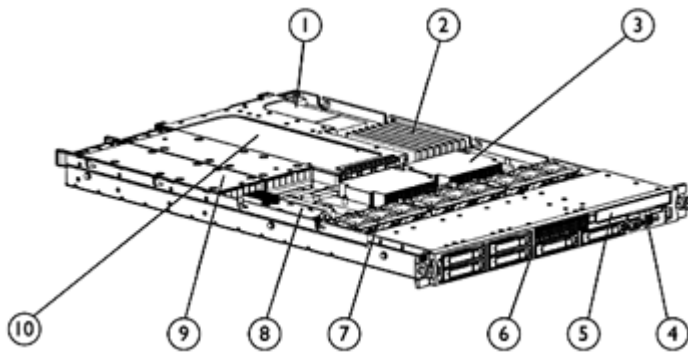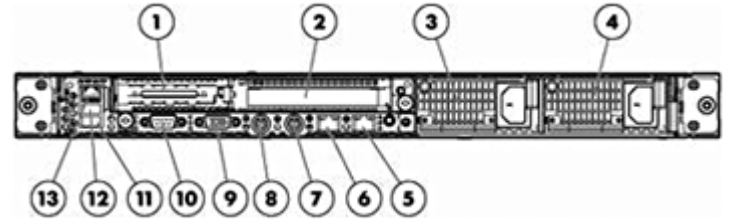## Overview

Front View:

1. Low-profile x8 PCI-Express slot
2. Eight PC2-5300 FB-DIMMs (DDR2 667) slots
3. Up to two Intel Quad-Core or Dual-Core Xeon™ processors
4. Slide-out System Insight Display
5. Slimline removable media bay
6. Up to six SAS/SATA hot plug drive bays
7. Removable fans for easy serviceability
8. Choice of Smart Array P400i Controller or Smart Array E200i Controller
9. Redundant Hot Plug Power Supplies (upgradeable option)
10. Full length/height x8 PCI-Express Slot (optional PCI-X)

Rear View:

1. PCI Express expansion slot 1, low-profile, half-length
2. PCI Express expansion slot 2
3. Power supply bay 2
4. Power supply bay 1
5. NIC 2 connector
6. NIC 1 connector
7. Keyboard connector
8. Mouse connector
9. Video connector
10. Serial connector
11. USB connector
12. USB connector
13. iLO 2 NIC connector

What's New

- The HP ProLiant DL360 G5 is now available with the latest Intel processor refresh (Quad-Core X5470 3.33GHz, 120W & L5430 2.66GHz, 50W)

At A Glance

Combining concentrated 1U compute power, integrated Lights-Out management, and essential fault tolerance, the HP ProLiant DL360 is optimized for space constrained installations. Quad or Dual-core Xeon processors, DDR2 Fully Buffered DIMMs, Serial Attached SCSI (SAS) and PCI Express technology provide a high performance system ideal for the full range of scale out applications. What's more, the HP ProLiant DL360 G5 steps up the fault tolerant in an ultra dense platform with redundant power, redundant fans, mirrored memory or online spare memory, embedded RAID capability, and full-featured remote Lights-Out management.

- **Processors:**
  - Up to 2 Quad-Core or Dual-Core Intel® Xeon® processor 5100 sequence
  - Up to 2 Quad-Core Intel® Xeon® processor 5400/5300 sequence
  - Up to 2 Dual-Core Intel® Xeon® processor 5200 sequence
  - Intel® 5000P chipset supporting up to a 1333MHz Front Side Bus (FSB)
- **Memory:**
  - Up to 64 GB of memory, supported by 8 slots of PC2-5300 Fully Buffered DIMMs (DDR2-667):4:1 interleaving:memory mirroring:online spare

Overview

- **Storage Controller:**
  - Performance Models: HP Smart Array P400i/256MB BBWC Controller (RAID 0/1/1+0/5/6) (512MB BBWC optional)
  - High Efficiency and Base Models: HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5) (512MB BBWC optional)
  - Entry Models: HP Smart Array E200i/64MB Controller (RAID 0/1/1+0) (128MB BBWC optional)
- **Internal Drive Support:**
  - Up to (6) small form factor (SFF) hot-plug drive bays
  - Slimline media bay supporting DVD, CD or Floppy drive
- **Network Controller:**
  - Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit
- **Expansion Slots:**
  - Two PCI-Express expansion slots: (1) full-length, full-height slot; (1) low-profile slot (optional PCIx riser supported)
- **USB 2.0 Ports:**
  - 4 Total: (1) front, (1) internal and (2) rear accessible ports
- **Redundancy:**
  - Multiple layers of fault tolerance through critical component redundancy (power supply and fan redundancy), mirrored memory, embedded RAID capability, and full-featured remote Lights-Out management
- **Infrastructure Management:**
  - Convenient slide-out Systems Insight Display for quick and easy front view server diagnostics, along with status LEDs, Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU)
  - HP ProLiant Onboard Administrator (powered by the HP Integrated Lights-Out 2 management processor) for simplified server setup, health monitoring and recovery, power and thermal control, and lights-out remote administration.
  - HP Insight Control a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, control and optimize your IT infrastructure through a single, simple management console. Insight Control supports both Windows and Linux-based central management servers.
  - HP Insight Dynamics for ProLiant, a product option, is an integrated command center that enables IT Staff personnel to continuously analyze and optimize a converged infrastructure, while automating and reducing the cost of common data center tasks by as much as 40 percent. This ultimately enables them to dynamically keep pace with the organization's changing business requirements.
- **Form Factor:**
  - 1U Rack form factor (1.75″), less than 28 inches (70.5 cm) deep
- **Operating Systems and Virtualization Software Support for ProLiant Servers:**
  - Supports Windows, RHEL, SLES, OEL, Solaris, VMware, NetWare & HP Citrix Essentials for XenServer
- **Deployment/Serviceability:**
  - Sliding rails for in rack servicing ship standard; optional 1U Cable Management Arm
  - Customer Self Repair (CSR): HP products are designed with many CSR parts to minimize repair time and allow for greater flexibility in performing defective parts replacement
- **Warranty:**
  - This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
    NOTE: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

Overview

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

Standard Features

Processor

One of the following depending on Model

Quad-Core Processors

Quad-Core Intel® Xeon® Processor X5470 (3.33 GHz, 120 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor X5460 (3.16 GHz, 120 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor X5450 (3.00 GHz, 120 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5450 (3.00 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5440 (2.83 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5430 (2.66 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5420 (2.50 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor L5430 (2.66 GHz, 50 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor L5420 (2.50 GHz, 50 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5410 (2.33 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5405 (2.00 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor L5410 (2.33 GHz, 50 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5345 (2.33 GHz, 80 Watts, 1333 FSB)

Quad-Core Intel® Xeon® Processor E5320 (1.86 GHz 80 Watts, 1066 FSB)

Quad-Core Intel® Xeon® Processor L5320 (1.86 GHz 50 Watts, 1066 FSB)

Quad-Core Intel® Xeon® Processor E5310 (1.60 GHz 80 Watts, 1066 FSB)

Dual-Core Processors

Dual-Core Intel® Xeon® Processor X5260 (3.33 GHz, 80 Watts, 1333 FSB)

Dual-Core Intel® Xeon® Processor L5240 (3.00 GHz, 40 Watts, 1333 FSB)

Dual-Core Intel® Xeon® Processor E5205 (1.86 GHz, 65 Watts, 1066 FSB)

Dual-Core Intel® Xeon® Processor 5160 (3.0 GHz, 80 Watts, 1333 FSB)

Dual-Core Intel® Xeon® Processor 5150 (2.67 GHz, 65 Watts, 1333 FSB)

Dual-Core Intel® Xeon® Processor 5148 (2.33 GHz, 40 Watts, 1333 FSB, Low Voltage)

Dual-Core Intel® Xeon® Processor 5140 (2.33 GHz, 65 Watts, 1333 FSB)

Dual-Core Intel® Xeon® Processor 5130 (2.0 GHz, 65 Watts, 1333 FSB)

Dual-Core Intel® Xeon® Processor 5120 (1.86 GHz, 65 Watts, 1066 FSB)

Dual-Core Intel® Xeon® Processor 5110 (1.6 GHz, 65 Watts, 1066 FSB)

NOTE: Up to 2 processors supported. Performance configurations include two processors.

NOTE: Intel® 5400/5300 sequence processors are 64-bit, Quad-Core, and supports Intel VT technology. Intel® 5200/5100 sequence processors are 64-bit, Dual-Core, and supports Intel VT technology.

Cache Memory

One of the following depending on Model

12MB (2 x 6MB) Level 2 cache (5400 sequence)

8MB (2 x 4MB) Level 2 cache (5300 sequence)

6MB (1x 6MB) Level 2 cache (5200 sequence)

4MB (1 x 4MB) Level 2 cache (5100 sequence)

4MB (2 x 2MB) Level 2 cache (5000 sequence)

Standard Features

Upgradeability	Upgradeable to quad or dual processing
	NOTE: Future upgradeable to Xeon® Series 5400/5300 Quad-Core processors (Please contact your regional sales support to determine quad core upgradeability. Some of the earlier shipping models may not support this upgrade). 5100 Dual-Core models are not upgradeable to the 5200 Dual-Core processors.

Chipset	Intel® 5000P chipset
	NOTE: For more information regarding Intel® chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/.

Memory Protection & Functionality	Advanced ECC (multi-bit error protection), Online Spare, Mirroring
	4-way interleaving

Memory

Type	PC2-5300 Fully Buffered DIMMs (DDR2-667)
Standard (Entry or Base Models)	1 GB (2 x 512 MB)
Standard (Performance Models)	2 GB (2 x 1 GB)
Standard (Performance Model)	4 GB (4 x 1 GB)
Maximum	64 GB (8 x 8 GB)

NOTE: Memory DIMMs in systems with the Front Side Bus (FSB) running at 1333 MHz will run at 667 MHz and in systems with a FSB running at 1066 MHz or 667 MHz the memory DIMMs will run at 533 MHz.

Network Controller	Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit

Expansion Slots

Expansion Slot #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
1	PCI-e	x4	x8	11	Low profile slot	
2	PCI-e	x8	x8	19	Full length, full height slot	
2	PCI-X (133 MHz, 3.3 Voltage)	64-bit	x8	16		PCI-X is supported with an optional PCI riser cage (also supports PCI-e x8 low profile)

Standard Features

Storage Controller One of the following depending on Model	Performance Models=	HP Smart Array P400i/256MB BBWC Controller (RAID 0/1/1+0/5/6) **Available upgrades**=512MB memory battery-backed write cache (BBWC) module for RAID 0/1/1+0/5/6.
	High Efficiency and Base Models=	HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5) **Available upgrades**=512MB memory battery for battery-backed write cache (BBWC) module for RAID 0/1/1+0/5/6, or battery-backed write cache for RAID 0/1/1+0/5/6.
	Entry Models=	HP Smart Array E200i/64MB Controller (RAID 0/1/1+0) **Available upgrades**=128MB memory battery for battery-backed write cache (BBWC) module for RAID 0/1/1+0/5.

Storage	Optical Drives (Slimline Drive bay)	Optional DVD-ROM, DVD/CD-RW Combo (standard in performance models), DVD-RW, or Slimline floppy drive
	Drive Bays	Up to 6 Small Form Factor bays total
		NOTE=4 bays active in most models. Smart Array P400i controller and Mini-SAS storage cable (P/N 399546-B21) required for activation of 5th and 6th drive bays.

Maximum Internal Storage Type	Hot Plug SAS	1.8TB SAS	6 x 300GB
	Hot Plug SATA	3.0TB SATA	6 x 500GB

Interfaces	Keyboard	1
	Mouse	1
	Serial	1
	Video	1
	USB 2.0 Ports	4 total=2 rear, 1 front, 1 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 2 remote management port	1

Standard Features

Graphics	Integrated ATI ES1000, 32MB video standard

- 16 bit color‗maximum resolution of 1600 x 1200
- 32 bit color‗maximum resolution of 1280 x 1024

NOTE‗Maximum resolution available via iLO 2 remote console is 1280x1024.

Form Factor	Rack (1U), (1.75 in/4.45 cm)‗27.75 inch depth (70.5cm)

HP Insight management software	HP Insight Foundation	Managing the growing number of servers can be complex and expensive for your organization. IT managers need to address changing business needs with tools that meet the challenges of managing today's complex Datacenters.
		HP provides management solutions that are designed to simplify a server's installation, configuration and maintenance throughout the entire server lifeccyle. This provides the customer with higher levels of operational efficiency and highly reliable systems‗www.hp.com/go/foundation.
		The foundation pack includes‗

- HP SmartStart
- HP Management
- HP ProLiant Firmware Maintenance

SmartStart version supported (minimum)‗SmartStart 7.60.
http‗//www.hp.com/servers/smartstart

	ProLiant Onboard Administrator	HP ProLiant Onboard Administrator (powered by the HP Integrated Lights-Out 2 management processor) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP ProLiant Onboard Administrator functions without additional software, and can be accessed from any location via a web browser. It works hand-in-hand with HP Systems Insight Manager, Insight Control suites, and the Insight Dynamics for ProLiant helping customers unlock the value of the ProLiant platform and deliver the highest possible quality of IT service to the business. See www.hp.com/go/ProLiantOA
	HP Insight Control	HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console.
		Two versions of Insight Control are available, to serve environments requiring either a Linux-based or a Windows-based central management server‗HP Insight Control for Linux, and HP Insight Control. See www.hp.com/go/insightcontrol
		HP Insight Control includes one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive

Standard Features

		delivery of software updates. For more information about this service, please visit http://www.hp.com/services/insight.
	HP Insight Dynamics for ProLiant	HP Insight Dynamics for ProLiant, a product option, is an integrated command center that enables IT Staff personnel to continuously analyze and optimize a converged infrastructure, while automating and reducing the cost of common data center tasks by as much as 40 percent. As a powerfully integrated by design toolkit to accelerate complex technology projects and simplify daily operations that ultimately enable IT Staff personnel to dynamically keep pace with the organizations changing business requirements. It enables them to plan capacity and power continuously, balance across physical and virtual resources, and ensure cost-effective high availability. It also enables IT organizations to provision infrastructure consistently and automatically from pools of shared resources using a self-service portal. Resources provisioned can range from a single virtual machine to complex multi-tier environments and their associated physical and virtual resource requirements. In addition to the previous functional benefits, it also provides a cost-effective disaster recovery for physical and virtual environments that works with HP StorageWorks Continuous Access software for both the Enterprise Virtual Array and the XP storage array allowing application environments to be reactivated in minutes with the touch of a button to a remote location. **NOTE:** For more information, visit http://www.hp.com/go/insightdynamics

Industry Standard Compliance	ACPI 2.0b Compliant
	PCI 2.2 Compliant
	WOL Support
	Microsoft® Logo certifications
	PXE Support
	USB 1.1 and 2.0 Compliant

Standard Features

Intelligent Manageability

HP Systems Insight Manager
SmartStart
ROM-Based Setup Utility (RBSU)
Remote-Flash Redundant ROM
Integrated Management Log (IML)
Server Health logging
Automatic Server Recovery-2 (ASR-2)
System Insight Display (SID)
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 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
Integrated Lights-Out has 12 customizable user accounts and SSL encryption
Integrated Lights-Out can be disabled via a Global Setting
iLO Advance Pack supports directory services integration and two-factor authentication

Server Power Cords

High voltage power cord ships standard with all part numbers. Localized cables included with geographic specific models in other world regions.

NOTE: ProLiant DL servers no longer ship standard with NEMA power cords (187335-001) that allow connection to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to PDU's in data center racks so they now ship standard with only a PDU power cord (416151-B21). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the above NEMA power cord must be ordered separately.

UPS and PDU Power Cord Matrix

Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the &HP Power Cord Matrix&link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link:
www.hp.com/products/powercords.

Power Supply

700W, Optional (1+ 1 redundant) power supply
NOTE: PN 399542-B21 contains the optional power supply and an IEC power cable only- purchase if connecting to PDU/UPS that supports IEC cables. PN 399542-291 includes IEC power cable and a Japan power cable.

Standard Features

System Fans

9 fans ship standard. N+1 fan redundancy standard

Required Cabling

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

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server
Microsoft Windows Server Hyper V
Red Hat Enterprise Linux (RHEL)
SUSE Linux Enterprise Server (SLES)
Oracle Enterprise Linux (OEL)
Solaris 10 for x86/x64 based Systems
NetWare
VMware
Citrix Essentials for XenServer

NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at http://www.hp.com/go/ossupport and our driver download page www.hp.com/support/DL360G5.

Rack Airflow Requirements

Rack 10000 G2 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 G2 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: www.hp.com/servers/dl360.

Rack Kit

Quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 G2 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

Standard Features

Telco Rack Support

Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions at http://www.hp.com/go/rackandpower

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Factory Express Portfolio for Servers and Storage

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

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

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

HP Enterprise Configurator

The HP eConfigure-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 a custom rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance.
http://www.hp.com/products/configurator

Service and Support

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

HP Care Pack services include coverage for the HP branded hardware options qualified for the server and purchased at the same time or afterward that are internal to the enclosure. This also includes the 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, and 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.

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 your business. Whether an SMB, or large global corporation, HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Recommended Service - simplify ProLiant solution implementation, maintenance, and management.

- **Support** - 3-Year 4-Hour response 24x7 Same Business Day Coverage only
- **Deployment Service** - Installation and Start up only

Enhanced Service - optimize service level to increase IT performance and availability.

- **Support** - 3-Year Support Plus 24 only

Standard Features

Refer to the information on "Installation & Start-Up" for service on 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, excluding 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

Models

HP DL360 G5 Performance Models **Quad-Core Models DL360R05 E5450 4GB** 490666-xx1	**Processor(s)**	(2) Quad-Core Intel® Xeon® Processors E5450 (3.00 GHz, 80 Watts, 1333 FSB)
	Cache Memory	12MB (2 x 6MB) Level 2 cache∓Intel Xeon Processor 5400 Sequence
	Memory	4 GB (4 x 1 GB) Standard∓PC2-5300 Fully Buffered DIMMs (DDR2-667)
	Network Controller	Two embedded NC373i Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P400i/256MB BBWC Controller (RAID 0/1/1+0/5/6)
	Hard Drive	No drives included∓(6) drive bays active
	Internal Storage	1.8TB SAS∓1.50TB SATA
	Optical Drive	Slimline DVD/CD-RW Combo drive
	PCI-Express Slots	1 full-length x8 PCI-Express slot 1 low-profile x8 PCI-Express slot
	Power Supplies	(2) 700W power supplies, redundant
	Fans	9 total, redundancy standard
	Form Factor	Rack (1U), (1.75 in/4.45 cm)∓27.75 inch depth (70.5cm)

HP DL360 G5 Base Models **Quad-Core Models DL360R05 E5440 2GB** 457923-xx1 **DL360R05 E5430 2GB** 457924-xx1 **DL360R05 E5420 2GB** 457925-xx1 **Dual-Core Models DL360R05 X5260 2 GB** 457928-xx1	**Processor(s)** *One of the following depending on Model*	(1) Quad-Core Intel® Xeon® Processor E5440 (2.83 GHz, 80 Watts, 1333 FSB) (1) Quad-Core Intel® Xeon® Processor E5430 (2.66GHz, 80 Watts, 1333 FSB) (1) Quad-Core Intel® Xeon® Processor E5420 (2.50GHz, 80 Watts, 1333 FSB) (1) Dual-Core Intel® Xeon® Processor X5260 (3.33 GHz, 80 Watts, 1333 FSB)
	Cache Memory *One of the following depending on Model*	Quad-Core: 12MB (2 x 6MB) Level 2 cache∓Intel Xeon Processor 5400 Sequence Dual-Core: 6MB (1 x 6MB) Level 2 cache∓Intel Xeon Processor 5200 Sequence
	Memory *One of the following depending on Model*	2 GB (2 x 1 GB) Standard on E5335/E5440/E5430/E5420/X5260 Model∓PC2-5300 Fully Buffered DIMMs (DDR2-667) 1 GB (2 x 512 MB) Standard on E5320, 5140-5160, 5060 Models∓PC2-5300 Fully Buffered DIMMs (DDR2-667)
	Network Controller	Embedded NC373i Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5)
	Hard Drive	No drives included∓(4) drive bays active. (6) bays supported with optional storage cable (PN 399546-B21)
	Internal Storage	1.8TB SAS∓1.50TB SATA
	Optical Drive	Optional DVD, DVD/CD-RW, or Floppy
	PCI-Express Slots	1 full-length x8 PCI-Express slot 1 low-profile x8 PCI-Express slot
	Power Supply	(1) 700W power supply, redundant optional
	Fans	9 total, redundancy standard
	Form Factor	Rack (1U), (1.75 in/4.45 cm)∓27.75 inch depth (70.5cm)

Models

HP DL360 G5 Entry Models

**Quad-Core Models
DL360R05 E5405 1GB**

457926-xx1

Processor(s)	(1) Quad-Core Intel® Xeon® Processor E5405 (2.00GHz 80 Watts, 1333 FSB)
Cache Memory	Quad-Core⁼
	12MB (2 x 6MB) Level 2 cache∓Intel Xeon Processor 5400 Sequence
Memory	1 GB (2 x 512 MB) Standard∓PC2-5300 Fully Buffered DIMMs (DDR2-667)
Network Controller	Embedded NC373i Multifunction Gigabit Server Adapters
Storage Controller	HP Smart Array E200i/64MB Controller (RAID 0/1/1+0)
Hard Drives	No drives included∓(4) drive bays active
Internal Storage	1.8TB SAS∓1.50TB SATA
Optical Drive	Optional DVD, DVD/CD-RW, or Floppy
PCI-Express Slots	1 full-length x8 PCI-Express slot
	1 low-profile x8 PCI-Express slot
Power Supply	(1) 700W power supply, redundant optional
Fans	9 total, N+1 redundancy standard
Form Factor	Rack (1U), (1.75 in/4.45 cm)∓27.75 inch depth (70.5cm)

HP DL360 G5 High Efficiency

**Quad-Core Models
DL360R05 L5420 2GB**

457927-xx1

Processor	(1) Quad-Core Intel® Xeon® Processor L5420 (2.50GHz 50 Watts, 1333 FSB)
Cache Memory	Quad-Core⁼
	12MB (2 x 6MB) Level 2 cache∓Intel Xeon Processor 5400 Sequence
Memory	2 GB (2 x 1 GB) Standard∓PC2-5300 Fully Buffered DIMMs (DDR2-667)
Network Controller	Embedded NC373i Multifunction Gigabit Server Adapters
Storage Controller	HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5)
Hard Drives	No drives included∓(4) drive bays active
Internal Storage	1.8TB SAS∓1.50TB SATA
Optical Drive	Optional DVD or Floppy
PCI-Express Slots	1 full-length x8 PCI-Express slot
	1 low-profile x8 PCI-Express slot
Power Supply	(1) 700W power supply, redundant optional
Fans	9 total, N+1 redundancy standard
Form Factor	Rack (1U), (1.75 in/4.45 cm)∓27.75 inch depth (70.5cm)

Country Code Key   **Rack Code Key**

XX=00	US
XX=20	Brazil
XX=29	Japan
XX=37	APD
XX=42	EURO
XX=AA	PRC

Configuration Information - Factory Integrated Models

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on CTO product offerings and requirements.

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

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

Models

HP ProLiant DL360 G5 Rack CTO Chassis	399524-B21

Factory Integrated Model ships with:

Two embedded NC373i Multifunction Gigabit Server Adapters

Integrated Lights-Out 2 (iLO 2) embedded

1 full-length and 1 low-profile x8 PCI-Express slots

9 fans, N+1 fan redundancy

(1) 700W power supply, redundant optional

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

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

Processors

Quad-Core Processors

Quad-Core Intel® Xeon® Processor X5470 - 3.33GHz, 120 Watts, 1333, FSB, FIO	487511-L21
Quad-Core Intel® Xeon® Processor X5460 - 3.16GHz, 120 Watts, 1333 FSB, FIO	457929-L21
Quad-Core Intel® Xeon® Processor X5450 - 3.00GHz, 120 Watts, 1333 FSB, FIO	462858-L21
Quad-Core Intel® Xeon® Processor E5450 - 3.00GHz, 80 Watts, 1333 FSB, FIO	457931-L21
Quad-Core Intel® Xeon® Processor E5440 - 2.83GHz, 80 Watts, 1333 FSB, FIO	457933-L21
Quad-Core Intel® Xeon® Processor E5430 - 2.66GHz, 80 Watts, 1333 FSB, FIO	457935-L21
Quad-Core Intel® Xeon® Processor L5430 - 2.66GHz, 50 Watts, 1333 FSB, FIO	487513-L21
Quad-Core Intel® Xeon® Processor E5420 - 2.50GHz, 80 Watts, 1333 FSB, FIO	457937-L21
Quad-Core Intel® Xeon® Processor L5420 - 2.50GHz, 50 Watts, 1333 FSB, FIO	457943-L21
Quad-Core Intel® Xeon® Processor E5410 - 2.33GHz, 80 Watts, 1333 FSB, FIO	457939-L21
Quad-Core Intel® Xeon® Processor L5410 - 2.33GHz, 50 Watts, 1333 FSB, FIO	457945-L21
Quad-Core Intel® Xeon® Processor E5405 - 2.00GHz, 80 Watts, 1333 FSB, FIO	457941-L21

Dual-Core Processors

Dual-Core Intel® Xeon® Processor X5260 - 3.33 GHz, 80 Watts, 1333 FSB, FIO	457949-L21
Dual-Core Intel® Xeon® Processor L5240 - 3.00 GHz, 40 Watts, 1333 FSB, FIO	457947-L21
Dual-Core Intel® Xeon® Processor E5205 - 1.86 GHz, 50 Watts, 1066 FSB, FIO	460497-L21

NOTE: If High Performance Model features are desired, 2nd processor is included in the Performance Pack part numbers in Step 3 below.

Base Memory

1 GB FBD PC2-5300 2 x 512 MB Single Rank Kit	397409-B21
2 GB FBD PC2-5300 2 x 1 GB Dual Rank Kit	397411-B21
2 GB FBD PC2-5300 2 x 1 GB Low Power Single Rank Kit	461826-B21
4 GB FBD PC2-5300 2 x 2 GB Dual Rank Kit	397413-B21

Configuration Information - Factory Integrated Models

	4 GB FBD PC2-5300 2 x 2 GB Low Power Dual Rank Kit	461828-B21
	8 GB FBD PC2-5300 2 x 4 GB Dual Rank Kit	397415-B21
	8 GB FBD PC2-5300 2 x 4 GB Low Power Dual Rank Kit	466440-B21
	16 GB FBD PC2-5300 2 x 8 GB Dual Rank Kit	413015-B21
	64 GB FBD PC2-5300 8 x 8 GB Dual Rank Kit	495604-B21

NOTE: Memory Option Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, please visit: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/

Storage Controllers

NOTE: If High Performance Model features are desired, Storage Controller is included in the Performance Pack part numbers in Step 3 below.

HP E200i Controller FIO		399548-B21

NOTE: If selected, must choose one of the two cache modules below.

HP Smart Array E200 64MB FIO Cache		405102-B21

NOTE: Supports Smart Array E200 Controller only.

128MB Battery-Backed Write Cache with Battery Housing		346914-B21

NOTE: Supports Smart Array E200i Controller.

Smart Array P400i controller for DL360 G5		413741-B21

NOTE: If selected, must choose one of the two cache modules below.

HP Smart Array P400 256MB Cache FIO		405139-B21

NOTE: Supports Smart Array P400 Controller and Smart Array P400i Controller only.

512MB Battery-backed cache upgrade		405148-B21

NOTE: Supports Smart Array P400 Controller and Smart Array P400i Controller only.

HP Smart Array P600/256 BBWC Controller		337972-B21

NOTE: Requires PCI-X Riser option (PN 405154-B21).
NOTE: Requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).

HP Smart Array 6402/512 FIO Controller		441508-B21
HP Smart Array 6404/512 FIO CNTRLR		452240-B21

Step 3: Choose Additional Factory Integratable Options

Performance Packs

The HP ProLiant DL360 G5 performance packs are necessary to configure a HP ProLiant DL360 G5 Performance Model. HP ProLiant DL360 G5 Performance model includes the latest performance technologies and enterprise class availability features pre-installed for convenience and value. The performance pack includes a 2nd processor, redundant power supplies, Smart Array P400i Controller with 256MB of BBWC, and storage cable to enable the all 6 disk drive bays.

NOTE: 331903-B21 Slimline CD-RW/DVD-ROM Combo Drive Option Kit should also be selected along with the Performance Pack skus below to achieve parity to the HP ProLiant DL360 G5 Performance Models.

HP DL360G5 X5150 HPM FIO Perf Pack		431883-B21
HP DL360G5 X5450 HPM FIO Perf Pack		457951-B21

Step 4: Choose Additional Options for Factory Integration

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

Core Options

HP ProLiant DL360 G5 Unique Options		
	Quad-Core Processors	
	Quad-Core Intel® Xeon® Processor X5470 (3.33GHz, 120 Watts, 1333 FSB)	487511-B21
	Quad-Core Intel® Xeon® Processor X5460 (3.16GHz, 120 Watts, 1333 FSB)	457929-B21
	Quad-Core Intel® Xeon® Processor X5450 (3.00GHz, 120 Watts, 1333 FSB)	462858-B21
	Quad-Core Intel® Xeon® Processor E5450 (3.00GHz, 80 Watts, 1333 FSB)	457931-B21
	Quad-Core Intel® Xeon® Processor E5440 (2.83GHz, 80 Watts, 1333 FSB)	457933-B21
	Quad-Core Intel® Xeon® Processor E5430 (2.66GHz, 80 Watts, 1333 FSB)	457935-B21
	Quad-Core Intel® Xeon® Processor L5430 (2.66GHz, 50 Watts, 1333 FSB)	487513-B21
	Quad-Core Intel® Xeon® Processor E5420 (2.50GHz, 80 Watts, 1333 FSB)	457937-B21
	Quad-Core Intel® Xeon® Processor L5420 (2.50GHz, 50 Watts, 1333 FSB)	457943-B21
	Quad-Core Intel® Xeon® Processor E5410 (2.33GHz, 80 Watts, 1333 FSB)	457939-B21
	Quad-Core Intel® Xeon® Processor L5410 (2.33GHz, 50 Watts, 1333 FSB)	457945-B21
	Quad-Core Intel® Xeon® Processor E5405 (2.00GHz, 80 Watts, 1333 FSB)	457941-B21
	Quad-Core Intel® Xeon® Processor E5345 (2.33 GHz, 80 Watts, 1333 FSB)	435954-B21
	Quad-Core Intel® Xeon® Processor E5335 (2.00 GHz, 80 Watts, 1333 FSB)	435952-B21
	Quad-Core Intel® Xeon® Processor E5310 (1.60 GHz, 80 Watts, 1066 FSB)	438314-B21
	Dual-Core Processors	
	Dual-Core Intel® Xeon® Processor X5260 (3.33 GHz, 80 Watts, 1333 FSB)	457949-B21
	Dual-Core Intel® Xeon® Processor L5240 (3.00 GHz, 40 Watts, 1333 FSB)	457947-B21
	Dual-Core Intel® Xeon® Processor E5205 (1.86 GHz, 50 Watts, 1066 FSB)	460497-B21
	PCI-X Riser option	405154-B21

NOTE: To convert full-length PCI-Express slot to PCI-X slot.

Processor		
	Quad-Core Processors	
	Quad-Core Intel® Xeon® Processor X5470 (3.33GHz, 120 Watts, 1333 FSB)	487511-B21
	Quad-Core Intel® Xeon® Processor X5460 (3.16GHz, 120 Watts, 1333 FSB)	457929-B21
	Quad-Core Intel® Xeon® Processor X5450 (3.00GHz, 120 Watts, 1333 FSB)	462858-B21
	Quad-Core Intel® Xeon® Processor E5450 (3.00GHz, 80 Watts, 1333 FSB)	457931-B21
	Quad-Core Intel® Xeon® Processor E5440 (2.83GHz, 80 Watts, 1333 FSB)	457933-B21
	Quad-Core Intel® Xeon® Processor E5430 (2.66GHz, 80 Watts, 1333 FSB)	457935-B21
	Quad-Core Intel® Xeon® Processor L5430 (2.66GHz, 50 Watts, 1333 FSB)	487513-B21
	Quad-Core Intel® Xeon® Processor E5420 (2.50GHz, 80 Watts, 1333 FSB)	457937-B21
	Quad-Core Intel® Xeon® Processor L5420 (2.50GHz, 50 Watts, 1333 FSB)	457943-B21
	Quad-Core Intel® Xeon® Processor E5410 (2.33GHz, 80 Watts, 1333 FSB)	457939-B21
	Quad-Core Intel® Xeon® Processor L5410 (2.33GHz, 50 Watts, 1333 FSB)	457945-B21
	Quad-Core Intel® Xeon® Processor E5405 (2.00GHz, 80 Watts, 1333 FSB)	457941-B21
	Quad-Core Intel® Xeon® Processor E5345 (2.33 GHz, 80 Watts, 1333 FSB)	435954-B21
	Quad-Core Intel® Xeon® Processor E5335 (2.00 GHz, 80 Watts, 1333 FSB)	435952-B21

Core Options

	Quad-Core Intel® Xeon® Processor E5310 (1.60 GHz, 80 Watts, 1066 FSB)	438314-B21
	Dual-Core Processors	
	Dual-Core Intel® Xeon® Processor X5260 (3.33 GHz, 80 Watts, 1333 FSB)	457949-B21
	Dual-Core Intel® Xeon® Processor L5240 (3.00 GHz, 40 Watts, 1333 FSB)	457947-B21
	Dual-Core Intel® Xeon® Processor E5205 (1.86 GHz, 50 Watts, 1066 FSB)	460497-B21

Memory	1 GB FBD PC2-5300 2 x 512 MB Single Rank Kit	397409-B21
	2 GB FBD PC2-5300 2 x 1 GB Dual Rank Kit	397411-B21
	2 GB FBD PC2-5300 2 x 1 GB Low Power Single Rank Kit	461826-B21
	4 GB FBD PC2-5300 2 x 2 GB Dual Rank Kit	397413-B21
	4 GB FBD PC2-5300 2 x 2 GB Low Power Dual Rank Kit	461828-B21
	8 GB FBD PC2-5300 2 x 4 GB Dual Rank Kit	397415-B21
	8 GB FBD PC2-5300 2 x 4 GB Low Power Dual Rank Kit	466440-B21
	16 GB FBD PC2-5300 2 x 8 GB Dual Rank Kit	413015-B21
	64 GB FBD PC2-5300 8 x 8 GB Dual Rank Kit	495604-B21

NOTE: Memory Option Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, please visit: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/

Diskette Drive	Slimline Ejectable Floppy drive	390164-B21

Optical Drives	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit	264007-B21
	HP DVD+R/RW 8X Slim	383975-B21
	Slimline CD-ROM Drive 24X	356963-B21

Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF Enterprise (ENT) Drives

HP 300GB 6G SAS 10K SFF DP ENT HDD	507127-B21
HP 300GB 3G SAS 10K SFF DP ENT HDD	492620-B21
HP 146GB 6G SAS 15K SFF DP ENT HDD	512547-B21
HP 146GB 6G SAS 10K SFF DP ENT HDD	507125-B21
HP 146GB 3G SAS 15K SFF DP ENT HDD	504062-B21
HP 146GB 3G SAS 10K SFF DP ENT HDD	418367-B21
HP 72GB 6G SAS 15K SFF DP ENT HDD	512545-B21
HP 72GB 3G SAS 15K SFF DP ENT HDD	418371-B21

Core Options

HP 72GB 3G SAS 10K SFF DP ENT HDD	384842-B21

SAS Hot Plug SFF Midline (MDL) Drives

HP 500GB 6G SAS 7.2K SFF DP MDL HDD	507610-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)

SATA Hot Plug SFF Midline (MDL) Drives

HP 500GB 3G SATA 7.2K 2.5in MDL HDD	507750-B21
HP 160GB 3G SATA 7.2K 2.5in MDL HDD	530888-B21

SATA Hot Plug SFF Entry (ETY) Drives

HP 250GB 3G SATA 5.4K SFF ETY HDD	460355-B21
HP 120GB 1.5G SATA 5.4K SFF ETY HDD	458924-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html (Worldwide)

SATA Hot Plug Midline (MDL) Solid State Drives

HP 60GB 3G SATA 3.5in MDL 1y Wty SSD	570761-B21
HP 120GB 3G SATA 3.5in MDL 1y Wty SSD	570763-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13415_div/13415_div.html (Worldwide)

Communications

Gigabit Ethernet Adapters

HP NC110T PCI Express Gigabit Server Adapter	434905-B21
HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
HP NC364T PCI Express Quad Port Gigabit Server Adapter	435508-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

NOTE: Supported on a Full Length-Full Height slot only.

10 Gigabit Ethernet Adapters

HP NC522SFP Dual Port 10GbE Server Adapter	468332-B21

NOTE: A minimum of two gigabyte (2 GB) of server memory is required per each NC522SFP adapter.

NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

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

Core Options

| **Power Supplies** | 700W HP redundant power supply with IEC cord only | 399542-B21 |
| | 700W HP redundant power supply with IEC cord and Japan cord (Japan) | 399542-291 |

Additional Options

HP Insight Software	**HP Insight Control server deployment**

HP Insight Control server deployment, Electronic License including 1 year of 24x7 Technical Support and Updates	T9082AAE

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

NOTE: Electronic software is available in all countries except China and Japan. Customers in China and Japan should order the physical equivalent.

NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

NOTE: Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at http://www.hp.com/go/insightupdates.

NOTE: For additional license options please see the Insight Control QuickSpecs at http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html

HP Insight Control for Linux

HP Insight Control for Linux, 1-server license, including one year of 24x7 Technical Support and Updates, Electronic	T9084BAE
HP Insight Control for Linux, No Media, 1-Server license, including one year of 24x7 Technical Support and Updates	464423-B22
HP Insight Control for Linux, Media pack (DVD) - No licenses included	464422-B22

NOTE: Media pack DVD contains the ISO image for HP Insight Control for Linux, HP Systems Insight Manager, HP Insight Control power management, HP Insight Control virtual machine management, and an integrated installer. Servers must be acquired separately.

NOTE: Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at http://www.hp.com/go/insightupdates.

NOTE: Electronic software is available in all countries except China and Japan. Customers in China and Japan should order the physical equivalent.

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single set of activation keys.

NOTE: For additional License Kits, including electronic licensing options, please see the QuickSpecs at http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html

HP Integrated Lights-Out Advanced

HP Integrated Lights-Out Advanced, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates	512485-B21

NOTE: This license allows 1 server to be deployed and managed via HP iLO Advanced. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service

NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html

HP Insight Rapid Deployment software

Additional Options

	HP Insight Rapid Deployment software No Media 1-Server License, including 1 year of 24x7 Technical Support and Updates	452151-B21
	NOTE: This license allows 1 server to be deployed and managed via RDP. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service	
	NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.html	

Storage Controllers	**SAS Controllers**	
	Smart Array E500 Controller	
	Smart Array E500/256MB Controller	435129-B21
	HP Smart Array P400 Controller	
	HP Smart Array P400i Controller	
	HP Smart Array P400/256MB Controller	405132-B21
	HP Smart Array P400i/256MB Controller	399550-B21
	Smart Array P600 Controller	
	HP Smart Array P600/256 BBWC Controller	337972-B21
	NOTE: Requires DL360 G5 PCI-X conversion kit (PN 405154-B21).	
	Smart Array P800 Controller	
	HP Smart Array P800/512 BBWC Controller	381513-B21
	Optional Upgrades	
	128 MB Battery-Backed Write Cache with Battery Housing	346914-B21
	NOTE: Supports Smart Array E200i Controller only.	
	Battery-backed write cache upgrade	383280-B21
	NOTE: For Smart Array P400 Controller and Smart Array P400i Controller only.	
	512 MB Battery-backed write cache upgrade	405148-B21
	NOTE: For Smart Array P400 Controller and Smart Array P400i Controller only.	
	512 MB Battery-Backed Cache Upgrade	372538-B21
	NOTE: This 512-MB Battery-Backed Cache Module upgrade kit supports the Smart Array P600 Controller and the Smart Array 6400 series Controller.	
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12460_div/12460_div.html (Smart Array E200 Controller) http://h18000.www1.hp.com/products/quickspecs/12700_div/12700_div.html (Smart Array E500 Controller) http://h18000.www1.hp.com/products/quickspecs/12400_div/12400_div.html (Smart Array P400 Controller) http://h18000.www1.hp.com/products/quickspecs/12247_div/12247_div.html (Smart Array P600 Controller) http://h18000.www1.hp.com/products/quickspecs/12616_div/12616_div.html (Smart Array P800 Controller)	
	SAS HBA	

Additional Options

HP SC08Ge Host Bus Adapter	488765-B21
HP SC44Ge Host Bus Adapter	416096-B21

NOTE: When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. Transfer rate-1.5 Gb/s SATA, 3 Gb/s SAS.

HP 8 Internal Port SAS HBA with RAID	347786-B21

NOTE: Supports SAS and SATA disk drive. RAID 0,1 supported. Transfer rate-1.5 Gb/s SATA, 3 Gb/s SAS.

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

http://h18004.www1.hp.com/products/quickspecs/13082_div/13082_div.html (SC08Ge HBA)

http://h18004.www1.hp.com/products/quickspecs/12617_div/12617_div.html (SC44Ge HBA)

http://h18004.www1.hp.com/products/quickspecs/12332_div/12332_div.html (SAS HBA)

SAS Cables

HP Mini SAS 4i 13.4 inch/0.35 m cable	399546-B21

NOTE: Used to connect Smart Array P400i Controller to DL360 G5 5th and 6th drive bays.

HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable	411100-B21

NOTE: Used to connect SA-P600, SA-P400, SA-E200 Controllers to the HP ProLiant DL360 G5 drive backplane. This kit supports all six drive bays.

SCSI Controllers for External Drive/Storage Support

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 128-MB Battery-Backed Cache Module upgrade kit supports the Smart Array 642 Controller.

512 MB Battery-Backed Cache Upgrade	372538-B21

NOTE: This 512-MB Battery-Backed Cache Module upgrade kit supports the Smart Array P600 Controller and the Smart Array 6400 series Controller.

64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21

SCSI HBA

HP SC11Xe Host Bus Adapter	412911-B21

NOTE: Recommended HBA for SCSI tape drive connect.

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

http://h18000.www1.hp.com/products/quickspecs/10429_div/10429_div.html (SCSI Adapter)

http://h18000.www1.hp.com/products/quickspecs/11555_div/11555_div.html (U320 Adapter)

Additional Options

http://h18000.www1.hp.com/products/quickspecs/11943_div/11943_div.html
(U320 SCSI HBA)

http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html
(SC11Xe HBA)

Power Cords	NOTE: The HP ProLiant DL360 G5 ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs).	
	Nema 5-15P to IEC320-C13	AF556A
	Power Cord, Euro, 10A 250 V Straight (6 ft/1.83 m)	AF568A
	Power Cord, UK, 10A 250 V Straight (6 ft/1.83 m)	AF570A
	Power Cord, Danish, 10A 250 V Straight (6 ft/1.83 m)	AF566A
	Power Cord, Swiss, 10A 250 V Straight (6 ft/1.83 m)	AF565A
	Power Cord, Italian, 10A 250 V Straight (6 ft/1.83 m)	AF571A
	Power Cord, South Africa, 10A 250 V Straight (8.2 ft/2.5 m)	AF567A

HPC Specific Options	HP IB 4X DDR PCI-e Dual Port HCA	409376-B21
	HP IB 4X DDR PCI-e DUAL PORT 0 mem HCA	483513-B21
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html	

Tape Storage

NOTE: For the complete listing of Tape Drive offerings, please see:
http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html

Tape Drives

DAT USB Tape Drives

DAT USB Tape Drives	AJ823A
DAT 320 WW SAS External Tape Drive	AJ828A

USB Rack-Mount Tape Solutions

HP StorageWorks 1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive NOTE: Pre-configured with one DAT 160 USB tape drive.	AG703A

SAS Rack-Mount Tape Solutions

NOTE: HP recommends purchasing the HP SC44Ge HBA (416096-B21) for a dedicated SAS HBA for tape.

HP StorageWorks 1U SAS Rack-Mount Kit with one LTO-4 Ultrium 1760 NOTE: Pre-configured with one LTO-4 Ultrium 1760 SAS tape drive.	EH946A
HP StorageWorks 1U SAS Rack-Mount Kit NOTE: Supports up to (2) half-height SAS tape drives.	AE459A
HP StorageWorks LTO-2 Ultrium 448 SAS Internal Tape Drive NOTE: Mounts inside the 1U SAS Rack-Mount Kit (AE459A).	DW085A
HP StorageWorks LTO-3 Ultrium 920 SAS Internal Tape Drive NOTE: Mounts inside the 1U SAS Rack-Mount Kit (AE459A).	EH847A

NOTE: For an up-to-date listing of the latest O/S and software support details for HP tape drives, please visit: http://www.hp.com/go/connect.

Additional Options

HP StorageWorks 1/8 G2 Tape Autoloader

HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader	AK377A
HP StorageWorks 1/8 G2 LTO-3 Ultrium 920 SAS Autoloader	AH558A
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.

HP StorageWorks MSL2024 Tape Library

HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library	AK378A
HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library	AH559A

HP StorageWorks MSL4048 Tape Library

HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library	AK380A
HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library	AH560A

NOTE: Please reference the MSL 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.

Disk-Based Backup

RDX Removable Disk Backup

HP RDX500 External Removable Disk Backup System	AJ935A

NOTE: 500 GB of Disk Storage.

NOTE: Please see the HP RDX Removable Disk Backup System QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/13036$_z$div/13036$_z$div.html

D2D Backup

HP StorageWorks D2D2502i Backup System	EJ001A

NOTE: 2 TB raw capacity/1.5 TB useable capacity.

HP StorageWorks D2D2504i Backup System	EJ002A

NOTE: 4 TB raw capacity/3 TB useable capacity.

NOTE: Please see the HP D2D Backup Systems QuickSpecs for additional information: http://www.hp.com/go/d2d

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Additional Options

StorageWorks Options	**HP StorageWorks Fibre Channel HBAs**	
	NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html	
	Brocade Fibre Channel HBAs	
	HP StorageWorks 81B PCI-e FC HBA Single Port	AP769A
	HP StorageWorks 82B PCI-e FC HBA Dual Port	AP770A
	HP StorageWorks 41B 4Gb PCI-e FC HBA	AP767A
	HP StorageWorks 42B 4Gb Dual-Port PCI-e FC HBA	AP768A
	Emulex Fibre Channel HBAs	
	HP StorageWorks 81E PCI-e FC HBA Single Port	AJ762A
	HP StorageWorks 82E PCI-e FC HBA Dual Port	AJ763A
	HP StorageWorks FC2142 4Gb PCI-e HBA	A8002A
	HP StorageWorks FC2242 Dual Channel 4Gb PCI-e HBA	A8003A
	QLogic Fibre Channel HBAs	
	HP StorageWorks 81Q PCI-e FC HBA Single Port	AK344A
	HP StorageWorks 82Q PCI-e FC HBA Dual Port	AJ764A
	HP StorageWorks FC1142 4Gb PCI-e HBA	AE311A
	HP StorageWorks FC1242 Dual Channel 4Gb PCI-e HBA	AE312A
	StorageWorks SCSI HBA	
	HP U320e SCSI Host Bus Adapter	AH627A
	NOTE: Recommended HBA for MSL SCSI Tape Library connect.	

HP StorageWorks Modular Smart Array	**MSA SAN Storage Arrays**	
	HP StorageWorks 20 Modular Smart Array	335921-B21
	NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	
	NOTE: Please see the QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/11942_div/11942_div.html (Worldwide)	
	HP StorageWorks 50 Modular Smart Array	364430-B21
	NOTE: Please see the QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html (Worldwide)	
	HP StorageWorks 60 Modular Smart Array	418408-B21
	NOTE: Please see the QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/12627_div/12627_div.html (Worldwide)	
	HP StorageWorks 70 Modular Smart Array	418800-B21
	NOTE: Please see the QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/12652_div/12652_div.html (Worldwide)	

Additional Options

HP 2012sa Single Controller Modular Smart Array	AJ752A
HP 2012sa Dual Controller Modular Smart Array	AJ753A

NOTE: Please see the Modular Smart Array 2000sa QuickSpecs for additional options and configuration information at
http://h18000.www1.hp.com/products/quickspecs/13045_div/13045_div.html (Worldwide)

Uninterruptible Power Systems

HP Rack-mountable UPS

HP R1500 G2 UPS

HP, R1.5kVA UPS, 1U, NA	AF419A
HP, R1.5kVA UPS, 1U, INTL	AF418A
HP, R1.5kVA UPS, 1U, JPN/TW	AF421A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information
http://h18000.www1.hp.com/products/quickspecs/12507_div/12507_div.html (Worldwide)

HP R3000 UPS

HP R3000 VA UPS, 2U, DTC, INTL	AF414A
HP R3000 VA UPS, 2U, Low voltage L5-30, NA	AF422A
HP R3000 VA UPS, 2U, High voltage L6-20, NA	AF423A
HP R3000 VA UPS, 2U, High voltage L6-20, JPN	AF424A
HP R3000 VA UPS, 2U, Low voltage L5-30, JPN	AF425A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information
http://h18000.www1.hp.com/products/quickspecs/10671_div/10671_div.html (Worldwide)

HP R3000v Uninterruptible Power System

HP R3000v UPS	AF444A

NOTE: The R3000v is available in China and India only.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information
http://h18000.www1.hp.com/products/quickspecs/13129_div/13129_div.html (Worldwide)

HP R/T3000 Uninterruptible Power System (UPS)

HP R/T3000 UPS, Low voltage NA/JPN	AF452A
HP R/T3000 UPS, High voltage, NA/JPN	AF453A
HP R/T3000 UPS, High voltage, detachable inlet cord INTL	AF454A

NOTE: Please see the QuickSpecs for additional information
http://h18000.www1.hp.com/products/quickspecs/13417_div/13417_div.html (Worldwide)

HP Rack-Mountable R5500 UPS

HP R5500 VA UPS, INTL	AF416A

Additional Options

HP R5500 VA UPS, NA/JPN   AF426A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/11871_div/11871_div.html (Worldwide)

NOTE: For additional information on HP Uninterruptible Power Systems please go to: www.hp.com/servers/rackups.

Power Distribution Units	**Monitored PDUs**	
	HP Monitored Power Distribution Unit: Full Rack Version	
	HP 17.3 kVA S2324 Monitored PDU- dual input, 3Ø24A (NA/JPN)	AF503A
	HP 8.6 kVA S1324 Monitored PDU- single input, 3Ø, 24A (NA/JPN)	AF504A
	HP 16.6 kVA S2140 Monitored PDU- dual input, 1Ø, 40A (NA/JPN)	AF505A
	HP 8.3 S1140 Monitored PDU- single input, 1Ø, 40A (NA/JPN)	AF506A
	HP 22.1 kVA S2316 Monitored PDU- dual input, 3Ø, 16A (INTL)	AF507A
	HP 11 kVA S1316 Monitored PDU- single input, 3Ø, 16A (INTL)	AF508A
	HP 14.7 kVA S2132 Monitored PDU- dual input, 1Ø, 32A (INTL)	AF509A
	HP 7.3 kVA S1132 Monitored PDU- single input, 1Ø, 32A (INTL)	AF510A
	HP Monitored Power Distribution Unit: Half Rack Version	
	HP 4.9 kVA S124 Monitored PDU- single input, 1Ø, 24A (NA/JPN)	AF914A
	HP 7.3 kVA S132 Monitored PDU- single input, 1Ø, 32A (INTL)	AF915A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/12118_div/12118_div.html (Worldwide)

Modular PDUs 1U/0U (Up to 32 outlets)	**NOTE:** 1U/0U mounting brackets shipped with the unit (optimized for 10000 G2 and 9000 series racks).	
	Fixed Cord Extension Bars	351655-B21
	NOTE: Two extension bar sticks: each with (7) C13 plugs.	
	3.6kVA Model - mPDU, 16A, High (WW)	252663-B24
	2.8 kVA Model - mPDU, 24A, Low (NA/JPN)	252663-D71
	4.9kVA Model - mPDU, 24A, High (NA/JPN)	252663-D72
	7.3kVA Model - mPDU, 32A, High (INT'L)	252663-B31
	8.3kVA Model - mPDU, 40A, High (WW)	252663-B21
	8.3kVA Model - mPDU, 40A, High (power cord attached) (NA/JPN)	252663-D73
	9.2kVA Model - mPDU, 40A, High (power cord attached) (INTL)	252663-B32
	8.3kVA Model - mPDU 40A, High (core only) (NA/JPN)	252663-D75
	9.2kVA Model - mPDU 40 A, High (core only) (Int'l)	252663-B34
	8.3kVA Model - mPDU 32A, High (core only) (Int'l)	252663-B33
	4.9kVA Model - mPDU 24A, High (core only) (NA/JPN)	252663-D74

Additional Options

HP Rack Series	**HP Rack 5000 Series (Graphite Metallic)**	
	HP 5642 Rack Unassembled	358254-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.html (Worldwide)

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)

S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
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
10622 G2 (22U) Rack Cabinet - Pallet	AF021A
10622 G2 (22U) Rack Cabinet - Shock Pallet	AF022A
10642 G2 (42U) Rack Cabinet 1200mm Deep - Shock Pallet	AF034A
10642 G2 (42U) Rack Cabinet 1200mm Deep - Pallet	AF038A
10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	AF041A
10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet	AF042A
10647 G2 (47U) Rack Cabinet - Pallet	AF031A
10647 G2 (47U) Rack Cabinet 1200mm Deep - Shock Pallet	AF044A

NOTE: Due to handling and shipping requirements, AF044A is only orderable through HP Factory Express. It is not for direct sales. Customer site surveys are required before an order is approved. CTO orders may require additional lead time.

10647 G2 (47U) Rack Cabinet 1200mm Deep - Pallet	AF045A

NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed.
NOTE: xxxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels).
NOTE: Please see the QuickSpecs for Technical Specifications and additional information http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html (Worldwide)
NOTE: For additional information regarding Rack Cabinets, please see the following URL http://www.hp.com/go/rackandpower.

Additional Options

HP Rack Options

Keyboards and Monitors

TFT7600 Rackmount Keyboard Monitor US	AG052A
TFT7600 Rackmount Keyboard Monitor UK	AG053A
TFT7600 Rackmount Keyboard Monitor GR	AG054A
TFT7600 Rackmount Keyboard Monitor FR	AG055A
TFT7600 Rackmount Keyboard Monitor IT	AG056A
TFT7600 Rackmount Keyboard Monitor SP	AG057A
TFT7600 Rackmount Keyboard Monitor DEN	AG058A
TFT7600 Rackmount Keyboard Monitor NOR	AG059A
TFT7600 Rackmount Keyboard Monitor SE/FI	AG060A
TFT7600 Rackmount Keyboard Monitor SWI	AG061A
TFT7600 Rackmount Keyboard Monitor PORT	AG062A
TFT7600 Rackmount Keyboard Monitor BEL	AG063A
TFT7600 Rackmount Keyboard Monitor JPN2	AG064A
TFT7600 Rackmount Keyboard Monitor RUS	AG065A
TFT7600 Rackmount Keyboard Monitor INTL	AG066A
HP TAA TFT7600 US Rkmntkybd 17in Monitor	AG067A
1U Rackmount Keyboard with USB, US	AG072A
1U Rackmount Keyboard with USB, UK	AG073A
1U Rackmount Keyboard with USB, GR	AG074A
1U Rackmount Keyboard with USB, FR	AG075A
1U Rackmount Keyboard with USB, ITL	AG076A
1U Rackmount Keyboard with USB, SP	AG077A
1U Rackmount Keyboard with USB, DEN	AG078A
1U Rackmount Keyboard with USB, NOR	AG079A
1U Rackmount Keyboard with USB, SE/FI	AG080A
1U Rackmount Keyboard with USB, SWI	AG081A
1U Rackmount Keyboard with USB, PORT	AG082A
1U Rackmount Keyboard with USB, BEL	AG083A
1U Rackmount Keyboard with USB, JPN2	AG084A
1U Rackmount Keyboard with USB, RUS	AG085A
1U Rackmount Keyboard with USB, INTL	AG086A

NOTE: For additional information regarding Rack Cabinets, 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 0x2x8	AF616A

Additional Options

Server console switch 0x2x16	AF617A
0x2x16 KVM Server Console G2 Switch with Virtual Media and CAC	AF618A
0x2x32 KVM Server Console G2 Switch with Virtual Media and CAC	AF619A
1x1Ex8 KVM IP Console Switch G2 with Virtual Media and CAC	AF620A
2x1Ex16 KVM IP Console Switch G2 with Virtual Media and CAC	AF621A
4x1Ex32 KVM IP Console Switch G2 with Virtual Media and CAC	AF622A
HP TAA Server console switch 0x2x16	AF626A
PS/2 Interface Adapter, 1 pack	262588-B21
PS/2 Interface Adapter, 8 pack	262587-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 1x4 Console Switch (ALL)	
PS2 Server Console Cable, 6 ft, 2 pack	AF612A
USB Server Console Cable, 6 ft, 2 pack	AF613A

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 (worldwide)	AF101A
HP 48 Port Serial Console Server (worldwide)	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.

USB and SD Options

HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
HP USB 04 Standard Keyboard	DT528A#ABA
HP 1GB USB 2.0 Floppy Drive Key	442085-B21

Additional Options

Service and Support Offerings

(HP Care Pack Services)

Hardware Services 4-Hour On-site Service

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, 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

HP ProLiant DL360 G5 Entry and Base Models

Standard Memory

1 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) installed (2 x 512 MB)

Upgrading Memory and Memory Interleaving

When upgrading memory, DIMMs 1A and 3A must match. DIMMs 5B and 7B, DIMMs 2C and 4C, and DIMMs 6D and 8D 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 all 4 banks are populated the system is automatically configured for 4:1 interleaving. When four, six, or eight DIMMs are populated with identical DIMMs the system is automatically configured for bank interleaving.

Standard Memory Plus Optional Memory

Up to 25 GB memory is available with the standard memory of 1 GB and the optional installation of PC2-5300 Fully Buffered DIMMs (DDR2-667) memory kits.

Standard Memory Replaced with Optional Memory

Up to 32 GB of memory is available with the removal of the standard 512 MB of memory and the optional installation of PC2-5300 Fully Buffered DIMMs (DDR2-667) memory kits.

NOTE: 4 GB Fully Buffered DIMMs kits will be available shortly following server availability to allow a maximum of 32 GB. Today's maximum is 16 GB utilizing 2 GB DIMMs.

NOTE: Chart does not represent all possible configurations.

Memory		Slot							
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Standard	1 GB	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	25 GB	512 MB	512 MB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Maximum	64 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 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, If banks A, B, C and D are populated, bank D is the spare bank, Online spare memory is configured through RBSU.

NOTE: Mirrored Memory uses mirrored banks to provide a high level of memory redundancy. Customer chooses to implement or not: User selectable via BIOS and default is off.

Memory

Following are memory options available from HP:

1 GB FBD PC2-5300 2 x 512 MB Single Rank Kit	397409-B21
2 GB FBD PC2-5300 2 x 1 GB Dual Rank Kit	397411-B21
2 GB FBD PC2-5300 2 x 1 GB Low Power Single Rank Kit	461826-B21
4 GB FBD PC2-5300 2 x 2 GB Dual Rank Kit	397413-B21
4 GB FBD PC2-5300 2 x 2 GB Low Power Dual Rank Kit	461828-B21
8 GB FBD PC2-5300 2 x 4 GB Dual Rank Kit	397415-B21
8 GB FBD PC2-5300 2 x 4 GB Low Power Dual Rank Kit	466440-B21
16 GB FBD PC2-5300 2 x 8 GB Dual Rank Kit	413015-B21
64 GB FBD PC2-5300 8 x 8 GB Dual Rank Kit	495604-B21

NOTE: Memory Option Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, please visit: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/

HP ProLiant DL360 G5 Performance Models
Standard Memory
2 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) (2 x 1 GB)

Upgrading Memory and Memory Interleaving
When upgrading memory, DIMMs 1A and 3A must match. DIMMs 5B and 7B, DIMMs 2C and 4C, and DIMMs 6D and 8D 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 all 4 banks are populated the system is automatically configured for 4:1 interleaving. When four, six, or eight DIMMs are populated with identical DIMMs the system is automatically configured for bank interleaving.

Standard Memory Plus Optional Memory
Up to 14 GB memory is available with the standard memory of 2 GB and the optional installation PC2-5300 Fully Buffered DIMMs (DDR2-667) memory kits.

Standard Memory Replaced with Optional Memory
Up to 32 GB of memory is available with the removal of the standard 1 GB of memory and the optional installation of PC2-5300 Fully Buffered DIMMs (DDR2-667) memory kits.

NOTE: Chart does not represent all possible configurations.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	2 GB	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	14 GB	1 GB	1 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Maximum	64 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 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.

NOTE: Mirrored Memory uses mirrored banks to provide a high level of memory redundancy. Customer chooses to implement or not. User selectable via BIOS and default is off.

Memory

Following are memory options available from HP:

1 GB FBD PC2-5300 2 x 512 MB Single Rank Kit	397409-B21
2 GB FBD PC2-5300 2 x 1 GB Dual Rank Kit	397411-B21
2 GB FBD PC2-5300 2 x 1 GB Low Power Single Rank Kit	461826-B21
4 GB FBD PC2-5300 2 x 2 GB Dual Rank Kit	397413-B21
4 GB FBD PC2-5300 2 x 2 GB Low Power Dual Rank Kit	461828-B21
8 GB FBD PC2-5300 2 x 4 GB Dual Rank Kit	397415-B21
8 GB FBD PC2-5300 2 x 4 GB Low Power Dual Rank Kit	466440-B21
16 GB FBD PC2-5300 2 x 8 GB Dual Rank Kit	413015-B21
64 GB FBD PC2-5300 8 x 8 GB Dual Rank Kit	495604-B21

Online spare FBDIMM configuration requirements (in addition to general configuration requirements):

- When only bank A is being used, it must be fully populated with dual-rank FBDIMMs.
- If banks A and C are being used, they must be fully populated.
- If installed, bank A and bank C must contain FBDIMMs with identical part numbers.
- If installed, bank B and bank D must also contain FBDIMMs with identical part numbers.

In online spare mode, FBDIMMs must be populated as specified in the following table:

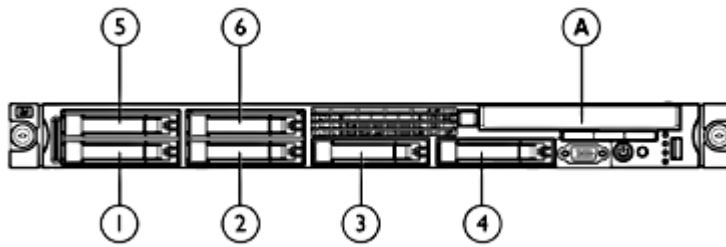| Configuration	Branch 0 Bank A 1A and 3A	Branch 0 Bank C 2C and 4C	Branch 1 Bank B 5B and 7B	Branch 1 Bank D 6D and 8D
1*	X	-	-	-
2	X	X	-	-
3	X	X	X	X
* Configuration 1 is only supported if using bank A, populated with dual-rank FBDIMMs.				

Mirrored memory FBDIMMs configuration requirements (in addition to general configuration requirements):

- Banks A and B must be fully populated.
- Bank A and bank B must contain FBDIMMs with identical part numbers. If installed, bank C and bank D must also contain FBDIMMs with identical part numbers.

When using mirrored memory mode, FBDIMMs must be populated as specified in the following table:

Configuration	Bank A 1A and 3A	Bank B 5B and 7B	Bank C 2C and 4C	Bank D 6D and 8D
1	X	X	-	-
2	X	X	X	X

Storage

1-6   6 x SFF SAS Hot Pluggable Hard Drive Bays

A   Slimline Bay – Optional optical or floppy drive

Drive Support

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

Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty – refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
300GB 6G SAS 10K DP	6	1-6	HP Smart Array E200i/64MB Controller
300GB 3G SAS 10K DP			HP Smart Array E500/256MB Controller
146GB 6G SAS 10K DP			HP Smart Array P400i/512MB BBWC Controller
146GB 3G SAS 15K DP			HP Smart Array P400i/256MB Controller
146GB 3G SAS 10K DP			HP Smart Array P600/256 BBWC Controller
72GB 3G SAS 15K DP			HP Smart Array P800/512 BBWC Controller
72GB 3G SAS 10K DP			Please see **NOTES** below regarding hard drive quantity supported by Smart Array Controller.

NOTE: The Smart Array E200i Controller can support a maximum of 4 hard drives.

NOTE: The Smart Array P400i Controller can support a maximum of 6 hard drives. To support drives 5 and 6, the optional HP Mini SAS 4i 13.4 inch/0.35 m cable is required (PN 399546-B21).

NOTE: The Smart Array P600 Controller requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).

Storage

SAS Hot Plug SFF Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
500GB 6G SAS 7.2K DP	6	1-6	HP Smart Array E200i/64MB Controller
			HP Smart Array E500/256MB Controller
			HP Smart Array P400i/512MB BBWC Controller
			HP Smart Array P400i/256MB Controller
			HP Smart Array P600/256 BBWC Controller
			HP Smart Array P800/512 BBWC Controller
			Please see **NOTES** below regarding hard drive quantity supported by Smart Array Controller.

SATA Hot Plug SFF Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
500GB 3G SATA 7.2K 160GB 3G SATA 7.2K	6	1-6	HP Smart Array E200i/64MB Controller
			HP Smart Array E500/256MB Controller
			HP Smart Array P400i/512MB BBWC Controller
			HP Smart Array P400i/256MB Controller
			HP Smart Array P600/256 BBWC Controller
			HP Smart Array P800/512 BBWC Controller
			Please see **NOTES** below regarding hard drive quantity supported by Smart Array Controller.

SATA Hot Plug SFF Entry (ETY) Drives

	Quantity Supported	Position Supported	Controller
250GB 3G SATA 5.4K 120GB 1.5G SATA 5.4K	6	1-6	HP 8 Internal Port SAS HBA with RAID **NOTE:** Transfer rate=1.5 Gb/s SATA, 3 Gb/s SAS.
			HP SC44Ge Host Bus Adapter **NOTE:** When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. Transfer rate=1.5 Gb/s SATA, 3 Gb/s SAS.
			HP Smart Array E200i/64MB Controller
			HP Smart Array E500/256MB Controller
			HP Smart Array P400i/512MB BBWC Controller
			HP Smart Array P400i/256MB Controller
			HP Smart Array P600/256 BBWC Controller
			HP Smart Array P800/512 BBWC Controller
			Please see **NOTES** below regarding hard drive quantity supported by Smart Array Controller.

NOTE: The Smart Array E200i Controller can support a maximum of 4 hard drives.
NOTE: The Smart Array P400i Controller can support a maximum of 6 hard drives. To support drives 5 and 6, the optional HP Mini SAS 4i 13.4 inch/0.35 m cable is required (PN 399546-B21).
NOTE: The Smart Array P600 Controller requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).

Storage

SATA Hot Plug Midline (MDL) Solid State Drives

	Quantity Supported	Position Supported	Controller
60GB 3.0G SATA SSD 120GB 3.0G SATA SSD	6	1-6	HP 8 Internal Port SAS HBA with RAID **NOTE:** Transfer rate= 1.5 Gb/s SATA, 3 Gb/s SAS. HP SC44Ge Host Bus Adapter **NOTE:** When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. Transfer rate= 1.5 Gb/s SATA, 3 Gb/s SAS. HP Smart Array E200i/64MB Controller HP Smart Array E500/256MB Controller HP Smart Array P400i/512MB BBWC Controller HP Smart Array P400i/256MB Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller Please see **NOTES** below regarding hard drive quantity supported by Smart Array Controller.

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
20 Modular Smart Array	Please see the QuickSpecs to determine configuration requirements	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller
50 Modular Smart Array	Up to 2	External	HP Smart Array P600/256 BBWC Controller
	Up to 4	External	HP Smart Array E500/256MB Controller HP Smart Array P800/512 BBWC Controller
60 Modular Smart Array	Up to 4	External	HP Smart Array P600/256 BBWC Controller
	Up to 8	External	HP Smart Array E500/256MB Controller HP Smart Array P800/512 BBWC Controller
70 Modular Smart Array	Up to 2	External	HP Smart Array P600/256 BBWC Controller
	Up to 4	External	HP Smart Array E500/256MB Controller HP Smart Array P800/512 BBWC Controller
HP 2000sa Modular Smart Array Controller	Up to 4	External	HP SC08Ge Host Bus Adapter

Tape and Disk-Based Backup

NOTE: For a complete listing of compatible tape and disk-based backup offerings, please visit: www.hp.com/go/connect

	Position Supported	Controller	Controller Part Number
HP StorageWorks SCSI Tape Drives, External LTO-1 Ultrium 232	External	HP SC11Xe Host Bus Adapter	412911-B21

Storage

LTO-2 Ultrium 448
LTO-3 Ultrium 960
LTO-3 Ultrium 920
LTO-4 Ultrium 1760
LTO-4 Ultrium 1840
DAT 40
DAT 72
DAT 160
1U Rack-Mount Kit
3U Rack-Mount Kit

HP StorageWorks USB Tape Drives, External DAT 40 USB DAT 72 USB DAT 160 USB 1U Rack-Mount Kit	External	USB 2.0 Port	N/A
HP StorageWorks SAS Tape Drives, External DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1760 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC44Ge Host Bus Adapter	416096-B21
HP StorageWorks SCSI Tape Automation, External DAT 72x10 Autoloader 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096 MSL6000	External	HP SC11Xe Host Bus Adapter HP U320e SCSI Host Bus Adapter **NOTE:** Recommended for MSL tape libraries.	412911-B21 AH627A
HP StorageWorks SAS Tape Automation, External 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096	External	HP SC44Ge Host Bus Adapter	416096-B21
HP StorageWorks Fibre Tape Automation,	External	Please consult the EBS connectivity matrix at=	N/A

Storage

External

MSL2024
MSL4048
MSL8096
MSL6000

http://www.hp.com/go/ebs for detailed connectivity information.

HP StorageWorks RDX Removable Disk Backup System	External	USB 2.0 Port	N/A
RDX160			
RDX320			
RDX500			

HP StorageWorks D2D Backup Systems	External	Embedded Network Controller	N/A
D2D120			
D2D130			
D2D2500i			
D2D4000i			

Power Specifications

Part Number - AC	399542-B21
Operational Input Voltage Range (V rms)	90 to 264
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)

Nominal Input Voltage (Vrms)	**100**	**120**	**208**	**220**	**230**	**240**
Max Rated Output Wattage Rating	700	700	700	700	700	700
Nominal Input Current (A rms)	8.5	7	4	3.77	3.6	3.4
Max Rated Input Wattage Rating (Watts)	833	823	815	813	811	800
Max. Rated VA (Volt-Amp)	850	840	832	829	828	816
Efficiency (%)	83.5	84	86	86	87	87.5
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	0.35	0.41	0.71	0.78	0.81	0.85
Max. Inrush Current (A peak)	30	30	30	30	30	30
Max. Inrush Current duration (mS)	3	3	3	3	3	3

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

To drill down to calculators:
- Click on: &ProLiant Servers&
- Click on the Server of interest. Example: DL360 G5
- Click on: &Power Calculator& link. (You may need to scroll down to see it)

Technical Specifications

System Unit			
	Dimensions (H x W x D) (with bezel)	1.70 x 16.78 x 27.25 in (4.32 x 42.62 x 69.22 cm)	
	Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	39.5 lb (17.92 kg)
		Minimum (one hard drive, power supply, and processor installed)	32 lb (14.51 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 to 240 VAC
		Rated Input Current	7.1 Amps (at 120VAC) to 3.5 Amps (at 240 VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	852 W
	BTU Rating	Maximum	2910 BTU / hr (at 120 VAC), 2870 (at 240 VAC)
	Power Specifications	NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url-www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor	
		- Click on the system of interest. Example-DL360 G5	
		- Follow the instructions of the next screens.	
	Power Supply Output (per power supply)	Rated Steady-State Power	700 W (at 100 VAC), 700 W (at 200 VAC)
		Maximum Peak Power	700 W (at 100 VAC), 700 W (at 200 VAC)
	System Inlet Temperature	Operating	10° to 35° C (50° to 95° F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8° F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10° C/hr (18° F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30° C (86° F).
		Non-operating	-40 to 70C (-40 to 158F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28° C (82.4° F) maximum wet bulb temperature, non-condensing.
		Non-operating	5 to 95% relative humidity (Rh), 38.7° C (101.7° F) maximum wet bulb temperature, non-condensing.
	Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457

Technical Specifications

		m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise		Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
	Idle	
	L_{WAd}	6.4 B
	L_{pAm}	49 dBA
	Operating	
	L_{WAd}	6.4 B
	L_{pAm}	49 dBA
Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22∓EN55022∓EN55024∓FCC CFR 47, Pt 15∓ICES-003∓CNS13438∓GB9254∓K22∓K24∓EN 61000-3-2∓EN 61000-3-3∓EN 60950-1∓IEC 60950-1

NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

Smart Array E200i Controller	**Disk Drive and Enclosure Interface**	3G SAS (Serial Attached SCSI)
		1.5G SATA (Serial Advanced Technology Attachment)
	SAS Connectors	2 internal (SFF8484) x4 wide port connectors
	Cache Memory Speed	DDR-1/266 MHz provides up to 4.2 GB/s maximum bandwidth.
	Server Interface	x4 2.5G PCIe provides 2GB/s maximum bandwidth.
	SAS Speed	x8 3G SAS provides 2.4GB/s maximum bandwidth.
	Cache Memory	40-bit 64MB or 128MB cache∓ECC protection, battery-backed, and transportable
	Logical Volumes Supported	Up to 32 logical volumes
	Maximum Volume Capacity	3TB (6 x 500GB)
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
	RAID Support	RAID 5 (Distributed Data Guarding) requires 128MB BBWC option
		RAID 1, 1+0 (Striping & Mirroring)
		RAID 0 (Striping)
	Upgradeable Firmware	Upgradeable Firmware

Technical Specifications

Smart Array P400i Controller	Disk Drive and Enclosure Interface	3G SAS (Serial Attached SCSI)
		1.5G SATA (Serial Advanced Technology Attachment)
	SAS Connectors	2 internal (SFF8484) x4 wide port connectors
	Cache Memory Speed	DDR2-533MHz with 40 or 72-bit wide bus provides up to 4.2 GB/s maximum bandwidth.
	Server Interface	x8 2.5G PCIe provides 2GB/s maximum bandwidth.
	SAS Speed	x8 3G SAS provides 2.4GB/s maximum bandwidth.
	Cache Memory	40-bit 256MB cache (72-bit 512MB module upgrades available)∓ECC protection, battery-backed, and transportable
	Logical Drives Supported	Up to 32 logical drives
	Maximum Logical Drive Capacity	3 TB (6 x 500GB)
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
	RAID Support	RAID 6 with ADG (Advanced Data Guarding) requires Battery Backed Write Cache Upgrade
		RAID 5 (Distributed Data Guarding)
		RAID 1+0 (Striping & Mirroring)
		RAID 0 (Striping)
	Upgradeable Firmware	Upgradeable Firmware with recovery ROM feature

Embedded NC373i Multifunction Gigabit Server Adapters	Network Interface	10/100/1000-T	
	Compatibility	EEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	PCI Express, four lanes (x4)	
	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)

Technical Specifications

Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to http://www.hp.com/go/green. To recycle your product, please go to http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.