



Changing The World of Storage

T950

***Enterprise
Data Protection
Platform***



SPECTRALOGIC.COM

Uncompromised enterprise storage: The Spectra® T950 Library



Integrated inside the library, RXT VTL drives write to media that consists of multiple SATA RAID disks sealed in a rugged enclosure.

Just add disk: VTL capabilities built-in

An extraordinary capability of the Spectra T950 is the simple addition of VTL to your data protection strategy. RXT® VTL drives and media make adding VTL as easy as adding a standard tape drive. The difference being that RXT drives write data to portable RXT media which consist of disks, but can still be moved out of the library and off-site as easily as tape.

With the unique design of the T950, VTL, tape backup and encryption can be managed through a single interface, within a single footprint.

ADD VTL BENEFITS QUICKLY AND SIMPLY

- SIMPLE UPGRADE: All T950 robotics support the addition of RXT VTL to tape backup strategies
- SEAMLESS INTEGRATION: Supported by all major backup, archive and HSM applications
- FAST THROUGHPUT: From 100 MB/sec up to 24 GB/sec throughput, with the seek performance and random access benefit of disk
- SCALABLE: Increase capacity from 2 TB to 1.2 PB and add throughput by adding drives just like standard tape drives
- PORTABLE: Disk moves out of library and off-site as easily as tape
- RAID RELIABILITY: RXT media uses RAID protection, and is sealed in a rugged enclosure
- COMPRESSION AND ENCRYPTION: Use less media while protecting your data

To truly protect backed up data, encrypt it: BlueScale Encryption and key management

The Spectra T950 library allows you to seamlessly add AES-256 bit encryption, either through LTO-4 drives or through the library itself. This lets you encrypt and backup data on any portable media type in a single step.

Spectra BlueScale Encryption provides a complete key management system that eases the management of encrypted data, making secure data backup practical, affordable, and easy to implement.

START ENCRYPTING YOUR DATA IN FOUR EASY STEPS



Step 1: Create an encryption user

Step 2: Create an encryption key

Step 3: Export the key for safe keeping

Step 4: Create a partition for encryption

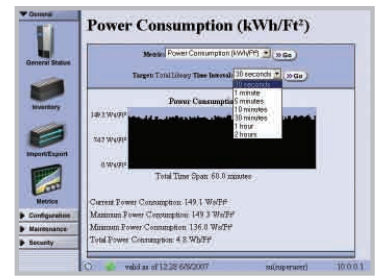
BlueScale Encryption software [...]— and more importantly, simple key management tools— [...] are both crucial to St. John's Hospital for HIPAA requirements and easy IT administration.

Chad Goldhammer,
Network facilitator at St. John's Hospital

Go green

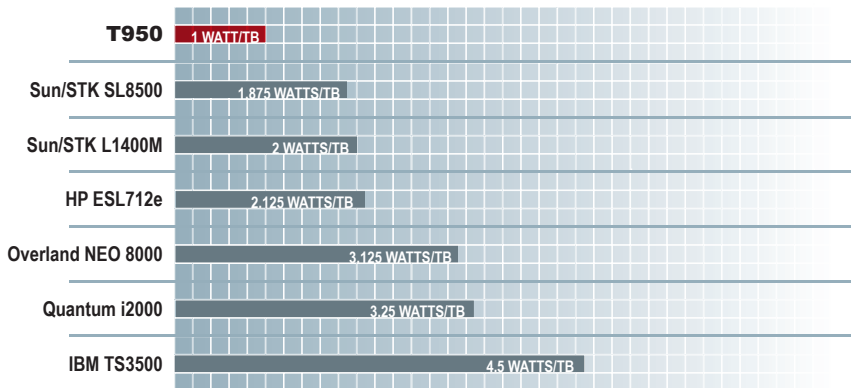
The T950 uses innovative “shelves” instead of slots, and TeraPack containers in place of individual cartridges, resulting in a storage density that is unmatched by any other library available. This incredible density lets you maximize the amount of data that can be stored per square foot of expensive data center real estate.

Along with using less space, the T950 uses less power. Keep an eye on the power use by taking advantage of the library’s power monitoring feature. Armed with this information, you can effectively manage your data center’s power usage to suit your needs-and that’s good for business and the environment.

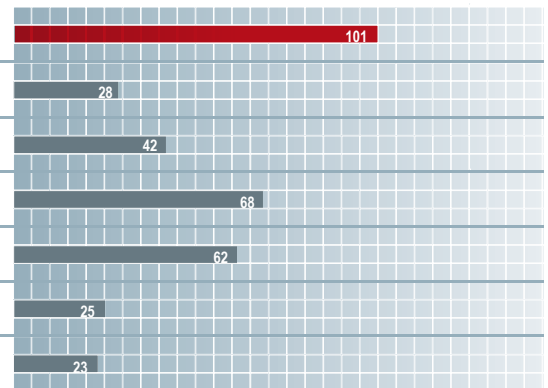


COMPARISONS:

Total power consumption per TB protected



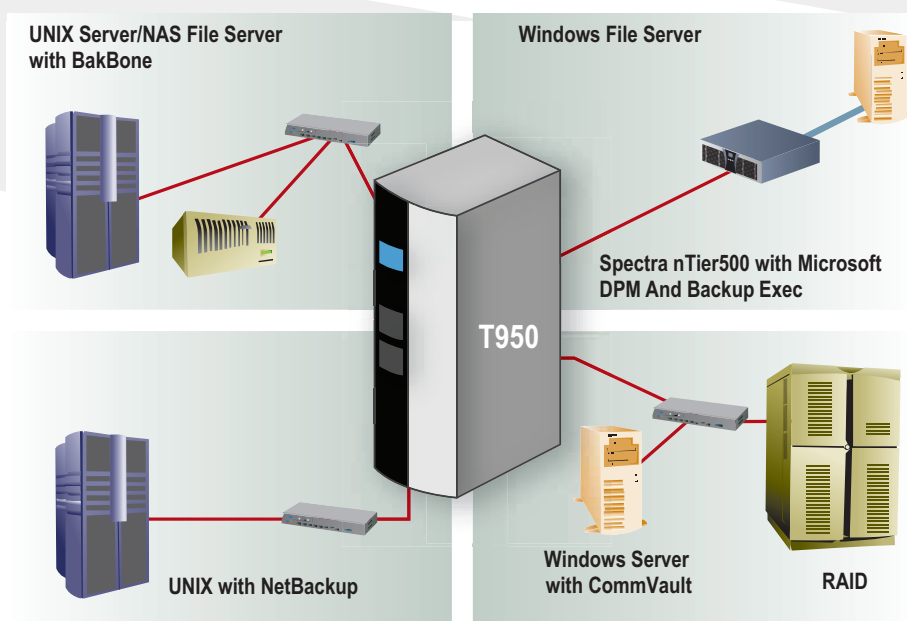
Number of tapes per square foot of data center space



The Spectra T950 library uses an average of 67% less space and 65% less power than any competitor, in part through the library’s intelligent use of interior space. * See white papers on www.SpectraLogic.com for more information and supporting calculations comparing space and power use across multiple enterprise libraries.

Consolidate data using integrated partitioning

The T950’s Shared Library Services (SLS) let data centers implement simple, integrated partitioning, so that a single library appears to the network 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.



Spectra Logic was the only vendor to offer backup, encryption, compression, and advanced key management in a single unit.

Richard Sheridan,
I.T. Manager for
R.C. Willey Home Furnishings.

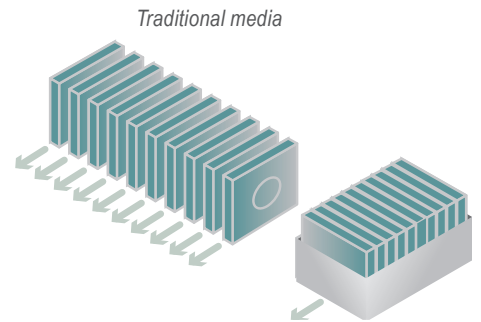
— Gigabit Ethernet
— Fibre Channel

Reduce staff involvement with Spectra TeraPack® technology

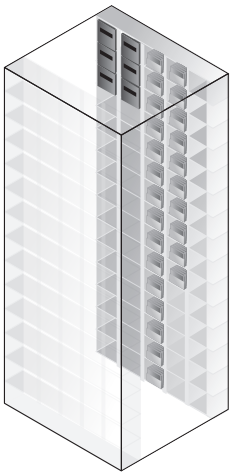
Handling and managing the hundreds of tapes storing your site's data is a chronic data center problem. The Spectra T950 brings an elegant, straightforward solution: TeraPack cases, each holding multiple tapes. Using TeraPack cases automatically reduces time handling media by 90 percent. For example, users can load 100 LTO tapes (ten TeraPack cases) in under three minutes, compared to the hour it takes to load 100 tapes into competing libraries.

Data continuing to grow? Scale to more than 16 PB

The Spectra T950 lets you tailor the library to suit your current data requirements, and expand easily to keep up with data growth and technology changes, adding slots, future drive generations such as LTO-5, and even RXT VTL. An initial single-frame configuration has as few as 100 tape slots and two drives, and can scale to 10,050 tapes and 120 tape drives contained in eight frames.

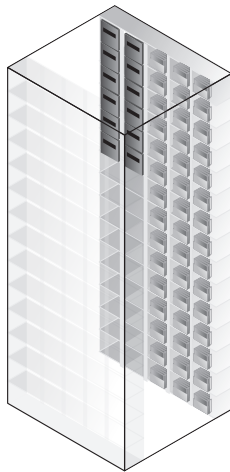


TeraPack cases reduce media handling by 90%



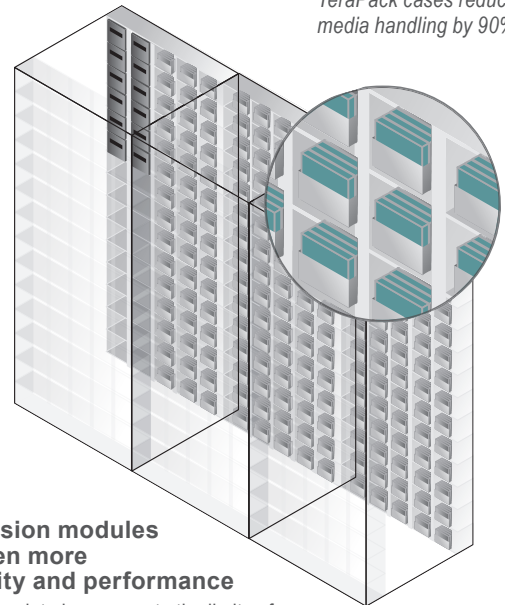
Base unit with extra tape slots

Every Spectra T950 ships with all of the tape slots ready to be used. Enable slots as you need them with a simple software key activation.



Additional slots activated, additional drives added

More capacity or performance can be added instantly, based on your needs. Purchase only what you need now, and let the library grow with your data.



Expansion modules for even more capacity and performance

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 10,050 slots in eight frames.

Support when, where, and how you want it

Support options for the Spectra T950 range from the expected 24x7 worldwide on-site support to more advanced options. These include self-monitoring and automatic e-mail notification of issues, and a unique self-service option that eliminates the delay that a site visit can involve.

The self-service support option, Assisted Self Maintenance, stores customer-replaceable components on-site; these components can be replaced in minutes. You can also take advantage of Spectra T950 AutoSupport which proactively and immediately alerts you and SpectraGuard technical support of maintenance requirements and even impending problems. By proactively monitoring library status, Spectra Logic can head off trouble before it has an operational impact.



DRIVE



POWER SUPPLY



ROBOTICS



I/O BLADE (QIP)

The Spectra T950 Library: Enterprise Excellence

The Spectra T950 enterprise-class 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 tremendously, scales in throughput and capacity, and supports multiple generations of current and future tape and disk options. Support options range from the expected 24x7 worldwide onsite support as well as advanced options, such as an industry first Assisted Self Maintenance (ASM) option and proactive reporting tools.



Easy to use and manage

The T950 is managed through Spectra's innovative BlueScale 10 software interface, accessible through the library's color touchscreen front panel or remotely using a Web browser. This interface is consistent across the entire Spectra product line, allowing you to manage 10 to 10,000 tapes, disk and encryption, across your enterprise, from the data center to satellite offices.

Multiple media

A single T950 platform simultaneously supplies multiple tiers of storage to meet Information Lifecycle Management (ILM) strategies. Using multiple partitions through Shared Library Services (SLS), one library can support multiple types of disk or tape based media. By adding an external rackmounted nTier500 or nTier700 along side the T950, the platform easily supports Disk to Disk (D2D) and Disk to Disk to Tape (D2D2T) strategies for effective, efficient data migration through ILM.



TeraPack cases allow for unmatched storage density and reduce media handling by 90%.



nTier700



nTier500

nTier700 or nTier500 and the T950 provide D2D2T, supporting ILM strategies.

Physical Characteristics:
<ul style="list-style-type: none"> • H 200 cm, W 77.8 cm, D 109.8 cm • H 78.77 in, W 30.63 in, D 43.21 in • Power Requirements: Input Power: 8.2-6.8 Amps (RMS) at 200-240 VAC, 50/60 Hz (max config) • Heat Dissipation: 5,898 BTU/h (24 drives)

Weights:
<ul style="list-style-type: none"> • Base Frame (no drives or media) - 800 lbs/362 kg • Drive Expansion Frame (no drives or media) - 750 lbs/340 kg • Media Expansion Frame (no media) - 700 lbs/317kg • Drive/Sled - 12 lbs/5 kg • TeraPack Case (with media) - 6 lbs/3 kg

Interfaces
FC I/O Blade (QIP) <ul style="list-style-type: none"> • 2 Gb/sec, dual port • 4 Gb/sec, dual port iSCSI I/O Blade (QIP) <ul style="list-style-type: none"> • 1 Gb/sec, dual port • 10 Gb/sec-ready • iSCSI TCP/IP Offload Engine (TOE) Native Fibre Channel (4Gb)

Reliability Stats
Mean Cycle Between Failures (MCBF): 2,000,000 Mean Time Between Failures (MTBF): 250,000 power-on hrs. Mean Time to Repair (MTTR): 3 minutes for hot-swap components, 30 minutes average for non-hotswap components

Media*	One frame max slots	One frame max capacity	8 frame max slots	8 frame max capacity
LTO-4 1.6 TB compressed	950 tapes (95) ¹	1520 TB compressed	10,050 slots (1005) ¹	16 PB compressed
LTO-3 800 GB compressed		760 TB compressed		8 PB compressed
LTO-2 400 GB compressed		380 TB compressed		4 PB compressed
RXT VTL 1.2 TB native	95 disk packs	114 TB native	1005 disk packs	1.2 PB native

¹ Indicates the equivalent number of TeraPacks

Drive*	One frame max drives	One frame max throughput	8 frame max drives	8 frame max throughput
LTO-4 240 MB/sec compressed	24 drives	20.8 TB/hour compressed	120 drives	103.7 TB/hour compressed
LTO-3 160 MB/sec compressed	24 drives	13.8 TB/hour compressed	120 drives	69.1 TB/hour compressed
LTO-2 70 MB/sec compressed	24 drives	6 TB/hour compressed	120 drives	12.1 TB/hour compressed
RXT 100 MB/sec native	22 drives	7.5 TB/ hour native	110 drives	39.6 TB/hour native

SDLT and SAIT also available- contact Spectra Logic for more information

* Support planned for future LTO generations (LTO-5 and LTO-6 currently on roadmap) and future RXT releases.

About Spectra Logic Corporation

Spectra Logic is the leading innovator in data archive and backup. We help customers all over the world protect data with power-efficient products that let users reduce risk, lower cost and save time. Spectra Logic's archive and backup products are designed specifically for secondary storage needs and are compatible with every major tape and disk format. Spectra products provide integrated encryption and key management options through the intuitive BlueScale 10 interface. The company's tape, disk and encryption solutions are designed to evolve over time and are an excellent investment for IT managers who project growth and plan for years into the future.

Since Spectra Logic was founded in 1979, the company has introduced innovative, industry-leading products including: Archive and Backup Servers (nTier-2007); hardware-based, VTL encryption with compression (RXT-2006); hardware-based, library enabled encryption with compression (BlueScale Encryption-2005); and integrated tape and disk in a single library (Spectra T950 with RXT-2004). Spectra Logic is changing the world of storage.



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