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Product Datasheet

HP StorageWorks NAS e7000

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Overview

Models

- HP StorageWorks NAS e7000
322310-001,421

What's New

- New updated server platform
- Persistent Storage Manager by Columbia Data Products for snapshot functionality
- Updated web interface for easier management
- Integrated Lights-Out (iLO) Management standard on system board
- Intel® Xeon 2.0 GHz Processors (quad capability) with 2-MB Integrated Level 3 Cache
- 4 GB RAM (expandable to 6GB)
- Integrated Smart Array 5i Plus Controller with optional Battery-Backed Write Cache (BBWC) Enabler option kit
- Three available 64-bit PCI-X slots, including two hot pluggable 100MHz slots and one 133MHz slot
- 2 x 800-Watt Hot Plug Power Supply
- Redundant Hot Pluggable Fans
- HBA options dependent upon storage array connectivity

Benefits of NAS

• Controllable

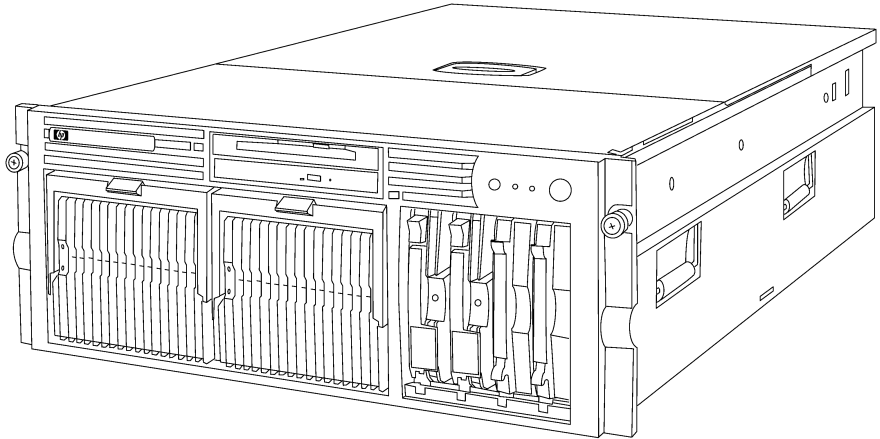
- NAS/SAN fusion: integration of file or block data leads to increased efficiency of the storage network.
- Manageable: simpler management of file or block level data leading to decreased costs for storage.
- Affordable: NAS/SAN fusion provides an architecture that offers better efficiency for your storage.

• Resilient

- Reliable: HP's experience is the key to success with affordable optimized NAS solutions.
- Redundant: configurations which allow for redundancy at every level.

• Extensible

- Extensive: consolidated fusion solutions for the enterprise with a broad range of SAN array compatibility.
- Optimized: HP provides the right NAS solution for each customer, no need to settle for trade-offs.



Product Highlights

CUSTOMER BENEFITS

HP StorageWorks NAS e7000

The HP StorageWorks NAS e7000 is the ultimate in NAS performance, scalability and availability by providing a gateway to the enterprise SAN for File level data. The NAS e7000 provides the maximum return on data center storage investment and the confidence that is expected in an enterprise environment is built in. The e7000 connects to the industry's broadest range of SAN arrays – the fusion of NAS and SAN for the enterprise.

e7000 Customer benefits include:

- **Management & Consolidation**

- StorageWorks NAS provides increased manageability of file services by allowing file server and storage consolidation. The integrated web GUI provides a single point of manageability for administrative function associated with advanced file serving.

- **Scalability**

- While consolidating servers and storage the StorageWorks NAS products provides scalability up to the limits of the SAN that maximizes the return on storage investment.

- **Availability**

- StorageWorks NAS provides a family of products that offer a wide range of availability, and confidence that data will be available when needed. From redundant components, to replication, to no single point of failure deployments, StorageWorks NAS offers it all.

- **Performance**

- Advanced file serving functions require high performance. The StorageWorks NAS family of products offers impressive performance ranging from the smallest business to the largest enterprise.

KEY FEATURES

Key features for the HP StorageWorks NAS e7000

- Innovative management GUI for ease of use
- Optimized file serving for consolidated benefits
- NAS/SAN fusion for the best return on storage investment
- Snapshots for incremental backups (Persistent Storage Manager by Columbia Data Products)
- Protocol support for CIFS, NFS, NCP, AppleTalk, FTP, HTTP
- NAS Data Copy - host based IP replication for added confidence and disaster recovery (30 day trial included with the system image)
- Next generation server platform delivers maximum performance and unprecedented availability in a flexible, rack optimized form factor
- Intel Xeon Processors MP at 2.0 GHz/2M
- Integrated Lights-Out Standard Management (iLO) on system board
- HP Advanced Memory Protection (Online Spare, Single Board Mirrored Memory, Hot Plug Mirrored Memory)
- Six, full length 64-bit/100 MHz PCI-X slots, 4 Hot Pluggable
- Integrated NC7770 PCI- X Gigabit Server Adapter in a slot, and one NC3134 dual port 10/100 NIC in a slot
- Integrated Smart Array 5i Plus Controller (Dual Channel, Ultra3) with 64 MB total memory on 5i Plus Memory Module
- Redundant Cooling Zones for major subsystems (Memory, I/O, CPUs) assure 7x24 cooling
- Tool-less and virtually cable-less internal design
- Innovative diagnostic lighting (QuickFind Diagnostic Display) for rapid response to service events

Product Highlights

PRODUCT HIGHLIGHTS

- Capacity – the e7000 is virtually limitless in the fact that it is dependent upon the storage array chosen for connection to the NAS head. Supported arrays are: EVA, XP, EMA, MA, VA, and the msa1000. The multiple options for the e7000 array support provide flexibility for fusion into new or existing SAN environments. Reducing the cost of storage management and increasing your return on storage investment.
- Innovative management GUI – for ease of use making it possible to manage all NAS function from a central location or anywhere with internet access capabilities.
- Optimized file serving – for environments that have a desire to consolidate storage and servers and get the best return on storage investment from their SAN.
- NAS/SAN fusion – taking advantage of selective storage presentation for the best return on storage investment in a preferred manner for access and utilization of both file and block level access.
- Snapshots – incremental backups that are flexibly scheduled throughout the day. An additional level of data availability that provides easy restoration of data without having to access tape, with limited utilization of time and space. (Persistent Storage Manager by Columbia Data Products)
- NAS Data Copy – advanced host based IP replication for added confidence and disaster recovery. Providing built in disaster recovery features and the flexibility to store data at any location. (30 day trial included with the system image)
- Platform enhancements – next generation server platform delivers maximum performance and unprecedented availability in a flexible, rack optimized form factor.
- Integrated Lights – Out Standard Management (iLO) on system board regardless of the state of the server.
- Integrated Smart Array 5i Plus Controller with 64 MB total memory on 5i Plus Memory Module – allowing for control of the mirrored OS separate from the user data for control and peace of mind.

SOFTWARE COMPONENTS

HP Supplied Software

- Windows® Powered OS – providing advanced file services in a familiar easy to manage package. Management options include GUI, Integrated Lights Out functionality, Terminal Services, and Command Line interface
- HP NAS Data Copy – 30 day trial of advanced host based replication capabilities. Software license available as option for long term activation. NAS Data Copy is a host-based data replication package that allows data to be replicated over TCP/IP in an asynchronous mode. One-to-one, one-to-many, many-to-one and many-to-many replication is supported along with failover and fallback capabilities.
- CDP Persistent Storage Manager – allowing for incremental backup or snapshots throughout the day. Use storage space and management time more efficiently with small extremely fast copies of your data. Supports up to 256 snapshots using a flexible schedule for administration of snapshots.
- Rapid Launch – for easy configuration and set up of file services. The answer to the fast pace and demands of the data center environment.
- Web Based Management GUI – for remote distribution and ongoing management and configuration of advanced file service where technical resources are at a premium. Maximizing the management resources available to you.
- Secure path software – for high availability for HBA failover and redundancy.
- Windows Powered OS drivers, including Array Controller driver and HBA drivers.
- SNMP management support – with pre-installed agents that work with management software such as HP Openview, or Tivoli TME, IBM Netview, CA Unicenter, and BMC.
- NIC Teaming Drivers Pre-loaded – providing increased throughput & performance of important data.
- HP & APC UPS agents – confidence that all will be well in the event of a site power failure.
- Quick Restore CD – for restoration to the StorageWorks NAS standard factory image.

Models

HP StorageWorks NAS e7000 v2 322310-001, 421	Processor	(2) Intel Xeon Processor 2.0 GHz standard (up to 4 supported)
	Cache Memory	2-MB Integrated Level 3 Cache
	Memory	4 GB DIMM Memory 4 x 1 GB 200-MHz Double Data Rate (DDR)
	Network Controller	Integrated Compaq NC7770 PCI-X Gigabit Server Adapter in a slot and NC3134 dual port 10/1000 NIC
	Hard Drive (internal storage)	Standard two (2) 36 GB U320 10K drives for mirrored OS internal to server.
	Form Factor	Rack 4U
	Smart Array 5i Plus Controller (integrated on system board) For control of the mirrored OS disks	NOTE: For complete list of devices supported the Smart array 5i Controller see the following:
	Diskette Drives	1.44 MB
	DVD Drive	Slimline DVD-ROM (8x24x)
	Storage Arrays Supported	EVA, XP, EMA, MA, VA, MSA 1000
	Cooling Fans	Redundant Hot Pluggable Fans
	Power Supplies	2 x 800-Watt Hot Plug Power Supply
	**NOTE: HBA selection left to customer choice based on desired array support.	

Options

***NOTE:** Two (2) e7000 part number 322310-xxx and one (1) cluster kit 331474-b21 must be purchased for cluster configurations.

NAS e7000 customers who desire to have high availability clusters are required to purchase this cluster kit.

StorageWorks NAS Cluster Kit (includes heartbeat cable and license agreement)	331474-B21
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NAS e7000 customers who desire to activate NAS Data Copy after the 30 day trial will need to order the license part number

NAS Data Copy is a host-based data replication package that allows data to be replicated over TCP/IP in either a synchronous or asynchronous mode. One-to-one, one-to-many, many-to-many replication is supported along with failover and failback capabilities.	278546-001
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TCP/Offload NIC (optional)
NOTE: Additional technical and purchasing information can be obtained at <http://www.alacritech.com/hp>

Alacritech 1000x1 Single Port Gigabit Server and Storage Accelerator Copper wire	Alacritech P/N 2000-100007
Alacritech 1000x1 Single Port Gigabit Server and Storage Accelerator Fibre	Alacritech P/N 2000-100009
Alacritech 100x4 Quad-Port Fast Ethernet Server Accelerator	Alacritech P/N 2000-100000

HP StorageWorks NAS e7000 Unique Options

8192 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB)	202173-B21
4096 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB)	202172-B21
2048 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB)	202171-B21
1024 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB)	202170-B21
Hot Plug Memory Expansion Board	203320-B21
NOTE: The Hot Plug Memory Expansion Board provides 8 additional DIMM slots for powering memory-intensive applications.	
DL580 G2 Third Party Racking Kit	287528-B21
DL580 G2 Folding Cable Management Arm	289294-B21
DL580 G2 Cable Assembly, SCSI, Ultra3, LVDS	288874-B21
NOTE: The e7000 ship standard with the integrated Smart Array 5i Plus Controller, which has been designed to deliver maximum performance and availability across the internal SCSI Duplex backplane.	
<ul style="list-style-type: none"> The Ultra3 SCSI cable is required only if the customer chooses to <i>bypass</i> the Smart Array 5i Plus Controller and connect slot-based SCSI adapters or RAID controllers to the internal SCSI Duplex backplane. Two cables are required to maintain the standard, duplexed configuration of the backplane. One cable is required if the simplex configuration is chosen. 	
The backplane is easily configured to simplex mode by means of a simple switch (duplex to simplex) located on the top of the backplane itself.	

Processor

Intel Xeon MP X2.0 GHz-2MB Processor Option Kit	307276-B21
NOTE: This processor option kit (PN 307276-B21) supports the ProLiant ML570 G2 and the DL580 G2 & e7000	

Memory (DIMMs)

8192 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB)	202173-B21
4096 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB)	202172-B21
2048 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB)	202171-B21
1024 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB)	202170-B21
Hot Plug Memory Expansion Board	203320-B21
NOTE: The Hot Plug Memory Expansion Board provides 8 additional DIMM slots for powering memory-intensive applications.	

Optical Drives

Slimline DVD-ROM Drive (8X/24X) Option Kit	264007-B21
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Options

Communications	NC3134 Fast Ethernet NIC 64 PCI Dual Port 10/100	138603-B21
	NC3135 Fast Ethernet Module Dual 10/100 Upgrade Module for NC3134	138604-B21
	NC6132 Gigabit Module 1000 SX Upgrade Module for NC3134	338456-B23
	NC6136 Gigabit Server Adapter, 64-bit/66-MHz, PCI, 1000 SX	203539-B21
	NC7131 Gigabit Server Adapter, 64-bit/66-MHz, PCI, 10/100/1000-T	158575-B21
	NC7132 10/100/1000-T Upgrade Module for NC3134 and NC3131	153543-B21
	NC7770 PCI-X Gigabit Server Adapter	244948-B21
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
Security	HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
	AXL300 Accelerator PCI Card for ProLiant Servers	227933-B21
Tape Drives	Internal and External DAT Tape Drives	
	HP StorageWorks 20/40-GB DAT DDS-4 Tape Drive, External (Carbon) (NA)	157770-002
	HP StorageWorks 20/40-GB DAT DDS-4 Tape Drive, External (Int'l) (Carbon)	157770-B32
	HP StorageWorks 20/40-GB DAT DDS-4 Tape Drive, External (Japan) (Carbon)	157770-292
	HP StorageWorks Internal 20/40-GB DAT, Hot Plug (Carbon)	215488-B21
	HP StorageWorks 3U Rackmount Tape Drive Kit	274338-B21
	NOTE: Please see the 20/40-GB DAT Tape Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following: http://www5.hp.com/products/quickspecs/10426_div/10426_div.HTML (Division/World Wide) http://www5.hp.com/products/quickspecs/10426_na/10426_na.HTML (North America)	
	Internal and External AIT Tape Drives	
	HP StorageWorks External AIT 35 GB, LVD Tape Drive (Carbon)	216885-001
	HP StorageWorks External AIT 35 GB, LVD Tape Drive (Carbon) (Int'l)	216885-B31
	HP StorageWorks External AIT 35 GB, LVD Tape Drive (Carbon) (Japan)	216885-291
	HP StorageWorks Internal AIT 35 GB, LVD, Hot Plug (Carbon)	216886-B21
	NOTE: Please see the AIT 35 GB, LVD Tape Drive QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following: http://www5.hp.com/products/quickspecs/10712_div/10712_div.HTML (Division/World Wide) http://www5.hp.com/products/quickspecs/10712_na/10712_na.HTML (North America)	
	HP StorageWorks AIT 50 GB Tape Drive, External (Carbon) (NA)	157767-002
	HP StorageWorks AIT 50 GB Tape Drive, External (Int'l) (Carbon)	157767-B32
	HP StorageWorks AIT 50 GB Tape Drive, External (Japan) (Carbon)	157767-292
Internal AIT 50 GB, Hot Plug (Carbon)	215487-B21	
HP StorageWorks Rackmount AIT 50 GB, 3U (Single Drive)	274333-B21	
HP StorageWorks 3U Rackmount Tape Drive Kit	274338-B21	
NOTE: Please see the AIT 50-GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following: http://www5.hp.com/products/quickspecs/10425_div/10425_div.HTML (Division/World Wide) http://www5.hp.com/products/quickspecs/10425_na/10425_na.HTML (North America)		

Options

Tape Drives *(continued)*

Internal and External AIT Tape Drives (continued)

HP StorageWorks External AIT 100 GB Tape Drive (Carbon)	249160-001
HP StorageWorks External AIT 100 GB Tape Drive (Carbon) (Int'l)	249160-B31
HP StorageWorks Internal AIT 100 GB, Hot-Plug (Carbon)	249161-B21

NOTE: Please see the AIT 100 GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:
http://www5.hp.com/products/quickspecs/11062_div/11062_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/11062_na/11062_na.HTML (North America)

NOTE: Internal Hot Plug AIT drives can be supported by the integrated Smart Array 5i Plus Controller.

External DLT Tape Drives

HP StorageWorks External 20/40 GB DLT Drive (opal) (WW)	340744-B22
HP StorageWorks External 20/40 GB DLT Drive (opal) (Japan)	340744-292

NOTE: Please see the 20/40 GB DLT Drive QuickSpecs for additional options such as data and cleaning cartridges, and for an up-to-date listing of the latest O/S Support details, please see the following:
http://www5.hp.com/products/quickspecs/10234_div/10234_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/10234_na/10234_na.HTML (North America)

HP StorageWorks 40/80 GB DLT Tape Drive, External (Carbon) (NA)	146197-B23
HP StorageWorks 40/80 GB DLT Tape Drive, External (Carbon) (Japan)	146197-293
HP StorageWorks Rackmount DLT 40/80, 3U (Single Drive)	274332-B21
HP StorageWorks Rackmount DLT 40/80, Dual-Drive, 3U (Two Drives)	274335-B21
HP StorageWorks Rackmount DLT 40/80 Tape Array III, 5U (Four Drives)	274337-B21

NOTE: Please see the 40/80 GB DLT Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/10658_div/10658_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/10658_na/10658_na.HTML (North America)

External DLT VS Tape Drives

HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) All	280129-B22
HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) (WW)	280129-B31
HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) (Japan)	280129-291

NOTE: Please see the DLT VS 40/80 Tape Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/11403_div/11403_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/11403_na/11403_na.HTML (North America)

Options

Tape Drives *(continued)*

External SDLT Tape Drives

HP StorageWorks SDLT 110/220, External NA (carbon)	192103-002
HP StorageWorks SDLT 110/220, External WW (carbon)	192103-B32
HP StorageWorks SDLT 110/220, External Japan (carbon)	192103-292

NOTE: Please see the SDLT 110/220 GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/10772_div/10772_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/10772_na/10772_na.HTML (North America)

HP StorageWorks SDLT 160/320, External NA (carbon)	257319-001
HP StorageWorks SDLT 160/320, External WW (carbon)	257319-B31
HP StorageWorks SDLT 160/320, External Japan (carbon)	257319-291

NOTE: Please see the SDLT 160/320 GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/11406_div/11406_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/11406_na/11406_na.HTML (North America)

HP StorageWorks Rackmount SDLT 110/220, 3U (Single Drive)	274331-B21
HP StorageWorks Rackmount SDLT 110/220, Dual-Drive, 3U (Two Drives)	274334-B21
HP StorageWorks Rackmount SDLT 110/220 Tape Array III, 5U (Four Drives)	274336-B21

NOTE: Please see the SDLT 110/220 GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/10772_div/10772_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/10772_na/10772_na.HTML (North America)

External SuperLoader

DLT1 1280 SuperLoader	268664-B21
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NOTE: Please see the HP StorageWorks DLT1 1280 SuperLoader QuickSpecs for additional options and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/11330_div/11330_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/11330_na/11330_na.HTML (North America)

External LTO Ultrium Tape Drives

HP StorageWorks LTO Ultrium 230 Tape Drive, External (Carbon) NA	Q1516A
HP StorageWorks LTO Ultrium 230 Tape Drive, External (Carbon) Int'l	Q1517A

NOTE: Please see the HP StorageWorks LTO Ultrium Tape Drive QuickSpecs for additional options such as controllers, and other related items, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/11415_div/11415_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/11415_na/11415_na.HTML (North America)

External HP StorageWorks Ultrium 460 tape drive for ProLiant

HP StorageWorks Ultrium 460 tape drive for ProLiant, external (Carbon) NA	Q1519A
HP StorageWorks Ultrium 460 tape drive for ProLiant, external (Carbon) Int'l	Q1520A

NOTE: Please see the HP StorageWorks Ultrium 460 Tape Drive QuickSpecs for additional options such as controllers, and other related items, and for an up-to-date listing of the latest O/S Support details, please see the following:

http://www5.hp.com/products/quickspecs/11530_div/11530_div.HTML (Division/World Wide)
http://www5.hp.com/products/quickspecs/11530_na/11530_na.HTML (North America)

Options

Tape Drives <i>(continued)</i>	<i>1/8 Autoloader</i>	
	HP Storage Works 1/8 Autoloader, DLT vs 80	C9264CB
	HP Storage Works 1/8 Autoloader, Ultrium 230	C9572CB
	Rackmount Kit for 1/8 Autoloader	C9268R
	NOTE: Please see the 1/8 Autoloader QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following: http://www5.hp.com/products/quickspecs/11496_div/11496_div.HTML (Division/World Wide) http://www5.hp.com/products/quickspecs/11496_na/11496_na.HTML (North America)	
	<i>Internal and External AIT Autoloader</i>	
	HP StorageWorks AIT 35 GB Autoloader, Rackmount (Carbon) (NA)	280349-001
	HP StorageWorks AIT 35 GB Autoloader, Rackmount (Carbon) (Int'l)	280349-B31
	NOTE: Please see the AIT 35 GB Autoloader QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following: http://www5.hp.com/products/quickspecs/11404_div/11404_div.HTML (Division/World Wide) http://www5.hp.com/products/quickspecs/11404_na/11404_na.HTML (North America)	
	<i>Rackmount Tape Drive Kits</i>	
	3U Rackmount Kit	274338-B21
	NOTE: The 3U Rackmount Kit (PN 274338-B21) 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 the 12/24 GB DAT, 20/40 GB DAT, 20/40 GB DAT DDS-4 8 Cassette Autoloader, AIT 35 GB LVD, AIT 50 GB, 20/40 GB DLT, 40/80 GB DLT, SDLT 110/220 GB, and Ultrium 230 Tape Drives.	
	5U Rackmount Kit	274339-B21
	NOTE: The 5U Rackmount Kit (PN 274339-B21) can support up to (4) full-height tape drives and is compatible with all DLT/SDLT tape drives including the 20/40 GB DLT, 35/70 GB DLT, 40/80 GB DLT, and SDLT 110/220 GB, and Ultrium 230 Tape Drives.	
	NOTE: Please see the Rackmount Tape Drive Kits QuickSpecs for additional information regarding these kits, please see the following: http://www5.hp.com/products/quickspecs/10854_div/10854_div.HTML (Division/World Wide) http://www5.hp.com/products/quickspecs/10854_na/10854_na.HTML (North America)	
	<i>Rackmount Tape Drive Cable Kits</i>	
	LVD Cable Kit, VHDCI/HD68	168048-B21
	NOTE: For use with the 3U RM Storage Enclosure and DLT Tape Array III only.	
	LVD Cable Kit, HD68/HD68	242381-B21
	NOTE: For use with the 3U RM Storage Enclosure and DLT Tape Array III only.	
Tape Automation	<i>HP StorageWorks ESL9000 Enterprise System Library</i>	
	ESL9322L1 – LTO Ultrium based enterprise library with up to 8 drives and 222, 322 slots	
	ESL9322L1 222 slot 2 DRV LTO1	301927-B22
	ESL9322L1 222 slot 8 DRV LTO1	301927-B28
	ESL9322L1 322 slot 2 DRV LTO1	301928-B22
	ESL9322L1 322 slot 8 DRV LTO1	301928-B28

Options

Tape Automation *(continued)*

HP StorageWorks ESL9000 Enterprise System Library (continued)

ESL9322S2 – SDLT160 based enterprise library with up to 8 drives and 222, 322 slots

ESL9322S2 222 slot 2 DRV SDLT2	293409-B22
ESL9322S2 222 slot 8 DRV SDLT2	293409-B28
ESL9322S2 322 slot 2 DRV SDLT2	293410-B22
ESL9322S2 322 slot 8 DRV SDLT2	293410-B28

NOTE: Please see the HP StorageWorks ESL9322S2 Enterprise Library QuickSpecs for additional information including Tape Drives, Cartridges, Controllers, and SCSI Cables and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/11437_na/11437_na.HTML (North America)

http://www5.hp.com/products/quickspecs/11437_div/11437_div.HTML (World Wide)

ESL9322: Common Options

ESL9322, slot upgrade 222 to 322 slots	293588-B21
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ESL9595L1 – LTO Ultrium based enterprise library with up to 16 drives and 400, 500, 595 slots

ESL9595L1 400 slot 2 DRV LTO1	301929-B22
ESL9595L1 400 slot 16 DRV LTO1	301929-B28
ESL9595L1 500 slot 2 DRV LTO1	301931-B22
ESL9595L1 500 slot 16 DRV LTO1	301931-B28
ESL9595L1 595 slot 2 DRV LTO1	301932-B22
ESL9595L1 595 slot 16 DRV LTO1	301932-B28

NOTE: Please see the HP StorageWorks ESL9595L1 Enterprise Library QuickSpecs for additional information including Tape Drives, Cartridges, Controllers, and SCSI Cables and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/11435_na/11435_na.HTML (North America)

http://www5.hp.com/products/quickspecs/11435_div/11435_div.HTML (World Wide)

ESL9595S2 – SDLT160 based enterprise library with up to 16 drives and 400, 500, 595 slots

ESL9595S2 400 slot 2 DRV SDLT 160/320	293411-B22
ESL9595S2 400 slot 16 DRV SDLT 160/320	293411-B28
ESL9595S2 500 slot 2 DRV SDLT 160/320	293412-B22
ESL9595S2 500 slot 16 DRV SDLT 160/320	293412-B28
ESL9595S2 595 slot 2 DRV SDLT 160/320	293413-B22
ESL9595S2 595 slot 16 DRV SDLT 160/320	293413-B28

NOTE: Please see the HP StorageWorks ESL9595S2 Enterprise Library QuickSpecs for additional information including Tape Drives, Cartridges, Controllers, and SCSI Cables and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/11436_na/11436_na.HTML (North America)

http://www5.hp.com/products/quickspecs/11436_div/11436_div.HTML (World Wide)

Options

Tape Automation *(continued)*

HP StorageWorks ESL9000 Enterprise System Library *(continued)*

ESL9595SL – SDLT110 based enterprise library with up to 16 drives and 400, 500, 595 slots

ESL9595SL 400 slots, 2 DRV SDLT110/220	274672-B22
ESL9595SL 400 slots, 16 DRV SDLT110/220	274672-B28
ESL9595SL 500 slots, 2 DRV SDLT110/220	281627-B22
ESL9595SL 500 slots, 16 DRV SDLT110/220	281627-B28
ESL9595SL 595 slots, 2 DRV SDLT110/220	281628-B22
ESL9595SL 595 slots, 16 DRV SDLT110/220	281628-B28

NOTE: Please see the HP StorageWorks ESL9595SL Enterprise Library QuickSpecs for additional information including Tape Drives, Cartridges, Controllers, and SCSI Cables and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/11332_na/11332_na.HTML (North America)

http://www5.hp.com/products/quickspecs/11332_div/11332_div.HTML (World Wide)

ESL9595: Common Options

ESL9595SL 400 to 500 slot upgrade	274674-B21
ESL9595SL 500 to 595 slot upgrade	274674-B22
ESL9595SL 400 to 595 slot upgrade	274674-B23

Add-on drives & Accessories

ESL9000 LVD SDLT 160/320 Drive upgrade (ESL9595S2 and ESL9322S2 only)	293414-B21
ESL9000 LTO1 drive upgrade (ESL9322L1 and ESL9595L1 only)	301930-B21
ESL9000 Universal Load Port (support both LTO & SDLT cartridges) Not removable	302254-B21
ESL9000 Pass-thru kit (graphite)	161268-B23

ESL9326SL – SDLT110 based enterprise library with up to 16 drives and 326 slots

ESL9326SL Enterprise Library LVD 0 Drives	234488-B21
ESL9326SL Enterprise Library LVD 6 110/220 SDLT Drives	234615-B21
ESL9326SL Enterprise Library LVD 8 110/220 SDLT Drives	234615-B22
ESL9326SL Enterprise Library LVD 16 110/220 SDLT Drives	234615-B26

ESL9326DX – 40/80 GB DLT based HVD enterprise library with up to 16 drives and 326 slots

ESL9326DX, 0 Drive Unit	146205-B21
ESL9326DX Enterprise Library 6 40/80 Drive	161265-B23
ESL9326DX Enterprise Library 8 40/80 Drive	161265-B24
ESL9326DX Enterprise Library 10 40/80 Drive	161265-B25
ESL9326DX Enterprise Library 12 40/80 Drive	161265-B26
ESL9326DX Enterprise Library 14 40/80 Drive	161265-B27
ESL9326DX Enterprise Library 16 40/80 Drive	161265-B28

Options

Tape Automation *(continued)*

HP StorageWorks ESL9000 Enterprise System Library (continued)

ESL9198DLX – 40/80 GB DLT based enterprise library with up to 8 drives and 198 slots

ESL9198 Enterprise Library LVD, 0 Drives	194993-B21
ESL9198DLX Enterprise Library 2 40/80 Drive	194993-B22
ESL9198DLX Enterprise Library 4 40/80 Drive	194993-B24
ESL9198DLX Enterprise Library 8 40/80 Drive	194993-B28
ESL9198SL Enterprise Library, LVD 4 110/220 SDLT Drives	234618-B21
ESL9198SL Enterprise Library, LVD 8 110/220 SDLT Drives	234618-B22
ESL9000 Add-On 40/80 GB DLT Drive, HVD in Hot Plug Canister (ESL9326DX only)	161267-B21
ESL9000 Add-On LVD 40/80 GB DLT Drive in Hot Plug Canister (ESL9198DLX only)	221248-B21

NOTE: Please see the HP StorageWorks ESL9198SL Enterprise Library QuickSpecs for additional information including Tape Drives, Cartridges, Controllers, and SCSI Cables and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/10867_na/10867_na.HTML (North America)

http://www5.hp.com/products/quickspecs/10867_div/10867_div.HTML (World Wide)

Add-on drives & Accessories

ESL9000 Field Upgrade SDLT 110/220, LVD Drive (ESL9198SL, ESL9326SL, ESL9595SL only)	234617-B21
ESL9000 Field Upgrade SDLT 110/220, HVD Drive (for existing ESL9326D/DX customers)	234617-B22
LVD Extender Kit for ESL9198DLX, ESL9198SL, ESL9326SL	221249-B21
ESL 9000 Pass Through Kit for Multi Unit Connectivity	161268-B21
64-Bit/66Mhz Dual Channel Wide Ultra3 SCSI Adapter	129803-B21

NOTE: 64-Bit/66Mhz Dual Channel Wide Ultra3 SCSI Adapter is required to support the LVD based libraries.

HP StorageWorks MSL5000 departmental libraries

MSL5060L1 – LTO Ultrium 1 based departmental library up to 4 drives and 60 slots

MSL5060L1, 0 DRV LTO1 RM Library	301899-B21
MSL5060L1, 2 DRV LTO1 RM Library	301899-B22
MSL5060L1, 2 DRV LTO1 TT Library	301900-B21
MSL5060L1FC, 2 DRV LTO1 RM-with integrated FC router	301899-B23

NOTE: Please see the HP StorageWorks MSL5060 LTO Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/11438_na/11438_na.HTML (North America)

http://www5.hp.com/products/quickspecs/11438_div/11438_div.HTML (Division/World Wide)

MSL5052S2 – SDLT160 based departmental library up to 4 drives and 52 slots

MSL5052S2, RM 0 DRV SDLT ALL	255102-B21
MSL5052S2, 2 DRV SDLT2 TT LIB	293476-B21
MSL5052S2, 2 DRV SDLT2 RM LIB	293474-B21
MSL5052S2FC 2 DRV SDLT2 RM- with integrated FC router	293474-B24

NOTE: Please see the HP StorageWorks MSL5052S2 Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

http://www5.hp.com/products/quickspecs/11442_na/11442_na.HTML (North America)

http://www5.hp.com/products/quickspecs/11442_div/11442_div.HTML (Division/World Wide)

Options

Tape Automation *(continued)*

HP StorageWorks MSL5000 departmental libraries *(continued)*

MSL5030L1 – LTO Ultrium 1 mid-range library up to 2 drives and 30 slots

MSL5030L1, 0 DRV LTO1 RM Library	301897-B21
MSL5030L1, 1 DRV LTO1 RM Library	301897-B22
MSL5030L1, 2 DRV LTO1 RM Library	301897-B23
MSL5030L1, 1 DRV LTO1 TT Library	301898-B21
MSL5030L1, 2 DRV LTO1 TT Library	301898-B22
MSL5030L1FC, 1 DRV LTO1 RM- with integrated FC router	301897-B24
MSL5030L1FC, 2 DRV LTO1 RM- with integrated FC router	301897-B25

NOTE: Please see the HP StorageWorks MSL5030 LTO Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:
http://www5.hp.com/products/quickspecs/11439_na/11439_na.HTML (North America)
http://www5.hp.com/products/quickspecs/11439_div/11439_div.HTML (Division/World Wide)

MSL5026S2 – SDLT160 based mid-range library up to 2 drives and 26 slots

MSL5026S2, 0 DRV SDLT2 RM Library	293472-B21
MSL5026S2, 1 DRV SDLT2 RM Library	293472-B22
MSL5026S2, 2 DRV SDLT2 RM Library	293472-B23
MSL5026S2, 1 DRV SDLT2 TT Library	293473-B21
MSL5026S2, 2 DRV SDLT2 TT Library	293473-B22
MSL5026S2FC, 1 DRV SDLT2 RM- with integrated FC router	293472-B24
MSL5026S2FC, 2 DRV SDLT2 RM- with integrated FC router	293472-B25

NOTE: Please see the HP StorageWorks MSL5026SL Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:
http://www5.hp.com/products/quickspecs/11453_na/11453_na.HTML (North America)
http://www5.hp.com/products/quickspecs/11453_div/11453_div.HTML (Division/World Wide)

MSL5026SL Graphite – SDLT110 based mid-range library up to 2 drives and 26 slots

MSL5026SL, 1 DRV SDLT TT, graphite	302511-B21
MSL5026SL, 2 DRV SDLT TT, graphite	302511-B22
MSL5026SL, 1 DRV SDLT RM, graphite	302512-B21
MSL5026SL, 2 DRV SDLT RM, graphite	302512-B22

NOTE: Please see the HP StorageWorks MSL5026SL Graphite Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:
http://www5.hp.com/products/quickspecs/11440_na/11440_na.HTML (North America)
http://www5.hp.com/products/quickspecs/11440_div/11440_div.HTML (Division/World Wide)

MSL5026SL Opal – SDLT110 based mid-range library up to 2 drives and 26 slots

MSL5026, 0 DR, LVD, RM	231979-B21
MSL5026SL, 1 SDLT 110/220,LVD, TT	231822-B21
MSL5026SL, 2 SDLT 110/220,LVD, TT	231822-B22
MSL5026SL, 1 SDLT 110/220,LVD, RM	231892-B21
MSL5026SL, 2 SDLT 110/220,LVD, RM	231892-B22

Options

<i>Tape Automation (continued)</i>	<i>HP StorageWorks MSL5000 departmental libraries (continued)</i>
	MSL5026DLX– 40/80 GB DLT based mid-range library up to 2 drives and 26 slots
	MSL5026DLX, 1 40/80 GB DLT, LVD, TT 231821-B21
	MSL5026DLX, 2 40/80 GB DLT, LVD, TT 231821-B22
	MSL5026DLX, 1 40/80 GB DLT, LVD, RM 231891-B21
	MSL5026DLX, 2 40/80 GB DLT, LVD, RM 231891-B22
	NOTE: Please see the HP StorageWorks MSL5026DLX Library QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at: http://www5.hp.com/products/quickspecs/10860_na/10860_na.HTML (North America) http://www5.hp.com/products/quickspecs/10860_div/10860_div.HTML (Division/World Wide)
	MSL5000 Add-on drives & accessories
	MSL5000 SDLT 160/320 Upgrade DRV (MSL5052S2 & MSL5026S2 only) 293475-B21
	MSL5000 LTO Ultrium 1 Upgrade DRV (MSL5060L1 & MSL5030L1 only) 301901-B21
	MSL5000 SDLT 110/220 Upgrade DRV 231823-B22
	MSL5000 40/80 GB DLT Upgrade DRV 231823-B21
	MSL5000 Dual Magazine LTO (2 X 15 slot magazines) 301902-B21
	MSL5000 Dual Magazine DLT (2 X 13 slot magazines) 232136-B21
	MSL5000, Pass through mechanism 10U (includes elevator mechanism and router, required to connect first two units in a stack) 231824-B21
	MSL5026, 5U Pass through extender (required one for each unit connected to the stack, for third and additional units) – for MSL5026 & MSL5030 231824-B22
	MSL5052, 10U Pass-Through Extender (required one for each unit connected to the stack, for third and additional units) – for MSL5052 & MSL5060 231824-B23
	HP StorageWorks SSL2000 small system library
	SSL2020 – AIT50 based library with up to 2 drives and 20 slots
	SSL2020 AIT Mini-Library 1 drive, 20 slot Table Top 175195-B21
	SSL2020 AIT Mini-Library 2 drive, 20 slot Table Top 175195-B22
	SSL2020 AIT Mini-Library 1 drive, 20 slot Rackmount 175196-B21
	SSL2020 AIT Mini-Library 2 drive, 20 slot Rackmount 175196-B22
	SSL2020 AIT Library Pass Thru with Transport 175312-B21
	Add-on drives and accessories
	SSL2020 AIT Library Pass Thru Extender 175312-B22
	AIT 50 GB Drive Add-On LVD Drive for SSL2020 AIT Library 175197-B21
	19 Slot Magazine for SSL2020 AIT Library 175198-B21
	AIT 50 GB Data Cassette (5 pack) 152841-001
	AIT Cleaning Cassette 402374-B21
	NOTE: Please see the SSL2020 Automated AIT Tape Library Solution QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at: http://www5.hp.com/products/quickspecs/10580_na/10580_na.HTML (North America) http://www5.hp.com/products/quickspecs/10580_div/10580_div.HTML (Division/World Wide)

Options

External Storage - Rack	StorageWorks Enclosure Model 4314R (rackmountable)	190209-001
	StorageWorks Enclosure Model 4314R (rackmountable) (Int'l)	190209-B31
	StorageWorks Enclosure Model 4314R (rackmountable) (Japan)	190209-291
	StorageWorks Enclosure Model 4354R (rackmountable)	190211-001
	StorageWorks Enclosure Model 4354R (rackmountable) (Int'l)	190211-B31
	StorageWorks Enclosure Model 4354R (rackmountable) (Japan)	190211-291
	NOTE: The HP StorageWorks Enclosure 4300 Family support the Wide Ultra2/Ultra3 1" Hot Plug Hard Drives.	
	StorageWorks Enclosure 4200 Redundant Power Supply Option	119826-B21
	StorageWorks Enclosure 4200 Ultra3 Single Bus I/O Module Option	190212-B21
StorageWorks Enclosure 4200 Ultra3 Dual Bus I/O Module Option	190213-B21	
MSA1000	msa1000	201723-B22
	msa1000 Controller	218231-B22
	msa Fibre Channel I/O Module	218960-B21
	msa SAN Switch 2/8	288247-B21
	msa1000 Fibre Channel Adapter (FCA) 2101	245299-B21
	NOTE: Please see the HP StorageWorks by Modular SAN Array 1000 QuickSpecs for additional options and configuration information at: http://www5.hp.com/products/quickspecs/11033_na/11033_na.HTML (North America) http://www5.hp.com/products/quickspecs/11033_div/11033_div.HTML (Division/World Wide)	
HP StorageWorks Modular Array 8000/Enterprise Modular Array 12000	ema12000 D14 60 Hz	175990-B21
	ema12000 D14 50 Hz	175990-B22
	ema12000 S14 60 Hz	175991-B21
	ema12000 S14 50 Hz	175991-B22
	ma8000 60 Hz	175992-B21
	ma8000 50 Hz	175992-B22
	ema12000 Blue 60 Hz	175993-B21
	ema12000 Blue 50 Hz	175993-B22
	NOTE: Options include controller, solution kits, ACS. ma8000/ema12000 includes controller shelf, drive shelves and cabinet. Packaging upgrade to ra8000/esa12000.	
NOTE: Please see the HP StorageWorks ma8000/ema12000 QuickSpecs for FC Hubs, FC switches, platform software, host adapters, disks and options for complete solutions at: http://www5.hp.com/products/quickspecs/10545_na/10545_na.HTML (North America) http://www5.hp.com/products/quickspecs/10545_div/10545_div.HTML (Division/World Wide)		
StorageWorks Enterprise Modular Array 16000 FC	ema16000 D14 50Hz (opal)	238792-B22
	ema16000 D14 60Hz (opal)	238792-B21
	ema16000 S14 50Hz (opal)	238791-B22
	ema16000 S14 60Hz (opal)	238791-B21
	NOTE: Models include: Dual HSG80 controllers in each Model 2200 enclosure (2 pairs per single bus configuration, 4 pairs per dual bus configuration) with 1 GB cache per controller pair, and 12 14-bay drive enclosures with redundant power supplies. Configure-to-Order (CTO) builds are available. Options include ACS, platform kits and OpenView software by HP.	
NOTE: Please see the HP StorageWorks ema16000 QuickSpecs for FC switches, platform software, host adapters, disks and options for complete solutions at: http://www5.hp.com/products/quickspecs/10812_na/10812_na.HTML (North America) http://www5.hp.com/products/quickspecs/10812_div/10812_div.HTML (Division/World Wide)		

Options

StorageWorks Options		
	HP StorageWorks SAN Switch Integrated/32	230616-B21
	HP StorageWorks SAN Switch Integrated/64	230617-B21
	HP StorageWorks Fibre Channel SAN Switches 8-EL	176219-B21
	HP StorageWorks SAN Switch 2/8-EL	322120-B21
	HP StorageWorks SAN Switch 2/16-EL	322118-B21
	HP StorageWorks SAN Switch 2/8-EL Upgrade Kit	325888-B21
	HP StorageWorks SAN Switch 2/16-EL Upgrade Kit	288250-B21
	HP StorageWorks SAN Director 64	286809-B21

NOTE: Please see the HP StorageWorks SAN Director 64 QuickSpecs for additional information:
http://www5.hp.com/products/quickspecs/11003_na/11003_na.HTML (North America)
http://www5.hp.com/products/quickspecs/11003_div/11003_div.HTML (Division/World Wide)

UPS Power Cord Reference Guide *Please see the UPS Power Cord Reference Guide that lists cable descriptions, requirements, and specifications for UPS units.*

<http://www.hp.com/products/servers/proliantstorage/power-protection/options/index.html>

Uninterruptible Power Systems – Rack		
	UPS R1500 XR (1440VA, 1340 Watt), Low Voltage (NA)	204404-001
	UPS R1500 XR (1500VA, 1340 Watt), High Voltage (Int'l)	204404-B31
	UPS R1500 XR (1500VA, 1340 Watt), Low Voltage (Japan)	204404-291
	UPS R3000 XR (2880VA, 2700 Watt), Low Voltage (NA)	192186-001
	UPS R3000 XR (3000VA, 2700 Watt), High Voltage (NA)	192186-002
	UPS R3000 XR (2400VA, 2250 Watt), Low Voltage (Japan)	192186-291
	UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Japan)	192186-292
	UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Int'l - detachable cord)	192186-B31
	UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A IEC309 Plug)	192186-B32
	UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A CEE 7/7 SCHUKO Plug)	192186-B33
	UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A BS-546 Plug)	192186-AR1
	Rackmountable UPS R6000 (6000VA, 6000 Watt) High Voltage (NA)	347207-001
	Rackmountable UPS R6000 (6000VA, 6000 Watt) High Voltage (Int'l)	347207-B31
	Rackmountable UPS R6000 (6000VA, 6000 Watt) High Voltage (Japan)	347207-291
	UPS R12000 XR, N+x (12KVA, 12KW) High Voltage (WW)	207552-B22

NOTE: UPS R6000 has a hardwired input; and the UPS R12000 XR has a hardwired input and output connection.

UPS Options		
	SNMP Serial Port Card	192189-B21
	NOTE: Supports tower and rack UPS XR models ranging from 1000 – 3000VA.	
	Six Port Card	192185-B21
	NOTE: Supports tower and rack UPS XR models ranging from 1000 – 3000VA.	
	High to Low Voltage Transformer (250VA)	388643-B21
	NOTE: Supports R6000 UPS series only. 2.5 amps @ 125 Volts max output across two NEMA 5-15.	
	Extended Runtime Module, R1500 XR	218971-B21
	NOTE: 2U each, two ERM maximum.	
	Extended Runtime Module, R3000 XR	192188-B21
	NOTE: 2U each, one ERM maximum.	
	Extended Runtime Module, R6000	347224-B21
	NOTE: 3U each, two ERM maximum.	
	Extended Runtime Module, R12000 XR, 4U	217800-B21
	NOTE: 4U each, two ERM maximum.	

Options

UPS Options (<i>continued</i>)	SNMP-EN Adapter	347225-B21
	NOTE: Supports R6000 UPS series only.	
	Multi-Server UPS Card	123508-B21
	NOTE: Supports R6000 UPS series only.	
	Scalable UPS Card	123509-B21
	NOTE: Supports R6000 UPS series only.	
	Cable, 16A, IEC320-C20 to IEC320-C19	295633-B21
	NOTE: Power cord (295633-B21) connects ProLiant servers to PDUs or UPSs with IEC320-C19 output connections.	
	Cable, 10A, IEC320-C14 to IEC320-C19	291034-B21
	NOTE: Power cord (291034-B21) connects ProLiant DL580 G2 servers to PDUs or UPSs with IEC320-C13 output connections. This power cord has been specifically designed to work with the ProLiant DL580 G2 server. Please NOTE the following important precautions when deploying this power cord:	
	<ul style="list-style-type: none"> • Use the cord only in conjunction with the ProLiant DL580 G2 server. • Use the cord to connect the ProLiant DL580 G2 server only to PDUs or UPSs with IEC320-C13 output connections. • Do not use the cord with any other ProLiant or third party server. • Do not use the cord with any other office equipment or computers. • Do not use the cord as an extension cord. • Do not plug the cord into a wall outlet. 	
	Failure to adhere to these precautions may invalidate the server warranty.	
Rackmountable PDUs – 1U/0U (Up to 12 outlets) NOTE: 0U mounting brackets shipped with the unit (separate option kit for 1U mounting).	Power Distribution Unit-16A (200 to 240V) (WW)	207590-B21
	NOTE: The 16A PDU also connects to the high volt models of the UPS R3000 XR (need cable P/N 340653-001 for North America) and the UPS R6000 models. Cable P/N 340653-001 required if connecting to UPS R3000 XR (192186-002 NA-High Volt model only).	
	Power Distribution Unit-24A (200 to 240V) (NA, Japan, LA)	207590-D72
	NOTE: This PDU may also be used to connect to the low volt UPS R3000 XR model.	
	Power Distribution Unit-32A (200 to 240V) (Int'l)	207590-B31
	Power Distribution Unit-40A (200 to 240V) (WW)	207590-B23
	NOTE: Hardwire input required.	
	Power Distribution Unit-24A (100 to 127V) (NA, Japan, LA)	207590-D71
	NOTE: L5-30 input.	
	1U PDU Mounting Brackets Kit	215852-B21
	NOTE: Please see the following Power Distribution Unit (Zero-U/1U PDU) QuickSpecs for additional options including cables: http://www5.hp.com/products/quickspecs/10838_na/10838_na.HTML (North America) http://www5.hp.com/products/quickspecs/10838_div/10838_div.HTML (Division/World Wide)	
Dual Input PDUs, 1U/0U (Up to 12 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks)	Dual Input Power Distribution Unit-24A High Voltage (NA only)	191186-001
	Dual Input Power Distribution Unit-24A High Voltage (Int'l)	191186-B31
	NOTE: Please see the following Power Distribution Unit (Zero-U/1U PDU) QuickSpecs for additional options including cables: http://www5.hp.com/products/quickspecs/10838_na/10838_na.HTML (North America) http://www5.hp.com/products/quickspecs/10838_div/10838_div.HTML (Division/World Wide)	

Options

<p>Modular PDUs 1U/0U (Up to 32 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks)</p>	<p>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).</p>	<p>252663-B24</p>
	<p>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).</p>	<p>252663-D71</p>
	<p>Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) (NA, Japan) NOTE: L6-30 input.</p>	<p>252663-D72</p>
	<p>Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)</p>	<p>252663-B31</p>
	<p>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://www5.hp.com/products/quickspecs/11041_na/11041_na.HTML (North America) http://www5.hp.com/products/quickspecs/11041_div/11041_div.HTML (Division/World Wide)</p>	<p>252663-B21</p>
<p>Third Party Rack Kit</p>	<p>The Third Party rack kit 287528-B21 provides support for any rack, square hole or round hole, (including HP Rack System /E and HP Systems), with an adjustment range from 23 1/2"– 34" deep. NOTE: The Third party rack kit is required for round hole racks or for square hole racks that do not conform to the adjustment range of the standard rail that ships with the server.</p>	<p>287528-B21</p>
<p>Telco Rack Support</p>	<p>Support for all 2-post Telco racks requires the Third Party option kit 287528-B21, plus an additional option kit from Rack Solutions. The Rack Solutions brackets can be purchased at: http://www.racksolutions.com/hp</p>	<p>287528-B21</p>

Memory

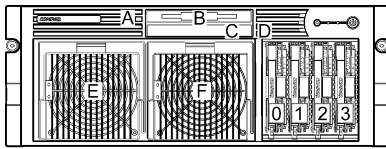
The following memory options are available from HP:

- | | |
|--|------------|
| ▪ 1024 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB) | 202170-B21 |
| ▪ 2048 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB) | 202171-B21 |
| ▪ 4096 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB) | 202172-B21 |
| ▪ 8192 MB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB) | 202173-B21 |

Expand your memory capacity with the DL580 G2 Hot Plug Memory Expansion Board. Provides 8 additional DIMM slots for powering memory-intensive applications.

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| ▪ Hot Plug Memory Expansion Board | 203320-B21 |
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Storage



- A Diskette Drive eject button
- B Ejectable: DVD (Slimline)
- C Ejectable: 1.44-MB Diskette Drive (Slimline)
- D DVD Drive eject button
- E 800-Watt (low line or high line) Redundant Hot Plug Power Supply
- F 800-Watt (low line or high line) Primary Hot Plug Power Supply
- 0-3 Wide Ultra3 Drive Cage (Duplex or Simplex configurable). Duplex is standard shipping configuration

DRIVE SUPPORT

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

Hard Drives

Ultra 320 Hot Pluggable Drives

1-inch	2 for mirrored OS in server.	0-1
146.8 GB 10,000 rpm	User data drive support is dependent upon the array chosen	
72.8 GB 10,000 rpm		
36.4 GB 10,000 rpm		
72.8 GB 15,000 rpm		
36.4 GB 15,000 rpm		

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

Wide Ultra3 Hot Pluggable Drives

NOTE: Wide Ultra3 SCSI drives require the purchase and installation of Wide Ultra3 Controllers or Adapters to run at Wide Ultra3 speeds.

1-inch	2 for mirrored OS in server	0-1
72.8 GB 10,000 rpm	User data drive support is dependent upon the array chosen	
36.4 GB 10,000 rpm		
18.2 GB 10,000 rpm		
36.4 GB 15,000 rpm		

External Storage

Array Support	External	EVA, XP, EMA, MA, VA, MSA 1000
Please see the appropriate Array QuickSpecs for the latest list of supported HBAs		

Technical Specifications

File Protocol Support	CIFS, NFS, NCP, AppleTalk, HTTP, FTP	
O/S Support	Windows Powered OS based on Windows 2000 Advanced Server	
Dimensions (HxWxD)	6.94 x 19 x 26.5 in/17.6 x 48.3 x 67.3 cm	
Weight	66 lb/29.9 kg	
Data Transfer Method	Fibre Channel	
Input Requirements	Nominal Line Voltage	100 to 120 VAC/200 to 240 VAC
	Range Line Voltage	1135W @ 110 VAC/1125W @ 220 VAC
	Line Frequency	50 to 60 Hz
	Typical Input Current	12A (100 VAC), 9.8A (120 VAC), 4.9A (220 VAC)
Maximum Number of Drives	Dependent upon SAN array	
Power	800W/800W (lowline/highline)	
Power Supply Weight		
Reliability Features	Redundant OS, redundant power supplies, hot plug PCI	
Relative Humidity (non-condensing)	Operating	10% to 70%
Temperature Range	Operating	50° to 95° F/10° to 35° C
	Shipping	-22° to 122° F/-30° to 50° C
Max BTUs	4000 BTU	
Max Wet Bulb Temp	101.7° F/38.7° C	

Service & Support, HP Care Pack and Warranty Information

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- | | |
|----------------------------------|---|
| Software Product Services | <ul style="list-style-type: none">• Stand-alone telephone support• Media and documentation updates |
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| Hardware Product Services | <ul style="list-style-type: none">• Installation services• On-site maintenance (includes warranty support)• Response time upgrades during the warranty period• Post-warranty coverage• RAID setup and performance consulting via statement of work |
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For additional hardware installation and maintenance information, please refer to the URLs listed below:

http://h18005.www1.hp.com/services/carepag/us/install/cp_storage.html

http://h18005.www1.hp.com/services/carepag/us/hardware/cp_storage.html

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| Warranty | The e7000 is covered standard with a 3,3,3 warranty |
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| Warranty Upgrade Options | <ul style="list-style-type: none">• Response – Upgrade on-site response from next business day to same day 4-hours• Coverage – Extend hours of coverage from 5 days x 9 hours to 7 days x 24 hours• Duration – Select duration of coverage for a period of 1, 3, or 5 years <p>HP Care Pack is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.</p> <ul style="list-style-type: none">• HP Care Pack is not available for less than the product's warranty duration.• HP Care Pack is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the Warranty Start Date (delivery date to end user customer). Proof of purchase may be required.• HP Care Pack services are prepaid. |
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For additional HP Care Pack (hardware & software) information, as well as orderable part numbers, please refer to the URL listed below:

<http://h18005.www1.hp.com/services/carepag/index.html>

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|-------------------|---|----------------------------|----------------|-------------------|----------|
| Components | The following brick-level options/components do not have individual HP Care Pack services. These items will be included in product HP Care Pack services into which they are installed. | | | | |
| | Disk Drives | Tape Drives | CD/DVD ROM | SCSI Hubs in SBBS | Adapters |
| | Bus Converters | Backplane RAID Controllers | Power Supplies | Cabling | Fans |

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