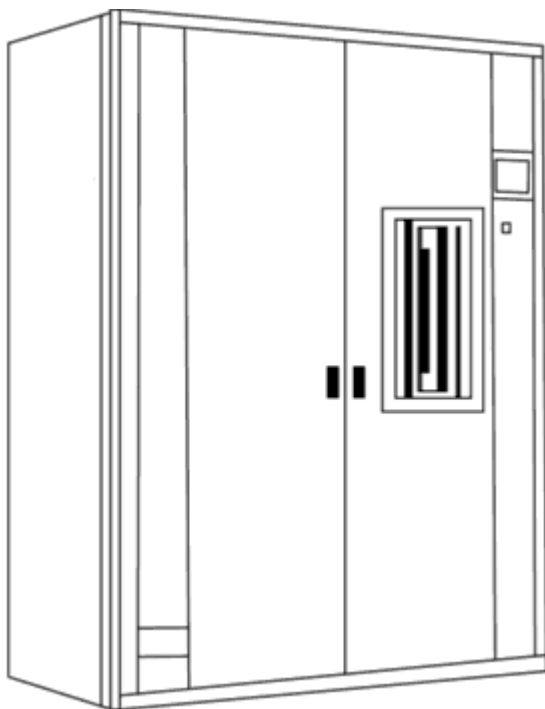


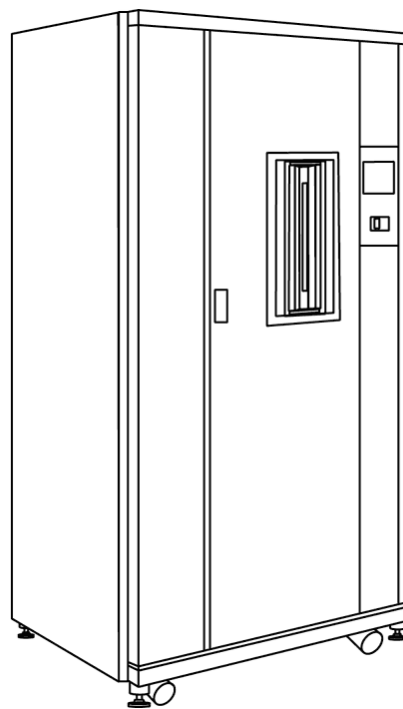
Overview

The HP StorageWorks ESL9000 Series Tape Libraries provide a highly reliable backup and restore solution for mission critical data storage requirements of high-end enterprise customers. The ESL9000 Series Tape Libraries provide component level redundancy, high availability, and enterprise level capacity in a compact footprint for direct SCSI and SAN environments. The ESL9000 Series Tape Libraries provide years of fully automated operation for backup, save and restore of critical data, when coupled with a variety of qualified industry standard backup application solutions. With the Ultrium 960 drives, ESL Libraries offer up to 238 TB of native capacity.

HP ESL Tape Libraries together with Extended Tape Library Architecture (ETLA) deliver tape libraries that are self-aware -- self-managed, automatically maintained, continuously available -- and network-aware -- resilient, secure, and adaptable. HP's high-end tape libraries provide the reliability, interoperability, and advanced functionality required for your enterprise SAN environment. Effective December 31st, 2006 all remaining ESL9000 product skus, including tape drive and slot upgrades, will be removed from the CPL.



HP StorageWorks ESL9595 Tape Library



HP StorageWorks ESL9322 Tape Library

Overview

What's New

- All the remaining ESL9000 skus (tape drives and slot updates) will be discontinued and removed from the price list on December 31st, 2006. Please notify customers appropriately.
- Select ESL 9000 product accessories including ESL9000 LVD SDLT 320 (293414-B21) ESL9000 HVD SDLT 320 (293415-B21), ESL9000 Ultrium 460 (330834-B21) and license for Direct Backup ESL (343376-B21) are no longer available. If required, check with HP product management for available inventory.
- ESL Interface Manager (343372-B21) and ESL Interface Manager Upgrade Kit (343373-B21) are no longer available. If required, contact HP product management for available inventory.
- Select ESL 9000 Extended tape libraries now support the Ultrium 960 tape drive. This is now available to ESL9000 install base customers to upgrade. Supports ESL9000 tape libraries including: ESL9595L1/9322L1, S2, L2, SL. ESL9326D/SL/DX HVD and 9198SL/9198DLX libraries are NOT supported. Four drive SCSI attachment to e2400-160 interface controller (330839-B21).
- Ultrium 960 tape drives also provide WORM support. This allows customers to purchase a single tape drive for both file backup and extended archive.

Models

Product Numbers associated with HP StorageWorks ESL9000 Tape Libraries

ESL9595 Tape Library	ESL9000 400 to 500 slot upgrade	330842-B21
Upgrade Kits	ESL9000 500 to 595 slot upgrade	330842-B22
	ESL9000 400 to 595 slot upgrade	330842-B23
ESL9322 Tape Library	ESL9000 222 to 322 slot upgrade kit	330840-B21
Upgrade Kits		

Standard Features

- The HP StorageWorks ESL9000 Series Tape Libraries provide the ultimate in high capacity, unattended backup and restore for customers with large server pools and centralized backup and restore requirements, serviced by network attached storage devices or storage area networks (SAN).
- The consolidation of the enterprise's data into a single shared storage device requires that these devices provide both high capacity and high performance, and the need for redundancy and high availability.
- With high availability features, the ESL9000 Series Tape Library family can provide years of fully automated operation for backup, save and restore, and hierarchical storage management of critical data when coupled with a variety of qualified industry standard backup application solutions.
- The HP StorageWorks ESL9595 tape library comes with up to 400, 500, and 595 slots respectively and up to sixteen hot-plug drives of the following technologies: LTO Ultrium 960, LTO Ultrium 460, and SDLT600. The ESL9595 offers up to 238 TB of native data storage and native transfer rates up to 2.07 TB/hr.
- The HP StorageWorks ESL9322 tape library comes with 222 or 322 slots respectively and up to eight hot plug drives of the following technologies: LTO Ultrium 960, LTO Ultrium 460, and SDLT 600. With Ultrium technology the ESL9322 can reach to 128.8 TB of native data storage and native transfer rates up to 1.03 TB/hr.
- Qualified with a variety of industry standard backup application solutions and operating systems.

Product Highlights

The ESL9000 Enterprise Library Family	With the high availability feature set, the ESL9000 family provides maximum uptime. Based on PCI backplane architecture, the ESL9000 series libraries also provide a simple upgrade path for future upgrades.
Manageability	HP StorageWorks Extended Tape Library Architecture will save library and SAN administrators time and money by simplifying library setup, configuration, and troubleshooting, increasing reliability and robustness of libraries in the SAN, integrating with leading enterprise management applications, and offering advanced features -- such as Access Control (Secure Manager ESL) -- that further increases backup performance and reliability. HP offers a balanced solution - neither piece-meal nor monolithic - that includes a generous initial feature set and allows users to buy only the advanced options they need.
Scalability	<ul style="list-style-type: none">• The HP StorageWorks ESL9322 Tape Library offers maximum investment protection with its scaling capabilities, from 1 to 8 drives, and 222 to 322 cartridges. When scaling five ESL9322 libraries together using the Pass Through Mechanism, the ESL9322 can extend to 40 drives and 1,466 cartridges.• The HP StorageWorks ESL9595 offers maximum investment protection with its scaling capabilities, from 1 to 16 drives, and 400 to 595 cartridges. When scaling four 9595 libraries together using the Pass Through Mechanism, the ESL9595 can extend to 64 drives and 2278 cartridges.
NOTE: The ESL9000 graphite pass through port (161268-B23) is no longer available.	
High Availability	As data becomes more and more mission critical and downtime becomes more costly to the enterprise, customers are requiring high availability consolidated storage solutions which offer hot-swappable components and redundancies of key operating subsystems (tape drives, controllers, and power supplies). With redundant power distribution, power supplies, and cooling fans, coupled with hot-pluggable drive carriers, power supplies and cooling fan modules, the HP StorageWorks ESL9000 Tape Libraries offer the best in high availability for continuous operation.
Hot-Pluggable Drives	The ESL9000 Series Tape Libraries use hot-pluggable drive carriers, allowing drive replacement and additional drives to be added for capacity expansion without interrupting backup and restore functions. These hot-pluggable drive trays allow for easy scalability of performance, as well as provide an easy upgrade path towards future drive technologies.
Proven Reliability	Proven library robotics has reached a rating of 3,000,000 load/unload cycles; the HP StorageWorks ESL9000 Series Tape Libraries provide the highest reliability.

Product Highlights

HP LTO Ultrium Technology

HP's Ultrium tape technology uses a "best of breed" technology approach, taking the best features from other tape technologies and combining them into a single "superdrive" without the need for design compromises. Ultrium 3 builds on the strengths and success of Ultrium 2 to deliver even better resilience than before. The HP StorageWorks Ultrium 960 tape drive has a mean time between failures (MTBF) rating of 250,000 hours at a 100 percent duty cycle, making it a truly enterprise class tape drive. Additionally, Ultrium 960 tape drives are fully backwards compatible with all Ultrium Generation 3 products from all licensed manufacturers, and can both read and write Ultrium 2 tapes. For IT organizations with stringent, long-term data retention requirements, the Ultrium 960's WORM (Write-Once, Read-Many) data protection feature offers a simple and secure method for archiving records as part of a compliance solution to meet the toughest of industry regulations.

WORM (Write-Once, Read-Many) Drive and Media Support

Critical to the success of data retention policies in highly regulated environments is the ability to store and manage data in an unalterable state. Following stringent guidelines set forth by regulatory agencies such as the SEC and HIPPA, IT organizations must now integrate new solutions and policies that can verify the integrity of stored data for periods that can extend well beyond seven years.

The new Ultrium 960 tape drive features the ability to archive and store data in a non-rewriteable format that meets the most stringent regulatory guidelines. Using a combination of integrated fail-safe features in the drive firmware, cartridge memory, and tape formatting, the Ultrium 960 can archive large amounts of data for periods of up to 30 years in a secure, untampered state. Since all Ultrium 960 tape drives include support for both rewritable and WORM media, IT organizations can now easily integrate a secure, long-term archiving solution into their current data protection strategy. As compared to other technologies that feature support for WORM storage, the Ultrium 960 offers the advantages of:

- A single drive to support all backup and archiving needs
- Two distinctive tape cartridges to easily distinguish and manage both rewriteable and WORM data cartridges
- A specially designed WORM data cartridge with multiple integrated fail-safe features to prevent accidental or intentional overwriting of data
- High-capacity, low-cost HP WORM media that can store 800GB of data on a single data cartridge
- Support from many backup and archiving software vendors, providing the most comprehensive and mainstream support in the industry
- In-the-box software support for Ultrium 960 WORM provided by both HP OpenView Data Storage Protector
- The LTO open standard that offers greater choice and compatibility across all third-generation Ultrium products

NOTE: While all HP Ultrium 960 tape drives support LTO Ultrium WORM media, some third-generation LTO Ultrium tape drives from other manufacturers may not include read and write support for LTO Ultrium WORM media. For non-HP third-generation LTO Ultrium tape drives, please check the manufacturers' specifications to ensure this support is provided if you are using your WORM media. If WORM support is not provided, the drive will eject the WORM tape cartridge immediately upon insertion into the tape drive.

Product Highlights

SDLT Technology

Digital Linear Tape uses a proven linear recording technology, a highly accurate tape guide system, and a read after write correction system to provide high capacity, high reliability data backup and restoration. SDLT, in addition to enhanced capacity and backup performance, provides several features such as Laser Guided Magnetic Recording (LGMR) technology, Pivoting Optical Servo (POS), Magneto-Resistive Cluster Heads (MRC), and Partial Response Maximum Likelihood (PRML) channel technology. SDLT drives are Backward Read Compatible with earlier generations of DLT drives, able to read DLTIV media written in DLT4000, DLT7000, DLT8000, and VS80 drives.

HP Ultrium Storage Media

HP's test program for HP branded Ultrium Generation 3 media is probably the most thorough and comprehensive in the industry. HP cartridges must satisfy an exhaustive battery of additional tests that relate directly to real life situations, where real data and real businesses are at stake. For example, each HP Ultrium 3 cartridge is specified for 20,000 load/unloads and must complete a torturous 'shoeshine' test. This measures the ability of the media to withstand repeated passes over the tape head by simulating excessive repositioning or error recovery on a short length of tape. It is particularly relevant to the library environment where media may be frequently loaded or unloaded by the operating system. Both of these procedures are unique to HP.

HP SDLT Storage Media

HP specifies performance goals to the supplier and monitors the quality of product being shipped. HP defines a brand standard for SDLT media just as it is for Ultrium. This means that the end user can be confident in having the highest levels of quality and reliability from HP SDLT media. Like all HP storage media, SDLT media is tested thoroughly with HP drives, libraries and autoloaders to ensure maximum performance, retrievability and reliability.

Mixed Media

The HP StorageWorks ESL9000 Tape Libraries support mixing SDLT and Ultrium LTO drives within the same frame. This is managed via backup application software package.

NOTE: For a list of supported ISV's please visit: <http://www.hp.com/go/ebs>.

HP StorageWorks Library and Tape Tools (L&TT)

The ESL9000 Library configurations are supported on HP's industry-leading diagnostic tool - HP StorageWorks Library and Tape Tools (L&TT). L&TT is a single, convenient program that's a snap to install and simple to operate. L&TT's intuitive user interface eliminates the need for training and deploys in less than five minutes. This robust diagnostic tool is designed for both the experienced professional and the untrained administrator. It ensures product integrity through self-diagnostics and fast resolution to device concerns. Additional information on L&TT plus download information can be found at:

<http://www.hp.com/support/tapetools>.

Compatibility

Server Support

The HP StorageWorks ESL libraries are supported on the following classes of HP systems:

- HP ProLiant servers
- HP UX Servers
- HP AlphaServers

NOTE: For the complete listing of compatibility information visit <http://www.hp.com/go/ebs>.

OS Support

The HP StorageWorks ESL libraries are supported on the following operating systems:

- HP-UX
- AIX
- Linux
- NetWare
- OVMS
- Tru64
- Solaris
- Windows

NOTE: For the complete listing of compatibility information visit <http://www.hp.com/go/ebs>.

Software Support

The HP StorageWorks ESL libraries are supported on the following ISV's:

- HP OpenView Storage Data Protector
- CA ARCserv
- EMC Legato Networker
- Tivoli Storage Manager
- Symantec VERITAS Backup Exec
- Symantec VERITAS NetBackup

NOTE: For the complete listing of compatibility information visit <http://www.hp.com/go/ebs>.

Service and Support, HP Care Pack and Warranty Information

Warranty

HP Care Pack Services offer upgraded service levels to extend and expand your standard product warranty with easy to buy, easy to use support packages that help you make the most of your hardware and software investments. They let you choose the support levels that meet your business requirements, from basic to mission-critical. They help you contain total cost of ownership.

HP Care Pack warranty extensions can be purchased along with HP products to cost-effectively upgrade or extend your warranty. For many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

Why purchase an HP Care Pack service?

Your standard warranty protects against product defects. HP Care Pack Services help you guard against unplanned downtime, which can reduce your productivity and profitability. These convenient service packages:

- Protect your investment in HP products
- Provide consistent, predictable levels of support across your entire department or business
- Ease budget planning with fixed-cost support that includes parts and labor
- Give you direct access to proven technical and problem-solving expertise
- Offer a choice of response-time and repair-time commitments
- Deliver prompt, measurable results
- Are available whenever and wherever you do business

HP Care Pack availability may vary by country and product.

Supporting your Adaptive Enterprise journey

HP Services helps you make the Adaptive Enterprise real for your organization. The breadth, depth, and quality of HP hardware and software support services can help you **improve the performance** of your IT support processes and resolve the complex software and hardware problems that tax user productivity. HP Care Pack services help you **increase IT environment stability, efficiency, and agility** from the desktop to the data center, and improve the productivity of your employees.

Warranty and Services Included with the Product

Hewlett-Packard provides a 1-year, next-day, on-site, limited warranty for the ESL 9000 series enterprise tape library, hardware, plus 9x5 phone support for the duration of the warranty. All drive modules and interface controllers have a 1-year, parts exchange, limited warranty, with next business day response, plus 9x5 phone support for the duration of the warranty.

For more information about HP's Global Limited Warranty and Technical Support, visit:
ftp://ftp.compaq.com/pub/products/storageworks/warranty/EN_321708-008.pdf

Service and Support, HP Care Pack and Warranty Information

Recommended Services In order to maximize ROI and product uptime, and minimize the cost of ownership, Hewlett Packard recommends:

3 years 24 x 7 Hardware Support

- Guards against downtime, which reduces productivity and profitability
- Eases budget planning with fixed-cost support that includes parts and labor
- Direct access to proven technical and problem-solving expertise

3 years 24 x 7 Software Support

- Improve the productivity of system managers and operators
- Improve system performance and reduce downtime due to software defects
- Expedite problem resolution through expert-level technical resources
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP and selected third-party software at a predictable cost
- Take advantage of subscription savings on software updates
- Keep your license compliancy up-to-date

Available HP Care Pack Services

Extend your product warranty with a wide choice of cost-saving support packages.

HP Care Pack Services are sold by HP and HP authorized enterprise and commercial resellers. Services for customers purchasing via direct and enterprise resellers are quoted using HP order configuration tools. Additional information about HP Care Pack Service features and benefits is available at:

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

Key for HP Care Pack Service availability in the table below:

E = Service available for customers purchasing direct and via enterprise resellers

C = Service available for customers purchasing via commercial resellers

N/A = Service not applicable

HP Care Pack Services Deployment and Per Event Services	Service Available
HP Installation	E/C
HP Installation & Startup	E/C
HP Implementation	N/A

For more information about Deployment and Per Event Services for HP Storage, visit:

<http://www.hp.com/hps/storage/>.

Service and Support, HP Care Pack and Warranty Information

HP Care Pack Services Availability Services	1 yr	3 yr	4 yr	5 yr
HP Next Day Hardware Support	E/C	E/C	C	C
HP 4 Hr, 9x5 HW Support	E/C	E/C	C	C
HP 4 Hr, 13x5 Hardware Support	E/C	E/C	C	C
HP 4 Hr, 24x7 Hardware Support	E/C	E/C	C	C
HP 6 HR Call-to-Repair HW Support	E/C	E/C	C	C
HP Software Support	E/C	E/C	C	C
HP Software Support 24x7	E/C	E/C	C	C
HP Support Plus	E/C	E/C	C	C
HP Support Plus 24	E/C	E/C	C	C
HP Proactive Essentials 9x5, 10 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 9x5, 25 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 9x5 Unlimited	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7, 25 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7, 50 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7 Unlimited	N/A	N/A	N/A	N/A
HP Proactive 24 Service (*)	E/C	E/C	N/A	N/A
HP Critical Service (*)	E/C	E/C	N/A	N/A

(*) Both Proactive 24 & Critical Service only relate to 'reactive elements'. 'Proactive elements' are available on time & materials basis. (SW is supported separately per package).

Due to the scalability of the product, Service offerings match that of the purchase motion. i.e. support for the robotics, drives, software is purchased separately.

To find HP Care Pack Services available via HP authorized commercial resellers, visit http://h30125.www3.hp.com/csn/salesmktg/elfpack/elf_nonlkup_ctrylang.asp?code=ELNL

Deployment and Per Event Service Descriptions

HP Installation & Start up for HP StorageWorks

- Provides for the implementation of the HP StorageWorks ESL (Enterprise Storage Library) and MSL (Midrange Storage Library) products in SAN environments, including the installation of a Fibre Channel Interface Controller
- Minimizes implementation-related disruptions to your environment and helps ensure increased system reliability and more effective data management

Due to the complexities involved with the initial installation of an enterprise Library into a SAN environment, Hewlett Packard requires that the Installation & Start-up service (HA114A1) is purchased.

The Tape Library Installation & Start Up covers pre-installation preparation activities, installation and configuration of the library into the customers SAN. Installation of: Command View ESL license installation (if applicable); Secure Manager ESL license installation (if applicable); Direct Backup ESL license installation (if applicable); configuration of hosts (up to 5, additional hosts handled via HA114A1 5B2 per additional 10) and switches; Verification testing and customer orientation.

Service and Support, HP Care Pack and Warranty Information

Service	Description	Comments
HA114A1 # 5DQ:	Installation and start-up:	1 library and up to 5 SAN host connects
HA124A1 #5B1:	Additional day:	Each additional library on the same site(*)
HA124A1 #5B2:	Additional half day:	Additional SAN host connects up to 10 hosts
HA124A1 #5B2:	Additional half day:	Per ESL Pass-through mechanism

***NOTE:** If the additional library is to be configured at a different site location then an additional instance of HA114A1 #5DQ is required

For more information please visit: http://www.hp.com/hps/storage/ns_info.html#related

Care Pack Service Product Numbers

Product Number	Product Description	ESL 9322 Band	ESL 9595 Band	Drive Band	Install Band
HA113A1	Tape Installation HW Installation Only	N/A	N/A	N/A	5DQ
HA113A1	Subsequent Add-on Tape Drive Installation	N/A	N/A	N/A	5DU
HA113A1	Command View ESL Installation Into SAN	N/A	N/A	N/A	5J5
HA113A1	Secure Manager ESL Installation Into SAN	N/A	N/A	N/A	5J5
HA113A1	Direct Backup ESL Installation Into SAN (Per Drive)	N/A	N/A	N/A	5J5
HA114A1	Tape Library Installation And Start Up	N/A	N/A	N/A	5DQ
HA114A1	Installation-Interfaces for libraries	N/A	N/A	N/A	5DP
HA101A3	HW, "3-year", "next-day", "13x5", "on-site"	8GN	8GP	8G5	N/A
HA103A3	HW, "3-year", "4-hour", "13x5", "on-site"	8GN	8GP	8G5	N/A
HA104A3	HW, "3-year", "4-hour", "24x7", "on-site"	8GN	8GP	8G5	N/A
HA106A3	SW, "3-year", "Phone-in", "9x5"*	8FC	8FC	N/A	N/A
HA107A3	SW, "3-year", "Phone-in", "24x7"*	8FC	8FC	N/A	N/A
HA106A3	SW, "3-year", "Phone-in", "9x5"**	8NJ	8NJ	N/A	N/A
HA107A3	SW, "3-year", "Phone-in", "24x7"**	8NJ	8NJ	N/A	N/A
HA109A3	HW Only, Support Plus, "3-year", "13x5"****	8GN	8GP	8G5	N/A
HA110A3	HW Only, Support Plus 24, "3-year", "24x7"****	8GN	8GP	8G5	N/A
HA111A3	HW Only, Proactive 24, "3-year", "24x7"****	8GN	8GP	8G5	N/A
HA112A3	HW Only, Critical Service, "3-year", "24x7"****	8GN	8GP	8G5	N/A

NOTES:

* Software supported under this service is Command View ESL or Secure Manager ESL (SW support for each package purchased separately).

** Software supported under this service is Direct Backup ESL (SW purchasable per drive).

**** Support Plus covers 4hr H/W response (SW is supported separately per package).

***** Both Proactive 24 & Critical Service only relate to 'reactive elements', 'proactive elements' are available on time & materials basis. (SW is supported separately per package).

The Care Pack information quoted above relates to 3 year offerings only, 1yr, 4yr & 5yr packs are available for each offering (replace A3 with A1, A4 or A5).

Service and Support, HP Care Pack and Warranty Information

eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit <http://www.hp.com/support>

HP Education Services

For more information about HP Education Services for Storage and SAN, visit <http://education.hp.com/curr-storsan.htm>

Additional Services Information

For more information about Deployment, Per Event, Consulting and Education services for HP Storage, visit: <http://www.hp.com/hps/storage/>

For more information about HP Care Pack Services for Storage, visit: http://www.hp.com/hps/carepack/storage/cp_networked.html

For more information about HP Storage Software, services and updates, visit: <http://h18006.www1.hp.com/storage/software.html>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com>

Related Options

	Description	Part Number
ESL9595 Tape Library Upgrade Kits	ESL9000 400 to 500 slot upgrade	330842-B21
	ESL9000 500 to 595 slot upgrade	330842-B22
	ESL9000 400 to 595 slot upgrade	330842-B23
ESL9322 Tape Library Upgrade Kits	ESL9000 222 to 322 slot upgrade kit	330840-B21
ESL9000 Tape Library Upgrade Kits	ESL9000 Ultrium 960 Drive Upgrade Kit NOTE: Supports ESL9000 tape libraries including: ESL9322L1/9595L1, S2, L2, SL, 9326SL, 9198SL, and 9198DLX. ESL9326D/DX HVD libraries are NOT supported. Four drive SCSI attachment to e2400-160 interface controller (330839-B21). Same performance as four LTO2 tape drives, but twice the capacity.	AD596A
	ESL 9000 SDLT 600 Drive NOTE: The HP StorageWorks SDLT 600 Tape Drive includes support for WORM (Write-Once, Read-Many) functionality. WORM implementation is dependent on the backup application and more information on which applications support WORM can be found at: http://www.hp.com/go/connect .	AD550A
	<p>WORM technology provides an enhanced level of security against accidental or malicious alteration of data on tape cartridges. WORM can be important when implementing data retention policies to be compliant with regulations regarding the storage of data on non-rewritable, non-erasable media. The SDLT 600 tape drive ships with support for WORM and can be set to WORM mode using the backup application. Once the cartridge has been set up for WORM, you will be unable to erase or overwrite the data on it, although you will be able to append data until the cartridge is full. WORM media can be read as often as required. When implementing WORM an unformatted or blank Super DLTape II 600GB data cartridge is required.</p>	
	ESL9000 Universal Load Port magazine (two 4-slot fixed magazines) NOTE: A Maximum of only one pair per library is necessary.	302254-B21
ESL9000 ETLA Upgrade	NOTE: The following sku is for libraries already installed (ESL9595, ESL9322, ESL 9198, and ESL9326).	
Embedded Fibre Channel Interface Controllers	ESL9000 E2400-160 FC Interface Controller NOTE: Single card with 2 FC X 4 Ultra 3 SCSI ports. Installed into the ESL9000 card cage which is ordered separately. One drive per bus configuration, or one controller for every four tape drives for a maximum of four FC interface controllers for 16 tape drives. Installation services will be quoted with this product.	330839-B21

Related Options

HP StorageWorks Command View for Tape Libraries software	<p>NOTE: The following options are components of HP StorageWorks Extended Tape Library Architecture.</p> <p>Permanent License (per library) for Command View ESL 343374-B21</p> <p>NOTE: For the ESL9000, Command View ESL in conjunction with the Interface Manager provides library and controller manageability.</p> <p>NOTE: Only needed if user is upgrading a currently installed library, user orders Interface Manager upgrade kit (manageability card) and then Command View ESL Permanent License.</p> <p>NOTE: Please reference the Command View ESL QuickSpecs for more information at http://www.hp.com/go/automated</p>
HP StorageWorks Secure Manager for Tape Libraries software	<p>Permanent (per library) License for Secure Manager ESL 343376-B21</p> <p>NOTE: Please reference Secure Manager ESL QuickSpecs for more information at http://www.hp.com/go/automated</p>
Power Cord	<p>ESL9000 Power Cords, 2 each 146210-001</p> <p>NOTE: Option Kit shipped with all units.</p>
Media	<p>HP Ultrium 800GB RW Data Cartridge (1pk) C7973A NOTE: For use with HP StorageWorks Ultrium 960 Tape Drives.</p> <p>HP Ultrium 800GB WORM Data Cartridge (1pk) C7973W NOTE: For use with HP StorageWorks Ultrium 960 Tape Drives.</p> <p>HP Ultrium 800GB Custom Labeled WORM Data Cartridge (20pk) C7973WL NOTE: Customers can customize an exact label sequence.</p> <p>HP Ultrium 800GB Custom Labeled Data Cartridge (20pk) C7973AL NOTE: This product is available in the USA and Europe. Customers can customize an exact label sequence.</p> <p>HP Ultrium 800GB RW Non-Custom Labeled Data Cartridge (20pk) C7973AN NOTE: This product is for customers that require labeled media but do not need to specify an exact label sequence.</p> <p>HP Ultrium 400GB Data Cartridge (1pk) C7972A NOTE: For use with HP StorageWorks Ultrium 460 and Ultrium 960 Tape Drives.</p> <p>HP Ultrium 400GB Custom Labeled Data Cartridge (20pk) C7972AL NOTE: This product is available in the USA and Europe. Customers can customize an exact label sequence.</p> <p>HP Ultrium 400GB Non-Custom Labeled Data Cartridge (20pk) C7972AN NOTE: This product is for customers that require labeled media but do not need to specify an exact label sequence.</p> <p>HP Ultrium 400GB Storage Media Kit C8014A NOTE: Kit includes twenty HP Ultrium 400GB Data Cartridges, one HP Ultrium Cleaning Cartridge, Media Case, Colored Labels, and collateral.</p> <p>HP Ultrium 200GB Data Cartridge (1pk) C7971A NOTE: For use with HP StorageWorks Ultrium 215, 230 and Ultrium 460 Tape Drives. (Read compatible with Ultrium 960 tape drives).</p> <p>HP Ultrium 200GB Custom Labeled Data Cartridge (20pk) C7971AL NOTE: Customers can customize an exact label sequence.</p> <p>HP Ultrium 200GB Non-Custom Labeled Data Cartridge (20pk) C7971AN NOTE: This product is for customers that require labeled media but do not need to specify an exact label sequence.</p>

Related Options

HP Ultrium 200GB Storage Media Kit NOTE: Kit includes twenty HP Ultrium 200GB Data Cartridges, one HP Ultrium Cleaning Cartridge, Media Case, Colored Labels, and collateral.	C8013A
HP LTO Ultrium Universal Cleaning Cartridge NOTE: For use with HP StorageWorks Ultrium 215, Ultrium 230, Ultrium 460 and Ultrium 960 Tape Drives.	C7978A
HP SDLT 600 GB Data Cartridge NOTE: For use with HP StorageWorks SDLT 600 Tape Drives.	Q2020A
HP SDLT 220/320 GB Data Cartridge NOTE: For use with HP StorageWorks SDLT 220 and SDLT 320 Tape Drives.	C7980A
HP SDLT-I Custom Labeled Data Cartridge (20 pk) NOTE: Customers can customize an exact label sequence.	C7980AL
HP SDLT Cleaning Cartridge NOTE: For use with HP StorageWorks SDLT 220 and SDLT 320 Tape Drives.	C7982A
HP Ultrium 3 Bar Code Labels NOTE: For use with HP Ultrium 800GB cartridges. Option Kit ships with 100 data labels and 10 cleaning labels.	Q2007A
HP Ultrium 3 WORM Bar Code Labels NOTE: For use with HP Ultrium 800GB WORM cartridges. Option Kit ships with 100 data labels and 10 cleaning labels.	Q2008A
HP Ultrium 2 Bar Code Labels NOTE: For use with HP Ultrium 400GB cartridges. Option Kit ships with 100 data labels and 10 cleaning labels.	Q2002A
HP Ultrium 1 Bar Code Labels NOTE: For use with HP Ultrium 200GB cartridges. Option Kit ships with 100 data labels and 10 cleaning labels.	Q2001A
HP SDLT 600 Bar Code Labels NOTE: For use with HP SDLT 600 GB cartridges. Option Kit ships with 100 data labels and 10 cleaning labels.	Q2006A
HP SDLT Bar Code Labels NOTE: For use with HP SDLT 220/320 GB cartridges. Option Kit ships with 100 data labels and 10 cleaning labels.	Q2003A

SCSI Cables

Wide/Wide SCSI cable, 5 m	328215-001
Wide/Wide SCSI cable, 10 m NOTE: Do not order for multiple device per HBA configurations.	328215-002
Wide/Wide SCSI cable, 15 m NOTE: Do not order for multiple device per HBA configurations.	328215-003
Wide/Wide SCSI cable, 20 m NOTE: Do not order for multiple device per HBA configurations.	328215-004
SCSI Cable, VHDCI/Wide, 6 ft	341176-B21
SCSI Cable, VHDCI/Wide, 12 ft	341177-B21
Check the cable-adapter matrix for tape libraries on: ftp://ftp.compaq.com/pub/products/storageworks/tape-and-optical-storage/adapter-cable-matrix.pdf	

Related Options

Host Bus Adapters

For a complete listing of supported SAN components please visit
<http://www.hp.com/go/ebs>.

Fibre Channel Cables

NOTE: Additional Fibre Channel Cables are required. Order one cable per Interface Controller, selecting cable length and converter type to match the appropriate environment.

2m SW LC/SC FC Cable Kit	221691-B21
5m SW LC/SC FC Cable Kit	221691-B22
15m SW LC/SC FC Cable Kit	221691-B23
2m SW LC/LC FC Cable Kit	221692-B21
5m SW LC/LC FC Cable Kit	221692-B22
15m SW LC/LC FC Cable Kit	221692-B23

Technical Specifications

Dimensions		ESL9595 Tape Library	ESL9322 Tape Library
	Form Factor	Free standing	Free standing
	Physical (HxWxD)	75.00 x 60.00 x 29.00 in (190.50 x 152.40 x 73.70 cm)	75.00 x 40.00 x 29.00 in (190.50 x 101.60 x 73.70 cm)
	Shipping (HxWxD)	80.00 x 71.00 x 48.00 in (203.20 x 180.30 x 121.90 cm)	80.00 x 52.00 x 48.00 in (203.20 x 132.10 x 121.90 cm)
Weight	Out of box, without data cartridges, 0 drives	1660 lbs (753 kg)	1335 lbs (605.5 kg)
	Shipping, without data cartridges, 0 drives	1822 lbs (826.4 kg)	1362 lbs (617.8 kg)
SCSI Identification	Product ID	ESL9000 Series	
	Vendor ID	HP	
Control Panel	Library and drive status Move tape cartridges Load/unload tape drives Maintenance (drive cleaning, diagnostics) Library configuration Statistics		
SCSI Interface	Ultra3 SCSI LVD, 68HD Interconnect NOTE: External cable length between library and HBA limited to 9 m when using more than one device per HBA. Can extend up to 22 m when using exactly one device per HBA (point to point SCSI termination.)		
Performance (native)	Capacity	Transfer Rates	
	Ultrium 960	400 GB native	80 MB/s
	Ultrium 460	200 GB native	30 MB/s
	Ultrium 230	100 GB native	15 MB/s
	SDLT 320	160 GB native	16 MB/s
	SDLT 600	300 GB native	36 MB/s

Technical Specifications

Storage Capacity

	ESL9322			ESL9595	
	222 Slots	322 Slots	400 Slots	500 Slots	595 Slots
Ultrium 960	88.8 TB native, 176.8 TB compressed	128.8 TB native, 257.6 TB compressed	160 TB native, 320 TB compressed	200 TB 400TB compressed	238 TB native 476 TB compressed
Ultrium 460	44.4 TB native, 88.4 TB compressed	64.4 TB native, 128.8 TB compressed	80 TB native, 160 TB compressed	100 TB 200 TB compressed	119 TB native 238 TB compressed
Ultrium 230	22 TB native, 44 TB compressed	32.2 TB native, 64.4 TB compressed	40 TB 80 TB compressed	50 TB 100 TB compressed	59.5 TB 119TB compressed
SDLT 320	35.5 TB native, 71 TB compressed	51.5 TB native, 103 TB compressed	64 TB 128 TB compressed	80 TB 160 TB compressed	95.2 TB 190.4 TB compressed
SDLT 600	66.6 TB native, 133.2TB compressed	96 TB native, 193.2 TB compressed	120TB native, 240TB compressed	150 TB native, 300TB compressed	178TB native, 357TB compressed

NOTE: Compressed data listed above is assuming 2:1 compression.

Input/Output Port

Two 4-slot fixed magazines

Initialization (cartridge inventory) time

< 7 minutes

Cartridge Swap Time

33 seconds average from slot to drive

Cartridge Pass-through time - end-to-end

78 seconds average from first frame to fourth frame

Electrical Specifications

Auto-range to domestic and international AC voltages

AC Voltage Range

90 to 132 VAC or 180 to 264 VAC, single phase

Nominal

100 to 120 VAC or 220 to 240 VAC

Line Frequency Range

47 to 63Hz

AC Receptacle

IEC-320 C19 Type 100-120V/200-240V, 50/60 Hz, 20A/16A (5-20P plug)

Power Consumption

ESL9595 Tape Library

ESL9322 Tape Library

VA Maximum 1,600W

1200 VA Maximum

5500 BTU/hr or 1400

Kcal/hr

Acoustic Noise

Noise Power Emission Level

Idle: 7.8 bels

Reliability (Library Only)

MTBF

250,000 hours

MSBF

3,000,000 load/unload cycles

Regulatory Compliance

Safety

EN60950/IEC950, UL, CSA/cUL, CE, CB Scheme, Nemko GS, DHHS/FDA (Class 1 Laser), IEC60825-1 (Laser Class 1).

Regulatory ID Number ED 1002

EMI

EN 60825:1994/A11, FCC Part 15 Class A, CISPR Publication 22 Class A, ICES-003 Class A, VCCI Class 1, SMA AZ/NZS 3548 Class A

EMC

EN6100-3-2, EN50082-1: 1992, EN50022: 1994

Technical Specifications

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