Quantum Scalar i500 Rack Ears Installation

Follow the steps in this document to install a set of rack ears in your Scalar i500 library rack:

To install the rack ears, refer to the following sections:

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You need one rack ear kit for each module except for the bottom module. Each rack ear kit contains the supplies to install right and left rack ears on one module. You must install one set of rack ears for each module in the rack.

All modules that you add to the rack must be positioned above the module that you previously installed, since the bottom module must be secured to the rackmount shelves (unless you decide to uninstall the entire library from the rack and reconfigure it).

Required parts:

- (2) Rack ears
- (4) M5 thumbscrews
- (4) nut clips (if needed) or (4) cage nuts (if needed)

Explanation of parts: Each rack ear contains two elongated holes, enabling you to fasten it to the rack using the M5 thumbscrews and either the nut clips or cage nuts (or neither if your rack has threaded holes), using the most accessible mounting holes.

Preparing to Install the Rack Ears

To prepare to install the rack ears:

1 Before beginning installation, verify the contents of the rack ear kit: (2) Rack ears, (4) M5 thumbscrews, (4) nut clips (if needed) or (4) cage nuts (if needed).

2 Remove all rack hardware that may interfere with the installation of the modules that you plan to add to the rack.

3 Consider removing the front and back doors of the rack to obtain full access to the mounting holes and other areas of the rack.

Installing the Rack Ears

To install the rack ears:

1 Make sure of the following:

- If you are installing a module above a module that currently has a top cover, remove the top cover.

- Similarly, if the module you are installing has a bottom cover, remove the bottom cover before installing the module above another module in the rack.

- Make sure that library is "hollow" all the way through with just one bottom cover on the lowest module and one top cover on the top module.

2 Determine where in the rack to install the nut clips (or cage nuts).

Note: Consider using the method shown in this step to determine where to install the nut clips (or cage nuts), rather than adding a module to the rack first. If you add a module to the rack first, installing the nut clips (or cage nuts) can be difficult because rack space has become restricted.

- If you are adding a module above a previously racked 9U expansion module, count nine full units from the location of the 9U expansion module's rack ears, and prepare to install the nut clip (or cage nut) in that location on the rack.

  For example, if the 9U expansion module's rack ears are located at 1U and 2U, the nut clips (or cage nuts) should be installed at 10U and 11U.

Next, determine which holes you must use within the 10U and 11U markers. Notice that each rack unit (U), as delineated by the alignment markers in the rack, contains three mounting holes.

- If you are adding a module anywhere *above* the control module, position the nut clip (or cage nut) at the middle hole in that unit.

- If you are adding a module anywhere *below* the control module, position the nut clip (or cage nut) at the upper hole in that unit.

- If you are adding a module directly above a previously racked control module, count five full units from the location of the control module's rack ears, and prepare to install the nut clip (or cage nut) in that location on the rack.

  For example, if the control module's rack ears are located at 1U and 2U, the nut clips (or cage nuts) should be installed at 6U and 7U.

  Next, determine which holes you must use within the 6U and 7U markers. Notice that each rack unit, as delineated by the alignment markers in the rack, contains three mounting holes.

  - If you are adding a module anywhere *above* the control module, position the nut clip (or cage nut) at the middle hole in that unit.

  - If you are adding a module anywhere *below* the control module, position the nut clip (or cage nut) at the upper hole in that unit.

3 Install the nut clips (or cage nuts) to the desired location in the rack.

   Installing nut clips:

   a Hold the nut clip so that its semi-circle design faces outside the rack.

   b Push the nut clip onto the rack's mounting holes so that the nut is behind the rack's holes. (After the nut clip is installed, you can slide it up and down the mounting holes, if necessary.)
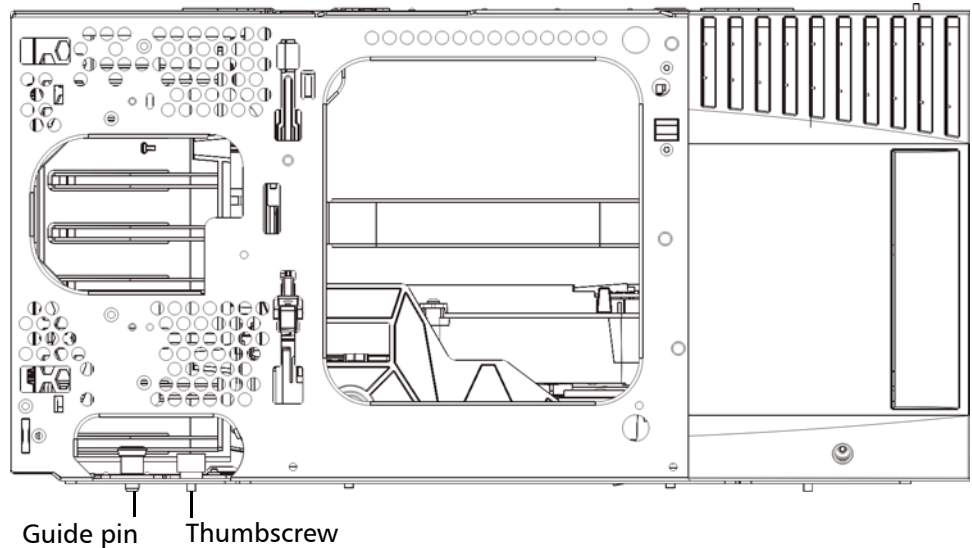
   Installing cage nuts:

   a Hold the cage nut so that its hinges face outside the rack, and so that its hinges clasp the upper and lower portions of the square hole.

   b Place the cage nut in the desired hole. Insert one hinge in the hole first, then pinch the cage nut and push it into the hole until it snaps into place. (You may want to use a screwdriver to help push the hinge into the hole.)
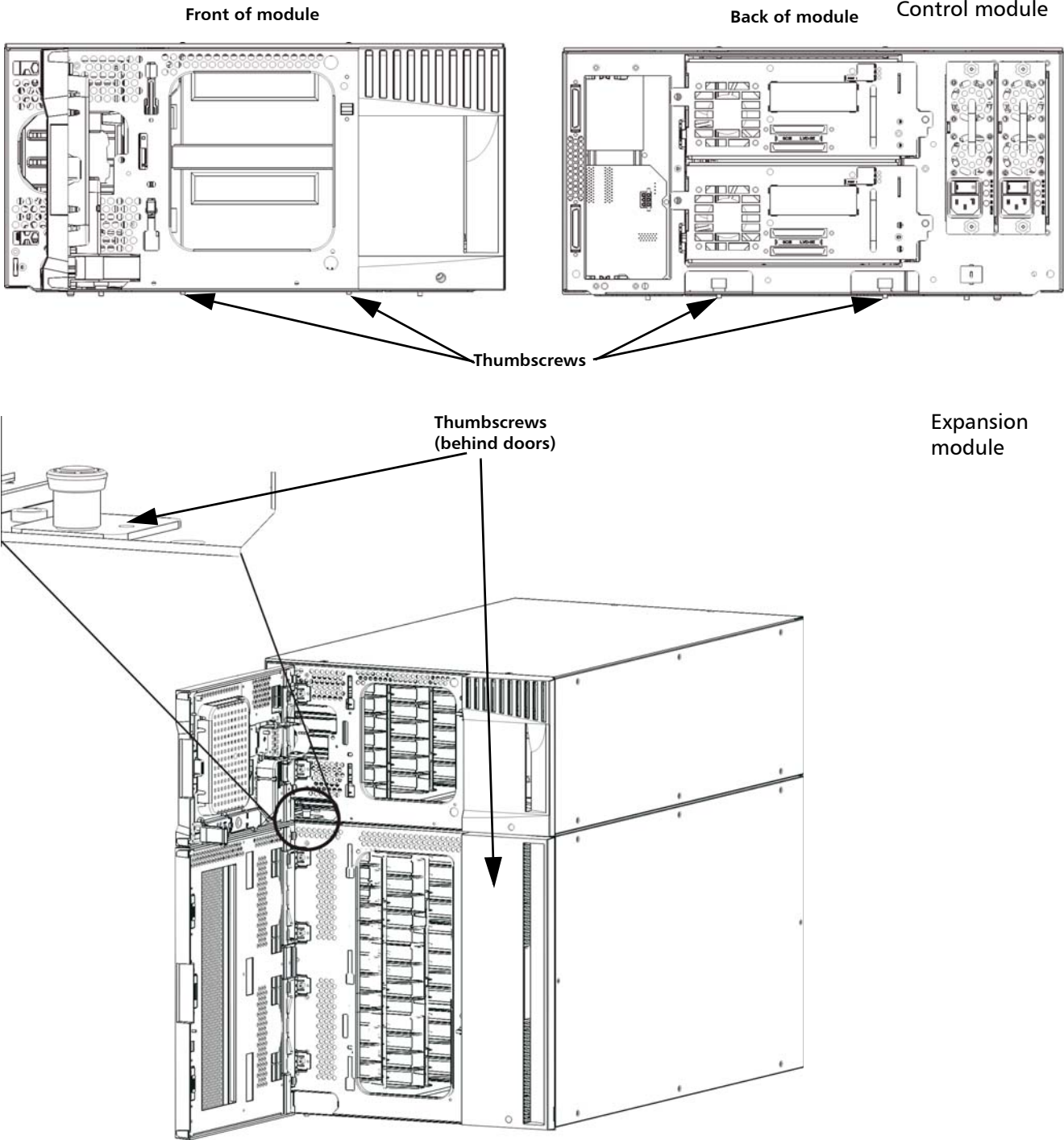
4 Power off the module:

   a Shut down the system:

      - From the Web client, select **Operations > System Shutdown**.

      - From the operator panel, select **Operations > Shutdown**.

   b Press the white power button on the front of the control module to shut off the library.

   c Turn off the power switch on each power supply, located at the rear of the library

5 Disconnect all power cords, network data cables, and module-to-module cables. Label all power cords, network data cables, and module-to-module cables so that the library can be returned to its original cabling configuration.

6 Consider removing all tape drives, tape cartridges, and power supplies from the module. Modules are much easier to lift into the rack without the additional weight of these items.

7 Open the module's access door and raise the guide pin by pulling it up and turning it slightly, as if it were a screw. Otherwise, the guide pin may scratch the front doors of the module on which you are stacking it.
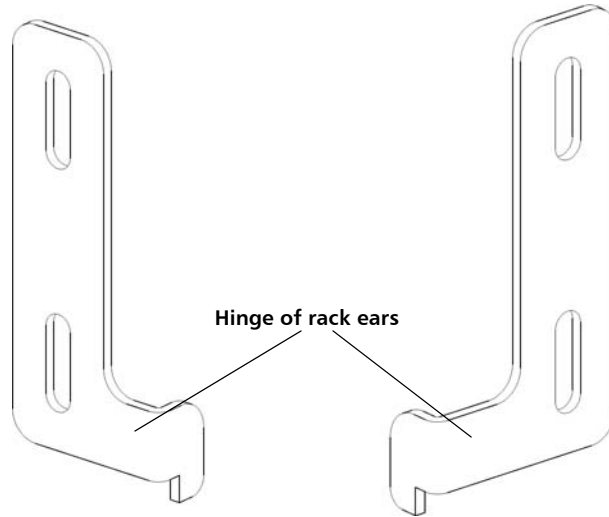

Guide pin   Thumbscrew

8 Lift the module, align it so that it is parallel with the module below it, and slide it into place.

9 Lower the module's guide pin by turning it and pushing it down.

10 Secure the module to the module beneath it by tightening the thumbscrews located at the base of the front and back of the module. Press down the thumbscrews, and then tighten them.
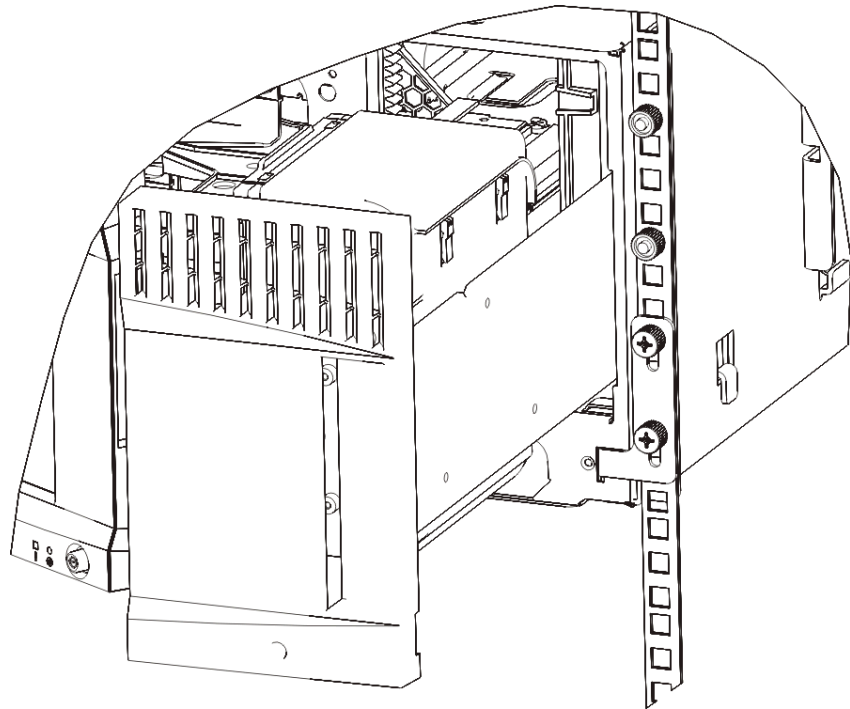
Front of module

Back of module Control module

Thumbscrews

**Thumbscrews
(behind doors)** Expansion
module

11 Install the right rack ear at the front of the library:

a Open the I/E station door. At the lower right corner of the module is a vertical slot. Insert the hinge of the right rack ear into the slot, and then position the holes of the rack ear flush with the rack rail.

Hinge of rack ears

b Using two M5 thumbscrews, fasten the rack ear to the rack, as shown below. The thumbscrews should thread through the nut clips (or cage nuts) and fasten completely and evenly.
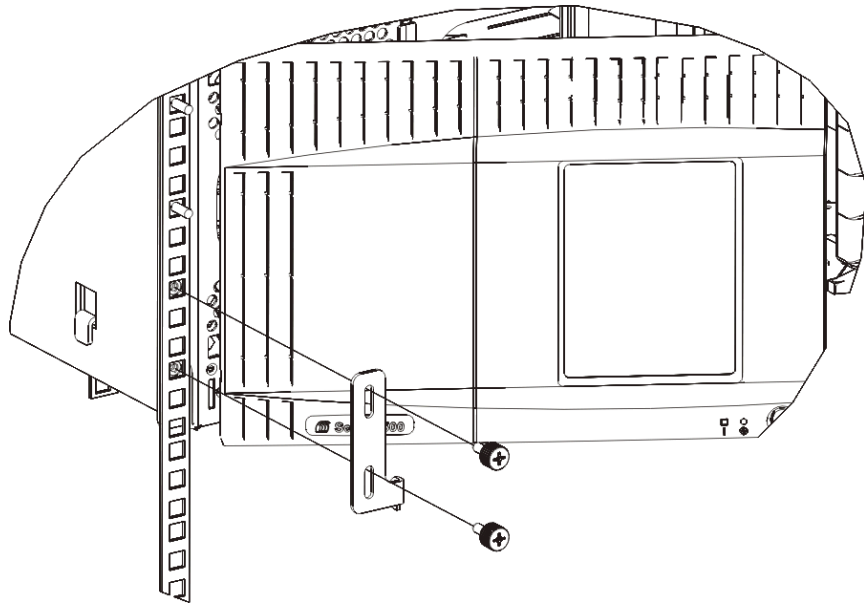
12 Install the left rack ear.

a With the I/E station door open, open the left door (the access door) of the module and pull the door toward you to access the slot located in the lower left corner of the module. (The flexible door hinge allows the door to be pulled away from the module, providing access to the slot.)
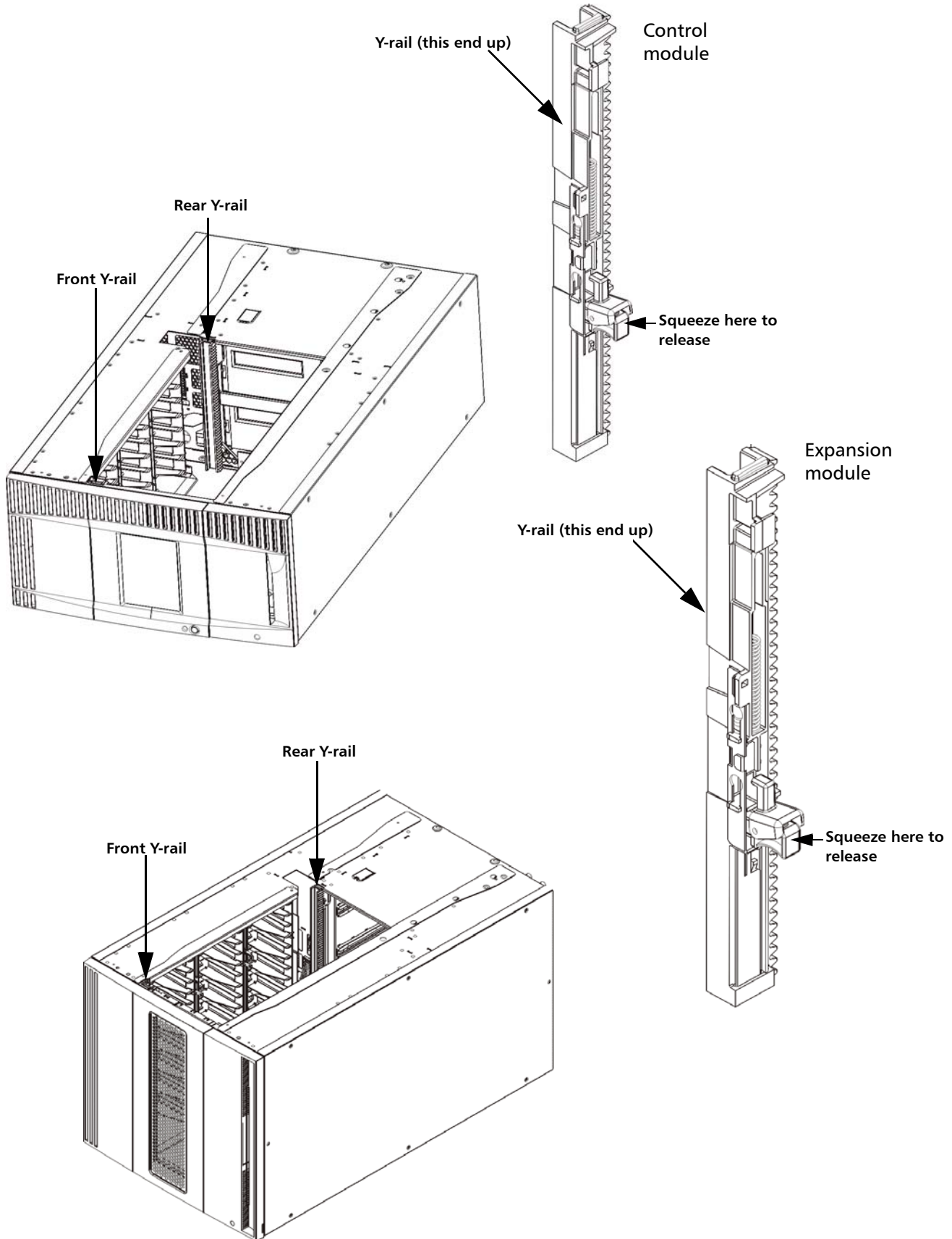
Note: You may need to pull the door toward you to access the slot.

b Install the left rack ear in the same manner as the right rack ear.

c Using two M5 thumbscrews, fasten the rack ear to the rack. The thumbscrews should thread through the nut clips (or cage nuts) and fasten completely and evenly.

13 If the module you are installing is an expansion module, engage the Y-rails of the new module in your library configuration. Ensure that the Y-rails are properly aligned, and that the thumbscrews are tightened.
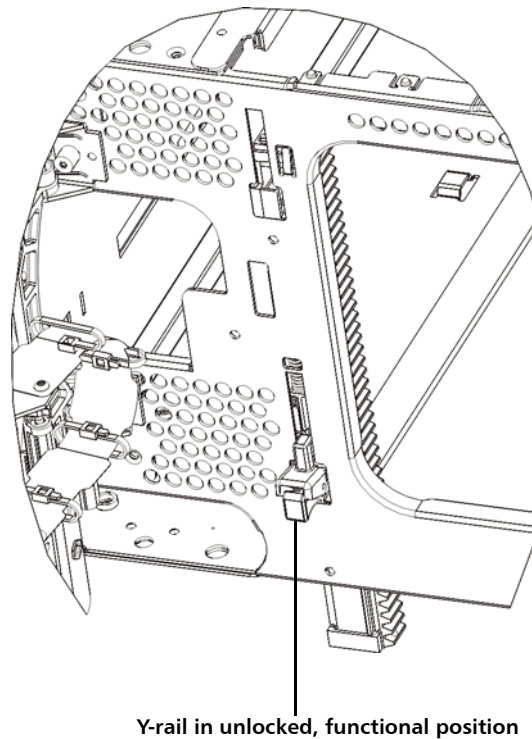
Y-rail (this end up)

Control module

Rear Y-rail

Front Y-rail

Squeeze here to release

Expansion module

Y-rail (this end up)

Rear Y-rail

Front Y-rail

Squeeze here to release

a From the front of the library, open the I/E station doors and access doors of the 9U expansion module. Squeeze the handle of the Y-rail release mechanism, lift it out of its locked position, and slide it downward as far as it will go.

b From the back of the library, find the rear Y-rail release mechanism, which is located in the interior of the right side of the module. Squeeze the handle of the Y-rail release mechanism, lift it out of its locked position, and slide it downward as far as it will go.

Caution: Check to make sure that there is no gap between the top and bottom Y-rails on both the front and back of the library. If a gap exists, the library cannot mechanically initialize.

Doing this aligns the Y-rails with the Y-rails of the module beneath it.

Y-rail in unlocked, functional position

14 Close the module's doors.

15 Repeat the above steps as necessary for each module you are installing.

16 Reinstall the tape drives in the library.

17 Re-cable the library as necessary using the power cords, network cables, and module-to-module cables you removed in Step 4 on page 3.

18 Power on the library:

a Turn on each power supply, using the switch on the rear of the power supply.

b Press the power button located on the front door of the library's control module.