



Quantum Scalar i6000

Release Notes

Product	Scalar® i6000
Firmware Version	776Q.GS01600 (i13.4)
Supported Web Browsers	Firefox Chrome Microsoft Edge Apple Safari
Date	January 2020

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About This Release

The Scalar i6000 776Q.GS01600 release is a maintenance release that details bug fixes described in the [Resolved Issues - 776Q.GS01600](#) section. Refer to [Known Issues - 776Q.GS01600](#) for additional information.

What's New

The Scalar i6000 776Q.GS01600 release contains the following enhancements:

- IBM LTO-7 and LTO-8 drive code updates.

For additional information regarding these new features, please visit the [Scalar i6k Documentation Center](#).

Special Instructions - Access Legacy Java GUI

As of firmware release 776Q.GS01600, Scalar i6000 no longer uses the Java GUI as the default interface. In firmware release 770Q (i13.2) and above, the Scalar i6000 Java GUI has been disabled.

However, you can still use Java Web Start to run the legacy remote Java GUI.

Note: To run the legacy Java Web Start you need to be using JRE version 7(1.7) or version 8 (1.8) and a supported browser.

- 1 Enable the Java GUI from the LMC tab in the **Setup > Security** dialog window.
- 2 In your browser, type the library IP address or library name in the address field followed by `/lmc.jnlp`.
- 3 Press **Return** to start downloading the Library Management Console (LMC) Java applet (some browsers will give a warning but accept the download).
- 4 Select **Show in Folder**.
- 5 Double-click the file to start the Java applet and connect to the library.

General Information

- The i6k robot FRU (part number 9-02418) with a -05 and higher in the part number now requires 775Q (i13.3) or above library firmware.
- The Scalar library Web UI application requires that the browser cache be cleared and the application re-loaded to ensure that all new functionality is implemented.
- The Web client places a cookie on the user's computer to provide the last user's credentials upon login. The cookie only collects the user's credentials to facilitate login, and does not collect any other user data.

- If you are using the legacy Java GUI, to prevent any firmware upgrade failures when going from i12.x firmware to i13.x, make sure you are running either Java version 7 (1.7) or version 8 (1.8).
- Secure HTTPS communication protocols SSLv3, as well as TLS 1.0 and below, have been turned off due to identified security vulnerabilities such as *POODLE*. Supported browsers need to have TLSv1.1 or TLSv1.2 support enabled. TLS 1.3 is not currently supported.
- To help maintain system integrity and for marketing purposes, Quantum regularly collects system information through automatic emails and cloud based telemetric auto support. These emails and auto support telemetric data contain configuration and status information only, and do not contain any customer data stored on the system.

Email Support

Note: This is only relevant if you have an email server (SNMP).

To disable this function:

- 1 Log on to your library.
- 2 Select **Notifications** from the **Navigation** menu.
- 3 Select the check box next to *scalartelemetrics@quantum.com* in the **North Panel**.
- 4 From the **Operation** panel, select **Reports**.
- 5 Click the trash can icon next to **Scalar Telemetrics report**.
- 6 Click **Apply**, then **Close**.

Auto Support

To disable this function:

- 1 Log on to your library.
- 2 Select **Notifications** from the **Navigation** menu.
- 3 Select the check box next to *Auto Support* in the **North Panel**.
- 4 To disable RAS tickets, select **RAS Tickets** From the **Operation** panel.
- 5 De-select the **Enable Auto Support Communication** check box.
- 6 Click **Apply**, then **Close**.
- 7 From the **Operation** panel, select **Reports**.
- 8 Click the trash can icon next to **Scalar Telemetrics report**.
- 9 Click **Apply**, then **Close**.

Library Default Settings

Scalar i6000 software is installed with certain default settings. This section outlines those default settings. Review this section to determine if any of the default settings need to be changed to make your library run more effectively.

WebGUI Path	Option	Default Setting
Library > Settings	Automatic Inventory	Disabled
	Library-Assisted Drive Unload	Enabled
	Logical Drive Serial Number Addressing	Enabled
	Robot Health Check Interval	Once Daily
	Tower Health Check Interval	Once Daily
	Rail Health Check Interval	Once Daily
System > Notifications	Email Reports / Auto Support	Enabled
System > Settings	Aisle Lights	Enabled (duration set to 1 hour)

Security Scanners

Quantum tests with the following Security scanners against the library:

- Nessus Professional Version 7 - Version 7.0.2 (#110) WINDOWS
- insightVM 6.5.8

Compatibility and Support

Encryption Key Management Drive Support

While the Scalar i6000 library supports multiple partitions configured for encryption, only a single encryption type can be used.

Encryption Option	HP LTO-4	IBM LTO-4	HP LTO-5	IBM LTO-5	HP LTO-6	IBM LTO-6	IBM LTO-7	IBM LTO-8
Application Managed Encryption	Yes							
Q-EKM	No	Requires EKM License	No	Requires EKM License	No	Requires EKM License	No	No
TKLM/SKLM	No	Requires EKM License	No	Requires EKM License	No	Requires EKM License	Requires EKM License	Requires EKM License
SKM	Requires EKM License	No	Requires EKM License					
KMIP Key Manager ¹	Requires EKM License	No	Requires EKM License					

¹ - Only SafeNet, IBM SKLM and Thales encryption key servers are supported KMIP configurations

Web Browser Support

The Scalar i6000 WebGUI supports the following web browsers. Quantum recommends upgrading to the latest version of the browser.

Web Browser	Versions Supported
Internet Explorer	Not supported.
Google Chrome	Version 51 and above.
Mozilla Firefox	Version 55 and above.

Firmware Compatibility Matrix

The following tables show information on drive compatibility with this release of Scalar i6000. This information is current as of this product release. For the most up-to-date information on the latest qualified firmware, please visit: <http://www.quantum.com>.

IBM Drive Types	Minimum Firmware Version ¹
IBM LTO-3 (FC) 2 Gb	93GM
IBM LTO-3 (FC) 4 Gb	93GM
IBM LTO-4 (FC) 4 Gb	C7QH
IBM LTO-5 (FC) 8 Gb	H970
BM LTO-6 (FC) 8 Gb	K4M0 ²
IBM LTO-6 (FC) 8 Gb (FIPS)	K4M0
IBM LTO-7 (FC) 8 Gb	K4K4 ²
IBM LTO-7 (FC) 8 Gb (FIPS)	K4K4
IBM LTO-8 (FC) 8 Gb	K4K4 ²
IBM LTO-8 (FC) 8 Gb (FIPS)	K4K4
1. Check with Quantum Support for the latest firmware. 2. Included in library firmware bundle.	

HP Drive Types	Minimum Firmware Version ¹
HP LTO-3 (FC) 2 Gb	L67Z
HP LTO-3 (FC) 4 Gb	M69Z
HP LTO-4 (FC) 4 Gb	H64Z
HP LTO-5 (FC) 8 Gb	I6RZ
HP LTO-6 (FC) 8 Gb	J5WZ ²
1. Check with Quantum Support for the latest firmware. 2. Included in library firmware bundle.	

Backup Software Compatibility

To view a list of backup software packages that have been tested for interoperability with the Scalar i6000, refer to the *Quantum Software Compatibility Guide* at <http://www.quantum.com/swcompguide.aspx>.

Resolved Issues - 776Q.GS01600

This release of Scalar i6000 776Q.GS01600 firmware resolved the following issues (bug fixes):

Change Request Number	Service Request Number	Description	Resolution
70055		RCU reports lost tape on robot initialization.	Fixed.
70758		Multiple restart and failures on power supplies no longer allowed.	Fixed.
70895		Robot does not recover tape when robotics are enabled, but recovers tape if library reboots.	Fixed.
70907		New IBM drive code.	Enhancement.
70953		Library uses same cleaning tape repeatedly, even after the tape is expired.	Fixed.
71064		Tape left at a location other than the specified destination now returns failed status (Web Services only).	Fixed.
71341		Set firmware version for Unit Attention (UA).	Fixed.

Known Issues - 776Q.GS01600

This release of Scalar i6000 776Q.GS01600 firmware has the following known issues:

Change Request Number	Service Request Number	Description	Workaround
60636	3603548	Email requires secure configuration/authentication that Quantum does not support.	No workaround.
61255	3702952 3726084	In a dual robot system, in some rare cases when a robot fails, the library doesn't correctly fail over to the other robot.	Open/close the door, check for obstructions or stuck tapes.
64854	351347	Kernel Oops in Freescale display driver.	Oops occurred on shutdown and the library came back up without issue. Take snapshot, report issue and close ticket.

Change Request Number	Service Request Number	Description	Workaround
66066		When a user selects Full Restrictions for media checking on a partition via the Java GUI, the WebGUI still allows an unsupported media type to be moved into a drive.	User the Java GUI for full media checking.
66370		Company Name field does not save when the name contains an apostrophe.	Do not use an apostrophe in the Company Name field on the Contact screen.
67105		Drives automatically get varied off if taken from LME/FIPS partition to just LME partition.	This is a race condition, Wait a few minutes after removing the drives before adding them to another partition.
67287		RAS ticket report notification is in csv file format, but uses "!" separators instead of "," separators. This causes readability issues when opening the file in Excel.	Change the separator format in Windows: <ol style="list-style-type: none"> 1 In Microsoft Windows, click the Start button, and then click Control Panel. 2 Open the dialog box for changing Regional and Language settings. 3 Click Additional Settings. 4 Enter ! in the List separator field. 5 Click OK twice.
67274		Firmware download issue when dual robot missing.	Both robots must be in library when firmware download occurs.
67368		Tickets report saved as a zip file, but cannot be opened.	Save report with csv file format.
67514		Library requires calibration when rolling back code.	A manual full library calibration is required for the following code roll back scenarios: <ul style="list-style-type: none"> • Pre-i13 code from i13.0.x code. • Library has i13.0.x code, a roll back to pre-i13 code occurs, and i13.0.x code is re-installed.
67660		Browser issues when loading a new SSL certificate.	Redirect to HTTP (not HTTPS) on logout. This automatically will switch again to HTTPS and force the browser to renegotiate.

Change Request Number	Service Request Number	Description	Workaround
68364	434673	QEKM and KMIP servers are configured for use with separate partitions. The configuration does not work because the library keeps accessing the QEKM servers even from the KMIP partition drives.	QEKM and KMIP are not supported. Remove the QEKM or KMIP server and configure the partition to the remaining server.
68973		Service > Teach > Calibrate reports success when the library is not in a ready status.	Library must be in a ready status to run calibration.
69114		Both robots used when selecting left or right robot for a robot scanning diagnostic test.	Vary off the robot not selected scanning before running diagnostic test.
69178		Robot does not initialize after system reboot.	Vary off and vary on the robot.
69370		If a different generation of drive is added to a partition in a slot where a drive was just removed, the new drive cannot be varied on, even after removing it from the partition.	Close the Partition > Resources dialog modal after logically removing the drive from the partition. Re-open it and add the new drive.
69404		Network IPv6 stateless to stateful change results in error.	This error occurs on the first attempt. The change will occur on the second attempt.
69465		After performing a drive clean operation, the Drive Cleaning report the Media Use Count appears to be based on the number of times the media has been used in the library and not the number of times used stored on the CLN media.	The count will be incorrect, but the ticket that shows the Cleaning tape has expired is accurate.
69882		The StorNext path test is not functional for HTTPS webservice configurations.	When creating a StorNext Application Interface Configuration (Library > Application Interface Configuration > Add), use HTTP protocol instead of HTTPS.
71116		False firmware mismatch RAS ticket is generated.	Verify firmware. If a mismatch occurs, vary the drive off and on.

Documentation

The following documents are currently available for the Scalar i6000.

Document Number	Document Title
Documentation Center	<i>Scalar i6000 User's Guide</i>
Documentation Center	<i>Scalar i6000 Planning Guide</i>
6-67320-xx	<i>Scalar i6k Open Source License Agreement</i>
6-68185-xx	<i>RESTful Web Services API Guide</i>
6-00423-xx	<i>Scalar Intelligent Libraries SCSI Reference Guide</i>
6-01159-xx	<i>Scalar i6000 Basic SNMP Reference Guide</i>

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:

Quantum Technical Assistance Center in the USA:	+1 800-284-5101
For additional contact information:	www.quantum.com/support
To open a Service Request:	www.quantum.com/osr