STORAGETEK®

Key benefits

Consolidate data

With its extreme scalability, support for mixed media and diverse operating environments, the StreamLine SL8500 modular library system is ideal for the consolidation of many smaller libraries.

Share resources

The library system attaches to mainframe, supercomputing, UNIX, Linux and Windows environments. It supports the enterprise T9840 and T9940 lines of tape drives, along with LTO Ultrium and SDLT tape drives.

Increase availability

The SL8500 library system can be upgraded with additional drive and cartridge slots to increase capacity during operation, with no system downtime. Redundant, hot swap robotics, power and electronics are available for maximum system availability.

Increase throughput

High-performance robotics enable the SL8500 modular library system to keep pace with the unpredictable peak workloads and future demands for higher throughput.

Grow with ease

The SL8500 modular library system can scale from 1,448 to more than 300,000 slots to accommodate years of growth in your storage environment.

Save space

With extremely high slot density, the SL8500 makes maximum use of the floor space in your data center.

StreamLine™ SL8500 modular library system

For enterprises around the world, data is growing exponentially while IT budgets are tight. To calm the chaos brought by these dual challenges, your organization needs to identify new ways to manage data growth without adding IT resources. The answer is the StreamLine™ SL8500 modular library system. It makes enterprise tape easier to manage, share and grow.

Consolidation made easy

The SL8500 library system is the first offering in StorageTek's newest family of data protection and archive solutions. It is also the industry's first tape library to provide the true mixed-media support and interfaces necessary to consolidate enterprise and midrange computing infrastructures and allow for dynamic upgrades of capacity and throughput. Consolidation is made simpler as the SL8500 modular library system can be shared across different backup applications seamlessly. StorageTek's Any Cartridge Any Slot™ technology for StreamLine™ library system makes makes mixed media simple since no hard partitions are required to support different media types.

Reliability, availability, serviceability

In demanding enterprise storage environments, there is no time for downtime — especially unexpected outages that can create chaos. The SL8500 modular library system helps you ward off this threat with unmatched reliability, availability and serviceability features.

A sophisticated new architecture offers hot-swappable and fully redundant components, including multiple robots, to help keep your library system up and running.

StorageTek ®

Need even higher availability? With the StreamLine SL8500 modular library system, you can add additional redundant components to achieve your designed level of availability.

RealTime Growth™ capability for the StreamLine™ library system allows you to add slots and tape drives, dynamically — without scheduling downtime. The SL8500 is designed to grow and adapt to your changing needs, simply and without disruption to your operations.

Easy management

Library Console™ software for the StreamLine™ library system makes the SL8500 easy to manage and monitor via a remote, network-based operator panel or an optional local touch-screen operator panel. All of the basic functions that are available on the local operator panel are also available remotely via the Ethernet-based remote interface.

With outstanding manageability, excellent scalability, and superior reliability and performance, the SL8500 modular library system has it all. This is a fully integrated automated tape system that revolutionizes enterprise tape.

Applications

Data protection and archiving

The modular library system meets enterprise requirements for high-performance, high-reliability backup and archiving in open systems and mainframe environments. Its fast robotics can handle unpredictable peak workloads. And it provides the ability to add slots and drives to increase capacity and throughput rates without interrupting operations.

Backup consolidation

The SL8500 is an ideal solution for consolidating data from backup operations. Seamless, heterogeneous attachment and support for mixed media give you the ability to share the library across servers, applications and media types without requiring partition management.

Options

- RealTime Growth™ capability
- Redundant robotics
- N+1 or 2N power
- Redundant electronics
- One or two 39-cartridge cartridge access ports (CAPs)
- Touch-screen operator panel
- Remote monitoring
- Integrated with Virtual Storage Manager® (VSM®) Open solution to provide:
  - Sharing of drives
  - Improved backup reliability
  - Transparent migration of drive types
  - Automated media migration
  - Automation of other manual processes, such as multiple copies, remote copies, etc.

Interior photo of StreamLine SL8500 modular library system

Strong support

StorageTek's Professional Services can help you improve your current infrastructure with a StreamLine SL8500 modular library system data protection and archive consolidation solution that includes assessment, design, implementation and migration services. Training and support services for the SL8500 are also available from Professional Services and StorageTek-certified partners. Financing and leasing programs are available through StorageTek Financial Services Corporation.

Baseline Implementation Services

StorageTek's Implementation Services helps you achieve the full benefits of your storage solution investments — right from the start. Baseline Implementation for the enterprise tape library provides services to deliver and enable full functionality and utilization of your storage asset. enterprise tape library base service applies to the following:

- StorageTek enterprise-class tape libraries (StreamLine™ SL8500 modular library systems, PowderHorn® 9310 and L5500 tape libraries)
  - OS/390 environments requiring Host Software Component (HSC) software
  - Open systems environments requiring ACSLS Manager™ software
- Existing library environments requiring the reconfiguration of HSC software or ACSLS Manager software in order to implement an additional library

This service includes the installation and configuration or reconfiguration of library software, testing of library software utilities, as well as configuration of the library in your environment. If applicable, Backup Resource Monitor™ software is installed and set up to report on your backup operation. In addition, the service includes design validation, testing, documentation, project management and knowledge transfer.

In addition to Baseline Implementation Services, StorageTek offers two tiers of higher-level consulting services for organizations whose implementation needs go beyond the baseline level.

Custom Implementation Services.

StorageTek's Implementation Services helps you achieve the full benefits of your storage solution investments — right from the start. Custom Implementation Services for enterprise tape library migration provides the services you need for a complete migration solution. This service is designed to enable seamless migration of your existing tape environment to a StorageTek enterprise-class automated tape library (StreamLine™ SL8500 modular library systems, PowderHorn® 9310 and L5500 tape libraries). StorageTek Services provides a custom designed migration service that is specific to your environment and migration requirements and helps enable interoperability, functionality and availability of new and existing storage assets.

In addition to Custom Implementation Services, StorageTek offers higher-level consulting services for organizations whose implementation needs go beyond this level.

To learn more

To learn more about the StreamLine SL8500 modular library system and how it can help you calm the chaos in your storage environment, talk to your StorageTek representative or visit www.storagetek.com.

Certain features described here are not currently available but are expected to be available later in 2004 and in early 2005.

StreamLine™ SL8500 modular library system specifications

Performance	SL8500 (min config) modular library system	SL8500 (max config of 32 libraries) modular library system
Throughput per hour, native (uncompressed)	T9840C (64 drives, 30 MB/sec) – 6.9 TB/hr	T9840C (2,048 drives, 30 MB/sec) – 221 TB/hr
	T9840B (64 drives, 19 MB/sec) – 4.4 TB/hr	T9840B (2,048 drives, 19 MB/sec) – 140 TB/hr
	T9840A (64 drives, 10 MB/sec) – 2.3 TB/hr	T9840A (2,048 drives, 10 MB/sec) – 74 TB/hr
	T9940B (64 drives, 30 MB/sec) – 6.9 TB/hr	T9940B (2,048 drives, 30 MB/sec) – 221 TB/hr
	LTO Ultrium Gen 2 (64 drives, 30–35 MB/sec) – up to 8.1 TB/hr	LTO Ultrium Gen 2 (2,048 drives, 30–35 MB/sec) – up to 258 TB/hr
	SDLT 600 (64 drives, 35 MB/sec) – 8.1 TB/hr	SDLT 600 (2,048 drives, 35 MB/sec) – 258 TB/hr
Audit time	<60 min	<60 min
Average cell to drive time	5 sec	5 sec

Capacity		
Capacity, native (uncompressed)	T9840C (1,448 carts, 40 GB/cart) – 58 TB	T9840C (300,000 carts, 40 GB/cart) – 12 PB
	T9840B (1,448 carts, 20 GB/cart) – 29 TB	T9840B (300,000 carts, 20 GB/cart) – 6 PB
	T9840A (1,448 carts, 20 GB/cart) – 29 TB	T9840A (300,000 carts, 20 GB/cart) – 6 PB
	T9940B (1,448 carts, 200 GB/cart) – 290 TB	T9940B (300,000 carts, 200 GB/cart) – 60 PB
	LTO Ultrium Gen 2 (1,448 carts, 200 GB/cart) – 290 TB	LTO Ultrium Gen 2 (300,000 carts, 200 GB/cart) – 60 PB
	SDLT 600 (1,448 carts, 300 GB/cart) – 434 TB	SDLT 600 (300,000 carts, 300 GB/cart) – 90 PB
Number of cartridge slots	Starts at 1,448 carts customer-usable slots	300,000 customer-usable slots
Number of tape drives/types	Up to 64 drives of any combination of supported drives, including:	Up to 2,048 drives of any combination of supported drives, including:
	T9840 ESCON, Fibre Channel and FICON, T9940 ESCON, Fibre Channel and FICON, LTO Ultrium Gen Fibre Channel, SDLT Fibre Channel	T9840 ESCON, Fibre Channel and FICON, T9940 ESCON, Fibre Channel and FICON, LTO Ultrium Gen Fibre Channel, SDLT Fibre Channel
Cartridge access port (CAP)	Standard 39-cartridge slot CAP, optional 39 additional slots (78 total)	Up to 2,496 cartridge slots

Availability		
Mean exchanges/swaps between failure (MEBF/MSBF)	2,000,000	
Non-disruptive serviceability	Standard N+1 power for drives, robotics and library electronics that can be replaced while the library is operating.	

Compatibility		
Supported host platforms	All major operating systems	
Robotics control interfaces	TCP/IP (IEEE 802.3, 100 baseT, half-duplex)	
Any Cartridge Any Slot™ technology	Both minimum and maximum configurations support full mixed media, any cartridge can be placed in any cell, no required partitions	

Management		
Digital vision system	Unique digital vision camera system performs continuous calibration and reads bar codes	
Operator panel	Standard Web-accessible monitoring and control	
Automatic clean	Additional dedicated cleaning cartridge slots are included for tape drive cleaning for multiple drive types by library or software command	
Automatic self-discovery	Auto-discovery and auto-configuration for all drive, media types, slots and CAP	
Continuous automation calibration	No periodic maintenance or alignment required	

Mechanical		
Library		
Height	93.15 in (236.6 cm)	93.15 in (236.6 cm)
Depth	109 in (276.9 cm)	2,96.5 in (753.0 cm)
Width	67.3 in (170.81 cm)	2,338 in (5938.0 cm)
Weight (library only)	6250 lb (2835 kg)	492K lb (233 Mg)

Environmental		
Temperature (operating)	+60° to +90° F (+16° to +32° C)	
Temperature (non-operating)	+40° to +90° F (+4° to +32° C)	
Relative humidity (operating)	20% to 80%	
Relative humidity (non-operating)	20% to 80%	

Power		
Voltage	Choice of 220–240 VAC @ 50–60 Hz single phase or three phase (Delta, Wye or SUVA) — optional redundant inputs of any of the above.	
Drives	Drive power consumption varies (refer to individual drive specifications).	
Power consumption/dissipation	Varies by configuration	

Regulatory compliance		
Safety	UL 1950; CAN/CSA 22.2 No. 950; EN60950	
Emissions	FCC (47 CFR 15, Subpart B) Class A; CE (EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3)VCCI (CISPR 22) Class A; Canada (ICES-003) Class A	
Immunity	European Union CE immunity standards (CISPR24/EN55024)	

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TC 0018 A 11/04