

# Quantum®

## LTO Ultrium

### > DATASHEET

### Meeting the Needs of a Broad Market

#### WHY CHOOSE QUANTUM LTO ULTRIUM MEDIA

- Quantum's LTO Ultrium media is manufactured to the highest industry standards for quality and reliability—ensuring high performance and durability, whether used for primary backup or long-term archive.
- A pioneer of the LTO Consortium, Quantum is committed to the continued development of the LTO platform. Quantum's comprehensive media quality monitoring and extensive interoperability testing ensures cross-platform compatibility, optimal performance, and reliability whether you're using a Quantum tape drive, library, or other LTO-compatible hardware.
- Quantum's LTO Ultrium media is compliant with all media integrity analysis utilities. You can add another level of protection throughout the lifecycle of your data with the Advanced Media Usage Report and Extended Data Life Management (EDLM) features available in Quantum LTO Ultrium media. Media analysis and usage reports provide a view of the media condition for an entire media pool used within a specific tape library, even those in off-site storage. EDLM is a unique Scalar® automation feature designed to ensure the media integrity of cartridges placed in long-term archival or vaulted storage that are no longer used during normal operations. When your critical data is involved, it's important to have a complete health record of your media.
- LTO Ultrium Write Once, Read Many (WORM) media cartridges are available to meet today's stringent regulatory and compliance requirements. Combined with native AES 256-bit encryption on LTO-8, LTO-7, LTO-6, LTO-5, and LTO-4 drives, WORM cartridges physically prevent data from being overwritten or tampered with once it is written to the device—providing a reliable, accurate, and scalable data integrity solution.

- Quantum's LTO media offering supports your comprehensive, "edge-to-core" backup, recovery, and archive strategy. When you use Quantum media and hardware, you get the added assurance of over 30 years of storage experience and service behind the entire solution.

#### SAVE TIME AND MONEY WITH QUANTUM'S COMPLIMENTARY VALUE-ADDED SERVICES

Quantum is performing additional process and quality tests on its LTO Ultrium data media, demonstrating our continuing commitment to provide the highest quality LTO media. Quantum Certification focuses on five key user metrics: capacity, transfer rate, servo, and green media characteristics, with specific emphasis on testing the durability of the written data.

Have you ever spent hours unpacking, labeling, and loading media into your library? Why waste IT resources unpacking boxes and labeling cartridges? Your time and your data are valuable. We understand that.

- Allow Quantum to pre-label your data cartridges with your requested bar code label sequences and color scheme. They will arrive ready to load into the library.

No need for individual cartridge cases? No problem! We offer "library packaging" to save you time.

- This eco-friendly bulk packaging option protects cartridges during shipment and storage without the individual cartridge cases. This allows quicker access to the cartridges to expedite loading into automation slots/trays—and it results in less waste.

Combine bar code labeling with library packaging and save even more time!



### FEATURES & BENEFITS

#### High Storage Capacity

Up to 12 TB native and up to 30 TB\* compressed

#### Up to 30-Year Archival Life

#### Compliant with All Media Integrity Analysis Utilities

Adds another level of data protection

#### Write Once, Read Many (WORM)

Addresses today's tough regulatory and compliance needs

#### High Performance

A high-durability non-contact IC memory chip up to 16 KB is built in; this contributes to significant improvement in tape library access and health reporting

#### Bar Code Labeling and Library Packaging

Available to quickly load automation slots/trays

#### Over 30 Years of Storage Experience

Demonstrated top performance and innovation in hardware and media products

\*Based on 2.5:1 compression (LTO-8, LTO-7, and LTO-6), 2:1 compression (other LTO)



> LEARN MORE:  
[www.quantum.com/lto](http://www.quantum.com/lto)

# TECHNICAL SPECIFICATIONS

## BASIC GENERATION SPECIFICATIONS

|                                        | Ultrium 8<br>Ultrium 8 WORM | Ultrium 7 <sup>3</sup><br>Ultrium 7 WORM           | Ultrium 6<br>Ultrium 6 WORM | Ultrium 5<br>Ultrium 5 WORM | Ultrium 4<br>Ultrium 4 WORM | Ultrium 3<br>Ultrium 3 WORM | Ultrium Universal<br>Cleaning            |
|----------------------------------------|-----------------------------|----------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------------------|
| <b>Drive Compatibility</b>             | LTO-8<br>LTO-8 WORM         | LTO-7<br>LTO-7 WORM                                | LTO-6<br>LTO-6 WORM         | LTO-5<br>LTO-5 WORM         | LTO-4<br>LTO-4 WORM         | LTO-3<br>LTO-3 WORM         | All                                      |
| <b>Cartridge Color</b>                 | Brick Red<br>Brick Red/Gray | Purple<br>Purple/Gray                              | Black<br>Black/Gray         | Brick Red<br>Brick Red/Gray | Green<br>Green/Gray         | Blue<br>Blue/Gray           | Black                                    |
| <b>Capacity</b><br>(Native/Compressed) | 12/30 TB <sup>1</sup>       | 6/15 TB <sup>1</sup><br>(12/22.5 TB <sup>3</sup> ) | 2,500/6,250 GB <sup>1</sup> | 1,500/3,000 GB <sup>2</sup> | 800/1,600 GB <sup>2</sup>   | 400/800 GB <sup>2</sup>     | Maximum 50 cleanings–<br>drive dependent |
| <b>Tape Length</b>                     | 960 m (3,150 ft)            | 960 m (3,150 ft)                                   | 846 m (2,776 ft)            | 846 m (2,776 ft)            | 820 m (2,690 ft)            | 680 m (2,231 ft)            | 319 m (1,046.59 ft)                      |

## DIMENSIONS

|                                         |                                                                |
|-----------------------------------------|----------------------------------------------------------------|
| <b>Tape Width</b>                       | 12.65 mm (0.50 in)                                             |
| <b>Cartridge Dimensions (W x H x L)</b> | 21.5 mm x 105.4 mm x 102.0 mm<br>(0.85 in x 4.15 in x 4.02 in) |

## OPERATING ENVIRONMENT

|                    |                                  |
|--------------------|----------------------------------|
| <b>Temperature</b> | 10 °C to 45 °C (50 °F to 113 °F) |
| <b>Humidity</b>    | 10% to 80% RH                    |

## READ/WRITE COMPATIBILITY

An Ultrium drive can read and write data to prior LTO generations:

| Drive Type                                 | LTO-8             | LTO-7        | LTO-6        | LTO-5        | LTO-4        | LTO-3        |
|--------------------------------------------|-------------------|--------------|--------------|--------------|--------------|--------------|
|                                            | LTO-8 R/W         | LTO-7 R/W    | LTO-6 R/W    | LTO-5 R/W    | LTO-4 R/W    | LTO-3 R/W    |
| <b>Read/Write<br/>Compatible<br/>Media</b> | LTO-7 (M8)<br>R/W | LTO-6 R/W    | LTO-5 R/W    | LTO-4 R/W    | LTO-3 R/W    | LTO-2 R/W    |
|                                            | LTO-7 R/W         | LTO-5 R Only | LTO-4 R Only | LTO-3 R Only | LTO-2 R Only | LTO-1 R Only |

## <sup>3</sup>LTO-8 TYPE M FORMATTED LTO-7 MEDIA

LTO-8 drives include a new format feature enabling customers to increase the capacity of new or unused LTO Ultrium 7 cartridges by up to 50 percent to store 9 TB (uncompressed) or 22.5 TB<sup>1</sup> (compressed) of data. To unlock this additional capacity, customers need an LTO-8 drive with a utility or application to up-format new or unused LTO Ultrium 7 cartridges with properly attached "M8" media ID bar code labels.

## STORAGE ENVIRONMENT – NON-ARCHIVE

|                    | Ultrium 8, 7, 6, and 5          | Ultrium 4, 3, 2, and Cleaning   |
|--------------------|---------------------------------|---------------------------------|
| <b>Temperature</b> | 16 °C to 35 °C (61 °F to 95 °F) | 16 °C to 32 °C (61 °F to 90 °F) |
| <b>Humidity</b>    | 20% to 80% RH                   | 20% to 80% RH                   |

## STORAGE ENVIRONMENT – ARCHIVE

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| <b>Temperature</b>                      | 16 °C to 25 °C (61 °F to 77 °F) |
| <b>Humidity</b>                         | 20% to 50% RH                   |
| (Not applicable for cleaning cartridge) |                                 |

## LTO ULTRIUM MEDIA PRODUCT SERVICE AND SUPPORT

Quantum LTO Ultrium cartridge tapes are free from defects in material and manufacturing at the time of purchase. This limited lifetime warranty extends to the original end-user purchaser of the product and is not assignable or transferable to any subsequent purchaser or end user. Visit [www.quantum.com](http://www.quantum.com) for more information.

<sup>1</sup> Based on 2.5:1 compression

<sup>2</sup> Based on 2:1 compression

## Model Numbers and Descriptions

|                         | Standard    | WORM        | Bar Code<br>Labeled | Bar Code<br>Labeled – WORM | Library Pack | Bar Code Labeled<br>Library Pack |
|-------------------------|-------------|-------------|---------------------|----------------------------|--------------|----------------------------------|
| <b>Ultrium 8</b>        | MR-L8MQN-01 | MR-L8MQN-02 | MR-L8MQN-BC         | MR-L8WQN-BC                | MR-L8MQN-20  | MR-L8LQN-BC                      |
| <b>Ultrium 7</b>        | MR-L7MQN-01 | MR-L7MQN-02 | MR-L7MQN-BC         | MR-L7WQN-BC                | MR-L7MQN-20  | MR-L7LQN-BC                      |
| <b>Ultrium 6</b>        | MR-L6MQN-03 | MR-L6WQN-04 | MR-L6MQN-BL         | MR-L6WQN-BL                | MR-L6LQN-LP  | MR-L6LQN-BL                      |
| <b>Ultrium 5</b>        | MR-L5MQN-01 | MR-L5MQN-02 | MR-L5MQN-BC         | MR-L5WQN-BC                | MR-L5MQN-20  | MR-L5LQN-BC                      |
| <b>Ultrium 4</b>        | MR-L4MQN-01 | MR-L4MQN-02 | MR-L4MQN-BC         | MR-L4WQN-BC                | MR-L4MQN-20  | MR-L4LQN-BC                      |
| <b>Ultrium 3</b>        | MR-L3MQN-01 | MR-L3MQN-02 | MR-L3MQN-BC         | MR-L3WQN-BC                | MR-L3MQN-20  | MR-L3LQN-BC                      |
| <b>Ultrium 2</b>        | MR-L2MQN-01 |             | MR-L2MQN-BC         |                            |              |                                  |
| <b>Ultrium Cleaning</b> | MR-LUCQN-01 |             | MR-LUCQN-BC         |                            |              |                                  |

## ABOUT QUANTUM

Quantum is a leading expert in scale-out tiered storage, archive, and data protection, providing solutions for capturing, sharing, and preserving digital assets over the entire data lifecycle. From small businesses to major enterprises, more than 100,000 customers have trusted Quantum to address their most demanding data workflow challenges. Quantum's end-to-end, tiered storage foundation enables customers to maximize the value of their data by making it accessible whenever and wherever needed, retaining it indefinitely and reducing total cost and complexity. See how at [www.quantum.com/customerstories](http://www.quantum.com/customerstories).

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