



Quantum LTO-8 Release Notes

Product	LTO-8 HH Serial Attached SCSI
Firmware Version	Half Height Code: P381
Supported Web Browsers	Firefox Chrome Microsoft Edge Apple Safari
Date	April 2022

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Introduction

These release notes apply to the Quantum LTO-8 Half Height distribution product.

Firmware Code Update

The P381 firmware code update provides:

- Increased overall reliability
- Improved tape handling
- Reduction of any possibility of errors
- Continued enhancements to diagnostic capabilities

Firmware Version Identification

These drives will have similar inquiry string as previous Quantum models and presented on the Standard Inquiry Page and Inquiry Device Identification Page 83h as:

- Vendor Identification = 8 bytes of ASCII data: "Quantum" followed by a space
- Product Identification = 16 bytes of ASCII data "ULTRIUM-HH8" followed by 5 spaces
- Product Revision Level = 4 bytes of ASCII data "YMDV"

Compatibility

LTO-8 HH compatibility requirements:

- The LTO-8 HH drive has a dual port SAS-2 6-Gbps interface
- Please use the Drive Compatibility Guide tool found on Quantum.com for software and hardware compatibility

New Features and Enhancements

This is a FW release for LTO-8 HH SAS drives. Changes described below are for Half High code P381 FW version.

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.

Firmware Change Summary

Bug Fixes

Issue	Description
Drive fails with 601D on READ	Areas with poor read quality can lead to mis-correction iterative error recovery process methods. Adding code to reset mis-correction counter.
Read failure during ERP	When the drive was attempting a READ ERP (Error Recovery Procedure) and incorrect LPOS position limit caused that ERP to fail.
WRITE append time out	The drive was having trouble getting the current position on tape and used an estimated value instead. This caused the drive to time out because it could not find the position to append.
Incorrect sense ASC/ASCQ reported for FSC 2C0B "Invalid Cartridge Type"	When an unsupported cartridge type was loaded into the drive, the drive reported an ASC/ASCQ of 3/3001. I was determined that a 3/3002 was more appropriate.
Drive may hang on MTR	If the drive is powered on with a cartridge in the drive, it might hang during MTR (Mid Tape Recovery) due to a code issue where there is contention between code segment.
WRITE failed with an FSC 7346	The Drive failed a WRITE command incorrectly. A reporting action, which should have been handled without a failure, should have been suppressed as a perm failure.

Issue	Description
LP17 not correct on a load/hold	When a cartridge was loaded but not treaded, LP17 was incorrectly updated. LP17h should not be updated at the HOLD position but should keep the last mounts values until fully mounted (i.e., completed threading and ready to be used).
Drive fails the READ at EOW with a FSC 6353	Drive failed a READ at the EOW because it mistakenly read stale data from the buffer when it should have checked the Tape Directory.
Reject load of refurbished cartridge	Added code to reject a refurbished cartridge on LOAD.
Avoid referring invalid TD for WP confirmation	When reading the last wrap, which had failed a WRITE previously, the drive used the WP from the tape directory, which was invalid.
READ failed with an FSC 6353	The starting position of a read ERP was not correct which caused the drive to start the ERP in the wrong position.
Drive discards a block on a command abort	The drive discarded a block when an unsupported HBA aborted a write command after the drive sent status indicating Early Warning was encountered.
Some MAM attributes out of order or absent in command response	Attributes 1010h/1011h are out of order and attributes 1000h/1001h are missing when issuing READ_ATTRIBUTE command with service action 5.
Panic during positioning	Due to race condition on recovered error, one of the expected fields was empty which cause the drive to panic.
Drive failed a READ on a tape which had a previously failed WRITE	The drive referred to an invalid tape directory caused by a previous WRITE failure. When the drive READ into the last wrap it failed. Drive should avoid referring to an invalid Tape Directory.
Drive incorrectly reported end of data	Drive ran across an old EOD which had been overwritten by a suspended append write. A check was added to verify the EOD detected, was the EOD reported in the CM.
EOD READ failure on tape test	During a tape test, the drive incorrectly read the EOD information from the CM which was not correct.
Full length LTU is sometimes done with no tape motion	An unload command might take up to 4 min. to complete even though no tape motion was done after the load command.
Reposition timeout due to incorrect location	The drive would continually try to read from the same incorrect location and could not get to the proper position.
Reposition timeout	The drive got into a condition where it could not get to the reposition target. The starting position of the reposition was corrected so that target could be found.

Issue	Description
Fix canister port 1 activity LED	Fixed a code issue where the activity for PORT 0 was incorrectly being reported for PORT 1.
Front Panel LED light change	Made some LED light behaviors on an OEM specific HH implementation for drive cleaning.

Functional Change Requests (FCR)

Issue	Description
Implement E_12VPC (disable 12V off) mode support	Allows for 12 Volt power to still be active during power-on mode.
Media wear indicator & capacity param for LTO	Added two parameters to LP17h to provide information on media wear out and application design capacity reporting.

Contacting Quantum

More information about this product is available on the Service and Support website at www.quantum.com/support. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact Quantum:

United States:	+1 800-284-5101 (toll free) +1-720-249-5700
EMEA:	+800-7826-8888 (toll free) +49-6131-3241-1164
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For additional contact information:	www.quantum.com/support
To open a Service Request:	www.quantum.com/osr