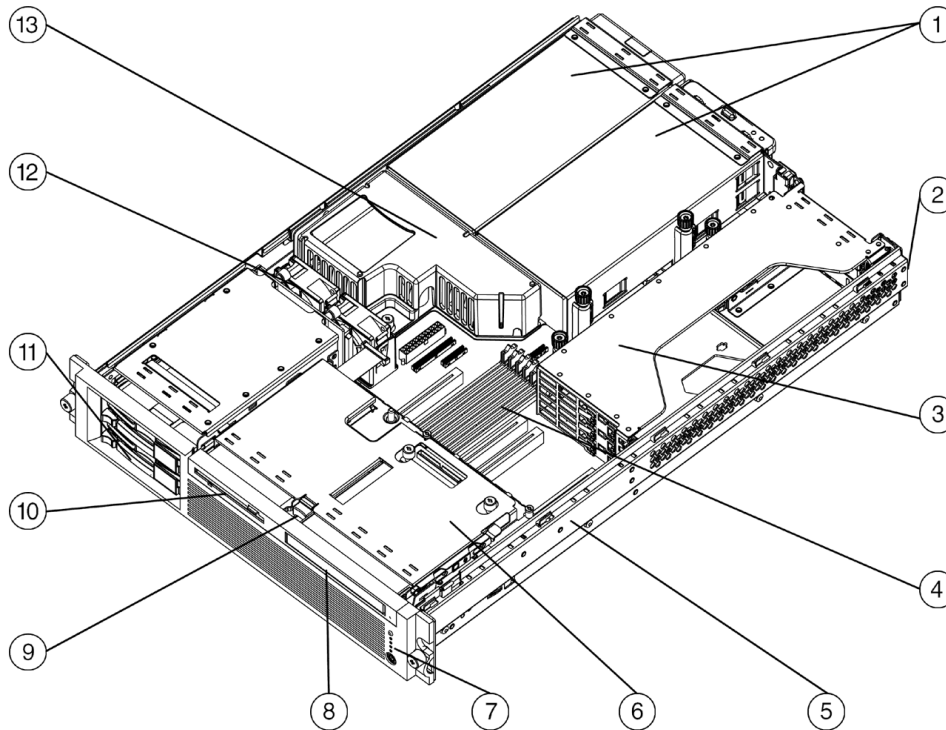


Overview



1. Dual 550W Hot Plug Redundant Power
2. 2U (3.5" Height) rack form factor
3. PCI-X Riser Cage, Three 64-bit PCI-X slots
4. Six memory DIMM slots
5. Tool-less "Snap in" Rail Solution
6. Hood
7. LEDs
8. Slim Line Removable media Bay with 24x CD-ROM installed
9. Hood latch (accesses processors and fans)
10. 1.44 Diskette Drive
11. Wide Ultra3 SCSI drive cage for two hot plug hard drives or one AIT or DAT hot plug tape drive (plus 1 hard drive)
12. Hot Plug Fans
13. DC Power Converter Module

What's New

- Intel® Xeon Processors MP at 2.8 GHz/2MB, 2.5 GHz/1MB or 2.0 GHz/1MB (Expandable to 4 processors)

At a Glance

- Intel Xeon Processors MP at 2.8 GHz/2MB, 2.5 GHz/1MB 2.0 GHz/1MB, 2.0GHz/2MB, 1.9GHz/1MB, or 1.5GHz/1MB (Expandable to 4 processors)
- The DL560 delivers extraordinary performance and maximum power efficiency in an ultra dense, rack optimized form factor ServerWorks Grand Champion-LE chipset
- 2x1 interleaved memory, 200MHz DDR SDRAM Memory (PC2100 Registered SDRAM with Advanced ECC functionality)
- 1024MB or 512 MB (depending on model) standard memory, expandable to 12 GB
- HP Advanced Memory Protection
- Two, full length 64-bit/100 MHz Non-Hot Pluggable PCI slots, one full length 64-bit/133 MHz Non-Hot Pluggable
- Integrated Lights-Out Standard Management (iLO) on system board
- Two NC7781 PCI-X Gigabit NICs (embedded)
- Integrated Smart Array 5i Plus Controller (Dual Channel, Ultra3) with 64-MB total memory on 5i Plus Memory Module
- Battery-Backed Write Cache Enabler module on all 2P models (optional on 1P model)
- Internal Hot Plug Drive Storage of up to 293.6 GB (2 x 146.8-GB 1" Wide Ultra3 SCSI hard drives)
- Redundant Cooling Zones for major subsystems (Memory, I/O, CPUs) assure 7x24 cooling
- Toolless and virtually cable-less internal design
- Rapid Deployment racking solution (rack rails and cable management)
- Protected by HP Services, including a three-year, Next Business Day on-site, limited, Global warranty and extended Pre-Failure Warranty that covers processors, memory and disk drives - Certain restrictions and exclusions apply. Consult the Customer Support Center at 1-800-345-1518 for details.

Standard Features

Processor	(2P) Intel Xeon Processor MP 2.8GHz\2-MB (Expandable to 4 processors)
One or more of the following depending on Model	(2P) Intel Xeon Processor MP 2.5GHz\1-MB (Expandable to 4 processors)
	(1P) Intel Xeon Processor MP 2.0-GHz\1-MB (Expandable to 4 processors)
	(2P) Intel Xeon Processor MP 2.0-GHz\2-MB (Expandable to 4 processors)
	(2P) Intel Xeon Processor MP 1.9-GHz\1-MB (Expandable to 4 processors)
	(1P) Intel Xeon Processor MP 1.5-GHz\1-MB (Expandable to 4 processors)

Cache Memory	2-MB Integrated Level 3 Cache
One of the following depending on Model	NOTE: 2.8 GHz and 2.0 GHz Models only.
	1-MB Integrated Level 3 Cache
	NOTE: 2.5 GHz, 2.0 GHz, 1.9GHz and 1.5GHz Models only.

Upgradability	Upgradable to quad processing
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Chipset	ServerWorks Grand Champion-LE chipset
	NOTE: For more information regarding ServerWorks, please see the following URL: http://www.serverworks.com/products/overview.html .

Memory One of the following depending on Model	Standard	1024 MB 200-MHz (DDR) SDRAM (PC2100 Registered SDRAM Memory with Advanced ECC functionality) (2P Models and the 2.0 GHz (1P) model)
	Maximum	12 GB
	Standard	512 MB, 1024 MB, or 2048 MB 200-MHz (DDR) SDRAM PC2100 Registered SDRAM Memory with Advanced ECC functionality depending on model (see section below)
	Maximum	12 GB
	NOTE: Advanced ECC Memory Technology protects the data even in the event of an entire SDRAM component failure. Embedded in the chipset design, this feature allows the use of Industry-Standard Registered DIMMs.	

Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
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Expansion Slots	I/O (3 Total, 3 Available)		PCI Voltage:
	64-bit/100-MHz PCI Non-Hot Plug	2 and 3	3.3 Volt only
	64-bit/133-MHz PCI-X Non-Hot Plug	1	3.3 Volt only

Manageability	Integrated Lights-Out (iLO) Standard Management (ASIC on the System Board)
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Standard Features

Storage Controllers

Smart Array 5i Plus Controller, Dual Channel, Ultra3 (supports RAID 0, 1, across internal hard disk drives) with 64 MB of memory.

- 64-MB total memory for code, transfer buffers, and read/write cache on the 5i Plus Memory Module
- Connector for Battery Backed Write Cache (BBWC) Enable

NOTE: The Smart Array 5i Plus Controller is integrated on the system board and is designed to support the simplex drive cage. An external SCSI port is not available on the DL560. External SCSI solutions require the addition of a PCI or PCI-X option card.

NOTE: For complete list of devices supported the Smart Array 5i Controller see the following:

http://h18000.www1.hp.com/products/quickspecs/10890_div/10890_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/10890_na/10890_na.HTML (North America)

Storage Data Protection

The Battery-Backed Write Cache (BBWC) Enabler protects up to 64-MB write cache memory from hard boot, power, controller, or system board failures.

- Standard on DL560 2P Models, optional on DL560 1P Models
- Battery charge/life: Up to 72 hours/ 3 years
- Transportable data protection
- Increases overall controller performance

NOTE: Safely transport your write cache data to another DL560 in the data center by removing the BBWC Enabler and 5i Plus Memory Module simultaneously (connected by short cable).

Storage

Diskette Drives	1.44 MB
CD-ROM	24x IDE CD-ROM Drive (slim line) – ejectable for security and serviceability
Hard Drives	None
Maximum Internal Storage	293.6 GB (2 x 146.8 GB Wide Ultra320 1" drives) (internal hot plug Ultra3 drive cage)
Hard Disk Drive Backplane	Internal Wide Ultra3 backplane supports up to TWO 1" hard disk drives

Interfaces

Serial	1
Pointing Device (Mouse)	1
Graphics	1
Keyboard	1
Rear USB Ports	2
iLO Remote Management	1
Network RJ-45	2

Graphics

Integrated 1280 x 1024, 16M color on PCI local bus, 8-MB of SDRAM video memory

Form Factor

Rack (2U = 3.5 inches), ships with sliding rails and cable management system
Space saving form factor (2U) provides space efficiencies while providing maximum deployment flexibility

Standard Features

ProLiant Essentials Foundation Pack Software

Insight Manager 7	Insight Manager 7 helps maximize system uptime and performance and reduces the cost of maintaining the IT infrastructure by providing proactive notification of problems before those problems result in costly downtime and reduced productivity. Insight Manager 7 is easy to set up and provides rapid access to detailed fault and performance information gathered by the Management Agents. One-click access to the Integrated Lights-Out or Remote Insight Lights Out Edition board allows systems administrators to take full graphical control of ProLiant servers in remote locations or lights-out data centers. Finally, Insight Manager 7 in concert with the Version Control Agents and Version Control Repository Manager enables systems administrators to version manage and update system software across groups of ProLiant servers.
SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at http://www.hp.com/servers/smartstart . SmartStart version supported (minimum): SmartStart 6.2.
Management Agents	The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to Insight Manager 7 and other enterprise management applications in case of subsystem or environmental failures. For additional information about the Management Agents and other management products from HP, please visit the management Web site at http://www.hp.com/servers/manage .
ActiveUpdate	Active Update is a web-based application that keeps IT managers directly connected to HP for proactive notification and delivery of the latest software updates.
ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options.
Survey Utility and diagnostics utilities	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips.
Optional ProLiant Essentials Value Packs	Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs: <ul style="list-style-type: none">● Rapid Deployment Pack - an automated solution for multi-server deployment and provisioning, enabling companies to quickly and easily adapt to changing business demands.● Workload Management Pack - provides easier management of complex environments, improving overall server utilization and enabling Windows® 2000 customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server.● Integrated Lights-Out Advanced Pack - upgrades the Integrated Lights-Out processor to full virtual presence and control with graphical console and virtual media.● Integrated Lights-Out Advanced Pack - upgrades the Integrated Lights-Out processor to full virtual presence and control with graphical console and virtual media● Recovery Server Option Pack - entry-level high availability software that will provide reliable protection and increased uptime against server hardware and operating system failures.● Performance Management Pack - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources.

NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to <http://www.hp.com/servers/proliantessentials> or the various ProLiant Essentials Value Pack product QuickSpecs for more information.

NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: <http://www.hp.com/servers/proliantessentials>.

Standard Features

Industry Standard Compliance	ACPI 2.0 Compliant
	PCI 2.2 Compliant
	PXE Support
	WOL Support
	Physical Address Extension (PAE) Support
	Microsoft® Logo certifications

Intelligent Manageability

 Integrated Lights-Out (iLO) Standard Management

- Virtual Text Remote Console
- Virtual Power Button Control
- Dedicated LAN Connectivity
- Automatic IP Configuration via DHCP/DNS/WINS
- Industry Standard 128-bit Secure Sockets Layer (SSL) Security
- IML and iLO Event Logging
- Support for 12 user accounts with customizable access privileges

Integrated Lights-Out (iLO) Advanced Pack (supports Advanced features such as Graphical Remote Console and Virtual Floppy - available as a separate option)

Automatic Server Recovery-2 (ASR-2)

Insight Manager 7

Redundant ROM

Remote Flash ROM

ROM-Based Setup Utility (RBSU)

Integrated Management Log (IML)

Hot Spare Boot (**NOTE:** Upon the event of a failed processor or VRM in a multi-processing environment, the system will automatically reboot and use the remaining good processor(s).)

Dynamic sector repairing and drive parameter tracking (with Smart Array controllers)

Redundant/adaptive load balancing NIC Support

Availability

- Standard Advanced ECC functionality detects and corrects single bit and specific multi-bit memory errors (4bit and 8bit) while using industry standard registered DIMMS. Functionality is embedded in the chipset design.
- HP Advanced Memory Protection Technology – delivers unsurpassed memory protection and server availability:
- Online Spare Memory

Offers a higher level of memory protection than Advanced ECC alone. If the number of single-bit correctable errors on a bank exceeds the pre-defined error threshold, that bank will fail over to the online spare bank without intervention or server interruption. The failed memory can then be replaced at the user's convenience during a scheduled maintenance window.

NOTE: All HP Advanced Memory Protection modes are user configurable through the ROM-Based Setup Utility (RBSU) and viewable through Insight Manager 7 and the Integrated Management Log (IML).

- Smart Array 5i Plus Controller with standard Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance. Up to 64MB Battery Backed Write Cache protection available on 2P DL560 models (BBWC Enabler is optional on 1P model.)
- Redundant Cooling Zones across major server subsystems (Memory, I/O, CPU) provide 7x24 cooling. Each zone is independent of each other and is able to support n+ 1 redundancy, as indicated below.

This zone configuration enables the server to withstand up to three fan failures, provided that they are not within the same zone. Each fan is hot plug redundant and individually removable.

- Up to two Hot Plug Ultra3 Drive Bays
- Simplex SCSI Backplane
- Dual Hot Plug Redundant Power Supplies (standard on 2P Models, one ships standard on 1P Models.)

Standard Features

Serviceability

- Innovative Diagnostic Lighting
- LED display on front panel indicates power, internal health, external health, Unit ID light.
- Tool-less, virtually cable-less interior design
 - Tool-less access to interior of server
 - Lift up hood access to processors and primary fans
 - Ejectable, slim line media drives (and CD-ROM standard with support for optional DVD-ROM drives) is removable without the use of tools. Also has fixed floppy drive.
 - PCI Card Guides locks full length PCI cards in place during transit
 - Up to ten individually removable fans connect without cables to the system board
 - Processor/VRM Retention mechanism securely locks both processor and VRM into their respective sockets
 - Tool-less removal of system board
- Quick Deploy Rails
 - Tool-less design "snap in" rail

Security

Power-on password
Keyboard password
Diskette drive control
Diskette boot control
Network Server Mode
Security Provision
Serial interface control
Administrator's password
Disk configuration lock
Hot plug access security
Removable Diskette drive
Removable CD-ROM drive

Power Supply

550-Watt (low line or high line) Hot Plug Power Supply

NOTE: One 550-Watt Hot Plug Power Supply ships standard with 1P Models (optional Redundant Hot Plug Power Supply Option Kit).

NOTE: Two 550-Watt Hot Plug Power Supplies ship standard with 2P Models.

System Fans

Standard 5 Hot plug, redundant fans on 1P models (individually removable)
Maximum 10 Hot plug, redundant fans on 2P models (individually removable)

- Redundant Cooling Zones across major server subsystems (Memory, I/O, CPU) provide 7x24 cooling. Each zone is independent of each other and is able to support n+ 1 redundancy, as indicated below:
 - PCI-X expansion zone is 1+ 1 redundant (fans 1 and 2)
- System can run fully loaded with five fans. This zone configuration enables the server to withstand up to three fan failures, provided that they are not within the same zone. Each fan is hot plug redundant and individually removable.

Required Cabling

For required cabling information, refer to the HP Web site at <http://h18000.www1.hp.com/products/servers/proliantDL560/>.

Standard Features

OS Support

Microsoft Windows 2000
Windows Server 2003
Novell NetWare
LINUX (Red Hat, SuSE)
UnitedLinux

NOTE: For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: <ftp://ftp.HP.com/pub/products/servers/os-support-matrix-310.pdf>.

NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant DL560, please see: <http://www.HP.com/support/files/server/us/index.html>.

NOTE: For a more complete and up-to-date information on Linux support, please visit HP Linux website at <http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html>.

Rack Airflow Requirements

- Rack 9000 and 10000 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 9000 and 10000 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

- Rack 7000 series Cabinets

When installing a server with processors running at speeds of 550 MHz or greater in Rack 7000 series racks with glass doors (165753-001 (42U), and 163747-001 (22U)), the new processor technology requires the installation of High Airflow Rack Door Inserts (327281-B21 (42U), 327281-B22 (42U 6 pack), or 157847-B21 (22U)) to promote enhanced airflow for maximum cooling.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 5,350 sq cm (830 square inches) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 inches).

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL:

<http://www5.HP.com/products/servers/proliantdl560/index.html>.

Rack Airflow Requirements Tool-free support for racks with square mounting holes (including Compaq/HP 7000, 9000, 10000 and H9 series), with an adjustment range of 24"– 36".

HP Factory Express Capabilities

HP Factory Express gives you the flexibility to choose from a full menu of factory capabilities all in one manufacturing facility, in one process, with one touch giving you full control and access to HP's World class manufacturing facility anytime. This approach provides you the speed to deploy your IT needs, with total quality assurance, reliability, and predictability to lower your total cost of ownership by letting HP install, rack, and customize your software and hardware options for you.

Standard Features

Service and Support

HP Services provides a three-year, limited warranty, including Pre-Failure Warranty (coverage of hard drives, memory and processors) fully supported by a worldwide network of resellers and service providers and lifetime toll-free 7 x 24 hardware technical phone support. In addition, available service offerings include:

NOTE: Limited Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support.

A full range of HP Care Pack packaged hardware and software services:

- Installation and start up
- Extended coverage hours and enhanced response times
- System management and performance services
- Availability and recovery services

NOTE: For more information, visit <http://www.hp.com/services/carepack>.

Please see the following URL regarding Warranty Information For Your HP Products:

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>.

For additional information regarding Worldwide Limited Warranty and Technical Support, please see the following URL:

<ftp://ftp.compaq.com/pub/supportinformation/ejourney/176738.pdf>.

NOTE: Certain restrictions and exclusions apply. Consult the Customer Support Center at 1-800-345-1518 for details.

Models

DL560R01 X2.8GHz-2MB, 1024MB (2P) 246639-xx2	Processor(s)	(2) Intel Xeon Processors MP at 2.8 GHz standard (up to 4 supported)
	Cache Memory	2-MB Integrated Level 3 Cache
	Memory	1024 MB 200-MHz (DDR) SDRAM (PC2100-MHz Registered SDRAM Memory with Advanced ECC functionality) (Standard) to 12 GB (Maximum)
	Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	293.6 GB maximum (with optional hard drives)
	Power Supply	Two 550W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slim-line CD-ROM Drive
Form Factor	Rack 2U	

DL560R01 X2.5-1MB, 1024MB (2P) 283975-xx2	Processor(s)	(2) Intel Xeon Processors MP at 2.5 GHz standard (up to 4 supported)
	Cache Memory	1-MB Integrated Level 3 Cache
	Memory	1024 MB 200-MHz (DDR) SDRAM (PC2100-MHz Registered SDRAM Memory with Advanced ECC functionality) (Standard) to 12 GB (Maximum)
	Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	293.6 GB maximum (with optional hard drives)
	Power Supply	Two 550W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slim-line CD-ROM Drive
Form Factor	Rack 2U	

DL560R01 X2.0-1MB, 1024MB (1P) 246638-xx2	Processor(s)	(1) Intel Xeon Processors MP at 2.0 GHz standard (up to 4 supported)
	Cache Memory	1-MB Integrated Level 3 Cache
	Memory	1024 MB 200-MHz (DDR) SDRAM (PC2100-MHz Registered SDRAM Memory with Advanced ECC functionality) (Standard) to 12 GB (Maximum)
	Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	293.6 GB maximum (with optional hard drives)
	Power Supply	One 550W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slim-line CD-ROM Drive
Form Factor	Rack 2U	

Models

DL560R01 X2.0GHz-2MB, 1024MB (2P) 246639-xx1	Processor(s)	(2) Intel Xeon Processors MP at 2.0 GHz standard (up to 4 supported)
	Cache Memory	2-MB Integrated Level 3 Cache
	Memory	1024 MB 200-MHz (DDR) SDRAM (PC2100-MHz Registered SDRAM Memory with Advanced ECC functionality) (Standard) to 12 GB (Maximum)
	Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	293.6 GB maximum (with optional hard drives)
	Power Supply	Two 550W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slim-line CD-ROM Drive
Form Factor	Rack 2U	

DL560R01 X1.9-1MB, 1024MB (2P) 283975-xx1	Processor(s)	(2) Intel Xeon Processors MP at 1.9 GHz standard (up to 4 supported)
	Cache Memory	1-MB Integrated Level 3 Cache
	Memory	1024 MB 200-MHz (DDR) SDRAM (PC2100-MHz Registered SDRAM Memory with Advanced ECC functionality) (Standard) to 12 GB (Maximum)
	Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	293.6 GB maximum (with optional hard drives)
	Power Supply	Two 550W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slim-line CD-ROM Drive
Form Factor	Rack 2U	

DL560R01 X1.5-1MB, 512MB (1P) 246638-xx1	Processor(s)	(1) Intel Xeon Processors MP at 1.5 GHz standard (up to 4 supported)
	Cache Memory	1-MB Integrated Level 3 Cache
	Memory	512 MB 200-MHz (DDR) SDRAM (PC2100-MHz Registered SDRAM Memory with Advanced ECC functionality) (Standard) to 12 GB (Maximum)
	Network Controller	Two NC7781 PCI-X Gigabit NICs (embedded)
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	293.6 GB maximum (with optional hard drives)
	Power Supply	One 550W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slim-line CD-ROM Drive
Form Factor	Rack 2U	

Country Code Key	XX=00	US
	XX=01	Australia
	XX=42	Int'l, Europe, Germany, France
	XX=03	UK
	XX=37	APD
	XX=29	EURO
	XX=AA	PRC

Options

ProLiant Essentials Value Pack Software	Rapid Deployment Pack, 1 User, V1.x	267196-B21
	NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	
	Rapid Deployment Pack, 1 User, V1.x (Japan)	267196-291
	NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	
	Rapid Deployment Pack, 10 Users, V1.x	269817-B21
	NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	
	Rapid Deployment Pack, 10 Users, V1.x (Japan)	269817-291
	NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	
	Flexible Quantity License Kit	302127-B21
	License-Only - for use with a Master License Agreement	302128-B21
ProLiant Essentials Workload Management Pack (Featuring Compaq Resource Partitioning Manager version 2.0)	303284-B21	
ProLiant Essentials Recovery Server Option Pack	280189-B21	
Integrated Lights-Out (iLO) Advanced Pack	263825-B21	
ProLiant Essentials Performance Management Pack v2.0, Single License	306696-B21	
NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information.		
NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials .		
Software	HP digital asset protection	302316-001
Processor	Intel Xeon MP X2.80-2MB L3 Processor Option Kit	331004-B21
	Intel Xeon MP X2.50-1MB L3 Processor Option Kit	331003-B21
	Intel Xeon MP X2.0-1MB L3 Processor Option Kit	331002-B21
	Intel Xeon MP X2.0-2MB L3 Processor Option Kit	270765-B21
	Intel Xeon MP X1.90-1MB L3 Processor Option Kit	270764-B21
	Intel Xeon MP X1.50-1MB L3 Processor Option Kit	270763-B21
Memory (DIMMs)	4096MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x 2048 MB)	300682-B21
	2048MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x1024MB)	300680-B21
	1024MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x512MB)	300679-B21
	512MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x256MB)	300678-B21
Optical Drives	Slimline CD-RW/DVD-ROM 24X Combo Drive Option Kit	331903-B21

Options

Hard Drives

Ultra 320 SCSI – Universal Hot Plug

36.4GB 10,000 rpm, U320 Universal Hard Drive, 1"	286713-B22
72.8GB 10,000 rpm, U320 Universal Hard Drive, 1"	286714-B22
146.8GB 10,000 rpm, U320 Universal Hard Drive, 1"	286716-B22
18.2GB 15,000 rpm, U320 Universal Hard Drive, 1"	286775-B22
36.4GB 15,000 rpm, U320 Universal Hard Drive, 1"	286776-B22
72.8GB 15,000 rpm, U320 Universal Hard Drive, 1"	286778-B22

NOTE: All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds. U320 drives require an optional U320 Smart Array Controller or U320 SCSI HBA to support U320 transfer rates.

NOTE: Please see the Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:

U320 Hard Drive QS:

http://h18000.www1.hp.com/products/quickspecs/11531_div/11531_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML (North America)

Options

Storage Controllers	Smart Array 532 Controller	225338-B21
	Smart Array 532 Controller (Japan)	225338-291
	Smart Array 5302/128 Controller	283552-B21
	Smart Array 5302/128 Controller (Japan)	283552-291
	Smart Array 5304/256 Controller	283551-B21
	Smart Array 5304/256 Controller (Japan)	283551-291
	Smart Array 6402/128 Controller	238633-B21
	Smart Array 5312 Controller	238633-B21
	Smart Array 5312 Controller (Japan)	238633-291
	Smart Array 641 Controller	291966-B21
	Smart Array 642 Controller	291967-B21
	Ultra3 Channel Expansion Module for Smart Array 5300 Controller	153507-B21
	128-MB Cache Module for Smart Array 5302 Controller	153506-B21
	256-MB Battery-Backed Cache Module	254786-B21
	NOTE: This 256-MB Battery-Backed Cache Module supports the Smart Array 5300 series controllers, HP StorageWorks Modular Smart Array 1000 and the HP StorageWorks Modular Array 500.	
	256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400	273913-B21
	NOTE: This 256-MB Battery-Backed Cache Module upgrade kit supports the Smart Array 6400 series controller only.	
	Battery-Backed Write Cache Enabler Option Kit	255514-B21
	NOTE: This Battery-Backed Write Cache Enable Option Kit (PN 255514-xx1) is optional for the DL560 1P Model only.	
	Battery-Backed Write Cache Enabler Option Kit (Japan)	255514-291
	NOTE: This Battery-Backed Write Cache Enable Option Kit (PN 255514-xx1) is optional for the DL560 1P Model only.	
	64 MB Battery Backed Write Cache Enabler	291969-B21
NOTE: This 64 MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.		
64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter	268351-B21	
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS	284688-B21	
NOTE: Please see the following Controller or SCSI Adapter QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information: http://h18000.www1.hp.com/products/quickspecs/11063_div/11063_div.HTML (Smart Array 5i Plus) http://h18000.www1.hp.com/products/quickspecs/10851_div/10851_div.HTML (Smart Array 532) http://h18000.www1.hp.com/products/quickspecs/10640_div/10640_div.HTML (Smart Array 5300 Series) http://h18000.www1.hp.com/products/quickspecs/11328_div/11328_div.HTML (Smart Array 5312) http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.HTML (Smart Array 6402) http://h18000.www1.hp.com/products/quickspecs/11563_div/11563_div.HTML (Smart Array 641) http://h18000.www1.hp.com/products/quickspecs/11563_div/11563_div.HTML (Smart Array 642) http://h18000.www1.hp.com/products/quickspecs/10429_div/10429_div.HTML (SCSI Adapter) http://h18000.www1.hp.com/products/quickspecs/11555_div/11555_div.HTML (U320 Adapter)		
Communications	NC6170 Dual Port PCI-X 1000SX Gigabit Server Adapter	313879-B21
	NC6770 PCI-X Gigabit Server Adapter, 1000-SX	244949-B21
	NC7170 Dual Port PCI-X 1000T Gigabit Server Adapter	313881-B21
	NC7770 PCI-X Gigabit Server Adapter	244948-B21

Options

Redundant Options	Hot Plug Redundant Power Supply Option Kit	267555-001
	Hot Plug Redundant Power Supply Option Kit (EMEA)	267555-B21
	Hot Plug Redundant Fan Option Kit	288635-B21

Management Options	Remote Insight Lights-Out Edition II (NA, LA)	227251-001
	Remote Insight Lights-Out Edition II (EMEA)	227251-021
	Remote Insight Lights-Out Edition II (ROW)	227251-371

Security	HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
	Compaq AXL300 Accelerator PCI Card (HW SSL Encryption) for ProLiant Servers	227933-B21

Options

Monitors

Essential Series

Compaq S9500 CRT Monitor (19-inch, Carbon/Silver)	261615-XXX
Compaq S7500 CRT Monitor (17-inch, Carbon/Silver)	261606-XXX
Compaq S5500 CRT Monitor (15-inch Carbon/Silver)	261602-XXX
Compaq TFT1501 Flat Panel Monitor (15-inch, Carbon/Silver, North America)	301042-003
Compaq TFT1501 Flat Panel Monitor (15-inch, Carbon/Silver, Outside North America)	P4825D-XXX
Compaq TFT1701 Flat Panel Monitor (17-inch, Carbon/Silver, North America)	292847-003
Compaq TFT1701 Flat Panel Monitor (17-inch, Carbon/Silver, Outside North America)	P9019A-XXX

Advantage Series

Compaq V7550 CRT Color Monitor (17-inch, Carbon/Silver)	261611-XXX
Compaq TFT1720 Flat Panel Monitor (17-inch, Carbon/Silver, North America)	295926-003
Compaq TFT1720 Flat Panel Monitor (17-inch, Carbon/Silver, outside North America)	D5064D-XXX
Compaq FT1720M Flat Panel Monitor (17-inch, Carbon/Silver, includes speaker, USB port, headphone, North America)	301958-003
Compaq TFT1720M Flat Panel Monitor (17-inch, Carbon/Silver, includes speaker, USB port, headphone, outside North America)	D5064P-XXX
Compaq TFT1520 Flat Panel Monitor (15-inch, Carbon/Silver, North America)	295925-003
Compaq TFT1520 Flat Panel Monitor (15-inch, Carbon/Silver, outside North America)	D5063D-XXX
Compaq TFT1520M Flat Panel Monitor (15-inch, Carbon/Silver includes speaker, USB port, headphone, North America)	301957-003
Compaq TFT1520M Flat Panel Monitor (15-inch, Carbon/Silver includes speaker, USB port, headphone, outside North America)	D5063P-XXX

Performance Series

HP P930 CRT Monitor (19-inch, Flat-screen, Carbon/Silver, North America)	302268-003
HP P930 CRT Monitor (19-inch, Flat-screen, Carbon/Silver, Outside North America)	P909W-XXX
HP P1130 CRT Monitor (21-inch, Flat-screen, Carbon/Silver, North America)	302270-003
HP P1130 CRT Monitor (21-inch, Flat-screen, Carbon/Silver, Outside North America)	P4819-XXX
HP L1825 Flat Panel Monitor (18-inch, Carbon/Silver, North America)	303486-003
HP L1825 Flat Panel Monitor (18-inch, Carbon/Silver, Outside North America)	P9021W-XXX
HP L2025 Flat Panel Monitor (20-inch, Carbon/Silver, North America)	303102-003
HP L2025 Flat Panel Monitor (20-inch, Carbon/Silver, Outside North America)	P4831W-XXX
Compaq TFT1825 Flat Panel Monitor (18-inch, Carbon/Silver, North America)	296751-003
Compaq TFT1825 Flat Panel Monitor (18-inch, Carbon/Silver, Outside North America)	P9021A-XXX
Compaq TFT2025 Flat Panel Monitor (20-inch, Carbon/Silver, North America)	285550-003
Compaq TFT2025 Flat Panel Monitor (20-inch, Carbon/Silver, Outside North America)	P4831D-XXX
TFT5110R Flat Panel Monitor (Carbon)	281683-B21

Options

Tape Drives

NOTE: External tape devices, including both tape drives and tape arrays/enclosures, can be directly connected to the VHDCI SCSI port located on the back of the server. Use of a SCSI adapter to connect these devices is optional, not required.

External LTO Ultrium Tape Drives

HP StorageWorks Ultrium 215 Tape Drive for ProLiant, External (Carbon) NA	Q1544A
HP StorageWorks Ultrium 215 Tape Drive for ProLiant, External (Carbon) Int'l	Q1545A
HP StorageWorks Ultrium 230 Tape Drive for ProLiant, External (Carbon) NA	Q1516A
HP StorageWorks Ultrium 230 Tape Drive for ProLiant, External (Carbon) Int'l	Q1517A
HP StorageWorks Ultrium 460 Tape Drive for ProLiant, External (Carbon) NA	Q1519A
HP StorageWorks Ultrium 460 Tape Drive for ProLiant, External (Carbon) Int'l	Q1520A

NOTE: Please see the HP StorageWorks Ultrium 215, 230, and 460 Tape Drive QuickSpecs for additional options such as controllers, and other related items, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18006.www1.hp.com/products/quickspecs/11739_div/11739_div.html (Worldwide)

http://h18006.www1.hp.com/products/quickspecs/11739_na/11739_na.html (North America)

External DAT 72 Tape Backup Drives

HP StorageWorks DAT 72 for ProLiant, External (Carbon) (US)	Q1527A
HP StorageWorks DAT 72 Tape Drive for Open Connect, External (Carbon) WW	Q1523A
HP StorageWorks DAT 72 Tape Drive for ProLiant, External (Carbon) Int'l	Q1528A
HP StorageWorks DAT 72 for ProLiant, Internal Hot Plug (Carbon)	Q1529A

NOTE: Please see the DAT 72 Tape Drive QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18000.www1.hp.com/products/quickspecs/11597_div/11597_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/11597_na/11597_na.HTML (North America)

Internal and External DAT Tape Drives

HP StorageWorks DAT 40 Tape Drive for ProLiant, External (Carbon) US only	Q1554A
HP StorageWorks DAT 40 Tape Drive for Open Connect, External (Carbon) WW	C5687C
HP StorageWorks DAT 40 Tape Drive for ProLiant, External (Carbon) Int'l	Q1555A
HP StorageWorks DAT 40 Tape Drive for ProLiant, Internal Hot Plug	Q1546A

NOTE: Please see the DAT40 Tape Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18006.www1.hp.com/products/quickspecs/11784_div/11784_div.html (Worldwide)

http://h18006.www1.hp.com/products/quickspecs/11784_na/11784_na.html (North America)

HP StorageWorks DAT 24 Tape Drive for Open Connect, External (Flint) WW	C1556D
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NOTE: Please see the DAT24 Tape Drive QuickSpecs for additional options:

http://h18006.www1.hp.com/products/quickspecs/11783_div/11783_div.html (Worldwide)

http://h18006.www1.hp.com/products/quickspecs/11783_na/11783_na.html (North America)

External and Rackmount DLT Tape Drives

HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) NA	280129-B22
HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) Japan	280129-291

NOTE: Please see the DLT VS 40/80 Tape Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18006.www1.hp.com/products/quickspecs/11403_div/11403_div.HTML (Worldwide)

http://h18006.www1.hp.com/products/quickspecs/11403_na/11403_na.HTML (North America)

HP StorageWorks DLT 40/80 Tape Drive, External (Carbon) NA	146197-B22
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Options

HP StorageWorks DLT 40/80 Tape Drive, External (Carbon) Japan	146197-293
HP StorageWorks DLT 40/80 Tape Drive, 3U Rackmount (Single Drive) WW	274332-B21
HP StorageWorks DLT 40/80 Tape Drive, 3U Rackmount (Two Drives) WW	274335-B21
HP StorageWorks DLT 40/80 Tape Drive, 5U Rackmount (Four Drives) WW	274337-B21

NOTE: Please see the [DLT 40/80 Tape Drive QuickSpecs](#) for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18000.www1.hp.com/products/quickspecs/10658_div/10658_div.HTML
(Worldwide)

http://h18000.www1.hp.com/products/quickspecs/10658_na/10658_na.HTML
(North America)

External and Rackmount SDLT Tape Drives

HP StorageWorks SDLT 110/220 Tape Drive, External (Carbon) NA	192103-002
HP StorageWorks SDLT 110/220 Tape Drive, External (Carbon) Int'l	192103-B32
HP StorageWorks SDLT 110/220 Tape Drive, External (Carbon) Japan	192103-292
HP StorageWorks SDLT 110/220 Tape Drive, 3U Rackmount (Single Drive) WW	274331-B21
HP StorageWorks SDLT 110/220 Tape Drive, 3U Rackmount (Two Drives) WW	274334-B21
HP StorageWorks Rackmount DLT 40/80, Tape Array III, 5U (Four Drives)	274336-B21

NOTE: Please see the [SDLT 110/220 Tape Drive QuickSpecs](#) for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18000.www1.hp.com/products/quickspecs/10772_div/10772_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/10772_na/10772_na.HTML (North America)

HP StorageWorks SDLT 160/320 Tape Drive, External (Carbon) NA	257319-001
HP StorageWorks SDLT 160/320 Tape Drive, External (Carbon) Int'l	257319-B31
HP StorageWorks SDLT 160/320 Tape Drive, External (Carbon) Japan	257319-291

NOTE: Please see the [SDLT 160/320-GB Tape Drive QuickSpecs](#) for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18000.www1.hp.com/products/quickspecs/11406_div/11406_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/11406_na/11406_na.HTML (North America)

Rackmount Tape Drive Kits

3U Rackmount Kit	274338-B21
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NOTE: The 3U Rackmount Kit (PN 274338-B21) can support up to (2) full-height or (4) half-height tape drives and compatible with multiple Single-Ended and LVD SCSI Tape Drives including the DAT 24, DAT 40, DAT 72, DLT 40/80, DLT VS 40/80 and the SDLT 110/220-GB, SDLT 160/320-GB, Ultrium 215, Ultrium 230, and Ultrium 460 Tape Drives.

5U Rackmount Kit	274339-B21
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NOTE: The 5U Rackmount Kit (PN 274339-B21) can support up to (4) full-height tape drives and is compatible with all DLT/SDLT tape drives including the 20/40-GB DLT, 35/70-GB DLT, 40/80-GB DLT, SDLT 110/220-GB and the SDLT 160/320-GB tape drives. Also supported are the Ultrium 230 and Ultrium 460 tape drives.

NOTE: Please see the [Rackmount Tape Drive Kits QuickSpecs](#) for additional information regarding these kits, please see the following:

http://h18000.www1.hp.com/products/quickspecs/10854_div/10854_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML (North America)

Rackmount Tape Drive Cable Kits

LVD Cable Kit, VHDCI/HD68	168048-B21
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NOTE: For use with the 3U Rackmount Kit and 5U Rackmount Kit only.

LVD Cable Kit, HD68/HD68	242381-B21
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NOTE: For use with the 3U Rackmount Kit and 5U Rackmount Kit only.

Options

Tape Automation

StorageWorks ESL9000 Enterprise System Library

ESL9322L1 - LTO Ultrium and ESL9322 based enterprise library with up to 8 drives and 222, 322 slots

ESL9322L1 222 slot 0 DRV LTO1

330832-B21

ESL9595 and ESL9595 LTO Libraries

ESL9595 400 slot, zero drives

330833-B21

NOTE: Please see the StorageWorks ESL9322 Enterprise Library QuickSpecs for additional information including Tape Drives, Cartridges, Controllers, and SCSI Cables and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11628_na/11628_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11628_div/11628_div.HTML (Worldwide)

ESL9322: Common Options

ESL9322, slot upgrade 222 to 322 slots

293588-B21

ESL9595: Common Options

ESL 9000 400 to 500 slot upgrade

330842-B21

ESL 9000 500 to 595 slot upgrade

330842-B22

ESL 9000 400 to 595 slot upgrade

330842-B23

ESL9000 222 to 322 slot upgrade

330840-B21

Add-on drives & Accessories

ESL9000 LVD SDLT 160/320 Drive upgrade (ESL9595S2 and ESL9322S2 only)

293414-B21

ESL9000 LTO2 Upgrade Drive

330834-B21

ESL9000 LTO1 drive upgrade (ESL9322L1 and ESL9595L1 only)

301930-B21

ESL9000 Universal Load Port (support both LTO & SDLT cartridges) Not removable

302254-B21

ESL9000 Field Upgrade SDLT 110/220, LVD Drive (ESL9198SL, ESL9326SL, ESL9595SL only)

234617-B21

ESL9000 Field Upgrade SDLT 110/220, HVD Drive (for existing ESL9326D/DX customers)

234617-B22

LVD Extender Kit for ESL9198DLX, ESL9198SL, ESL9326SL

221249-B21

StorageWorks MSL6000 and MSL5000 mainstream tape libraries

MSL6060L1 - LTO Ultrium 1 based mainstream library up to 4 drives and 60 slots

MSL6060, 0 DRV, Ultrium 460, RM Library

331196-B23

MSL6060, 2 DRV, Ultrium 460, RM Library

331196-B21

MSL6060, 2 DRV, Ultrium 460, embedded Fibre, RM Library

331196-B22

NOTE: Please see the StorageWorks MSL6060 LTO Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11608_na/11608_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11608_div/11608_div.HTML (Worldwide)

MSL5060L1 - LTO Ultrium 1 based mainstream library up to 4 drives and 60 slots

MSL5060, 0 DRV, Ultrium 230, RM Library

301899-B21

MSL5060, 2 DRV, Ultrium 230, RM Library

301899-B22

MSL5060, 2 DRV, Ultrium 230, embedded Fibre, RM Library

301899-B23

NOTE: Please see the StorageWorks MSL5060 LTO Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11438_na/11438_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11438_div/11438_div.HTML (Worldwide)

MSL5052S2 - SDLT160 based mainstream library up to 4 drives and 52 slots

MSL5052S2, 0 DRV, SDLT 160/320, RM Library

255102-B21

MSL5052S2, 2 DRV, SDLT 160/320, RM Library

293474-B21

MSL5052S2, 2 DRV, SDLT 160/320, RM Library with embedded Fibre

293474-B24

NOTE: Please see the StorageWorks MSL5052S2 Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a

Options

complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11442_na/11442_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11442_div/11442_div.HTML (Worldwide)

MSL6030 - LTO Ultrium 1 based mainstream library up to 4 drives and 60 slots

MSL6030, 0 DRV, RM Library	330731-B21
MSL6030, 1 DRV, LTO Ultrium 460, RM Library	330731-B22
MSL6030, 2 DRV, LTO Ultrium 460, RM Library	330731-B23
MSL6030, 1 DRV, LTO Ultrium 460, embedded Fibre, RM Library	330731-B24
MSL 6030, 2 DRV, LTO Ultrium 460, embedded Fibre, RM Library	330731-B25

NOTE: Please see the StorageWorks MSL6030 LTO Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11625_na/11625_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11625_div/11625_div.HTML (Worldwide)

MSL5030L1 - LTO Ultrium 1 mainstream library up to 2 drives and 30 slots

MSL5030, 0 DRV, RM Library	301897-B21
MSL5030, 1 DRV, LTO Ultrium 230, RM Library	301897-B22
MSL5030, 2 DRV, LTO Ultrium 230, RM Library	301897-B23
MSL5030, 1 DRV, LTO Ultrium 230, embedded Fibre, RM Library	301897-B24
MSL 5030, 2 DRV, LTO Ultrium 230, embedded Fibre, RM Library	301897-B25

NOTE: Please see the StorageWorks MSL5030 LTO Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11439_na/11439_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11439_div/11439_div.HTML (Worldwide)

MSL5026S2 - SDLT160 based mainstream library up to 2 drives and 26 slots

MSL5026S2, 0 DRV, RM Library	293472-B21
MSL5026S2, 1 DRV, SDLT 160/320, RM Library	293472-B22
MSL5026S2, 2 DRV, SDLT 160/320, RM Library	293472-B23
MSL5026S2, 1 DRV, SDLT 160/320, RM Library with embedded Fibre	293472-B24
MSL5026S2, 2 DRV, SDLT 160/320, RM Library with embedded Fibre	293472-B25

NOTE: Please see the StorageWorks MSL5026SL Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11453_na/11453_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11453_div/11453_div.HTML (Worldwide)

MSL5026SL Graphite - SDLT110 based mainstream library up to 2 drives and 26 slots

MSL5026SL, 1 DRV SDLT RM, graphite	302512-B21
MSL5026SL, 2 DRV SDLT RM, graphite	302512-B22

NOTE: Please see the StorageWorks MSL5026SL Graphite Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/11440_na/11440_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11440_div/11440_div.HTML (Worldwide)

MSL5026DLX- 40/80GB DLT based mainstream library up to 2 drives and 26 slots

MSL5026DLX, 1 40/80GB DLT, LVD, RM	231891-B21
MSL5026DLX, 2 40/80GB DLT, LVD, RM	231891-B22

NOTE: Please see the StorageWorks MSL5026DLX Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://h18000.www1.hp.com/products/quickspecs/10860_na/10860_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/10860_div/10860_div.HTML (Worldwide)

MSL6000 and MSL5000 Add-on drives & accessories

Options

MSL5000 SDLT 160/320 Upgrade DRV (MSL5052S2 & MSL5026S2 only)	293475-B21
MSL Ultrium 460 upgrade drive in hot plug canister	
MSL5000 LTO Ultrium 1 Upgrade DRV (MSL5060L1 & MSL5030L1 only)	301901-B21
MSL5000 SDLT 110/220 Upgrade DRV	231823-B22
MSL5000 40/80GB DLT Upgrade DRV	231823-B21
MSL5000 Dual Magazine LTO (2 X 15 slot magazines)	301902-B21
MSL5000 Dual Magazine DLT (2 X 13 slot magazines)	232136-B21
MSL Universal Pass-Through mechanism	304825-B21
MSL5026, 5U Pass-Through extender (required one for each unit connected to the stack, for third and additional units) - for MSL5026 & MSL5030	231824-B22
MSL5052, 10U Pass-Through Extender (required one for each unit connected to the stack, for third and additional units) - for MSL5052 & MSL5060	231824-B23

DAT Autoloader

HP StorageWorks DAT40x6 Tape Autoloader for ProLiant, External (Flint) US only	Q1551A
HP StorageWorks DAT40x6 Tape Autoloader for Open Connect, External (Flint) WW	C5717C
HP StorageWorks DAT40x6 Tape Autoloader for ProLiant, External (Flint) WW	Q1552A

NOTE: Please see the [DAT40x6 Tape Autoloader QuickSpecs](#) for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://h18006.www1.hp.com/products/quickspecs/11785_div/11785_div.html (worldwide)

http://h18006.www1.hp.com/products/quickspecs/11785_na/11785_na.html

(North America)

HP StorageWorks 1/8 Autoloader

HP StorageWorks 1/8 Autoloader, Rackmount kit	C9266R
HP StorageWorks 1/8 Autoloader, Tabletop, Ultrium 230	C9572CB
HP StorageWorks 1/8 Autoloader, Tabletop, DLTVS80	C9264CB

SSL1016 tape autoloader

SSL1016 DLT1 tape autoloader (includes two 8-cartridge magazines and a barcode reader)	330815-B21
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NOTE: Please see the [SSL1016 SDLT160/320 tape autoloader Quick Specs](#) for additional information:

http://h18000.www1.hp.com/products/quickspecs/11626_na/11626_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11626_div/11626_div.HTML (Worldwide)

SSL1016 Ultrium 460 tape autoloader	330821-B21
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NOTE: Please see the [SSL1016 SDLT160/320 tape autoloader Quick Specs](#) for additional information:

http://h18006.www1.hp.com/products/quickspecs/11704_na/11704_na.HTML (North America)

http://h18006.www1.hp.com/products/quickspecs/11704_div/11704_div.HTML (Worldwide)

SSL1016 SDLT160/320 tape autoloader (includes two 8-cartridge magazines and a barcode reader)	330816-B21
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NOTE: Please see the [SSL1016 SDLT160/320 tape autoloader Quick Specs](#) for additional information:

http://h18006.www1.hp.com/products/quickspecs/11609_na/11609_na.HTML (North America)

http://h18006.www1.hp.com/products/quickspecs/11609_div/11609_div.HTML (Worldwide)

Options

HP StorageWorks Modular Smart Array 500	HP StorageWorks Modular Smart Array 500	201724-B21
	Modular Smart Array 500 Starter Kit (includes Modular Smart Array 500 and 2 SA-532 Adapters)	351504-B21
	Modular Smart Array 500 High Availability Kit (includes Modular Smart Array 500 controller, 4-port IO Module, Smart Array Multipath Software and 2 SA-532 Adapters)	351281-B21
	Modular Smart Array 500 Controller	218252-B21
	128-MB Cache Module for Smart Array Controller	153506-B21
	NOTE: 128-MB Cache Module for Smart Array Controller (PN 153506-B21) is an upgrade cache module (128 MB Standard) for Modular Smart Array 500 Controller	
256-MB Battery-Backed Cache Module	254786-B21	
NOTE: Please see the Modular Smart Array 500 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11050_na/11050_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11050_div/11050_div.HTML (Worldwide)		

Options

Cluster Options

ProLiant Cluster HA/F100 for Modular Smart Array 1000 v2	252408-B23
ProLiant Cluster HA/F100 for Modular Smart Array 1000 v2 (Japan)	252408-293
ProLiant Cluster HA/F200 for Modular Smart Array 1000 v2	252409-B23
ProLiant Cluster HA/F200 for Modular Smart Array 1000 v2 (Japan)	252409-293
NOTE: For additional information regarding the ProLiant Cluster for HA/F100, HA/F200 for Modular Smart Array 1000 v2 please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11035_na/11035_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11035_div/11035_div.html (Worldwide)	
ProLiant Cluster HA/F100 for Windows NT and 2000 Advanced Server	309816-B21
ProLiant Cluster HA/F200 Upgrade Kit (NT 4.0EE to W2K AS)	176848-B22
ProLiant Cluster HA/F200 for Windows NT and 2000 Advanced Server	380357-B23
ProLiant Cluster HA/F200 for Windows NT and 2000 Advanced Server (Japan)	380357-293
NOTE: For additional information regarding the ProLiant Cluster for HA/F100, HA/F200 for Windows NT and 2000 Advanced Server please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/10777_na/10777_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/10777_div/10777_div.html (Worldwide)	
ProLiant Cluster HA/F500 Basic Kit	103250-B24
ProLiant Cluster HA/F500 Enhanced Kit	379937-B24
ProLiant Cluster HA/F500 Enhanced DT Kit	164227-B22
NOTE: For additional information regarding the ProLiant Cluster for HA/F500 please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/10232_na/10232_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/10232_div/10232_div.html (Worldwide)	
ProLiant Cluster HA/F500 for Enterprise Virtual Array	254623-B22
NOTE: For additional information regarding the ProLiant Cluster HA/F500 for Enterprise Virtual Array please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11055_na/11055_na.html (North America) http://www5.HP.com/products/quickspecs/11055_div/11055_div.html (Worldwide)	
ProLiant Cluster HA/L100 LifeKeeper for Linux	303523-B22
NOTE: For additional information regarding the ProLiant Cluster HA/L100 LifeKeeper for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11533_na/11533_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11533_div/11533_div.html (Worldwide)	
HP Serviceguard for Linux ProLiant Cluster	305199-B21
NOTE: Kit includes 2 licenses, documentation and an Ethernet crossover cable.	
HP Serviceguard for Linux License	307554-B21
NOTE: Kit includes single license version and documentation. NOTE: For additional information regarding the HP Serviceguard for Linux License, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html (Worldwide)	

Options

External Storage – Rack	HP StorageWorks Modular Smart Array 30 SB	302969-B21	
	HP StorageWorks Modular Smart Array 30 DB	302970-B21	
	StorageWorks Enclosure Model 4314R (rack-mountable)	190209-001	
	StorageWorks Enclosure Model 4314R (rack-mountable) (Int'l)	190209-B31	
	StorageWorks Enclosure Model 4314R (rack-mountable) (Japan)	190209-291	
	StorageWorks Enclosure Model 4354R (rack-mountable)	190211-001	
	StorageWorks Enclosure Model 4354R (rack-mountable) (Int'l)	190211-B31	
	StorageWorks Enclosure Model 4354R (rack-mountable) (Japan)	190211-291	
	NOTE: The StorageWorks Enclosure 4300 Family supports the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.		
	StorageWorks Enclosure 4200 Redundant Power Supply Option	338296-B21	
	StorageWorks Enclosure 4200 Ultra3 Single Bus I/O Module Option	190212-B21	
	StorageWorks Enclosure 4200 Ultra3 Dual Bus I/O Module Option	190213-B21	
	StorageWorks Enclosure Tower to Rack Conversion Kit	150213-B21	

HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000	201723-B22
	Modular Smart Array 1000 Controller	218231-B22
	Modular Smart Array Fibre Channel I/O Module	218960-B21
	Modular Smart Array 1000 Fabric Switch	218232-B21
	Modular Smart Array 1000 Fibre Channel Adapter (FCA) 2101	245299-B21
	Modular Smart Array hub 2/3	286763-B21
	NOTE: Please see the Modular Smart Array 1000 QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML (Worldwide)	

StorageWorks Modular Array 8000/Enterprise Modular Array 12000	EMA12000 D14 60Hz	175990-B21	
	EMA12000 D14 50Hz	175990-B22	
	EMA12000 S14 60Hz	175991-B21	
	EMA12000 S14 50Hz	175991-B22	
	MA8000 60Hz	175992-B21	
	MA8000 50Hz	175992-B22	
	EMA12000 Blue 60Hz	175993-B21	
	EMA12000 Blue 50Hz	175993-B22	
	NOTE: Options include controller, solution kits, ACS. MA8000/EMA12000 includes controller shelf, drive shelves, and cabinet. Packaging upgrade to RA8000/ESA12000.		
	NOTE: Please see the StorageWorks MA8000/EMA12000 QuickSpecs for FC Hubs, FC switches, platform software, host adapters, disks and options for complete solutions at: http://h18000.www1.hp.com/products/quickspecs/10545_na/10545_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/10545_div/10545_div.HTML (Worldwide)		

Options

StorageWorks Enterprise Modular Array 16000 FC	EMA16000 D14 50Hz (opal)	238792-B22
	EMA16000 D14 60Hz (opal)	238792-B21
	EMA16000 S14 50Hz (opal)	238791-B22
	EMA16000 S14 60Hz (opal)	238791-B21

NOTE: Models include: Dual HSG80 controllers in each Model 2200 enclosure (2 pairs per single bus configuration, 4 pairs per dual bus configuration) with 1GB cache per controller pair, and 12 14-bay drive enclosures with redundant power supplies. Configure-to-Order (CTO) builds are available. Options include ACS, platform kits and software by HP.

NOTE: Please see the StorageWorks EMA16000 QuickSpecs for FC switches, platform software, host adapters, disks and options for complete solutions at:

http://h18000.www1.hp.com/products/quickspecs/10812_na/10812_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/10812_div/10812_div.HTML (Worldwide)

StorageWorks Options	StorageWorks SAN Switch 2/8-EL	322120-B21
	StorageWorks SAN Switch 2/16	322118-B21
	StorageWorks SAN Switch 2/8-EL Upgrade Kit	325888-B21
	StorageWorks SAN Switch 2/16-EL Upgrade Kit	325889-B21
	StorageWorks Director 2/64	286809-B21

NOTE: Please see the StorageWorks Director 2/64 QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/11003_na/11003_na.HTML (North America)

http://h18000.www1.hp.com/products/quickspecs/11003_div/11003_div.HTML (Worldwide)

UPS Power Cord Matrix *Please see the UPS Power Cord Matrix for cable descriptions, requirements, and specifications for UPS units.*
<ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf>.

Uninterruptible Power Systems – Rack	HP UPS R1500 XR (1440VA, 1340 Watt), Low Voltage (NA)	204404-001
	HP UPS R1500 XR (1500VA, 1340 Watt), High Voltage (Int'l)	204404-B31
	HP UPS R1500 XR (1500VA, 1340 Watt), Low Voltage (Japan)	204404-291
	HP UPS R3000 XR (2880VA, 2700 Watt), Low Voltage (NA)	192186-001
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (NA)	192186-002
	HP UPS R3000 XR (2400VA, 2250 Watt), Low Voltage (Japan)	192186-291
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Japan)	192186-292
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Int'l - detachable cord)	192186-B31
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A IEC309 Plug)	192186-B32
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A CEE 7/7 SCHUKO Plug)	192186-B33
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A BS-546 Plug)	192186-AR1
	Rack-Mountable UPS R6000 (6000VA, 6000 Watt) High Voltage (NA)	347207-001
	Rack-Mountable UPS R6000 (6000VA, 6000 Watt) High Voltage (Int'l)	347207-B31
	Rack-Mountable UPS R6000 (6000VA, 6000 Watt) High Voltage (Japan)	347207-291
	UPS R12000 XR N+x (200-240V) (WW-hardwired)	207552-B22

NOTE: HP UPS R6000 has a hardwired input; and the UPS R12000 XR has a hardwired input and output connection.

Options

UPS Options	SNMP Serial Port Card	192189-B21
	NOTE: Supports tower and rack UPS XR models ranging from 1000 – 3000VA.	
	Six Port Card	192185-B21
	NOTE: Supports tower and rack UPS XR models ranging from 1000 – 3000VA.	
	High to Low Voltage Transformer (250VA)	388643-B21
	NOTE: Supports R6000 UPS series only. 2.5 amps @ 125 Volts max output across two NEMA 5-15.	
	Extended Runtime Module, R1500 XR	218971-B21
	NOTE: 2U each, two ERM maximum.	
	Extended Runtime Module, R3000 XR	192188-B21
	NOTE: 2U each, one ERM maximum.	
	Extended Runtime Module, R6000	347224-B21
	NOTE: 3U each, two ERM maximum.	
	Extended Runtime Module, R12000 XR, 4U	217800-B21
	NOTE: 4U each, two ERM maximum.	
	R1200 XR Backplate Receptacle Kit, (2) L6-30R (NA)	325361-001
	NOTE: The R12000 XR Backplate Kit has a hardwired input.	
	R1200 XR Backplate Receptacle Kit, (2) IEC-309R (WW)	325361-B21
	NOTE: The R12000 XR Backplate Kit has a hardwired input.	
	SNMP-EN Adapter	347225-B21
	NOTE: Supports R6000 UPS series only.	
	Multi-Server UPS Card	123508-B21
	NOTE: Supports R6000 UPS series only.	
	Scalable UPS Card	123509-B21
	NOTE: Supports R6000 UPS series only.	
	Cable, 16A, IEC320-C20 to IEC320-C19	295633-B21
	NOTE: Power cord (295633-B21) connects ProLiant servers to PDUs or UPSs with IEC320-C19 output connections.	

Modular Power	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) (NA, Japan)	252663-D71
Distribution Units 1U/OU (Up to 32 outlets) NOTE: 1U/OU mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).	NOTE: This mPDU (252663-D71) may also be used to connect the low volt model of the UPS R3000 XR.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) (NA, Japan)	252663-D72
	HP Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) (WW)	252663-B21
	NOTE: This mPDU (252663-B21), 40A model has a hardwired input.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC) (WW)	252663-B24
	NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements. This model may also be used with the high volt UPSs R3000 XR and R6000 For North America, need to order cable PN 340653-001.	
	NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.HTML (Worldwide)	

Options

Power Distribution Unit Options	<p>Third Party Modular Power Distribution Unit Mounting Kit 310777-B21</p> <p>NOTE: This kit allows you to mount the Modular Power Distribution Units in racks other than the 9000/10000 Series racks (any racks using the standard 19" rail). For more details please refer the Modular Power Distribution Unit QuickSpecs.</p> <p>4.5' IEC C 13 to IEC C14 Power Distribution Unit Jumper Cable (1 per pack) 142257-006</p> <p>4.5' IEC C 13 to IEC C14 Power Distribution Unit Jumper Cable (15 per pack) 142257-007</p>
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USB Options	<p>USB Optical Scroll Mouse (Carbonite) DD441B</p> <p>USB 1.44-MB External Diskette Drive (Carbonite) DC141B</p> <p>USB Easy Access Keyboard (Carbonite/Silver) DC168B#</p>
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USB Easy Access Keyboard (Carbonite/Silver) Country Key Code

Dash #	Description	Dash #	Description
A2M	ICELAND	ABT	HE
AB0	TAWA	ABU	UK
AB1	KOR	ABV	ARA
AB2	PRC	ABX	FIN
AB6	FRA	ABY	DEN
AB7	GRK	ABZ	ITL
AB8	TURK	AC0	BEL
AB9	PORT	AC4	BRZ
ABA	US	ACB	RUSS
ABB	EURO	AKB	CZE
ABC	FCAN	AKC	HUNG
ABD	GR	AKD	POL
ABE	SP	AKL	THAI
ABF	FR	AKN	BHCSY
ABH	NL	AKR	SLOV
ABJ	Japan	ARK	ICELAND
ABM	LA	B15	KAZ
ABN	NOR	UUZ	SWISS
ABS	SW		

Rack Builder	Please see the Rack Builder for configuration assistance at http://www.compaq.com/rackbuilder/ .
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Rack Kit	Tool-free support for racks with square mounting holes (including Compaq/HP 7000, 9000, 10000 and H9 series), with an adjustment range of 24" – 36".
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Telco Rack Support	DL380 G3 Telco Rack Kit: Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions (http://www.racksolutions.com/hp).
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Options

HP Rack 10000 Series (Graphite Metallic)

HP Rack S10614 (14U) Rack Cabinet – Shock Pallet	292302-B22
HP Rack 10842 (42U, 800mm wide) – Pallet	257415-B21
HP Rack 10842 (42U, 800mm wide) – Shock Pallet	257415-B22
HP Rack 10647 (47U) – Pallet	245160-B21
HP Rack 10647 (47U) – Crated	245160-B23
HP Rack 10642 (42U) – Pallet	245161-B21
HP Rack 10642 (42U) – Shock Pallet	245161-B22
HP Rack 10642 (42U) – Crated	245161-B23
HP Rack 10636 (36U) – Pallet	245162-B21
HP Rack 10636 (36U) – Shock Pallet	245162-B22
HP Rack 10636 (36U) – Crated	245162-B23
HP Rack 10622 (22U) – Pallet	245163-B21
HP Rack 10622 (22U) – Shock Pallet	245163-B22
HP Rack 10622 (22U) – Crated	245163-B23

NOTE: -B21 (pallet) used to ship empty racks shipped on a truck

-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels)

-B23 (crated) used for air shipments of empty racks

NOTE: Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color:

http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML

(North America)

NOTE: For additional information regarding Rack Cabinets, please see the following URL:

<http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html>.

Options

Rack Options for HP Rack 10000 Series	Rack Blanking Panels – Graphite (Multi)	253214-B26
	NOTE: Contains one each of 1U, 2U, 4U and 8U.	
	Rack Blanking Panels – Graphite (1U)	253214-B21
	NOTE: The Rack Blanking Panels (PN 253214-B21) contains 10 each of (1U).	
	Rack Blanking Panels – Graphite (2U)	253214-B22
	NOTE: The Rack Blanking Panels (PN 253214-B21) contains 10 each of (2U).	
	Rack Blanking Panels – Graphite (3U)	253214-B23
	NOTE: The Rack Blanking Panels (PN 253214-B21) contains 10 each of (3U).	
	Rack Blanking Panels – Graphite (4U)	253214-B24
	NOTE: The Rack Blanking Panels (PN 253214-B21) contains 10 each of (4U).	
	Rack Blanking Panels – Graphite (5U)	253214-B25
	NOTE: The Rack Blanking Panels (PN 253214-B21) contains 10 each of (5U).	
	800mm Wide Stabilizer Kit (Graphite)	255488-B21
	NOTE: Supported by the Rack 10842 cabinet only.	
	600mm Stabilizer Kit – Graphite	246107-B21
	Baying Kit for Rack 10000 series (Carbon)	248929-B21
	42U Side Panel – Graphite Metallic	246099-B21
	110V Fan Kit (Graphite)	257413-B21
	NOTE: Roof Mount Includes power cord with IEC320-C13 to Nema 5-15P.	
	220V Fan Kit (Graphite)	257414-B21
	NOTE: Roof Mount Includes power cord with IEC320-C13 to Nema 6-15P.	
	36U Side Panel – Graphite Metallic	246102-B21
	47U Side Panel – Graphite Metallic	255486-B21
	9000/10000 Series Offset Baying Kit (42U)	248931-B21
	NOTE: This kit can be used to connect 9000 and 10000 series racks of the same U height together. Kit contents include hardware for connecting racks and a panel to cover the 100mm gap at the rear of the two racks.	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html .	

Options

Rack Options for Rack 9000 Series	Baying/Coupling Kit	120669-B21
	42U Side Panel	120670-B21
	NOTE: The 42U Side Panel (PN 120670-B21) supports the Compaq Rack 9142 and Compaq Rack 9842.	
	9142 Extension Kit	120679-B21
	NOTE: The 9142 Extension Kit (PN 120679-B21) supports the Compaq Rack 9142 only.	
	9142 Split Rear Door	254045-B21
	NOTE: The 9142 Split Rear Door (PN 254045-B21) supports the 600 mm wide, 42U 9000 series rack.	
	9142 Short Rear Door	218217-B21
	NOTE: The 9142 Short Rear Door (PN 218217-B21) supports the Compaq Rack 9142 only.	
	9122 Short Rear Door (Opal)	218219-B21
	600mm Stabilizer Option Kit	120673-B21
	Rack Blanking Panel (Multi)	169940-B21
	NOTE: Kit includes four panels in 1U, 2U, 4U, and 8U.	
9000/10000 Series 42U Offset Baying Kit	248931-B21	
NOTE: This kit can be used to connect 9000 and 10000 series racks of the same U height together. Kit contents include hardware for connecting racks and a panel to cover the 100mm gap at the rear of the two racks.		
NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html		

Rack Options for Rack 7000 Series	High Air Flow Rack Door Insert for the 7122 Rack	157847-B21
	High Air Flow Rack Door Insert for the 7142 Rack	327281-B21
	High Air Flow Rack Door Insert for the 7142 Rack (six-pack)	327281-B22
	Compaq Networking Cable Management Kit	292407-B21
	Compaq Networking Recessed Rail Management Kit	292406-B21
	Compaq Rack Extension Kit for 7142	154392-B21
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html	

Options

Rack Options for Rack 7000, 9000 and 10000 Series

Ballast Option Kit	120672-B21
Rack Rail Adapter Kit (25-inch depth)	120675-B21
Cable Management D-Rings Kit	168233-B21
Monitor/Utility Shelf - Graphite	253449-B21
Depth Adjustable Fixed Rail	332558-B21
Input Device Adjustable Rails	287139-B21

NOTE: Input Device Adjustable Rails (287139-B21) are for use ONLY with the TFT5110R, TFT5600RKM and integrated keyboard/drawer which is used in mounting into third party racks.

Input Device Telco Rails	287138-B21
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NOTE: Input Device Telco Rails (287138-B21) are for use ONLY with the TFT5110R, TFT5600RKM and integrated keyboard/drawer which is used in mounting into third party racks.

Console Management Controller (CMC) Option Kit	203039-B21
Console Management Controller (CMC) Sensors Option Kit	203039-B22
Console Management Controller (CMC) Locking Option Kit	203039-B23
Console Management Controller (CMC) Smoke Sensors Option Kit	203039-B24
Server Console Switch 1 x 4 port (100 to 230 VAC)	400336-001
Server Console Switch 1 x 4 port (100 to 230 VAC) (Int'l)	400336-B31
Server Console Switch 1 x 4 port (100 to 230 VAC) (Japan)	400336-291
CPU to Server Console Cable, 12'	110936-B21
CPU to Server Console Cable, 3'	110936-B24
CPU to Server Console Cable, 7'	110936-B25
Switch Box Connector Kit (115 V)	144007-001
Switch Box Connector Kit (230 V)	144007-002
Switch Box Connector Kit (high voltage) (Int'l)	144007-B33
TFT5600 RKM (Rack-mount Keyboard Monitor)	221546-xx1

Country Code Key (for TFT5600 RKM Rack Keyboard Monitor (PN 221546-xx1))

XX = 001	US	XX = 091	Norway
XX = 031	UK	XX = 101	Sweden/Finland
XX = 041	Germany	XX = 111	Switzerland
XX = 051	France	XX = 131	Portugal
XX = 061	Italy	XX = 181	Belgium
XX = 071	Spain	XX = 291	Japan
XX = 081	Denmark	XX = B31	International

1U Rack Keyboard & Drawer	257054-xx1
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Country Code Key (for 1U Rack Keyboard & Drawer (PN 257054-xxx))

XX = 001	US	XX = 091	Norway
XX = 031	UK	XX = 101	Sweden/Finland
XX = 041	Germany	XX = 111	Switzerland
XX = 051	France	XX = 131	Portugal
XX = 061	Italy	XX = 181	Belgium
XX = 071	Spain	XX = 291	Japan
XX = 081	Denmark	XX = B31	International

NOTE: For additional information regarding Rack Cabinets, please see the following URL: <http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html>.

Options

Rack Options for Third party Cabinet Racks	<p>Round hole rack cabinet rail kit 293052-B21</p> <p>NOTE: Support for racks with round mounting holes (include HP Rack System /E and HP Systems) with and adjustment range of 24 inches to 36 inches (60.96 cm to 91.44 cm).</p>
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HP Factory Express	<p>Factory Installation, Racking, and Customization Services</p> <p>Factory Express Server Configuration Level 1 293355-888</p> <p>NOTE: Free Installation of HP Options - Installation of HP Options memory, NICs, hard drives, controllers, processors, I/O cards, pre-install standard OEM OS image, and tape drives. Installation fees will apply to all non-HP certified hardware and asset tags.</p> <p>Factory Express Server Configuration Level 2 266326-888</p> <p>NOTE: Includes Level 1 Customer Intent of a ProLiant server and options configuration, OS installation, custom image download, IP addressing, network setting, and custom packaging. Customer unique requirements (quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, and RILOE). Customer access, validation and control through VPN (price/server).</p> <p>Factory Express Rack Integration Level 3 with 1 – 3 servers or storage enclosures 325736-888</p> <p>Factory Express Rack Integration Level 3 with 4 – 9 servers or storage enclosures 232539-888</p> <p>Factory Express Rack Integration Level 3 with 10 or more servers or storage enclosures 325735-888</p> <p>NOTE: Includes Level 1 Customer Intent for standard mounted servers and storage units plus standard cable mgmt, RAID configuration, servers & storage, power distribution, networking gear and accessories (price/ra520ck).</p> <p>Factory Express Rack Integration Level 4 with 1 – 3 servers or storage enclosures 325734-888</p> <p>Factory Express Rack Integration Level 4 with 4 – 9 servers or storage enclosures 232540-888</p> <p>Factory Express Rack Integration Level 4 with 10 or more servers or storage enclosures 325733-888</p> <p>NOTE: Includes Level 2 Customer Intent plus customer defined cable management and naming convention, customer furnished image download, IP addressing, cluster configurations (SQL, External storage RAID). Quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, RILOE). Customer access and validation through VPN (price/rack).</p> <p>Factory Express Rack Integration Level 5 with 1 – 3 servers or storage enclosures 325732-888</p> <p>Factory Express Rack Integration Level 5 with 4 – 9 servers or storage enclosures 232541-888</p> <p>Factory Express Rack Integration Level 5 with 10 or more servers or storage enclosures 325731-888</p> <p>NOTE: Includes Level 4 Customer Intent plus Custom SW layering and extended test, Customer access, validation and control through VPN, Clustered racks with networking gear and/or external storage array, Start-up installation services custom quote. (price/rack).</p> <p>NOTE: Factory Express Engineered Solution Level 6 is a custom solutions available through Factory Express. Please contact a your local reseller or Account Manager.</p>
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Service and Support Offerings (HP Care Pack Services)	<p>Hardware Services On-site Service</p> <p>4-Hour On-site Service 5-Day x 13-Hour Coverage, 3 Years (Canadian Part Number) FP-MI3EC-36</p> <p>4-Hour On-site Service, 5-Day x 13-Hour, 3 Years (U.S. Part Number) 331087-002</p> <p>4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years (AP/EMEA Part Numbers) U4697A U4697E</p> <p>4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years (Canadian Part Number) FP-MI7EC-36</p> <p>4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number) 401782-002</p> <p>4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years (AP/EMEA Part Numbers) U4698A U4698E</p> <p>6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years (Canadian Part Number) FP-MICEC-36</p> <p>6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number) 331088-002</p> <p>6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years (AP/EMEA Part Numbers) U4699A U4699E</p>

Options

Installation & Start-up Services

Hardware Installation (Canadian Part Number)	FP-MIINS-EC
Hardware Installation (U.S. Part Number)	401793-002
Hardware Installation (AP/EMEA Part Number)	U4707A U4707E
Installation & Start-Up of a ProLiant server and Microsoft O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (U.S. Part Number)	240015-002
Installation & Start-Up of a ProLiant server and Microsoft O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (Canadian Part Number)	FM-MSTEC-03
Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (AP/EMEA Part Numbers)	U4708A U4708E
Installation & Start-Up of a ProLiant server and Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (U.S. Part Number)	331093-002
Installation & Start-Up of a ProLiant server and Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (Canadian Part Number)	FM-LSTEC-03

Support Plus

Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (U.S. Part Number)	239936-002
Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (Canadian Part Number)	FM-M01E3-36
Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (AP/EMEA Part Numbers)	U4709A U4709E
Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (U.S. Part Number)	331091-002
Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (Canadian Part Number)	FM-L01E3-36
Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays (AP/EMEA Part Numbers)	U4711A U4711E

Support Plus 24

Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (U.S. Part Number)	239938-002
Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (Canadian Part Number)	FM-M02E3-36
Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (AP/EMEA Part Numbers)	U4710A U4710E
Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (U.S. Part Number)	331092-002
Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (Canadian Part Number)	FM-L02E3-36
Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (AP/EMEA Part Numbers)	U4712A U4712E

Options

HP Care Pack Priority Services for ProLiant Servers - Priority Silver

24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday - Friday, 8AM - 5PM local time, 2-hr response after hours for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review (2-5-2 Part Number for Canada)	FM-M04E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday - Friday, 8AM - 5PM local time, 2-hr response after hours for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System Operating System, Technical Account Manager, Technical Newsletter, SW activity review (6-3 Part Number for U.S.)	239940-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (6-3 Part Number for U.S.)	239942-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (2-5-2 Part Number for Canada)	FM-M24E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday - Friday, 8AM - 5PM local time, 2-hr response after hours for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review (2-5-2 Part Number for Canada)	FM-N04E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday - Friday, 8AM - 5PM local time, 2-hr response after hours for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review (6-3 Part Number for U.S.)	239980-002
HP Care Pack Priority Services for ProLiant Servers - Priority Silver	
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Novell NetWare Operating System (2-5-2 Part Number for Canada.)	FM-N24E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Novell NetWare Operating System (6-3 Part Number for U.S.)	239982-002

Options

HP Care Pack Priority Services for ProLiant Servers - Priority Gold

24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (2-5-2 Part Number for Canada)	FM-M08E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (6-3 Part Number for U.S.)	239944-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (2-5-2 Part Number for Canada)	FM-M28E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (6-3 Part Number for U.S.)	239946-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (2-5-2 Part Number for Canada)	FM-N08E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (6-3 Part Number for U.S.)	239984-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (2-5-2 Part Number for Canada)	FM-N28E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (6-3 Part Number for U.S.)	239986-002

Options

HP Care Pack Priority Services for ProLiant Servers – Priority Gold Executive

24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (2-5-2 Part Number for Canada)	FM-M09E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (6-3 Part Number for U.S.)	239948-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (2-5-2 Part Number for Canada)	FM-M29E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (6-3 Part Number for U.S.)	239950-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (2-5-2 Part Number for Canada.)	FM-N09E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (6-3 Part Number for U.S.)	239988-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (2-5-2 Part Number for Canada)	FM-N29E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (6-3 Part Number for U.S.)	239990-002

NOTE: For more information, customer/resellers can contact <http://www.hp.com/services/carepack>

Memory

HP ProLiant DL560 2P Models or 2.0GHz (1P) Model Standard Memory

1024 MB PC2100 Registered DDR SDRAM DIMM Memory comes installed (2 x 512-MB SDRAM)

Standard Memory Plus Optional Memory

Up to 9216-MB memory is available with the optional installation of PC2100 Registered DDR SDRAM DIMM Memory Option Kit

Standard Memory Replaced with Optional Memory

Up to 12,288-MB of memory is available with the removal of the standard 1024-MB of memory, the optional installation of PC2100 Registered DDR SDRAM DIMM Memory Option Kit

NOTE: This chart does not represent all possible memory configurations.

Memory		Standard Memory Board (Slots)					
		1	2	3	4	5	6
Standard	1024 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Optional	9,216 MB	512 MB	512 MB	2048 MB	2048 MB	2048 MB	2048 MB
Maximum	12,288 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB

The following memory options are available from HP:

- 512MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x256MB) 300678-B21
- 1024MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x512MB) 300679-B21
- 2048MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x1024MB) 300680-B21
- 4096MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x 2048 MB) 300682-B21

HP ProLiant DL560 1P Models Standard Memory

512 MB PC2100 Registered DDR SDRAM DIMM Memory comes installed (2 x 256-MB SDRAM)

Standard Memory Plus Optional Memory

Up to 8,704-MB memory is available with the optional installation of PC2100 Registered DDR SDRAM DIMM Memory Option Kit

Standard Memory Replaced with Optional Memory

Up to 12,288-MB of memory is available with the removal of the standard 512-MB of memory, the optional installation of PC2100 Registered DDR SDRAM DIMM Memory Option Kit

NOTE: Memory must be added in banks of two DIMMS. This chart does not represent all possible memory configurations.

Memory		Standard Memory Board (Slots)					
		1	2	3	4	5	6
Standard	512 MB	256 MB	256 MB	Empty	Empty	Empty	Empty
Optional	8,704 MB	256 MB	256 MB	2048 MB	2048 MB	2048 MB	2048 MB
Maximum	12,288 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB

The following memory options are available from HP:

- 512MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x256MB) 300678-B21
- 1024MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x512MB) 300679-B21
- 2048MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x1024MB) 300680-B21
- 4096MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (2x 2048 MB) 300682-B21

Storage



A	1.44-MB Diskette Drive
B	Ejectable: 24x IDE CD-ROM (Slimline)
0-1	Wide Ultra3/Ultra 320 Drive Cage

Drive Support

	Quantity Supported	Position Supported	Controller
Slim Line Drives			
1.44-MB slim-line Diskette Drive	Up to 1	C	Integrated
Ejectable IDE slim-line CD-ROM Drive	Up to 1	B	Integrated IDE
Ejectable Slimline DVD-ROM Drive (8X/24X) Option Kit	Up to 1	B	Integrated IDE

Hard Drives

Ultra320 Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
1-inch	Up to 2	0-1	Integrated Dual Channel Wide Ultra3 SCSI Adapter
146.8-GB 10,000 rpm			Smart Array 532 Controller
72.8-GB 10,000 rpm			Smart Array 5302/128 Controller
36.4-GB 10,000 rpm			Smart Array 5304/256 Controller
72.8-GB 15,000 rpm			Smart Array 6402/128 Controller
36.4-GB 15,000 rpm			Smart Array 5312 Controller
18.2-GB 15,000 rpm			Smart Array 641 Controller
			Smart Array 642 Controller
			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter

NOTE: All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds. U320 drives require an optional U320 Smart Array Controller or U320 SCSI HBA to support U320 transfer rates.

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family Up to 13		External	Smart Array 5302/128 Controller Smart Array 5304/256 Controller Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Modular Smart Array 500 System	1	External	Smart Array 532 Controller (used as Host Bus Adapter) Please see the Modular Smart Array 500 QuickSpecs for the latest list of supported HBAs: http://www.hp.com/go/msa500
Modular Smart Array 1000	Please see the Modular Smart Array 1000 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1000 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1000: http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML (Worldwide) http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML (North America)			

Maximum Storage Capacity – (External StorageWorks Enclosure Attached)

Internal	293.6 GB (2 x 146.8-GB Ultra320 SCSI 1" Drives)
External	24.662 TB (12 x (14 x 146.8-GB 1" Ultra320 SCSI Drives))
Total	24.955 TB

Tape Drives

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html (North America)
<http://h18000.www1.hp.com/products/quickspecs/Division/10233.html> (Worldwide)

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Storage Systems listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html (North America)
<http://h18000.www1.hp.com/products/quickspecs/Division/10809.html> (Worldwide)

	Quantity Supported	Position Supported	Controller
Internal DAT 20/40 Internal DAT 72			Smart Array 5i Controller (integrated on system board) Smart Array 532 Smart Array 5302/128 Controller Smart Array 5304/256 Controller Smart Array 6402/128 Controller Smart Array 5312 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
External DAT 72			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
Internal AIT 100-GB, Hot Plug Internal AIT 50-GB, Hot Plug Internal AIT 35-GB, LVD, Hot Plug Internal 20/40-GB DAT, Hot Plug Internal DAT 72 Tape Drive	Up to 1	0 or 1	Smart Array 5i Controller (integrated on system board) Smart Array 532 *NOTE: The Smart Array 532 Controller does not support the AIT 100-GB Hot Plug Tape Drive. Smart Array 5302/128 Controller Smart Array 5304/256 Controller Smart Array 6402/128Controller Smart Array 5312 Controller Smart Array 641 Controller

Storage

External AIT 50-GB Tape Drive	Up to 2	External	Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
External AIT 35-GB, LVD Tape Drive			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
External DAT 72 Tape Drive			
SDLT 110/220-GB, External	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
SDLT 160/320-GB, External			
LTO Ultrium 230, External	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
LTO Ultrium 460, External			
SDLT 110/220-GB, External	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
SDLT 160/320-GB, External			
DLT VS 40/80-GB, External	Up to 3	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
External 40/80-GB DLT Enhanced			
HP StorageWorks AIT 35 GB Autoloader	Up to 1 (for a single HBA) Up to 2 (for a dual HBA)	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
SSL2020 AIT Mini-Library	2 drives per SCSI channel	External	SAN Access Module for Smart Array 5302 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
SSL1016 tape autoloader	Up to 2 drives	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
MSL5026DLX (40/80GB DLT-based)	2 drives per SCSI channel	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
MSL5026SL (SDLT-based) Library			
MSL5052SL (SDLT-based) Library			
MSL5052S2 (SDLT-based) Library			
MSL5030L1 (LTO-based) Library			
MSL5060L1 (LTO-based) Library			
MSL6030 (Ultrium 460 -based) Library			
MSL6060 (Ultrium 460 -based) Library			
ESL9322	Please see the ESL Library QuickSpecs below to determine configuration requirements	External	64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
ESL9322L1			
ESL9595SL			
ESL9595			
ESL9595L1			
ESL9595SL: http://h18000.www1.hp.com/products/quickspecs/11332_div/11332_div.HTML			
ESL9322: http://h18000.www1.hp.com/products/quickspecs/11628_div/11628_div.HTML			
ESL9322L1: http://h18000.www1.hp.com/products/quickspecs/11445_div/11445_div.HTML			
ESL9595: http://h18000.www1.hp.com/products/quickspecs/11629_div/11629_div.HTML			
ESL9595L1: http://h18000.www1.hp.com/products/quickspecs/11435_div/11435_div.HTML			

Power Specifications

Part Number	280126-001
Spare Kit	280126-B21
Operational Input Voltage Range (V rms)	90 to 264
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	550	550	550	550	550	550
Nominal Input Current (A rms)	7.1	6.1	3.3	3.1	3.0	2.8
Max Rated Input Wattage Rating (Watts)	696	688	679	671	667	663
Max. Rated VA (Volt-Amp)	710	702	693	684	680	676
Efficiency (%)	79	80	81	82	82.5	83
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	.87	1.00	1.81	1.91	2.00	2.09
Maximum Inrush Current (A peak)	100	100	100	100	100	100
Maximum Inrush Current duration	20	20	20	20	20	20

System Specifications

DL560 Fully Configured

Up to 4 Processors, 6 Memory Slots, 2 Hard Drives, 3 PCI Slots, and 2 Hot Plug Power Supplies

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Fully Loaded System Input Wattage (W)	534	527	520	514	507	501
Fully Loaded System Input Current (A rms)	5.4	4.7	2.6	2.4	2.3	2.1
Fully Loaded System Thermal (BTU- Hr)	1820	1707	1774	1752	1730	1709
Fully Loaded System VA (Volt-Amp)	545	538	531	524	518	511
System Leakage with all power supplies loaded (mA)	.87	1.00	1.81	1.91	2.00	2.09
System Inrush Current with all power supplies loaded (A)	200	200	200	200	200	200
Power cord requirements	Nema 5-15P to IEC320-C13			Option no./Spare no: 163719-002		
	IEC320-C13 to IEC320-C14			Option no./Spare no: 142259-001/ 142258-B21		

NOTES:

ActiveAnswers Power Calculation

Power calculator is LIVE on ActiveAnswers Web site. This is an external link.

Follow this link: <http://h30099.www3.hp.com/configurator/powercalcs.asp>.

To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL560
- Click on: "Power Calculator" link (You may need to scroll down to see it.)

TechSpecs

System Unit Rack	Chassis Footprint (HxWxD)	3.38 x 17.50 x 25.75 in (8.59 x 44.45 x 65.41 cm)
	Weight	<p>Maximum (2 Power Supplies, 2 Hard Drives) 60 lb (27 kg)</p> <p>Minimum (No hard drives installed, one power supply) 35 lb (16 kg)</p>
	Input Requirements	<p>Rated Input Voltage 100 to 120 VAC/200 to 240 VAC</p> <p>Rated Input Frequency 50 to 60 Hz</p> <p>Input Power 690W @ 115 VAC/675W @ 230 VAC</p> <p>Rated Input Current 7A (100 VAC), 6A (115 VAC), 3A (230 VAC)</p>
	Max BTU Rating	2375 BTU (550 Watts)
	Power Supply Output Power (per power supply)	<p>Rated Steady-State Power 550W/550W (lowline/highline)</p> <p>Maximum Peak Power 550W/550W (lowline/highline)</p>
	Temperature Range	<p>Operating 50° to 95° F (10° to 35° C)</p> <p>Non-operating -20° to 140° F (-29° to 60° C)</p> <p>Shipping -22° to 122° F (-30° to 50° C)</p>
	Relative Humidity (non-condensing)	<p>Operating 10% to 70%</p> <p>Non-operating 5% to 95%</p>
	Maximum Wet Bulb Temperature	101.7° F (38.7° C)
	Acoustic Noise	<p>NOTE: Listed are the declared A-weighted sound power levels LWAd and the declared average bystander position sound pressure levels LpAm when operating in a 23° C ambient environment. Noise emissions were measured in accordance with ECMA 74 and declared in accordance with ECMA 109.</p> <p>Idle (Fixed Disk Drives Spinning)</p> <p>L WAd (BELS) 6.0</p> <p>L pAm (dBA) 46</p> <p>NOTE: These values apply to 2U rack configuration. Configuration tested included 2 processors, two 10,000 rpm hard drive, 1 power supplies, 1 power supply fan and 4 CPU fans.</p>

TechSpecs

1.44-MB Diskette Drive	Size	3.5 in	
	LED Indicators (front panel)	Green	
	Read/Write Capacity per Diskette (high/low density)	1.44 MB/720 KB formatted	
	Drive Supported	One	
	Drive Height	One-third	
	Drive Rotation	300 rpm	
	Transfer Rate Synchronous (Maximum) (high/low)	500/250 KB/s	
	Bytes/Sector	512	
	Sectors/Track (high/low)	18/9	
	Tracks/Side (high/low)	80/80	
	Access Times	Track-to-Track (high/low)	3/6 ms
		Average (high/low)	169/94 ms
		Settling Time	15 ms
		Latency Average	100 ms
	Cylinders (high/low)	80/80	
Read/Write Heads	Two		

TechSpecs

24X Max (or higher) IDE CD-ROM Drive Slim Line	Disk	Applicable Disk	CD-DA, CD-ROM (Mode 1 and 2) CD-XA, CD-I (Mode 2, Form 1 and 2) Photo CD (Single and Multi-session) Mixed Mode (Audio and Data combined)
		Capacity	540 MB (Mode 1, 12 cm) 650 MB (Mode 2, 12 cm)
		Diameter	4.7 x 3.15 in/12 x 8 cm
		Rotational Speed	4200 rpm maximum
		Center Hole	0.6 in/15 mm diameter
		Thickness	1.2 mm
		Track Pitch	1.6 μ m
	Block Size	Mode 1	2,048
		Mode 2	2,340, 2,336, 1,024 bytes
		CD-DA	2,352 bytes
		CD-XA	2,328 bytes
	Interface	IDE (ATAPI)	
	Access Times (typical)	Random	100 ms
		Full-Stroke	2000 ms
	Data Transfer Rate	Sustained	150 KB/s (sustained 1X)
		Burst	2100 to 3600 KB/s
	Cache Buffer	128 KB	
	Start-up Time (typical)	< 7seconds	
	Stop Time	< 4seconds	
	Laser Parameters	Type	Semiconductor Laser GaAlAs
		Wave Length	780 \pm 25 nm
		Divergence Angle	53.5 $^{\circ}$ \pm 1.5 $^{\circ}$
		Output Power	0.14 mW
	Operating Conditions	Temperature	41 $^{\circ}$ to 113 $^{\circ}$ F (5 $^{\circ}$ to 45 $^{\circ}$ C)
		Humidity	10% to 80%
	Dimensions	(HxWxD, maximum)	1.69 x 5.75 x 8.19 in (4.29 x 15 x 20.8 cm)
		Weight	2.66 lb (1.2 kg)

Slim Line CD-RW/DVD- ROM 24X Combo Drive (Multibay)	Shipping Dimensions	13.88 x 11.38 x 9.25 in (35.26 x 28.91 x 23.50 cm)
	Shipping Weight	5 lb (2.27 kg)
Disk	Applicable Disk	DVD-ROM DVD-R (Read Only) 2.6 GB/side DVD-RAM (Read Only) 5.2 GB/side DVD-RAM (Read Only) CD-ROM Mode-1 data disc CD-ROM Mode-2 data disc CD Audio disc CD-Extra CD-RW CD-R CD Text PhotoCD CD-I (mode 2) CD-I Ready

		CD-Bridge	
	Capacity	DVD-ROM	DVD-SL 4.7 GB/side DVD-DL 8.5 GB/side Double Sided 9.40 GB/side
		DVD-R	3.95 GB/side
		DVD-RAM	2.6 GB/side and 5.2 GB/
		CD-ROM	Mode-1 650 MB (550 MB) Mode-2 742 MB (640 MB)
	Block Size	DVD	2,048 bytes
		CD	2,352 (Mode-0) 2352, 2340, 2336, 2048 bytes (Mode-1) 2352, 2340, 2336, 2048 bytes (Mode-2)
	Diameter	120 mm, 80 mm (with adapter at vertical mounting mode)	
Loading Mechanism	Tray type		
Interface	EIDE (ATAPI)		
Access Times (typical)	Random	DVD-ROM < 120 ms, CD-ROM < 110 ms	
	Full-Stroke	DVD-ROM < 240 ms, CD-ROM < 160 ms	
Audio Output Level (typical)	Line-out	CD 0.7 Vrms at 47 Kohms Load	
Data Transfer Rate (sustained)	DVD-ROM	Single Layer	10.8 MB/sec. Max.
	DVD-RAM	2.77 MB/sec. Max	
	CD-ROM	7.2 MB/sec. Max.	
Cache Buffer	2 MB		
Spin-up Time (typical)	less than 10 seconds		
MTBF	120,000 Power On Hours (POH)		
Ambient Temperature	Operating	-22° to 140° F (-30° to 60° C)	
Relative Humidity	Operating	10% to 80%	
	Storage/Transportation	5% to 95%	
Dimensions	(HxWxD, maximum)	0.5 x 5.04 x 5.1 in (12.7x128x129.4 mm)	
Option Kit Contents	DVD-ROM drive with installation guide, warranty card, registration card		

TechSpecs

Integrated Lights-Out Standard (integrated on system board)

Architecture	32-bit PCI-based health and remote management ASIC (Application Specific Integrated Circuit)
Processor	32-bit RISC processor core running at 66 MHz
Upgradability	Option firmware upgradable via flash ROM.
Video Support	Utilizes the host server's embedded video chip. Supports VGA/SVGA, 640 x 480 (256 to 16.7M colors), 800 x 600 (256 to 16.7M colors), 1024 x 768 (256 to 65K colors), 1280 x 1024 (256 colors)
Interfaces	One Ethernet network connection (10/100 Mb/s)
Memory	2-MB Flash ROM 8-MB SDRAM
OperatingSystem Support	United Linux 1.0 Windows 2000 Server Windows 2000 Advanced Server Red Hat 7.x SLES8 Novell NetWare 5.x, 6.x
Client Browser Support	Microsoft Internet Explorer 5.5 or later.
iLO Standard Features	Virtual Text Remote Console Virtual Power Button Control Dedicated LAN Connectivity Automatic IP Configuration via DHCP/DNS/WINS Industry Standard 128-bit Secure Sockets Layer (SSL) Security IML and iLO Event Logging Support for up to 12 user accounts with customizable access privileges
iLO Advanced Features (optional)	Virtual Graphical Remote Console Virtual Floppy Drive

TechSpecs

Integrated Smart Array 5i Plus Controller	Data Compatible with all Smart Array Controllers	Yes
	Instant Upgrades to other Smart Array Controllers	Yes
	Consistent Software Manageability Tools	Yes
	PCI-X Bus	64-bit, 100 MHz (integrated on system board)
	PCI-X Peak Data Transfer Rate	800 MB/s
	SCSI Protocols Supported	Ultra3, Ultra2
	SCSI Peak Data Transfer Rate	160 MB/s per channel
	Channels	2 (only one connected)
	SCSI Ports (external/internal)	0/1
	Drives Supported (maximum)	2
	NOTE: Maximum is the total number of internal drives on each specific ProLiant server.	
	Cache	64 MB Read and/or Write Cache
	Battery-Backed Write Cache	Yes, with installation of Battery-Backed Write Cache Enabler, up to 64MB
	RAID Support	0, 1
	Logical Drives (maximum)	Maximum = total number of drives
	Online Configuration	Yes
	Online Capacity Expansion	Yes
	Logical Drive Capacity Extension	Yes
	Online Stripe Size Migration	Yes
	Online RAID Level Migration	Yes
	Online Spare Support	Yes
	Automatic Data Recovery	Yes
	Drive Roaming	Yes
	Redundant Controllers	No

TechSpecs

Two NC7781 PCI-X Gigabit NICs (embedded) Server Adapter	Network Interface	10/100/1000-T	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	64-bit/133MHz PCI-X	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-T (Half-Duplex)	1000 Mb/s
1000Base-T (Full-Duplex)		2000 Mb/s	
Connector	RJ-45		
Cable Support	10Base-T	Category 3,4 or 5 UTP up to 328 ft (100 m)	
	10/100/1000Base-T	Category 5 UTP (2 pair); up to 328 ft (100 m)	

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