



Hewlett Packard Hewlett Packard Enterprise Support Center Enterprise

Drivers & software

HPE Ultrium 15000 LTO-7 Normal Mode Tape Drive Firmware

Type:	Firmware
Version:	S2T1 (Normal Mode Only)(5 Aug 2025)
Upgrade Requirement:	Recommended
Operating System(s):	OS Independent

Description

This firmware version is for use only when NOT using Secure Mode with hardware-based encryption. If Secure Mode firmware was previously installed and you now choose to use Normal Mode firmware, you must disable Secure Mode from the library RMI before updating the drive firmware. For details, see the library user guide and the HPE Storage MSL Tape Libraries Encryption Key Server Configuration Guide.

Release Notes

End User License Agreements:

HPE Software License Agreement v1

(<https://downloads.hpe.com/pub/softlib2/software1/doc/p1796552785/v113125/eula-en.html>)

Important:

HPE GPG Signature Verification

The .sig files on this page can be used with GPG to validate and verify the digital signature of the .frm firmware files on this page.

GPG Signature Verification Procedure:

Verify the signature by running 'gpg --verify ' Name.of.Sig.File'

Note: The HPE Public Key, hpePublicKey2048_key1.pub (fingerprint: 26C2B797), is required to support signature verification and is available from the HPE Software Delivery Repository (SDR)

(<https://downloads.linux.hpe.com/SDR/keys.html>)

(<https://downloads.linux.hpe.com/SDR/keys.html>)). Download the HPE Public key and import the key using "gpg --import hpePublicKey2048_key1.pub" command before running the verification command.

HPE Storage 1/8 Tape Autoloader and MSL Tape Libraries

Ultrium 15000 LTO-7 Version S2T1 Normal Mode Firmware

Release Notes

Abstract

This document provides information about enhancements and fixes to the firmware for the LTO-7 Ultrium 15000 tape drives used with the HPE Storage 1/8 Tape Autoloader and MSL2024, MSL3040, MSL4048, and MSL6480 Tape Libraries. This document also provides instructions for updating the tape drive firmware.

Part Number: 20-STGL7-NMFWRNS2T1-ED1

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Release Notes

Description

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This release includes tape drive firmware for Ultrium 15000 tape drives in HPE Storage 1/8 Tape Autoloaders and MSL2024, MSL3040, MSL4048, and MSL6480 Tape Libraries.

NOTE:

The MSL8048 and MSL8096 Tape Libraries do not support LTO-7 tape drives.

The tape drive firmware can be updated through any of the following methods:

- Remote management interface (RMI)
- Operator control panel (OCP)
- HPE Library and Tape Tools (L&TT)
- HPE Command View for Tape Libraries (CVTL)

Tape drive firmware version: S2T1

Effective date: August 2025

Update recommendation

Update recommendation: Recommended

Supersede information

Supersedes: R3G3 and all previous version of LTO-7 tape drive firmware.

Product models

This release applies to the following HPE product models:

- 1/8 Tape Autoloader with an Ultrium 15000 SAS or FC tape drive
- MSL2024 Tape Library with one or more Ultrium 15000 SAS or FC tape drives
- MSL3040 Tape Library with one or more Ultrium 15000 SAS or FC tape drives
- MSL4048 Tape Library with one or more Ultrium 15000 SAS or FC tape drives
- MSL6480 Tape Library with one or more Ultrium 15000 SAS or FC tape drives

NOTE: 1/8 Autoloader refers to 1/8 G2 Autoloader and 1/8 G3 Autoloader unless explicitly stated.

Operating systems

The release is not OS-dependent.

Languages

Languages supported for this release:

- English (American)
- English (International)

Compatibility notes

This version of firmware is compatible with:

- HPE Library and Tape Tools (L&TT) standalone version 6.6 and newer
- Command View for Tape Libraries (Command View TL) version 6.5.64 and newer
- TapeAssure Advanced (license installed from and used with Command View TL 6.5.64 and newer)
- Data Verification (license installed from and used with Command View TL 6.5.64 and newer)

Enhancements

- Reduced the time to perform a Mid-Tape Recovery (MTR), if a drive has been powered on with a tape loaded.
- Improved the error recovery procedures to reduce occurrence of errors during LOAD and READ operations.
- Improved the SPACE/LOCATE operation to reduce occurrence of 6350 drive errors.
- Improved future READ reliability by failing a WRITE with 7122 drive error.
- Added a new Cartridge Memory (CM) attribute (0C00h) to report EOD validity per partition.
- Improved drive logging to aid failure analysis.

Fixes

- Fixed an issue where a drive could become unresponsive after a 2E1B drive error.
- Fixed an issue where a drive could become unresponsive if a LOAD command is received during MTR.
- Fixed a 2C30 (write protect) drive error with uninitialized WORM media.
- Fixed issues that could cause the drive to become unresponsive during WRITE/READ operations.
- Fixed an issue where a drive reset could occur when the partition is changed.
- Fixed a WRITE failure that resulted in a 7023 drive error.
- Fixed an unexpected drive reset that could occur during a WRITE retry.
- Fixed a cartridge eject issue after drive error 2E01 during a LOAD operation.
- Fixed a Position Error Signal (PES) error after exiting power-saving mode.
- Fixed issues at the end-of-tape or wrap turnarounds that could cause WRITE/READ errors to be reported.

- Fixed the SET CAPACITY command when the minimum capacity setting is specified.
- Fixed an issue where a drive cannot read data on some cartridges with unreadable CM.
- Resolved a rare SRR race condition where the FC interface may have become unresponsive.
- Fixed a library issued UNLOAD command that caused a drive to become unresponsive when the PAMR was set.
- Fixed a 7250 drive error when the host connection is terminated by the tape library.
- Fixed an issue where the library set drive serial number in LP14:0041h may have two invalid trailing bytes.

Installation instructions

About this task

NOTE:

This firmware version is for use only when NOT using Secure Mode with hardware-based encryption. If Secure Mode firmware was previously installed and you now choose to use Normal Mode firmware, you must disable Secure Mode from the library RMI before updating the drive firmware. For details, see the library user guide and the HPE Storage MSL Tape Libraries Encryption Key Server Configuration Guide.

See **Downloading firmware** for instructions to download from the Hewlett Packard Enterprise support website.

Procedure

- **1/8 G3 Tape Autoloader, MSL3040 or MSL6480 RMI**
 1. Log in to the RMI as the administrator user.
 2. Navigate to the Maintenance > Firmware Upgrades > Drive Firmware screen. The tape drives are organized by drive type.
 3. Select a drive or group of drives to update.
 4. Click Choose File, and then select the file from the local computer.
 5. Click Submit.
- **1/8 G3 Tape Autoloader OCP**
 1. Copy the firmware file to a USB flash drive.
 2. Log in to the OCP as the administrator user.
 3. Insert the USB flash drive into the USB port on the front of the library.
 4. Navigate to Maintenance > Upgrade Drive from USB Device, and follow the prompts to begin the firmware upgrade.
- **MSL3040 OCP**
 1. Copy the firmware file to a USB flash drive.
 2. Log in to the OCP as the administrator user.
 3. Insert the USB flash drive into the USB port on the front of the library.
 4. Navigate to Maintenance > Drive Firmware Upgrade, and follow the prompts to begin the firmware upgrade.
- **MSL6480 OCP**
 1. Copy the firmware file to a USB flash drive.
 2. Log in to the OCP as the administrator user.
 3. Insert the USB flash drive into the USB port on the front of the library.
 4. Navigate to Maintenance > Firmware Upgrades > Drive Firmware, and follow the prompts to begin the firmware upgrade.
- **1/8 G2 Tape Autoloader, MSL2024, or MSL4048 RMI**
 1. Log in to the RMI as the administrator user.
 2. In the Support: Firmware page, select the tape drive, browse to the location of the tape drive firmware file, and click Update.
 3. Repeat step 3 to update firmware for additional tape drives in the library.
- **1/8 G2 Tape Autoloader or MSL2024 OCP**
 1. Copy the firmware onto the USB flash drive.

2. Insert the USB flash drive into the USB port on the back of the autoloader or library.
3. From the Home screen, press Next until the screen displays Support. Press Enter to select.
4. Press Next until the screen displays Drive FW upgrade. Press Enter to select.
5. Enter the administrator password if prompted.
6. Select Drive FW upgrade by USB and press Enter.
7. Press Next until the screen displays the filename of the tape drive firmware file on the USB drive. Press Enter to select the firmware file.
8. When the upgrade is complete, remove the USB flash drive from the USB port.

- **MSL4048 OCP**

1. Copy the firmware onto the USB flash drive.
2. Insert the USB flash drive into the USB port on the back of the library.
3. From the Support menu, select FW Upgrade > By USB.
4. Enter the administrator password if prompted.
5. Select the tape drive as the target for the upgrade, and select the filename of the firmware. Click Upgrade.
6. Repeat step 4 to update firmware for additional tape drives in the Library.
7. When the upgrade is complete, remove the USB flash drive from the USB port.

Downloading firmware

Procedure

1. Go to the Hewlett Packard Enterprise support website <https://www.hpe.com/support/storage> (<https://www.hpe.com/support/storage>).
2. Enter a product name and firmware version in the Search field and press Enter.
The search result is displayed.
3. Select the Drivers and Software tab.
4. In the search results, confirm the firmware by the product name and by the version listed for the latest version.

Related information

The latest documentation for your tape product is available on the Hewlett Packard Enterprise Support Center at <https://www.hpe.com/support> (<https://www.hpe.com/support>).

Locate the user and service guide for your product, which provides the most complete information about installation and operation.

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Revision History

Version

S2T1 (Normal Mode Only)(5 Aug 2025)

Version

Q387 (Normal Mode Only)(9 Aug 2023)

Version

P381 (Normal Mode Only)(16 May 2023)

Version

N4Q1 (Normal Mode Only)(16 May 2023)

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