

A modern office interior with glass walls and a meeting room. The background is a grayscale image of a contemporary office space. In the foreground, there is a blue rectangular overlay containing white text. Below the blue overlay, the date '14-DEC-17' is visible on the left, and the 'Quantum' logo is on the right. The meeting room in the background features a dark table and several black office chairs on a light-colored tiled floor.

LTO-8 TYPE M FORMATTED LTO-7 (M8) MEDIA FAQ'S

14-DEC-17

Quantum

LTO-8 TYPE M FORMATTED LTO-7 MEDIA FAQ'S



- What is LTO-7 (M8)?
 - This is a new LTO technology feature with the formal consortium name of “LTO-8 Type M Formatted LTO-7 Media”. For simplicity, this feature is also known as “M8”.
 - LTO-8 drives include a new format feature enabling customers to increase the capacity of new and/or unused LTO Ultrium 7 cartridges by up to 50 percent to store 9 TB (un-compressed) or 22.5 TB (2.5:1 compressed) of data.
- Can the customer use any LTO-7 cartridge to be LTO-7 (M8), or do they have to buy a specific one?
 - Customers can use any LTO-7 cartridge so long as it is new and/or unused. The formatted LTO-7 (M8) cartridges cannot be read by LTO-7 tape drives, so it’s important that customers format, label and handle the LTO-7 (M8) tapes accordingly.
- How will Scalar libraries and customers know which tapes are standard LTO-7 and which are LTO-7 (M8)?
 - The tapes will need to be bar coded correctly. Standard LTO tape bar codes use a L# media ID designator at the end of the label to indicate the LTO generation. For example, “L7” indicates a standard LTO-7 tape cartridge and “L8” a standard LTO-8 cartridge. The LTO-7 (M8) cartridges use bar code labels that have an “M8” media ID.
 - The media ID is the two right most characters printed on a bar code label. The media ID indicates the media type to the drive.



- Quantum offers customers both pre-sequenced M8 label packs and custom M8 labeling of Quantum brand LTO Ultrium 7 media.

LTO-8 TYPE M FORMATTED LTO-7 MEDIA FAQ'S (CONT'D)

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- What happens if LTO-7 cartridges get mislabeled. For example, a L7 barcode is placed on a LTO-7 (M8) cartridge?
 - This will work like mislabeling any other LTO generation, for example, putting a L7 media ID label on a LTO-6 cartridge. In this case, Scalar libraries would treat the cartridge as an LTO-7 and only place it in drives that support LTO-7 media (i.e. LTO-7 and LTO-8 drives). If the mislabeled LTO-6 cartridge was loaded into a LTO-8 tape drive (that does not support LTO-6 media), the drive would determine that the cartridge is formatted for LTO-6 and reject the tape and the library would post a RAS ticket. With an M8 label on an LTO-7 cartridge, Scalar libraries will only place that cartridge in LTO-8 tape drives, as M8 formatted media is not supported by LTO-7 tape drives.

- Is the LTO-7 (M8) capability supported by Quantum tape hardware?
 - All Quantum Certified LTO-7 media ships with the standard LTO-7 format, not an M format.
 - All Quantum M8 pre-labeled media must be M formatted.
 - Scalar libraries will automatically format any M8 labeled media the first time a write occurs.
 - For Quantum Stand-Alone drives and the SuperLoader 3, the StorageCare Sage xTalk Management Console (xTalk) must be used to format Quantum LTO-7 media with the M format.
 - xTalk can be downloaded from quantum.com:
(<http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/lto-7hh/index.aspx>).
(Select the “Diagnostics” tab).
 - In all cases, only a new and/or unused LTO-7 cartridge can be M formatted.
 - In addition to the bar code label and formatting requirements, the M format must be supported by the application being used with the tape library and tape drive. Application support is listed in the Quantum Compatibility Guide on Quantum.com:
(<http://www.quantum.com/swcompguide.aspx>)

LTO-8 TYPE M FORMATTED LTO-7 MEDIA FAQ'S (CONT'D)

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- Is this M8 type capability available on LTO-7 or other generation LTO tape drives?
 - No, this new feature is only available with LTO-8 tape drives and new and/or unused LTO-7 cartridges.

- Will this M8 type capability be available with LTO-9 and all future LTO generations?
 - That has not been determined yet by the LTO consortium.

- What's the benefit of the LTO-7 (M8) media?
 - Some benefits are:
 - Customers with a supply of unused, LTO-7 tapes can get 50% more capacity on each tape with an LTO-8 drive.
 - The \$/TB may be better with LTO-7 (M8) compared to LTO-8 (L8).
 - Customers that don't fill entire an LTO-8 cartridge for offsite or vaulting purposes can save cost by using an LTO-7 (M8) cartridge.

- All prior LTO generations have supported 2-generation back read support, why won't LTO-8?
 - After seven generations (and 17 years of shipments), LTO needed a technology transition to support the higher storage densities and performance for the long-term roadmap. This transition includes both the media technology and the read/write head technology of the drives. The cost to support 2-generation read capability, and the new LTO-8 capacity/performance, makes this support infeasible.