



Quantum LTO-9 Media Calibration

Frequently Asked Questions (FAQ)

Quantum

Quantum LTO-9 Media Calibration

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Overview

LTO-9 media calibration is a new requirement for LTO-9 media. Calibration is a one-time requirement for new cartridges prior to first-time read/write operations; it is not a requirement for older generations including LTO-8. Due to continued LTO innovation, with LTO-9 there is an increased number of tracks used to write data on tape that requires greater precision. Media optimization creates a referenced calibration for each cartridge that enables the tape drive's intelligent alignment to optimize data placement and enhances LTO tape long-term media durability.

For a more detailed description of the different possible scenarios with LTO-9, please reach out to your Quantum representative or solutions architect.

Below are the most frequently questions about LTO-9 calibration.

Section 2

LTO-9 Quantum Media Calibration FAQ

Q: Is there a difference between the terms, “optimization”, “initialization” and “calibration”, in reference to LTO-9 media?

A: No. Quantum chose to use “calibration” to describe this one-time LTO9 media event.

Q: What is LTO-9 media calibration?

A: Media calibration has been implemented in LTO-9 technology to optimize data placement to each LTO-9 cartridge characteristics. New LTO-9 media requires a one-time step calibration prior to commencing read/write operations. LTO-9 media calibration enhances LTO tape long-term media durability.

Q: Once the LTO-9 media cartridge has been calibrated within the recommended environmental range, does it need to be re-calibrated when it is moved to a separate drive, separate library, separate data center or environment.

A: No, the LTO-9 calibration process is only required on the first load of a new and unused LTO-9 media, subsequent loads in any LTO-9 drive do not require calibration.

Q: Will LTO-8 media require calibration on first load to an LTO-9 tape drive?

A: No. Media calibration is required only on new LTO-9 media.

Q: How much time does the LTO-9 calibration add to the first-time load of a new media cartridge?

A: The LTO-9 media cartridge calibration time typically averages between 35 to 52 minutes per first load, but it could take as long as 2 hours.

Q: Why does LTO-9 media require calibration?

A: Higher track densities (TPI) and longer tapes using thinner polymer base substrates in LTO-9 media achieve double digit Areal Densities and more than 21K TPI track density. A new tape calibration algorithm was introduced, ensuring data durability, compatibility and allowing for complex interchange requirements over the specified environmental conditions. The length of calibration is mainly for media optimum characterization and will vary based on these factors. This initial calibration, also, enables the tape drive's intelligent alignment to optimize data placement.

Q: Does LTO-9 media calibration need to be performed in the destination site?

A: It is recommended that calibration be performed at the final installation destination where the drives and media are to be used, to provide optimized acclimation within the recommended environmental ranges on Quantum product data sheets.

Q: Can the customer disable media calibration?

A: No, the one-time calibration cannot be disabled. For the tape to perform, it must be calibrated before first time use and one time only.

Q: Can I use uncalibrated LTO-9 media for installation verification test (IVT)?

A: No, LTO-9 media calibration is required before first use which includes IVT.

Q: Can I use an Extended Data Life Management (EDLM) drive to calibrate new LTO-9 media?

A: No, the EDLM scan engine will recognize that the media is new and does not contain data and just unload it again without loading it. This mechanism will prevent the media from getting calibrated in an EDLM drive.

Q: Can I recalibrate an LTO-9 media cartridge?

A: Yes. The Format command with specific field settings will reinitiate calibration. However, regardless of recalibration, any Format command will result in loss of all existing data on the tape.

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