SPECTRA SL3 LIBRARY INSTALLATION GUIDE

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Part Number

90970048 Revision C

Revision History

Revision	Date	Description
A	September 2025	Initial release.
B	February 2026	Updated instructions.
C	May 2026	Corrected and streamlined process.

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To Obtain Documentation	
support.spectralogic.com/documentations	

Installation Requirements

This chapter outlines the requirements for the Spectra SL3 library components. Make sure that you meet these requirements before installing the library.

Required Tools and Supplies

- A sturdy work surface. This is required even if you plan to install the library in a rack.
- #2 Phillips screwdriver
- A small screwdriver (to depress cover plate latches)
- A pair of scissors
- An anti-static wrist band

CAUTION

Static Sensitive - Risk of damage to devices

Any damage to a Spectra SL3 library caused by failure to protect it from electrostatic discharge (ESD) voids the product warranty.

Location Requirements

Criteria	Definition
Room Temperature	10-35º C (50-95º F)
Power Source	• AC Power Voltage: 100-240 VAC • Line Frequency: 50-60 Hz • Library Located near AC Outlet(s) • The AC power cord is the library's main AC disconnect device and must be easily accessible at all times.
Air Quality	• Place the library in an area with minimal sources of particulate contamination. Excessive dust and debris can damage the library, tape drives, and cartridges. • Avoid areas near frequently used doors and walkways, stacks of supplies that collect dust, printers, and smoke-filled rooms.
Humidity	20-80% RH non-condensing

Rack and Tabletop Requirements

The SL3 Library is designed for both rack and tabletop installations.

- The rack must be compliant to the EIA 310A standard and at least 3.3 ft (1 m) deep.
- Rack installations must use the provided rack rails. If possible, install the base module in the middle of the rack to provide space for the permitted eight expansion modules above and seven expansion modules below the base module.
- Single module tabletop installations require no additional hardware.

Note: Spectra Logic recommends installing the library in a rack.

CAUTION The rack must be located on a level, hard-surfaced floor, such as cement or tile. Do not place the rack on a carpeted floor or anywhere else that poses risk for static discharge that could damage your library or drives.

SAS Requirements

The host server must have a SAS Host Bus Adapter (HBA) with an external connector. The HBA uses multiple Logical Unit Numbers (LUNs) to communicate with the library. Verify that your HBA supports multiple LUNs, as most RAID controllers do not. Most SAS HBA ports have four SAS channels. A tape drive uses one channel, so each HBA port can support up to four tape drives. If you connect one drive to a four channel port, only one channel is used.

You must provide one SAS cable with the correct configuration for your HBA for each tape drive.

- High quality SAS cables rated at the transfer rate of the SAS drives are required.
- Verify that the SAS cable you are using is rated for the data transfer speed of the interface of your components.
- SAS cables described as "equalized" may not support 6 Gb/s data rates and should not be used unless the cables are verified for 6 Gb/s data rates.

Supported speeds by drive generation are shown in the table below.

LTO Generation	Supported SAS Speeds
LTO-6	1.5 Gbps, 3 Gbps, 6 Gbps
LTO-7	1.5 Gbps, 3 Gbps, 6 Gbps
LTO-8	1.5 Gbps, 3 Gbps, 6 Gbps
LTO-9	3 Gbps, 6 Gbps, 12 Gbps
LTO-10	3 Gbps, 6 Gbps, 12 Gbps

Fibre Channel Requirements

A Fibre Channel (FC) tape drive can be connected directly to the server with a Host Bus Adapter (HBA) or through a storage area network (SAN).

The installation requires one fiber cable with an LC-style connector for each tape drive. Some drives have two FC ports, but only one cable connection is needed per drive. The cable can be connected to either drive FC port.

Supported speeds by drive generation are listed in the table below.

LTO Generation	Supported FC Speeds
LTO-6	2 Gbps, 4 Gbps, 8 Gbps
LTO-7	2 Gbps, 4 Gbps, 8 Gbps
LTO-8	2 Gbps, 4 Gbps, 8 Gbps
LTO-9	2 Gbps, 4 Gbps, 8 Gbps
LTO-10	32 Gbps

- Use an HBA appropriate for your tape drive performance requirements. A lower Gbps HBA might result in performance degradation when moving highly compressible data to a higher Gbps tape drive.
- In a SAN installation, all switches between the host and the library must be of the appropriate speed. A lower Gbps switch in the path may result in performance degradation. Configure zoning so only the data backup servers may access the drives.

Unpacking the Spectra SL3 Library

This chapter describes unpacking the SL3 library.

The Spectra SL3 library is shipped in a cardboard box attached to a pallet. The only tool needed to unpack the library is a pair of scissors.

Note: Save the box, anti-static bags, and foam packaging in case you need to move or ship the library module later.

Acclimating the Spectra SL3 Library

Before unpacking the library, you must allow time for the Spectra SL3 library to acclimate to the working environment when you move it from the loading dock.

CAUTION

When the base module is moved from a cold storage environment to a warm operating environment, it must acclimate for at least 24 hours before opening the packaging to prevent serious condensation damage from occurring.

Prepare the Unpacking Location

Move the pallet with the boxes to the location where you plan to install the Spectra SL3 module. Make sure you have adequate clearance around and above the shipping boxes so that you can safely unpack them. Have a sturdy work surface nearby that is large enough to accommodate the components as you unpack them.

Product Weight

Each SL3 module weighs more than 44 lbs (20 kg) without drives or tapes and more than 77 lbs (35 kg) with three tape drives and 40 tapes.

WARNING

Risk of Personal Injury - Before moving or lifting a module:

- Observe local health and safety requirements and guidelines for manual material handling.
- Remove all tapes to reduce the weight and to prevent cartridges from falling into the robotics path and damaging the library.
- Remove all tape drives to reduce the weight.
- Obtain adequate assistance to lift and stabilize the module during installation or removal.

Unpack and Inventory the Components

1. Inspect the shipping box for signs of damage.

IMPORTANT Do not unpack a Spectra SL3 library if the shipping box shows signs of damage. Contact both the shipping company and Spectra Logic (see Contacting Spectra Logic on page 3) to report the problem.

2. Use scissors to cut the straps securing the shipping box to the pallet.

WARNING Take care when cutting the straps securing the shipping box. The straps around the packaging are secured very tightly; the tension may cause them to whip outward when cut, which could lead to personal injury.

WARNUNG Vorsicht beim Schneiden der Bänder sichern Sie den Versandkarton. Die Riemen um die Verpackung sehr fest gesichert ist; die Spannung kann bewirken, dass sie nach außen, wenn sie geschnitten Peitsche, die zu Verletzungen führen können.

Figure 1 Lift the top cover off of the shipping box.

3. Lift the top cover off of the shipping box.
4. Remove the top foam piece and set it aside.
5. **Stop unpacking** and inventory the components before continuing. Contact Spectra Logic if any component is missing. SeeContacting Spectra Logic on page 3

Base Module	
Component	**Description**
Base Module	The SL3 Library base module.
Two Rack Rails	Two racks rails for mounting the base module.
Accessory Kit	Includes one packet of rack mount hardware and one power cord. Additional materials may be present in the kit depending on your order configuration.
Four Module Feet	Four mounting feet for tabletop installations.

Expansion Module	
Component	**Description**
Expansion Module	The SL3 Library expansion module.
Two Rack Rails	Two racks rails for mounting the base module.
Accessory Kit	Includes one packet of rack mount hardware and one expansion interconnect cable.

Unpack the Library Module

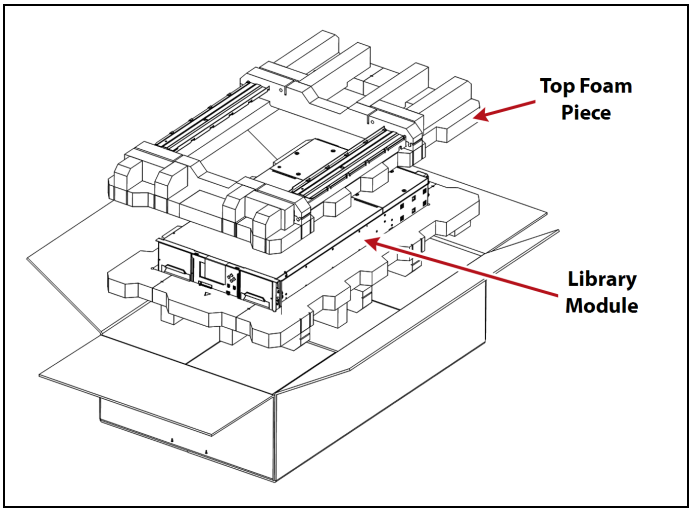

Figure 2 Remove the top foam piece and library module.

1. Lift the library module out of the box and place it on a sturdy work surface.

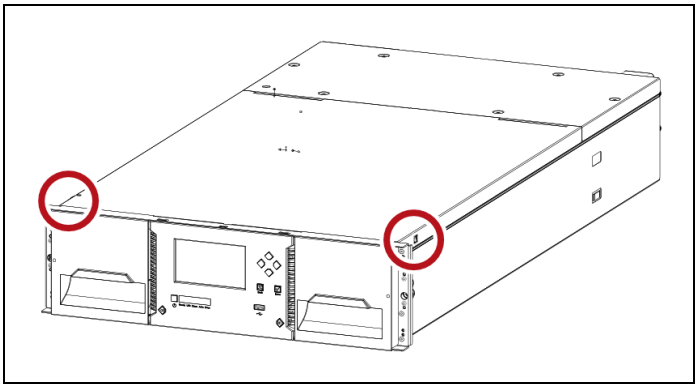

Figure 3 Unlock the top over plate.

2. The base module robotics are protected during shipment by a foam insertion, which must be removed prior to installation. Depress the top cover latches on each side of the module to unlock the cover.

   Note: It may be helpful to use a small screwdriver to depress the latches.

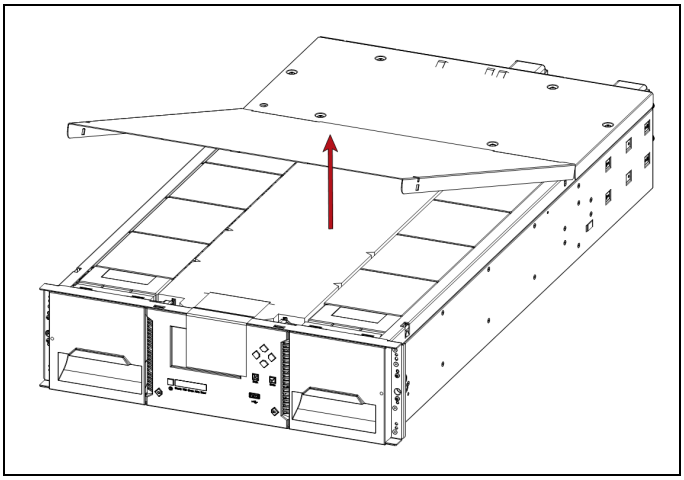

Figure 4 Lift and remove the top cover.

3. Lift the front end of the cover, then pull gently forward to disengage the cover from the module.

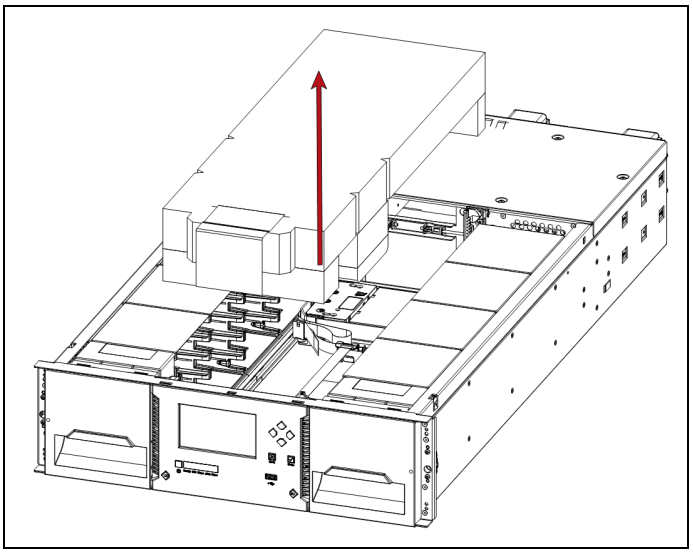

Figure 5 Remove foam insertion.

4. Remove the foam insertion.

5. Continue with one of the following:
   - If you are installing a base module only, install the top cover and skip to Rack Installation on page 14.
   - If you are installing a library with multiple modules, continue with Preparing Top and Bottom Modules.

Installing the Library

This chapter describes the installation process for a Spectra SL3 library.

Preparing Top and Bottom Modules

Use the information in this section to prepare your Spectra SL3 library modules for a multiple module configuration. When installing expansion modules above or below the base module, move the base module top cover to the top expansion module, and move the base module bottom cover to the bottom expansion module.

If you are only installing the single main module, skip to Rack Installation on page 14

Moving the Top Cover Plate

Use the following steps to move the library top cover plate from the base module to an expansion module.

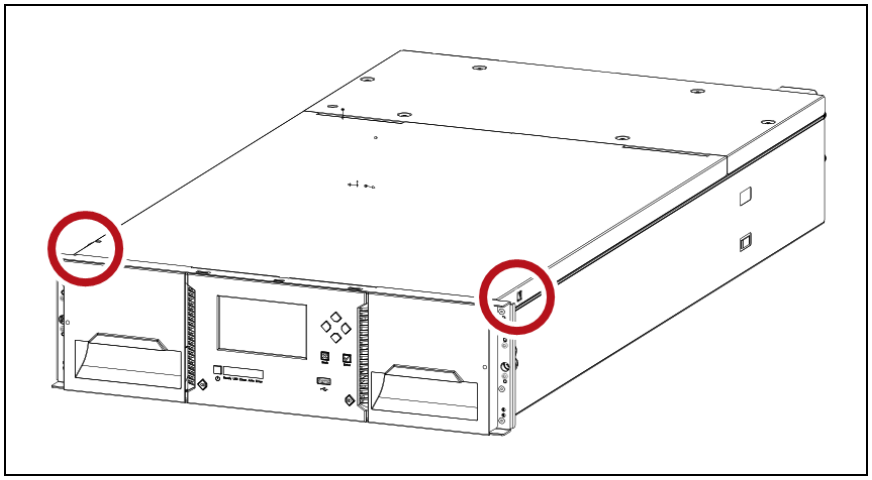

Figure 6 Unlock the top cover plate.

1. Place the base module on a work table.
2. Depress the top cover latches on each side of the module to unlock the top cover.

Note: It may be helpful to use a small screwdriver to depress the latches.

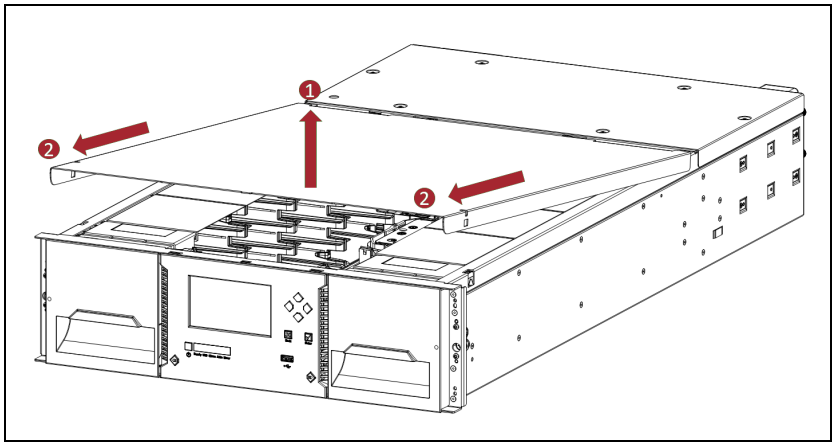

Figure 7 Remove the top cover from the base module.

3. Lift the cover front end (1) and pull gently forward (2) to disengage it from the module.

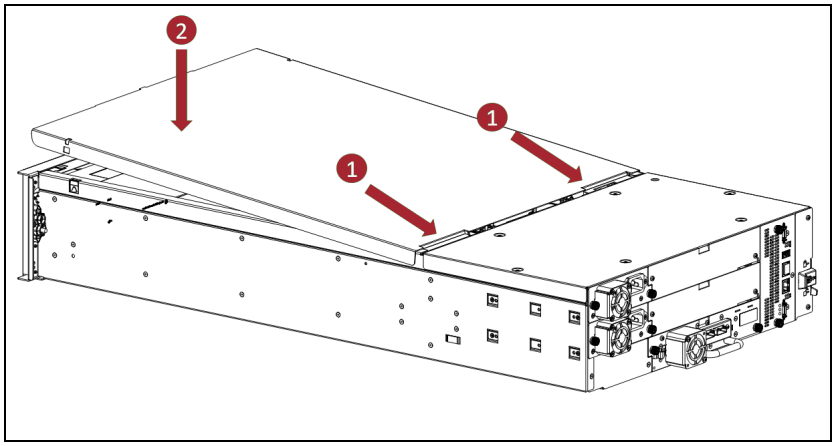

Figure 8 Insert the top cover into the expansion module.

4. Place the expansion module on a work table.
5. Insert the tabs of the top cover into the slots in the top of the module (**1**) and then lower the front end of the cover (**2**) until the latches engage on both sides.

Moving the Bottom Cover Plate

Use the following steps to move the library bottom cover plate from the base module to an expansion module.

CAUTION Do not flip the base module to remove the bottom cover plate or damage to the library may occur.

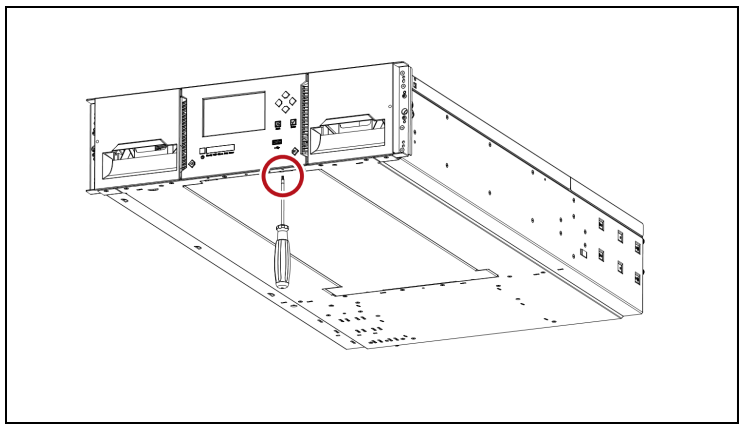

Figure 9 Depress the latch on the bottom cover.

1. Place the base module on a work table.
2. Lift the module front end of the module and depress the latch to unlock the bottom cover.

Note: It may be helpful to use a small screwdriver to depress the latch.

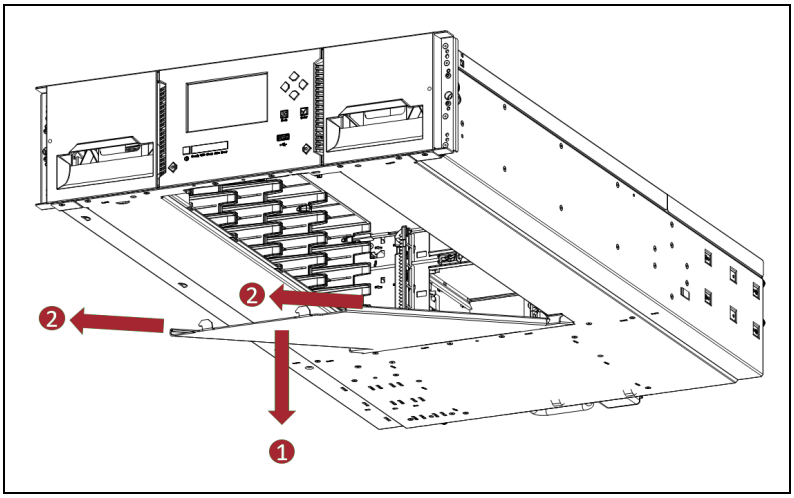

Figure 10 Remove the bottom cover from the base module.

3. Lower the cover (1) and pull gently forward (2).

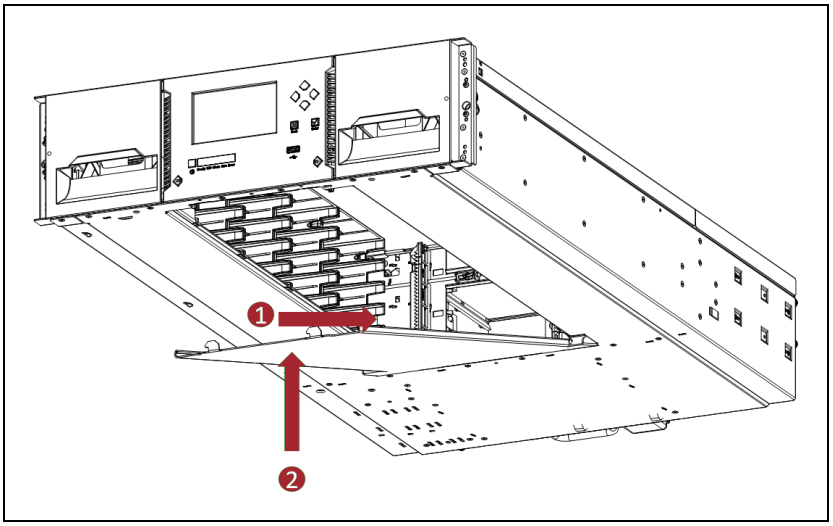

Figure 11 Insert the bottom cover into an expansion module.

4. Place the expansion module on a work table.
5. Lift the front end of the module and insert the tabs on bottom cover into the slots on the bottom of the expansion module (1), and raise the front of the bottom cover up towards the module (2) until the cover locks into place.

Rack Installation

Use the information in this section to install a Spectra SL3 library module in a rack. For tabletop installations, skip to Tabletop Installation on page 17.

WARNING

Risk of damage to devices - When placing a module into or removing the module from a rack:

- Extend the rack leveling jacks to the floor.
- Ensure that the full weight of the rack rests on the leveling jacks.
- Install stabilizing feet on the rack.
- Extend only one rack component at a time.

Locate the rail locations when installing multiple modules:

- Locate the bottom of the lowest full U where the lowest library module will be installed.
- Continue identifying the locations for any additional modules in increments of 3U.

Install the library into the rack:

1. Gather all four adapter blocks, four Phillips screws, and two rackmount rails (identified as **LH** and **RH** stamped into the sheet metal).
2. If you are installing multiple modules, start from the lowest module location.
3. On the front of the rack, mount an adapter block at the appropriate height to the front right and left rack posts. Mount the adapter so the middle two holes in the adapter align with the two narrow-gap holes in the rack. Secure the adapter to the rack with a screw.

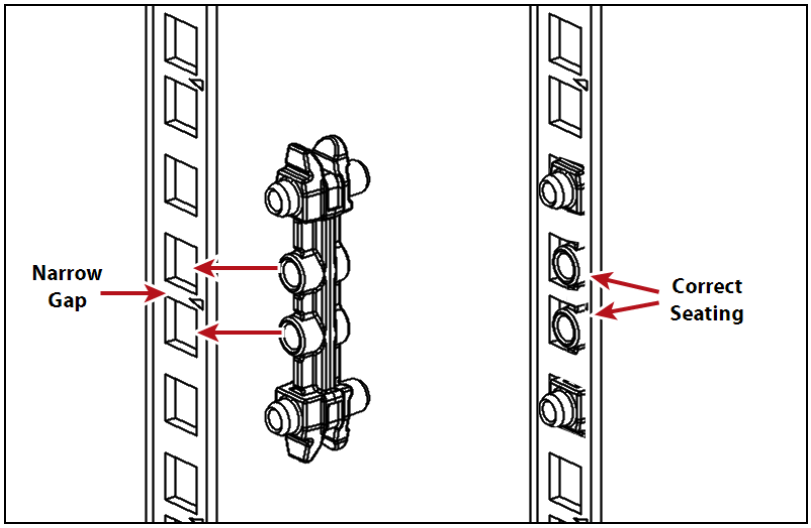

Figure 12 Lock the alignment lever.

4. Repeat Step 3 on the rear right and left rack posts of the rack.

5. Mount the LH rackmount rail to the adapter blocks, then mount the RH rackmount rail to the adapter blocks.

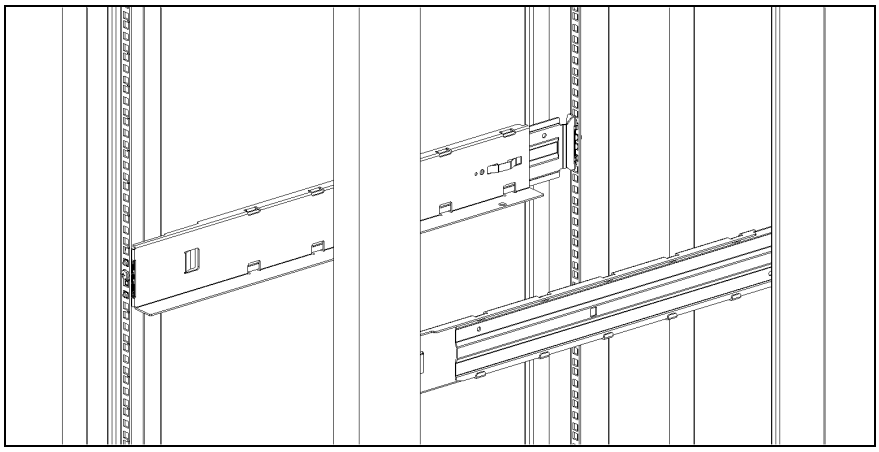

Figure 13 Mount the rackmount rails.

6. Lift the module to the height of the rack rails.
7. Place the module at the front of the rack on the horizontal support ledges of the rack rails and fully push the module into the rack.

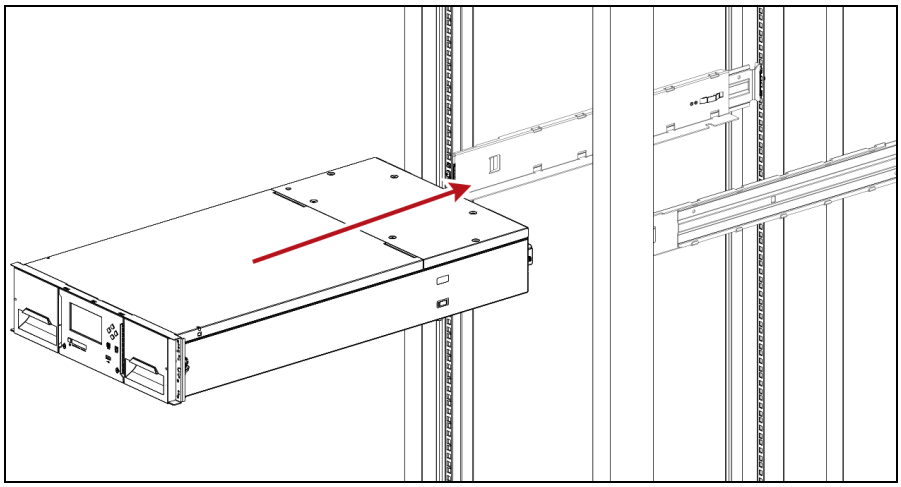

Figure 14 Push the module into the rack.

8. If you are installing multiple modules, verify that this module has been installed directly above or below its adjacent module and is contained within the correct 3U volume. The gap between modules must be less than 4 mm.
9. Use a #2 Phillips screwdriver to secure the module to the rack:
    - If you are installing **only the base module** - fully install the screws to secure the module.
    - If you are installing **additional modules** - loosely install the screws, they will be fully tightened during the module alignment procedure.
10. Repeat to install all modules into the rack.

Aligning and Connecting Modules

For SL3 libraries containing multiple modules, the library will not operate unless the alignment mechanism is locked in position. Aligning the modules ensures that the robot can move freely between the modules. Use the following steps to align and connect your modules.

1. If necessary, loosen the screws on the front of each of the modules two full turns but do not fully remove the screws.
2. From the back of the library, beginning with the bottom pair of modules, align each module with the module below:

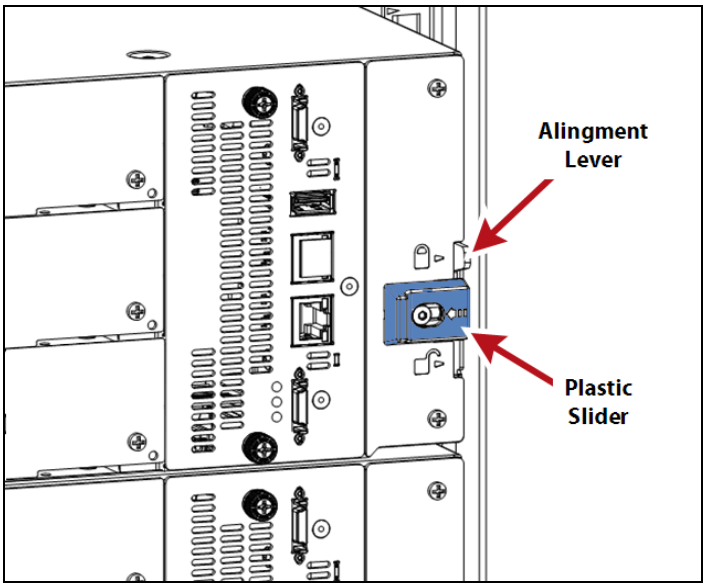

Figure 15 Lock the alignment lever.

   a. Push and hold the blue plastic slider to the left and push the locking lever up to the locked position, then release the plastic slider.

Note: If you encounter resistance, adjust the position of the upper module so the pin in the alignment mechanism moves into the mating hole in the lower module.

   b. Repeat for each pair of modules.
   c. Verify the lowest module in the library has the alignment mechanism in the unlocked position.

3. From the front of the library, fully tighten the screws on all the modules to secure them to the rack.

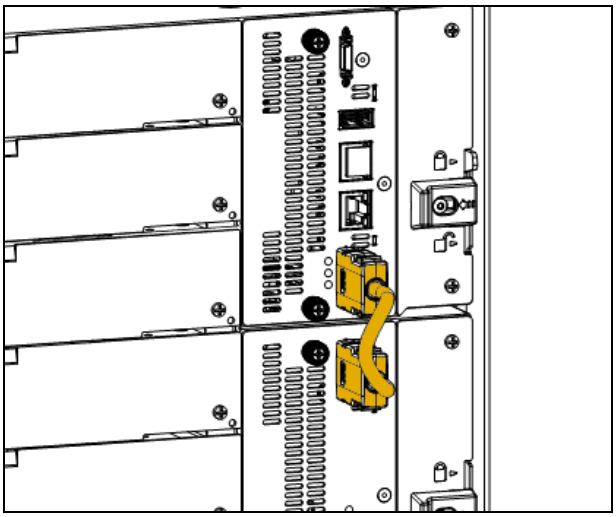

Figure 16 Connect the expansion interconnect cable.

4. From the back of the library, connect the modules of each pair to the adjacent module using an expansion interconnect cable.

Tabletop Installation

Use this section to install the base module as a tabletop library.

CAUTION Do not flip the base module to install the feet or damage to the library may occur.

Place the four feet on the bottom of the module as indicated in the figure below.

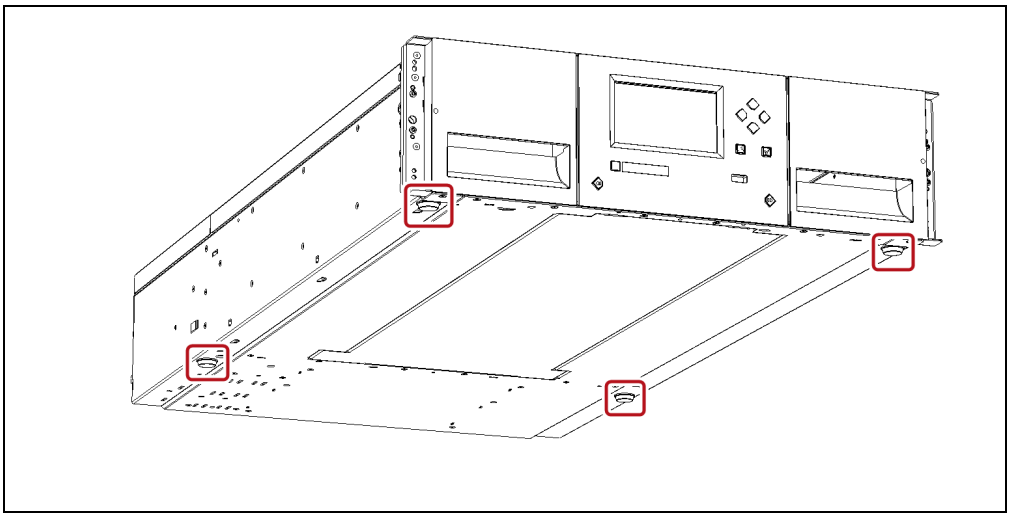

Figure 17 Place the feet in indicated locations of the module.

Installing Tape Drives

CAUTION

To protect the drives from damage:

- Wear an anti-static wristband, properly grounded, throughout the procedure.
- Leave the drive in its anti-static bag until you are ready to install it.
- Do not place a drive that is not in an anti-static bag on any metal surfaces.

Use the following steps to install a tape drive.

1. Put on an anti-static wristband and attach it to an anti-static mat or an unpainted metallic surface.
2. Locate the empty drive bay where you want to install the drive.
3. Use a #2 Phillips screwdriver to remove the two cover plate screws.

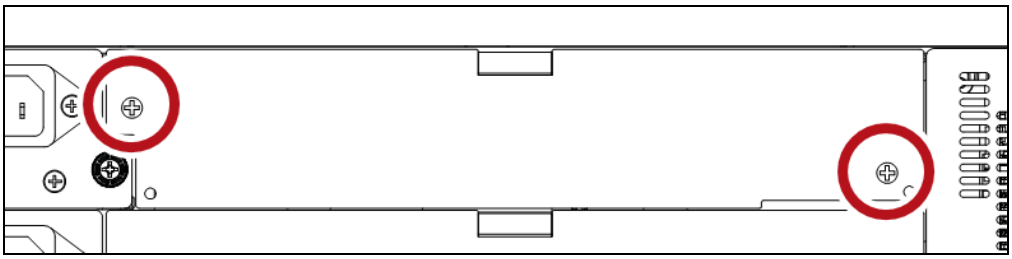

Figure 18 Remove the two cover plate screws.

4. Holding the tape drive by the handle and supporting it from the bottom, slide the tape drive along the alignment rails into the drive bay until it is flush with the back of the library.
5. Tighten the captive screws with your fingers to secure the tape drive to the library. If the thumbscrews cannot be tightened, verify that the tape drive is aligned properly.
6. Depending on your drive type, continue with one of the following:
   - Connecting Fibre Channel Cables on the next page
   - Connecting SAS Cables on the next page

Connecting Fibre Channel Cables

1. Remove the fiber cable port caps and attach one end of the cable to port A on the tape drive.

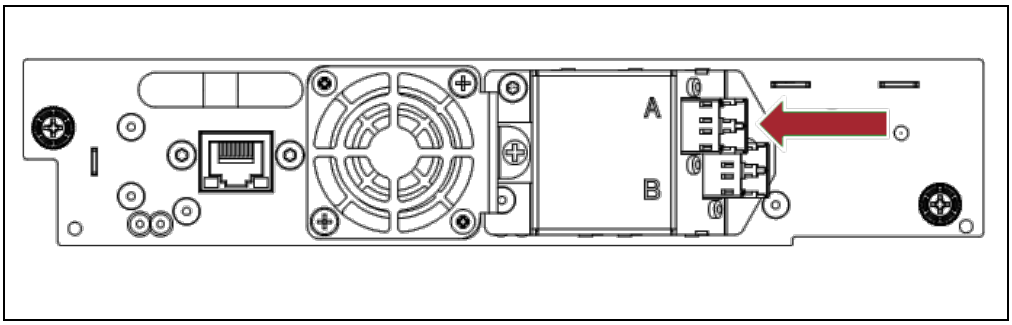

Figure 19 Connect the fiber cable to port A.

2. Attach the other end of the fiber cable to a switch or HBA.
3. Repeat for each additional Fibre Channel drive in the library.

Connecting SAS Cables

1. Attach the HBA end of the SAS cable to the HBA.

Note: If you are using a SAS fanout/Hydra cable, the end of the cable with only one connector should be plugged into the HBA.

2. Connect the drive end of the cable to port A.

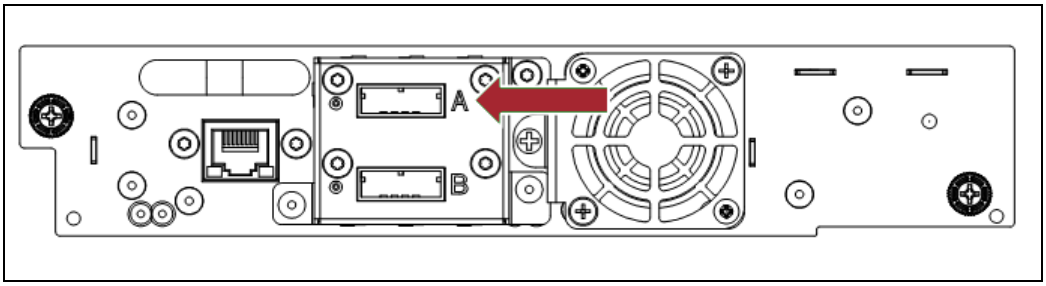

Figure 20 Connect the SAS cable to port A.

CAUTION The SAS connector is keyed to only fit one way. Do not force it.

3. Repeat for each additional SAS drive in the library.

Connecting Cables

1. Connect a Category 5 (or higher) Ethernet cable to the Spectra SL3 library Ethernet port on the rear of the library. Connect the other end of the cable to an active network over which a host computer can access the library. This connection is used to access the web interface.

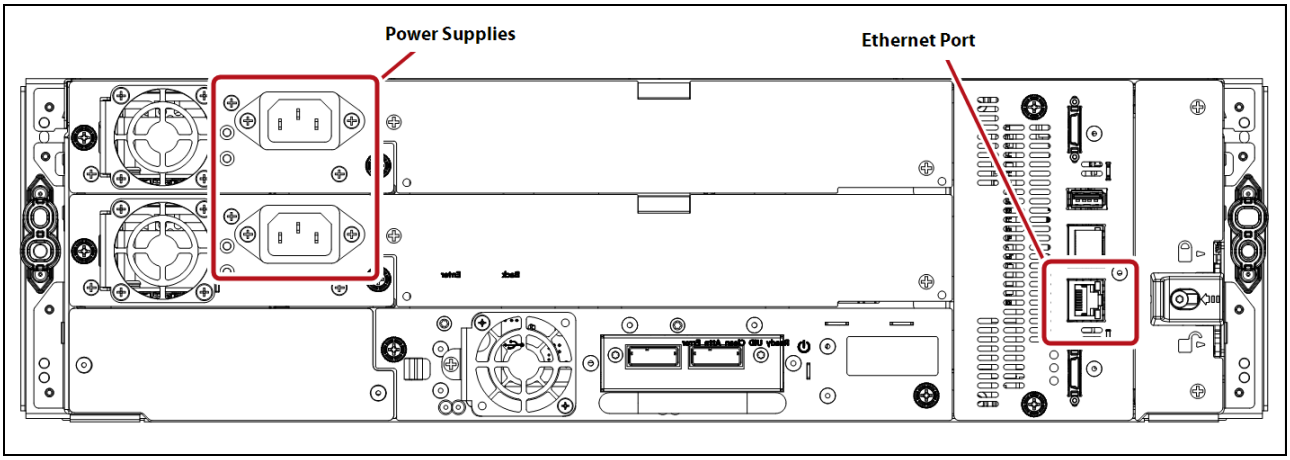

Figure 21 Connect the Ethernet and power cords.

2. Connect a power cord to each of the power supply connectors.
3. Plug the other end of each cord into an AC power outlet. Spectra Logic recommends connecting the cords to separate electrical circuits for power redundancy.

Power On Library and Next Steps

Power on the library by pressing the power button on the front of the base module just below the user interface screen. A green light will illuminate. When the library is powered on, it confirms the presence of the existing modules, and searches for any new modules. It then checks the firmware version on all modules, configures the tape drives, and inventories the library.

Your Spectra SL3 library is now installed. For information about configuring and using the library, read the *Spectra SL3 User Guide* starting with Chapter 3 - Configuring the Library.