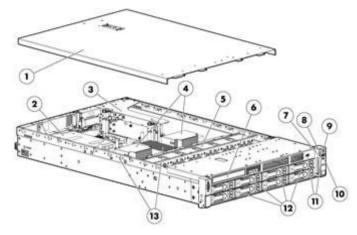
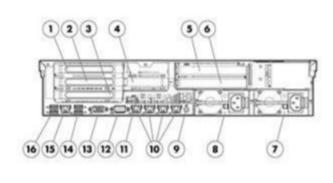
### Overview

The HP ProLiant DL380e 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 DL380e Gen8 offers the perfect solution for the dynamic compute and storage requirements of today's demanding datacenters.





#### **Front View:**

- 1. Quick removal access panel
- Redundant Hot Plug Power Supplies(upgradeable option)
- 3. Removable Riser Cage assembly
- 4. Up to 2 Intel E5-2400 Series Processors
- 5. Removable Hot Plug Fans modules, (optional, full N+1 redundancy)
- 6. Optical Disk Drive Bay
- 7. Health LED
- 8. Network activity LED
- 9. Power On /Standby button and system power LED button
- 10. Unit ID LED
- 11. USB connectors
- 12. Hard Drive bays
- 13. 12 DIMM slots: DDR3 Registered(RDIMM), Load Reduced (LRDIMM) or Unbuffered(UDIMM) memory

### **Rear View:**

- 1. Slot1 PCle3 x8 (4, 1)
- 2. Slot2 PCle3 x16 (8, 4, 1)
- 3. Only for riser board without SAS support: Slot3 PCle3 x8 (8, 4, 1)
- 4. Slot4 PCle2 x8 (4, 1)
- 5. Slot5 PCle3 x16 (16, 8, 4, 1) (optional)
- 6. Slot6 PCle3 x16 (8, 4, 1) (optional)
- 7. Power Supply bay1 (Primary Power Supply)
- 8. Power Supply bay 2 (Shown populated: optional)
- 9. Unit ID LED/Button
- 10. HP Ethernet 1Gb 4-port 366i Adapter (4 x 1GbE)
- 11. Service tool
- 12. Serial connector
- 13. Video connector
- 14. USB connectors (2)
- 15. iLO connector
- 16. USB connectors (2)

# What's New

New HDD offering



### 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

#### Entry Processors - E5-2400v2 series Processors

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

Intel® Xeon® E5-2407v2(2.4GHz/4-core/10MB/6.4GT/s QPI/80W, DDR3-1333) Intel® Xeon® E5-2403v2(1.8GHz/4-core/10MB/6.4GTs QPI/80W, DDR3-1333)

#### Base Processors - E5-2400v2 series Processors

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

Intel® Xeon® E5-2430v2(2.5GHz/6-core/15MB/7.2GT/s QPI/80W, DDR3-1600,HT, Turbo2-3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2430Lv2(2.4GHz/6-core/15MB/7.2GT/s QPI/60W, DDR3-1600,HT, Turbo2-3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2420v2(2.2GHz/6-core/15MB/7.2GT/s QPI/80W, DDR3-1600,HT, Turbo2-3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2440v2(1.9GHz/8-core/20MB/7.2GT/s QPI/95W, DDR3-1600,HT, Turbo2-3/3/4/4/5/5) Turbo

#### Performance Processors - E5-2400v2 series Processors

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

Intel® Xeon® E5-2450v2(2.5GHz/8-core/20MB/8.0GT/s QPI/95W, DDR3-1600,HT, Turbo2-5/5/6/6/7/7/8/8) Turbo +

Intel® Xeon® E5-2470v2(2.4GHz/10-core/25MB/8.0GT/s QPI/95W, DDR3-1600,HT, Turbo2-5/5/6/6/7/7/8/8) Turbo+

Intel® Xeon® E5-2450Lv2(1.7GHz/10-core/25MB/8.0GT/s QPI/60W, DDR3-1600, HT, Turbo2-5/5/6/6/7/7/8/8) Turbo+

### **Entry Processors - E5-2400 series Processors**

NOTE: All support up to 1066MHz DDR3 memory speeds.

Intel® Xeon® E5-2407(2.2GHz/4 -core/10MB/6.4GT-s QPI/80W, DDR3-1066)

Intel® Xeon® E5-2403(1.8GHz/4 -core/10MB/6.4GT-s QPI/80W, DDR3-1066)

#### Base Processors - E5-2400 series Processors

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

Intel® Xeon® E5-2440(2.4GHz/6 -core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2-3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2430(2.2GHz/6 -core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT,Turbo2-3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2430L(2.0GHz/6 -core/15MB/7.2GT-s QPI/60W, DDR3-1333,HT, Turbo2-3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2420(1.9GHz/6 -core/15MB/7.2GT/s QPI/95W, DDR3-1333, HT, Turbo2-3/3/4/4/5/5) Turbo

#### Performance Processors - E5-2400 series Processors

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

Intel® Xeon® E5-2470(2.3GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1600,HT, Turbo2-5/5/6/6/7/7/8/8) Turbo+

Intel® Xeon® E5-2450(2.1GHz/8 -core/20MB/8.0GT-s QPI/95W, DDR3-1600,HT, Turbo2-5/5/6/6/7/7/8/8) Turbo+

Intel® Xeon® E5-2450L(1.8GHz/8 -core/20MB/8.0GT-s QPI/70W, DDR3-1600,HT, Turbo2-2/2/3/3/4/4/5/5) Turbo+

**NOTE**: HT indicates that the processor model supports Intel® Hyper-Threading Technology. **NOTE**: Turbo2 indicates the maximum potential frequency increment when using Intel® Turbo



### Standard Features

Boost Technology, with 8, 7, 6, 5, 4, 3, 2 and 1 cores 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 E5-2400 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2400x v#, 2 = number of CPUs in a Node, 4 is socket/segment designation, <math>00 = Processor SKU, x = L for low power SKUs and v# (not yet

designated) = version number.

# **Cache Memory**

One of the following depending on model

25MB (1x25MB) Level 3 cache **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.

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

#### Chipset

One of the following depending on model

Intel® C600 Series Chipset

Intel® E5-2400 Processor Family Intel® E5-2400v2 Processor Family

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

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

### Upgradeability

One of the following depending on model

Upgradeable to two processors (20 cores)

**NOTE:** Processor upgrade available from Intel® Xeon® Processors E5-2400 to E5-2400 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 E5-2400 to an Intel Xeon Processor E5-2400v2, regarding critical details before upgrading. An explanation of requirements and limitations

are provided.

# On System Management Chipset

One of the following depending on model

HP iLO (Firmware: HP iLO 4)

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

# Memory Protection

One of the following depending on model

Advanced ECC Online Spare Lock-step mode



### Standard Features

**Memory**One of the following depending on model

Type HP SmartMemory

DDR3 Load Reduced (LRDIMM), Registered (RDIMM) or Unbuffered

(UDIMM)

Maximum Capacity

Maximum Capacity

(LRDIMM)

384GB (12 x 32GB LRDIMM @1333MHz)

192GB (12 x 16GB RDIMM @1600MHz or 1333MHz)

(RDIMM)

Maximum Capacity 96GB (12 x 8GB UDIMM @1333MHz)

(UDIMM)

**NOTE:** HP memory from previous generation servers are not fully compatible with the HP ProLiant DI 380e Gen8 Server.

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

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

NOTE: UDIMM max DIMM population is 12

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

Network Controller One of the following depending on model The HP ProLiant DL380e Gen8 server offers the customer a quad-port NIC standard with the option to upgrade with a variety of networking options.

HP Ethernet 1Gb 4-port 366i Adapter

<b>Expans</b>	ion S	ots
---------------	-------	-----

Apanolon Ciclo						
Primary Riser (Standard)	Expansion Slots #	Technology	Bus Width**	Connector Width	Form Factor	Notes
	1	PCle 3.0	X4	X8	Full Length, Full Height Slot	
	2	PCIe 3.0	X8	X16	Half Length, Full Height Slot	
	3	PCIe 3.0	X8	X8	Half Length, Full Height Slot	
	4	PCIe 2.0	X4	X8	Low Profile	

<sup>\*\*</sup> Indicates the number of physical electrical lanes running to the connector

	"" indicates the	number of physica	ai electricai ian	es running to the	e connector.	
<b>Primary Riser</b> (Riser with SAS)	Expansion Slots #	Technology	Bus Width**	Connector Width	Form Factor	Notes
	1	PCIe 3.0	X4	X8	Full Length, Full Height Slot	
	2	PCIe 3.0	X8	X16	Half Length, Full Height Slot	
	3	PCle 3.0	NA	NA	NA	Not available for Riser with SAS
	4	PCIe 2.0	X4	X8	Low Profile	

<sup>\*\*</sup> Indicates the number of physical electrical lanes running to the connector.

**NOTE**: This riser kit comes with B320i Smart Array controller which provides support for up to 8 SAS or SATA drives and requires a SAS license key to support SAS drives.

Secondary Riser Expansion Technology Bus Connector Form Factor Notes



### Standard Features

(Optional)	Slots #		Width**	Width	
	5	PCle 3.0	X16	X16	Full length, full height slot
	6	PCIe 3.0	X8	X16	Half length, full height slot

<sup>\*\*</sup> Indicates the number of physical electrical lanes running to the connector.

**NOTE:** When populating slots on secondary riser (p/n 661628-B21), a second processor must be installed.

**NOTE:** Slot 5 supports up to 225w PCIe cards. An additional Graphic Card Power Adapter Kit is required (663282-B21). See Option Section below for offering.

**NOTE:** Adding the rear drive cage negates the space required for secondary optional riser slots 5 & 6.

#### **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: http://www.hp.com/support/rbsu.



### Standard Features

Storage Controller One of the following depending on model Entry Model - SATA HP Dynamic Smart Array B120i Controller

NOTE: Provides support for up to 6 SATA drives and data transmission

speeds up to 3Gb/s

Entry Model - SAS HP Dynamic Smart Array B320i/512MB FBWC Controller

**NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key.

Base Models - LFF HP Dynamic Smart Array B320i/512MB FBWC Controller

NOTE: Provides support for up to 8 SATA drives, data transmission

speeds up to 6Gb/s and requires purchase of SAS license key for SAS

mode.

Base Model - SFF HP Dynamic Smart Array B320i/512MB FBWC Controller

**NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key.

High Performance H

Models

HP Smart Array P420/1GB FBWC Controller (RAID

0/1/1+0/5/5+0/6/6+0)

Storage Models - LFF HP Smart Array P420/1GB FBWC Controller (RAID

0/1/1+0/5/5+0/6/6+0)

Storage Models - SFF HP Smart Array P420/2GB FBWC Controller (RAID

0/1/1+0/5/5+0/6/6+0)

# Internal Storage Devices

One of the following depending on model

Diskette Drive None
Optical Drive Optional

DVD-ROM, DVD-RW

**NOTE:** This option available with all 8SFF or 8LFF drive bay models.

Hard Drives None ship standard

Drive Bays 8 SFF drive bays total with Optical Bay

Optional: +8SFF drive bay (total of 16SFF drive bays)

NOTE: The Optical Drive bay is not available with +8SFF drive bay

optional upgrade.

8 LFF drive bays total with Optical Bay 12 LFF drive bays total without Optical Bay Optional: +2 Rear Drive Bays (LFF or SFF) 25 SFF drive bays total without Optical Bay Optional: +2 Rear Drive Bays (LFF or SFF)

NOTE: Drive cage changes are not supported except for adding +8SFF

to an existing 8SFF drive cage.

NOTE: Adding the rear drive cage negates the space required for

secondary optional riser slots 5 & 6.

**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. These part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server.



### Standard Features

Maximum Internal Storage	Hot Plug SFF SAS	32.4TB	27 x 1.2TB (with 25SFF drive cage + Rear 2SFF drive cage)
One of the following depending on model	Hot Plug SFF SATA	27.0TB	27 x 1TB (with 25SFF drive cage + Rear 2SFF drive cage)
	Hot Plug LFF SAS	56.0TB	14 x 4TB (with 12LFF drive cage + Rear 2LFF drive cage)
	Hot Plug LFF SATA	56.0TB	14 x 4TB (with 12LFF drive cage + Rear 2LFF drive cage)
	Hot Plug SFF SAS SSD	21.6TB	27 x 800GB (with 25SFF drive cage + Rear 2SFF drive cage)
	Hot Plug SFF SATA SSD	21.6TB	27 x 800GB (with 25SFF drive cage + Rear 2SFF drive cage)
	Hot Plug LFF SATA SSD	) 11.2TB	14 x 800GB (with 12LFF drive cage + Rear 2LFF drive cage)

**Interfaces** Serial

Video 2 (1 front, 1 back) not active simultaneously

LOM Network Ports 4x1GbE ports
HP iLO Remote 1 Gb Dedicated

Management Network

Port

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 (secure)

NOTE: 12LFF and 25SFF drive cage models have 1front, 4 back and 1

internal USB ports.

Industry Standard Compliance

ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support

Microsoft® Logo certifications

**USB 2.0 Compliant** 

Server Power Cords

One of the following depending on model

High voltage power cord ships standard with all part numbers.

**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 (A0K02A). 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 Worldwide Power Cord options.



# Standard Features

#### **Power Specifications**

To review typical system power ratings use the HP Power Advisor which is available via the online tool located at URL: http://www.hp.com/go/proliant-energy-efficient or http://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 div/14209 div.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 96% (Titanium) 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 and Titanium 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 <a href="http://www.hp.com/go/ipd">http://www.hp.com/go/ipd</a>.

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: http://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 independently tests power supply efficiency and publicly posts the results on <a href="http://www.80plus.org/">http://www.80plus.org/</a>.

Redundant Power: Optional (1+ 1) 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\_div/14209\_div.html



### Standard Features

#### **System Fans**

One of the following depending on model

- (4) Hot-Plug Non-redundant Fans ship standard in 1P Models
  - 1P: 4 fans non-redundancy
  - 1P: 5 fans redundancy
- (6) Hot-plug Redundant Fans ship standard in 2P Models
  - 2P: 5 fans non-redundancy
  - 2P: 6 fans redundancy

NOTE: Customers may separately purchase redundant fans with the 667855-B21 option kit. Additional fan to support redundancy are also included in -B21 processor option kits when upgrading from one processor to two processors.

#### Required Cabling

For required cabling information, refer to the HP Web site at: http://www.hp.com/servers/dl380egen8.

**Operating Systems and Microsoft Windows Server** 

Virtualization Software Red Hat Enterprise Linux (RHEL) Support for ProLiant Servers

SUSE Linux Enterprise Server (SLES)

Oracle Linux **VMware** 

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/DL380eGen8

### **Graphics**

Integrated Matrox G200 video standard

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

### **Form Factor**

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

Entry models ship with fixed rails.

All other models ship with sliding rails and cable management system.

8 SFF Drive Bay Version:

3.44 (8.75 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) Length

8 LFF Drive Bay Version:

3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length

12 LFF Drive Bay Version:

3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length

25 SFF Drive Bay Version:

3.44 (8.75 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) 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.
  - O 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 http://www.hp.com/go/intelligentprovisioning for additional information and to view usage videos.
    - Use the Service Pack for ProLiant (SPP) at http://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: http://www.hp.com/go/ilo/mobileapp

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

### Security

Power-on password Serial interface control Administrator's password



# HP ProLiant DL380e Generation 8 (Gen8)

# **QuickSpecs**

# 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, 1-Year Labor, 1-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 <a href="http://www.hp.com/go/insightcontrol">http://www.hp.com/go/insightcontrol</a>.

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 iLO Essentials** 

HP iLO Essentials license ideal for small and medium business customers. The specially created HP iLO Essentials (a subset of iLO Advanced functionality) saves SMB customers time and money, by ease of remote server set up through the interactive virtual media, lowering operational costs with remote access via the Integrated Remote Console, and faster time to resolution with email-based proactive notifications. With this newly designed HP iLO Essentials license SMB customers now have the option of a server management package solely design and priced just right for their IT environments. HP iLO Essentials is available on all HP ProLiant Gen8 e-series making this an ideal solution for small business owners. For more information, see: http://www.hp.com/go/iLO/essentials

HP iLO Advanced

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/iloadvance

HP Matrix Operating Environment

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 (laaS).

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

# Optional Features

# 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

### 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: http://www.hp.com/go/storage/software



# **Optional Features**

#### **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. http://www.hp.com/go/insightonline

#### **HPC Interconnects**

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

**InfiniBand** 

PCI-Express Generation 2 adapters

# 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 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: <a href="http://www.hp.com/go/proactiveinsightexperience">http://www.hp.com/go/proactiveinsightexperience</a>

# 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**

HP Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to HP to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

### Protect your business beyond warranty with HP Care Pack Services

HP Care Pack Services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.

#### **Optimized Care**

### Optimized Care: Supports maintaining servers at optimum performance availability

# HP Proactive Care with 24x7 coverage, three year Care Pack Service

HP Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HP. This Care Pack Service combines three years' proactive reporting and advice with our 24x7 coverage and enhanced escalation management, four hour hardware response time and two hour call back for software questions on leading industry standard software running on your HP ProLiant server. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

#### **Standard Care**

### Standard Care: Service recommendation that maintains high level of server availability

## Foundation Care 24x7, three-year Care Pack Service

HP Foundation Care 24x7 connects you to HP 24 hours a day, seven days a week for assistance on resolving issues. Hardware onsite response within four hours if needed; collaborative software included in this Care Pack service provides troubleshooting assistance on industry leading software running on your HP server. Simplify your support experience and make HP your first call for hardware or software questions.

http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

#### **Related services**

### **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

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

#### **Data Privacy Services**

Protect your data through better media management. HP Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services allow you to keep drives and other devices upon failure, our removal services provide convenient data sanitization and our recovery services allow you to safely retire IT assets and capture any remaining value from the hardware. http://www.hp.com/services/dataprivacy



# Service and Support

Additional HP Care Pack services can be found at: http://www.hp.com/go/cpc

# experience

Get connected to HP to Prevent problems with innovative, automated monitoring tools and proactive services. Combining improve your support Proactive Care Services with our remote support technology such as Insight Online 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: http://www.hp.com/go/proactiveinsightexperience

### **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

# Warranty / Service Coverage

For ProLiant servers and storage systems, the services cover HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.

For more information To learn more on HP ProLiant servers and HP BladeSystem servers, please contact your HP sales representative or HP Authorized 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.

NOTE: When the SAS-enabled riser board with the Smart Array B320i controller is installed in the server, the embedded Smart Array B120i controller is automatically disabled. In the absence of another storage controller or an expander backplane, front drives operate in AHCI or Legacy mode. In these two modes, the drives are not part of a hardware RAID or a member of a logical drive. The Locate, Drive status, and Do not remove LEDs in the drive carrier are disabled. NOTE: Not all models are available in all regions. Check with your local country HP offices for availability.

# **Entry Models - SATA**

**HP ProLiant DL380e** Gen8 E5-2403v2 4GB-R B120i Hot Plug SATA 4 Cache Memory LFF 460W PS Server

747766-xx1

**Processor** 

(1) Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W, DDR3-1333)

Processor

10MB (1 x 10MB) L3 cache

4GB (1x4GB) DDR3 Registered DIMMs PC3-10600R (1333MHz) Memory

**Network Controller** HP Ethernet 1Gb 4-port 366i Adapter

**Storage Controller** HP Dynamic Smart Array B120i Controller

**NOTE:** Provides support for up to 6 SATA drives and data transmission speeds up to 3Gb/s Greater than 4 drives requires an additional cable

(see p/n 675856-B21)

**Hard Drive** None ship standard; includes 7 LFF hard drive blanks

**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered.

**Internal Storage** 8 LFF HDD Bays

NOTE: This model comes with 8LFF Chassis.

**Power Supply** (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 4 Hot-Plug Non-redundant Fans

NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

**Form Factor** Rack (2U)

NOTE: Includes Rack Mounting Gen8 non-telescoping Friction Rail Kit which does not allow for in rack serviceability. The HP 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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, 1-Year Labor, 1-Year Onsite Warranty

support with next business day response.



**HP ProLiant DL380e** Gen8 E5-2403 1P 4GB-

R Hot Plug 4 LFF 460W Cache Memory **PS Entry Server** 

648255-xx1

**Processor** 

(1) Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W,

DDR3-1066) Processor

10MB (1 x 10MB) L3 cache

4GB (1 x 4GB) Registered DIMMs PC3-10600R (1333MHz) Memory

**NOTE:** Memory runs at 1066MHz speed due to processor.

**Network Controller** Storage Controller

HP Ethernet 1Gb 4-port 366i Adapter

HP Dynamic Smart Array B120i Controller

NOTE: Provides support for up to 6 SATA drives and data transmission speeds up to 3Gb/s Greater than 4 drives requires an additional cable

(see p/n 675856-B21)

**Hard Drive** None ship standard: includes 7 LFF hard drive blanks

NOTE: This model comes with 7 HDD blanks if no HDD is ordered.

8 LFF HDD Bays Internal Storage

NOTE: This model comes with 8LFF Chassis.

**Power Supply** (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 4 Hot-Plug Non-redundant Fans

NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

**Form Factor** 

NOTE: Includes Rack Mounting Gen8 non-telescoping Friction Rail Kit which does not allow for in rack serviceability. The HP 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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, 1-Year Labor, 1-Year Onsite Warranty

support with next business day response.

# **Entry Models - SAS**

**HP ProLiant DL380e** Gen8 E5-2403 1P 4GB-

R Hot Plug 8 SFF 460W Cache Memory

**PS Entry Server** 648256-xx1

**Processor** 

Memory

(1) Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W,

DDR3-1066) Processor

10MB (1 x 10MB) L3 cache 4GB (1 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)

**NOTE:** Memory runs at 1066MHz speed due to processor.

**Network Controller** HP Ethernet 1Gb 4-port 366i Adapter **Storage Controller** HP Dynamic Smart Array B320i Controller

> NOTE: Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key.

**Hard Drive** None ship standard; includes 7 SFF hard drive blanks

NOTE: This model comes with 7 HDD blanks if no HDD is ordered.

Internal Storage 8 SFF HDD Bays

(1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) **Power Supply** 

**Fans** 4 Hot-Plug Non-redundant Fans

NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

**Form Factor** Rack (2U)



NOTE: Includes Rack Mounting Gen8 non-telescoping Friction Rail Kit which does not allow for in rack serviceability. The HP 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.

# Base Models - LFF

**HP ProLiant DL380e** Gen8 E5-2407v2 8GB-R **B320i Hot Plug SAS 8** LFF 460W PS Server

747767-xx1

**Processor** 

(1) Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/6.4GT-s QPI/80W,

DDR3-1333) Processor

**Cache Memory** 

10MB (1 x 10MB) L3 cache 8GB (1 x 8GB DDR3-1600MHZ RDIMMs)

Memory

NOTE: Memory runs at 1333MHz speed due to processor.

**Network Controller** 

HP Ethernet 1Gb 4-port 366i Adapter

**Storage Controller** 

HP Dynamic Smart Array B320i/512 MB FBWC Controller

**NOTE:** Provides support for up to 8 SATA drives, data transmission speeds up to 6Gb/s and requires purchase of SAS license key for SAS

mode.

**Hard Drive** None ship standard; includes 7 LFF hard drive blanks

**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered.

Internal Storage

8 LFF HDD Bavs

**Power Supply** (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 

4 Hot-Plug Non-redundant Fans NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

**Form Factor** 

NOTE: Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.



**HP ProLiant DL380e** Gen8 E5-2407 1P 8GB-

R Hot Plug 8 LFF 460W Cache Memory **PS Base Server** 

668665-xx1

**Processor** 

Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-

1066) Processor

8 LFF HDD Bays

Memory

10MB (1 x 10MB) L3 cache 8GB (2 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)

**Network Controller** 

HP Ethernet 1Gb 4-port 366i Adapter

**Storage Controller** 

HP Dynamic Smart Array B320i/512MB FBWC Controller **NOTE:** Provides support for up to 8 SATA drives, data transmission

speeds up to 6Gb/s and requires purchase of SAS license key for SAS

mode.

**Hard Drive** 

None ship standard; includes 7 LFF hard drive blanks

**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered.

Internal Storage

**Power Supply** 

(1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 

4 Hot-Plug Non-redundant Fans

NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

Form Factor

NOTE: Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.

### Base Models - SFF

**HP ProLiant DL380e** Gen8 E5-2407v2 8GB-R **B320i Hot Plug SAS 8** SFF 460W PS Server

747768-xx1

**Processor** 

(1) Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/6.4GT-s QPI/80W,

DDR3-1333) Processor

**Cache Memory** 

10MB (1 x 10MB) L3 cache

Memory

8GB (1 x 8GB DDR3-1600MHZ RDIMMs)

**NOTE:** Memory runs at 1333MHz speed due to processor.

**Network Controller** 

HP Ethernet 1Gb 4-port 366i Adapter

**Storage Controller** 

HP Dynamic Smart Array B320i/512MB FBWC Controller

**NOTE:** Provides support for up to 8 SATA drives, data transmission speeds up to 6Gb/s and requires purchase of SAS license key for SAS

mode.

None ship standard; includes 7 SFF hard drive blanks **Hard Drive** 

**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered.

**Internal Storage** 

8 SFF HDD Bays

**Power Supply** 

(1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 

4 Hot-Plug Non-redundant Fans

**NOTE:** Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

**Form Factor** Rack (2U)

> NOTE: Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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:



**Pre-configured Models** 

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, 1-Year Labor, 1-Year Onsite

support with next business day response.

**HP ProLiant DL380e** Gen8 E5-2407 1P 8GB-

R Hot Plug 8 SFF 460W Cache Memory **PS Base Server** 

668666-xx1

**Processor** 

Memory

(1) ) Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/6.4GT-s QPI/80W,

DDR3-1066) Processor

10MB (1 x 10MB) L3 cache

8GB (2 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)

**Network Controller** HP Ethernet 1Gb 4-port 366i Adapter

HP Dynamic Smart Array B320i/512MB FBWC Controller **Storage Controller** 

> NOTE: Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key.

**Hard Drive** None ship standard; includes 7 SFF hard drive blanks

NOTE: This model comes with 7 HDD blanks if no HDD is ordered.

Internal Storage 8 SFF HDD Bays

(1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) **Power Supply** 

4 Hot-Plug Non-redundant Fans **Fans** 

NOTE: Customers can upgrade to a redundant fan configuration with

the purchase of an option kit (see p/n 667855-B21)

**Form Factor** Rack (2U)

> NOTE: Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.



# **High Performance Models**

**HP ProLiant DL380e** 

**Processor** 

(2) Intel® Xeon® E5-2450v2 (2.5GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1600) Processor

Gen8 E5-2450v2 24GB-R Hot Plug SAS/SATA 8 Cache Memory

SFF 750W RPS Server

20MB (1x20MB) Level 3 Memory

747771-xx1

24GB (3 x 8GB) Registered DIMMs PC3L-12800R (1600MHz)

**Network Controller** 

HP Ethernet 1Gb 4-port 366i Adapter

**Storage Controller** 

HP Smart Array P420/1GB FBWC Controller (RAID

0/1/1+0/5/5+0+6/6+0)

NOTE: This controller would be installed on the standard riser card or

the optional secondary riser card.

**Hard Drive** 

None ship standard; includes 7 SFF hard drive blanks

NOTE: This model comes with 7 HDD blanks if no HDD is ordered. 8 SFF HDD Bavs

Internal Storage **Power Supply** 

(2) HP 750W CS Gold Plus Hot Plug Power Supplies (92% Efficient)

6 Hot-plug Redundant Fans **Fans** 

**Form Factor** Rack (2U)

> NOTE: Includes Rack Mounting Gen8 telescoping 8SFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.

**HP ProLiant DL380e** Gen8 E5-2450 2P 24GB-R P420 Hot Plug 8 SFF 750W PS Perf

Svr

668669-xx1

**Cache Memory** 

(2) Intel® Xeon® E5-2450 (2.1GHz/8-core/20MB/8GT-s QPI/95W, DDR3-1600, 5/5/6/6/7/7/8/8) Processors

Memory

**Processor** 

20MB (1x20MB) Level 3

**Network Controller** 

24GB (6 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)

HP Ethernet 1Gb 4-port 366i Adapter

Storage Controller 0/1/1+0/5/5+0/6/6+0)

HP Smart Array P420/1GB FBWC Controller (RAID

NOTE: This controller would be installed on the standard riser card or

the optional secondary riser card.

None ship standard; includes 7 SFF hard drive blanks **Hard Drive** 

**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered.

Internal Storage

8 SFF HDD Bays

**Power Supply** 

(1) HP 750W CS Gold Plus Hot Plug Power Supplies (92% Efficient)

**Fans** 6 Hot-plug Redundant Fans

**Energy Star** Meets Energy Star requirements

**Form Factor** Rack (2U)

NOTE: Includes Rack Mounting Gen8 telescoping 8SFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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



**Pre-configured Models** 

instructions for proper tools and number of people to use for any

installation.

Warranty Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite

support with next business day response.

Storage Models - LFF

**HP ProLiant DL380e Processor** 

Gen8 E5-2420v2 12GB-

R Hot Plug SAS/SATA

12 LFF 750W PS Server Memory

747769-xx1

**Cache Memory** 

**Network Controller** 

Storage Controller

**Hard Drive** 

Internal Storage

**Power Supply** 

**Fans** 

**Form Factor** 

(1) Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/7.2GT-s QPI/80W,

DDR3-1600) Processor

15MB (1 x 15MB) L3 cache 12GB (3 x 4GB) Registered DIMMs PC3L-12800R (1600MHz)

HP Ethernet 1Gb 4-port 366i Adapter

HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0)

NOTE: This controller would be installed on the standard riser card or

the optional secondary riser card.

None ship standard; includes 11 LFF hard drive blanks

NOTE: This model comes with 11 HDD blanks if no HDD is ordered.

12 LFF HDD Bays

(1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient)

4 Hot-Plug Non-redundant Fans

NOTE: Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail

Kit which does allow for in rack serviceability. 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.

Rack (2U)

Warranty Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite

support with next business day response.



**HP ProLiant DL380e** 

Gen8 E5-2420 1P

12GB-R P420 Hot Plug 12 LFF 750W PS Server Memory

668667-xx1

**Processor** 

(1) Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/7.2GT-s QPI/95W,

DDR3-1333, 3/3/4/4/5/5) Processor

**Cache Memory** 

12GB (3 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)

**Network Controller** HP Ethernet 1Gb 4-port 366i Adapter

HP Smart Array P420/1GB FBWC Controller (RAID **Storage Controller** 

15MB (1x15MB) Level 3

0/1/1+0/5/5+0/6/6+0)

NOTE: This controller would be installed on the standard riser card or

the optional secondary riser card.

None ship standard; includes 11 LFF hard drive blanks **Hard Drive** 

NOTE: This model comes with 11 HDD blanks if no HDD is ordered.

Internal Storage 12 LFF HDD Bavs

**Power Supply** (1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 4 Hot-Plug Non-redundant Fans

**Form Factor** Rack (2U)

> NOTE: Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.

# Storage Models - SFF

**HP ProLiant DL380e** Gen8 E5-2420v2 12GB-

R Hot Plug SAS/SATA

25 SFF 750W PS Server Memory

747770-xx1

**Processor** 

**Cache Memory** 

**Network Controller** 

12GB (3 x 4GB) Registered DIMMs PC3L-12800R (1600MHz)

HP Ethernet 1Gb 4-port 366i Adapter

HP Smart Array P420/2GB FBWC Controller (RAID Storage Controller

0/1/1+0/5/5+0/6/6+0)

DDR3-1600) Processor

15MB (1 x 15MB) L3 cache

NOTE: This controller would be installed on the standard riser card or

(1) Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/7.2GT-s QPI/80W,

the optional secondary riser card.

None ship standard; includes 24 SFF hard drive blanks **Hard Drive** 

**NOTE:** This model comes with 24 HDD blanks if no HDD is ordered.

Internal Storage 25 SFF HDD Bays

**Power Supply** 

(1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient)

**Fans** 4 Hot-Plug Non-redundant Fans

**Form Factor** 

NOTE: Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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.



**Pre-configured Models** 

Warranty

Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite

support with next business day response.

**HP ProLiant DL380e** Gen8 E5-2420 1P

12GB-R P420 Hot Plug Cache Memory 25 SFF 750W PS Server Memory

668668-xx1

**Processor** 

(1) Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/7.2GT-s QPI/95W,

DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Turbo Processor

15MB (1 x 15MB) L3 cache

12GB (3 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)

**Network Controller** HP Ethernet 1Gb 4-port 366i Adapter

**Storage Controller** HP Smart Array P420/2GB FBWC Controller (RAID

0/1/1+0/5/5+0/6/6+0)

25 SFF HDD Bavs

NOTE: This controller would be installed on the standard riser card or

the optional secondary riser card.

**Hard Drive** None ship standard; includes 24 SFF hard drive blanks

NOTE: This model comes with 24 HDD blanks if no HDD is ordered.

Internal Storage

**Power Supply** 

**Fans** 

(1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient)

4 Hot-Plug Non-redundant Fans

**Form Factor** Rack (2U)

NOTE: Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. 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, 1-Year Labor, 1-Year Onsite

support with next business day response.

**Country Code Key** 

xx = 00xx = 20

xx = 29

xx = 37

xx = 42xx = AA U.S.

Brazil

Japan

APD

Europe **PRC** 

# 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)

**NOTE:** Rail kits and cable management solutions are optional in CTO. See "Step 3: Choose Additional Factory Integratable Options" for details on ordering.

**NOTE:** The DL380e ships standard with the Dynamic Smart Array B120i controller which provides support for up to 6 SATA drives (greater than 4 drives requires additional cable, p/n 675856-B21) and data transmission speeds up to 3Gb/s. Customers requiring SAS support or greater than 6 drives should select either a Smart Array family controller or the HP Dynamic Smart Array B320i controller (p/n 661402-B21, implemented via riser).

**NOTE:** When the SAS-enabled riser board with the Smart Array B320i controller is installed in the server, the embedded Smart Array B120i controller is automatically disabled. In the absence of another storage controller or an expander backplane, front drives operate in ACHI or Legacy mode. In these two modes, the drives are not part of a hardware RAID or a member of a logical drive. The Locate, Drive status, and Do not remove LEDs in the drive carrier are disabled.

NOTE: Number of HDD blanks in a given chassis is same as number of drive cage bays.

NOTE: Power Supply not included - choose from Options section.

**HP Models** 

HP ProLiant DL380e Gen8 12 LFF Configure-to-order Server

669257-B21

**NOTE:** This CTO server includes an "expander-based" storage backplane. A single Smart Array P420 controller is capable of controlling all 12 LFF drives and optional rear drives.

#### **Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.

12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation

HP Ethernet 1Gb 4-port 366i Adapter

HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)

I/O slots - 4 Slots come standard:

- Slot 1 FL/FH x4 PCle 3.0 (x8 connector)
- Slot 2 HL/FH x8 PCle 3.0 (x16 connector)
- Slot 3 HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 Low Profile x4 PCle 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (1 additional fan included with purchase of second processor)

Drive Cage - 12-LFF

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

HP iLO Management Engine (standard)

**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

HP ProLiant DL380e Gen8 25 SFF Configure-to-order Server

669256-B21

**NOTE:** This CTO server includes an "expander-based" storage backplane. A single Smart Array P420 is capable of controlling all 25 SFF drives and optional rear drives.

### **Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.

12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation

HP Ethernet 1Gb 4-port 366i Adapter

HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)



# Configuration Information - Factory Integrated Models

I/O slots - 4 Slots come standard:

- Slot 1 FL/FH x4 PCIe 3.0 (x8 connector)
- Slot 2 HL/FH x8 PCle 3.0 (x16 connector)
- Slot 3 HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 Low Profile x4 PCle 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (1 additional fans included with purchase of second processor)
Drive Cage - 25-SFF

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

HP iLO Management Engine (standard)

**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

HP ProLiant DL380e Gen8 8 LFF Configure-to-order Server

669255-B21

**NOTE:** This CTO server supports 4, 6, and 8LFF drive configurations based on the selection of controller. The HP Dynamic Smart Array B120i is capable of controlling up to 6 SATA drives. Greater than 4 SATA drives require the use of an option cable, p/n 675856-B21). Greater than 6 SATA drives require an HP Dynamic Smart Array B320i or P420 or greater controller.

# **Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.

12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation

HP Ethernet 1Gb 4-port 366i Adapter

HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)

I/O slots - 4 Slots come standard:

- Slot 1 FL/FH x4 PCle 3.0 (x8 connector)
- Slot 2 HL/FH x8 PCle 3.0 (x16 connector)
- Slot 3 HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 Low Profile x4 PCle 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (one additional fan included with purchase of second processor)

Drive Cage - 8-LFF (Optical media drive optional)

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

HP iLO Management Engine (standard)

**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

HP ProLiant DL380e Gen8 8 SFF Configure-to-order Server

669253-B21

**NOTE:** This CTO server supports up to 8SFF drives and is expandable up to 16 SFF drives via the optional 8SFF upgrade kit (p/n 668295-B21).

# Factory Integrated Model ships with:

2 x HP Smart Socket Guides for fast processor installation.

12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation

HP Ethernet 1Gb 4-port 366i Adapter

HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)

I/O slots - 4 Slots ship standard:

- Slot 1 FL/FH x4 PCle 3.0 (x8 connector)
- Slot 2 HL/FH x8 PCle 3.0 (x16 connector)
- Slot 3 HL/FH x8 PCIe 3.0 (x8 connector)



# Configuration Information - Factory Integrated Models

- Slot 4 Low Profile x4 PCle 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (one additional fan included with purchase of second processor)

Drive Cage - 8-SFF (Optical media drive optional) USB - 4 Rear, 2 Front, 1 Internal, 1 SD slot

HP iLO Management Engine (standard)

NOTE: New options are available for Rack Rail Kits: these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

# 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

Base Processors - E5-2400 series Processors

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

HP DL380e Gen8 Intel® Xeon® E5-2430 (2.2GHz/6-core/15MB/95W) FIO 661126-L21

Processor Kit

**HP Memory** 

NOTE: To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/14225\_div/14225\_div.html (Worldwide)

NOTE: HP memory from previous generation servers are not fully compatible with Smart Memory features in Gen8 Servers.

### Registered DIMMs (RDIMMs)

**NOTE:** The following memory is supported by the E5-2400v2 series Processors HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-713981-B21 11 Low Voltage Memory Kit HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-731765-B21 11 Low Voltage Memory Kit HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 713983-B21 Low Voltage Memory Kit HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-713985-B21 11 Low Voltage Memory Kit **NOTE:** The following memory is supported by the E5-2400 series Processors

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

HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 647895-B21 Memory Kit

HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9

Low Voltage Memory Kit 647899-B21

HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit

HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit

HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-647901-B21 9 Low Voltage Memory Kit



647897-B21

690802-B21

# Configuration Information - Factory Integrated Models

ation Tuotory integrated models	
HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672631-B21
Unbuffered with ECC DIMMs (UDIMMs)	
<b>NOTE:</b> The following memory is supported by the E5-2400v2 series Processors	
HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713975-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713977-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713979-B21
NOTE: The following memory is supported by the E5-2400 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)	
<b>NOTE:</b> The following memory is supported by E5-2400v2 or E5-2400 series Processors	
HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit	647903-B21
<b>NOTE:</b> 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: http://www.hp.com/go/ddr3memory-configurator. <b>NOTE:</b> PC3L is a low voltage memory.	
<b>NOTE:</b> Depending on the memory configuration and processor model, 1600MHz and 1333MHz memory may operate at a lower speed. Please see the see the "Memory" section later in this document and the Online Memory Configuration Tool for details at http://www.hp.com/go/ddr3memory-configurator.	
<b>NOTE:</b> 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 Power Supplies**

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

### **HP Common Slot Titanium Power Supply Kits**

NOTE: The following Power Supplies offer up to 96% Efficiency support for Intelligent Power Discovery.

HP 750W Common Slot Titanium Hot Plug Power Supply Kit 697581-B21

### **HP Common Slot Platinum Plus Power Supply Kits**

NOTE: The following Power Supplies offer up to 94% Efficiency support for Intelligent Power Discovery.

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



# Configuration Information - Factory Integrated Models

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 CS Gold Ht Plg 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

**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.

NOTE: Option Kits for AC power supplies include the power supply and one PDU

IEC cable.

**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 http://www.hp.com/products/powercords

# HP I/O Expansion Options

HP DL380e Gen8 CPU1 with SAS Support FIO Riser Kit

661402-B21

**NOTE:** If selected with HP DL380e Gen8 8LFF CTO Chassis, HP DL380eGen8 8LFF Mini SAS FIO Kit is required. This option can only be selected for HP DL380e Gen8 8LFF CTO Chassis, HP DL380e Gen8 8SFF CTO Chassis, or HP DL380e Gen8 12LFF 1:1 CTO Chassis.

NOTE: Includes HP Dynamic Smart Array B320i controller

**NOTE:** SAS license key (PN BC393A) is selected by default when this riser kit is selected. If SAS support is not needed, SAS license key (PN BC393A) can be deselected. SAS license key is mandatory for SAS support. Supports up to 8 drives

HP DL380e Gen8 CPU1 Riser Kit

661404-B21

**NOTE:** Cannot be selected if 661402-B21 is selected.

# Step 3: Choose Additional Factory Integratable Options

**HP Rack 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:** The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails. 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 FIO Friction Rail Kit

663476-B21

**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.

#### **HP Insight Software**

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

HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO

C6N36ABE

C6N36A

Electronic License



Configuration Information - Factory Integrated Models

HP Converged HP OneView with iLO Advanced - Server hardware required on same

Infrastructure purchase order

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

Svr Lic

E5Y43A

# **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 n	nay not be integrated at the factory. Contact your local sales representative for addition	nal information.
<b>HP Unique Options</b>	HP DL380e Gen8 Hot Plug Fan Kit	667855-B21
	NOTE: Upgrades a non-redundant server with additional hot-plug fans.  HP DL380e Gen8 8 Small Form Factor (SFF) Hard Drive Cage Kit  NOTE: With upgrade of 8SFF Cage, there is no Optical Drive support and an additional storage controller is required for 1:1 CTO Server.	668295-B21
	HP DL380e Gen8 CPU1 Riser Kit	661404-B21
	-	
HP Processors	Entry Processors - E5-2400v2 series Processors NOTE: All support up to 1333MHz memory speeds.	
	HP DL380e Gen8 Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/80W) Processor Kit	708497-B21
	HP DL380e Gen8 Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W) Processor Kit	708495-B21
	Base Processors - E5-2400v2 series Processors NOTE: All support up to 1600MHz memory speeds.	
	HP DL380e Gen8 Intel® Xeon® E5-2430Lv2 (2.4GHz/6-core/15MB/60W) Processor Kit	746521-B21
	HP DL380e Gen8 Intel® Xeon® E5-2430v2 (2.5GHz/6-core/15MB/80W) Processor Kit	724569-B21
	HP DL380e Gen8 Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/80W) Processor Kit	724567-B21
	HP DL380e Gen8 Intel® Xeon® E5-2440v2 (1.9GHz/8-core/20MB/95W) Processor Kit	724571-B21
	Performance Processors - E5-2400v2 series Processors NOTE: All support up to 1600MHz memory speeds.	
	HP DL380e Gen8 Intel® Xeon® E5-2450v2 (2.5GHz/8-core/20MB/95W) Processor Kit	724573-B21
	HP DL380e Gen8 Intel® Xeon® E5-2470v2 (2.4GHz/10-core/25MB/95W) Processor Kit	724575-B21
	HP DL380e Gen8 Intel® Xeon® E5-2450Lv2 (1.7GHz/10-core/25MB/60W) Processor Kit	746523-B21
	Entry Processors - E5-2400 series Processors NOTE: All support up to 1066MHz memory speeds.	
	HP DL380e Gen8 Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/80W) Processor Kit	661132-B21
	HP DL380e Gen8 Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/80W) Processor Kit	661134-B21
	Base Processors - E5-2400 series Processors NOTE: All support up to1333MHz DDR3 memory speeds.	
	HP DL380e Gen8 Intel® Xeon® E5-2440 (2.4GHz/6-core/15MB/95W) Processor Kit	661124-B21
	HP DL380e Gen8 Intel® Xeon® E5-2430 (2.2GHz/6-core/15MB/95W) Processor Kit	661126-B21
	HP DL380e Gen8 Intel® Xeon® E5-2430L (2.0GHz/6-core/15MB/60W) Processor Kit	661138-B21
	HP DL380e Gen8 Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/95W) Processor Kit	661128-B21



# Core Options

#### Performance Processors - E5-2400 series Processors

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

HP DL380e Gen8 Intel® Xeon® E5-2470 (2.3GHz/8-core/20MB/95W) Processor 661118-B21 661120-B21

HP DL380e Gen8 Intel® Xeon® E5-2450 (2.1GHz/8-core/20MB/95W) Processor

Kit

HP DL380e Gen8 Intel® Xeon® E5-2450L (1.8GHz/8-core/20MB/70W)

661136-B21

Processor Kit

**NOTE:** Up to 2 processors supported.

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

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

**NOTE:** DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed. NOTE: For the Intel® C600 Chipset E5-2400 and E5-2400 v2 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2400x v#, 2 = number of CPUs in a Node, 4 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# = version number.

### **HP Memory**

**NOTE:** To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at:

http://h18000.www1.hp.com/products/guickspecs/14225 div/14225 div.html (Worldwide)

**NOTE:** HP memory from previous generation servers are not fully compatible with Smart Memory features in Gen8 Servers.

# Registered DIMMs (RDIMMs)

11 Low Voltage Memory Kit

**NOTE:** The following memory is supported by the E5-2400v2 series Processors HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-713981-B21 11 Low Voltage Memory Kit HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-731765-B21 11 Low Voltage Memory Kit

HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit

HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-713985-B21

**NOTE:** The following memory is supported by the E5-2400 series Processors

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

HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit

HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit

HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 647899-B21 Memory Kit

HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 690802-B21 Memory Kit



713983-B21

647895-B21

647897-B21

$\sim$	$\sim$			
1 Oro	<i>(</i> )	nti	$\sim$ r	$\mathbf{r}$
Core	. ,			1.5
$\mathbf{c}$	$\sim$	$\sim$ $^{\circ}$	$\sim$	

	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 E5-2400v2 series Processors	
	HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713975-B21
	HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713977-B21
	HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713979-B21
	NOTE: The following memory is supported by the E5-2400 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)	
	<b>NOTE:</b> The following memory is supported by E5-2400v2 or E5-2400 series Processors	
	HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit	647903-B21
	<b>NOTE:</b> 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: http://www.hp.com/go/ddr3memory-configurator. <b>NOTE:</b> PC3L is a low voltage memory.	
HP Optical Drives	HP 12.7mm Slim SATA DVD-ROM JackBlack Optical Drive HP 12.7mm Slim SATA DVD-RW JackBlack Optical Drive	652232-B21 652235-B21
HP Hard Drives	12G SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives	
nr naid blives	HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
	HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
	HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
	12G SAS Hot Plug SFF (2.5-inch) Enterprise Drives	
	HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21



**Core Options** 

HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-B21
HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21
HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
12G SAS Hot Plug SmartDrive LFF (3.5-inch) Converter Enterprise Drives	705404 D04
HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737394-B21
HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737261-B21
12G SAS Hot Plug SFF (2.5-inch) SC 512e Drives	
HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765466-B21
HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765464-B21
12G SAS Hot Plug LFF (3.5-inch) Midline (MDL) 512e Drives	
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
12G SAS Hot Plug LFF (3.5-inch) SC 512e Performance Drives	
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty	793671-B21
Hard Drive	
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793669-B21
6G SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives	
HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
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 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
6G 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
6G SAS Hot Plug SmartDrive LFF (3.5-inch) Midline Drives	
HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	761477-B21



**Core Options** 

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
<b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:	
http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)	
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 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
6G SATA 2.5in WI-PLP SCC SSD	
HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804680-B21
HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804674-B21
HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804668-B21
HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804642-B21
HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in LPC 3yr Wty Solid State Drive	831725-B21
6G SATA 2.5in MU-PLP SCC SSD	
HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804634-B21
HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804628-B21
HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	832417-B21
HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804616-B21
6G SATA 2.5in RI-PLP SCC SSD	
HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804608-B21
HP 800GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804602-B21
HP 480GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804596-B21
HP 240GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804590-B21
HP 120GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804584-B21
HP 80GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804578-B21
6G SATA 2.5in WI-PLP SC SSD	
HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804677-B21
HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804671-B21
HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804665-B21
HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804639-B21
6G SATA 2.5in MU-PLP SC SSD	
HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21
HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804625-B21
HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	832414-B21
HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804613-B21
6G SATA 2.5in RI-PLP SC SSD	
HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804605-B21
HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804599-B21
HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804593-B21
HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804587-B21
HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804581-B21
HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804575-B21



**Core Options** 

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline (MDL) Drives	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	753874-B21
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	e 628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	e 658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	e 657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard	658071-B21
Drive	
6G SATA Hot Plug SFF (2.5-inch) SC 512e Drives HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
6G SATA Hot Plug LFF (3.5-inch) SC 512e Performance Drives	703433-621
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty	y 793667-B21
Hard Drive	700001 521
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	y 793665-B21
<b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:	
http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html (Worldwide)	
12G SAS Hot Plug Value Endurance SFF (2.5-inch) Enterprise Value Soli State Drives	id
HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty	762263-B21
Solid State Drive	
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wi Solid State Drive	ty 762261-B21
12G SAS Hot Plug Value Endurance LFF (3.5-inch) Enterprise Value Soli	d
State Drives	
HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762272-B21
HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wt Solid State Drive	y 762270-B21
12G SAS High Endurance Hot Plug SFF (2.5-inch) Enterprise Performand Solid State Drives	e
HP 400GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3 Wty Solid State Drive	Byr 741155-B21
NOTE: This drive supports Gen8 servers only.	
12G SAS Mainstream Endurance Hot Plug SFF (2.5-inch) Enterprise Mainstream H2 Solid State Drives	
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3	yr 779176-B21
Wty H2 Solid State Drive	,
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC Wty H2 Solid State Drive	3yr 779172-B21
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC Wty H2 Solid State Drive	3yr 779168-B21
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3 Wty H2 Solid State Drive	3yr 779164-B21
12G SAS Hot Plug SFF (2.5-inch) SC Read/Write Intensive Solid State Dr	ives
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802891-B21
HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802586-B21



**Core Options** 

HB 4000B 400 040 M 11 L L L L OFF 0.5 1 00 0 M 10 11 OL L B 1	000500 D04
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802582-B21 802578-B21
6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Boot Solid	002370-DZ1
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 Hot Plug Value Endurance LFF (3.5-inch) Converter Enterprise Value G1 Solid State Drives	
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756660-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756639-B21
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756624-B21
6G SATA Hot Plug Value Endurance SFF (2.5-inch) Enterprise Value G1 Solid State Drives	
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756657-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756621-B21
6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid	
State Drives  HP 1.6TB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty	757339-B21
Solid State Drive	737339-DZ1
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 Value 3yr Wty Solid State Drive	739898-B21
HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739888-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717969-B21
6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	757342-B21
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 Conveter Enterprise Value 3yr Wty Solid State Drive	739900-B21



**Core Options** 

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 Converter Enterprise Value 3yr Wty Solid State Drive	739890-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty	718177-B21
Solid State Drive  6G SATA Hot Plug Light Endurance SFF (2.5-inch) Enterprise Light G1 Solid	
State Drives	
HP 960GB 6G SATA Light Endurance SFF 2.5-in SC Enterprise Light 3yr Wty G1 Solid State Drive	756601-B21
6G SATA Hot Plug Light Endurance LFF (3.5-inch) Enterprise Light G1 Solid State Drives	
HP 960GB 6G SATA Light Endurance LFF 3.5-in SC Converter ENT Light 3yr Wty G1 Solid State Drive	756604-B21
6G SATA Mainstream Endurance 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	691866-B21
Mainstream 3yr Wty Solid State Drive HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise	691864-B21
Mainstream 3yr Wty Solid State Drive	091004-D21
HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691862-B21
6G SATA Mainstream Endurance 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	691852-B21
Mainstream 3yr Wty Solid State Drive	
6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives	700455 D04
HP 960GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789155-B21
HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789145-B21
HP 240GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789135-B21
6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives	<b>-</b> 004 <b> D</b> 04
HP 960GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789157-B21
HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
HP 240GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789137-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional	
information: http://h18000.www1.hp.com/products/quickspecs/14038_div/14038_div.html (Worldwide)	



#### **Core Options**

#### **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.

HP Large Form Factor Hard Drive Blank Kit

HP Small Form Factor Hard Drive Blank Kit

666987-B21

HP 2U Gen8 2 LFF Rear Kit

663278-B21

**NOTE:** Supports 2 hot plug drives in the back of server and the kit includes multiple cable options which allow connections between rear, front backplanes and also between rear backplane, motherboard.

HP 2U Gen8 2 SFF Rear Kit 663280-B21

**NOTE:** Supports 2 hot plug drives in the back of server and the kit includes multiple cable options which allow connections between rear, front backplanes and also between rear backplane, motherboard.

**NOTE:** The HP ProLiant DL380e 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.

HP NC112T PCI Express Gigabit Server Adapter

#### HP Networking Gigabit Ethernet adapters

HP NC365T 4-port Ethernet Server Adapter	593722-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
10 Gigabit Ethernet Adapters	
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 NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
HP Ethernet 10Gb 2-port 561T Adapter	716591-B21

**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.

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



503746-B21

Quickop	HP ProLiant DL380e Generati	on 8 (Gen8)
Core Options		
HP InfiniBand	QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544QSFP Adapter NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html	583211-B21 592520-B21 649281-B21
HP I/O Expansion Options	HP DL380e Gen8 CPU1 Riser Kit  NOTE: This kit provides three slots that run off of first processor.  HP DL380e Gen8 x16 PCI-E Riser Kit	661404-B21
	NOTE: This kit provides two additional slots that run off of second processor.	661628-B21
HP Power Supplies	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.  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: http://www.hp.com/go/hppoweradvisor.	
	HP Common Slot Titanium Power Supply Kits	
	HP 750W Common Slot Titanium Hot Plug Power Supply Kit	697581-B21
	NOTE: The above Power Supplies offer 96% Efficiency with support for Intelligent Power Discovery.*	
	HP Common Slot Platinum Plus Power Supply Kits	
	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
	<b>NOTE:</b> The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.	
	HP Common Slot Gold Power Supplies	
	HP 460W CS Gold Ht Plg Power Supply Kit	503296-B21
	HP 750W Common Slot Gold Hot Plug Power Supply Kit	512327-B21
	HP Common Slot -48VDC Power Supplies	
	HP 750W Common Slot -48VDC Hot Plug Power Supply Kit  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.	636673-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

**NOTE**: Power Specification and Technical Content for supported power supplies

http://h18000.www1.hp.com/products/quickspecs/14209\_div/14209\_div.html

power cords please go to http://www.hp.com/products/powercords

can be found at:

**Core Options** 

**HP Graphic Options** HP Graphic Card Power Adapter Kit

663282-B21

NOTE: The adapter kit is used to provide power to high-wattage cards

(example: graphics cards) that require up to 225W of power.

**NOTE:** High wattage cards are supported on the x16 FL/FH slot which is

controlled by the second processor. p/n 661628-b21 is required.

NOTE: Because of a single x16 FL/FH slot, we support only one of the below

graphic cards at a time.

NVIDIA Quadro K4000 PCI-E Graphics Adapter

730870-B21

**NOTE:** Only the following OS types are supported: 64-bit Only: Red Hat Enterprise Linux 5.x, Red Hat Enterprise Linux 6.x, SUSE Linux Enterprise

Server 11 SPx. 64-bit Only: Windows Server 2008 R2 SPx.

**HP Cooling Options** 

HP DL380e Gen8 Hot Plug Fan Kit

667855-B21

NOTE: This kit contains a single fan and is used to upgrade non-redundant

configurations to redundant configurations.



## **Additional Options**

<b>HP Insight Software</b>	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 Electronic License	C6N28ABE
	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_div/12631_div.html	
	HP Integrated Lights-Out (iLO) Advanced for ProLiant	
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU	E6U59ABE
	HP iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	E6U64ABE
	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
	HP iLO Essentials	
	HP Integrated Lights-Out Essentials including 3yr 24x7 Technical Support and Updates E-LTU	E6U61ABE
	HP Integrated Lights-Out Essentials including 1yr 24x7 Technical Support and Updates E-LTU	E6U62ABE
	HP Integrated Lights-Out Essentials including 3yr 24x7 Tech Support and Updates Single Svr License	BD774A
	HP Integrated Lights-Out Essentials including 1yr 24x7 Tech Support and Updates Single Svr License	BD775A
	<b>NOTE:</b> For additional license options please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/14276_div/14276_div.html	
	NOTE: For more information, visit: http://www.hp.com/go/ilo.	
HP Converged	HP OneView	
Infrastructure	HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y34A
Management Software	HP OneView Media Kit Phys No Lic	E5Y37A
	HP OneView w/o iLO Adv incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y38A
	7 7 7	



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

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

E5Y35AAE

E5Y39AAE

### Additional Options

#### **High Performance** Clusters

HP Insight Cluster Management Utility 1yr 24x7 Flexible License HP Insight Cluster Management Utility 3yr 24x7 Flexible License **QL803B 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/guickspecs/12612 div/12612 div.html

#### **HP I/O Accelerator Options**

#### Second Generation Accelerators

HP 365GB Multi Level Cell G2 PCle ioDrive2 for ProLiant Servers 673642-B21 HP 785GB Multi Level Cell G2 PCle ioDrive2 for ProLiant Servers 673644-B21 HP 1205GB Multi Level Cell G2 PCle ioDrive2 for ProLiant Servers 673646-B21 HP 2410GB Multi Level Cell G2 PCIe ioDrive2 Duo for ProLiant Servers 673648-B21

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

http://h18000.www1.hp.com/products/guickspecs/13587 div/13587 div.html (Worldwide)

#### **HP Security**

HP 2U Security Bezel Kit

666988-B21

**HP Trusted Platform Module Option** 

488069-B21

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

NOTE: ProLiant OS pre-installed units will come with the partition required for

TPM deployment.

NOTE: The TPM key is unique to every TPM deployed server and must be

retained. Misplacing or losing the key could result in data loss.

#### **HP Storage Controllers SAS Controllers**

### **Smart Array P222 Controller**

HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller 631667-B21 **Smart Array P420 Controller** 

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** 

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



## **Additional Options**

HP Smart Array P430 Controller	
HP Smart Array P430/2GB FBWC 12Gb 1-port Int SAS Controller	698529-B21
HP Smart Array P430/4GB FBWC 12Gb 1-port Int SAS Controller	698530-B21
HP Smart Array P431 Controller	
HP Smart Array P431/2GB FBWC 12Gb 2-ports Ext SAS Controller	698531-B21
HP Smart Array P431/4GB FBWC 12Gb 2-ports Ext SAS Controller	698532-B21
Smart Array P822 Controller	
HP Smart Array P822/2GB FBWC 6Gb 2-ports-Int/4-ports Ext SAS Controller	615418-B21
HP Smart Array P830 Controller	
HP Smart Array P830/4GB FBWC 12Gb 2-ports Int SAS Controller	698533-B21
Optional Upgrades	
HP 2GB P-series Smart Array Flash Backed Write Cache	631681-B21
HP 512MB B-series 36 inch Dynamic Smart Array Flash Backed Write Cache for	631922-B21
ML/DL	
<b>NOTE:</b> This kit includes a cable and cache module that is used in conjunction with the B320i controller.	
HP SAS License Key No Media 1 Single Server License for B320i	BC393A
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
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14227_div/14227_div.html (Smart Array P222 Controller) http://h18000.www1.hp.com/products/quickspecs/14228_div/14228_div.html (Smart Array P420 Controller) http://h18000.www1.hp.com/products/quickspecs/14229_div/14229_div.html (Smart Array P421 Controller) http://h18000.www1.hp.com/products/quickspecs/14341_div/14341_div.html (Smart Array P822 Controller) http://h18000.www1.hp.com/products/quickspecs/14343_div/14343_div.html (Dynamic Smart Array Controllers) Host Bus Adapter	
HP H220 Host Bus Adapter	650933-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_div/14336_div.html (HBA 220)	
http://h18004.www1.hp.com/products/quickspecs/14222_div/14222_div.html (HBA 221)	
http://h18004.www1.hp.com/products/quickspecs/14337_div/14337_div.html (HBA 222)	
SCSI HBA	
HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter	412911-B21
NOTE: Please see the following QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html	



(SC11Xe HBA)

Additional	Ontions
Additional	Options

•		
HP Cable Options	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A 
HP Power Cords	HP C13 - SEV 1011 CH 250V 10Amp 1.83m Power Cord	AF565A
Til Tower Cords	HP C13 - DK-2.5A DK 250V 10Amp 1.83m Power Cord	AF566A
	HP C13 - CEE-VII EU 250V 10Amp 1.83m Power Cord	AF568A
	HP C13 - BS-1363A UK/HK/SG 250V 10Amp 1.83m Power Cord	AF570A
	HP C13 - CEI-23-50 IT/CL 250V 10Amp 1.83m Power Cord	AF571A
	HP C13 - SABS-164 ZA 250V 10Amp 2.5m Power Cord	AF567A
	HP C13 - Nema 6-15P US 250V 15A JP 3.6m Power Cord	A0N33A
	HP C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
	NOTE: HP ProLiant servers ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs).	711 00071
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 and http://www.hp.com/go/ebs.  NOTE: For Internal drives to be connected to DL servers please make sure that you order rack mount kit as well.  HP StoreEver 1U USB Rack-mount Kit  HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit  HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive  HP StoreEver LTO-6 Ultrium 6250 External Tape Drive	A8007B C0L99A EH964A EH970A
HP Disk Backup	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 USB 3.0 External Disk Backup System	B7B66A
	HP RDX1000 USB3.0 Internal Disk Backup System	B7B67A
	HP RDX1000 USB 3.0 External Disk Backup System	B7B69A
	NOTE: Please see the QuickSpecs for additional part numbers, Technical Specifications, and additional information: http://h18000.www1.hp.com/products/quickspecs/13036_div/13036_div.html (Worldwide)	
	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.	



### **Additional Options**

<b>HP Storage Options</b>	<b>HP</b>	Storage	<b>Options</b>
---------------------------	-----------	---------	----------------

#### 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 PCle Fibre Channel Host Bus Adapter	AP769B
HP 82B 8Gb 2-port PCle Fibre Channel Host Bus Adapter	AP770B
Emulex Fibre Channel HBAs	
HP 81E 8Gb 1-port PCle Fibre Channel Host Bus Adapter	AJ762B
HP 82E 8Gb 2-port PCle Fibre Channel Host Bus Adapter	AJ763B
HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A
Ol agia Fibra Champal IIDAa	

#### **QLogic Fibre Channel HBAs**

HP 81Q 8Gb 1-port PCle Fibre Channel Host Bus Adapter	AK344A
HP 82Q 8Gb 2-port PCle Fibre Channel Host Bus Adapter	AJ764A
HP StoreFabric SN1000Q 16GB 1-port PCle Fibre Channel Host Bus Adapter	QW971A
HP StoreFabric SN1000Q 16GB 2-port PCle Fibre Channel Host Bus Adapter	QW972A

#### Converged Network Adapter

Converged Network Adapter	
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 DirectFlow Three Phase UPS**

### Power Unit (1U UPS)

**NOTE:** #0D1 will appear after the part number on the sales order if HP factory integration is indicated.

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

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

NOTE: Choose one I/O Module per UPS.

**NOTE:** #0D1 will appear after the part number on the sales order if HP factory integration is indicated.

HP 32A 400-415 Volt Three Phase INTL R12000 DirectFlow UPS IEC309	AF488A
Input/Output Module	

HP 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309	AF489A
Input/Output Module	

HP 32A 380 Volt Three Phase China R12000 DirectFlow UPS Unterminated	AF490A
Input/Output Module	

HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output	AF491A
Module	

HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output	AF492A
Module	

HP 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309	G9Y76A
Input/Output Module	

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

**HP Tower UPS** 

**HP T750 G4 UPS Models** 



**Additional Options** 

HP T750 G4 NA/JP Uninterruptible Power System	J2P85A
HP T750 G4 INTL Uninterruptible Power System	J2P88A
HP T1000 G4 UPS Models	
HP T1000 G4 NA/JP Uninterruptible Power System	J2P86A
HP T1000 G4 INTL Uninterruptible Power System	J2P89A
HP T1500 G4 UPS Models	
HP T1500 G4 NA/JP Uninterruptible Power System	J2P87A
HP T1500 G4 INTL Uninterruptible Power System	J2P90A
HP Rack/Tower UPS	
HP R/T2200 G4 UPS Models	
HP R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A
HP R/T3000 G4 UPS Models	
HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
HP R/T3000 G4 High Voltage INTL Uninterruptible Power System	J2R04A
NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14059_div/14059_div.html	
(Worldwide)	
HP R1500 G4 Uninterruptible Power Supply (UPS) HP R1500 G4 NA Uninterruptible Power System	J2Q99A
HP R1500 G4 INTL Uninterruptible Power System	J2Q99A J2R03A
HP R1500 G4 JP/TWN Uninterruptible Power System	J2R05A J2R05A
NOTE: Please see the QuickSpecs for additional information:	321\03A
http://h18000.www1.hp.com/products/quickspecs/14058_div/14058_div.html (Worldwide)	
R5000 Uninterruptible Power System (UPS)	
HP R5000 3U IEC309-32A High Voltage INTL Uninterruptible Power System	AF461A
HP R5000 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
<b>NOTE:</b> Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14109_div/14109_div.html (Worldwide)	
R7000 Uninterruptible Power System (UPS)	
HP R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
HP R7000 4U IEC-32A High Voltage INTL Uninterruptible Power System	AF463A
<b>NOTE:</b> Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14110_div/14110_div.html (Worldwide)	
NOTE: For additional information on sizing your HP UPS, 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: http://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 L5-20 Input (12xNEMA 5-20R) NA/JP Basic PDU	H5M54A
HP 3.6kVA 200-240 Volt Detachable C20 Input ( 12xC13) WW Basic PDU	H5M56A
HP Basic Power Distribution Unit: Half Height Version	
HP 2.8kVA 120 Volt L5-30 Input (18xNEMA 5-20R) NA/JP Basic PDU	H5M55A
HP 3.6kVA 200-240 Volt Detachable C20 Input (18xC13) WW Basic PDU	H5M57A
HP 4.9kVA 208 Volt L6-30 Input (20xC13) NA/JP Basic PDU	H5M58A
HP 7.3kVA 230 Volt IEC309 32A Input (20xC13) INTL Basic PDU	H5M68A
HP 8.6kVA 208 Volt L15-30 3-Phase Input (18xC13) NA/JP Basic PDU	H5M61A
HP Basic Power Distribution Unit: Mid Height Version	
HP 4.9kVA 208 Volt L6-30 Input (24xC13/6xC19) NA/JP Basic PDU	H5M59A
HP 7.3kVA 230 Volt IEC309 32A Input (24xC13/6xC19) INTL Basic PDU	H5M70A
HP 8.3kVA 208 Volt CS8265C Input (30xC13/6xC19) NA/JP Basic PDU	H5M60A
HP 11kVA 230 Volt IEC309 63A Input (30xC13/6xC19) INTL Basic PDU	H5M71A
HP Hardwired 200-240 Volt Input (30xC13/6xC19) WW Basic PDU	H5M75A
HP 5.7kVA 208 Volt L21-20 3-Phase Input (24xC13/3xNEMA 5-20R) NA/JP Basic PDU	H5M63A
HP 8.6kVA 208 Volt L21-30 3-Phase Input (24xC13/3xC19/3xNEMA 5-20R) NA/JP Basic PDU	H5M64A
HP 8.6kVA 208 Volt L15-30 3-Phase Input (24xC13/6xC19) NA/JP Basic PDU	H5M62A
HP 11kVA 400 Volt IEC309 16A 3-Phase Input (30xC13/6xC19) INTL Basic PDU	H5M72A
HP Basic Power Distribution Unit: Full Height Version	
HP 11kVA 400 Volt IEC309 16A 3-Phase Input (36xC13/6xC19) INTL Basic PDU	H5M73A
HP 11kVA 400 Volt IEC309 30A 3-Phase Input (36xC13/6xC19) NA Basic PDU	H5M67A
HP Basic Power Distribution Unit: 480/277 Volt Version	
HP 19.9kVA 480 Volt IEC309 30A 3-Phase Input (30 Outlet) NA Basic PDU	H3X08A
HP 277 Volt options for 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_div/14557_div.html (Worldwide)	
<b>NOTE:</b> Additional HP Power Distribution Units are available. For a complete list of all HP PDUs and additional information please visit <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a> .	



**Additional Options** 

Additional Options		
	HP Remote Monitored Power Distribution Unit: 1U Version	
Power Distribution Units (mPDU)	HP 2.8kVA 120 Volt L5-30 Input (12xNEMA 5-20R)NA/JP Monitored PDU	D9N43A
	HP 3.6kVA 200-240 Volt Detachable C20 Input (12xC13) WW Monitored PDU	D9N46A
	HP 4.9kVA 208 Volt L6-30 Input (12xC13) NA/JP Monitored PDU	D9N44A
	HP Remote Monitored Power Distribution Unit: Half Height Version	
	HP 3.6kVA 200-240 Volt Detachable C20 Input (16xC13) WW Monitored PDU	D9N45A
	HP 4.9kVA 208 Volt L6-30 Input (12xC13) NA/JP Monitored PDU	G9Z05A
	HP 7.3kVA 230 Volt IEC309 32A Input (12xC13) INTL Monitored PDU	G9Z06A
	HP Remote Monitored Power Distribution Unit: Mid Height Version	
	HP 4.9kVA 208 Volt L6-30 Input (20xC13/4xC19) NA/JP Monitored PDU	D9N47A
	HP 7.3kVA 230 Volt IEC309 32A Input (20xC13/4xC19) INTL Monitored PDU	D9N48A
	HP 8.6kVA 208 Volt L15-30 3-Phase Input (18xC13/3xC19) NA/JP Monitored PDU	D9N51A
	HP 5.7kVA 208 Volt L21-20 3-Phase Input (18xC13/3xNEMA 5-20R) NA/JP Monitored PDU	D9N52A
	HP 8.6kVA 208 Volt L21-30 3-Phase Input (20xC13/3xC19/3xNEMA 5-20R) NA/JP Monitored PDU	D9N53A
	HP 11kVA 400 Volt IEC309 16A 3-Phase Input (18xC13/3xC19) INTL Monitored PDU	D9N55A
	HP Remote Monitored Power Distribution Unit: Full Height Version	
	HP 8.3kVA 208 Volt CS8265C Input (30xC13/3xC19) NA Monitored PDU	D9N49A
	HP 7.3kVA 230 Volt IEC309 32A Input (32xC13/4xC19) INTL Monitored PDU	D9N50A
	HP 11kVA 400 Volt IEC309 16A 3-Phase Input (30xC13/3xC19) INTL Monitored PDU	D9N57A
	HP 14.4kVA 208 Volt CS8365C 3-Phase Input (12xC13/12xC19)NA Monitored PDU	D9N58A
	HP 16.6kVA 400 Volt IEC309 30A 3-Phase Input (30xC13/3xC19) NA Monitored PDU	D9N61A
	HP 16.6kVA 400 Volt IEC309 30A 3-Phase Input (12xC13/12xC19) NA Monitored PDU	D9N62A
	HP 17.3kVA 208 Volt IEC309 60A 3-Phase Input (24xC13/3xC19) NA/JP Monitored PDU	D9N54A
	HP 17.3kVA 208 Volt IEC309 60A 3-Phase Input (12xC13/12xC19) NA/JP Monitored PDU	D9N59A
	HP 19.9kVA 480 Volt 3-Phase (30 Outlet) NA Monitored PDU	D9N63A
	HP 22kVA 400 Volt IEC309 32A 3-Phase Input (30xC13/3xC19) INTL Monitored PDU	D9N56A
	HP 22kVA 400 Volt IEC309 32A 3-Phase Input (12xC13/12xC19) INTL Monitored PDU	D9N60A
	HP Environmental Sensor for Remote Monitored PDUs	
	HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14669_div/14669_div.html	



(Worldwide)

Additional Options		
HP Intelligent Power	iPDU Core Units	
Distribution Units (iPDU)	HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
	HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
	HP 7.3kVA 32A Single Phase INTL Core Intelligent Modular Power Distribution Unit	AF525A
	HP 11kVA 16A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF526A
	iPDU Extension Bars	
	HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
	HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A
	<b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:	
	http://h18000.www1.hp.com/products/quickspecs/13650_div/13650_div.html (Worldwide)	
HP Managed Power	Half Height Models	
Distribution Units (maPDU)	HP 3.6kVA 200-240 Volt Detachable C20 Input (7xC13/1xC19) WW Managed PDU	H8B49A
	Full Height Models	
	HP 2.8kVA 120 Volt L5-30 Input (24x NEMA 5-20) NA/JP Managed PDU	H8B48A
	HP 4.9kVA 208 Volt L6-30 Input (20xC13/4xC19) NA/JP Managed PDU	H8B50A
	HP 7.3kVA 200-240 Volt IEC309 32A Input (20xC13/4xC19) INTL Managed PDU	H8B51A
	HP 8.6kVA 208 Volt L15-30 3 Phase Input (18xC13/6xC19) NA/JP Managed PDU	H8B52A
	HP 8.6kVA 208 Volt L21-30 3 Phase Input (20xC13/3xC19/1x NEMA 5-20) NA/JP Managed PDU	H8B53A
	HP 11kVA 400 Volt IEC309 16A 3 Phase Input (21xC13/3xC19) INTL Managed PDU	H8B54A
	HP 14.4kVA 208V CS8365C 3 Phase Input (12xC13/12xC19) NA/JP Managed PDU	H8B55A
	HP 17.3kVA 208V IEC309 60A 3 Phase Input (12xC13/12xC19) NA/JP Managed PDU	H8B56A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional	



http://www8.hp.com/h20195/v2/GetHtml.aspx?docname=c04376673

(Worldwide)

#### Additional Options

<b>HP Rack Series</b>	HP Intelligent Series Rack	
	HP 636 1075mm Pallet Intelligent Rack	BW895A
	HP 636 1075mm Shock Intelligent Rack	BW896A
	HP 642 1075mm Pallet Intelligent Rack	BW903A

HP 642 1075mm Shock Intelligent Rack BW904A HP 647 1075mm Pallet Intelligent Rack BW911A HP 647 1075mm Shock Intelligent 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\_div/14223\_div.html (Worldwide)

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

HP Rack Options HP LCD8500 1U Rackmount Console Kit N	lodole

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

### **HP LCD8500 1U Rackmount Console Kit Options**

HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
HP Location Discovery Services LCD8500 Kit	TL052A
HP Rack LED Light Kit	BW939A

#### **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/guickspecs/14429 div/14429 div.html (Worldwide)

#### **HP USB Keyboard and Mouse**

HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21
HP USB BFR with PVC Free UK Keyboard/Mouse Kit	631344-B21
HP USB BFR with PVC Free FR Keyboard/Mouse Kit	631346-B21
HP USB BFR with PVC Free ES Keyboard/Mouse Kit	631348-B21
HP USB BFR with PVC Free DE Keyboard/Mouse Kit	631358-B21
HP USB BFR with PVC Free JP Keyboard/Mouse Kit	631360-B21
HP USB BFR with PVC Free IT Keyboard/Mouse Kit	631362-B21
HP USB BFR with PVC Free CN Keyboard/Mouse Kit	631364-B21
HP USB BFR with PVC Free AE Keyboard/Mouse Kit	638212-B21
HP USB BFR with PVC Free RU Keyboard/Mouse Kit	638214-B21
HP USB BFR with PVC Free AP-Intl Keyboard/Mouse Kit	672097-373



## **Additional Options**

HP USB BFR with PVC Free Intl Keyboard/Mouse Kit	672097-B33
HP USB BFR with PVC Free PT Keyboard/Mouse Kit	672097-133
HP USB BFR with PVC Free TR Keyboard/Mouse Kit	672097-143
HP USB BFR with PVC Free CZ Keyboard/Mouse Kit	672097-223
HP USB BFR with PVC Free FI Keyboard/Mouse Kit	672097-353
HP USB BFR with PVC Free SE Keyboard/Mouse Kit	672097-103
HP USB BFR with PVC Free CH Keyboard/Mouse Kit	672097-113
HP USB BFR with PVC Free KR Keyboard/Mouse Kit	672097-KD3
HP USB BFR with PVC Free IN Keyboard/Mouse Kit	672097-D63
<b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:	
http://h18000.www1.hp.com/products/quickspecs/13972_div/13972_div.html (Worldwide)	
HP Server Console Switches	
HP 0x1x8 G3 KVM Console Switch	AF651A
HP 0x2x16 G3 KVM Console Switch	AF652A
HP TAA 0x2x16 G3 KVM Console Switch	AF653A
HP USB Remote Access Key for G3 KVM Console Switches	AF650A
NOTE: Please see the QuickSpecs for Technical Specifications and additional	
information: http://h18000.www1.hp.com/products/quickspecs/11834_div/11834_div.html (Worldwide)	
HP Server Console Switch G2 with Virtual Media & CAC	
HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
KVM USB Cnsl Itfc Adapter 1PK ALL	336047-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional	330047-021
information:	
http://h18000.www1.hp.com/products/quickspecs/13475_div/13475_div.html (Worldwide)	
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_div/13474_div.html (Worldwide)	
Rail Kits	
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 Rack Cable Management Velcro Clips	379820-B21
NOTE: Gen8 rail kits have changed significantly from prior generation rail kits.	37 3020-B2 I
Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen8 server.	
<b>NOTE:</b> Rail kits are optional for DL380e Gen8 and are no longer included standard with the server. Customers have the option to purchase their server	



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

without a rail kit.

### **Additional Options**

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 USB and SD Options

#### **HP Flash Media Kits for USB Drives**

HP 32GB SD Enterprise Mainstream Flash Media Kit

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 Care Pack Services Proactive Care**

HP 3 year 4 hour 24x7 ProLiant DL380e Proactive Care Service	U6E33E
HP 3 year 4 hour 24x7 with Defective Media Retention ProLiant DL380e Proactive Care Service	U6E34E
HP 3 year 4-Hour 24x7 with Comprehensive Defective Material Retention DL380e Proactive Care Service	U9C04E
HP 3 year 4 hour 24x7 ProLiant DL380e with Insight Control Proactive Care Service	U6G61E
HP 3 year 4 hour 24x7 w/Defective Media Retention DL380e with Insight Control Proactive Care Service	U6G62E

**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 w/Comprehensive Defective Material Retention DL380e

#### **Foundation Care**

w/IC ProactiveCare Service

HP 3 year 24x7 DL380e Foundation Care Service

HP 3 year 24x7 with Defective Media Retention DL380e Foundation Care Service	U2GP0E
HP 3 year 24x7 with Comprehensive Defective Material Retention DL380e Foundation Care Service	U2GP1E
HP 3 year 24x7 DL380e w/IC Foundation Care Service	U2JB1E
HP 3 year 24x7 with Defective Media Retention DL380e w/IC Foundation Care	U2JB2E

## HP 3 year 24x7 with Comprehensive Defective Material Retention DL380e w/IC Foundation Care Service

#### **Installation Services**

Service

**NOTE:** Reduce the time required to get your system up and running and help minimize disruptions to your business.

HP Installation ProLiant DL180/DL380e Service U6E81E



700136-B21

U9C15E

U2GN9E

U2JB3E

### **HP ProLiant DL380e Generation 8 (Gen8)**

## **QuickSpecs**

## **Additional Options**

HP Startup ProLiant DL180/DL380e Service

U6E83E

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

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

NOTE: Reduce the time required to get your system up and running and help

minimize disruptions to your business.



#### Memory

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

#### **Memory Subsystem Architecture**

Each Intel® Xeon® E5-2400v2 and E5-2400 family processor socket contains three memory channels per installed processor with two DIMMs per channel for a total of six (6) DIMMs or a grand total of twelve (12) DIMMs for the server. Up to 32GB capacity DIMMs are supported for 384GB of memory (12 DIMM slots x 32GB per DIMM).

#### **DIMM** configuration NOTE: This information is for Advanced ECC memory mode only. If Ch1 Ch2 Ch3 Ch 1 Ch 2 Ch 3 operating in other modes, see the user guide. ADBECF ADBECF Key: Alpha - population order Numeric - DIMM slot ID for spare replacement 1. Before installing DWWs, review the following population guidelines: Install DIWMs only if the corresponding processor is installed. When two processors are installed, balance the total capacity DIMMs across the two processors. White DIMM slots denote the first slot of a channel (Ch 1-A. . Do not mix UDIWWs, RDIWMs, or LRDIWMs in the same system. P2 P1 When one processor is installed, install DWWs in sequential alphabetic order: A, B, C, D, E, F, and so forth. When two processors are installed, install DIWWs in sequential alphabetic order: P1-A, P2-A, P1-B, P2-B, P1-C, P2-C, and so For DIWM spare replacement, install the DIWMs per slot number as instructed by your system software. For more information on DIMMs, see the user guide on the HP website (http://www.hp.com). Click Support & Drivers, Product Support & Troubleshooting and then enter your product 3 4 5 Front of server e/oumber

### Memory population guidelines

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

- White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- 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.
- 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.
- 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 DL380e 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 information, please see the HP SmartMemory QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/14225\_div/14225\_div.html.
- For memory population rules and additional memory guidelines, please see the DL380e Gen8 user guide at <a href="http://www.hp.com/support">http://www.hp.com/support</a>.
- There are three(3) Memory channels per processor; six(6) channels for 2 processors server.
- There are two(2) DIMM slots for each memory channel; twelve(12) total slots for 2 processors server.



### Memory

Intel Gen8 Supported Memory Bandwidth for HP ProLiant Gen8 Intel® Xeon®E5-2400v2 Series Processor Family

DIMM Type			Registered DIMMS Unbuffered with ECC DIMMs (RDIMMs) (UDIMMs)							
DIMM Rank	Single Rank	Dual Rank	Single Rank	Dual Rank	Single Rank	Dual Rank	Dual Rank			
DIMM Capacity	4GB	8GB	8GB	16GB	2GB	4GB	8GB			
DIMM Native Speed (MT/s)	1600	1600	1600	1600	1600	1600	1600			
Voltage	LV	LV	Std	LV	LV	LV	LV			
12 slot servers	12	12	12	12	12	12	12			
	48	96	96	192	24	48	96			
1 DIMM Per Channel	1600	1600	1600	1600	1600	1600	1600			
2 DIMM Per Channel	1600	1600	1600	1600	1600	1600	1600			
3 DIMM Per Channel	800	800	800	800	n/a	n/a	n/a			

Intel Gen8 Supported Memory Bandwidth for HP ProLiant Gen8 Intel® Xeon®E5-2400 Series Processor Family

Memory	Bandwi	dth and	Capaci	ty										
DIMM Type	Registered DIMMS (RDIMMs)							Load Reduced (LRDIMMs)	Unbuffered with ECC DIMMs (UDIMMs)					
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Single Rank	Dual Rank	Dual Rank	Quad Rank	Single Rank		Dual Rank		Dual Rank	Dual Rank
DIMM Capacity	4GB	4GB	8GB	8GB	8GB	16GB	16GB	32GB	2GB	2GB	4GB	4GB	8GB	8GB
DIMM Native Speed (MT/s)	1333	1600	1333	1600	1600	1333	1600	1333	1333	1600	1333	1600	1600	1333
Voltage	LV	Std	LV	Std	Std	LV	Std	LV	LV	Std	LV	Std	Std	LV
SLOTS T 12 slot servers	12	12	12	12	12	12	12	12	12	12	12	12	12	12
MAXIMUI	M CAPA	CITY (GI	B)*											
	48	48	96	96	96	192	192	384	24	24	48	48	96	96
1 DIMM Per Channel	1333	1600	1333	1600	1600	1333	1600	1333****	1333	1600	1333	1600	1600	1333
2 DIMM Per Channel	1333	1600	1333	1600	1600	1333	1600	1333****	1333***	1600	1333***	1600	1600	1333**
3 DIMM Per Channel	1066**	1333#	1066**	1333#	1333#	1066**	1333#	1066	n/a	n/a	n/a	n/a	n/a	n/a

<sup>\*</sup>Maximum capacity will vary based on individual server platform qualification schedule

<sup>\*\*</sup> For HP SmartMemory, RDIMM support 3DPC@ DDR3-1066 at 1.35V. Third party memory may only support up to 3DPC@DDR3-1066 at 1.5V.



### Memory

\*\*\*\*\*LRDIMM enables 2 DIMMs per channel. HP SmartMemory supports up to 2DPC@1333 at 1.35V. Third party memory may only support up to 2DPC@1066 at 1.5V.

\*\*\* For UDIMMs, HP SmartMemory supports 2DPC@1333 at 1.35V. Third party memory may only support up to 2DPC@1066 at 1.5V.

# RBSU setting required.

## DIMM slot and configuration diagrams Basic memory slot & population diagram

• Population order; looking from the front of your server CPU#1 is on right side and CPU#2 is on the left. See the population order by alphabetic and numeric progression below

	CPU #1 IS PROCESSOR ON RIGHT - LOOKING FROM FRONT OF SERVER						
	CPU 1		CPU 2				
	Slot #	population order		Slot#	populati	on order	
Chnl 1	1	Α	1	1	Α	1	CPU 1
	2	D	4	2	D	4	
	CPU 1			CPU 2			
	Slot #	population order		Slot#	population order		
Chnl 2	3	В	2	3	В	2	CPU 2
	4	E	5	4	E	5	
	CPU 1			CPU 2			
	Slot #	population order		Slot#	populati	on order	
Chnl 3	5	С	3	5	С	3	CPU 3
	6	F	6	6	F	6	

#### **Memory Speed by Processor Model**

Processor Models	Supported Memory Speeds
E5-2470, E5-2450,	1600/1333/1066MHz
E5-2440, E5-2430, E5-2420, E5-2450L,	1333/1066MHz
E5-2407, E5-2403, E5-2430L,	1066MHz
E5-2430v2, E5-2430Lv2, E5-2420v2, E5-2440v2, E5-2450v2, E5-2470v2, E5-2450Lv2,	1600/1333/1066MHz
E5-2407v2, E5-2403v2,	1333/1066MHz

#### **Standard and Maximum Memory Capacity (Pre-configured Models)**

Pre-Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
E5-2403v2, E5-2403, E5- 2403,	4GB (1x4GB)	180GB (11x16GB, 1x4GB)	384GB (12x32GB)
E5-2407v2, E5-2407v2,	8GB (1x8GB)	184GB (11x16GB, 1x8GB)	384GB (12x32GB)
E5-2407, E5-2407,	8GB (2x4GB)	168GB (10x16GB, 2x4GB)	384GB (12x32GB)
E5-2450,	24GB (6x4GB)	120GB (6x16GB, 6x4GB)	384GB (12x32GB)
E5-2420v2, E5-2420, E5- 2420v2, E5-2420,	12GB (3x4GB)	156GB (9x16GB, 3x4GB)	384GB (12x32GB)

#### DDR3 memory options part number decoder

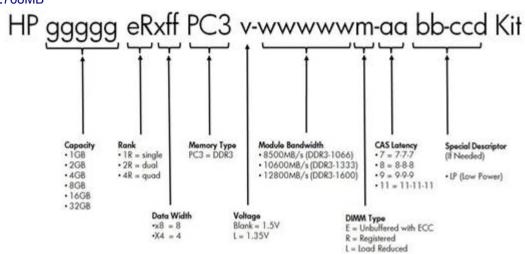
**NOTE:** Capacity references are rounded to the common Gigabyte values.

- 1GB = 1024MB
- 2GB = 2048MB



### Memory

- 4GB = 4096MB
- 8GB = 8192MB
- 16GB = 16384MB
- 32GB = 32768MB



#### **HP Memory**

**NOTE:** To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/14225\_div/14225\_div.html (Worldwide)

**NOTE**: HP memory from previous generation servers are not fully compatible with the DL360e Gen8 Server.

### Registered DIMMs (RDIMMs)

HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713981-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 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713985-B21
<b>NOTE:</b> The above memory is supported by the E5-2400 v2 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



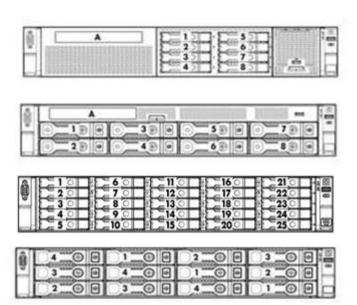
Memory

<b>NOTE</b> : The above memory is supported by the E5-2400 series Processors.	
Unbuffered with ECC DIMMs (UDIMM)	
HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713975-B21
HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713977-B21
HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit	713979-B21
<b>NOTE:</b> The above memory is supported by the E5-2400 v2 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
<b>NOTE</b> : The above memory is supported by the E5-2400 series Processors.	
Load Reduced DIMMs (LRDIMMs)	
HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit	647903-B21
<b>NOTE:</b> The above memory is supported by the E5-2400 v2 and E5-2400 series Processors.	
<b>NOTE:</b> 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: http://www.hp.com/go/ddr3memory-configurator. **NOTE:** PC3L is a low voltage memory.



### Storage



- A Optical Media Bay optional
- 1-8 8 x SFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays
- A Optical Media Bay optional
- 1-8 8 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays
- 1-25 25 x SFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays
- 1-4 12 x LFF (1:1) SATA/SAS/SDD Hot Pluggable Hard drive bays with point to point backplane

#### **Maximum Storage Capacity** - (with D2700)

Internal 32.4TB (27 x 1.2TB SAS/SATA SFF with 25SFF drive cage + Rear 2SFF drive cage)

(25 SFF Drive Cage)

Internal 56TB (14 x 4TB SAS/SATA LFF with 12LFF drive cage + Rear 2LFF drive cage)

(12 LFF Drive Cage)

External 240TB (200 x 1.2TB SAS SFF)

Total 272.4TB

(25 SFF Drive)

Total 296TB

(12 LFF Drive)



### **Technical Specifications**

**System Unit Dimensions** (with bezel) SFF Drives: 3.44 x 17.54 x 27.5 in (8.75 x 44.55 x 69.85 cm)

LFF Drives: 3.44 x 17.54 x 29.5 in (8.75 x 44.55 x 74.94 cm)

Weight (approximate) Maximum 71.20 lb (32.30 kg)

Minimum 30.80 lb (14.00 kg)

Input Requirements 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) 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)

### **Technical Specifications**

Illons			
System Inlet Temperature	Operating	altitude derating of 1.0 (1.8°F per every 1000 maximum of 3048 m ( sustained sunlight. Maximum	ft) above sea level to a 10,000 ft), no direct aximum rate of change he upper limit may be d number of options
	Non-operating	-30° to 60°C (-22° to 1 change is 20°C/hr (36	40°F). Maximum rate of °F/hr).
Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, n condensing.	
	Non-operating	5 to 95% relative hum (101.7°F) maximum w 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).		er of options installed. Ititude change rate is
	Non-operating	9144 m (30,000 ft). Ma altitude change rate is ft/min).	
Acoustic Noise	declared average bystar (LpAm) when the produ- Noise emissions were n	A-Weighted sound powe nder position A-Weighted ct is operating in a 23°C neasured in accordance ordance with ISO 9296 (	d sound pressure levels ambient environment. with ISO 7779 (ECMA
	Idle	1P Non- Redundant SKU	2P Redundant SKU
	LWAd	5.8 B	5.4 B
	LpAm	41 dBA	38 dBA
	Operating	1P SKU	2P SKU
	. LWAd	5.9 B	5.7 B
	LpAm	42 dBA	41 dBA
		d levels apply to standar al options may result in i	
Emissions	FCC Rating	Class A	
Classification (EMC)	Normative Standards	Pt 15; ICES-003; CNS	EN55024; FCC CFR 47, 314336-1; CNS13438;

GB4943; GB9254; 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

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



### Technical Specifications

HP Dynamic Smart Array B120i Controller **Dimensions** Embedded

**Disk Drive and** Up to 6Gb/s SATA (Serial ATA) **Enclosure Interface -**

Transfer rate

SAS Connectors 6 internal SATA connectors

**Server Interface** x4 PCle 2.0 **SAS Speed** 6Gb/s SATA links

Cache Memory Zero Memory RAID has no cache memory
Logical Drives Up to 8 logical volumes (6 physical drives)
Supported

Host Memory Addressing 64-bit, supporting greater than 4GB server memory space

Hot Plug Support Yes

RAID Support RAID 0 (Striping), RAID 1 (Mirroring)

RAID 1+0 (Striping & Mirroring)

HP Dynamic Smart Array B320i Controller **Dimensions** Embedded

**Disk Drive and** Up to 6Gb/s SATA (Serial ATA) **Enclosure Interface -**

SAS Connectors 2 internal x4 connectors

Server Interface x4 PCIe 2.0 SAS Speed 6Gb/s SAS links

**Cache Memory** Zero Memory RAID has no cache memory

optional 40-bit 512MB ECC protected Flash Backed Write Cache

(FBWC)

Logical Drives Supported

Transfer rate

Zero Memory, Up to 2 logical volumes (6 physical drives)

Host Memory Addressing 64-bit, supporting greater than 4GB server memory space

RAID Support

RAID 0 (Striping), RAID 1 (Mirroring)

RAID 1+0 (Striping & Mirroring)

RAID 5 with optional 512MB FBWC

NOTE: 512 MB cache is required to enable RAID 5 support.

NOTE: NO SAS supported.



### Technical Specifications

HP Smart Array P420 Controller

Dimensions Low Profile PCle Form Factor

Disk Drive and 6Gb/s SAS (Serial Attached SCSI)

Enclosure Interface -

transfer rate 3Gb/s SATA (Serial ATA)

SAS Connectors 2 internal 4X connectors

Cache Memory Speed DDR2-800MHz with 40 or 72-bit wide bus

**Server Interface** x4 PCle 2.0 provides 2GB/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 256MB ECC protected cache (battery upgrade available)

72-bit 512MB BBWC or 72-bit 512MB and 1G FBWC Zero Memory, Up to 2 logical volumes (8 physical drives)

Logical Drives Supported Host Memory

....

Addressing
RAID Support

64-bit, supporting greater than 4GB server memory space

RAID 6, 60 (Advanced Data Guarding)
RAID 5, 50 (Distributed Data Guarding)

Up to 64 logical drives with cache

**NOTE:** Either a minimum of 256MB cache and battery kit or a minimum of 512MB BBWC/FBWC is required to enable RAID 5, 50, 6, 60. **NOTE:** HP Smart Array Advanced Pack (SAAP 2.0) is no longer required to enable 6 & 60 (Advanced Data Guarding). However,

controller must be in firmware version 4.68 (or later).

RAID 1+0 (Striping & Mirroring)

HP Ethernet 1Gb 4-port Network Interface 366i Adapter Compatibility

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

Compatibility EEE 802.3 10Base-T

IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 1588, IEEE 802.1AS

IEEE 802.3az - Energy Efficient Ethernet (EEE) PCI Express v 2.0, 5.0 GT/s, two lanes (x2)

Controller Intel I350 Powerville

**Data Transfer Method** 

Connector

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

10Base-T (Full-Duplex) 20 Mb/s per port , 80 Mb/s combined 100Base-TX (Half- 100 Mb/s per port, 400 Mb/s combine

Duplex)

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

Duplex)

1000Base-TX (Half and 1000Mb/s per port, 4000 Mb/s combined

Full-Duplex)

Two RJ-45

Cable Support10Base-TCategories 3, 4 or 5 UTP;

up to 328 ft (100 m)

10/100/1000Base-TX Category 5 or higher UTP;

up to 328 ft (100 m)



**Technical Specifications** 

Environment-friendly End-of-life
Products and Approach 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: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a>. To recycle your product, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> or contact your nearest 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: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a>. 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.



## **Summary of Changes**

Date	Version History	Action	Description of Change
17-Aug-2015	From Version 41 to 42	Added	New Solid State Drives offering was added to HP Hard Drives section.
01-Jun-2015	From Version 40 to 41	Added	New Hard Drives were added to Core Options.
01 0411 2010		Removed	Obsolete SKUs were removed from Configuration
			Information - Factory Integrated Models, Core Options,
			and Additional Options.
30-Mar-2015	From Version 39 to 40	Added	New Hard Drives were added to Core Options.
09-Feb-2015	From Version 38 to 39	Added	New Hard Drives, DirectFlow UPS, Rack and Tower G4
			Models, LCD8500 1U Rackmount Models and Options
			were added to the Additional Options section.
		Changed	HP Uninterruptible Power Systems, HP Rack Options,
			and HP Care Pack Services in Additional Options
			section were revised.
01-Dec-2014	From Version 37 to 38	Added	HP 1.6TB 6G SATA Value Endurance SFF 2.5-in SC
			Enterprise Value 3yr Wty Solid State Drive and HP
			1.6TB 6G SATA Value Endurance LFF 3.5-in SC
			Converter Enterprise Value 3yr Wty Solid State Drive
			were added to HP Hard Drives.
		Removed	Proactive Care Services (U6E39E, U6E40E, U6G63E,
			and U6G64E), Collaborative Support, and Proactive
			Care Personalized Support Option were removed from
			HP Care Pack Services.
01-Nov-2014	From Version 36 to 37	Changed	Service and Support section was revised.
29-Sep-2014	From Version 35 to 36	Added	New Solid State Drives were added.
			HP Managed Power Distribution Units (maPDU) was
			added to Additional Options.
		Changed	Service and Support section was revised.
			HP Hard Drives was revised in Core Options section.
		Removed	HP Power Distribution Units was removed from
			Additional Options.
09-Sep-2014	From Version 34 to 35	Added	12G SAS Hot Plug VE SFF (2.5-inch) SC EV SSD and
			12G SAS Hot Plug VE SFF (2.5-inch) SCC EV SSD
			hard drives were added to Core Options section.
		Changed	Memory section was revised.
18-Aug-2014	From Version 33 to 34	Added	New Hard Drives were added.
			HP Remote mPDUs half height version were added.
		Changed	Pre-configured Models, Configuration Information -
			Factory Integrated Models, Core Options, Additional
			Options, and Memory sections were revised.
16-Jun-2014	From Version 32 to 33	Changed	Memory, Hard Drives, Networking, Insight Software,
			Storage Controllers, Disk Backup, Storage Options,
			Power Distribution Units, and USB and SD Options
20.14			were revised.
09-May-2014	From Version 31 to 32	Changed	Service and Support, Memory, Hard Drives, Storage
			Controllers, and Basic and Remote Monitoring Power
44.4 0044			Distribution Units were revised.
11-Apr-2014	From Version 30 to 31	Changed	Changes made to the North America and Canada
		Ob come !	versions only.
00 les 0044		Changed	The link in the Note was corrected in the Standard
22-Jan-2014	From Version 29 to 30		
		Ob	Features/ Upgradeability section.
22-Jan-2014 15-Jan-2014	From Version 29 to 30  From Version 28 to 29	Changed	Changes made to the North America and Canada
15-Jan-2014	From Version 28 to 29		Changes made to the North America and Canada versions only.
		Changed Changed Changed	Changes made to the North America and Canada



## **Summary of Changes**

15-Nov-2013	From Version 25 to 26	Changed	Minor change made to the Core Options/ Hard Drives Section.
10-Oct-2013	From Version 24 to 25	Changed	Changes made to the Tape Backup section of Additional Options.
18-Sep-2013	From Version 23 to 24	Changed	Changes made to the following sections: Configuration Information section: Step 1 Technical Specifications section: HP Dynamic Smart Array B120i Controller
10-Sep-2013	From Version 22 to 23	Changed	Changes made to the following sections: Standard Features - HP Insight Management Optional Features - High Performance Clusters Pre-configured Models Memory Core Options - HP Hard Drives
10-Jul-2013	From Version 21 to 22	Removed	Removed Part number 721458-B21 from the HP I/O Accelerator Options section.
12-Jun-2013	From Version 20 to 21	Changed	Changes made in the North America and Canada versions only.
31-May-2013	From Version 19 to 20	Changed	Changes made in the North America and Canada versions only.
15-May-2013	From Version 18 to 19	Added	Additional Options: Added HP Basic Power Distribution Units section.
		Changed	Standard Features: Updated Processor and Maximum Internal Storage sections. Core Options: Updated HP Hard Drives and HP InfiniBand sections. Additional Options: Updated HP I/O Accelerator Options, HP Storage Controllers, HP Power Distribution Units, HP Rack Options, updated entire HP USB and SD Options and HP Care Pack Services sections. Technical Specifications: Updated HP Dynamic Smart Array B120i Controller and HP Dynamic Smart Array B320i Controller sections.
29-Apr-2013	From Version 17 to 18	Added	Technical Specifications: Updated HP Dynamic Smart Array B120i Controller section.
25-Mar-2013	From Version 16 to 17	Added	Configuration Information: Added a NOTE to the HP Power Supplies section. Core Options: Added a NOTE to the HP Power Supplies section.
		Removed	Additional Options: Removed 641027-B21, 600282-B21 and 600279-B21 from the HP I/O Accelerator Options.
19-Feb-2013	From Version 15 to 16	Changed	Standard Features: Updated Maximum Internal Storage Optional Features: HP Insight Management added HP iLO Essentials and HP iLO Advanced Additional Options: completely updated HP Insight Software, updated product description for BC393A in HP Storage Controllers, updated product description for A8007B in HP Tape Backup
		Added	Optional Feature: Added Storage Software section Pre-configured Models: Added HP iLO Essentials to Management section Configuration Information-Factory Integrated Models: Added HP Insight Software to Step 3. Core Options: 697514-B21, 693687-B21 HP, 6GSATA ME HotPlug SFF(2.5-inch) Enterprise Mainstream Solid

### **Summary of Changes**

			State Drive and 6GSATA ME HotPlug SFF(3.5-inch) Enterprise Mainstream Solid State Drive to Hard Drives Section Added 656596-B21 to HP Networking Additional Options: Added 721458-B21 to HP ILO Accelerator Options
21-Dec-2012	From Version 14 to 15	Changed	Additional Options: in HP Cable Options = changed HP Premier Flex LC/LC Multi-mode OM4 5 fiber 5m Cable to a 2 fiber 5m Cable
07-Dec-2012	From Version 13 to 14	Removed	Removed the HP Backup & Recovery Software and HP Disk Storage Systems sections from the Additional Options section.
		Changed	Standard Features: Graphics, On System Management Optional Features: HP Insight Management Configuration Information: Step 1 - Added Notes, Step 2 - HP Power Supplies section changes Core Options: Optical Drives, HP Hard Drives, HP Power Supplies Additional Options: Completely revised the HP Insight Software section, HP Rack Series, HP Rack Options & HP Care Pack Services
26-Oct-2012	From Version 12 to 13	Changed	Changes made in Standard Features, Pre-Configured Models, Configuration Information, and Additional Options sections.
12-Oct-2012	From Version 11 to 12	Changed	Change made in the North America and Canada versions only.
24-Sep-2012	From Version 10 to 11	Changed	Change made in Standard Features, Optional Features and Technical Specifications sections.
06-Sep-2012	From Version 9 to 10	Changed	Change made in the North America and Canada versions only.
31-Aug-2012	From Version 8 to 9	Changed	Change made in the Models section.
27-Aug-2012	From Version 7 to 8	Changed	Change made in the North America and Canada versions only.
22-Aug-2012	From Version 6 to 7	Changed	Change made in Technical Specifications.
17-Aug-2012	From Version 5 to 6	Changed	Change made throughout the QuickSpecs.
03-Jul-2012	From Version 4 to 5	Changed	Change made in the Additional Options section.
27-Jun-2012	From Version 3 to 4	Changed	Changes made within the Standard Features, Models, Options and Memory sections.
15-Jun-2012	From Version 2 to 3	Changed	Changes made throughout the QuickSpecs.
08-Jun-2012	From Version 1 to 2	Changed	Added Care Pack Services.

© Copyright 2015 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

Microsoft and Windows NT are US registered trademarks of Microsoft Corporation.

Intel, the Intel logo, Xeon and Xeon Inside are trademarks of Intel Corporation in the U.S. and other countries.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

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

