SPECTRA®

LTO-9

Bring Greater Density to Your Spectra Tape Library

Regardless of size, most organizations face the same data management challenges – how to efficiently and cost-effectively protect and manage ever-growing data repositories. Spectra® Tape libraries with LTO-9 technology offer innovative storage solutions for small businesses up to the largest enterprises.

LTO-9 Highlights

- Delivers the only open tape format available, providing the first and only cooperative development effort in the industry
- Provides the lowest cost per gigabyte data storage available
- Provides high reliability with proven enterprise-level technology and quality assurance
- Retrieve data 73% faster with Open Recommended Access Order (oRAO)
- Get better protection with a physical air gap to mitigate ransomware attacks
- Avoid data corruption with data immutability with WORM capabilities
- Prevent data visibility with AES 256-bit data encryption at rest

ULTRIUM LTO 9

18TB /45TB
NATIVE / COMPRESSED

LTO-9 Enhanced with Spectra Certified Media

The introduction of LTO-9 drives and media with its improved performance and capacity over LTO-8 is a solid and substantial advancement in storage technology. Spectra enhances its tape media by including Spectra's Media Lifecycle Management (MLM), Data Integrity Verification (DIV), and CarbideClean® features that produce Spectra Certified Media with a Spectra-backed lifetime guarantee. LTO-9 drives are backward-compatible with LTO-8 media, allowing for full read / write capability.

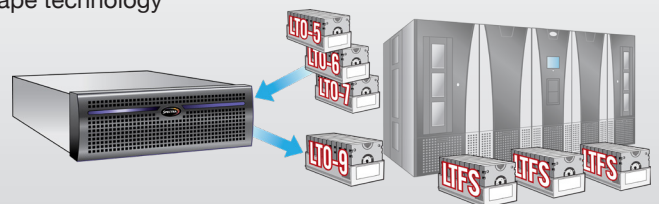## Spectra MigrationPass℠ Service:
An innovative way to preserve drive and media investment

MigrationPass™
Spectra Migration Services

Both Spectra and the Spectra® Stack Tape Library make any migration plan seamless. Tape is designed for long-term data storage, but too often users are required to sacrifice their existing investment in tape drives when they move to a new tape library. Spectra Stack's MigrationPass eliminates the need to make that costly decision. MigrationPass starts with the unique ability to migrate existing tape drives into the Spectra Stack library. It also includes a program to help migrate to newer LTO generations as they are released. This unprecedented offering protects user investment while providing a truly open approach to working with a technology designed for multi-generation use.

Intelligent Object Management with Spectra BlackPearl®:
Time consuming and expensive tape migration is a thing of the past

Traditionally organizations could skip a generation of LTO drives and migrate data forward, but recent changes in LTO technology allow users to read/write data back just one generation. With BlackPearl, organizations can migrate data from any generation (LTO-5 or newer) seamlessly to the latest LTO-9 tape technology with a background migration. In addition, BlackPearl can import any tapes written in LTFS format into its environment and begin to use and migrate this data to the newest generation, creating an innovative way to reduce the complexity sometimes associated with tape migrations.

LTO-5
LTO-6
LTO-7
LTO-9
LTFS LTFS LTFS

LTO-9 Capacities and Spectra Tape Libraries

	Spectra Stack	T380	T680	T950 | T950v 8-frame	TFinity ExaScale 45-frame
Maximum Number of Drives	21 Full-Height Drives	12		Up to 120 (8-frame)	Up to 144
Max Throughput LTO-9 FH* (TB/hr native/compressed)	30.24 TB / 68.04 TB	17.28 TB / 38.88 TB		172.8 TB / 388.8 TB	207.36 TB / 466.56 TB
Maximum Media/Slot Count	560	380	670	10,020 (8-frame)	56,400 (45-frame)
Max Capacity LTO-9 (native/compressed)	10.08 PB / 25.2 PB	6.8 PB / 17.1 PB	12 PB / 30.1 PB	180.3 PB / 450.9 PB	1.01 EB / 2.53 EB

* FH = Full-Height Drive

LTO-9 compressed capacity calculated at 2.5:1 ratio.
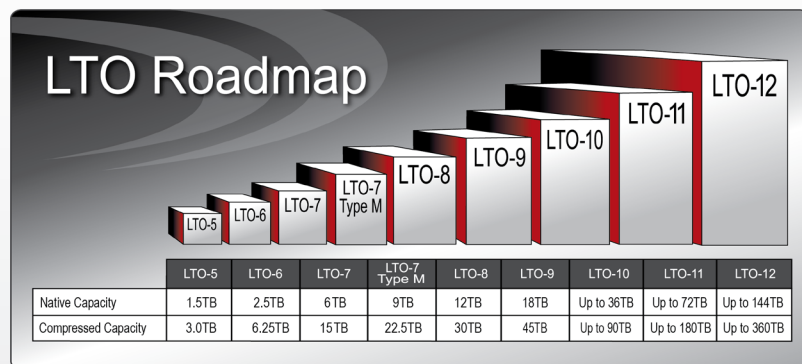
Spectra LTO-9 Tape Drive Specs

Capacity: Up to 45TB compressed 2.5:1 (18TB native)
Data transfer rate: Up to 900 MB/s compressed (400 MB/s native)
Speed matching capable
Data compression: Streaming Lossless Data Compression (SLDC)
Data cartridge: LTO-9 (rewritable) LTO-9 (WORM)
Cleaning cartridge: LTO Universal Cleaning Cartridge (UCC)
Backwards Compatibility: Read/write LTO-8 media
Encryption: AES 256-GCM (256-bit Advanced Encryption Standard). LTO-9 reads/writes LTO-8 encrypted media.
Drive Head Type: Tunneling Magnetoresistive (TMR)

Reliability

Mean time between failures (MTBF): 250,000 hours at 100 percent duty cycle.

Mean swaps between failures (MSBF): 100,000 tape load/unload cycles.

Operating Environment

Operating temperature: 16° to 35° C (60° to 95° F)
Relative humidity: 20% to 80% (non-condensing)
Power specifcations: Full Height: 35 W (typical)

LTO Roadmap

	LTO-5	LTO-6	LTO-7	LTO-7 Type M	LTO-8	LTO-9	LTO-10	LTO-11	LTO-12
Native Capacity	1.5TB	2.5TB	6TB	9TB	12TB	18TB	Up to 36TB	Up to 72TB	Up to 144TB
Compressed Capacity	3.0TB	6.25TB	15TB	22.5TB	30TB	45TB	Up to 90TB	Up to 180TB	Up to 360TB

Long-Term LTO Roadmap

LTO's strong roadmap ensures a solid future for tape, and provides peace of mind to organizations that rely on tape for its superior benefits in capacity, performance, reliability, portability and affordability.

About Spectra Logic Corporation

Spectra Logic develops data storage solutions that solve the problem of long-term digital preservation for business and technology professionals dealing with exponential data growth. Dedicated solely to storage innovation for over 40 years, Spectra Logic's uncompromising product and customer focus is proven by the adoption of its solutions by industry leaders 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 storage—including archive, backup, cold storage, private cloud and public cloud. To learn more, visit www.SpectraLogic.com.

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