# Scalar i40 and Scalar i80: Library Chassis Replacement

DISCLAIMER: Tests have been conducted on the finished product which has passed Safety Regulatory requirements at the time of the test.

**WARNING:** Two people are required to safely lift the library into and out of its packaging, a rack, or a desktop kit.

When you replace a Scalar® i40 or Scalar i80 library chassis, you will remove all the components from your existing library and install them in the new library.

To replace the library chassis, refer to the following sections:

## Required Tools

- Phillips #1 screwdriver
- Magazine lock override tool — an opened paperclip, small screwdriver, or other object (3.5 mm or less in diameter that will not break off)

# 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.

- 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 other components.

**Note:** Dry climates and cold-weather heating environments have lower relative humidity and are more likely to produce static electricity.
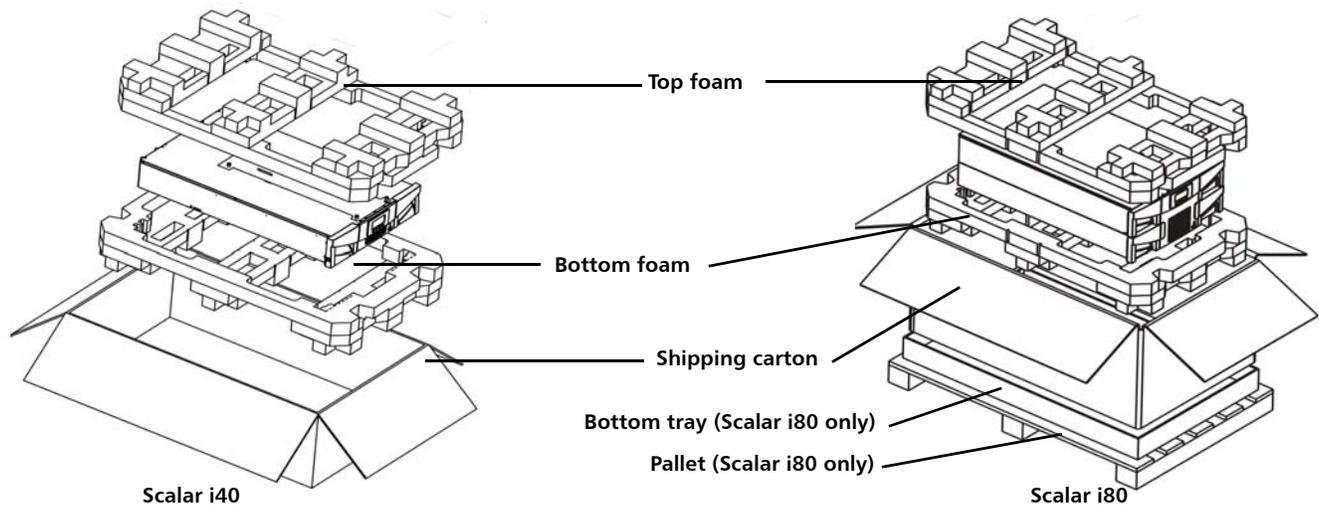
# Unpacking the Replacement Chassis

**Note:** Unpack the chassis as close to the installation location as possible.

These instructions explain how to unpack the library.

1 Inspect the outer library packaging for damage. If there is any damage evident on the library packaging, do not continue with the installation, and contact Quantum customer support.

Figure 1  Packaging



Top foam

Bottom foam

Shipping carton

Bottom tray (Scalar i80 only)

Pallet (Scalar i80 only)

Scalar i40

Scalar i80

**2** Remove the top foam.

**3** **Scalar i80 only:** Remove the shipping carton by lifting it straight up and out of the bottom tray.

> **WARNING:** Two people are required to safely lift the library out of its packaging or into a rack.

> **Caution:** Lift the library chassis at the sides. Avoid putting the weight of the library chassis on the front bezel.

**4** With the help of a second person, lift the library chassis out of the shipping carton and place it on a table approximately waist high.

**5** Remove the antistatic wrapping from the library. Keep the antistatic wrapping intact so that you can use it later if needed.

**6** Save the packing box, packaging material, and antistatic wrapping in case you need to move or ship the library in the future.

**7** Remove the protective plastic sheet covering the front panel display.

**8** Verify that the new chassis is the same type (Scalar i40 or Scalar i80) as the unit you are replacing.

**9** If you had license keys installed on your library, you will need to install new ones on the replacement library. Contact Quantum Support to request new license keys.

# Removing the Chassis

If the library you are replacing is still turned on and operational, complete Step 1 and Step 2; otherwise proceed to Step 3.

1  Save the library configuration by completing the following steps:

 a  From the Web client, select **Tools > Save/Restore Configuration**.

 b  Select **Save System Configuration** and **Apply**.

2  Shut down the library by completing the following steps:

 a  From the Operator panel, select **Actions > Shutdown**.

 b  Select **Shutdown Library** and confirm.

 c  When prompted on the screen, press the power button on the front panel to **OFF** and wait for the Operator panel to turn off.

3  Disconnect the power supply cord, the Ethernet cable, and all tape drive cables from the back of the library.

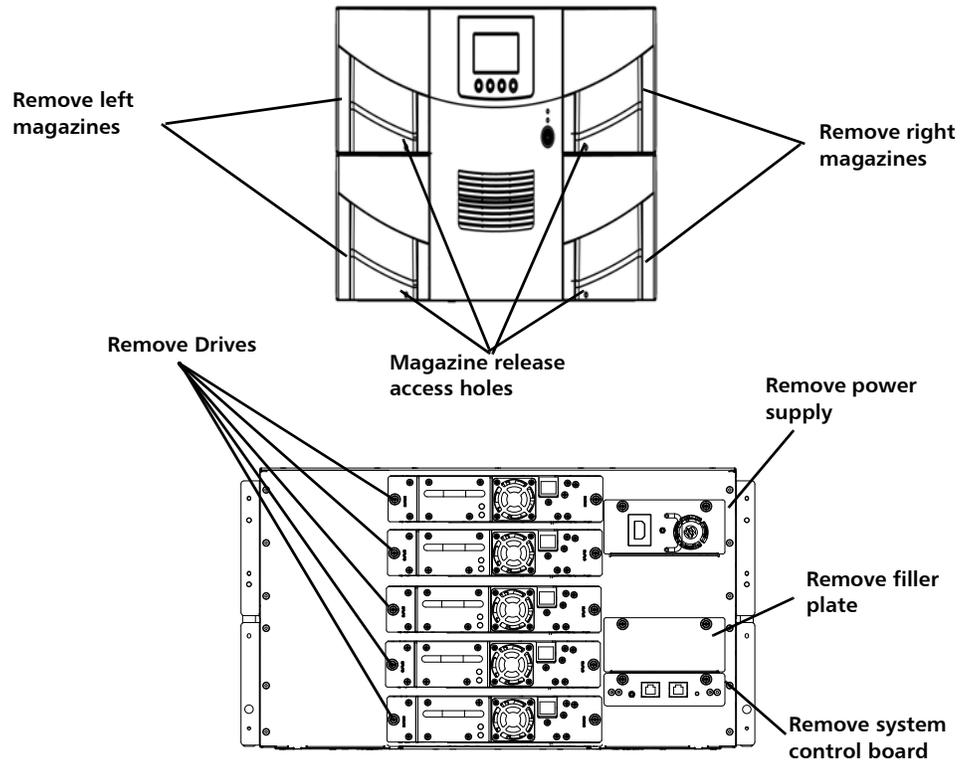**Note:**  If the library has multiple tape drives, label the cables so you can reconnect them to the correct ports.

4  Remove all of the following components from the library (see Figure 2 on page 6).

| Component to Remove | Instructions |
|---|---|
| Power Supplies | **Warning:**  Make sure the power supply is unplugged and disconnected from live power before you remove it. This can avoid injury. <br> 1 Disconnect the power cord from the back of the power supply. <br> 2 Unscrew the captive thumbscrews. <br> 3 Pull outward on the power supply handle to remove it from the library. |
| System Control Board (SCB) | 1 Loosen the two captive thumbscrews on the SCB. <br> 2 Grip the thumbscrews and pull outward to slide the SCB out of the library. <br> 3 Place the SCB on an antistatic surface or in an antistatic bag. |

| Component to Remove | Instructions |
| --- | --- |
| Tape Drives | **1** Label each tape drive with its location in the library slots. It is recommended that you reinstall the tape drives in the same location in the new chassis.<br><br>**2** Unscrew the captive thumbscrews securing the tape drive sled to the back of the library. Half-height tape drives have two thumbscrews. Full-height tape drives have four thumbscrews.<br><br>**3** Use the handle to pull the drive sled out of the library. It should slide out smoothly and easily. |
| Filler Plates | Remove all filler plates (tape drive and power supply).<br><br>**1** Unscrew the two captive thumbscrews.<br><br>**2** Pull the filler plate out. |
| Magazines | **1** If your library is a Scalar i80, label the magazines so you can reinstall them in the same slots.<br><br>**2** Insert the magazine lock override tool into the access hole in the bottom of the magazine bezel.<br><br>**3** Use the tool to depress the release latch while gently pulling outward on the magazine bezel handle. If the magazine is on the right side, it will only slide out as far as the I/E station.<br><br>**4** To release the magazine fully:<br><br>  • On the Scalar i40 and the bottom right magazine of the Scalar i80, reach under the open magazine and insert the tool directly into the access hole in the library chassis to depress the release latch, while pulling out on the magazine bezel handle.<br><br>  • On the top right magazine of the Scalar i80, reach under the open magazine and press the release latch directly with your finger, while pulling out on the magazine bezel handle. |

Figure 2  Components to
Remove



Remove left
magazines

Remove right
magazines

Remove Drives

Magazine release
access holes

Remove power
supply

Remove filler
plate

Remove system
control board

> **WARNING:**  Two people are required to safely lift the library out of a
> rack.

**5**  If the library is in a desktop kit or rack, remove it.

- To remove the library from a rack:

  **a**  Unscrew the captive thumbscrews on the front of the library that
  secure the library to the rack.

  **b**  Slide the library out of the rack.

  **c**  Place the library on a flat, stable surface.

- To remove the library from a desktop kit:

  **a**  Remove the two top cover screws at the rear of the top cover.

  **b**   Loosen the captive thumbscrews on the library chassis that are
  attached to the side panels of the desktop kit.

  **c**  Slide the side panels one-half inch toward the rear of the library to
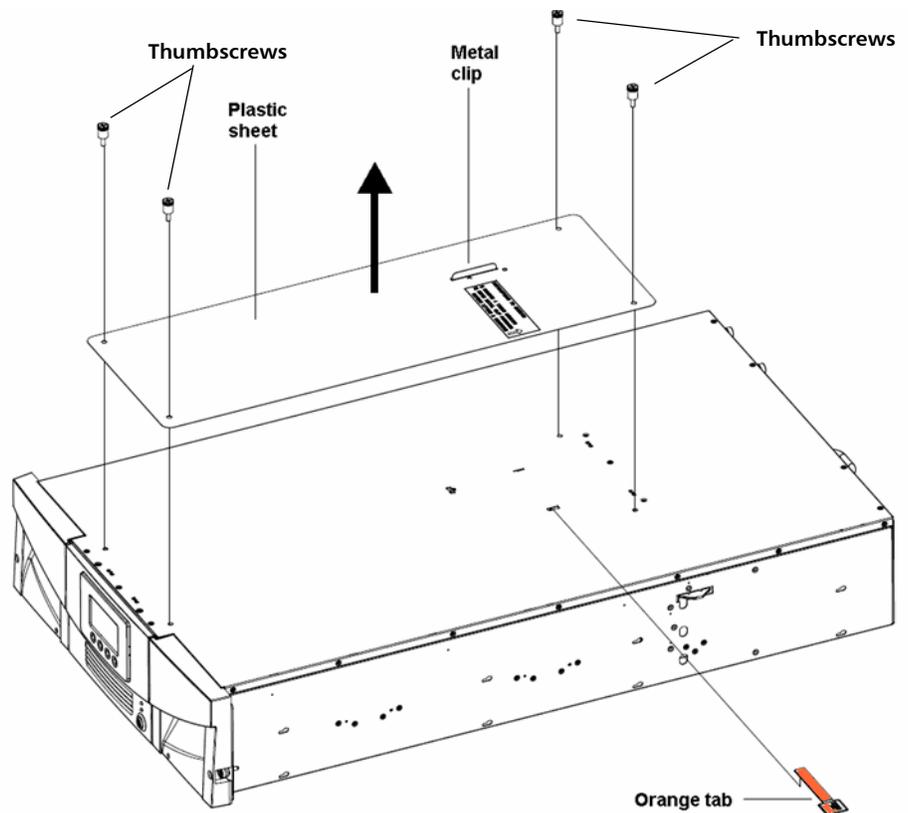  disengage the side-panel posts from the library wall, then pull the
  side panels off.

> **Note:** Do **NOT** remove the eight rubber "feet" installed on the bottom of the library (you will remove them later, in Step 7, Sub-Step c on page 8, once the library is set on its side).

6 Remove the robot (Y-tray) restraint from the replacement chassis. The Y-tray restraint consists of four (4) thumbscrews, a plastic sheet, a small metal clip, and underneath the plastic sheet, an orange restraint tab located on the top cover of the library. Figure 3 on page 7 shows these items.

a Unscrew and remove the four thumbscrews from the top cover. Save the thumbscrews for use in restraining the Y-tray in the chassis you are returning.

b Remove the plastic sheet and metal clip and discard. You will not need to use them again.

c **IMPORTANT:** Remove the orange shipping restraint tab and discard. You will not need to use it again.

Figure 3  Removing the Robot Restraint



> **Note:** The robot may stay at the top of the library, or it may move downward toward the floor of the library. If it moves downward, you will hear the gears turning as it moves. This is normal.

**7** Restrain the Y-tray in the chassis being returned as follows (see <span style="color:blue">Figure 4</span> on page 9):

**a** Look through the magazine slot openings to be sure the robot is resting on the floor of the library. If not, reach inside and gently press down on one of the Y-tray's side metal rods until the Y-tray starts moving. It should drift down to rest on the floor of the library.

**Caution:** Do not turn the library upside down. Do not turn the library more than 90 degrees from upright.

**b** Turn the library carefully on its side (either the left or right side). Make sure the front end of the library (the "rack ear") overhangs the edge of the table so that the library lies flat as shown in <span style="color:blue">Figure 4</span> on page 9.

**c** If your library was installed in a desktop kit, remove the eight rubber "feet" installed on the bottom of the library. Remove them by twisting them as you pull them out. Save them to use on the replacement chassis.

**d** Take the four thumbscrews you just removed from the replacement chassis and install them into the floor of the chassis you are returning, in the locations shown in <span style="color:blue">Figure 4</span>. They will screw through the Y-tray and secure it in place on the floor of the chassis.
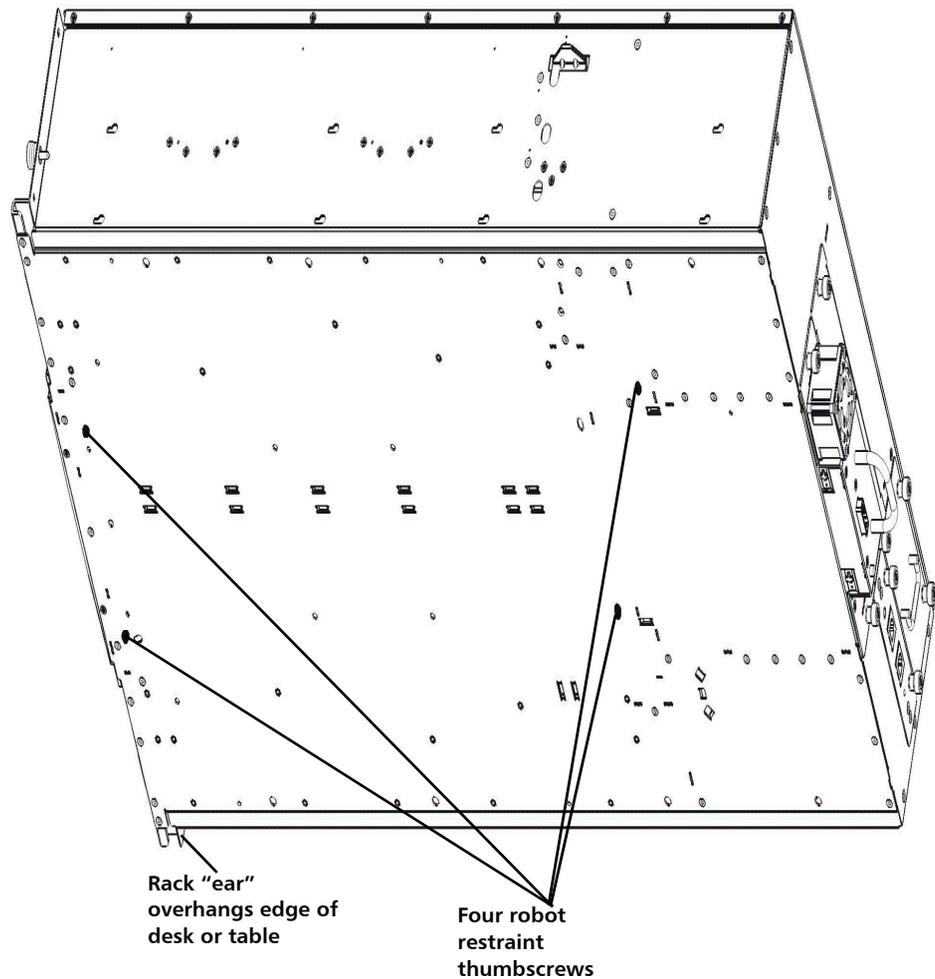
**Caution:** If you place the library upright with the Y-tray restraint thumbscrews installed, you could damage the chassis or Y-tray.

**e** Do NOT turn the library back to an upright position at this point; leave it on its side until you place it in the box.

Figure 4  Restraining the Robot

**Rack "ear" overhangs edge of desk or table**

**Four robot restraint thumbscrews**

8  If desired, you may cover the holes in the replacement library top cover with the stickers, which are provided in the accessory kit for this purpose. This step is optional and is intended to prevent small objects from accidentally falling into the library through the holes.

# Replacing the Chassis

**WARNING:**  Two people are required to safely lift the library.

Install the new chassis in one of the following kits:

- To install the new chassis in a rackmount kit, see the document *Scalar i40 and Scalar 80: Rackmount Installation* for instructions.

- Install the new chassis desktop kit, see the or the document *Scalar i40 and Scalar 80: Desktop Kit Library Installation* for instructions.

# Replacing Chassis Components

These instructions explain how to install all the components you removed into the replacement chassis and how to complete the setup process.

**1** Install the components you removed from the old chassis into the new chassis.

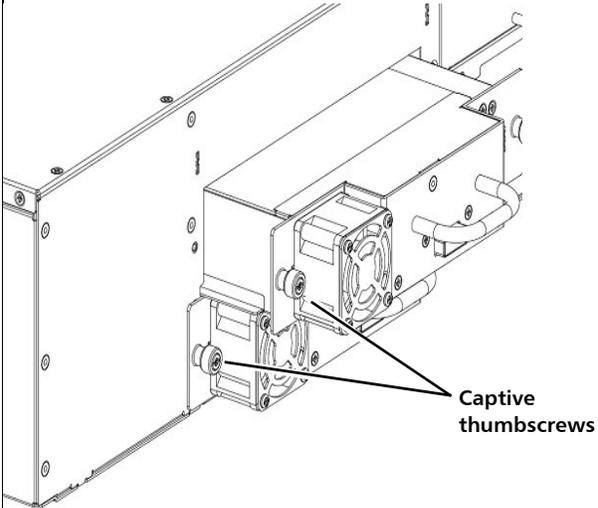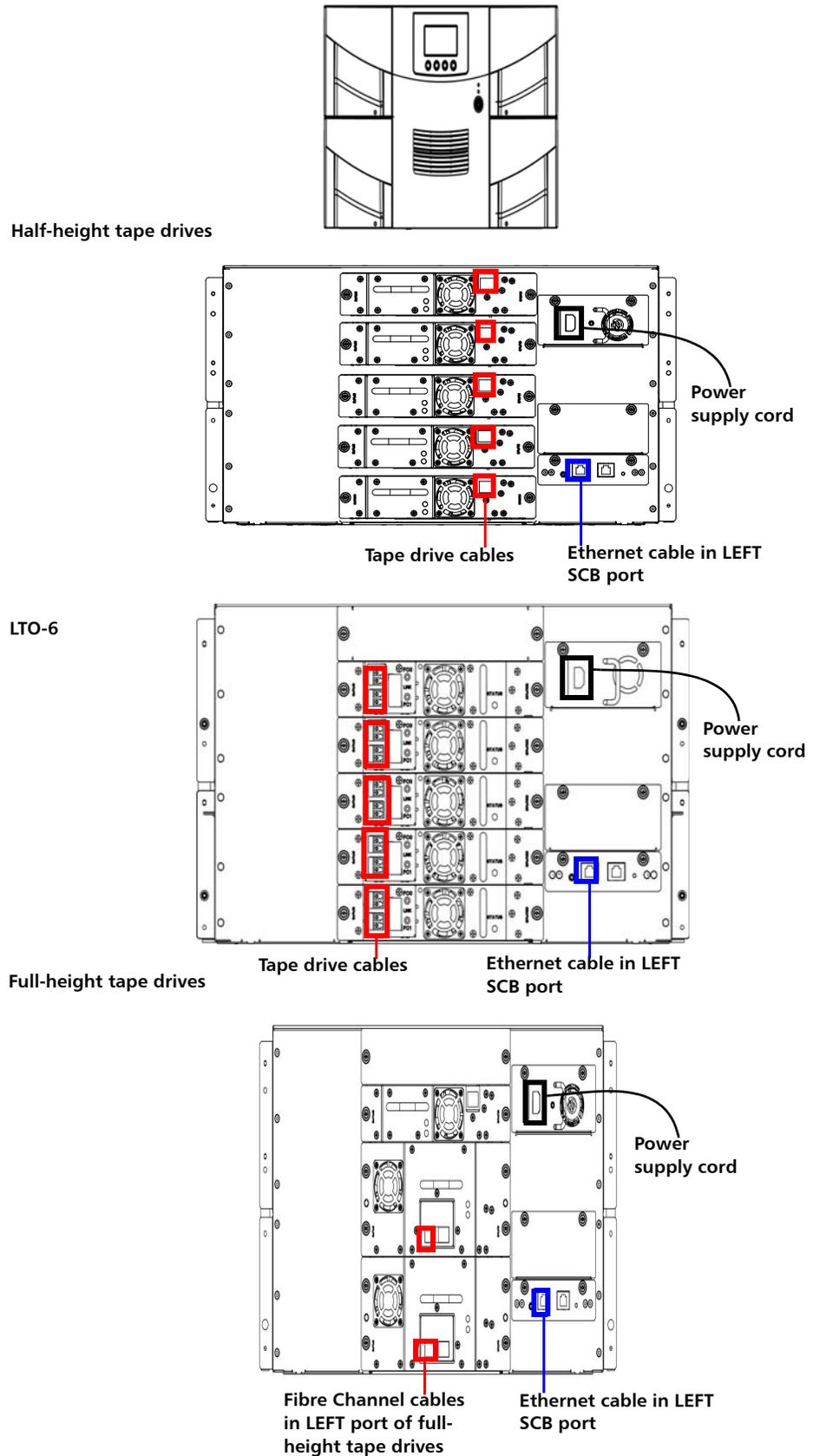| Components to install | Instructions |
|---|---|
| System Control Board (SCB) | Install the SCB **before** you install the power supply:<br><br>**1** Position the SCB for installation: The board components should face upward. The flat part of the board should face downward. The thumbscrews are on the upper side of the SCB back plate.<br><br>**2** Install the SCB by pushing the SCB into the slot until it stops. It should slide smoothly and easily. When it reaches the end of its travel, press firmly on the back panel of the SCB to "snap" it into place.<br><br>**3** Tighten the two thumbscrews finger tight.<br><br>**4** Connect the Ethernet cable to the LEFT SCB port (as viewed from the back of the library; see [Figure 5](#) on page 12). |
| Power Supplies | **Note:** If your library is a Scalar i80 and you have only one power supply, install it in the top slot. If you have two power supplies, install them both.<br><br>**Warning:** Make sure the power supply is unplugged and disconnected from live power before you install it. This can avoid injury.<br><br>**1** Push the power supply straight into the slot. You may need to press firmly on the power supply sheet metal at the very end to plug in the power supply to the connector on the library. You will feel it snap into place.<br><br>The power supply only goes in one way, and should slide in easily. If you cannot slide it in, you may be trying to install it upside down.<br><br>**2** Tighten the two thumbscrews finger tight.<br><br>**3** Connect the power cord to the power supply.<br><br>**4** Plug the power cord into a grounded AC outlet. |

| Components to install | Instructions |
|---|---|
| Tape Drives | **1** Insert the tape drives into the same drive slots where they were in the old chassis. The "shelf" on the bottom of the drive sled fits into the notch in the library chassis and slides on the plastic guide rails. The tape drive must be level to slide in smoothly. At the very end of the slide, you will feel a slight "click" as the tape drive sled connector connects into its mating connector in the library chassis.<br><br><br><br>Captive thumbscrews<br><br>**2** Tighten the tape drive's captive thumbscrews finger tight to secure the tape drive to the library chassis.<br>**3** Connect all tape drive cables as they were in the old unit. Make sure they are connected to the host or switch as they were before. For full-height Fibre Channel tape drives, the cable must go in the LEFT connector (as viewed from the back of the library; see Figure 5 on page 12). |
| Filler Plates | Make sure every empty power supply slot and tape drive slot is covered with a filler plate.<br>**1** Slide the filler plate into the slot.<br>**2** Tighten the thumbscrews. |
| Magazine | Slide each magazine into its slot and push it in all the way until it stops. |

Figure 5  Reinstalled
Components



**Half-height tape drives**

Power
supply cord

**Tape drive cables**  **Ethernet cable in LEFT
SCB port**

**LTO-6**

Power
supply cord

**Tape drive cables**  **Ethernet cable in LEFT
SCB port**

**Full-height tape drives**

Power
supply cord

**Fibre Channel cables
in LEFT port of full-
height tape drives**  **Ethernet cable in LEFT
SCB port**

**2** Turn **ON** the library by pressing the power button on the front panel.

**3** Wait for the library to initialize. This can take up to 5 to 17 minutes, depending on library size.

Notice that the library has a new diagnostic ticket (DT042) stating that the library's vital product data (VPD) has changed.

**4** Since the VPD change is caused by the intentional library chassis replacement, follow the Diagnostic Ticket resolution steps to reconfigure the host application accordingly.

**5** If you had license keys installed on the old library, install the new license keys.

- From the Operator panel, select **Setup > License Installation**.

- From the Web client, select **Setup > License**.

For further directions, see the *Scalar i40 and Scalar i80 User's Guide*.

**6** Run the Installation and Verification Test (IVT) to ensure that the robot, tape drives, and magazines are all functioning properly.

**a** From the Operator panel, select **Tools > IVT.**

**b** Follow the instructions on the screen. The IVT takes about 30 minutes.

**7** Save the library configuration

**a** From the Web client, select **Tools > Save/Restore Configuration**.

**b** Select **Save Configuration** and **Apply**.

**8** If your library is running SKM, you must you run a special script on the SKM server after you replace the chassis. The script will correct the library serial number associations in the key server database and allow you to export used SKM encryption keys via the Web client correctly. For instructions, refer to the chapter titled "Updating the SKM Keystore After Replacing a Library Control Module" in the *Scalar Key Manager User's Guide*.

**9** Wrap the removed chassis in the antistatic wrapping that contained the replacement chassis.

**a** Package the removed chassis using the packaging that contained the replacement chassis.

**b** Use the enclosed RMA information to send the chassis back to Quantum.