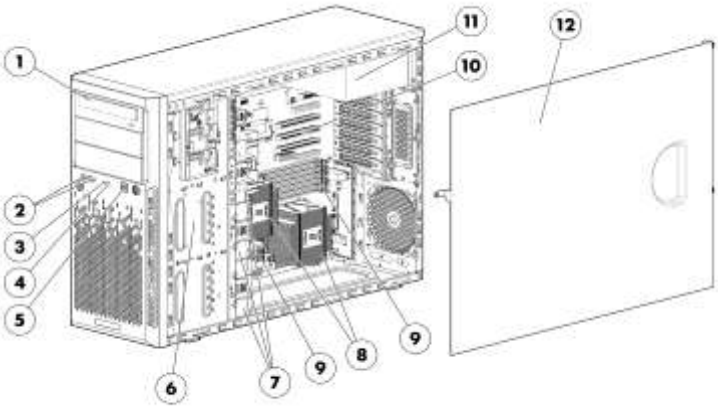
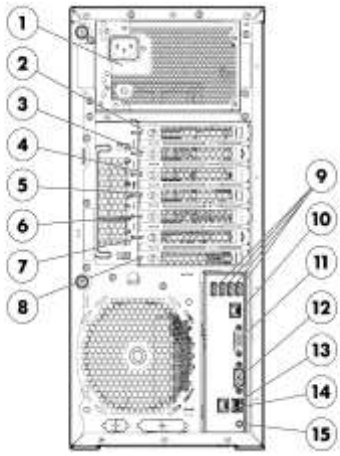
RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HP ProLiant ML350e Generation 8 (Gen8) v2

The HP ProLiant ML350e Gen8 v2 is a dual processor tower platform, which is built on the latest Intel® Xeon® E5-2400 v2 processors to create a unique system architecture. This unique architecture, as well as flexible deployment options, allows businesses to scale as needed so they can optimize their IT spending dollars. The HP ProLiant ML350e Gen8 v2 delivers the industry's most powerful embedded management technology, HP integrated Lights-Out 4 (iLO4), enabling businesses to manage the servers anytime and from anywhere.





Front View:

1. Optical Drive
2. USB2.0 Connectors (2)
3. Health LED
4. NIC Status LED
5. Power On/Standby Button and System Power LED
6. Drive Bays
7. Fans
8. Heat Sink
9. DIMM Slots
10. PCIe Slots
11. Non-hot-plug Power Supply
12. Access Panel

Rear View:

1. Non-hot-plug Power Supply
2. PCIe Slot 6 (for processor 1)
3. PCIe Slot 5 (for processor 1)
4. PCIe Slot 4 (for processor 2)
5. PCIe Slot 3 (for processor 2)
6. PCIe Slot 2 (for processor 1)
7. PCIe Slot 1 (for processor 1)
8. Slot Cover
9. USB 2.0 Connectors (4)
10. iLO Connector
11. Video Connector
12. Serial Connector
13. NIC Connector 1
14. NIC Connector 2
15. UID/LED button

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

E5-2400 v2 Series Processors

Ten-Core Processors
NOTE: All support up to 1600MHz DDR3 memory speeds.
Intel® Xeon® E5-2470 v2 (2.4GHz/10-core/95W/25MB) Processor

Eight-Core Processors
NOTE: All support up to 1600MHz DDR3 memory speeds.
Intel® Xeon® E5-2450 v2 (2.5GHz/8-core/95W/20MB) Processor
Intel® Xeon® E5-2440 v2 (1.9GHz/8-core/95W/20MB) Processor

Six-Core Processors
NOTE: All support up to 1600MHz DDR3 memory speeds.
Intel® Xeon® E5-2430 v2 (2.5GHz/6-core/80W/15MB) Processor
Intel® Xeon® E5-2420 v2 (2.2GHz/6-core/80W/15MB) Processor

Quad-Core Processors
NOTE: All support up to 1333MHz DDR3 memory speeds.
Intel® Xeon® E5-2407 v2 (2.4GHz/4-core/80W/10MB) Processor
Intel® Xeon® E5-2403 v2 (1.8GHz/4-core/80W/10MB) Processor

E5-2400 Series Processors

Eight-Core Processors
NOTE: All support up to 1600MHz DDR3 memory speeds.
Intel® Xeon® E5-2470 (2.3GHz/8-core/95W/20MB) Processor
Intel® Xeon® E5-2450 (2.1GHz/8-core/95W/20MB) Processor
Intel® Xeon® E5-2450L (1.8GHz/8-core/70W/20MB) Processor

Six-Core Processors
NOTE: All support up to 1333MHz DDR3 memory speeds.
Intel® Xeon® E5-2440 (2.4GHz/6-core/95W/15MB) Processor
Intel® Xeon® E5-2430 (2.2GHz/6-core/95W/15MB) Processor
Intel® Xeon® E5-2430L (2.0GHz/6-core/60W/15MB) Processor
Intel® Xeon® E5-2420 (1.9GHz/6-core/95W/15MB) Processor

Quad-Core Processors
NOTE: All support up to 1066MHz DDR3 memory speeds.
Intel® Xeon® E5-2407 (2.2GHz/4-core/80W/10MB) Processor
Intel® Xeon® E5-2403 (1.8GHz/4-core/80W/10MB) Processor

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, 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 (1 x 25MB) Level 3
NOTE: For Ten-core processors.

20MB (1 x 20MB) Level 3
NOTE: For Eight-core processors.

15MB (1 x 15MB) Level 3

Standard Features

	NOTE: For Six-core processors. 10MB (1 x 10MB) Level 3 **NOTE:** For Quad-core processors.
Chipset	Intel® C600 Chipset Intel® E5-2400 v2 Processor Family **NOTE:** For more information regarding Intel® chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/.
Upgradeability	Upgradeable to two processors **NOTE:** Total 8, 12, 16 or 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. Customer Advisory: ProLiant Servers-Instructions for Upgrading an HP ProLiant Gen8 Server from an Intel Xeon Processor E5-2400 to an Intel Xeon Processor E5-2400 v2. Up to 12 DIMM slots available for higher memory capacity Up to 16 SFF hard drives or 8 LFF hard drives for expanded storage 4 PCIe 3.0 and 2 PCIe 2.0 I/O slots for additional communications and storage expansion Redundant Power Supplies (92% and 94% efficiency) Tower to rack conversion Optical drive bays (up to 2)
On System Management Chipset	HP iLO (Firmware: HP iLO4) **NOTE:** For more information, visit: http://www.hp.com/go/ilo
Memory Protection	Advanced ECC Online Spare Lock-step mode
Memory One of the following depending on model	Type: HP SmartMemory DDR3 Registered (RDIMM) or Unbuffered (UDIMM) DIMM Slots Available: 12 DIMM slots (6 DIMM slots per CPU) Maximum (RDIMM): 192 GB (12 x 16 GB) RDIMMM Maximum (UDIMM): 96 GB (12 x 8 GB) UDIMM **NOTE:** HP memory from previous generation servers are not fully compatible with the HP ProLiant ML350e Gen8 v2 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 one processor is installed, only 6 DIMM slots are available. When populating with two processors 12 DIMM slots are available. **NOTE:** Depending on the memory configuration and processor model, the memory speed may run up to 1600MHz or at 1333MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: www.hp.com/go/ddr3memory-configurator. **NOTE:** Redundant PSU Kit (PN 738661-B21) is required for RDIMMs.
Network Controller	HP Ethernet 1Gb 2-port 361i Adapter

Standard Features

Expansion Slots

Expansion Slot #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
6	PCIe 2.0	x1	X4	0	Half Length/Full Height	Activated when installed with Processor 1
5	PCIe 2.0	x4	x8	0	Full-length/Full Height	Activated when installed with Processor 1
4	PCIe 3.0	X8	X16	32	Full Length/Full Height	Activated when installed with Processor 2
3	PCIe 3.0	x16	x16	32	Full Length/Full Height	Activated when installed with Processor 2
2	PCIe 3.0	X16	X16	0	Full Length/Full Height	Activated when installed with Processor 1
1	PCIe 3.0	X4	X8	0	Full Length/Full Height	Activated when installed with Processor 1

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

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).

Standard Features

	NOTE: For further information, please refer to HP's RBSU (ROM based setup utility) user guide: www.hp.com/support/rbsu.		
Storage Controller One of the following depending on model	HP Dynamic Smart Array B120i/512MB FBWC SATA Controller (RAID 0, 1, 1+0, Optional RAID 5)		
Internal Storage Devices	**Optical Drives**	HP Half-Height SATA DVD-ROM/RW Optical Drive **NOTE:** DVD ROM is standard in base tower models.	
	Hard Drives	None ship standard	
	Hard Drive Bays One of the following depending on model	(4) Non-hot plug LFF SATA HDD bays (4) Hot plug LFF SAS/SATA HDD bays; upgradable to (8) (8) Hot plug SFF SAS/SATA HDD bays; upgradable to (16) **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.	
Maximum Internal Storage One of the following depending on model	Hot Plug LFF SAS	32TB	8 x 4TB
	Hot Plug LFF SATA	32TB	8 x 4TB
	Hot Plug SFF SAS	19.2TB	16 x 1.2TB
	Hot Plug SFF SATA	16TB	16 x 1TB
	Non-Hot Plug LFF SATA	16TB	4 x 4TB
	Hot Plug SFF SAS SSD	1.6TB	16 x 100GB
	Hot Plug LFF SATA SSD	1TB	8 x 100GB
Interfaces	Serial	1	
	Video	1 (rear)	
	Network RJ-45 (Ethernet)	3 (1 dedicated for HP Integrated Lights-Out)	
	HP iLO Remote Management Network Port	1 Gb Dedicated	
	SD slot	1 (internal) **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	8 (2 front, 4 rear, 2 internal)	
Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Novell Certified IPMI 2.0, SMASH CLP, DCMI 1.0 compliant Microsoft® Logo certifications USB 2.0 Support SMBIOS 2.7.1		

Standard Features

Server Power Cords

ProLiant ML servers in a rack-mount configuration no longer ship standard with NEMA power cords that allow connection to 110V US wall outlets in a home or office. These servers are primarily connected to PDU's in data center racks so they now ship standard with only a PDU power cord (416151-B21). If a user wishes to power a ProLiant ML rack-mount server using a 110V receptacle (NEMA-15), the NEMA power cord must be ordered separately. The 12' cord (AF556A) or 6' cord (187335-001) can be purchased online at HP.COM. In a tower configuration, the servers ship standard with a 6' country specific NEMA power cord. If customers require a local power cord, they can check the power cord matrix for the appropriate country specific sku. Please see the following power cord matrix: http://www.hp.com/go/powercordmatrix.

Power Specifications

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

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

Common Slot Power Supplies

NOTE: The ML350e Gen8 v2 supports 460W and 750W 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: Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

HP's Common Slot (CS) power supplies allow for commonality of power supplies across a wide range of ProLiant and Integrity servers, as well as HP Storage solutions, and are designed to provide the highest power supply efficiency without degrading system performance. HP CS power supplies are tested by the Electric Power Research Institute (EPRI) and certified through the ECOS 80 Plus power supply program. HP CS power supply options provide efficiency ratings of up to 94% (80 Plus Platinum) and are available in power output options - 460W, 750W - 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 power supplies are required when enabling HP's Intelligent Power Discovery (IPD) solution. IPD is the first technology to create an automated, energy-aware network between IT systems and facilities. This allows your company to reclaim millions of dollars in wasted power capacity and downtime costs across data centers. For more information on HP's IPD solution, go to www.hp.com/go/ipd.

It is highly recommended that you use the HP Power Advisor in defining the "Right-Size" power supply for your needs. HP Power Advisor can be accessed at: www.hp.com/go/hppoweradvisor.
NOTE: The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 Plus independently tests power supply efficiency and publicly posts the results on 80Plus.org.

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

NOTE: Power Specification and Technical Content for supported power supplies can be found at:

Standard Features

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

System Fans	Two (2) Non-hot plug, non-redundant fans ship standard (support up to 3 fans). **NOTE:** Third fan is shipped with 2nd CPU Kit. Third fan is only required in 2P configurations.
Operating Systems and Virtualization Software Support for ProLiant Servers	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Canonical Ubuntu 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/ML350eGen8v2
Graphics	Integrated Matrox G200 video standard • 1280 x 1024 (32 bpp) • 1920 x 1200 (16 bpp) HP iLO 4 On System Management Memory • 16 MB Flash • 256 MB DDR 3 with ECC (112 MB after ECC and video)
Form Factor	Tower 5U Rackable with the purchase of tower to rack conversion tray kit

On System Management	HP iLO Management Engine: HP iLO Management Engine is a comprehensive set of embedded management features supporting the complete lifecycle of the server, from initial deployment, through ongoing management, to service alerting and remote support. HP iLO Management Engine comes standard on all HP ProLiant Gen8 servers. The HP iLO Management Engine portfolio includes:
	• **HP iLO**: The HP iLO (Integrated Lights-Out) management processor is the core foundation for the HP iLO Management Engine
	• **HP Agentless Management**: Provides built in server health monitoring and alerting capability without OS agents, that starts working the moment a power cord and an Ethernet cable are connected.
	• **HP Active Health System**: Always on, continuous monitoring for increased stability and shorter downtimes; 100% configuration history; Health and service alerts and easy export and upload to Service and Support.
	• **HP Intelligent Provisioning**: Lets customers provision and configure a single server without any separate media. No more SmartStart CDs or Smart Update Firmware DVD are needed.
	  ○ To start Intelligent Provisioning:
	  ○ Press the F10 key during the ProLiant Gen8 server boot process (also known as power on self test or POST).
	  ○ Please go to the Intelligent Provisioning website at

		www.hp.com/go/intelligentprovisioning for additional information and to view usage videos. ○ Use the Service Pack for ProLiant (SPP) at: www.hp.com/go/spp to get firmware and software updates. • **HP iLO Mobile App**: Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: www.hp.com/go/ilo/mobileapp **NOTE:** For more information, visit: http://www.hp.com/go/ilo or HP iLO Management Engine technologies whitepaper
HP Insight Management	HP Service Pack for ProLiant	HP Service Pack for ProLiant (SPP) and HP Smart Update Manager (HP SUM) provide a comprehensive approach to firmware and system software maintenance. Together they provide better operating stability and ensure maximum uptime. The SPP will be updated at a predictable cadence, typically coinciding with new HP server hardware launches. By enabling firmware to be updated online and integrating firmware and system software updates in one operation, HP SUM and the SPP offer faster updates of individual servers and dramatically faster updates of entire BladeSystem enclosures. Further improving system uptime and stability is the fact that HP provides 12 months of support for each Service Pack for ProLiant release. The user experience around HP SUM and the SPP has been improved in several ways, starting with the web download. A single web page provides access to a single download containing both the latest version of HP SUM and the latest SPP. Optional smaller subsets with only specific types of servers or specific operating systems are offered to save on download time. The HP SUM application provides a straightforward, intuitive user interface that guides the user through the steps of discovery, analyses and update, providing comprehensive information on available updates, criticality and interdependencies. This information is also available in reports. By providing the option of multiple local or shared repositories which can be easily updated from hp.com, HP SUM provides the tools to optimize stability and consistency throughout the company. While HP SUM and the SPP recommend the combinations of firmware and system software that HP has found to be the best practice, the application gives customers the flexibility to set their own specific baseline. The Service Pack for ProLiant has been rigorously tested with specific attention for interaction between firmware, drivers and agents both within the server as well as in interaction with the BladeSystem enclosure components (Onboard Administrator and Virtual Connect). This testing ensures the highest quality as well as providing the input for HP SUM to deploy updates taking into account all interdependencies, when determining the correct updates and order of update deployment. **NOTE:** The Service Pack for ProLiant (which includes HP SUM) can be downloaded from www.hp.com/go/spp/download. More information can be found: http://www.hp.com/go/SmartUpdate, www.hp.com/go/spp and http://www.hp.com/go/hpsum
Security	Power-on password	

Standard Features

Setup password
Serial interface control
Power switch security
Administrator's password

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 1-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 http://www.hp.com/go/insightcontrol. 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/iloadvanced
	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 (IaaS). **NOTE:** For more information, visit: http://www.hp.com/go/matrixoe
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	

Optional Features

software will cost-effectively protect you against disaster and ensure business continuity.

- **Data Archive and Migration Software**
  HP's storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.
- **Storage Resource Management Software (SRM)**
  HP's storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.
- **Data Replication Software**
  HP offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- **Storage Device Management Software**
  Maximize your investment in HP storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HP StoreVirtual VSA**
  With HP StoreVirtual VSA you can use the power of virtualization to turn a set of heterogeneous and disconnected physical disk drives in your servers and storage devices into a single pool of logical storage capacity.

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

HP Insight Online	HP Insight Online is a new addition to the HP Support Center for one stop, secure access to product and HP support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HP Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime. www.hp.com/go/insightonline
HP Proactive Insight experience	Prevent problems with innovative, automated monitoring tools and proactive services. The HP Proactive Insight experience consist of using Insight Online, Insight Remote Support, and Proactive Care Support Service as one integrated solution. The Proactive Insight experience provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: www.hp.com/go/proactiveinsightexperience
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, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches. For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express
HP Simple Configurator	SCE is a guided self service tool to help sales and non technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact HP's Customer Business Center or an Authorized Partner

Optional Features

for assistance. http://www.hp.com/products/configurator

Service and Support

Service and Support

HP Technology Services for Industry Standard Servers and BladeSystem
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

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

Supports maintaining 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: http://www.hp.com/go/factory-express.

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.
www.hp.com/services/dataprivacy

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

Service and Support

Get connected to HP to improve your support experience

Prevent problems with innovative, automated monitoring tools and proactive services. Combining 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: 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

Parts and Materials

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

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

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

For more information

To learn more on services for HP ProLiant 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: Not all models are available in all regions. Check with your local country HP offices for availability.

Entry Models

HP ProLiant ML350e Gen8 v2 E5-2403v2 1P 2GB-U B120i 460W PS Entry Server 740898-001	**Processor**	(1) Intel® Xeon® E5-2403 v2 (1.8GHz/4-core/80W/10MB) Processor
	Cache Memory	10MB (1 x 10MB) Level 3
	Memory	2GB (1 x 2GB) Unbuffered DIMMs
	Network Controller	HP Ethernet 1Gb 2-port 361i Adapter
	Storage Controller	HP Dynamic Smart Array B120i/ZM FBWC SATA Controller (RAID 0,1, 5, 10)
	Hard Drive	None ships standard
	Internal Storage	4 LFF Non-Hot Plug SATA HDD Bays only
	Optical Drive	None ships standard
	Power Supply	(1) 460 Watt Power Supply (non-hot plug, non-redundant)
	Fans	2 Non-Hot Plug, Non Redundant Fans
	Accessories	USB Keyboard and Mouse (None ship standard)
	Management	HP iLO Management Engine (standard) Optional: HP iLO Essentials or HP Insight Control
	Form Factor	Tower (5U)
	Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

Base Models

HP ProLiant ML350e Gen8 v2 E5-2407v2 1P 4GB-U 460W PS Base Server 748953-001	**Processor**	(1) Intel® Xeon® E5-2407 v2 (2.4GHz/4-core/80W/10MB) Processor
	Cache Memory	10MB (1 x 10MB) Level 3
	Memory	4GB (1 x 4GB) Unbuffered DIMMs
	Network Controller	HP Ethernet 1Gb 2-port 361i Adapter
	Storage Controller	HP Dynamic Smart Array B120i/512MB FBWC SATA Controller (RAID 0,1, 5, 10)
	Hard Drive	None ships standard
	Internal Storage	4 LFF Hot Plug SATA HDD Bays only
	Optical Drive	HP Half-Height SATA DVD-ROM Optical Drive
	Power Supply	(1) 460 Watt Power Supply (non-hot plug, non-redundant)
	Fans	2 Non-Hot Plug, Non Redundant Fans
	Accessories	USB Keyboard and Mouse ship standard
	Management	HP iLO Management Engine (standard) Optional: HP iLO Essentials or HP Insight Control
	Form Factor	Tower (5U)

Pre-configured Models

Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

Smart Buys

HP ProLiant ML350eGen8v2 E5-2403v2 8GB-U B120i 460W PS US Svr/S-Buy 749355-S01	**Processor**	(1) Intel® Xeon® E5-2403 v2 (1.8GHz/4-core/80W/10MB) Processor
	Cache Memory	10MB (1 x 10MB) Level 3
	Memory	8GB (2 x 4GB) Unbuffered DIMMs
	Network Controller	HP Ethernet 1Gb 2-port 361i Adapter
	Storage Controller	HP Dynamic Smart Array B120i/ZM SATA Controller (RAID 0, 1, 1+0)
	Hard Drive	None ships standard
	Internal Storage	4LFF Hot Plug HDD Bays
	Optical Drive	HP Half Height SATA DVD/RW Optical Drive
	Power Supply	(1) 460 Watt ATX Power Supply (non-hot plug, non-redundant)
	Fans	2 Non-Hot Plug, Non Redundant Fans
	Accessories	USB Keyboard and Mouse
	Management	HP iLO Management Engine (standard)
	Form Factor	Tower (5U)
	Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response
HP ProLiant ML350eGen8v2 E5-2420v2 8GB-U B120i 460W PS US Svr/S-Buy 749356-S01	**Processor**	(1) Intel® Xeon® E5-2420 v2 (2.2GHz/6-core/80W/15MB) Processor
	Cache Memory	15MB (1 x 15MB) Level 3
	Memory	8GB (2 x 4GB) Unbuffered DIMMs
	Network Controller	HP Ethernet 1Gb 2-port 361i Adapter
	Storage Controller	HP Dynamic Smart Array B120i/512MB FBWC SATA Controller (RAID 0,1, 5, 10)
	Hard Drive	None ships standard
	Internal Storage	4LFF Hot Plug HDD Bays
	Optical Drive	HP Half Height SATA DVD/RW Optical Drive
	Power Supply	(1) 460 Watt ATX Power Supply (non-hot plug, non-redundant)
	Fans	2 Non-Hot Plug, Non Redundant Fans
	Accessories	USB Keyboard and Mouse
	Management	HP iLO Management Engine (standard)
	Form Factor	Tower (5U)
	Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response
HP ProLiant ML350eGen8v2 E5-2440v2 2P 16GB-R P430/2GB 750W PS US Svr/S-Buy 749357-S01	**Processor**	(2) Intel® Xeon® E5-2440 v2 (1.9GHz/8-core/95W/20MB) Processor
	Cache Memory	20MB (1 x 20MB) Level 3
	Memory	16GB (2 x 8GB) 1600 RDIMMs
	Network Controller	HP Ethernet 1Gb 2-port 361i Adapter
	Storage Controller	HP Smart Array P430/2GB FBWC 6Gb 1-Port SAS Controller
	Hard Drive	None ships standard
	Internal Storage	(8) Hot plug SFF SAS/SATA HDD bays
	Optical Drive	HP Half Height SATA DVD/RW Optical Drive
	Power Supply	(1) 750 Watt Common Slot Platinum Plus Power Supply (Hot Plug, Redundant)
	Fans	3 Non-Hot Plug, Non Redundant Fans
	Accessories	USB Keyboard and Mouse

Smart Buys

Management	HP iLO Management Engine (standard)
Form Factor	Tower (5U)
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

Configuration Information - Factory Integrated Models

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.
NOTE: Factory Integrated Models must start with a CTO Server.
NOTE: FIO indicates that this option is only available as a factory installable option.
NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

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

HP Models

ML350e Gen8 v2 Tower Models

HP ProLiant ML350e Gen8 v2 Non-hot Plug 4 LFF Configure-to-order Server 740895-B21

Includes:

HP Ethernet 1Gb 2-port 361i Adapter
HP Dynamic Smart Array B120i/ZM SATA Controller (RAID 0/1/1+0)
Four (4) Non-Hot-Plug (LFF) SATA Drive Bays
Eight (8) USB ports
Six (6) PCIe slots
Two (2) Non-hot plug, non-redundant fans
HP iLO Management Engine (standard)
Tower (5U) form factor

HP ProLiant ML350e Gen8 v2 Hot Plug 4 LFF Configure-to-order Server 740896-B21

Includes:

HP Ethernet 1Gb 2-port 361i Adapter
HP Dynamic Smart Array B120i/ZM SATA Controller (RAID 0/1/1+0)
Four (4) Hot-Plug (LFF) SATA Drive Bays
Eight (8) USB ports
Six (6) PCIe slots
Two (2) Non-hot plug, non-redundant fans
HP iLO Management Engine (standard)
Tower (5U) form factor

HP ProLiant ML350e Gen8 v2 Hot Plug 8 SFF Configure-to-order Server 740897-B21

Includes:

HP Ethernet 1Gb 2-port 361i Adapter
HP Dynamic Smart ArrayB120i/ZM SATA Controller (RAID 0/1/1+0)
Eight (8) Hot-Plug (SFF) SATA Drive Bays
NOTE: A SAS controller is required to support 8 SFF drives.
Eight (8) USB ports
Six (6) PCIe slots
Two (2) Non-hot plug, non-redundant fans
HP iLO Management Engine (standard)
Tower (5U) form factor

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

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_na/14225_na.html (Worldwide)
NOTE: Redundant PSU Kit (PN: 738661-B21) is required for RDIMMs, whether 1 or 2 CPUs are populated.

Configuration Information - Factory Integrated Models

Registered DIMMs (RDIMMs) **NOTE:** The following memory is supported by the E5-2400 v2 series Processors.	
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 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713985-B21
Registered DIMMs (RDIMMs) **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 Low Voltage Memory Kit	647893-B21
HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647895-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647897-B21
HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647899-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	690802-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647901-B21
HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672631-B21
Unbuffered with ECC DIMMs (UDIMMs) **NOTE:** The following memory is supported by the E5-2400 v2 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
Unbuffered with ECC DIMMs (UDIMMs) **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
NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator. **NOTE:** Kits described as LP include Low Power DIMMs. For more information on	

Configuration Information - Factory Integrated Models

	ProLiant Energy Efficient Features, see: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/	
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 wattage/ model. **NOTE:** Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.	
	HP Common Slot Platinum Plus Power Supply Kits **NOTE:** The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.	
	HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit	656362-B21
	HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit	656363-B21
	Enablement Kit	
	HP ML350e v2 Redundant Power Supply **NOTE:** ML350e v2 Redundant Power Supply Kit (PN: 738661-B21) is required for any common slot power supply. **NOTE:** Redundant PSU Kit (PN: 738661-B21) is required for any 2P configuration. **NOTE:** Redundant PSU Kit (PN: 738661-B21) is required for RDIMMs, whether 1 or 2 CPUs are populated.	738661-B21
	NOTE: Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html	

Step 3: Choose Additional Factory Integratable Options

HP Insight Software	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	C6N36A
HP Storage Controller	**Optional Upgrades**	
	HP 4GB Flash Backed Write Cache FIO Kit for P-series Smart Array Controllers	698537-B21

Step 4: Choose Additional Options for Factory Integration

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

Core Options

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

HP Processors	**E5-2400 v2 Series Processors** **NOTE:** Redundant PSU Kit (PN: 738661-B21) is required for any 2P configuration.	
	Ten-Core Processors **NOTE:** All support up to 1600MHz memory speeds.	
	HP ML350e Gen8 v2 Intel® Xeon® E5-2470v2 (2.4GHz/10-core/25MB/95W) Processor Kit	701849-B21
	Eight-Core Processors **NOTE:** All support up to 1600MHz DDR3 memory speeds.	
	HP ML350e Gen8 v2 Intel® Xeon® E5-2450v2 (2.5GHz/8-core/20MB/95W) Processor Kit	701847-B21
	HP ML350e Gen8 v2 Intel® Xeon® E5-2440v2 (1.9GHz/8-core/20MB/95W) Processor Kit	701845-B21
	Six-Core Processors **NOTE:** All support up to 1600MHz DDR3 memory speeds.	
	HP ML350e Gen8 v2 Intel® Xeon® E5-2430v2 (2.5GHz/6-core/15MB/80W) Processor Kit	701843-B21
	HP ML350e Gen8 v2 Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/80W) Processor Kit	701841-B21
	Quad-Core Processors **NOTE:** All support up to 1333MHz DDR3 memory speeds.	
	HP ML350e Gen8 v2 Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/80W) Processor Kit	701839-B21
	HP ML350e Gen8 v2 Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W) Processor Kit	701837-B21
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_na/14225_na.html **NOTE:** Redundant PSU Kit (PN: 738661-B21) is required for RDIMMs, whether 1 or 2 CPUs are populated.	
	Registered DIMMs (RDIMMs) **NOTE:** The following memory is supported by the E5-2400 v2 series Processors.	
	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 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	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 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

Core Options

	HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	690802-B21
	HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647901-B21
	HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672631-B21
	Unbuffered with ECC DIMMs (UDIMMs)	
	NOTE: The following memory is supported by the E5-2400 v2 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
	NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator. **NOTE:** Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/	
HP Optical Drives	HP Half-Height SATA DVD ROM JackBlack Optical Drive	624189-B21
	HP Half-Height SATA DVD RW JackBlack Optical Drive	624192-B21
HP Hard Drives	**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.	
	12G SAS Hot Plug SmartDrive LFF (3.5-inch) Converter Enterprise Drives	
	HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
	HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737394-B21
	HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737261-B21

Core Options

12G SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives	
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) 10K SC Enterprise Drives	
HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
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
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 SFF (3.5-inch) SC Midline 512e Drives	
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-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 Hard Drive	793671-B21
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 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
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
12G SAS Hot Plug SFF (2.5-inch) SC 512e HDD	
HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-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
HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12244_na/12244_na.html	
6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-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	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
6G SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659339-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659337-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659341-B21
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	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793667-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793683-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628065-B21
NOTE: SATA hard drives have a 1-year warranty. Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13021_na/13021_na.html	
12G SAS Hot plug LFF (3.5inch) SC HDD	
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793699-B21
12G SAS Hot Plug VE SFF (2.5-inch) SC EV SSD	
HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762263-B21
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762261-B21
HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	748387-B21
12G SAS Hot Plug VE SFF (2.5-inch) SCC EV SSD	
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 Wty Solid State Drive	762270-B21
12G SAS High Endurance Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives	

Core Options

HP 400GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive **NOTE:** This drive supports Gen8 servers only.	741155-B21
12G SAS Hot Plug SFF (2.5-inch) ENT Mainstream SC H2 Solid State Drives	
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779176-B21
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779172-B21
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779168-B21
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779164-B21
12G SAS Hot Plug SFF (2.5-inch) SC Read/Write Intensive Solid State Drives	
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
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802582-B21
HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802578-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Boot Solid State Drives	
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	717965-B21
HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734360-B21
6G SATA Hot Plug LFF Value Endurance (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 LFF Value Endurance (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 SFF Value Endurance (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 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756636-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756621-B21
6G SATA Hot Plug SFF (2.5-inch) SC Enterprise Value M1 Solid State Drives	
HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764929-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid	764927-B21

Core Options

State Drive	
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764925-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764923-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	757339-B21
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 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717969-B21
6G SATA Hot Plug LFF Value Endurance (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 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718183-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718177-B21
6G SATA Hot Plug SFF Light Endurance (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 LFF Light Endurance (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 ME Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives	
HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691868-B21
HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691866-B21
HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691864-B21
HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691862-B21
6G SATA ME Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives	
HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691860-B21
HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691856-B21
HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691854-B21

Core Options

	HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691852-B21
	6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives	
	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	
	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_na/14038_na.html	
	Hard Drive Kits	
	NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server. **NOTE:** Mixing of SFF and LFF drive cages is not allowed. **NOTE:** A second SFF Hot Plug Drive Cage requires a separate Smart Array controller. A second LFF Hot Plug Drive cage can be supported with a P222, or both LFF drive cages can be supported with a single P430.	
	HP Large Form Factor Hard Drive Blank Kit	666986-B21
	HP Small Form Factor Hard Drive Blank Kit	666987-B21
HP Networking	**Gigabit Ethernet adapters**	
	HP NC112T PCI Express Gigabit Server Adapter	503746-B21
	HP NC365T 4-port Ethernet Server Adapter	593722-B21
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
	10 Gigabit Ethernet Adapters **NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter. **NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. See cables/options below.	
	HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
	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
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs	
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 wattage/ model. **NOTE:** Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.	

Core Options

	HP Common Slot Platinum Plus Power Supply Kits **NOTE:** The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.	
	HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit	656362-B21
	HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit	656363-B21
	NOTE: Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html	
HP Computation and Graphics Accelerators	NVIDIA Quadro K2000 PCIe Graphics Adapter	753959-B21

Additional Options

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

HP Insight Software	**HP Insight Control**	
	HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	C6N27A
	HP Insight Control Server Provisioning Media Kit	BD883A
	HP Insight Management Media Kit	C6N31A
	NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key. **NOTE:** Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. **NOTE:** Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/insightupdates. **NOTE:** For additional license options please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_na/12631_na.html	
	HP Integrated Lights-Out (iLO)	
	HP Integrated Lights-Out (iLO) Advanced for ProLiant	
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Electronic License	TA850AAE
	HP iLO Advanced Electronic License with 3yr 24x7 Tech Support and Updates	BD506AAE
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
	HP iLO Essentials	
	HP iLO Advanced 1 Server License with 3yr 24x7 Tech Support and Updates	BD505A
	NOTE: For additional license options please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/14276_na/14276_na.html **NOTE:** For more information, visit: http://www.hp.com/go/ilo.	
HP PCIe Workload Accelerator Options	**Mainstream Endurance (ME) PCIe Workload Accelerators**	
	HP 1.4TB HH/HL Mainstream Endurance (ME) PCIe Workload Accelerator	729307-B21
	HP 700GB HH/HL Mainstream Endurance (ME) PCIe Workload Accelerator	729305-B21
	High Endurance (HE) PCIe Workload Accelerators	
	HP 700GB HH/HL High Endurance (HE) PCIe Workload Accelerator	708090-B21
	HP 350GB HH/HL High Endurance (HE) PCIe Workload Accelerator	708088-B21
	Light Endurance (LE) PCIe Workload Accelerators	
	HP 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator	775672-B21
	HP 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775670-B21
	HP 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775668-B21
	HP 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775666-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14528_na/14528_na.html	
HP Storage Controllers	**SAS Controllers**	
	HP Smart Array P222 Controller	

Additional Options

	HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller	631667-B21
	HP Smart Array P430 Controller	
	HP Smart Array P430/2GB FBWC 12Gb 1-port Int SAS Controller	698529-B21
	HP Smart Array P431 Controller	
	HP Smart Array P431/2GB FBWC 12Gb 2-ports Ext SAS Controller	698531-B21
	Optional Upgrades	
	HP 512MB B-series 36 inch Dynamic Smart Array Flash Backed Write Cache for ML/DL **NOTE:** This cache option provides RAID 5 for the integrated Dynamic Smart Array B120i.	631922-B21
	HP Tower to Rack Conversion Tray Universal Kit	417705-B21
	HP PCI Baffle Kit **NOTE:** The PCI Baffle Kit is required whenever a PCI option card (NIC, Smart Array Controller, etc.) is installed in a PCIe slot. Note, only 1 PCI Baffle Kit per system is required if multiple PCI cards are installed.	738655-B21
	HP SmartCache No Media 24x7 Technical Support 1 Svr License	D7S26A
	HP SmartCache No Media 24x7 Technical Support Flexible License	D7S27A
	HP SmartCache No Media 24x7 Technical Support Electronic License	D7S27AAE
	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/14624_div/14624_div.html (Smart Array P430 Controller) http://h18000.www1.hp.com/products/quickspecs/14625_div/14625_div.html (Smart Array P431 Controller) http://h18000.www1.hp.com/products/quickspecs/14744_div/14744_div.html (Smart Array P830 Controller)	
	HP Host Bus Adapters	
	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 221) 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)	
HP Secure Encryption	HP Secure Encryption No Media E-LTU per Drive	D8S85AAE
	HP Secure Encryption No Media Flexible License per Drive	D8S84A
	NOTE: HP Secure Encryption is supported on the HP Smart Array P731m and the P230i as an option. HP Secure Encryption licensing is based on the number of physical drives requiring encryption.	

Additional Options

	NOTE: For more information about HP Secure Encryption, go to www.hp.com/go/hpsecureencryption.	
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 www.hp.com/go/ebs. **NOTE:** All internal tape drives listed are only supported with the non-hot plug, non-redundant ATX power supply. The internal drives not are supported in any hot-plug, redundant power supply configuration.	
	HP StoreEver LTO-3 Ultrium 920 SAS Internal Tape Drive	EH847B
	HP StoreEver LTO-4 Ultrium 1760 SAS Internal WW Tape Drive	EH919B
	HP StoreEver LTO-4 Ultrium 1760 SCSI Internal Tape Drive	EH921B
	HP StoreEver LTO-5 Ultrium 3000 SAS Internal Tape Drive	EH957B
	HP StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
	HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit	C0L99A
	HP StoreEver LTO-6 Ultrium 6650 SAS Internal Tape Drive	EH963A
	HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
	HP StoreEver LTO-6 Ultrium 6250 Internal Tape Drive	EH969A
	HP StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
	HP StoreEver 1/8 G2 LTO-6 Ultrium 6250 FC Tape Autoloader	C0H19A
HP Tape Storage Systems	**HP StoreEver MSL6480**	
	HP StoreEver MSL6480 Scalable Base Module	QU625A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14604_na/14604_na.html	
HP Disk Storage Systems	**Disk Enclosures**	
	HP D3600 Enclosure	QW968A
	NOTE: See the D3000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/14866_na/14866_na.html (Worldwide)	
	HP D3700 Enclosure	QW967A
	NOTE: See the D3000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/14866_na/14866_na.html	
	HP D2600 Disk Enclosure	AJ940A
	NOTE: See the D2000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/13404_na/13404_na.html	
	HP D2700 Disk Enclosure	AJ941A
	NOTE: See the D2000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/13404_na/13404_na.html	
	HP D6000 Dual I/O Module Disk Enclosure	QQ695A
	NOTE: See the D6000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/14419_na/14419_na.html	

Additional Options

HP Storage Options	**QLogic Fibre Channel HBAs**	
	HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
	HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A
	Converged Network Adapter	
	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 Direct Flow Uninterruptible Power Systems	HP DirectFlow UPS Management Card **NOTE:** Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/xxxxx_na/xxxxx_na.html	QW971A
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 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
	HP 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	G9Y76A
	NOTE: All Input/Output Modules support dual output outlets except the AF484A.	
	Power Unit (2U UPS)	
	NOTE: #0D1 will appear after the part number on the sales order if HP factory integration is indicated.	
	HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	Input/Output Module Options for 2U 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 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF486A
	HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF487A
	HP 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	D9Q02A
	HP 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module	AF484A

Additional Options

	NOTE: All Input/Output Modules support dual output outlets except the AF484A.	
	Battery Pack Options	
	NOTE: Choose up to two Battery Packs per UPS (must be the same). **NOTE**: #0D1 will appear after the part number on the sales order if HP factory integration is indicated.	
	HP DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack	AF480A
	HP DirectFlow UPS - 3U Rackmount VRLA Battery Pack	AF482A
	NOTE: Please see the QuickSpecs for additional information: HP DirectFlow Three Phase Uninterruptible Power System	
	HP Tower UPS	
	HP T750 G4 UPS Models	
	HP T750 G4 NA/JP Uninterruptible Power System	J2P85A
	HP T1000 G4 UPS Models	
	HP T1000 G4 NA/JP Uninterruptible Power System	J2P86A
	HP T1500 G4 UPS Models	
	HP T1500 G4 NA/JP Uninterruptible Power System	J2P87A
	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 Rack Models	
	HP R1500 G4 Uninterruptible Power Supply (UPS)	
	HP R1500 G4 NA Uninterruptible Power System	J2Q99A
	R7000	
	HP R7KVA 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
	R5000	
	HP R5KVA 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
	NOTE: Please see the QuickSpecs for additional information: HP Line Interactive Single Phase UPS	
	NOTE: For additional information on HP Uninterruptible Power Systems please go to: www.hp.com/servers/rackups. **NOTE:** For additional information on sizing your server, please reference: http://www.upssizer.com. **NOTE:** Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords.	
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

Additional Options

	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 8.3kVA 208 Volt CS8265C Input (30xC13/6xC19) NA/JP Basic PDU	H5M60A
	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 Basic Power Distribution Unit: Full Height Version	
	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 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14557_na/14557_na.html	
	NOTE: Additional HP Power Distribution Units are available. For a complete list of all HP PDUs and additional information please visit www.hp.com/go/rackandpower.	
HP Remote Monitored Power Distribution Units (mPDU)	**HP Remote Monitored Power Distribution Unit: 1U Version**	
	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 Remote Monitored Power Distribution Unit: Mid Height Version	
	HP 4.9kVA 208 Volt L6-30 Input (20xC13/4xC19) NA/JP Monitored PDU	D9N47A
	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 Remote Monitored Power Distribution Unit: Full Height Version	
	HP 8.3kVA 208 Volt CS8265C Input (30xC13/3xC19) NA Monitored PDU	D9N49A
	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 17.3kVA 208 Volt IEC309 60A 3-Phase Watertight Input (12xC13/12xC19) NA/JP Monitored PDU	G9Z07A
	HP 19.9kVA 480 Volt 3-Phase (30 Outlet) NA Monitored PDU	D9N63A

Additional Options

	HP Environmental Sensor for Remote Monitored PDUs	
	HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A
	HP Remote Monitored Power Distribution Unit: 1U Version	
	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
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14669_na/14669_na.html	
HP Intelligent Power Distribution Units (iPDU)	**iPDU Core Units**	
	HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
	HP 8.3kVA 40A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF521A
	HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
	HP 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
	HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
	HP 17.3kVA 48A 208V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF535A
	HP 17.3kVA 24A 415V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF537A
	HP 22kVA 32A 400V Three Phase 12 Outlet Core INTL Intelligent Power Distribution Unit	AF538A
	iPDU Kits with Standard Extension Bars	
	HP 4.9kVA 24A Single Phase NA/JP Intelligent Modular Power Distribution Kit	AF531A
	HP 8.6kVA 24A Three Phase NA/JP Intelligent Modular Power Distribution Kit	AF532A
	iPDU Extension Bars	
	HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
	HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13650_na/13650_na.html	
HP Managed Power Distribution Units (maPDU)	**Half Height Models**	
	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 information: http://www8.hp.com/h20195/v2/GetHtml.aspx?docname=c04376673	
HP Rack Series	**HP Intelligent Series Rack**	

Additional Options

	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 642 1200mm Pallet Intelligent Rack	BW907A
	HP 642 1200mm Shock Intelligent Rack	BW908A
	HP 647 1075mm Pallet Intelligent Rack	BW911A
	HP 647 1075mm Shock Intelligent Rack	BW912A
	HP 647 1200mm Pallet Intelligent Rack	BW913A
	HP 647 1200mm Shock Intelligent Rack	BW914A
	NOTE: Please see the QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/14223_na/14223_na.html	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.	
HP Rack Options	**HP LCD8500 1U Rackmount Console Kit Models**	
	HP LCD8500 1U US Rackmount Console Kit	AF630A
	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 USB Keyboard and Mouse	
	HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13792_na/13792_na.html	
	HP Server Console Switches	
	HP USB Remote Access Key for G3 KVM Console Switches	AF650A
	HP 0x1x8 G3 KVM Console Switch	AF651A
	HP 0x2x16 G3 KVM Console Switch	AF652A
	HP TAA 0x2x16 G3 KVM Console Switch	AF653A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/11834_na/11834_na.html	
	Rack Kits	
	HP Tower to Rack Conversion Tray Universal Kit	417705-B21
HP USB and SD Options	**HP Flash Media Kits for USB Drives**	
	NOTE: HP qualified blank USB key for use with HP ProLiant servers that support the VMware virtualization environment and other HP value-add software. HP recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HP VMware Getting Started Guide for installation instructions.	
	HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HP Enterprise Mainstream Flash Media Kits for Memory Cards	

Additional Options

	HP 8GB SD Enterprise Mainstream Flash Media Kit	726113-B21
	HP 32GB SD Enterprise Mainstream Flash Media Kit	700136-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13971_na/13971_na.html	
HP Care Pack Services	**Proactive Care**	
	NOTE: Collaborative Support plus Proactive services delivered by the onshore, local language Advanced Solution Center (ASC), end-to-end case ownership from a Technical Solution Specialists and Technical Account Manager who remotely delivers firmware/software revision management, proactive scans and incident trend reports. Recommended for customers running a virtualized infrastructure and/or customers who desire an enhanced call support experience.	
	HP 3 year 4 hour 24x7 ProLiant ML350e Proactive Care Service	U6C93E
	HP 3 year 4 hour 24x7 with Defective Media Retention ProLiant ML350e Proactive Care Service	U6C94E
	HP 3year 4-Hour 24x7 with Comprehensive Defective Material Retention ML350e ProactiveCare Service	U9F16E
	Foundation Care	
	HP 3 year 24x7 ML350e Foundation Care Service	U2FU0E
	HP 3 year 24x7 with Defective Media Retention ML350e Foundation Care Service	U2FU1E
	HP 3 year 24x7 with Comprehensive Defective Material Retention ML350e Foundation Care Service	U2FU2E
	HP 3 year 4 hour 24x7 ProLiant ML350e Collaborative Support	U6C91E
	HP 3 year 4 hour 24x7 with Defective Media Retention ProLiant ML350e Collaborative Support	U6C92E
	HP 3 year 6 hour Call to Repair 24x7 ProLiant ML350e Collaborative Support	U6C97E
	HP 3 year 6 hour CalltoRepair 24x7 w/Defective Media Retention ProLiant ML350e Collaborative Support	U6C98E
	Installation Services	
	NOTE: Reduce the time required to get your system up and running and help minimize disruptions to your business.	
	HP Installation ML350e/ML150 Service	U6D41E
	HP Startup ML350e/ML150 Service	U6D43E
	NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack	

Memory

NOTE: Memory configurations listed do not apply to "Factory Integrated Models".

DDR3 memory population guidelines

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

General 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, balance the total memory capacity between all installed processors
  - Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel
  - Heaviest load (DIMM with most ranks) within a channel goes furthest from the processor
- Do not mix UDIMMs or RDIMMs
- DIMMs of different voltages (1.35V & 1.5V) may be mixed in any order
  - The system will power them at the higher voltage
- DIMMs of different speed grades may be mixed in any order
  - The system will select a common optimal speed
- Memory speed is a function of the processor QPI bus speed.

Population Guidelines:

- There are three (3) channels per processor; six (6) channels per server
- There are two (2) DIMM slots for each memory channel; twelve (12) total slots
- Memory channel 1 consists of the two (2) DIMMs that are furthest from the processor
- Memory channel 3 consists of the two (2) DIMMs that are closest to the processor

DIMM slot/capacity/populated speed table																			
DIMM Type ->	**Registered DIMMS (RDIMMs)**										**Unbuffered with ECC DIMMs (UDIMMs)**								
DIMM Rank ->	**Single Rank (1R)**				**Dual Rank (2R)**						**Single Rank (1R)**			**Dual Rank (2R)**					
DIMM Capacity ->	4GB	4GB	4GB	8GB	8GB	8GB	8GB	16GB	16GB	16GB	2GB	2GB	2GB	4GB	4GB	4GB	8GB	8GB	8GB
DIMM Native Speed (MHz) ->	1333	1600	1600	1600	1333	1600	1600	1333	1600	1600	1333	1600	1600	1333	1600	1600	1333	1600	1600
Voltage	LV	Std	LV	Std	LV	Std	LV	LV	Std	LV	LV	Std	LV	LV	Std	LV	LV	Std	LV
SLOTS THAT CAN BE POPULATED																			
12 slot servers	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
MAXIMUM CAPACITY (GB)*																			
12 slot servers	48	48	48	96	96	96	96	192	192	192	24	24	24	48	48	48	96	96	96

Memory

POPULATED DIMM SPEED (MHz)																			
1 DIMM Per Channel	1333	1600	1600	1600	1333	1600	1600	1333	1600	1600	1333	1600	1600	1333	1600	1600	1333	1600	1600
2 DIMM Per Channel	1333	1600	1600	1600	1333	1600	1600	1333	1600	1600	1333**	1600	1600	1333**	1600	1600	1333**	1600	1600
Please note: Memory speed is a function of the processor QPI bus speed. * Maximum capacity will vary based on individual server platform qualification schedule ** For HP SmartMemory, UDIMM is supported at 2DPC@DDR3-1333. Third party memory may only support up to 2DPC@DDR3-1066.																			

DIMM slot and configuration diagrams

Basic memory slot & population diagram

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

12 DIMM SLOTS (6 per CPU node)					
	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A	1	A	Chnl 1
	5	D	2	D	
Chnl 2	4	B	3	B	Chnl 2
	3	E	4	E	
Chnl 3	2	C	5	C	Chnl 3
	1	F	6	F	

Standard memory configuration (1 CPU model) - Entry models

- 2GB, consisting of one (1) 2GB single-rank PC3L-10600E-9 UDIMM

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 2GB UDIMM	1	A; empty	Chnl 1
	5	D; empty	2	D; empty	
Chnl 2	4	B; empty	3	B; empty	Chnl 2
	3	E; empty	4	E; empty	
Chnl 3	2	C; empty	5	C; empty	Chnl 3
	1	F; empty	6	F; empty	

Standard memory configuration (1 CPU model) - Base models

Memory

- 4GB, consisting of one (1) 4GB dual-rank PC3L-10600E-9 UDIMM

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 4GB UDIMM	1	A; empty	Chnl 1
	5	D; empty	2	D; empty	
Chnl 2	4	B; empty	3	B; empty	Chnl 2
	3	E; empty	4	E; empty	
Chnl 3	2	C; empty	5	C; empty	Chnl 3
	1	F; empty	6	F; empty	

Standard memory configuration (1 CPU model) - Performance models

- 8GB, consisting of two (2) 4GB dual-rank PC3L-10600E-9 UDIMMs

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 4GB UDIMM	1	A; empty	Chnl 1
	5	D; empty	2	D; empty	
Chnl 2	4	B; 4GB UDIMM	3	B; empty	Chnl 2
	3	E; empty	4	E; empty	
Chnl 3	2	C; empty	5	C; empty	Chnl 3
	1	F; empty	6	F; empty	

RDIMM maximum configuration (1 CPU model)

- 96GB, consisting of six (6) 16GB dual-rank PC3L-10600R-9 RDIMMs

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 16GB RDIMM	1	A; empty	Chnl 1
	5	D; 16GB RDIMM	2	D; empty	
Chnl 2	4	B; 16GB RDIMM	3	B; empty	Chnl 2
	3	E; 16GB RDIMM	4	E; empty	
Chnl 3	2	C; 16GB RDIMM	5	C; empty	Chnl 3
	1	F; 16GB RDIMM	6	F; empty	

UDIMM maximum configuration (1 CPU model)

Memory

- 48GB, consisting of six (6) 8GB dual-rank PC3L-10600E-9 UDIMMs

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 8GB RDIMM	1	A; empty	Chnl 1
	5	D; 8GB RDIMM	2	D; empty	
Chnl 2	4	B; 8GB RDIMM	3	B; empty	Chnl 2
	3	E; 8GB RDIMM	4	E; empty	
Chnl 3	2	C; 8GB RDIMM	5	C; empty	Chnl 3
	1	F; 8GB RDIMM	6	F; empty	

RDIMM maximum configuration (2 CPU model)

- 192GB, consisting of twenty (12) 16GB dual-rank PC3L-10600R-9 RDIMMs

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 16GB RDIMM	1	A; 16GB RDIMM	Chnl 1
	5	D; 16GB RDIMM	2	D; 16GB RDIMM	
Chnl 2	4	B; 16GB RDIMM	3	B; 16GB RDIMM	Chnl 2
	3	E; 16GB RDIMM	4	E; 16GB RDIMM	
Chnl 3	2	C; 16GB RDIMM	5	C; 16GB RDIMM	Chnl 3
	1	F; 16GB RDIMM	6	F; 16GB RDIMM	

UDIMM maximum configuration (2 CPU model)

- 96GB, consisting of twelve (12) 8GB dual-rank PC3L-10600E-9 UDIMMs

	Processor 1		Processor 2		
	slot #	population order	slot #	population order	
Chnl 1	6	A; 8GB RDIMM	1	A; 8GB RDIMM	Chnl 1
	5	D; 8GB RDIMM	2	D; 8GB RDIMM	
Chnl 2	4	B; 8GB RDIMM	3	B; 8GB RDIMM	Chnl 2
	3	E; 8GB RDIMM	4	E; 8GB RDIMM	
Chnl 3	2	C; 8GB RDIMM	5	C; 8GB RDIMM	Chnl 3
	1	F; 8GB RDIMM	6	F; 8GB RDIMM	

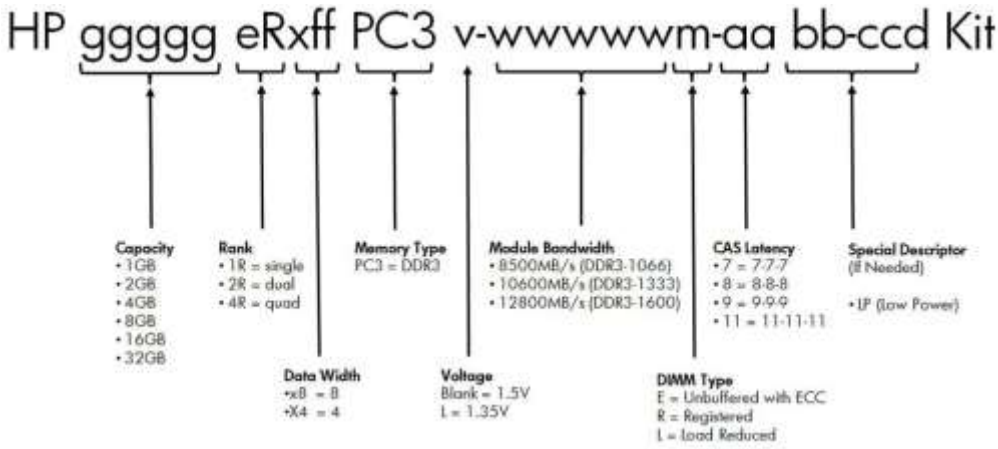
NOTE: Capacity references are rounded to the common Gigabyte values.

- 1GB = 1024MB

Memory

- 2GB = 2048MB
- 4GB = 4096MB
- 8GB = 8192MB
- 16GB = 16384MB

DDR3 memory options part number decoder



Following are memory options available from HP:

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_na/14225_na.html

NOTE: Redundant PSU Kit (PN: 738661-B21) is required for RDIMMs, whether 1 or 2 CPUs are populated.

Registered DIMMs (RDIMMs)

NOTE: The following memory is supported by the E5-2400 v2 series Processors.

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 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713985-B21

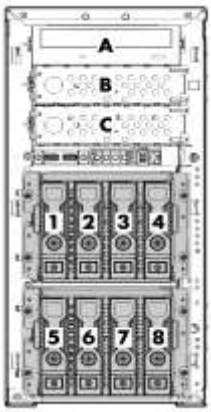
NOTE: The following memory is supported by the E5-2400 series Processors.

HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 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

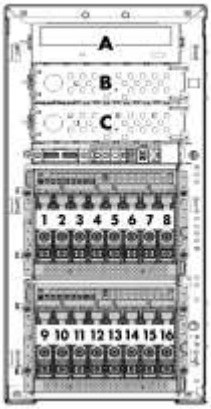
Memory

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 E5-2400 v2 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
NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator. **NOTE:** Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/	

Storage



A	Optical Drive (standard with BTO, optional with CTO)
B	Optional Media Bay
C	Optional Media Bay
1-4	Standard LFF Drive Cage
5-8	Optional LFF Drive Cage (only available with hot-plug models)



A	Optical Drive
B	Optional Media Bay
C	Optional Media Bay
1-8	Standard SFF Drive Cage
9-16	Optional SFF Drive Cage

Technical Specifications

System Unit	**Dimensions** (H x W x D) (with feet/bezel)	16.93 x 7.87 x 24.8 in (43 x 20 x 63 cm)	
	Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	72.34 lb (27 kg)
		Minimum (one hard drive, power supply, and processor installed)	53.58lb (20 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 to 240 VAC
		Rated Input Current	7.1 Amps (at 120VAC) to 3.5 Amps (at 240 VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	852 W
	BTU Rating	Maximum	460W - 1773 BTU / hr (at 120 VAC), 1715 (at 240 VAC) 750W - 2892 BTU / hr (at 120 VAC), 2797 (at 240 VAC) 1200W - 3530 BTU / hr (at 120 VAC), 4600 (at 240 VAC)
	Power Supply Output (per power supply)	Rated Steady-State Power	460(750) W (at 100 VAC) 460(750) W (at 200 VAC)
		Maximum Peak Power	460(750) W (at 100 VAC) 460(750) W (at 200 VAC)
	System Inlet Temperature	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
		Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
		Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Technical Specifications

	Acoustic Noise	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). Idle **L** WAd: 4.1 Bets (1P 460W ATX); 3.7 Bets (1P 460W RPSU) **L** pAm: 25 dBA (1P 460W ATX); 21 dBA (1P 460W RPSU) Operating **L** WAd: 4.1 Bets (1P 460W ATX); 4.0 Bets (1P 460W RPSU) **L** pAm: 26 dBA (1P 460W ATX); 21 dBA (1P 460W RPSU) **NOTE:** Configurations tested for Base models included one (1) 1TB non-hot plug LFF SATA HDD and Windows 2008 Enterprise 64-bit. **NOTE:** The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.
	Emissions Classification (EMC)	**FCC Rating**: Class A **Normative Standards**: CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1 **NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
HP Dynamic Smart Array B120i Controller	**Dimensions**	Embedded
	Disk Drive Interface - Transfer rate	Up to 6Gb/s SATA (Serial ATA)
	Connectors	6 internal SATA connectors
	Server Interface	x4 PCIe 2.0
	SATA Speed	6Gb/s SATA links
	Cache Memory	Zero Memory RAID has no cache memory optional 40-bit 512MB ECC protected Flash Backed Write Cache (FBWC)
	Logical Drives Supported	Up to 8 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.
HP Ethernet 1Gb 2-port 361i Adapter	**Network Interface Compatibility**	10Base-T/100Base-TX/1000Base-TX IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX

Technical Specifications

		IEEE 1588, IEEE 802.1AS	
		IEEE 802.3az - Energy Efficient Ethernet (EEE)	
	Data Transfer Method	PCI Express V2.0, 5.0 GT/s with x2 link (fixed)	
	Controller	Intel I350 Powerville	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 20 Mb/s Combined
		10Base-T (Full-Duplex)	20 Mb/s per port, 40 Mb/s Combined
		100Base-TX (Half-Duplex)	100 Mb/s per port, 200 Mb/s Combined
		100Base-TX (Full-Duplex)	200 Mb/s per port, 400 Mb/s Combined
		1000Base-TX (Half-Duplex)	1000Mb/s per port, 2000 Mb/s Combined
		1000 Base-TX (Full-Duplex)	2000Mb/s per port, 4000 Mb/s Combined
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000Base-TX	Category 5E or better; up to 328 ft (100 m)
Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.	

Summary of Changes

Date	Version History	Action	Description of Change
01-Jun-2015	From Version 22 to 23	Added	New Hard Drives were added to Core Options.
		Removed	Obsolete SKUs were removed from Configuration Information - Factory Integrated Models, Core Options, and Additional Options.
30-Mar-2015	From Version 21 to 22	Added	New Hard Drives were added to Core Options.
		Removed	Obsolete SKUs were removed from HP Care Pack Services and HP Insight Software.
09-Feb-2015	From Version 20 to 21	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 19 to 20	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. U6W98E Care Pack was deleted
01-Nov-2014	From Version 18 to 19	Added	Updated Service and Support.
29-Sep-2014	From Version 17 to 18	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	Obsolete part numbers were removed from QuickSpecs.
09-Sep-2014	From Version 16 to 17	Added	New Hard Drives were added.
18-Aug-2014	From Version 15 to 16	Added	New Hard Drives were added. HP Remote mPDUs half height version were added.
		Changed	Standard Features, Configuration Information - Factory Integrated Models, Core Options, and Additional Options sections were revised.
		Removed	HP Processors E5-2400 Series were removed from QuickSpecs.
16-Jul-2014	From Version 14 to 15	Changed	Storage Controller and Common Slot Power Supplies were revised in Standard Features section. Changes in Pre-configured Models, Configuration Information - Factory Integrated Models, Core Options, Memory, and Technical Specifications sections.
		Removed	Removed HP ProLiant ML350e Gen8 v2 E5-2407 1P 4GB-U B120i 460W PS Base Server from Base Models in Pre-configured Models section.
10-Jun-2014	From Version 13 to 14	Added	Customer Advisory note was added to Upgradeability. HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive was added to Hard Drives. HP PCIe Workload Accelerator Options was added to Additional Options. HP StoreEver DAT 160 SCSI Internal Tape Drive and HP StoreEver LTO-4 Ultrium 1760 SCSI Internal Tape Drive were added to HP Tape Backup.
		Changed	Updated What's New section. HP Remote Monitoring Power Distribution Units (mPDU) was revised. Updates made to Configuration Information - Factory Integrated Models, Core Options, Additional Options, Memory and Storage sections.
09-May-2014	From Version 12 to 13	Changed	Foundation Care, Memory, HP Disk Storage Systems, and HP Basic

Summary of Changes

			and Remote Monitoring Power Distribution Units were revised.
15-Apr-2014	From Version 11 to 12	Changed	Correction made to the Changes File.
31-Mar-2014	From Version 10 to 11	Changed	Changes made throughout the QuickSpecs.
01-Mar-2014	From Version 9 to 10	Changed	Changes made in the North America and Canada versions only.
20-Feb-2014	From Version 8 to 9	Changed	Changes made in Steps 2 & 3 and in the Options sections.
18-Feb-2014	From Version 7 to 8	Changed	Processors, Hard Drives, and Storage Controllers were revised HP Secure Encryption was added to Additional Options
22-Jan-2014	From Version 6 to 7	Changed	A link was corrected in the Upgradeability section of Standard Features.
13-Jan-2014	From Version 5 to 6	Changed	A SKU description was corrected in the Processors sections.
09-Jan-2014	From Version 4 to 5	Changed	Changes made throughout the QuickSpecs.
13-Dec-2013	From Version 3 to 4	Changed	HP Insight Control including 1yr 24x7 Support ProLiant Ml/DL/BL-bundle FIO Electronic License was added to Step 3 in Configuration Information SmartCache was added to Storage Controllers HP Tape and Disk Storage Systems were added to Additional Options HP Basic Power Distribution Units and HP Remote Monitoring Power Distribution Unites were revised in Additional Options HP Power Distribution Units was removed from Additional Options
18-Oct-2013	From Version 2 to 3	Changed	Change made in the Models and Configuration Information sections.
02-Oct-2013	From Version 1 to 2	Changed	Change made in the Standard Features, Configuration Information, Options, Storage and Memory sections.

© 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 is a US registered trademark of Intel Corporation.

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.