SPECTRA®

DEEP STORAGE EXPERTS

T950

Enterprise Storage without Compromise

The Spectra® T950 library is designed and built to meet the stringent requirements of the enterprise for data integrity, data security and high reliability. The T950 library reduces staff involvement significantly, affordably scales in capacity and throughput, and delivers the best Total Cost of Ownership of any tape solution. Support options range from the expected 24x7 worldwide onsite support to more advanced offerings including our industry-first Assisted Self Maintenance (ASM) program as well as proactive management and reporting tools that ensure you maintain optimal system availability.

Now available with TS1150 Technology

Maximum Density, Performance & Availability

The T950 brings an elegant, straightforward solution to managing large quantities of tapes: TeraPack cases, each holding up to ten LTO or nine TS1150 tape cartridges. The TeraPack architecture reduces floor space requirements allowing the T950 to use as little as 20% of the floor space competitors require.

TS1150 TeraPack

LTO-7 TeraPack

T950 Interior View

The T950 also offers a unique bulk load/unload system that provides superior import and export performance. This optional feature at the left end of a multi-frame library allows for the import or export of 14 TeraPacks within minutes.

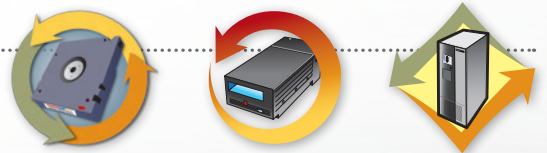## Simplified Management

POWERED BY
BlueScale
INTELLIGENCE

BlueScale, the common software interface for all Spectra libraries, brings enterprise command and control features to the T950. Available through the library's on-board LCD color touch-screen and remote web access, BlueScale is an easy-to-navigate, browser-based library interface built into Spectra Logic libraries that enables our solutions to work easily, flexibly and safely with your data.

A single BlueScale® user interface manages an entire T950 without any external servers. BlueScale manages your library, configurations, partitions, encryption key management and all library/media health monitoring. By consolidating all management functions in a single T950, you save time managing the library and lower costs by eliminating the need for additional equipment, software license charges or additional power or cooling requirements of extra server hardware.

The Spectra T950 offers encryption and key management as seamless, integrated standard features. Spectra's BlueScale Encryption utilizes AES-256 bit encryption through the library for LTO-4 and newer drives. It lets you seamlessly and affordably add encryption to your backup strategy, with no changes to backup policies and no additional hardware or software.

Better Reliability Through Lifecycle Management

To ensure the viability of your data, Media Lifecycle Management (MLM) tracks and reports on health and security related statistics for Spectra Certified Media. Detailed reporting mitigates media problems and restore issues, allowing you to copy and move your data onto new tapes before degraded media affects your data.

Like MLM, Drive Lifecycle Management (DLM) extends the same approach to drives by integrating tape drive analysis and reporting within the library. Using easy-to-manage, color-coded icons, you can quickly identify the health status of a drive. DLM also offers easy-to-use tape drive diagnostics to verify drive health and operation.

Managing the health of your library's critical components is made easy with Library Lifecycle Management (LLM). By delivering utilization metrics relative to the expected useful life of library robotics, filters and other critical components; you are able to service your library before issues occur.
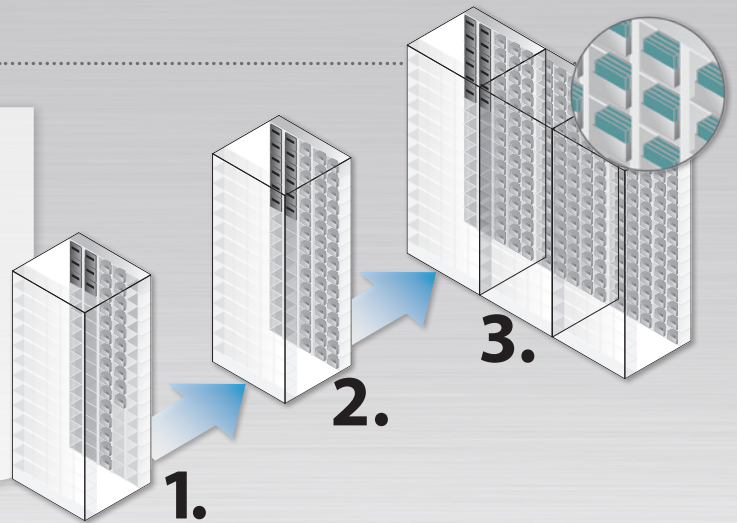
Data Integrity Verification

To give you data integrity verification, Spectra offers a sophisticated suite of standard features that allow you to actively check data already written to tape. PreScan checks each imported tape and verifies that the tape can be written to, scanning the tape for potential issues including broken or dislodged leader and write-protected status. QuickScan scans a tape uni-directionally by reading the length of one track of the tape to provide a rapid indicator of integrity of data written. FullScan confirms that there are no media errors on the tape by reading the entire length of the tape up to the end of the recorded data. To ensure that the data is valid, you can set triggers to check the health of tapes over an interval of time or verify a specific tape's data integrity on request. This process allows for rapid spot-checks of data integrity.
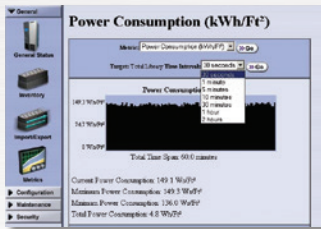
Incremental Scalability and Performance

1. Every Spectra T950 ships with all of the tape slots installed. Enable slots as you need them with a simple software key activation.

2. Based on your needs, more capacity or performance can be easily added. Purchase more drives and slots, and let the library grow with your data.

3. Once your data has grown to the limits of your initial configuration, there's no need to go looking for a new library. Just add an expansion cabinet to keep growing. The T950 can expand all the way up to 120 drives and 10,020 LTO slots in eight frames.

1.

2.

3.

Consolidate Data Using Integrated Partitioning

With support for multiple connectivity protocols as well as all major backup software packages and operating systems, the T950 fits easily into any environment. The T950's Shared Library Services lets data centers implement simple, integrated partitioning, so that a single library appears to the SAN as multiple libraries. Unlike other partitioning solutions that involve complicated and expensive external partitioning servers, network connections, and proprietary client software, you can easily partition the Spectra T950 using the library's BlueScale interface.
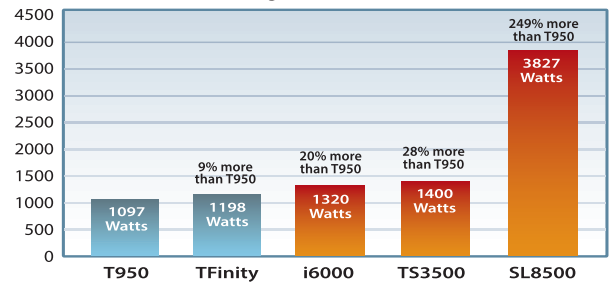
Energy-Efficient Storage

The T950's energy-efficient, compact design helps you reduce your overall storage power consumption. With our patented BlueScale EnergyAudit® feature you can monitor and record your library's power useage to gain control of your energy budget.

Power Useage Comparison
Watts Per Hour - Using 12 LTO drives & 1,200 LTO slots

	T950	TFinity	i6000	TS3500	SL8500
Watts	1097 Watts	1198 Watts	1320 Watts	1400 Watts	3827 Watts
		9% more than T950	20% more than T950	28% more than T950	249% more than T950

Support When, Where and How You Want It

Support for Spectra T950 ranges from our standard worldwide next business day replacement to more advanced alternatives, including next day, same day, four-hour onsite service or our exclusive Assisted Self-Maintenance option. Our expertise comes from over 30 years of solving real problems with hands-on lab work and on-site technical support. Our support staff is cross-trained over the entire storage environment—not just hardware—so we can assist you with all aspects of a problem. From open to close, we are committed to resolving any issue.

Assisted Self-Maintenance

Spectra's Assisted Self-Maintenance (ASM) is an industry-first support option designed for customers that require minimal downtime or for environments where normal support services are not feasible (e.g. high-security facilities, mobile sites such as ships). ASM stocks all customer replaceable parts at your site, giving you the ability to make immediate repairs and eliminate the delays that a site visit can involve.

Drive → Power Supply → Robotics → I/O Blade (RIM)

Product Specifications

T950 Minimum and Maximum Capacities

Media	Min. Slots	Max. Slots	Min. Drives	Max. Drives	Max. Capacity (PB) (Uncompressed/Compressed)	Max. Throughput (TB/h) (Uncompressed/Compressed)	Min. Frames	Max. Frames
TS1150 Technology	90	7,614	2	120	76 / 190	155 / 302	1	8
TS1140 Technology	90	7,614	2	120	30 / 76	30 / 78	1	8
LTO-7	100	10,020	2	120	60 / 150	129.6 / 324	1	8

Compressed capacities shown at compression ratios of 2.5:1
Compressed throughput figures are for maximum specified drive performance

Physical Characteristics

Dimensions (single frame):
- 79.2" H x 29" W in x 43.25" D
- 201 cm H, 73.6 cm W, 109.9 cm D

Weights:
- Base Frame (no drives or media) - 933 lbs/423 kg
- Drive Expansion Frame (no drives or media) - 750 lbs/340 kg
- Media Expansion Frame (no media) - 546 lbs/248kg
- Drive/Sled - 12 lbs/5 kg
- TeraPack Case (with media) - 6 lbs/3 kg

Power Requirements
- Input Power: 8.2-6.8 Amps (RMS) at 200-240 VAC, 50/60 Hz (max.)
- Heat Dissipation: 5,898 BTU/h (1 frame, 24 drives)

Reliability Stats
- Mean Cycles Between Failures (MCBF): Over 1 million
- Mean Time Between Failures (MTBF): 250,000 power-on hours
- Mean Time to Repair (MTTR): 3 minutes for hot swap components, 30 minutes average for non-hot swap components

Interface Options
- Fibre Channel – 4 Gb/s and 8Gb/s

Tape Drive Technologies

LTO-7 Drive Specifications

Capacity	6 TB (Native)	15 TB (Compressed)
Performance	300 MB/s (Native)	750 MB/s (Compressed)
Speed Matching	100 MB/s - 300 MB/s	
Backward Compatible	LTO-6 Media (Read/Write)	LTO-5 Media (Read Only)
Interface	8 Gb/s Fibre Channel (Auto-Negotiate 2Gb/s & 4 Gb/s)	

TS1150 Technology Drive Specifications

Capacity	10 TB (Native)	25 TB (Compressed)
Performance	360 MB/s (Native)	700 MB/s (Compressed)
Speed Matching	62 MB/s - 300 MB/s	
Backward Compatible	TS1140 (Read/Write) Reformat to 7.0TB	
Interface	8 Gb/s Fibre Channel	

NOTE: T950 does not support mixed LTO and TS1150 configurations. Library may be configured as LTO only or TS1150 only.

About Spectra Logic Corporation

Spectra Logic develops deep storage solutions that solve the problem of long term storage for business and technology professionals dealing with exponential data growth. Dedicated solely to storage innovation for nearly 40 years, Spectra Logic's uncompromising product and customer focus is proven by the largest information users in multiple vertical markets globally. Spectra enables affordable, multi-decade data storage and access by creating new methods of managing information in all forms of deep storage — including archive, backup, cold storage, cloud and private cloud.

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