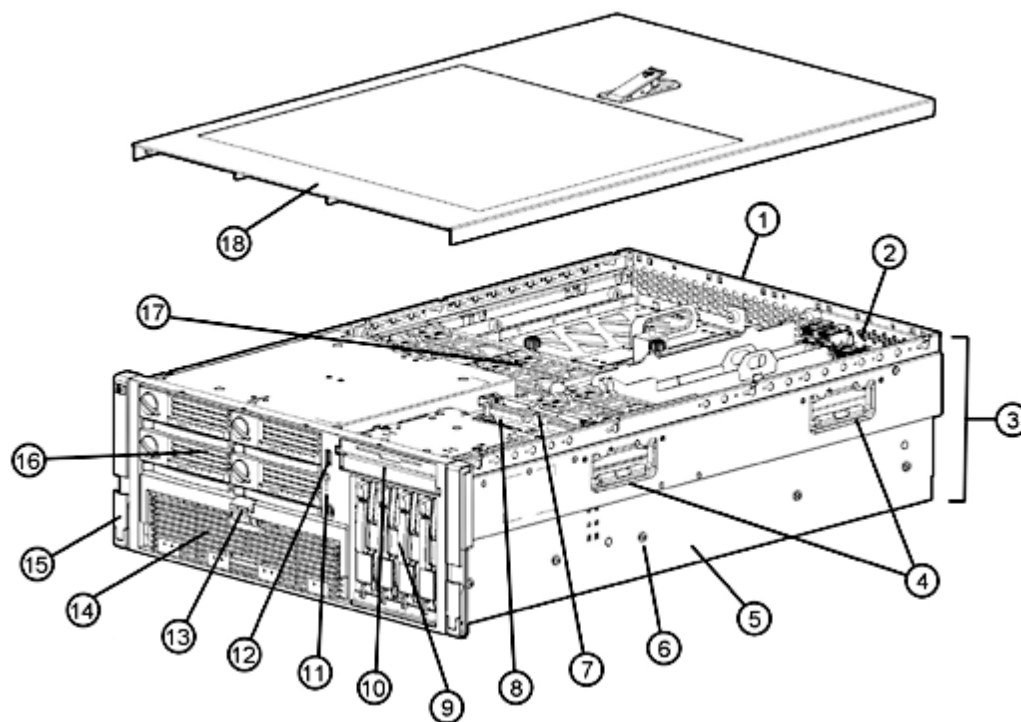


Overview

HP ProLiant DL580 Generation 3 (G3)



1. Dual Hot Plug Redundant Power Supplies (one standard with 1P Models, requires optional RPS for redundancy)
2. Up to Seven I/O Slots: 5 Standard 64-bit PCI-X (Three 133MHz and Two 100MHz). Optional Mezzanine adds Two Hot Plug 64-bit/133MHz PCI-X or two X4 PCI Express, or one X8 PCI Express
3. 4U (7" Height) Rack Form Factor
4. Server Lifting Handles
5. Smart Array 6i Ultra320 array controller with optional 128MB Battery Backed Write Cache (BBWC ships standard with some models)
6. Universal Tool-less "Snap In" Rail Solution
7. Wide Ultra3/U320 Duplex Drive Cage (can be Simplex configured)
8. QuickFind Diagnostic Display
9. Support for up to four 1" Ultra320 SCSI hot plug hard drives or two hot plug hard drives and one DAT 40 or DAT 72 hot plug tape drive
10. Support for up to Two Ejectable Slimline Drives (DVD Drive standard, Floppy Drive optional with all models)
11. Front Panel LED Display (internal and external health, Two Network Port Status, Unit ID light) and Power Button
12. One front accessible USB 2.0 port, Two rear accessible USB 2.0 ports (all bootable)
13. Front accessible Processor drawer (allows access to Processors and Processor Power Modules)
14. Support for up to Four Intel Xeon MP Processors with EM64T, 667 MHz FSB, and 0M-8M L3 cache
15. Quick release levers for fast server access
16. Front accessible Hot Plug RAID Memory (One Memory Board ships Standard with all models)
17. Six Hot Plug Redundant Fans Standard on all models
18. Quick Removal Access Panel

Overview

At A Glance

The world's best selling 4-way server just got even better! The HP ProLiant DL580 G3 delivers on its history of design excellence with Enterprise-class uptime and manageability, proven Intel Xeon MP performance, and unsurpassed flexibility and serviceability.

Introducing the new HP ProLiant DL580 G3, now available with the latest 64-bit Intel® Xeon™ MP processors with Hyper-threading, Hot-Plug RAID memory and a totally redesigned flexible and serviceable chassis.

New HP ProLiant DL580 G3 models:

- DL580R03 X3.16-1MB/667, 1GB
- DL580R03 X3.66-1MB/667, 1GB
- DL580R03 X2.83-4MB/667, 1GB
- DL580R03 X3.00-8MB/667, 2GB
- DL580R03 X3.33-8MB/667, 2GB

New HP ProLiant DL580 G3 features:

- Supports up to four 64-bit Intel® Xeon™ MP processors and HT Technology, Dual Independent 667MHz Front Side Buses and up to 8MB of L3 cache
- Intel 8500 Chipset
- Front accessible Hot Plug RAID Memory (Configurable for Standard, Mirrored or RAID) provides maximum up-time, flexibility and serviceability
- Front accessible Processor and Processor Power Modules allow server to stay safely secured in the rack during servicing
- New HP Power Regulator for ProLiant delivering server level, policy based power management with industry leading energy efficiency and savings on system power and cooling costs
- Integrated Lights-Out featuring new firmware v 1.70 with support for Power Regulator for ProLiant and introducing support for the draft DMTF System Management Architecture for Server Hardware Command Line Protocol standard
- Rear accessible Hot Plug Redundant Power Supplies (RPS optional on some models)
- Up to Seven I/O Slots: 5 Standard 64-bit PCI-X (Three 133MHz and Two 100MHz). Optional Mezzanine adds Two Hot Plug 64-bit/133MHz PCI-X, Two X4 PCI Express, or One X8 PCI Express
- PC2-3200R 400MHz DDR2 Memory can be configured in Hot Plug Mirrored, Hot Plug RAID, Online Spare or Advanced ECC modes
- Integrated Ultra320 Smart Array 6i Controller with 64MB RAM and optional 128MB Battery-Backed Write Cache (BBWC) Enabler option kit
- Embedded NC7782 Dual Port PCI-X 10/100/1000 Gigabit NIC
- USB 2.0 up front, 2 ports rear (configurable for boot capability)
- Quick Deploy Rail System includes sliding universal rails, an ambidextrous cable management arm and quick release levers for fast and easy serviceability and in-rack tool-less access to major components
- New iLO Shared Network Port enables access to the iLO management processor through one of the embedded system NIC's (Can be disabled). This allows access to iLO without requiring a separate, dedicated network connection for iLO.
- Ejectable Slimline DVD Drive standard, Floppy Drive optional on all models

HP ProLiant DL580 G3 features, that were also included in the HP ProLiant DL580 G2:

- Integrated Lights-Out (iLO) Standard Management on system board
- Simplex or Duplex configurable Wide Ultra3/U320 Duplex Drive Cage
- Support for up to four 1" Ultra320 SCSI hot plug hard drives or three hot plug hard drives and one DAT hot plug tape drive
- Hot Plug Fans with full redundancy
- Tool-less access to all system components for easy in rack serviceability
- Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU), HP Systems Insight Manager, Status LED's including system health and UID, and SmartStart
- Internal hot plug hard drive capacity 1.2 TB standard (4 x 300 GB 1" HD)
- Protected by HP Services, including a three-year, Next Business Day, on-site limited Global warranty and extended Pre-Failure Warranty, which covers processors, memory, and hard drives - Certain restrictions and exclusions apply.

Overview

Processor

One or more of the following depending on Model

Intel Xeon Processor 3.16 GHz/667MHz - 1MB L2 cache
Intel Xeon Processor 3.66 GHz/667MHz - 1MB L2 cache
Intel Xeon Processor 2.83 GHz/667MHz - 4MB L3 cache
Intel Xeon Processor 3.00 GHz/667MHz - 8MB L3 cache
Intel Xeon Processor 3.33 GHz/667MHz - 8MB L3 cache

Cache Memory

One of the following depending on Model

8-MB Integrated Level 3 cache (per processor)
NOTE: Available with 3.33 GHz, 3.00 GHz models only.
4-MB Integrated Level 3 cache (per processor)
NOTE: Available with 2.83 GHz model only.
1-MB Integrated Level 2 cache (per processor)
NOTE: Available with 3.16 GHz, 3.66 GHz models only.

Upgradability

Upgradable to quad processing

Chipset

Intel 8500 Chipset
NOTE: For more information regarding Intel chipsets, please see the following URL:
<http://www.intel.com/products/server/chipsets/>

Memory

One of the following depending on Model

Type	PC2-3200R 400MHz DDR2
Standard (1P base models)	1024MB
Standard (2P base models)	2048MB
Maximum	32 GB

NOTE: 32 GB achieved with use of four memory cartridges and sixteen 2GB PC2-3200 Memory Modules. The HP ProLiant DL580 G3 will accept both single rank and dual rank DIMMs in all sockets.

Network Controller

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

Standard Features

Expansion Slots with No Mezzanine Option	Bus speed	Bus number	Hot Plug	PCI Voltage	Notes
1	N/A	N/A	N/A	N/A	Standard
2	N/A	N/A	N/A	N/A	Standard
3	64-bit / 133 MHz PCI-X	12	No	3.3 Volt	Standard
4	64-bit / 133 MHz PCI-X	15	No	3.3 Volt	Standard
5	64-bit / 133 MHz PCI-X	19	No	3.3 Volt	Standard
6	64-bit / 100 MHz PCI-X	22	No	3.3 Volt	Standard
7	64-bit / 100 MHz PCI-X	22	No	3.3 Volt	Standard
Expansion Slots with PCI-X Mezzanine Option	Bus speed	Bus number	Hot Plug	PCI Voltage	Notes
1	64-bit / 133 MHz PCI-X	6	Yes	3.3 Volt	Optional
2	64-bit / 133 MHz PCI-X	9	Yes	3.3 Volt	Optional
3	64-bit / 133 MHz PCI-X	13	No	3.3 Volt	Standard
4	64-bit / 133 MHz PCI-X	16	No	3.3 Volt	Standard
5	64-bit / 133 MHz PCI-X	20	No	3.3 Volt	Standard
6	64-bit / 100 MHz PCI-X	23	No	3.3 Volt	Standard
7	64-bit / 100 MHz PCI-X	23	No	3.3 Volt	Standard
Expansion Slots with PCI Express X4 Mezzanine Option	Bus speed	Bus number	Hot Plug	PCI Voltage	Notes
1	PCI Express X4	5	No	N/A	Optional
2	PCI Express X4	8	No	N/A	Optional
3	64-bit / 133 MHz PCI-X	12	No	3.3 Volt	Standard
4	64-bit / 133 MHz PCI-X	15	No	3.3 Volt	Standard
5	64-bit / 133 MHz PCI-X	19	No	3.3 Volt	Standard
6	64-bit / 100 MHz PCI-X	22	No	3.3 Volt	Standard
7	64-bit / 100 MHz PCI-X	22	No	3.3 Volt	Standard

Standard Features

Expansion Slots with PCI Express X8 Mezzanine Option	Bus speed	Bus number	Hot Plug	PCI Voltage	Notes
1	PCI Express X8	5	No	N/A	Optional
2	N/A	N/A	N/A	N/A	Standard
3	64-bit / 133 MHz PCI-X	12	No	3.3 Volt	Standard
4	64-bit / 133 MHz PCI-X	15	No	3.3 Volt	Standard
5	64-bit / 133 MHz PCI-X	19	No	3.3 Volt	Standard
6	64-bit / 100 MHz PCI-X	22	No	3.3 Volt	Standard
7	64-bit / 100 MHz PCI-X	22	No	3.3 Volt	Standard

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

Storage Controllers Smart Array 6i Controller (integrated on system board)

Storage Data Protection The Battery-Backed Write Cache (BBWC) Enabler protects up to 128-MB write cache memory from hard boot, power, controller, or system board failures.

- Standard on 2P Model with 3.33GHz/8MB processors, optional with others
- 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 DL580 G3 in the data center by removing the BBWC Enabler and 6i Controller Memory Module simultaneously (connected by short cable).

Storage

Diskette Drive	None Standard - Optional Ejectable Slimline Floppy Drive available.
Optical Drive	Ejectable Slimline DVD ROM Drive Standard on all models.
Hard Drives	None ship standard
Hard Disk Drive Backplane	Internal Wide Ultra3/U320 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.

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

Standard Features

Interfaces	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	Front USB Ports (2.0)	1
	Rear USB Ports (2.0)	2
	iLO Remote Management	1
	Network RJ-45	2

Graphics	Integrated ATI Rage XL Video Controller with 8-MB SDRAM Video Memory
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Form Factor	Rack (4U = 7 inches), ships with Quick Deploy Rail System, an ambidextrous cable management arm and quick release levers for fast and easy serviceability and in-rack tool-less access to major components 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 are both easy to set up work with the Insight Management Agents, integrated Light-Out and Remote Insight Light-Outs Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP SIM customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP 9000 systems; and plug-ins for storage, client, printer, and power management as well as server rapid deployment, performance management, and workload management. For more details on HP SIM visit http://www.hp.com/go/hpsim .
SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at http://www.hp.com/servers/smartstart . SmartStart version supported (minimum): SmartStart 7.20.
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 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.

Standard Features

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:

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

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

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

Industry Standard Compliance

ACPI 1.0a. Compliant
PCI 2.2 Compliant
PXE Support
WOL Support
Physical Address Extension (PAE) Support
Microsoft® Logo certifications
USB 2.0 Support

Standard Features

Remote Management

Integrated Lights-Out (iLO) Standard Management

- Text Remote Console
- Virtual Power Button Control
- Dedicated and Shared LAN Connectivity
- Secure access using web browser
- Secure access using Secure Shell (SSH) client
- Serial access
- 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 Advanced Pack (optional)
- Remote Insight Lights-Out Edition II (optional)

Intelligent Manageability

HP Systems Insight Manager

SmartStart

Redundant ROM

Remote Flash ROM

Management Agents

Integrated Management Log (IML)

Automatic Server Recovery-2 (ASR-2)

ROM-Based Setup Utility (RBSU)

Dynamic Sector Repairing (with Smart Array Controllers)

Drive Parameter Tracking (with Smart Array Controllers)

Pre-Failure Warranty (covers processors, hard drives and memory)

Redundant/adaptive load balancing NIC Support

Hot Spare Boot

NOTE: Upon the event of a failed processor or VRM in a multi-processing environment, the system will automatically reboot and use the remaining good processor(s).

Availability

- **HP Advanced Memory Protection Technology** - delivers unsurpassed memory protection and server availability with the following supported modes of operation:
 - Advanced ECC (1 or More Memory Boards)
Advanced ECC Memory is the default memory protection mode for the HP ProLiant DL580 G3. In Advanced ECC, the server is protected against correctable memory errors. The server will provide notification if the level of correctable errors exceeds a predefined threshold rate. The server does not fail because of correctable memory errors.

Advanced ECC provides additional protection over Standard ECC in that it is possible to correct certain memory errors that would otherwise be uncorrectable and result in server failure. Whereas Standard ECC can correct single-bit memory errors, Advanced ECC can correct single-bit and multi-bit memory errors if all failed bits are on the same DRAM device on the DIMM. Advanced ECC is the only mode in which hot-add operations are supported by adding a memory board with memory to the server while it is running.

Standard Features

- Online Spare Memory (1 or More Memory Boards)
Offers a higher level of memory protection than Advanced ECC alone. If the number of single-bit correctable errors on a bank exceeds the pre-defined error threshold, that bank will fail over to the online spare bank without intervention or server interruption. The failed memory can then be replaced at the user's convenience during a scheduled maintenance window.

Online Spare Memory is achieved by protecting active memory with online spare memory on the same memory board. No operating system support is required.

- Hot Plug Mirrored Memory (2 or 4 Memory Boards)
Hot Plug Mirrored Memory provides a higher level of availability than Advanced ECC and Online Spare Memory. With Hot Plug Mirrored Memory, the server is protected against uncorrectable memory errors that would otherwise result in server failure. Hot Plug Mirrored Memory allows the server to keep two copies of all memory data on separate memory boards. If an uncorrectable error is encountered, the proper data is retrieved from the memory board that did not fail. In addition, Hot Plug Mirrored Memory allows failed or degraded DIMMs to be replaced while the server is running without requiring server downtime. The memory board with the failed DIMMs can be removed from the front of the server, failed DIMMs replaced, and the board re-inserted into the server without disengaging the server from the rack or interrupting the operating system.
- Hot Plug RAID Memory (4 Memory Boards)
Hot Plug RAID Memory provides a similar level of protection as Hot Plug Mirrored Memory but obtains this protection using a smaller percentage of the installed memory. While Hot Plug Mirrored Memory keeps two copies of all memory data, Hot Plug RAID Memory keeps only one copy of all memory data and additional parity information. If an uncorrectable memory error is encountered, the server can create the proper data using data from the parity information and the other memory boards that contain no failures. In a Hot Plug RAID Memory configuration, 75% of the installed memory is available to the Operating System; 50% more than in a Hot Plug Mirrored Configuration. As with Hot Plug Mirrored Memory, Hot Plug RAID Memory allows failed DIMMs to be replaced while the server remains running and safely engaged in the rack.

Supported Modes	# of Memory Boards Installed			
	1 Board	2 Boards	3 Boards	4 Boards
Number of DIMMs Supported	4	8	12	16
Maximum Memory Supported	8GB	16GB	24GB	32GB
Advanced ECC Memory Protection	Yes	Yes	Yes	Yes
Online Spare Memory	Yes	Yes	Yes	Yes
Hot Plug Mirrored Memory	No	Yes	No	Yes
Hot Plug RAID Memory	No	No	No	Yes

Standard Features

- PCI-X Hot Plug Technology (Two 64bit/133-MHz PCI-X hot plug slots available with the Hot Plug PCI-X Mezzanine Option)
- Smart Array 6i Controller with optional Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance. Up to 128MB Battery Backed Write Cache protection optional on HP ProLiant DL580 G3 (BBWC Enabler ships standard with 2P 3.33GHz/8M base model)
- Hot Plug Redundant Fans - Six Hot Plug Redundant Fans ship standard with all models.
- Front Accessible Chassis - Redesigned chassis allows access to memory, processors and hard drives from the front of the server while it remains safely engaged in the rack. This provides easier serviceability and lowers the chance of interfering with neighboring servers cables and components.
- Hot Plug Universal Drives - Up to four Hot Plug Universal drives are supported with ability to configure for Duplex or Simplex Backplane functionality.
- Hot Plug Redundant Power Supplies - Two Hot Plug Redundant Power Supplies ship standard with all 2P base models (2nd Hot Plug Redundant Power Supply is optional with 1P base models)

Serviceability

- Front and Rear accessibility provides unsurpassed serviceability by allowing the server to remain safely secured in the rack while maintaining Hot Plug RAID Memory, Hot Plug Universal Hard Drives, Hot Plug Redundant Power Supplies, as well as Processors and Processor Power Modules.
- 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.
- LED display on front panel indicates power, internal health, external health, Unit ID light.
- LED display on Memory board indicates Memory status, health, and protection mode.
- LED display on Processor board indicates Processor and Processor Power Module health.
- Tool-less, virtually cable-less interior design
 - Tool-less access to interior of server
 - Up to Two ejectable, Slimline media drives are removable without the use of tools
 - Rear Access to Hot Plug Redundant Power Supplies
 - PCI Card Guides locks full length PCI cards in place
 - 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.
 - Six individually removable fans connect without cables to the system board
 - Processor/PPM Retention Cage securely locks Processors into their sockets
 - Tool-less removal of system board
- Quick Deploy Rails
 - Tool-less design "snap in" rail and ambidextrous cable management arm.

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 (optional)
Removable CD-ROM or DVD drive

Standard Features

Power Regulator	Power Regulator is a new operating system-independent power management feature of HP ProLiant servers that enables dynamic or static changes in CPU performance and power states. In dynamic power mode, Power Regulator automatically adjusts the server's power usage and performance to match CPU application activity. This improves server energy efficiency by giving CPUs full power for applications when they need it and enabling power savings without performance degradation when application activity is reduced.
Power Supply	910W (low line), 1300W (high line) with 12V main output. Size is 2.8"(H) X 4.9"(W) X 7.5"(L). NOTE: One Hot Plug Power Supply ships standard with 1P base models (optional Redundant Hot Plug Power Supply Option Kit). NOTE: Two Hot Plug Power Supplies ship standard with 2P base models.
System Fans	Standard 6 Hot plug, redundant fans (individually removable) Maximum 6 Hot plug, redundant fans (individually removable)
Required Cabling	For required cabling information, refer to the HP Web site at http://h18000.www1.hp.com/products/servers/proliantDL580/ .
OS Support	Windows Server 2003 Microsoft Windows 2000 Red Hat Linux SuSE Linux Novell Netware Sun Solaris Intel Platform Edition NOTE: For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: http://www.hp.com/go/supportos . NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant DL580 G2, please see: http://www.hp.com/support . 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

Standard Features

Rack Airflow Requirements

Rack 10000 series Cabinets

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

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

- **Front and rear doors:** If your 42U server rack includes closing front and rear doors, you must allow 5,350 sq cm (830 square inches) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- **Side:** The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 inches).

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

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: <http://www5.HP.com/products/servers/proliantdl580/index.html>.

Rack Mounting Requirements

HP ProLiant DL580 G3 rack models provide tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 and H9 series) with an adjustment range from 24" - 36" in depth. The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

NOTE: Cable management arm must be removed to access Hot Plug Power Supplies when the cable management arm is mounted on the right.

HP ProLiant DL580 G3 in Telco Racks

Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions (<http://www.racksolutions.com/hp/>)

Factory Express Portfolio for Servers and Storage

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

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

For more information on how to order please contact your sales representative or go to <http://www.hp.com/go/factory-express>.

Standard Features

Service and Support

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

NOTE: Limited warranty includes 3 year parts, 3 year labor, 3-year on-site support

From Web-based support...to remote diagnostic tools that help decrease downtime...to dedicated onsite service, HP and its service partners provide "as-you-need-it" access to ProLiant-specific knowledge and skills no other vendor can match.

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 services helps you get your ProLiant servers deployed rapidly
- Education courses provide industry leading training for IT professionals
- Support services for fast, efficient resolution of hardware and software issues
- Extending onsite hardware warranty coverage from next business day to same business day 13 hours, 5 day or 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

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

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

NOTE: For more information on Software Support offers contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: <http://www.hp.com/hps/software>

NOTE: For more information on HP ProLiant Essentials support offers contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: http://www.hp.com/hps/servers/sr_proliant_essentials.html

NOTE: For more information on HP training offers contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: <http://www.hp.com/education/>

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

The HP ProLiant DL580 G3 server is an enterprise class, 4-way server designed for maximum scalability and high availability. Its radically redesigned chassis offers unsurpassed flexibility and serviceability in a versatile, rack-optimized form factor.

Based upon the latest industry standard processing, memory, I/O and networking technologies, the HP ProLiant DL580 G3 provides the highest levels of performance demanded by today's compute intensive applications. Unparalleled high availability features, including Hot Plug RAID Memory technology, an integrated U320 Smart Array 6i controller, duplex drive cage, and hot-plug redundant components guarantee maximum uptime. The HP ProLiant DL580 G3's Integrated Lights-Out technology, allows remote administration from a standard web-browser without ever having to visit the server. Within the 4U dense form factor, the HP ProLiant DL580 G3's highly expandable architecture provides maximum application deployment flexibility with the ability to add PCI-Express, hot plug PCI-X or battery-backed write cache options. Innovative new features, such as the ability to access processors, memory, hard drives, and power supplies while the unit remains secured in the rack, enable rapid response to service events, radically decreasing overall IT costs and server downtime.

Typical Usage:

Space-constrained corporate data centers and service providers

- With up to 1.2TB of internal storage, 16 DIMM sockets and PCI-Express or hot-plug PCI-X mezzanine options; the HP ProLiant DL580 G3 packs the storage, memory, and I/O you need in a versatile, 4U chassis
- Ambidextrous cable management and a quick deploy rail solution make racking a snap
- Availability features including hot plug RAID memory, hot plug redundant power, hot plug redundant fans, hot plug PCI-X and hot plug RAID hard drives keep environments up and running and users productive

Database, Messaging and Business Applications

- The latest 64-bit Intel® Xeon™ processors with Hyper-Threading, DDR-2 memory, and large internal storage capacity provide scalability for everything from web apps to mail servers to databases
- Five standard full-length PCI-X slots and the ability to add either two additional X4 PCI Express, one additional X8 PCI Express, or two additional hot plug PCI-X slots, provide powerful and flexible I/O alternatives
- Integrated dual-port 10/100/1000 gives you the connectivity and bandwidth needed in today's database or business applications environments
- Easily attach to SAN or NAS and manage from one location

Server Consolidation

- Scalability, availability and built-in serviceability make the HP ProLiant DL580 G3 the perfect platform for server consolidation solutions
- The ProLiant HP DL580 G3 and ProLiant Essentials make it easy to deploy, manage, and migrate virtualized servers with VMware or Microsoft Virtual Server
- Integrated Lights-Out enables administrators to manage the HP ProLiant DL580 G3 from remote locations

For more solutions visit: <http://www.hp.com/solutions/proliantdl580>.

Models

DL580R03 3.33 GHz-8MB, 2048MB (2P) 364635-xx1	Processor(s)	(2) Intel Xeon MP Processors 3.33GHz (up to 4 supported)
	Cache Memory	8MB level 3 cache
	Memory	(1) Memory Cartridge (up to 4 supported) 2GB (2 x 1GB) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board) with 128MB Battery Backed Write Cache
	Manageability	Integrated Lights-Out (iLO) Standard Management
	Hard Drives	None ship standard
	Internal Storage	1.2 TB max (with optional 300GB U320 Universal Hot Plug hard drives)
	Power Supply	(2) Hot Plug Redundant Power Supplies
	Optical Drive	Ejectable Slimline DVD-ROM Drive (8X/24X)
	Diskette Drive	None ship standard (optional Ejectable Slimline Floppy Drive)
Form Factor	Rack 4U	

DL580R03 3.0 GHz-8MB, 2048MB (2P) 364634-xx1	Processor(s)	(2) Intel Xeon MP Processors 3.00GHz (up to 4 supported)
	Cache Memory	8MB level 3 cache
	Memory	(1) Memory Cartridge (up to 4 supported) 2GB (2 x 1GB) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard Management
	Hard Drives	None ship standard
	Internal Storage	1.2 TB max (with optional 300GB U320 Universal Hot Plug hard drives)
	Power Supply	(2) Hot Plug Redundant Power Supplies
	Optical Drive	Ejectable Slimline DVD-ROM Drive (8X/24X)
	Diskette Drive	None ship standard (optional Ejectable Slimline Floppy Drive)
Form Factor	Rack 4U	

Models

DL580R03 2.83 GHz-4MB, 1024MB (1P) 364633-xx1	Processor(s)	(1) Intel Xeon MP Processor 2.83GHz (up to 4 supported)
	Cache Memory	4MB level 3 cache
	Memory	(1) Memory Cartridge (up to 4 supported) 1GB (2 x 512MB) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard Management
	Hard Drives	None ship standard
	Internal Storage	1.2 TB max (with optional 300GB U320 Universal Hot Plug hard drives)
	Power Supply	(1) Hot Plug Power Supply
	Optical Drive	Ejectable Slimline DVD-ROM Drive (8X/24X)
	Diskette Drive	None ship standard (optional Ejectable Slimline Floppy Drive)
Form Factor	Rack 4U	

DL580R03 3.66 GHz-1MB, 1024MB (1P) 385999-xx1	Processor(s)	(1) Intel Xeon MP Processors 3.66GHz (up to 4 supported)
	Cache Memory	1MB level 2 cache
	Memory	(1) Memory Cartridge (up to 4 supported) 1GB (2 x 512MB) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard Management
	Hard Drives	None ship standard
	Internal Storage	1.2 TB max (with optional 300GB U320 Universal Hot Plug hard drives)
	Power Supply	(1) Hot Plug Power Supply
	Optical Drive	Ejectable Slimline DVD-ROM Drive (8X/24X)
	Diskette Drive	None ship standard (optional Ejectable Slimline Floppy Drive)
Form Factor	Rack 4U	

Models

DL580R03 3.16 GHz-1MB, 1024MB (1P) 377239-xx1	Processor(s)	(1) Intel Xeon MP Processors 3.16GHz (up to 4 supported)
	Cache Memory	1MB level 2 cache
	Memory	(1) Memory Cartridge (up to 4 supported) 1GB (2 x 512MB) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard Management
	Hard Drives	None ship standard
	Internal Storage	1.2 TB max (with optional 300GB U320 Universal Hot Plug hard drives)
	Power Supply	(1) Hot Plug Power Supply
	Optical Drive	Ejectable Slimline DVD-ROM Drive (8X/24X)
	Diskette Drive	None ship standard (optional Ejectable Slimline Floppy Drive)
	Form Factor	Rack 4U

Country Code Key	XX=00	US
	XX=20	Brazil
	XX=42	Int'l, Europe, Germany, France
	XX=29	Japan
	XX=37	APD
	XX=AA	PRC

Configuration Information - Factory Integrated Models

NOTE: HP does not allow factory integration of options into standard models listed above.

Configure-to-order servers must start with a CTO Chassis.

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

Step 1: Base Configuration

Models	HP ProLiant DL580 G3 Highly Serviceable Rack Chassis	364636-405
	Factory Integrated Model ships with:	
	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter	
	Ultra320 Smart Array 6i Controller (integrated on system board)	
	Five Standard 64-bit non-hot plug PCI-X slots (3 x 133MHz, 2 x 100MHz)	
	One (1) Hot Plug Power Supply with one (1) low line NEMA power cord and One high-line IEC power cord	
	Six (1) Redundant Hot Plug Fans	
	Wide Ultra3/U320 Duplex Drive Cage (can be Simplex configured)	
	Integrated Lights-Out (iLO) Standard Management	
	Rack (4U), 7-inch	

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

Processors	Intel X3.33GHz/667-8MB 580 G3 FIO BASE	348123-L22
	Intel X3.00GHz/667-8MB 580 G3 FIO BASE	348122-L22
	Intel X2.83GHz/667-4MB 580 G3 FIO BASE	348121-L22
	Intel X3.66GHz/667-1MB 580 G3 FIO BASE	385903-L22
	Intel X3.16GHz/667-1MB 580 G3 FIO BASE	375368-L22
Base Memory	4GB (2 x 2GB 2RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities	375004-B21
	4GB (2 x 2GB 1RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities	343057-B21
	2GB (2 x 1GB 1RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities	343056-B21
	1GB (2 x 512MB 1RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities	343055-B21
Optical Drive	Slimline CD-RW/DVD-ROM 24X Combo Drive Option Kit (Servers)	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21

Configuration Information - Factory Integrated Models

Step 3: Choose Additional Factory Integratable Options

The HP ProLiant DL580 G3 Performance Packs include the latest performance technologies and enterprise class availability features pre-installed for convenience and value. In addition to the standard features listed in Step 1, the Performance Packs include the following:

- 2nd Intel Xeon Processor MP and Processor Power Module
- 2nd Rear Accessible Hot Plug Redundant Power Supplies
- The 3.33GHz Performance Pack also includes the 128MB Battery Backed Write Cache for the embedded Smart Array 6i controller

DL580G3 X3.33GHz/667-8MB HPM Performance Pack US	391717-001
DL580G3 X3.00GHz/667-8MB HPM Performance Pack US	391718-001
DL580G3 X3.33GHz/667-8MB HPM Performance Pack WW	391717-B21
DL580G3 X3.00GHz/667-8MB HPM Performance Pack WW	391718-B21

Step 4: Choose Additional Options for Factory Integration

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

Options

ProLiant DL580 Unique Options	Hot Plug 64-bit/133MHz PCI-X Mezzanine Option NOTE: Adds two Hot Plug PCI-X slots.	377520-B21
	PCI Express X4 Mezzanine Option NOTE: Adds two PCI Express (X4) I/O slots. Each slot will accept PCI Express cards with X1 through X8 connectors and utilize X4 lanes.	377522-B21
	PCI Express X8 Mezzanine Option NOTE: Adds one PCI Express (X8) I/O slot. The slot will accept PCI Express Cards with X1 through X8 connectors and utilize X8 lanes.	389876-B21
	DL580 G3 Memory Board NOTE: The HP ProLiant DL580 G3 utilizes up to four Memory Boards that support up to four DIMMs each. These memory boards are Front accessible providing unsurpassed levels of memory protection as well as scalability for the most memory-intensive applications. See Memory Configuration Diagram. NOTE: One Memory Board ships standard with all models.	364639-B21
ProLiant Essentials Value Pack Software	Rapid Deployment Pack, 1 User, V1.x NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	267196-B21
	Rapid Deployment Pack, 1 User, V1.x (Japan) NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	267196-291
	Rapid Deployment Pack, 10 Users, V1.x NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	269817-B21
	Rapid Deployment Pack, 10 Users, V1.x (Japan) NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	269817-291
	Flexible Quantity License Kit	302127-B21
	License-Only - for use with a Master License Agreement	302128-B21
	ProLiant Essentials Workload Management Pack (Featuring Resource Partitioning Manager version 2.0)	303284-B21
	Integrated Lights-Out (iLO) Advanced Pack	263825-B21
	Performance Management Pack, single server NOTE: This license allows 1 server to be managed by Performance Management Pack.	306696-B21
	ProLiant Essentials Performance Management Pack, 10 Pack Server License	374055-B21
	Performance Management Pack, flexible license kit NOTE: A single pack is shipped with a single license key for the total number of licenses ordered	306697-B21
	ProLiant Essentials Intelligent Networking Pack, 1 License	372906-B21
	ProLiant Essentials Intelligent Networking Pack Flex License	372950-B21
	ProLiant Essentials Intelligent Networking Pack Track License	372951-B21
ProLiant Essentials 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.	372214-B21	

Options

ProLiant Essentials Virtual Machine Management Pack, Flexible-Quantity License NOTE: For use with multiple servers. This part number can be used to purchase multiple licenses with a single activation key.	372215-B21
ProLiant Essentials Virtual Machine Management Pack, Tracking License NOTE: For use with signed and implemented Activation Key Agreements only. Purchase of this part number entitles the customer to deploy additional licenses of the product under the terms of the existing Activation Key Agreement.	372216-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License	371645-B21
ProLiant Essentials Vulnerability and Patch Management Pack, 10-Server License	372029-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Flexible-Quantity License	371646-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for new servers	371647-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for installed servers	378372-B21
ProLiant Essentials Vulnerability and Patch Management Pack, 1-Server 10-Desktop Bundle License 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 .	389941-B21

Software	HP digital asset protection	302316-001
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Processor	Intel X3.16GHz/667-1MB 570/580 G3 Processor Option Kit	375369-B21
	Intel X3.66GHz/667-1MB 570/580 G3 Processor Option Kit	385903-B21
	Intel X2.83GHz/667-4MB 570/580 G3 Processor Option Kit	348109-B21
	Intel X3.00GHz/667-8MB 570/580 G3 Processor Option Kit	348110-B21
	Intel X3.33GHz/667-8MB 570/580 G3 Processor Option Kit	348111-B21

Memory (DIMMs)	1GB (2 x 512MB 1RANK) PC2-3200R 400MHz DDR2 Option Kit NOTE: With Advanced ECC and online spare memory capabilities.	343055-B21
	2GB (2 x 1GB 1RANK) PC2-3200R 400MHz DDR2 Option Kit NOTE: With Advanced ECC and online spare memory capabilities.	343056-B21
	4GB (2 x 2GB 1RANK) PC2-3200R 400MHz DDR2 Option Kit NOTE: With Advanced ECC and online spare memory capabilities.	343057-B21
	4GB (2 x 2GB 2RANK) PC2-3200R 400MHz DDR2 Option Kit NOTE: With Advanced ECC and online spare memory capabilities.	375004-B21
	DL580 G3 Memory Board NOTE: The HP ProLiant DL580 G3 utilizes up to four Memory Boards that support up to four DIMMs each. These memory boards are Front accessible providing unsurpassed levels of memory protection as well as scalability for the most memory-intensive applications. See Memory Configuration Diagram. NOTE: One Memory Board ships standard with all models.	364639-B21

Options

Diskette Drive	Slimline Ejectable Floppy Drive	390164-B21
Optical Drives	Slimline Ejectable CD-RW/DVD-ROM 24X Combo Drive Option Kit (Servers)	331903-B21
	Slimline Ejectable DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21
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_div/11531_div.HTML (Worldwide)	
	http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML (North America)	
Storage Controllers	Smart Array 6i 128MB Battery-Backed Write Cache Enabler Option Kit	346914-B21
	NOTE: This Battery-Backed Write Cache Enabler Option Kit is for the integrated Smart Array 6i Controller. This BBWC ships standard on 2P Model with 3.33GHz/8MB processors.	
	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
	256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400	273913-B21
	NOTE: This 256-MB Battery-Backed Cache Module upgrade kit supports the Smart Array 6400 series controller only.	
	128MB Battery-Backed Cache Enabler	351580-B21
	NOTE: This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
	DL580 G3 Cable Assembly, SCSI, Ultra3, LVDS	288874-B21
	NOTE: All HP ProLiant DL580 G3 models ship standard with the integrated Smart Array 6i Controller, which has been designed to deliver maximum performance and availability across the internal SCSI Duplex backplane.	
	<ul style="list-style-type: none"> The Ultra3 SCSI cable is required only if the customer chooses to bypass the Smart Array 6i 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. 	

Options

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
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS	284688-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/12030_div/12030_div.HTML
(Smart Array 6i)

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

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

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

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

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

Communications

HP NC150T PCI 4-port Gigabit 1000T Combo Switch Adapter	367132-B21
HP NC310F PCI-X Single Port 1000SX Gigabit Server Adapter	368169-B21
HP NC320T PCI Express Single Port 1000T Gigabit Server Adapter	367047-B21
HP NC1020 PCI Single Port 1000T Gigabit Server Adapter	353377-B21
HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21
HP NC7771 PCI-X Single Port 1000T Gigabit Server Adapter	290563-B21

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

HP NC570C PCI-X Dual-port 4x Fabric Adapter	376158-B21
HP NC571C PCI Express Dual-port 4x Fabric Adapter	376160-B21
HP 24-Port 4x Fabric Copper Switch	376227-B21
HP 4x Fabric 1m Copper Cable	376232-B21
HP 4x Fabric 3m Copper Cable	376232-B22
HP 4x Fabric 5m Copper Cable	376232-B23

Redundant Options

910W (low line), 1300W (high line) Hot Plug Redundant Power Supply US - includes Nema 5-15P to IEC320-C19	348114-001
910W (low line), 1300W (high line) Hot Plug Redundant Power Supply -includes C14 to C19 IEC cable	348114-B21

Options

Management Options	Remote Insight Lights-Out Edition II (NA, LA)	227251-001
	Remote Insight Lights-Out Edition II (EMEA)	227251-021
	Remote Insight Lights-Out Edition II (ROW)	227251-371
	iLO Advanced Pack	263825-B21

Security	HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
	AXL300 Accelerator PCI Card for ProLiant Servers	227933-B21

Tape Drives

NOTE: The following tape drives are recommended for use with the ProLiant DL580 G3. Additional HP tape drives are supported. For a complete listing of HP tape drive offerings supported with the HP ProLiant DL580 G3, visit

<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

NOTE: External tape devices, including both tape drives and tape arrays/enclosures, can be directly connected to the VHDCI SCSI port located on the back of the server. Use of a SCSI adapter to connect these devices is optional, not required.

Ultrium Tape Drives - External, Rack-Mount and Array

HP StorageWorks Ultrium 215 Tape Drive, External (Carbon)	Q1545A
HP StorageWorks Ultrium 215 rack-mount (Carbon) - Single drive installed in a 1U rack-mount kit	A7444A
HP StorageWorks Ultrium 215 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7492B
HP StorageWorks Ultrium 230 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7470B
HP StorageWorks Ultrium 460 Tape Drive, External (Carbon)	Q1520A
HP StorageWorks Ultrium 460, Rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit	350546-B21
HP StorageWorks Ultrium 460 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	Q1512B
HP StorageWorks Ultrium 448 Tape Drive, External (Carbonite)	DW017A
HP StorageWorks Ultrium 448, Rack-mount (Carbonite) - Single drive installed in a 1U rack-mount kit	DW028A
HP StorageWorks Ultrium 960 Tape Drive , Internal (Carbonite)	Q1538A
HP StorageWorks Ultrium 960 Tape Drive , External (Carbonite)	Q1539A
HP StorageWorks 3U Rack-Mount Kit with one Ultrium 960 drive	Q1595A
HP StorageWorks Ultrium 960 Array Module	Q1540A

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

http://h18006.www1.hp.com/products/quickspecs/11739_div/11739_div.html
(Worldwide)

http://h18006.www1.hp.com/products/quickspecs/11739_na/11739_na.html
(North America)

http://h18006.www1.hp.com/products/quickspecs/12128_div/12128_div.html
(Worldwide)

http://h18006.www1.hp.com/products/quickspecs/12128_na/12128_na.html
(North America)

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

Options

DAT Drives - External, Rack-Mount and Array Module

HP StorageWorks DAT 72 Tape Drive, External (Carbon)	Q1523A
HP StorageWorks DAT 72 rack-mount (Carbon) - Single drive installed in a 1U rack-mount kit	A7443A
HP StorageWorks DAT 72 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	Q1524B
HP StorageWorks DAT 40 Tape Drive, External (Carbon)	C5687C
HP StorageWorks DAT 40 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7497B
HP DAT 24e External Tape Drive	C1556D
HP StorageWorks DAT 24 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7498A

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

http://h18000.www1.hp.com/products/quickspecs/11883_div/11883_div.HTML
(Worldwide)

http://h18000.www1.hp.com/products/quickspecs/11883_na/11883_na.HTML
(North America)

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

Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit	A7445A
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NOTE: The 1U Rack-mount Kit can support up to 2 half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including DAT 24, DAT40, DAT72, DLT VS 80, VS160, Ultrium 215 and Ultrium 448 tape drives.

HP StorageWorks 3U Rack-Mount Kit	274338-B21
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NOTE: The 3U Rack-Mount Kit can support up to 2 full-height or 4 half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including DAT, DLT VS80, VS160, SDLT 320, SDLT600, Ultrium 215, Ultrium 448, Ultrium 230, and Ultrium 460 Tape Drives.

HP StorageWorks 5U Rack-Mount Kit	274339-B21
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NOTE: The 5U Rack-Mount Kit can support up to 4 full-height tape drives and is compatible with SDLT 320, SDLT600, Ultrium 230, and Ultrium 460 tape drives.

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

http://h18000.www1.hp.com/products/quickspecs/10854_div/10854_div.HTML
(Worldwide)

http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML
(North America)

HP StorageWorks Tape Array 5300	C7508A
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NOTE: The Tape Array 5300 is a 3U enclosure that supports up to 2 full-height or 4 half-height hot-swap array modules, including DAT and Ultrium tape drives. Cables and terminators are not included and must be ordered separately.

NOTE: Please see the Tape Array 5300 QuickSpecs for additional information regarding this product.

http://h18000.www1.hp.com/products/quickspecs/11878_div/11878_div.HTML
(Worldwide)

http://h18000.www1.hp.com/products/quickspecs/11878_na/11878_na.HTML
(North America)

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

Options

LVD Cable Kit, VHDCI/HD68	168048-B21
NOTE: For use with the 3U Rack-mount Kit and 5U Rack-mount Kit only.	
LVD Cable Kit, HD68/HD68	242381-B21
NOTE: For use with the 3U Rack-mount Kit and 5U Rack-mount Kit only.	
Accessories for 3U & 5U Rack-mount Tape Drive Kits	
<i>PSU/Fan Upgrade Kit - Redundant hot-swap power supply unit and fan for Tape Array 5300.</i>	
68-pin HD multi-mode terminator	C2364A
1.0m 68-pin VHDCI to 68-pin HD cable	C2361B
2.5m 68-pin VHDCI to 68-pin HD cable	C2362B
5.0m 68-pin VHDCI to 68-pin HD cable	C2365A
10.0m 68-pin VHDCI to 68-pin HD cable	C2363B
0.5m 68-pin HDI to 68-pin HD cable LVD/SE	C2978B
1.5m 68-pin HDI to 68-pin HD cable LVD/SE	C2979B
0.9m 68-pin HDI to 68-pin HD cable LVD/SE	C2911C
2.5m 68-pin HDI to 68-pin HD cable LVD/SE	C2924C
NOTE: For use with Tape Array 5300 only	

Tape Autoloaders

DAT Autoloader

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

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

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

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

HP StorageWorks 1/8 Tape Autoloader

1/8 Ultrium 460 Tape Autoloader, Tabletop AA927A

1/8 SDLT 320 Tape Autoloader, Tabletop AA926A

1/8 Ultrium 230 Tape Autoloader, Tabletop C9572CB

1/8 DLT VS80 Tape Autoloader, Tabletop C9264CB

1/8 Tape Autoloader Rackmount Kit C9268R

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

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

HP StorageWorks SSL1016 Tape Autoloader

SSL1016 Ultrium 460 Tape Autoloader 330821-B21

SSL1016 SDLT 320 Tape Autoloader 330816-B21

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

Options

Tape Libraries

HP StorageWorks MSL6000 Tape Library

MSL6030, 1 drive, 30 slots, Ultrium 460, RM	330731-B22
MSL6030, 2 drive, 30 slots, Ultrium 460, RM	330731-B23
MSL6030, 1 drive, 30 slots, Ultrium 460, RM with embedded FC router	330731-B24
MSL6030, 2 drive, 30 slots, Ultrium 460, RM with embedded FC router	330731-B25
MSL6060, 2 drive, 60 slot, Ultrium 460, RM	331196-B21
MSL6060, 2 drive, 60 slot, Ultrium 460, RM with embedded FC router	331196-B22

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

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

HP StorageWorks MSL5026S2 Tape Library

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

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

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

HP StorageWorks MSL5052S2 Tape Library

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

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

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

HP StorageWorks MSL5030 Tape Library

MSL5030, 1 drive, 30 slots, Ultrium 230, RM	301897-B22
MSL5030, 2 drive, 30 slots, Ultrium 230, RM	301897-B23
MSL5030, 1 drive, 30 slots, Ultrium 230, RM with embedded FC router	301897-B24
MSL5030, 2 drive, 30 slots, Ultrium 230, RM with embedded FC router	301897-B25

NOTE: Please reference the [MSL5030 Tape Library QuickSpecs at http://www.hp.com/go/automation](http://www.hp.com/go/automation) for additional information needed to create a complete solution; reference current compatibility information at

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

HP StorageWorks MSL5060 Tape Library

MSL5060, 2 drive, 60 slots, Ultrium 230, RM	301899-B22
MSL5060, 2 drive, 60 slots, Ultrium 230, RM with embedded FC router	301899-B23

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

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

HP StorageWorks ESL E-Series Tape Libraries

ESL Extended 712e Tape Library, 0 drive, 712 LTO slots	AA934A
ESL Extended 630e Tape Library, 0 drive, 630 SDLT slots	AA935A

Options

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

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

Magneto-Optical Jukeboxes

HP StorageWorks 9.1 GB Mid-range Optical Jukeboxes

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

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

HP StorageWorks 9.1 GB High-end Optical Jukeboxes

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

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

HP StorageWorks Ultra Density Optical Storage

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

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

Options

Cluster Options	ProLiant Cluster Starter Kit	364023-B21
	NOTE: For additional information regarding the ProLiant Cluster Starter Kit please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11935_div/11935_div.html (Worldwide)	
	ProLiant Cluster Kit with OpenView Storage Mirroring	364025-B21
	NOTE: For additional information regarding the ProLiant Cluster Kit with OpenView Storage Mirroring please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11934_na/11934_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11934_div/11934_div.html (Worldwide)	
	ProLiant Cluster HA/F200 for the Entry Level SAN	364026-B21
	ProLiant Cluster HA/F200 for the Entry Level SAN (Japan)	364026-291
	NOTE: For additional information regarding the ProLiant Cluster for Entry Level SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11932_div/11932_div.html (Worldwide)	
	ProLiant Cluster HA/F500 for the Enterprise SAN	364024-B21
	NOTE: For additional information regarding the ProLiant Cluster HA/F500 for Enterprise SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11933_na/11933_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11933_div/11933_div.html (Worldwide)	
	HP Serviceguard for Linux ProLiant Cluster A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (2 node license cluster kit)	305199-B24
	HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 and Red Hat EL 3 (2 node license cluster kit)	305199-B25
	HP Serviceguard for Linux License A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (single license version)	307754-B24
	HP Serviceguard for Linux A.11.16 for SUSE SLES9 and Red Hat EL 3 (single license version)	307754-B25
	NOTE: For additional information regarding the HP Serviceguard for Linux License, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html (Worldwide)	

Options

External Storage – Rack	HP StorageWorks Modular Smart Array 20 NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	335921-B21
	HP StorageWorks Modular Smart Array 20 Starter Kit NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies. Includes Smart Array 6402/128 Controller. NOTE: The Modular Smart Array Enclosure 20 Family supports the SATA 1.5Gb/s 1" Hot Plug Hard Drives.	366172-B21
	HP StorageWorks Modular Smart Array 30 SB NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies	302969-B21
	HP StorageWorks Modular Smart Array 30 DB NOTE: Rack-mountable 14 drive enclosure with dual bus, redundant power supplies NOTE: The Modular Smart Array Enclosure 30 Family supports the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.	302970-B21
	StorageWorks Modular Smart Array 30 OpenView Storage Mirroring HA Kit	359079-B21
	Redundant Power Supply 499W	338296-B21
	Ultra320 Dual Bus I/O Module for MSA30	287483-B21
	Ultra320 Single Bus I/O Module for MSA30	287484-B21
HP StorageWorks Modular Smart Array 500	HP StorageWorks Modular Smart Array 500 Generation 2 NOTE: Please see the Modular Smart Array 500 Generation 2 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11956_na/11956_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.HTML (Worldwide)	335880-B21
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
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 (North America) http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML (Worldwide)	201723-B22

Options

StorageWorks Options	HP StorageWorks SAN Switch 2/8-EL	322120-B21
	HP StorageWorks SAN Switch 2/16	322118-B21
	HP StorageWorks SAN Switch 2/8-EL SAN Fabric Scaling Upgrade license	325888-B21
	HP StorageWorks SAN Switch 2/16-EL Full SAN scaling license	325889-B21
	HP StorageWorks Director 2/64, Base 32-port configuration	286809-B21
	HP StorageWorks Director 2/64	286809-B21

NOTE: For additional information on Fibre Channel Host Bus Adapters and San Switches visit the following URL:

<http://h18000.www1.hp.com/storage/saninfrastructure.html>

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>.

Uninterruptible Power Systems – Rack

HP UPS R1500 XR (1440VA, 1340 Watt), Low Voltage (NA)	204404-001
HP UPS R1500 XR (1500VA, 1340 Watt), High Voltage (Int'l)	204404-B31
HP UPS R1500 XR (1500VA, 1340 Watt), Low Voltage (Japan)	204404-291
HP UPS R3000 XR (2880VA, 2700 Watt), Low Voltage (NA)	192186-001
HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (NA)	192186-002
HP UPS R3000 XR (2400VA, 2250 Watt), Low Voltage (Japan)	192186-291
HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Japan)	192186-292
HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Int'l - detachable cord)	192186-B31
HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A IEC309 Plug)	192186-B32
HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A CEE 7/7 SCHUKO Plug)	192186-B33
HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A BS-546 Plug)	192186-AR1
HP UPS R5500 XR, (5000VA, 4500 Watt), High Voltage (NA/Jpn)	326529-D71
HP UPS R5500 XR, (6000VA, 5400 Watt), High Voltage (Int'l)	326529-B31
HP UPS R12000 XR N+x (200-240V) (WW-hardwired)	207552-B22

NOTE: The UPS R12000 XR has a hardwired input and output; requires a 100A circuit.

Options

HP Power Distribution Unit with Power Monitoring	HP Power Distribution Unit with Power Monitoring Model S2324 - dual input, 3 phase, 24A (NA/JPN)	370959-D71
	HP Power Distribution Unit with Power Monitoring Model S1324 - single input, 3 phase, 24A (NA/JPN)	370960-D71
	HP Power Distribution Unit with Power Monitoring Model S2140 - dual input, 1 phase, 40A (NA/JPN)	370961-D71
	HP Power Distribution Unit with Power Monitoring Model S1140 - single input, 1 phase, 40A (NA/JPN)	370962-D71
	HP Power Distribution Unit with Power Monitoring Model S2316 - dual input, 3 phase, 16A (INTL)	370963-D71
	HP Power Distribution Unit with Power Monitoring Model S1316 - single input, 3 phase, 16A (INTL)	370964-D71
	HP Power Distribution Unit with Power Monitoring Model S2132 - dual input, 1 phase, 32A (INTL)	370965-D71
	HP Power Distribution Unit with Power Monitoring Model S1132 - single input, 1 phase, 32A (INTL)	370966-D71
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).	Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC) (WW) NOTE: This model has a detachable input power cord and is adaptable to country specific requirements. The 16A PDU also connects to the high volt models of the UPS R3000 XR and R6000 models. Cable P/N 340653-001 required if connecting to UPS R3000 XR (192186-002 NA -High Volt model only).	252663-B24
	Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) (NA, Japan) NOTE: This model has a detachable input power cord and is adaptable to country specific requirements. The 16A PDU also connects to the high volt models of the UPS R3000 XR and R6000 models. Cable P/N 340653-001 required if connecting to UPS R3000 XR (192186-002 NA -High Volt model only).	252663-D71
	Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) (NA, Japan) NOTE: L6-30 input.	252663-D72
	Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) (WW) NOTE: The 40A model has a hardwired input. NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including cables: http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.HTML (Worldwide)	252663-B21
	Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31

Options

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

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

Telco Rack Support	DL580 G3 Telco Rack Kit: Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions (http://www.racksolutions.com/hp/)	
	Rack Adapter Kit NOTE: This kit allows HP rack servers to fit in racks that are 24" wide.	332815-B21

HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled	358254-B21
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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)	10642 (42U) Infrastructure Rack (Low Voltage)	379006-001
	10642 (42U) Infrastructure Rack (High Voltage)	379005-001
	HP Rack S10614 (14U) Rack Cabinet – Shock Pallet	292302-B22
	HP Rack 10842 (42U, 800mm wide) – Pallet	257415-B21
	HP Rack 10842 (42U, 800mm wide) – Shock Pallet	257415-B22
	HP Rack 10647 (47U) – Pallet	245160-B21
	HP Rack 10647 (47U) – Crated	245160-B23
	HP Rack 10642 (42U) – Pallet	245161-B21
	HP Rack 10642 (42U) – Shock Pallet	245161-B22
	HP Rack 10642 (42U) – Crated	245161-B23
	HP Rack 10636 (36U) – Pallet	245162-B21
	HP Rack 10636 (36U) – Shock Pallet	245162-B22
	HP Rack 10636 (36U) – Crated	245162-B23
	HP Rack 10622 (22U) – Pallet	245163-B21
	HP Rack 10622 (22U) – Shock Pallet	245163-B22
	HP Rack 10622 (22U) – Crated	245163-B23

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

Options

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

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

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

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

Rack Options for HP Rack 10000 Series

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

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

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

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

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

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

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

Options

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

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

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

Service and Support Offerings (HP Care Pack Services)

Hardware Services On-site Service

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

6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number)

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

Installation & Start-up Services

Hardware Installation	U4617A
Hardware Installation, Electronic	U4617E
Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays.	U4618A
Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic	U4618E
Installation and Startup for Essentials Rapid Deployment Pack	U5683A
Installation and Startup for Essentials Rapid Deployment Pack, Electronic	U5683E

Options

Support Plus

Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. U4619A

Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic U4619E

Support Plus 24

Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. U4620A

Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U4620E

Onsite HW support 24x7, 4hr response and RedHat AS O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. U9239A

Onsite HW support 24x7, 4hr response and RedHat AS O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U9239E

Onsite HW support 24x7, 4hr response and SuSE O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. U6316A

Onsite HW support 24x7, 4hr response and SuSE O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U6316E

NOTE: For more information, customer/resellers can contact:

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

Memory

HP ProLiant DL580 G3 2P Models

Standard Memory

2GB 400MHz DDR-2 SDRAM (PC2-3200R Registered SDRAM Memory with Advanced ECC functionality)

Standard Memory Plus Optional Memory and Optional Memory Boards

Up to 30GB of memory is available with the optional installation of PC2-3200R Registered SDRAM Memory kits and the use of all four optional memory boards.

Standard Memory Replaced with Optional Memory and Optional memory board

Up to 32GB of memory is available with the removal of the standard 1GB or 2GB of memory, the optional installation of PC2-3200R Registered SDRAM Memory Kits and the use of all four optional memory boards.

NOTE: Memory must be added in banks of two DIMMS. This chart does not represent all possible memory configurations.

Additional requirements may apply to enable Advanced Memory Protection features.

Standard Memory		Standard Memory Board (Slots)			
Standard	2 GB	1	2	3	4
		1GB	1GB	Empty	Empty
Optional Memory Summary		Standard Memory Board (Slots)			
Optional (Standard Memory Plus Optional Memory Boards and Optional Memory)	30GB	1	2	3	4
		1GB	1GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Third Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Fourth Memory Board (Slots)			
		1	2	3	4
2GB	2GB	2GB	2GB		
Maximum Memory Summary		Standard Memory Board (Slots)			
Maximum (Standard Memory Replaced with Optional Memory with Optional Memory board)	32GB	1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
2GB	2GB	2GB	2GB		

Memory

HP ProLiant DL580 G3 1P Models

Standard Memory

1 GB 400MHz DDR-2 SDRAM (PC2-3200R Registered SDRAM Memory with Advanced ECC functionality)

Standard Memory Plus Optional Memory and Optional Memory Boards

Up to 29GB of memory is available with the optional installation of PC2-3200R Registered SDRAM Memory kits and the use of all four optional memory boards.

Standard Memory Replaced with Optional Memory and Optional memory board

Up to 32GB of memory is available with the removal of the standard 1GB or 2GB of memory, the optional installation of PC2-3200R Registered SDRAM Memory Kits and the use of all four optional memory boards.

NOTE: Memory must be added in banks of two DIMMS. This chart does not represent all possible memory configurations. Additional requirements may apply regarding the configuration of single-rank/dual-rank DIMMs and to enable Advanced Memory Protection features.

Standard Memory		Standard Memory Board (Slots)			
Standard	1GB	1	2	3	4
		512MB	512MB	Empty	Empty
Optional Memory Summary		Standard Memory Board (Slots)			
Optional (Standard Memory Plus Optional Memory Boards and Optional Memory)	29GB	1	2	3	4
		512MB	512MB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Third Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Fourth Memory Board (Slots)			
		1	2	3	4
2GB	2GB	2GB	2GB		
Maximum Memory Summary		Standard Memory Board (Slots)			
Maximum (Standard Memory Replaced with Optional Memory with Optional Memory board)	32GB	1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
		2GB	2GB	2GB	2GB
		Optional Second Memory Board (Slots)			
		1	2	3	4
2GB	2GB	2GB	2GB		

Memory

The following memory options are available from HP:

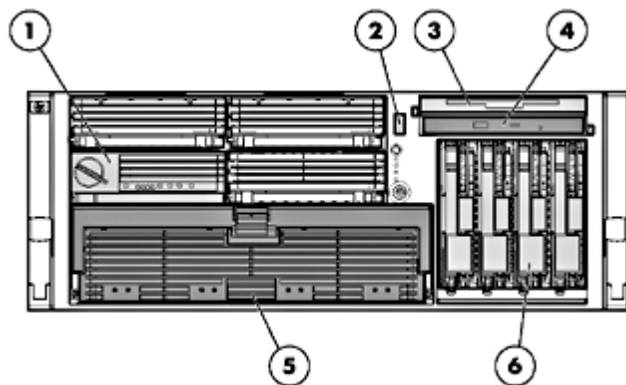
- 1 GB (2 x 512MB 1RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities 343055-B21
- 2GB (2 x 1GB 1RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities 343056-B21
- 4GB (2 x 2GB 1RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities 343057-B21
- 4GB (2 x 2GB 2RANK) PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities 375004-B21

NOTE: The HP ProLiant DL580 G3 utilizes up to four Memory Boards that support up to four DIMMs each. These memory boards are Front accessible providing unsurpassed levels of memory protection as well as scalability for the most memory-intensive applications.

NOTE: One Memory Board ships standard with all models.

- DL580 G3 Memory Board 364639-B21

Storage



- 1 Front-accessible DL580 G3 Memory Board, one standard, up to four configurable
- 2 Front-accessible USB 2.0 Port
- 3 Ejectable Slimline 1.44-MB Diskette Drive (optional)
- 4 Ejectable Slimline DVD-ROM Drive (8X/24X) (standard)
- 5 Front-accessible DL580 G3 Processor Board (allows front access to processors and Processor Power Modules)
- 6 Ultra320 Drive Cage (Duplex or Simplex configurable). Duplex is standard shipping configuration

Drive Support

	Quantity Supported	Position Supported	Controller
Ejectable Slimline Drives			
1.44-MB Slimline Diskette Drive	Up to 2	3 or 4	Integrated
IDE slim-line CD-ROM Drive	Up to 2	3 or 4	Integrated IDE
Slimline DVD-ROM Drive (8X/24X) Option Kit	Up to 2	3 or 4	Integrated IDE

NOTE: The HP ProLiant DL580 G3 can support a maximum of two Slimline Ejectable drives. Additional configuration settings may be required if running 2 Diskette Drives. When running 1 diskette drive, the top bay is the default location, but can be changed with additional configuration settings.

Hard Drives

Ultra320 Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
1-inch	Up to 4	6	Smart Array 6i Plus Controller (integrated on system board)
300-GB 10,000 rpm			Smart Array 6402/128 Controller
146.8-GB 10,000 rpm			Smart Array 641 Controller
72.8-GB 10,000 rpm			Smart Array 642 Controller
146.8-GB 15,000 rpm			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
72.8-GB 15,000 rpm			
36.4-GB 15,000 rpm			

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family	Up to 28	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Modular Smart Array 500 G2	Please see the Modular Smart Array 500 G2 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 500 G2 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1000	Please see the Modular Smart Array 1000 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1000 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 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 500 G2:

http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.HTML

Modular Smart Array 1000:

http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.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, & Tape Libraries

Storage

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html (North America)
<http://h18000.www1.hp.com/products/quickspecs/Division/10233.html> (Worldwide)

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders & Tape Libraries listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html (North America)
<http://h18000.www1.hp.com/products/quickspecs/Division/10809.html> (Worldwide)

	Quantity Supported	Position Supported	Controller
HP StorageWorks Tape Drives, Internal Hot Plug DAT 40 Tape Drive DAT 72 Tape Drive	Up to 1	0 & 1 or 2 & 3	Smart Array 6i Controller (integrated on system board) Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller Smart Array 641 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Drives, External DAT 72 Tape Drive DAT 40 Tape Drive DAT 24 Tape Drive Ultrium 215 Tape Drive Ultrium 230 Tape Drive Ultrium 448 Tape Drive Ultrium 460 Tape Drive SDLT 320 Tape Drive	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Drives, External DLT VS80 Tape Drive	Up to 3	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Autoloaders, External DAT 72x6 Tape Autoloader	Up to 3	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Autoloaders, External 1/8 Tape Autoloader SSL1016 Tape Autoloader	1 autoloader per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

Storage

<p>HP StorageWorks Tape Libraries, External MSL6060 (Ultrium 460 - based) MSL6030 (Ultrium 460 - based) MSL5026S2 (SDLT 320-based) MSL5052S2 (SDLT 320-based) MSL5030 (Ultrium 230 - based) MSL5060 (Ultrium 230 - based)</p>	<p>Please reference the MSL Tape Library QuickSpecs to determine configuration requirements</p>	<p>External</p>	<p>64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS</p>
<p>HP StorageWorks Rack-mount Tape Drive Enclosures 1U Rack-Mount Kit 3U Rack-Mount Kit 5U Rack-Mount Kit</p>	<p>1 per SCSI channel</p>	<p>External</p>	<p>Smart Array 6i Controller (integrated on system board) Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller</p>
<p>HP StorageWorks ESL E-Series Tape Libraries ESL 712e ESL 630e ESL 322e ESL 286e</p>	<p>Please reference the ESL E-series Tape Libraries QuickSpecs to determine configuration requirements</p>	<p>External</p>	<p>64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS</p>

Power Specifications

Part Number	348114-001
Operational Input Voltage Range (V rms)	90 to 264
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	910	910	1300	1300	1300	1300
Nominal Input Current (A rms)	11.9	10.2	7.7	7.3	6.9	6.6
Max Rated Input Wattage Rating (Watts)	1163	1148	1566	1566	1548	1548
Max. Rated VA (Volt-Amp)	1186	1172	1598	1598	1579	1579
Efficiency (%)	80	81	83	83	84	84
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	.43	.50	.90	.96	1.00	1.04
Maximum Inrush Current (A peak)	100	100	100	100	100	100
Maximum Inrush Current duration	10	10	10	10	10	10

• **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:

- o Click on: "ProLiant Servers"
- o Click on the Server of interest. Example: DL380 G4
- o Click on: "Power Calculator" link. (You may need to scroll down to see it)

Standard Rack Model Power Cords / Jumper Cords	Description
Asia Pacific	IEC320-C14 to IEC320-C19 Jumper Cord
Europe	IEC320-C14 to IEC320-C19 Jumper Cord
Japan	JIS C8303 to IEC320-C19 IEC320-C14 to IEC320-C19 Jumper Cord
PRC	IEC320-C14 to IEC320-C19 Jumper Cord
USA	Nema 5-15P to IEC320-C19 IEC320-C14 to IEC320-C19 Jumper Cord

Power Specifications

Optional Country Power Cords and Jumper Cords	Description	Option Kit Part Number
Australia/New Zealand	AS/NZS 3112 to IEC320-C19	305340-011
Denmark/Switzerland	IEC320-C19, Industrial	305340-081
Europe	CEE 7 to IEC320-C19	305340-021
Italy	IEC320-C19, Italy	305340-061
South Africa/India	IEC320-C19, SA	305340-AR1
UK	BS1363 to IEC320-C19	305340-031
US	Nema 5-15P to IEC320-C19	235603-001
US	Nema 6-20P to IEC320-C19	235604-001
US	IEC320-C19, 20A, 250V, US	340653-001
WW	IEC320-C19 to IEC320-C14 Jumper (16A, IEC, 6 ft/2.0m)	313227-B21
WW	IEC320-C19 to IEC320-C14 Jumper (16A, IEC, 12ft/3.7m)	313228-B21
WW	IEC320-C19 to IEC320-C20 Jumper (16A, IEC, 8ft/2.5m)	295633-B22

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	80 lb (36.3 kg)	
	Input Requirements	Rated Input Voltage	100 to 120 VAC/200 to 240 VAC
		Rated Input Frequency	50 to 60 Hz
		Input Power	1148W @ 115 VAC/1566W @ 220 VAC
		Rated Input Current	12A (100 to 127 VAC), 8.0A (200 to 240 VAC)
	Max BTU Rating	5457 BTU	
	Power Supply Output Power (per power supply)	Rated Steady-State Power	910W/1300W (lowline/highline)
		Maximum Peak Power	910W/1300W (lowline/highline)
	Temperature Range	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)	Operating	10% to 70%
		Non-operating	5% to 95%
Maximum Wet Bulb Temperature	101.7° F (38.7° C)		
Acoustic Noise	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.		

Idle (Fixed Disk Drives Spinning)

L WAd (BELS)	7.0
L pAm (dBA)	54

NOTE: These values apply to 4U rack configuration. The configuration tested included 4 processors, 4 15,000 rpm hard drives, (also 8 SFF SAS hard drives), 2 power supplies, and 6 system fans.

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	0.05 in (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 (4.7 in), 80 mm (3.1 in)(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 (12.7 x 128 x 129.4 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
	Upgradability	Option firmware upgradable 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	Microsoft Windows NT 4.0 Server
		Windows NT 4.0 Enterprise Edition
		Windows 2000 Server
		Windows 2000 Advanced Server
		Red Hat 7.x
	Client Browser Support	SuSE 7.0
Novell NetWare 5.x, 6.x		
iLO Standard Features	Microsoft Internet Explorer 5.5 or later.	
iLO Advanced Features (optional)	Virtual Text Remote Console	
	Virtual Power Button Control	
	Dedicated LAN Connectivity	
	Secure access using web browser	
	Secure access using Secure Shell (SSH) client	
	Serial 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		

Technical Specifications

Smart Array 6i Controller (Ultra320), Integrated	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)
	Electrical Protocol	Low Voltage Differential (LVD)
	SCSI Protocols Supported	Ultra320, Ultra3, Ultra2
	SCSI Peak Data Transfer Rate	320 MB/s per channel
	Channels	2
	SCSI Ports (external/internal)	2 Internal Only
	Logical Drives	Supports up to 32 RAID volumes
	Cache	64 MB Read Cache
	Battery-Backed Write Cache	Yes, with installation of Battery-Backed Write Cache Enabler, up to 128MB
	RAID Support	0, 1, 1+0, 5
	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

Technical Specifications

NC7782 Dual Port PCI-X Gigabit NIC (embedded)	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 80.3u 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	Categories 3, 4, or 5 UTP; up to 328 ft (100 m)
		100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)
		1000Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

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