

Intel[®] Server System SR9000MK4U Rack Installation Guide

Intel Order Number D78504-001



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Mounting System in a Rack Cabinet

This document provides instructions to mount the Intel® Server System SR9000MK4U into a cabinet rack. The procedure to attach a rail bracket kit to a rack cabinet differs if a cable arm kit is used. A set of instructions for each mounting method is included in this document. Use the appropriate steps for your installation.

Cautions:

- *Installing and replacing components is to be performed only by trained personnel.*
- *Before performing the procedures in this chapter turn off the system and disconnect all power plugs.*
- *The server equipment is heavy. Do not attempt to lift the server onto the rack alone.*
- *Mount a stabilizer to the rack cabinet. Do not attempt to slide a server out from the rack without a stabilizer in place. The rack could tip, causing injury.*

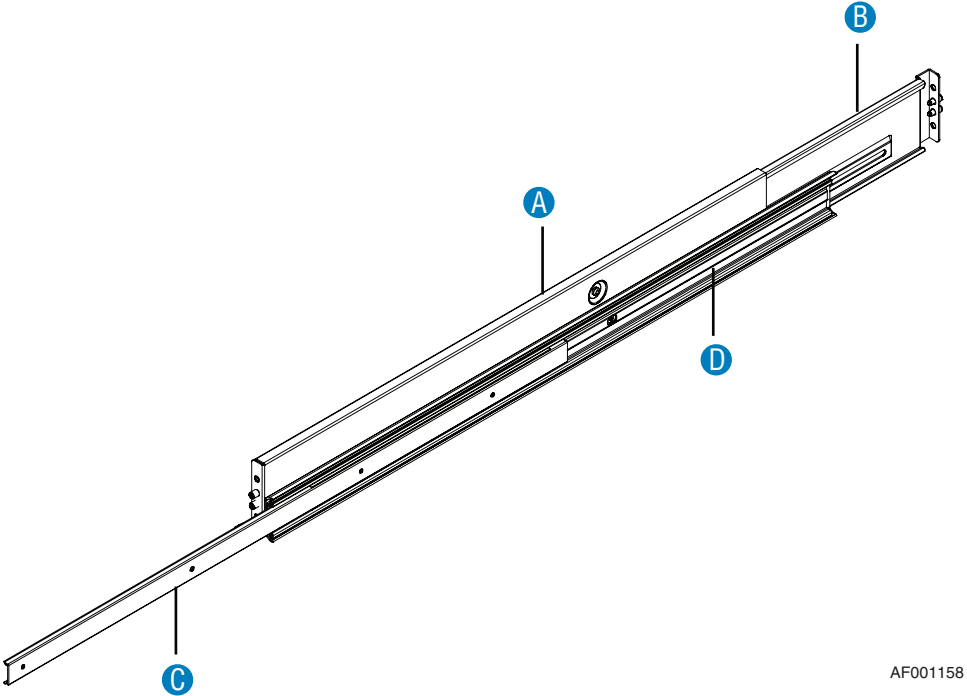
Tools Needed

The following tools are needed to install or remove the hardware described in this chapter.

- Phillips* screwdriver #2
- Flathead screwdriver 5.5 x 75
- Cotton gloves
- Antistatic wrist strap

Dimensions and Components of Rail Bracket Kit and Rack Cabinet

The rail kit components are as shown below.



- A. Front mounting bracket
- B. Rear mounting bracket
- C. Inner channel
- D. Inter channel

Figure 1. Configuration of Rail Bracket Kit

Your rack cabinet rails need to range between 715 mm and 920 mm, including the thickness of the cabinet rail, as shown below.

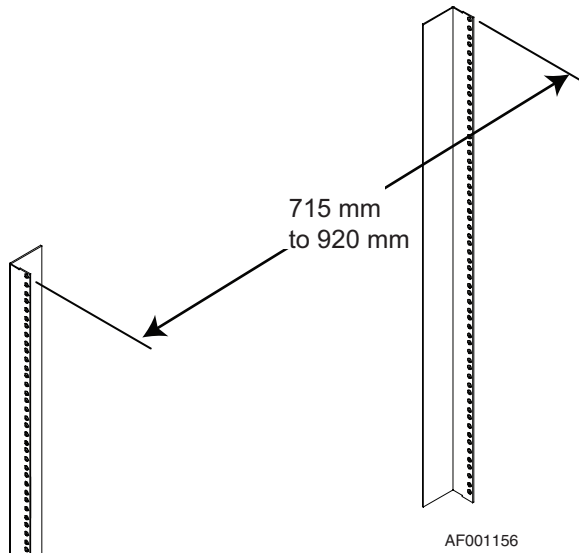


Figure 2. Cabinet Rail to Rail Distance

Your rack cabinet will have either round or square holes as shown by letters “A” and “B” in the figure below.

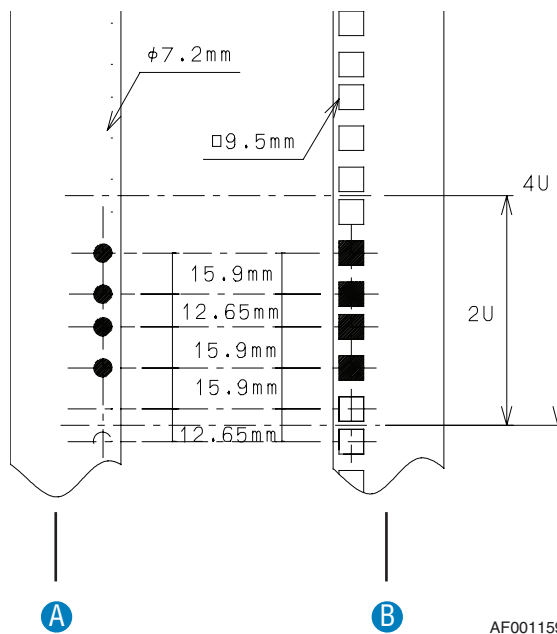
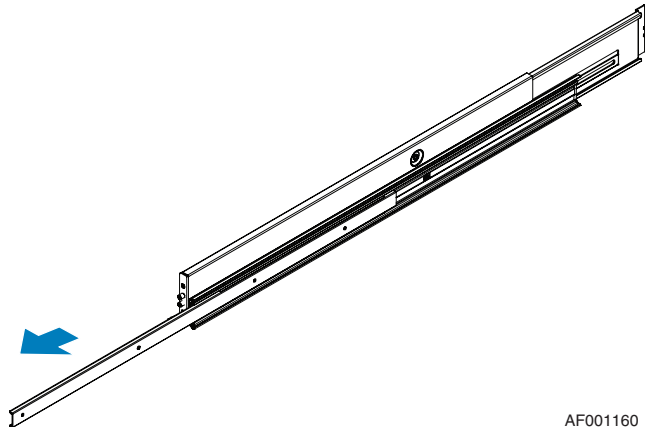


Figure 3. Configuration of Cabinet Holes

Attach Inner Channel to Chassis

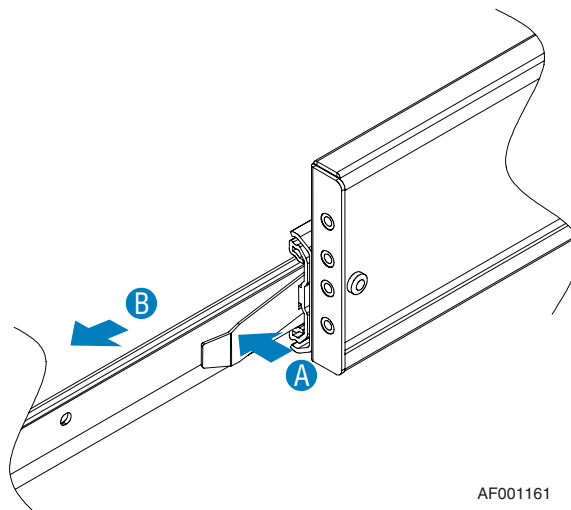
1. Pull the inner channel out until it stops. See the following figure.



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Figure 4. Pulling Out Inner Channel

2. Push and hold the lock spring where the inner channel meets the front mounting bracket. See letter “A” in the figure below.
3. While holding the lock spring, pull out again on the inner channel to remove it from the mounting bracket. See letter “B” in the figure.
4. Repeat steps 1 - 3 on the second rail bracket.

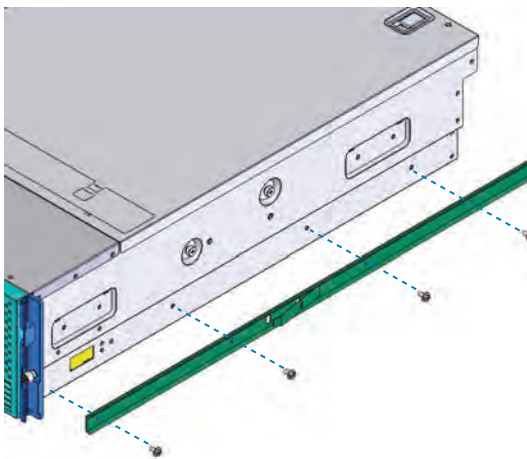


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Figure 5. Releasing the Inner Channel Lock Spring

5. Attach one inner channel to each side of the chassis, using the eight M4x6 screws, four screws on each side of the system.

Note: In the diagram below, the rail is being attached to the right side of the chassis. Be sure to use the correct orientation on your rails.



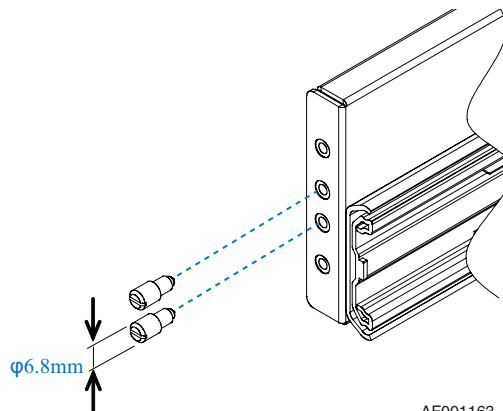
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Figure 6. Attaching Inner Channel to Chassis

Attach Guide Pin to Rail Bracket Kit

Insert guide pins at each end of both rail brackets as shown below, using a total of eight guide pins. Be sure to use the correct size of guide pin for your rail kit and insert the guide pins into the center two holes, as shown in the diagrams.

- Use 6.8 mm guide pins for a cabinet that has round holes.



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Figure 7. Attaching Guide Pin to Rail Bracket Kit for Round Holes

- Use 9.2 mm guide pins for a cabinet that has square holes.

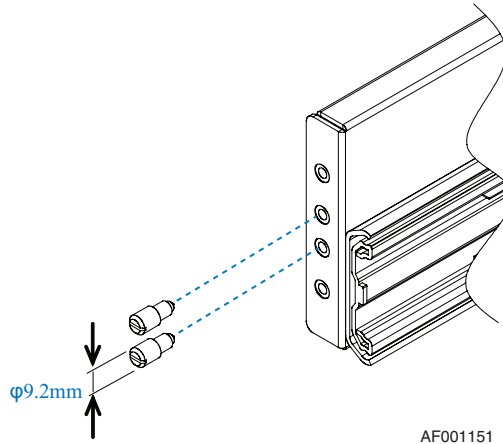


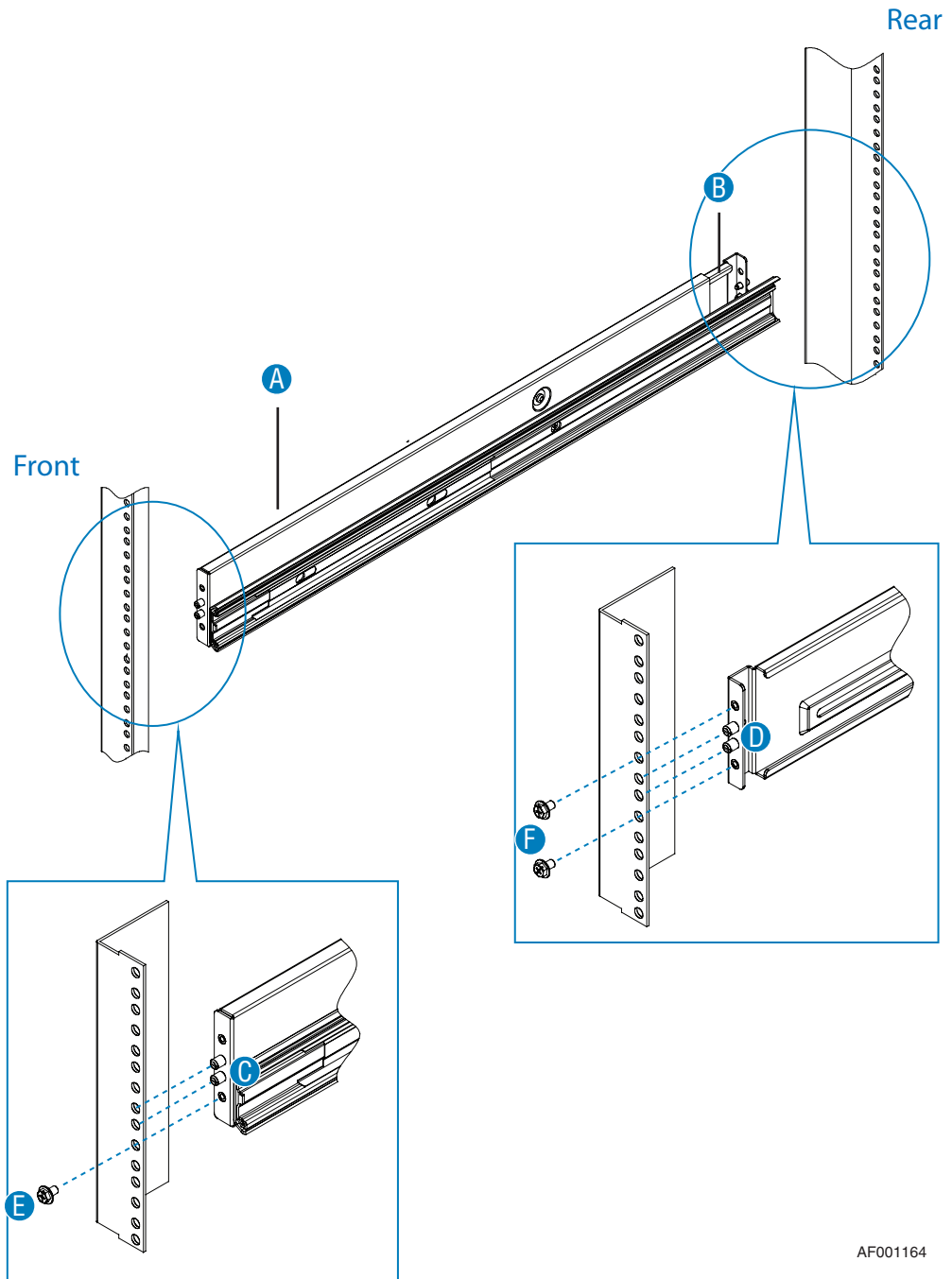
Figure 8. Attaching Guide Pin to Rail Bracket Kit for Square Holes

Mounting System without using a Cable Arm Kit

Note: *These steps apply only if you are not using a cable arm kit. If you are using a cable arm kit, do not use the steps in this section. Instead see “Mounting System with use of a Cable Arm Kit” on page 10.*

In the diagram below:

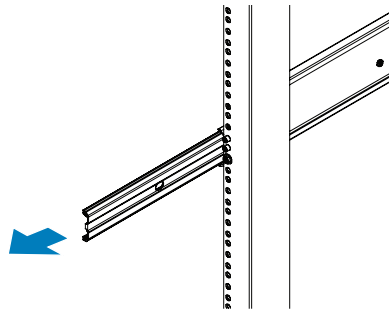
- Letter “A” shows the front mounting bracket.
 - Letter “B” shows the rear mounting bracket.
 - The front of the rack is at the left.
 - The exploded view of the rear mounting bracket and rail is reversed, as if you will see it when standing behind the rack.
 - Two guide pins have been installed into the front and rear mounting brackets. See [Figure 7](#) and [Figure 8](#).
1. Insert the rail guide pins into the corresponding holes at the front of the rack. See letter “C” in the following figure.
 2. Slide the rear mounting bracket backward, lining up the guide pins with the corresponding holes at the rear of the rack. Insert the guide pins into the rack holes. See letter “D” in the figure.
 3. Insert one M5x10 hexagon screw into the front of the rack, screwing it into the rail, as shown by letter “E” in the figure.
 4. Insert two M5x10 hexagon screws into the rear of the rack, screwing them into the rail, as shown by letter “F” in the figure.
 5. Repeat steps 1 - 4 on the other side of the rack.



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Figure 9. Attaching Rail Bracket Kit to Cabinet Rail

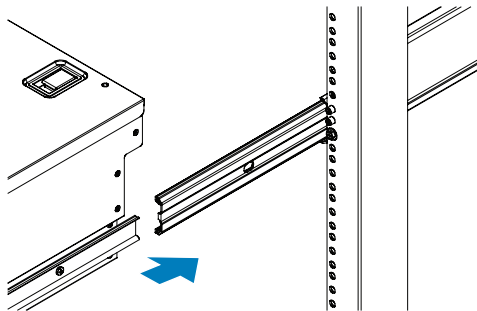
6. Slide the inter channel out from the front portion of the rail bracket kit that is attached to the rack until it locks.
7. Repeat step 6 on the other side of the rack.



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Figure 10. Pulling Out Inter Channel

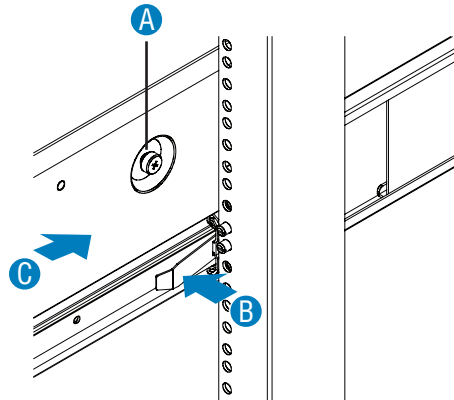
8. The inner channels are attached to the left and right sides of the chassis. Line up the inner channels at each side of the chassis with the inter channels on each side of the rack.
9. Engage the inner and inter channels at each side of the chassis and slide the chassis back until the channels lock together.



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Figure 11. Inserting Inter Channel to Inter Channel

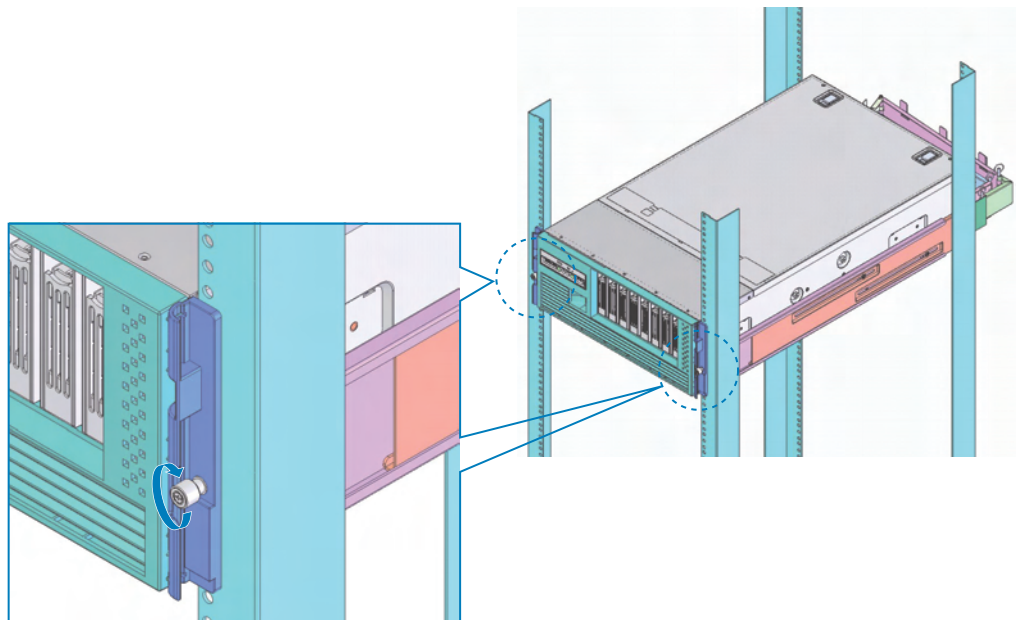
10. Confirm that screws on both sides of the chassis are fastened. See letter “A” in the figure below. If they are extended, they will hit the rack frame, causing damage to the chassis or to the rack.
11. At each side of the chassis, push the lock spring. Slide the chassis back until it stops. See letter “B” and “C” in the figure below.



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Figure 12. Pushing Lock Spring

12. At each side of the system, tighten the fastener on the rack handle to attach the chassis to the rack cabinet.



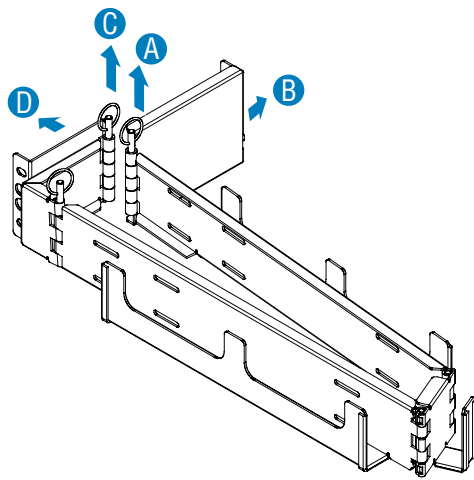
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Figure 13. Attaching Chassis to Rack

Mounting System with use of a Cable Arm Kit

Note: Use these steps only if you are installing a cable arm kit. If you are not using a cable arm kit, instead see “Mounting System without using a Cable Arm Kit” on page 6.

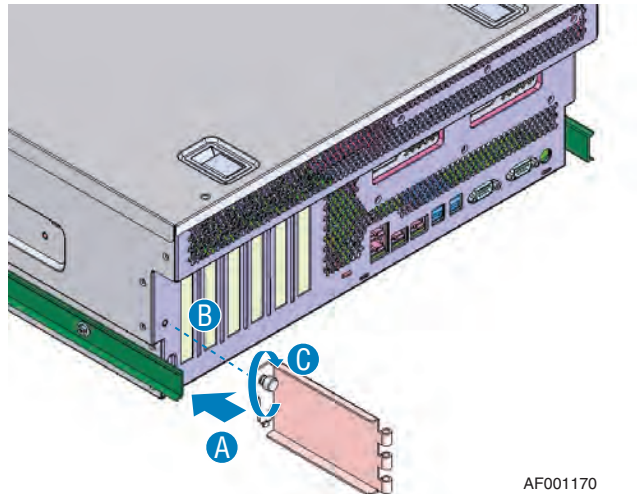
1. Remove the lock pin from the arm bracket. See letter “A” in the figure below.
2. Remove the arm bracket. See letter “B” in the figure.
3. Remove the lock pin from the arm support. See letter “C” in the figure below.
4. Remove the arm support. See letter “D” in the figure.



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Figure 14. Disassembling Cable Arm Kit

5. At the left rear of the system, near the PCI add-in card slots, insert the hook on the arm bracket into the notch of the inner rail that is attached to the chassis. See letter “A” in the figure below.
6. Line up the fastener with the corresponding hole in the chassis. See letter “B” in the figure.
7. Tighten the fastener to attach the arm bracket to the chassis. See letter “C” in the figure.



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Figure 15. Attaching Arm Bracket

In figure Figure 16 through Figure 19:

- Letter “A” shows the front mounting bracket.
 - Letter “B” shows the rear mounting bracket.
 - The front of the rack is at the left.
 - The exploded view of the rear mounting bracket and rail is reversed, as you will see it when standing behind the rack.
 - Guide pins have already been installed into the front and rear mounting brackets. See [Figure 7](#) and [Figure 8](#).
1. Facing the front of the rack, at the right side of the rack, insert the rail guide pins into the corresponding holes at the front of the rack. See letter “C” in the following figure.
 2. Slide the rear mounting bracket backward, lining up the guide pins with the corresponding holes at the rear of the rack. Insert the guide pins into the rack holes. See letter “D” in the figure.
 3. Insert one M5x10 hexagon screw into the front of the rack, screwing it into the rail, as shown by letter “E” in the figure.

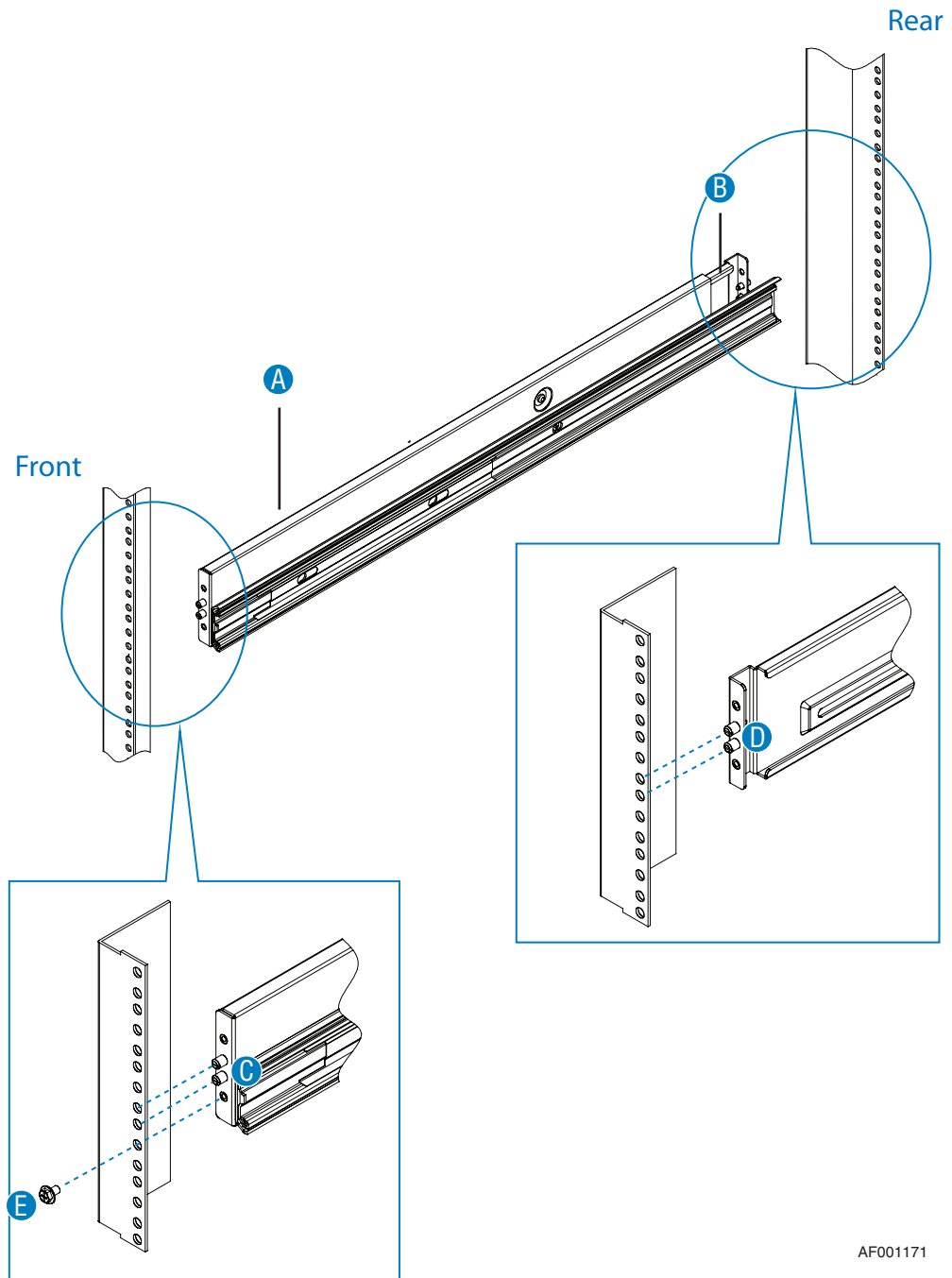


Figure 16. Attaching Rail Bracket Kit to Cabinet Rail

4. Facing the rear of the rack, insert two M5x10 hexagon screws through the outer two holes of the cable arm support into the rear of the left side of the rack. Screw the arm supports into the rail. The two guide pins you installed earlier will fit into the two center holes of the cable arm support. Use the diagram below that is appropriate for the length of your rack:
 - For a rack that is between 715 mm and 785 mm, see letter “C” Figure 17.
 - For a rack that is between 845 mm and 920 mm, see letter “C” in Figure 18.

Caution: The arm support is installed differently for the different rack lengths. Be sure to use the figure that is correct for the length of your rack.

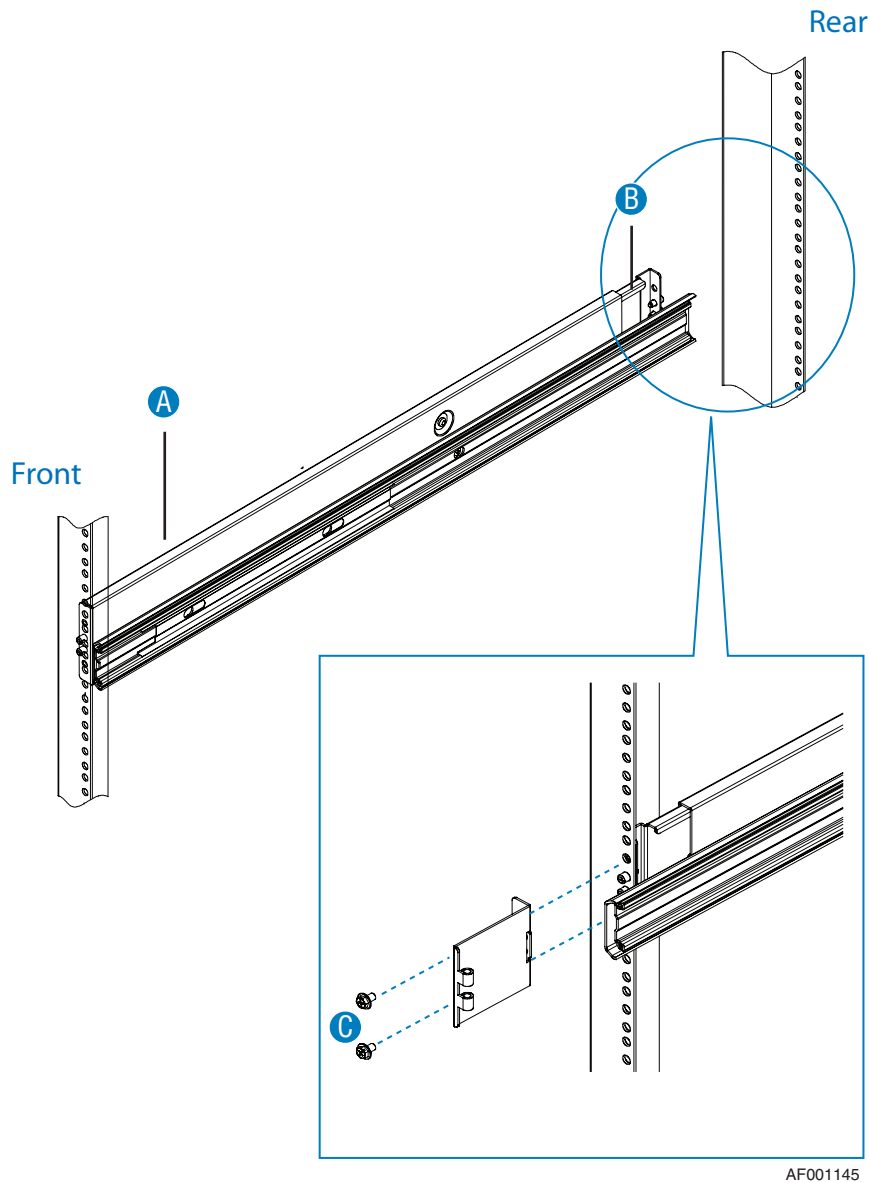
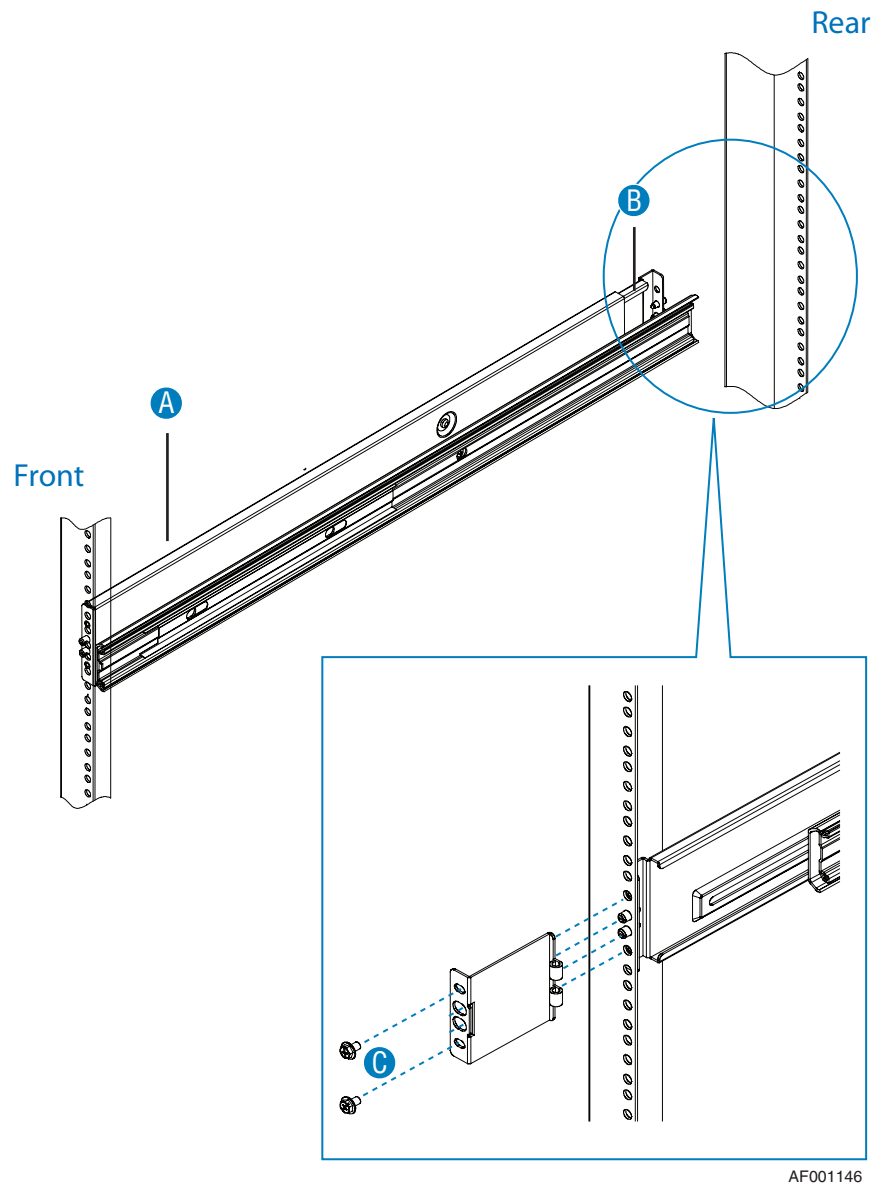


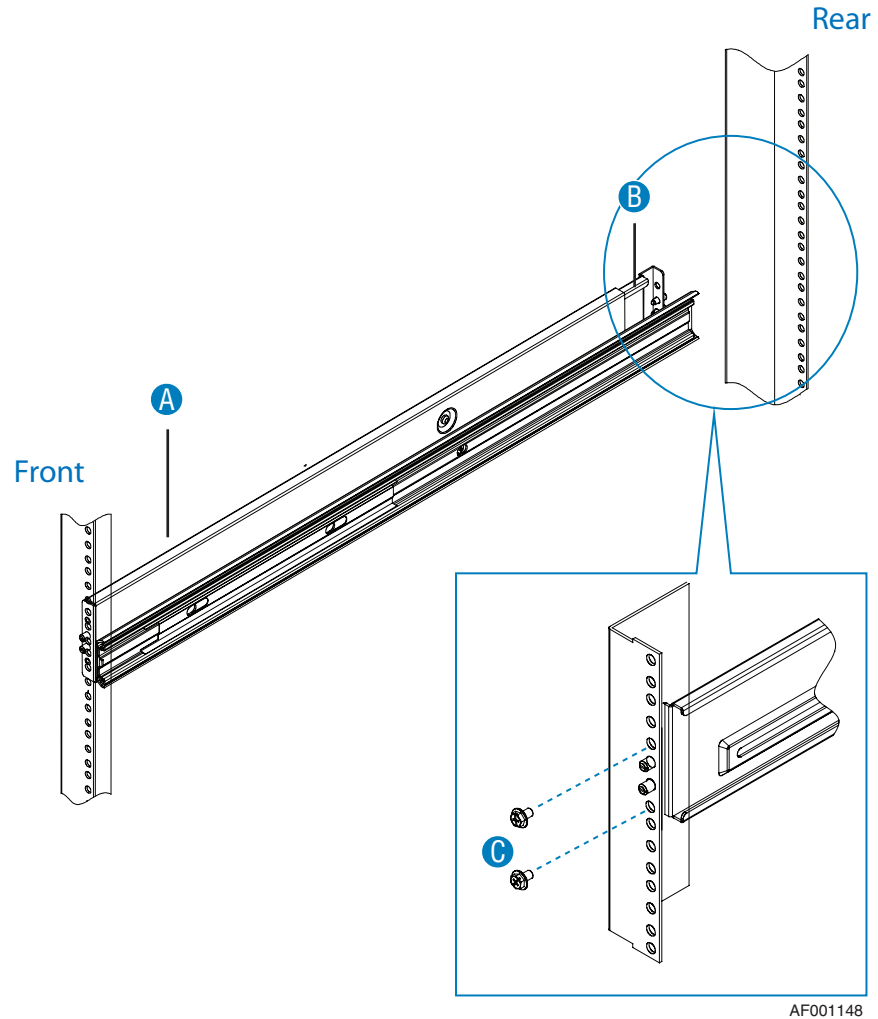
Figure 17. Attaching Arm Support to 715 mm to 785 mm Rack



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Figure 18. Attaching Arm Support to 845 mm to 920 mm Rack

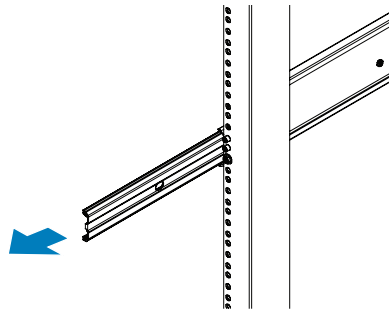
5. Repeat steps 1 - 3 on the other side of the rack.
6. Insert two M5x10 hexagon screws into the right rear side of the rack, screwing them into the rail, as shown by letter “F” in the figure below.



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Figure 19. Attaching Rail to Right Rear Side of Rack

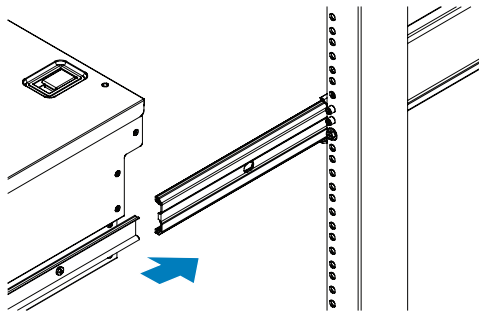
7. Slide the inter channel out from the front portion of the rail bracket kit that is attached to the rack until it locks.
8. Repeat step 6 on the other side of the rack.



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Figure 20. Pulling Out Inter Channel

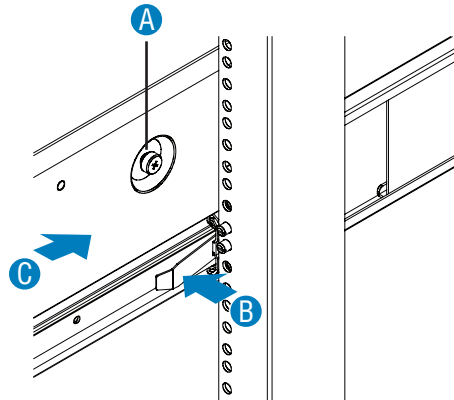
9. The inner channels are attached to the left and right sides of the chassis. Line up the inner channels at each side of the chassis with the inter channels on each side of the rack.
10. Engage the inner and inter channels at each side of the chassis and slide the chassis back until the channels lock together.



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Figure 21. Inserting Inter Channel to Inter Channel

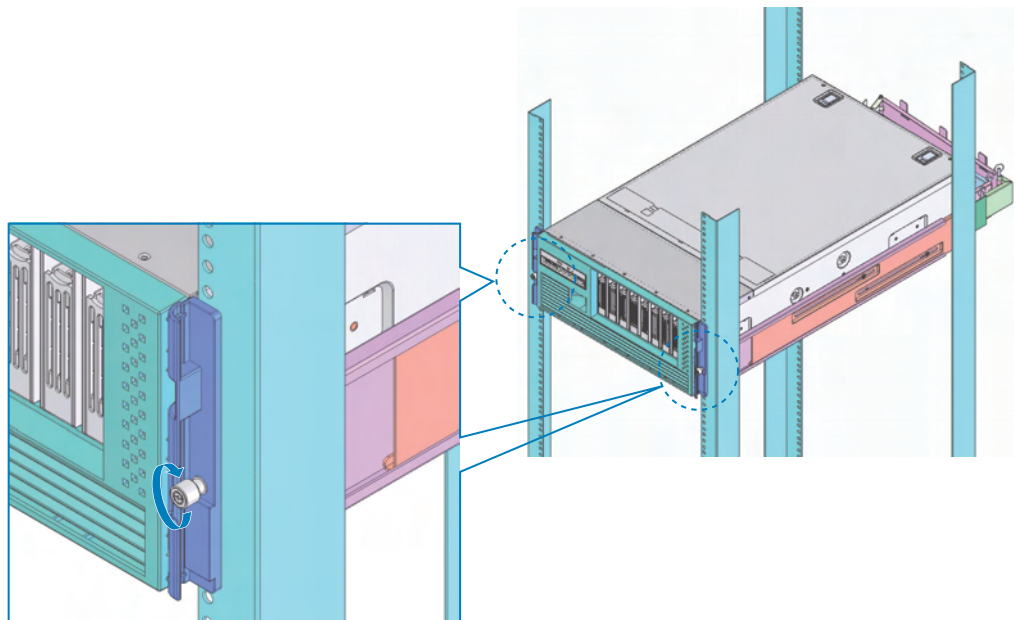
11. Confirm that screws on both sides of the chassis are fastened. See letter “A” in the figure below. If they are extended, they will hit the rack frame, causing damage to the chassis or to the rack.
12. At each side of the chassis, push the lock spring. Slide the chassis back until it stops. See letter “B” and “C” in the figure below.



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Figure 22. Pushing Lock Spring

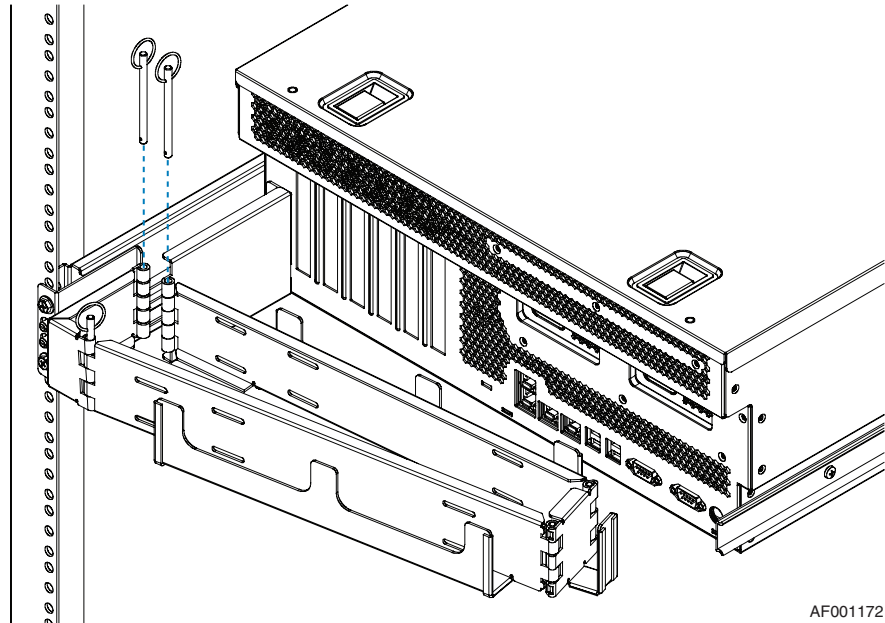
13. At each side of the system, tighten the fastener on the rack handle to attach the chassis to the rack cabinet.



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Figure 23. Screw Chassis to Rack

14. At the rear of the system, use the lock pins to re-attach the arm bracket (installed on the chassis) and the arm pin (installed on the rack).



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Figure 24. Reinstalling Cable Arm Lock Pins