

# User's Guide

## for Echo™ Dual NVMe Thunderbolt™ Dock



**Support Note:** This document was up to date at the time of printing. However, changes to the hardware or software may have occurred since then. Please check the Sonnet website for the latest documentation.

1. Go to <https://www.sonnettech.com/support/kb/kb.php>
2. Navigate to and click the Echo Dual NVMe Thunderbolt Dock link.
3. Click the Manual link.
4. Click the Echo Dual NVMe Thunderbolt Dock User's Guide [English] link and then check the Document Version information. If the version listed is later than this document (**revision B**), click the Download Now button for the latest version.



THUNDERBOLT™



For  
Windows

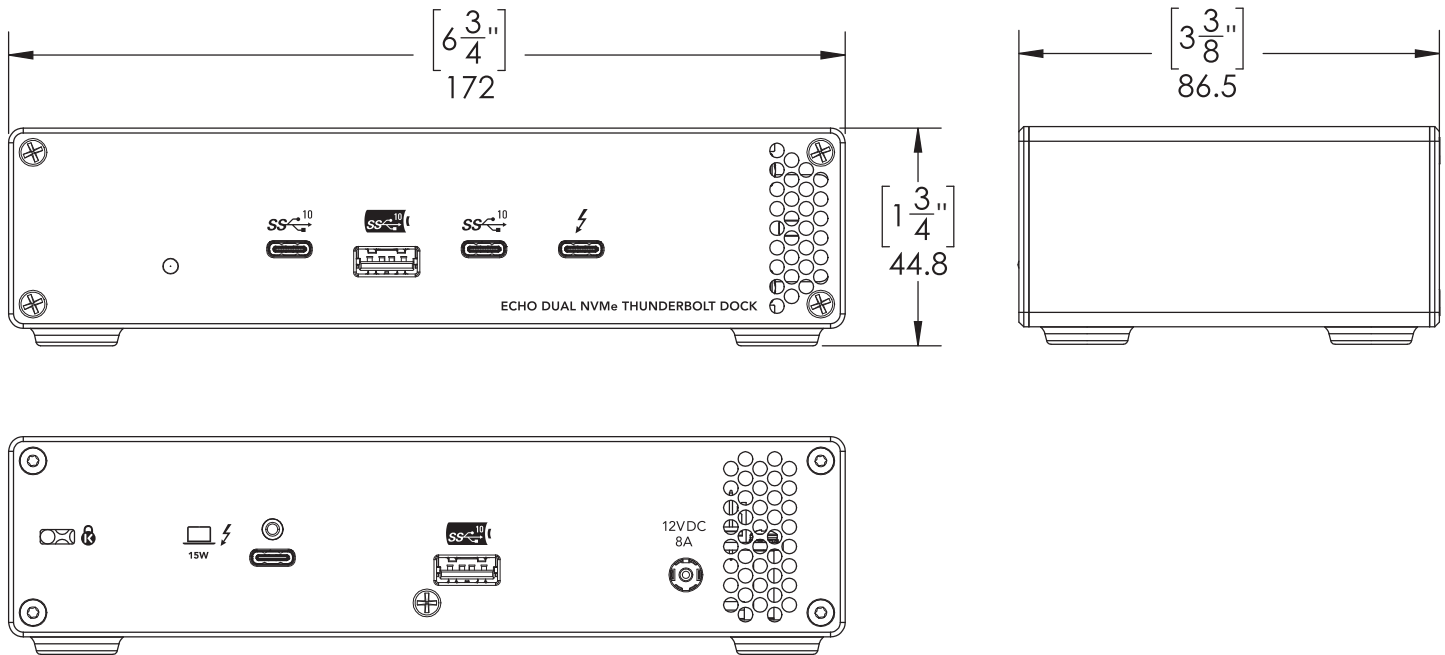


SONNETTECH™

## Contents

<b>1</b>	<b>Compatibility Information and Computer Preparation</b>	<b>1</b>
	Mac Compatibility	
	iPad Compatibility	
	Windows Compatibility	
	Preparing to Use the Dock With a Mac Computer	
	Preparing to Use the Dock With an iPad Pro	
	Preparing to Use the Dock With a Windows Computer	
<b>2</b>	<b>Echo Dual NVMe Thunderbolt Dock Description</b>	<b>2</b>
	Echo Dual NVMe Thunderbolt Dock Exterior	
	Echo Dual NVMe Thunderbolt Dock Interior Assembly	
	Additional Package Contents	
<b>3</b>	<b>SSD Installation Steps, Dock Connection, SSD Formatting Information</b>	<b>4</b>
	SSD Installation Steps, and Dock Connection	
	How to Format Installed SSDs	
	Booting From Installed SSDs	
<b>4</b>	<b>Tips, General Information, and Known Issues</b>	<b>7</b>
	Safety Precautions	
	Tips, General Information	
	Known Issues	
<b>5</b>	<b>Precautions, FCC Compliance, and Support Information</b>	<b>8</b>
	Safety Precautions	
	FCC Compliance	
	Contacting Customer Service	
	Visit Our Website	

## Chapter 1 – Compatibility Information and Computer Preparation



### Mac® Compatibility

- Mac (M1, M1 Pro, M1 Max)
- Mac (Intel®) with Thunderbolt 3 ports
- Macs with Thunderbolt 2 or Thunderbolt ports via an Apple Thunderbolt 3 (USB-C) to Thunderbolt 2 Adapter plus Thunderbolt cable (both sold separately)
- macOS® 10.12.6+

### iPad® Compatibility

- iPad Pro® with Thunderbolt port (supports only one mirrored display)
- iPadOS® 15+

### Windows® Compatibility

- PCs with Thunderbolt 4 or Thunderbolt 3 ports
- Windows 11, 10

### Preparing to Use the Dock With a Mac Computer

The drivers required to support the Echo Dock are installed as part of macOS 10.12.6 and later; there are no preparation steps.

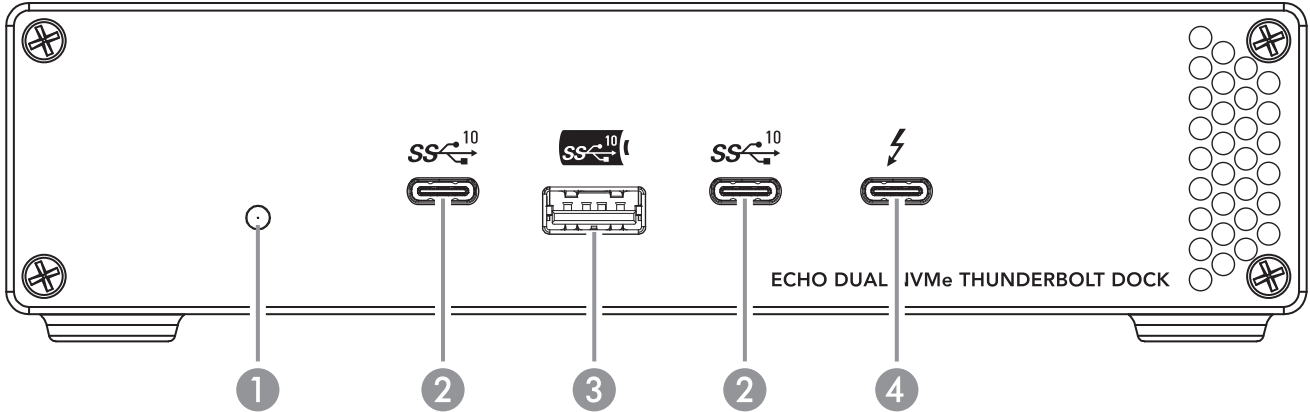
### Preparing to Use the Dock With an iPad Pro

The standard drivers required to support the Echo Dock are included in iPadOS; there are no preparation steps.

### Preparing to Use the Dock With a Windows PC

The standard drivers required to support the Echo Dock are installed as part of Windows 11 and 10; there are no preparation steps. However, the first time you connect the dock to your computer, an Approve Thunderbolt™ Devices window will appear. From the drop-down menu select Always Connect, and then click OK.

## Chapter 2 – Echo Dual NVMe Thunderbolt Dock Description



### Echo Dual NVMe Thunderbolt Dock Exterior

#### 1 – Power Indicator LED

This lights when the Echo Dock is powered, the Thunderbolt cable between the dock and your computer is plugged in securely, and the computer powered on.

#### 2 – USB-C Ports

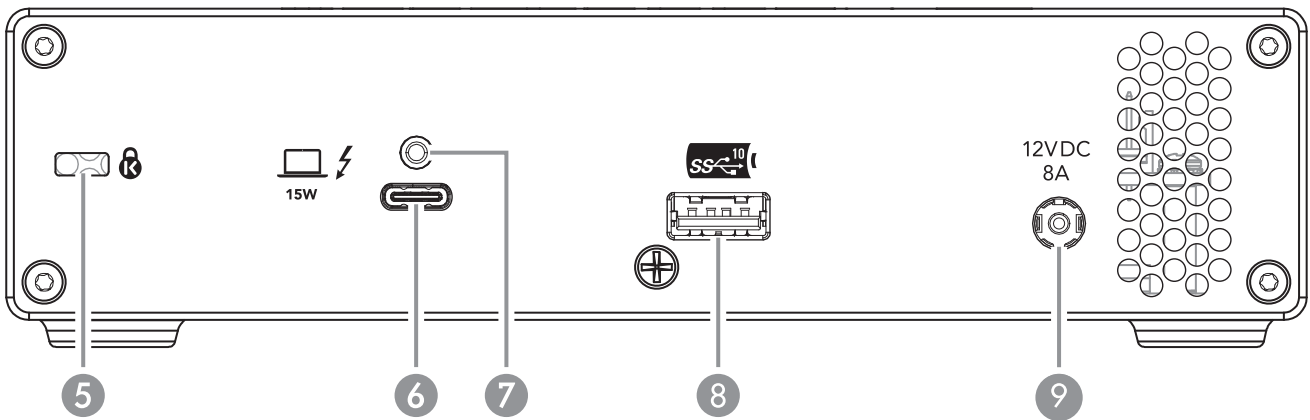
Connect USB devices to these ports.

#### 3 – USB-A Port

Connect a USB device to this port.

#### 4 – Thunderbolt Peripheral Port

Connect Thunderbolt or USB peripheral devices (including monitors) to this port using an appropriate cables or adapter.



#### 5 – Kensington® Lock Slot

When used with a Kensington Lock (sold separately), this can provide added security for the Echo Dock. Also compatible with Kensington MicroSaver® and MicroSaver 2 locks..

#### 6 – Thunderbolt (Computer) Port

Connect the included (or comparable) Thunderbolt 3 (40Gbps) cable, or any Thunderbolt 4 cable, between this connector and your computer's Thunderbolt port.

#### 7 – Threaded Nut for ThunderLok 3

Attach the included Thunderbolt connector retainer clip here.

#### 8 – USB-A Port

Connect a USB device to this port.

#### 9 – 12VDC Socket

Connect the included DC power adapter between this socket and the included power cord.

## Chapter 2 – Echo Dual NVMe Thunderbolt Dock Description

### Echo Dual NVMe Thunderbolt Dock Inner Assembly

#### 1 – M.2 SSD Sockets

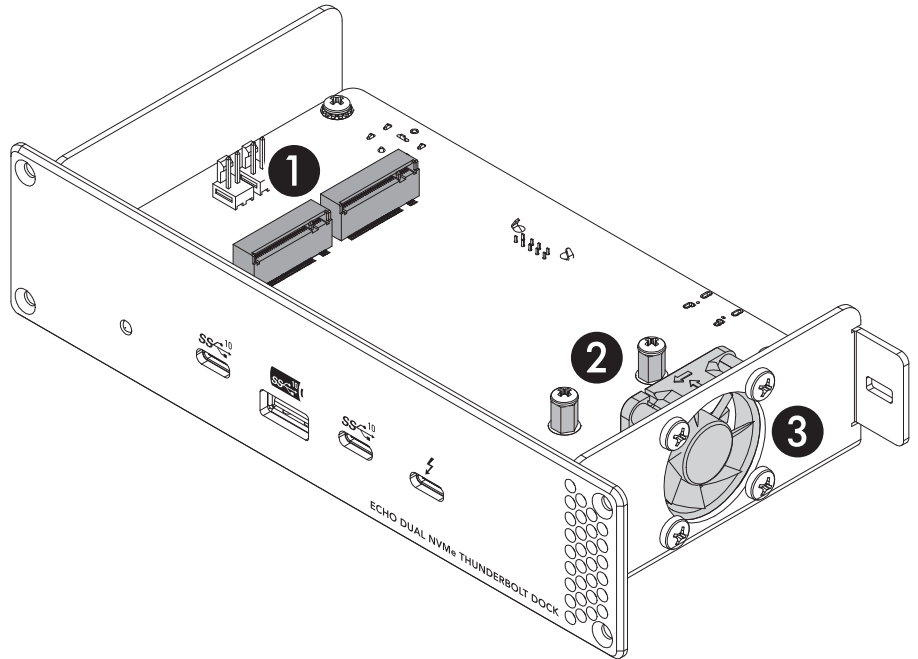
The Echo Dock supports the installation of two single- or double-sided M.2 2280 NVMe PCIe SSDs (sold separately) with “M” key connectors.

#### 2 – SSD Mounting Posts (Standoffs)

Secure installed SSDs to these posts.

#### 3 – Fan

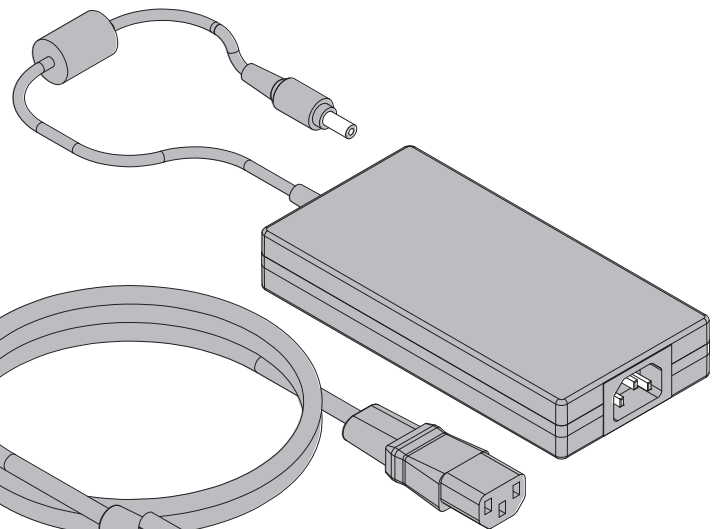
The temperature-controlled fan provides cooling for the installed SSDs and the dock’s Thunderbolt circuitry. It operates at a whisper when the card is running cool, and speeds up when the temperature rises. Do not block the fan or the vent holes on the dock to prevent overheating.



### Additional Package Contents

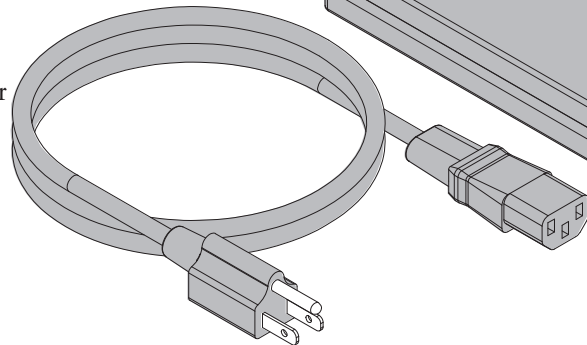
#### Power Adapter

Connect this to the Echo Dock’s 12VDC socket.



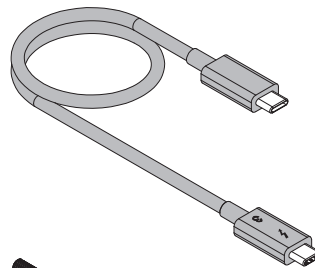
#### Power Cord

Connect this between a power outlet and the power adapter. Note that the power cord included with your product may appear different than the one pictured here, depending on where the product was purchased.



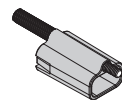
#### Thunderbolt 3 (40Gbps) Cable

Connect this cable between the Echo Dock and one of your computer’s Thunderbolt ports (often indicated by a  $\mathcal{L}$  logo), or other Thunderbolt peripheral device in the chain connected to the computer. Connecting the dock to a computer port marked with the generic USB icon (🔌) or USB + Charging Port icon (🔌⚡) is NOT supported.



#### Thunderbolt Connector Retainer Clip

This clip secures the Thunderbolt 3 connector plugged into the Echo Dock’s Thunderbolt (Computer) Port to prevent accidental cable disconnection. This clip is compatible with Sonnet 0.5- and 0.7-meter Thunderbolt 3 cables, but not with Sonnet 1- or 2-meter Thunderbolt 3 cables (which require ThunderLok 3L, part number TB3-LOK2L).



## Chapter 3 – SSD Installation Steps, Dock Connection, SSD Formatting Information

### SSD Installation Steps and Dock Connection

Steps 1–8 are optional. If you are *not* installing SSDs, skip to the Support Note at the bottom of the next page.



**Support Note:** To avoid damaging components due to static electricity discharge, wear an antistatic wrist strap while working inside Echo Dock.

1. Using a Phillips screwdriver, remove the seven screws (one from the front panel, two from the bottom of the case, four from the back panel) securing the inner assembly to the outer case as shown (Figure 1). Pull out the inner assembly from the case, and then set aside the case and screws.

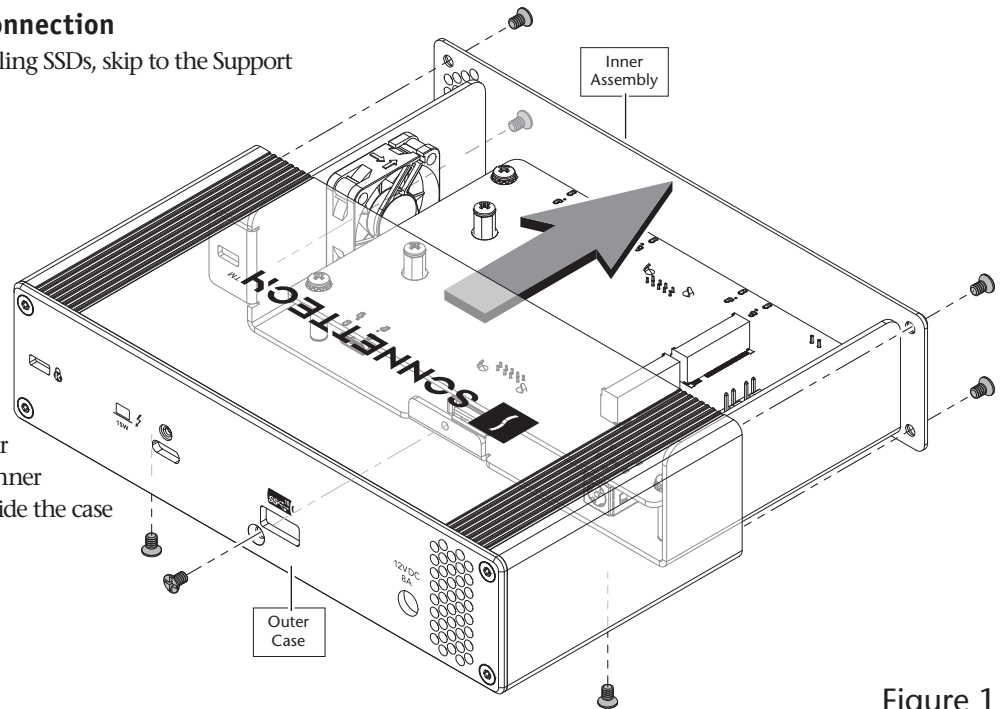


Figure 1

2. Remove the two screws from the standoffs as shown (Figure 2). Note that if you are only installing one SSD, you only need to remove one screw.

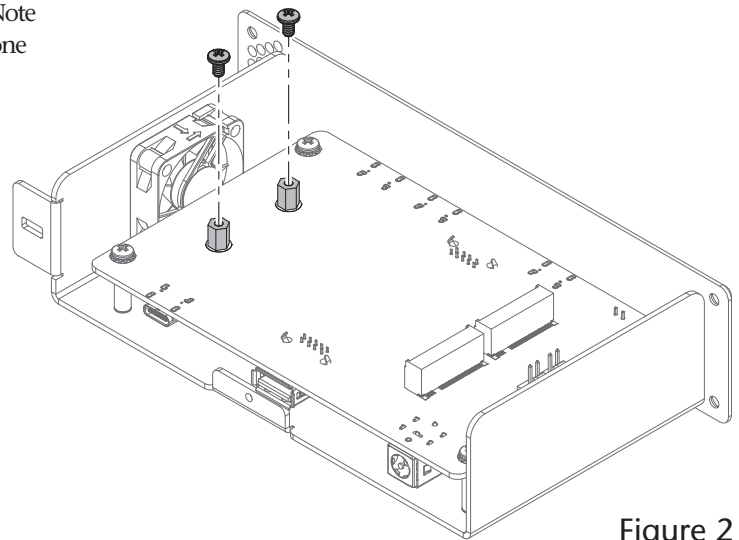


Figure 2

3. Handling it by its edges, remove an SSD from its packaging.
4. Insert the SSD at an angle into one of the SSD sockets until it snaps into place (Figure 3).
5. When installing a second SSD, repeat steps 3 and 4 (Figure 3). Otherwise, skip to the next step.

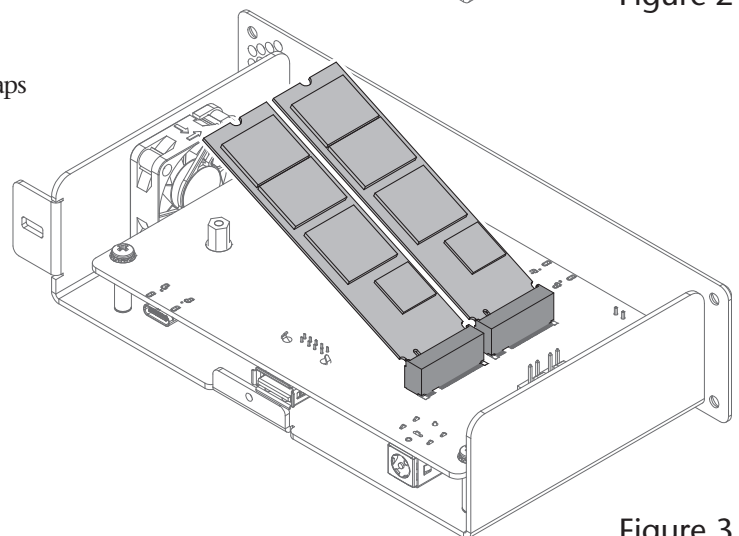


Figure 3

## Chapter 3 – SSD Installation Steps, Dock Connection, SSD Formatting Information

- Using the screw(s) you removed previously, secure the SSD(s) to the standoff(s); **do not overtighten the screws** (Figure 4).

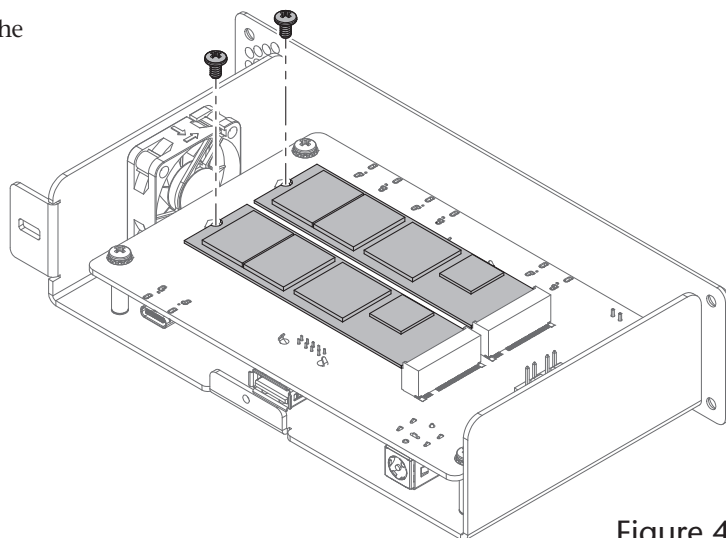


Figure 4

- Slide the inner assembly back into the outer case (Figure 5).
- Using the seven screws you removed previously, secure the inner assembly to the outer case; **do not overtighten the screws** (Figure 5).

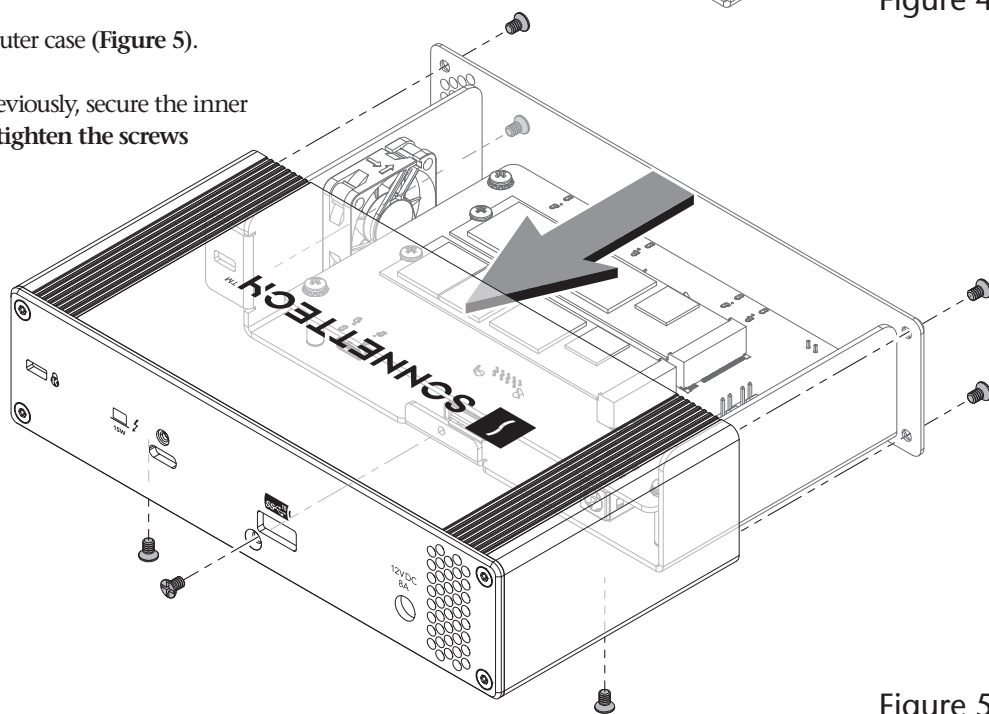


Figure 5

**Support Note:** Sonnet's ThunderLok™ 3 Thunderbolt 3 (40Gbps) connector retainer clip secures the included Thunderbolt 3 (40Gbps) cable to the Echo Dock to prevent accidental disconnects. The included clip is compatible with Sonnet 0.5- and 0.7-meter Thunderbolt 3 (40Gbps) cables, but it is not compatible with Sonnet 1- or 2-meter Thunderbolt 3 (40Gbps) cables.

To attach the clip to the cable, remove both items from their packaging, and then insert the connector through the connector clip as shown (Figure 6). Note that the connector will pass all the way through the clip; when you connect the cable to the dock, the clip will secure the connector.

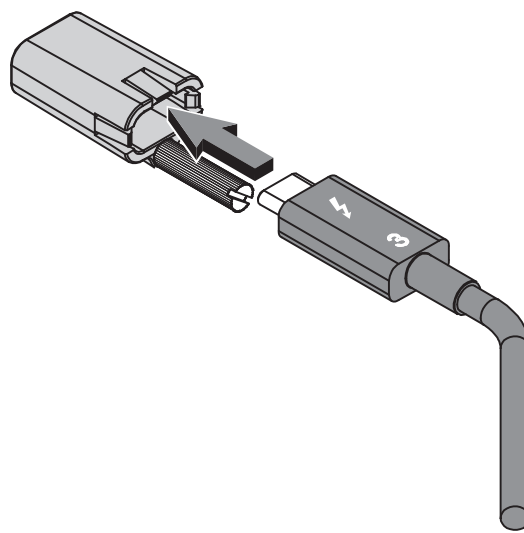


Figure 6

## Chapter 3 – SSD Installation Steps, Dock Connection, SSD Formatting Information

9. Connect the included (or comparable) Thunderbolt 3 (40Gbps) cable, or any Thunderbolt 4 cable, between a Thunderbolt port on the Echo Dock and a Thunderbolt port on your computer, or other Thunderbolt device in the chain connected to the computer (**Figure 8**). Note that cables and computer ports marked with a generic USB icon (🔌) or USB + Charging Port icon (🔌⚡) are NOT compatible. Secure the retainer clip to the dock 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 Dock.
10. Connect the included power cord between a wall outlet or power strip and the power adapter; verify the connector is plugged in securely.
11. Connect the power adapter cable to the dock's 12V DC socket. Note that the power indicator on the Echo Dock will not light until the computer, and any other Thunderbolt device connected between it and the Echo Dock, is powered on.

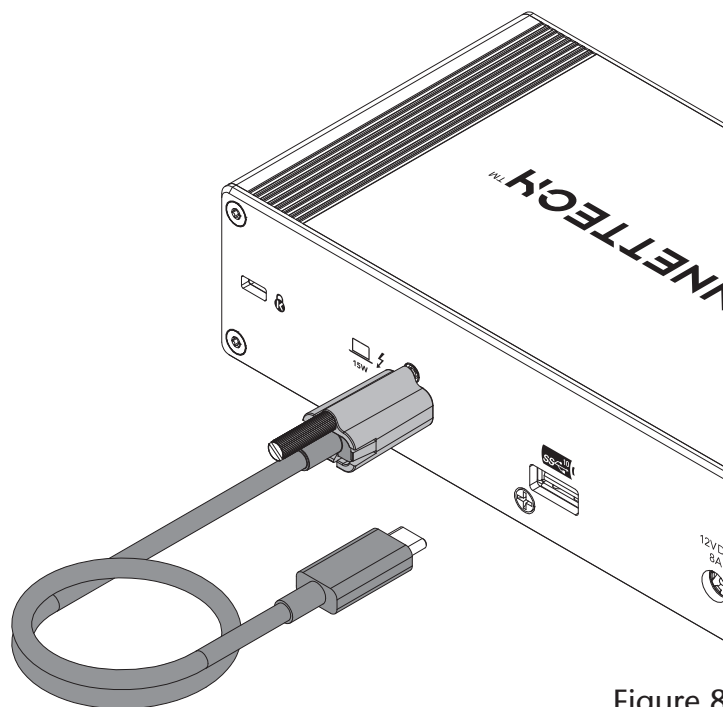


Figure 8

### How to Format Installed SSDs

#### macOS:

Use Disk Utility (found in the Utilities folder within the Applications folder) to format installed SSDs.



**Support Note for macOS Users:** macOS 10.14.6+ supports both 512 and 4k block size SSDs, but macOS 10.13.6 supports only 4k block size SSDs. 1TB or larger SSDs are shipped from the factory programmed with a 4k block size. If you have smaller SSDs that are programmed with 512 byte block size, and you need to be compatible with macOS 10.13.6, you may need to reprogram your SSDs to a 4k block size. Go to [www.sonnettech.com/support/kb/kb.php](http://www.sonnettech.com/support/kb/kb.php), navigate to the support page for Echo Dual NVME Thunderbolt Dock, and then open the FAQ about *Programming SSDs to 4k Block Size for Compatibility With macOS 10.13.6* for more information.

#### Windows:

If you intend to format SSDs connected to the dock using Windows drive formatting tools (Disk Management), you may locate instructions by using “format volume”, and “create striped volume” as search items in Windows Help.

### RAID Configuration Support Information

RAID 0, RAID 1, and concatenated disk set configurations of SSDs are supported under macOS 10.14.6 and later, Windows 11 and 10.

### Booting From Installed SSDs

#### macOS:

The Echo Dock supports booting your Mac from individual (non-RAIDed) SSDs. Please note that in some cases it may be necessary for you to hold the *option* key during a start, and then select the startup disk attached to the Sonnet card.

#### Windows:

*The Echo Dock does not support booting in computers running Windows.*

## Chapter 4 – Tips, General Information, and Known Issues

### TIPS, GENERAL INFORMATION

#### There's No Need to Unplug the Power Adapter

Because the Echo Dock automatically powers on and off with the computer to which it's connected, there's no power switch, nor is there any need to disconnect the power cable under normal use.

#### Power Indicator LED Operation

The dock's power indicator only lights when the computer to which it's connected is on, and turns off when the computer is sleeping or powered off.

#### Hot Plugging the Echo Dock

You may connect and disconnect the dock while the computer is on. If you have anything connected to the dock; such as storage devices, cameras, etc., follow proper procedures for ejecting (unmounting) those devices before unplugging the dock from the computer.

**Using the Dock to Charge Your Portable Computer or iPad Pro** MacBook Air® and MacBook Pro® computers with Thunderbolt ports, some PC laptop computers with Thunderbolt 3 ports, all PC laptops with Thunderbolt 4 ports, and iPad Pro with a Thunderbolt port may be charged *slowly* via the Echo Dock's Thunderbolt (Computer) port (via 15W Power Delivery). Computers with Thunderbolt 2 or Thunderbolt ports cannot be charged via Thunderbolt.

#### The Echo Dock Provides Downstream Power

For connected peripheral devices requiring extra power, the Echo Dock provides up to 15 watts to bus-powered devices through its front Thunderbolt port, enabling them to operate without connecting an additional power adapter.

#### Connecting Additional Thunderbolt 3 or 4 Peripheral Devices

The dock includes two Thunderbolt ports; the back port is reserved for connection to your computer, while the front port supports connection of up to five additional Thunderbolt peripheral devices through daisy-chain connection.

#### Connecting a Thunderbolt 2 Peripheral Device (Mac Only)

The Echo Dock's second (front) Thunderbolt port supports a self-powered Thunderbolt 2 peripheral device when connected with an Apple Thunderbolt 3 (USB-C) to Thunderbolt 2 Adapter plus a Thunderbolt 2 cable (both sold separately); bus-powered Thunderbolt 2 devices are not supported.

#### How to Identify Thunderbolt 3 (40Gbps) Cables

Full performance requires the use of the included 40Gbps Thunderbolt 3 cable, other 40Gbps (not 20Gbps) Thunderbolt 3 cable, or any Thunderbolt 4 cable; look for the Thunderbolt icon (⚡) AND the number 3 or 4 on the connector housings to identify Thunderbolt cables. Cables marked with the generic USB icon (🔌) are NOT compatible for connecting the Echo Dock to the computer.

#### Thunderbolt Cable Compatibility

You may use Thunderbolt 3 (40Gbps) or Thunderbolt 4 cables with Thunderbolt 4 or Thunderbolt 3 peripherals and computers without any compromise.

### KNOWN ISSUES

#### Not All Computers' Thunderbolt Performance is Equal

When using the dock with the 2017 MacBook Pro 13-inch model with four Thunderbolt 3 ports, you should connect the dock to one of the ports on the left side of the computer. The right side ports use an x2 (2-lane) implementation of Thunderbolt 3 that limits PCIe bandwidth to 20Gbps (up to 1,400 MB/s).

#### Not All Thunderbolt Cables Deliver Full Performance

Full performance from the Echo Dock requires the use of the included (or comparable) Thunderbolt 3 (40Gbps) cable, or any Thunderbolt 4 cable. When shopping for a Thunderbolt 3 cable, please be aware that some support only lower data transfer speeds (20Gbps).

#### Operating System (OS) Updates May Break Compatibility

*Specific device drivers that work under one OS version may not work under a later version. Before updating your computer to the latest OS, we recommend that you contact your PCIe card's manufacturer to verify that the existing drivers work. Note that other computer software updates may also break compatibility.*

#### Some Devices' Performance May be Affected by Where They Are Connected in a Thunderbolt Chain

However small, Thunderbolt introduces latency to a device chain. If you connect additional Thunderbolt devices to the dock, you may need to experiment with ones work better closer to or farther from the computer in the chain.

## Chapter 5 – Precautions, FCC Compliance, and Support Information

### 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 dock; dropping or mishandling the dock may result in a malfunction leaving the product inoperable.
- 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

Echo Dual NVMe Thunderbolt Dock 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](http://www.sonnettech.com) has the most current support information and technical updates. Before contacting Customer Service, please check our Web site for the latest updates and online support files, and check this User's Guide for helpful information.

Email support requests generally receive the fastest responses, and are usually processed within a 24-hour period during normal business hours, excluding holidays. When you contact Customer Service, have the following information available so the customer service staff can better assist you:

- Product name
- Date and place of purchase
- Computer model
- Operating system version
- Software/firmware versions
- A System Report (macOS) or a Microsoft System Information MSINFO32 (Windows) report (Windows), along with a description of the issue(s) you are encountering with your device

If further assistance is needed, please contact **Sonnet Customer Service** at:

**E-mail:** [support@sonnettech.com](mailto:support@sonnettech.com)

**Tel:** 1-949-472-2772

(Monday–Friday, 9 a.m.–5 p.m. Pacific Time, excluding holidays)

### Japan Customers

Contact Sonnet Customer Service Japan at:

**E-mail:** [jp.support@sonnettech.com](mailto:jp.support@sonnettech.com)