



HPE Storage 1/8 Tape Autoloader and MSL Tape Libraries Ultrium 45000 LTO-9 Version S2SD Secure Mode Firmware Release Notes

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HPE Storage 1/8 Tape Autoloader and MSL Tape Libraries Ultrium 45000 LTO-9 Version S2SD Secure Mode Firmware Release Notes

Abstract

This document provides information about enhancements and fixes to the firmware for the LTO-9 Ultrium 45000 tape drives used with the HPE Storage 1/8 Tape Autoloader and MSL2024, MSL3040, and MSL6480 Tape Libraries. This document also provides instructions for updating the tape drive firmware.

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Description



NOTE

This firmware version is for use only when using Secure Mode with hardware-based encryption. To enable Secure Mode, Secure Mode firmware must be installed before you can activate the feature from the library RMI. For details, see the library user guide and the HPE Storage MSL Tape Libraries Encryption Key Server Configuration Guide.

This release includes Secure Mode tape drive firmware for Ultrium 45000 tape drives in HPE Storage 1/8 Tape Autoloaders and MSL2024, MSL3040, and MSL6480 Tape Libraries.



NOTE

The MSL4048, MSL8048, and MSL8096 Tape Libraries do not support LTO-9 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: S2SD

Effective date: March 2026

Subtopics

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Update recommendation

Update recommendation: Critical

For details about the update contents, see [Enhancements](#) and [Fixes](#).

Supersede information

Supersedes: S2S1 and all previous versions of LTO-9 tape drive firmware.

Product models

This release applies to the following HPE Storage product models:

- 1/8 Tape Autoloader with an Ultrium 45000 SAS or FC tape drive
- MSL2024 Tape Library with one or more Ultrium 45000 SAS or FC tape drives
- MSL3040 Tape Library with one or more Ultrium 45000 SAS or FC tape drives
- MSL6480 Tape Library with one or more Ultrium 45000 SAS or FC tape drives



NOTE

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

MSL2024 refers to MSL2024 G3 and MSL2024 G4 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 LTO-9 Ultrium 45000 firmware is compatible with:

- HPE Library and Tape Tools (L&TT) standalone version 6.7 and newer
- Command View for Tape Libraries (Command View TL) version 6.7.47 and newer
- TapeAssure Advanced (license installed from and used with Command View TL 6.7.47 and newer)
- Data Verification (license installed from and used with Command View TL 6.7.47 and newer)

Enhancements

The following enhancements are part of this firmware version:

- Improvements to checks for head alignment issues that prevent the drive from working correctly.
 - A 78D8 drive error will now be reported for head alignment issues.
 - Previously a 2E1B drive error was reported for some correctly functioning drives.
- Improvements to detect servo pattern and reduce occurrence of drive error 2E12 during a LOAD.
- Improved error recovery procedures during READ operations.
- Update Nominal and Recommended timeouts for READ ATTRIBUTE.
- Define new drive error codes 105C/D05C to better diagnose write head issues.

Fixes

- Fix for a condition that could cause head misalignment and lead to a 2E1B drive error.
- Fix to prevent a drive reset when requesting a Support Ticket during Write/Read operations.
- Fix for drive errors 7875 followed by 2E13 with certain tapes.

Installation instructions

About this task



NOTE

This firmware version is for use only when using Secure Mode with hardware-based encryption. To enable Secure Mode, Secure Mode firmware must be installed before you can activate the feature from the library RMI. 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, MSL2024 G4, 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 and MSL2024 G4 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 or MSL2024 G3 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 G3 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.

Subtopics

Downloading firmware

Downloading firmware

Procedure

1. Go to the Hewlett Packard Enterprise support website <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>.

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

Documentation feedback

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