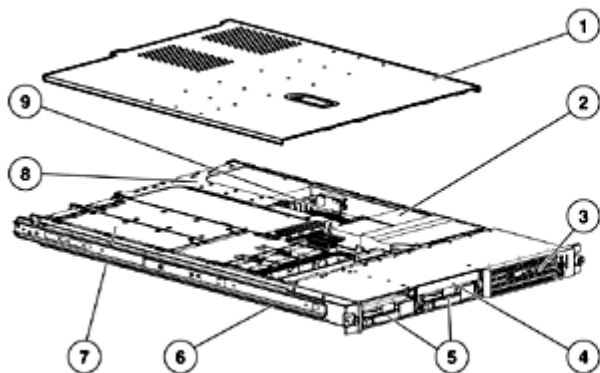


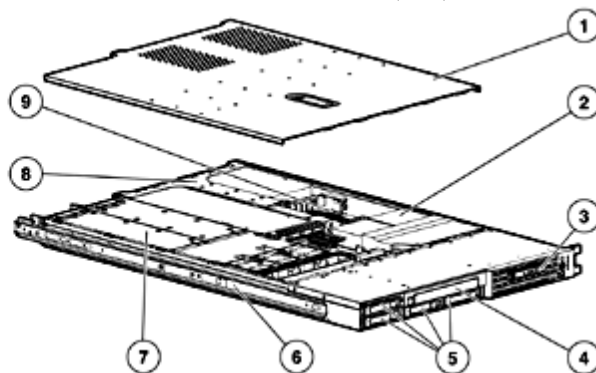
Overview

Ultra320 SCSI and SATA 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 Ultra320 hot plug drive bays; or
Two SATA pluggable drive bays; or
Four Serial Attached SCSI hot plug drive bays

Serial Attached SCSI (SAS) Model



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 12 GB DDR2 PC2-3200 SDRAM

What's New

- 2.8 GHz Dual-core Intel® Xeon™ processors are now available with the powerful HP ProLiant DL360 G4p Serial Attached SCSI (SAS) model. Offering up to a 50% performance increase over single-core processors, the Dual-core Intel Xeon offers a 2x2MB L2 cache and 64-bit capability.
- 3.8 GHz Intel® Xeon™ processors are available now available with robust HP ProLiant DL360 G4p SCSI and SAS models and includes 2MB L2 cache and 64-bit support.
- Introducing Xeon™ 3.0 GHz low voltage processor for performance per watt optimization in dense server environments.

At A Glance

Combining concentrated 1U compute power, integrated Lights-Out management, and essential fault tolerance, the DL360 is optimized for space constrained installations. Dual Xeon processors, DDR2 SDRAM, and PCI-X and PCI Express technology provide a high performance system ideal for the full range of scale out applications. What's more, the DL360 G4p steps up the fault tolerant in an ultra dense platform with redundant power, redundant fans, and online spare memory, embedded RAID capability, and full-featured remote Lights-Out management.

- **Processors:**
 - 64-bit Intel® Xeon™ processors supporting 64-bit extension and 64-bit Microsoft Windows and Linux operating systems
 - SAS Model - best performance:
 - Up to 2.8 GHz Dual-core and 3.8 GHz single core Intel Xeon processor options
 - SCSI Model - best price/performance:
 - Up to 3.8 GHz single core processor Intel Xeon processor options
 - SATA Model - best priced:
 - Up to 3.6 GHz single core processor Intel Xeon processor options
- **Memory:**

Overview

- Up to 12 GB of PC2-3200 DDR2 400 SDRAM; with 2-way interleaving
- Advanced ECC memory standard; optional Online Spare Memory
- **Storage Controller:**
 - SAS Model - best performance:
 - HP Smart Array P600/256 BBWC Controller
 - SCSI Model - best price/performance:
 - Embedded Smart Array 6i RAID Controller with optional 128MB transportable battery backed cache (SCSI models)
 - SATA Model - best priced:
 - Embedded 2 Port SATA Controller (SATA models)
- **Internal Drive Support:**
 - SAS Model - best performance:
 - 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 - best price/performance:
 - Up to two Universal SCSI hot plug disk drives
 - SATA Model - best priced:
 - Up to two pluggable Serial ATA disk drives
- **Network Controller:**
 - Embedded NC7782 PCI-X Gigabit Server Adapter
- **Expansion Slots:**
 - Two 64-bit/133 MHz PCI-X slots
 - Optional PCI-X to PCI-Express conversion kit
- **USB Ports:**
 - 3 Total: 1 front, 1 internal, 1 rear accessible port
- **Redundancy:**
 - Fan redundancy, standard
 - Hot plug power supply with optional 1 + 1 redundancy
- **Management:**
 - Built in reliability and availability features: embedded RAID, redundant fans, redundant power option, pre-failure notifications, and Lights-Out Management
 - 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 NICs
 - ProLiant Essential Foundation Pack standard, including HP Systems Insight Manager, SmartStart, SmartStart Scripting Toolkit, Subscriber's Choice and ROM Based Setup Utility (RBSU).
- **Form Factor:**
 - 1U Rack form factor (1.75")
- **Deployment/Serviceability:**
 - Sliding rails for in rack servicing ship standard; optional ambidextrous cable management arm
- **Warranty:**
 - Protected by HP Services and a worldwide network of resellers and service providers. Three-year Next Business Day, on-site limited global warranty. Certain restrictions and exclusions apply. Pre-Failure Notification on processors, memory, and SCSI/SAS hard drives. SATA hard drives have a one-year warranty.

Standard Features

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

Processor	Intel Xeon Processor 2.8 GHz/800MHz -2MB L2, 110W
One of the following depending on Model	Intel Xeon Processor 3.0 GHz/800MHz -2MB L2, 110W
	Intel Xeon Processor 3.0 GHz/800MHz -2MB L2, Low Voltage 55W
	Intel Xeon Processor 3.2 GHz/800MHz -2MB L2, 110W
	Intel Xeon Processor 3.4 GHz/800MHz -2MB L2, 110W
	Intel Xeon Processor 3.6 GHz/800MHz -2MB L2, 110W
	Intel Xeon Processor 3.8 GHz/800MHz -2MB L2, 110W
	Dual-core Intel Xeon Processor 2.8 GHz/800MHz - 2x2MB L2, 135W
	NOTE: Dual-core processor is supported on HP ProLiant DL360 G4p Serial Attached SCSI (SAS) models only.

Processor Cache	2MB Level 2 cache memory
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Upgradeability	Upgradeable to dual processing
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Chipset	Intel chipset is E7520
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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 (on some models)	2 GB (2 x 1024 MB)
	Maximum	12 GB

Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
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Standard Features

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	n/a
	2	64-bit/133MHz PCI-X	10	0	no	3.3 Volt
	2	x8 PCI Express (option)	13	0	no	n/a

*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: All slots can accept universal keyed PCI cards.

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

Storage Controllers

SAS Models	HP Smart Array P600/256 BBWC Controller (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. NOTE: SATA RAID 0, 1 is available with the optional purchase of the HP 8-port SAS HBA (347786-B21) and HP SAS/SATA Cable Kit (398307-B21) - hot-plug drive functionality and drive activity LEDs not supported.

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	584GB SAS	4 x 146GB SAS
	240GB SATA	4 x 60GB Serial ATA
SCSI Model	600GB	2 x 300GB Ultra320 SCSI
SATA Model	1.50TB	2 x 750GB Serial ATA

Standard Features

Interfaces	Serial	1	
	Pointing Device (Mouse)	1	
	Graphics	1	
	Hot Plug Keyboard	1	
	USB Ports	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
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Form Factor	Rack (1U), (1.75 in/4.45 cm)
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ProLiant Essentials Foundation Pack Software

HP Systems Insight Manager

HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible environment to centrally manage servers, storage and other infrastructure devices across multiple operating system platforms.

Through a single management view, HP SIM provides core management services that include device discovery and identification, event views, health monitoring, inventory data collection, software version control and reporting. HP SIM is built on industry standards and is extensible with value-added ProLiant Essentials, Integrity Essentials and Storage Essentials software to meet individual management needs. For more details on HP SIM visit <http://www.hp.com/go/hpsim>.

HP SIM provides organizations with the following benefits:

- Simplifies and consolidates infrastructure lifecycle management using task and query based functionality
- Provides the foundation for infrastructure automation and virtualization
- Enables IT management based on business processes not hardware platforms
- Lowers infrastructure maintenance cost and frees resources for innovation
- Maximizes resource utilization with virtualization technologies
- Provides a central point of integration between infrastructure and Enterprise management tools such as HP OpenView

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.

Standard Features

Insight Management Agents

Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers, Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the ProLiant Essentials Rapid Deployment Pack. For additional information about the Management Agents and the HP System Management Homepage 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.

ROMPkg, 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.

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 (RDP) is an automated deployment and provisioning solution for all ProLiant servers. RDP includes the ProLiant Integration Module featuring ProLiant server pre-configured events for OS installation, and optimized software drivers, firmware and management agents. Every RDP disc includes a 7-day, 10-node trial licenses for evaluation purposes. RDP requires a license for each server deployed and is available for purchase with HP servers. For more information, visit: <http://www.hp.com/servers/rdp>.
- 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.
- 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.
- Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus
- 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

Standard Features

Optional Remote Management Packs

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.

- Server Migration Pack - The Server Migration Pack automates the manual processes required for migrating servers between physical or virtual platforms (P2V, V2P, and V2V).
- Server Migration Pack - P2P Edition: Upgrading or replacing your existing server? Effortlessly transition to new servers with automated, accurate and affordable migration of OS, application and data.
- Integrated Lights-Out Advanced Pack - upgrades the Integrated Lights-Out processor to full virtual presence and control with graphical console and virtual media.

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

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)

Standard Features

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 SCSI/SAS 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 One Lowline NEMA power cord and One Highline IEC Power cord ships standard in most models. Smart Buys include one IEC power cable per power supply.

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>.

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

Standard Features

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
VMware Virtualization Software

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>.

NOTE: For more information on HP's Certified and Supported ProLiant Servers, please visit the VMware Server Support Matrix at:

<http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.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, EVA, XP, rackable tape libraries and configurable network switches.

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

HP Enterprise Configurator

The HP eCo-Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance.

Service and Support

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of resellers and service providers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements.

NOTE: Server Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support. Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

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.

HP services provide continuous care and support expertise with committed response designed to meet your IT and business needs.

To fully capitalizing on your HP ProLiant servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions provides a range of support services designed to meet the varying needs of business. Whether an SMB or large global corporation HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Enhanced Care - Minimum recommended service support offer designed to ensure customers have access to expert assistance, whenever they need it.

- 4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years

Continuance Care - Recommended service delivering cost-effective support options designed to extend HP Services committed response and guaranteed fix times, designed to speed problem identification and

Standard Features

resolution.

- *6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years*

Total Care - Highest HP Support service level recommend to help increase IT performance and availability with comprehensive, integrated hardware and software services

- *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*

Deployment Services - HP Installation and Start Up services designed to take time, risk, and worry out of the deployment of ProLiant servers - and free customers IT support staff to focus on what they do best, their business.

- *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*

NOTE: For a complete listing of service offerings and information visit:

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

<http://www.hp.com/go/proliant/carepack>

Models

SAS Models

DL360R04p X3.0-
2MB/800, 1GB SAS
389820-001

Processor	(1) Intel Xeon Processor 3.0 GHz/800MHz standard (up to 2 supported)
Cache Memory	2MB level 2 cache
Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
Storage Controller	HP Smart Array P600/256 BBWC 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
389821-001

Processor	(1) Intel Xeon Processor 3.2 GHz/800MHz standard (up to 2 supported)
Cache Memory	2MB level 2 cache
Memory	2 GB (2 x 1024 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
Storage Controller	HP Smart Array P600/256 BBWC 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 389822-001	Processor	(1) Intel Xeon Processor 3.4 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	2 GB (2 x 1024 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	HP Smart Array P600/256 BBWC 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 389823-001	Processor	(1) Intel Xeon Processor 3.6 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	2 GB (2 x 1024 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	HP Smart Array P600/256 BBWC 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 X3.8-2MB/800, 2GB SAS RPS 394919-001	Processor	(1) Intel Xeon Processor 3.8 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	2 GB (2 x 1024 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	HP Smart Array P600/256 BBWC 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)

SCSI Models

DL360R04p X3.8-2MB/800, 2GB SCSI, RPS 376235-001	Processor	(1) Intel Xeon Processor 3.8 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	2 GB (2 x 1 GB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, 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 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	Two 460W power supplies
	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 X3.6- 2MB/800, 1GB SCSI 376236-001	Processor	(1) Intel Xeon Processor 3.6 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, 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 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 378705-001	Processor	(1) Intel Xeon Processor 3.6 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	2 GB (2 x 1 GB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, 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 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, 2GB SCSI, RPS 380079-001	Processor	(1) Intel Xeon Processor 3.4 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	2 GB (2 x 1-GB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, embedded on system board) NOTE: The ProLiant DL360 G4p does not offer an external SCSI port.
	Hard Drives	None ship standard; system supports up to two hot plug U320 drives NOTE: The ProLiant DL360 G4p SCSI models only support U320 Universal Hot Plug drives.
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	Two 460W power supply (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)
	<hr/>	
DL360R04p X3.4- 2MB/800, 1GB SCSI 376237-001	Processor	(1) Intel Xeon Processor 3.4 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, 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 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 X3.2- 2MB/800, 1GB SCSI 379753-001	Processor	(1) Intel Xeon Processor 3.2 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, 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 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 X3.0- 2MB/800, 1GB SCSI 380325-001	Processor	(1) Intel Xeon Processor 3.0 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Smart Array 6i Controller (U320, 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 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

SATA Models

DL360R04p X3.6-
2MB/800, 1GB SATA
378704-001

Processor	(1) Intel Xeon Processor 3.6 GHz/800MHz standard (up to 2 supported)
Cache Memory	2MB level 2 cache
Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
Storage Controller	Embedded SATA controller NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs. NOTE: SATA RAID 0, 1 is available with the optional purchase of the HP 8-port SAS HBA (347786-B21) and HP SAS/SATA Cable Kit (398307-B21) - hot-plug drive functionality and drive activity LEDs not supported.
Hard Drives	None ship standard; system supports up to two Serial ATA drives
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	One 460W power supply (redundant power supply optional)
Optical Drive	Optical Drives not supported 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)

DL360R04p X3.4-
2MB/800, 1GB SATA
380078-001

Processor	(1) Intel Xeon Processor 3.4 GHz/800MHz standard
Cache Memory	2MB level 2 cache
Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
Storage Controller	Embedded SATA controller NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs. NOTE: SATA RAID 0, 1 is available with the optional purchase of the HP 8-port SAS HBA (347786-B21) and HP SAS/SATA Cable Kit (398307-B21) - hot-plug drive functionality and drive activity LEDs not supported.
Hard Drives	None ship standard; system supports up to two Serial ATA drives
Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
Power Supply	One 460W power supply (redundant power supply optional)
Optical Drive	Optical Drives not supported 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 X3.2- 2MB/800, 1GB SATA 379752-001	Processor	(1) Intel Xeon Processor 3.2 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	1 GB (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 NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs. NOTE: SATA RAID 0, 1 is available with the optional purchase of the HP 8-port SAS HBA (347786-B21) and HP SAS/SATA Cable Kit (398307-B21) - hot-plug drive functionality and drive activity LEDs not supported.
	Hard Drives	None ship standard; system supports up to two Serial ATA drives
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	Optical Drives not supported 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 X3.0- 2MB/800, 1GB SATA 380324-001	Processor	(1) Intel Xeon Processor 3.0 GHz/800MHz standard (up to 2 supported)
	Cache Memory	2MB level 2 cache
	Memory	1 GB (2 x 512 MB) Standard to 12 GB (Maximum) of PC2-3200 DDR2 400 SDRAM
	Network Controller	Embedded NC7782 PCI-X Gigabit Server Adapter
	Storage Controller	Embedded SATA controller NOTE: The HP embedded 2 Port SATA controller does not support RAID, hot plug drive functionality or drive activity LEDs. NOTE: SATA RAID 0, 1 is available with the optional purchase of the HP 8-port SAS HBA (347786-B21) and HP SAS/SATA Cable Kit (398307-B21) - hot-plug drive functionality and drive activity LEDs not supported.
	Hard Drives	None ship standard; system supports up to two Serial ATA drives
	Remote Management	Integrated Lights-Out (iLO) Standard Management (embedded)
	Power Supply	One 460W power supply (redundant power supply optional)
	Optical Drive	Optical Drives not supported 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)	

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.

NOTE: FIO indicates that this option only available as a Factory Installable Option.

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

Models	<p>HP ProLiant DL360G4p SATA Rack CTO Chassis 382146-405</p> <p>Factory Integrated Model ships with:</p> <p>Embedded NC7782 PCI-X Gigabit Server Adapter 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)</p>
	<p>HP ProLiant DL360G4p SCSI Rack CTO Chassis 382147-405</p> <p>Factory Integrated Model ships with:</p> <p>Embedded NC7782 PCI-X Gigabit Server Adapter 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)</p>
	<p>HP ProLiant DL360G4p SAS Rack CTO Chassis 389831-405</p> <p>Factory Integrated Model ships with:</p> <p>Embedded NC7782 PCI-X Gigabit Server Adapter 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)</p>

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

SAS Controller	<p>HP Smart Array P600/256 BBWC Controller 337972-B21</p> <p>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.</p>
SAS Starter Kit	<p>NOTE: SAS Starter Kits are not compatible with the SCSI or SATA models.</p> <p>SAS Starter Kit - 36GB 396221-B21</p> <p>NOTE: Includes Smart Array P600/256 BBWC Controller and (2) 36GB SFF SAS Universal Hard Drives.</p> <p>SAS Starter Kit - 72GB 396220-B21</p> <p>NOTE: Includes Smart Array P600/256 BBWC Controller and (2) 72GB SFF SAS Universal Hard Drives.</p>

Configuration Information - Factory Integrated Models

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

Processors	Intel X2.8GHz/800-2MB DL360G4 FIO processor	399042-L21
	Intel X3.0GHz/800-2MB DL360G4 FIO processor	380327-L21
	Intel X3.0GHz/800-2M LV DL360G4 FIO processor	394921-L21
	Intel X3.2GHz/800-2MB DL360G4 FIO processor	379817-L21
	Intel X3.4GHz/800-2MB DL360G4 FIO processor	376243-L21
	Intel X3.6GHz/800-2MB DL360G4 FIO processor	376242-L21
	Intel X3.8GHz800-2M DL360G4 FIO processor	376241-L21
	NOTE: Dual-core processor is supported on HP ProLiant DL360 G4p Serial Attached SCSI (SAS) model only.	
Base Memory	1 GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21
	2 GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 1 GB)	343056-B21
	4 GB 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-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.		
Slimline CD-ROM Drive 24X	356963-B21	
NOTE: This CD-ROM Drive (PN 356963-B21) is the only drive that will support SATA 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 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-ROM Drive 24X	356963-B21
NOTE: This CD-ROM Drive (PN 356963-B21) is the only drive that will support 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.		

Configuration Information - Factory Integrated Models

Power Supply	460W HP redundant power supply with IEC cord only NOTE: For SCSI and SATA Models.	354587-B21
	535W HP redundant power supply with IEC cord only NOTE: For SAS Models.	389830-B21
	535W HP redundant power supply with NEMA cord only NOTE: for SAS Models.	389830-001

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 G4p Unique Options	Intel Xeon Dual-core 2.8 GHz/800MHz-2x2MB 135W Processor Option Kit NOTE: This processor option kit (PN 408585-B21) supports the HP ProLiant DL360 G4p SAS only.	408585-B21
	Intel Xeon 2.8G Hz/800MHz-2MB 110W Processor Option Kit NOTE: This processor option kit (PN 399042-B21) supports the HP ProLiant DL360 G4p only.	399042-B21
	Intel Xeon 3.0 GHz/800MHz-2MB 110W Processor Option Kit NOTE: This processor option kit (PN 380327-B21) supports the HP ProLiant DL360 G4p only.	380327-B21
	Intel Xeon 3.0 GHz/800MHz-2MB 55W Low Voltage Processor Option Kit NOTE: This processor option kit (PN 394921-B21) supports the HP ProLiant DL360 G4p only.	394921-B21
	Intel Xeon 3.2 GHz/800MHz-2MB 110W Processor Option Kit NOTE: This processor option kit (PN 379817-B21) supports the HP ProLiant DL360 G4p only.	379817-B21
	Intel Xeon 3.4 GHz/800MHz-2MB 110W Processor Option Kit NOTE: This processor option kit (PN 376243-B21) supports the HP ProLiant DL360 G4p only.	376243-B21
	Intel Xeon 3.6 GHz/800MHz-2MB 110W Processor Option Kit NOTE: This processor option kit (PN 376242-B21) supports the HP ProLiant DL360 G4p only.	376242-B21
	Intel Xeon 3.8 GHz/800MHz-2MB 110W Processor Option Kit NOTE: This processor option kit (PN 376241-B21) supports the HP ProLiant DL360 G4p only.	376241-B21
	PCI-e Riser option (to convert one or both PCI-X to PCI-e slots)	354589-B21
	460W HP redundant power supply with IEC cord only	354587-B21
	460W HP redundant power supply with 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 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

ProLiant Essentials Intelligent Networking Pack

ProLiant Essentials Intelligent Networking Pack - Windows Edition, Single Server License

NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Intelligent Networking Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12062_na/12062_na.HTML

ProLiant Essentials Intelligent Networking Pack - Linux Edition, Single Server License



Options

NOTE: For additional ProLiant Intelligent Networking Pack - Linux License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12327_na/12327_na.HTML

ProLiant Essentials Performance Management Pack

ProLiant Essentials Performance Management Pack, Single-Server License 306696-B21

NOTE: For use with a single server. Contains one license with a unique license activation key, HP Management CD and documentation.

NOTE: The most recent version of the software can always be downloaded at <http://www.hp.com/products/pmp>.

NOTE: For additional ProLiant Performance Management Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/11925_na/11925_na.HTML

ProLiant Essentials Rapid Deployment Pack Windows Edition Release

Rapid Deployment Pack, Single-Server License 267196-B21

NOTE: This license allows 1 server to be deployed and managed via RDP.

NOTE: For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.HTML

ProLiant Essentials Workload Management Pack

ProLiant Essentials Workload Management Pack, Single Server License 303284-B21

NOTE: For additional ProLiant Workload Management Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/11452_na/11452_na.HTML

ProLiant Essentials Virtualization Management Software

ProLiant Essentials Virtual Machine Management Pack, Single-Server License 435661-B21

NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

ProLiant Essentials Server Migration Pack, Single-Migration License 435663-B21

NOTE: Contains one license, enabling 1 server migration, with a unique license activation key and documentation.

ProLiant Essentials Server Migration Pack - Physical to ProLiant Edition, Single-Migration License 412978-B21

NOTE: This license allows 1 server to be migrated from a physical server to a virtual machine. Or this license can be used to migrate a virtual machine from one virtualization layer i.e. VMware GSX to a different virtualization layer such as VMware ESX or Microsoft Virtual Server 2005.

NOTE: For additional ProLiant Essentials Virtualization Management Software License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12328_na/12328_na.HTML

ProLiant Essentials Vulnerability and Patch Management Pack

ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License 371645-B21

NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12111_na/12111_na.HTML

Options

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>.

Remote Management	Integrated Lights-Out Advanced Pack	
	Integrated Lights-Out Advanced Pack, 1 server	263825-B21
	Featuring: Sophisticated virtual administration features for ultimate control of servers in the data centers and remote sites.	
	NOTE: For additional Integrated Light-Out Advanced Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11052_na/11052_na.HTML	
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/North_America/11073.html	
Processor	Intel Xeon 2.8 GHz/800MHz-2MB 110W Processor Option Kit	399042-B21
	NOTE: This processor option kit (PN 399042-B21) supports the HP ProLiant DL360 G4p only.	
	Intel Xeon 3.0 GHz/800MHz-2MB 110W Processor Option Kit	380327-B21
	NOTE: This processor option kit (PN 380327-B21) supports the HP ProLiant DL360 G4p only.	
	Intel Xeon 3.0 GHz/800MHz-2MB 55W Processor Option Kit, Low Voltage	394921-B21
	NOTE: This processor option kit (PN 394921-B21) supports the HP ProLiant DL360 G4p only.	
	Intel Xeon 3.2 GHz/800MHz-2MB 110W Processor Option Kit	379817-B21
	NOTE: This processor option kit (PN 379817-B21) supports the HP ProLiant DL360 G4p only.	
Intel Xeon 3.4 GHz/800MHz-2MB 110W Processor Option Kit	376243-B21	
NOTE: This processor option kit (PN 376243-B21) supports the HP ProLiant DL360 G4p only.		
Intel Xeon 3.6 GHz/800MHz-2MB 110W Processor Option Kit	376242-B21	
NOTE: This processor option kit (PN 376242-B21) supports the HP ProLiant DL360 G4p only.		
Intel Xeon 3.8 GHz/800MHz-2MB 110W Processor Option Kit	376241-B21	
NOTE: This processor option kit (PN 376241-B21) supports the HP ProLiant DL360 G4p only.		

Options

Memory (DIMMs)	1 GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21
	2 GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Memory Kit (2 x 1 GB)	343056-B21
	4 GB Advanced ECC PC2-3200 DDR2 SDRAM DIMM Single Rank Memory Kit (2 x 2 GB)	343057-B21
	4 GB 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	331903-B21
	NOTE: This CD-RW/DVD-ROM Drive (PN 331903-B21) is for SCSI and SAS models only. It is not supported in SATA models.	
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21
	NOTE: This DVD-ROM Drive (PN 264007-B21) is supported on SCSI and SAS models.	
Optical Drives	Slimline CD-ROM Drive 24X	356963-B21
	NOTE: This CD-ROM Drive (PN 356963-B21) is the only drive that will support SATA models.	
	HP DVD±R/RW 8X Slim	383975-B21
	NOTE: This DVD±R/RW 8X Slim (PN 383975-B21) is supported on SCSI and SAS models.	

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

Hard Drives	Ultra320 – Hot Plug	
	NOTE: The HP ProLiant DL360 G4p SCSI models support U320 Universal Hot Plug drives.	
	HP 300GB U320 10K Universal HDD	350964-B22
	HP 146GB U320 10K Universal HDD	286716-B22
	HP 72GB U320 10K Universal HDD	286714-B22
	HP 300GB U320 15K Universal HDD	411089-B22
	HP 146GB U320 15K Universal HDD	347708-B22
	HP 72GB U320 15K Universal HDD	286778-B22
	HP 36GB U320 15K Universal HDD	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: http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML	
	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.	
	HP 750GB 1.5G SATA 7.2K 3.5" HDD	432341-B21
HP 500GB 1.5G SATA 7.2K 3.5" HDD	395473-B21	

Options

HP 250GB 1.5G SATA 7.2K 3.5" HDD	349239-B21
HP 160GB 1.5G SATA 7.2K 3.5" HDD	349238-B21
HP 80GB 1.5G SATA 7.2K 3.5" HDD	349237-B21
SFF SATA Hot Plug	
HP 60GB 1.5G SATA 5.4K SFF HDD	379306-B21
<p>NOTE: SATA drives have a 1-year warranty. 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: http://h18000.www1.hp.com/products/quickspecs/11940_na/11940_na.HTML</p>	
Serial Attached SCSI (SAS) SFF Hot Plug (For use with SAS Models)	
HP 146GB 3G SAS 10K SFF SP HDD	431958-B21
HP 72GB 3G SAS 10K SFF SP HDD	375861-B21
HP 36GB 3G SAS 10K SFF SP HDD	375859-B21
<p>NOTE: All SFF SAS Universal Hard Drives are supported ONLY by HP ProLiant DL360 G4p SAS models.</p> <p>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: http://h18000.www1.hp.com/products/quickspecs/12224_na/12224_na.HTML</p>	

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.	
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
<p>NOTE: Please see the following QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12030_na/12030_na.HTML (Smart Array 6i) http://h18000.www1.hp.com/products/quickspecs/11587_na/11587_na.HTML (Smart Array 6400 Series) http://h18000.www1.hp.com/products/quickspecs/11563_na/11563_na.HTML (Smart Array 642) http://h18000.www1.hp.com/products/quickspecs/11943_na/11943_na.HTML (U320 SCSI G2 HBA)</p>	
SAS Controller	
Smart Array P600 Controller	
HP Smart Array P600/256 BBWC Controller	337972-B21

Options

512MB DDR BBWC Upgrade 372538-B21

NOTE: Ships standard with SAS model.

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

http://h18000.www1.hp.com/products/quickspecs/12247_na/12247_na.HTML

(Smart P600 Controller)

SAS HBA

HP 8 Internal Port SAS HBA with RAID 347786-B21

NOTE: Supports SAS/SATA models. RAID 0,1 supported.

NOTE: Please see the HBA QuickSpecs for additional information:

http://h18004.www1.hp.com/products/quickspecs/12332_na/12332_na.html

HP SATA/SAS 1U Cable Kit 398307-B21

NOTE: Required for HP SAS/SATA HBA use with HP ProLiant DL360 G4p SATA models.

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 NC360T PCI Express Dual Port Gigabit Server Adapter 412648-B21

HP NC373F PCI Express Multifunction Gigabit Server Adapter 394793-B21

HP NC373T PCI Express Multifunction Gigabit Server Adapter 394791-B21

HP NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter 394795-B21

HP NC510F PCIe 10 Gigabit Server Adapter 414126-B21

NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510F adapter.

HP NC510C PCIe 10 Gigabit Server Adapter 414129-B21

NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.

HP NC1020 PCI 1000T Gigabit Server Adapter 353377-B21

HP NC7771 PCI-X 1000T Gigabit Server Adapter 290563-B21

NOTE: Any NIC (except the NC1020) on the option list can be used for redundancy with the embedded NC7782 Dual Port Network Controller. When teaming with other NICs or with the embedded NIC, the lack of Jumbo Frames and LSO features on the NC1020 will cause high end NICs to have those features disabled. (e.g. incompatibility issues with the other option NICs for that platform).

HP IB 4X SDR PCI-e single PORT HCA 431038-B21

HP IB 4X DDR PCI-e Single PORT HCA 431039-B21

Management Options

Remote Insight Lights-Out Edition II 227251-001

Options

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 72 USB Internal Tape Drive (Carbonite) DW026A

NOTE: HP recommends combining this tape drive with the 1U USB Rack-Mount kit (A8007A) for a complete rack-mount solution.

Ultrium Tape Drives

HP StorageWorks Ultrium 232 Internal Tape Drive (Carbonite) DW064A

NOTE: HP recommends combining this tape drive with the 1U SCSI Rack-Mount kit (A7445B) for a complete rack-mount solution.

HP StorageWorks 3U SCSI Rack-mount kit with one Ultrium 460 (Carbon) 350546-B22

HP StorageWorks 1U SCSI Rack-mount kit with one Ultrium 448 SCSI Tape Drive (Carbonite) DW028B

HP StorageWorks 1U SCSI Rack-mount kit with one Ultrium 920 EH903A

HP StorageWorks 3U SCSI Rack-mount kit with one Ultrium 960 (Carbonite) Q1595B

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_na/11739_na.html

http://h18006.www1.hp.com/products/quickspecs/12128_na/12128_na.html

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>

Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit A7445B

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 the DAT 24, DAT 40, DAT 72, DLT VS80, DLT VS160, Ultrium 215, Ultrium 232, Ultrium 448 and Ultrium 920 tape drives.

HP StorageWorks 1U USB Rack-Mount Kit A8007A

NOTE: The 1U USB Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the DAT 24 USB, DAT 40 USB and DAT 72 USB tape drives.

HP StorageWorks 3U Rack-Mount Kit 274338-B22

NOTE: The 3U Rack-mount Kit can support up to (2) full-height or (4) half-height tape drives and compatible with multiple LVD SCSI tape drives including DAT 40, DAT 72, DLT VS160, SDLT 320, SDLT 600, Ultrium 232, Ultrium 460, Ultrium 448, Ultrium 920 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_na/10854_na.HTML

Options

Tape Autoloaders

HP StorageWorks DAT Autoloader

HP StorageWorks DAT 72x10 tape autoloader AE313A

HP StorageWorks 1/8 Tape Autoloader

HP StorageWorks 1/8 Ultrium 920 G2 Tape Autoloader AH165A

HP StorageWorks 1/8 Ultrium 448 G2 Tape Autoloader AH164A

HP StorageWorks 1/8 Ultrium 232 G2 Tape Autoloader AH163A

HP StorageWorks 1/8 G2 Tape Autoloader Rack Kit AH166A

NOTE: Required to install the 1/8 G2 Autoloaders in a standard 19-inch rack; includes rails and rackmount instructions

NOTE: Please reference the 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 MSL2024 Tape Library

HP StorageWorks MSL2024 1 Ultrium 960 Drive Library AG115A

HP StorageWorks MSL2024 1 Ultrium 960 4GB FC Drive Library AG326B

HP StorageWorks MSL2024 1 Ultrium 920 Drive Library AH169A

HP StorageWorks MSL2024 2 Ultrium 920 Drive Library AH170A

HP StorageWorks MSL2024 1 Ultrium 448 Drive Library AG116A

HP StorageWorks MSL2024 2 Ultrium 448 Drive Library AG117A

HP StorageWorks MSL4048 Tape Library

HP StorageWorks MSL4048 1 Ultrium 448 Drive Library AG320A

HP StorageWorks MSL4048 2 Ultrium 448 Drive Library AG321A

HP StorageWorks MSL4048 1 Ultrium 920 Drive Library AH171A

HP StorageWorks MSL4048 2 Ultrium 920 Drive Library AH172A

HP StorageWorks MSL4048 1 Ultrium 960 Drive Library AG322A

HP StorageWorks MSL4048 1 Ultrium 960 4GB FC Drive Library AG324B

HP StorageWorks MSL4048 2 Ultrium 960 Drive Library AG323A

HP StorageWorks MSL4048 2 Ultrium 960 4GB FC Drive Library AG325B

HP StorageWorks MSL6000 Tape Library

Ultrium 960 technology

HP StorageWorks MSL6030 1 Ultrium 960 Dr LVDS Library AD606B

HP StorageWorks MSL6030 1 Ultrium 960 Dr FC Library AD608B

HP StorageWorks MSL6030 2 Ultrium 960 Dr LVDS Library AD607B

HP StorageWorks MSL6030 2 Ultrium 960 Dr FC Library AD609B

Ultrium 460 technology

HP StorageWorks MSL6030 1 Ultrium 460 Dr LVDS Library AD598B

HP StorageWorks MSL6030 1 Ultrium 460 Dr FC Library AD600B

HP StorageWorks MSL6030 2 Ultrium 460 Dr LVDS Library AD599B

HP StorageWorks MSL6030 2 Ultrium 460 Dr FC Library AD601B

NOTE: Please reference the MSL2024, MSL4048, and 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>.

Options

Power Cords	<p>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, models will ship with two power cords: IEC-IEC (142257-002) and C13-Nema 5-15P (103541-001) cords.</p>	
HP StorageWorks Modular Smart Array 20	<p>HP StorageWorks Modular Smart Array 20 NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.</p> <p>HP StorageWorks Modular Smart Array 20 Starter Kit 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 3.5" Hot Plug Hard Drives.</p>	<p>335921-B21</p> <p>366172-B21</p>
HP StorageWorks Modular Smart Array 30	<p>HP StorageWorks Modular Smart Array 30 SB NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies</p> <p>HP StorageWorks Modular Smart Array 30 DB 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 Hot Plug Hard Drives.</p>	<p>302969-B21</p> <p>302970-B21</p>
HP StorageWorks Modular Smart Array 50	<p>HP StorageWorks Modular Smart Array 50 Enclosure 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</p>	364430-B21
HP StorageWorks Modular Smart Array 500	<p>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</p>	335880-B21
HP StorageWorks Modular Smart Array 1000	<p>HP StorageWorks Modular Smart Array 1000 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</p>	201723-B22
HP StorageWorks Modular Smart Array 1500 cs	<p>Modular Smart Array 1500 Controller Shelf NOTE: Please see the StorageWorks Modular SAN Array 1500 cs QuickSpecs for additional options and configuration information at: http://www.hp.com/go/MSA1500cs</p>	AA986A

Options

StorageWorks Options	NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows, Linux and Netware. For detailed compatibility information please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html	
	HP StorageWorks FC2142SR 4Gb PCI-e HBA	A8002A
	HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA	A8003A
	HP StorageWorks FC1142SR 4Gb PCI-e HBA	AE311A
	HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA	AE312A
	HP StorageWorks FC2143 4Gb PCI-X 2.0 -to-Fibre Channel HBA	AD167A
	HP StorageWorks FC2243 Dual Channel 4Gb PCI-X 2.0 HBA	AD168A
	HP StorageWorks FC1143 4Gb PCI-X 2.0 HBA	AB429A
	HP StorageWorks FC1243 Dual Channel 4Gb PCI-X 2.0 HBA	AE369A
Cluster Options	ProLiant Cluster Starter Kit	364023-B22
	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	
	HP HA/F200 for Entry SAN Cluster	364026-B22
	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	
	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	
	HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 & 10 and Red Hat EL 3 & 4 (2 node license cluster kit)	305199-B26
	HP Serviceguard for Linux A.11.16 for SUSE SLES 9 & 10 and Red Hat EL 3 & 4 (single license version)	307754-B26
	HP Serviceguard for Linux and Red Hat Global File System - 1 year subscription	T2798AA#001
	HP Serviceguard for Linux and Red Hat Global File System - 3 years subscription	T2798AA#003
	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	
Uninterruptible Power Systems – Rack Mountable	HP, R1.5kVA UPS, 1U	AF419A
	HP R3000 VA UPS, 2U, L5-30	AF422A
	NOTE: Replaces non-RoHs compliant part number 192186-001.	
	HP R3000 VA UPS, 2U, L6-20	AF423A
	NOTE: Replaces non-RoHs compliant part number 192186-002.	
	HP R5500 VA UPS	AF426A
	NOTE: Replaces non-RoHs compliant part number 326529-D71.	

Options

HP Monitored Power Distribution Unit (PDU)	HP Monitored Power Distribution Unit: Full Rack Version	
	HP 17.3 kVA S2324 Monitored PDU- dual input, 3U, 24A NOTE: Replaces non-RoHs compliant part number 370959-D71.	AF503A
	HP 8.3 kVA S1324 Monitored PDU- single input, 3U, 24A NOTE: Replaces non-RoHs compliant part number 370960-D71.	AF504A
	HP 16.6 kVA S2140 Monitored PDU- dual input, 1U, 40A NOTE: Replaces non-RoHs compliant part number 37061-D71.	AF505A
	HP 8.6 S1140 Monitored PDU- single input, 1U, 40A NOTE: Replaces non-RoHs compliant part number 370962-D71.	AF506A

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 NOTE: Four Fixed Cord Extension Bars, and one 24A, HV mPDU L6-30P core.	351655-D72
	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) 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)	252663-D72
	HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) 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)	252663-B24
	HP Modular Power Distribution Unit (mPDU), High Volt Model, 40A, Attached Cord 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 - need to order cable PN 340653-001. NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML	252663-D73

USB Options	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	HP USB 04 Standard Keyboard	DT528A#ABA
	USB 2.0 4-port HUB	DG954A
	HP 1GB Drive Key II- USB 2.0 Flash Drive	AG382AA
	HP 512MB DriveKey II- USB Flash Drive	ED516AA

Options

HP ProLiant DL360 G4p Deployment Options	460W HP redundant power supply with IEC cord only	354587-B21
	460W HP redundant power supply with 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, 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 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 models ship with two power cords: IEC-IEC and NEMA cords.	
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	Rack Kits	1U Cable Management Arm
	NOTE: Package contains two cable management arms.	
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HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack Unassembled	358254-B21
	NOTE: Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.HTML (Worldwide) NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower .	
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HP Rack 10000 G2 Series (Carbon/Graphite Metallic)	10642 G2 (42U) Rack Cabinet - Pallet	AF001A
	10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A
	10642 G2 (42U) Rack Cabinet - Crated	AF003A
	10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet	AF004A
	10636 G2 (36U) Rack Cabinet - Pallet	AF011A
	10636 G2 (36U) Rack Cabinet - Shock Pallet	AF012A
	10636 G2 (36U) Rack Cabinet - Crated	AF013A
	10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet	AF014A
	NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed. NOTE: Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12402_na/12402_na.HTML NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower .	
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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 10622 (22U) – Pallet	245163-B21
	HP Rack 10622 (22U) – Shock Pallet	245163-B22
	HP Rack 10622 (22U) – Crated	245163-B23

NOTE: xxxxx-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). xxxxx-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_na/10995_na.HTML

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

Keyboards and Monitors	TFT7210R Rack Mounted 17" Monitor	348373-B21
	NOTE: For a complete list of Monitors please view the following URL: http://www.hp.com/go/kvm	
	TFT7600 Rackmount Keyboard Monitor	AG052A
	1U Rackmount Keyboard with USB	AG072A
NOTE: For additional information regarding Rack Options, please see the following URL: http://www.hp.com/go/rackandpower		

HP KVM Switch Options	2x1x16 IP Console Switch with Virtual Media	AF601A
	4x1x16 IP Console Switch with Virtual Media	AF602A
	2x16 Server Console Switch with Virtual Media	AF600A
	PS/2 Virtual Media Interface Adapter, 1 pack	AF604A
	NOTE: Requires PS/2 and one USB port on server.	
	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm .	
	HP 1x 4 USB/PS2 KVM Switch, TT	371301-D71
	HP 1x 4 USB/PS2 KVM Switch, RM	371302-B21
	HP PS2 KVM Cable with audio, 6', 2-pack	371730-B21

Options

HP USB KVM Cable with audio, 6', 2-pack 371729-B21

NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: <http://www.hp.com/go/kvm>.

HP Serial Console Server Options	HP 16 Port Serial Console Server	AF101A
	HP 48 Port Serial Console Server	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A

NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: <http://www.hp.com/go/kvm>.

NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: <http://www.hp.com/go/kvm>.

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, Electronic	U4496E
	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, Electronic	U4498E
	Hardware Services Next Business Day On-Site Service	
	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, 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, 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, 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, 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, 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:

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

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:

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

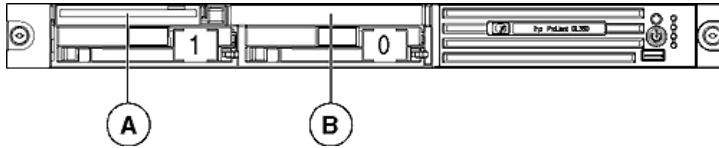
NOTE: Online Spare Memory is not supported when using 2-rank DIMMs. A total of 8 ranks are supported on the HP ProLiant DL360 G4p, A maximum of 4, 2-rank DIMMs can be populated. If you plan to mix DIMM types, 2-rank DIMMs must be installed in the first bank, 1 rank DIMMs can then be installed in subsequent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

The following is the memory population rules for the HP ProLiant ProLiant DL360 G4p.

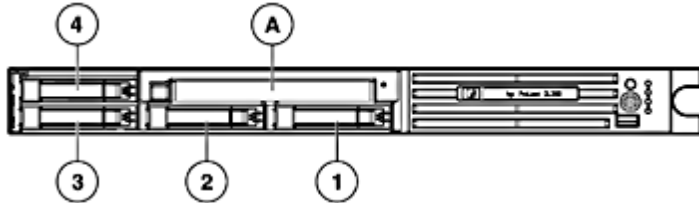
Key: S denotes single rank kit, D denotes Dual rank kit, and X denotes no install.

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



- 1,0 Two 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)



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

Drive Support - SAS Models

	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

Drive Support - SCSI Models

	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

Storage

Hard Drives

Ultra320 Hot Pluggable Drives

NOTE: The HP ProLiant DL360 G4p only supports U320 Universal drives.

	Quantity Supported	Position Supported	Controller
300GB U320 10K	Up to 2	0-1	Smart Array 6i Controller (integrated on system board) NOTE: The HP ProLiant DL360 G4p does not offer an external SCSI port.
146GB U320 10K			
72GB U320 10K			
300GB U320 15K			
146GB U320 15K			
72GB U320 15K			
36GB U320 15K			Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2

SFF SAS Hard Drive

	Quantity Supported	Position Supported	Controller
146GB 3G SAS 10K SP	4	1-4	HP Smart Array P600/256 BBWC Controller
72GB 3G SAS 10K SP			
36GB 3G SAS 10K SP			

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
700GB 1.5G SATA 7.2K	Up to 2	0-1	HP embedded 2 Port SATA Controller with RAID 0/1 support
500GB 1.5G SATA 7.2K			
250GB 1.5G SATA 7.2K			
160GB 1.5G SATA 7.2K			
80GB 1.5G SATA 7.2K			

Serial-ATA (SATA) SFF 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
60GB 1.5G SATA 5.4K	Up to 2	0-1	HP embedded 2 Port SATA Controller with RAID 0/1 support

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 Single Channel Ultra320 SCSI HBA G2
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 Single Channel Ultra320 SCSI HBA G2
Modular Smart Array 50 Enclosure	2	External	HP Smart Array P600/256 BBWC 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_na/11033_na.HTML			
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

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

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

For recommended tape drive offerings for this ProLiant server see the following:

	Position Supported	Controller	Controller Part Numbers
HP StorageWorks Tape Drives, External DAT 24 USB DAT 40 USB DAT 72 USB	External	USB 2.0 Port	N/A
HP StorageWorks Tape Drives, External Ultrium 232 Ultrium 448 Ultrium 460 Ultrium 920 Ultrium 960 DAT 40 DAT 72 DLT VS160 SDLT 600	External	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
HP StorageWorks Autoloaders, External DAT 72x10 Autoloader 1/8 G2 Tape Autoloader	External	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
HP StorageWorks SCSI Rack-Mount Tape Drive Enclosures 1U Rack-Mount Kit 3U Rack-Mount Kit	External	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
HP StorageWorks USB Rack-Mount Tape Drive Enclosures 1U Rack-Mount Kit	External	USB 2.0 Port	N/A

Storage

HP StorageWorks Tape Libraries, External

MSL2024 (Ultrium 448, Ultrium 920 and 960-based)

MSL4048 (Ultrium 448, Ultrium 920 and 960-based)

MSL6000 (Ultrium 960 and 460-based)

MSL6000 (SDLT 600-based)

External

Please consult the EBS connectivity matrix at <http://www.hp.com/go/ebs> for detailed connectivity information.

N/A

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 535 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 535 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 _{WA} d (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 Advanced Technology 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

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 Enclosure Protocol Support	4-MB flashable ROM 3 Gb SAS and 1.5 Gb SATA

Embedded NC7782 PCI-X Gigabit Server Adapter

Network Interface Compatibility	10/100/1000-T 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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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.