

StorageTek StreamLine™ SL8500

Modular Library System



Highlights

- **Consolidate data**

With extreme scalability and support for mixed media and diverse operating environments, the StorageTek StreamLine SL8500 modular library system is ideal for consolidating many smaller libraries into one high-performance system.

- **Share resources**

The SL8500 library system is designed to work well in mainframe, supercomputing, UNIX, Linux, and Windows environments. It supports the new enterprise StorageTek T10000, fast-access T9840, and high-capacity T9940 families of tape drives, along with the midrange Linear Tape Open (LTO) Ultrium and Super DLT (SDLT) tape drives.

- **Increase availability**

The SL8500 can be upgraded with additional drives and cartridge slots, without the need for system downtime. Redundant, hot-swappable robotics, power, and electronic components maximize your system availability.

- **Increase throughput**

High-performance robotics let the SL8500 help you keep pace with unpredictable workload spikes and future throughput needs.

- **Grow with ease**

The SL8500 modular library system can scale from 1448 slots to more than 300,000 slots — easily handling years of explosive growth in your storage requirements.

- **Save space**

With its extremely high slot density, the SL8500 offers a lot of storage in a very small footprint. Make the most of your current data center.



If your storage requirements are rapidly outpacing your IT budget, you probably need to simplify your data access strategy while holding the line on staff. Today, the StorageTek StreamLine™ SL8500 modular library system is the foundation of many such strategies.

And as you'd expect, it's from the experts at Sun Microsystems, the global leader in scalable storage solutions. With the SL8500, your organization can streamline its operations while maximizing availability and compliance — all with minimal cost and disruption, but with a maximum of security and flexibility.

The SL8500 modular library can accommodate growth up to 150 petabytes, making it an extremely flexible and compact option for intelligent archiving of vital corporate information. Perhaps that's no surprise, since Sun protects and manages more data than anyone else in the world.

Consolidation made easy

The SL8500 library system is the first in a series of offerings in the StorageTek™ family of data protection and archive solutions. It provides broad support for mixed-media environments, along with the interfaces needed to consolidate and manage enterprise computing infrastructures.

Consolidation is even simpler, as different backup applications can seamlessly share the SL8500 modular library system. Plus, the StorageTek Any Cartridge Any Slot™ technology simplifies mixed-media access, since no

hard partitions are required to support the different media types.

Reliability, availability, serviceability

There's no time for downtime in your demanding storage environment — especially for those unexpected outages that threaten business continuity. The SL8500 modular library system reduces this threat with a sophisticated new architecture that offers hot-swappable and fully redundant components, including multiple robots, designed to help keep your library system up and running.

With the StreamLine SL8500 modular library system, you can add additional redundant components to achieve your desired level of availability. The StorageTek RealTime Growth™ capability for the StreamLine library system lets you easily add slots and tape drives — all without scheduling downtime. The SL8500 will grow and adapt to your changing needs, now and for years to come.

Easy management

StorageTek 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 available on the local operator panel are also available remotely via the Ethernet-based remote interface.

With its outstanding performance, excellent scalability, and superior reliability, the SL8500 modular library system truly can simplify your access to vital information. This fully integrated and automated library has set new and higher standards of excellence for enterprise tape systems around the world.

Data protection and archiving

This modular library system was designed to handle enterprise requirements for high-performance, high-reliability backup, and intelligent archiving, in both open systems and mainframe environments. Its fast robotics handle unpredictable peak workloads with ease, and the system also lets you add slots and drives for increased capacity and throughput, without any downtime requirements.

Backup consolidation

The SL8500 is an ideal solution for consolidating data from backup operations. Its seamless support for mixed media in heterogeneous environments give you the ability to share the library across servers, applications, and media types, without the need for 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 StorageTek 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 and remote copies

Strong support

The Sun StorageTek Professional Services team can help you improve your current infrastructure with a StreamLine SL8500 library deployment that includes assessment, design, implementation, and migration services. Training, support, and other SL8500 services are also available worldwide from our certified partners. Financing and leasing programs are available through Sun Financial Services Corporation.



Interior photo of StreamLine SL8500 modular library system

StorageTek Baseline Implementation Services

Achieve the full benefits of your storage solution investment, right from the start, with the Baseline level of Sun's StorageTek Implementation Services for enterprise-class tape library systems:

- .. StreamLine SL8500 modular library systems operating in:
 - OS/390 environments requiring StorageTek Host Software Component (HSC) software
 - Open systems environments requiring StorageTek ACSLS Manager™ software
- .. Existing library environments that require reconfigured HSC software or ACSLS Manager software in order to add an additional library

This service covers the installation and configuration/reconfiguration of library software, testing of library software utilities, as well as the operational tuning of the library in your environment. Sun also offers design validation, testing, documentation, project management, and knowledge transfer.

StorageTek Custom Implementation Services

The Custom level of Sun's StorageTek Implementation Services can help provide a seamless migration of your existing tape environment to an enterprise-class SL8500 library system. These services are custom-tailored to maximize interoperability, functionality and availability of your new and existing storage assets.

Engage the storage experts

Sun StorageTek service professionals help you address storage challenges by delivering integrated services and solutions that optimize and manage storage performance over the life of your data. Our recognized, world-class service and customer care give you confidence that your technology investment is protected and that your business will be responsive to change. We can help you pinpoint opportunities to reduce costs, mitigate business risk, and better leverage information assets. Our consulting and managed services offer clear and simple choices in solutions that address your regulatory concerns,

complex storage growth, resource management, and scalability challenges. Covering over 125 countries, more than 2100 dedicated storage service professionals can help you gain and sustain measurable results with the reliability and flexibility that you require.

Learn more

As a first step, we'd like to learn more about your needs, so we can propose a vendor-neutral, "best-of-breed" system that fits your exact requirements. We'll sit down with you and share our 35 years of industry experience in order to help you identify the best possible storage solution for your particular business challenges.

To learn more about Sun — or how the StreamLine SL8500 modular library system can help simplify your data access and management — please contact your Sun representative or visit www.sun.com/storagetek.

StreamLine™ SL8500 Modular Library System Specifications

Performance	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
Throughput per hour, native (uncompressed)	T10000 (64 drives, 120 MB/sec) - 27.6 TB/hr T9840C (64 drives, 30 MB/sec) - 6.9 TB/hr T9840B (64 drives, 19 MB/sec) - 4.4 TB/hr T9840A (64 drives, 10 MB/sec) - 2.3 TB/hr T9940B (64 drives, 30 MB/sec) - 6.9 TB/hr LTO Gen 2 (64 drives, 30-35 MB/sec) - up to 8.1 TB/hr LTO Gen 3 (64 drives, 80 MB/sec) - 18.4 TB/hr SDLT 600 (64 drives, 36 MB/sec) - 8.3 TB/hr	T10000 (2,048 drives, 120 MB/sec) - 884.7 TB/hr T9840C (2,048 drives, 30 MB/sec) - 221 TB/hr T9840B (2,048 drives, 19 MB/sec) - 140 TB/hr T9840A (2,048 drives, 10 MB/sec) - 74 TB/hr T9940B (2,048 drives, 30 MB/sec) - 221 TB/hr LTO Gen 2 (2,048 drives, 30-35 MB/sec) - up to 258 TB/hr LTO Gen 3 (2,048 drives, 80 MB/sec) - up to 590 TB/hr SDLT 600 (2,048 drives, 36 MB/sec) - 265 TB/hr
Audit time (with redundant HandBots)	<12 min	<60 min
Average cell to drive time per HandBot	<11 sec	<11 sec

Capacity	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
Capacity, native (uncompressed)	T10000 (1,448 carts, 500 GB/cart) - 724 TB T9840C (1,448 carts, 40 GB/cart) - 58 TB T9840B (1,448 carts, 20 GB/cart) - 29 TB T9840A (1,448 carts, 20 GB/cart) - 29 TB T9940B (1,448 carts, 200 GB/cart) - 290 TB LTO Gen 2 (1,448 carts, 200 GB/cart) - 290 TB LTO Gen 3 (1,448 carts, 400 GB/cart) - 579 TB SDLT 600 (1,448 carts, 300 GB/cart) - 434 TB	T10000 (300,000 carts, 500 GB/cart) - 150 PB T9840C (300,000 carts, 40 GB/cart) - 12 PB T9840B (300,000 carts, 20 GB/cart) - 6 PB T9840A (300,000 carts, 20 GB/cart) - 6 PB T9940B (300,000 carts, 200 GB/cart) - 60 PB LTO Gen 2 (300,000 carts, 200 GB/cart) - 60 PB LTO Gen 3 (300,000 carts, 400 GB/cart) - 120 PB SDLT 600 (300,000 carts, 300 GB/cart) - 90 PB
Number of cartridge slots	Starts at 1,448 customer-usable slots	300,000 customer-usable slots
Number of tape drives/types	Up to 64 drives of any combination of supported drives, including: T10000, T9840 ESCON, Fibre Channel and FICON, T9940 ESCON, Fibre Channel and FICON, LTO Ultrium Gen Fibre Channel, SDLT Fibre Channel	Up to 2,048 drives of any combination of supported drives, including: T10000, 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	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
Non-disruptive serviceability	Standard N+1 power for drives, robotics and library electronics that can be replaced while the library is operating.	
Mean exchanges/swaps between failure (MTBF/MSBF)	2,000,000 per HandBot	

Compatibility	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
Supported host platforms	UNIX, Solaris, Windows, Linux	
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	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
Digital vision system	Unique digital vision camera system performs continuous calibration and reads bar codes	
Operator panel	Standard TCP/IP remote monitoring	
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	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
Library		
Height	93.15 in (236.6 cm)	93.15 in (236.6 cm)
Depth	109 in (276.9 cm)	296.5 in (753.0 cm)
Width	67.3 in (170.81 cm)	2,338 in (5938.0 cm)
Weight (library only)	4,309 lb (1,954 kg)	247,830 lb (112,423 kg)

Environmental	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
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	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
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	SL8500 (minimum configuration)	SL8500 (maximum configuration of 32 libraries)
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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