STORAGETEK LINEAR TAPE OPEN (LTO) ULTRIUM DATA CARTRIDGES

KEY FEATURES

ENHANCED DATA AVAILABILITY AND PROTECTION WITH STORAGETEK LTO ULTRIUM DATA CARTRIDGES

- **Reduced costs**. StorageTek LTO Ultrium data cartridges provide higher capacity levels, which means fewer cartridges to buy and maintain, fewer tape mounts, and improved overall automation efficiency.

- **Enhanced performance**. The cartridge memory minimizes access time to files for faster restores.

- **High durability**. StorageTek LTO Ultrium data cartridges were designed with an improved dual-coating system and an improved substrate for greater durability and stability, even under changing environmental conditions.

- **Drive compatibility**. StorageTek LTO Ultrium data cartridges are compatible with tape drives made by all three manufacturers of LTO Ultrium: Hewlett-Packard, IBM and Quantum.

- **WORM capability. Th**e StorageTek LTO Ultrium 3, 4 and 5 specifications include the ability of WORM (write once, read many)-enabled and non-WORM-enabl**ed drives to co**exist and provide users with a secure means of storing data to comply with regulations.

The high capacity (up to 1.5 TB native) and solid durability of Oracle's StorageTek Linear Tape Open (LTO) Ultrium data cartridges help you economically meet ever-increasing data storage requirements. The StorageTek LTO Ultrium tape media's capacity— 1.5 TB (native) and 3 TB (compressed)—makes the StorageTek LTO Ultrium data cartridges ideal for use in your archiving, backup and restore, and disaster recovery applications. StorageTek LTO Ultrium data cartridges have high data integrity and longevity, so data is securely retained over its archived life. Backup and restore activities are accelerated, because more data is processed in less time with fewer tape mounts and dismounts.

StorageTek LTO Ultrium data cartridges provide security in data storage.

Advanced Technology

StorageTek LTO Ultrium data cartridges feature a wide range of innovative technology advancements, including

- Highly reliable metal particle media, with improved long-term magnetic stability for archival applications

- A unique dual-coating process and an improved substrate for greater durability and stability, delivering very low error rates, even under changing environmental conditions

- Stable data reading and writing performance for high-density recording and archiving delivered via a PEN base film with dimensional stability

- A precise, timing-based servo technology, which means superior tracking accuracy to minimize data loss and facilitate high tape performance levels

- Noncontact 8 KB cartridge memory (4 KB on StorageTek LTO Ultrium 3), which enables storage of historical usage records, indexing, and high-speed data searches by the drive.

- The StorageTek LTO Ultrium 4 systems introduce, for the first time to midrange tape storage, the Advanced Encryption Standard (AES) 26-bit algorithms for keeping data secure. The hardware-based AES 256-bit encryption capability of the new StorageTek LTO Ultrium 4 format AND LTO 5 offers a higher level of security during data storage and when transporting sensitive information.

Engage the Storage Experts

Oracle's service professionals can help you address storage challenges by delivering integrated services and solutions that optimize and manage storage performance over the life of your data. Oracle's recognized, world-class service and customer care give you confidence that your technology investment is protected and that your business will be responsive to change. To help you pinpoint opportunities to reduce costs, mitigate business risk, and better leverage information assets, Oracle's consulting and managed services offerings deliver clarity, simplicity, and choice in solutions that address regulatory concerns, complex storage growth, resource management, and scalability challenges.

StorageTek Linear Tape Open (LTO) Ultrium Data Cartridge Specifications				
Basic Specifications	StorageTek Ultrium 5/Ultrium 5 WORM Tape Cartridge	StorageTek Ultrium 4/Ultrium 4 WORM Tape Cartridge	StorageTek Ultrium 3/Ultrium 3 WORM Tape Cartridge	StorageTek Ultrium 2 Tape Cartridge
Capacity	1.5 TB; 3 TB (with 2:1 compression)	800 GB; 1.6 TB (with 2:1 compression)	400 GB; 800 GB (with 2:1 compression)	200 GB; 400 GB (with 2:1 compression)
WORM capacity	1.5 TB; 3 TB (with 2:1 compression)	800 GB; 1.6 TB (with 2:1 compression)	400 GB; 800 GB (with 2:1 compression)	N/A
Tape length	846 m	820 m	680 m	609 m
Number of tracks	1280	896	704	512
Cartridge memory	8 KB	8 KB	4 KB	4 KB
Tape width	12.65 mm	12.65 mm	12.65 mm	12.65 mm
Tape thickness	6.4 μm	6.6 μm	8.0 μm	8.9 μm
Cartridge color	Red	Teal	Blue	Purple
WORM cartridge color	Red	Teal/gray	Blue/gray	N/A

Environmental				
Temperature (Noncondensing)				
Operating	+50°F to +113°F (+10°C to +40°C)	+50°F to +113°F (+10°C to +40°C)	+50°F to +113°F (+10°C to +40°C)	+50°F to +113°F (+10°C to +40°C)
Storage up to four weeks	+61°F to +90°F (+16°C to +32°C)	+61°F to +90°F (+16°C to +32°C)	+61°F to +90°F (+16°C to +32°C)	+61°F to +90°F (+16°C to +32°C)
Shipping	−10°F to +120°F (−23°C to +49°C)	−10°F to +120°F (−23°C to +49°C)	−10°F to +120°F (−23°C to +49°C)	−10°F to +120°F (−23°C to +49°C)
Humidity				
Operating	20% – 80%	20% – 80%	20% – 80%	20% – 80%
Storage up to four weeks	20% – 80%	20% – 80%	20% – 80%	20% – 80%
Storage, archive	20% – 80%	20% – 80%	20% – 80%	20% – 80%
Shipping	20% – 80%	20% – 80%	20% – 80%	20% – 80%
Wet Bulb Maximum				
Storage up to four weeks	+78°F (+26°C)	+78°F (+26°C)	+78°F (+26°C)	+78°F (+26°C)
Storage, archive	+78°F (+26°C)	+78°F (+26°C)	+78°F (+26°C)	+78°F (+26°C)
Shipping	+78°F (+26°C)	+78°F (+26°C)	+78°F (+26°C)	+78°F (+26°C)
Compatibility Chart				
LTO Ultrium Cartridge	**Ultrium 5 Drive**	**Ultrium 4 Drive**	**Ultrium 3 Drive**	**Ultrium 2 Drive**
Ultrium 5 Cartridge	Read/write at 1.5 TB	Not compatible	Not compatible	Not compatible
Ultrium 5 WORM Cartridge	Read/write once	Not compatible	Not compatible	Not compatible
Ultrium 4 Cartridge	Read/write at 800 GB	Read/write at 800 GB	Not compatible	Not compatible
Ultrium 4 WORM Cartridge	Read/Write once	Read/write once	Not compatible	Not compatible
Ultrium 3 Cartridge	Read-only	Read/write at 400 GB	Read/write at 400 GB	Not compatible
Ultrium 3 WORM Cartridge	Read-only	Read/write once	Read/write once	Not compatible
Ultrium 2 Cartridge	Not Compatible	Read-only	Read/write at 200 GB	Read/write at 200 GB
Ultrium 1 Cartridge	Not Compatible	Not compatible	Read-only	Read/write at 100 GB
Universal Cleaning Cartridge (UCC)	Will clean	Will clean	Will clean	Will clean

Data transfer rates are drive dependent. Specifications are subject to change.

Warranty

Visit oracle.com/sun/warranty for Oracle's global warranty support information on StorageTek products.

Services

Visit oracle.com/sun/services for information on Oracle's service program offerings for StorageTek products.

Contact Us

For more information about Oracle's StorageTek LTO Ultrium data cartridges, please visit oracle.com/storage or call +1.800.786.0404 to speak to an Oracle representative.

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