

# StorageTek SL4000 Modular Library System



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.



## KEY FEATURES

- Nondisruptive scalability from 300 to 9,017 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

## 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 4 PB in a single frame. Scale up to 108.2 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

**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**

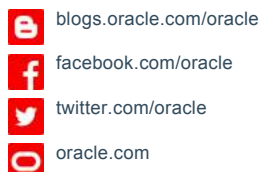
Oracle offers tailored mission-critical services and support for your storage environment. Oracle Advanced Customer Support Services helps you address storage challenges by delivering installation, configuration, optimization and on-going monitoring services and tailored support. Oracle service professionals 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](mailto:acsdirect_us@oracle.com), or visit [oracle.com/acs](http://oracle.com/acs).

**STORAGETEK SL4000 MODULAR LIBRARY SYSTEM SPECIFICATIONS**

| Specification                            | Base Module<br>(minimum configuration)   | Drive Expansion Module<br>(optional module, up to 3)   | Cartridge Expansion Module<br>(optional module, up to 14)  |
|--|--|--|--|
| Number of cartridge slots                | Up to 339 customer-usable slots,<br>26 cartridge access ports (CAP) slots  | Up to 518 customer-usable slots,<br>optional 26 CAP slots  | Up to 620 customer-usable slots,<br>optional 26 CAP slots  |
| Capacity, native (uncompressed)          | <ul style="list-style-type: none"> <li>StorageTek LTO8 (339 carts, 12 TB/cart) – 4 PB</li> <li>StorageTek LTO7 (339 carts, 6 TB/cart) – 2 PB</li> <li>StorageTek T10000D (339 carts, 8.5 TB/cart) – 2.8 PB</li> </ul>                    | <ul style="list-style-type: none"> <li>StorageTek LTO8 (518 carts, 12 TB/cart) – 6.2 PB</li> <li>StorageTek LTO7 (518 carts, 6 TB/cart) – 3.1 PB</li> <li>StorageTek T10000D (518 carts, 8.5 TB/cart) – 4.4 PB</li> </ul>              | <ul style="list-style-type: none"> <li>StorageTek LTO8 (620 carts, 6 TB/cart) – 7.4 PB</li> <li>StorageTek LTO7 (620 carts, 6 TB/cart) – 3.7 PB</li> <li>StorageTek T10000D (620 carts, 8.5 TB/cart) – 5.3 PB</li> </ul> |
| 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)        | <ul style="list-style-type: none"> <li>StorageTek LTO8 (24 drives, 360 MB/sec) – 29.7 TB/hr.</li> <li>StorageTek LTO7 (24 drives, 300 MB/sec) – 24.7 TB/hr.</li> <li>StorageTek T10000D (24 drives, 252 MB/sec) – 20.8 TB/hr.</li> </ul> | <ul style="list-style-type: none"> <li>StorageTek LTO8 (32 drives, 360 MB/sec) – 39.5 TB/hr.</li> <li>StorageTek LTO7 (32 drives, 300 MB/sec) – 33 TB/hr.</li> <li>StorageTek T10000D (32 drives, 252 MB/sec) – 27.7 TB/hr.</li> </ul> | No drives in this module   |
| Module dimensions (height, depth, width) | <ul style="list-style-type: none"> <li>77.6 in./197.5 cm</li> <li>48 in./121.9 cm</li> <li>36 in./91.5 cm</li> </ul>   | <ul style="list-style-type: none"> <li>77.6 in./197.5 cm</li> <li>48 in./121.9 cm</li> <li>30.2 in./76.8 cm</li> </ul>   | <ul style="list-style-type: none"> <li>77.6 in./197.5 cm</li> <li>30.5 in./77.5 cm</li> <li>30.2 in./76.8 cm</li> </ul>  |
| 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   |  |  |

**CONTACT US**

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