StorageTek SL4000 Modular Library System

ORACLE®
STORAGETEK

KEY FEATURES

- Nondisruptive scalability from 300 to 9,000 slots
- Redundant and hot-swappable components to minimize downtime
- Intelligent partitioning to enable consolidation and improve library utilization
- Integrated management and embedded web-services interface

KEY BUSINESS BENEFITS

- Higher availability with multiple redundant options and intelligent serviceability
- Lower total cost of ownership with pay-as-you-grow scalability
- Faster performance with a centerline architecture and redundant robotics
- Simplified management with an integrated UI and proactive alerting

Today, protecting sensitive data and keeping it secure are top of mind for busy IT departments. Tape-based data protection and archiving solutions are proven to help businesses recover from ransomware attacks and other business disruptions while providing the lowest total cost of ownership for long-term data retention. Incorporating a robust, high-performance and highly flexible tape system as part of your data protection or archiving strategy can help you maximize security and availability while lowering costs.

Flexibility to Meet Changing Demands

Keeping up with changing storage demands is easy with Oracle's flexible StorageTek SL4000 modular library system, which can scale from 300 to 9,000 slots and from 1 to 120 tape drives. The base library supports up to 339 slots and up to 24 tape drives, supporting up to 2.8 PB in a single frame. Scale up to 76 PB within a single library by adding additional cartridge expansion modules, or increase throughput up to 148 TB/hour by adding up to three drive expansion modules. By leveraging the system's RealTime Growth capability with capacity-on-demand technology, you can nondisruptively scale by preinstalling physical capacity to secure floor space and activate that capacity only when it is needed by using hardware activation files.

Simplified Management to Lower Costs

Lower your administrative burden with an intelligent approach to storage management. The StorageTek SL4000 modular library system offers the most flexible solution for managing, monitoring, partitioning, and sharing library resources. The rich management interface provides an in-depth look into library operations. It also provides support for four user roles, including read-only, to improve security. Proactive email alerts can be set up based on the tracking of all actions initiated within the system by users and applications. Email alerts can be set up to provide proactive notification of library events.
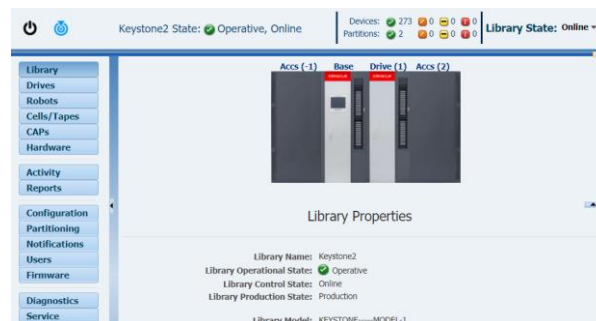

Figure 1: StorageTek SL4000 modular library system integrated UI

ORACLE®

STORAGETEK SL4000

The system delivers unprecedented value through flexible scalability, high availability, and simplified management. It's the eco-friendly choice for your data protection, disaster recovery, archive, or cloud deployment needs.

RELATED PRODUCTS

The following products integrate with the StorageTek SL4000 modular library system:

• Oracle DIVArchive
• Oracle Hierarchical Storage Manager
• Oracle Secure Backup
• Oracle's StorageTek LTO series of tape drives
• Oracle's StorageTek T10000 series of tape drives
• Oracle's StorageTek tape media

To help your storage dollars go further, the StorageTek SL4000 modular library system simplifies consolidation to help you save space, power, and money. You can seamlessly support a mix of backup and archiving applications by assigning up to 16 partitions within the library and assigning resources down to the individual slot/tape drive for ultimate flexibility. The system's Any Cartridge Any Slot technology further simplifies storage management by allowing any mix of supported drives and media to be spread throughout the library.

The StorageTek SL4000 modular library system also works with Oracle Key Manager, an appliance that provides a simple, centralized, scalable solution for managing the keys used to encrypt and decrypt data written by tape drives. Oracle Key Manager is platform-independent and complies with Federal Information Processing Standards Publications (FIPS PUBS) 140-2, and it runs without regard to application, operating platform, or primary storage device.

Redundant Components Maximize Availability

The StorageTek SL4000 modular library system is aggressively risk-averse, with innovative technologies proven in the most-demanding enterprise environments. Nondisruptive, on-the-fly replacement of robotics, power supplies, and drives helps sustain 24x7 operations. Dual control path technology supports host application failover in the event of a path failure. Support for redundant robotics improves performance while maximizing availability. The system's unique centerline architecture alleviates robot contention, improving cartridge-to-drive performance by as much as 50 percent.

Engage the Storage Experts

Oracle offers tailored mission-critical services and support for your storage environment. Oracle Advanced Customer Support Services helps you address storage challenges by delivering installation, configuration, optimization and on-going monitoring services and tailored support. Oracle service professionals help you achieve the highest levels of system performance and availability with diagnostic and monitoring tools that help anticipate, identify, and remediate any potential issues. From tape library installation services to the design and implementation of key management encryption systems, Oracle service experts help you realize more value from your storage infrastructure—with less disruption to your business. For more information, contact your Oracle representative, email acsdirect_us@oracle.com, or visit oracle.com/acs.

STORAGETEK SL4000 MODULAR LIBRARY SYSTEM SPECIFICATIONS

Specification	Base Module (minimum configuration)	Drive Expansion Module (optional module, up to 3)	Cartridge Expansion Module (optional module, up to 14)
Number of cartridge slots	Up to 339 customer-usable slots, 26 cartridge access ports (CAP) slots	Up to 518 customer-usable slots, optional 26 CAP slots	Up to 620 customer-usable slots, optional 26 CAP slots
Capacity, native (uncompressed)	• StorageTek LTO 7 (339 carts, 6 TB/cart) – 2 PB • StorageTek LTO 6 (339 carts, 2.5 TB/cart) – 0.85 PB • StorageTek T10000D (339 carts, 8.5 TB/cart) – 2.8 PB	• StorageTek LTO 7 (518 carts, 6 TB/cart) – 3.1 PB • StorageTek LTO 6 (518 carts, 2.5 TB/cart) – 1.3 PB • StorageTek T10000D (518 carts, 8.5 TB/cart) – 4.4 PB	• StorageTek LTO 7 (620 carts, 6 TB/cart) – 3.7 PB • StorageTek LTO 6 (620 carts, 2.5 TB/cart) – 1.5 PB • StorageTek T10000D (620 carts, 8.5 TB/cart) – 5.3 PB
Number of tape drives/types	Up to 24 drives in any combination of supported drives	Up to 32 drives in any combination of supported drives	No drives in this module
Throughput, native (uncompressed)	• StorageTek LTO 7 (24 drives, 300 MB/sec) – 24.7 TB/hr. • StorageTek LTO 6 (24 drives, 160 MB/sec) – 13 TB/hr. • StorageTek T10000D (24 drives, 252 MB/sec) – 20.8 TB/hr.	• StorageTek LTO 7 (32 drives, 300 MB/sec) – 33 TB/hr. • StorageTek LTO 6 (32 drives, 160 MB/sec) – 17.6 TB/hr. • StorageTek T10000D (32 drives, 252 MB/sec) – 27.7 TB/hr.	No drives in this module
Module dimensions (height, depth, width)	• 77.6 in./197.5 cm • 48 in./121.9 cm • 36 in./91.5 cm	• 77.6 in./197.5 cm • 48 in./121.9 cm • 30.2 in./76.8 cm	• 77.6 in./197.5 cm • 30.5 in./77.5 cm • 30.2 in./76.8 cm
Nondisruptive serviceability	Power distribution units (PDU, optional 2N), CAP motor and control card, cooling fans, DC power supplies, tape drives, and robotics (with Access Expansion Modules [AEMs])		
Mean exchanges between failures	2,000,000 per robot		
Library interface	Integrated UI available via operator panel (standard) or web browser; option to use embedded web-services interface		
Automatic self-discovery	Auto-discovery and auto-configuration for all drives, media types, slots, and CAPs		
Service integration	Built-in email alerting and integrated support for Oracle's service delivery platform		
Temperature (operating)	+60°F to +90°F (+16°C to +32°C)		
Temperature (nonoperating)	+50°F to +104°F (+10°C to +40°C)		
Relative humidity (operating)	20% to 80%		
Relative humidity (nonoperating)	20% to 80%		
Voltage	200 VAC–240 VAC at 50 Hz–60 Hz		
Power consumption	Varies by configuration; refer to product documentation		
Safety	UL 60950-1, -23; CAN/CSA-C22.2 No. 60950-1-07, -23-07; EN/IEC 60950-1, -23		
Emissions	FCC (47 CFR 15, Subpart B) Class A; CE (EN55022 Class A, EN61000-3-2, EN61000-3-3); VCCI V-3 Class A; ICES-003 Class A, KN22 Class A, and AS/NZS CISPR22 Class A		
Immunity	EN55024, KN24, and CISPR24		

ORACLE®