



protection



hp StorageWorks ESL9322 tape library



hp StorageWorks ESL9595 tape library

hp StorageWorks ESL9000 series tape libraries

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. ESL9000 series tape libraries are ideal for direct SCSI and SAN environments, providing component level redundancy, high availability, and enterprise level capacity — in a compact footprint. They provide unique investment protection with future multi-unit scalability and a PCI backplane for future feature expansion. ESL 9000 series tape libraries simplify management of backup and restore activities and providing a unique value in data protection needs.

When coupled with a variety of qualified industry standard backup application solutions, ESL9000 series tape libraries provide years of fully automated operation for backup, save and restore, and hierarchical storage management of critical data. With the new Ultrium LTO 460 drives, ESL9000 series tape libraries offer up to 119 TB of native capacity, with 16 drives, and native transfer rates of 30 MB/sec. HP StorageWorks ESL9000 series tape libraries meet the need for a highly reliable, high capacity, high performance data protection solution.

key features and benefits

controllable

- **upgradeable:** offers investment protection with an upgrade path scalable in both drive and cartridge count
- **serviceable:** makes repairs a breeze with hot-swappable drives, power supplies, and fans

resilient

- **reliable:** high availability, enterprise features with N+2 power supplies and cooling fans

extensible

- **open:** supports multiple operating systems, including HP-UX, Microsoft® Windows®, Solaris and AIX
- **flexible:** offers a broad choice of drive and media technology, and scalable cartridge counts
- **scalable:** easily scales cartridge and drive count as backup needs increase

what's new

- ESL9000 series tape libraries now support the new HP StorageWorks Ultrium 460 tape drives providing greater capacity and performance for enterprise tape backup
- HP Ultra 3 SCSI support
- HP StorageWorks Ultrium 230 and Ultrium 460 mixed drive support

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ESL9000 series
tape libraries



high capacity

technical specifications

SCSI interface	Ultra 3 SCSI LVD, 68 HD interconnect; external cable length between library and host bus adapter (HBA) limited to 10 m when using more than one device per HBA; extends up to 23 m when using exactly one device per HBA (point-to-point SCSI termination)			
form factor	free standing			
dimensions	unit	packaged		
ESL9595	height	75 in/190.5 cm	80 in/203.2 cm	
	width	60 in/152.4 cm	52 in/132.1 cm	
	depth	29 in/73.7 cm	48 in/121.9 cm	
ESL9322	height	75 in/190.5 cm	80 in/203.2 cm	
	width	40 in/101.6 cm	52 in/132.1 cm	
	depth	29 in/73.7 cm	48 in/121.9 cm	
unit weight	unit	packaged		
ESL9595	without data cartridges	1444 lb/655 kg	1627 lb/738 kg	
ESL9322	without data cartridges	1072 lb/487 kg	1254 lb/568.8 kg	
performance (native)	Ultrium 460	Ultrium 230	SDLT160/320	SDLT 110/220
capacity	200 GB native	100 GB native	160 GB native	110 GB native
native transfer rates	30 MB/sec	15 MB/sec	16 MB/sec	11 MB/sec
storage capacity	Ultrium 460	Ultrium 230	SDLT160/320	SDLT 110/220
222 slots	44.4 TB native	22 TB	35.5 TB	24.4 TB
	88.4 TB compressed*	44 TB compressed*	71 TB compressed*	48.8 TB compressed*
322 slots	64.4 TB	32.2 TB	51.5 TB	35.4 TB
	128.8 TB compressed	64.4 TB compressed*	103 TB compressed*	70.8 TB compressed*
400 slots	80 TB native,	40 TB	64 TB	44 TB
	160 TB compressed*	80 TB compressed*	128 TB compressed*	88 TB compressed*
500 slots	100 TB	50 TB	80 TB	55 TB
	200 TB compressed*	100 TB compressed*	160 TB compressed*	110 TB compressed*
595 slots	119 TB native,	59.5 TB	95.2 TB	65.4 TB
	238 TB compressed*	119 TB compressed*	90.4 TB compressed*	130.9 TB compressed*
400 slots	80 TB native,	40 TB	64 TB	44 TB
	160 TB compressed*	80 TB compressed*	128 TB compressed*	88 TB compressed*
input/output port	two, 4-slot fixed magazines			
initialization time	< 7 minutes			
cartridge swap time	33 seconds average			
cartridge pass-through time – end to end	78 seconds average			
swaps	180 swaps/hour			
electrical specifications	AC Voltage	<ul style="list-style-type: none"> • 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 for U.S. and Canada) 		
	power consumption	1200 VA maximum		

* assuming 2:1 compression

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backup

specifications — continued

acoustic noise	noise power emission level	idle 7.8 bels operating 8.1 bels
reliability (library only)	MTBF	250,000 hours
	MSBF	2,000,000 load/unload cycles
regulatory compliance	safety	EN60950/IEC950, UL, CSA/cUL, CE, CB Scheme, Nemko
regulatory ID number ED1002	EMI	GS, DHHS/FDA (Class 1 Laser), IEC60825-1 (Laser Class 1). 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
supplies		<ul style="list-style-type: none"> • HP StorageWorks Ultrium 400 GB data cartridge (capacity of 200 GB native) — C7972A • HP StorageWorks Ultrium 200 GB data cartridge (capacity of 100 GB native) — C7971A • HP StorageWorks Ultrium universal cleaning cartridge — C7978A • HP Super DLT tape 160-320 GB data cartridge — C7980A • HP Super DLT tape cleaning cartridge — C7982A
power cord (pair required)		<ul style="list-style-type: none"> • ESL9000 power cords 2X, US/CANADA/MEX* — 146210-001 • ESL9000 power cords 2X, SE ASIA/INDIA — 146210-AR1 • ESL9000 power cords 2X, CENTRAL EUROPE — 146210-021 • ESL9000 power cords 2X, AUS/CHINA/NZL — 146210-011 • ESL9000 power cords 2X, SWITZERLAND — 146210-111 • ESL9000 power cords 2X, UK/HONG KONG — 146210-031 • ESL9000 power cords 2X, ITALY — 146210-061 • ESL9000 power cords 2X, DENMARK — 146210-081 • ESL9000 power cords 2X, JAPAN — 146210-291 <p>* note: shipped with all units; order local power cords</p>
safety		CSA 950 (Canada); UL 1950 (USA); IEC60950 A4 (Japan); NEMKO (EUC); AS/NZS 3548 (Australia/New Zealand); IEC 60950 (international)
supported backup/restoration applications software packages		<ul style="list-style-type: none"> • HP OpenView Data Protector • VERITAS Backup Exec™ • VERITAS NetBackup • Computer Associates BrightStor ARCserve2000™ for Microsoft Windows NT/Windows 2000 • Computer Associates BrightStor ARCserveIT™ for Novell NetWare • Computer Associates Enterprise Backup • Legato NetWorker • Tivoli TSM • CommVault Galaxy • BackBone NetVault • Syncsort BackupExpress
supported operating systems		<ul style="list-style-type: none"> • HP HP-UX • HP Tru64 UNIX® • Microsoft Windows NT/Windows 2000 • Novell NetWare • SUN Solaris • IBM AIX • Linux Red Hat • Linux SUSE
supported servers in direct SCSI attach and enterprise backup solution FC SAN configurations		<ul style="list-style-type: none"> • HP ProLiant servers • HP • HP-UX servers • HP AlphaServer system • SUN Solaris • IBM AIX

Note: not all backup applications, operating systems and servers are supported on all the hardware listed above. Please visit the HP website at hp.com/products/tapestorage for the Comparison Matrix.

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reliable

ordering information

product number	product name	description
330833-B21	ESL9595, 400 slot, 0 drive, enterprise library	400 slot zero drive library
330842-B21	ESL9000, 400 to 500 slot upgrade*	400 to 500 slot upgrade
330842-B22	ESL9000, 500 to 595 slot upgrade*	500 to 595 slot upgrade*
330842-B23	ESL9000, 400 to 595 slot upgrade*	400 to 595 slot upgrade*
330834-B21	ESL9000, Ultrium 460 drive upgrade kit	Ultrium 460 drive
30193-B21	ESL9000, Ultrium 230 drive upgrade kit	Ultrium 230 drive
330832-B21	ESL9322, 0 drive library, 222 slots	0 drive library, 222 slots
330840-B21	ESL9000, 222 to 322 slot upgrade kit*	222 to 322 slot upgrade kit
293409-B22	ESL9322, 222 slots, 2 drives	222 slots, 2 SDLT drives
293409-B28	ESL9322, 222 slots, 8 drives	222 slots, 8 SDLT drives
293410-B22	ESL9322, 322 slots, 2 drives	322 slots, 2 SDLT drives
293410-B28	ESL9322, 322 slots, 8 drives	322 slots, 8 SDLT drives
293411-B22	ESL9595, 400 slots, 2 drive SDLT 160/320	400 slots, 2 SDLT 160 drives
293411-B28	ESL9595, 400 slots, 16 drive SDLT 160/320	400 slots, 16 SDLT 160 drives
293412-B22	ESL9595, 500 slots, 2 drive SDLT 160/320	500 slots, 2 SDLT 160 drives
293412-B28	ESL9595, 500 slots, 16 drive SDLT 160/320	500 slots, 16 SDLT 160 drives
293413-B22	ESL9595, 595 slots, 2 drive SDLT 160/320	595 slots, 2 SDLT 160 drives
293413-B28	ESL9595, 595 slots, 16 drive SDLT 160/320	595 slots, 16 SDLT 160 drives
293414-B21	ESL9000, SDLT 160/320 drive upgrade kit	SDLT 160/320 drive upgrade kit
234617-B21	ESL9000, SDLT 110/220 drive upgrade kit	SDLT 160/320 drive upgrade kit
229909-B21	ESL9000 SDLT magazine (for use with SDLT/DTL cartridges only; will not hold LTO cartridges)	SDLT magazine

* serial number of your existing library is required when ordering these capacity upgrade product numbers if not ordering at the time of library purchase; please enter the serial number in the comments section of the purchase order and inform your Secondary Storage Product Manager

what's included

Library unit, documentation CD including user guide, safety warnings with translations, warranty card with translations, safety booklet with translations, (2) keys, SCSI terminators (1 per drive, installed), diagnostic cable (for PC attach), bar code label samples, diagnostic cable (for PC attach)

note: supplied with each library: 2 Line Cords (IEC 320 C19), US/Canada, 2 Line Cords (IEC 320 C19), specific to country of destination are provided by region where required

warranty and support

warranty features — hp service and support

- 1-year warranty, with 1-year parts exchange and next day on-site service
- warranty upgrade to 3-year, same-day, on-site — H4616A/E
- increased warranty options are available, including 3-year on-site, same-day and 3-year on-site, 24x 7
- SAN implementation service — H9273A; SAN architecture service — H9162A

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for more information

For more information on HP StorageWorks ESL9000 series tape libraries, contact any of our worldwide sales offices or visit our web site at www.hp.com/go/automation

