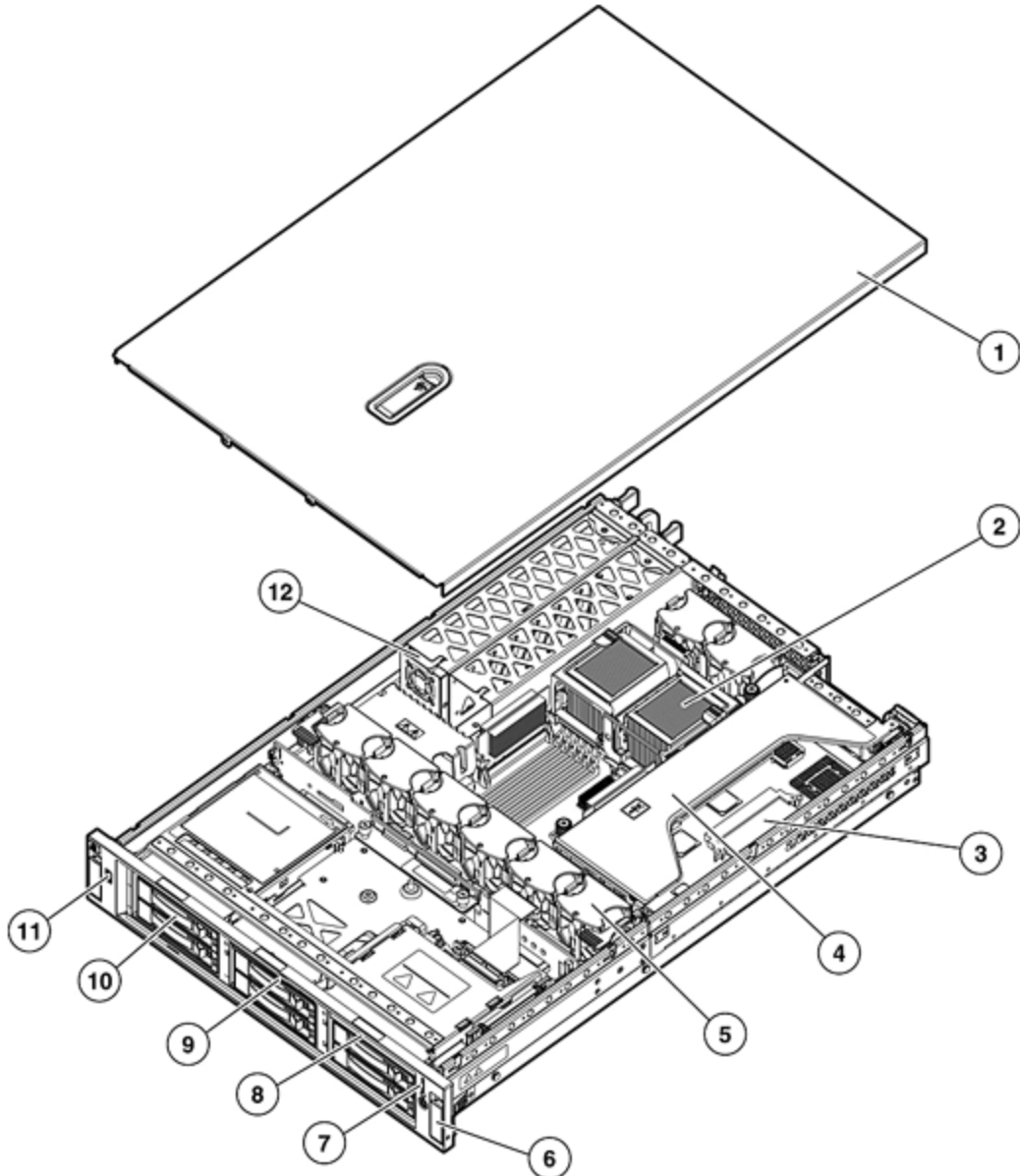


Overview



1. Quick removal access panel
2. Intel Xeon Processor (High performance models include two processors)
3. Smart Array 6i Ultra320 array controller with optional 128MB Battery Backed Write Cache (BBWC) (High performance models include 128MB BBWC)
4. Three PCI-X non hot plug expansion slots (or optional PCI-X hot plug expansion cage or PCI Express expansion cage)
5. Hot-plug fans, full redundancy option (High performance models include fully redundant fans)
6. Quick release lever for fast server access
7. Front LEDs (show server status) and Unit Identification button/LED (for easy in rack server identification)
8. 24X Max CD-ROM (High performance models include DVD-ROM drive)
9. Optional 1.44 MB (3.5") Diskette Drive (High performance models include Diskette Disk Drive)
10. Support for up to six 1" Ultra320 SCSI hot plug hard drives or for five hot plug hard drives and one DAT 40 or DAT 72 hot plug tape drive
11. USB port (USB 2.0 Support)
12. Hot plug power supply, redundancy option (High performance models include redundant power supply)
13. Six PC2-3200R 400MHz DDR2 Sockets

Overview

What's New

The world's best selling server just got better; the new ProLiant DL380 G4 delivers on its history of design excellence with enterprise-class uptime and manageability, proven 2-way Intel Xeon performance, and 2U density for a variety of rack deployments and applications.

Introducing the next generation ProLiant DL380 G4 now with the latest performance technologies; new High performance models are also available for convenient, fully loaded configurations.

New ProLiant DL380 G4 models:

- DL380 G4 X3.6-1MB/800, 1GB (311144-xx1)
- DL380 G4 X3.2-1MB/800, 1GB (370596-xx1)

New ProLiant DL380 G4 features:

- Intel Xeon processors with EM64T, a 800MHz Front Side Bus and 1MB of L2 cache (two 3.4GHz or 3.6GHz processors included in High Performance models)
- Intel E7520 Chipset
- 1GB PC2-3200R 400MHz DDR2 Memory with online spare capabilities (2GB included in High Performance model)
- Integrated Ultra320 Smart Array 6i Controller with 64MB RAM and optional 128MB Battery-Backed Write Cache (BBWC) Enabler option kit (128MB BBWC included in High Performance models)
- Three available 64-bit PCI-X slots, including two non-hot plug 100MHz slots and one non-hot-plug 133MHz slot or optional PCI-X Hot-plug cage or Optional PCI Express Non-hot-plug Cage
- **NOTE:** For information about PCI Express visit: <http://www.hp.com/servers/pci-express>
- NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)
- Optional dual channel drive backplane (2/4 split) (Included in High Performance Models)
- Optional floppy disk drive (Included in High Performance Models)
- USB 2.0 support, one port up front and two ports in back
- 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
- High performance models available fully loaded for convenience
- Support for new iLO Shared Network Port enables access to the iLO management processor through one of the embedded system NICs

ProLiant DL380 G4 features, that were also included in the ProLiant DL380 G3:

- Integrated Lights-Out (iLO) Standard Management on system board
- Support for up to six 1" Ultra320 SCSI hot plug hard drives or for five hot plug hard drives and one DAT hot plug tape drive
- Hot Plug Fans with optional full redundancy (Included in High performance models)
- Hot Plug Power Supply with optional redundancy (Included in High performance models)
- Tool-less access to all system components for easy in rack serviceability
- Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU), HP System Insight Manager, Status LEDs including system health and UID and SmartStart
- Internal hot plug capacity 1.8 TB standard (6 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. Consult the HP Customer Support Center at 1-800-345-1518 for details.

Standard Features

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

Processor <i>One of the following depending on Model</i>	Intel Xeon Processor 3.2 GHz/800MHz - 1MB L2 Intel Xeon Processor 3.4 GHz/800MHz - 1MB L2 Intel Xeon Processor 3.6 GHz/800MHz - 1MB L2	
Cache Memory	1-MB Level 2 cache	
Upgradability	Upgradable to dual processing	
Chipset	Intel E7520 Chipset NOTE: For more information regarding Intel chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/ .	
Memory Protection	Online spare Advanced ECC	
Memory <i>(One of the following depending on model)</i>	Type	PC2-3200R 400MHz DDR2
	Standard	1024MB (Standard on base models) 2048MB (Standard on High Performance models)
	Maximum	12 GB NOTE: Maximum 6GB at introduction, 2GB DIMMS will be available in 4Q04.
Network Controller	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)	

Standard Features

PCI-X Non Hot-Plug Riser

Expansion Slots	Slot Number	Bus Speed	Bus Number*	Device Number**	Hot Plug	PCI Voltage
	1	64-bit/133MHz PCI-X	10	1	no	3.3 Volt
	2	64-bit/100MHz PCI-X	6	1	no	3.3 Volt
	3	64-bit/100MHz PCI-X	6	2	no	3.3 Volt

NOTE: Universal cards are supported

PCI-X Hot Plug Riser (Optional)

1	64-bit/133MHz PCI-X	10	1	no	3.3 Volt
2	64-bit/100MHz PCI-X	6	1	yes	3.3 Volt
3	64-bit/100MHz PCI-X	6	2	yes	3.3 Volt

NOTE: Universal cards are supported

PCI Express Non-Hot Plug Riser (Optional)

1	PCI Express x4	8	0	no	NA
2	PCI Express x4	5	0	no	NA

NOTE: For information about PCI Express visit: <http://www.hp.com/servers/pci-express>

NOTE: x8 cards are supported but will run at x4 speeds.

***NOTE:** Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.

****NOTE:** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).

NOTE: For more information regarding PCI-X, please see the following URL: <http://www.HP.com/pci-x>.

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

Storage

Diskette Drive	1.44 MB Diskette Drive (optional on some models)
Optical Drive	24x IDE CD-ROM (IDE DVD-ROM included on High performance models)
Hard Drives	None Standard

NOTE: The system can be operated in single channel or dual channel (2/4 split). SCSI configuration kit (364471-B21) is required for dual channel configurations.

Maximum Internal Storage Type Hot Plug SCSI 1.8 TB 6 x 300 GB with standard internal hot plug drive cage

Interfaces

Serial	1
Pointing Device (Mouse)	1
Graphics	1
Keyboard	1
External SCSI (VHDCI)	1
Network RJ-45	3 (1 for iLO)
USB	3 (1 front, 2 back)

NOTE: Please see the following URL for additional information regarding USB support: <http://h18004.www1.hp.com/products/servers/platforms/usb-support.html>.

Graphics Integrated ATI Rage XL Video Controller with 8-MB SDRAM Video Memory

Standard Features

Form Factor Rack (2U), (3.5-inch)

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 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 7.10
Management Agents	The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to HP Systems Insight Manager and other enterprise management applications in case of subsystem or environmental failures. For additional information about the Management Agents and other management products from, HP please visit the management Web site at: http://www.hp.com/servers/manage
Subscribers Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides automatic delivery of software and driver change notifications for ProLiant products. Sign up at http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options available in SmartStart or downloadable from Software and Drivers download pages http://www.hp.com/go/support .
Insight Diagnostics Online Edition	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.
Optional ProLiant Essentials Value Packs	Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs: ● Rapid Deployment Pack - 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. ● Recovery Server Option Pack - entry-level high availability software that will provide reliable protection and increased uptime against server hardware and operating system failures. ● 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.

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

Standard Features

information.

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

Industry Standard Compliance

ACPI 2.0 Compliant
PCI 2.2 Compliant
WOL Support
Microsoft® Logo certifications
USB 2.0 Support

Remote Management

Integrated Lights Out (iLO) Standard Management:

- Virtual Text Remote Console
 - Virtual Power Button Control
 - Dedicated & shared LAN Connectivity
 - Browser and command line access
 - Automatic IP Configuration via DHCP/DNS/WINS
 - Industry Standard 128-bit Secure Sockets Layer (SSL) and Secure Shell Security
 - IML and iLO Event Logging
 - Support for 12 user accounts with customizable access privilege
 - Integrated Lights Out Advanced Pack (optional)
 - Remote Insight Lights-Out Edition II (optional)
-

Intelligent Manageability

HP Systems Insight Manager
SmartStart
Redundant ROM
Remote Flash ROM
Management Agent
Integrated Management Log
Automatic Server Recovery (ASR)
Dynamic Sector Repairing (with Smart Array Controllers)
Drive Parameter Tracking (with Smart Array Controllers)
Hot Spare Boot
(NOTE: Upon the event of a failed processor or VRM in a multi-processing environment, the system will automatically reboot and use the remaining good processor(s).)
Pre-Failure Warranty (covers processors, hard drives and memory)

Server Power Cords

One Lowline NEMA power cord and One Highline IEC Power cord ships standard

Power Supply

575 Watt, CE Mark Compliant
Optional Hot Plug AC Redundant Power Supply

System Fans

5 hot plug fans ship standard. 8 hot plug fans total supported internally for full redundancy
NOTE: The additional 3 fans are available via Redundant Fan Option Kit (PN 293048-B21).

Required Cabling

For required cabling information, refer to the Web site at:
<http://h18000.www1.hp.com/products/servers/proliantDL380/>.

Standard Features

OS Support

Microsoft Windows Server 2000
Microsoft Windows Server 2003
Novell NetWare
LINUX (Red Hat, SuSE)
SCO UnixWare, OpenServer

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

NOTE: For a 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 ProLiant DL380 G4, please see: <http://h18023.www1.hp.com/support/files/server/us/index.html>.

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

Rack Airflow Requirements Rack 10000 series Cabinets

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

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

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

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

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL:

<http://h18000.www1.hp.com/products/servers/proliantdl380/index.html>.

Rack Kit

The DL380 quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

NOTE: Cable management arm must be removed to access hot-plug power supplies when the cable management arm is mounted on the right.

Telco Rack Support

DL380 G4 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 (www.racksolutions.com/hp/)

HP Factory Express Capabilities

HP Factory Express gives you the flexibility to choose from a full menu of factory capabilities all in one manufacturing facility, in one process, with one touch giving you full control and access to HP's World class manufacturing facility anytime. This approach provides you the speed to deploy your IT needs, with total quality assurance, reliability, and predictability to lower your total cost of ownership by letting HP install, rack, and customize your software and hardware options for you.

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 next business day 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 HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the enclosure, as well as 22" and smaller external monitors and tower UPS options up to 3KVA. 22" and smaller external monitors will be covered at the same service level and coverage period as the server. 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>

Models

DL380R04 X3.2-1MB/800, Processor(s) 1GB 370596-xx1	Cache Memory	(1) Intel Xeon Processor 3.2 GHz (up to 2 supported)
	Memory	1MB level 2 cache
	Network Controller	1 GB (2 x 512MB) of 2-way interleaved PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Storage Controller	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)
	Hard Drive	Ultra320 Smart Array 6i Controller (integrated on system board)
	Internal Storage	None ship standard
	Optical Drive	1.8 TB max (with optional hard drives)
	Diskette Drive	24x IDE CD-ROM (Universal Media Bay)
	Form Factor	Optional
		Rack (2U), (3.5-inch)
DL380R04 X3.4-1MB/800, Processor(s) 1GB 311143-xx1	Cache Memory	(1) Intel Xeon Processor 3.4 GHz (up to 2 supported)
	Memory	1MB level 2 cache
	Network Controller	1 GB (2 x 512MB) of 2-way interleaved PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Storage Controller	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)
	Hard Drive	Ultra320 Smart Array 6i Controller (integrated on system board)
	Internal Storage	None ship standard
	Optical Drive	1.8 TB max (with optional hard drives)
	Diskette Drive	24x IDE CD-ROM (Universal Media Bay)
	Form Factor	Optional
		Rack (2U), (3.5-inch)
DL380R04 X3.4-1MB/800, Processor(s) 2GB High Performance 373822-xx1	Cache Memory	(2) Intel Xeon Processor 3.4 GHz
	Memory	1-MB level 2 cache
	Network Controller	2 GB (2 x 1024MB) of 2-way interleaved PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Storage Controller	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)
	Hard Drive	Ultra320 Smart Array 6i Controller (integrated on system board) with 128MB Battery Backed Write Cache (BBWC) and Duplex backplane standard (SCSI configuration kit)
	Availability	None ship standard
	Internal Storage	Hot Plug Fully Redundant Fans Standards
	Optical Drive	Hot Plug Redundant Power Supplies Standard
	Diskette Drive	1.8 TB max (with optional hard drives)
	Form Factor	IDE DVD-ROM (Universal Media Bay)

Models

DL380R04 X3.6-1MB/800, Processor(s) 1GB 311144-xx1	Processor(s)	(1) Intel Xeon Processor 3.6 GHz (up to 2 supported)
	Cache Memory	1MB level 2 cache
	Memory	1 GB (2 x 512MB) of 2-way interleaved PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board)
	Hard Drive	None ship standard
	Internal Storage	1.8 TB max (with optional hard drives)
	Optical Drive	24x IDE CD-ROM (Universal Media Bay)
	Diskette Drive	1.44MB Diskette Drive
	Form Factor	Rack (2U), (3.5-inch)

DL380R04 X3.6-1MB/800, Processor(s) 2GB High Performance 361011-xx1	Processor(s)	(2) Intel Xeon Processor 3.6 GHz
	Cache Memory	1-MB level 2 cache
	Memory	2 GB of 2-way interleaved PC2-3200R 400MHz DDR2 with Advanced ECC and online spare memory capabilities
	Network Controller	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)
	Storage Controller	Ultra320 Smart Array 6i Controller (integrated on system board) with 128MB Battery Backed Write Cache (BBWC) and Duplex backplane standard (SCSI configuration kit)
	Hard Drive	None ship standard
	Availability	Hot Plug Fully Redundant Fans Standards Hot Plug Redundant Power Supplies Standard
	Internal Storage	1.8 TB max (with optional hard drives)
	Optical Drive	IDE DVD-ROM (Universal Media Bay)
	Diskette Drive	1.44MB Diskette Drive
	Form Factor	Rack (2U), (3.5-inch)

Country Code Key	XX=00	U.S.
	XX=20	Brazil
	XX=29	Japan
	XX=37	APD
	XX=42	Euro
	XX=AA	PRC

Configuration Information - Factory Integrated Models (NA only)

Step 1: Base Configuration

Models	HP ProLiant DL380G4 Rack Chassis (North America)	371293-405
	Factory Integrated Model ships with:	
	NC7782 Dual Port PCI-X Gigabit Server Adapter (embedded)	
	Ultra320 Smart Array 6i Controller (integrated on system board)	
	Three available 64-bit PCI-X slots, including two non-hot plug 100MHz slots and one non-hot-plug 133MHz slot	
	575 Watt hot plug power supply, CE Mark Compliant.	
	One Lowline NEMA power cord and One Highline IEC Power cord	
	5 hot plug fans	
	Rack (2U), (3.5-inch)	

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

Processors	Intel X3.2GHz/800-1MB 380G4 FIO BASE	374492-L22
	Intel X3.4GHz/800-1MB 380G4 FIO BASE	311583-L22
	Intel X3.6GHz/800-1MB 380G4 FIO BASE	311584-L22
Base Memory	HP ProLiant 1GB PC2-3200 2x512 FIO BASE	343055-L21
	HP ProLiant 2GB PC2-3200 2x1GB FIO BASE	343056-L21
Optical Drive	HP ProLiant 8/24X Slim DVD Drv FIO BASE	264007-L21
	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	HP ProLiant Slim CD-ROM FIO BASE	338732-B21
Diskette Drive	Floppy Drive Option Kit	364507-B21

Step 3: Choose Additional Factory Integratable Options

Controller	BBWC for SA6i PR FIO BASE	346914-L21
Availability Options	HP ProLiant DL380G4 RPS FIO BASE	355892-L21
	HP ProLiant DL380 G3/G4 Red Fan FIO BASE	293048-L21
	SCSI Configuration Kit	364471-B21

Step 4: Choose Additional Options for Factory Integration

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

Options

ProLiant DL380 G4 Unique Options	DL380 G4 Redundant Fan Option Kit	293048-B21
	NOTE: Hot Plug Redundant Fan Option Kit (PN 293048-B21) contains three fans.	
	Hot Plug AC Redundant Power Supply Module (NEMA and IEC cords) (NA and Japan)	355892-001
	Hot Plug AC Redundant Power Supply Module (IEC cord) (WW)	355892-B21
	Floppy Drive Option Kit	364507-B21
	NOTE: Included in high performance models.	
	SCSI Configuration Kit	364471-B21
	NOTE: Kit Includes duplex drive backplane terminator and 2 long SCSI cables.	
	PCI-X Hot Plug Riser Cage Option Kit	354676-B21
	PCI Express Riser Cage Option Kit	354675-B21
	NOTE: For information about PCI Express visit: http://www.hp.com/servers/pci-express	
ProLiant Essentials Value Pack Software	Rapid Deployment Pack, 1 User, V1.x	267196-B21
	NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	
	Rapid Deployment Pack, 1 User, V1.x (Japan)	267196-291
	NOTE: This license allows 1 server to be managed and deployed via the Deployment Server.	
	Rapid Deployment Pack, 10 Users, V1.x	269817-B21
	NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	
	Rapid Deployment Pack, 10 Users, V1.x (Japan)	269817-291
	NOTE: This license allows 10 servers to be managed and deployed via the Deployment Server.	
	ProLiant Essentials Workload Management Pack (Featuring Compaq Resource Partitioning Manager version 2.0)	303284-B21
	Rapid Deployment Pack, Flexible Quantity License Kit	302127-B21
	License-Only - for use with a Master License Agreement	302128-B21
	ProLiant Essentials Recovery Server Option Pack	280189-B21
	ProLiant Essentials Performance Management Pack v2.0, Single License	306696-B21
	NOTE: This license allows 1 server to be managed by Performance Management Pack.	
	Performance Management Pack, flexible license kit	306697-B21
	NOTE: A single pack is shipped with a single license key for the total number of licenses ordered	
	ProLiant Essentials Integrated Lights-Out Advanced Pack	263825-B21
	Featuring: sophisticated virtual administration features for ultimate control of servers in the data centers and remote sites	
ProLiant Software Maintenance Subscription	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
	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 .	
	ProLiant Software Maintenance Subscription	355060-B21
	ProLiant Software Maintenance Single Release	356573-B21
	ProLiant Foundation Pack Single Release	356604-B21
	NOTE: Please see the SmartStart QuickSpecs for additional information regarding the subscription purchase: http://h18000.www1.hp.com/products/quickspecs/12007_div/12007_div.HTML (Worldwide) http://h18000.www1.hp.com/products/quickspecs/12007_na/12007_na.HTML (North America)	

Options

Software	HP digital asset protection	302316-001
Processor	Intel Xeon X3.2-1MB/800MHz Processor Option Kit	374492-B21
	Intel Xeon X3.4-1MB/800MHz Processor Option Kit	311583-B21
	Intel Xeon X3.6-1MB/800MHz Processor Option Kit	311584-B21
Memory	1GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21
	2GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2x1024 MB)	343056-B21
	4GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2x 2048 MB)	343057-B21
	NOTE: 4GB Kit will be delayed, availability is expected in 4Q04	
Optical Drives	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	Slimline DVD-ROM	264007-B21
	NOTE: Included in high performance models.	
Diskette Drive	Floppy Drive Kit	364507-B21
	NOTE: Included in high performance models.	
Hard Drives	Ultra 320 SCSI - Universal Hot Plug	
	300 GB 10,000 rpm U320 Universal Hard Drive, 1"	350964-B22
	146.8GB 10,000 rpm, U320 Universal Hard Drive, 1"	286716-B22
	72.8GB 10,000 rpm, U320 Universal Hard Drive, 1"	286714-B22
	36.4GB 15,000 rpm, U320 Universal Hard Drive, 1"	286776-B22
	72.8GB 15,000 rpm, U320 Universal Hard Drive, 1"	286778-B22
	NOTE: All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds.	
	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)	

Options

Storage Controllers	Smart Array 6i 128MB Battery Backed Write Cache Enabler Option Kit	346914-B21
	NOTE: This 128 MB BBWC is interoperable with the Smart Array 641/641.	
	NOTE: Included in high performance models.	
	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
	128MB Battery-Backed Cache Enabler	351580-B21
	NOTE: This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
	256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400	273913-B21
	NOTE: This 256MB DDR, Battery-Backed Cache upgrade kit supports the Smart Array 6400 series controller only.	
	64 MB Battery Backed Write Cache Enabler	291969-B21
	NOTE: This 64MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter	268351-B21
	Ultra320 Expansion Module for SA-6402	273911-B21
NOTE: Please see the following Controller or SCSI Adapter QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information: http://h18000.www1.hp.com/products/quickspecs/12030_div/12030_div.HTML (Smart Array 6i) http://h18000.www1.hp.com/products/quickspecs/11746_div/11746_div.HTML (Smart Array 6400 Series) http://h18000.www1.hp.com/products/quickspecs/11563_div/11563_div.HTML (Smart Array 641 & 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 NC310F PCI-X Gigabit Server Adapter	368169-B21
	HP NC150T PCI 4-port Gigabit Combo Switch Adapter	367132-B21
	NC1020 Cu Gigabit Server Adapter 32 PCI Single Port	353377-B21
	NC6170 Dual Port PCI-X 1000SX Gigabit Server Adapter	313879-B21
	NC7170 Dual Port PCI-X 1000T Gigabit Server Adapter	313881-B21
	NC7771 PCI-X 10/100/1000-T Server Adapter	290563-B21
	NOTE: Any NIC (except the NC1020) on the option list can be used for redundancy with the embedded NC7782 Network Controller. When teaming with other NICs or with the embedded NIC, the lack of Jumbo Frames and LSO features on the NC1020 will cause high end NICs to have those features disabled. (e.g. incompatibility issues with the other option NICs for that platform).	
Redundant Options	Hot Plug AC Redundant Power Supply Module (NEMA and IEC cord) (NA and Japan)	355892-001
	Hot Plug AC Redundant Power Supply Module (IEC cord) (WW)	355892-B21
	DL380 G4 Redundant Fan Option Kit	293048-B21
	NOTE: Hot Plug Redundant Fan Option Kit (PN 293048-B21) contains three fans per kit.	
Management Options	iLO Advanced Pack	263825-B21
	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

Options

Security

HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
Compaq AXL300 Accelerator PCI Card (HW SSL Encryption) for ProLiant Servers	227933-B21

Tape Drives

NOTE: For complete listing of tape drive offerings see

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

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

Hot Plug Tape Drives

HP StorageWorks DAT 40 Tape Drive, Internal Hot-Plug (Carbon) Q1546A

HP StorageWorks DAT 72 Tape Drive, Internal Hot-Plug (Carbon) Q1529A

External, Rack-Mount, and Array Module Ultrium Tape Drives

HP StorageWorks Ultrium 215 Tape Drive, Internal (Carbon) Q1543A

NOTE: No internal tape drives fit inside the DL380 (except hot plug tape). The internal drive shown here is for the 3U Rackmount Kit

HP StorageWorks Ultrium 215 Tape Drive, External (Carbon) Q1545A

HP StorageWorks Ultrium 215 rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit 350544-B21

HP StorageWorks Ultrium 215 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300 C7492B

HP StorageWorks Ultrium 230 Tape Drive, Internal (Carbon) Q1515A

NOTE: No internal tape drives fit inside the DL380 (except hot plug tape). The internal drive shown here is for the 3U or 5U Rackmount Kit

HP StorageWorks Ultrium 230 Tape Drive, External (Carbon) Q1517A

HP StorageWorks Ultrium 230, Rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit 350545-B21

HP StorageWorks Ultrium 230 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300 C7470B

NOTE: Please see the HP StorageWorks Ultrium 215 and 230 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)

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>.

External and Array Module DAT Drives

HP StorageWorks DAT 72 Tape Drive, External (Carbon) Q1523A

HP StorageWorks DAT 72 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300 Q1524B

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 3U Rack-Mount Kit 274338-B21

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, SDLT 320, Ultrium 215, Ultrium 230, and Ultrium 460 Tape Drives.

HP StorageWorks 5U Rack-Mount Kit 274339-B21

NOTE: The 5U Rack-Mount Kit can support up to 4 full-height tape drives and is compatible with SDLT 320, 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

NOTE: The Tape Array 5300 is a 3U enclosure that supports up to 2 full-height or 4 half-height hot-

Options

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

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.

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 DAT 40x6 Tape Autoloader, External (Flint)

C5717C

NOTE: Please see the DAT 40x6 Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media:

http://h18000.www1.hp.com/products/quickspecs/11882_div/11882_div.HTML (Worldwide)

http://h18000.www1.hp.com/products/quickspecs/11882_na/11882_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 Rack-mount Kit

C9268R

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

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

HP StorageWorks SSL1016 Tape Autoloader

SSL1016 Ultrium 460 Tape Autoloader

330821-B21

SSL1016 SDLT 320 Tape Autoloader

330816-B21

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

Tape Libraries

HP StorageWorks MSL6000 Tape Library

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

Options

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> 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> 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> 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> 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> 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

ESL E Ultrium 460 drive kit AA937A

ESL E SDLT 320 drive kit AA936A

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>

HP StorageWorks ESL9000 Series Tape Libraries

ESL9595 Extended Tape Library, 0 drive, 400 slots (card cage, Interface Mgr card, Command View license) 343378-B21

Options

ESL9322 Extended Tape Library, 0 drive, 222 slots (card cage, Interface Mgr card, Command View license)	343377-B21
ESL9000 Ultrium 460 drive kit	330834-B21
ESL9000 Ultrium 230 drive kit	301930-B21
ESL9000 SDLT 320 drive kit	293414-B21

NOTE: Please reference the ESL9000 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, up to 128 slots	C1104M
1200mx, 6 drive, up to 128 slots	C1105M
2200mx, 4 drive, up to 238 slots	C1111M
2200mx, 6 drive, up to 238 slots	C1107M
2200mx, 10 drive, up to 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.

Ultra Density Optical Jukeboxes

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 Ultra Density Optical Jukebox QuickSpecs at <http://www.hp.com/go/optical> for additional information needed to create a complete solution

HP StorageWorks Modular Smart Array 500

HP StorageWorks Modular Smart Array 500 Generation 2	335880-B21
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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)

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 (2 node license cluster kit) A.11.15		305199-B24
NOTE: Kit includes 2 licenses, documentation and an Ethernet crossover cable.		
HP Serviceguard for Linux (single license version for ordering flexibility and to ease ordering for larger cluster) A.11.15		307754-B24
NOTE: Kit includes single license version and documentation. 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)		
PDC/O5000-EVA Windows RAC Cluster Kit		252478-B25
ProLiant Parallel Database Cluster for Linux - Oracle9i Real Application Cluster		308225-B22
NOTE: For additional information regarding the ProLiant Parallel Database Cluster for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11688_na/11688_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/11688_div/11688_div.html (Worldwide)		
HP Parallel Database Cluster Model PDC/O2000-MSA1000 for Oracle Real Application Cluster on Windows		279406-B24
NOTE: For additional information regarding the HP Parallel Database Cluster Model PDC/O2000-MSA1000, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/10889_na/10889_na.html (North America) http://h18000.www1.hp.com/products/quickspecs/10889_div/10889_div.html (Worldwide)		

Options

External Storage - Rack	HP StorageWorks Modular Smart Array 20	335921-B21
	NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	
	HP StorageWorks Modular Smart Array 20 Starter Kit	366172-B21
	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.	
	HP StorageWorks Modular Smart Array 30 SB	302969-B21
	NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies	
	HP StorageWorks Modular Smart Array 30 DB	302970-B21
	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.	
HP StorageWorks Modular Smart Array 1500	StorageWorks Modular Smart Array 30 OpenView Storage Mirroring HA Kit - WW	359079-B21
	StorageWorks Modular Smart Array 30 OpenView Storage Mirroring HA Kit - Japan	359079-291
	Redundant Power Supply 499W for Modular Smart Array 30	338296-B21
	Ultra320 Single Bus I/O Module for Modular Smart Array 30	287484-B21
	Ultra320 Dual Bus I/O Module for Modular Smart Array 30	287483-B21
	Modular Smart Array 1500 Controller Shelf	AA986A
HP StorageWorks Modular Smart Array 1000	NOTE: Please see the StorageWorks Modular SAN Array 1500 QuickSpecs for additional options and configuration information at: http://www.hp.com/go/MSA1500cs	
	HP StorageWorks Modular Smart Array 1000	201723-B22
	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)	
Network Storage Router	M2402 2FCX 4SCSI LVD Network Storage Router	262653-B21
	M2402 2FCX 4SCSI HVD Network Storage Router	262654-B21
	M2402 4 channel LVD SCSI Module	262659-B21
	M2402 4 channel HVD SCSI Module	262660-B21
	M2402 2 channel FC Module	262661-B21

Options

StorageWorks Options	StorageWorks 2 Gb, 64-bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for Windows 2000, Windows Server 2003 and Linux NOTE: FCA2214 2 Gb Fibre Channel Host Bus Adapter is a single channel, 64-bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface	281541-B21
	StorageWorks 2 Gb, 64-bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for NetWare NOTE: FCA2210 2 Gb, Fibre Channel Host Bus Adapter is a single channel, 64-bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface.	281540-B21
	FCA2408 - HP StorageWorks 2 Gb, 64-Bit/133 MHz Single Channel , PCI- X-to-Fibre Channel Host Bus Adapter for Windows® 2000 and Windows Server® 2003 NOTE: FCA2408 HP StorageWorks 2 Gb, 133 MHz PCI-X-to-Fibre Channel Host Bus Adapter (HBA) with optical small-form-factor (SFF) (LC) interface.	343073-B21
	FCA2404DC - HP StorageWorks 2 Gb, Dual Channel, 133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for Windows® 2000, and Windows Server 2003 NOTE: FCA2404DC HP StorageWorks 2 Gb Fibre Channel Host Bus Adapter is a dual channel, 133 MHz, PCI-X to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface.	323264-B21
	FCA2404 - StorageWorks 2 Gb, single channel, 133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for Windows 2000, Windows NT and Windows Server 2003 NOTE: FCA2404 StorageWorks 2 Gb, Fibre Channel Host Bus Adapter is a single channel, multi-path failover, 133 MHz, PCI-X to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface for ProLiant Server connects	305573-B21
	StorageWorks 2 Gb, Dual Port, 64-Bit/133 MHz PCI-X-to-Fibre Channel Host Bus Adapter for W2K, Windows Server 2003 and Linux NOTE: FCA2214DC StorageWorks 2 Gb Dual Port, Fibre Channel Host Bus Adapter is a 64-bit/133 MHz, PCI-X-to Fibre Channel Host Bus Adapter (HBA) with an embedded multi-mode optical interface.	321835-B21
	StorageWorks Director 2/64	286809-B21
	StorageWorks SAN Switch 2/8-EL	322120-B21
	StorageWorks SAN Switch 2/8-EL Upgrade	325888-B21
	StorageWorks SAN Switch 2/16	322118-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 .
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Options

Uninterruptible Power Systems - Rack	HP UPS R1500 XR (100 to 127) (NA)	204404-001
	HP UPS R1500 XR (208 to 480) (Int'l)	204404-B31
	HP UPS R1500 XR (100 to 127) (Japan)	204404-291
	HP UPS R3000 XR (120V) (NA)	192186-001
	HP UPS R3000 XR (208V) (NA)	192186-002
	HP UPS R3000 XR (100V) (Japan)	192186-291
	HP UPS R3000 XR (208V) (Japan) HP UPS R3000 XR (200V) (Japan)	192186-292
	HP UPS R3000 XR (230V) (Int'l - detachable cord)	192186-B31
	HP UPS R3000 XR (230V) (16A IEC309 Plug)	192186-B32
	HP UPS R3000 XR (230V) (16A CEE 7/7 SCHUKO Plug)	192186-B33
	HP UPS R3000 XR (230V) (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 connection.

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).	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) (NA, Japan)	252663-D71
	NOTE: This mPDU (252663-D71) may also be used to connect the low volt model of the UPS R3000 XR.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) (NA, Japan)	252663-D72
	HP Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) (WW)	252663-B21
	NOTE: This mPDU (252663-B21), 40A model has a hardwired input.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC) (WW)	252663-B24
	NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements. This model may also be used with the high volt UPSs R3000 XR and R6000 For North America, need to order cable PN 340653-001.	
	NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML (North America) http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.HTML (Worldwide)	

USB Options	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	USB Easy Access Keyboard (Carbonite/Silver)	DC168B#
	256MB HP Drive Key	DL973B
	Multibay USB cradle	DC373A#ABA
	Multibay USB cradle	DC373A#B13

Options

USB Easy Access Keyboard (Carbonite/Silver) Country Key Code

Dash #	Description	Dash #	Description
A2M	ICELAND	ABT	HE
AB0	TAWA	ABU	UK
AB1	KOR	ABV	ARA
AB2	PRC	ABX	FIN
AB6	FRA	ABY	DEN
AB7	GRK	ABZ	ITL
AB8	TURK	AC0	BEL
AB9	PORT	AC4	BRZ
ABA	US	ACB	RUSS
ABB	EURO	AKB	CZE
ABC	FCAN	AKC	HUNG
ABD	GR	AKD	POL
ABE	SP	AKL	THAI
ABF	FR	AKN	BHCSY
ABH	NL	AKR	SLOV
ABJ	Japan	ARK	ICELAND
ABM	LA	B15	KAZ
ABN	NOR	UUZ	SWISS
ABS	SW		

Custom Builder

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

Third Party Rack Adapter Kit (for wide racks)

Rack Adapter Kit

332815-B21

NOTE: Not required for most racks. This kit allows HP rack servers to fit in racks that are 24" wide.

Rack Shipping Kit

Shipping Kit for Round Hole Racks

371482-B21

Options

HP Rack 10000 Series (Graphite Metallic)	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	HP 10842 (42U) Rack Cabinet - Pallet	257415-B21
	HP 10842 (42U) Rack Cabinet - Shock Pallet	257415-B22
	HP 10647 (47U) Rack Cabinet - Pallet	245160-B21
	HP 10647 (47U) Rack Cabinet - Crated	245160-B23
	HP 10642 (42U) Rack Cabinet - Pallet	245161-B21
	HP 10642 (42U) Rack Cabinet - Shock Pallet	245161-B22
	HP 10642 (42U) Rack Cabinet - Crated	245161-B23
	HP 10636 (36U) Rack Cabinet - Pallet	245162-B21
	HP 10636 (36U) Rack Cabinet - Shock Pallet	245162-B22
	HP 10636 (36U) Rack Cabinet - Crated	245162-B23
	HP 10622 (22U) Rack Cabinet - Pallet	245163-B21
	HP 10622 (22U) Rack Cabinet - Shock Pallet	245163-B22
	HP 10622 (22U) Rack Cabinet - Crated	245163-B23
	NOTE: -B21 (pallet) used to ship empty racks shipped on a truck -B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels) -B23 (crated) used for air shipments of empty racks	
	NOTE: It is mandatory to use a shock pallet in order to ship racks with equipment installed.	
	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 .	

Options

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 Light kit for 10000 series rack	361589-B21
HP Plinth kit for 10000 series rack	251960-B21
KVM USB Interface Adapter	336047-B21
Server Console Switch 1 x 4 port (100-230 VAC)	400336-001
Server Console Switch, 0 x 1 x 8 port	336044-B21
Server Console Switch, 0 x 2 x 16 port	336045-B21
Server Console Switch 1 x 4 port (100-230 VAC) (Int'l)	400336-B31
Server Console Switch 1 x 4 port (100-230 VAC) (Japan)	400336-291
IP Console Switch Box, 1 x 1 x 16	262585-B21
IP Console Switch Box, 3 x 1 x 16	262586-B21
Switch Box Connector Kit (high voltage) (Int'l)	144007-B33
TFT5600 Rack Keyboard Monitor	221546-xx1
TFT7210R Rack Mounted 17" Monitor	348373-B21
NOTE: For a complete list of Monitors please view the following URL: http://h18004.www1.hp.com/products/monitors/ .	
1U Rack Keyboard & Drawer (Carbon)	257054-xx1

Country Code Key for Keyboards

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 Factory Express

Factory Installation, Racking, and Customization Services

Factory Express Server Configuration Level 1 293355-888

NOTE: Free Installation of HP Options - Installation of HP Options memory, NICs, hard drives, controllers, processors, I/O cards, pre-install standard OEM OS image, and tape drives. Installation fees will apply to all non-HP certified hardware and asset tags.

Factory Express Server Configuration Level 2 266326-888

NOTE: Includes Level 1 Customer Intent of a ProLiant server and options configuration, OS installation, custom image download, IP addressing, network setting, and custom packaging. Customer unique requirements (quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, and RILOE). Customer access, validation and control through VPN (price/server).

Factory Express Rack Integration Level 3 with 1 - 3 servers or storage enclosures 325736-888

Factory Express Rack Integration Level 3 with 4 - 9 servers or storage enclosures 232539-888

Factory Express Rack Integration Level 3 with 10 or more servers or storage enclosures 325735-888

NOTE: Includes Level 1 Customer Intent of a ProLiant server and options configuration, OS installation, custom image download, IP addressing, network setting, and custom packaging. Customer unique requirements (quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, and RILOE). Customer access, validation and control through VPN (price/server).

Factory Express Rack Integration Level 4 with 1 - 3 servers or storage enclosures 325734-888

Factory Express Rack Integration Level 4 with 4 - 9 servers or storage enclosures 232540-888

Factory Express Rack Integration Level 4 with 10 or more servers or storage enclosures 325733-888

NOTE: Includes Level 2 Customer Intent plus customer defined cable management and naming convention, customer furnished image download, IP addressing, cluster configurations (SQL, External storage RAID). Quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, RILOE). Customer access and validation through VPN (price/rack).

Factory Express Rack Integration Level 5 with 1 - 3 servers or storage enclosures 325732-888

Factory Express Rack Integration Level 5 with 4 - 9 servers or storage enclosures 232541-888

Factory Express Rack Integration Level 5 with 10 or more servers or storage enclosures 325731-888

NOTE: Includes Level 4 Customer Intent plus Custom SW layering and extended test, Customer access, validation and control through VPN, Clustered racks with networking gear and / or external storage array, Start-up installation services custom quote. (price/rack).

NOTE: Factory Express Engineered Solution Level 6 is a custom solutions available through Factory Express. Please contact your local reseller or Account Manager.

Options

Service and Support

Offerings (HP Care Pack Services)

Hardware Services On-site Service

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years U4544A

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic U4544E

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years U4545A

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic U4545E

Hardware Services 6-Hour Call to Repair On-site Service

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years U4546A

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic U4546E

Installation & Start-up Services

Hardware Installation U4554A

Hardware Installation, Electronic U4554E

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. U4555A

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 U4555E

Installation and Startup for Essentials Rapid Deployment Pack, Electronic U5683E

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. U4556A

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 U4556E

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. U4557A

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 U4557E

Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. U6312A

Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U6312E

Onsite HW support 24x7, 4hr response and Red Hat ES2.1 Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. U8334A

Onsite HW support 24x7, 4hr response and Red Hat ES2.1 Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U8334E

NOTE: For more information, customer/resellers can contact <http://www.hp.com/services/carepack>

Memory

NOTE: Memory configurations listed do not apply to "Factory Integrated Models".

HP ProLiant Model DL380 Generation 4 (G4) Base (1P) Models

Standard Memory

1 GB PC2 3200 DDR2 SDRAM running at 400MHz comes installed (2 x 512-MB SDRAM)

Standard Memory Plus Optional Memory

Up to 9-GB memory is available with the optional installation of PC2 3200 Registered DDR2 SDRAM DIMM Memory Option Kit

Standard Memory Replaced with Optional Memory

Up to 12-GB of memory is available with the removal of the standard 512-MB of memory and the optional installation of PC2 3200 Registered DDR2 SDRAM DIMM Memory Option Kit

NOTE: Chart does not represent all possible memory configurations.

Memory		Slot					
		1	2	3	4	5	6
Standard	1GB	512MB	512MB	Empty	Empty	Empty	Empty
Optional	9GB	512MB	512MB	2GB	2GB	2GB	2GB
Maximum	12GB	2GB	2GB	2GB	2GB	2GB	2GB

NOTE: In the online spare configuration, the ROM automatically configures the last populated bank as the spare memory. If only banks A and B are populated, bank B is the spare bank. If banks A, B, and C are populated, bank C is the spare bank, Online spare memory is configured through RBSU.

Following are memory options available from HP:

- 1 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB) 343055-B21
- 2GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 1024 MB) 343056-B21
- 4GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 2048 MB) 343057-B21

NOTE: The 4GB Memory Kit will be delayed, availability expected in 4Q 2004

HP ProLiant Model DL380 Generation 4 (G4) High Performance (2P) Model

Standard Memory

2 GB PC2 3200 DDR2 SDRAM running at 400MHz comes installed (2 x 1024-MB SDRAM)

Standard Memory Plus Optional Memory

Up to 10-GB memory is available with the optional installation of PC2 3200 Registered DDR2 SDRAM DIMM Memory Option Kit

Standard Memory Replaced with Optional Memory

Up to 12-GB of memory is available with the removal of the standard 512-MB of memory and the optional installation of PC2 3200 Registered DDR2 SDRAM DIMM Memory Option Kit

NOTE: Chart does not represent all possible memory configurations.

Memory		Slot					
		1	2	3	4	5	6
Standard	2 GB	1024 MB	1024 MB	Empty	Empty	Empty	Empty
Optional	9 GB	1024 MB	1024 MB	2 GB	2 GB	2 GB	2 GB
Maximum	12 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

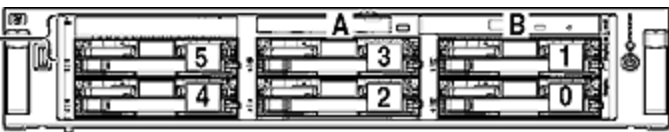
NOTE: In the online spare configuration, the ROM automatically configures the last populated bank as the spare memory. If only banks A and B are populated, bank B is the spare bank. If banks A, B, and C are populated, bank C is the spare bank, Online spare memory is configured through RBSU.

Following are memory options available from HP:

- 1 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB) 343055-B21
- 2GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 1024 MB) 343056-B21
- 4GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 2048 MB) 343057-B21

NOTE: The 4GB Memory Kit will be delayed, availability expected in 4Q 2004

Storage



The diagram shows the front panel of the HP ProLiant DL380 Generation 4 (G4) server. It features a series of drive bays labeled 0 through 5, A, B, and C. Bay 0 is a 1.44-MB Diskette Drive. Bays 1 and 2 are 24x IDE CD-ROM drives. Bays 3 through 5 are 1-inch Ultra320 SCSI hot plug hard drive bays. Bay C is a 1-inch Wide Ultra3/Ultra320 SCSI hot plug hard drive bay, which can also accommodate a DAT 40 or DAT 72 hot plug tape drive.

0 - 5

A

B

C

Six 1" Ultra320 SCSI hot plug hard drive bays

1.44-MB Diskette Drive

24x IDE CD-ROM (Universal Media Bay)

Six 1" Wide Ultra3/Ultra320 SCSI hot plug hard drives or for five hot plug hard drives and one DAT 40 or DAT 72 hot plug tape drive

Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
1.44-MB Diskette Drive	1	A	Integrated IDE NOTE: Optional except on high performance models
IDE CD-ROM Drive	1	B	Integrated IDE NOTE: Standard on base models
Slimline DVD-ROM (8x24x) Option Kit (Servers)	1	B	Integrated IDE NOTE: Standard on high performance models

Hard Drives

Ultra320 SCSI - Hot Plug Drives

	Quantity Supported	Position Supported	Controller
1-inch	Up to 6	0-5	Smart Array 6i Controller (integrated on system board) Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 641 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
300-GB 10,000 rpm			
146.8-GB 10,000 rpm			
72.8-GB 10,000 rpm			
36.4-GB 10,000 rpm			
72.8-GB 15,000 rpm			
36.4-GB 15,000 rpm			
18.2-GB 15,000 rpm			

NOTE: All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds.

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 20	1 per SCSI VHDCI connector	External	Smart Array 6i Smart Array 6402/128 Controller Smart Array 6404/256 Controller
Modular Smart Array 30	1 per SCSI VHDCI connector	External	Smart Array 6i Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
Modular Smart Array 500 G2	1 per SCSI	External	Smart Array 6i Smart Array 642 Controller (used as Host Bus Adapter) Please see the Modular Smart Array 500 G2 QuickSpecs for the latest list of supported HBAs: http://www.hp.com/go/msa500
Modular Smart Array 1500	Please see the Modular Smart Array 1500 QuickSpecs link below to determine configuration requirements	External	Please see the Modular Smart Array 1500 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1000	Please see the Modular Smart Array 1000 QuickSpecs link below to determine configuration requirements	External	Please see the Modular Smart Array 1000 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1000: http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML (Worldwide) http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML (North America)			
Modular Smart Array 1500: http://www.hp.com/go/MSA1500cs			

Maximum Storage Capacity – (StorageWorks Enclosure SCSI Attached)

Internal	1.80 GB (6 x 300 GB Ultra320 1")
External	54.60 TB (13 x (14 x 300 GB Ultra320 1"))
Total	58.20 TB

Tape Drives, Tape Autoloaders, & Tape Libraries

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

http://www5.compaq.com/products/quickspecs/North_America/10233.html (North America)

<http://www5.compaq.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://www5.compaq.com/products/quickspecs/North_America/10809.html (North America)

<http://www5.compaq.com/products/quickspecs/Division/10809.html> (Worldwide)

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

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

	Quantity Supported	Position Supported	Controller
HP StorageWorks DAT 40 Tape Drive, Internal Hot-Plug	Up to 2		Smart Array 6i Controller (integrated on system board)
HP StorageWorks DAT 72 Tape Drive, Internal Hot-Plug			64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter

Storage

HP StorageWorks DAT 72 Tape Drive, External HP StorageWorks Ultrium 215 Tape Drive, External HP StorageWorks Ultrium 230 Tape Drive, External	Up to 2	External	Smart Array 6i Controller (integrated on system board) 64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter
3U Rack-mount Kit 5U Rack-mount Kit Tape Array 5300	1 per SCSI channel	External	Smart Array 6i Controller (integrated on system board) Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller
HP StorageWorks Tape Autoloaders, External 72x6 Tape Autoloader, External HP StorageWorks DAT 40x6 Tape Autoloader, External 1/8 Ultrium 460 Tape Autoloader 1/8 SDLT 320 Tape Autoloader 1/8 Ultrium 230 Tape Autoloader 1/8 DLT VS80 Tape Autoloader SSL1016 Ultrium 460 Tape Autoloader SSL1016 SDLT 320 Tape Autoloader	1 autoloader per SCSI channel	External	64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter
HP StorageWorks Tape Libraries MSL6000 (Ultrium 460 -based) Tape Library MSL5026S2 (SDLT 320-based) Tape Library MSL5052S2 (SDLT 320-based) Tape Library MSL5030 (Ultrium 230 -based) Tape Library MSL5060 (Ultrium 230 -based) Tape Library ESL712e ESL630e ESL9322 ETLA ESL9595 ETLA	Please reference the relevant MSL or ESL Tape Library QuickSpecs to determine configuration requirements	External	64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter

Power Specifications

Models with Hot Plug Power

Part Number	280127-001
Spare Kit	305447-001
Operational Input Voltage Range (V rms)	90 - 264
Frequency Range (Nominal) (Hz)	47 - 63 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	325	325	325	325	325	325
Nominal Input Current (A rms)	4.5	3.9	2.1	2.0	1.9	1.8
Max Rated Input Wattage Rating (Watts)	445	442	433	428	425	422
Max. Rated VA (Volt-Amp)	454	451	442	437	434	431
Efficiency (%)	73.1	73.6	75.1	75.9	76.4	77
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	0.31	0.36	0.65	0.69	0.72	0.75
Maximum Inrush Current (A peak)	30	30	30	30	30	30
Maximum Inrush Current duration (milliseconds)	20	20	20	20	20	20

NOTES:

- To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at URL:
<http://h30099.www3.hp.com/configurator/powercalcs.asp>.

To drill down to calculators:

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

Power Cords (Nema 5-15P to IEC320-C13)		
	Country	Standard Power Cord Part Number/Option Power Cord Part Number
	JPN	139867-006/227100-291
	US	163719-002/227099-001
Power Cords (IEC320-C13 to IEC320-C14)		
	Country	Standard Power Cord Part Number/Option Power Cord Part Number
	US	142263-003/142257-003
	JPN	142263-003/142257-003
	APD	142263-003/142257-003
	EURO	142263-003/142257-003
	PRC	142263-003/142257-003

NOTES:

- To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at URL:
<http://h30099.www3.hp.com/configurator/powercalcs.asp>.

To drill down to calculators:

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

Technical Specifications

System Unit	Dimensions (HxWxD) (with feet/bezel)	3.38 x 17.54 x 26.01 in (8.59 x 44.54 x 66.07 cm)	
	Weight (approximate)	Maximum	60 lb (27.22 kg)
		No drives:	47.18 lb (20.41 kg)
	Input Requirements (per power supply)	Rated Input Voltage	100-132 VAC, 200-240 VAC
		Rated Input Current	7.5A (100VAC), 3.8A (200VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	735 W
	BTU Rating	2508 BTU/HR	
	Power Specifications	To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at URL: http://h30099.www3.hp.com/configurator/powercalcs.asp .	
		To drill down to calculators:	
		- Click on: "ProLiant Servers"	
		- Click on the Server of interest. Example: DL380 G4	
		- Click on: "Power Calculator" link. (You may need to scroll down to see it.)	
	SCSI Connectors	One external VHDCI connector	
	Power Supply Output Power (per power supply)	Rated Steady-State Power	575W
		Maximum Peak Power	575W
	Temperature Range NOTE: All temperature ratings shown are for sea level. An altitude derating of 1 Cj per 300 m (1.8 FR per 1000 ft) to 3048 m (19,000 ft) is applicable. No direct sunlight allowed.	Operating	50° to 95° F (10° to 35° C)
		Shipping	-40° to 158° F (-40° to 70° C)
	Maximum Wet Bulb Temperature	82.4° F (28° C)	
	Relative Humidity (non-condensing) NOTE: Storage maximum humidity of 95% is based on a maximum temperature of 45°C (113°F). Altitude maximum for storage corresponds to a pressure minimum of 70 KPa.	Operating	10% to 90%
		Shipping	5% to 95%
	Acoustic Noise	Idle Minimum (Fixed Disk Drives Spinning)	
		L WAd (BELS)	7.4
		L pAm (dBA)	58
		Operating Minimum (Random Seeks to Fixed Disks)	
		L WAd (BELS)	7.4
		L pAm (dBA)	58

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 up to 133 MHz (integrated on system board)
	Electrical Protocol	Low Voltage Differential (LVD)
	SCSI Protocols Supported	Ultra 320, Ultra3, Ultra2
	SCSI Peak Data Transfer Rate	320 MB/s per channel
	Channels	Two 68-Pin Wide-Ultra SCSI-3 connectors
	SCSI Ports (external/internal)	1/2 NOTE: The ProLiant DL380 G4 external SCSI port can only be used if PORT 1 of the system board is NOT connected to the internal SCSI backplane.
	Logical Drives Supported	Supports up to 32 RAID volume
	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) 10/100/1000 WOL (Wake On LAN)	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 bus-master 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-Duplex)	1000 Mb/s
		1000Base-TX (Full-Duplex)	2000 Mb/s
	Connector	Two 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)
		1000BaseTX	Category 5 or higher UTP; up to 328 ft (100 m)

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