IBM LTO-8 Firmware Version K4K1 (HH) Release Announcement

August 2019

Preface

This Product Information Bulletin announces the release of IBM LTO-8 firmware update K4K1 for half-height (HH) drives. This update is intended, among other things, to increase overall reliability, improve tape handling, further reduce any possibility of error, and provide continued enhancements to diagnostic capabilities.

Models Affected

This firmware affects all IBM HH LTO-8 drives.

Upgrade Considerations

All systems running code IBM LTO-8 JAYF for HH drives can be upgraded to LTO-8 K4K1.

⚠️ **CAUTION:** To prevent data corruption, verify that all active backup and recovery jobs to the NEO tape library are completed prior to performing the upgrade.

Downgrades

Downgrades are not supported.

Functional Improvements (Reduce Permanent Errors)

Firmware fixes included with the K4K1 HH update:

- Consistent handling of MP25h subpages.
- Return deferred error on any nexus before first DEA cmd.
- LUN2: hang on Send Diagnostic with parm data.
- Queue hang on aborted write command.
- Fixed sequencing problems on aborted load/unload commands.
- Fixed inquiry page 0xC0.
- Only use writable densities in diag.
- L7/L8: Fixed Ch1Ch2 offset checking for Locate to EOT.
- Wait ch1ch2offset noise check until BOTref is updated.
- Jx/Lx: Handle L6 tape properly at ch1ch2offset chk.
- Don't send dsit data if rd perm failed to read it successful.
- Some log pages (for example, 30h) return zeros to library.

- Only create CM app specific page on LTO clnr carts.
- Allow CM MAM page to be created at Hold position.
- Update Servo info only at WEON for storing in DSIT.
- Add support for write side Tcomp.
- SRV_set_tension takes 0 to set nominal tension.
- Support LogSense subpage FFh correctly.
- LTFS: 04/4400 on load/unload cmd.
- CM validity check fails when SAW on recursive write failed.
- LTO7: LTO does not have last standard wrap.
- Suspended Append Write support.
- Change the option order to improve ERP time.
- Motor driver error at high speed locate.
- report correct UCI/Alt-UCI at the LOAD-HOLD position by read_at.
- Could not decelerate at $10m/s^2$ at low tension mode.
- Race in MAC flush type check.
- Segrepos info is unexpectedly cleared.
- Fixed return code handling in callback functions.
- Calibration RcvDiag results missing if pre-erase fails.
- Deferred error should be reported earlier.
- Tape test diag sometimes fails by internal error (FSC 4000).
- SAS/FCH: Improve asynchronous transfer permission.
- Limit size of request for LUN1 read/write buffer cmds.
- Failed to read SAW data set.
- Unexpected WPRO_CRYPTO_INTEGRITY error by wrong trip.
- MAM parameters not updated on unload.
- Target DS is skipped unexpectedly by referring to old DSIT.
- Off-track to different partition caused INCONSIST_WRITEPASS.
- LTO6: Use latest WP to continue read ERP for OTF rewrite DS.
- Expand Bridging for short file & general cases.
- VHF holds on "WRITING" though motion stopped by error.
- Wrong SAW element separation for multiple partitions.
- Cannot retrieve SAW data set at BOW position.
- Append thread count field into engineering log in dump.
- L7HH/L8HH: Add RAS check for srv_open_skew values out of spec.
- 4m rule violation due to sticky vel temp.
- Cannot skip multiple DS during locate.
- Internal error (FSC 405E) in read.
- Couldn't enter SAW when append failed on EOD.
- Capture FMT header log before table overflow.
- L7: Watchdog timer expired in on 7076/7060 erp session.
- Unexpected wrap turn when EOW detected by STOP_DEST.
- Modify end lpos of prev DS.
- Write ERP fails by 5 trials when SAW in CM is full.
- MCP: update WDT before validate image in code update.

- INCONSISTENT_DSNUM for fermi-like wrap turn.
- LN0: check parameter list length vs. attribute length.
- Fixed inconsistent if condition.
- Allow write append @ write perm on worm.
- C2 memory error on read - need ERP.
- Stop tpm at interrupt missing detection.
- Improve DMA tracing / error handling.
- Full_pewOn Detect a servo error.
- MCP: missing interrupt (due to corrupt UBIFS kernel printk).
- FSC6000 at append write on worm.
- L7HH/L8HH: Change FSC 2E1B (srv excessive head skew).
- Retry once for LPOS_INVERSION before perm.
- Avoid needless ERP on the next wrap of EOD wrap.
- SRV_Unthread hang due to race condition.
- Panic when entering power saving mode.
- Panic: med_hdridx_write is out of range.
- Mount hang when cartridge pulled out.
- 2E14 motor stall during unspool.
- Avoid updating wrong trip/lpos during 7225 ERP.
- Enable LLWR.
- Fixed speed table and ERP timeout.
- Panic due to double callback for SRV_Unthread.
- L8HH: 2E13 on Unload with Archive Bit set.
- Fixed memory overwrites.

Downloads

Firmware update codes IBM LTO-8 K4K1 (HH) are available for download for supported NEO users with active software entitlement agreements. Go to the Overland-Tandberg Customer Support Portal by navigating to the Manage Products page: http://support.overlandstorage.com/support/neo-series.htm.