

Scalar i40 and Scalar i80: System Control Board Replacement

These instructions explain how to remove a System Control Board (SCB) from your Scalar[®] i40 or Scalar i80 library, and replace it with a new one.

The SCB contains library firmware, tape drive firmware, all configurable settings, license keys, and SKM TLS certificates. After you replace the SCB, you must either restore a previously saved configuration, or reinstall the license keys and manually reconfigure the settings.

Note: When you replace the SCB you will permanently lose all data previously collected for logs and reports.

To replace the SCB, refer to the following sections:

- [Taking ESD Precautions](#) on page 1
- [Removing the System Control Board](#) on page 2
- [Replacing the System Control Board](#) on page 4
- [Installing Library Firmware](#) on page 4
- [Configuring the Library](#) on page 5

Taking ESD Precautions

To avoid damaging static-sensitive parts while performing this procedure, observe the following precautions:

- Use an antistatic wrist strap. If you do not have one, touch the outside of the library on the sheet metal before touching any components, to discharge static from your body.

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- Keep static-sensitive parts in their original shipping containers until ready for installation. Look for the ESD sticker to identify static-sensitive parts.



- Avoid touching connectors and board components.

Note: Dry climates and cold-weather heating environments have lower relative humidity and are more likely to produce static electricity.

Removing the System Control Board

These instructions explain how to power down and remove the system control board from the Scalar i40 and the Scalar i80 library.

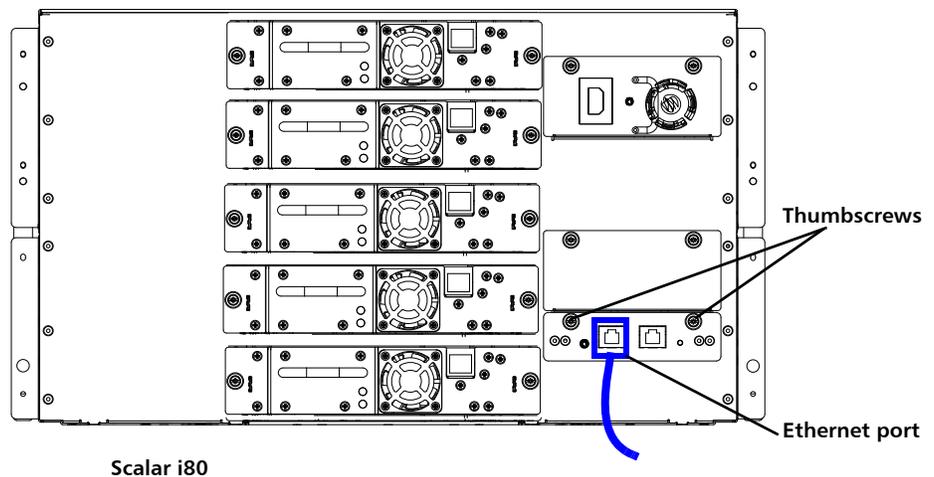
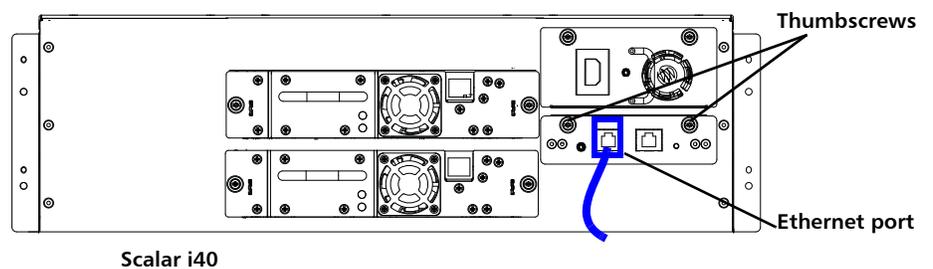
Caution: You must completely remove power from the library before removing and replacing the system control board.

- 1 If the library is still operational, save the library configuration.
 - a From the Web client, select **Tools > Save/Restore Configuration**.
 - b Select **Save System Configuration**, and click **Apply**.
- 2 If the library is still operational, and you want to save log and report information for historical purposes, access the logs and reports you want using the Web client and save them to a known location.
- 3 If possible, save a library snapshot for future troubleshooting.
 - a From the Web client, select **Tools > Capture Snapshot**.
 - b Follow the on-screen instructions.
- 4 Prepare host applications by following the vendor instructions for stopping all commands to the library.
- 5 If the library is still operational, shut down the library:
 - a From the Operator panel, select **Actions > Shutdown**.
 - b Select **Shutdown Library** and **Yes** to confirm.
 - c When prompted on the screen, press the **OFF** button on the front panel and wait for the Operator screen to turn off, and for all the LEDs on the SCB to turn off.

- 6 Disconnect the power cords from the power supplies on the back of the library.

The Scalar i40 has one power supply. The Scalar i80 may have one or two power supplies. Make sure you disconnect all power cords from the power supplies.
- 7 Remove the Ethernet cable from the SCB (see [Figure 1](#)).
- 8 Loosen the two captive thumbscrews on the SCB.
- 9 Grip the thumbscrews and pull outward to slide the SCB out of the library.
- 10 Remove the new SCB from its packaging, and wrap the old SCB in the antistatic bag that the replacement SCB was wrapped in.

Figure 1 Ethernet Port Locations on the SCB



Replacing the System Control Board

These instructions explain how to replace the defective SCB.

- 1 Position the new SCB for installation as follows:
 - a Place the board components face up. (The flat part of the board faces down.)
 - b Be sure the thumbscrews are on the upper side of the SCB back plate (see [Figure 1](#) on page 3).
- 2 To install the new SCB, complete the following steps:
 - a Push the SCB into the slot until it stops.
It should slide smoothly and easily.
 - b When it reaches the end of its travel, press firmly on the back panel of the SCB to “snap” it into place.
 - c Tighten the two thumbscrews finger tight.
- 3 Connect the Ethernet cable to the **LEFT** Ethernet port on the SCB (as viewed from the back of the library; see [Figure 1](#) on page 3).

Installing Library Firmware

These instructions explain how to install the firmware for the library.

- 1 Connect the power cords to the power supplies on the back of the library.
Make sure that each power supply is plugged into a grounded AC outlet.
- 2 To turn the library **ON**, press the power button on the front panel.
The LED on the SCB should illuminate green. The green power LED on the library front panel above the power button illuminates, and the Operator panel screen turns on. The library goes through a connection and initialization sequence that takes up to 60 seconds.
When initialization is complete, the **Library Installation** screen appears on the Operator panel, displaying the text, “**The library needs to have its IP Address configured.**” The purpose of this screen is to set the IP address so you can access the library via the Web client and download firmware. (After you have loaded firmware, you can change or reconfigure IP addresses, if needed.)
- 3 From the Operator panel, press **Next**.
The screen displays the text, “**Current protocol: IPv4. Set protocol to IPv6?**”
- 4 Press one of the following options:
 - **Yes** — The library supplies a stateless IPv6 address and displays it, along with other network settings, on two screens. Use the **Next** and **Back**

buttons to view the screens. You can only change these settings via the Web client.

- **No** — You are asked if you want to use DHCP.
 - If you press **Yes**, the library receives an IPv4 address from the DHCP server and displays the information on the screen.
 - If you press **No**, use the **Up** and **Down** buttons to enter a **static IP address, mask, and gateway**. Set the numeric value for each segment of the address, then press the **Right** button to go to the next segment. To save the values, press **Apply**.

5 Take note of the IP address.

6 Download the latest library firmware to a known location on your computer. Library firmware is available at <http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/si40/index.aspx>.

- a Navigate to the appropriate firmware version.
- b Download the firmware image file.

7 From your browser, enter the library IP address that you obtained in [Step 5](#).

The Web client displays a screen instructing you to select the firmware image you want to load on the library.

- a Click **Browse** and select the firmware image you downloaded in [Step 6](#) to install on the library.
- b Click **OK**, then click **OK** again to agree to restart the library.

The Web client displays the following message:

```
Decoding installation bundle...done.  
Validating bundle...good.  
Installing firmware...library will reboot when complete.
```

After the library reboots, the **Setup Wizard** appears on the Operator panel. It may take up to 20 minutes before the **Setup Wizard** screen is displayed.

Configuring the Library

To configure the library, do one of the following:

- If you have saved a library configuration that you want to restore on the library, go to [Restoring the Library Configuration](#) on page 5.
- If you do NOT have a saved library configuration to restore on the library, go to [Manually Reconfiguring the Library](#) on page 7.

Restoring the Library Configuration

Follow the instructions in this section if you have a saved library configuration that you want to reinstall on the library.

- 1 From the Operator panel, press **Cancel** to exit the **Setup Wizard**.

- 2 Take note of the library's IP address; from the Operator panel, select **Reports > Network Settings**.
- 3 From the Web client, enter the IP address and log in using the default user name and password:
 - User name: **admin**
 - Password: **password**

Note: Once you restore the configuration, all your former user names and passwords are restored.

- 4 To restore the configuration using the Web client, complete the following steps:
 - a Select **Tools > Save/Restore Configuration**.
 - b Select **Restore System Configuration**.
 - c Click **Browse**. Navigate to the saved configuration and click **Open**.
 - d Click **Apply**.
 - e Click **OK**.

Note: Restoring the configuration does NOT restore your network settings.

- 5 Check the library's date, time, and time zone settings and reconfigure if necessary. (From the Web client, select **Setup > Date & Time**.)
- 6 If you changed the IP address from what it was originally, update host and other applications that access the library.
- 7 Save the library configuration.
 - a From the Web client, select **Tools > Save/Restore Configuration**.
 - b Select **Save System Configuration**, and click **Apply**.

Note: You must ensure the library is fully functional with the new SCB installation and configuration selections by running the Installation and Verification Test.

- 8 Run the Installation and Verification Test (IVT).
 - a From the Operator panel, select **Tools > IVT**.
 - b Follow the instructions and run the test.

The IVT takes about 30 minutes. If any problems are detected, the library issues a diagnostic ticket.
- 9 Package the old SCB in the packaging that shipped with the new SCB, and send the old SCB back to Quantum using the return shipping label included in the package.

Manually Reconfiguring the Library

Follow the instructions in this section if you do not have a saved library configuration.

When the firmware update is complete, the Setup Wizard appears on the Operator panel screen. The Setup Wizard helps you configure the date, time, IP address, IPv6 enable/disable, licenses, partitions, I/E slots, and cleaning slots.

Note: If you had licenses installed on your library, have them available so you can reinstall them. If you no longer have them, you can obtain them at <http://www.quantum.com/licensekeys>, or from Quantum Support.

- 1 From the Operator panel, complete the steps displayed in the **Setup Wizard**.

If you make a mistake or do not complete all the screens, you can change the configuration later using the Operator panel or Web client **Setup** menus.

Note: You cannot update the host name of the library or time zone on the Operator panel. If the displayed host name of the library or time zone is incorrect, you can change it later using the Web client (see [Step 5](#)).

- 2 Take note of the library's IP address (from the Operator panel, select **Reports > Network Settings**).
- 3 From the Web client, enter the IP address from [Step 2](#) and log in using the default user name and password:
 - User name: **admin**
 - Password: **password**
- 4 If you changed the IP address from what it was originally, update host and other applications that access the library.
- 5 Update the library name, time zone, and any other configuration settings, if required, using the Web client **Setup** menus.
- 6 If you are connecting to a Scalar Key Manager (SKM), take note that TLS certificates will need to be loaded onto the library. For instructions, refer to the *Scalar i40 and i80 User Guide, Checking and Installing TLS Certificates on the Library*.
- 7 Save the library configuration.
 - a From the Web client, select **Tools > Save/Restore Configuration**.
 - b Select **Save System Configuration**, and click **Apply**.
- 8 To ensure the library is fully functional with the new SCB installation and configuration selections, run the Installation and Verification Test (IVT).
 - a From the Operator panel, select **Tools > IVT**.
 - b Follow the instructions and run the test.

The IVT takes about 30 minutes to complete. If any problems are detected, the library issues a diagnostic ticket.

- 9 Package the old SCB in the packaging that shipped with the new SCB, and send the old SCB back to Quantum using the return shipping label included in the package.