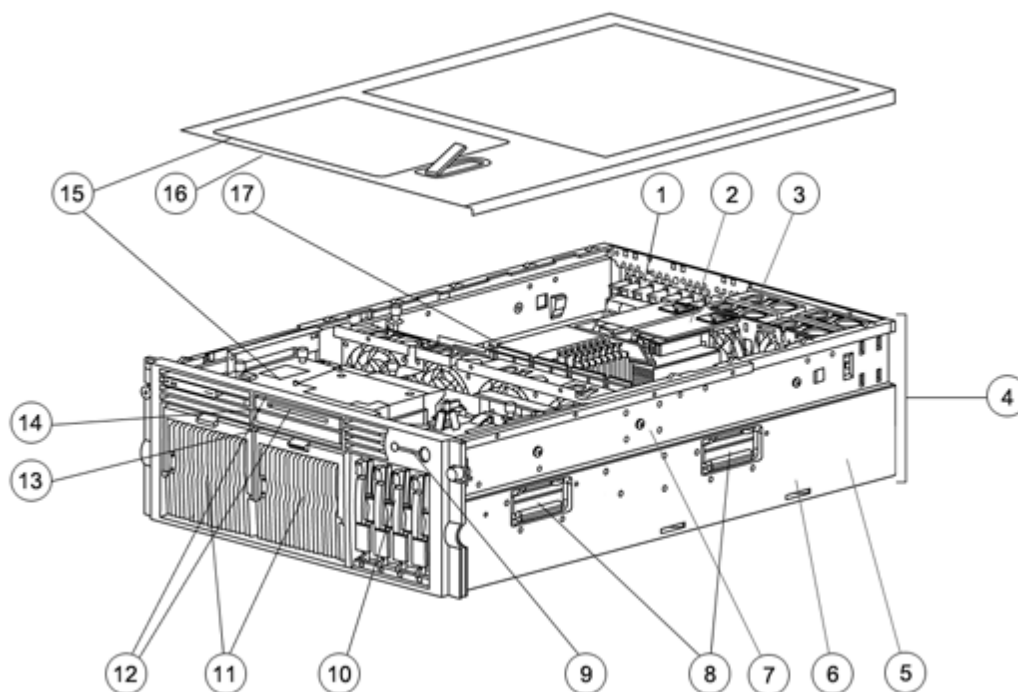


Overview



1. Eight 64-bit PCI-X I/O Slots (Six 100 MHz, two 133 MHz)
2. 2 or 4 processors/memory boards
3. 2 or 4 AMD Opteron 800 Series Processors
4. Up to 128 GB of PC2700 DDR SDRAM with Advanced ECC, running at 266 MHz, 64 GB of PC2700 running at 333 MHz or 32 GB of PC3200 running at 400 MHz
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, upgradeable to SFF SAS drive technology
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 dual core AMD Opteron Model 880 processor, running at 2.4 GHz (two or four processors supported) with PC3200 or PC2700
- Support for AMD Opteron Model 854 processor, running at 2.8 GHz (two or four processors supported) with PC3200 or PC2700
- Support for new SAS SFF drive technology

Overview

At A Glance

- Delivering maximum performance in a versatile, rack optimized form factor
- AMD Opteron 800 series 2.4 GHz, 2.2 GHz or 1.8 GHz dual core or 2.8 GHz, 2.6 GHz, 2.4 GHz or 2.2 GHz single core processors (two or four supported)
- AMD Opteron 8000 chipset supporting up to 1 GHz HyperTransport
- 4 GB of PC3200 DDR SDRAM, running at 400 MHz, expandable to 32 GB, or 2 GB of PC2700 DDR SDRAM, running at 333 MHz, expandable to 128 GB with support for PC2700 DDR with Advanced ECC SDRAM (64 GB running at 333 MHz or 128 GB running at 266 MHz)
- Eight full length 64-bit PCI-X slots, 6 100 MHz, 2 133 MHz
- 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
- Multi-Bay floppy and CD-ROM drives
- Choice of Internal Hot Plug Drive Storage; Up to 1.20 TB (4 x 300 GB Ultra320 SCSI 1" hard drives) or up to 582 GB (8 x 72.8 GB SAS SFF hot plug drives; one DAT hot plug tape drive and two hot plug 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 and a worldwide network of resellers and service providers. Three-year Next Business Day, on-site limited global warranty. Certain restrictions and exclusions apply. Pre-Failure Notification on processors, memory, and SCSI hard drives. SATA hard drives have a one-year warranty.

Standard Features

Processor Two or four of the following depending on Model	AMD Opteron model 880, dual core running at 2.4 GHz (2 or 4 supported) AMD Opteron model 875, dual core running at 2.2 GHz (2 or 4 supported) AMD Opteron model 865, dual core running at 1.8 GHz (2 or 4 supported) AMD Opteron model 854, running at 2.8 GHz (2 or 4 supported) AMD Opteron model 852, running at 2.6 GHz (2 or 4 supported) 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						
Upgradeability	Upgradeable to quad processing Upgradeable to SAS drive technology						
Chipset	AMD Opteron 8000 series chipset						
Memory Protection & Functionality	Advanced ECC						
Memory	<table border="0"> <tr> <td data-bbox="329 1032 595 1073">Type</td> <td data-bbox="595 1032 1478 1144"> PC2100 DDR SDRAM, running at 266 MHz PC2700 DDR SDRAM, running at 333 MHz PC3200 DDR SDRAM, running at 400 MHz </td> </tr> <tr> <td data-bbox="329 1144 595 1185">Standard</td> <td data-bbox="595 1144 1478 1267"> 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) 8 GB (8 x 1024 MB x Processor Boards) (PC3200 DDR SDRAM) </td> </tr> <tr> <td data-bbox="329 1267 595 1308">Maximum</td> <td data-bbox="595 1267 1478 1441"> 32 GB (PC3200 DDR SDRAM) 128 GB (PC2700DDR SDRAM) NOTE: PC2700 only supported on 2.4 GHz and faster single core models and all dual core models. Also PC3200 only supported on 2.6 GHz single core models and dual core models. </td> </tr> </table>	Type	PC2100 DDR SDRAM, running at 266 MHz PC2700 DDR SDRAM, running at 333 MHz PC3200 DDR SDRAM, running at 400 MHz	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) 8 GB (8 x 1024 MB x Processor Boards) (PC3200 DDR SDRAM)	Maximum	32 GB (PC3200 DDR SDRAM) 128 GB (PC2700DDR SDRAM) NOTE: PC2700 only supported on 2.4 GHz and faster single core models and all dual core models. Also PC3200 only supported on 2.6 GHz single core models and dual core models.
Type	PC2100 DDR SDRAM, running at 266 MHz PC2700 DDR SDRAM, running at 333 MHz PC3200 DDR SDRAM, running at 400 MHz						
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) 8 GB (8 x 1024 MB x Processor Boards) (PC3200 DDR SDRAM)						
Maximum	32 GB (PC3200 DDR SDRAM) 128 GB (PC2700DDR SDRAM) NOTE: PC2700 only supported on 2.4 GHz and faster single core models and all dual core models. Also PC3200 only supported on 2.6 GHz single core models and dual core models.						
Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter						

Standard Features

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).

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).

Storage

Diskette Drive	1.44 MB Diskette Drive (slimline) – ejectable for security and serviceability
Optical Drive	24x IDE CD-ROM Drive (slimline) – ejectable for security and serviceability
Hard Drives	None ship standard
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.

NOTE: 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.

Standard Features

Maximum Internal Storage Type	Hot Plug SCSI	1.20 TB	4 x 300 GB Ultra320 1" drives (internal hot plug Ultra3 or Ultra320 drive cage)
	Hot Plug SAS	582 GB	8 x 72 GB SFF SAS drives (internal hot plug)

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

Graphics	Integrated 1280 x 1024, 16M color on PCI local bus, 8 MB of SDRAM video memory
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Form Factor	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
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ProLiant Essentials Foundation Pack Software	HP Systems Insight Manager	HP's new HP Systems Insight Manager (HP SIM) helps maximize system uptime and performance and reduce system maintenance costs by providing proactive notification of problems before those problems result in unplanned downtime or reduced productivity. HP SIM is both easy to set up and work with the Insight Management Agents, integrated Lights-Out and Remote Insight Lights-Out 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 http://www.hp.com/go/hpsim .
	SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at http://www.hp.com/servers/smartstart . SmartStart version supported (minimum): SmartStart 7.00.

Standard Features

Management Agents	The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to HP 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 http://www.hp.com/servers/manage .
Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides automatic delivery of software and driver change notifications for ProLiant products. Sign up at http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options available in SmartStart or downloadable from Software and Drivers download pages, linked from the SmartStart website at http://www.hp.com/servers/smartstart .
Survey Utility and diagnostics utilities	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.
Optional ProLiant Essentials Value Packs	Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs: <ul style="list-style-type: none">• Rapid Deployment Pack - an automated solution for multi-server deployment and provisioning, enabling companies to quickly and easily adapt to changing business demands.• Workload Management Pack - provides easier management of complex environments, improving overall server utilization and enabling Windows® 2000 customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server.• Integrated Lights-Out Advanced Pack - upgrades the Integrated Lights-Out processor to full virtual presence and control with graphical console and virtual media.• Performance Management Pack - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources.• Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus.• Vulnerability and Patch Management Pack - identifies and remediates software security vulnerabilities due to missing patches as well operating system configurations that can be exploited by viruses, worms, and other blended threats.• Virtual Machine Management Pack - provides central management 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.

Standard Features

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>.

Industry Standard Compliance

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

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 all 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/133 MHz PCI-X slots available)
- Smart Array 5i Plus Controller with 64 MB 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.

Standard Features

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

Security

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

Power Supply

Dual 870-Watt Hot Plug Redundant Power Supplies (hi/lo line auto-sensing)

UPS and PDU Power Cord Matrix

Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units:
<ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf>.

System Fans

Standard 8 Hot plug, redundant fans (individually removable)
Maximum 8 Hot plug, redundant fans (individually removable)

NOTE: A single cooling zone across the major server subsystems (Memory, I/O, CPU) providing 7x24 cooling in an N + 1 redundant configuration.

Required Cabling

For required cabling information, refer to the HP Web site at
<http://h18000.www1.hp.com/products/servers/proliantDL585/>

Standard Features

OS Support - single core 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
VMware Virtualization Software

NOTE: 2.2 GHz, 2.4 GHz and 2.6 GHz models.

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

<http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html>

OS Support - dual core Microsoft Windows 2000 Server (licensed by core)
Microsoft Windows 2000 Advanced Server (licensed by core)
Windows Server 2003, Standard Edition (licensed by processor socket)
Windows Server 2003, Enterprise Edition (licensed by processor socket)
Red Hat Enterprise Linux 3 Update 5
Red Hat Enterprise Linux 4 Update 2
SuSE Linux Enterprise Server 9 SP1
VMware Virtualization Software

NOTE: 1.8 GHz and 2.2 GHz models.

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

NOTE: For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: <http://h18004.www1.hp.com/products/servers/software/OEM.html>.

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

<http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html>

Rack Airflow Requirements

Rack 10000 series Cabinets

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

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

- **Front and rear doors:** If your 42U server rack includes closing front and rear doors, you must allow 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>.

Standard Features

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, EVA, XP, rackable tape libraries and configurable network switches.

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

Custom Builder

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

Service and Support

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

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

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

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

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

Standard Features

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

Models (dual core)

DL585R01 O2.4 GHz-1MB, 4096MB (2P-dual core) 397842-001	Processor(s)	(2) AMD 880 Dual Core Opteron Processors at 2.4 GHz standard (2 or 4 supported)
	Cache Memory	1-MB Integrated Level 2 Cache
	Memory	4 GB of PC3200 DDR SDRAM (Standard) to 32 GB running at 400 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
	Form Factor	Rack 4U

DL585R01 O2.4 GHz-1MB, 2048MB (2P-dual core) 397841-001	Processor(s)	(2) AMD 880 Dual Core Opteron Processors at 2.4 GHz standard (2 or 4 supported)
	Cache Memory	1-MB Integrated Level 2 Cache
	Memory	2 GB of PC2700 DDR SDRAM (Standard) to 64 GB, running at 333 MHz, or 128 GB running at 266 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
	Form Factor	Rack 4U

Models

DL585R01 O2.2 GHz-1MB, 4096MB (2P-dual core) 383359-001	Processor(s)	(2) AMD 875 Dual Core Opteron Processors at 2.2 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	4 GB of PC3200 DDR SDRAM (Standard) to 32 GB running at 400 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

DL585R01 O2.2 GHz-1MB, 2048MB (2P-dual core) 383357-001	Processor(s)	(2) AMD 875 Dual Core Opteron Processors at 2.2 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	2 GB of PC2700 DDR SDRAM (Standard) to 64, running at 333 MHz, or 64 GB running at 266 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

Models

DL585R01 O1.8 GHz-1MB, 4096MB (2P-dual core) 383358-001	Processor(s)	(2) AMD 865 Dual Core Opteron Processors at 1.8 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	4 GB of PC3200 DDR SDRAM (Standard) to 32 GB running at 400 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

DL585R01 O1.8 GHz-1MB, 2048MB (2P-dual core) 383356-001	Processor(s)	(2) AMD 865 Dual Core Opteron Processors at 1.8 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	2 GB of PC2700 DDR SDRAM (Standard) to 64, running at 333 MHz, or 64 GB running at 266 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

Models

Models (single core)

DL585R01 O2.8 GHz-1MB, 2048MB (2P) 397296-001	Processor(s)	(2) AMD 854 Opteron Processors at 2.8 GHz standard (2 or 4 supported)
	Cache Memory	1-MB Integrated Level 2 Cache
	Memory	2 GB of PC2700 DDR SDRAM (Standard) to 64 GB, running at 333 MHz, or 128 GB running at 266 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
	Form Factor	Rack 4U

DL585R01 O2.8 GHz-1MB, 4096MB (2P) 397299-001	Processor(s)	(2) AMD 854 Opteron Processors at 2.8 GHz standard (2 or 4 supported)
	Cache Memory	1-MB Integrated Level 2 Cache
	Memory	4 GB of PC3200 DDR SDRAM (Standard) to 32 GB running at 400 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
	Form Factor	Rack 4U

Models

DL585R01 O2.6 GHz-1MB, 4096MB (2P) 380125-001	Processor(s)	(2) AMD 852 Opteron Processors at 2.6 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	4 GB of PC3200 DDR SDRAM (Standard) to 32 GB running at 400 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

DL585R01 O2.6 GHz-1MB, 2048MB (2P) 380124-001	Processor(s)	(2) AMD 852 Opteron Processors at 2.6 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	2 GB of PC2700 DDR SDRAM (Standard) to 64 GB running at 333 MHz or 64 GB running at 266 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

Models

DL585R01 O2.4 GHz-1MB, 2048MB (2P) 378020-001	Processor(s)	(2) AMD 850 Opteron Processors at 2.4 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	2 GB of PC2700 DDR SDRAM (Standard) to 64 GB running at 333 MHz or 64 GB running at 266 MHz with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

DL585R01 O2.2 GHz-1MB, 2048MB (2P) 356820-B21	Processor(s)	(2) AMD 848 Opteron Processors at 2.2 GHz standard (2 or 4 supported)
	Cache Memory	1 MB Integrated Level 2 Cache
	Memory	2 GB of PC2100 DDR SDRAM running at 266 MHz (Standard) to 64 GB (Maximum) with Advanced ECC
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 870W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE Universal Media Bay CD-ROM Drive
Form Factor	Rack 4U	

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

Model	HP ProLiant DL585 Rack CTO Chassis	390524-405
	Factory Integrated Models ship with:	
	1.44 MB Diskette Drive	
	Dual Port NC7782 embedded NIC	
	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)	
	Integrated Lights-Out (iLO) Standard management (integrated on system board)	
	Two 870W Hot Plug Redundant Power Supplies (low line or high line)	
	Rack 4U Form Factor	

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

Processors	AMD O880 2.4 GHz/1000 dual core 1 MB PC 3200 DL585 FIO BASE	397844-L21
	NOTE: If four processors are desired, select one 397844-L21 and two 397844-B21.	
	AMD O880 2.4 GHz/1000 dual core 1 MB PC 2700 DL585 FIO BASE	397843-L21
	NOTE: If four processors are desired, select one 397843-L21 and two 397843-B21.	
	AMD O854 2.8/1000 1 MB PC2700 DL585 FIO BASE	397820-L21
	NOTE: If four processors are desired, select one 397820-L21 and two 397820-B21.	
	AMD O875 2.2 GHz/1000 dual core 1 MB PC3200 DL585 FIO BASE	383393-L21
	NOTE: If four processors are desired, select one 383393-L21 and two 383393-B21.	
	AMD O854 2.8 GHz/1000 1 MB PC3200 DL585 FIO BASE	397821-L21
	NOTE: If four processors are desired, select one 397821-L21 and two 397821-B21.	
	AMD O875 2.2 GHz/1000 dual core 1 MB PC2700 DL585 FIO BASE	383391-L21
	NOTE: If four processors are desired, select one 383391-L21 and two 383391-B21.	
	AMD O865 1.8 GHz/1000 dual core 1 MB PC3200 DL585 FIO BASE	383392-L21
	NOTE: If four processors are desired, select one 383392-L21 and two 383392-B21.	
	AMD O865 1.8 GHz/1000 dual core 1 MB PC2700 DL585 FIO BASE	383390-L21
	NOTE: If four processors are desired, select one 383390-L21 and two 383390-B21.	
	AMD O852 2.6 GHz/1000 1 MB PC3200 DL585 FIO BASE	385751-L21
	NOTE: If four processors are desired, select one 385751-L21 and two 381477-B21.	
	AMD O852 2.6 GHz/1000 1 MB PC2700 DL585 FIO BASE	385750-L21
	NOTE: If four processor are required, select one 385750-L21 and two 381476-B21.	

Configuration Information - Factory Integrated Models

Base Memory	1 GB of PC2700 DDR SDRAM DIMM Memory (2 x 512 MB)	371047-B21
	2 GB of PC2700 DDR SDRAM DIMM Memory (2 x 1 GB)	371048-B21
	4 GB of PC2700 DDR SDRAM DIMM Memory (2 x 2 GB)	371049-B21
	2 GB of PC3200 DDR SDRAM DIMM Memory (2 x 1 GB)	376639-B21
	4 GB of PC3200 DDR SDRAM DIMM Memory (2 x 2 GB)	379300-B21
	8 GB of PC2700 DDR SDRAM DIMM Memory (2 x 4 GB)	395409-B21

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

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

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

Step 3: Choose Additional Options for Factory Integration

SAS Options	8-Bay SAS/SATA Cage Option Kit	379090-B21
	NOTE: may be ordered with a SAS/SATA Controller such as the Smart Array P600 Controller and the desired quantity of 2.5" SAS Universal Hard Drives/2.5" SATA hard drives OR may be ordered with one of the following SAS Starter Kits.	
	SAS Starter Kit - 36GB	396221-B21
	NOTE: Includes Smart Array P600 Performance Array Controller with 256 MB BBWC and (2) 36 GB 2.5" SAS Universal Hard Drives.	
SAS Options	SAS Starter Kit - 72GB	396220-B21
	NOTE: Includes Smart Array P600 Performance Array Controller with 256 MB BBWC and (2) 72 GB 2.5" SAS Universal Hard Drives.	

Step 4: 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.

ProLiant DL585 Unique Options	<p>AMD Opteron 880 2.4 GHz-1 MB dual core PC3200 Processor Option Kit 397844-B21 NOTE: This Opteron 880 2.4 GHz dual core PC3200 processor Option kit (PN 397844-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 880 2.4 GHz-1 MB dual core PC2700 Processor Option Kit 397843-B21 NOTE: This Opteron 880 2.4 GHz dual core PC2700 processor Option kit (PN 397843-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 875 2.2 GHz-1 MB dual core PC3200 Processor Option Kit 383393-B21 NOTE: This Opteron 875 2.2 GHz dual core PC3200 processor Option kit (PN 383393-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 875 2.2 GHz-1 MB dual core PC2700 Processor Option Kit 383391-B21 NOTE: This Opteron 875 2.2 GHz dual core PC2700 processor Option kit (PN 383391-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 865 1.8 GHz-1 MB dual core PC3200 Processor Option Kit 383392-B21 NOTE: This Opteron 865 1.8 GHz dual core PC3200 processor Option kit (PN 383392-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 865 1.8 GHz-1 MB dual core PC2700 Processor Option Kit 383390-B21 NOTE: This Opteron 865 1.8 GHz dual core PC2700 processor Option kit (PN 383390-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 854 2.8 GHz-1 MB PC3200 processor Option Kit 397821-B21 NOTE: This Opteron 854 2.8 GHz PC3200 processor Option kit (PN 397821-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 854 2.8 GHz-1 MB PC2700 processor Option Kit 397820-B21 NOTE: This Opteron 854 2.8 GHz PC2700 processor Option kit (PN 397820-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 852 2.6 GHz-1 MB PC3200 Processor Option Kit 381477-B21 NOTE: This Opteron 852 2.6 GHz PC3200 processor Option kit (PN 381477-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 852 2.6 GHz-1 MB PC2700 Processor Option Kit 381476-B21 NOTE: This Opteron 852 2.6 GHz PC2700 processor Option kit (PN 381476-B21) comes standard with the -003 processor/memory board.</p> <p>AMD Opteron 850 2.4 GHz-1 MB Processor Option Kit 366725-B21 NOTE: This Opteron 850 2.4 GHz processor Option kit (PN 366725-B21) comes standard with the -002 processor/memory board.</p> <p>AMD Opteron 848 2.2 GHz-1 MB Processor Option Kit 359708-B21 NOTE: This Opteron 848 2.2 GHz processor Option kit (PN 359708-B21) comes standard with the processor/memory board.</p> <p>AMD Opteron 844 1.8 GHz-1 MB Processor Option Kit 359707-B21 NOTE: This Opteron 844 1.8 GHz processor Option kit (PN 359707-B21) comes standard with the processor/memory board.</p> <p>AMD Opteron 842 1.6 GHz-1 MB Processor Option Kit 359706-B21 NOTE: This Opteron 842 1.6 GHz processor Option kit (PN 359706-B21) comes standard with the processor/memory board.</p> <p>NOTE: Must order two kits to expand the system from 2 to 4 processors</p>
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Options

Value Pack Software

<p>ProLiant Essentials Integrated Lights-Out Advanced Pack, 1 server Featuring: sophisticated virtual administration features for ultimate control of servers in the data centers and remote sites. NOTE: For additional ProLiant Integrated Light-Out Advanced Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11052_na/11052_na.HTML</p> <p>ProLiant Essentials Intelligent Networking Pack</p> <p>ProLiant Essentials Intelligent Networking Pack - Windows Edition, Single Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation. NOTE: For additional ProLiant Intelligent Networking Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12062_na/12062_na.HTML</p> <p>ProLiant Essentials Intelligent Networking Pack - Linux Edition, Single Server License NOTE: For additional ProLiant Intelligent Networking Pack - Linux License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12327_na/12327_na.HTML</p> <p>ProLiant Essentials Performance Management Pack</p> <p>ProLiant Essentials Performance Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key, HP Management CD and documentation. NOTE: The most recent version of the software can always be downloaded at http://www.hp.com/products/pmp. NOTE: For additional ProLiant Performance Management Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11925_na/11925_na.HTML</p> <p>ProLiant Essentials Rapid Deployment Pack Windows Edition and Linux Edition Release</p> <p>Rapid Deployment Pack, Single-Server License NOTE: This license allows 1 server to be deployed and managed via RDP. NOTE: For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.HTML http://h18000.www1.hp.com/products/quickspecs/11713_na/11713_na.HTML</p> <p>ProLiant Essentials Workload Management Pack</p> <p>ProLiant Essentials Workload Management Pack, Single Server License NOTE: For additional ProLiant Workload Management Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11452_na/11452_na.HTML</p> <p>ProLiant Essentials Virtualization Management Software</p> <p>ProLiant Essentials Virtual Machine Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.</p>	<p>263825-B21</p> <p>372906-B21</p> <p>397004-B21</p> <p>306696-B21</p> <p>267196-B21</p> <p>303284-B21</p> <p>372214-B21</p>
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Options

<p>ProLiant Essentials Server Migration Pack, Single-Migration License NOTE: Contains one license, enabling 1 server migration, with a unique license activation key and documentation. NOTE: This license allows 1 server to be migrated from a physical server to a virtual machine. Or this license can be used to migrate a virtual machine from one virtualization layer i.e. VMware GSX to a different virtualization layer such as VMware ESX or Microsoft Virtual Server 2005. NOTE: For additional ProLiant Essentials Virtualization Management Software License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12328_na/12328_na.HTML</p> <p>ProLiant Essentials Vulnerability and Patch Management Pack</p> <p>ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation. NOTE: For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12111_na/12111_na.HTML 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.</p>	<p>375345-B21</p> <p>371645-B21</p>
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Processor

<p>AMD Opteron 880 2.4 GHz-1 MB dual core PC3200 Processor Option Kit NOTE: This Opteron 880 2.4 GHz dual core PC3200 processor Option kit (PN 397844-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 880 2.4 GHz-1 MB dual core PC2700 Processor Option Kit NOTE: This Opteron 880 2.4 GHz dual core PC3200 processor Option kit (PN 397843-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 875 2.2 GHz-1 MB dual core PC3200 Processor Option Kit NOTE: This Opteron 875 2.2 GHz dual core PC3200 processor Option kit (PN 383393-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 875 2.2 GHz-1 MB dual core PC2700 Processor Option Kit NOTE: This Opteron 875 2.2 GHz dual core PC2700 processor Option kit (PN 383391-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 865 1.8 GHz-1 MB dual core PC3200 Processor Option Kit NOTE: This Opteron 865 1.8 GHz dual core PC3200 processor Option kit (PN 383392-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 865 1.8 GHz-1 MB dual core PC2700 Processor Option Kit NOTE: This Opteron 865 1.8 GHz dual core PC2700 processor Option kit (PN 383390-B21) comes standard with the 011974-003 processor/memory board.</p> <p>AMD Opteron 852 2.6 GHz-1 MB PC3200 Processor Option Kit NOTE: This Opteron 852 2.6 GHz PC3200 processor Option kit (PN 381477-B21) comes standard with the 012567-001 processor/memory board.</p> <p>AMD Opteron 852 2.6 GHz-1 MB PC2700 Processor Option Kit NOTE: This Opteron 852 2.6 GHz PC2700 processor Option kit (PN 381476-B21) comes standard with the -003 processor/memory board.</p> <p>AMD Opteron 850 2.4 GHz-1 MB Processor Option Kit NOTE: This Opteron 850 2.4 GHz processor Option kit (PN 366725-B21) comes standard with the -002 processor/memory board.</p>	<p>397844-B21</p> <p>397843-B21</p> <p>383393-B21</p> <p>383391-B21</p> <p>383392-B21</p> <p>383390-B21</p> <p>381477-B21</p> <p>381476-B21</p> <p>366725-B21</p>
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Options

AMD Opteron 848 2.2 GHz-1 MB Processor Option Kit	359708-B21
NOTE: This Opteron 848 2.2 GHz processor Option kit (PN 359708-B21) comes standard with the processor/memory board.	
AMD Opteron 844 1.8 GHz-1 MB Processor Option Kit	359707-B21
NOTE: This Opteron 844 1.8 GHz processor Option kit (PN 359707-B21) comes standard with the processor/memory board.	
AMD Opteron 842 1.6 GHz-1 MB Processor Option Kit	359706-B21
NOTE: This Opteron 842 1.6 GHz processor Option kit (PN 359706-B21) comes standard with the processor/memory board.	
NOTE: Must order two kits to expand the system from 2 to 4 processors	

Memory (DIMMs)	1 GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 512 MB)	300679-B21
	2 GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 1 GB)	300680-B21
	4 GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 2 GB)	300682-B21
	1 GB of PC2700 DDR SDRAM DIMM Memory (2 x 512 MB)	371047-B21
	2 GB of PC2700 DDR SDRAM DIMM Memory (2 x 1 GB)	371048-B21
	4 GB of PC2700 DDR SDRAM DIMM Memory (2 x 2 GB)	371049-B21
	2 GB of PC3200 DDR SDRAM DIMM Memory (2 x 1 GB)	376639-B21
	4 GB of PC3200 DDR SDRAM DIMM Memory (2 x 2 GB)	379300-B21
	8 GB of PC2700 DDR SDRAM DIMM Memory (2 x 4 GB)	395409-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 (333 MHz), -002 or greater processor boards must be used in conjunction with no more than 6 PC2700 DIMMs per processor board.		

Optical Drives	Slimline CD-RW/DVD-ROM 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

SAS Drive Cage	8-Bay SAS/SATA Cage Option Kit	379090-B21
NOTE: The SAS/SATA Cage must be used in conjunction with a SAS/SATA Controller such as the Smart Array P600 Controller to upgrade all U320 models to SAS.		

Options

Hard Drives

Ultra320 SCSI – Universal Hot Plug

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_na/11531_na.HTML

SFF SATA Hot Plug

60 GB SATA 1.5 Gb 5,400 rpm Hard Drive (2.5")	379306-B21
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NOTE: SATA drives have a 1 year warranty. Please see the SATA Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:

SATA Hard Drive QS:

http://h18000.www1.hp.com/products/quickspecs/12091_na/12091_na.HTML

SFF SAS - Universal Hot Plug

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

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

SAS Hard Drive QS:

http://h18000.www1.hp.com/products/quickspecs/12244_na/12244_na.HTML

Storage Controllers

SCSI 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

NOTE: The Smart Array 641 and 642 Controller must be placed in the 100MHz slots only.

64 MB Battery Backed Write Cache Enabler	291969-B21
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NOTE: This 64 MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.

128MB Battery-Backed Cache Enabler	351580-B21
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NOTE: This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.

Options

DL585 Cable Assembly, SCSI, Ultra3, LVDS 365483-B21

NOTE: 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.

- 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.
- Two cables are required to maintain the standard, duplexed configuration of the backplane.
- One cable is required if the simplex configuration is chosen.

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

NOTE: Please see the following Controller or SCSI Adapter QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information:

http://h18000.www1.hp.com/products/quickspecs/11587_na/11587_na.HTML
(Smart Array 6400 Series)

http://h18000.www1.hp.com/products/quickspecs/12067_na/12067_na.HTML
(Smart Array 641)

http://h18000.www1.hp.com/products/quickspecs/12069_na/12069_na.HTML
(Smart Array 642)

http://h18000.www1.hp.com/products/quickspecs/10429_na/10429_na.HTML
(SCSI Adapter)

http://h18000.www1.hp.com/products/quickspecs/11555_na/11555_na.HTML
(U320 Adapter)

SAS Controller

HP Smart Array P600 Controller 337972-B21

NOTE: The Smart Array P600 Controller supports internal and external Serial Attached SCSI and Serial ATA drives. It is supported in all HP ProLiant DL585 Models.

NOTE: Internal usage of the Smart Array P600 Controller requires the 8-Bay SAS/SATA Drive Cage Option Kit. .

512MB DDR BBWC Upgrade 372538-B21

NOTE: Please see the following Controller QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information:

http://h18000.www1.hp.com/products/quickspecs/12247_na/12247_na.HTML
(Smart P600 Controller)

SAS HBA

HP 8 Internal Port SAS HBA with RAID 347786-B21

http://h18000.www1.hp.com/products/quickspecs/12332_na/12332_na.HTML
(SAS HBA)

Options

Communications	HP NC150T PCI 4-port Gigabit 1000T Combo Switch Adapter	367132-B21
	HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
	HP NC370F PCI-X Multifunction 1000SX Gigabit Server Adapter	374193-B22
	HP NC370T PCI-X Multifunction 1000T Gigabit Server Adapter	374191-B22
	HP NC1020 PCI 1000T Gigabit Server Adapter	353377-B21
	HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21
	HP NC7771 PCI-X 1000T Gigabit Server Adapter	290563-B21
	NOTE: A minimum of 1 GB of memory is required for NC370x adapters, with a maximum of two NC370x adapters permitted in a server.	
	HP NC570C PCI-X Dual-port 4x Fabric Adapter	376158-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

Tape Drives

NOTE: For the complete listing of Tape Drive offerings for this server, please visit: <http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

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

Hot Plug Tape Drives

HP StorageWorks DAT 72 SCSI Hot-plug Tape Drive (Carbon) Q1529A

USB Tape Drives

HP StorageWorks DAT 72 USB External Tape Drive (Carbonite) DW027A

NOTE: Requires purchase of the Adaptec USB2connect 3100LP USB adapter available at <http://www.adaptec.com>. Microsoft Windows support only.

External and Rack-Mount Ultrium Tape Drives

HP StorageWorks Ultrium 232 External Tape Drive (Carbonite) DW065B

HP StorageWorks Ultrium 460 External Tape Drive (Carbon) Q1520A

HP StorageWorks Ultrium 448 External Tape Drive (Carbonite) DW017B

HP StorageWorks 1U Rack-mount kit with one Ultrium 448 (Carbonite) DW028A

HP StorageWorks Ultrium 960 External Tape Drive (Carbonite) Q1539B

HP StorageWorks 3U Rack-mount kit with one Ultrium 960 (Carbonite) Q1595A

NOTE: Please see the HP StorageWorks Ultrium Tape Drive QuickSpecs for additional options such as controllers, media, and other related items:

http://h18006.www1.hp.com/products/quickspecs/11739_na/11739_na.html

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

Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit A7445B

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

HP StorageWorks 1U USB Rack-Mount Kit A8007A

Options

1U USB Cable Option Kit	396114-B21
NOTE: Converts a 1U SCSI rack-mount kit to a USB interface to support the USB tape drives.	
HP StorageWorks 3U Rack-Mount Kit	274338-B23
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, DLT VS160, SDLT 320, SDLT 600, Ultrium 215, Ultrium 230, Ultrium 232, Ultrium 460, Ultrium 448 and Ultrium 960 tape drives.	
NOTE: Please see the Rack-Mount Tape Drive Kits QuickSpecs for additional information regarding these kits: http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML	

Tape Autoloaders

DAT Autoloader

HP StorageWorks DAT 72x6 Autoloader (External)	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_na/11905_na.html	

HP StorageWorks 1/8 Tape Autoloader

HP StorageWorks 1/8 Ultrium 960 Tape Autoloader	AF204A
HP StorageWorks 1/8 Ultrium 448 Tape Autoloader	AF203A
HP StorageWorks 1/8 SDLT 320 Tape Autoloader	AA926A
HP StorageWorks 1/8 Ultrium 232 Tape Autoloader	AF202A
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

HP StorageWorks SSL1016 Ultrium 460 Tape Autoloader	330821-B21
HP StorageWorks 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>.

Options

Tape Libraries	<p>HP StorageWorks MSL2024 Tape Library</p> <p>HP StorageWorks MSL2024 1 Ultrium 960 Drive Library AG115A</p> <p>HP StorageWorks MSL2024 1 Ultrium 448 Drive Library AG116A</p> <p>HP StorageWorks MSL2024 2 Ultrium 448 Drive Library AG117A</p> <p>HP StorageWorks MSL6000 Tape Library</p> <p>Ultrium 960 technology</p> <p>HP StorageWorks MSL6030 1 Ultrium 960 Dr LVDS Library AD606A</p> <p>HP StorageWorks MSL6030 1 Ultrium 960 Dr FC Library AD608A</p> <p>HP StorageWorks MSL6030 2 Ultrium 960 Dr LVDS Library AD607A</p> <p>HP StorageWorks MSL6030 2 Ultrium 960 Dr FC Library AD609A</p> <p>Ultrium 460 technology</p> <p>HP StorageWorks MSL6030 1 Ultrium 460 Dr LVDS Library AD598A</p> <p>HP StorageWorks MSL6030 1 Ultrium 460 Dr FC Library AD600A</p> <p>HP StorageWorks MSL6030 2 Ultrium 460 Dr LVDS Library AD599A</p> <p>HP StorageWorks MSL6030 2 Ultrium 460 Dr FC Library AD601A</p> <p>NOTE: Please reference the MSL2024 and MSL6000 Tape Library QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs.</p>
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Magneto-Optical Jukeboxes	<p>HP StorageWorks 9.1 GB Optical Jukeboxes</p> <p>600mx, 4 drive, 64 slot jukebox C1160M</p> <p>1200mx, 4 drive, up to 128 slots C1104M</p> <p>2200mx, 6 drive, up to 238 slots C1107M</p> <p>NOTE: Please see the HP StorageWorks Magneto-Optical Products data sheet for a complete listing of available jukeboxes at: http://www.hp.com/products1/storage/products/archivalprod/brochures/MO_family_pb.pdf</p> <p>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.</p>
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Ultra Density Optical Jukeboxes	<p>1900ux, 4 drive, 64 slot jukebox AA966A</p> <p>3800ux, 4 drive, 128 slot jukebox AA969A</p> <p>7100ux, 6 drive, 238 slot jukebox AA971A</p> <p>NOTE: Please see the HP StorageWorks Ultra Density Optical Jukeboxes QuickSpecs for a complete listing of available jukeboxes at: http://h18006.www1.hp.com/products/quickspecs/11944_na/11944_na.html</p> <p>NOTE: Please reference the Ultra Density Optical Jukebox QuickSpecs at http://www.hp.com/go/optical for additional information needed to create a complete solution</p>
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Options

Cluster Options	<p>ProLiant Cluster Starter Kit 364023-B21</p> <p>NOTE: For additional information regarding the ProLiant Cluster Starter Kit please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html</p> <p>ProLiant Cluster Kit with OpenView Storage Mirroring 364025-B21</p> <p>NOTE: For additional information regarding the ProLiant Cluster Kit with OpenView Storage Mirroring please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11934_na/11934_na.html</p> <p>HP HA/F200 for Entry SAN Cluster 364026-B22</p> <p>NOTE: For additional information regarding the ProLiant Cluster for Entry Level SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html</p> <p>ProLiant Cluster HA/F500 for the Enterprise SAN 364024-B21</p> <p>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</p> <p>HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 and Red Hat EL & 4 (2 node license cluster kit) 305199-B26</p> <p>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</p> <p>HP Serviceguard for Linux A.11.16 for SUSE SLES9 and Red Hat EL 3 & 4 (single license version) 307754-B26</p> <p>NOTE: For additional information regarding HP Serviceguard for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html</p>
HP StorageWorks Modular Smart Array 20	<p>HP StorageWorks Modular Smart Array 20 335921-B21</p> <p>NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.</p> <p>HP StorageWorks Modular Smart Array 20 Starter Kit 366172-B21</p> <p>NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies. Includes Smart Array 6402/128 Controller.</p> <p>NOTE: The Modular Smart Array Enclosure 20 Family supports the SATA 1.5Gb/s 1" Hot Plug Hard Drives.</p>
HP StorageWorks Modular Smart Array 30	<p>HP StorageWorks Modular Smart Array 30 SB 302969-B21</p> <p>NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies</p> <p>HP StorageWorks Modular Smart Array 30 DB 302970-B21</p> <p>NOTE: Rack-mountable 14 drive enclosure with dual bus, redundant power supplies</p> <p>NOTE: The Modular Smart Array Enclosure 30 Family supports the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.</p>
HP StorageWorks Modular Smart Array 50	<p>HP StorageWorks Modular Smart Array 50 Enclosure 364430-B21</p> <p>NOTE: Please see the Modular Smart Array 50 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/12245_na/12245_na.HTML</p>

Options

HP StorageWorks Modular Smart Array 500	HP StorageWorks Modular Smart Array 500 Generation 2 NOTE: Please see the Modular Smart Array 500 Generation 2 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11956_na/11956_na.HTML	335880-B21
HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000 NOTE: Please see the Modular Smart Array 1000 QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML	201723-B22
HP StorageWorks Modular Smart Array 1500 cs	Modular Smart Array 1500 Controller Shelf NOTE: Please see the StorageWorks Modular SAN Array 1500 cs QuickSpecs for additional options and configuration information at: http://www.hp.com/go/MSA1500cs	AA986A
StorageWorks Options	StorageWorks SAN Switch 2/8-EL Upgrade Kit StorageWorks SAN Switch 2/16-EL Upgrade Kit StorageWorks Director 2/64 NOTE: Please see the StorageWorks Director 2/64 QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/11003_na/11003_na.HTML	325888-B21 325889-B21 286809-B21
Uninterruptible Power Systems – Rack	HP UPS R1500 XR (1440VA, 1340 Watt), Low Voltage HP UPS R3000 XR (2880VA, 2700 Watt), Low Voltage HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage HP UPS R5500 XR (5000VA, 4500 Watt) High Voltage HP UPS R12000 XR N+x (12000VA, 12000 Watt) (hardwired) NOTE: The UPS R12000 XR has a hardwired input and output connection.	204404-001 192186-001 192186-002 326529-D71 207552-B22
HP Monitored Power Distribution Unit (PDU)	HP Monitored Power Distribution Unit: Full Rack Version HP PDU with Power Monitoring, Model S2324 - dual input, 3-phase, 24A HP Power Distribution Unit with Power Monitoring Model S1324 - single input, 3 phase, 24A HP Power Distribution Unit with Power Monitoring Model S2140 - dual input, 1 phase, 40A HP Power Distribution Unit with Power Monitoring Model S1140 - single input, 1 phase, 40A HP Monitored Power Distribution Unit: Half Rack Version HP PDU with Power Monitoring, Model S1348 - single input, 3-phase, 60A	370959-D71 370960-D71 370961-D71 370962-D71 AF916A

Options

<p>Modular Power Distribution Units 1U/0U (Up to 32 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).</p>	<p>HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) NOTE: This mPDU (252663-D71) may also be used to connect the low volt model of the UPS R3000 XR.</p> <p>HP Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC)</p> <p>HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) NOTE: This mPDU (252663-B21), 40A model has a hardwired input.</p> <p>HP Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC) NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements. This model may also be used with the high volt UPS R3000 XR. Need to order cable PN 340653-001. NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and power cords: http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML</p>	<p>252663-D71</p> <p>252663-D72</p> <p>252663-B21</p> <p>252663-B24</p>
<p>USB Options</p>	<p>HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)</p> <p>USB 1.44-MB External Diskette Drive (Carbonite)</p> <p>256MB HP Drive Key (USB 2.0)</p>	<p>DC172B</p> <p>DC141B</p> <p>PH657A</p>
<p>Third Party Rack Kit</p>	<p>3rd Party Rack Kit (ALL) NOTE: The rack kit (PN 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 ½" - 34" deep. NOTE: 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.</p>	<p>287528-B21</p>
<p>Telco Rack Support</p>	<p>Rack Adapter Kit NOTE: This kit allows HP rack servers to fit in racks that are 24" wide. NOTE: 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: http://www.racksolutions.com/hp.</p>	<p>332815-B21</p>

Options

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) NOTE: The stabilizing kit is used to prevent rack from tipping over.	374493-B21
	Baying Kit for 5642 Rack (Graphite Carbon) NOTE: The baying kit is used to join two or more HP 5642 racks.	374499-B21
HP Rack 10000 Series (Graphite Metallic)	Rack, HP Infrastructure 42U (HV)	379005-001
	Rack, HP Infrastructure 42U (LV)	379006-001
	HP Rack S10614 (14U) Rack Cabinet – Shock Pallet	292302-B22
	HP Rack 10842 (42U, 800mm wide) – Pallet	257415-B21
	HP Rack 10842 (42U, 800mm wide) – Shock Pallet	257415-B22
	HP Rack 10647 (47U) – Pallet	245160-B21
	HP Rack 10647 (47U) – Crated	245160-B23
	HP Rack 10642 (42U) – Pallet	245161-B21
	HP Rack 10642 (42U) – Shock Pallet	245161-B22
	HP Rack 10642 (42U) – Crated	245161-B23
	HP Rack 10636 (36U) – Pallet	245162-B21
	HP Rack 10636 (36U) – Shock Pallet	245162-B22
	HP Rack 10636 (36U) – Crated	245162-B23
	HP Rack 10622 (22U) – Pallet	245163-B21
	HP Rack 10622 (22U) – Shock Pallet	245163-B22
	HP Rack 10622 (22U) – Crated	245163-B23
	NOTE: -B21 (pallet) used to ship empty racks shipped on a truck -B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels) -B23 (crated) used for air shipments of empty racks	
	NOTE: Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html .	

Options

Rack Options for HP Rack 10000 Series	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
	TFT7210R Rack Mounted 17" Monitor	348373-B21
	NOTE: For a complete list of Monitors please view the following URL: http://h18004.www1.hp.com/products/monitors/ .	
	TFT5600 Rack Keyboard Monitor	221546-001
	NOTE: For a complete list of Monitors please view the following URL: http://h18004.www1.hp.com/products/monitors/ .	
	1U Rack Keyboard & Drawer (Carbon)	257054-001
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 KVM Switch Options	IP Console Switch Box (KVM/IP), 3 x 1 x 16	262586-B21
	IP Console Switch Box (KVM/IP), 1 x 1 x 16	262585-B21
	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm .	
	HP 1x 4 USB/PS2 KVM Switch, TT	371301-D71
	HP PS2 KVM Cable with audio, 6', 2-pack	371730-B21
	HP USB KVM Cable with audio, 6', 2-pack	371729-B21
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm .	

HP Serial Console Server Options	HP 16 Port Serial Console Server	AF101A
	HP 48 Port Serial Console Server	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
	NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm .	
NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm .		

Options

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, Electronic	U4607E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4608E
	Hardware Services 6-Hour Call to Repair On-site Service	
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4609E
	Installation & Start-up Services	
	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, Electronic	U4618E
	Support Plus	
	Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic	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, 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, 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, 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

- 4 GB PC3200 Double Data Rate (DDR) SDRAM (Registered SDRAM) memory running at 400 MHz or
- 2 GB PC2100 Double Data Rate (DDR) SDRAM (Registered SDRAM) memory running at 266 MHz or
- 2 GB PC2700 Double Data Rate (DDR) SDRAM (Registered SDRAM) memory running at 333 MHz 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 or greater processor boards
- 333 MHz memory performance requires no more than 6 PC2700 DIMMs per processor board; any more will result in the memory slowing down to 266 MHz
- PC3200 memory, running at 400 MHz will be supported on a PC3200-only processor board (012567-001) with 4 DIMM slots, resulting in a system max of 32 GB with 4 processors

The following memory options are available from HP:

- 1 GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 512 MB) 300679-B21
- 2 GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 1 GB) 300680-B21
- 4 GB of PC2100 DDR SDRAM DIMM Memory Kit (2 x 2 GB) 300682-B21
- 1 GB of PC2700 DDR SDRAM DIMM Memory (2 x 512 MB) 371047-B21
- 2 GB of PC2700 DDR SDRAM DIMM Memory (2 x 1 GB) 371048-B21
- 4 GB of PC2700 DDR SDRAM DIMM Memory (2 x 2 GB) 371049-B21
- 2 GB of PC3200 DDR SDRAM DIMM Memory (2 x 1 GB) 376639-B21
- 4 GB of PC3200 DDR SDRAM DIMM Memory (2 x 2 GB) 379300-B21
- 8 GB of PC2700 DDR SDRAM DIMM Memory (2 x 4 GB) 395409-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:

Memory

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

Example #2: Optional Memory Configuration

Standard Memory plus Optional Processor Memory Boards and Processors

Total Memory = 8 GB

	1	2	3	4	5	6	7	8
Board 1	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Board 2	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Board 3 (optional)	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Board 4 (optional)	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty

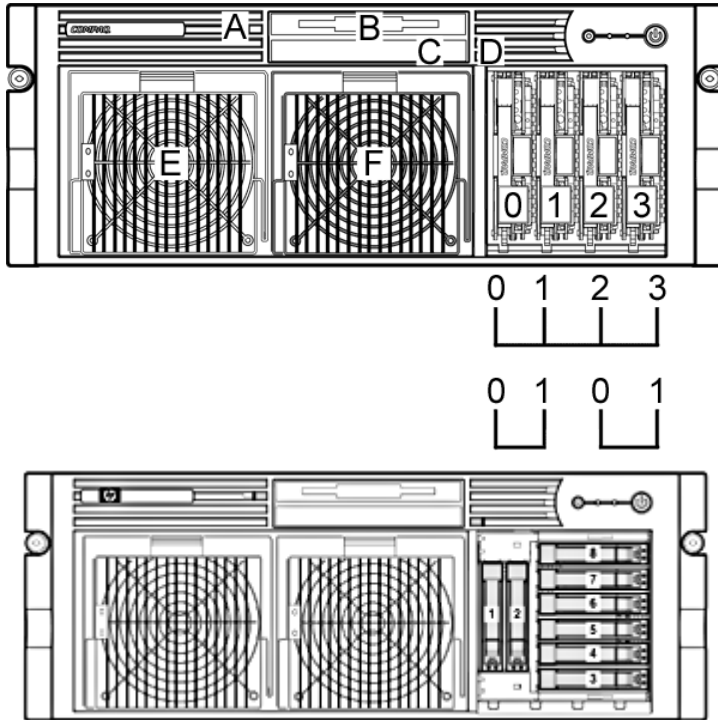
Example #3: Maximum Memory Configuration

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: 1.44 MB Diskette Drive (Slimline)
- C Ejectable: 24x IDE CD-ROM (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
- 1-8 SFF SAS Internal Drive cage

Drive Support

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

Storage

Hard Drives

Ultra320 Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
1-inch	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.

SATA - Hot Plug Drives

	Quantity Supported	Position Supported	Controller
2.5-inch	8	1, 2, 7, 5, 3, 8, 6, 4 (should be populated in this order)	Smart Array P600 Controller
60-GB 5,400 rpm			

SFF SAS - Hot Plug Drives

	Quantity Supported	Position Supported	Controller
2.5-inch	8	1, 2, 7, 5, 3, 8, 6, 4 (should be populated in this order)	Smart Array P600 Controller
36-GB 10,000 rpm			
72-GB 10,000 rpm			

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 20 Family	1 per SCSI VHDCI connector	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller
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 50 Enclosure	2 per connector (supports 1 + 1 cascading)	External	Smart Array P600 Controller

Storage

Modular Smart Array 1000	Please see the Modular Smart Array 1000 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1000 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1500 cs	Please see the Modular Smart Array 1500 cs QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1500 cs QuickSpecs (URL below) for the latest list of supported HBAs

Modular Smart Array 1000:

http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML

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

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

For details on connecting tape drives to this server, see the following:

	Quantity Supported	Position Supported	Controller
HP StorageWorks Tape Drives, Hot Plug DAT 40 Hot Plug DAT 72 Hot Plug	1	0-3	Smart Array 5i Plus Controller (integrated on system board) 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Drives, USB External DAT 24 USB DAT 40 USB DAT 72 USB	1 per USB port	External	Adaptec USB2connect 3100LP adapter orderable at http://www.adaptec.com (Windows only)

Storage

HP StorageWorks Tape Drives, External Ultrium 215 Ultrium 230 Ultrium 232 Ultrium 448 Ultrium 460 DAT 40 DAT 72 DLT VS80 DLT VS160 SDLT 320	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Drives, External Ultrium 960 SDLT 600	1 per SCSI Channel	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Rack-mount Tape Drive Enclosures 1U Rack-Mount Kit 3U Rack-Mount Kit 5U Rack-Mount Kit	1 per SCSI channel	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Autoloaders, External DAT 72x6 Tape Autoloader 1/8 Tape Autoloader SSL1016 Tape Autoloader	1 autoloader per SCSI channel	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Libraries, External MSL2024 (Ultrium 960-based) MSL2024 (Ultrium 448-based) MSL6000 (Ultrium 960-based) MSL6000 (SDLT 600-based) MSL6000 (Ultrium 460-based) MSL5026S2 (SDLT 320-based) MSL5052S2 (SDLT 320-based)	Please reference the MSL Tape Library QuickSpecs to determine configuration requirements	External	Please consult the EBS connectivity matrix at http://www.hp.com/go/ebs for detailed connectivity information.

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)

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.

Power Supply Specification	Part number		192147-001			
	Spare Kit		278535-B21			
Operational Input Voltage Range (V rms)	90 - 264					
Frequency Range (Nominal) (Hz)	47 - 63 (50 / 60)					
Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	870	870	870	870	870	870
Nominal Input Current (A rms)	12.0	10.4	5.7	5.3	5.1	4.9
Max Rated Input Wattage Rating (Watts)	1192	1184	1160	1145	1145	1145
Max. Rated VA (Volt-Amp)	1204	1196	1184	1168	1168	1168
Efficiency (%)	73	73.5	75	76	76	76
Power Factor	0.99		0.98			
Leakage Current (mA)	0.43	0.50	0.90	0.96	1.00	1.04
Max. Inrush Current (A peak)	25	25	25	25	25	25
Max. Inrush Current duration (mS)	3					
System Specifications DL585 Fully Configured	Processor	Memory	HDD	PCI	PS	
	4	32	4	8	2	
Nominal Input Voltage (Vrms)	100	115	208	220	230	
Fully Loaded System Input Wattage (W)	1135	1096	1059	1055	1050	
Fully Loaded System Input Current (A rms)	11.4	9.6	5.2	4.9	4.7	
Fully Loaded System Thermal (BTU-Hr)	3870	3736	3611	3596	3582	
Fully Loaded System VA (Volt-Amp)	1141	1101	1080	1076	1072	
System Leakage with all power supplies loaded (mA)	0.87	1.00	1.81	1.91	2.00	
System Inrush Current with all power supplies loaded (A)	50	50	50	50	50	
Power cord requirements	Nema 5-15P to IEC320-C19					
	Option no. 235603-001 / Spare no: 237457-001					
	PDU Jumper Cord IEC320-C19 to IEC320-C20					
	Option no 295633-B21. / Spare no.: 295508-001					

Power Specifications

***NOTE:** - To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at url:

<http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls>

To drill down to calculators:

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

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 Cords	Power Cord Part Number
	295529-001

Technical Specifications

System Unit Rack	Chassis Footprint (HxWxD)	6.94 x 19 x 26.5 in (17.6 x 48.3 x 67.3 cm)								
	Weight No hard drives installed, one power supply	66 lb (29.9 kg)								
	Input Requirements	<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)									
	Max BTU Rating	4070 BTU								
	Power Specifications	<p>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.</p> <p>To drill down to calculators:</p> <ul style="list-style-type: none"> • 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 Supply Output Power (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)									
	Temperature Range	<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)									
	Relative Humidity (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%									
	Maximum Wet Bulb Temperature	101.7° F (38.7° C)								
	Acoustic Noise	<p>NOTE: Listed are the declared A-weighted sound power levels LWAd and the declared average bystander position sound pressure levels LpAm when operating in a 23° C ambient environment. Noise emissions were measured in accordance with ECMA 74 and declared in accordance with ECMA 109.</p> <p>Idle (Fixed Disk Drives Spinning)</p> <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>NOTE: 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

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

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

Shipping Dimensions
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)	
Loading Mechanism	Tray type		
Interface	EIDE (ATAPI)		
Access Times (typical)	Random	DVD-ROM < 120 ms, CD-ROM < 110 ms	
	Full-Stroke	DVD-ROM < 240 ms, CD-ROM < 160 ms	
Audio Output Level (typical)	Line-out	CD 0.7 Vrms at 47 Kohms Load	
Data Transfer Rate (sustained)	DVD-ROM	Single Layer	10.8 MB/sec. Max.
	DVD-RAM	2.77 MB/sec. Max	
	CD-ROM	7.2 MB/sec. Max.	
Cache Buffer	2 MB		
Spin-up Time (typical)	less than 10 seconds		
MTBF	120,000 Power On Hours (POH)		
Ambient Temperature	Operating	-22° to 140° F (-30° to 60° C)	
Relative Humidity	Operating	10% to 80%	
	Storage/Transportation	5% to 95%	
Dimensions	(HxWxD, maximum)	0.5 x 5.04 x 5.1 in (12.7x128x129.4 mm)	
Option Kit Contents	DVD-ROM drive with installation guide, warranty card, registration card		

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
	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.	
	Channels	2 (only one connected)
	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.	
	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 64 MB 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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