



NVMe blades compatibility M2 Mac Studio and M2 Mac Pro

In this note:

- A bug has been discovered in version of macOS 13.4 unique to the 2023 Mac Studio and Mac Pro and causes the computers to restart whenever four or more SoftRAID NVMe blades are attached.
- Affected OWC products include Accelsior 8M2 or 4M2, Thunderblade, and Express 4M2 or U2 Shuttle.
- Apple must issue a fix in macOS to address the issue, but OWC has a workaround available until then.

At OWC, we are really excited by the new Mac Studio and Mac Pro with Apple's latest M2 Ultra processor. Apple's product page for the new Mac Pro reports 26 GB/s from a RAID volume, a speed achieved using OWC's Accelsior 8M2 PCIe card. The Accelsior 8M2 comes with 8 SSD blades configured as a SoftRAID RAID 0 volume. SoftRAID is OWC's powerful software RAID application for macOS and Windows. SoftRAID enables you to easily create RAID storage with incredible speed and robust data protection.

However, once OWC received its first 2023 Mac Pro and installed our Accelsior 8M2 card in it, OWC discovered that the Mac would not start up. Upon further investigation, OWC discovered this problem affected most of our multi-drive storage solutions which use NVMe blades, both internal and external. Furthermore, OWC found that the issue affects these storage solutions *only* when connected to the new Mac Studio with M2 Max or M2 Ultra, or the new Mac Pro with M2 Ultra. OWC affected products include Accelsior 8M2 or 4M2, Thunderblade, and Express 4M2 or U2 Shuttle.

Over the past week, OWC has investigated this problem and even have a workaround which allows macOS to avoid this bug. Unfortunately, OWC cannot ship this workaround at this time and must wait for it to be fixed in macOS. OWC is confident that Apple engineers will have a new version of macOS which fixes this problem in the very near future.

The workaround until Apple releases a fix

In the meantime, if you purchase one of OWC's affected products for use in the M2 Mac Studio or M2 Mac Pro, you can use AppleRAID, built into the Disk Utility application, to create a volume which will work on your NVMe based storage.

You may get significantly slower performance from the card using AppleRAID than you would using SoftRAID. Once Apple ships a version of macOS which fixes this problem, you will be able to convert to using SoftRAID and gain all the speed and monitoring features which are not in AppleRAID.



To create a volume with your OWC storage solution using AppleRAID, you will have to use a Mac other than your new M2 Mac Studio or M2 Mac Pro. There are directions below. If you do not have another Mac available, please contact OWC Customer Support so you can ship the card back to OWC and they will reconfigure the card for you with AppleRAID.

Directions:

To perform this task, you need a Mac Pro 2019, or separate computer with Thunderbolt 3, and a PCI-based enclosure, such as a Node Titan, or Flex 8.

The older computer can be running any version of Mac OS and SoftRAID.

In our example, we are using:

- MacBook Pro 2016
- Node Titan
- MacOS Catalina
- SoftRAID 7.5

Note: These steps will wipe all data from the drives. Please backup beforehand to avoid losing data.

1. Install SoftRAID

If SoftRAID is not already installed on this computer, install SoftRAID. Since you are not going to create a volume, you do not need to reduce Security, or enter a license number.

2. Connect/install your target device

i.e, If this is a Mac Pro 2019, install the Accelsior 8M2. If this is a Thunderblade, Express 4M2, or Node Titan with the Accelsior installed, connect your device with a Thunderbolt cable.

3. Launch SoftRAID application.

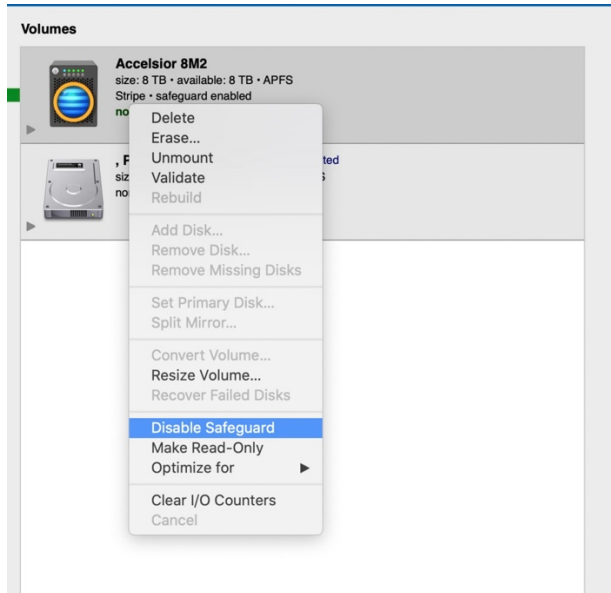
You will see the drives in the disks column and the volume in the volumes column.





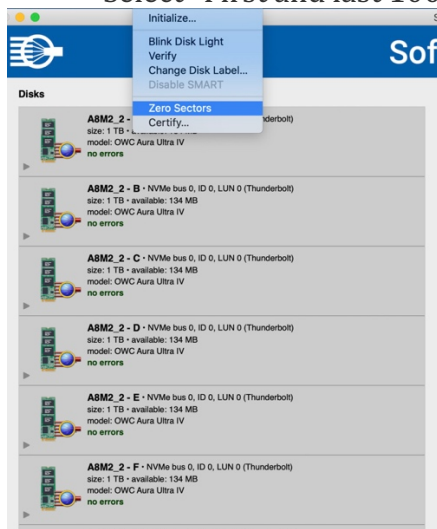
4. Disable Safeguard

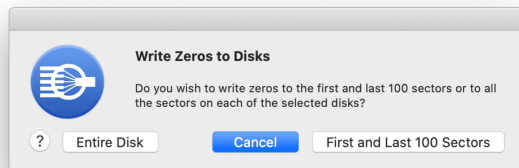
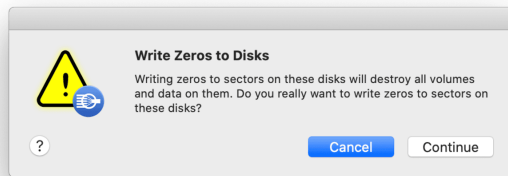
Select the volume tile and select "disable Safeguard" from the volumes menu



5. Zero disks

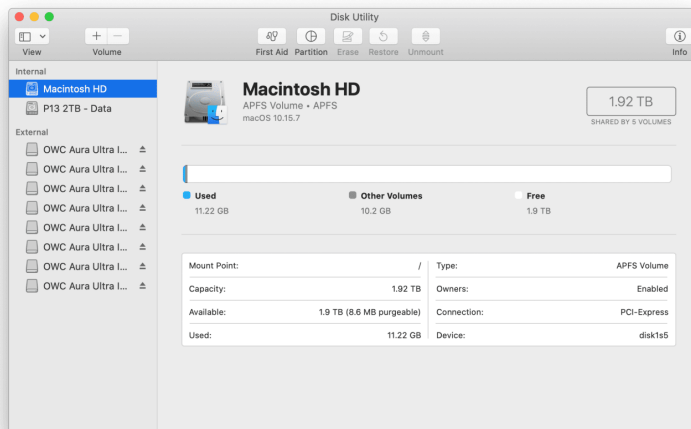
- Select all the SoftRAID disk tiles (shift click to select)
- Select "Zero Sectors" from the disks menu
- You will be prompted to confirm you want to zero your disks
- Select "First and last 100 sectors"





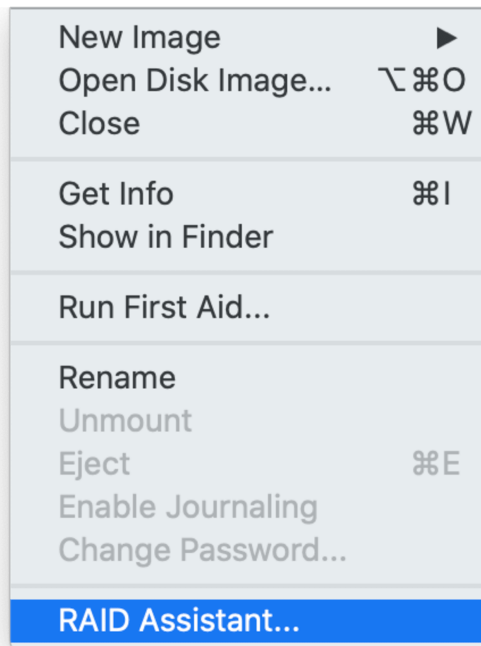
6. Launch Disk Utility

Quit SoftRAID. Launch Disk Utility from the Applications/Utilities folder.



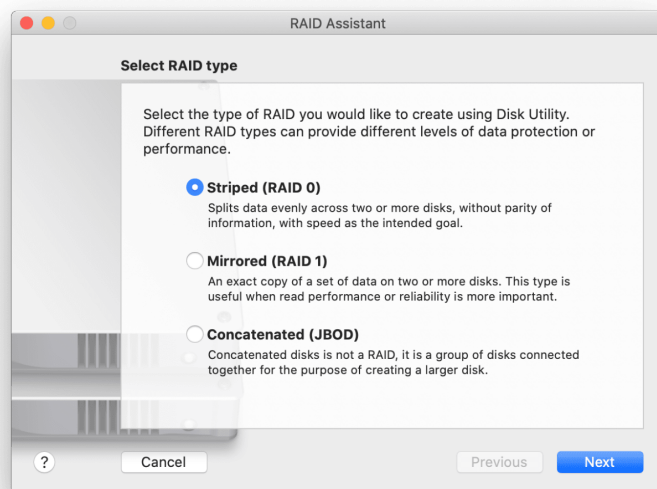
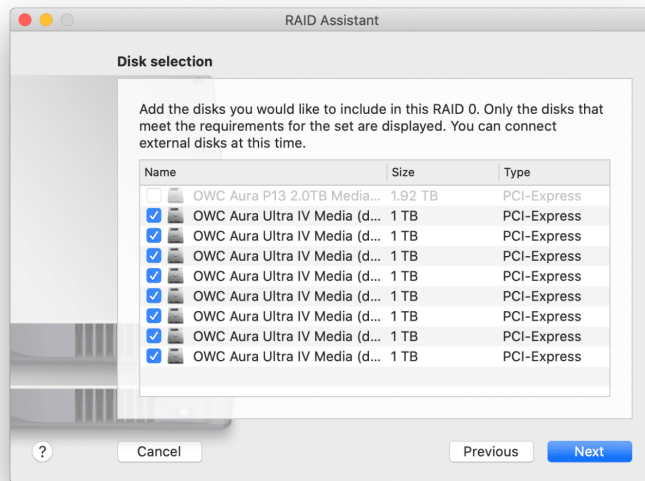
7. RAID Assistant

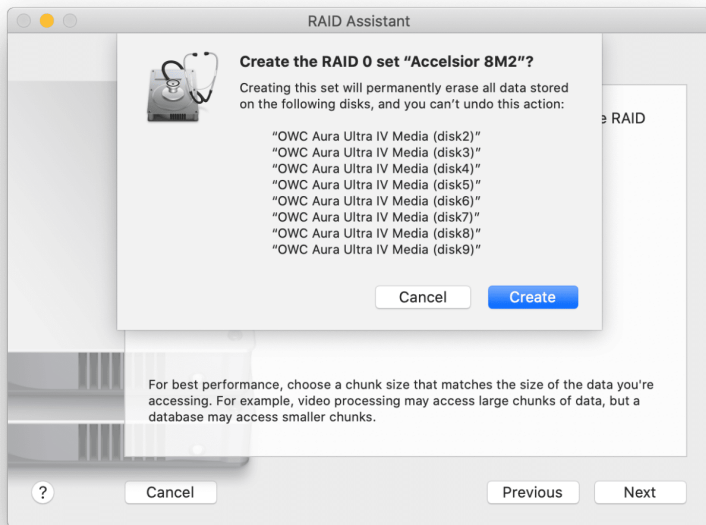
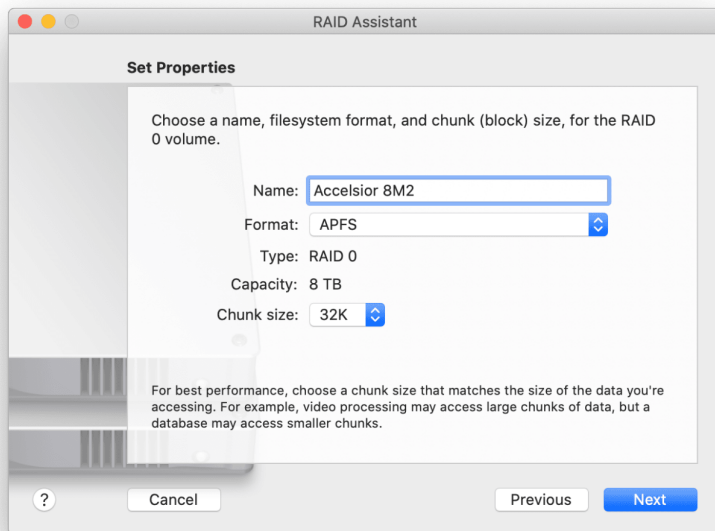
RAID Assistant is found at the bottom of the Files menu in Disk Utility



8. Create a RAID 0 Volume

- Select all the NVMe blades, and click Next (ignore the greyed disk in the below photo)
- Select Striped (RAID 0)
- Give your volume a name, select a file System (APFS selected in this example). You can customize the chunk size if you wish.
- Click Next
- Click Create





9. Use your new volume.

- It will mount on your desktop, as shown.
- Shut down your computer and move your volume to the new 2023 computer. It does not need any additional settings to work.



Macintosh HD



Accelsior 8M2