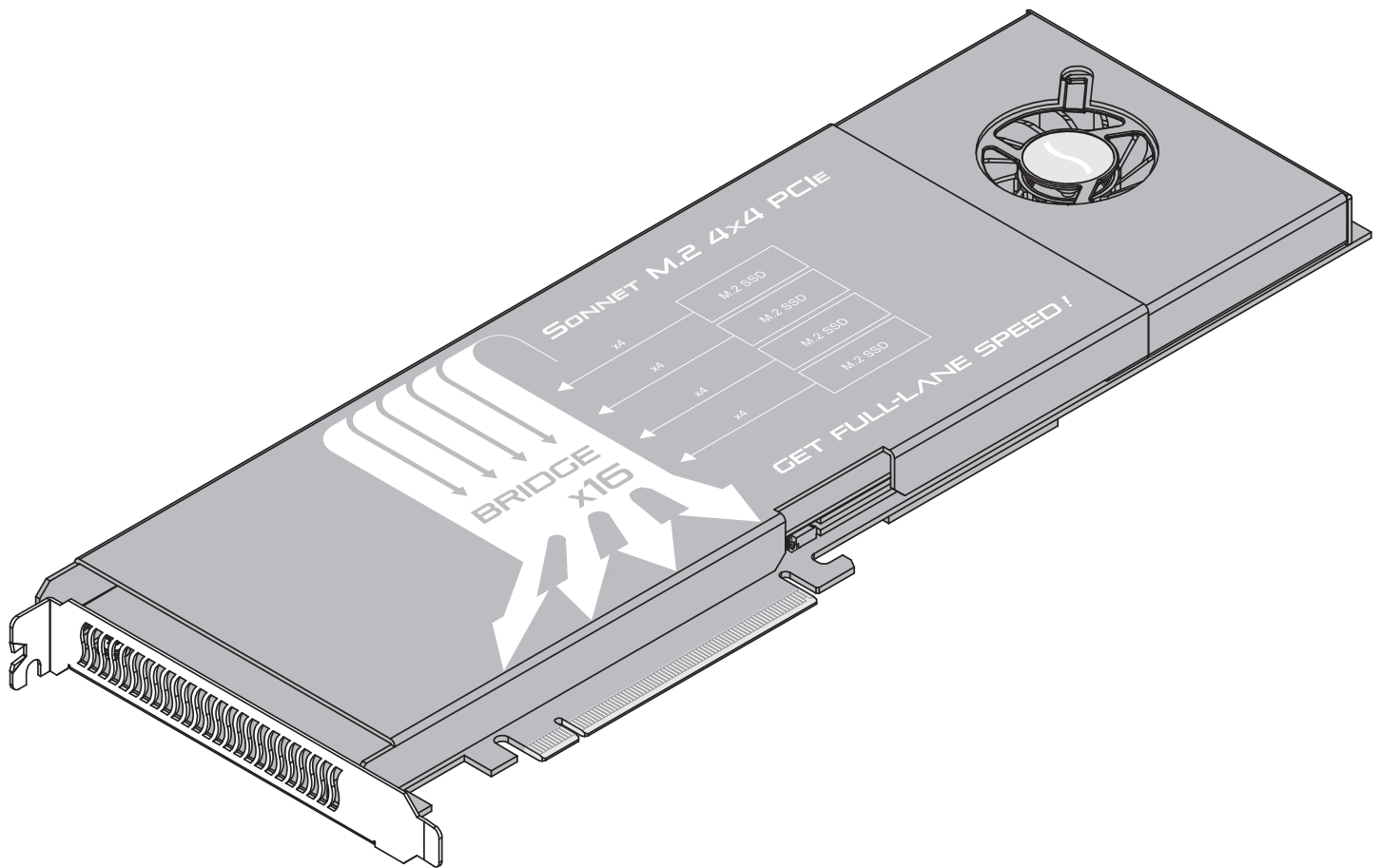


Sonnet M.2 4x4 PCIe® Card

Quick Start Guide



PCI EXPRESS®



For
Windows



SONNET™

Introduction, Compatibility Information, and Card Description

Congratulations on your purchase! The Sonnet M.2 4x4 PCIe Card provides a handy way to install up to four M.2 format PCIe SSDs into a PCIe slot. macOS®, Windows®, Linux®, and Thunderbolt™ compatible, this card works in compatible computers and Thunderbolt-to-PCIe card expansion systems.



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 www.sonnettech.com/support/kb/kb.php
2. Click the Computer Cards link.
3. Click the PCIe Cards link.
4. Click the Sonnet M.2 4x4 PCIe Card link, and then click the Manual link.
5. Click the Sonnet M.2 4x4 PCIe Card Quick Start Guide [English] link, and then check the Document Version information. If the version listed is later than this document (**revision F**), click the Download Now button for the latest version.

Computer Compatibility

- Mac Pro® 5,1 (Mid 2010 & Mid 2012) with available full-length x16 PCIe slot (also requires a recommended Metal-compatible graphics card)
- Mac Pro 7,1 (2019) – Use x16 PCIe slot (slot 3, 4, or 5) for full performance
- PC desktop or server with available full-length, full-height x16 PCIe slot (PCIe 3.0 slot is preferred for best performance)

OS Compatibility

- macOS 10.14.4+ (macOS Catalina compatible)
- macOS 10.13.6 compatible under specific circumstances; visit <https://www.sonnettech.com/product/m2-4x4-pcie-card.html> and view Technical Notes for information
- Windows 10 (64-bit Edition Version 1903 or greater)
- Linux Kernel 5.0+

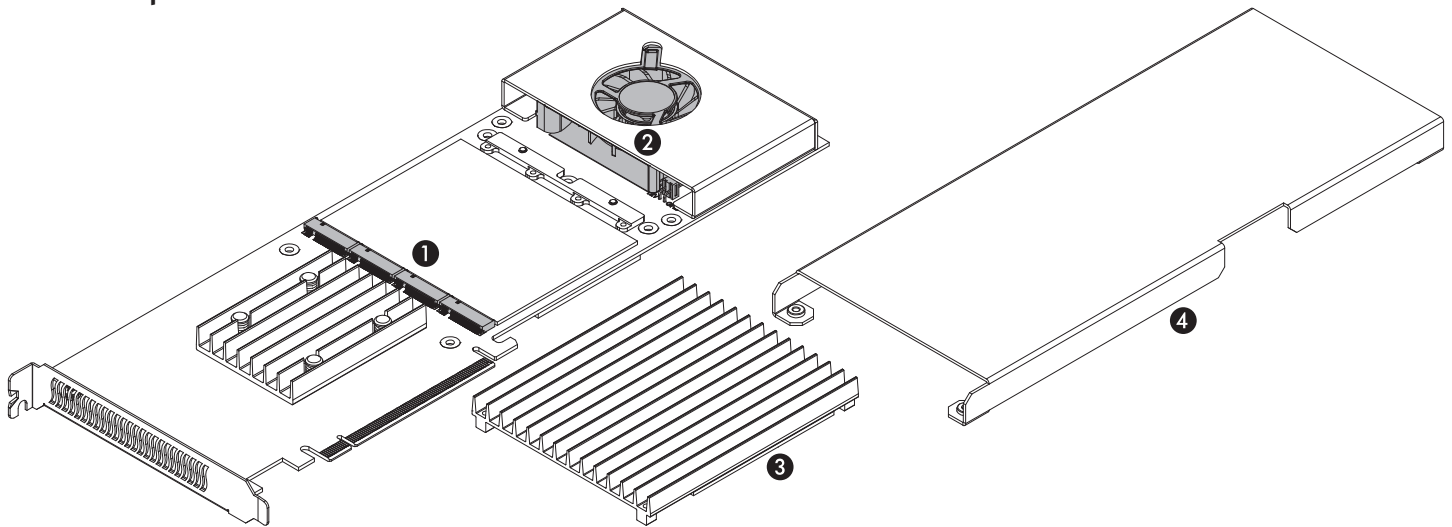
M.2 SSD Compatibility

Only single-sided (components on top side) SSDs are supported. For a list of compatible SSDs, please visit the Sonnet website at: https://sonnettech.com/support/downloads/manuals/M2_compatibility.pdf

Thunderbolt Compatibility

- Mac® or Linux computer with Thunderbolt 3 or Thunderbolt 2 ports via a Thunderbolt-to-PCIe card expansion system with available full-length x16 PCIe slot
- Windows computer with Thunderbolt 3 ports via a Thunderbolt 3 to PCIe card expansion system with available full-length x16 PCIe slot

Card Description



1 – M.2 SSD Sockets

The Sonnet M.2 4x4 PCIe Card supports the installation of four single-sided M.2 2280 NVMe PCIe SSDs with “M” key connectors. When configuring them as RAID volumes, Sonnet recommends the use of identical SSDs.

2 – Smart Blower

This blower is temperature-controlled and spins only when and as fast as needed, minimizing noise.

3 – SSD Heatsink

Backed with a thermal transfer pad that contacts the SSDs’ components, the heatsink conducts heat away from the SSDs.

4 – Cover

The cover directs airflow over the heatsink to provide proper cooling for the SSDs. Always use the card with the cover installed; this will help prevent thermal throttling of the SSDs’ performance, and may help extend the life of the SSDs.

SSD Installation Steps



Support Note: When handling computer products, you must take care to prevent components from being damaged by static electricity. Before opening your computer or removing parts from their packages, always ground yourself first by touching a metal part of the computer, such as a port access cover, and work in an area free of static electricity; avoid carpeted areas. Handle all electronic components by their edges, and avoid touching connector traces and component pins.

1. Handling the card by its edges, remove the Sonnet M.2 4x4 PCIe Card from its packaging.
2. Place the card upside-down on a flat, level surface (**Figure 1**).
3. Using a Phillips screwdriver, remove the four screws securing the cover to the card (**Figure 1**). Set aside the screws.

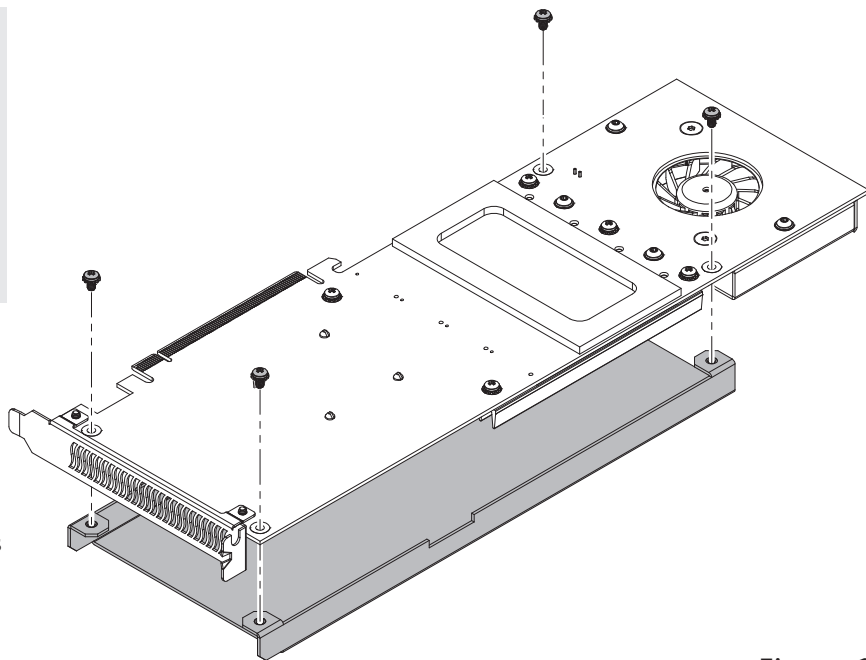


Figure 1

4. Using a Phillips screwdriver, remove the five screws securing the heatsink to the card (**Figure 2**). Set aside the screws.

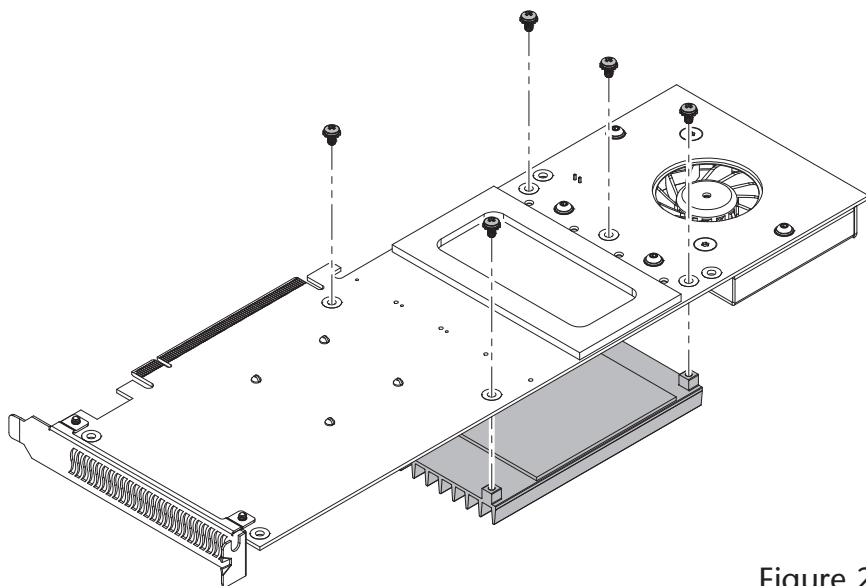


Figure 2

5. Flip the card over, and then remove the four screws as shown (**Figure 3**). Set aside the screws.

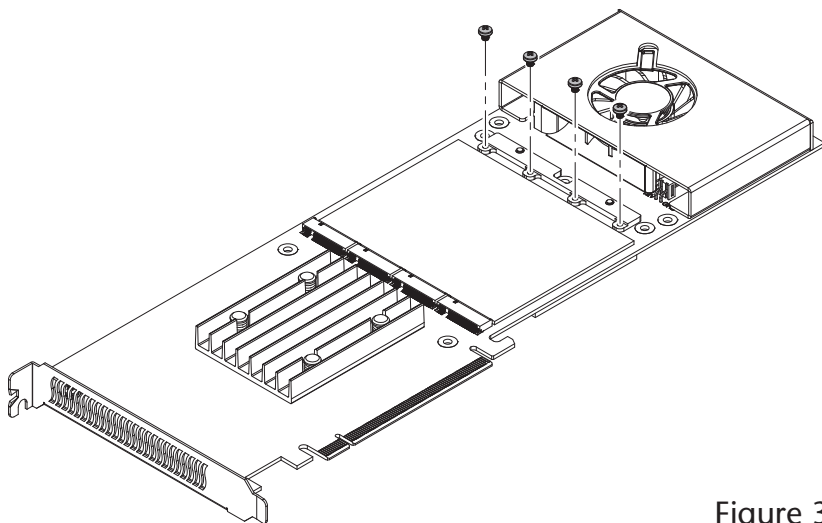


Figure 3

SSD Installation Steps

6. Handling it by its edges, remove an SSD from its packaging.
7. Insert the SSD component side up into one of the SSD sockets until it snaps into place (**Figure 4**).
8. Repeat steps 6 and 7 with any remaining SSDs you are installing (**Figure 4**).

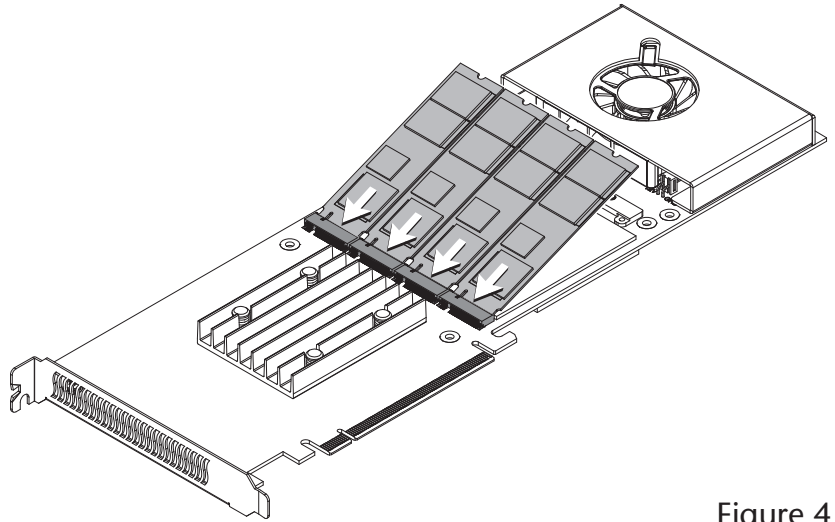


Figure 4

9. Using screws you removed previously, secure the SSD(s) to the card (**Figure 5**); **do not overtighten the screws**. If you installed fewer than four SSDs, reinstall remaining screws into the open holes.

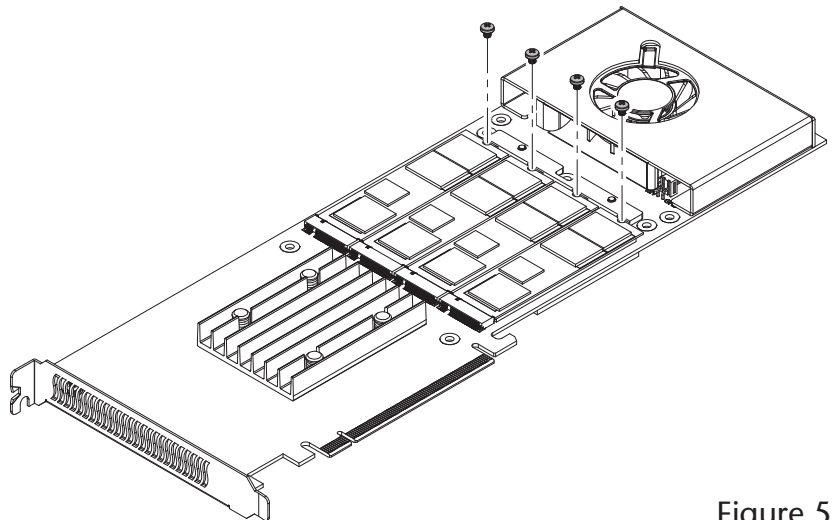


Figure 5

10. Set the heatsink on top of the SSDs, aligning the screw holes in the heatsink with the corresponding holes in the card (**Figure 6**).

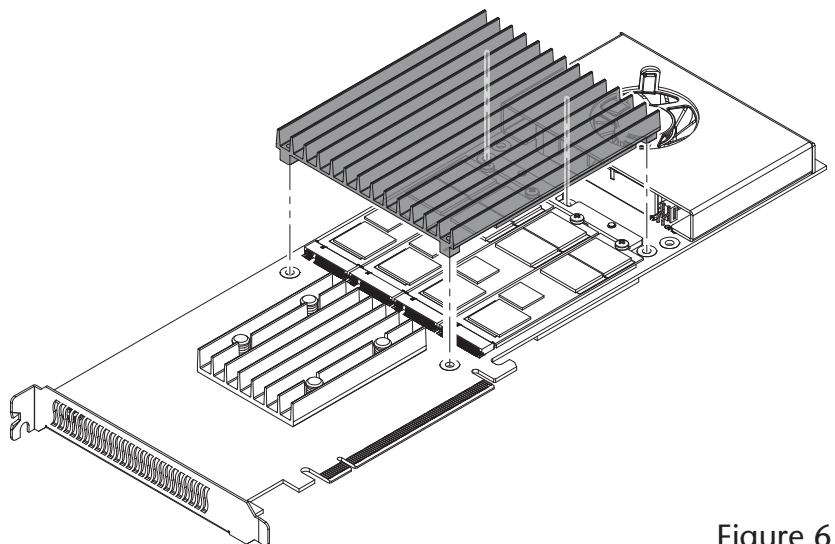


Figure 6

SSD Installation Steps

11. Holding the heatsink firmly against the card, flip the Sonnet M.2 4x4 PCIe over (Figure 7).
12. Secure the heatsink to the card with five of the screws you removed previously (Figure 7); **do not overtighten the screws.**

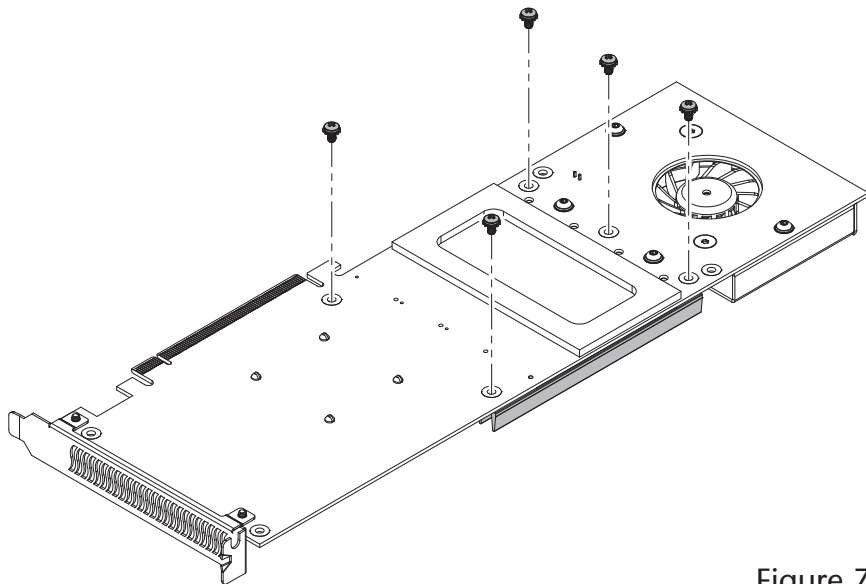


Figure 7

13. Place the card on top of the cover as shown, and then secure the cover to the card with the four remaining screws you removed previously (Figure 8); **do not overtighten the screws.**

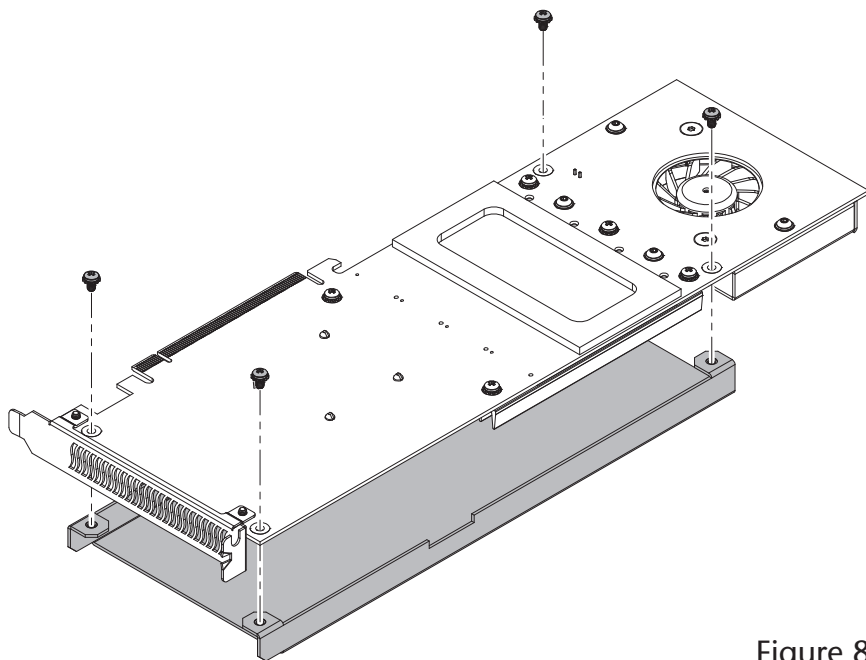


Figure 8

Card Installation Steps

1. Shut down your computer or expansion chassis, disconnect its power cable, and then open it to access the expansion card area (PCI Express slots); refer to the user manual for specific information
2. Locate an available x16 PCIe slot and remove its access cover if necessary.
3. Install the Sonnet card with attached SSDs into the slot; **make sure the card is firmly seated and secured (use the computer's PCIe card retaining latch if present).**
4. Close your computer or expansion chassis.
5. Reconnect the computer's power cable.

Card Installation Steps and Support Information

Formatting SSDs

macOS:

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

Windows:

If you intend to format SSDs connected to the Sonnet card 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.



Support Note for Windows Users: Use of Samsung SSDs in computers running Windows requires the download and installation of NVMe drivers from Samsung; Microsoft *Windows inbox NVMe drivers do not support Samsung SSDs*. Download the drivers from <https://www.samsung.com/semiconductor/minisite/ssd/download/tools/>

Linux

Use the tools or utilities you would normally use to format internal drives.

RAID Configuration Support Information

macOS:

Sonnet M.2 4x4 PCIe supports RAID 0, RAID 1, and concatenated disk set configurations of SSDs under macOS 10.14.4 and later. Additionally, RAID 5 configuration is supported via third party software (sold separately).

Windows:

Sonnet M.2 4x4 PCIe supports RAID 0, RAID 1, RAID 5, and concatenated disk set configurations of SSDs.

Windows:

Sonnet M.2 4x4 PCIe supports RAID 0, RAID 1, RAID 5, and concatenated disk set configurations of SSDs.

Booting From Attached SSDs

macOS:

Sonnet M.2 4x4 PCIe supports booting from JBOD (non-RAIDed) SSDs when the card is installed in Mid 2010, Mid 2012, and 2019 Mac Pro computers and Thunderbolt-to-PCIe card expansion systems.

Please note that in some cases it may be necessary for you to hold the *option* + *R* keys during a start, and then select the startup disk attached to the Sonnet card.

Booting from an external SSD in macOS 10.14.4+ requires enabling external booting in the security preferences that can be set in a command-R (recovery system) boot.

Windows and Linux:

Sonnet M.2 4x4 PCIe Card does not support booting in computers running Windows or Linux.

Contacting Customer Service

The Sonnet Web site located at 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 Quick Start 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
- SSD model(s)
- Date and place of purchase
- Computer model
- OS version
- 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 us at:

USA, Canada, or Mexico Customers

Please contact **Sonnet Customer Service** at:

E-mail: support@sonnettech.com

Tel: 1-949-472-2772

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

For Customers Outside North America

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. Remember to register your product online at <https://registration.sonnettech.com> to be informed of future upgrades and product releases.

