Add-on Expansion Module Instructions
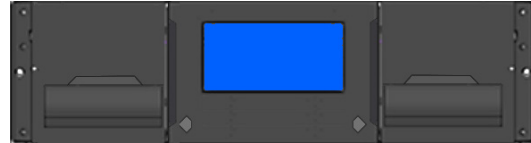
This document describes how to add an optional Expansion Module to a NEOxl 40 (3U) tape library from Overland Storage.

⚠️ **WARNING:** To reduce the risk of electric shock or damage to equipment, always remove any power cords while working with the library.

WARNUNG: Um das Risiko eines elektrischen Schlags oder Schäden am Gerät zu vermeiden, ziehen Sie stets den Netzstecker, bevor Sie an der Einheit arbeiten.

AVERTISSEMENT: Pour réduire le risque de choc électrique ou endommagement de l'équipement, retirez toujours les cordons électriques en travaillant avec l'appareil.

⚠️ **CAUTION:** While working with the library, observe standard Electrostatic Discharge (ESD) precautions to prevent damage to micro-circuitry or static-sensitive devices.

Special Handling Notice

Each NEOxl 40 Expansion 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.
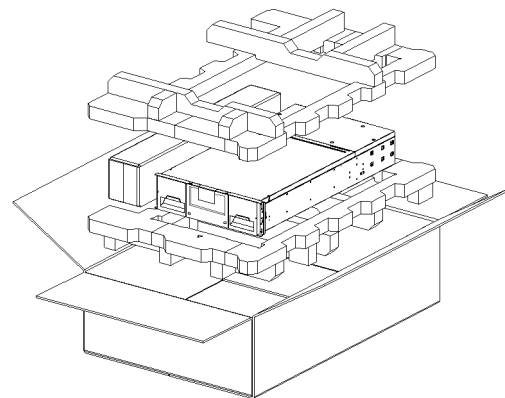
Before moving or lifting the Expansion Module, remove the tape magazines and drives to reduce the weight.

Overview

To install an Expansion Module, the main steps include:

1. After determining the installation location, if necessary, transfer the library top or bottom cover to the new Expansion Module.
2. Make space in the rack and install the rack rails.
3. If applicable, install the power supplies.
4. If applicable, install the DC-DC drive power board.
5. Install the Expansion Module in the rack and align the module with the library.
6. If applicable, install the tape drives.
7. Attach the cables and cords.
8. Install the tape magazines and verify the installation.

You will need a small flat head or Torx screwdriver and a #2 Phillips screwdriver.

Prepare the Library

Power Off Library

If still running, power off the library from the Base Module front panel by pressing and holding down the power button for three (3) seconds.

> *NOTE:* *If the library does not perform a soft shutdown, press and hold the power button for 10 seconds.*

Verify that the Robotic Assembly is in its parked position and that all host processes are idle.
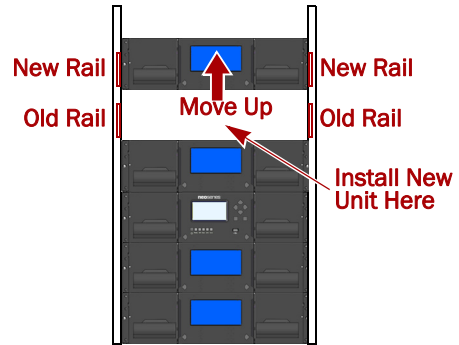
Determine Installation Location

If library expansion was planned and the Base Module is in the middle of the rack, there should be space for up to three Expansion Modules above and below the Base Module.

When Expansion Modules are already in place, to eliminate the steps needed to move covers, install the new rack rails in the space above or below a current Expansion Module. Move the existing Expansion Module onto the new rails and install the new Expansion Module in its old space.

See Chapter 1, "Supported Configurations," in the *NEOxl 40 Tape Library Administrator's Guide* for additional details.

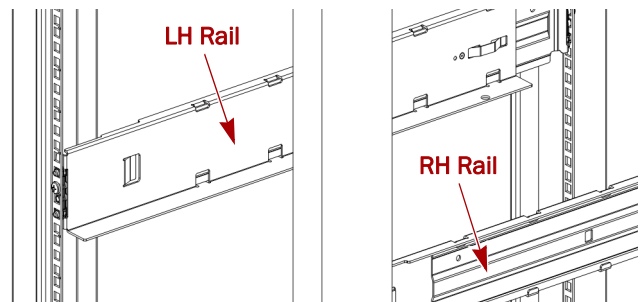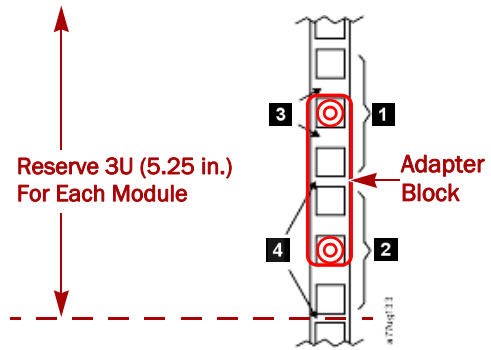# Install the Expansion Module

Install the Rack Rails

1. Determine the location in your rack for your Expansion Module to be installed and, using a pencil, mark the **location** on each vertical rail in your rack.

    NOTE: *The modules require 3U (5.25 in.) of rack space each.*

2. On the front of the rack, mount the left and right **adapter blocks** with the lower fixed nut in the middle hole of the bottom 1U space reserved for the module.

3. Secure the adapters with a **screw** through the front into one of the middle holes.

4. Mount the **rear adapters** making sure they are level with the front ones.

5. Mount the **LH Rackmount rail** to the left adapter blocks with the tray flange parallel to the floor and facing inward.

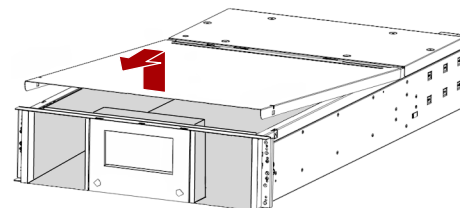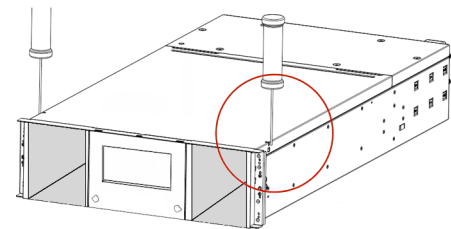6. Mount the **RH Rackmount rail** to the right adapter blocks.

Move Cover to the New Module

➡ **IMPORTANT:** When replacing an Expansion Module in either the top or bottom position, you must move the cover from the old Expansion Module to the new one.
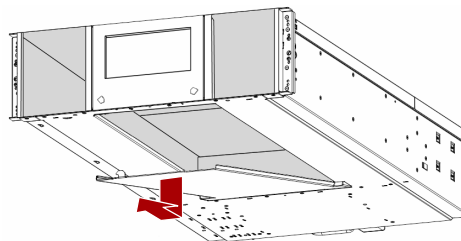
To move a **top** cover:

1. At the old Expansion Module, unlock the top cover by pushing **two small screwdrivers** down and inward in both slots.

2. Lift the top cover **front edge** by about 4.75 in. (12cm) and pull the cover gently forward to disengage from the pivot point at the module center.

3. At the new Expansion Module, with the cover at the same angle, reengage the **rear of the cover** at the pivot point.

4. Lower the front of the top cover until the **latches** engage on both sides.
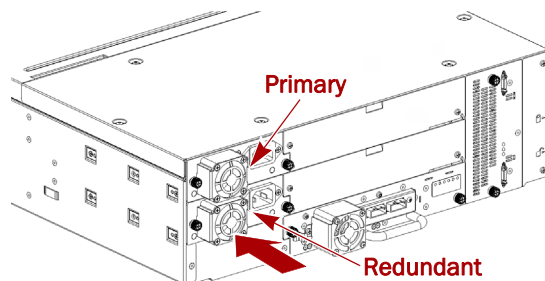
To move a **bottom** cover:

1. Place both Expansion Modules **upside-down**.

2. At the old Expansion Module, insert a small flathead or Torx **screwdriver** into the release hole and slide it about 1/4 in. (4mm) sidewards to unlock the spring loaded lock.

3. Raise the **cover front end** by about 4 in. (10cm) and gently pull it forward to disengage from the pivot point at module center and remove.

4. At the new Expansion Module, with the cover at the same angle, reengage the **rear of the cover** at the pivot point.

5. Lower the front of the cover until the **latch** engages.

Install Optional Power Supplies

If the Expansion Module comes with power supplies:
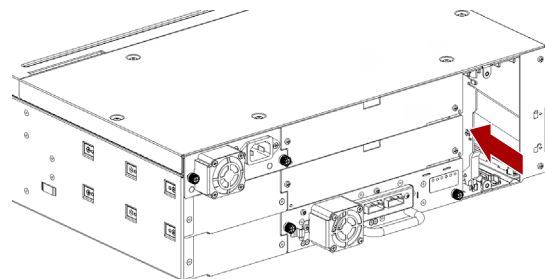
1. Remove the appropriate power supply **covers**.

   The top cover for the primary power supply and, if there is a redundant power supply, also the bottom cover.

2. While supporting the **bottom**, position the power supply onto the **alignment rails** in the open bay.

3. Slide the power supply into the **module** until it is flush with the back panel of the module.

4. Tighten the **thumbscrews** with your fingers to secure it.

5. If necessary, repeat these steps for a **redundant power supply**.

Install Optional DC-DC Board

If the Expansion Module comes with a DC-DC drive power board for tape drives:

1. Loosen the **two blue captive thumbscrews** on the controller and slowly remove it from the Expansion Module, setting it aside on a secure **ESD surface**.

2. Position the **drive power board** onto the alignment rails inside the controller compartment.

3. Slide the **drive power board** in until seated firmly.

4. Push the board **latch** up until it snaps into place.

5. Position the **controller** on the alignment rails and slide it back in until it is flush with the back panel of the module.

6. Tighten the **thumbscrews** with your fingers to secure it to the module.
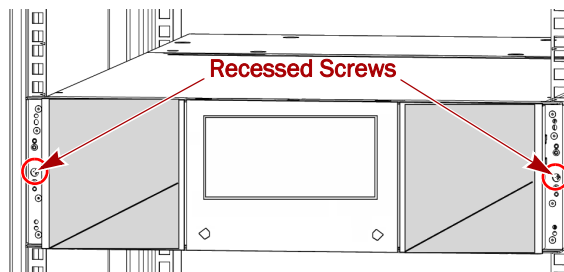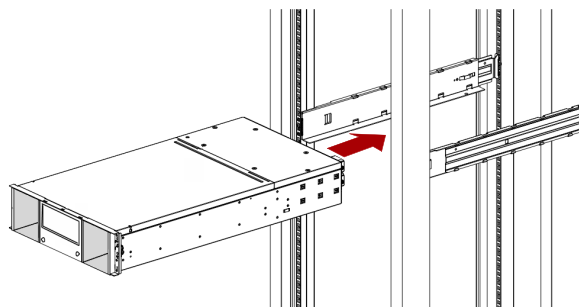
Insert the Module in the Rack

⚠️ **WARNING:** To avoid injury, it is recommended that a mechanical lifter (or at least two people) be used for rack installation or removal. Use care during rack installation or removal to avoid accidentally tilting or tipping the rack, causing damage or personal injury.

WARNUNG: Um Verletzungen zu vermeiden, empfehlen wir zur Rack-Installation oder -Deinstallation die Nutzung einer mechanischen Hebehilfe (oder mindestens zwei Personen). Seien Sie vorsichtig bei der Rack-Installation oder -Entnahme, um ein versehentliches Kippen des Racks zu vermeiden und das Rack nicht zu beschädigen bzw. sich selbst zu verletzen.

AVERTISSEMENT: Afin d'éviter des blessures pendant l'installation, il est recommande d'utiliser un monte-charge (ou au moins deux personnes) pour élever ou aligner l'module. Faites attention lorsque vous insérez ou retirez l'module d'un support, pour empêcher le déversement accidentel de la crémaillère causant des dommages et des blessures.

1. Position the **module** in front, aligned with the rails.
2. Slide the module onto the **rail flanges** and into the rack.
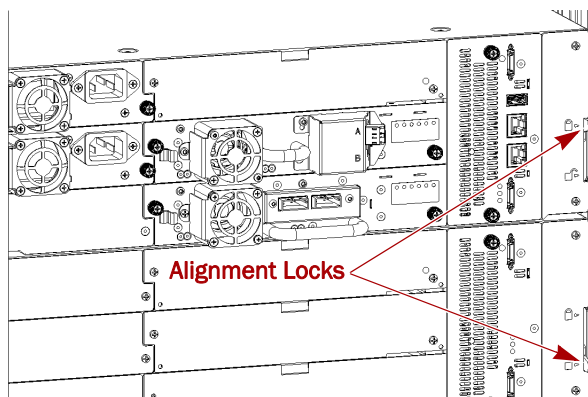3. Tighten the **recessed screws** only one turn to hold it.

Aligning and Connecting the Module

Aligning the Expansion Module with the library ensures that the robot can move freely between the modules.

NOTE: The library will not operate unless the alignment mechanism is in the locked position (except the bottom module).
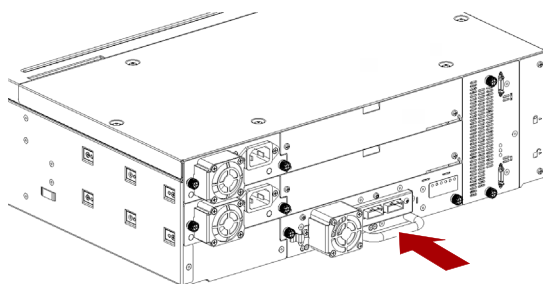
1. At the back of the library, using the **alignment lock lever**, align and lock the new Expansion Module to the modules to which it connects.

   If you encounter resistance, adjust the upper module so that the alignment mechanism pin moves into the mating hole in the lower module.
2. Verify that, for the **lowest** module in the library, its alignment mechanism is in the **unlocked position**.
3. From the front of the library, tighten the **Phillips screws** on both the Expansion Module and the adjacent modules to secure them all to the rack.

Install Optional Tape Drives

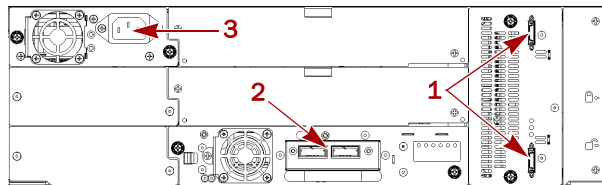If the Expansion Module comes with tape drives:

1. Remove the appropriate tape drive **covers**.

   Start with the bottom cover and work your way up.
2. Holding a **tape drive** by the handle and supporting it from the bottom, position it on the alignment rails.
3. Slowly slide the tape drive into the **drive bay** until it is flush with the back of the library.
4. Finger-tighten the **blue captive thumbscrews** to secure the tape drive.
5. Repeat Steps 2–4 for any **additional tape drives**.

Attach Cables

Reconnect all cables and cords:

1. Connect the **expansion interconnect** cables (1) from the Expansion Module to any adjacent modules.

2. If tape drives are installed, connect the **SAS/FC cables** (2) to the appropriate ports on the drives.

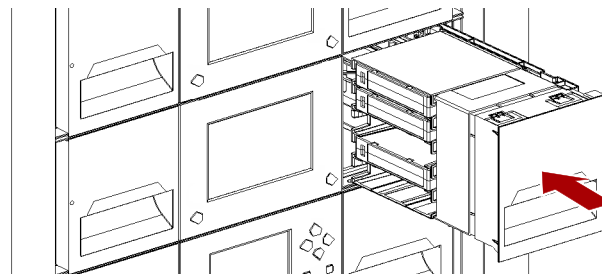3. If power supplies are installed, plug in their **AC power cords** (3).

Load Tape Cartridges

If desired, cartridges can be added to the magazines before using the Expansion Module.

1. Insert a small flat head screwdriver or Torx driver into the appropriate **magazine release hole** and gently push the tab in.

> **IMPORTANT:** Do not continue to exert force once you encounter resistance. Doing so can damage the device.

2. Using the magazine **access handle** and supporting it underneath, pull the magazine out of the library and place it on a secure surface.

3. Load the **cartridges** into the magazine.

4. Using the magazine **access handle** and supporting it underneath, position the magazine on the alignment rails and slide the **magazine** back into the module.

5. Repeat Steps 1–4 for the **other magazine**.

Verifying the Installation and Configuration

Power on the library and check the following:

- Verify that the library powers on and initializes correctly, and that the status is Ready.

- From the OCP or RMI, verify that the new Expansion Module is visible.

- Check the library configuration settings related to the additional storage slots, mailslots, and tape drives. Update if necessary.

The Expansion Module operates using the existing library firmware. It is recommended that you always update the library to the latest firmware version. You can update firmware from the RMI or the OCP **Maintenance > Library Firmware Upgrade** screen.