

# Release Notes

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**Product:** Scalar® 10K 313A.00001

**Date:** January 2007

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## Purpose of This Release

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This release provides an update to the Scalar 10K firmware, which resolves several functional issues. Refer to [Resolved Issues](#) on page 4.

## New Features and Enhancements

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The Scalar 10K 313A release includes the following new features and enhancements.

- **Aisle Light Options**

The Scalar 10K library now provides the capability to set timer durations for the aisle lights using options available in the Operator Panel (Utils > Library > Lights). You can set the aisle lights to be on for two, four, six, eight, or ten hours, or you can set the lights to be continuously on.

- **IBM LTO-3 Fibre Channel 4Gb Support**

The Scalar 10K library now supports the integration of IBM LTO-3 4 Gb drives.

- **Logical Tape Drive Serial Number**

If a drive supports this feature, the Scalar 10K library can write a logical serial number to the drive that will always be the same for that drive position in the library. The logical serial number that is assigned to the drive position is the last nine digits of the world wide name assigned to the drive slot, preceded by the character, "F".

You can enable or disable the logical serial number through the Operator Panel. When enabled, drives display the logical serial number instead of the manufacturer's serial number.

- Note: When enabling or disabling the logical serial number, the library must be power cycled before the change is reflected in the library. Once you enable the logical serial number feature, the manufacturer's serial number is no longer visible and the logical serial number is listed in the library logs, along with the manufacturer's serial number.

Drives that currently support this feature are:

- IBM LTO-1 SCSI / FC, IBM LTO-2 SCSI / FC, IBM LTO-3 SCSI / FC, IBM LTO-3 4Gb FC, IBM 3592-J1A/TS1120.

- **IBM TS1120 Drive Support**

The Scalar 10K library now supports the TS1120 drive. This drive returns an element type of 0x06. Refer to the Scalar 10K SCSI Reference Guide for information on drive element types.

- **WORM Support**

The Scalar 10K library supports WORM (write once, read many) technology in LTO-3 tape drives. WORM allows non-erasable data to be written once and provides extra data security by prohibiting accidental data erasure. When the library firmware and WORM-supported LTO-3 tape drive code are installed on a library with LTO-3 tape drives, the WORM feature is supported whenever the operator uses WORM cartridges.

- Note: Due to the addition of the LTO-3 WORM support, if a 3592-J1A/TS1120 drive is installed in the library, the library must be inventoried after the upgrade. If the library is not inventoried after this upgrade, the media types for 3592 J1A or TS1120 media will be listed incorrectly and mounts to the drives may fail.

# Compatibility Matrix

The following table provides information about drive and auxiliary firmware compatibility with Scalar 10K 313A.00001. This information is current as of the publication date of these release notes. For the most current information, contact the Quantum Technical Assistance Center.

Component	Firmware Version
RMU	210A.00002
Scalar DLC	2.6
AMC	4.4.2
<b>SNC</b>	
SNC 3100	3.42.18
SNC 5100	4.45.18
<b>Drive Types</b>	
LTO-1	5AU1 (SCSI, FC) 53J1 (SCSI, FC)
LTO-2	5AT0 (SCSI, FC) 53Y2 (SCSI, FC)
LTO-3	64D0 (FC) 5481 (FC)
AIT-2	0203_001
AIT-3	0209_0001 0207_1002
DLT-8000	V80
SDLT 220	V87
SDLT 320	V87
3590 E1A / H1A / B1A	DOIF_26E
3592-J1A	D310_825
TS1120	D311_942



## Note

The library assigns 12-character logical serial numbers to 3592-J1A tape drives. If you use IBM Tivoli® Storage Manager (TSM), install a version of the TSM device driver that is *later* than maintenance release 5.2.4.4 (for TSM 5.2) or *later* than 5.3.1.1 (for TSM 5.3) to ensure that TSM can properly identify 3592-J1A tape drives according to their 12-character logical serial numbers.

# Resolved Issues

This release of Scalar 10K firmware resolved the following issues. This table also shows cumulative information for previously released versions.

Change Request Number	Service Request Number	Description
<b>Version 313A.00001</b>		
64349		Sled code incorrectly determines DDC boards to be LDC boards causing boot failures.
<b>Version 312A.00001</b>		
64247		When the library gets many READ ELEMENT STATUS commands from SCSI (20-30/sec) the library may go Not Ready.
<b>Version 311A.00001</b>		
62065		The drive firmware code for TS1120 drives should be updated to ensure the library initializes the TS1120 drives properly.
<b>Version 310A.00002</b>		
48008		When powering up, the Scalar 10K library should always turn on at a slow speed to avoid damage to the library if a motor, pulley assembly, or logic fails.
54701		The library can cause a SAC 35 and hang the library if certain conditions exist during a SCSI abort.
54936		The gripper test should be run at boot, and the results printed in the log so the health of the gripper can be evaluated.
57293		DLT 8000 drives generate a SAC 96 when mounting tapes into the drive. The problem was caused by code sending a request for an extended status to the drive, which is only supported in SDLT drives. This caused the drive to report an error. A request for extended status to DLT 8000 drives is no longer sent.
<b>Version 304A.00001</b>		
CR 30354	N/A	Capture and log False Symptom Codes (FSCs) from drives. After being captured, the FSCs are logged by the Library SCSI Controller (LSC) and are visible through the Library Command Log.
CR 42442	N/A	Send the tape's VOLSER to the drive so when drive information is extracted it will contain a meaningful VOLSER that a customer can locate. (LTO & 3592 drive types are the only ones that support this feature so far.)
CR 43221	N/A	Tape Alert (TA) information more accurately reflects the condition of the drive.
CR 47537	SR 420534	When large amounts of data were passed to the host, high SCSI activity would cause a Service Action Code (SAC) A3 for the gripper. For example, the SAC A3 occurred when the library performed multiple tasks, such as teach the IE and attempting to send data to the host over SCSI bus. The Library SCSI Controller (LSC) became so busy it could not service responses to the gripper command and would post a SAC A3 on the operator panel. Now if the SCSI bus is busy performing large data transfers, the other operations will wait for the data transfer to complete before issuing additional commands to the gripper.

Change Request Number	Service Request Number	Description
CR 51700	SR 461614	When a drive was being varied online, the cartridges that were in other drives would be set to the default media type. When the cartridges that were in other drives were moved back to storage slots, the library could no longer place them back into a drive if their new media type was not the correct type for the drive. Now when a drive is being varied on line, the library will not set the media type of cartridges that are in other drives.
CR 52796	SR 465006	Touch teach failures should not post operator panel messages for IE stations. The library notes the failure in the library log, but no longer posts the touch teach failure to the operator panel, because the library does not fail and the IE magazines can still be used to import and export the media.

Change Request Number	Service Request Number	Description
<b>Version 303A.00001</b>		
CR 49088	SR 448174	<p><b>Opening and closing the I/E door during the vaulting operation causes the operation to fail</b></p> <p>If the I/E door is opened and closed while Netbackup is vaulting to the I/E station, Netbackup vaulting operations can fail. If the vaulting operations fail, the operator must restart the vaulting job. Opening and closing the I/E door while the vaulting operation is in process is considered to be operator error.</p> <p>To avoid causing this failure during the vaulting process:</p> <ul style="list-style-type: none"> <li>• Open the I/E doors only when prompted to do so by Netbackup.</li> <li>• Open all of the I/E doors at the same time and remove all cartridges.</li> <li>• Close all of the I/E doors at the same time and make sure the lock light is on all I/E station doors that were closed prior to telling Netbackup to proceed with the vaulting operation.</li> </ul> <p><b>Library no longer returns the full status on an open I/E door</b></p> <p>Formerly, when the I/E doors were opened fully loaded with cartridges, and the cartridges were removed and the I/E doors closed, Netbackup would attempt to move the cartridges back into the library. The vaulting process would fail and the library would return a 02/53/02 service action code.</p> <p>The vaulting process failed because the library returns an exception status for all cells when the I/E door is open. However, when Netbackup checks the status of the cell it ignores this exception status and recognizes only the full status. To avoid the error, the firmware has changed so that when the I/E door is opened, the library no longer returns the full status and voltag information in response to a Read Element Status command.</p> <p><b>Library processes I/E door interrupts sooner</b></p> <p>Formerly, as soon as the first I/E door was closed, the library would block the interrupts while teaching and inventorying the I/E door. The library code has changed so that the I/E door interrupts are disabled only during critical move operations.</p> <p><b>Library allows time for SCSI commands to complete between opening and closing I/E doors</b></p> <p>Formerly the library would finish teaching and inventorying all I/E doors that were closed before processing any other information. This caused SCSI commands waiting in a queue to time out and moves to fail. The library code has changed so that after each door is taught and inventoried, the library processes all waiting SCSI commands prior to teaching and inventorying the next door.</p>

Change Request Number	Service Request Number	Description
<b>Version 302A.00001</b>		
CR 45736	SR 427194	<p>When one I/E station is being taught and inventoried, it was possible for the Read Element Status (RES) for the other I/E stations to be inaccurate. For example, after you opened I/E station 2 and then closed it, the S10K locked the station to the SCSI host while it performs the teach and inventory for the I/E station. While the S10K performed the teach and inventory for the I/E station 2, the S10K allowed you to open and close I/E stations 1, 3, 4, because the RES data returned to the host indicated that these other I/E stations were accessible. However, if the host then issued a move to the cells in one of these I/E stations, the move would fail.</p> <p>With release 302A, all other I/E stations are locked to the host while the S10K teaches and inventories the I/E station that was just opened and closed.</p>
<b>Version 301A.00002</b>		
CR 43807	SR 404660	Fibre channel topology selection for sleds does not correctly affect the configuration of the drive. Instead, the drive is always configured to operate in AUTO topology mode, independent of OP panel choice.

# Known Issues

This release of Scalar 10K firmware has the following known issues:

Change Request Number	Service Request Number	Description	Workaround
33359	282830	On occasion, the vertical mounting of a 3590 tape drive might be higher than the vertical window expected by the library firmware to successfully scan for the drive fiducial. As a result, the library cannot teach the drive.	Manually adjust the vertical placement of the 3590 tape drive or the front bezel until the library can successfully teach the drive.
40518		When a Teach Current operation is performed for a DM, a drive teach failure can return an incorrect bay number to the Operator Panel.	Physically inspect the drive bay that the failure indicated or possibly the bay that is located immediately before. The bay that is identified by the failure might not exist.
41203		When using a data tape instead of a FUP tape to update a list of drives, the library correctly posts a "BAD FIRMWARE MEDIA" operator intervention message, but continues to the next drive in the list. The operation should fail and not continue.	No applicable workaround is available.
41301		After cleaning cartridges are ejected from drives, the View dialog ( <b>Main Menu ► Setup ► Cleaning ► View</b> ) continues to indicate a Valid status for the first cleaning cartridge rather than clearing the status.	Make sure that cleaning cartridges are inserted into the library by using the Insert Clean Tape command ( <b>Main Menu ► Commands ► Insert/Eject ► Insert Clean Tape</b> ). This operation physically inserts the cartridges and also inserts them into the library database.  NOTE: Do not use <b>Main Menu ► Setup ► Cleaning ► Media</b> to perform this operation. This operation inserts the cartridges into the library database only.



Change Request Number	Service Request Number	Description	Workaround
41305		The usage count for the first cleaning cartridge increments when a second cleaning cartridge is used.	Make sure that cleaning cartridges are inserted into the library by using the Insert Clean Tape command ( <b>Main Menu ► Commands ► Insert/Eject ► Insert Clean Tape</b> ). This operation physically inserts the cartridges and also inserts them into the library database.  NOTE: Do not use <b>Main Menu ► Setup ► Cleaning ► Media</b> to perform this operation. This operation inserts the cartridges into the library database only.

## Documentation

The following documents are currently available for the Scalar 10K.

Document Number	Document Title
6-01023-01 Rev A	Scalar 10K Unpacking Instructions
6-01337-02 Rev A	Scalar 10K Planning Guide
6-00058-03 Rev A	Scalar 10K Operator Guide
6-01338-02 Rev A	Scalar 10K SCSI Reference Manual

## Contacting Quantum

More information about this product is available on the Service and Support website at [www.quantum.com/support](http://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:

**Quantum Technical Assistance Center in the USA:** +1 800-284-5101

**For additional contact information:** [www.quantum.com/support](http://www.quantum.com/support)

**To open a Service Request:** [www.quantum.com/esupport](http://www.quantum.com/esupport)

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