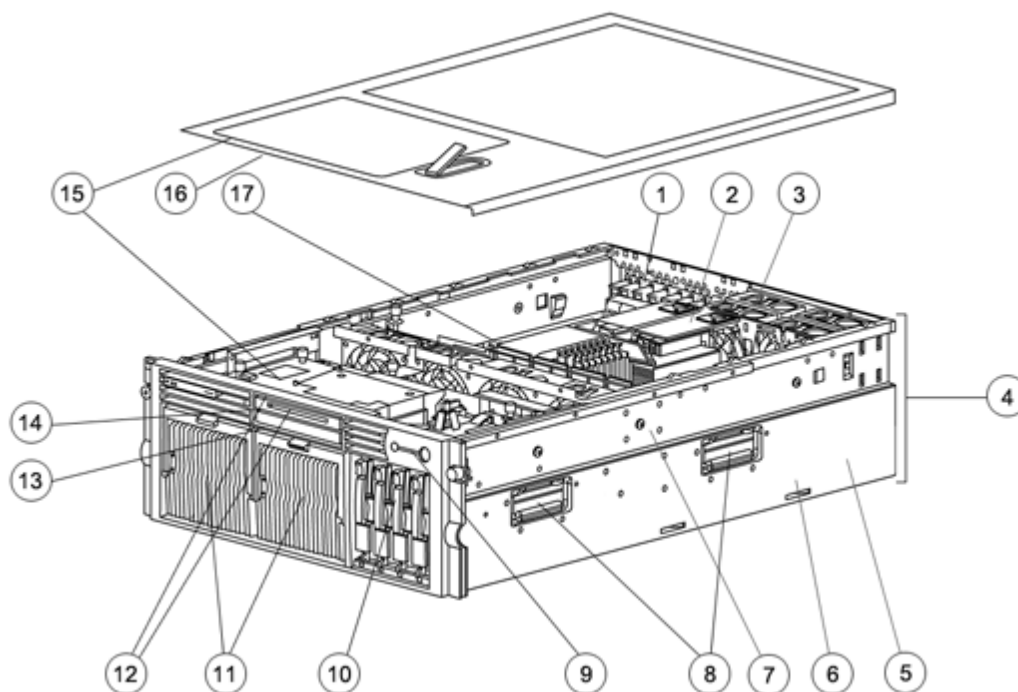


## Overview



1. Eight 64-bit PCI-X I/O Slots (Six 100MHz, two 133MHz)
2. 2 or 4 processors/memory boards
3. 2 or 4 AMD Opteron 800 Series Processors
4. Up to 64GB of PC2700 DDR SDRAM with Advanced ECC, running at 266MHz, 48GB of PC2700 running at 333MHz or 32GB of PC3200 running at 400MHz
5. Hot Plug Redundant Fans (standard)
6. 4U (7" Height) Rack Form Factor
7. Tool-less "Snap In" rail solution
8. Server Lifting Handle
9. Front Panel LED Display (internal and external health, Unit ID light) and Power Button

10. Ultra320 Drive Cage, capable of simplex or duplex configuration)
11. Dual 870-Watt Hot Plug Redundant Power Supplies (hi/lo line auto-sensing)
12. Two Universal Media Bays: 24X CD-ROM IDE and 1.44 MB Diskette Drive (standard)
13. Multi-Bay floppy and CD-ROM drives, standard on most models
14. QuickFind Diagnostic Display (viewable through the Top Access Panel)
15. Removable Top Access Panel
16. Integrated Lights-Out (iLO)- not shown
17. Dual Port NC7782 embedded NIC - not shown

## What's New

- Support for AMD Opteron Model 852 processors with PC2700

## Overview

### At A Glance

- Delivering maximum performance in a versatile, rack optimized form factor
- AMD Opteron 800 series running at 2.6 GHz, 2.4 GHz or 2.2 GHz single core processors (two or four supported)
- AMD Opteron 8000 chipset supporting up to 1GHz HyperTransport
- 4GB of PC3200 DDR SDRAM, running at 400MHz, expandable to 32GB, or 2GB of PC2700 DDR SDRAM, running at 333MHz, expandable to 64 GB with support for PC2700 DDR with Advanced ECC SDRAM (48 GB running at 333MHz or 64GB running at 266MHz)  
**NOTE:** 1.8 GHz, 2.2 GHz sku's still ship with PC2100 memory.
- Eight full length 64-bit PCI-X slots, 6 100MHz, 2 133MHz
- Integrated Lights-Out Standard Management (iLO) on system board
- Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
- Integrated Smart Array 5i Plus Controller (Dual Channel, Ultra3) with 64-MB total memory on 5i Plus Memory Module
- Transportable Battery-Backed Write Cache Enabler module (depending on model)
- Multi-Bay floppy and CD-ROM drives
- Internal Hot Plug Drive Storage of up to 1.20 TB (4 x 300 GB Ultra320 SCSI 1" hard drives)
- Redundant hot plug power supplies and fans
- Tool-less and virtually cable-less internal design
- Innovative diagnostic lighting (QuickFind Diagnostic Display) for rapid response to service events
- Rapid Deployment racking solution (rack rails and cable management)
- Protected by HP Services, including a three-year, Next Business Day on-site, limited, Global warranty and extended Pre-Failure Warranty that covers processors, memory and disk drives - Certain restrictions and exclusions apply.

## Standard Features

**Processor** AMD Opteron model 852, running at 2.6 GHz (2 or 4 supported)  
 Two or four of the following depending on Model AMD Opteron model 850, running at 2.4 GHz (2 or 4 supported)  
 AMD Opteron model 848, running at 2.2 GHz (2 or 4 supported)

**Cache Memory** 1-MB Integrated Level 2 Cache

**Upgradability** Upgradable to quad processing

**Chipset** AMD Opteron 8000 series chipset

**Memory Protection & Functionality** Advanced ECC

**Memory**

Type	PC2100 DDR SDRAM, running at 266MHz PC2700 DDR SDRAM, running at 333MHz PC3200 DDR SDRAM, running at 400MHz
Standard	2 GB (2 x 512 MB x 2 Processor Boards) (PC2100 or PC2700DDR SDRAM) 4 GB (2 x 1024 MB x 2 Processor Boards) (PC3200 DDR SDRAM)
Maximum	32 GB (PC3200 DDR SDRAM) 64 GB (PC2100 or PC2700DDR SDRAM)

**NOTE:** PC2700 only supported on 2.4GHz and faster single core models and all dual core models. Also PC3200 only supported on 2.6GHz single core models and dual core models.

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

Expansion Slots	Bus speed	Bus number	Hot Plug	PCI Voltage
1	64-bit / 133 MHz PCI-X	5	No	3.3 Volt
2	64-bit / 133 MHz PCI-X	6	No	3.3 Volt
3	64-bit / 100 MHz PCI-X	7	No	3.3 Volt
4	64-bit / 100 MHz PCI-X	7	No	3.3 Volt
5	64-bit / 100 MHz PCI-X	8	No	3.3 Volt
6	64-bit / 100 MHz PCI-X	8	No	3.3 Volt
7	64-bit / 100 MHz PCI-X	3	No	3.3 Volt
8	64-bit / 100 MHz PCI-X	3	No	3.3 Volt

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

## Standard Features

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

**Storage Controllers** Smart Array 5i Plus Controller (integrated on system board), Dual Channel, Ultra3 (supports RAID 0, 1, 1+0, and 5 across internal hard disk drives) with 64 MB of memory.

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

**NOTE:** The Smart Array 5i Plus Controller is integrated on the system board and is designed to support the duplex/simplex drive cage. An external SCSI port is not available on the HP ProLiant DL585. External SCSI solutions require the addition of a PCI or PCI-X option card.

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

- Standard on all HP ProLiant DL585 Models
- Battery charge/life: Up to 72 hours/3 years
- Transportable data protection
- Increases overall controller performance

**NOTE:** Safely transport your write cache data to another HP ProLiant DL585 in the data center by removing the BBWC Enabler and 5i Plus Memory Module simultaneously (connected by short cable).

<b>Storage</b>	Diskette Drive	1.44 MB Diskette Drive (slim line) – ejectable for security and serviceability
	Optical Drive	24x IDE CD-ROM Drive (slim line) – ejectable for security and serviceability
	Hard Drives	None
	Hard Disk Drive Backplane	Internal Wide Ultra3 backplane supports up to four 1" hard disk drives and is easily configurable to support simplex (4x1) or duplex mode (2x2) Standard shipping configuration is the duplex mode.
		<b>NOTE:</b> Optional SCSI cable assembly 365483-B21 is required for connecting Smart Array Controller in a PCI slot to internal hard drive backplane. Duplex configuration requires two such kits.

<b>Maximum Internal Storage Type</b>	Hot Plug SCSI	1.20 TB	4 x 300 GB Ultra320 1" drives (internal hot plug Ultra3 or Ultra320 drive cage)
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<b>Interfaces</b>	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	Rear USB Ports	2
	iLO Remote Management	1
	Network RJ-45	2

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

### Standard Features

<b>Form Factor</b>	Rack (4U = 7 inches), ships with sliding rails and cable management system Space saving form factor (4U) provides space efficiencies while providing maximum deployment flexibility
<b>ProLiant Essentials Foundation Pack Software</b>	<p><b>HP Systems Insight Manager</b></p> <p>HP's new HP Systems Insight Manager (HP SIM) helps maximize system uptime and performance and reduce system maintenance costs by providing proactive notification of problems before those problems result in unplanned downtime or reduced productivity. HP SIM are both easy to set up work with the Insight Management Agents, integrated Light-Out and Remote Insight Light-Outs Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP SIM customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP 9000 systems; and plug-ins for storage, client, printer, and power management as well as server rapid deployment, performance management, and workload management. For more details on HP HP SIM visit <a href="http://www.hp.com/go/hpsim">http://www.hp.com/go/hpsim</a>.</p> <p><b>SmartStart</b></p> <p>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 <a href="http://www.hp.com/servers/smartstart">http://www.hp.com/servers/smartstart</a>. <b>SmartStart version supported (minimum): SmartStart 7.00.</b></p> <p><b>Management Agents</b></p> <p>The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to HP Systems Insight Manager and other enterprise management applications in case of subsystem or environmental failures. For additional information about the Management Agents and other management products from HP, please visit the management Web site at <a href="http://www.hp.com/servers/manage">http://www.hp.com/servers/manage</a>.</p> <p><b>Subscriber's Choice</b></p> <p>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 <a href="http://www.hp.com/go/subscriberschoice">http://www.hp.com/go/subscriberschoice</a> and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.</p> <p><b>ROMPaq, support software, and configuration utilities</b></p> <p>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, linked from the SmartStart website at <a href="http://www.hp.com/servers/smartstart">http://www.hp.com/servers/smartstart</a>.</p> <p><b>Survey Utility and diagnostics utilities</b></p> <p>The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.</p>

## Standard Features

### Optional ProLiant Essentials Value Packs

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

- Rapid Deployment Pack - an automated solution for multi-server deployment and provisioning, enabling companies to quickly and easily adapt to changing business demands.
- Workload Management Pack - provides easier management of complex environments, improving overall server utilization and enabling Windows® 2000 customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server.
- Integrated Lights-Out Advanced Pack - upgrades the Integrated Lights-Out processor to full virtual presence and control with graphical console and virtual media.
- Performance Management Pack - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources.
- Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions.
- Vulnerability and Patch Management Pack - identifies and remediates software security vulnerabilities due to missing patches as well operating system configurations that can be exploited by viruses, worms, and other blended threats.
- Virtual Machine Management Pack - provides central management and control of virtual machines from Microsoft and VMware. Integrated approach provides the ability to manage both physical and virtual resources from a single management console.

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

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

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### Industry Standard Compliance

ACPI 1.0a. Compliant  
PCI 2.2 Compliant  
PXE Support  
WOL Support  
Physical Address Extension (PAE) Support  
Microsoft® Logo certifications

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## Standard Features

### Remote Management

Integrated Lights-Out (iLO) Standard Management

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

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

### Intelligent Manageability

Automatic Server Recovery-2 (ASR-2)

HP Systems Insight Manager

Redundant ROM

Remote Flash ROM

ROM-Based Setup Utility (RBSU)

Integrated Management Log (IML)

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

Redundant/adaptive load balancing NIC Support

### Availability

- Smart Array 5i Plus Controller with standard Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance. Up to 64MB Battery Backed Write Cache protection available on 2P HP ProLiant DL585 models.
- Up to four Hot Plug Ultra3 or Ultra320 Hard Drives
- Duplex or Simplex SCSI Backplane (Duplex configuration is standard)
- Dual Hot Plug Redundant Power Supplies (standard)
- PCI-X Technology (six 64-bit/100-MHz and two 64-bit/133MHz PCI-X slots available)
- Smart Array 5i Plus Controller with 64GB of Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance.

Fans are 7+1 hot plug redundant and individually removable.

### Serviceability

- Innovative Diagnostic Lighting
- QuickFind Diagnostic Display - precisely depicts all major subsystems of the server (PCI-X I/O, Memory, CPU, Redundant Cooling, Interlock, Thermtrip) and gives instant visual indication of fault status. Located on top front of server.
- Tool-less, virtually cable-less interior design
  - Tool-less access to interior of server
  - Two ejectable, Universal Media Bay media drives (diskette and CD-ROM standard with support for optional DVD-ROM drives) are removable without the use of tools
  - Front access power supplies
  - PCI Card Guides locks full length PCI cards in place during transit
  - SCSI Duplex/Simplex Drive Cage connects directly to system board - no cables.  
**NOTE:** Configure your SCSI Duplex/Simplex Drive Cage by means of simple switch (duplex to simplex)  
located on the cage itself. System ships standard in Duplex mode.
  - Eight individually removable fans connect without cables to the system board
  - Tool-less removal of system board
- Quick Deploy Rails
  - Tool-less design "snap in" rail

## Standard Features

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<b>Security</b>	Power-on password Keyboard password Diskette drive control Diskette boot control Network Server Mode Serial interface control Administrator's password Disk configuration lock Removable Diskette drive Removable CD-ROM drive
<b>Power Supply</b>	Dual 870-Watt Hot Plug Redundant Power Supplies (hi/lo line auto-sensing)
<b>System Fans</b>	Standard                      8 Hot plug, redundant fans (individually removable) Maximum                      8 Hot plug, redundant fans (individually removable) <b>NOTE:</b> A single cooling zone across the major server subsystems (Memory, I/O, CPU) providing 7x24 cooling in an N + 1 redundant configuration.
<b>Required Cabling</b>	For required cabling information, refer to the HP Web site at <a href="http://h18000.www1.hp.com/products/servers/proliantDL585/">http://h18000.www1.hp.com/products/servers/proliantDL585/</a>
<b>OS Support</b>	Microsoft Windows 2000 Server Microsoft Windows 2000 Advanced Server Windows Server 2003, Standard Edition Windows Server 2003, Enterprise Edition Red Hat Enterprise Linux 3 Red Hat Enterprise Linux 4 SuSE Linux Enterprise Server 8 SuSE Linux Enterprise Server 9  <b>NOTE:</b> 2.2 GHz, 2.4 GHz and 2.6 GHz models. <b>NOTE:</b> For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: <a href="http://www.hp.com/go/supportos">http://www.hp.com/go/supportos</a> . <b>NOTE:</b> For an up-to-date listing of the latest drivers available for the HP ProLiant DL585, please see: <a href="http://www.hp.com/support/files/server/us/index.html">http://www.hp.com/support/files/server/us/index.html</a> . <b>NOTE:</b> For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at <a href="http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html">http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html</a> . <b>NOTE:</b> For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: <a href="http://h18004.www1.hp.com/products/servers/software/OEM.html">http://h18004.www1.hp.com/products/servers/software/OEM.html</a> .

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## Standard Features

### 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 5,350 sq cm (830 square inches) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- **Side:** The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 inches).

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

**NOTE:** For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: <http://www5.hp.com/products/servers/proliantdl585/index.html>.

### Rack Mounting Requirements

HP ProLiant DL585 rack models provide tool-free support for square hole racks (including Compaq/HP 7000, 9000, 10000 and H9 series) with an adjustment range from 28" - 29" in depth.

### Factory Express Portfolio for Servers and Storage

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

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

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

## Standard Features

### Service and Support

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

**NOTE:** Limited warranty includes 3 year parts, 3 year labor, 3-year next business day on-site support.

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

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair

Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 minutes for critical problems to 2 hours.

System Management, Performance Services and Mission Critical Support Solution.

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

**NOTE:** For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: <http://www.hp.com/hps/carepack>.

**NOTE:** For more complete information on HP Services offerings, customers and resellers, please visit us at: <http://www.hp.com/hps>.

**NOTE:** Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>.

## Solutions

### Solutions

Designed for enterprise customers with growing data centers and application and Internet service providers that require a rack optimized 4-processor server that delivers maximum performance and high availability for highly complex, business critical applications. Specifically, the HP ProLiant DL585 would be excellent for running the following types of applications:

#### Typical Usage:

- High Performance Computing (HPC)
- Electronic Design Automation (EDA)/semiconductor
- Financial
- Large database applications
- ERP / CRM
- Petrochemical
- Life Science and Material Science
- Video Rendering

## Models

<b>DL585R01 O2.6 GHz-1MB, 4096MB (2P)</b> 380125-xx1	<b>Processor(s)</b>	(2) AMD 852 Opteron Processors at 2.6 GHz standard (2 or 4 supported)
	<b>Cache Memory</b>	1-MB Integrated Level 2 Cache
	<b>Memory</b>	4 GB of PC3200 DDR SDRAM (Standard) to 32 GB running at 400MHz with Advanced ECC
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	<b>Manageability</b>	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	1.20 TB maximum (with optional hard drives)
	<b>Power Supply</b>	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	<b>Optical Drive</b>	24x IDE Universal Media Bay CD-ROM Drive
	<b>Form Factor</b>	Rack 4U

<b>DL585R01 O2.6 GHz-1MB, 2048MB (2P)</b> 380124-xx1	<b>Processor(s)</b>	(2) AMD 852 Opteron Processors at 2.6 GHz standard (2 or 4 supported)
	<b>Cache Memory</b>	1-MB Integrated Level 2 Cache
	<b>Memory</b>	2 GB of PC2700 DDR SDRAM (Standard) to 48 GB running at 333MHz or 64GB running at 266MHz with Advanced ECC
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	<b>Manageability</b>	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	1.20 TB maximum (with optional hard drives)
	<b>Power Supply</b>	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	<b>Optical Drive</b>	24x IDE Universal Media Bay CD-ROM Drive
	<b>Form Factor</b>	Rack 4U

## Models

<b>DL585R01 O2.4 GHz-1MB, 2048MB (2P) 378020-xx1</b>	<b>Processor(s)</b>	(2) AMD 850 Opteron Processors at 2.4 GHz standard (2 or 4 supported)
	<b>Cache Memory</b>	1-MB Integrated Level 2 Cache
	<b>Memory</b>	2 GB of PC2700 DDR SDRAM (Standard) to 48 GB running at 333MHz or 64GB running at 266MHz with Advanced ECC
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	<b>Manageability</b>	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	1.20 TB maximum (with optional hard drives)
	<b>Power Supply</b>	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	<b>Optical Drive</b>	24x IDE Universal Media Bay CD-ROM Drive
<b>Form Factor</b>	Rack 4U	

<b>DL585R01 O2.2 GHz-1MB, 2048MB (2P) 356820-xx1</b>	<b>Processor(s)</b>	(2) AMD 848 Opteron Processors at 2.2 GHz standard (2 or 4 supported)
	<b>Cache Memory</b>	1-MB Integrated Level 2 Cache
	<b>Memory</b>	2 GB of PC2100 DDR SDRAM running at 266MHz (Standard) to 64 GB (Maximum) with Advanced ECC
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	<b>Manageability</b>	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	1.20 TB maximum (with optional hard drives)
	<b>Power Supply</b>	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	<b>Optical Drive</b>	24x IDE Universal Media Bay CD-ROM Drive
<b>Form Factor</b>	Rack 4U	

<b>Country Code Key</b>	XX=00	US ( <b>NOTE:</b> Valid for 2.4 GHz, 2.6 Models)
	XX=20	Brazil ( <b>NOTE:</b> Valid for 2.2 GHz, 2.4 GHz, and 2.6 Models only)
	XX=29	Japan
	XX=37	A/P ( <b>NOTE:</b> Valid for 2.4 GHz and 2.6 Models only)
	XX=42	Europe ( <b>NOTE:</b> Valid for 2.4 GHz and 2.6 Models only)
	XX=AA	PRC
	XX=B2	WW ( <b>NOTE:</b> Valid for 1.8 GHz, and 2.2 GHz Models only)

## Configuration Information - Factory Integrated Models

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

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

### Step 1: Base Configuration

<b>Models</b>	<p>HP ProLiant DL585 Rack CTO Chassis (North America) <span style="float: right;">390524-405</span></p> <p><b>Factory Integrated Models ship with:</b></p> <ul style="list-style-type: none"> <li>1.44MB Diskette Drive</li> <li>Dual Port NC7782 embedded NIC</li> <li>Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)</li> <li>Integrated Lights-Out (iLO) Standard management (integrated on system board)</li> <li>Two 870W Hot Plug Redundant Power Supplies (low line or high line)</li> <li>Rack 4U Form Factor</li> </ul>
	<p>HP ProLiant DL585 Rack CTO Chassis (ROW) <span style="float: right;">390524-B21</span></p> <p><b>Factory Integrated Models ship with:</b></p> <ul style="list-style-type: none"> <li>1.44MB Diskette Drive</li> <li>Dual Port NC7782 embedded NIC</li> <li>Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)</li> <li>Integrated Lights-Out (iLO) Standard management (integrated on system board)</li> <li>Two 870W Hot Plug Redundant Power Supplies (low line or high line)</li> <li>Rack 4U Form Factor</li> </ul>

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

<b>Processors</b>	<p>AMD O852 2.6GHz/1000 1MB PC3200 DL585 FIO BASE <span style="float: right;">385751-L21</span></p> <p><b>NOTE:</b> If four processors are desired, select one 385751-L21 and two 381477-B21.</p> <p>AMD O852 2.6GHz/1000 1MB PC2700 DL585 FIO BASE <span style="float: right;">385750-L21</span></p> <p><b>NOTE:</b> If four processor are required, select one 385750-L21 and two 381476-B21.</p> <p>AMD O850 2.4GHz/800 1MB DL585 FIO BASE <span style="float: right;">381078-L21</span></p> <p><b>NOTE:</b> If four processors are desired, select one 381078-L21 and two 366725-B21.</p> <p>AMD O848 2.2GHz/800 1MB DL585 FIO BASE <span style="float: right;">381077-L21</span></p> <p><b>NOTE:</b> If four processors are desired, select one 381077-L21 and two 359708-B21.</p>
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## Configuration Information - Factory Integrated Models

Base Memory	1GB of PC2700 DDR SDRAM DIMM Memory (2x512 MB)	371047-B21
	2GB of PC2700 DDR SDRAM DIMM Memory (2x1 GB)	371048-B21
	4GB of PC2700 DDR SDRAM DIMM Memory (2x2 GB)	371049-B21
	2GB of PC3200 DDR SDRAM DIMM Memory (2x1 GB)	376639-B21
	4GB of PC3200 DDR SDRAM DIMM Memory (2x2 GB)	379300-B21

**NOTE:** Memory must be ordered in like-pairs, i.e. two of the same size.

**NOTE:** For max memory performance with PC2700 (333MHz), -002 processor boards should be used in conjunction with no more than 6 PC2700 DIMMs per processor. -002 board ships standard with 2.4GHZ SKUs and faster SKUs.

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Optical Drives	24x IDE Universal Media Bay CD-ROM Drive	339866-B21
	Slimline CD-RW/DVD-ROM 24X Combo Drive Option Kit	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21
	HP DVD+R/RW 8X Slim	383975-B21

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## Step 3: Choose Additional Options for Factory Integration

**NOTE:** Select from "Options" section below.

## Options

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

<b>ProLiant DL585 Unique Options</b>	<p>AMD Opteron 852 2.6 GHz-1MB PC3200 Processor Option Kit for the ProLiant DL585  <b>NOTE:</b> This Opteron 852 2.6GHz PC3200 processor Option kit (PN 381477-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 852 2.6 GHz-1MB PC2700 Processor Option Kit for the ProLiant DL585  <b>NOTE:</b> This Opteron 852 2.6GHz PC2700 processor Option kit (PN 381476-B21) comes standard with the -003 processor/memory board.</p> <p>AMD Opteron 850 2.4 GHz-1MB Processor Option Kit for the ProLiant DL585  <b>NOTE:</b> This Opteron 850 2.4GHz processor Option kit (PN 366725-B21) comes standard with the -002 processor/memory board.</p> <p>AMD Opteron 848 2.2 GHz-1MB Processor Option Kit for the ProLiant DL585  <b>NOTE:</b> This Opteron 848 2.2GHz processor Option kit (PN 359708-B21) comes standard with the processor/memory board.</p> <p>AMD Opteron 844 1.8 GHz-1MB Processor Option Kit for the ProLiant DL585  <b>NOTE:</b> This Opteron 844 1.8GHz processor Option kit (PN 359707-B21) comes standard with the processor/memory board.</p> <p>AMD Opteron 842 1.6 GHz-1MB Processor Option Kit for the ProLiant DL585  <b>NOTE:</b> This Opteron 842 1.6GHz processor Option kit (PN 359706-B21) comes standard with the processor/memory board.  <b>NOTE:</b> Must order two kits to expand the system from 2 to 4 processors</p>	<p>381477-B21</p> <p>381476-B21</p> <p>366725-B21</p> <p>359708-B21</p> <p>359707-B21</p> <p>359706-B21</p>
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<b>ProLiant Essentials Value Pack Software</b>	<p>Rapid Deployment Pack, 1 User, V1.x  <b>NOTE:</b> This license allows 1 server to be managed and deployed via the Deployment Server.</p> <p>Rapid Deployment Pack, 1 User, V1.x (Japan)  <b>NOTE:</b> This license allows 1 server to be managed and deployed via the Deployment Server.</p> <p>Rapid Deployment Pack, 10 Users, V1.x  <b>NOTE:</b> This license allows 10 servers to be managed and deployed via the Deployment Server.</p> <p>Rapid Deployment Pack, 10 Users, V1.x (Japan)  <b>NOTE:</b> This license allows 10 servers to be managed and deployed via the Deployment Server.</p> <p>Flexible Quantity License Kit</p> <p>License-Only - for use with a Master License Agreement</p> <p>ProLiant Essentials Workload Management Pack (Featuring Resource Partitioning Manager version 2.0)</p> <p>ProLiant Essentials Performance Management Pack v2.0, Single License  <b>NOTE:</b> This license allows 1 server to be managed by Performance Management Pack.</p> <p>ProLiant Essentials Performance Management Pack, 10 Pack Server License</p> <p>Performance Management Pack, flexible license kit  <b>NOTE:</b> A single pack is shipped with a single license key for the total number of licenses ordered.</p> <p>ProLiant Essentials Intelligent Networking Pack, 1 License</p>	<p>267196-B21</p> <p>267196-291</p> <p>269817-B21</p> <p>269817-291</p> <p>302127-B21</p> <p>302128-B21</p> <p>303284-B21</p> <p>306696-B21</p> <p>374055-B21</p> <p>306697-B21</p> <p>372906-B21</p>
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## Options

ProLiant Essentials Intelligent Networking Pack Flex License	372950-B21
ProLiant Essentials Intelligent Networking Pack Track License	372951-B21
ProLiant Essentials Virtual Machine Management Pack, SINGLE LIC IP CCAO-WGR	372214-B21
ProLiant Essentials Virtual Machine Management Pack, FLEX LIC IP CCAO-WGR	372215-B21
ProLiant Essentials Virtual Machine Management Pack, TRACKING LIC IP CCAO-WGR	372216-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License	371645-B21
ProLiant Essentials Vulnerability and Patch Management Pack, 10-Server License	372029-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Flexible-Quantity License	371646-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for new servers	371647-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for installed servers	378372-B21
ProLiant Essentials Server Migration Pack, Single-Server License	375345-B21
ProLiant Essentials Server Migration Pack, Flexible-Quantity License	375346-B21
ProLiant Essentials Server Migration Pack, Tracking license	375347-B21
ProLiant Essentials Vulnerability and Patch Management Pack, 1-Server 10-Desktop Bundle License	389941-B21

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

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

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<b>Software</b>	HP digital asset protection	302316-001
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<b>Processor</b>	AMD Opteron 852 2.6 GHz-1MB PC3200 Processor Option Kit	381477-B21
	AMD Opteron 852 2.6 GHz-1MB PC2700 Processor Option Kit	381476-B21
	<b>NOTE:</b> Two 870W Hot Plug Redundant Power Supplies (low line or high line) are required if power redundancy is desired with 2.6GHz processors.	
	AMD Opteron 850 2.4 GHz-1MB Processor Option Kit	366725-B21
	AMD Opteron 848 2.2 GHz-1MB Processor Option Kit	359708-B21
	AMD Opteron 844 1.8 GHz-1MB Processor Option Kit	359707-B21
	AMD Opteron 842 1.6 GHz-1MB Processor Option Kit	359706-B21
	<b>NOTE:</b> Must order two kits to expand the system from 2 to 4 processors	

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## Options

Memory (DIMMs)	1GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 512 MB)	300679-B21
	2GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 1 GB)	300680-B21
	4GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 2 GB)	300682-B21
	1GB of PC2700 DDR SDRAM DIMM Memory (2 x 512 MB)	371047-B21
	2GB of PC2700 DDR SDRAM DIMM Memory (2 x 1 GB)	371048-B21
	4GB of PC2700 DDR SDRAM DIMM Memory (2 x 2 GB)	371049-B21
	2GB of PC3200 DDR SDRAM DIMM Memory (2 x 1 GB)	376639-B21
	4GB of PC3200 DDR SDRAM DIMM Memory (2 x 2 GB)	379300-B21

**NOTE:** The PC2700 DDR SDRAM DIMM Memory Kits are supported by the 2.4 GHz and faster models only.

**NOTE:** For max memory PC2700 performance (333MHz), -002 processor boards must be used in conjunction with no more than 6 PC2700 DIMMs per processor.

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

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Hard Drives	<b><i>Ultra320 SCSI – Universal Hot Plug</i></b>	
	300-GB 10,000 rpm U320 Universal Hard Drive (1")	350964-B22
	146.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286716-B22
	72.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286714-B22
	146.8-GB 15,000 rpm U320 Universal Hard Drive (1")	347708-B22
	72.8-GB 15,000 rpm U320 Universal Hard Drive (1")	286778-B22
	36.4-GB 15,000 rpm U320 Universal Hard Drive (1")	286776-B22

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

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

U320 Hard Drive QS:

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

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

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## Options

Storage Controllers	Smart Array 6402/128 Controller	273915-B21
	Smart Array 6404/256 Controller	273914-B21
	Smart Array 641 Controller	291966-B21
	Smart Array 642 Controller	291967-B21
	<b>NOTE:</b> The Smart Array 641 and 642 Controller must be placed in the 100MHz slots only.	
	256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400	273913-B21
	<b>NOTE:</b> This 256-MB Battery-Backed Cache Module upgrade kit supports the Smart Array 6400 series controller only.	
	64 MB Battery Backed Write Cache Enabler	291969-B21
	<b>NOTE:</b> This 64 MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
	128MB Battery-Backed Cache Enabler	351580-B21
	<b>NOTE:</b> This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
	DL585 Cable Assembly, SCSI, Ultra3, LVDS	365483-B21
	<b>NOTE:</b> All DL585 models ship standard with the integrated Smart Array 5i Plus Controller, which has been designed to deliver maximum performance and availability across the internal SCSI Duplex backplane.	
	<ul style="list-style-type: none"> <li>• The Ultra3 SCSI cable is required only if the customer chooses to bypass the Smart Array 5i Plus Controller and connect slot-based SCSI adapters or RAID controllers to the internal SCSI Duplex backplane.</li> <li>• Two cables are required to maintain the standard, duplexed configuration of the backplane.</li> <li>• One cable is required if the simplex configuration is chosen.</li> </ul>	
	The backplane is easily configured to simplex mode by means of a simple switch (duplex to simplex) located on the top of the backplane itself.	
	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter	268351-B21
	Ultra320 Expansion Module for SA-6402	273911-B21
	<b>NOTE:</b> Please see the following Controller or SCSI Adapter QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information:	
	<a href="http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.HTML</a> (Smart Array 6400 Series)	
	<a href="http://h18000.www1.hp.com/products/quickspecs/12067_div/12067_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12067_div/12067_div.HTML</a> (Smart Array 641)	
	<a href="http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.HTML</a> (Smart Array 642)	
	<a href="http://h18000.www1.hp.com/products/quickspecs/10429_div/10429_div.HTML">http://h18000.www1.hp.com/products/quickspecs/10429_div/10429_div.HTML</a> (SCSI Adapter)	
	<a href="http://h18000.www1.hp.com/products/quickspecs/11555_div/11555_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11555_div/11555_div.HTML</a> (U320 Adapter)	

## Options

<b>Communications</b>	HP NC150T PCI 4-port Gigabit 1000T Combo Switch Adapter	367132-B21
	HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
	HP NC1020 PCI 1000T Gigabit Server Adapter	353377-B21
	HP NC6170 PCI-X Dual Port 1000SX Gigabit Server Adapter	313879-B21
	HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21
	HP NC7771 PCI-X 1000T Gigabit Server Adapter	290563-B21
	HP NC570C PCI-X Dual-port 4x Fabric Adapter	376160-B21
	HP 24-Port 4x Fabric Copper Switch	376227-B21
	HP 4x Fabric 1m Copper Cable	376232-B21
	HP 4x Fabric 3m Copper Cable	376232-B22
	HP 4x Fabric 5m Copper Cable	376232-B23

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<b>Management</b>	Integrated Lights-Out (iLO) Advanced Pack	263825-B21
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<b>Security</b>	HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
	AXL300 Accelerator PCI Card for ProLiant Servers	227933-B21

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<b>Monitors</b>	<b><i>Rack-mount Flat Panel Monitors</i></b>	
	TFT5110R Flat Panel Monitor (Carbon)	281683-B21
	TFT7210R Rack Mounted 17" Monitor	348373-B21

**NOTE:** Monitors larger than 17" may be too heavy for use in rack systems.

**NOTE:** For a complete list of Rack Monitors please view the following URL:  
<http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/>

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

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<b>Tape Drives</b>	<b>NOTE:</b> For complete listing of tape drive offerings see <a href="http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html">http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html</a> For recommended tape drive offerings for this ProLiant server see the following:	
	<b>NOTE:</b> Use of a SCSI adapter to connect these devices is required.	
	<b>Ultrium Tape Drives - External, Rack-Mount and Array</b>	
	HP StorageWorks Ultrium 215 Tape Drive, External (Carbon)	Q1545A
	HP StorageWorks Ultrium 215 rack-mount (Carbon) - Single drive installed in a 1U rack-mount kit	A7444A
	HP StorageWorks Ultrium 448 Tape Drive, External (Carbonite)	DW017A
	HP StorageWorks Ultrium 448, Rack-mount (Carbonite) - Single drive installed in a 1U rack-mount kit	DW028A
	HP StorageWorks Ultrium 460 Tape Drive, External (Carbon)	Q1520A
	HP StorageWorks Ultrium 460, Rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit	350546-B21
	HP StorageWorks Ultrium 960 Tape Drive, External (Carbonite)	Q1539A
HP StorageWorks Ultrium 960 Rack-mount (Carbonite) - Single drive installed in a 3U rack-mount kit	Q1595A	

## Options

**NOTE:** Please see the HP StorageWorks Ultrium Tape Drive QuickSpecs for additional options such as controllers, media, and other related items:  
[http://h18006.www1.hp.com/products/quickspecs/11739\\_div/11739\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11739_div/11739_div.html)  
 (Worldwide)  
[http://h18006.www1.hp.com/products/quickspecs/11739\\_na/11739\\_na.html](http://h18006.www1.hp.com/products/quickspecs/11739_na/11739_na.html)  
 (North America)  
[http://h18006.www1.hp.com/products/quickspecs/12128\\_div/12128\\_div.html](http://h18006.www1.hp.com/products/quickspecs/12128_div/12128_div.html)  
 (Worldwide)  
[http://h18006.www1.hp.com/products/quickspecs/12128\\_na/12128\\_na.html](http://h18006.www1.hp.com/products/quickspecs/12128_na/12128_na.html)  
 (North America)

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

### DAT Drives - External, Rack-Mount and Array Module

HP StorageWorks 1U Rack-Mount Kit with one DAT 72 drive (Carbon)	A7443A
HP StorageWorks DAT 72 Tape Drive, External (Carbon)	Q1523A
HP StorageWorks DAT 40 Tape Drive, External (Carbon)	C5687C
HP StorageWorks DAT 24 Tape Drive, External (Flint)	C1556D

**NOTE:** Please see the DAT Tape Drive QuickSpecs for controllers, media, and other options:

[http://h18000.www1.hp.com/products/quickspecs/11883\\_div/11883\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11883_div/11883_div.HTML)  
 (Worldwide)  
[http://h18000.www1.hp.com/products/quickspecs/11883\\_na/11883\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11883_na/11883_na.HTML)  
 (North America)

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

### Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit	A7445A
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**NOTE:** The 1U Rack-mount Kit can support up to 2 half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including DAT 24, DAT40, DAT72, DLT VS 80, Ultrium 215 and Ultrium 448 tape drives.

HP StorageWorks 3U Rack-Mount Kit	274338-B21
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**NOTE:** The 3U Rack-Mount Kit can support up to 2 full-height or 4 half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including DAT 24, DAT 40, DAT 72, , DLT VS80, SDLT 320, Ultrium 215, Ultrium 230, Ultrium 448, Ultrium 460, and Ultrium 960 Tape Drives.

HP StorageWorks 5U Rack-Mount Kit	274339-B21
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**NOTE:** The 5U Rack-Mount Kit can support up to 4 full-height tape drives and is compatible with SDLT 320, Ultrium 230, Ultrium 460, and Ultrium 960 tape drives.

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

[http://h18000.www1.hp.com/products/quickspecs/10854\\_div/10854\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10854_div/10854_div.HTML)  
 (Worldwide)  
[http://h18000.www1.hp.com/products/quickspecs/10854\\_na/10854\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML)  
 (North America)

### Accessories for 3U & 5U Rack-mount Tape Drive Kits

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

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

## Options

### Tape Autoloaders

#### DAT Autoloader

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

Q1567A

**NOTE:** Please see the DAT 72x6 Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media:

[http://h18006.www1.hp.com/products/quickspecs/11905\\_div/11905\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11905_div/11905_div.html)  
(Worldwide)

[http://h18006.www1.hp.com/products/quickspecs/11905\\_na/11905\\_na.html](http://h18006.www1.hp.com/products/quickspecs/11905_na/11905_na.html)  
(North America)

#### HP StorageWorks 1/8 Tape Autoloader

1/8 Ultrium 460 Tape Autoloader, Tabletop

AA927A

1/8 SDLT 320 Tape Autoloader, Tabletop

AA926A

1/8 Ultrium 230 Tape Autoloader, Tabletop

C9572CB

1/8 DLT VS80 Tape Autoloader, Tabletop

C9264CB

1/8 Tape Autoloader Rackmount Kit

C9268R

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

**NOTE:** Please reference the 1/8 Tape Autoloader QuickSpecs at

<http://www.hp.com/go/automation> for additional information needed to create a complete solution; reference current compatibility information at

<http://www.hp.com/go/ebs>

#### HP StorageWorks SSL1016 Tape Autoloader

SSL1016 Ultrium 460 Tape Autoloader

330821-B21

SSL1016 SDLT 320 Tape Autoloader

330816-B21

**NOTE:** Please reference the SSL1016 Tape Autoloader QuickSpecs at

<http://www.hp.com/go/automation> for additional information needed to create a complete solution; reference current compatibility information at

<http://www.hp.com/go/ebs>.

### Tape Libraries

#### HP StorageWorks MSL6000 Tape Library

##### Ultrium 960 technology

MSL6030, 1 drive, 30 slots, Ultrium 960

AD606A

MSL6030, 2 drive, 30 slots, Ultrium 960

AD607A

MSL6030, 1 drive, 30 slots, Ultrium 960, with embedded FC router

AD608A

MSL6030, 2 drive, 30 slots, Ultrium 960, with embedded FC router

AD609A

MSL6060, 2 drive, 60 slots, Ultrium 960

AD610A

MSL6060, 2 drive, 60 slots, Ultrium 960, with embedded FC router

AD611A

##### SDLT 600 technology

MSL6026, 1 drive, 26 slots, SDLT 600

AD582A

MSL6026, 2 drive, 26 slots, SDLT 600

AD583A

MSL6026, 1 drive, 26 slots, SDLT 600, with embedded FC router

AD584A

MSL6026, 2 drive, 26 slots, SDLT 600, with embedded FC router

AD585A

MSL6052, 2 drive, 52 slots, SDLT 600

AD587A

MSL6052, 2 drive, 52 slots, SDLT 600, with embedded FC router

AD588A

##### Ultrium 460 technology

## Options

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

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

### HP StorageWorks MSL5026S2 Tape Library

MSL5026S2, 1 DRV, SDLT320, RM Library	293472-B22
MSL5026S2, 2 DRV, SDLT320, RM Library	293472-B23
MSL5026S2, 1 DRV, SDLT320, Fibre Channel, RM Library	293472-B24
MSL5026S2, 2 DRV, SDLT320, Fibre Channel, RM Library	293472-B25

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

### HP StorageWorks MSL5052S2 Tape Library

MSL5052S2, 2 DRV, SDLT320, RM Library	293474-B21
MSL5052S2, 2 DRV, SDLT320, Fibre Channel, RM Library	293474-B24

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

### HP StorageWorks MSL5060 Tape Library

MSL5060, 2 DRV, Ultrium 230, RM Library	301899-B22
MSL5060, 2 DRV, Ultrium 230, Fibre Channel, RM Library	301899-B23

**NOTE:** Please reference the [MSL5060 Tape Library QuickSpecs at http://www.hp.com/go/automation](http://www.hp.com/go/automation) for additional information needed to create a complete solution; reference current compatibility information at <http://www.hp.com/go/ebs>.

### HP StorageWorks ESL E-Series Tape Libraries

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

## Options

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

### Magneto-Optical Jukeboxes

#### HP StorageWorks 9.1 GB Mid-range Optical Jukeboxes

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

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

#### HP StorageWorks 9.1 GB High-end Optical Jukeboxes

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

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

#### HP StorageWorks Ultra Density Optical Storage

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

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



## Options

Cluster Options	ProLiant Cluster Starter Kit	364023-B21
	<b>NOTE:</b> For additional information regarding the ProLiant Cluster Starter Kit please see the following QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html">http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11935_div/11935_div.html">http://h18000.www1.hp.com/products/quickspecs/11935_div/11935_div.html</a> (Worldwide)	
	ProLiant Cluster Kit with OpenView Storage Mirroring	364025-B21
	<b>NOTE:</b> For additional information regarding the ProLiant Cluster Kit with OpenView Storage Mirroring please see the following QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/11934_na/11934_na.html">http://h18000.www1.hp.com/products/quickspecs/11934_na/11934_na.html</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11934_div/11934_div.html">http://h18000.www1.hp.com/products/quickspecs/11934_div/11934_div.html</a> (Worldwide)	
	ProLiant Cluster HA/F200 for the Entry Level SAN	364026-B21
	ProLiant Cluster HA/F200 for the Entry Level SAN (Japan)	364026-291
	<b>NOTE:</b> For additional information regarding the ProLiant Cluster for Entry Level SAN please see the following QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html">http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11932_div/11932_div.html">http://h18000.www1.hp.com/products/quickspecs/11932_div/11932_div.html</a> (Worldwide)	
	ProLiant Cluster HA/F500 for the Enterprise SAN	364024-B21
	HP Serviceguard for Linux ProLiant Cluster A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (2 node license cluster kit)	305199-B24
	HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 and Red Hat EL 3 (2 node license cluster kit)	305199-B25
	HP Serviceguard for Linux License A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (single license version)	307754-B24
	HP Serviceguard for Linux A.11.16 for SUSE SLES9 and Red Hat EL 3 (single license version)	307754-B25
	<b>NOTE:</b> For additional information regarding HP Serviceguard for Linux, please see the following QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html">http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html">http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html</a> (Worldwide)	

## Options

External Storage – Rack	HP StorageWorks Modular Smart Array 20	335921-B21
	<b>NOTE:</b> Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	
	HP StorageWorks Modular Smart Array 20 Starter Kit	366172-B21
	<b>NOTE:</b> Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies. Includes Smart Array 6402/128 Controller.	
	<b>NOTE:</b> The Modular Smart Array Enclosure 20 Family supports the SATA 1.5Gb/s 1" Hot Plug Hard Drives.	
	HP StorageWorks Modular Smart Array 30 SB	302969-B21
HP StorageWorks Modular Smart Array 30 DB	<b>NOTE:</b> Rack-mountable 14 drive enclosure with single bus, redundant power supplies	
	HP StorageWorks Modular Smart Array 30 DB	302970-B21
	<b>NOTE:</b> Rack-mountable 14 drive enclosure with dual bus, redundant power supplies	
Redundant Power Supply 499W	<b>NOTE:</b> The Modular Smart Array Enclosure 30 Family supports the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.	
	Ultra320 Dual Bus I/O Module for MSA30	338296-B21
	Ultra320 Single Bus I/O Module for MSA30	287483-B21 287484-B21
HP StorageWorks Modular Smart Array 500	HP StorageWorks Modular Smart Array 500 Generation 2 <b>NOTE:</b> 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: <a href="http://h18000.www1.hp.com/products/quickspecs/11956_na/11956_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11956_na/11956_na.HTML</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.HTML</a> (Worldwide)	335880-B21
HP StorageWorks Modular Smart Array 1500 cs	Modular Smart Array 1500 Controller Shelf <b>NOTE:</b> Please see the StorageWorks Modular SAN Array 1500 cs QuickSpecs for additional options and configuration information at: <a href="http://www.hp.com/go/MSA1500cs">http://www.hp.com/go/MSA1500cs</a>	AA986A
HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000 <b>NOTE:</b> Please see the Modular Smart Array 1000 QuickSpecs for additional options and configuration information at <a href="http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML</a> (Worldwide)	201723-B22

## Options

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

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

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

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

UPS and PDU Power Cord Matrix	<i>Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units:</i> <a href="ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf">ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf</a> .
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Uninterruptible Power Systems – Rack	HP UPS R1500 XR (1440VA, 1340 Watt), Low Voltage (NA)	204404-001
	HP UPS R1500 XR (1500VA, 1340 Watt), High Voltage (Int'l)	204404-B31
	HP UPS R1500 XR (1500VA, 1340 Watt), Low Voltage (Japan)	204404-291
	HP UPS R3000 XR (2880VA, 2700 Watt), Low Voltage (NA)	192186-001
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (NA)	192186-002
	HP UPS R3000 XR (2400VA, 2250 Watt), Low Voltage (Japan)	192186-291
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Japan)	192186-292
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Int'l - detachable cord)	192186-B31
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A IEC309 Plug)	192186-B32
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A CEE 7/7 SCHUKO Plug)	192186-B33
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A BS-546 Plug)	192186-AR1
	HP UPS R5500 XR (5000VA, 4500 Watt) High Voltage (NA/JPN, L6-30P)	326529-D71
	HP UPS R5500 XR (6000VA, 5400 Watt) High Voltage (Int'l, IEC-309)	326529-B31
	HP UPS R12000 XR N+x (12000VA, 12000 Watt) (WW-hardwired)	207552-B22

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

## Options

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

<b>Modular Power Distribution Units 1U/0U</b> (Up to 32 outlets) <b>NOTE:</b> 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) (NA, Japan)	252663-D71
	<b>NOTE:</b> This mPDU (252663-D71) may also be used to connect the low volt model of the UPS R3000 XR.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) (NA, Japan)	252663-D72
	HP Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) (WW)	252663-B21
	<b>NOTE:</b> This mPDU (252663-B21), 40A model has a hardwired input.	
HP Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC) (WW)	252663-B24	
<b>NOTE:</b> 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 UPS R3000 XR. For North America, need to order cable PN 340653-001.		
<b>NOTE:</b> 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: <a href="http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.HTML</a> (Worldwide)		

<b>USB Options</b>	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	256MB HP Drive Key (USB 2.0)	PH657A

## Options

Custom Builder	Please see the Enterprise Configurator for configuration assistance at: <a href="http://www.hp.com/products/configurator">http://www.hp.com/products/configurator</a> .	
Third Party Rack Kit	DL585 rack model support: The DL580 G2/585 Third Party rack kit 287528-B21 provides support for any rack, square hole or round hole, (including HP Rack System /E and HP Systems), with an adjustment range from 23 1/2" – 34" deep. <b>NOTE:</b> The Third party rack kit is required for round hole racks or for square hole racks that do not conform to the adjustment range of the standard rail that ships with the server.	287528-B21
Telco Rack Support	DL585 rack model support: Support for all 2-post Telco racks requires the Third Party option kit 287528-B21, plus an additional option kit from Rack Solutions. The Rack Solutions brackets can be purchased at: <a href="http://www.racksolutions.com/hp">http://www.racksolutions.com/hp</a> . Rack Adapter Kit	287528-B21 332815-B21
HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled	358254-B21
Rack Options for Rack 5000 Series	Stabilizer Kit for 5642 Rack (Graphite Carbon) <b>NOTE:</b> The stabilizing kit is used to prevent rack from tipping over. Baying Kit for 5642 Rack (Graphite Carbon) <b>NOTE:</b> The baying kit is used to join two or more HP 5642 racks.	374493-B21 374499-B21
HP Rack 10000 Series (Graphite Metallic)	Rack, HP Infrastructure 42U (HV) Rack, HP Infrastructure 42U (LV) HP Rack S10614 (14U) Rack Cabinet – Shock Pallet HP Rack 10842 (42U, 800mm wide) – Pallet HP Rack 10842 (42U, 800mm wide) – Shock Pallet HP Rack 10647 (47U) – Pallet HP Rack 10647 (47U) – Crated HP Rack 10642 (42U) – Pallet HP Rack 10642 (42U) – Shock Pallet HP Rack 10642 (42U) – Crated HP Rack 10636 (36U) – Pallet HP Rack 10636 (36U) – Shock Pallet HP Rack 10636 (36U) – Crated HP Rack 10622 (22U) – Pallet HP Rack 10622 (22U) – Shock Pallet HP Rack 10622 (22U) – Crated	379005-001 379006-001 292302-B22 257415-B21 257415-B22 245160-B21 245160-B23 245161-B21 245161-B22 245161-B23 245162-B21 245162-B22 245162-B23 245163-B21 245163-B22 245163-B23

## Options

**NOTE:** -B21 (pallet) used to ship empty racks shipped on a truck  
 -B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels)  
 -B23 (crated) used for air shipments of empty racks

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

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

[http://h18000.www1.hp.com/products/quickspecs/10995\\_na/10995\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML)  
 (North America)

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

### Rack Options for HP Rack 10000 Series

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

HP Rack Light Kit (Neon)	361589-B21
HP Rack Plinth Kit (Carbon)	251960-B21
42U Side Panel – Graphite Metallic	246099-B21
36U Side Panel – Graphite Metallic	246102-B21
47U Side Panel – Graphite Metallic	255486-B21
TFT5600 Rack Keyboard Monitor	221546-xx1

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

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

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

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

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

## Options

<b>HP KVM Switch Options</b>	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	IP Console Switch Box (KVM/IP), 1 x 1 x 16	262585-B21
	IP Console Switch Box (KVM/IP), 3 x 1 x 16	262586-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	CAT5 KVM USB Interface Adapter	336047-B21
	CAT5 KVM Expansion Module	262589-B21
	CAT5 KVM Serial Interface Adapter	373035-B21
	CAT5e Cable 3', 4 pack	263474-B21
	CAT5e Cable 6', 8 pack	263474-B22
	CAT5e Cable 12', 8 pack	263474-B23
	CAT5e Cable 20', 4 pack	263474-B24
	CAT5e Cable 40', 1 pack	263474-B25
	HP 1x4 USB/PS2 KVM Switch, RM (ALL)	371302-B21
	HP 1x4 USB/PS2 KVM Switch, TT, (EURO)	371301-A21
	HP 1x4 USB/PS2 KVM Switch, TT (UK)	371301-031
	HP 1x4 USB/PS2 KVM Switch, TT, (AUST/NZ)	371301-011
	HP 1x4 USB/PS2 KVM Switch, TT, (NA/JPN)	371301-D71
	HP 6ft, 2-Pack, PS2 with audio KVM cable	371730-B21
	HP 6ft, 2-Pack, USB with audio KVM cable	371729-B21

**NOTE:** For additional information regarding HP KVM Switches and options, please see the following URL:

<http://h18004.www1.hp.com/products/servers/proliantstorage/rack-options/list.html#console>

## Service and Support Offerings (HP Care Pack Services)

### Hardware Services On-site Service

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years	U4607A
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	U4607E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years	U4608A
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4608E

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

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years	U4609A
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4609E

### Installation & Start-up Services

Hardware Installation	U4617A
Hardware Installation, Electronic	U4617E
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.	U4618A
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	U4618E

## Options

### **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. U4619A

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 U4619E

### **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. U4620A

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 U4620E

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. U6316A

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 U6316E

Onsite HW support 24x7, 4hr response and Red Hat AS Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. U9239A

Onsite HW support 24x7, 4hr response and Red Hat AS Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U9239E

**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 DL585 2P Models

#### Standard Memory

4GB PC3200 Double Data Rate (DDR) SDRAM (Registered SDRAM) memory running at 400MHz or  
 2GB PC2100 Double Data Rate (DDR) SDRAM (Registered SDRAM) memory running at 266MHz or  
 2GB PC2700 Double Data Rate (DDR) SDRAM (Registered SDRAM) memory running at 333MHz with Advanced ECC

#### Rules:

- Must install a minimum of 2 DIMMs in the processor memory board in slot 2
- DIMMs on a processor memory board must be installed in pairs and in bank order
- All DIMMs on a processor memory board must be of the same size (512 MB, 1 GB, or 2 GB)
- Each processor memory board can have different amounts of memory, ex. Processor memory board 2 = (4) 1 GB, Processor memory board 1 = (2) 512 MB, Processor memory board 4 = no memory
- PC2700 memory support requires -002 processor board
- 333MHz memory performance requires no more than 6 PC2700 DIMMs per processor board; any more will result in the memory slowing down to 266MHz
- PC3200 memory, running at 400MHz will be supported on a PC3200-only processor board (012567-001) with 4 DIMM slots, resulting in a system max of 32GB with 4 processors

The following memory options are available from HP:

1GB of PC2100 DDR SDRAM DIMM Memory Kit (2x512 MB)	300679-B21
2GB of PC2100 DDR SDRAM DIMM Memory Kit (2x1 GB)	300680-B21
4GB of PC2100 DDR SDRAM DIMM Memory Kit (2x2 GB)	300682-B21
1GB of PC2700 DDR SDRAM DIMM Memory (2x512 MB)	371047-B21
2GB of PC2700 DDR SDRAM DIMM Memory (2x1 GB)	371048-B21
4GB of PC2700 DDR SDRAM DIMM Memory (2x2 GB)	371049-B21
2GB of PC3200 DDR SDRAM DIMM Memory (2x1 GB)	376639-B21
4GB of PC3200 DDR SDRAM DIMM Memory (2x2 GB)	379300-B21

Standard Memory Configuration								
Total Memory = 2 GB								
	1	2	3	4	5	6	7	8
Board 1	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
Board 2	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
Board 3 (optional)	Not installed	–	–	–	–	–	–	–
Board 4 (optional)	Not installed	–	–	–	–	–	–	–

Examples of other optional configurations include, but are not limited to:

Example #1: Optional Memory Configuration								
Standard Memory plus Optional Processor Memory Boards and Processors								
Total Memory = 32 GB								
	1	2	3	4	5	6	7	8
Board 1	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
Board 2	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
Board 3 (optional)	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Board 4 (optional)	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB



## Memory

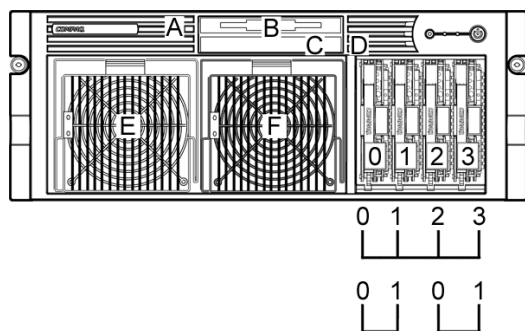
### Example #2: Maximum Memory Configuration

Maximum Memory (Standard replaced with Optional Memory and Optional Memory Board)

Total Memory = 64 GB

	1	2	3	4	5	6	7	8
Board 1	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Board 2	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Board 3 (optional)	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Board 4 (optional)	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

## Storage



- A Diskette Drive eject button
- B Ejectable: 24x IDE CD-ROM (Slimline)
- C Ejectable: 1.44-MB Diskette Drive (Slimline)
- D CD-ROM Drive eject button
- E 870 Watt (low line or high line) Redundant Hot Plug Power Supply
- F 870 Watt (low line or high line) Primary Hot Plug Power Supply
- 0-3 Wide Ultra3 Drive Cage (Duplex or Simplex configurable). Duplex is standard shipping configuration

## Drive Support

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

## Hard Drives

### Ultra320 Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
<b>1-inch</b>	Up to 4	0-3	Smart Array 5i Plus Controller (integrated on system board)
300-GB 10,000 rpm			Smart Array 6402/128 Controller
146.8-GB 10,000 rpm			Smart Array 6404/256 Controller
72.8-GB 10,000 rpm			Smart Array 641 Controller
148.8-GB 15,000 rpm			Smart Array 642 Controller
72.8-GB 15,000 rpm			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
36.4-GB 15,000 rpm			

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

## Storage

### External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family	Up to 13	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Modular Smart Array 1000	Please see the <a href="#">Modular Smart Array 1000 QuickSpecs</a> 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 1500 cs	Please see the <a href="#">Modular Smart Array 1500 cs QuickSpecs</a> 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:

[http://h18000.www1.hp.com/products/quickspecs/11033\\_div/11033\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML) (Worldwide)

Modular Smart Array 1500 cs: <http://www.hp.com/go/MSA1500cs>

### Maximum Storage Capacity – (External Enclosure Attached)

Internal	1.20 TB (4 x 300 GB Ultra320 SCSI 1" Drives)
External	84.00 TB (20 x (14 x 300 GB Ultra320 SCSI 1" Drives))
Total	85.20 TB

### Tape Drives, Tape Autoloaders, and Tape Libraries

**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](http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html) (North America)

<http://h18000.www1.hp.com/products/quickspecs/Division/10233.html> (Worldwide)

**NOTE:** For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders & Tape Libraries listed below, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/North\\_America/10809.html](http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html) (North America)

<http://h18000.www1.hp.com/products/quickspecs/Division/10809.html> (Worldwide)

Quantity Supported	Position Supported	Controller
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## Storage

<b>HP StorageWorks Tape Drives, External</b> Ultrium 215 Ultrium 230 Ultrium 448 Ultrium 460 DAT 72 Tape Drive DAT 40 Tape Drive DAT 24 Tape Drive	Up to 2	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter
<b>HP StorageWorks Tape Drives, External</b> Ultrium 960	1	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter
<b>HP StorageWorks Rack-mount Tape Drive Enclosures</b> 1U Rack-Mount Kit 3U Rack-Mount Kit 5U Rack-Mount Kit	1	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter
<b>HP StorageWorks Autoloaders, External</b> DAT 72x6 Tape Autoloader 1/8 Tape Autoloader SSL1016 Tape Autoloader	1 autoloader per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter
<b>HP StorageWorks Tape Libraries, External</b> MSL6000 (Ultrium 960 - based) MSL6000 (SDLT 600- based) MSL6000 (Ultrium 460 - based) MSL5026S2 (SDLT 320- based) MSL5052S2 (SDLT 320- based)	<a href="#">Please reference the MSL Tape Library QuickSpecs to determine configuration requirements</a>	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter
<b>HP StorageWorks ESL E-Series Tape Libraries</b> ESL 712e ESL 630e ESL 322e ESL 286e	<a href="#">Please reference the ESL E-series Tape Libraries QuickSpecs to determine configuration requirements</a>	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

## Power Specifications

Part Number	384413-001 (870W)
Spare Kit	192201-002 (870W)
Operational Input Voltage Range (V rms)	90 to 264
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	800	800	800	800	800	800
Nominal Input Current (A rms)	11.7	9.9	5.2	4.9	4.7	4.5
Max Rated Input Wattage Rating (Watts)	1143	1111	1067	1067	1067	1053
Max. Rated VA (Volt-Amp)	1166	1134	1088	1088	1088	1074
Efficiency (%)	70	72	75	75	75	76
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	.43	.50	.90	.96	1.00	1.04
Maximum Inrush Current (A peak)	25	25	25	25	25	25
Maximum Inrush Current duration	20	20	20	20	20	20

## System Specifications

### DL585 Fully Configured

4 processors, 32 memory modules, 4 hard drives, 8 PCI-X expansion cards, 8 hot plug fans, and 2 hot plug power supplies.

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Fully Loaded System Input Wattage (W)	954	928	890	890	890	879
Fully Loaded System Input Current (A rms)	10	8.5	4.4	4.1	4.0	3.7
Fully Loaded System Thermal (BTU- Hr)	3253	3163	3063	3063	3063	2996
Fully Loaded System VA (Volt-Amp)	1004	976	909	909	909	897
System Leakage with all power supplies loaded (mA)	.87	1.00	1.81	1.91	2.00	2.09
System Inrush Current with all power supplies loaded (A)	50	50	50	50	50	50
Power cord requirements	Nema 5-15P to IEC320-C19			Option no./Spare no: 235603-001/237457-001		
	PDU Jumper Cord IEC320-C19 to IEC320-C20			Option no./Spare no: 295633-B21/295508-001		
	PDU Jumper Cord IEC320-C14 to IEC320-C19			Option no./Spare no: 291034-001/292241-001		

### NOTES:

\* 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/powercalcs.asp>.

To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL585
- Click on: "Power Calculator" link (You may need to scroll down to see it.)

## Power Specifications

Power Cords	Power Cord Part Number
Country	
US	295529-001
AUST	295529-011
EURO	295529-021
UK	295529-031
Japan	295529-291

## Technical Specifications

<b>System Unit Rack</b>	<b>Chassis Footprint</b> (HxWxD)	6.94 x 19 x 26.5 in (17.6 x 48.3 x 67.3 cm)								
	<b>Weight</b> No hard drives installed, one power supply	66 lb (29.9 kg)								
	<b>Input Requirements</b>	<table border="0"> <tr> <td>Rated Input Voltage</td> <td>100 to 120 VAC/200 to 240 VAC</td> </tr> <tr> <td>Rated Input Frequency</td> <td>50 to 60 Hz</td> </tr> <tr> <td>Input Power</td> <td>1135W @ 110 VAC/1125W @ 220 VAC</td> </tr> <tr> <td>Rated Input Current</td> <td>12A (100 VAC), 9.8A (120 VAC), 4.9A (220 VAC)</td> </tr> </table>	Rated Input Voltage	100 to 120 VAC/200 to 240 VAC	Rated Input Frequency	50 to 60 Hz	Input Power	1135W @ 110 VAC/1125W @ 220 VAC	Rated Input Current	12A (100 VAC), 9.8A (120 VAC), 4.9A (220 VAC)
Rated Input Voltage	100 to 120 VAC/200 to 240 VAC									
Rated Input Frequency	50 to 60 Hz									
Input Power	1135W @ 110 VAC/1125W @ 220 VAC									
Rated Input Current	12A (100 VAC), 9.8A (120 VAC), 4.9A (220 VAC)									
	<b>Max BTU Rating</b>	4000 BTU								
	<b>Power Specifications</b>	<p>To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at URL: <a href="http://h30099.www3.hp.com/configurator/powercalcs.asp">http://h30099.www3.hp.com/configurator/powercalcs.asp</a>.</p> <p>To drill down to calculators:</p> <ul style="list-style-type: none"> <li>• Click on: "ProLiant Servers"</li> <li>• Click on the Server of interest. Example: DL585</li> <li>• Click on: "Power Calculator" link (You may need to scroll down to see it.)</li> </ul>								
	<b>Power Supply Output Power</b> (per power supply)	<table border="0"> <tr> <td>Rated Steady-State Power</td> <td>800W/800W (lowline/highline)</td> </tr> <tr> <td>Maximum Peak Power</td> <td>800W/800W (lowline/highline)</td> </tr> </table>	Rated Steady-State Power	800W/800W (lowline/highline)	Maximum Peak Power	800W/800W (lowline/highline)				
Rated Steady-State Power	800W/800W (lowline/highline)									
Maximum Peak Power	800W/800W (lowline/highline)									
	<b>Temperature Range</b>	<table border="0"> <tr> <td>Operating</td> <td>50° to 95° F (10° to 35° C)</td> </tr> <tr> <td>Non-operating</td> <td>-20° to 140° F (-29° to 60° C)</td> </tr> <tr> <td>Shipping</td> <td>-22° to 122° F (-30° to 50° C)</td> </tr> </table>	Operating	50° to 95° F (10° to 35° C)	Non-operating	-20° to 140° F (-29° to 60° C)	Shipping	-22° to 122° F (-30° to 50° C)		
Operating	50° to 95° F (10° to 35° C)									
Non-operating	-20° to 140° F (-29° to 60° C)									
Shipping	-22° to 122° F (-30° to 50° C)									
	<b>Relative Humidity</b> (non-condensing)	<table border="0"> <tr> <td>Operating</td> <td>10% to 70%</td> </tr> <tr> <td>Non-operating</td> <td>5% to 95%</td> </tr> </table>	Operating	10% to 70%	Non-operating	5% to 95%				
Operating	10% to 70%									
Non-operating	5% to 95%									
	<b>Maximum Wet Bulb Temperature</b>	101.7° F (38.7° C)								
	<b>Acoustic Noise</b>	<p><b>NOTE:</b> Listed are the declared A-weighted sound power levels LWAd and the declared average bystander position sound pressure levels LpAm when operating in a 23° C ambient environment. Noise emissions were measured in accordance with ECMA 74 and declared in accordance with ECMA 109.</p> <p>Idle (Fixed Disk Drives Spinning)</p> <table border="0"> <tr> <td>L WAd (BELS)</td> <td>7.3</td> </tr> <tr> <td>L pAm (dBA)</td> <td>55</td> </tr> </table> <p>Operating Minimum (Random Seeks to Fixed Disks)</p> <table border="0"> <tr> <td>L WAd (BELS)</td> <td>7.3</td> </tr> <tr> <td>L pAm (dBA)</td> <td>55</td> </tr> </table> <p><b>NOTE:</b> These values apply to 4U rack configuration with the Health Driver Fan Control active. Configuration tested included 2 AMD Opteron 2.2 GHz processors, 1 15 krpm hard drive, 2 power supplies, 4 memory/IO fans and 4 CPU fans.</p>	L WAd (BELS)	7.3	L pAm (dBA)	55	L WAd (BELS)	7.3	L pAm (dBA)	55
L WAd (BELS)	7.3									
L pAm (dBA)	55									
L WAd (BELS)	7.3									
L pAm (dBA)	55									



## Technical Specifications

<b>24X Max (or higher) IDE CD-ROM Drive Slim Line</b>	<b>Disk</b>	Applicable Disk	CD-DA, CD-ROM (Mode 1 and 2) CD-XA, CD-I (Mode 2, Form 1 and 2) Photo CD (Single and Multi-session) Mixed Mode (Audio and Data combined)
		Capacity	540 MB (Mode 1, 12 cm) 650 MB (Mode 2, 12 cm)
		Diameter	4.7 x 3.15 in (12 x 8 cm)
		Rotational Speed	4200 rpm maximum
		Center Hole	0.6 in/15 mm diameter
		Thickness	1.2 mm
		Track Pitch	1.6 $\mu$ m
	<b>Block Size</b>	Mode 1	2,048
		Mode 2	2,340, 2,336, 1,024 bytes
		CD-DA	2,352 bytes
		CD-XA	2,328 bytes
	<b>Interface</b>	IDE (ATAPI)	
	<b>Access Times (typical)</b>	Random	100 ms
		Full-Stroke	2000 ms
	<b>Audio Output Level</b>	Line-Out	0.7 VRMS at 47 kOhms
		Headphone	0.6 VRMS at 32 kOhms (maximum volume)
	<b>Data Transfer Rate</b>	Sustained	150 KB/s (sustained 1X)
		Burst	2100 to 3600 KB/s
	<b>Cache Buffer</b>	128 KB	
	<b>Start-up Time (typical)</b>	< 7seconds	
	<b>Stop Time</b>	< 4seconds	
	<b>Laser Parameters</b>	Type	Semiconductor Laser GaAlAs
		Wave Length	780 $\pm$ 25 nm
		Divergence Angle	53.5 $^{\circ}$ $\pm$ 1.5 $^{\circ}$
		Output Power	0.14 mW
	<b>Operating Conditions</b>	Temperature	41 $^{\circ}$ to 113 $^{\circ}$ F (5 $^{\circ}$ to 45 $^{\circ}$ C)
		Humidity	10% to 80%
	<b>Dimensions</b>	(HxWxD, maximum)	1.69 x 5.75 x 8.19 in (4.29 x 15 x 20.8 cm)
		Weight	2.66 lb (1.2 kg)

Slim Line CD-RW/DVD-ROM 24X Combo Drive (Multibay)

Shipping Dimensions  
Shipping Weight  
Disk

13.88 x 11.38 x 9.25 in (35.26 x 28.91 x 23.50 cm)  
5 lb (2.27 kg)  
Applicable Disk

DVD-ROM  
DVD-R (Read Only)  
2.6 GB/side DVD-RAM (Read Only)  
5.2 GB/side DVD-RAM (Read Only)  
CD-ROM Mode-1 data disc  
CD-ROM Mode-2 data disc  
CD Audio disc

## Technical Specifications

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

## Technical Specifications

Integrated Lights-Out Standard (integrated on system board)	Architecture	32-bit PCI-based health and remote management ASIC (Application Specific Integrated Circuit)
	Processor	32-bit RISC processor core running at 66 MHz
	Upgradeability	Option firmware upgradeable via flash ROM.
	Video Support	Utilizes the host server's embedded video chip. Supports VGA/SVGA, 640 x 480 (256 to 16.7M colors), 800 x 600 (256 to 16.7M colors), 1024 x 768 (256 to 65K colors), 1280 x 1024 (256 colors)
	Interfaces	One Ethernet network connection (10/100 Mb/s)
	Memory	2-MB Flash ROM 8-MB SDRAM
	Operating System Support	Windows 2000 Server Windows 2000 Advanced Server Red Hat 7.x SuSE 7.0
	Client Browser Support	Microsoft Internet Explorer 5.5 or later.
	iLO Standard Features	Virtual Text Remote Console Virtual Power Button Control Dedicated LAN Connectivity Automatic IP Configuration via DHCP/DNS/WINS Industry Standard 128-bit Secure Sockets Layer (SSL) Security IML and iLO Event Logging Support for up to 12 user accounts with customizable access privileges
	iLO Advanced Features (optional)	Virtual Graphical Remote Console Virtual Floppy Drive

Integrated Smart Array 5i Plus Controller	Data Compatible with all Smart Array Controllers	Yes
	Instant Upgrades to other Smart Array Controllers	Yes
	Consistent Software Manageability Tools	Yes
	PCI-X Bus	64-bit, 100 MHz (integrated on system board)
	PCI-X Peak Data Transfer Rate	800 MB/s
	SCSI Protocols Supported	Ultra3, Ultra2
	SCSI Peak Data Transfer Rate	160 MB/s per channel
	<b>NOTE:</b> For ProLiant servers having TWO internal drive bays on separate SCSI ports: SCSI Peak Data Transfer Rate is 320 MB/s total; 160 MB/s per channel and Channels is 2.	
	Channels	2 (only one connected)
	<b>NOTE:</b> For ProLiant servers having two internal drive bays on separate SCSI ports: SCSI Peak Data Transfer Rate is 320 MB/s total; 160 MB/s per channel and Channels is 2.	
	SCSI Ports (external/internal)	0/1

## Technical Specifications

**NOTE:** For ProLiant servers having two internal drive bays on separate SCSI ports: SCSI Peak Data Transfer Rate is 320 MB/s total; 160 MB/s per channel and Channels is 2.

**Drives Supported** 2  
(maximum)

**NOTE:** Maximum is the total number of internal drives on each specific ProLiant server.

**Cache** 64 MB Read and/or Write Cache

**Battery-Backed Write Cache** Yes, with installation of Battery-Backed Write Cache Enabler, up to 64MB Cache

**RAID Support** 0, 1, 1+0, 5

**Logical Drives (maximum)** Maximum = total number of drives

**Online Configuration** Yes

**Online Capacity Expansion** Yes

**Logical Drive Capacity Extension** Yes

**Online Stripe Size Migration** Yes

**Online RAID Level Migration** Yes

**Online Spare Support** Yes

**Automatic Data Recovery** Yes

**Drive Roaming** Yes

**Redundant Controllers** No

### Dual Port NC7782

**Network Interface** 10/100/1000-T

**Compatibility** IEEE 802.3 10Base-T  
IEEE 802.3ab 1000Base-T  
IEEE 802.3u 100Base-TX

**Data Transfer Method** 64-bit/133MHz PCI-X

**Network Transfer Rate**

10Base-T (Half-Duplex)	10 Mb/s
10Base-T (Full-Duplex)	20 Mb/s
100Base-TX (Half-Duplex)	100 Mb/s
100Base-TX (Full-Duplex)	200 Mb/s
1000Base-TX (Half and Full-Duplex)	2000 Mb/s

**Connector** RJ-45

**Cable Support** 10Base-T Category 3, 4 or 5 UTP up to 328 ft (100 m)  
10/100/1000Base-T Category 5 UTP (2 pair); up to 328 ft (100 m)

## *Technical Specifications*

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