Overview

Ultra320 SCSI and SATA Model

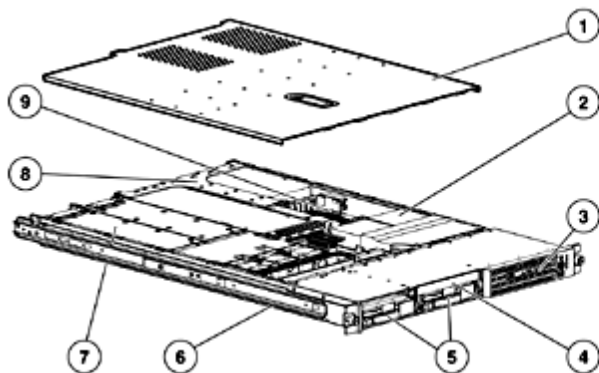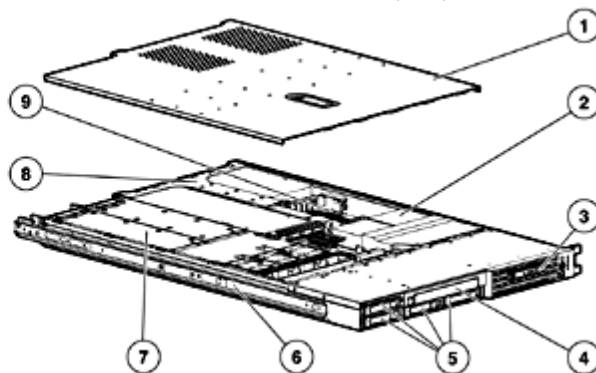Serial Attached SCSI (SAS) Model

1. Removable server hood
2. Up to two Intel Xeon™ processors
3. Removable processor fan assembly with front and secure internal USB ports
4. Removable media bay
5. Two 1" Ultra320 hot plug drive bays; or
Two 1" SATA pluggable drive bays; or
Four Serial Attached SCSI hot plug drive bays

6. Sliding rails standard for in rack servicing
7. Redundant power supplies
8. 1 full length and 1 half length PCI-X slots (optional PCI Express)
9. Up to 12GB DDR2 PC2-3200 SDRAM

What's New

- New HP ProLiant DL360 G4p SAS models with up to 3.6 GHz Intel® Xeon™ processors with 2MB L2 Cache
    - Features four Serial Attached SCSI small form factor hot-plug disk drive bays
    - Supporting both Serial Attached SCSI and Serial ATA hard disk drives
    - Smart Array P600 Controller with RAID 0, 1, 5 and Online Spare support

At A Glance

- HP ProLiant DL360 G4p performance models for exceptional performance, reliability, and manageability
- Built in reliability and availability features: embedded RAID, redundant fans, redundant power option, pre-failure notifications, and Lights-Out Management
- Combining concentrated 1U compute power, integrated Lights-Out management, and essential fault tolerance, the HP ProLiant DL360 G4p is optimized for space constrained data center installations.
- Up to two 3.6 GHz Intel® Xeon processors with 2-MB L2 cache and 800 MHz front side bus
- 64-bit Intel® Xeon™ processors with 32-bit & 64-bit computing
- Up to 12GB of PC2-3200 DDR2 400 SDRAM; with 2-way interleaving
- Advanced ECC memory standard; optional Online Spare Memory
- Two 64-bit/133 MHz PCI-X slots
- Optional PCI-X to PCI-Express conversion kit.
- Integrated Lights-Out (iLO) remote management embedded on every HP ProLiant DL360 G4p
- Optional Integrated Lights-Out support for Power Regulator for ProLiant and introducing support for the draft DMTF System Management Architecture for Server Hardware Command Line Protocol standard
- HP Power Regulator for ProLiant delivering server level, policy based power management with industry leading energy efficiency and savings on system power and cooling costs
- Support for iLO Shared Network Port enables access to the iLO management processor through one of the embedded system

Overview

NICs
- Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
- Fan redundancy, standard
- Hot plug power supply with optional 1+1 redundancy
- 1U Rack form factor (1.75")
- Sliding rails for in rack servicing ship standard; optional ambidextrous cable management arm
- ProLiant Essential Foundation Pack standard, including HP Systems Insight Manager, SmartStart, SmartStart Scripting Toolkit, Subscriber's Choice and ROM Based Setup Utility (RBSU).
- SAS Model:
  - Smart Array P600 RAID Controller with 256MB transportable battery backed cache
  - Up to four Small Form Factor (SFF) Serial Attached SCSI (SAS) hot plug hard drives or four SFF Serial ATA (SATA) hard drives
- SCSI Model:
  - Embedded Smart Array 6i RAID Controller with optional 128MB transportable battery backed cache (SCSI models)
  - Up to two HP Universal SCSI hot plug disk drives
- SATA Model:
  - Embedded 2 Port SATA Controller (SATA models)
  - Up to two pluggable Serial ATA disk drives
- Protected by HP Services, including a three-year, next business day on-site limited global warranty and extended Pre-Failure Warranty which covers processors, memory, and U320 SCSI hard drives - SATA hard drives have a one-year warranty. Certain restrictions and exclusions apply.

QuickSpecs

Standard Features

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

Processor One of the following depending on Model	Intel Xeon Processor 3.0 GHz/800MHz -2MB L2
	Intel Xeon Processor 3.2 GHz/800MHz -2MB L2
	Intel Xeon Processor 3.4 GHz/800MHz -2MB L2
	Intel Xeon Processor 3.6 GHz/800MHz -2MB L2

Processor Cache	2-MB Level 2 cache memory

Upgradeability	Upgradeable to dual processing

Chipset	Intel chipset is E7520

Memory Protection & Functionality	Advanced ECC (multi-bit error protection) Online spare 2-way interleaving

Memory	Type	PC2-3200 DDR2 400 SDRAM
	Standard	1 GB (2 x 512 MB)
	Standard (3.2 GHz and above SAS models)	2 GB (2 x 1024 MB)
	Maximum	12 GB

Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter

Expansion Slots

Slot Number	Bus Speed	Bus Number*	Device Number**	Hot Plug	PCI Voltage
1	64-bit/133MHz PCI-X	7	0	no	3.3 Volt
1	x8 PCI Express (option)	3	0	no	X8
2	64-bit/133MHz PCI-X	10	0	no	3.3 Volt
2	x8 PCI Express (option)	13	0	no	X8

*NOTE: Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.
**NOTE: Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).
NOTE: For more information regarding PCI-X, please see the following URL:
http://www.hp.com/servers/pci-x.
NOTE: All slots can accept universal keyed PCI cards.

Standard Features

Manageability	Integrated Lights-Out (iLO) Management (integrated on motherboard)	

Storage Controllers	SAS Models	HP Smart Array P600 Controller with 256MB Cache (installed in PCI-X slot) NOTE: The Smart Array P600 controller offers an external 4X SAS port for additional storage expansion.
	SCSI Models	HP Smart Array 6i Controller (embedded) NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI port.
	SATA Models	HP embedded 2 Port SATA Controller (integrated on system board) NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.

Storage	Optical Drives	Ejectable CD-ROM (Standard in most models), DVD-ROM, or DVD-RW drives, or Slimline floppy NOTE: Slimline Floppy Diskette Drive is not supported in SCSI and SATA models.
	Diskette Drive	1.44 MB Diskette Drive NOTE: Standard in SCSI models; optional in SATA models; not available in SAS models.
	Drive Bays	SAS Model: 4 Small Form Factor SCSI Model: 2 HP Universal SCSI SATA Model: 2 Pluggable SATA

Maximum Internal Storage Type	SAS Model	292 GB SAS	4 x 72.8 GB Serial SCSI
		240 GB SATA	4 x 60 GB Serial ATA
	SCSI Model	600 GB	2 x 300 GB Ultra320 SCSI
	SATA Model	500 GB	2 x 250 GB Serial ATA

Interfaces	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Hot Plug Keyboard	1
	USB	3 (rear, front, internal) NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html.
	Network RJ-45	2
	iLO remote management port	1

Graphics	Integrated ATI RAGE XL Video Controller with 8-MB SDRAM Video Memory

Form Factor	Rack (1U), (1.75 in/4.45 cm)

Standard Features

ProLiant Essentials Foundation Pack Software	HP Systems Insight Manager	HP's new HP Systems Insight Manager (HP SIM) helps maximize system uptime and performance and reduce system maintenance costs by providing proactive notification of problems before those problems result in unplanned downtime or reduced productivity. HP SIM are both easy to set up work with the Insight Management Agents, integrated Light-Out and Remote Insight Light-Outs Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP SIM customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP 9000 systems; and plug-ins for storage, client, printer, and power management as well as server rapid deployment, performance management, and workload management. For more details on HP SIM visit http://www.hp.com/go/hpsim.
	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 7.2.
	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 HP System Insight Manager 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.
	Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides automatic delivery of software and driver change notifications for ProLiant products. Sign up at http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
	ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options available in SmartStart or downloadable from Software and Drivers download pages: http://www.hp.com/go/support
	Insight Diagnostics Online Edition	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.

Standard Features

Optional ProLiant Essentials Value Packs

Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs:

- 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.
- 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.
- Vulnerability and Patch Management Pack - identifies and remediates software security vulnerabilities due to missing patches as well operating system configurations that can be exploited by viruses, worms, and other blended threats
- Virtual Machine Management Pack - provides central management and control of virtual machines from Microsoft and VMware. Integrated approach provides the ability to manage both physical and virtual resources from a single management console.

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/proliantessential.

Industry Standard Compliance

ACPI 1.0b Compliant

PCI 2.2 Compliant

Microsoft® Logo certifications

USB 1.1 and 2.0 Compliant

Standard Features

Remote Manageability	Integrated Lights-Out (iLO) Standard Management:

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

Integrated Lights Out Advanced Pack (optional)
Remote Lights out Edition II (optional)

Intelligent Manageability

HP Systems Insight Manager
SmartStart
Remote Insight Lights-Out Edition II (optional)
ROM-Based Setup Utility (RBSU)
Remote-Flash Redundant ROM
Integrated Management Log (IML)
Server Health logging
Automatic Server Recovery-2 (ASR-2)
System Interconnect Status Indicators
Dynamic sector repairing and drive parameter tracking (with Smart Array controllers)
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).)
Power Down Utility
Pre-Failure Warranty (covers processors, as well as hard drives and memory)

Security

Power-on password
Keyboard password
Diskette drive control
Diskette boot control
QuickLock, Network Server Mode
Removable CD and Diskette Drive Assembly
Serial interface control
Administrator's password
Disk configuration lock
Integrated Lights-Out has 12 customizable user accounts and SSL encryption
Integrated Lights-Out can be disabled via a Global Setting

Server Power Cords

High line cord ships standard with all skus, an additional low line cord for US and Japan

Standard Features

Power Supply	SAS Models:	535W Optional (1+ 1 redundant) power supply
		NOTE: PN 389830-B21 contains the optional power supply and an IEC power cable only; purchase if connecting to PDU/UPS that supports IEC cables. PN 389830-001 contains a low line (NEMA) power cord only.
	SCSI & SATA Models:	460W Optional (1+ 1 redundant) power supply
		NOTE: PN 354587-B21 contains the optional power supply and an IEC power cable only; purchase if connecting to PDU/UPS that supports IEC cables. PN 354587-001 contains a low line (NEMA) power cord only.

System Fans

7 fans ship standard; Fan redundancy standard

Required Cabling

For required cabling information, refer to the Web site at
http://h18000.www1.hp.com/products/servers/proliantdl360/.

OS Support

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

NOTE: SAS, SCSI and SATA models may have different OS support. Please see OS Support Matrix.
NOTE: For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix page at: http://www.hp.com/go/supportos.
NOTE: For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: http://h18004.www1.hp.com/products/servers/software/OEM.html
NOTE: For a listing of the latest drivers available for the HP ProLiant DL360, please see: http://h18023.www1.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 Web site at http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html.

Rack Airflow Requirements

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

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 830 square inches (5,350 sq cm) 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 2.75 inches (7 cm).

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://h18000.www1.hp.com/products/servers/proliantdl360/index.html.

Standard Features

Factory Express Portfolio for Servers and Storage

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

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSA1000, VA7xxx, EVA3000 & EVA5000, XP, rackable tape libraries and configurable network switches.

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

Service and Support

Three-year limited warranty, including hardware diagnostic support, pre-failure warranty (coverage of hard drives, memory and processors). The warranty is fully supported by HP Services and a worldwide network of resellers and service providers. In addition 90-day's getting started software telephone support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services.

NOTE: Limited warranty includes 3 year parts, 3 year labor, 3-year on-site support.
NOTE: SATA drives have a 1 year warranty.

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.
A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

HP Care Pack services include coverage for the HP branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as 22" and smaller external monitors and tower UPS options up to 3kVA; these items will be covered at the same service level and for the same coverage period as the server. Coverage of UPS Battery is not included, standard warranty terms & conditions apply. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: http://www.hp.com/hps/carepack
NOTE: For more complete information on HP Services offerings, customers and resellers, please visit us at: http://www.hp.com/hps
NOTE: Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

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Models

SAS Models

DL360R04p X3.0-2MB/800, 1GB SAS
389820-xx1

Processor	(1) Intel Xeon Processor 3.0-GHz/800MHz standard (up to 2 supported)
Cache Memory	2-MB level 2 cache
Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
Storage Controller	HP Smart Array P600 Controller
Hard Drives	None ship standard; system supports up to four Serial SCSI or Serial ATA drives.
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	One 535W power supply (redundant power supply optional)
Optical Drive	Slimline CD-ROM Drive
PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot NOTE: Full length slot is occupied with HP Smart Array P600 Controller and is not available.
Form Factor	Rack (1U), (1.75 in/4.45 cm)

DL360R04p X3.2-2MB/800, 2GB SAS RPS
389821-xx1

Processor	(1) Intel Xeon Processor 3.2-GHz/800MHz standard (up to 2 supported)
Cache Memory	2-MB level 2 cache
Memory	2GB (2 x 1024-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
Storage Controller	HP Smart Array P600 Controller
Hard Drives	None ship standard; system supports up to four Serial SCSI or Serial ATA drives.
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	Two 535W power supplies (1+1 redundant)
Optical Drive	Slimline CD-ROM Drive
PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot NOTE: Full length slot is occupied with HP Smart Array P600 Controller and is not available.
Form Factor	Rack (1U), (1.75 in/4.45 cm)

Models

DL360R04p X3.4-2MB/800, 2GB SAS RPS 389822-xx1		
Processor	(1) Intel Xeon Processor 3.4-GHz/800MHz standard (up to 2 supported)	
Cache Memory	2-MB level 2 cache	
Memory	2GB (2 x 1024-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM	
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter	
Storage Controller	HP Smart Array P600 Controller	
Hard Drives	None ship standard; system supports up to four Serial SCSI or Serial ATA drives.	
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)	
Power Supply	Two 535W power supplies (1+1 redundant)	
Optical Drive	Slimline CD-ROM Drive	
PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot NOTE: Full length slot is occupied with HP Smart Array P600 Controller and is not available.	
Form Factor	Rack (1U), (1.75 in/4.45 cm)	

DL360R04p X3.6-2MB/800, 2GB SAS RPS 389823-xx1		
Processor	(1) Intel Xeon Processor 3.6-GHz/800MHz standard (up to 2 supported)	
Cache Memory	2-MB level 2 cache	
Memory	2GB (2 x 1024-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM	
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter	
Storage Controller	HP Smart Array P600 Controller	
Hard Drives	None ship standard; system supports up to four Serial SCSI or Serial ATA drives.	
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)	
Power Supply	Two 535W power supplies (1+1 redundant)	
Optical Drive	Slimline CD-ROM Drive	
PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot NOTE: Full length slot is occupied with HP Smart Array P600 Controller and is not available.	
Form Factor	Rack (1U), (1.75 in/4.45 cm)	

Models

SCSI Models

DL360R04p X3.6-2MB/800, 1GB SCSI
376236-xx1

Processor	(1) Intel Xeon Processor 3.6-GHz/800MHz standard (up to 2 supported)
Cache Memory	2-MB level 2 cache
Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
Storage Controller	U320 Smart Array 6i Controller (embedded on system board) NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI port.
Hard Drives	None ship standard; system supports up to two 1" hot plug U320 drives NOTE: The HP ProLiant DL360 G4p SCSI models only support U320 Universal Hot Plug drives.
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	One 460W power supply (redundant power supply optional)
Optical Drive	24x IDE CD-ROM Drive (Low-profile)
Diskette Drive	1.44 MB Diskette Drive
PCI-X Slots	1 full length and 1 half length 64bit/133MHz PCI-X slot
Form Factor	Rack (1U), (1.75 in/4.45 cm)

DL360R04p X3.6-2MB/800, 2GB SCSI, RPS
378705-xx1

Processor	(1) Intel Xeon Processor 3.6-GHz/800MHz standard (up to 2 supported)
Cache Memory	2-MB level 2 cache
Memory	2GB (2 x 1-GB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
Storage Controller	U320 Smart Array 6i Controller (embedded on system board) NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI port.
Hard Drives	None ship standard; system supports up to two 1" hot plug U320 drives NOTE: The HP ProLiant DL360 G4 SCSI models only support U320 Universal Hot Plug drives.
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	Two 460W power supplies (1+1 redundant)
Optical Drive	24x IDE CD-ROM Drive (Low-profile)
Diskette Drive	1.44 MB Diskette Drive
PCI-X Slots	1 full length and 1 half length 64bit/133MHz PCI-X slot
Form Factor	Rack (1U), (1.75 in/4.45 cm)

Models

DL360R04p X3.4- 2MB/800, 1GB SCSI 376237-xx1	Processor	(1) Intel Xeon Processor 3.4-GHz/800MHz standard (up to 2 supported)
	Cache Memory	2-MB level 2 cache
	Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	U320 Smart Array 6i Controller (embedded on system board) NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI port.
	Hard Drives	None ship standard; system supports up to two 1" hot plug U320 drives NOTE: The HP ProLiant DL360 G4 SCSI models only support U320 Universal Hot Plug drives.
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	24x IDE CD-ROM Drive (Low-profile)
	Diskette Drive	1.44 MB Diskette Drive
	PCI-X Slots	1 full length and 1 half length 64bit/133MHz PCI-X slot
	Form Factor	Rack (1U), (1.75 in/4.45 cm)

DL360R04p X3.2- 2MB/800, 1GB SCSI 379753-xx1	Processor	(1) Intel Xeon Processor 3.2-GHz/800MHz standard (up to 2 supported)
	Cache Memory	2-MB level 2 cache
	Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	U320 Smart Array 6i Controller (embedded on system board) NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI port.
	Hard Drives	None ship standard; system supports up to two 1" hot plug U320 drives NOTE: The HP ProLiant DL360 G4 SCSI models only support U320 Universal Hot Plug drives.
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	24x IDE CD-ROM Drive (Low-profile)
	Diskette Drive	1.44 MB Diskette Drive
	PCI-X Slots	1 full length and 1 half length 64bit/133MHz PCI-X slot
	Form Factor	Rack (1U), (1.75 in/4.45 cm)

Models

DL360R04p X3.0-2MB/800, 1GB SCSI 380325-xx1		
	Processor	(1) Intel Xeon Processor 3.0-GHz/800MHz standard (up to 2 supported)
	Cache Memory	2-MB level 2 cache
	Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	U320 Smart Array 6i Controller (embedded on system board) **NOTE:** The HP ProLiant DL360 G4p does not offer an external SCSI port.
	Hard Drives	None ship standard; system supports up to two 1" hot plug U320 drives **NOTE:** The HP ProLiant DL360 G4 SCSI models only support U320 Universal Hot Plug drives.
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	24x IDE CD-ROM Drive (Low-profile)
	Diskette Drive	1.44 MB Diskette Drive
	PCI-X Slots	1 full length and 1 half length 64bit/133MHz PCI-X slot
	Form Factor	Rack (1U), (1.75 in/4.45 cm)

SATA Models

DL360R04p X3.6-2MB/800, 1GB SATA 378704-xx1		
	Processor	(1) Intel Xeon Processor 3.6-GHz/800MHz standard (up to 2 supported)
	Cache Memory	2-MB level 2 cache
	Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Embedded SATA controller
	Hard Drives	None ship standard; system supports up to two Serial ATA drives **NOTE:** The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	Optional CD, DVD on SATA Models
	Diskette Drive	Optional floppy on SATA Models
	PCI-X Slots	1 full length and 1 half length 64bit/133MHz PCI-X slot
	Form Factor	Rack (1U), (1.75 in/4.45 cm)

QuickSpecs

Models

DL360R04p X3.4-2MB/800, 1GB SATA
380078-xx1

Processor	(1) Intel Xeon Processor 3.4-GHz/800MHz standard
Cache Memory	2-MB level 2 cache
Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
Storage Controller	Embedded SATA controller
Hard Drives	None ship standard; system supports up to two Serial ATA drives NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	One 460W power supply (redundant power supply optional)
Optical Drive	Optional CD, DVD, CD-RW/DVD combo on SATA Models
Diskette Drive	Optional floppy on SATA Models
PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot
Form Factor	Rack (1U), (1.75 in/4.45 cm)

DL360R04p X3.2-2MB/800, 1GB SATA
379752-xx1

Processor	(1) Intel Xeon Processor 3.2-GHz/800MHz standard (up to 2 supported)
Cache Memory	2-MB level 2 cache
Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
Storage Controller	Embedded SATA controller
Hard Drives	None ship standard; system supports up to two Serial ATA drives NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	One 460W power supply (redundant power supply optional)
Optical Drive	Optional CD, DVD on SATA Models
Diskette Drive	Optional floppy on SATA Models
PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot
Form Factor	Rack (1U), (1.75 in/4.45 cm)

Models

DL360R04p X3.0-2MB/800, 1GB SATA 380324-xx1	Processor	(1) Intel Xeon Processor 3.0-GHz/800MHz standard (up to 2 supported)
	Cache Memory	2-MB level 2 cache
	Memory	1GB (2 x 512-MB) Standard to 12-GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Embedded SATA controller
	Hard Drives	None ship standard; system supports up to two Serial ATA drives **NOTE:** The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	Optional CD, DVD combo on SATA Models
	Diskette Drive	Optional floppy on SATA Models
	PCI-X Slots	1 full length and 1 half length 64bit/133 MHz PCI-X slot
	Form Factor	Rack (1U), (1.75 in/4.45 cm)

Country Code Key		Rack Code Key
	XX=00	US
	XX=20	Brazil
	XX=29	Japan
	XX=37	APD
	XX=42	EURO
	XX=AA	PRC

Configuration Information - Factory Integrated Models

NOTE: HP does not allow factory integration of options into standard models listed above.
Configure-to-order servers must start with a CTO Chassis.

NOTE: This product offering does not support HP Factory Express Server Configuration Level 1.

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

Models   HP ProLiant DL360G4p SATA Rack CTO Chassis (North America)   382146-405

HP ProLiant DL360G4p SATA Rack CTO Chassis (ROW)   382146-B21

Factory Integrated Model ships with:

Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit NIC
Embedded SATA Controller (SATA RAID functionality is available via OS)
Integrated Lights-Out (iLO) embedded
1 full length and 1 half length 64-bit/133 MHz PCI-X slot
7 fans; N+1 fan redundancy
Rack (1U), (1.75 in/4.45 cm)

HP ProLiant DL360G4p SCSI Rack CTO Chassis (North America)   382147-405

HP ProLiant DL360G4p SCSI Rack CTO Chassis (ROW)   382147-B21

Factory Integrated Model ships with:

Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit NIC
Smart Array 6i Controller (Ultra320 SCSI, RAID, embedded)
Integrated Lights-Out (iLO) embedded
1 full length and 1 half length 64-bit/133 MHz PCI-X slots
1.44MB Diskette Drive
7 fans; N+1 fan redundancy
Rack (1U), (1.75 in/4.45 cm)

HP ProLiant DL360G4p SAS Rack CTO Chassis (North America)   389831-405

HP ProLiant DL360G4p 2M SAS MOD-FX Svr ALL   389831-B21

Factory Integrated Model ships with:

Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit NIC
Integrated Lights-Out (iLO) embedded
1 full length and 1 half length 64-bit/133 MHz PCI-X slots
7 fans; N+1 fan redundancy
Rack (1U), (1.75 in/4.45 cm)

Configuration Information - Factory Integrated Models

Step 1A: If SAS Model, Choose SAS Starter Kit or Controller (only one of the following)

SAS Controller	HP Smart Array P600 Controller	337972-B21
	NOTE: This is a required selection if one of the two following SAS Starter Kits is not selected. If choosing this part number, 2.5" SAS hard drives must still be selected under Step 4.	
SAS Starter Kit	NOTE: SAS Starter Kits are not compatible with the SCSI or SATA models.	
	SAS Starter Kit - 36GB	396221-B21
	NOTE: Includes Smart Array P600 Performance Array Controller with 256MB BBWC and (2) 36GB 2.5" SAS Universal Hard Drives.	
	SAS Starter Kit - 72GB	396220-B21
	NOTE: Includes Smart Array P600 Performance Array Controller with 256MB BBWC and (2) 72GB 2.5" SAS Universal Hard Drives.	

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

Processors	Intel X3.0GHz/800-2MB DL360G4 FIO BASE	380327-L21
	Intel X3.2GHz/800-2MB DL360G4 FIO BASE	379817-L21
	Intel X3.4GHz/800-2MB DL360G4 FIO BASE	376243-L21
	Intel X3.6GHz/800-2MB DL360G4 FIO BASE	376242-L21
Base Memory	1GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21
	2GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 1 GB)	343056-B21
	4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 2 GB)	343057-B21
Optical Drive (may or may not be required. See notes)	NOTE: Optical Drives are OPTIONAL if choosing the (389831-405) SAS Rack CTO Chassis Model or (382146-405) SATA Rack CTO Chassis Model in Step 1. NOTE: An Optical Drive is REQUIRED if choosing the 382147-405 SCSI Rack CTO Chassis Model in Step 1.	
	Slimline CD-ROM Drive 24X	356963-B21
	NOTE: This CD/ROM Drive (PN 356963-B21) is for SAS, SCSI, and SATA models.	
	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	NOTE: This CD-RW/DVD-ROM Drive (PN 331903-B21) is for SAS and SCSI models. It is not supported in SATA models.	
	Slimline DVD-ROM Drive (8X/24X) Option Kit	264007-B21
	NOTE: This DVD-ROM Drive (PN 264007-B21) is for SAS and SCSI models. It is not supported in SATA models.	

Configuration Information - Factory Integrated Models

Step 3: Choose Additional Factory Integratable Options

Diskette Drive	Slimline Ejectable Floppy Drive	390164-B21
	NOTE: This Diskette Drive is for SAS (389831-405) models.	
	1.44 MB Diskette drive	354588-B21
	NOTE: This Diskette Drive is for SATA (382146-405) models	
Optical Drive	NOTE: Optical Drives are OPTIONAL if choosing the (389831-405) SAS Rack CTO Chassis Model or (382146-405) SATA Rack CTO Chassis Model in Step 1. NOTE: An Optical Drive is REQUIRED if choosing the 382147-405 SCSI Rack CTO Chassis Model in Step 1.	
	Slimline CD-ROM Drive 24X	356963-B21
	NOTE: This DVD-ROM Drive (PN 264007-B21) is for SAS and SCSI models. It is not supported in SATA models.	
	Slimline DVD-ROM Drive (8X/24X) Option Kit	264007-B21
	NOTE: This DVD-ROM Drive (PN 264007-B21) is for SAS and SCSI models. It is not supported in SATA models.	
	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	NOTE: This CD-RW/DVD-ROM Drive (PN 331903-B21) is for SAS and SCSI models. It is not supported in SATA models.	
Power Supply	460W HP redundant power supply with IEC cord only	354587-B21
	NOTE: For SCSI and SATA Models.	
	535W HP redundant power supply with IEC cord only	389830-B21
	NOTE: For SAS Models.	
	535W HP redundant power supply with NEMA or Japan cord only	389830-001
	NOTE: for SAS Models.	

Step 4: Choose Additional Options for Factory Integration

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

Options

NOTE: Some options may not be factory integratable. Please contact your local sales representative for additional information.

HP ProLiant DL360 G4 and ProLiant DL360 G4p Unique Options	Intel Xeon 3.0GHz/800MHz-2MB Processor Option Kit NOTE: This processor option kit (PN 380327-B21) supports the HP ProLiant DL360 G4p only.	380327-B21
	Intel Xeon 3.2GHz/800MHz-2MB Processor Option Kit NOTE: This processor option kit (PN 379817-B21) supports the HP ProLiant DL360 G4p only.	379817-B21
	Intel Xeon 3.4GHz/800MHz-2MB Processor Option Kit NOTE: This processor option kit (PN 376243-B21) supports the HP ProLiant DL360 G4p only.	376243-B21
	Intel Xeon 3.6GHz/800MHz-2MB Processor Option Kit NOTE: This processor option kit (PN 376242-B21) supports the HP ProLiant DL360 G4p only.	376242-B21
	PCI-e Riser option (to convert one or both PCI-X to PCI-e slots)	354589-B21
	Ambidextrous cable management arm NOTE: Package contains two cable management arms	365403-B21
	Fixed Cord Extension Bars for 1U servers (2 PDU sticks per kit)	351655-B21
	460W HP redundant power supply with IEC cord only	354587-B21
	460W HP redundant power supply with US or Japanese NEMA cord only NOTE: The HP ProLiant DL360 G4p ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For stand-alone deployments or installation without a rack, country-specific power cord options are available. U.S., Japan, & APD models ship with two power cords: IEC-IEC and NEMA cords.	354587-001
	460W HP redundant power supply with US or Japanese NEMA cord only NOTE: The HP ProLiant DL360 G4p ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For stand-alone deployments or installation without a rack, country-specific power cord options are available. U.S., Japan, & APD models ship with two power cords: IEC-IEC and NEMA cords.	354587-001
	535W HP redundant power supply with IEC cord only	389830-B21
	535W HP redundant power supply with US or Japanese NEMA cord only NOTE: The HP ProLiant DL360 G4p ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For stand-alone deployments or installation without a rack, country-specific power cord options are available. U.S., Japan, & APD models ship with two power cords: IEC-IEC and NEMA cords.	389830-001
ProLiant Essentials Value Pack Software	Rapid Deployment Pack, 1 User, V1.x NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	267196-B21
	Rapid Deployment Pack, 1 User, V1.x (Japan) NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	267196-291
	Rapid Deployment Pack, 10 Users, V1.x NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	269817-B21
	Rapid Deployment Pack, 10 Users, V1.x (Japan) NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	269817-291

Options

Rapid Deployment Pack, Flexible-Quantity License Kit	302127-B21
NOTE: A single pack is shipped with a single license key for the total number of licenses ordered.	
Rapid Deployment Pack, Tracking License Kit	302128-B21
NOTE: For use with a Master License Agreement.	
ProLiant Essentials Workload Management Pack (Featuring Resource Partitioning Manager version 2.0)	303284-B21
Flexible Quantity License Kit	302127-B21
License-Only - for use with a Master License Agreement	302128-B21
ProLiant Essentials Integrated Lights-Out Advanced Pack	263825-B21
Featuring: sophisticated virtual administration features for ultimate control of servers in the data centers and remote sites	
ProLiant Essentials Intelligent Networking Pack (1 License)	372906-B21
ProLiant Essentials Intelligent Networking Pack Flex License	372950-B21
ProLiant Essentials Intelligent Networking Pack Track License	372951-B21
ProLiant Essentials Server Migration Pack, Single-Server License	375345-B21
NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	
ProLiant Essentials Server Migration Pack, Flexible-Quantity License	375346-B21
NOTE: For use with multiple servers. This part number can be used to purchase multiple licenses with a single activation key. The quantity ordered of this part number will be the quantity of licenses included in the kit in the form of a corresponding activation key. Use the same key to activate all licenses in the actual quantity ordered. For a given order, one kit will be delivered with the activation key, and documentation.	
ProLiant Essentials Server Migration Pack, 10-Server License	390739-B21
NOTE: This license allows 10 servers to be migrated from a physical server to a 10 virtual machines. Or this license can be used to migrate a 10 virtual machines from one virtualization layer i.e. VMware GSX to a different virtualization layer such as VMware ESX or Microsoft Virtual Server 2005.	
ProLiant Essentials Server Migration Pack, 25-Server License	391674-B21
ProLiant Essentials Server Migration Pack, 50-Server License	391675-B21
ProLiant Essentials Server Migration Pack, 100-Server License	391676-B21
Performance Management Pack, single server	306696-B21
NOTE: This license allows 1 server to be managed by Performance Management Pack.	
Performance Management Pack, flexible license kit	306697-B21
NOTE: A single pack is shipped with a single license key for the total number of licenses ordered	
ProLiant Essentials Virtual Machine Management Pack, Single-Server License	372214-B21
NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	
ProLiant Essentials Virtual Machine Management Pack, Flexible-Quantity License	372215-B21
NOTE: For use with multiple servers. This part number can be used to purchase multiple licenses with a single activation key.	
ProLiant Essentials Virtual Machine Management Pack, Tracking License	372216-B21
NOTE: For use with signed and implemented Activation Key Agreements only. Purchase of this part number entitles the customer to deploy additional licenses of the product under the terms of the existing Activation Key Agreement.	

Options

	ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License	371645-B21
	ProLiant Essentials Vulnerability and Patch Management Pack, 10-Server License	372029-B21
	ProLiant Essentials Vulnerability and Patch Management Pack, Flexible-Quantity License	371646-B21
	ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for new servers	371647-B21
	ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for installed servers	378372-B21
	ProLiant Essentials Vulnerability and Patch Management Pack, 1-Server 10-Desktop Bundle License	389941-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.

ProLiant Software Maintenance Subscription	ProLiant Software Maintenance Subscription	355060-B21
	ProLiant Software Maintenance Single Release	356573-B21
	ProLiant Foundation Pack Single Release	356604-B21

NOTE: Please see the SmartStart QuickSpecs for additional information regarding the subscription purchase:
http://h18000.www1.hp.com/products/quickspecs/Division/11073.html
(Worldwide)
http://h18000.www1.hp.com/products/quickspecs/North_America/11073.html
(North America)

Software	HP digital asset protection	302316-001

Processor	Intel Xeon 3.0GHz/800MHz-2MB Processor Option Kit	380327-B21
	NOTE: This processor option kit (PN 380327-B21) supports the HP ProLiant DL360 G4p only.	
	Intel Xeon 3.2GHz/800MHz-2MB Processor Option Kit	379817-B21
	NOTE: This processor option kit (PN 379817-B21) supports the HP ProLiant DL360 G4p only.	
	Intel Xeon 3.4GHz/800MHz-2MB Processor Option Kit	376243-B21
	NOTE: This processor option kit (PN 376243-B21) supports the HP ProLiant DL360 G4p only.	
	Intel Xeon 3.6GHz/800MHz-2MB Processor Option Kit	376242-B21
	NOTE: This processor option kit (PN 376242-B21) supports the HP ProLiant DL360 G4p only.	

Options

Memory (DIMMs)	1GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21
	2GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 1 GB)	343056-B21
	4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Single Rank Memory Kit (2 x 2 GB)	343057-B21
	4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Dual Rank Memory Kit (2 x 2 GB)	375004-B21

Optical Drives	Slimline CD-RW/DVD-ROM Combo Option Kit **NOTE:** This CD-RW/DVD-ROM Drive (PN 331903-B21) is for SCSI and SAS models only. It is not supported in SATA models.	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers) **NOTE:** This DVD-ROM Drive (PN 264007-B21) is supported on SCSI and SAS models.	264007-B21
	Slimline CD-ROM Drive 24X **NOTE:** This CD/ROM Drive (PN 356963-B21) is for SAS, SCSI, and SATA models. **NOTE:** Ships standard in some SCSI and SAS models.	356963-B21
	HP DVD+R/RW 8X Slim **NOTE:** This DVD+R/RW 8X Slim (PN 383975-B21) is supported on SCSI and SAS models.	383975-B21

Diskette Drive	Slimline Ejectable Floppy drive **NOTE:** This Diskette Drive is for SAS models only.	390164-B21
	1.44 MB Diskette Drive **NOTE:** This 1.44MB Diskette Drive (PN 354588-B21) is supported on SCSI and SATA models only. **NOTE:** Ships standard in SCSI models.	354588-B21

Hard Drives	**Ultra320 – Universal Hot Plug** **NOTE:** The HP ProLiant DL360 G4p SCSI models support U320 Universal Hot Plug drives.	
	300-GB 10,000 rpm U320 Universal Hard Drive (1")	350964-B22
	146.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286716-B22
	72.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286714-B22
	146.8-GB 15,000 rpm U320 Universal Hard Drive (1")	347708-B22
	72.8-GB 15,000 rpm U320 Universal Hard Drive (1")	286778-B22
	36.4-GB 15,000 rpm U320 Universal Hard Drive (1")	286776-B22

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

Serial-ATA (SATA) Hot Plug Hard Drive (For use with SATA Models)
NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.
NOTE: SATA drives have a 1 year warranty.

80-GB SATA 1.5 Gb 7,200 rpm Hard Drive (3.5")	349237-B21
160-GB SATA 1.5 Gb 7,200 rpm Hard Drive (3.5")	349238-B21
250-GB SATA 1.5 Gb 7,200 rpm Hard Drive (3.5")	349239-B21
60-GB SATA 1.5 Gb 5,400 rpm Hard Drive (2.5")	379306-B21

NOTE: Please see the SATA Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:
Serial ATA Hard Drive QS:
http://h18000.www1.hp.com/products/quickspecs/11940_div/11940_div.HTML
(Worldwide)
http://h18000.www1.hp.com/products/quickspecs/11940_na/11940_na.HTML
(North America)

Serial Attached SCSI (SAS) 2.5" Hot Plug (For use with SAS Models)

HP 72 GB SAS 10,000 rpm Hard Drive (2.5")	375861-B21
HP 36 GB SAS 10,000 rpm Hard Drive (2.5")	375859-B21

NOTE: All SFF SAS Universal Hard Drives are supported ONLY by HP ProLiant DL360 G4p SAS models.
NOTE: Please see the SAS Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:
SAS Hard Drive QS:
http://h18000.www1.hp.com/products/quickspecs/12224_div/12224_div.HTML
(Worldwide)
http://h18000.www1.hp.com/products/quickspecs/12224_na/12224_na.HTML
(North America)

Storage Controllers

SCSI Controllers

128MB Battery Backed Write Cache Enabler Option Kit	346914-B21
NOTE: Upgrade for Smart Array 6i Controller.	
Smart Array 6402/128 Controller	273915-B21
NOTE: For support of external drives only.	
Smart Array 6404/256 Controller	273914-B21
NOTE: For support of external drives only.	
Smart Array 642 Controller	291967-B21
NOTE: For support of external drives only.	
128MB Battery-Backed Cache Enabler	351580-B21
NOTE: This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
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.	
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS	284688-B21
64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter	268351-B21
NOTE: For support of external drives only.	

Options

Ultra320 Expansion Module for SA-6402	273911-B21

NOTE: For support of external drives only.

64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-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.www.1.hp.com/products/quickspecs/12030_div/12030_div.HTML (Smart Array 6i)
http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.HTML (Smart Array 6400 Series)
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)
http://h18000.www.1.hp.com/products/quickspecs/11943_div/11943_div.HTML (U320 SCSI HBA)

SAS Controller

HP Smart Array P600 Controller	337972-B21
512MB DDR BBWC Upgrade	372538-B21
HP Int SAS/SATA Multi-Lane Cable	389659-B21

NOTE: The SAS cable above supports four drives. Two cables are required when more than four drives are installed.

NOTE: Ships standard with SAS model.
NOTE: Please see the following Controller 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/12247_div/12247_div.HTML (Smart P600 Controller)

Communications	
HP NC150T PCI 4-port Gigabit 1000T Combo Switch Adapter	367132-B21
HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
HP NC320T PCI Express 1000T Gigabit Server Adapter	367047-B21
HP NC370F PCI-X Multifunction 1000SX Gigabit Server Adapter	374193-B21
HP NC370T PCI-X Multifunction 1000T Gigabit Server Adapter	374191-B21
HP NC1020 PCI 1000T Gigabit Server Adapter	353377-B21
HP NC6170 PCI-X Dual Port 1000SX Gigabit Server Adapter	313879-B21
HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21
HP NC7771 PCI-X 1000T Gigabit Server Adapter	290563-B21

NOTE: Any Ethernet network controller (NIC) (except the NC1020) on the option list can be used for redundancy with the embedded NC7782 NIC.

HP NC570C PCI-X Dual-port 4x Fabric Adapter	376158-B21
HP NC571C PCI Express Dual-port 4x Fabric Adapter	376160-B21
HP 24-Port 4x Fabric Copper Switch	376227-B21
HP 1m 4x Fabric Copper Cable	376232-B21

Options

	HP 3m 4x Fabric Copper Cable	376232-B22
	HP 5m 4x Fabric Copper Cable	376232-B23

Management Options	ProLiant Essentials Integrated Lights-Out Advanced Pack	263825-B21
	FEATURING: Sophisticated virtual administration features for ultimate control of servers in the data centers and remote sites	
	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
	AXL300 Accelerator PCI Card for ProLiant Servers	227933-B21

High Performance Solutions	HPCC Myrinet Fiber NIC	257894-006

Tape Drives	**NOTE:** For the complete listing of Tape Drive offerings, please see: http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html	
	For recommended tape drive offerings for this ProLiant server see the following:	
	USB Tape Drives	
	HP StorageWorks DAT 40 USB External Tape Drive	DW023A
	HP StorageWorks DAT 72 USB External Tape Drive	DW027A
	Ultrium Tape Drives - External, Rack-Mount and Array	
	HP StorageWorks Ultrium 232 Tape Drive, External (Carbonite)	DW065A
	HP StorageWorks Ultrium 232 Tape Drive, Internal (Carbonite)	DW064A
	NOTE: No internal tape drives fit inside the HP ProLiant DL360 G4p. The internal drive shown here is for the 1U or 3U Rack-mount Kit.	
	HP StorageWorks Ultrium 448, External (Carbonite)	DW017A
	HP StorageWorks Ultrium 448, Rack-mount (Carbonite) - Single drive installed in a 1U rack-mount kit	DW028A
	NOTE: Please see the HP StorageWorks Ultrium Tape Drive QuickSpecs for additional options such as controllers, media, and other related items: 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) http://h18006.www1.hp.com/products/quickspecs/12128_div/12128_div.html (Worldwide) http://h18006.www1.hp.com/products/quickspecs/12128_na/12128_na.html (North America)	
	For an up-to-date listing of the latest O/S and software support details for HP Ultrium tape drives, please visit: http://www.hp.com/go/connect	
	DAT Drives - External, Rack-Mount and Array Module	
	HP StorageWorks DAT 72 Tape Drive, External (Carbon)	Q1523A

HP StorageWorks 1U Rack-Mount Kit with one DAT 72 drive (Carbon)	A7443A

NOTE: Please see the DAT Tape Drive QuickSpecs for controllers, media, and other options:
http://h18000.www1.hp.com/products/quickspecs/11883_div/11883_div.HTML (Worldwide)
http://h18000.www1.hp.com/products/quickspecs/11883_na/11883_na.HTML (North America)
For an up-to-date listing of the latest O/S and software support details for HP DAT drives, please visit: http://www.hp.com/go/connect

Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit	A7445A

NOTE: The 1U Rack-mount Kit can support up to 2 half-height tape drives and is compatible with multiple Single-Ended and LVD SCSI tape drives including DAT 24, DAT 40, DAT 72, DLT VS80, DLT VS160, Ultrium 215, Ultrium 232, and Ultrium 448 tape drives.

HP StorageWorks 3U Rack-Mount Kit	274338-B21

NOTE: The 3U Rack-mount Kit 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 DAT 24, DAT 40, DAT 72, DAT 72X6 Autoloader, DLT VS80, DLT VS160, SDLT 320, SDLT 600, Ultrium 215, Ultrium 232, Ultrium 230, Ultrium 448, Ultrium 460, and Ultrium 960 tape drives.

NOTE: Please see the Rack-Mount Tape Drive Kits QuickSpecs for additional information regarding these kits:
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)

Tape Autoloaders

DAT Autoloader

HP StorageWorks DAT 72x6 Tape Autoloader, External (Flint)	Q1567A

NOTE: Please see the DAT 72x6 Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media:
http://h18006.www1.hp.com/products/quickspecs/11905_div/11905_div.html (Worldwide)
http://h18006.www1.hp.com/products/quickspecs/11905_na/11905_na.html (North America)

HP StorageWorks 1/8 Tape Autoloader

1/8 Ultrium 960 Tape Autoloader, Tabletop	AF204A
1/8 Ultrium 448 Tape Autoloader, Tabletop	AF203A
1/8 SDLT 320 Tape Autoloader, Tabletop	AA926A
1/8 Ultrium 230 Tape Autoloader, Tabletop	C9572CB
1/8 DLT VS80 Tape Autoloader, Tabletop	C9264CB
1/8 Tape Autoloader Rackmount Kit	C9268R

NOTE: Required to install the 1/8 tape autoloader in a standard 19-inch rack.

NOTE: Please reference the 1/8 Tape Autoloader QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs.

HP StorageWorks SSL1016 Tape Autoloader

Options

SSL1016 Ultrium 460 Tape Autoloader	330821-B21
SSL1016 SDLT 320 Tape Autoloader	330816-B21

NOTE: Please reference the SSL1016 Tape Autoloader QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs.

Tape Libraries

HP StorageWorks MSL6000 Tape Library

Ultrium 960 technology

MSL6030, 1 drive, 30 slots, Ultrium 960	AD606A
MSL6030, 2 drive, 30 slots, Ultrium 960	AD607A
MSL6030, 1 drive, 30 slots, Ultrium 960, with embedded FC router	AD608A
MSL6030, 2 drive, 30 slots, Ultrium 960, with embedded FC router	AD609A
MSL6060, 2 drive, 60 slots, Ultrium 960	AD610A
MSL6060, 2 drive, 60 slots, Ultrium 960, with embedded FC router	AD611A

SDLT 600 technology

MSL6026, 1 drive, 26 slots, SDLT 600	AD582A
MSL6026, 2 drive, 26 slots, SDLT 600	AD583A
MSL6026, 1 drive, 26 slots, SDLT 600, with embedded FC router	AD584A
MSL6026, 2 drive, 26 slots, SDLT 600, with embedded FC router	AD585A
MSL6052, 2 drive, 52 slots, SDLT 600	AD587A
MSL6052, 2 drive, 52 slots, SDLT 600, with embedded FC router	AD588A

Ultrium 460 technology

MSL6030, 1 drive, 30 slots, Ultrium 460	AD598A
MSL6030, 2 drive, 30 slots, Ultrium 460	AD599A
MSL6030, 1 drive, 30 slots, Ultrium 460, with embedded FC router	AD600A
MSL6030, 2 drive, 30 slots, Ultrium 460, with embedded FC router	AD601A
MSL6060, 2 drive, 60 slot Ultrium 460	AD603A
MSL6060, 2 drive, 60 slot Ultrium 460, with embedded FC router	AD604A

NOTE: Please reference the MSL6000 Tape Library QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs.

HP StorageWorks MSL5026S2 Tape Library

MSL5026S2, 1 drive, 26 slots, SDLT 320, RM	293472-B22
MSL5026S2, 2 drive, 26 slots, SDLT 320, RM	293472-B23
MSL5026S2, 1 drive, 26 slots, SDLT 320, RM with embedded FC router	293472-B24
MSL5026S2, 2 drive, 26 slots, SDLT 320, RM with embedded FC router	293472-B25

NOTE: Please reference the MSL5026S2 Tape Library QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs.

HP StorageWorks MSL5052S2 Tape Library

MSL5052S2, 2 drive, 52 slots, SDLT 320, RM	293474-B21
MSL5052S2, 2 drive, 52 slots, SDLT 320, RM with embedded FC router	293474-B24

Options

NOTE: Please reference the MSL5052S2 Tape Library QuickSpecs at
http://www.hp.com/go/automation for additional information needed to create a
complete solution; reference current compatibility information at
http://www.hp.com/go/ebs.

HP StorageWorks ESL E-Series Tape Libraries

ESL Extended 712e Tape Library, 0 drive, 712 LTO slots	AA934B
ESL Extended 630e Tape Library, 0 drive, 630 SDLT slots	AA935B
ESL Extended 322e Tape Library, 0 drive, 322 LTO slots	AA939B
ESL Extended 286e Tape Library, 0 drive, 286 SDLT slots	AA940B
ESL E-Series Ultrium 960 drive kit	AD595A
ESL E-Series Ultrium 460 drive kit	AA937A
ESL E-Series Ultrium 460-FC drive kit	AA941A
ESL E-Series SDLT 320 drive kit	AA936A
ESL E-Series e2400-FC 2G Interface Controller	AA928A

NOTE: Please reference the ESL E-Series Tape Libraries QuickSpecs at
http://www.hp.com/go/automation for additional information needed to create a
complete solution; reference current compatibility information at
http://www.hp.com/go/ebs.

Magneto-Optical Jukeboxes

HP StorageWorks 9.1 GB Mid-range Optical Jukeboxes

300mx, 2 drive, 32 slot jukebox	C1150M
600mx, 4 drive, 64 slot jukebox	C1160M
700mx, 2 drive, 76 slot jukebox	C1170M

NOTE: Please reference the Magneto-Optical Jukebox data sheets at
http://www.hp.com/go/optical for additional information needed to create a complete
solution.

HP StorageWorks 9.1 GB High-end Optical Jukeboxes

1200mx, 4 drive, up to 128 slots	C1104M
2200mx, 4 drive, up to 238 slots	C1105M
2200mx, 4 drive, up to 238 slots	C1111M
2200mx, 6 drive, up to 238 slots	C1107M
2200mx, 10 drive, up to 238 slots	C1110M

NOTE: Please reference the Magneto-Optical Jukebox data sheets at
http://www.hp.com/go/optical for additional information needed to create a complete
solution.

Options

Ultra Density Optical Jukeboxes	1000ux, 2 drive, 32 slot jukebox	AA965A
	1900ux, 4 drive, 64 slot jukebox	AA966A
	1900ux, 4 mixed drive, 64 slot jukebox	AA968A
	2300ux, 2 drive, 76 slot jukebox	AA967A
	3800ux, 4 drive, 128 slot jukebox	AA969A
	3800ux, 6 drive, 128 slot jukebox	AA970A
	7100ux, 4 drive, 238 slot jukebox	AA973A
	7100ux, 6 drive, 238 slot jukebox	AA971A
	7100ux, 10 drive, 238 slot jukebox	AA972A
	7100ux, 6 mixed drive, 238 slot jukebox	AA974A

NOTE: Please reference the Ultra Density Optical Jukebox QuickSpecs at http://www.hp.com/go/optical for additional information needed to create a complete solution

Power Cords	**NOTE:** The HP ProLiant DL360 G4p ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For stand-alone deployments or installation without a rack, country-specific power cord options are available. U.S. & Japan models will ship with two power cords: IEC-IEC (142257-002) and North American C13-Nema 5-15P (103541-001) cords.	
	Power Cord, Euro, 10A 250 V Straight (12 ft/3.7 m)	157215-021
	Power Cord, UK, 10A 250 V Straight (12 ft/3.7 m)	157216-031
	Power Cord, Danish, 10A 250 V Straight (12 ft/3.7 m)	157218-081
	Power Cord, Swiss, 10A 250 V Straight (12 ft/3.7 m)	157219-111
	Power Cord, Italian, 10A 250 V Straight (12 ft/3.7 m)	157217-061
	Power Cord, South Africa, 10A 250 V Straight (12 ft/3.7 m)	157220-AR1

HP StorageWorks Modular Smart Array 50	HP StorageWorks Modular Smart Array 50 Enclosure	364430-B21

NOTE: Supported by the SAS Models only.
NOTE: Please see the Modular Smart Array 50 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at:
http://h18000.www1.hp.com/products/quickspecs/12245_na/12245_na.HTML (North America)
http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.HTML (Worldwide)

Options

External Storage - Rack	HP StorageWorks Modular Smart Array 20	335921-B21
	NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	
	HP StorageWorks Modular Smart Array 20 Starter Kit	366172-B21
	NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies. Includes Smart Array 6402/128 Controller.	
	NOTE: The Modular Smart Array Enclosure 20 Family supports the SATA 1.5Gb/s 1" Hot Plug Hard Drives.	
	HP StorageWorks Modular Smart Array 30 SB	302969-B21
	NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies.	
	HP StorageWorks Modular Smart Array 30 DB	302970-B21
	NOTE: Rack-mountable 14 drive enclosure with dual bus, redundant power supplies.	
	NOTE: The Modular Smart Array Enclosure 30 Family supports the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.	
	StorageWorks Modular Smart Array 30 OpenView Storage Mirroring HA Kit - WW	359079-B21
	StorageWorks Modular Smart Array 30 OpenView Storage Mirroring HA Kit - Japan	359079-291
	Redundant Power Supply 499 W	338296-B21
	Ultra320 Single Bus I/O Module for MSA30	287484-B21
	Ultra320 Dual Bus I/O Module for MSA30	287483-B21
HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000	201723-B22
	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)	
HP StorageWorks Modular Smart Array 1500 cs	Modular Smart Array 1500 Controller Shelf	AA986A
	NOTE: Please see the StorageWorks Modular SAN Array 1500 cs QuickSpecs for additional options and configuration information at: http://www.hp.com/go/MSA1500cs	
StorageWorks Modular Array 8000/Enterprise Modular Array 12000	StorageWorks SAN Director 64	254512-B21
	NOTE: Please see the StorageWorks SAN Director 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)	

QuickSpecs

HP ProLiant DL360 Generation 4p (G4p)

Options

StorageWorks Options	StorageWorks 2 Gb, 64-bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for Windows 2000, Windows Server 2003 and Linux NOTE: FCA2214 2 Gb Fibre Channel Host Bus Adapter is a single channel, 64-bit/133 MHz PCI-X-to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface	281541-B21
	FCA2404DC - HP StorageWorks 2 Gb, Dual Channel, 133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for Windows® 2000, and Windows Server 2003 NOTE: FCA2404DC HP StorageWorks 2 Gb Fibre Channel Host Bus Adapter is a dual channel, 133 MHz, PCI-X to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface.	323264-B21
	FCA2404 - StorageWorks 2 Gb, single channel, 133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for Windows 2000, Windows NT and Windows Server 2003 NOTE: FCA2404 StorageWorks 2 Gb, Fibre Channel Host Bus Adapter is a single channel, multi-path failover, 133 MHz, PCI-X to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface for Proliant Server connects	305573-B21
	StorageWorks 2 Gb, Dual Port, 64-Bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for W2K, Windows Server 2003 and Linux NOTE: FCA2214DC StorageWorks 2 Gb Dual Port, Fibre Channel Host Bus Adapter is a 64-bit/133 MHz, PCI-X-to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface.	321835-B21
	StorageWorks SAN Switch 2/8-EL Upgrade	325888-B21
	StorageWorks SAN Switch 2/16-EL Upgrade	325889-B21
HP StorageWorks Modular Smart Array 500	HP StorageWorks Modular Smart Array 500 Generation 2 NOTE: Please see the Modular Smart Array 500 Generation 2 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11956_na/11956_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.HTML (Worldwide)	335880-B21
Cluster Options	ProLiant Cluster Starter Kit NOTE: For additional information regarding the ProLiant Cluster Starter Kit please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11935_div/11935_div.html (Worldwide)	364023-B21
	ProLiant Cluster Kit with OpenView Storage Mirroring NOTE: For additional information regarding the ProLiant Cluster Kit with OpenView Storage Mirroring please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs /11934_na/11934_na.html (North America) http://h18000.www1.hp.com/products/quickspecs /11934_div/11934_div.html (Worldwide)	364025-B21
	ProLiant Cluster HA/F200 for the Entry Level SAN	364026-B21
	ProLiant Cluster HA/F200 for the Entry Level SAN (Japan)	364026-291

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NOTE: For additional information regarding the ProLiant Cluster for Entry Level SAN please see the following QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html (North America)
http://h18000.www1.hp.com/products/quickspecs/11932_div/11932_div.html (Worldwide)

ProLiant Cluster HA/F500 for the Enterprise SAN	364024-B21

NOTE: For additional information regarding the ProLiant Cluster HA/F500 for Enterprise SAN please see the following QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11933_na/11933_na.html (North America)
http://h18000.www1.hp.com/products/quickspecs/11933_div/11933_div.html (Worldwide)

HP Serviceguard for Linux ProLiant Cluster A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (2 node license cluster kit)	305199-B24
HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 and Red Hat EL 3 (2 node license cluster kit)	305199-B25
HP Serviceguard for Linux License A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (single license version)	307754-B24
HP Serviceguard for Linux A.11.16 for SUSE SLES9 and Red Hat EL 3 (single license version)	307754-B25

NOTE: For additional information regarding HP Serviceguard for Linux, 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)

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 Mountable	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
	HP UPS R5500 XR, (5000VA, 4500 Watt), High Voltage (NA/Jpn)	326529-D71
	HP UPS R5500 XR, (6000VA, 5400 Watt), High Voltage (Int'l)	326529-B31
	HP UPS R12000 XR, N+ x (12KVA, 12KW) High Voltage (WW)	207552-B22

NOTE: UPS R12000 has a hardwired input and output connection.

HP Power Distribution Unit with Power Monitoring	HP Power Distribution Unit with Power Monitoring Model S2324 - dual input, 3 phase, 24A (NA/JPN)	370959-D71
	HP Power Distribution Unit with Power Monitoring Model S1324 - single input, 3 phase, 24A (NA/JPN)	370960-D71
	HP Power Distribution Unit with Power Monitoring Model S2140 - dual input, 1 phase, 40A (NA/JPN)	370961-D71
	HP Power Distribution Unit with Power Monitoring Model S1140 - single input, 1 phase, 40A (NA/JPN)	370962-D71
	HP Power Distribution Unit with Power Monitoring Model S2316 - dual input, 3 phase, 16A (INTL)	370963-B31
	HP Power Distribution Unit with Power Monitoring Model S1316 - single input, 3 phase, 16A (INTL)	370964-B31
	HP Power Distribution Unit with Power Monitoring Model S2132 - dual input, 1 phase, 32A (INTL)	370965-B31
	HP Power Distribution Unit with Power Monitoring Model S1132 - single input, 1 phase, 32A (INTL)	370966-B31

Modular PDUs 1U/0U (Up to 32 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).	Fixed Cord Extension Bars NOTE: Two extension bar sticks; each with (7) C13 plugs.	351655-B21
	Fixed Cord PDU (NA/JPN) NOTE: Four Fixed Cord Extension Bars, and one 24A, HV mPDU L6-30P core.	351655-D72
	Fixed Cord PDU (INTL) NOTE: Four Fixed Cord Extension Bars, and one 32A, HV mPDU IEC-309 core.	351655-B31
	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) (NA, Japan) NOTE: This mPDU (252663-D71) may also be used to connect the low volt model of the UPS R3000 XR.	252663-D71
	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) NOTE: This mPDU (252663-B21), 40A model has a hardwired input.	252663-B21
	HP Modular Power Distribution Unit(mPDU), High Volt Model, 16A (200-240 VAC) (WW)	252663-B24
	HP Modular Power Distribution Unit (mPDU), High Volt Model, 40A, Attached Cord, (NA/JPN)	252663-D73
	HP Modular Power Distribution Unit (mPDU), High Volt Model, 40A, Attached Cord, (Int'l) 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.	252663-B32

Options

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)

USB Options	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	256MB HP Drive Key II (USB 2.0)	PH657A
	Multibay USB cradle	DC373A#ABA
	Multibay USB cradle	DC373A#B13

Customer Builder	Please see the Enterprise Configurator for configuration assistance at: http://www.hp.com/products/configurator.

HP ProLiant DL360 G4p Deployment Options	460W HP redundant power supply with IEC cord only	354587-B21
	460W HP redundant power supply with US or Japanese NEMA cord only	354587-001
	NOTE: The HP ProLiant DL360 G4p ships with a single IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For stand-alone deployments or installation without a rack, country-specific power cord options are available. U.S., Japan, & APD models ship with two power cords: IEC-IEC and NEMA cords.	
	535W HP redundant power supply with IEC cord only	389830-B21
	535W HP redundant power supply with US or Japanese NEMA cord only	389830-001
	NOTE: The HP ProLiant DL360 G4p ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For stand-alone deployments or installation without a rack, country-specific power cord options are available. U.S., Japan, & APD models ship with two power cords: IEC-IEC and NEMA cords.	

Third Party Rack Kit	Rack Adapter Kit	332815-B21
	NOTE: This kit allows HP rack servers to fit in racks that are 24" wide.	

HP Rack 5000 Series (Graphite Metallic)	HP 5642 RACK-UNASSEMBLED	358254-B21

Rack Options for Rack 5000 Series	Stabilizer Kit for 5642 rack (Graphite Carbon)	374493-B21
	NOTE: The stabilizing kit is used to prevent rack from tipping over.	
	Baying Kit for 5642 rack (Graphite Carbon)	374499-B21
	NOTE: The baying kit is used to join two or more HP 5642 racks.	

Options

HP Rack 10000 Series
(Graphite Metallic)

10642 (42U) Infrastructure Rack (Low Voltage)	379006-001
10642 (42U) Infrastructure Rack (High Voltage)	379005-001
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: It is mandatory to use a shock pallet in order to ship racks with equipment installed. Not all HP equipment is qualified to be shipped in the Rack 10000 series

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-ptions/index.html.

Options

Rack Options for Rack 10000 Series		
HP Light kit for 10000 series rack		361589-B21
HP Plinth kit for 10000 series rack		251960-B21
Switch Box Connector Kit (high voltage) (Int'l)		144007-B33
TFT7210R Rack Mounted 17" Monitor		348373-B21
TFT5600 RKM Rack Keyboard Monitor		221546-xx1

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

XX = 00	US	XX = 09	Norway
XX = 03	UK	XX = 10	Sweden/Finland
XX = 04	Germany	XX = 11	Switzerland
XX = 05	France	XX = 13	Portugal
XX = 06	Italy	XX = 18	Belgium
XX = 07	Spain	XX = 29	Japan
XX = 08	Denmark	XX = B3	International

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

NOTE: For a complete list of Monitors please view the following URL: http://h18004.www1.hp.com/products/monitors/

HP KVM Switch Options		
Server Console Switch (KVM), 0 x 1 x 8 port		336044-B21
Server Console Switch (KVM), 0 x 2 x 16 port		336045-B21
IP Console Switch Box (KVM/IP), 1 x 1 x 16		262585-B21
IP Console Switch Box (KVM/IP), 3 x 1 x 16		262586-B21
HP 1x4 USB/PS2 KVM Switch, RM (ALL)		371302-B21
HP 1x4 USB/PS2 KVM Switch, TT (EURO)		371301-A21
HP 1x4 USB/PS2 KVM Switch, TT (UK)		371301-031
HP 1x4 USB/PS2 KVM Switch, TT (AUST/NZ)		371301-011
HP 1x4 USB/PS2 KVM Switch, TT (NA/JPN)		371301-D71
PS/2 Interface Adapter, 8 pack		262587-B21
PS/2 Interface Adapter, 1 pack		262588-B21
CAT5 KVM Expansion Module		262589-B21
Serial Interface adapter - 1 Pack with power supply		373035-B21
CAT5e Cable 3', 4 pack		263474-B21
CAT5e Cable 6', 8 pack		263474-B22
CAT5e Cable 12', 8 pack		263474-B23
CAT5e Cable 20', 4 pack		263474-B24
CAT5e Cable 40', 1 pack		263474-B25

NOTE: For additional information regarding HP KVM Switches and options, please see the following URL: http://h18004.www1.hp.com/products/servers/proliantstorage/rack-options/list.html#console

Options

Service and Support Offerings (HP Care Pack Services)		
Hardware Services 4-Hour On-site Service		
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years		U4496A
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic		U4496E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years		U4497A
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic		U4497E
Hardware Services 6-Hour Call to Repair On-site Service		
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years		U4498A
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic		U4498E
Hardware Services Next Business Day On-Site Service		
Hardware Installation		U4506A
Hardware Installation, Electronic		U4506E
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.		U4507A
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, Electronic		U4507E
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.		U4508A
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, Electronic		U4508E
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.		U4509A
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, Electronic		U4509E
Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays.		U6310A
Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic		U6310E
Onsite HW support 24x7, 4hr response and Red Hat ES Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays.		U8332A
Onsite HW support 24x7, 4hr response and Red Hat ES Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic		U8332E

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

Memory

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

HP ProLiant DL360 G4p Standard Models

Standard Memory

1-GB PC2-3200 DDR2 400 Registered SDRAM DIMM installed (2 x 512-MB SDRAM DIMM)

Upgrading Memory and Memory Interleaving

When upgrading memory, DIMMs 1A and 2A must match. DIMMs 3B and 4B, and DIMMs 5C and 6C must match and must be installed as a pair. When DIMMs 1A and 2A are populated the system is automatically configured for 2:1 interleaving. When four or six DIMMs are populated with identical DIMMs the system is automatically configured for bank interleaving.

Standard Memory Plus Optional Memory

Up to 9-GB memory is available with the standard memory of 1-GB and the optional installation of PC2-3200 DDR2 400 Registered SDRAM DIMM memory kits.

Standard Memory Replaced with Optional Memory

Up to 12-GB of memory is available with the removal of the standard 512-MB of memory and the optional installation of PC2-3200 DDR2 400 Registered SDRAM DIMM memory kits.

NOTE: Chart does not represent all possible configurations.

Memory		Slot					
		1	2	3	4	5	6
Standard	1 GB	512 MB	512 MB	Empty	Empty	Empty	Empty
Optional	9 GB	512 MB	512 MB	2 GB	2 GB	2 GB	2 GB
Maximum	12 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

NOTE: In the online spare configuration, the ROM automatically configures the last populated bank as the spare memory. If only banks A and B are populated, bank B is the spare bank. If banks A, B, and C are populated, bank C is the spare bank, Online spare memory is configured through RBSU.

Following are memory options available from HP:

- 1GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)   343055-B21
- 2GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 1 GB)   343056-B21
- 4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Single Rank Memory Kit (2 x 2 GB)   343057-B21
- 4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Dual Rank Memory Kit (2 x 2 GB)   375004-B21

QuickSpecs

Memory

HP ProLiant DL360 G4p RPS Models
Standard Memory
2-GB PC3200 DDR 400 Registered SDRAM DIMM installed (2 x 1-GB SDRAM DIMM)

Upgrading Memory and Memory Interleaving
When upgrading memory, DIMMs 1A and 2A must match. DIMMs 3B and 4B, and DIMMs 5C and 6C must match and must be installed as a pair. When DIMMs 1A and 2A are populated the system is automatically configured for 2:1 interleaving. When four or six DIMMs are populated with identical DIMMs the system is automatically configured for bank interleaving.

Standard Memory Plus Optional Memory
Up to 10-GB memory is available with the standard memory of 2-GB and the optional installation of PC2-3200 DDR2 400 Registered SDRAM DIMM memory kits.

Standard Memory Replaced with Optional Memory
Up to 12-GB of memory is available with the removal of the standard 1-GB of memory and the optional installation of PC2-3200 DDR2 400 Registered SDRAM DIMM memory kits.

NOTE: Chart does not represent all possible configurations.

Memory		Slot					
		1	2	3	4	5	6
Standard	2 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Optional	10 GB	1 GB	1 GB	2 GB	2 GB	2 GB	2 GB
Maximum	12 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

NOTE: In the online spare configuration, the ROM automatically configures the last populated bank as the spare memory. If only banks A and B are populated, bank B is the spare bank. If banks A, B, and C are populated, bank C is the spare bank, Online spare memory is configured through RBSU.

Following are memory options available from HP:
- 1GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)   343055-B21
- 2GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 1 GB)   343056-B21
- 4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Single Rank Memory Kit (2 x 2 GB)   343057-B21
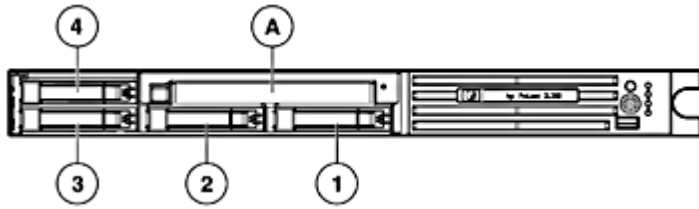- 4GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Dual Rank Memory Kit (2 x 2 GB)   375004-B21

NOTE: Online Spare Memory is not supported when using 2-rank DIMMs. A total of 8 ranks are supported on the HP ProLiant DL360 G4p, A maximum of 4, 2-rank DIMMs can be populated. If you plan to mix DIMM types, 2-rank DIMMs must be installed in the first bank, 1 rank DIMMs can then be installed in subsequent banks.
The following is the memory population rules for the HP ProLiant ProLiant DL360 G4p.

Key: S denotes single rank kit, D denotes Dual rank kit, and X denotes no install.

Bank A	Bank B	Bank C	NOTES:
S	X	X	
S	S	X	
S	S	S	
D	X	X	Online spare not supported
D	S	X	Online spare not supported
D	S	S	Online spare not supported
D	D	X	Online spare not supported

Storage

1,2,3,4	4 x Small Form Factor Serial Attached SCSI Hot Pluggable Hard Drive Bays
A	Multibay: Slimline 24x CD-ROM (ejectable)

Drive Support
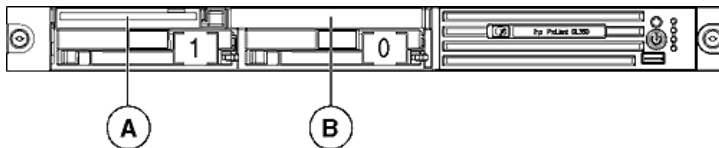
	Quantity Supported	Position Supported	Controller
Removable Media			
Slimline 1.44-MB Diskette Drive	Up to 1	A	Integrated
Slimline 24x IDE CD-ROM Drive	Up to 1	A	Integrated IDE
Slimline DVD-Rom Drive (8x/24x) Option Kit (Servers)	Up to 1	A	Integrated IDE

Hard Drives

Serial Attached SCSI (SAS) Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
<u>Small form factor</u> 72.8-GB 10,000 rpm 36.4-GB 10,000 rpm	Up to 4	1-4	Smart Array P600 Controller

1,0	2 x 1 inch Wide Ultra320 Hot Pluggable Hard Drive Bays; SATA model also available
A	1.44-MB Diskette Drive (removeable)
B	Low-Profile 24x IDE CD-ROM (ejectable)

Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
1.44-MB Diskette Drive	Up to 1	A	Integrated
Slimline 24x IDE CD-ROM Drive	Up to 1	B	Integrated IDE
Slimline DVD-Rom Drive (8x/24x) Option Kit (Servers)	Up to 1	B	Integrated IDE

Hard Drives

Ultra320 Hot Pluggable Drives
NOTE: The HP ProLiant DL360 G4p only supports U320 Universal drives.

	Quantity Supported	Position Supported	Controller
1-inch	Up to 2	0-1	Smart Array 6i Controller (integrated on system board)
300-GB 10,000 rpm			*NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI*
146.8-GB 10,000 rpm			*port.*
72.8-GB 10,000 rpm			Smart Array 6402/128 Controller
146.8-GB 15,000 rpm			Smart Array 6404/256 Controller
72.8-GB 15,000 rpm			Smart Array 642 Controller
36.4-GB 15,000 rpm			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter

SAS Hard Drive

	Quantity Supported	Position Supported	Controller
2.5-inch	4	1-4	Smart Array P600 Controller
36-GB 10,000 rpm			
72-GB 10,000 rpm			

Serial-ATA (SATA) Hard Drive
NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs.

	Quantity Supported	Position Supported	Controller
1-inch	Up to 2	0-1	HP embedded 2 Port SATA Controller with RAID 0/1 support
80GB 7.2k			
160GB 7.2k			
250GB 7.2k			

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 20 Family	Please see the Modular Smart Array 20 QuickSpecs to determine configuration requirements	External	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 30 Family	Please see the Modular Smart Array 30 QuickSpecs to determine configuration requirements.	External	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 50 Enclosure	2	External	HP Smart Array P600 Controller
Modular Smart Array 500 G2 System	1	External	Smart Array 642 Controller (used as Host Bus Adapter) Please see the Modular Smart Array 500 G2 QuickSpecs for the latest list of supported HBAs: http://www.hp.com/go/msa500
Modular Smart Array 1500 cs	Please see the Modular Smart Array 1500 cs QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1500 cs QuickSpecs (URL below) for the latest list of supported HBAs
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)
Modular Smart Array 1500 cs: http://www.hp.com/go/MSA1500cs

Tape Drives, Tape Autoloaders, & Tape Libraries

Storage

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 Autoloaders and Tape Libraries 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)

NOTE: For complete listing of tape drive offerings see
http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html

	Quantity Supported	Position Supported	Controller
HP StorageWorks Tape Drives, External Ultrium 215 Ultrium 232 Ultrium 448 Ultrium 460 DAT 40 DAT 72 DLT VS80 DLT VS160 SDLT 320	Up to 2	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Drives, External DAT 72 USB DAT 40 USB	Up to 2	External	USB Port
HP StorageWorks Tape Drives, External Ultrium 960 SDLT 600	1	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Autoloaders, External DAT 72x6 Tape Autoloader 1/8 Tape Autoloader SSL1016 Tape Autoloader	1 autoloader per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Rack-mount Tape Drive Enclosures 1U Rack-Mount Kit 3U Rack-Mount Kit 5U Rack-Mount Kit	1 per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

Storage

HP StorageWorks Tape Libraries, External MSL6000 (Ultrium 960 - based) MSL6000 (SDLT 600- based) MSL6000 (Ultrium 460 - based) MSL5026S2 (SDLT 320- based) MSL5052S2 (SDLT 320- based)	Please reference the MSL Tape Library QuickSpecs to determine configuration requirements	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks ESL E-Series Tape Libraries ESL 712e ESL 630e ESL 322e ESL 286e	Please reference the ESL E-series Tape Libraries QuickSpecs to determine configuration requirements	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

Power Specifications

To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at URL:
http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls

To drill down to calculators:
- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL360 G4p
- Click on: "Power Calculator" link. (You may need to scroll down to see it)

Technical Specifications

System Unit	Dimensions (H x W x D)	1.70 x 16.78 x 27.75 in (4.32 x 42.62 x 70.49 cm)	
	Weight	Maximum (two hard drives installed, two power supply, two processor)	37 lb (16.78 kg)
		No hard drives installed, one power supply, one processor	27.5 lb (12.47 kg)
	Input Requirements	Rated Input Voltage	100 to 240 VAC
		Rated Input Current	5.85 Amps (100 V) to 2.85 Amps (200 V)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	585 W (100VAC) to 565 W (200VAC) NOTE: 585 W of Rated Input Power is for the Maximum Peak Output Power of 460 W.
	BTU Rating	2000 BTU/HR NOTE: The BTU rating listed is for the Rated Input Power of 585 W.	
	Power Specifications	To review typical system power ratings use the Power Calculator which is available via the online tool located at URL: http://h30099.www3.hp.com/configurator/calc /Power%20Calculator%20Catalog.xls To drill down to calculators: - Click on: "ProLiant Servers" - Click on the Server of interest. Example: DL360 G4p - Click on: "Power Calculator" link. (You may need to scroll down to see it)	
	Power Supply Output Power (per power supply)	Rated Steady-State Power	460 W
	Temperature Range	Operating	10° to 35°C at sea level with an altitude derating of 1.0°C per every 300m (1000ft) above sea level to a maximum of 3000m (10,000ft), no direct sustained sunlight. Maximum rate of change is 10°C/Hr.
		Storage	-30° to 60°C - Maximum rate of change is 20°C/Hr.
	Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C maximum wet bulb temperature
		Storage	5 to 95% relative humidity (Rh), 38.7°C maximum wet bulb temperature
	Maximum Wet Bulb Temperature	38.7° C	
	SCSI Connectors	No external VHDCI connector	
	Acoustic Noise	Idle (Fixed Disk Drives Spinning)	
		L_{WAd} (BELS)	6.6

Technical Specifications

	L_{pAm} (dBA)	50
	Operating (Random Seeks to Fixed Disks)	
	L_{WAd} (BELS)	6.9 BELS
	L_{pAm} (dBA)	53 dBA

Smart Array 6i Controller (integrated on system board) (SCSI models)		
	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 up to 133 (integrated on system board)
	PCI-X Peak Data Transfer Rate	1066 MB/s
	SCSI Protocols Supported	Ultra320, Ultra3, Ultra2
	SCSI Peak Data Transfer Rate	320 MB/s
	Channels	1
	SCSI Ports (external/internal)	0/1
	Drives Supported (maximum)	2 drives
	Cache	64 MB Read Cache
	Battery-Backed Write Cache	Yes, with installation of Battery-Backed Write Cache Enabler, up to 128MB
	RAID Support	0, 1, 1+0, 5
	Logical Drives (maximum)	32 logical 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

Technical Specifications

Integrated Serial ATA Controller (SATA models)	Simultaneous drive transfer channels	Support for up to 2 hard drives
	Transfer rate synchronous (maximum theoretical)	150 MB/s per channel; 300MB/s in RAID 0 pair
	Protocol	Serial ATA
	Drive support	HP Universal Serial ATA
	Data transfer modes	ATA data-transfer modes supported SATA 1.0, SATA II PIO modes 0-4 Multiword DMA modes 0-2 Ultra DMA modes 0-6
	Feature	Supports Pre-Failure Warranty of SATA Hard Drives Support for Systems Insight Manager Supports multiple logical volumes Setup through ROM based Array Configuration Utility Installation scripting support
	OS Support	Microsoft Windows 2000 Server Microsoft Windows Server 2003 Novell NetWare Linux (Red Hat, SuSE, UnitedLinux)

NOTE: This controller does not support LED functions. This controller does not support Hot Plug functions.

Smart Array P600 Controller (SAS models only)	Disk Drive and Enclosure Protocol Support	3 Gbps SAS (Serial Attached SCSI) 1.5 Gbps SATA (Serial AT Attachment)
	Architecture	1.5 Gb SATA
	SAS Connectors	1 internal SFF8484 & 1 external SFF8470 / internal SFF8484 shared x4 Wide SAS Ports 12 Gbps per x4 Wide SAS Port (4 x 3 Gbps)
	Data Transfer Method	64-bit wide, PCIX 133 MHz (1 GB/s maximum bandwidth)
	PCI Bus Speed	PCIX-133 and 3.3 volt PCI compatibility only
	Memory Bus Speed	DDR-266 and 72 bit wide bus
	PCI	64-bit, 133-MHz PCI-X (1 GB/s maximum bandwidth)
	Simultaneous Drive Transfer Ports	PCI-X and 3.3 volt PCI compatibility only
	Port Transfer Rate	2 x4 Wide SAS Ports
	Software upgradeable Firmware	12 Gb/s per x4 Wide SAS Port (4 x 3 Gb/s)
	Cache Memory	Yes
	Logical Drives Supported	256 MB Read/Write (512-MB module upgrade available); ECC protection, battery-backed, and removable
	Maximum Capacity	Up to 32 logical drives Up to 2.2 TB per logical drive
	Memory Addressing	2.7 TB (38 x 72 GB) 64-bit, supporting servers memory greater than 4 GB

QuickSpecs

HP ProLiant DL360 Generation 4p (G4p)

Technical Specifications

	RAID Support	RAID 6 (Advanced Data Guarding) RAID 5 (Distributed Data Guarding) RAID 1+0 (Striping & Mirroring) RAID 0 (Striping)	
	Upgradeable Firmware Disk Drive and	4-MB flashable ROM	
	Enclosure Protocol Support	3 Gb SAS and 1.5 Gb SATA	

Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter	Network Interface	10/100/1000-T	
	Compatibility	EEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX	
	Data Transfer Method	64-bit/66MHz 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-TX (Half and Full-Duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP up to 328 ft (100 m)
		10/100/1000 Base-TX	Category 5 UTP up to 328 ft (100 m)

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