Sun™ Modular Storage Rail Kit Installation Guide

For Sun Rack II 1U and 2U Static Rail Kits

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Installing Modular Storage Rails

This guide describes how to install modular storage rails into the Sun Rack II. It applies to both the 2 rack unit (RU) and 1 RU modular storage rail kits. Supported controller and tray hardware for each kit is discussed in "Supported Array Hardware" on page 2.

Additional documentation, including documentation needed to complete array installation, can be found in "Related Documentation" on page 13.

The following topics are discussed:

Supported Array Hardware

Each rail kit can support a variety of Sun modular storage hardware. Be sure to use the correct kit for your equipment.

2U Modular Storage Rail Kit - Used for the installation of Sun Storage 6580 and 6780 array controller trays.

1U Modular Storage Rail Kit - Used for the installation of all tray hardware for the Sun Storage 6180 arrays, Sun StorageTek 2500 series arrays, Sun StorageTek 6140 and 6540 arrays, and expansion tray products such as the Sun StorageTek CSM200 expansion modules.

Prepare for Installation

Check the Contents of the Rail Kit

The modular storage rails are designed exclusively for the Sun Rack II family of racks. FIGURE 1 shows the contents of the 2U rack kit. FIGURE 2 shows the contents of the 1U rack kit.

FIGURE 1   Contents of the 2U Modular Storage Rail Kit
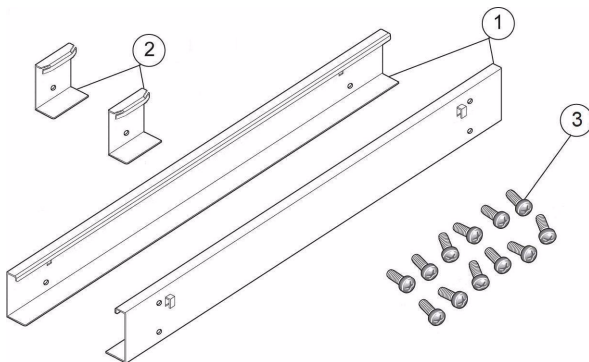
Callout	Description
1	Two 2U modular storage static rails
2	Two 2U rear restraint brackets
3	12 M6 thread forming screws

FIGURE 2 Contents of the 1U Modular Storage Rail Kit
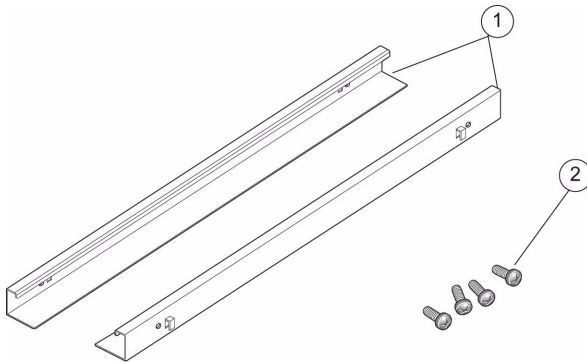
Callout	Description
1	Two 1U modular storage static rails
2	Four M6 thread forming screws

Gather Required Items

- T30 Torx wrench (provided with the Sun Rack II). Alternately, you can use an 18V variable-speed portable drill with a T30 Torx bit extension (recommended).
- Two cage nuts (provided with the Sun Rack II) for each array you will install.

Read Safety Guidelines

Follow all safety guidelines as described in:

- *Important Safety Information for Sun Hardware Systems*
- *Sun Storage Regulatory and Safety Compliance Manual*

Install and Stabilize the Rack

See the *Sun Rack II User's Guide* (820-4759) for complete installation instructions.

FIGURE 3 Sun Rack II

Install the Rail Hardware in the Rack

1. Locate available rack units (RUs).

If you are installing the 2U rail kit, locate four available RUs (two RUs for the static rails plus two RUs for the rear restraint brackets). If you are installing the 1U rail kit, locate one RU.

> **Caution –** To maintain rack stability, select the lowest available RUs in the rack.

> **Note –** A standard mounting rack unit equals 1.75" (44.45 cm) and consists of three mounting holes in the vertical mounting rails.

FIGURE 4 Standard Mounting Rack Unit on Vertical Rail
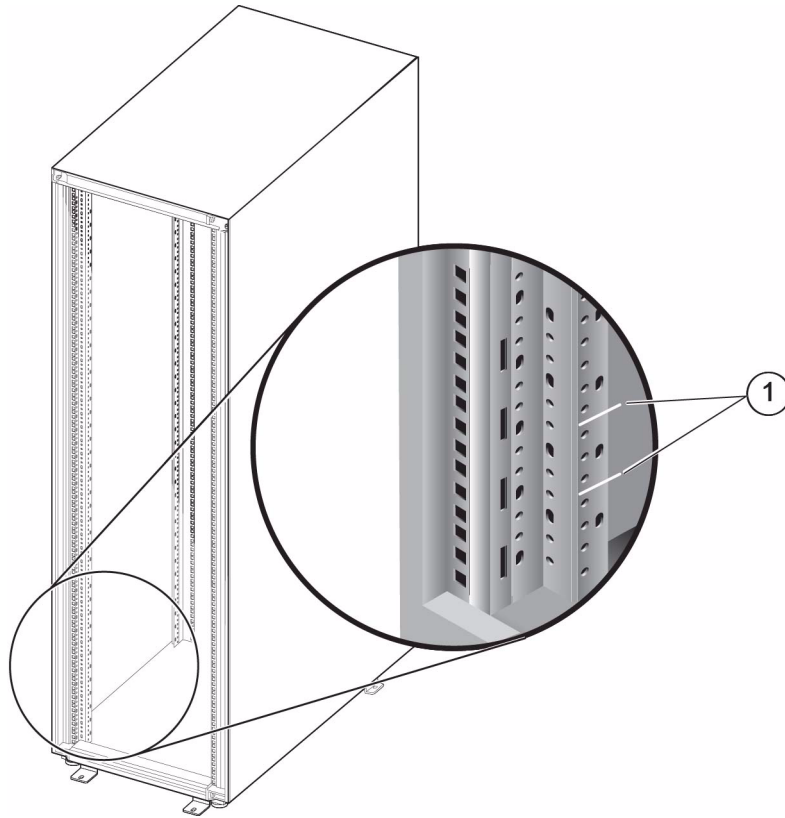
Figure Legend

1	One standard mounting rack unit (conforms to the EIA (RETMA) standard for mounting hole spacing)

2. Position one static rail inside the rack and hang the rail hooks in the oval slots on the front and back vertical mounting rails.

See FIGURE 5 if you are installing the 2U rail kit. See FIGURE 6 if you are installing the 1U rail kit.

Note – The screw holes on the static rail and vertical rail should align concentrically.

Figure Legend

1	Rail hook (one of two located on the outer edge of the rail)
2	Vertical mounting rail (oval) slot

FIGURE 6   Inserting the Rail Hooks Into the Vertical Mounting Rails:
1U Modular Storage Rail Kit
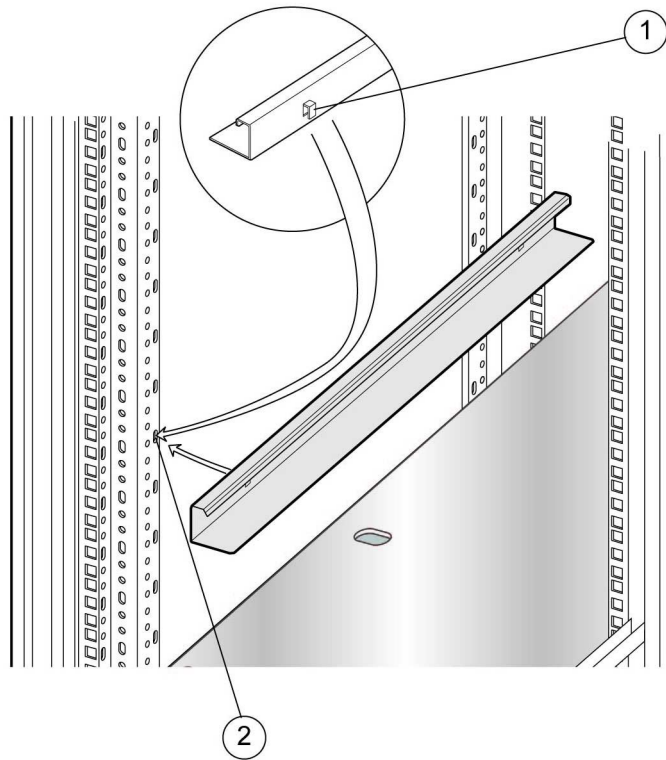
Figure Legend

1	Rail hook (one of two located on the outer edge of the rail)
2	Vertical mounting rail (oval) slot

3. Secure the rail to the rack using M6 screws. Do not tighten until Step 6.

For the 2U rail kit, each static rail uses four screws (see FIGURE 7). For the 1U rail kit, each static rail uses two screws (see FIGURE 8).

4. **Secure the rear restraint bracket to the rack using M6 screws (only for 2U rail kit). Do not tighten until** Step 6**.**

   Immediately adjacent to the top of the installed static rail, secure the restraint bracket at the rear of the rack. Each rear restraint bracket uses two screws. Make sure to position the bracket so that the smaller edge (with bent tabs) is closest to the static rail (see FIGURE 7).

FIGURE 7   Securing the Static Rail and Rear Restraint Bracket Using M6 Screws: 2U Modular Storage Rail Kit
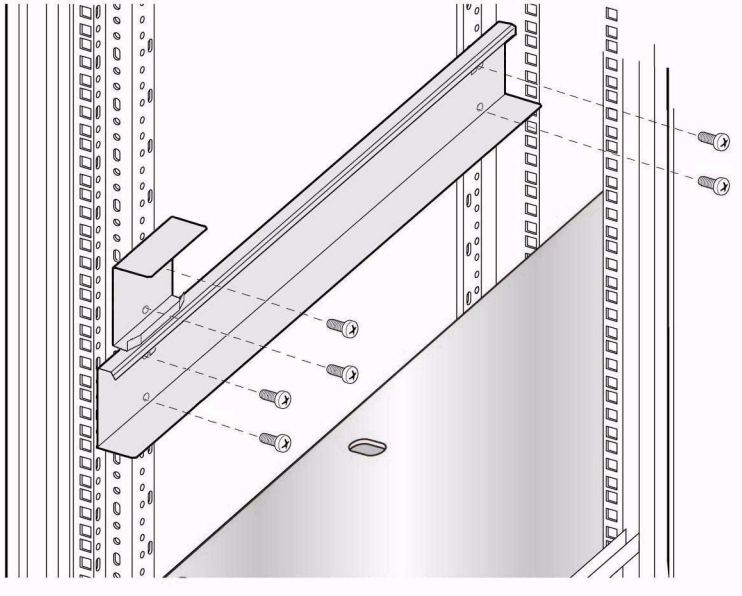
Note – When installed, the rear edge of the restraint bracket will be inset approximately 1 inch from the rear edge of the static rail.
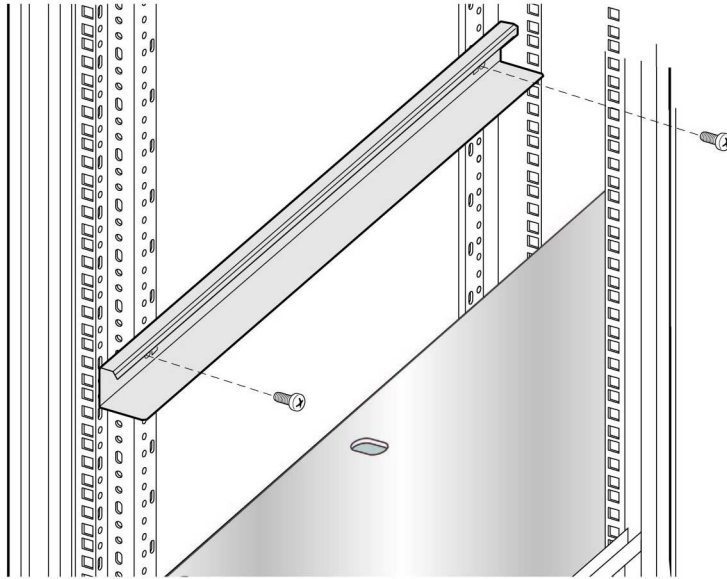
5. **Repeat Steps 2 through 4 to secure the other rail and bracket, as applicable.**

6. **Use the T30 Torx wrench or portable drill (with T30 Torx bit extension) to tighten all screws.**

Note – Tighten the screws to a torque of 35 inch-pounds (4 Nm).

Insert the Cage Nuts Into the Rail Holes

1. **At the front of the rack, locate the vertical rail mounting holes you will use to install the array.**

2. **Insert a cage nut into the mounting hole:**

   a. **Position the cage nut with the tabs at each side as shown in** FIGURE 9**.**

Note – Positioning the cage nut tabs horizontally allows for maximum amount of vertical movement when securing the array to the rack.

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   b. **Insert the cage nut behind the vertical rail, press it through the mounting hole, and snap it into place.**

FIGURE 9   Inserting Cage Nuts Into the Vertical Rails
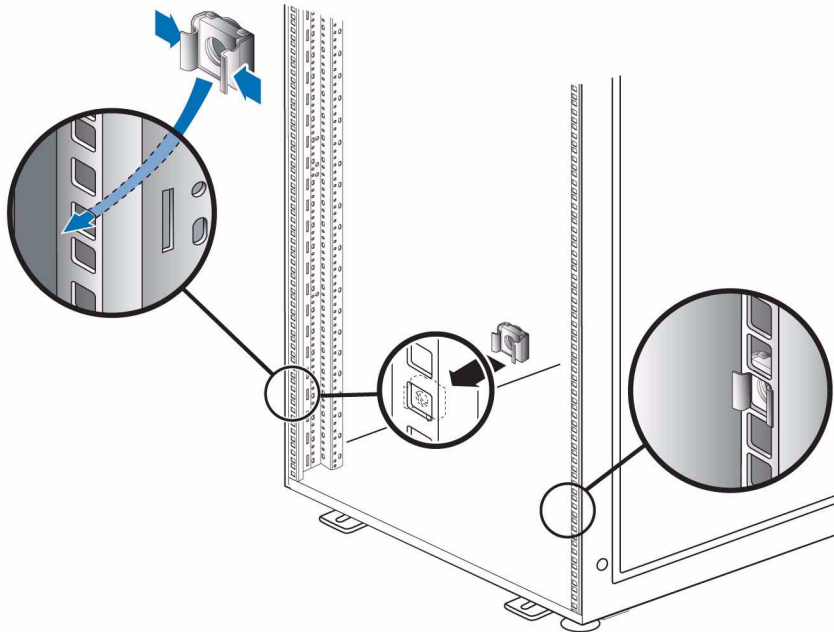
3. **Repeat** Step 2 **for the other rail.**

Mount the Array In the Rack

1. **Refer to the Hardware Installation Guide for your array (see** "Related Documentation" on page 13**) for details about mounting the array and securing it to the rack.**

2. **After you install the tray, install a pair of static rail restraints (provided with the Sun Rack II) directly above the topmost tray in the array stack.**

FIGURE 10   Installing the Rail Restraint
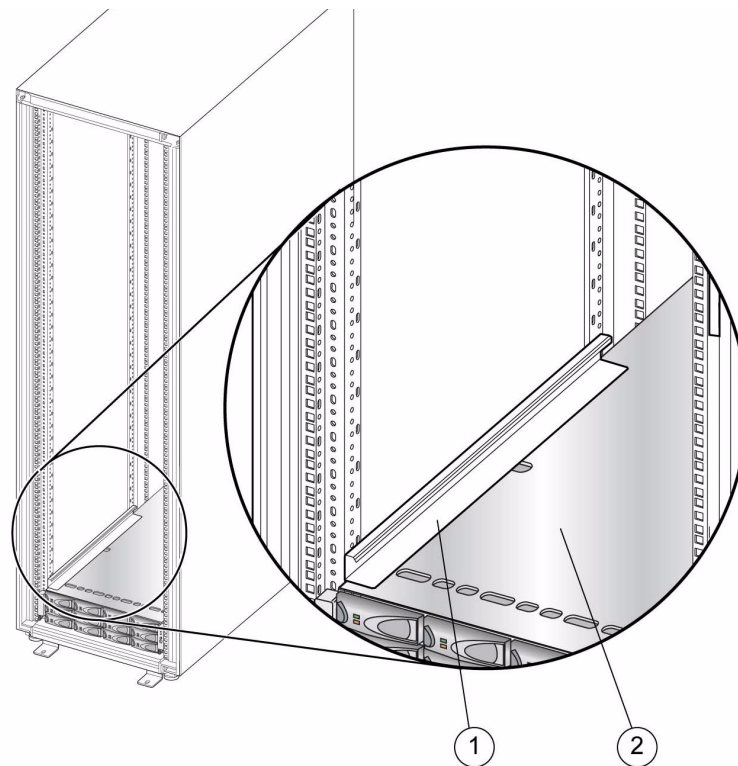
Figure Legend

1	Rail restraint installed above array
2	Array installed in rack

3. **If you install a server on slide-out rails above the topmost fixed tray, invert the static rails to free up the RU space above. This requires you to:**

   a. **Remove the topmost tray to allow access to the screws.**

   b. **Reinstall the tray.**

Related Documentation

Additional documentation needed to complete installation is available at the following Sun documentation web sites:

- For Sun Storage 6180 array documentation:

  http://docs.sun.com/app/docs/prod/6180.array#hic

- For Sun Storage 6580 and 6780 array documentation:

  http://docs.sun.com/app/docs/prod/6780.array#hic

- For Sun StorageTek 6540 array documentation:

  http://docs.sun.com/app/docs/prod/stortek.6540rohs#hic

- For Sun StorageTek 6140 array documentation:

  http://docs.sun.com/app/docs/prod/stortek.6140rohs#hic

- For Sun StorageTek 2500 array family documentation:

  http://docs.sun.com/app/docs/prod/st2500.array#hic

For translated versions of the documentation, go to the http://docs.sun.com web site and select your language to get the documentation.

Task	Documentation
Review safety information	*Sun Storage Regulatory and Safety Compliance Manual*
	Important Safety Information for Sun Hardware Systems
Review known issues and workarounds	Release notes for your array.
Prepare the site	*Sun Storage 6180 Array Site Preparation Guide*
	Site Preparation Guide for Sun Storage 6580 and 6780 Arrays
	Sun StorageTek 6540 Array Site Preparation Guide
	Sun StorageTek 6140 Array Site Preparation Guide
	Sun StorageTek 2500 Series Array Site Preparation Guide
Install the rack	*Sun Rack II User's Guide*
Install PDUs	*Sun Cabinet Power Distribution Unit (PDU) Installation Guide*
Install the array	Hardware Installation Guide for the:
	Sun Storage 6180 array
	Sun Storage 6580 and 6780 arrays

Task	Documentation
	Sun StorageTek 6540 array
	Sun StorageTek 6140 array
	Sun StorageTek 2500 array family

Sun Contact Information

Topic	URL
Technical support	http://www.sun.com/service/contacting
Submitting comments on this document	Click the Feedback[+] link at: http://docs.sun.com Please include the title and part number of this document with your feedback: *Sun Modular Storage Rail Kit Installation Guide*, part number 820-5774-12
Patch and firmware updates	http://www.sun.com/support/index.jsp