Sun Storage J4200/J4400 Array Rail Kit Installation Guide

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Installing the J4200/J4400 Array Rail Kit

This document describes how to install the J4200/J4400 Array Rail Kits.

Note – The instructions and graphical illustrations used throughout this guide are specific to the J4200 Rail Kit installation, with additional information unique to the J4400 Rail Kit where appropriate. Although the illustrations used throughout this document are specific to the J4200 Rail Kit, the J4400 Rail Kit is functionally the same mechanism, but with wider vertical flanges that require additional screws as noted.

This document contains the following sections:

- "Before You Begin" on page 1
- "Installing the Rail Kit in a Sun Rack 900/1000 Cabinet" on page 4
- "Installing the Rail Kit in a Sun StorEdge Expansion or Sun Fire Cabinet" on page 9
- "Installing the Rail Kit in a Standard 19-Inch Cabinet With Unthreaded Cabinet Rails" on page 14

Before You Begin

Before you begin to install the rail kit, do the following:

- "Check the Rail Kit Contents" on page 2
- "Prepare the Cabinet" on page 4

Check the Rail Kit Contents

The rail kits for both the J4200 array and J4400 array contain the appropriate cabinet rails and all required mounting hardware for installing in any of the supported cabinet types. Each rail adjusts to cabinet rail depths from 24 inches (60.96 cm) to 36 inches (91.44cm).

FIGURE 1 Left and Right Mounting Rails (J4200 Array Rails Shown)

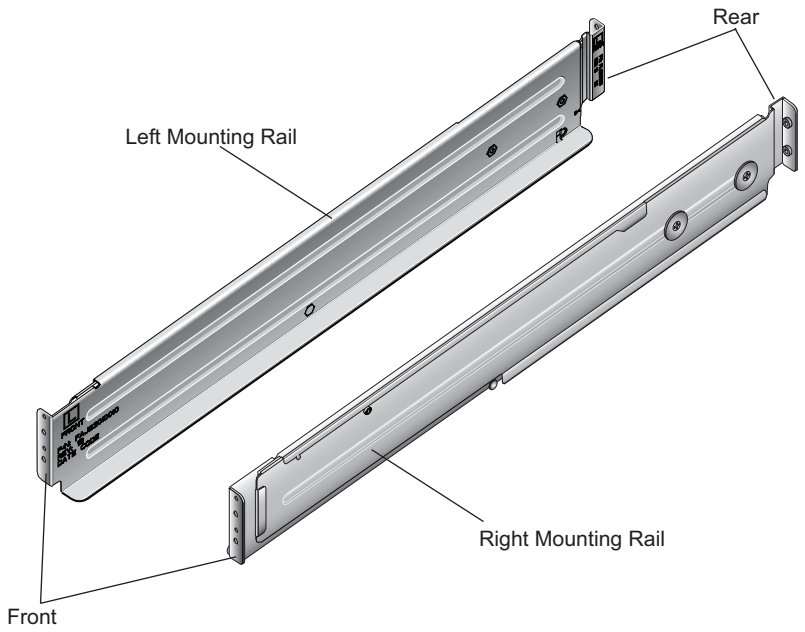


TABLE 1 lists the rail kit components for the J4200 array, and TABLE 2 lists the rail kit components for the J4400 array:

TABLE 1 Rail Kit Contents (J4200 Array)

Quantity	Description	Cabinet
1	Right rail assembly	All supported cabinets
1	Left rail assembly	All supported cabinets
4	Rail plate brackets 10-32	Sun StorEdge Expansion and Sun Fire cabinet
4	Rail plate brackets M6	Sun Rack 900/1000 cabinets
1	Right rear rail adapter bracket	Sun StorEdge Expansion cabinet and Sun Fire cabinet

TABLE 1 Rail Kit Contents (J4200 Array)

Quantity	Description	Cabinet
1	Left rear rail adapter bracket	Sun StorEdge Expansion cabinet and Sun Fire cabinet
4	Rail plate bracket (square hole)	Universal 19″non-threaded cabinet
4	M6 screws	Sun Rack 900/1000 cabinets and Universal 19″ non-threaded cabinet
4	M6 square cage nuts	Universal 19″ non-threaded cabinet
8	8-32 screws	All supported cabinets
8	10-32 screws	Sun Fire cabinet and Sun StorEdge Expansion cabinet
2	System locking clips	All supported cabinets

TABLE 2 Rail Kit Contents (J4400 Array)

Quantity	Description	Cabinet
1	Right rail assembly	All supported cabinets
1	Left rail assembly	All supported cabinets
4	Rail plate brackets 10-32	Sun StorEdge Expansion and Sun Fire cabinet
4	Rail plate brackets M6	Sun Rack 900/1000 cabinets
1	Right rear rail adapter bracket	Sun StorEdge Expansion cabinet and Sun Fire cabinet
1	Left rear rail adapter bracket	Sun StorEdge Expansion cabinet and Sun Fire cabinet
4	Rail plate bracket (square hole)	Universal 19″non-threaded cabinet
8	M6 screws	Sun Rack 900/1000 cabinets and Universal 19″ non-threaded cabinet
8	M6 square cage nuts	Universal 19″ non-threaded cabinet
16	8-32 screws	All supported cabinets
16	10-32 screws	Sun Fire cabinet and Sun StorEdge Expansion cabinet
2	System locking clips	All supported cabinets

Prepare the Cabinet

You can install the rail kit in any of the following cabinets:

- Sun Rack 900/1000 cabinet
- Sun Fire cabinet
- Sun StorEdge Expansion cabinet
- Any 19-inch wide, 4-post, EIA-compatible rack or cabinet with a front-to-back depth between vertical cabinet rails of 61 cm to 91 cm (24 in. to 36 in.). The cabinet can have threaded or unthreaded cabinet rails.

1. **Select the cabinet in which you will be installing the array. Be sure the cabinet is installed as described in the cabinet installation instructions.**
2. **Stabilize the cabinet as described in the cabinet documentation.**
3. **If the cabinet has casters, make sure the casters are locked to prevent the cabinet from rolling.**
4. **Position the data host next to the cabinet in which the array will be installed.**

Installing the Rail Kit in a Sun Rack 900/1000 Cabinet

Use the following procedure for the Sun Rack 900/1000 cabinet.

Prerequisites

Complete the following before you install the rail kit:

- Check the cabinet installation as described in "Prepare the Cabinet" on page 4.
- Unpack the left and right adjustable rails.
- Obtain a #2 Phillips screwdriver (minimum 4-inch length recommended).
- Gather the required mounting hardware for the cabinet (see TABLE 3 or TABLE 4).

TABLE 3 Sun Rack 900/1000 Cabinet Mounting Hardware (J4200 Array)

Quantity	Description	Purpose
4	M6 rail plate brackets	Attaches to a threaded EIA (vertical) cabinet rails
4	M6 screws	Secures rail plate brackets to cabinet's EIA rails
8	8-32 screws	Secures the rails to the cabinet rails
2	Locking clips	Stabilizes the back of the array in the cabinet

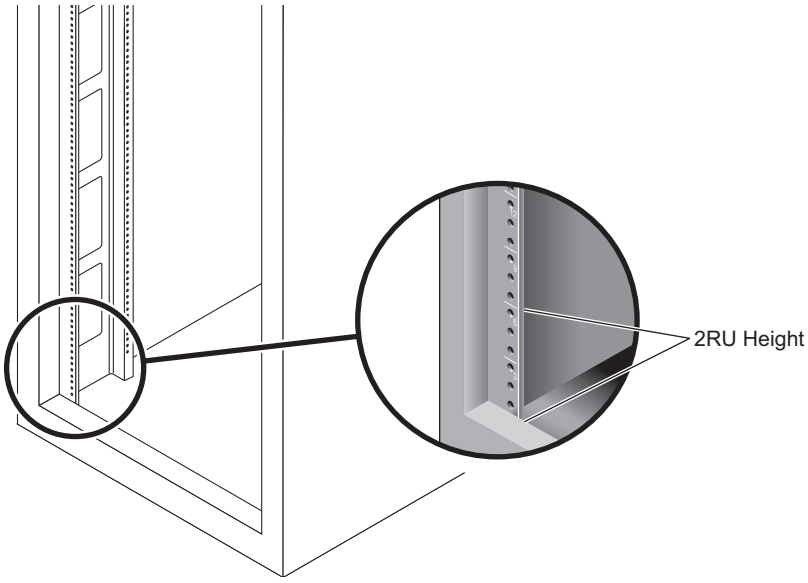
TABLE 4 Sun Rack 900/1000 Cabinet Mounting Hardware (J4400 Array)

Quantity	Description	Purpose
4	M6 rail plate brackets	Attaches to a threaded EIA (vertical) cabinet rails
8	M6 screws	Secures rail plate brackets to cabinet's EIA rails
16	8-32 screws	Secures the rails to the cabinet rails
2	Locking clips	Stabilizes the back of the array in the cabinet

1. **Starting at the bottom of the cabinet, locate the appropriate rack unit (RU) height. The J4200 array requires two standard mounting units (2RU) and the J4400 array requires four standard mounting units (4RU) of vertical space in the cabinet.**

Note – Each standard rack unit (RU) consists of three mounting holes in the left and right cabinet rails.

FIGURE 2 Cabinet Rail 2RU Mounting Holes for the J4200 Array



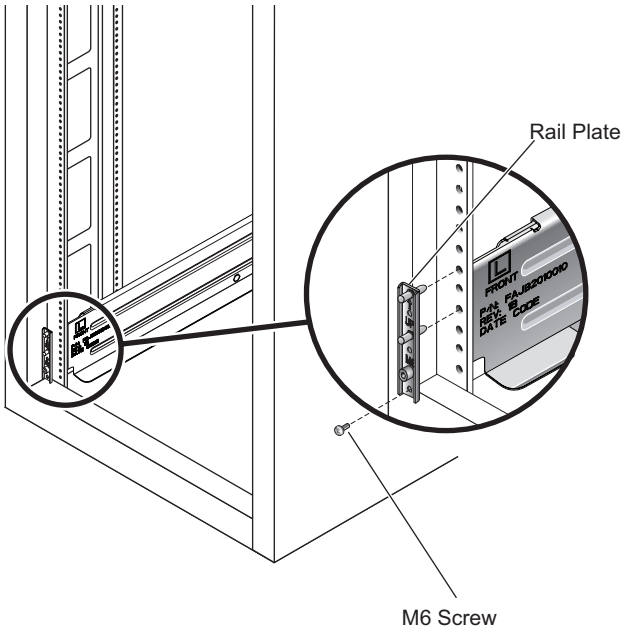
2. **Start at the front of the cabinet. Install one of the M6 rail plate brackets to each side of the rack (see FIGURE 3).**

   a. **With the text on the bracket facing toward you, align the two pins of the rail plate bracket with the holes on the cabinet rail.**

   b. **For the J4200 and J4400 rack mounting plates, insert an M6 screw in the lower hole and tighten. For the J4400, insert an additional M6 screw in the top hole.**

3. **At the back of the cabinet, repeat step 2 to install the remaining two M6 rail plate brackets.**

FIGURE 3 Attaching the Rail Plates to the Cabinet Rail for the J4200 Array



4. **For ease of installation, attach the left and right rails from the back of the cabinet. Follow these steps for the left rail:**

   a. **Position the front of the rail inside the cabinet, and insert the rail holes onto the two pins of the front rail plate bracket.**

Note – Rails are labeled L (left), Front and Rear, and R (right), Front and Rear. (See FIGURE 1.)

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   b. **Adjust the rail length to fit the size of the cabinet.**

      Be sure to align the rail flange so that the mounting holes at the back correspond to those at the front of the cabinet.

   c. **Insert the two holes of the rail flange onto the two pins on the back rail plate bracket.**

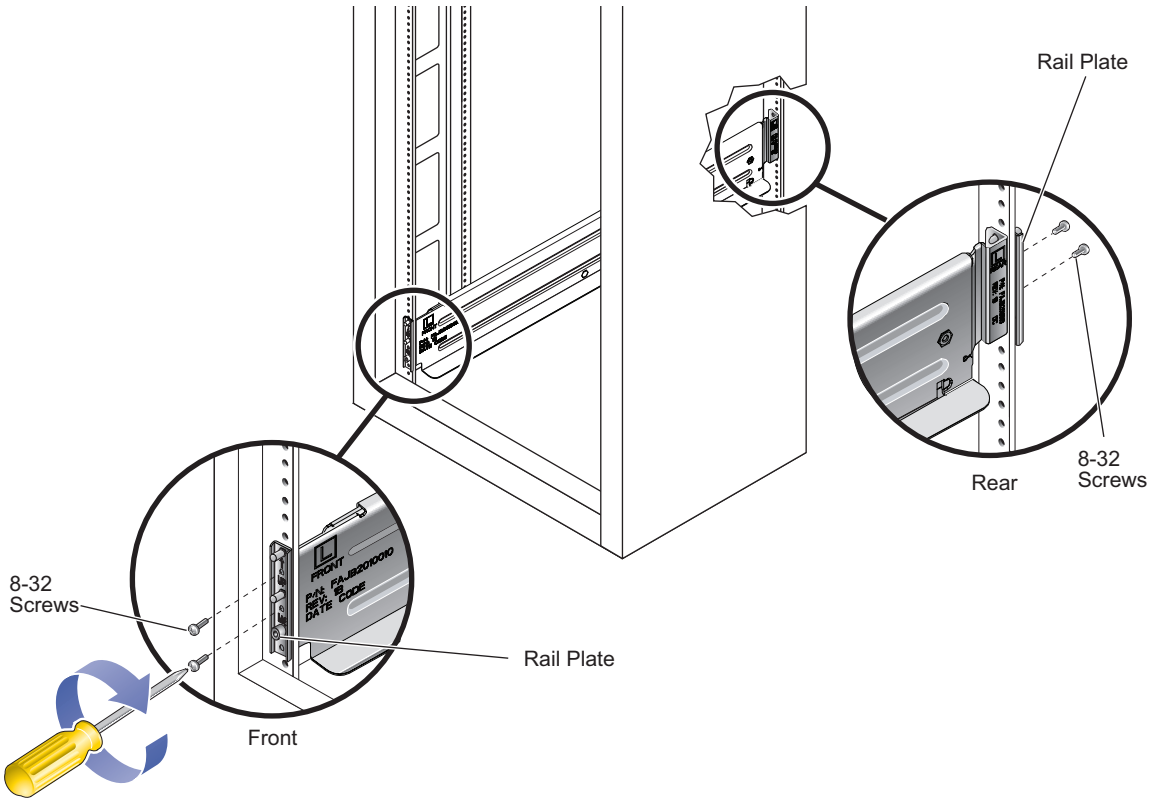
   d. **In the front rail bracket, insert an 8-32 screw into the first and second hole positions (into the first through fourth hole positions for the J4400 array). Use the #2 Phillips screwdriver to tighten each screw to secure the rail to the rack.**

e. **In the back rail bracket, insert an 8-32 screw into the first and second hole positions (into the first through fourth hole positions for the J4400 array). Use the #2 Phillips screwdriver to tighten each screw to secure the rail to the rack.**

f. **Repeat** Step a **through** Step e **for the right rail.**

Caution – Make sure you install the front screws into the rail bracket to secure the rail to the rack and to avoid damage to the device or person installing the device.

FIGURE 4 Attaching and Securing the Left Rail to the Cabinet Rail for the J4200 Array



Installation of the rail kit is complete. You are now ready to install the array chassis onto the cabinet rails. See the *Sun Storage J4200/J4400 Hardware Installation Guide* for installation instructions.

Installing the Rail Kit in a Sun StorEdge Expansion or Sun Fire Cabinet

Use the following procedure for Sun StorEdge Expansion or Sun Fire cabinet.

Prerequisites

Complete the following before you install the rail kit:

- Check the cabinet installation as described in "Prepare the Cabinet" on page 4.
- Unpack the left and right adjustable rails.
- Obtain a #2 Phillips screwdriver (minimum 4-inch length recommended).
- Gather the required mounting hardware for the cabinet (see TABLE 5 or TABLE 6).

TABLE 5 Sun StorEdge Expansion Cabinet and Sun Fire Cabinet Mounting Hardware (J4200)

Quantity	Description	Purpose
2	10-32 rail plate brackets	Attaches to front threaded EIA (vertical) cabinet rails.
2	Rear rail adapter bracket (left and right)	Attaches to the rear of the left and right rail assembly. These brackets allow access to the power cabling area at the back of the cabinet.
8	8-32 screws	Secures the rails and rear adapters to the cabinet.
8	10-32 screws	Secures the rails to the cabinet.
2	Locking clips	Stabilizes the back of the chassis in the cabinet.

TABLE 6 Sun StorEdge Expansion Cabinet and Sun Fire Cabinet Mounting Hardware (J4200)

Quantity	Description	Purpose
2	10-32 rail plate brackets	Attaches to front threaded EIA (vertical) cabinet rails.
2	Rear rail adapter bracket (left and right)	Attaches to the rear of the left and right rail assembly. These brackets allow access to the power cabling area at the back of the cabinet.
16	8-32 screws	Secures the rails and rear adapters to the cabinet.
16	10-32 screws	Secures the rails to the cabinet.
2	Locking clips	Stabilizes the back of the chassis in the cabinet.

1. **Install the rear rail adapter brackets onto the left and right rails. (See** FIGURE 5**.)**

Note – Rails are labeled L (left), Front and Rear, and R (right), Front and Rear. (See FIGURE 1.)

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2. **Insert and tighten two 8-32 screws (four 8-32 screws for the J4400) to secure the adapter bracket to each rail.**

FIGURE 5 Attaching the Adapter Brackets to the Rail (J4200)

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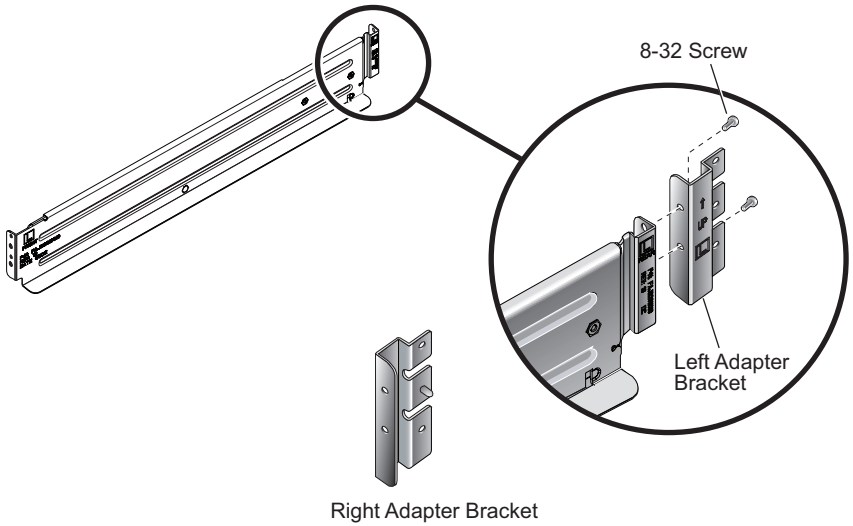
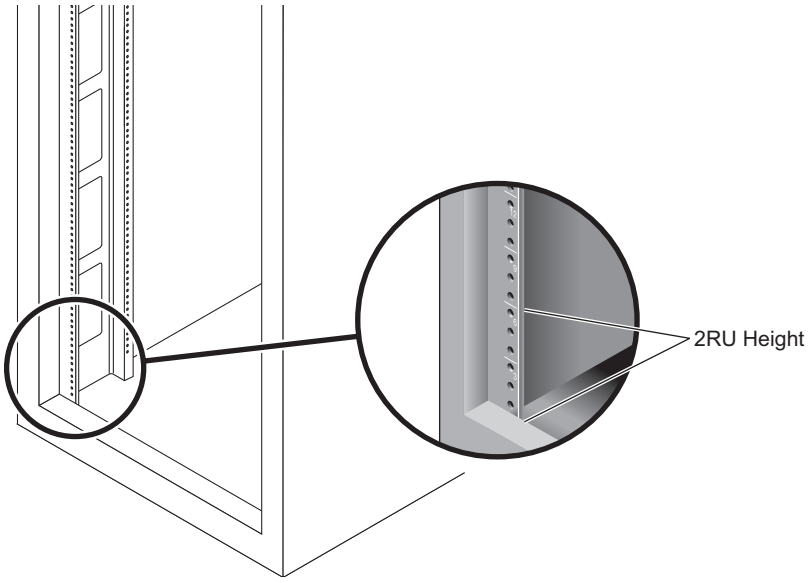


3. **Starting at the bottom of the cabinet, locate the appropriate mounting unit height. The J4200 array requires two standard rack units (2RU) and the J4400 array requires four standard rack units (4RU) of vertical space in the cabinet (See** FIGURE 6**).**

Note – Each standard rack unit (RU) consists of three mounting holes in the left and right cabinet rails.

FIGURE 6 Locating the Rack Unit (RU) Height for the J4200 Array

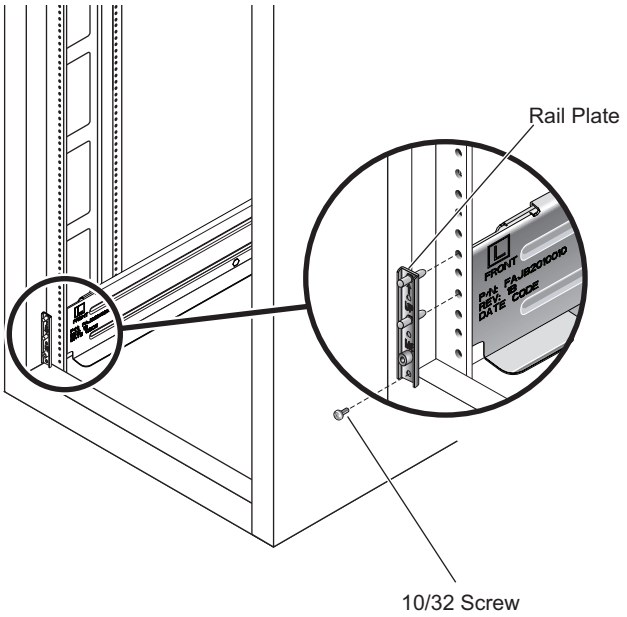


4. **At the front of the cabinet, install the 10-32 rail plate brackets to the left and right cabinet rails.**

   a. **With the text on the bracket facing our, align and insert the two pins of the rail plate bracket into the cabinet rail holes.**

   b. **For the J4200 and J4400 rack mounting plates, insert a 10-32 screw in the lower hole and tighten. For the J4400, insert an additional 10-32 screw in the top hole.**

FIGURE 7 Attaching the Rail Plates to the Cabinet Rail (J4200)



5. **For ease of installation, attach the left and right rails from the back of the cabinet. (See** FIGURE 8**.) Follow these steps for the left rail:**

   a. **Position the front of the rail inside the cabinet, insert the rail holes onto the two pins of the front rail plate bracket.**

   b. **Adjust the rail length to fit the size of the cabinet.**

      Be sure to align the rail flange so that the mounting holes at the front correspond to those at the back of the cabinet.

   c. **Align and insert the rear rail pin into the cabinet rail hole.**

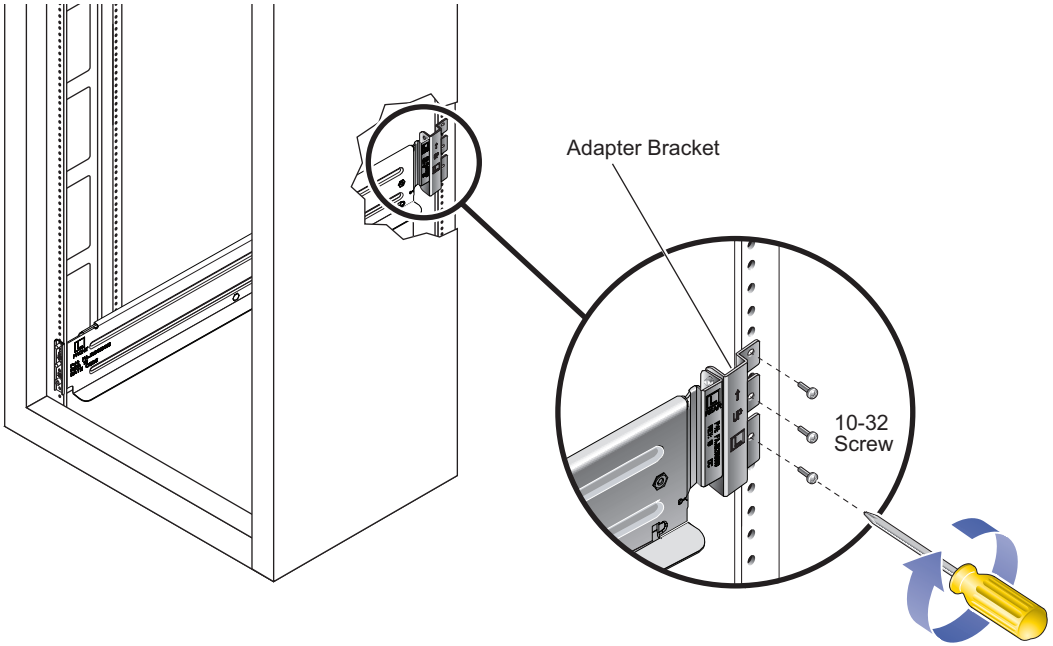
   d. **Add three 10-32 screws (six 10-32 screws for the J4400) to secure the rear adapter to the rack. (See** FIGURE 8**.)**

   e. **From the front of the cabinet, insert two 8-32 screws (four 8-32 screws for the J4400) to secure the rail to the cabinet.**

   f. **Repeat** Step a **through** Step e **for the right rail.**

Caution – Make sure you install the front screws into the rail bracket to secure the rail to the rack to avoid damage to the device or person installing the device.

FIGURE 8 Securing the Adapter Brackets to the Cabinet Rail (J4200)



Installation of the rail kit is complete. You are now ready to install the J4400 array chassis onto the cabinet rails. See the *Sun Storage J4200/J4400 Hardware Installation Guide* for installation instructions.

Installing the Rail Kit in a Standard 19-Inch Cabinet With Unthreaded Cabinet Rails

Use the following procedure to attach the rail kit to any 19-inch wide, 4-post EIA-compatible rack, or cabinet with unthreaded cabinet rails.

Prerequisites

Complete the following before you install the rail kit:

- Check the cabinet installation as described in "Prepare the Cabinet" on page 4.

- Unpack the left and right adjustable rails.
- Obtain a #2 Phillips screwdriver (minimum 4-inch length recommended).
- Gather the mounting hardware required for the cabinet (see TABLE 7 or TABLE 8).

TABLE 7 Universal 19-inch wide, 4-post, EIA-compatible Rack Mounting Hardware (J4200)

Quantity	Description	Purpose
4	M6 square cage nuts	Snaps over the rail mounting holes in the left and right back cabinet rails
4	Square adapter brackets	Attaches to non-threaded EIA (vertical) cabinet rails
4	M6 screws	Secures the square adapter brackets to the cabinet rails
8	8-32 screws	Secures the rails to the cabinet rack
2	Locking clips	Stabilizes the array chassis in the cabinet

TABLE 8 Universal 19-inch wide, 4-post, EIA-compatible Rack Mounting Hardware (J4400)

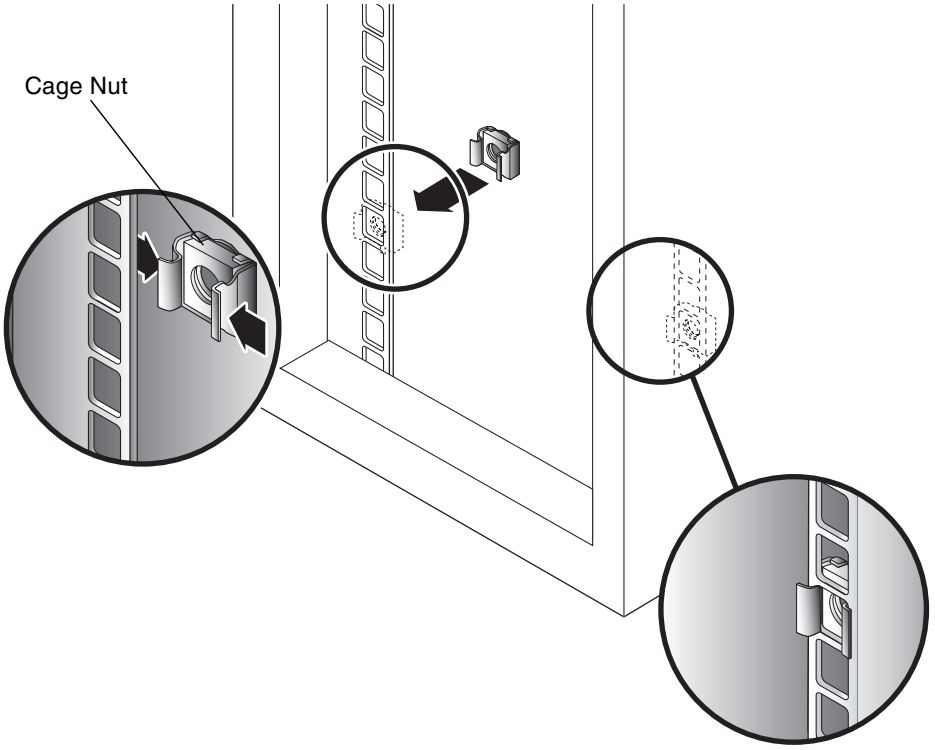
Quantity	Description	Purpose
4	M6 square cage nuts	Snaps over the rail mounting holes in the left and right back cabinet rails
8	Square adapter brackets	Attaches to non-threaded EIA (vertical) cabinet rails
8	M6 screws	Secures the square adapter brackets to the cabinet rails
16	8-32 screws	Secures the rails to the cabinet rack
2	Locking clips	Stabilizes the array chassis in the cabinet

1. **Starting at the bottom of the cabinet, locate the appropriate mounting unit height. The J4200 array chassis requires two standard mounting rack units (2RU) of vertical space in the cabinet. The J4400 array chassis requires four standard mounting rack units (4RU) of vertical space in the cabinet.**

Note – Each standard rack unit (RU) consists of three mounting holes in the left and right cabinet rails.

2. **At the front of the cabinet, snap a cage nut into the lower hole of the 2RU of the right rail (and an additional cage nut in the top hole of the 4RU for the J4400). Repeat for the left rail. (See** FIGURE 9**.)**

FIGURE 9 Inserting Cage Nuts Into the Cabinet Rail Mounting Holes (J4200)



3. **Install the left and right square hole rail plate brackets (four brackets total for J4400).**

   a. **For the J4200 and J4400 rack mounting plates, insert an M6 screw in the lower hole and tighten. For the J4400, insert an additional M6 screw in the top hole.**

   b. **Using the #2 Phillips screwdriver, tighten the screws to secure the plates to the rail.**

4. **At the back of the cabinet, snap a cage nut into the lower hole of the 2RU of the right rail (and an additional cage nut in the top hole of the 4RU for the J4400). Repeat for the left rail. (See** FIGURE 9**.)**

5. **For the J4200 and J4400 rack mounting plates, insert an M6 screw in the lower hole and tighten. For the J4400, insert an additional M6 screw in the top hole.**

   Be sure to align the rail flange so that the mounting holes at the front correspond to those at the back of the cabinet.

   a. **Insert an M6 screw into the lower hole of the rail plate bracket (lower two holes for J4400).**

   b. **Using the #2 Phillips screwdriver, tighten the screws to secure the plates to the rail.**

6. **For ease of installation, attach the left and right rails from the back of the cabinet. Follow these steps for the left rail:**

   a. **Position the front of the rail inside the cabinet, and insert the rail holes onto the two pins of the front rail plate bracket.**

   b. **Adjust the rail length to fit the size of the cabinet.**

      Be sure to align the rail flange so that the mounting holes at the front correspond to those at the back of the cabinet and the rail is level.

   c. **Align the two holes of the rail flange with the two pins on the back rail plate bracket.**

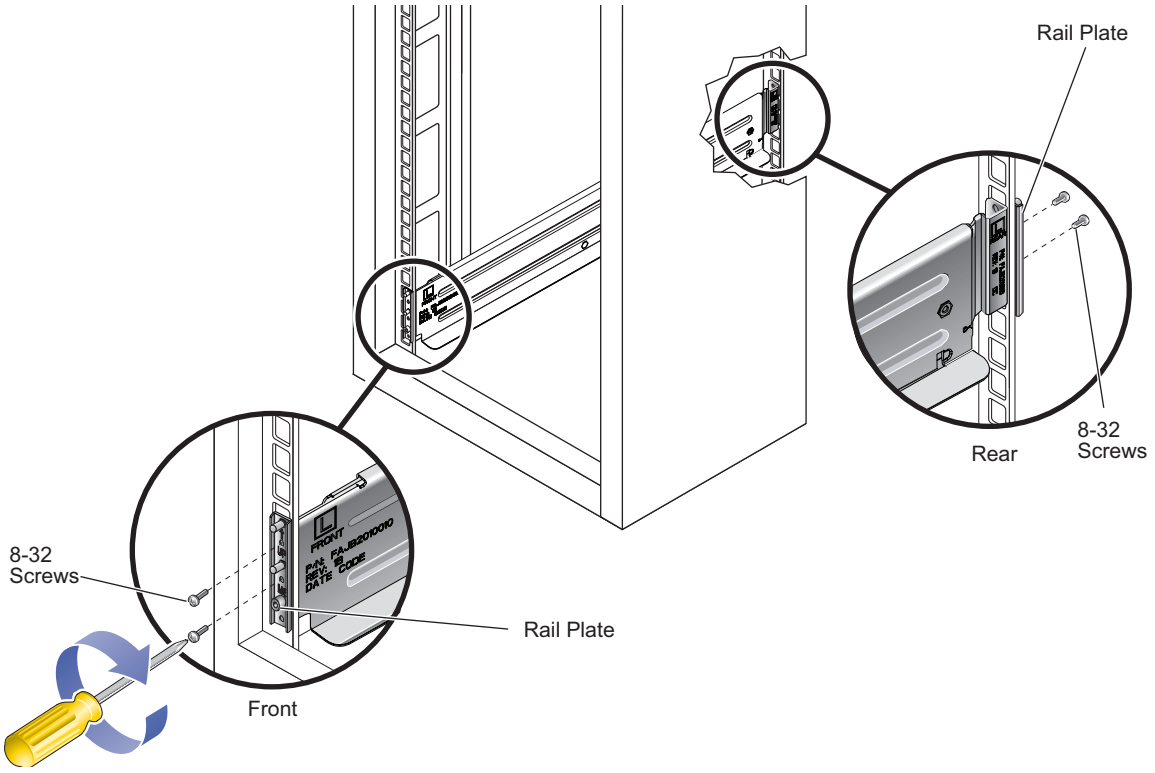
   d. **Install two 8-32 screws to secure the rail to the rack (install four screws for the J4400), as shown in** FIGURE 8**.**

   e. **Repeat** Step a **through** Step d **for the right rail.**

7. **At the front of the cabinet, insert two 8-32 screws (four screws for J4400) in the remaining holes of the left and right brackets and tighten to secure the rail to the cabinet.**

Caution – Make sure you install the front screws into the rail bracket to secure the rail to the rack and to avoid damage to the device or person installing the device.

FIGURE 10 Attaching the Rails to the Cabinet



Installation of the rail kit is complete. You are now ready to install the chassis onto the cabinet rails. See the *Sun Storage J4200/J4400 Hardware Installation Guide* for installation instructions.