HP 4GB (1x4GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708637-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713983-B21
HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	731765-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708639-B21
HP 8GB (1x8GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	731761-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713985-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708641-B21

Registered DIMMs (RDIMMs)

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

HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647893-B21
HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647895-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647897-B21
HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647899-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	690802-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647901-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672631-B21

Unbuffered with ECC DIMMs (UDIMMs)

NOTE: The following memory is supported by the E5-2600 v2 series Processors.

HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713975-B21
HP 2GB (1x2GB) Single Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708631-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713977-B21
HP 4GB (1x4GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708633-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713979-B21
HP 8GB (1x8GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708635-B21

Unbuffered with ECC DIMMs (UDIMMs)

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

Configuration Information - Factory Integrated Models

HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669320-B21
HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647905-B21
HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669322-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647907-B21
HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669324-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647909-B21
Load Reduced DIMMs (LRDIMMs)	
NOTE: The following memory is supported by the E5-2600 v2 series Processors.	
HP 32GB (1x32GB) Quad Rank x4 PC3-14900L (DDR3-1866) Load Reduced CAS-13 Memory Kit	708643-B21
Load Reduced DIMMs (LRDIMMs)	
NOTE: The following memory is supported by the E5-2600 series Processors.	
HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit	647903-B21
HyperCloud DIMMs (HDIMMs) - E5-2600 series Processors	
NOTE: The following memory is supported by the E5-2600 series Processors.	
HP 32GB (1x32GB) Dual Rank x4 PC3-10600H (DDR3-1333) HyperCloud CAS-9 Memory Kit	715166-B21
NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator .	
NOTE: Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: www.hp.com/go/proliant-energy-efficient	
NOTE: PC3L is a low voltage memory	
HP Networking	
FlexibleLOM Adapters	
NOTE: The FlexibleLOM Adapters in this section are Factory Integrated Options (FIO) only.	
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: For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.	
HP Ethernet 1Gb 4-port 331FLR FIO Adapter	684208-B21
HP FlexFabric 10Gb 2-port 526FLR-SFP+ FIO Adapter	684219-B21
HP Ethernet 10Gb 2-port 530FLR-SFP+ FIO Adapter	684210-B21
HP FlexFabric 10Gb 2-port 533FLR-T FIO Adapter	700760-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ FIO Adapter	700752-B21
HP FlexFabric 10Gb 2-port 554FLR-SFP+ FIO Adapter	684213-B21
HP Ethernet 1Gb 4-port 366FLR FIO Adapter	684217-B21
HP Ethernet 10Gb 2-port 560FLR-SFP+ FIO Adapter	684218-B21

Configuration Information - Factory Integrated Models

HP Ethernet 10Gb 2-port 561FLR-T FIO Adapter	700700-B21
HP Ethernet 10Gb 2-port 570FLR-SFP+ FIO Adapter	717492-B21
HP Ethernet 10Gb 2-port 571FLR-SFP+ FIO Adapter	728993-B21

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: www.hp.com/go/ProLiantNICs.

HP InfiniBand

HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544FLR-QSFP Adapter	649282-B21
HP Infiniband QDR/Ethernet 10Gb 2-port 544FLR-QSFP Adapter	649283-B21

NOTE: 10Gb Ethernet requires the use of the QSFP to SFP+ adapter P/N 655874-B21.

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13078_na/13078_na.html

HP Power Supplies

NOTE: Mixing of power supplies in the same server is not supported. All power supplies must be of the same output and efficiency rating. If non-matched power supplies are inserted, you will get errors, and operation will fail.

NOTE: Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.

HP Common Slot Platinum Plus Power Supply Kits

NOTE: The following Power Supplies offer 94% Efficiency and lower total harmonic distortion to save on energy costs. Common Slot Platinum Plus Power Supplies support Power Discovery Services when used with the HP Intelligent PDUs.

HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit	656362-B21
HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit	656363-B21
HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit	656364-B21

HP Common Slot Gold Power Supplies

NOTE: The following Power Supplies offer 92% Efficiency.

HP 460W Common Slot Gold Hot Plug Power Supply Kit	503296-B21
HP 750W Common Slot Gold Hot Plug Power Supply Kit	512327-B21

HP Common Slot -48VDC Power Supplies

NOTE: The following Power Supplies offer 92% Efficiency.

HP 750W Common Slot -48VDC Hot Plug Power Supply Kit	636673-B21
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NOTE: The HP 750W Common Slot -48VDC power supply does not ship with a power cable. It has been designed with a terminal block connection allowing for custom design of power cords by the user.

HP Common Slot 380VDC Power Supplies

NOTE: 94% efficiency.

HP 1200W Common Slot 380VDC Hot Plug Power Supply Kit	684539-B21
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NOTE: The 1200W Common Slot 380VDC Hot Plug Power Supply Kit does not include a power cord.

HP Common Slot 277VAC Power Supplies

NOTE: 94% efficiency.

HP 500W Common Slot 277VAC Hot Plug Power Supply Kit	717362-B21
HP 750W Common Slot 277VAC Hot Plug Power Supply Kit	717364-B21

Configuration Information - Factory Integrated Models

<p>HP 1200W Common Slot 277VAC Hot Plug Power Supply Kit</p> <p>NOTE: The 1200W Common Slot 277VAC Hot Plug Power Supply Kit does not include a power cord.</p> <p>HP Common Slot Titanium Power Supply Kits</p> <p>NOTE: 96% efficiency with support for HP Power Discovery Services.</p>	<p>717359-B21</p>
<p>HP 750W Common Slot Titanium Hot Plug Power Supply Kit</p> <p>NOTE: Option Kits for AC power supplies include the power supply and one PDU IEC cable.</p> <p>NOTE: HP ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For a full list of optional HP power cords please go to www.hp.com/products/powercords</p> <p>NOTE: Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html</p>	<p>697581-B21</p>

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

<p>HP Graphic Options</p>	<p>NVIDIA GRID K1 PCIe GPU FIO Adapter</p> <p>NOTE: The HP DL380p Gen8 Dbl Wide GPU Cage Kit (728543-B21) supports 1xK1 in the secondary position. This required the instillation of the second processor, E5-2600v2 only, the 1200W Power supply is also required (717359-B21)</p>	<p>730876-B21</p>
<p>HP Rack Kits</p>	<p>NOTE: Gen8 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 Gen8 server.</p> <p>NOTE: Rail kits are optional for DL380p Gen8 and are no longer included standard with the server. Customers have the option to purchase their server without a rail kit. The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails.</p> <p>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).</p> <p>Caution: HP 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.</p> <p>NOTE: See HP Rack Options in Additional Options section of this QuickSpecs for more rack kit choices.</p>	
	<p>HP 2U FIO Friction Rail Kit</p> <p>NOTE: Kit contains non-telescoping friction rails which do not allow for in-rack serviceability. The HP Gen8 Cable Management Arm is not available when using Friction Rails.</p>	<p>663476-B21</p>
<p>HP Insight Software</p>	<p>HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License</p>	<p>C6N36A</p>
<p>HP OneView</p>	<p>HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic</p> <p>HP OneView incl 3yr 24x7 Supp Bundle 1 Svr E-LTU</p>	<p>E5Y43A</p> <p>E5Y43AAE</p>

Configuration Information - Factory Integrated Models

Step 4: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Core Options and Additional Options" section below.

Core Options

NOTE: Some options may not be integrated at the factory. Contact your local sales representative for additional information.

HP Unique Options	HP DL380p/560 Gen8 3 Slot PCI-E Riser Kit	653206-B21
	HP DL380p/560 Gen8 2 Slot 2x16 PCI-E Riser Kit	653208-B21
	HP DL380p Gen8 Double Wide Riser Cage Kit	662885-B21
	NOTE: Kit contains a power cable for the nVidia Q6000 double wide graphics card.	
	NOTE: this riser does not support card greater than 9.5", and supports only one single or one double wide card.	
	NOTE: The double wide riser cage kit is not supported in the 8LFF, 12LFF and 25SFF Configure-to-order Servers.	
	HP DL380p Gen8 Double Wide Graphic Processing Unit Drive Cage Kit	728543-B21
	NOTE: Kit is required to support cards greater than 9.5", in the secondary position only.	
	NOTE: Two 1200W Power supply kits and 2 processors are required for this riser	
	NOTE: This riser supports two single wide, or one double wide CPU option in the secondary riser position	
	NOTE: The double wide riser cage kit is not supported in the 8LFF, 12LFF and 25SFF Configuration Servers.	
	HP DL380p Gen8 Double Wide Slot1 Riser Cage Kit	752803-B21
	NOTE: Kit is required to support cards greater than 9.5", in the primary position only, and supports one double wide card and a single PCI card in this riser.	
	NOTE: This riser supports one single wide, or one double wide GPU option in the primary riser position	
	NOTE: The double wide riser cage kit is not supported in the 8LFF, 12LFF and 25SFF Configuration Servers	
	HP DL380p Gen8 NEBS Conversion Cage Kit	707865-B21
	NOTE: This conversion kit is only available for the 8SFF base server model.	
	NOTE: A NEBS conversion cage kit is required for each riser in an 8SFF base server for the server to meet NEBS and ETSI certification.	

HP Processors

Entry Processors - E5-2600 v2 series Processors

NOTE: All support up to 1333MHz memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2609v2 (2.5GHz/4-core/10MB/80W) Processor Kit	715222-B21
HP DL380p Gen8 Intel® Xeon® E5-2609v2 (2.5GHz/4-core/10MB/80W) Processor Kit/S-Buy	736610-S21
HP DL380p Gen8 Intel® Xeon® E5-2603v2 (1.8GHz/4-core/10MB/80W) Processor Kit	715223-B21

Base Processors - E5-2600 v2 series Processors

NOTE: All support up to 1600MHz DDR3 memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2640v2 (2.0GHz/8-core/20MB/95W) Processor Kit	715219-B21
HP DL380p Gen8 Intel® Xeon® E5-2630v2 (2.6GHz/6-core/15MB/80W) Processor Kit	715220-B21
HP DL380p Gen8 Intel® Xeon® E5-2620v2 (2.1GHz/6-core/15MB/80W) Processor Kit	715221-B21
HP DL380p Gen8 Intel® Xeon® E5-2620v2 (2.1GHz/6-core/15MB/80W) Processor Kit/S-Buy	736611-S21
HP DL380p Gen8 Intel® Xeon® E5-2650Lv2 (1.7GHz/10-core/25MB/70W) Processor Kit	715229-B21
HP DL380p Gen8 Intel® Xeon® E5-2630Lv2 (2.4GHz/6-core/15MB/60W) Processor Kit	715230-B21

Core Options

Performance Processors - E5-2600 v2 series Processors

NOTE: All support up to 1866MHz DDR3 memory speeds

HP DL380p Gen8 Intel® Xeon® E5-2697v2 (2.7GHz/12-core/30MB/130W) Processor Kit	715224-B21
HP DL380p Gen8 Intel® Xeon® E5-2695v2 (2.4GHz/12-core/30MB/115W) Processor Kit	715225-B21
HP DL380p Gen8 Intel® Xeon® E5-2690v2 (3.0GHz/10-core/25MB/130W) Processor Kit	715214-B21
HP DL380p Gen8 Intel® Xeon® E5-2680v2 (2.8GHz/10-core/25MB/115W) Processor Kit	715215-B21
HP DL380p Gen8 Intel® Xeon® E5-2670v2 (2.5GHz/10-core/25MB/115W) Processor Kit	715216-B21
HP DL380p Gen8 Intel® Xeon® E5-2667v2 (3.3GHz/8-core/25MB/130W) Processor Kit	715226-B21
HP DL380p Gen8 Intel® Xeon® E5-2660v2 (2.2GHz/10-core/25MB/95W) Processor Kit	715217-B21
HP DL380p Gen8 Intel® Xeon® E5-2660v2 (2.2GHz/10-core/25MB/95W) Processor Kit/S-Buy	736612-S21
HP DL380p Gen8 Intel® Xeon® E5-2650v2 (2.6GHz/8-core/20MB/95W) Processor Kit	715218-B21
HP DL380p Gen8 Intel® Xeon® E5-2643v2 (3.5GHz/6-core/25MB/130W) Processor Kit	715227-B21
HP DL380p Gen8 Intel® Xeon® E5-2637v2 (3.5GHz/4-core/15MB/130W) Processor Kit	715228-B21

Entry Processors - E5-2600 series Processors

NOTE: All support up to 1066MHz memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2609 (2.40GHz/4-core/10MB/80W) Processor Kit	662252-B21
HP DL380p Gen8 Intel® Xeon® E5-2603 (1.80GHz/4-core/10MB/80W) Processor Kit	662254-B21

Base Processors - E5-2600 series Processors

NOTE: All support up to 1333MHz DDR3 memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2640 (2.5GHz/6-core/15MB/95W) Processor Kit	662246-B21
HP DL380p Gen8 Intel® Xeon® E5-2630 (2.3GHz/6-core/15MB/95W) Processor Kit	662248-B21
HP DL380p Gen8 Intel® Xeon® E5-2620 (2.0GHz/6-core/15MB/95W) Processor Kit	662250-B21
HP DL380p Gen8 Intel® Xeon® E5-2630L (2.0GHz/6-core/15MB/60W) Processor Kit	675092-B21

Performance Processors - E5-2600 series Processors

NOTE: All support up to 1600MHz DDR3 memory speeds.

HP DL380p Gen8 Intel® Xeon® E5-2690 (2.9GHz/8-core/20MB/135W) Processor Kit	662226-B21
HP DL380p Gen8 Intel® Xeon® E5-2680 (2.7GHz/8-core/20MB/130W) Processor Kit	662228-B21
HP DL380p Gen8 Intel® Xeon® E5-2670 (2.6GHz/8-core/20MB/115W) Processor Kit	662240-B21
HP DL380p Gen8 Intel® Xeon® E5-2667 (2.9GHz/6-core/15MB/130W) Processor Kit	662214-B21
HP DL380p Gen8 Intel® Xeon® E5-2665 (2.4GHz/8-core/20MB/115W) Processor Kit	666509-B21
HP DL380p Gen8 Intel® Xeon® E5-2660 (2.2GHz/8-core/20MB/95W) Processor Kit	662242-B21
HP DL380p Gen8 Intel® Xeon® E5-2650 (2.0GHz/8-core/20MB/95W) Processor Kit	662244-B21
HP DL380p Gen8 Intel® Xeon® E5-2650L (1.8GHz/8-core/20MB/70W) Processor Kit	662256-B21
HP DL380p Gen8 Intel® Xeon® E5-2643 (3.3GHz/4-core/10MB/130W) Processor Kit	662216-B21
HP DL380p Gen8 Intel® Xeon® E5-2637 (3.0GHz/2-core/5MB/80W) Processor Kit	662224-B21

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.

Core Options

NOTE: DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

HP Memory

NOTE: HP memory from previous generation servers are not qualified or warranted with this HP ProLiant Server. HP SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen8. For additional information, please see the HP SmartMemory QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html

NOTE: LRDIMM, RDIMM, UDIMM, and HDIMMs are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen8 servers support LRDIMM, RDIMM and UDIMMs.

Registered DIMMs (RDIMMs)

NOTE: The following memory is supported by the E5-2600 v2 series Processors.

HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713981-B21
HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit/S-Buy	713981-S21
HP 4GB (1x4GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708637-B21
HP 4GB (1x4GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit/S-Buy	708637-S21
HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713983-B21
HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	731765-B21
HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit/S-Buy	731765-S21
HP 8GB (1x8GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708639-B21
HP 8GB (1x8GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	731761-B21
HP 8GB (1x8GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit/S-Buy	731761-S21
HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713985-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit/S-Buy	713985-S21
HP 16GB (1x16GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708641-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit/S-Buy	708641-S21

Registered DIMMs (RDIMMs)

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

HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647893-B21
HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit S-Buy	647893-S21
HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647895-B21

Core Options

HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit S-Buy	647895-S21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647897-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit S-Buy	647897-S21
HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647899-B21
HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit S-Buy	647899-S21
HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	690802-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647901-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit S-Buy	647901-S21
HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672631-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit S-Buy	672631-S21
Unbuffered with ECC DIMMs (UDIMMs)	
NOTE: The following memory is supported by the E5-2600 v2 series Processors.	
HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713975-B21
HP 2GB (1x2GB) Single Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708631-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713977-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit/S-Buy	713977-S21
HP 4GB (1x4GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708633-B21
HP 4GB (1x4GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit/S-Buy	708633-S21
HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713979-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit/S-Buy	713979-S21
HP 8GB (1x8GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708635-B21
Unbuffered with ECC DIMMs (UDIMMs)	
NOTE: The following memory is supported by the E5-2600 series Processors.	
HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669320-B21
HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647905-B21
HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit S-Buy	647905-S21
HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669322-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647907-B21

Core Options

HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit S-Buy	647907-S21
HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669324-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647909-B21
Load Reduced DIMMs (LRDIMMs)	
NOTE: The following memory is supported by the E5-2600 v2 series Processors.	
HP 32GB (1x32GB) Quad Rank x4 PC3-14900L (DDR3-1866) Load Reduced CAS-13 Memory Kit	708643-B21
Load Reduced DIMMs (LRDIMMs)	
NOTE: The following memory is supported by the E5-2600 series Processors.	
HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit	647903-B21
HyperCloud DIMMs (HDIMMs)	
NOTE: The following memory is supported by the E5-2600 series Processors.	
HP 32GB (1x32GB) Dual Rank x4 PC3-10600H (DDR3-1333) HyperCloud CAS-9 Memory Kit	715166-B21
NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator .	
NOTE: Depending on the memory configuration and processor model, 1600MHz and 1333MHz memory may operate at a lower speed. Please see the "Memory" section later in this document and the Online Memory Configuration Tool for details at: www.hp.com/go/ddr3memory-configurator .	
NOTE: For additional memory rules and guidelines, see the "Memory" section later in this document.	
NOTE: For more information on ProLiant Energy Efficient Features, see: www.hp.com/go/proliant-energy-efficient	
NOTE: PC3L is a low voltage memory.	

HP Optical Drives	HP 12.7mm Slim SATA DVD-ROM JackBlack Optical Drive	652232-B21
	HP 12.7mm Slim SATA DVD-RW JackBlack Optical Drive	652235-B21

HP Hard Drives

NOTE: The HP ProLiant DL380p Gen8 Smart Storage solutions are equipped with entirely re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HP Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".		
NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.		
NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.		
SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives		
	HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21

Core Options

HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive/S-Buy	718162-S21
HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy	652589-S21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy	652583-S21
HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy	652564-S21
HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy	652611-S21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy	652605-S21
SAS Hot Plug SmartDrive SFF (2.5-inch) Midline Drives	
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 SmartDrive LFF (3.5-inch) Enterprise Drives	
HP 600GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive	652620-B21
HP 450GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive	652615-B21
SAS Hot Plug SmartDrive LFF (3.5-inch) Midline Drives	
HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional information:	
http://h18000.www1.hp.com/products/quickspecs/12244_na/12244_na.html	
6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy	655710-S21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy	655708-S21
6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline (MDL) Drives	
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	693687-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy	657750-S21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy	658071-S21

Core Options

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13021_na/13021_na.html

12G SAS High Endurance Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives

HP 800GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive 741159-B21

NOTE: This drive supports Gen8 servers only.

HP 400GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive 741155-B21

NOTE: This drive supports Gen8 servers only.

HP 200GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive 741151-B21

NOTE: This drive supports Gen8 servers only.

12G SAS Mainstream Endurance Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives

HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 741146-B21

NOTE: This drive supports Gen8 servers only.

HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 741142-B21

NOTE: This drive supports Gen8 servers only.

HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 741138-B21

NOTE: This drive supports Gen8 servers only.

6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Boot Solid State Drives

HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive 717965-B21

HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive 734360-B21

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

HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive 718171-B21

HP 80GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive 734362-B21

6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives

HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 717973-B21

HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 717971-B21

HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive 739898-B21

HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 739898-B21

Core Options

HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739888-B21
6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718189-B21
HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	739900-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718183-B21
HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	739890-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718177-B21
6G SATA ME Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives	
HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691868-B21
HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691866-B21
HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691864-B21
HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691862-B21
6G SATA ME Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives	
HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691860-B21
HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691856-B21
HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691854-B21
HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691852-B21
6G SAS SLC Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives	
HP 400GB 6G SAS SLC SFF (2.5-inch) SC Enterprise Performance 3yr Warranty Solid State Drive	653082-B21
HP 200GB 6G SAS SLC SFF (2.5-inch) SC Enterprise Performance 3yr Warranty Solid State Drive	653078-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14038_na/14038_na.html	
Hard Drive Kits	
NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.	
NOTE: The part numbers for single HDD blanks below are provided should the customer require replacement HDD blanks for their server.	
HP SFF Gen8 Hard Drive Blank Kit	666987-B21

Core Options

HP LFF Gen8 Hard Drive Blank Kit	666986-B21
HP DL380/DL385 Gen8 8 Small Form Factor Hard Drive Backplane Cage Kit	662883-B21
NOTE: With upgrade of 8SFF Cage/Bkpln (662883-B21), there is no Optical Drive support.	
NOTE: All cables necessary for proper installation of the 8SFF Cage are included with this Kit.	
NOTE: With upgrade of 8SFF Cage/Bkpln (662883-B21), an additional storage controller is required. HP recommends the HP Smart Array P420/1GB FBWC 6Gb 2-ports Int SAS Controller (P/N 631670-B21).	
NOTE: The P822 controller has only two internal ports like the P420 controller and cannot be used to attach both 8SFF drive cages through a single controller. Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14341_na/14341_na.html	
NOTE: In Gen8, the 8+8SFF solution is designed as a performance configuration delivering maximum IOPS across the two drive cages. Customers seeking to have all drives in a single volume should consider the DL380p Gen8 25 SFF Configure-to-order Server (P/N 665554-B21) as a base.	
Hard Drive Cables	
HP DL38x/DL360 Gen8 Embedded SATA Cable Kit	664009-B21

HP Networking

Gigabit Ethernet adapters

HP NC112T PCI Express Gigabit Server Adapter	503746-B21
HP NC365T 4-port Ethernet Server Adapter	593722-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21

10 Gigabit Ethernet Adapters

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:

www.hp.com/go/ProLiantNICs.

HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP Ethernet 10Gb 2-port 561T Adapter	716591-B21
HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
HP Ethernet 10Gb 2-port 570SFP+ Adapter	718904-B21
HP Ethernet 10Gb 2-port 571SFP+ Adapter	728987-B21

FlexibleLOM Adapters

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

Core Options

cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs.

HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B21
HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HP FlexFabric 10Gb 2-port 526FLR-SFP+ Adapter	629138-B21
HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter	647581-B21
HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP FlexFabric 10Gb 2-port 554FLR-SFP+ Adapter	629142-B21
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
HP Ethernet 10Gb 2-port 570FLR-SFP+ Adapter	717491-B21
HP Ethernet 10Gb 2-port 571FLR-SFP+ Adapter	728992-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs

HP InfiniBand

QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21
HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA	592520-B21
HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544QSFP Adapter	649281-B21

NOTE: For the following two InfiniBand Adapters, only 1 FlexibleLOM can be added to the server, which is selected in Step 2 for the "Configuration Information - Factory Integrated Models" section. These two options are for upgrade or change from original configuration.

NOTE: FLR Indicates new HP FlexibleLOM Adapter series.

HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544FLR-QSFP Adapter	649282-B21
HP Infiniband QDR/Ethernet 10Gb 2-port 544FLR-QSFP Adapter	649283-B21
HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21

NOTE: 10Gb Ethernet requires the use of the QSFP to SFP+ adapter P/N 655874-B21.

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13078_na/13078_na.html

Core Options

HP I/O Expansion Options	HP DL380p/560 Gen8 3 Slot PCI-E Riser Kit	653206-B21
	HP DL380p/560 Gen8 2 Slot 2x16 PCI-E Riser Kit	653208-B21
	HP DL380p Gen8 Double Wide Riser Cage Kit	662885-B21
	NOTE: Kit contains a power cable for the nVidia Q6000 double wide graphics card.	
	NOTE: this riser does not support card greater than 9.5", and supports only one single or one double wide card.	
	NOTE: The double wide riser cage kit is not supported in the 8LFF, 12LFF and 25SFF Configure-to-order Servers.	
	HP DL380p Gen8 Double Wide Graphic Processing Unit Drive Cage Kit	728543-B21
	NOTE: Kit is required to support cards greater than 9.5", in the secondary position only.	
	NOTE: Two 1200W Power supply kits and 2 processors are required for this riser	
	NOTE: This riser supports two single wide, or one double wide CPU option in the secondary riser position	
	NOTE: The double wide riser cage kit is not supported in the 8LFF, 12LFF and 25SFF Configuration Servers.	
	HP DL380p Gen8 Double Wide Slot1 Riser Cage Kit	752803-B21
	NOTE: Kit is required to support cards greater than 9.5", in the primary position only, and supports one double wide card and a single PCI card in this riser.	
	NOTE: This riser supports one single wide, or one double wide GPU option in the primary riser position	
	NOTE: The double wide riser cage kit is not supported in the 8LFF, 12LFF and 25SFF Configuration Servers	
	HP DL380p Gen8 NEBS Conversion Cage Kit	707865-B21
	NOTE: This conversion kit is only available for the 8SFF base server model.	
	NOTE: A NEBS conversion cage kit is required for each riser in an 8SFF base server for the server to meet NEBS and ETSI certification.	

HP Power Supplies

NOTE: Mixing of power supplies in the same server is not supported. All power supplies must be of the same output and efficiency rating. If non-matched power supplies are inserted, you will get errors, and operation will fail.

NOTE: Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.

HP Common Slot Platinum Plus Power Supply Kits

NOTE: The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.*

HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit	656362-B21
HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit	656363-B21
HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit	656364-B21

HP Common Slot Gold Power Supplies

NOTE: The following Power Supplies offer 92% Efficiency.

HP 460W Common Slot Gold Hot Plug Power Supply Kit	503296-B21
HP 750W Common Slot Gold Hot Plug Power Supply Kit	512327-B21

HP Common Slot -48VDC Power Supplies

NOTE: The following Power Supplies offer 92% Efficiency.

Core Options

HP 750W Common Slot -48VDC Hot Plug Power Supply Kit	636673-B21
NOTE: The 750W Common Slot -48VDC Hot Plug Power Supply Kit does not include a power cord. It has been designed with a terminal block connection that allows for custom design of power cords by the end user. To select an alternative power cord for your server, please review the HP Common Slot Power Supplies QuickSpecs	
HP Common Slot 380VDC Power Supplies	
NOTE: 94% efficiency.	
HP 1200W Common Slot 380VDC Hot Plug Power Supply Kit	684539-B21
NOTE: The 1200W Common Slot 380VDC Hot Plug Power Supply Kit does not include a power cord.	
HP Common Slot 277VAC Power Supplies	
NOTE: 94% efficiency.	
HP 500W Common Slot 277VAC Hot Plug Power Supply Kit	717362-B21
HP 750W Common Slot 277VAC Hot Plug Power Supply Kit	717364-B21
HP 1200W Common Slot 277VAC Hot Plug Power Supply Kit	717359-B21
NOTE: The 1200W Common Slot 277VAC Hot Plug Power Supply Kit does not include a power cord.	
HP Common Slot Titanium Power Supply Kits	
NOTE: 96% efficiency with support for HP Power Discovery Services.	
HP 750W Common Slot Titanium Hot Plug Power Supply Kit	697581-B21
NOTE: Option Kits contain optional power supply, an IEC power cable and PDU IEC cables.	
NOTE: HP ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For a full list of optional HP power cords please go to: www.hp.com/products/powercords	
NOTE: Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html	

HP Computation and Graphics Accelerators

NOTE: Each DL380pGen8 server will accommodate up to three single-width or two double width NVIDIA Quadro PCIe cards for high-end Quadro graphics, up to two NVIDIA GRID PCIe cards for virtual desktop graphics or up to two NVIDIA Tesla PCIe cards for accelerated high performance computing.	
NOTE: For two double wide Graphics cards both double wide risers, and the 1200W PS are required.	
NOTE: The NVIDIA K1 (730876-B21) is available as a FIO only option	
HP 150W PCI-E Power Cable Kit	669777-B21
HP 225W PCIe Power Cable Kit	728539-B21
NVIDIA Quadro K2000 PCIe Graphics Adapter	753959-B21
NOTE: This is supported in the 728543-B21 riser in the secondary position (second processor required) or in the 752803-B21, primary position. Maximum 3 supported with both risers, 2 in the secondary position.	
NVIDIA Quadro K4000 PCI-E Graphics Adapter	730870-B21
NOTE: 1xK4000 is supported in the primary position with the riser 653206-B21, or in the secondary position with the riser 662885-B21 Requires the 150W cable (669777-B21)	

Core Options

NOTE: 2xK4000 are supported in the secondary position with the riser 653206-B21 or 728543-B21 Requires the 225W Y cable 6p x 6p (757156-B21)

NOTE: To support 3xK4000 both the primary riser (653206-B21) and the secondary riser is required (653208-B21, 662885-B21 or 728543-B21) - Would require both the 150W 9669777-B21) and the 225W Cable (757156-B21)

NVIDIA Quadro K5000 PCI-E Graphics Adapter

730872-B21

NOTE: The HP DL380p Gen8 Dbl Wide GPU Cage Kit (728543-B21) supports 1xK5000 in the secondary position. This is only supported with the 2600v2 processor series and requires the 1200W PS (717359-B21) to be selected

NVIDIA Quadro K6000 PCI-E Graphics Adapter

730874-B21

NOTE: This is supported with the Intel, E5-2600v2 processor series only.

NOTE: This is supported in the 728543-B21 riser in the secondary position (second processor required) or in the 752803-B21, primary position. Maximum 2 supported with both risers.

NVIDIA GRID K2 Reverse Air Flow Dual GPU PCIe Graphics Accelerator

753958-B21

NOTE: This is supported with the Intel, E5-2600v2 processor series only.

NOTE: This is supported in the 728543-B21 riser in the secondary position (second processor required) or in the 752803-B21, primary position. Maximum 2 supported with both risers.

NVIDIA Tesla K40C 12 GB Computational Accelerator

753960-B21

NOTE: This is supported with the Intel, E5-2600v2 processor series only.

NOTE: This is supported in the 728543-B21 riser in the secondary position (second processor required) or in the 752803-B21, primary position. Maximum 2 supported with both risers.

Additional Options

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

HP Insight Software

HP Insight Control

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

HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License/S-Buy C6N27S

HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License/S-Buy C6N28ASE

HP Insight Control Server Provisioning Media Kit BD883A

HP Insight Management Media Kit C6N31A

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

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

NOTE: Licenses ship without media. The HP 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 QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_na/12631_na.html

HP Integrated Lights-Out (iLO) Advanced for ProLiant

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

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

NOTE: For additional license options please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/14276_na/14276_na.html

NOTE: For more information, visit: <http://www.hp.com/go/ilo>

Converged Infrastructure Management Software

HP OneView

Management Software

HP OneView with iLO Advanced

HP OneView Media Kit Phys No Lic E5Y37A

HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic E5Y34A

HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU E5Y35AAE

HP OneView without iLO Advanced

HP OneView w/o iLO Adv incl 3yr 24x7 Supp Phys 1 Svr Lic E5Y38A

HP OneView w/o iLO Adv inc 3yr 24x7 Supp Flex Qty E-LTU E5Y39AAE

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/14621_na/14621_na.html

Additional Options

High Performance Clusters

HP Cluster Management Utility

HP Insight Cluster Management Utility 1yr 24x7 Flexible License

QL803B

HP Insight Cluster Management Utility 3yr 24x7 Flexible License

BD476A

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

HP Insight Cluster Management Utility Media

BD477A

NOTE: For additional license kits please see the QuickSpecs at:

http://h18004.www1.hp.com/products/quickspecs/12612_na/12612_na.html

HP I/O Accelerator Options

Second Generation Accelerators

HP 365GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers

673642-B21

HP 785GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers

673644-B21

HP 1205GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers

673646-B21

HP 2410GB Multi Level Cell G2 PCIe ioDrive2 Duo for ProLiant Servers

673648-B21

HP 3TB G2 FH/HL PCIe ioDrive2 IO Accelerator for ProLiant Servers

721458-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13587_na/13587_na.html

HP PCIe Workload Accelerator Options

Mainstream Endurance (ME) PCIe Workload Accelerators

HP 1.4TB HH/HL Mainstream Endurance (ME) PCIe Workload Accelerator

729307-B21

HP 700GB HH/HL Mainstream Endurance (ME) PCIe Workload Accelerator

729305-B21

High Endurance (HE) PCIe Workload Accelerators

HP 700GB HH/HL High Endurance (HE) PCIe Workload Accelerator

708090-B21

HP 350GB HH/HL High Endurance (HE) PCIe Workload Accelerator

708088-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/14528_na/14528_na.html

Additional Options

HP Security	<p>HP Trusted Platform Module Option 488069-B21</p> <p>NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: www.hp.com/go/TPM.</p> <p>NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.</p> <p>NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.</p>
	<p>HP 2U Security Bezel Kit 666988-B21</p>

HP Storage Controllers

SAS Controllers

Smart Array P222 Controller

NOTE: P222 requires (1) HP Mini SAS Straight to Straight 37in Cable Assembly (P/N 662897-B21)

HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller 631667-B21

Smart Array P420 Controller

NOTE: P420 requires (2) HP Mini SAS Straight to Straight 37in Cable Assemblies (P/N 662897-B21)

HP Smart Array P420/1GB FBWC 6Gb 2-ports Int SAS Controller 631670-B21

HP Smart Array P420/2GB FBWC 6Gb 2-ports Int SAS Controller 631671-B21

Smart Array P421 Controller

NOTE: If a P421 controller is selected for the 12LFF model, it cannot be populated in slot 1.

HP Smart Array P421/1GB FBWC 6Gb 2-ports Ext SAS Controller 631673-B21

HP Smart Array P421/2GB FBWC 6Gb 2-ports Ext SAS Controller 631674-B21

Smart Array P430 Controller

NOTE: If a P430 controller is selected for any model, it cannot be populated in slots 3 or 4.

HP Smart Array P430/2GB FBWC 6Gb 1-port Int SAS Controller 698529-B21

HP Smart Array P430/4GB FBWC 6Gb 1-port Int SAS Controller 698530-B21

Smart Array P431 Controller

HP Smart Array P431/2GB FBWC 6Gb 2-ports Ext SAS Controller 698531-B21

HP Smart Array P431/4GB FBWC 6Gb 2-ports Ext SAS Controller 698532-B21

Smart Array P822 Controller

NOTE: If a P822 controller is selected for the 12LFF or 25SFF model, it cannot be populated in slot 3.

Additional Options

HP Smart Array P822/2GB FBWC 2-ports Int/4-ports Ext SAS Controller	615418-B21
NOTE: The P822 controller has only two internal ports like the P420 controller and cannot be used to attach both 8SFF drive cages through a single controller. Please see the QuickSpecs link below for Technical Specifications and additional information.	
Smart Array P830 Controller	
HP Smart Array P830/4GB FBWC 6Gb 2-ports Int SAS Controller	698533-B21
Optional Upgrades	
HP 1GB P-series Smart Array Flash Backed Write Cache	631679-B21
HP 2GB P-series Smart Array Flash Backed Write Cache	631681-B21
HP 512MB P-series Smart Array Flash Backed Write Cache	661069-B21
HP DL38Xp Gen8 8 Large Form Factor (LFF) P430/830 Cable Kit	729270-B21
HP DL38Xp Gen8 12 Large Form Factor (LFF) P430/830 Cable Kit	729272-B21
HP DL38Xp Gen8 25 Small Form Factor (SFF) P430/830 Cable Kit	729274-B21
HP 6G SAS P430/830 Secondary Cable Kit	729276-B21
HP 6G SAS P430/830 Primary Cable Kit	729278-B21
HP Mini SAS/Straight to Straight Offset Bypass Cable Assembly	697611-B21
HP Mini SAS/Straight to Straight Short Bypass Cable Assembly	697691-B21
HP Mini SAS/Straight to Straight 25 SFF Bypass Cable Assembly	726974-B21
HP SmartCache No Media 24x7 Technical Support 1 Svr License	D7S26A
HP SmartCache No Media 24x7 Technical Support Flexible License	D7S27A
HP SmartCache No Media 24x7 Technical Support Electronic License	D7S27AAE
HP Secure Encryption No Media Flexible License per Drive	D8S84A
HP Secure Encryption No Media E-LTU per Drive	D8S85AAE
HP Cable Options	
HP Mini SAS Straight to Straight 37in Cable Assembly	662897-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional information:	
http://h18000.www1.hp.com/products/quickspecs/14227_na/14227_na.html (Smart Array P222 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14228_na/14228_na.html (Smart Array P420 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14229_na/14229_na.html (Smart Array P421 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14624_na/14624_na.html (Smart Array P430 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14625_na/14625_na.html (Smart Array P431 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14341_na/14341_na.html (Smart Array P822 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14744_na/14744_na.html (Smart Array P830 Controller)	
http://h18000.www1.hp.com/products/quickspecs/14532_na/14532_na.html (SmartCache)	
http://h18000.www1.hp.com/products/quickspecs/14623_na/14623_na.html (Secure Encryption)	

Additional Options

Host Bus Adapter

HP H220 Host Bus Adapter	650933-B21
HP H221 Host Bus Adapter	650931-B21
HP H221 PCIe 3.0 SAS Host Bus Adapter	729552-B21
HP H222 Host Bus Adapter	650926-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18004.www1.hp.com/products/quickspecs/14336_na/14336_na.html
(HBA 220)

http://h18004.www1.hp.com/products/quickspecs/14222_na/14222_na.html
(HBA 221)

http://h18004.www1.hp.com/products/quickspecs/14337_na/14337_na.html
(HBA 222)

SCSI HBA

HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter	412911-B21
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NOTE: Please see the following QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/12566_na/12566_na.html
(SC11Xe HBA)

HP Power Cords

NOTE: HP ProLiant servers ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs).

HP C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
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HP 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 HP tape backup products see: <http://www.hp.com/storage/SPOCK>

HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit	COL99A
HP StoreEver LTO-6 Ultrium 6650 SAS Internal Tape Drive	EH963A
HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
HP StoreEver LTO-6 Ultrium 6250 Internal Tape Drive	EH969A
HP StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HP StoreEver 1/8 G2 LTO-6 Ultrium 6250 FC Tape Autoloader	COH19A

HP Tape Storage Systems HP StoreEver MSL6480

HP StoreEver MSL6480 Scalable Base Module	QU625A
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NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/14604_na/14604_na.html

Additional Options

HP Disk Backup

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

HP RDX Removable Disk Backup System

HP RDX320 USB3.0 External Disk Backup System B7B63A

HP RDX500 USB3.0 Internal Disk Backup System B7B64A

HP RDX500 USB3.0 External Disk Backup System B7B66A

HP RDX1000 USB3.0 Internal Disk Backup System B7B67A

HP RDX1000 USB3.0 External Disk Backup System B7B69A

HP RDX Removable Disk Backup Systems USB

HP RDX1000 USB3.0 Gen8 DL Server Module B7B70A

NOTE: Please see the QuickSpecs for additional part numbers, Technical Specifications, and additional information:

http://h18000.www1.hp.com/products/quickspecs/13036_na/13036_na.html

HP Disk Storage Systems Disk Enclosures

HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle E7W32A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13404_na/13404_na.html

HP Storage Options

Storage Fibre Channel HBA

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>

Brocade Fibre Channel HBAs

HP 81B 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AP769B

HP 82B 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AP770B

Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AJ762B

HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ763B

HP SN1000E 16Gb 1-port PCIe Fibre Channel Host Bus Adapter QR558A

HP SN1000E 16Gb 2-port PCIe Fibre Channel Host Bus Adapter QR559A

HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter C8R38A

HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter C8R39A

QLogic Fibre Channel HBAs

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AK344A

HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ764A

HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter QW971A

HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter QW972A

Converged Network Adapter

Additional Options

HP CN1100E Dual Port Converged Network Adapter	BK835A
HP CN1000Q Dual Port Converged Network Adapter	BS668A
HP StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A

HP Uninterruptible Power Systems

HP Rack-mountable UPS

HP R1500 G3 Uninterruptible Power Supply (UPS)

HP R1.5kVA G3 1U NA Uninterruptible Power System AF469A

HP R/T3000 G2 2U L530 Low Voltage NA/JP Uninterruptible Power System AF466A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/14059_na/14059_na.html

HP R/T3000 G2 Uninterruptible Power System (UPS)

HP R/T3000 G2 2U L620 High Voltage NA/JP Uninterruptible Power System AF467A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/14058_na/14058_na.html

R5000 Uninterruptible Power System (UPS)

HP R5KVA 3U L630 High Voltage NA/JP Uninterruptible Power System AF460A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/14109_na/14109_na.html

R7000 Uninterruptible Power System (UPS)

HP R7KVA 4U 50A High Voltage NA/JP Uninterruptible Power System AF462A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/14110_na/14110_na.html

NOTE: For additional information on HP Uninterruptible Power Systems please go to:

www.hp.com/servers/rackups.

NOTE: For additional information on sizing your server, please reference:

<http://www.upssizer.com>.

NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords.

Additional Options

HP Basic Power Distribution Units (bPDU)	HP Basic Power Distribution Unit: 1U/0U Version	
	HP 1.9kVA 120 Volt 12 Outlet NA/JP Basic Power Distribution Unit	H5M54A
	HP 3.6kVA 200-240 Volt 12 Outlet WW Basic Power Distribution Unit	H5M56A
	HP Basic Power Distribution Unit: Half Height Version	
	HP 2.8kVA 120 Volt 18 Outlet NA/JP Basic Power Distribution Unit	H5M55A
	HP 3.6kVA 200-240 Volt 20 Outlet WW Basic Power Distribution Unit	H5M57A
	HP 4.9kVA 208 Volt 20 Outlet NA/JP Basic Power Distribution Unit	H5M58A
	HP 8.6kVA 208 Volt Three Phase 18 Outlet NA/JP Basic Power Distribution Unit	H5M61A
	HP Basic Power Distribution Unit: Mid Height Version	
	HP 4.9kVA 208 Volt 30 Outlet NA/JP Basic Power Distribution Unit	H5M59A
	HP 8.3kVA 208 Volt 36 Outlet NA/JP Basic Power Distribution Unit	H5M60A
	HP Hardwired 200-240 Volt 36 Outlet WW Basic Power Distribution Unit	H5M75A
	HP 5.7kVA 208 Volt Three Phase 27 Outlet NA/JP Dual Voltage Basic Power Distribution Unit	H5M63A
	HP 8.6kVA 208 Volt Three Phase 30 Outlet NA/JP Dual Voltage Basic Power Distribution Unit	H5M64A
	HP 8.6kVA 208 Volt Three Phase 30 Outlet NA/JP Basic Power Distribution Unit	H5M62A
	HP Basic Power Distribution Unit: Full Height Version	
	HP 11kVA 400 Volt Three Phase 42 Outlet NA Basic Power Distribution Unit	H5M67A
	HP Basic Power Distribution Unit: 480/277 Volt Version	
	HP 13.2kVA 480 Volt Three Phase 15 Outlet NA Basic Power Distribution Unit	H3X07A
	HP 19.9kVA 480 Volt Three Phase 30 Outlet NA Basic Power Distribution Unit	H3X08A
	HP 277 Volt options for H3X07A and H3X08A	
	HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14557_na/14557_na.html	
	NOTE: Additional HP Power Distribution Units are available. For a complete list of all HP PDUs and additional information please visit www.hp.com/go/rackandpower .	

Additional Options

HP Remote Monitoring Power Distribution Units (mPDU)	HP Remote Monitored Power Distribution Unit: 1U Version	
	HP 2.8kVA 120 Volt 12 Outlet NA/JP Monitored Power Distribution Unit	D9N43A
	HP 3.6kVA 200-240 Volt 12 Outlet WW Monitored Power Distribution Unit	D9N46A
	HP 4.9kVA 208 Volt 12 Outlet NA/JP Monitored Power Distribution Unit	D9N44A
	HP Remote Monitored Power Distribution Unit: Half Height Version	
	HP 3.6kVA 200-240 Volt 16 Outlet WW Monitored Power Distribution Unit	D9N45A
	HP Remote Monitored Power Distribution Unit: Mid Height Version	
	HP 4.9kVA 208 Volt 24 Outlet NA/JP Monitored Power Distribution Unit	D9N47A
	HP 8.6kVA 208 Volt Three Phase 21 Outlet NA/JP Monitored Power Distribution Unit	D9N51A
	HP 5.7kVA 208 Volt Three Phase 21 Outlet NA/JP Dual Voltage Monitored Power Distribution Unit	D9N52A
	HP 8.6kVA 208 Volt Three Phase 24 Outlet NA/JP Dual Voltage Monitored Power Distribution Unit	D9N53A
	HP Remote Monitored Power Distribution Unit: Full Height Version	
	HP 8.3kVA 208 Volt 33 Outlet NA Monitored Power Distribution Unit	D9N49A
	HP 14.4kVA 208 Volt Three Phase 24 Outlet NA Monitored Power Distribution Unit	D9N58A
	HP 16.6kVA 400 Volt Three Phase 33 Outlet NA Monitored Power Distribution Unit	D9N61A
	HP 17.3kVA 208 Volt Three Phase 27 Outlet NA/JP Monitored Power Distribution Unit	D9N54A
	HP 17.3kVA 208 Volt Three Phase 24 Outlet NA/JP Monitored Power Distribution Unit	D9N59A
	HP 16.6kVA 400 Volt Three Phase 24 Outlet NA Monitored Power Distribution Unit	D9N62A
	HP 19.9kVA 480 Volt Three Phase 30 Outlet NA Monitored Power Distribution Unit	D9N63A
	HP Environmental Sensor for Remote Monitored PDUs	
HP Environmental Sensor for Remote Monitored PDUs	E2D53A	
NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14669_na/14669_na.html		

HP Intelligent Power Distribution Units (iPDU)	iPDU Core Units	
	HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
	HP 8.3kVA 40A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF521A
	HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
	HP 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
	HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
	HP 17.3kVA 24A 415V Three Phase L22-30 NA Core Intelligent Power Distribution Unit	AF902A
	HP 17.3kVA 48A 208V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF535A
	HP 17.3kVA 24A 415V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF537A
	iPDU Kits with Standard Extension Bars	
	HP 4.9kVA 24A Single Phase NA/JP Intelligent Modular Power Distribution Kit	AF531A
	HP 8.6kVA 24A Three Phase NA/JP Intelligent Modular Power Distribution Kit	AF532A
	iPDU Extension Bars	

Additional Options

HP 5x13 Intelligent PDU Extension Bar G2 Kit	AF547A
HP 5x13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13650_na/13650_na.html

NOTE: Additional HP Power Distribution Units are available. For a complete list of all HP PDUs and additional information please visit: www.hp.com/go/rackandpower.

HP Rack Series

HP Intelligent Series Rack

HP 366 1075mm Pallet Intelligent Series Rack	BW895A
HP 636 1075mm Shock Intelligent Series Rack	BW896A
HP 642 1075mm Pallet Intelligent Series Rack	BW903A
HP 642 1075mm Shock Intelligent Series Rack	BW904A
HP 647 1075mm Pallet Intelligent Series Rack	BW911A
HP 647 1075mm Shock Intelligent Series Rack	BW912A

NOTE: Please see the QuickSpecs for Technical Specifications such as height, width, depth, weight, and color:

http://h18000.www1.hp.com/products/quickspecs/14223_na/14223_na.html

NOTE: For additional information regarding HP Rack Cabinets, please see the following URL: <http://www.hp.com/go/rackandpower>.

HP Rack Options

HP Location Discovery Services

HP 36U Location Discovery Kit	BW945A
HP 42U Location Discovery Kit	BW946A
HP 47U Location Discovery Kit	BW947A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/14429_na/14429_na.html

HP TFT7600 G2 KVM Console and Monitor (TFT7600 G2)

HP TFT7600 G2 KVM Console Rackmount Keyboard US Monitor	AZ870A
HP TFT7600 G2 KVM Console Rackmount Keyboard US TAA Monitor	AZ885A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13731_na/13731_na.html

HP Server Console Switches

HP Server Console 0x2x8 Port Analog Switch	AF616A
HP Server Console 0x2x16 Port Analog Switch	AF617A
HP TAA 0x2x16xKVM Server Console G2 Switch	AF626A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/11834_na/11834_na.html

HP Server Console Switch G2 with Virtual Media & CAC

HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
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Additional Options

HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
HP KVM CAT5 1-pack USB Interface Adapter	336047-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13475_na/13475_na.html

HP IP Console Switch G2 with Virtual Media & CAC	
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: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13474_na/13474_na.html

Rail Kits

NOTE: Gen8 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 Gen8 server.

NOTE: Rail kits are optional for DL380p Gen8 and are no longer included standard with the server. Customers have the option to purchase their server without a rail kit.

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

NOTE: The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails.

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

HP 2U Large Form Factor Ball Bearing Gen8 Rail Kit with CMA	663480-B21
HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA	663478-B21
HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit	720863-B21
HP 2U Large Form Factor Ball Bearing Gen8 Rail Kit	720864-B21
HP 2U Cable Management Arm for Ball Bearing Gen8 Rail Kit	720865-B21
HP 2U Small Form Factor Easy Install Rail Kit	733660-B21
HP 2U Large Form Factor Easy Install Rail Kit	733662-B21
HP 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
HP 2U Small Form Factor Easy Install Rail Kit with CMA	733668-B21
HP 2U Large Form Factor Easy Install Rail Kit with CMA	733670-B21

Additional Options

HP USB and SD options

HP Flash Media Kits for USB Drives

NOTE: HP qualified blank USB key for use with HP ProLiant servers that support the VMware virtualization environment and other HP value-add software. HP recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HP VMware Getting Started Guide for installation instructions.

HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit 737953-B21

HP Enterprise Mainstream Flash Media Kits for Memory Cards

HP 8GB SD Enterprise Mainstream Flash Media Kit 726113-B21

HP 32GB SD Enterprise Mainstream Flash Media Kit 700136-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13971_na/13971_na.html

HP USB Standard Keyboard DT528A ABA DT528A#ABA

HP Care Pack Services

Proactive Care

NOTE: Collaborative Support plus Proactive services delivered by the onshore, local language Advanced Solution Center (ASC), end-to-end case ownership from a Technical Solution Specialists and Technical Account Manager who remotely delivers firmware/software revision management, proactive scans and incident trend reports. Recommended for customers running a virtualized infrastructure and/or customers who desire an enhanced call support experience.

HP 3 year 4 hour 24x7 ProLiant DL38x(p) Proactive Care Service U2Z50E

HP 3 year 4 hour 24x7 with Defective Media Retention ProLiant DL38x(p) Proactive Care Service U2Z53E

HP 3 year 6 hour Call To Repair 24x7 ProLiant DL38x(p) Proactive Care Service U2Z56E

HP 3 year 6 hour Call To Repair 24x7 w/DefectiveMedia Retention ProLiant DL38x(p) Proactive Care SVC U2Z59E

HP 3 year 4 hour 24x7 ProLiant DL38x(p) with Insight Control Proactive Care Service U3N23E

HP 3 year 4hr 24x7 with Defective Media Retention DL38x(p) with Insight Control Proactive Care SVC U3N26E

HP 3 year 6 hour Call To Repair 24x7 ProLiant DL38x(p) with Insight Control Proactive Care Service U3N29E

HP 3yr 6hrCallToRepair 24x7w/Defective Media Retention DL38x(p) w/Insight Control Proactive Care SVC U3N32E

NOTE: For more information, customer/resellers can contact:

<http://www.hp.com/services/carepack>

Memory

HP SmartMemory

New HP SmartMemory now provides additional protection for your servers. With HP Authentication it can verify that you have true HP Qualified Memory in your HP ProLiant Gen8 server. With HP SmartMemory your new HP ProLiant server can take advantage of additional Gen8 enhancements in performance, durability and future manageability support through HP Active Health System

For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool:
www.hp.com/go/ddr3memory-configurator

Memory Subsystem Architecture

Each Intel® Xeon® E5-2600 or E5-2600 v2 family processor socket contains four memory channels that support three DIMMs each for a total of twelve (12) DIMMs per installed processor or a grand total of Twenty Four (24) DIMMs for the server. Up to 32GB capacity DIMMs are supported for 768GB of max memory (for Best Speed (1600MHz) run 2 DIMMs per channel or 16 DIMM slots x 16GB per DIMM = 256GB).

Memory population guidelines

DIMM configuration

NOTE: This information is only for Advanced EEC memory mode. See the user guide for other memory modes.

Key: Alpha - population order
 Numeric - DIMM slot ID for spare replacement

- Before installing DIMMs, review the population rules:
 - Do not install DIMMs if the corresponding processor is not installed.
 - When two processors are installed, balance the DIMMs across the two processors
 - DIMM slots that are white denote the first slot of a channel (Ch 1-A, Ch 2-B, Ch 3-C, Ch 4-D...).
 - Do not mix UDIMMs, RDIMMs, or LRDIMMs.
 - Do not install more than two UDIMMs per channel. UDIMMs should be installed in slots Ch 1-I, Ch 2-J, Ch 3-K, Ch 4-L.
- When two processors are installed, install DIMMs in dequential alphabetical order balanced between the two processors: P1-A, P2-A, P1-B, P2-B, P1-C, P2-C...
- For DIMM spare replacement, install the DIMMs per slot number as instructed by your system software.

For additional DIMM information, see the user guide at: hp.com > support & drivers > product support & troubleshooting > enter your product

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.
- RDIMMs operating at either 1.35V or 1.5V may be mixed in any order, but the system will power them at the higher voltage.
- Do not mix RDIMMs, LRDIMMs, and UDIMMs.
- LRDIMMs are supported up to 3 DIMMs per channel.
- Using the HP RBSU, 1.35V DIMMs can be changed to operate at 1.5V.
- 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.
- HP memory from previous generation servers is not qualified on the DL380p Gen8 Server. Certain HP SmartMemory features such as memory authentication and enhanced performance may not be supported.
- To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional

Memory

information, please see the HP SmartMemory QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html.

- For memory population rules and additional memory guidelines, please see the DL380p Gen8 user guide at <http://www.hp.com/support>.

Supported Memory Bandwidth for DL380p Gen8 with Intel® Xeon® E5-2600 v2 Series Processor Family															
DIMM Type ->	Register DIMM								Load Reduced (LRDIMMs)	Unbuffered DIMM					
DIMM Rank ->	Single Rank (1R)		Dual Rank (2R)	Dual Rank (2R)	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)	Quad Rank (4R)	Single Rank (1R)		Dual Rank (2R)			
DIMM Capacity ->	4GB	4GB	8GB	8GB	8GB	8GB	16GB	16GB	32GB	2GB	2GB	4GB	4GB	8GB	8GB
DIMM Native Speed (MT/s) ->	1600	1866	1600	1866	1600	1866	1600	1866	1866	1600	1866	1600	1866	1600	1866
Voltage	LV	Std	LV	Std	LV	Std	LV	Std	Std	LV	Std	LV	Std	LV	Std

SLOTS THAT CAN BE POPULATED

12 slot servers	12	12	12	12	12	12	12	12	12	12	12	12	12	12	1
16 slot servers	16	16	16	16	16	16	16	16	16	16	16	16	16	16	1
24 slot servers	24	24	24	24	24	24	24	24	24	16	16	16	16	16	1

MAXIMUM CAPACITY (GB)*

12 slot servers	48	48	96	96	96	96	192	192	384	24	24	48	48	96	96
16 slot servers	64	64	128	128	128	128	256	256	512	32	32	64	64	128	128
24 slot servers	96	96	192	192	192	192	384	384	768	32	32	64	64	128	128

POPULATED DIMM SPEED (MT/s)

1 DIMM/Channel	1600	1866	1600	1866	1600	1866	1600	1866	1866	1600	1866	1600	1866	1600	1866
2 DIMM/Channel	1600	1866	1600	1866	1600	1866	1600	1866	1866	1600	1866	1600	1866	1600	1866
3 DIMM/Channel	800	1066	800	1066	800	1066	800	1066	1333	n/a	n/a	n/a	n/a	n/a	n/a

Memory

Memory speed is a function of the processor QPI bus speed.

* Maximum capacity will vary based on individual server platform qualification schedule

For HP SmartMemory, UDIMM is supported at 2DPC@DDR3-1866. Third party memory may only support up to 2DPC@DDR3-1333 or 16

All configurations on 64 slot server run at DDR3-1066.

Memory Speed by E5-2600 v2 Processor Model

Processor Models	Supported Memory Speeds
E5-2697 v2, E5-2695 v2, E5-2690 v2, E5-2680 v2, E5-2670 v2, E5-2667 v2, E5-2660 v2, E5-2650 v2, E5-2643 v2, E5-2637 v2	1866/1600MHz
E5-2640 v2, E5-2630 v2, E5-2620 v2, E5-2650L v2, E5-2630L v2	1600MHz
E5-2609 v2, E5-2603 v2	1333MHz

Supported Memory Bandwidth for DL380p Gen8 with Intel® Xeon® E5-2600 Series Processor Family

DIMM Type	Registered DIMMS (RDIMMs)							Load Reduced (LRDIMMs)	Unbuffered with ECC DIMMs (UDIMMs)						HyperCI Memo (HDIMM)
	Single Rank (1R)			Dual Rank (2R)					Quad Rank (4R)	Single Rank (1R)		Dual Rank (2R)			
DIMM Capacity	4GB	4GB	8GB	8GB	8GB	16GB	16GB	32GB	2GB	2GB	4GB	4GB	8GB	8GB	16GB
DIMM Native Speed (MHz)	1333	1600	1600	1333	1600	1333	1600	1333	1333	1600	1333	1600	1333	1600	1333
Voltage	LV	Std	Std	LV	Std	LV	Std	LV	LV	Std	LV	Std	LV	Std	Std

SLOTS THAT CAN BE POPULATED

24 slot servers	24	24	24	24	24	24	24	24	16	16	16	16	16	16	24
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MAXIMUM CAPACITY (GB)*

	96	96	192	192	192	384	384	768	32	32	64	64	128	128	384
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POPULATED DIMM SPEED (MHz)

1 DIMM Per Channel	1333	1600	1600	1333	1600	1333	1600	1333***	1333	1600	1333	1600	1333	1600	n/a
2 DIMM Per Channel	1333	1600	1600	1333	1600	1333	1600	1333***	1333***	1600	1333***	1600	1333***	1600	n/a
3 DIMM Per Channel	1066**	1333##	1333##	1066**	1333##	1066**	1333##	1066	n/a	n/a	n/a	n/a	n/a	n/a	1333#

NOTE: Memory speed is a function of the processor QPI bus speed. To realize the performance memory capabilities listed above HP SmartMemory is required.

* Maximum capacity will vary based on individual server platform qualification schedule

** For HP SmartMemory RDIMM supports up to 3DPC@1066 at 1.35V. Third party memory may only support up to 3DPC@1066 at 1.5V.

*** LRDIMMs enable 3 DIMMs per channel. HP SmartMemory will support up to 3DPC@1066 at 1.35V. Third party memory may only support 3DPC @1066 at 1.5V.

**** For HP SmartMemory, UDIMM is supported at 2DPC@1333 at 1.35V. Third party memory may only support up to 2DPC@1066 at 1.5

Memory

RBSU setting required

Memory Speed by E5-2600 Processor Model

Processor Models	Supported Memory Speeds
E5-2690 E5-2680, E5-2670, E5-2667, E5-2665, E5-2660, E5-2650, E5-2650L, E5-2643, E5-2637	1600/1333/1066MHz
E5-2640, E5-2630, E5-2630L, E5-2620	1333/1066MHz
E5-2609, E5-2603	1066MHz

DIMM slot and configuration diagram

Population order; start with "A" first, "B" second, "C" third, etc.

When one processor is installed, install DIMMs in sequential alphabetic order: A, B, C, D, E, F ...

When two processors are installed, install DIMMs in sequential alphabetic order: CPU1-A, CPU2-A,CPU1-B,CPU2-B,CPU1-C, CP2-C

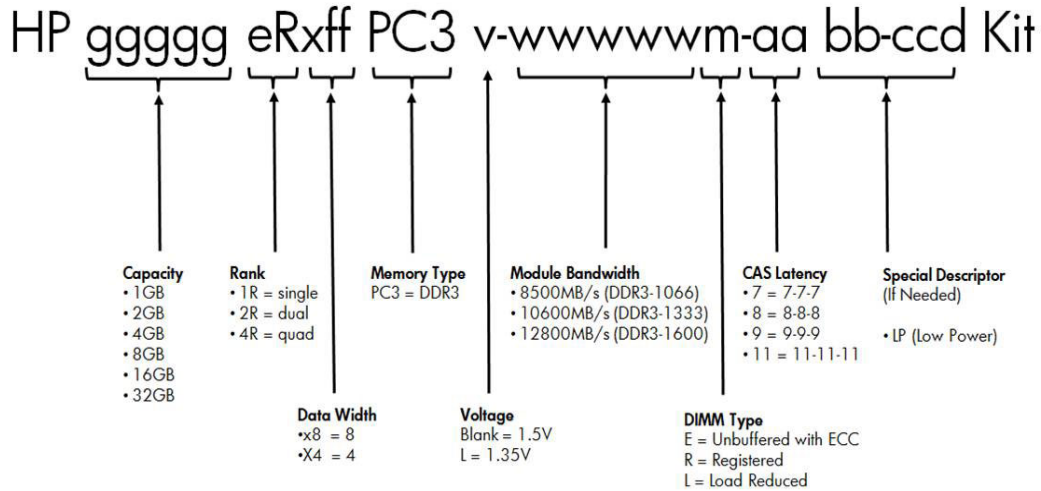
24 DIMM SLOTS (12 per CPU node)					
	slot #	population order	slot #	population order	
Chnl 3	1	C	1	C	Chnl 3
	2	G	2	G	
	3	K	3	K	
Chnl 4	4	D	4	D	Chnl 4
	5	H	5	H	
	6	L	6	L	
CPU1			CPU2		
Chnl 2	7	J	7	J	Chnl 2
	8	F	8	F	
	9	B	9	B	
Chnl 1	10	I	10	I	Chnl 1
	11	E	11	E	
	12	A	12	A	

NOTE: Capacity references are rounded to the common Gigabyte values.

- 1GB = 1024MB
- 2GB = 2048MB
- 4GB = 4096MB
- 8GB = 8192MB
- 16GB = 16384MB
- 32GB = 32768MB

DDR3 memory options part number decoder

Memory



Following are memory options available from HP:

HP Memory

NOTE: HP memory from previous generation servers are not qualified or warranted with this HP ProLiant Server. HP SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen8. For additional information, please see the HP SmartMemory QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html

NOTE: LRDIMM, RDIMM and UDIMMs are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen8 servers support RDIMM, UDIMM and LRDIMM.

Registered DIMMs (RDIMMs)

NOTE: The following memory is supported by the E5-2600 v2 series Processors.

HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713981-B21
HP 4GB (1x4GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708637-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713983-B21
HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	731765-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708639-B21
HP 8GB (1x8GB) Single Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	731761-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713985-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-14900R (DDR3-1866) Registered CAS-13 Memory Kit	708641-B21

Registered DIMMs (RDIMMs)

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

HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647893-B21
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Memory

HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647895-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647897-B21
HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647899-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	690802-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647901-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672631-B21
Unbuffered with ECC DIMMs (UDIMMs)	
NOTE: The following memory is supported by the E5-2600 v2 series Processors.	
HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713975-B21
HP 2GB (1x2GB) Single Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708631-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713977-B21
HP 4GB (1x4GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708633-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713979-B21
HP 8GB (1x8GB) Dual Rank x8 PC3-14900E (DDR3-1866) Unbuffered CAS-13 Memory Kit	708635-B21
Unbuffered with ECC DIMMs (UDIMMs)	
NOTE: The following memory is supported by the E5-2600 series Processors.	
HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669320-B21
HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647905-B21
HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669322-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647907-B21
HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669324-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit	647909-B21
Load Reduced DIMMs (LRDIMMs)	
NOTE: The following memory is supported by the E5-2600 v2 series Processors.	
HP 32GB (1x32GB) Quad Rank x4 PC3-14900L (DDR3-1866) Load Reduced CAS-13 Memory Kit	708643-B21
Load Reduced DIMMs (LRDIMMs)	
NOTE: The following memory is supported by the E5-2600 series Processors.	

Memory

HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit 647903-B21

HyperCloud DIMMs (HDIMMs)

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

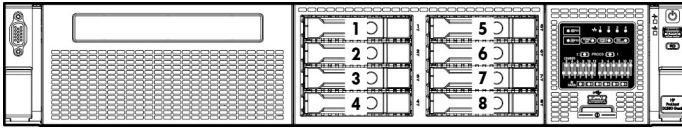
HP 32GB (1x32GB) Dual Rank x4 PC3-10600H (DDR3-1333) HyperCloud CAS-9 Memory Kit 715166-B21

NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator.

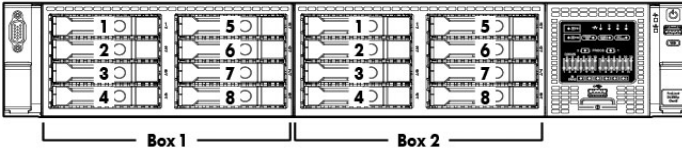
NOTE: For more information on ProLiant Energy Efficient Features, see: www.hp.com/go/proliant-energy-efficient

NOTE: PC3L is a low voltage memory.

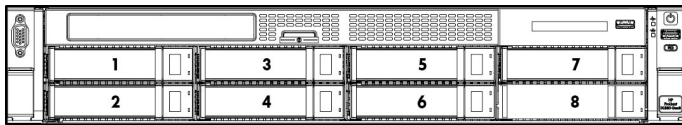
Storage



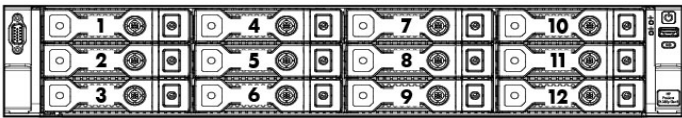
1-8 Eight SFF SAS hot plug drive bays



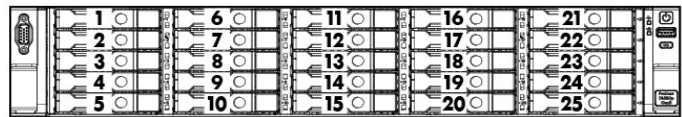
1-16 Sixteen SFF SAS hot plug drive bays
NOTE: This configuration does not support optical drive.
NOTE: This configuration requires the addition of a second controller for the second drive cage.



1-8 Eight LFF SAS hot plug drive bays.



1-12 Twelve LFF SAS hot plug drive bays.
NOTE: This configuration does not support optical drive.
NOTE: This configuration has a built-in expander that is driven by the embedded controller.



1-25 Twenty-five SFF SAS hot plug drive bays.
NOTE: This configuration does not support optical drive.
NOTE: This configuration has a built-in expander that is driven by the embedded controller.

Maximum Storage Capacity - (with D2700, SAS/SATA HDD)

Internal	30TB (25 SFF HDDs x 1.2TB SAS SFF)
Internal	48TB (12 LFF HDDs x 4TB SATA LFF)
External	240TB (200 x 1.2TB SAS SFF)
Total	270TB (D2700 + DL380p Gen8 25 SFF)
	288TB (D2700 + DL380p Gen8 12 LFF)

Technical Specifications

System Unit	Dimensions (H x W x D) (with bezel)	SFF Drives: 3.44 x 17.54 x 27.50 in (8.73 x 44.55 x 69.85 cm) LFF Drives: 3.44 x 17.54 x 29.50 in (8.73 x 44.55 x 74.93 cm)
	Weight (approximate)	Maximum 61.00 lb (27.66 kg) (all LFF hard drives, power supply, and processor installed) Minimum 41.0 lb (18.59 kg) (one SFF hard drive, power supply, and processor installed, ODD not installed)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
	Rated Input Current	For 1200 W Power Supply: 10 A (at 100 VAC), 4.9 A (at 200 VAC) For 750 W Power Supply: 8.9 A (at 100 VAC), 4.3 A (at 200 VAC) For 460 W Power Supply: 5.5 A (at 100 VAC), 2.6 A (at 200 VAC)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	For 1200 W Power Supply: 930 W (at 100 VAC), 1348 W (at 200 VAC) For 750 W Power Supply: 857 W (at 100 VAC), 824 W (at 200 VAC) For 460 W Power Supply: 526 W (at 100 VAC), 505 W (at 200 VAC)
	BTU Rating	Maximum For 1200 W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC) For 750 W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460 W Power Supply: 1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC)

Technical Specifications

		For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
	Maximum Peak Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
System Inlet Temperature	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
Relative Humidity (non-condensing)	Operating	10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
	Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise	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). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	

	Entry	Base	Performance
Idle			
LWAd	4.1 B	4.1 B	4.1 B
LpAm	25 dBA	25 dBA	25 dBA

Technical Specifications

		Operating			
		LWAd	4.3 B	4.7 B	5.0 B
		LpAm	27 dBA	31 dBA	35 dBA
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.

HP Smart Array P420i Controller	Dimensions	Embedded	
	Disk Drive and Enclosure Interface - Transfer Rate	6Gb/s SAS (Serial Attached SCSI) 6Gb/s SATA (Serial ATA)	
	SAS Connectors	2 internal 4X connectors	
	Cache Memory Speed	512MB FBWC - DDR3-1333MHz with 40-bit wide bus, 1GB or 2GB FBWC DDR3-1333MHz with 72-bit wide bus	
	Server Interface	x8 PCIe 3.0 provides 8GB/s maximum bandwidth	
	SAS Speed	(8) 6Gb/s SAS links provide 4.8GB/s maximum bandwidth	
	Cache Memory	Zero Memory RAID has no cache memory 40-bit 512MB ECC protected flash back write cache 72-bit 1GB FBWC or 72-bit 2GB FBWC	
	Logical Drives Supported	Zero Memory, Up to 2 logical volumes (8SFF or 4LFF physical drives) Up to 64 logical drives with cache	
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space	
	RAID Support	RAID 6, 60 (Advanced Data Guarding)	
		RAID 5, 50 (Distributed Data Guarding)	
		NOTE: A minimum of 512 MB cache is required to enable RAID 5, 50, 6, 60	
NOTE: HP Smart Array Advanced Pack (SAAP 2.0) is no longer required to enable RAID 6 & 60 (Advanced Data Guarding). However, controller must be in firmware version 4.68 (or later).			
	RAID 10 (Striping & Mirroring)		
	RAID 0 (Striping), RAID 1 (Mirroring)		

Technical Specifications

HP Ethernet 1Gb 4-port 331FLR Adapter	HP Flexible Network Technology	HP Flexible Network Technology consists of replaceable network solutions to meet customer requirements now and in the future.	
	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 802.3ad 1000Base-TX IEEE 802.1q 100Base-TX	
	Data Transfer Method	PCI Express, four lanes (x4)	
	Chipset	BCM5719	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half and Full-Duplex)	2000Mb/s
	Connector	Four RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)
		1000BaseTX	Category 5 or higher UTP; up to 328 ft (100 m)

HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter	Network Interface	SFP+ for Direct Attach Cable copper or fiber	
	Compatibility	IEEE 802.3 SFP+ (SX, SR & LR) IEEE 802.3ae IEEE 802.1ax IEEE 802.1q IEEE 802.3x IEEE 802.1au IEEE 802.3ap IEEE 802.1Qaz IEEE 802.1Qau IEEE 802.1Qbb	
	Data Transfer Method	PCI Express, eight lanes (x8)	
	Chipset	BCM57810S	
	Network Transfer Rate	10Base-T (Half-Duplex)	10Gbps
		10Base-T (Full-Duplex)	1Gbps
	Connector	Two SFP+	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)

Technical Specifications

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

HP FlexFabric 10Gb 2-port Network Interface 533FLR-T Adapter

Compatibility

10GBASE-T connectivity supporting up to 100 meters with CAT 6A cabling

IEEE 802.3
IEEE 802.3x
IEEE 802.2x
IEEE 802.3ad
IEEE 802.1Qaz
IEEE 802.1Qau
IEEE 802.1Qbb
IEEE 802.1Qbg
IEEE 802.1ax

Data Transfer Method

PCIe 2.0, eight lanes (x8)

Chipset

BCM57810S

Data Rate

Two ports, each at 20 Gbps full duplex; 40 Gbps aggregate full duplex theoretical bandwidth.

Connector

Two RJ-45

Cable Support

Maximum distances for CAT6 cable are 30 meters (98 feet).
Maximum distances for CAT6a are 100 meters (328 feet).

Environment-friendly Products and Approach

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP 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 HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

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

Technical Specifications

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