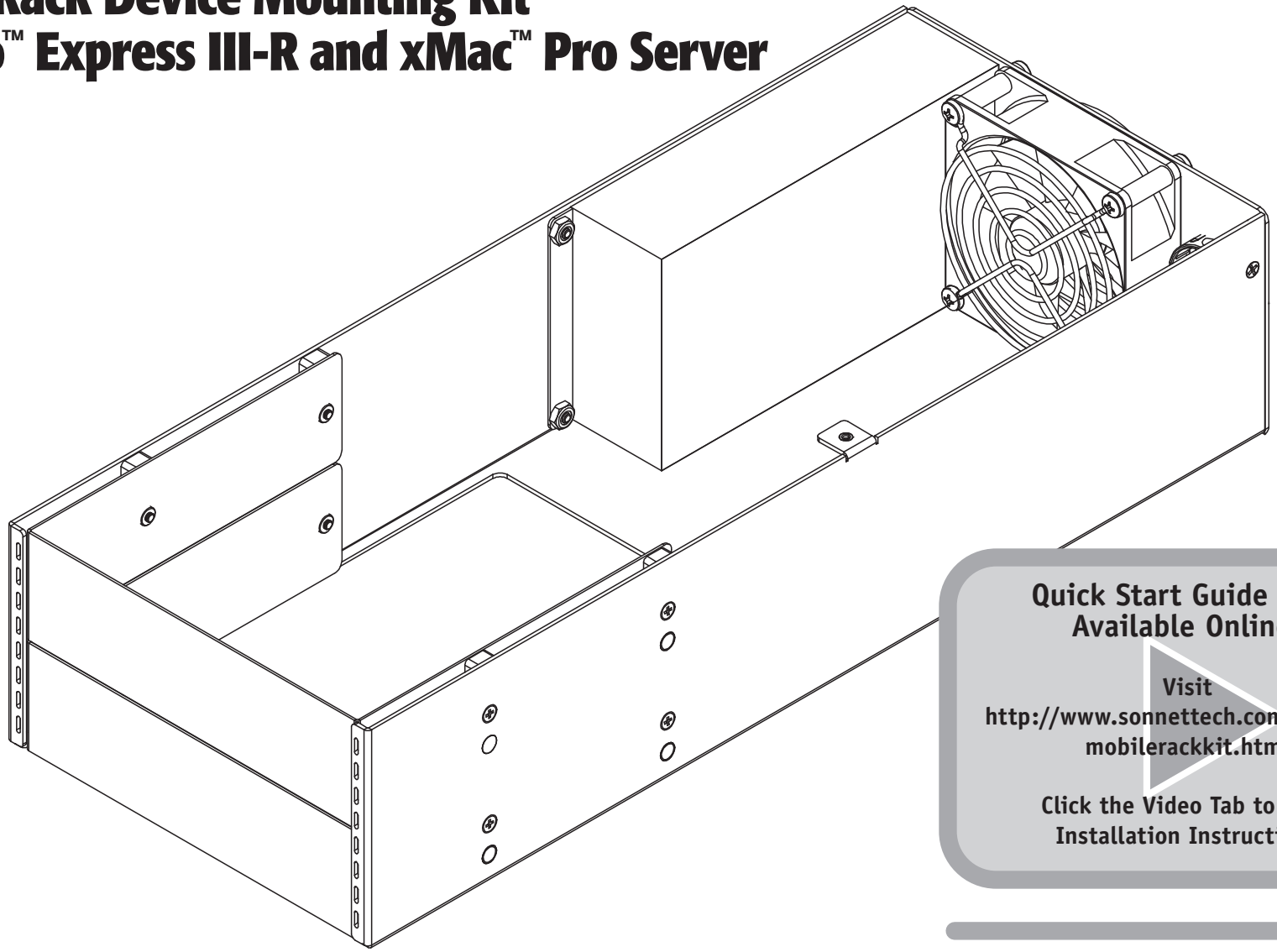
User's Guide

Mobile Rack Device Mounting Kit for Echo™ Express III-R and xMac™ Pro Server



Quick Start Guide Video Available Online!

Visit
http://www.sonnettech.com/product/mobilerackkit.html

Click the Video Tab to View Installation Instructions

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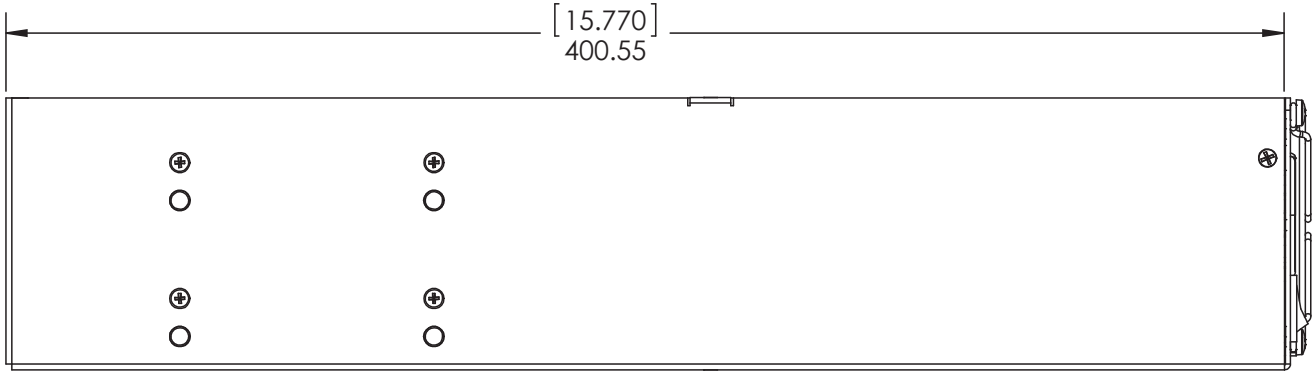
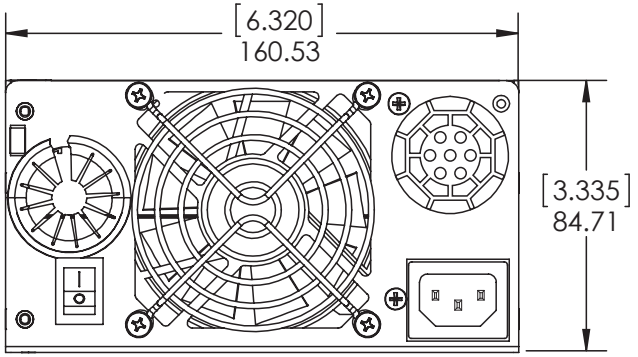
Chapter 1 – Introduction

FRONT VIEW



SIDE VIEW



REAR VIEW

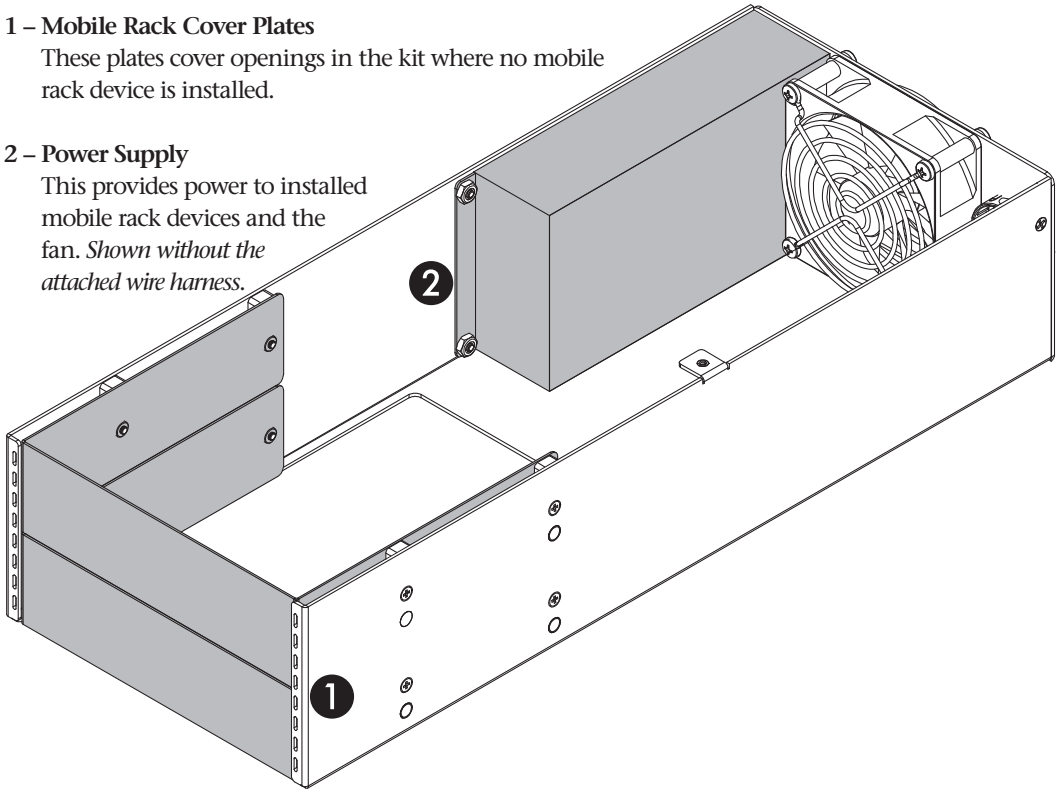
Congratulations on your purchase! With the Sonnet Mobile Rack Device Mounting Kit (referred to in this documentation as “the kit”) you can install one full-height or two half-height 5.25" form factor mobile rack devices inside your Echo Express III-R’s or xMac Pro Server’s enclosure. Some ideas include installing an internal LTO-6 tape drive plus an enclosure for four swappable 2.5" SSDs. Or, install one full-height mobile rack device, such as an enclosure for three swappable 3.5" hard disk drives—add more devices to your rack without taking up additional rack space.

The kit includes a 100W universal power supply with numerous power connectors from which to choose. Its internal fan works to keep things cool.

Chapter 2 – Mobile Rack Device Mounting Kit Description

1 – Mobile Rack Cover Plates
These plates cover openings in the kit where no mobile rack device is installed.

2 – Power Supply
This provides power to installed mobile rack devices and the fan. *Shown without the attached wire harness.*

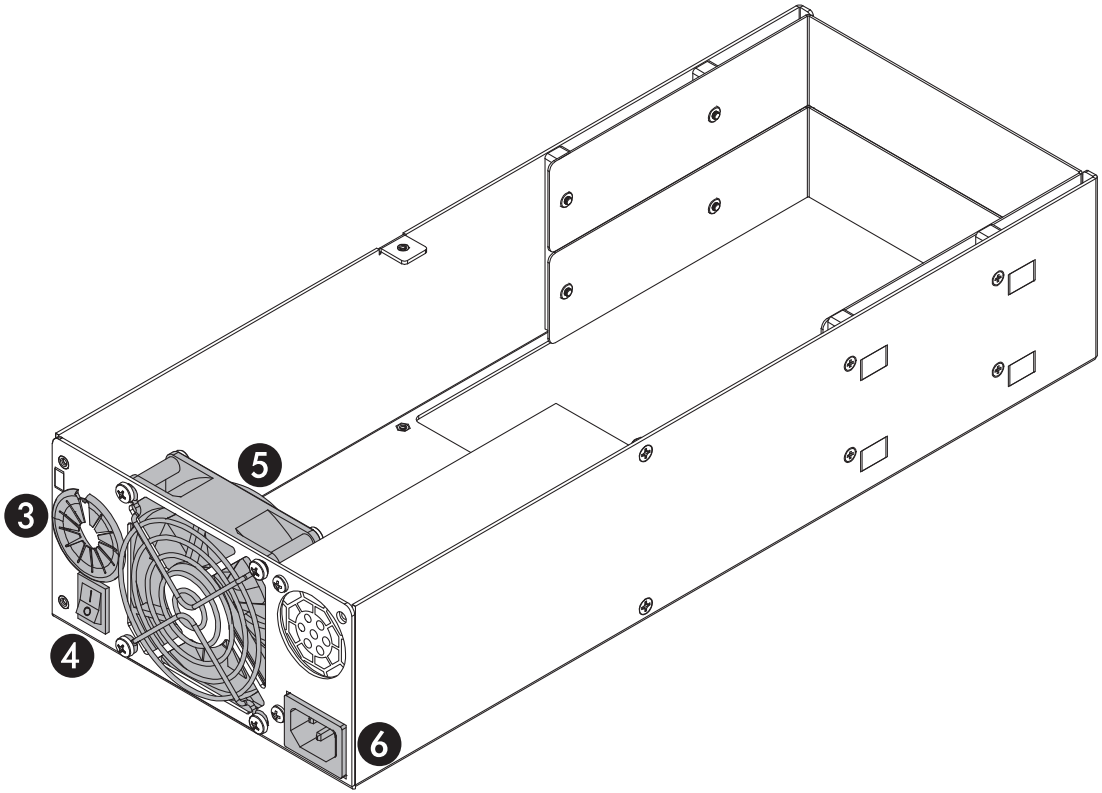


3 – Cable Passthrough Opening
This opening enables you to route interface cables inside to connect to installed devices.

4 – Power Switch
This switch turns power on and off to installed devices, works independently from the Echo Express III-R or xMac Pro server in which the kit is installed, and must be switched manually (remains powered on when computer switched off or sleeps).

5 – Fan
This fan provides cooling for installed devices, operating continuously when the kit's power is switched on.

6 – Power Input Socket
Connect the included power cable here.



Chapter 3 – Installation Steps

A – Mobile Rack Device Installation Steps

1. Remove the kit from its packaging and set it on a flat, level surface.

2. Remove and set aside the 8 screws securing the mobile rack cover plates to the frame **(Figure 1)**. Note that if you are installing a single half-height device, you only need to remove the four screws securing one plate.

3. Set aside the unfastened mobile rack cover plate(s) **(Figure 1)**.

4. Remove the mobile rack devices from their packaging, and then configure them as necessary, setting any jumpers or switches.

5. Locate the cable passthrough opening next to the fan, and then remove the plastic grommet by pushing it out from inside the frame.

6. Route any interface cables for the devices you are installing through the opening.

7. Connect the interface cables and appropriate power connectors to the mobile rack devices, following these rules to ensure the device or devices receive adequate power **(Figure 2)**:
   - *Use no more than one connector from any of the four cable bundles*
   - If your device or devices are equipped two matching power connectors, use an adapter for one of the connections. Sonnet provided the most commonly used adapter, a 4-pin peripheral power to 15-pin SATA power adapter, in the kit.

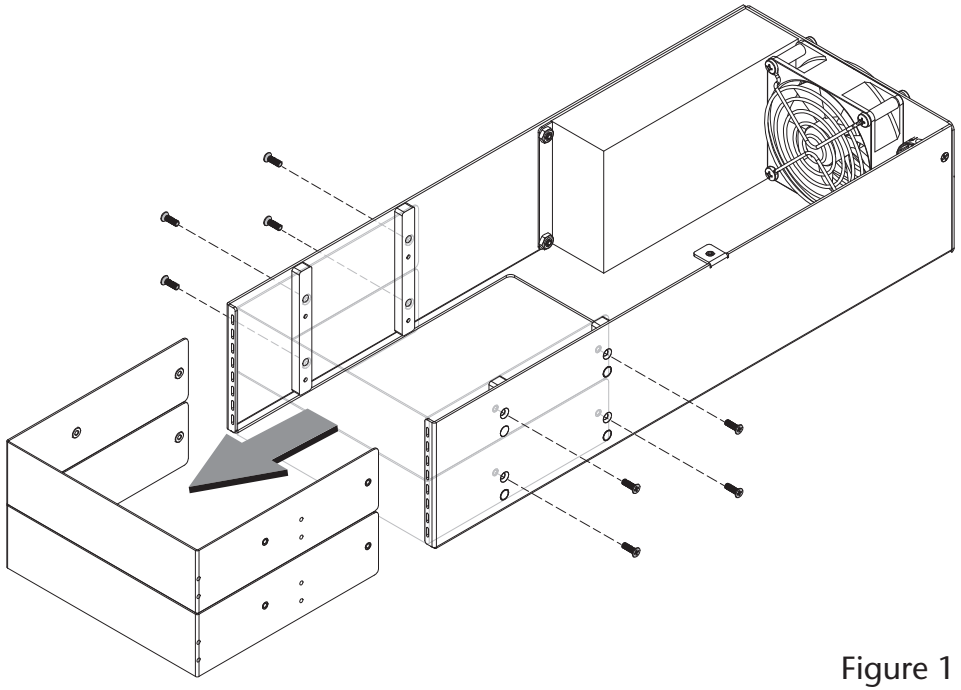


Figure 1

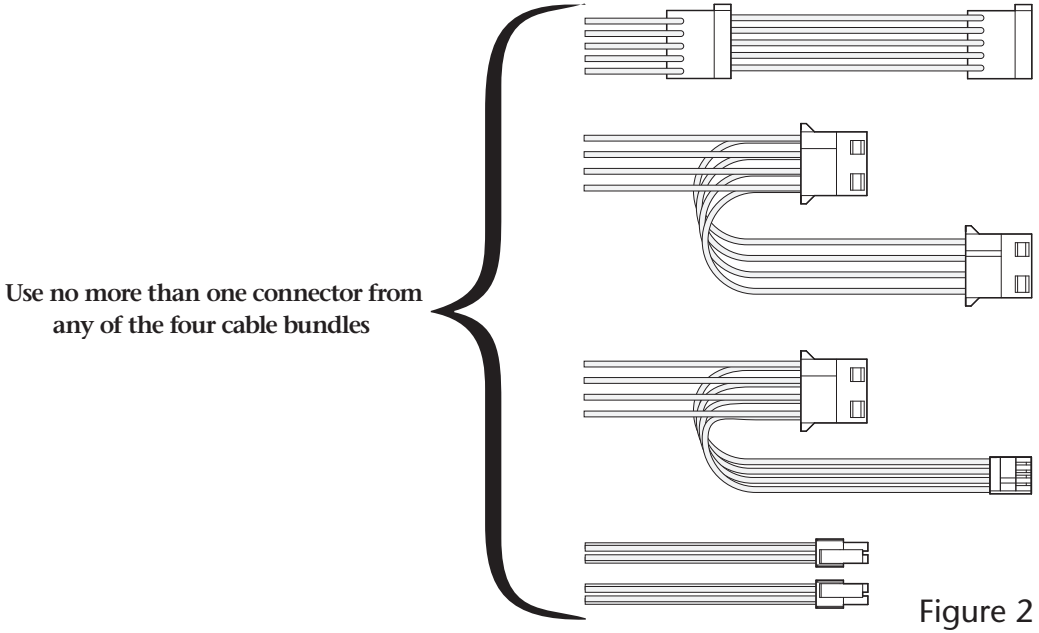


Figure 2

Chapter 3 – Installation Steps

8. Insert the mobile rack devices into the kit's frame, and then using the screws you removed previously, secure the devices to the frame **(Figure 3)**.

9. Wrap the grommet around the cables, and then reinstall it into the frame.

10. Arrange the cables and connectors inside the frame so as to ensure the kit's fan is not blocked.

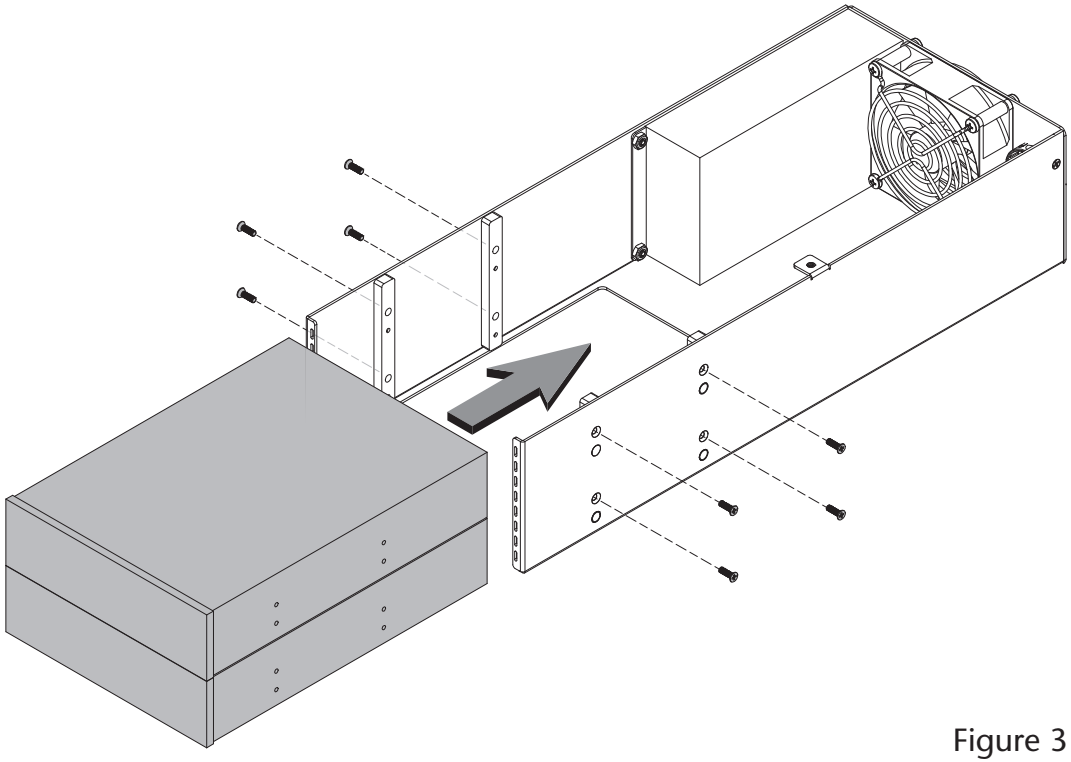


Figure 3

Chapter 3 – Installation Steps

B – Echo Express III-R Installation Steps

1. Remove your Echo Express III-R Thunderbolt 2-to-PCIe card expansion chassis from its packaging, or (after powering down and disconnecting attached cables) from the rack into which it is installed. Set it on a flat, level surface.

2. Using a Phillips screwdriver, remove and set aside the four screws securing the Echo chassis' inner assembly to its rackmount enclosure **(Figure 4)**.

3. Remove the inner assembly from the enclosure by gently gripping the faceplate by its edges and pulling **(Figure 4)**.

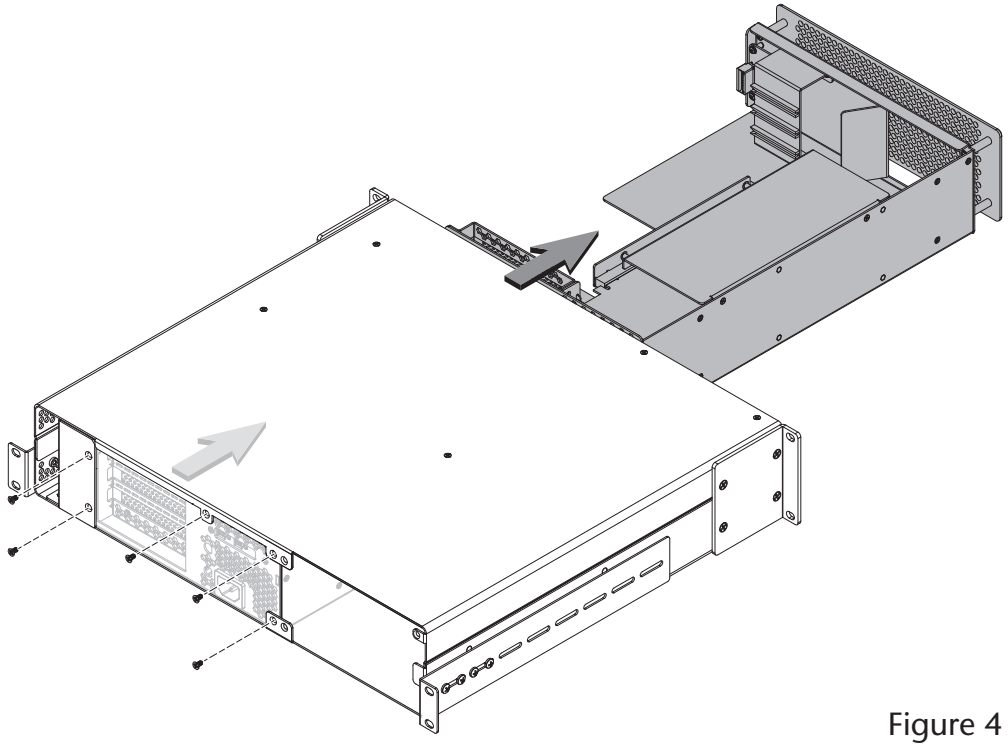


Figure 4

4. If you have not already done so, remove and set aside the six screws securing the blank plate inside the enclosure, and then remove and set aside the blank plate. **(Figure 5)**.

5. If you have not already done so, install your PCIe cards in the Echo chassis' inner assembly (refer to Chapter 3, steps 7 – 17 of the Echo Express III-R user's guide).

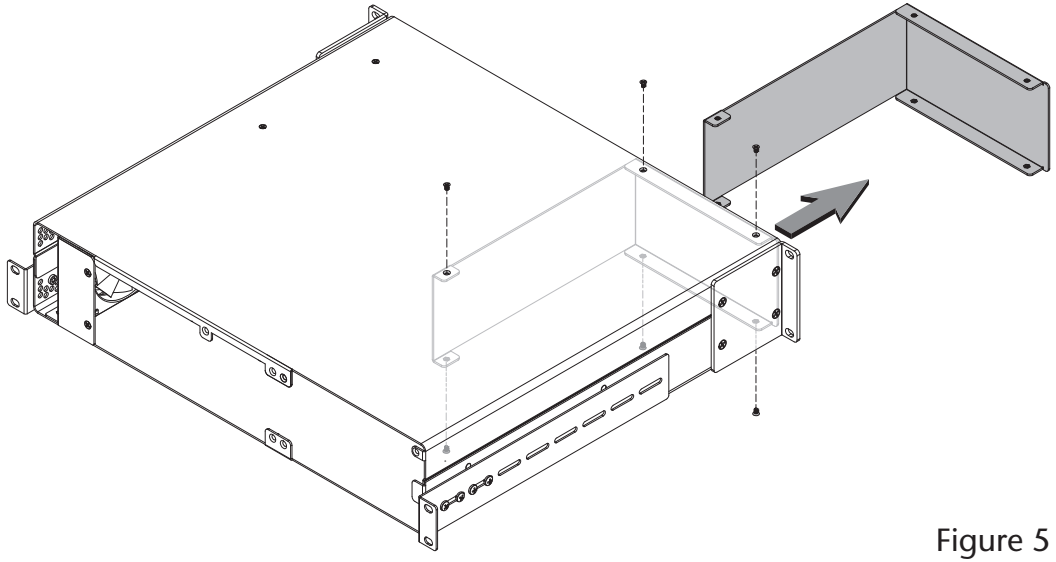


Figure 5

Chapter 3 – Installation Steps

6. Insert the kit into the Echo Express III-R rackmount enclosure, followed by the inner assembly **(Figure 6)**. Secure the inner assembly to the enclosure using the four screws you removed previously. Secure the kit to the enclosure using five of the six screws you removed previously, as shown.

7. Install the Echo Express III-R into its rack now.

Support Note: Sonnet's ThunderLok™ Thunderbolt connector retainer clip secures the included Thunderbolt cable to the Echo chassis to prevent accidental disconnects. Although it is compatible with other copper Thunderbolt cables like Apple's, it is not compatible with optical Thunderbolt cables.

To attach the clip to the cable, remove them from their packaging, and then insert the connector into the connector clip as shown **(Figure 7)**. Note that the connector will pass all the way through the clip; when you connect the cable to the chassis, the clip will secure the cable.

8. Connect the included Thunderbolt cable between either Thunderbolt port on the Echo chassis and a Thunderbolt port on your computer, or other Thunderbolt device in the chain connected to the computer **(Figure 7)**. Secure the retainer clip to the chassis if you attached it. If you are daisy chaining additional Thunderbolt devices, connect another Thunderbolt cable between the downstream device and the open Thunderbolt port on the Echo chassis.

9. Connect interface cables between devices, PCIe cards, and computer as necessary.

10. Connect the included power cords between a wall outlet or power strip and the Echo chassis' power socket and the kit's power socket. Note that the power indicator on the Echo Express III-R will not light until the computer, and any other Thunderbolt device connected between it and the Echo chassis, is powered on.

11. Return to *Chapter 4 – Verify Connections Using OS X System Information* in the Echo Express III-R User's Guide to complete setup.

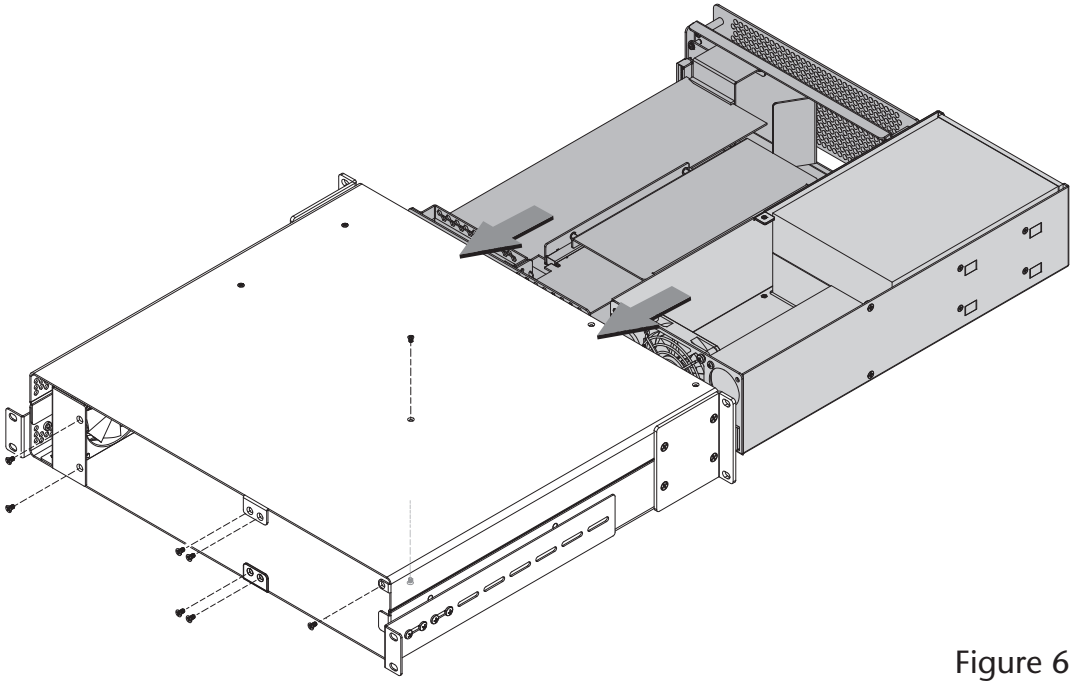


Figure 6

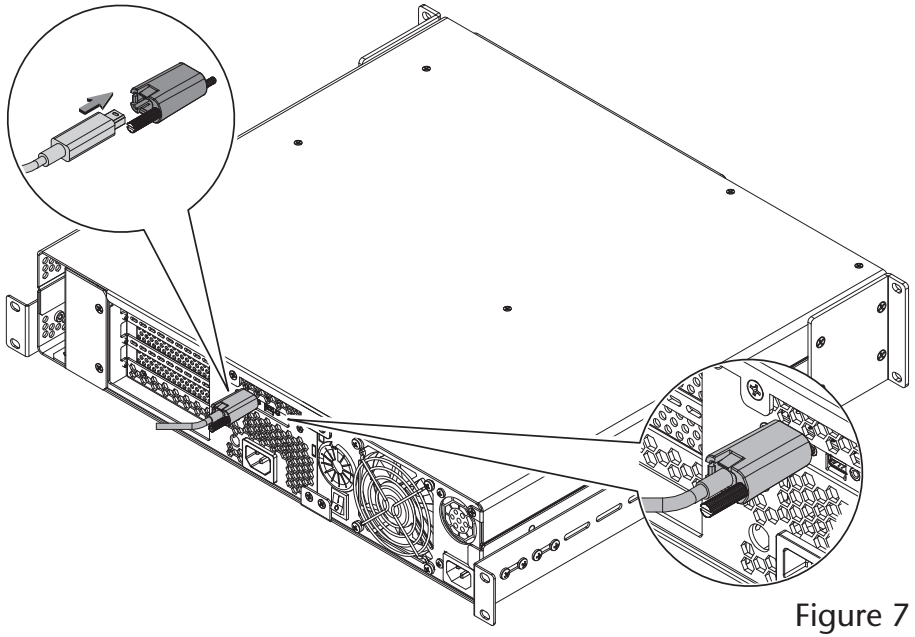


Figure 7

Chapter 3 – Installation Steps

C – xMac Pro Server (Two Front Panels) Installation Steps

These instructions are for the xMac Pro Server with two front panels. If your xMac Pro Server has a single front panel, go to page 13.

If you are installing the kit as part of a new installation, skip to step 8 on page 9; otherwise, start at step 1 here.

1. Disconnect cables connected to the PCIe card expansion module (and the cards installed in it) and to the computer mounting module. If there are Thunderbolt cables connected between the Mac Pro and other devices in the rack, disconnect them from the devices.

2. Remove the xMac Pro Server from the rack into which it is installed. Set it on a flat, level surface.

3. Loosen the eight thumbscrews securing the computer mounting module and PCIe card expansion module to the back of the rackmount enclosure **(Figure 8)**.

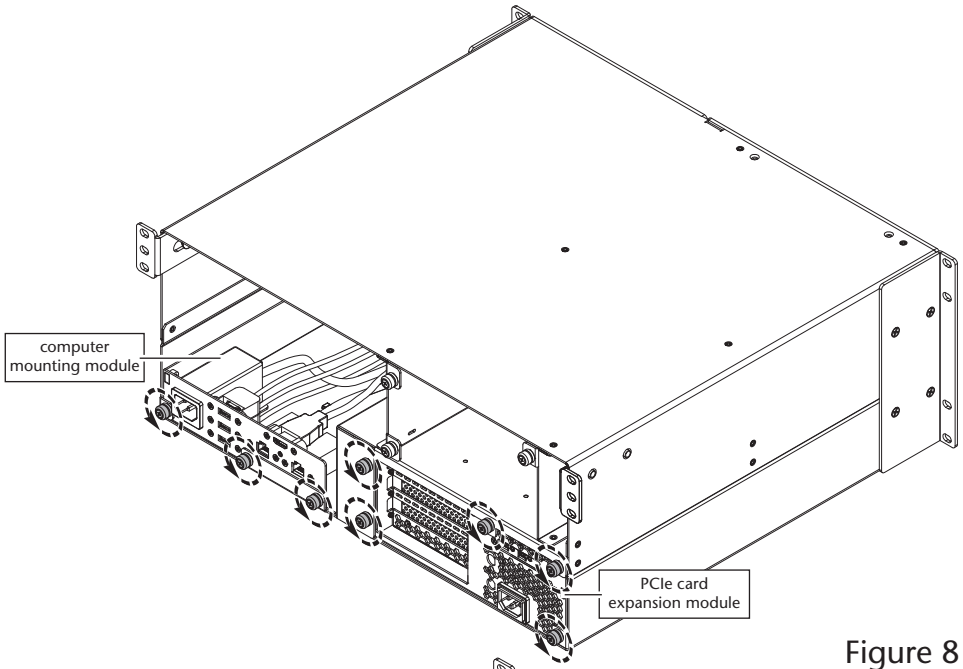


Figure 8

4. Loosen the two thumbscrews securing the PCIe card expansion module to the front of the rackmount enclosure **(Figure 9)**.

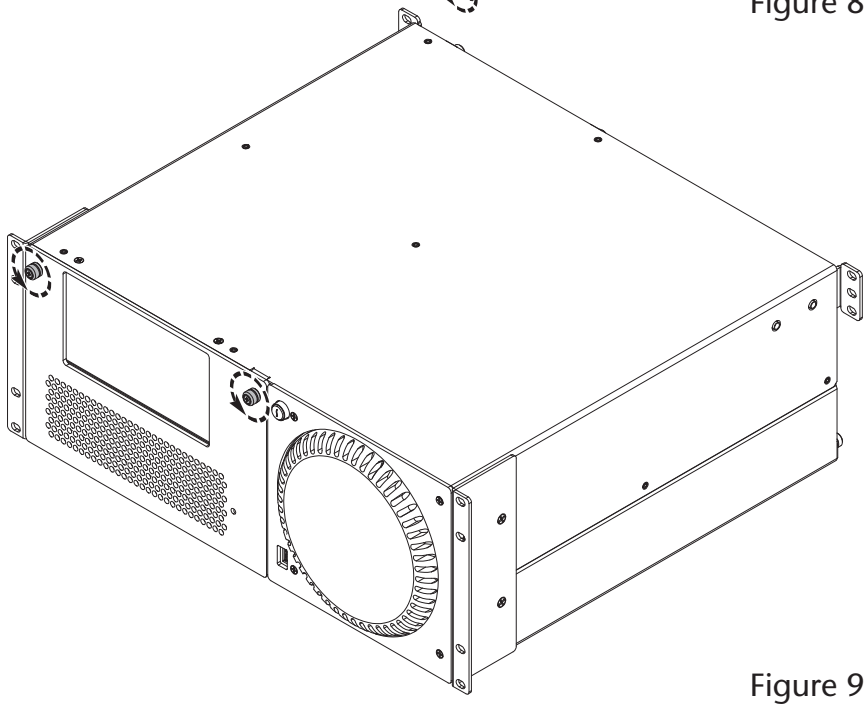


Figure 9

5. Gently pull out the computer mounting and PCIe card expansion modules through the front of the enclosure, and then set them aside **(Figure 10)**.

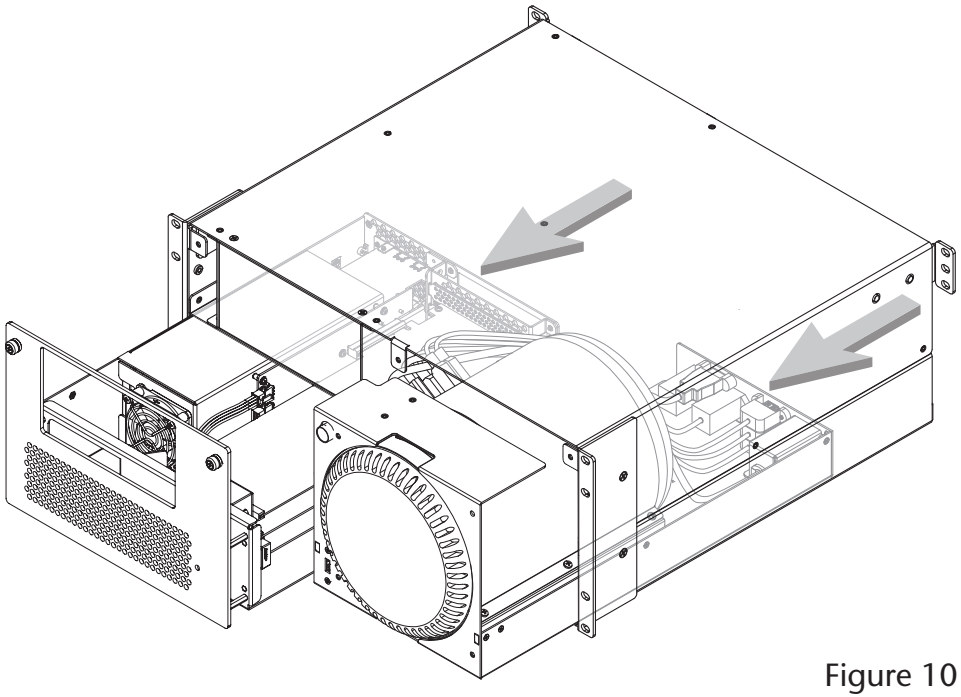


Figure 10

6. Using a Phillips screwdriver, remove and set aside the four screws securing the blank plate inside the enclosure, and then remove the blank plate **(Figure 11)**.

7. Install the rackmount enclosure back into the equipment rack.

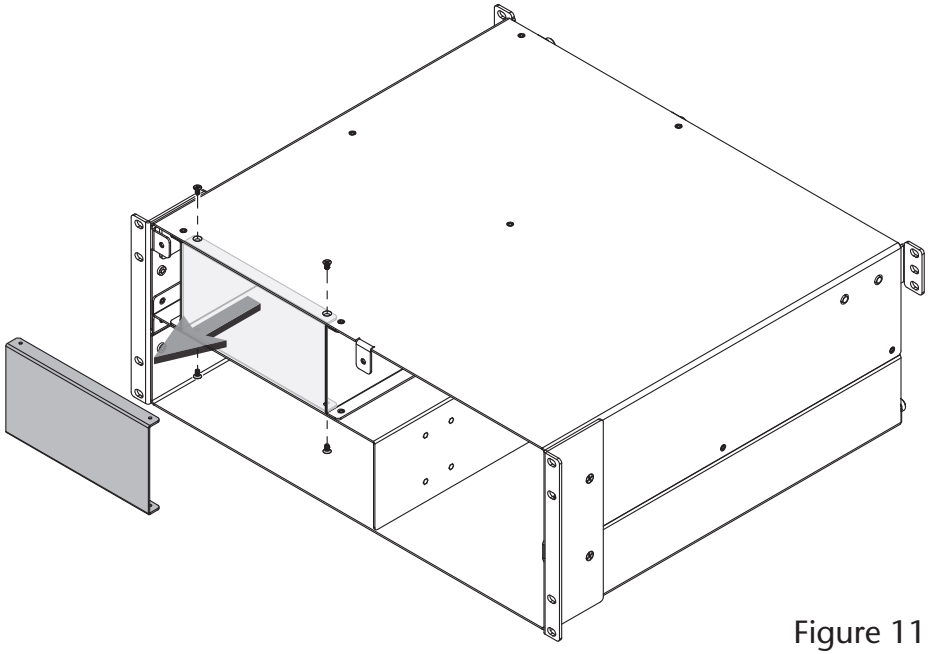


Figure 11

Chapter 3 – Installation Steps

8. Carefully slide the computer mounting module into the rackmount enclosure until it stops **(Figure 12)**.

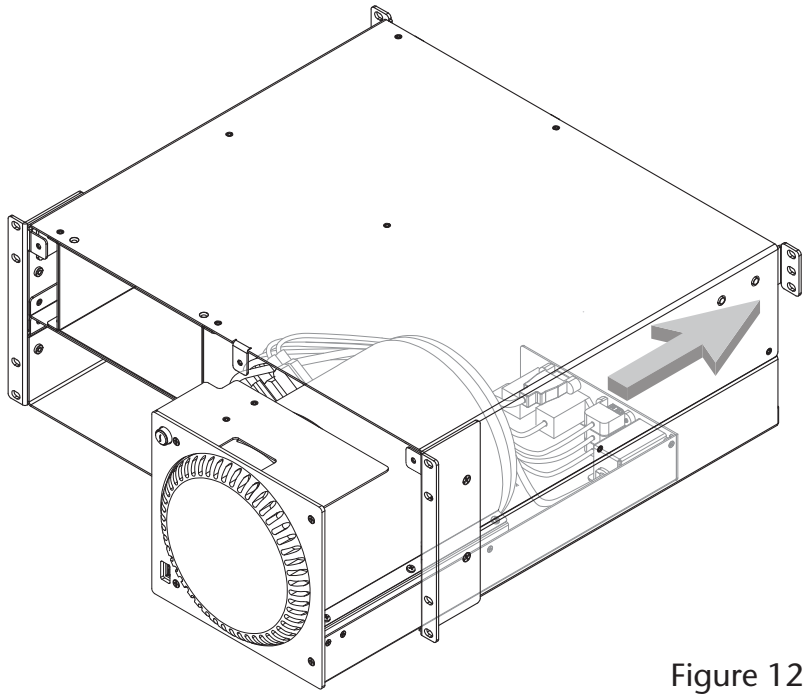


Figure 12

9. Carefully slide the mobile rack device mounting kit into the rackmount enclosure until it stops **(Figure 13)**.

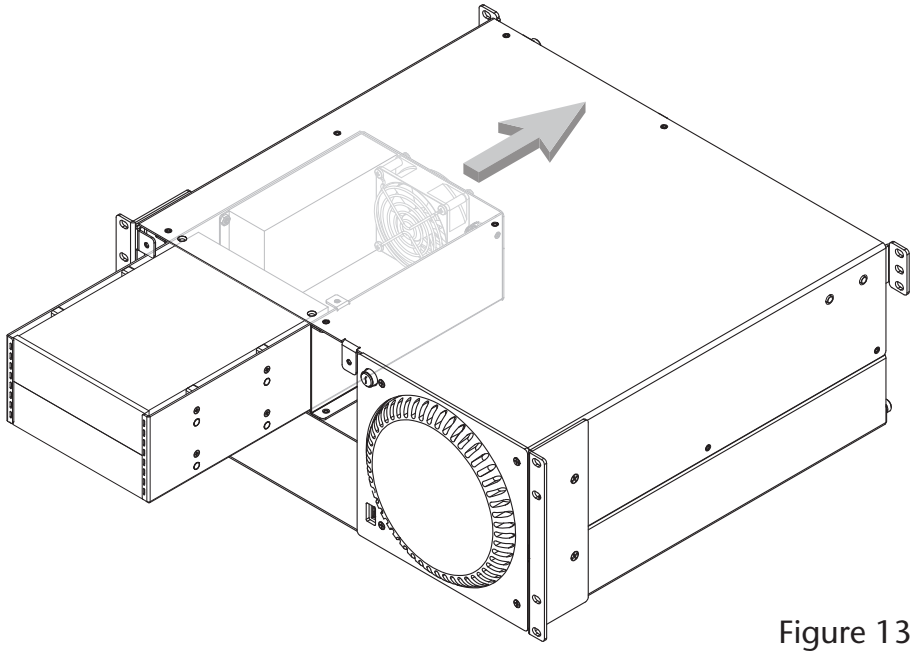


Figure 13

10. Carefully slide the PCIe card expansion module into the rackmount enclosure until it stops **(Figure 14)**.

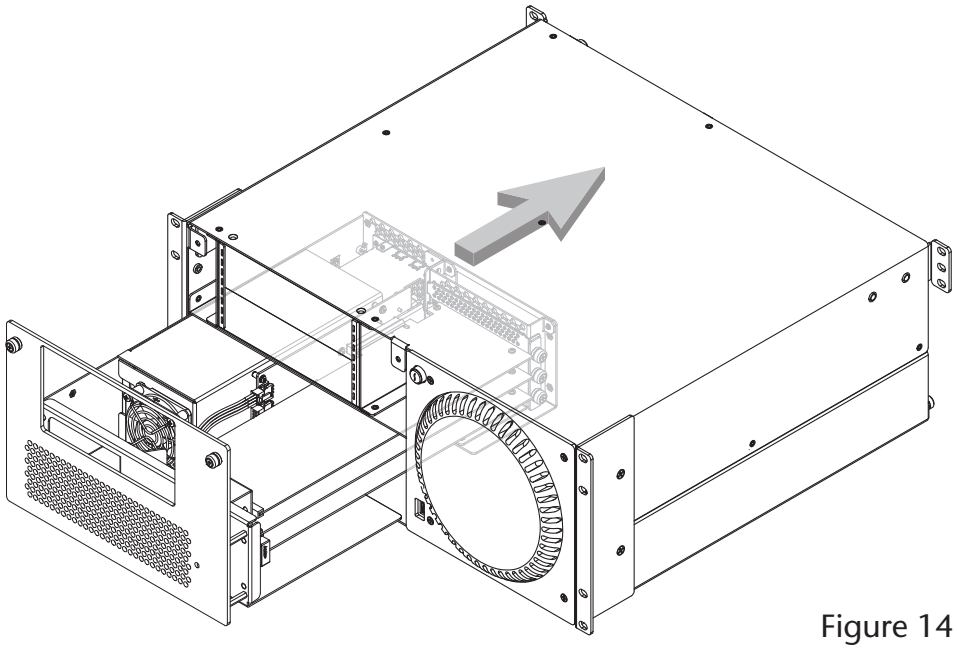


Figure 14

11. Secure the PCIe card expansion module to front of the rackmount enclosure by turning the two thumbscrews clockwise **(Figure 15)**.

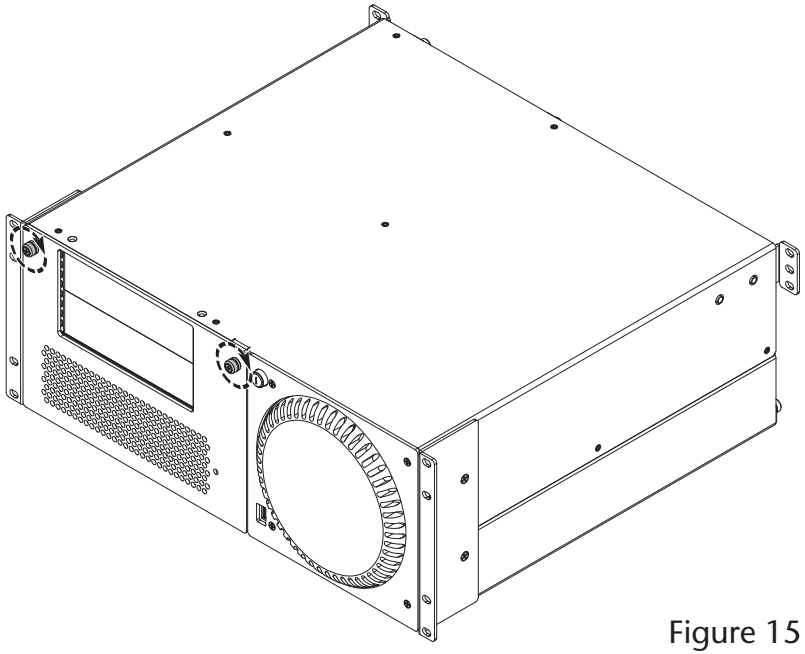


Figure 15

12. Secure the computer mounting module, PCIe card expansion module, and the mobile rack device mounting kit to the back of the rackmount enclosure by turning the eleven thumbscrews clockwise **(Figure 16)**.

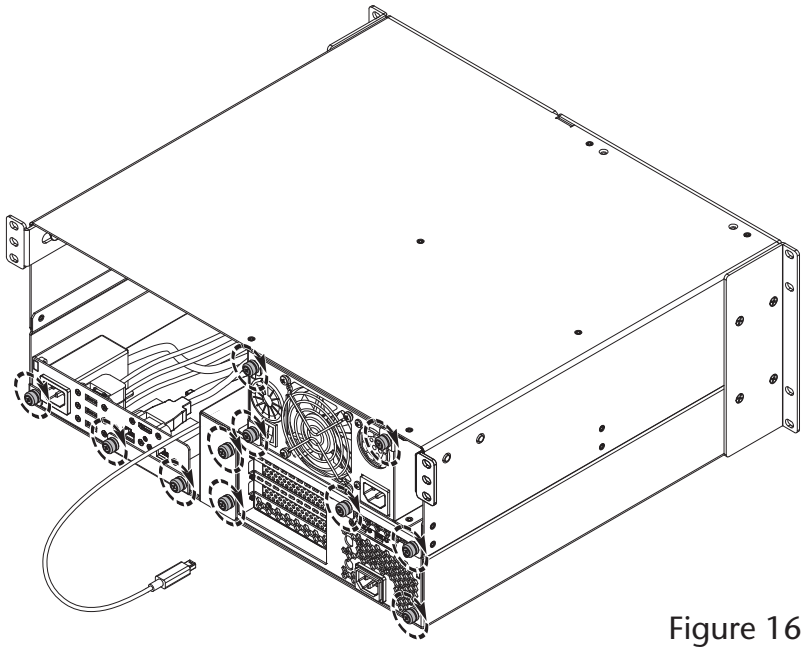


Figure 16

Support Note: Sonnet's ThunderLok Thunderbolt connector retainer clip secures the included Thunderbolt cable to the PCIe card expansion module to prevent accidental disconnects. Although it is compatible with other copper Thunderbolt cables, it is not compatible with optical Thunderbolt cables.

To attach the clip to the cable, remove them from their packaging, and then insert the connector into the connector clip as shown **(Figure 17)**. Note that the connector will pass all the way through the clip; when you connect the cable to the module, the clip will secure the cable.

13. Plug in the included Thunderbolt cable to either Thunderbolt port on the PCIe card expansion module **(Figure 17)**. Secure the retainer clip to the expansion module if you attached it.

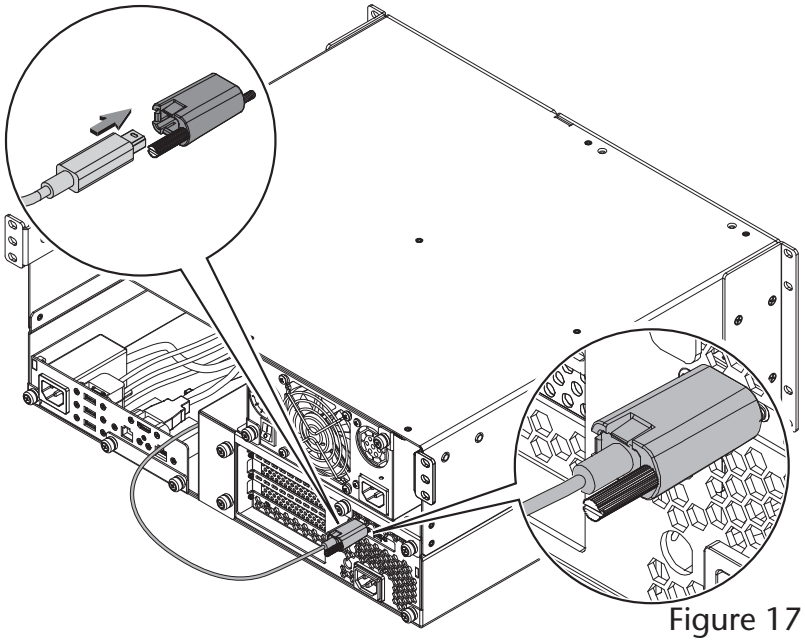


Figure 17

Chapter 3 – Installation Steps

14. OPTIONAL STEP: If you are connecting a monitor with an HDMI input to the xMac Pro Server, screw in the included standoff to the threaded hole just below the HDMI port on the back of the computer mounting module **(Figure 18).** Then, plug in the included HDMI cable to the computer mounting module's HDMI port, securing the locking connector by turning its thumbscrew clockwise. Plug in the other end of the cable to the monitor.

15. Connect the Mac Pro's power cord between a wall outlet or power strip and the computer mounting module's power socket.

16. Connect the included power cord between a wall outlet or power strip and the PCIe card expansion module's power socket. Note that the power indicator on the xMac Pro Server will not light until the computer is powered on.

17. Connect any remaining interface cables and devices to the computer mounting module, and to the PCIe cards installed in the PCIe card expansion module.

18. OPTIONAL STEP: Apply the bottom cover label to the Mac Pro by peeling off the backing material, aligning the cutout (the area without ink) over the words "Serial Number" and the computer's serial number, and making sure the words "Mac Pro" appear level.

19. Return to *Chapter 4 – Verify Connections Using System Information* in the xMac Pro Server User's Guide to complete setup.

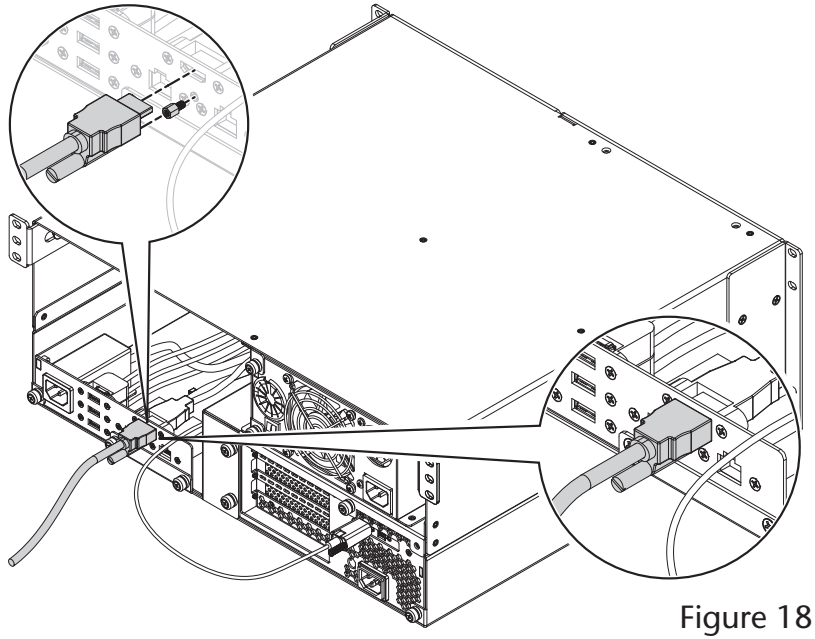


Figure 18

Chapter 3 – Installation Steps

D – xMac Pro Server (Single Front Panel) Installation Steps

If you are installing the kit as part of a new installation, skip to step 9 on page 15; otherwise, start at step 1 here.

1. Disconnect cables connected to the PCIe card expansion module (and the cards installed in it) and to the computer mounting module. If there are Thunderbolt cables connected between the Mac Pro and other devices in the rack, disconnect them from the devices.

2. Remove the xMac Pro Server from the rack into which it is installed. Set it on a flat, level surface.

3. Using a Phillips screwdriver, remove and set aside the six screws securing the front panel to the rackmount enclosure, being careful to prevent the front panel from falling off **(Figure 19)**. Set aside the front panel.

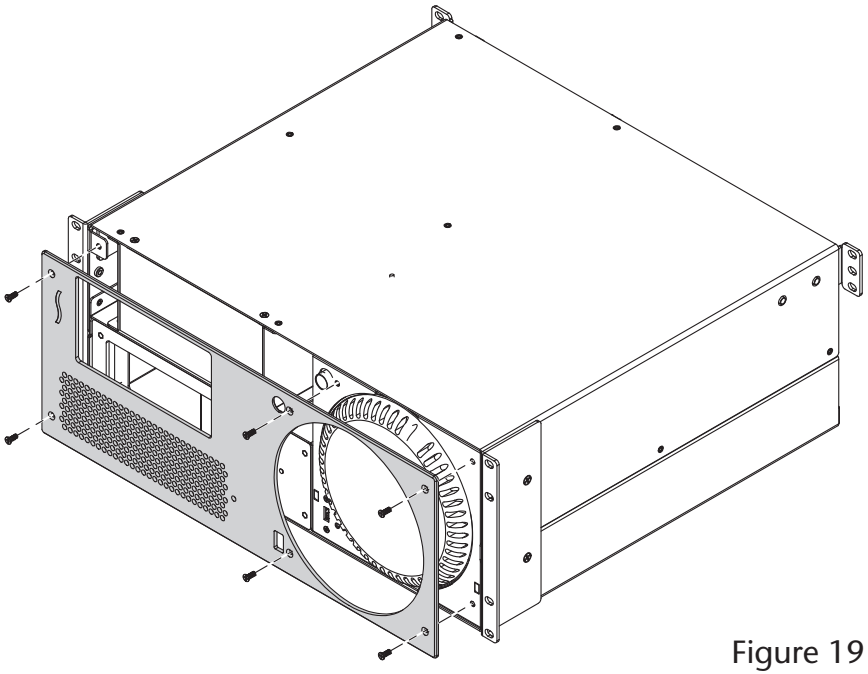


Figure 19

4. Using a Phillips screwdriver, remove and set aside the five screws securing the PCIe card expansion module to the rackmount enclosure **(Figure 20)**.

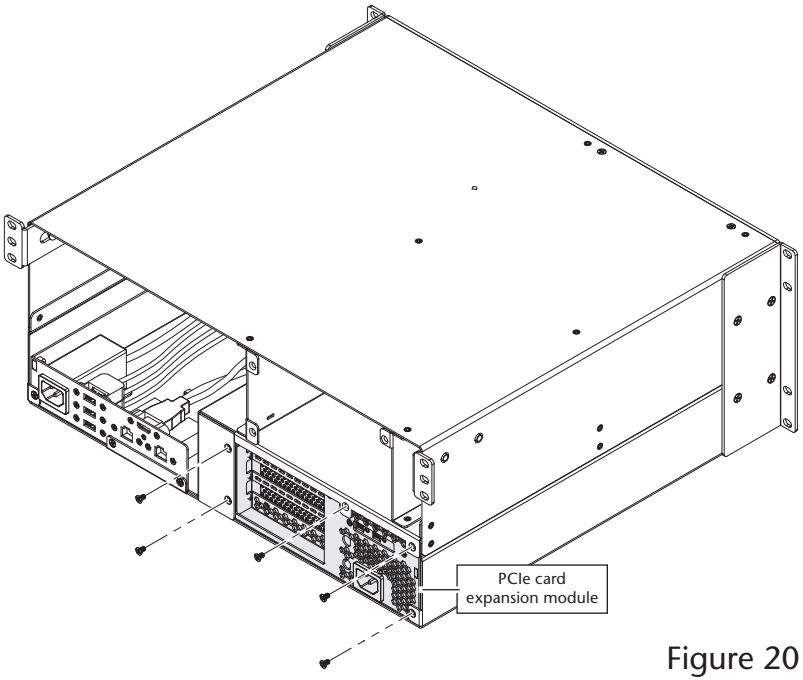


Figure 20

5. Gently pull out the PCIe card expansion module through the front of the enclosure, and then set it aside **(Figure 21)**.

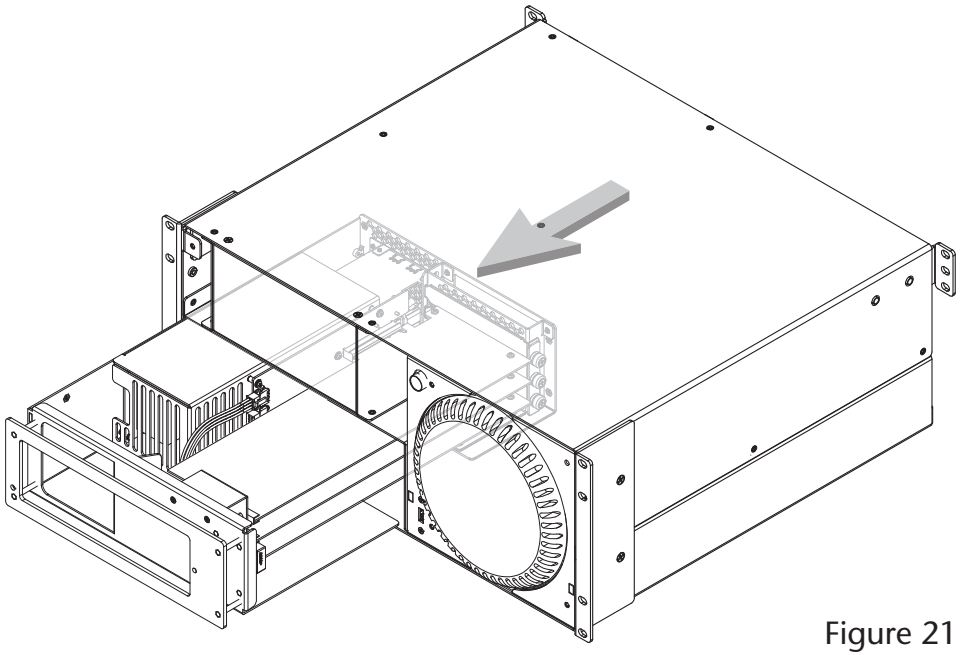


Figure 21

6. Using a Phillips screwdriver, remove and set aside the four screws securing the blank plate inside the enclosure, and then remove the blank plate (**Figure 22**). Note that you will reuse three of the four screws to secure the kit to the rackmount enclosure at a later step.

7. Install the rackmount enclosure back into the equipment rack.

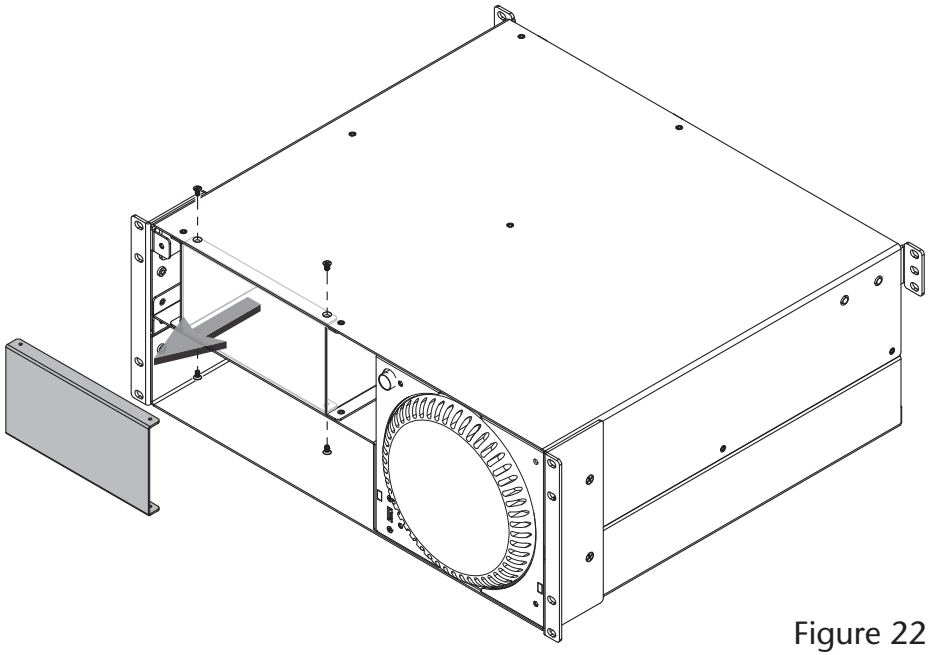


Figure 22

8. Carefully slide the PCIe card expansion module into the rackmount enclosure until it stops **(Figure 23)**.

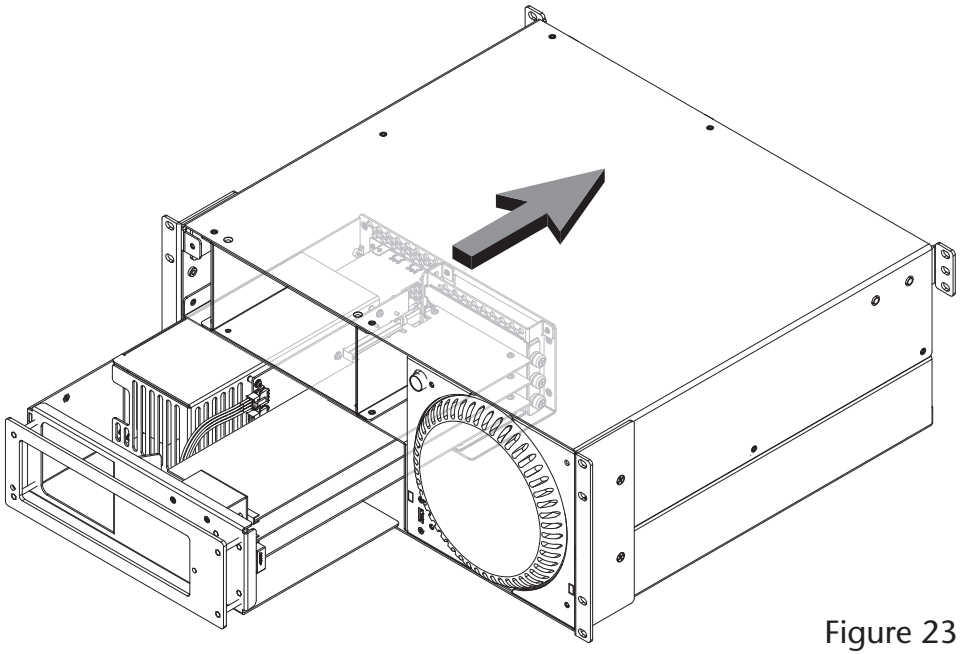


Figure 23

9. Carefully slide the mobile rack device mounting kit into the rackmount enclosure until it stops **(Figure 24)**.

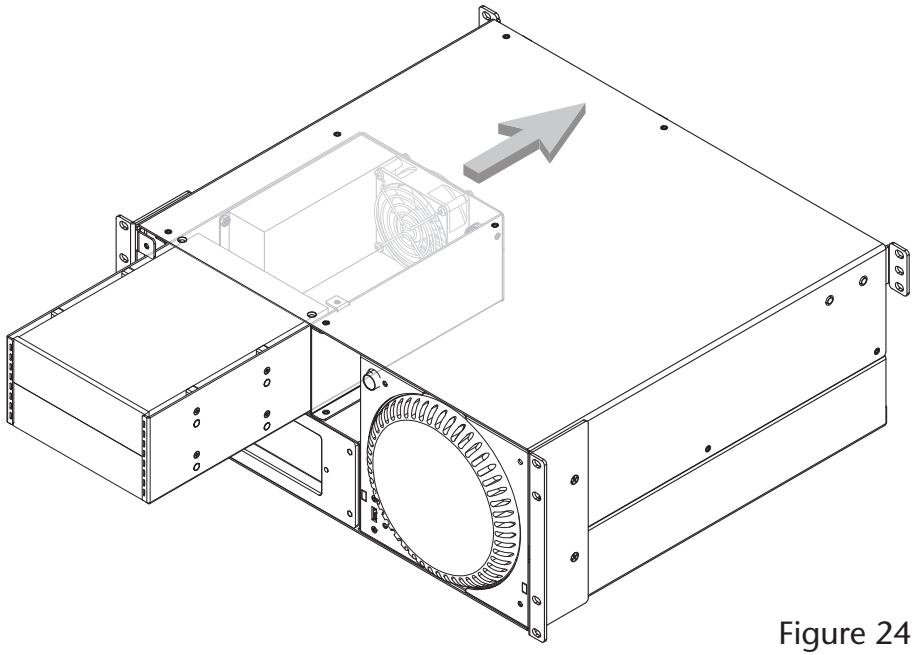


Figure 24

10. Using the five screws you removed previously, secure the PCIe card expansion module to the rackmount enclosure **(Figure 25)**.

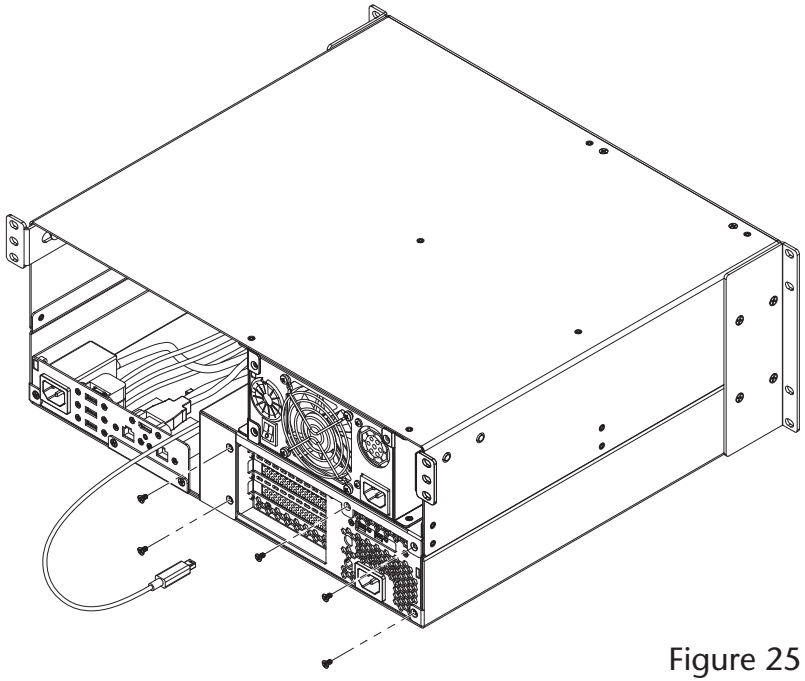


Figure 25

11. Using three of the four blank plate screws you removed previously, secure the kit to the rackmount enclosure **(Figure 26)**.

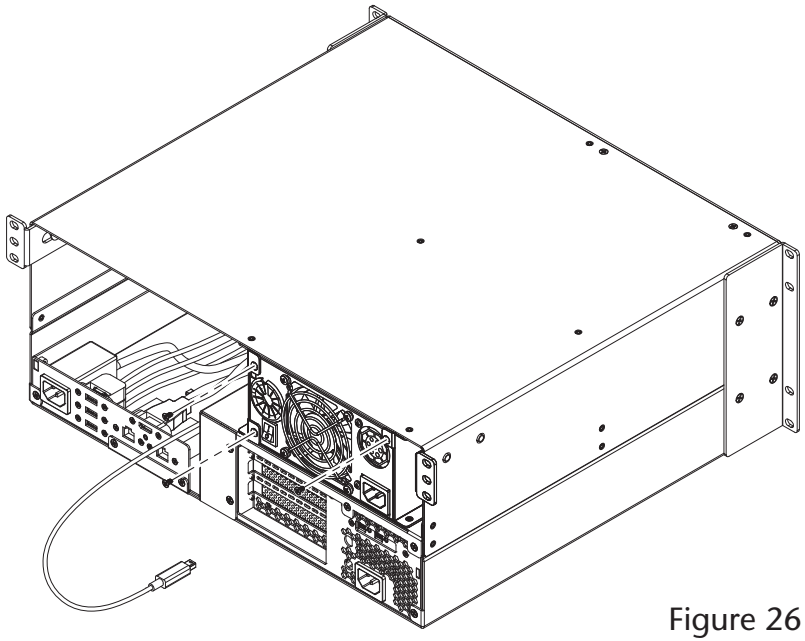


Figure 26

Chapter 3 – Installation Steps

Support Note: Sonnet's ThunderLok™ Thunderbolt connector retainer clip secures the included Thunderbolt cable to the PCIe card expansion module to prevent accidental disconnects. Although it is compatible with other copper Thunderbolt cables like Apple's, it is not compatible with optical Thunderbolt cables.

To attach the clip to the cable, remove them from their packaging, and then insert the connector into the connector clip as shown **(Figure 27)**. Note that the connector will pass all the way through the clip; when you connect the cable to the module, the clip will secure the cable.

12. Plug in the included Thunderbolt cable to either Thunderbolt port on the PCIe card expansion module **(Figure 27)**. Secure the retainer clip to the chassis if you attached it.

13. Connect the Mac Pro's power cord between a wall outlet or power strip and the computer mounting module's power socket.

14. Connect the included power cords between a wall outlet or power strip and the PCIe card expansion module's and kit's power sockets. Note that the power indicator on the xMac Pro Server will not light until the computer is powered on.

15. Connect any remaining interface cables and devices to the computer mounting module and computer, and to the PCIe cards installed in the PCIe card expansion module.

16. Using one of the screws you removed previously, secure the front panel to the rackmount enclosure, inserting the screw into the hole next to the power switch opening. Verify the power switch operates smoothly **(Figure 28)**.

17. Using the remaining screws, secure the faceplate to the rackmount enclosure; **do not overtighten the screws (Figure 28)**.

18. OPTIONAL STEP: Apply the bottom cover label to the Mac Pro by peeling off the backing material, aligning the cutout (the area without ink) over the words "Serial Number" and the computer's serial number, and making sure the words "Mac Pro" appear level.

19. Return to *Chapter 4 – Verify Connections Using System Information* in the xMac Pro Server's User's Guide to complete setup.

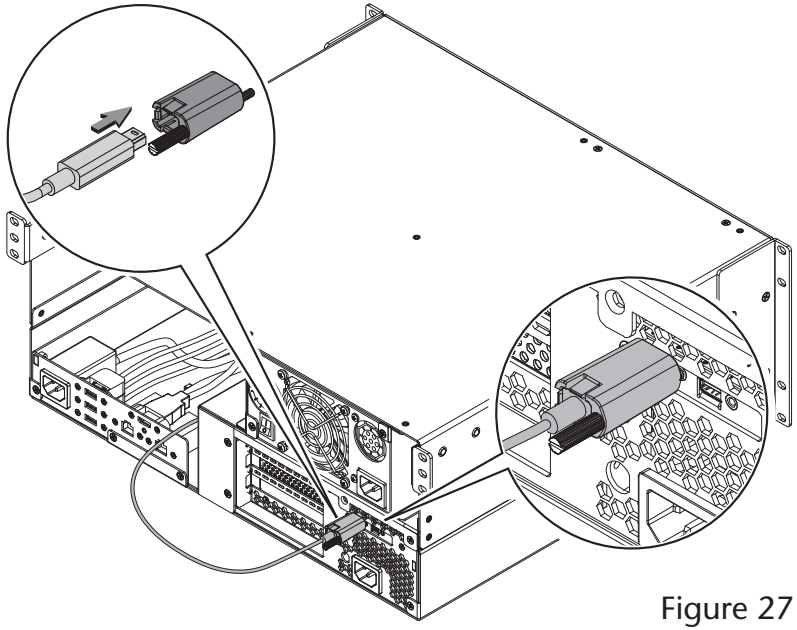


Figure 27

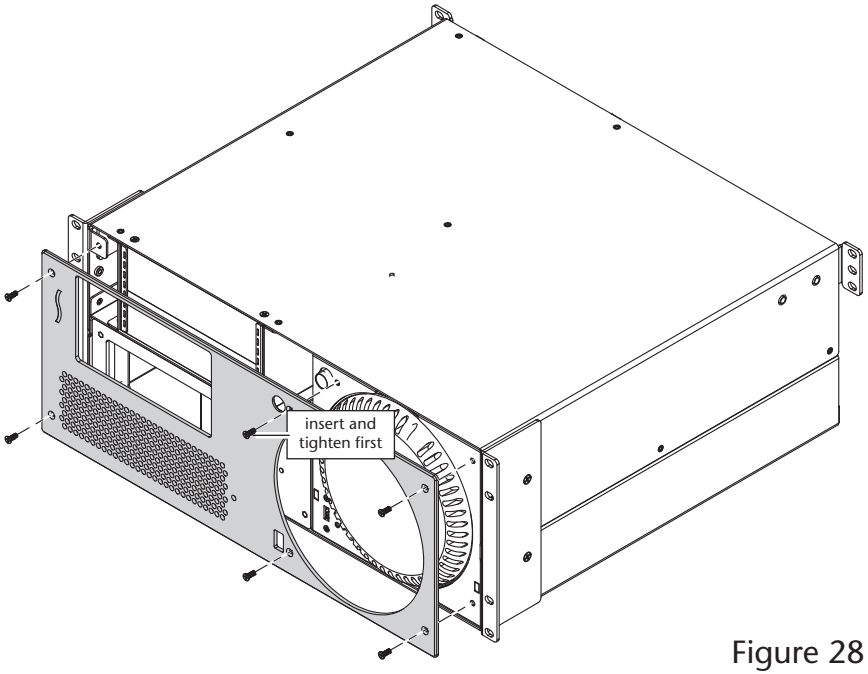


Figure 28

Chapter 4 – Specifications, Precautions, FCC Compliance, and Support Information

Specifications

External Connectors	Power (C14-type)
Internal Connectors	• Two SATA power • Three 4-pin peripheral power • One 4-pin floppy drive power • Two 4-pin CPU
Mobile Rack Devices Supported	• Two half-height mobile rack devices up to 8 inches (20.3 cm) long or • One full-height mobile rack devices up to 8 inches (20.3 cm) long
Power Supply	Universal 100W, 100-240V AC, 50-60 Hz
Operating Temperatures	0˚ C to 40˚ C (32˚ F to 104˚ F)
Dimensions WxDxH	6.32 x 15.77 x 3.33 in. (16.05 x 40.05 x 3.33 cm)
Weight	3.65 lbs (1.65 kg)
RoHS Compliant	Yes
Package Contents	• Mobile Rack Device Mounting Kit • Power cord • 4-pin peripheral power-to-15-pin SATA power adapter • User's guide

SAFETY PRECAUTIONS

Please read this section carefully before proceeding. These precautions explain the correct and safe use of this device, thereby helping to prevent injury to you or others, and also help you to minimize the risk of damaging the device.

Warnings

Always follow the basic warnings listed here to avoid the risk of serious injury or death from electrical shock, short-circuiting, fire, and other hazards. These warnings include, but are not limited to:

- Do not attempt to modify the enclosure. If this device appears to be malfunctioning, contact your reseller or local distributor
- Do not drop the enclosure; dropping or mishandling chassis may result in a malfunction leaving the product inoperable
- Do not insert your fingers or foreign objects inside the power supply
- Do not expose the device to rain, use it near water or containers that contain liquids which might spill into any openings, or in damp or wet conditions
- If unusual smells, sounds, or smoke come from the device, or if liquids enter it, switch it off immediately and unplug it from the electrical outlet
- Follow the instructions in this manual carefully; contact your reseller or local distributor for additional advice not covered in this User's Guide

FCC Compliance

The Mobile Rack Device Mounting Kit complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: This device may not cause harmful interference, AND this device must accept any interference received, including interference that may cause undesired operation.

Contacting Customer Service

The Sonnet Web site located at www.sonnettech.com has the most current support information and technical updates. Before you call Customer Service, please check our Web site for the latest updates and online support files, and check this User's Guide for helpful information.

When you call Customer Service, have the following information available so the customer service staff can better assist you:

- Product name
- Product serial number
- Date and place of purchase
- Computer model
- PCIe card models
- Mobile rack device models
- Operating system version
- Software/firmware versions

USA Customers

If further assistance is needed, please contact **Sonnet Customer Service** at:
Tel: 1-949-472-2772
(Monday–Friday, 7 a.m.–4 p.m. Pacific Time)
E-mail: support@sonnettech.com

For Customers Outside the USA

For support on this product, contact your reseller or local distributor.

Visit Our Web Site

For the most current product information and online support files, visit the Sonnet Web site at www.sonnettech.com/support/. Register your product online at http://registration.sonnettech.com to be informed of future upgrades and product releases.

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