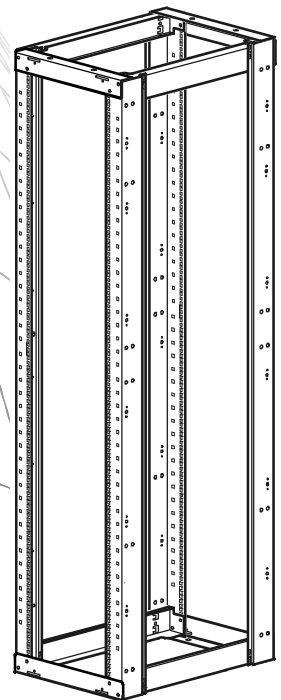


Unpacking, Installation, and Customization

NetShelter[®] Four-Post Rack

AR203A
AR204A





This manual is available in English on the APC Web site (www.apc.com).

本マニュアル<各国の言語に対応する>はAPC ウェブサイト (www.apc.com) からダウンロードできます。

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Product Overview

Description

The American Power Conversion (APC®) NetShelter® Four-Post Rack is a high-quality rack for storage of industry-standard (EIA-310), 19-in rack-mount hardware, which includes servers and voice, data, networking, internetworking, and APC power-protection equipment.

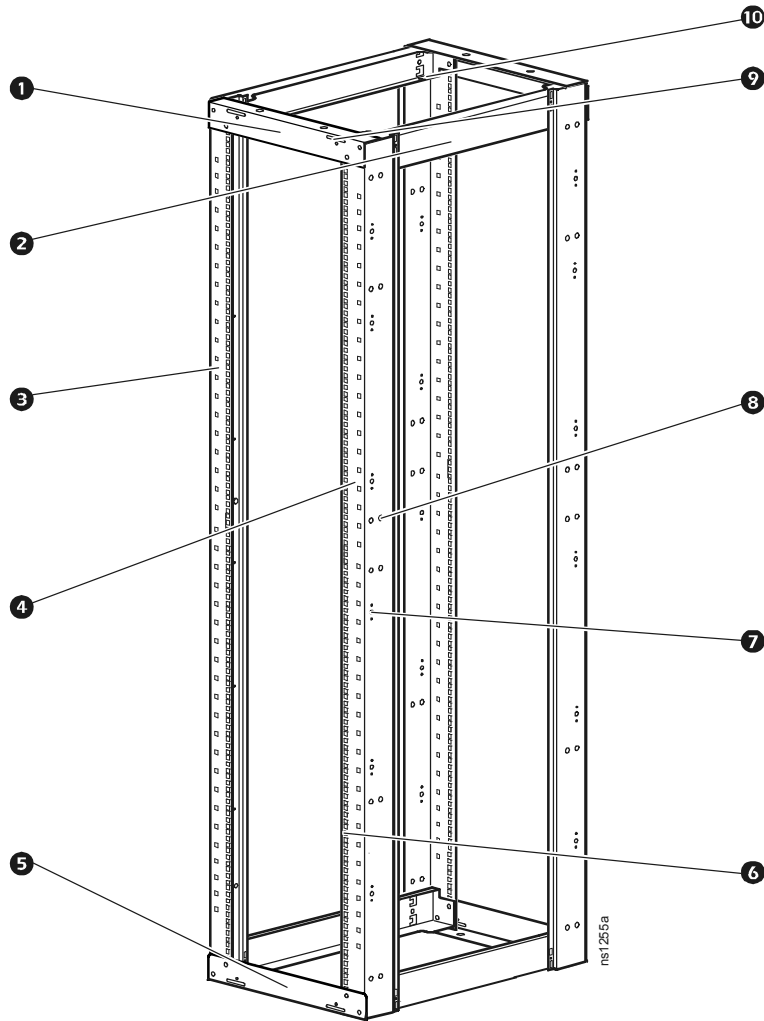
NetShelter Four-Post Rack models

Model	Rack Mounting Height	Rack Mounting Width	External Rack Width	Rack Depth	Mounting Holes
AR203A	44 U [†]	482 mm (19 in)	600 mm (23.62 in)	747 mm (29.41 in)	Square 9.5 mm
AR204A	44 U [†]	482 mm (19 in)	600 mm (23.62 in)	747 mm (29.41 in)	Tapped #12-24 THD

[†] One U = 44.4 mm (1.75 in)

Product Inventory

Components of the Four-Post Rack



- | | | | |
|---|---|---|--|
| ❶ | Horizontal frame brackets (600-mm) (4) | ❸ | Equipment mounting holes |
| ❷ | Side frame brackets (740-mm) (4) | ❹ | Spacer bracket mounting holes |
| ❸ | Left vertical frame post (2) | ❺ | Four-Post Rack joining and accessory mounting holes |
| ❹ | Right vertical frame post (2) | ❻ | Trough and partition adapter mounting holes |
| ❺ | Horizontal frame bracket (bottom horizontal frame can be used for rack stabilization) | ❼ | Grounding holes (See “Grounding locations” on page 11) |

Before Installation

Tools

Tools (provided)



Open-ended wrench (13 mm/14 mm)

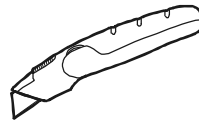


Cage nut tool (1)

Other tools required (not provided)



Phillips
screwdriver (1)



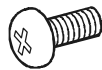
Utility knife (1)

Hardware

Hardware (provided)



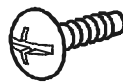
M8 x 16-mm
hex-head screw
(28)



M6 x 16
Phillips slot
screws[†] (60)



Cage nuts[†]
(60)



12-24 x 1/2
Pan-head
Screw[‡] (60)



M8 Hex Nut
(4)



Washer (8)

[†] This item is provided only with the AR203A Four-Post Rack with square holes.

[‡] This item is provided only with the AR204A Four-Post Rack with tapped holes.



Warning: Read all instructions thoroughly. Warning symbols indicate important instructions that must be followed to prevent injury or damage.

- Use at least two people to unpack and assemble the rack.
- To prevent the enclosure from tipping over, stabilize the rack before installing the equipment.
- Do not extend more than one piece of equipment from the rack at one time.
- Load the heaviest pieces of equipment first, and place them toward the bottom of the rack to prevent the rack from becoming top-heavy.

Please recycle



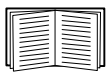
The shipping materials are recyclable. Save them for later use, or dispose of them appropriately.

Disclaimer

APC is not responsible for damage sustained during reshipment of this product.

Inventory

After unpacking the rack, verify that all required components and hardware have been shipped with the rack.



See the “Product Inventory” on page 2 for a list of components and “Hardware” on page 4 for a list of hardware provided with the Four-Post Rack.



Note: If any items are missing, contact APC Customer Support using the Web address listed on the back cover of this manual.

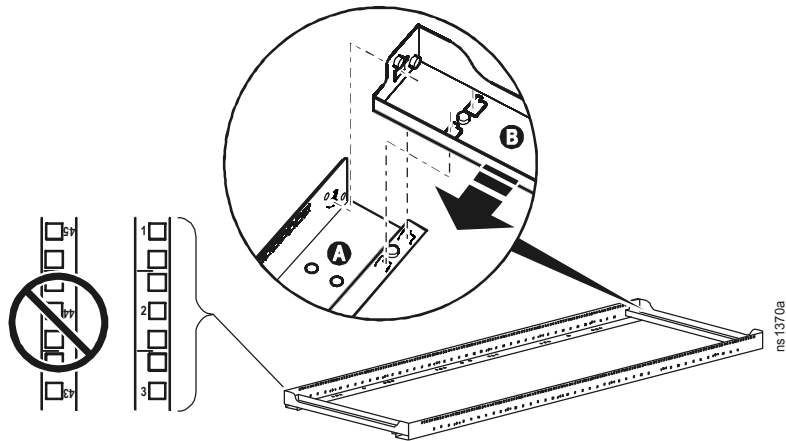
Install the Four-Post Rack

Assemble the rack

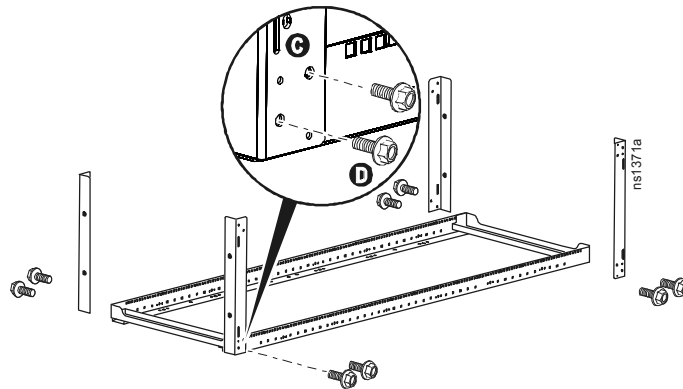


Note: Fasten the M8 x 16-mm hex-head screws loosely during assembly of the Four-Post Rack. When the rack is upright, complete the assembly by fully tightening all the screws.

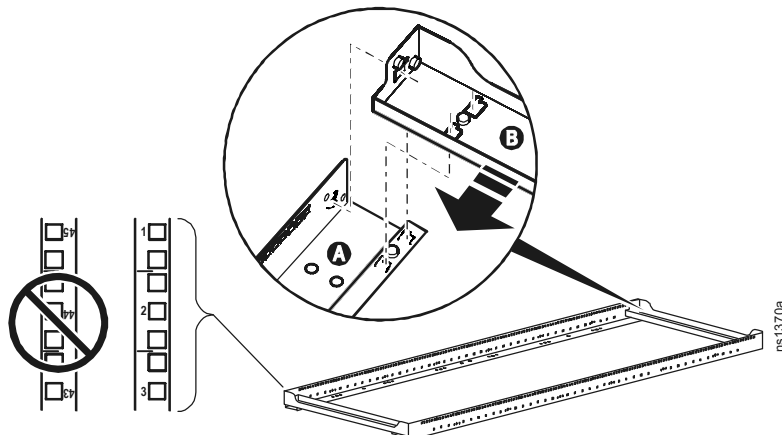
1. Insert the fastening tabs on the left and right vertical frame posts **A** into the holes of the side frame brackets **B**. Secure the side frame brackets by sliding them inward. Ensure that the U-spacing label is facing upright on both the left and right vertical frame posts.



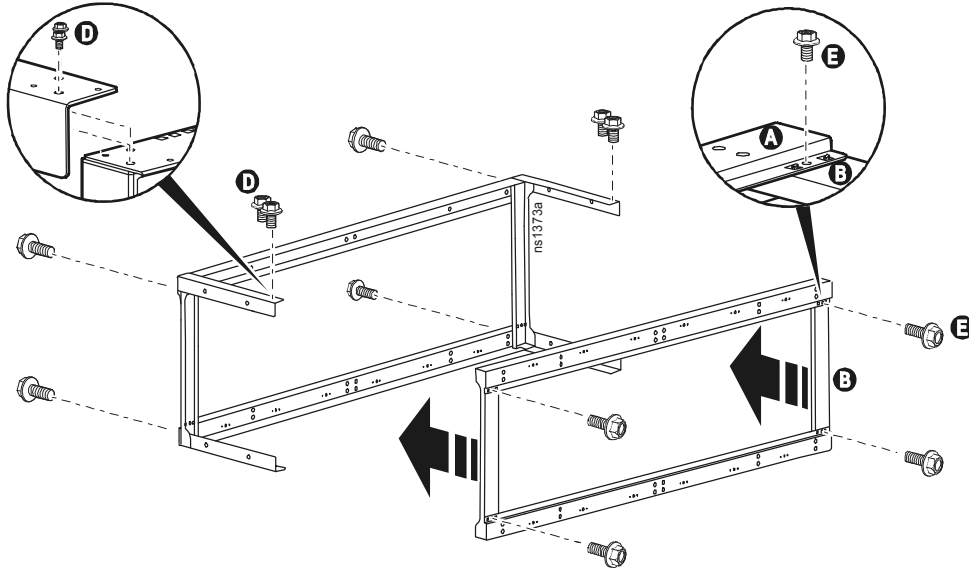
2. Attach the four horizontal frame brackets **C** to the assembled half of the rack using eight M8 x 16-mm hex-head screws **D**.



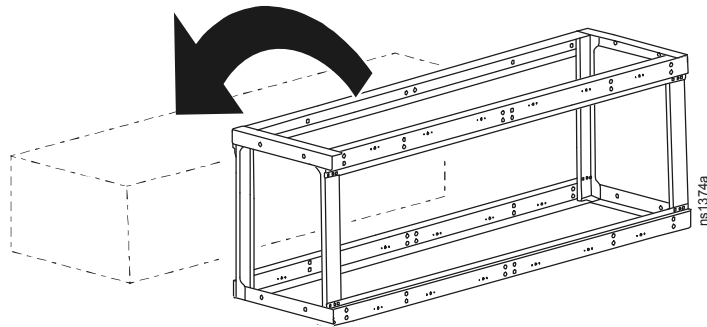
3. Repeat step 1 with the remaining left and right vertical frame posts **A** and side frame brackets **B**. Ensure that the U-spacing label is facing the same direction on both the left and right vertical frame posts.



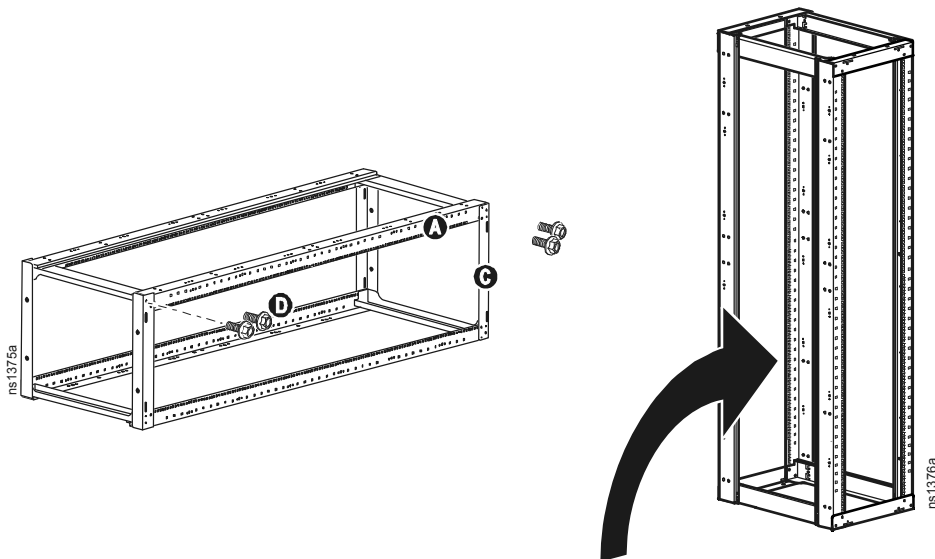
- Ensure that the U-spacing label is facing the same direction on both the left and right vertical frame posts and attach the two assembled halves of the rack using four M8 x 16-mm hex-head screws **D**.
- Install eight M8 x 16-mm hex-head screws **E** in the side frame brackets **B** and vertical frame posts **A**.



- Rotate the rack 90 degrees.



- Install the remaining four M8 x 16-mm hex-head screws **D** in the horizontal frame brackets **C** and vertical frame post **A** and tip the rack upright.



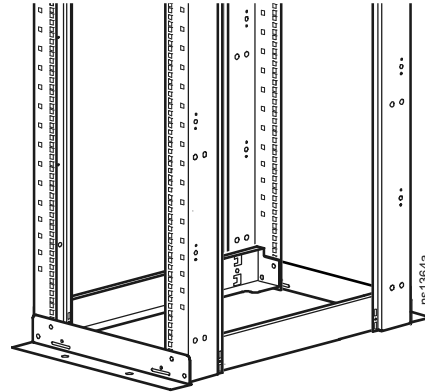
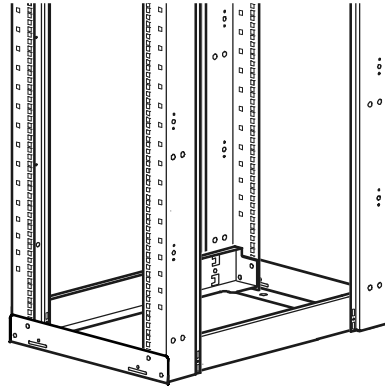
- Tighten all 24 hex-head screws to 27.11 N-m (20 ft-lb).



Warning: Stabilize the rack by securing it to the floor before installing the components—failure to do so could result in the rack tipping over.

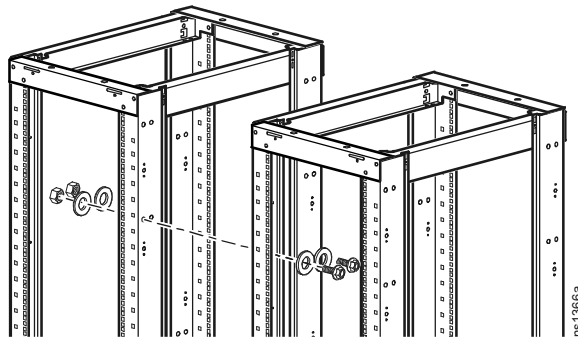


Note: The bottom horizontal frame can be attached on the exterior or, to save floor space, on the interior of the rack.

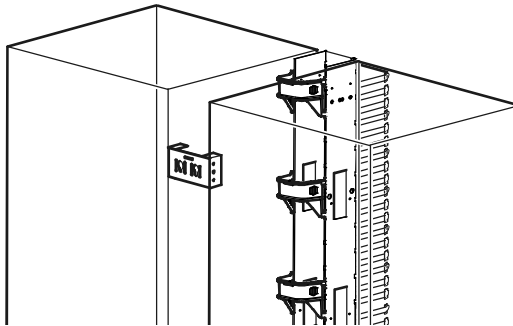


Join the Four-Post Racks

Join the racks directly with no spacing between them using the available holes on the vertical frame posts and the provided hardware.

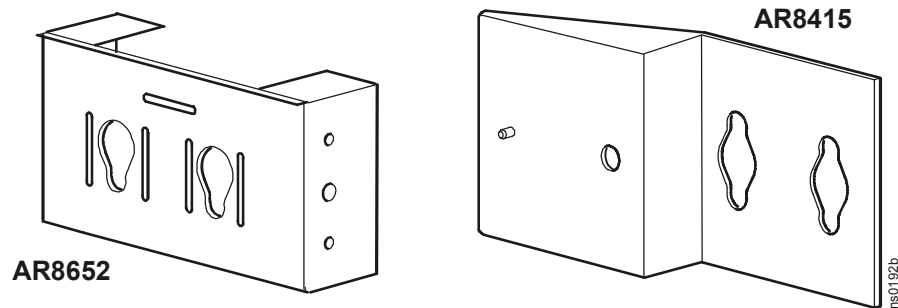


Join the racks together using the 6-in Spacer Brackets (AR8652) when installing the optional cable management accessories 6-in and 12-in Vertical Cable Managers (AR8650 and AR8651).



Mount an APC Rack Power Distribution Unit (Rack PDU)

APC Rack PDUs can be added to your installation with the optional Rack PDU mounting bracket (AR8415) and the optional 6-in Spacer Bracket (AR8652).

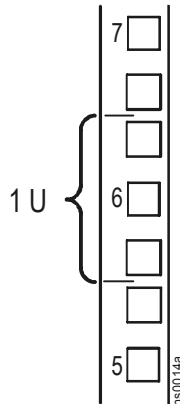


Install Equipment

This section provides information on how to install rack-mount equipment in the NetShelter Four-Post Rack. The instructions provided with the equipment contain more detailed information.

Identify one U-space on the vertical mounting flange

When installing equipment, locate the top and bottom of a U-space on the mounting flanges. Every third hole on the mounting flanges of a NetShelter rack is numbered to indicate the middle of a U-space. A U-space consists of one of these numbered holes and one hole directly above and below it, as shown.



Install cage nuts

APC offers a cage nut hardware kit (AR8100) for use with square holes.



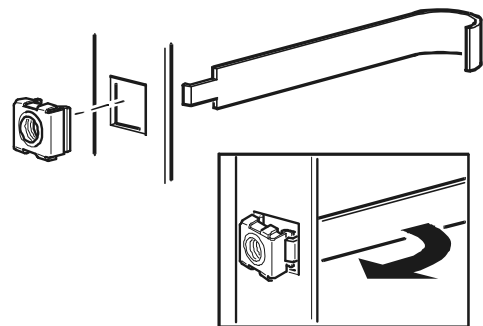
Warning: Install cage nuts horizontally, with the ears engaging the sides of the square hole. Do NOT install cage nuts vertically with the ears engaging the top and bottom of the square hole.

1. Insert the cage nut into the square hole by hooking one ear of the cage nut assembly through the far side of the hole.



Note: Install the cage nuts on the interior of the vertical mounting flange.

2. Place the cage nut tool (provided) on the other side of the cage nut and pull to snap it into position.



Remove cage nuts

1. Remove any attached screw.
2. Grasp the cage nut and squeeze the sides to release it from the square hole.

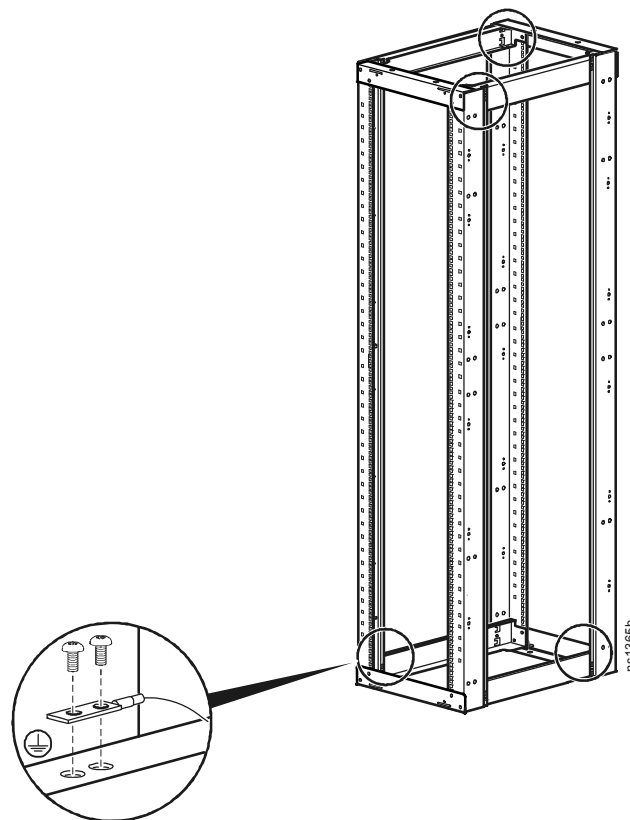
Grounding locations

Each rack should be grounded directly to the building ground using one of the grounding nuts at the top or bottom side frame.

Ground each rack directly to the building ground. Do not ground one rack to another rack in a cascading style.

There are four grounding locations on the Four-Post Rack.

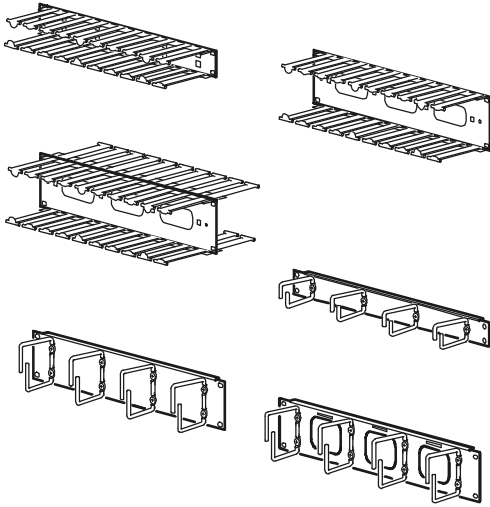
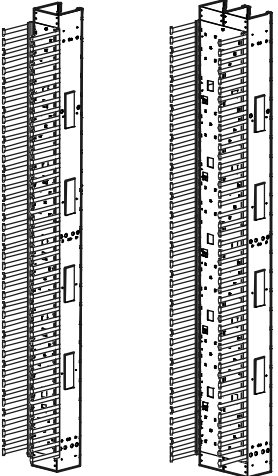
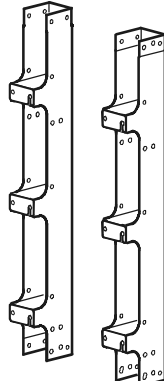
# of holes	Location
4	Top side frames
4	Bottom side frames

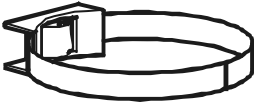
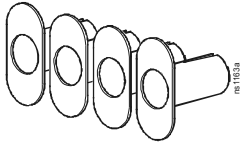
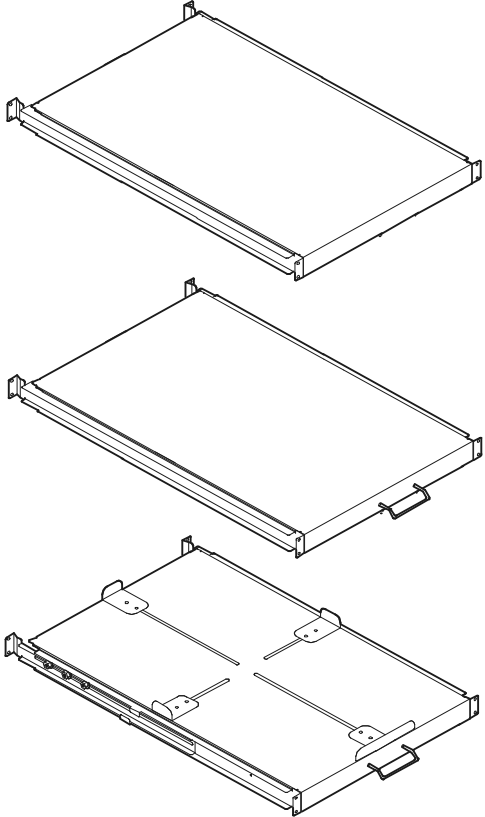



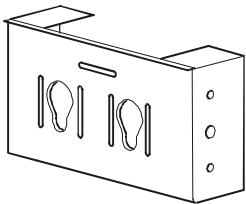
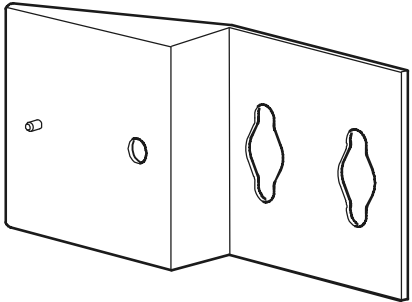
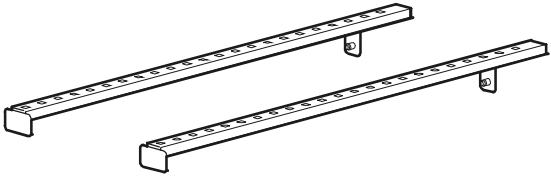
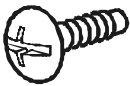

Note: M6 grounding screws and wiring are not provided with the Four-Post Rack. Tighten all M6 grounding screws to 5.65–6.78 N-m (50–60 in-lb).

Cable Management

Cable management options

Product	SKU	Description	Figure
19-inch horizontal cable organizers	AR8602 (1 U) AR8600 (2 U) AR8601 (2 U double sided) AR8425A (1 U) AR8426A (2 U) AR8428 (2 U)	Route patch cables horizontally at the front or rear of a 19-inch EIA rack.	
6-in and 12-in Vertical Cable Organizers	AR8650 (6-in) AR8651 (12-in)	High capacity vertical cable organizers that mount to either side of an open frame rack. Radiused cable fingers at 1U increments provide superior cable management.	
3-in and 6-in Vertical Cable Organizers	AR8440A (3-in) AR8441A (6-in)	Vertical cable organizers mount to either side of open frame racks. The simple design offers a cost effective cable management solution.	

Product	SKU	Description	Figure
Toolless Hook-and-Loop Cable Managers	AR8621	A toolless mount hook-and-loop cable fastener for organizing data cable bundles. Various mounting positions are available on the back panel of a vertical cable organizer.	
Fiber Organizer (spools only)	AR8444	Plastic spools for fiber cable management can be toollessly mounted to the AR8659 and AR8651 vertical cable organizers or attached with screws to the vertical mounting rails of open frame racks.	
Fixed and Sliding Shelves, 100, 200, and 250-lb	AR8122BLK (fixed) AR8123BLK (sliding) AR8128BLK (sliding 250-lb)	Fixed and sliding shelves to enable the mounting of tower units, monitors, and other equipment into the rack environment.	
Side Channel Cable Trough	AR8008BLK	Cable management accessory for routing cables between the front and rear mounted AR8650 and AR8651 vertical cable organizers.	

Product	SKU	Description	Figure
Spacer Bracket 2-in wide for Four-Post Racks	AR8652	Spacer brackets mount to the sides of open frame racks. They are used together with AR8650 and AR8651 vertical cable organizers to connect the rear frames of open frame racks. The brackets can also be used to mount two APC Rack PDUs.	
Vertical Rack PDU Mounting Bracket	AR8415	Attach the brackets to either side of the Four-Post open frame rack and mount two APC Rack PDUs.	
Trough and Partition Adapter	AR8450A	Mounts to the top of the Four-Post open frame racks to allow mounting of the APC overhead troughs and partitions.	
#12-24 Hardware Kit (quantity-24)	AR8400 (for AR204 and AR204A only)	#12-24 mounting screw hardware kit for Four-Post open frame rack with threaded holes.	
#10-32 Hardware Kit (quantity-36)	AR8005 (for AR203A only)	Cage nuts with #10-32 thread for mounting equipment in enclosures with square holes in the mounting rails. Accommodates devices using #10-32 mounting screws.	

Specifications

600-mm Four-Post Rack

Item	Measurements
Dimensions	AR203A and AR204A
Rack mounting height	44 U [†]
Exterior height	2130.40 mm (83.87 in)
Exterior width	600 mm (23.62 in)
Exterior depth	747 mm (29.41 in)
Weight	
Net weight	40.32 kg (88.90 lb)
Weight capacity	907.18 kg (2,000 lb)

[†] One U = 44.4 mm (1.75 in)

Five-Year Factory Warranty

The limited warranty provided by APC in this Statement of Limited Factory Warranty applies only to products you purchase for your commercial or industrial use in the ordinary course of your business.

Terms of warranty

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Connect to localized APC Web sites for specific countries, each of which provides customer support information.
 - **www.apc.com/support/**
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- Contact the APC Customer Support Center by telephone or e-mail.
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