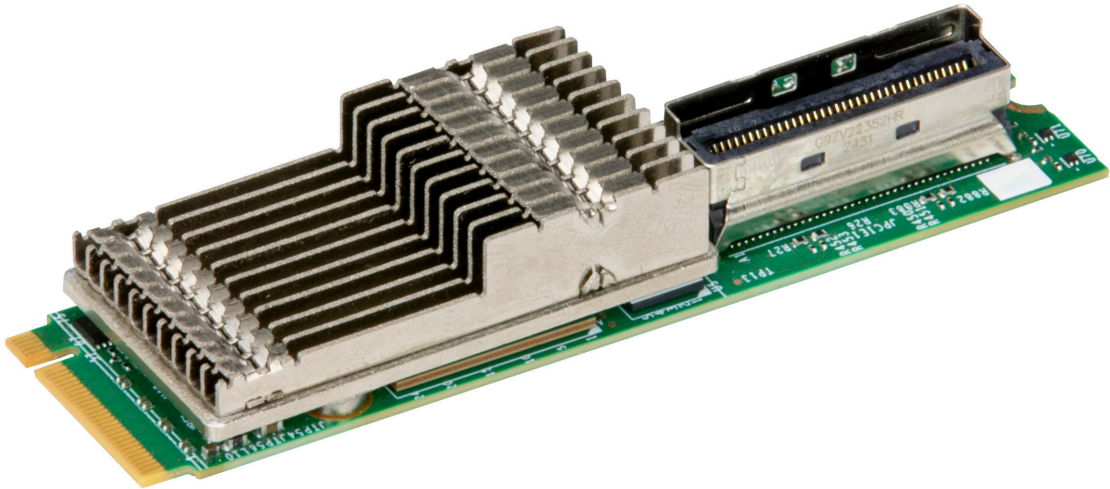




AOM-M3808NI-4HM



USER'S MANUAL

Revision 1.0

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Manual Revision 1.0

Release Date: August 11, 2025

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Preface

About This Manual

This user's guide is written for system integrators, IT technicians, and knowledgeable end users. It provides information for the installation and use of the AOM-M3808NI-4HM add-on module.

About This Add-On Module

The Supermicro AOM-M3808NI-4HM is a PCIe Gen 4.0 x4 M.2 form factor OS boot storage RAID adapter. This module supports up to two 2280 form factor NVMe drives or eight SAS/SATA drives. It also supports hot-swappable M.2 with a converter, which is compatible with 2280 M.2 SSD form factor with RAID 0 and RAID 1. It can also directly connect the backplane to support up to eight SAS/SATA drives.

An Important Note to the User

All graphic images and layout drawings shown in this user's guide are based upon the latest PCB revision available at the time of publishing this user's guide. The add-on module you have received may or may not look exactly the same as the graphics shown in this user's guide.

Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton and mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete. For faster service, RMA authorizations may be requested online (<http://www.supermicro.com/support/rma/>).

This warranty only covers normal consumer use and does not cover damages incurred in shipping or from failure due to the alteration, misuse, abuse, or improper maintenance of products.

During the warranty period, contact your distributor first for any product problems.

Conventions Used in the Manual

Special attention should be given to the following symbols for proper installation and to prevent damage done to the components or injury.



Warning! Indicates important information given to prevent equipment/property damage or personal injury.



Warning! Indicates high voltage may be encountered while performing a procedure.



Important: Important information given to ensure proper system installation or to relay safety precautions.



Note: Additional information given to differentiate various models or to provide information for proper system setup.

Important Links

For your system to work properly, follow the links to download all necessary drivers/utilities and the user's manual for your server.

- Supermicro product manuals: <http://www.supermicro.com/support/manuals/>
- Product drivers and utilities: <https://www.supermicro.com/wdl/driver>
- Product safety info: http://www.supermicro.com/about/policies/safety_information.cfm
- A secure data deletion tool designed to fully erase all data from storage devices can be found at our website: https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Lot9_Secure_Data_Deletion_Utility/
- If you have any questions, contact our support team at: support@supermicro.com
- Frequently Asked Questions: <https://www.supermicro.com/FAQ/index.php>
- If you have any feedback on Supermicro product manuals, contact our writing team at: Techwriterteam@supermicro.com

This manual may be periodically updated without notice. Check the Supermicro website for possible updates to the manual revision level.

Naming Convention

AOM-	S	3808N	I	-	4	N	M
Prefix	1st	2nd	3rd		4th	5th	6th

Character	Representation	Options
Prefix	Product Family	<ul style="list-style-type: none"> AOM = Add on Module Cards
1st	Form Factor	<ul style="list-style-type: none"> S = Standard PCI-E M = M.2 O = AIOM/OCP P = Special Form Factor
2nd	Chipset (Optional)	<ul style="list-style-type: none"> SAS chip: 3616,3816,3908,3916... etc. 3616 = SAS3616 3808N = SAS3808N 3816 = SAS3816 3908 = SAS3908
3rd	Controller Type	<ul style="list-style-type: none"> T = IT Mode I = iMR Mode= iR mode M = MR Mode N = No active controller
4th	Generation	<ul style="list-style-type: none"> 3 = PCIe Gen3 4 = PCIe Gen4 5 = PCIe Gen5 6 = PCIe Gen6
5th	Protocol Type	<ul style="list-style-type: none"> N = NVMe S = SAS T = SATA H = Hybrid/ Tri-mode
6th	Device Type (Optional)	<ul style="list-style-type: none"> M = M.2 MB = M.2 Stack (back to back) MS = M.2 Flat (side by side) U = U.2 E = E1.S/E3.S S = Switch T = Retimer D = Redriver
7th	MB Platform (Optional)	<ul style="list-style-type: none"> Reserved
8th	Customer Code (Optional)	<ul style="list-style-type: none"> OEM customer abbreviation

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Table of Contents

Chapter 1 Introduction

1.1 Overview.....	8
1.2 Key Features.....	8
1.3 Specifications.....	9

Chapter 2 Hardware Components

2.1 Add-On Module Image and Layout.....	10
2.2 Major Components.....	12
2.3 LED Indicators.....	13
2.4 SAS3808N SPI Flash.....	14

Chapter 3 Installation

3.1 Overview.....	15
3.2 Static-Sensitive Devices.....	15
3.3 Before Installation.....	16
3.4 Installation.....	17
3.5 Installing the Drivers in Windows.....	42
3.6 Uninstalling the Drivers.....	42

Chapter 4 Firmware Update

4.1 Update Firmware in the BIOS.....	43
4.2 Update Firmware in UEFI.....	52
4.3 Update Firmware in BMC.....	54

Chapter 5 Drive Management

5.1 RAID Minimum Drive Requirements.....	58
5.2 Managing Physical Drive.....	59
5.3 Creating RAID.....	63
5.4 Deleting RAID in BIOS.....	76
5.5 Managing JBOD State.....	82
5.6 Managing Unconfigured Good State.....	94

Chapter 6 Secure Boot Settings

6.1 Boot Mode Select Feature.....	99
6.2 Secure Boot/Secure Boot Mode.....	100
6.3 Secure Boot Settings.....	103

Chapter 1

Introduction

1.1 Overview

Congratulations on purchasing your add-on module from an acknowledged leader in the industry. Supermicro products are designed with the utmost attention to detail to provide you with the highest standards of quality and performance. For product support and updates, refer to our website at <https://www.supermicro.com/en/products/storage/cards>.

1.2 Key Features

The key features of this add-on module include the following:

- M.2 Form Factor OS Boot Storage Adapter
- Broadcom® SAS3808N RAID Controller: RAID 0/1 or JBOD
- PCIe Gen 4.0 x4 Host interface
- Connector Type: MCIO X8
- FW Stack: Hostless iMR (no host memory allocation required)
- Supports 22X80 mm M.2 form factor with adapter MCP-220-00201-0N (optional)
- Support up to two NVMe drives or eight SAS/SATA drives
- BMC-enabled management/SAA
- LSI Storage Authority (LSA)
- StorCLI (Command-Line Interface)
- UEFI HII Configuration Utility
- Supports MegaRAID SafeStore Software
- Supports Hardware Secure Boot
- Thermal operating range: System dependent (55°C/131°F or higher with enough airflow)

1.3 Specifications

OS Support

- Windows, Linux, and VMware

Physical Dimensions

- Module PCB dimensions: 3.15" x 0.87" (80 mm x 22 mm) (L x W)



Note: This product is only sold as part of an integrated solution with Supermicro server systems.

Chapter 2

Hardware Components

2.1 Add-On Module Image and Layout

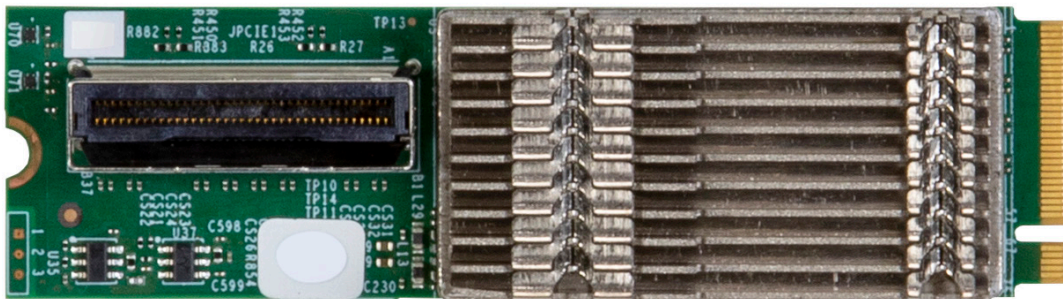


Figure 2-1: AOM-M3808NI-4HM Top View

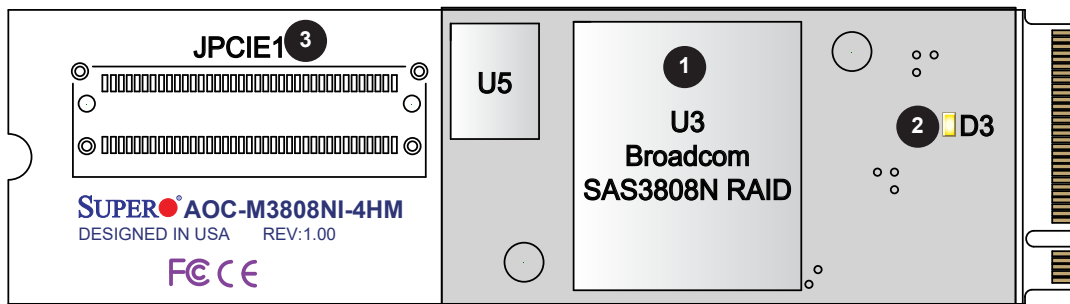


Figure 2-2: AOM-M3808NI-4HM Top Layout

2.2 Major Components

The following major components are included on the AOM-M3808NI-4HM:

AOM-M3808NI-4HM Major Components		
No.	Component Name	Definition
1	D3	Heartbeat LED
2	JPCIE1	MCIO x8
3	U3	Broadcom SAS3808N RAID Controller
4	U4	SAS3808N SPI Flash

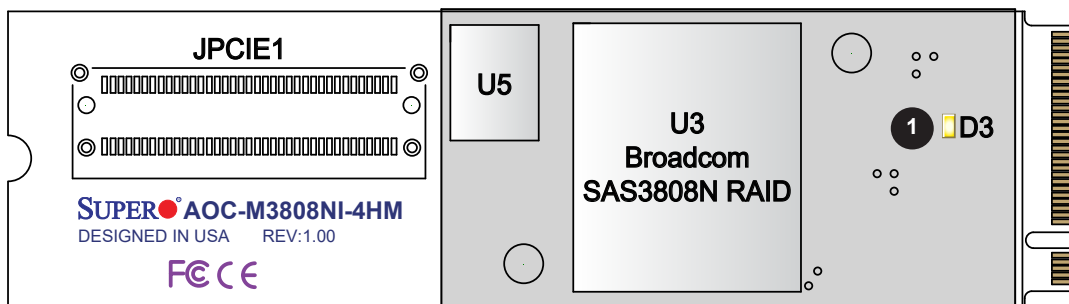
2.3 LED Indicators

System Heartbeat LED

The System Heartbeat LED is located at D3 on the add-on module. When the LED is blinking green at 1 Hz, the controller is operational and functioning normally. Refer to [page 10](#) for its location.

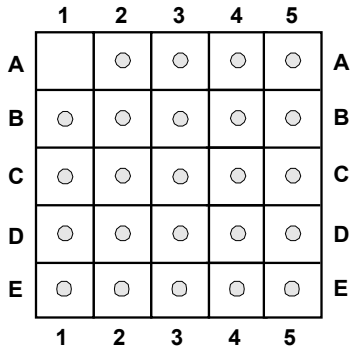
System Heartbeat LED Status	
Color/State	Definition
Green Blinking	Controller: Normal
Off	Power failure on controller

1. System Heartbeat LED



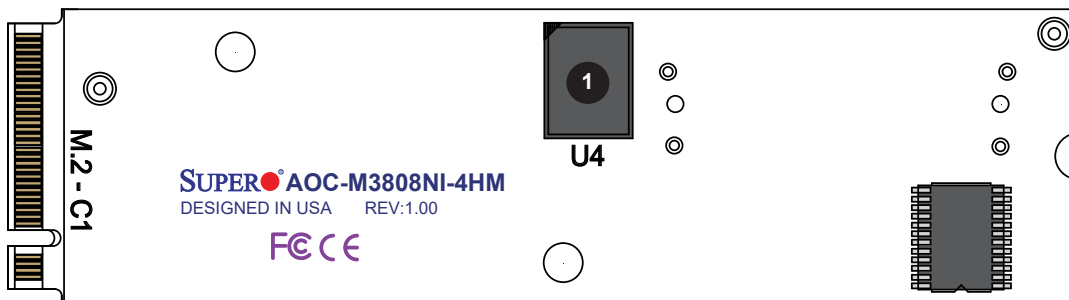
2.4 SAS3808N SPI Flash

SAS3808N Serial Peripheral Interface Flash memory (SPI Flash) is located at U4 and uses the SPI protocol to flash images.



SPI Flash Pin Definitions	
Pins	Definition
A4	Reset
B2	CLK
B3	Ground
B4	VCC
C2	Chip Select
C4	Data Pin
D2	Data Pin
D3	Data Pin
D4	Data Pin

1. SAS3808N SPI Flash



Chapter 3

Installation

3.1 Overview

As a part of an integrated solution, your system came with the adapter pre-installed. We do not recommend removing and reinstalling any part of your system components. If you need to remove or reinstall a system component, including this add-on module, follow the instructions in this chapter to ensure proper system setup.

3.2 Static-Sensitive Devices

Electrostatic Discharge (ESD) can damage electronic components. To avoid damaging your add-on module, it is important to handle it very carefully. The following measures are generally sufficient to protect your equipment from ESD.

Precautions

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing the add-on module from the antistatic bag.
- Handle the add-on module by its edges only; do not touch its components or peripheral chips.
- Put the add-on module back into the antistatic bags when not in use.
- Be sure to remove the power cord first before adding, removing, or changing any hardware components to avoid damaging the system or components.
- For grounding purposes, make sure that your system chassis provides excellent conductivity between the power supply, the cage, the mounting fasteners, and the add-on module.

Unpacking

The add-on module is shipped in antistatic packaging to avoid static damage. When unpacking your component or system, make sure you are static protected.



Note: To avoid damaging your components and to ensure proper installation, always connect the power cord last, and always unplug it before adding, removing, or changing any hardware components.

3.3 Before Installation

To install the add-on module properly, be sure to follow the instructions below.

1. Power down the system.
2. Remove the power cord from the wall socket.
3. Use industry-standard antistatic equipment (such as gloves or a wrist strap) and follow the instructions listed on [page 15](#) to avoid damage caused by ESD.
4. Familiarize yourself with the server, motherboard, and/or chassis documentation.
5. Confirm that your operating system includes the latest updates and hot fixes.

3.4 Installation

The AOM-M3808NI-4HM module supports updates to two NVMe drives or eight SAS/SATA drives. Visit the Supermicro website for a current list of supported drives.

AOM-M3808NI-4HM Installation Steps

To install AOM-M3808NI-4HM, refer to the following steps:

1. Locate the MCIO x8 slot (JPCIE1) on AOM-M3808NI-4HM.
2. Plug the MCIO cable into the AOM-M3808NI-4HM MCIO x8 slot.



Note: Components are delicate. Handle them carefully and do not try to force them to fit.

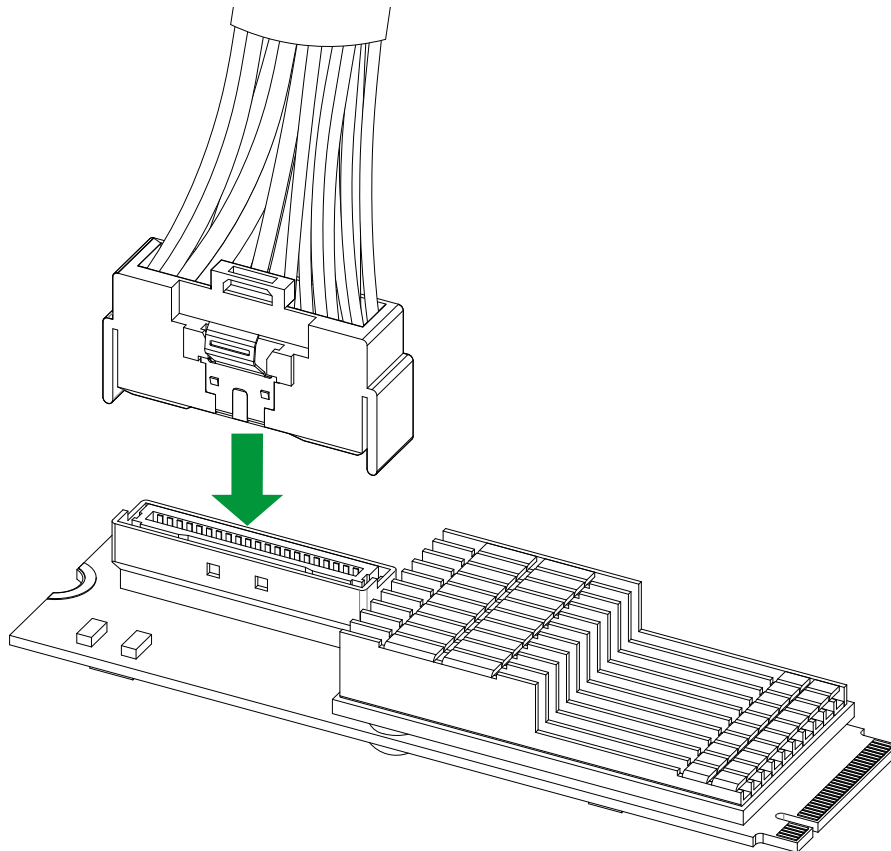


Figure 3-1: Plug the MCIO Cable Into the MCIO Slot

3. Locate the M-Key M.2 slot on the motherboard.
4. Press and hold the latch.

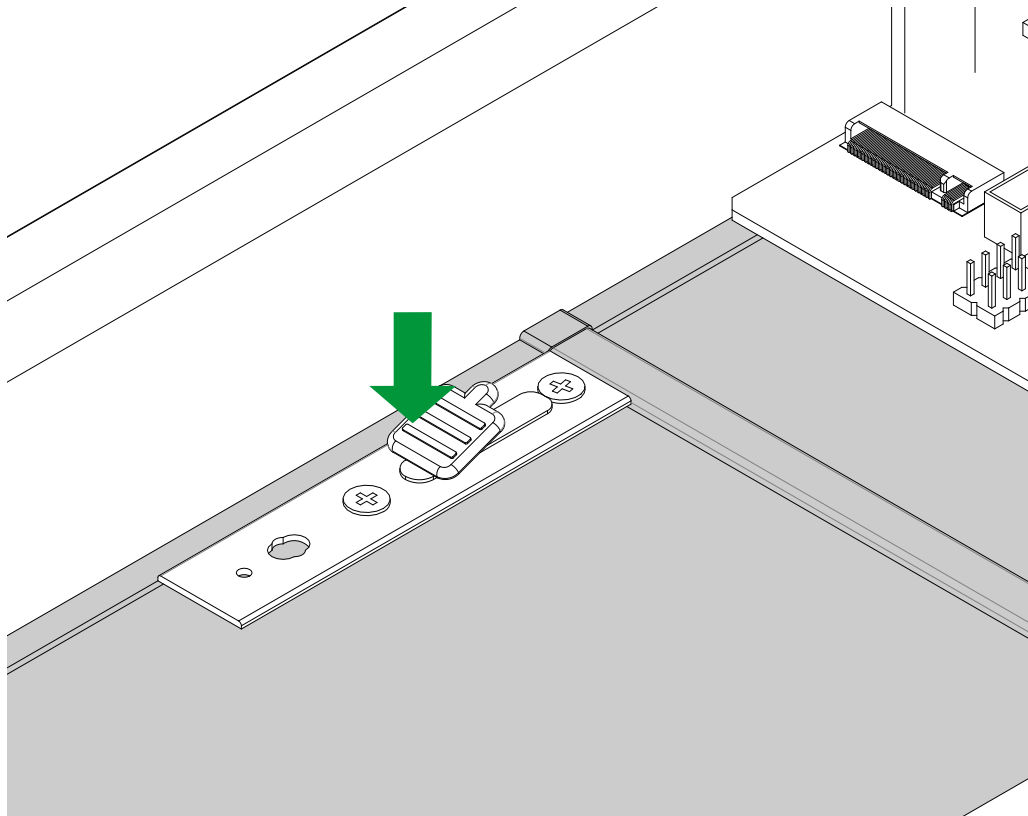


Figure 3-2: Pull Up To the M.2 Slot Latch

5. Slide and insert the AOM board (with cable) into the M-Key M.2 slot.
6. Press the other end straight down.

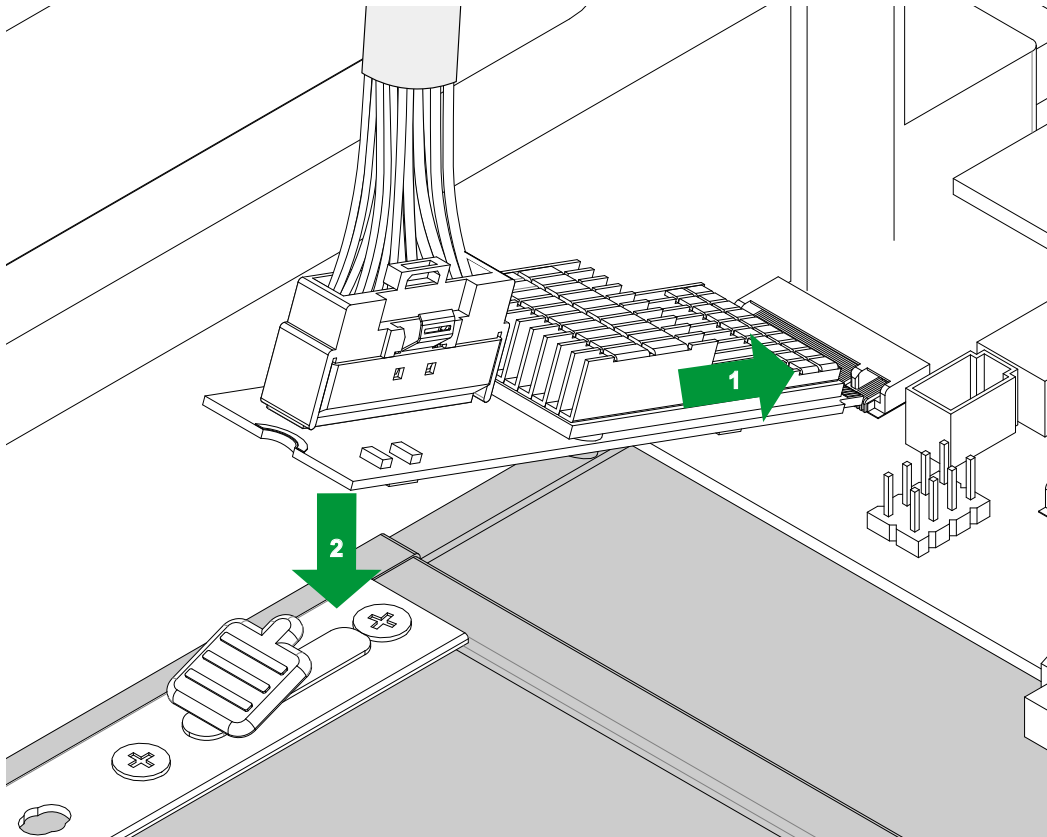


Figure 3-3: Install AOM-M3808NI-4HM

7. Lock the latch.

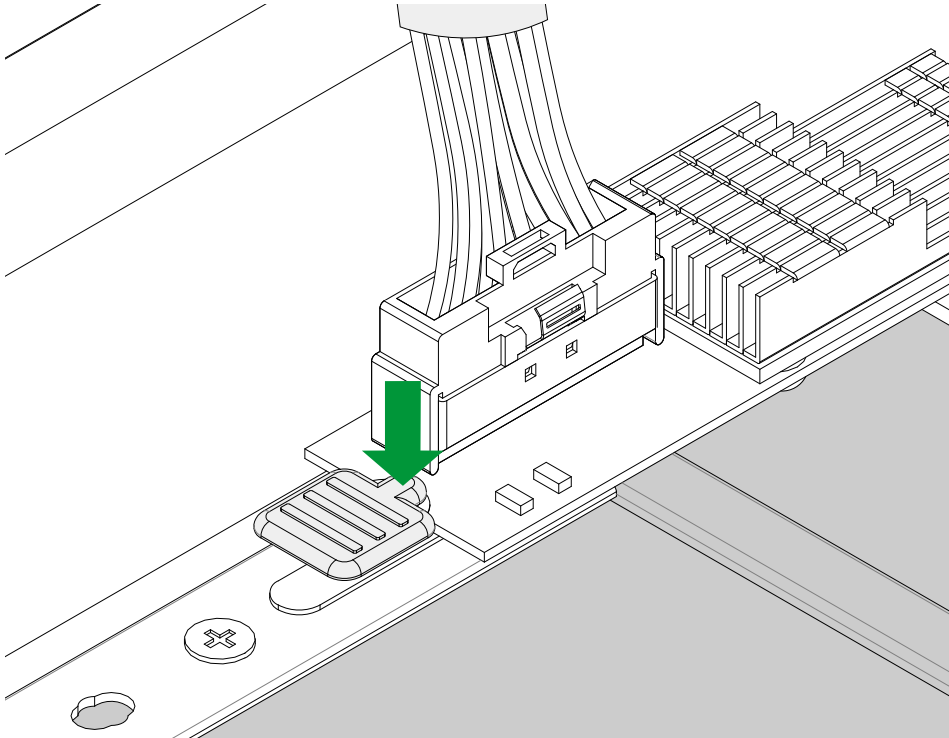


Figure 3-4: Lock the Latch

8. With AOM-M3808NI-4HM attached, run the cable along the track in the motherboard as shown.

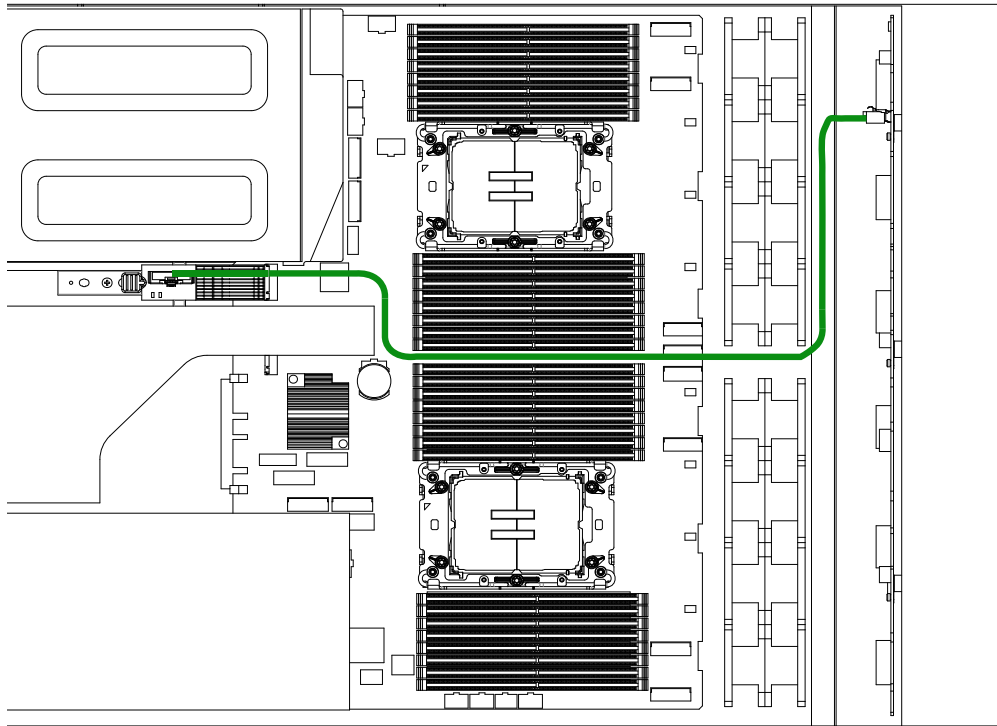


Figure 3-5: AOM-M3808NI-4HM Cable Routing on the Motherboard

9. Attach the other end of the Cable to the appropriate backplane drives.

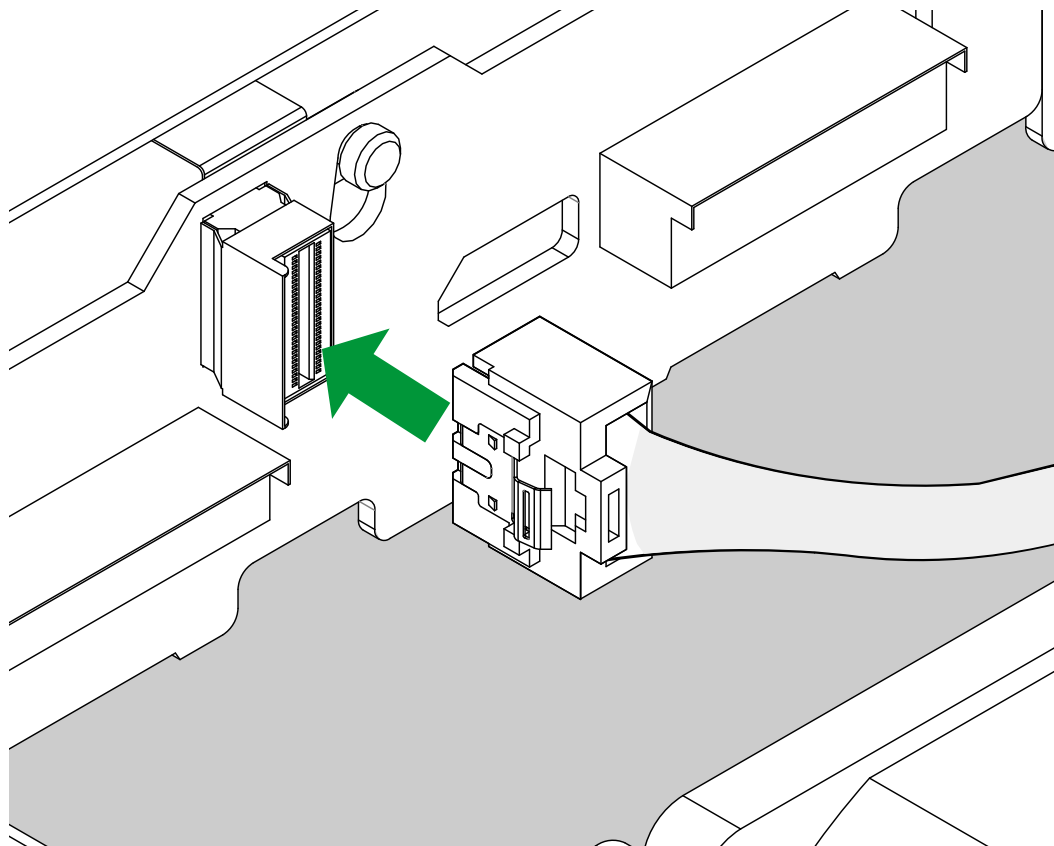



Figure 3-6: Plug the Cable To the Backplane Drives

 **Note:** Do not plug/unplug the MCIO cable after the AOM is installed. This may cause bending or damage to the board.

AOM Side-by-Side Installation

To assemble and install AOM-M3808NI-4HM to the AOM-PN-4NM adapter board and AOM-PN-4NMS carrier board using a side-by-side holder bracket, refer to the following steps:

1. Place the M.2 adapter board AOM-PN-4NM into the M.2 adapter tray.

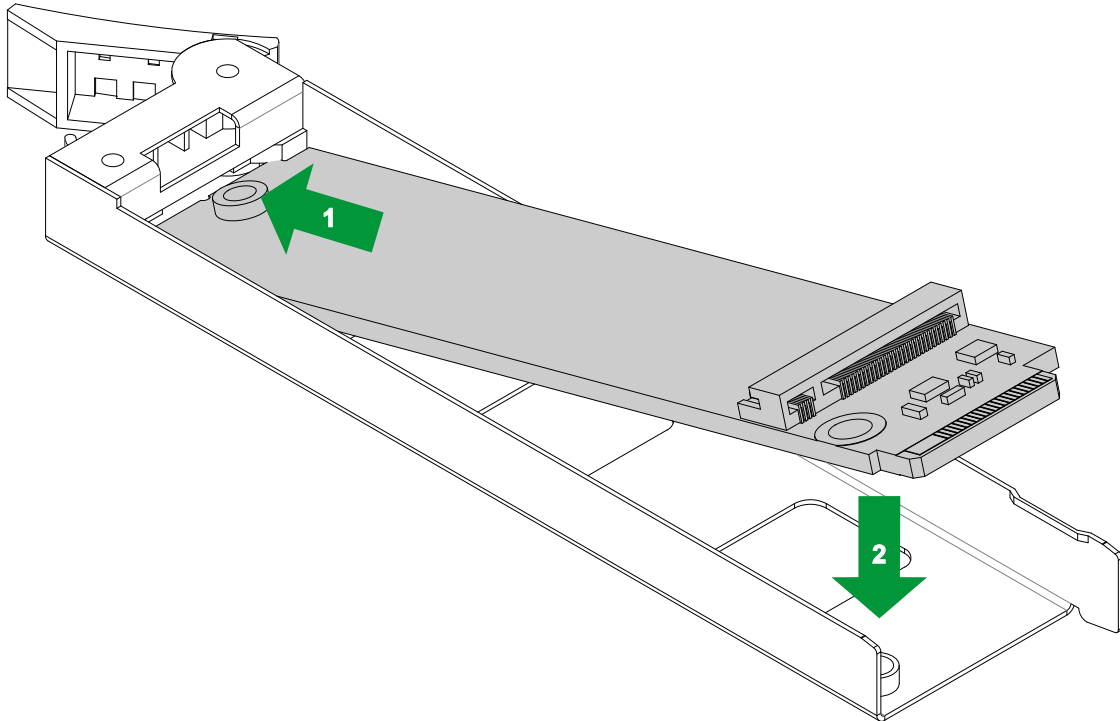


Figure 3-7: Install M.2 Adapter Board Into the Adapter Tray

2. Slide and insert the M.2 drive into the AOM-PN-4NM adapter board.
3. Press the other end of the M.2 drive straight down.

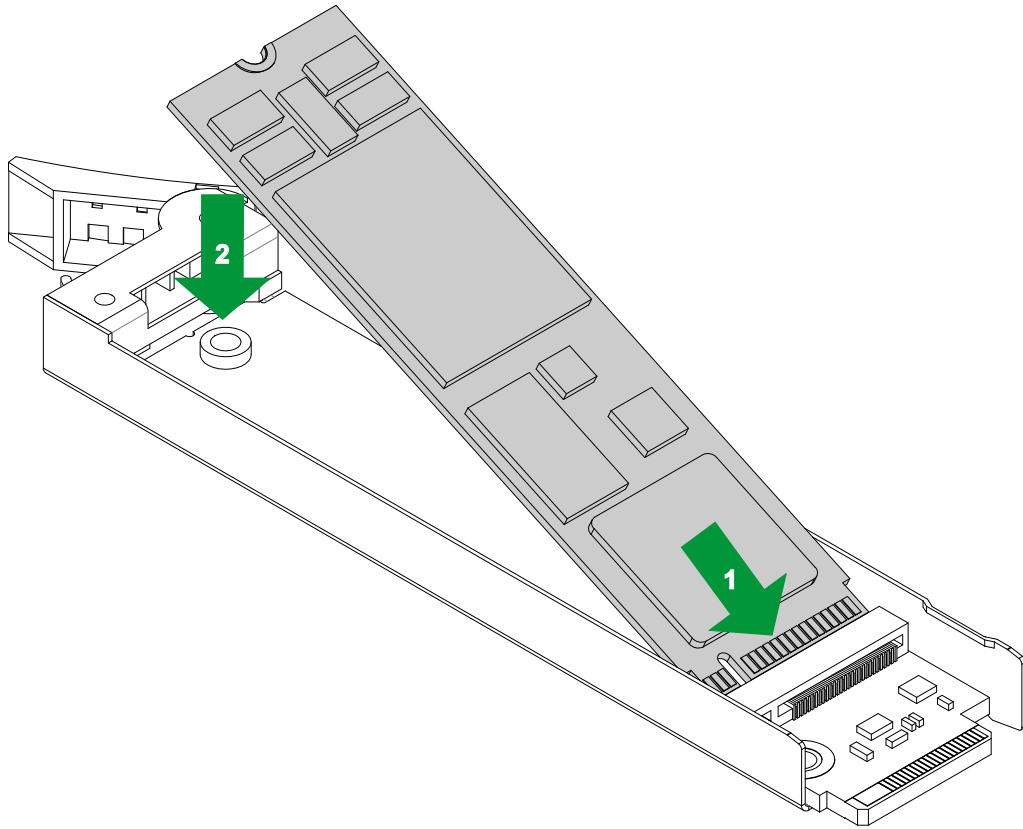


Figure 3-8: Insert the M.2 Drive Into the AOM-PN-4NM Adapter Board

4. Peel the protective film off the heatsink.

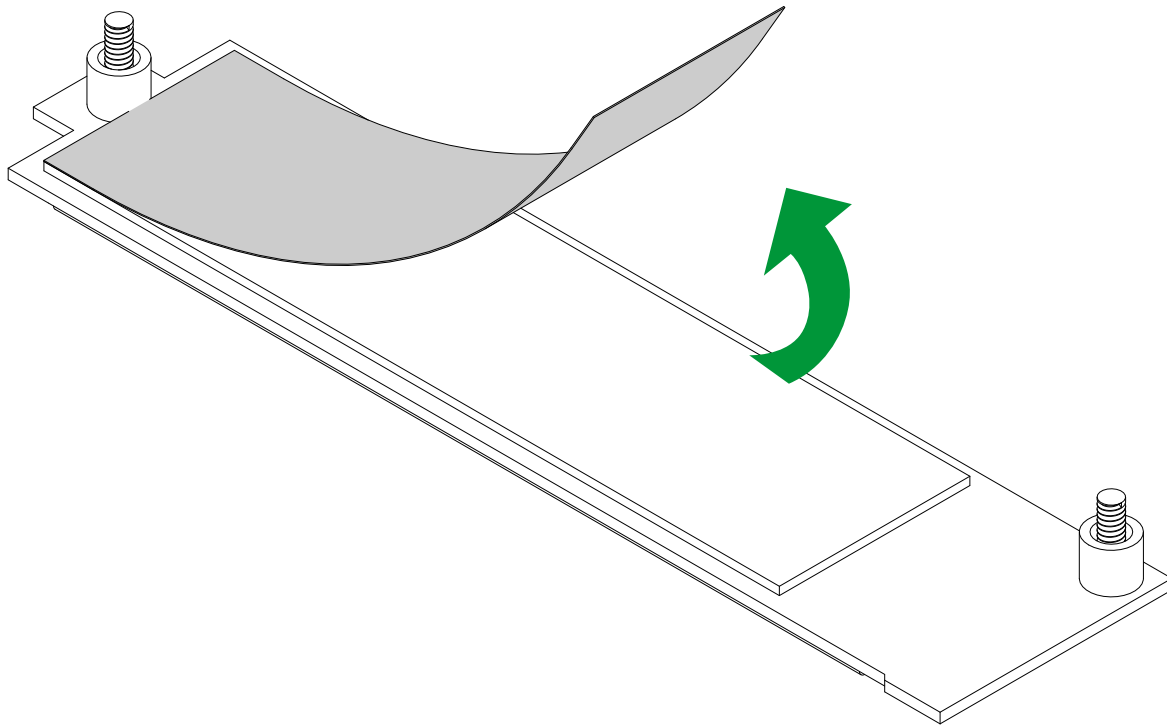


Figure 3-9: Peel Off Heatsink Protective Film

5. Flip the heatsink over and place it on top of the assembly.
6. Secure the heatsink in place by tightening screws #1 and #2 as shown.

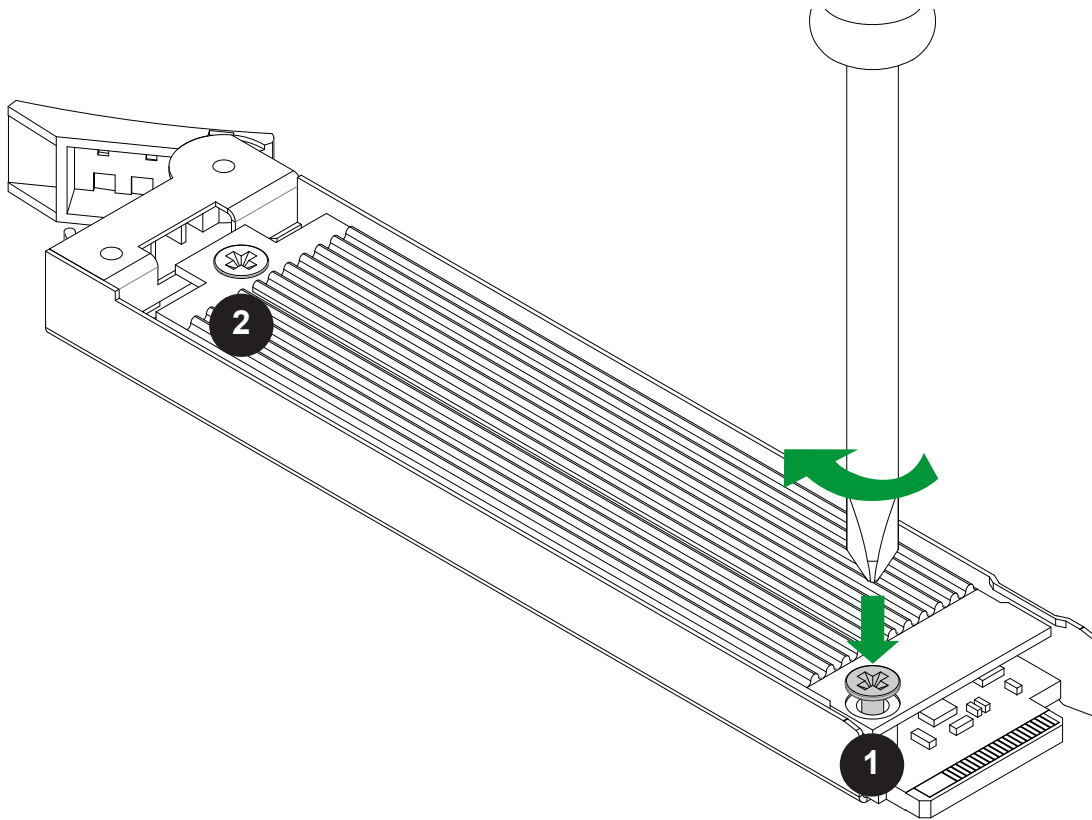


Figure 3-10: Secure the Heatsink

7. On the side-by-side holder bracket, secure the AOM-PN-4NMS to the end of the tray by adding and tightening two screws into the mounting holes as shown.

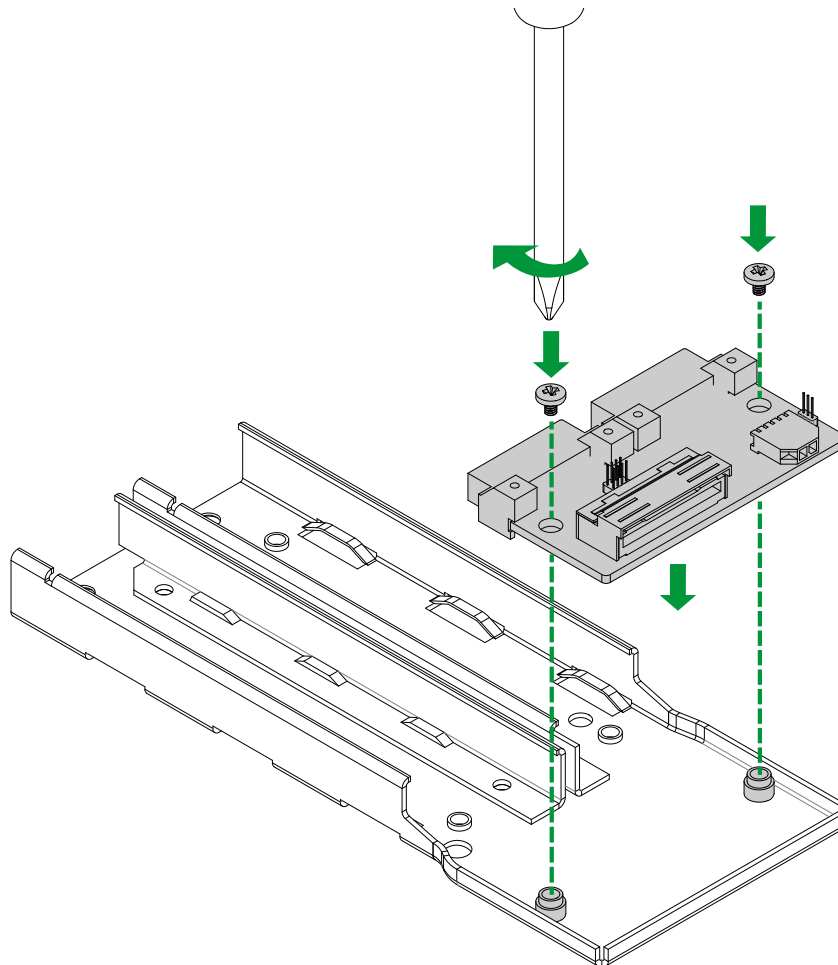


Figure 3-11: Secure AOM-PN-4NMS

8. Slide M.2 side-by-side carrier module (MCP-220-00202-0N) onto the holder bracket (MCP-290-24601-0N).

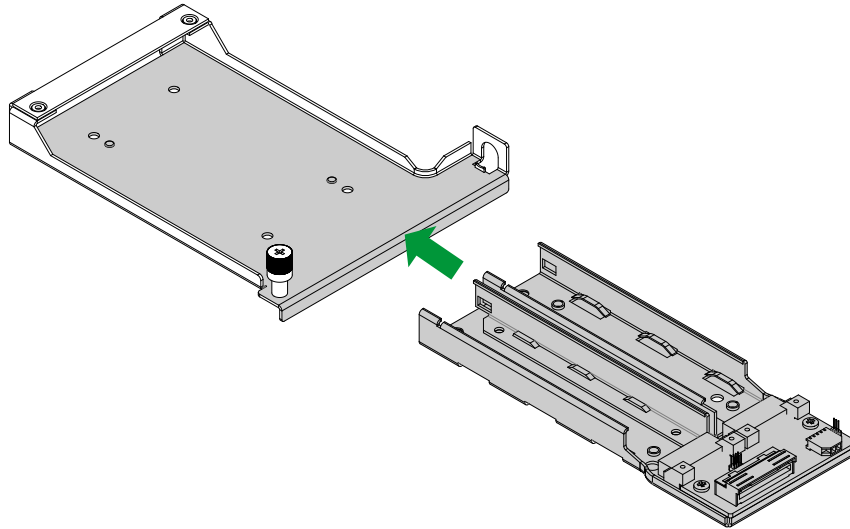


Figure 3-12: Slide the Carrier Module Onto the Holder Bracket

9. Be sure to align the holder bracket with the raised embossments before fastening the side-by-side carrier module onto the holder bracket using the screws.

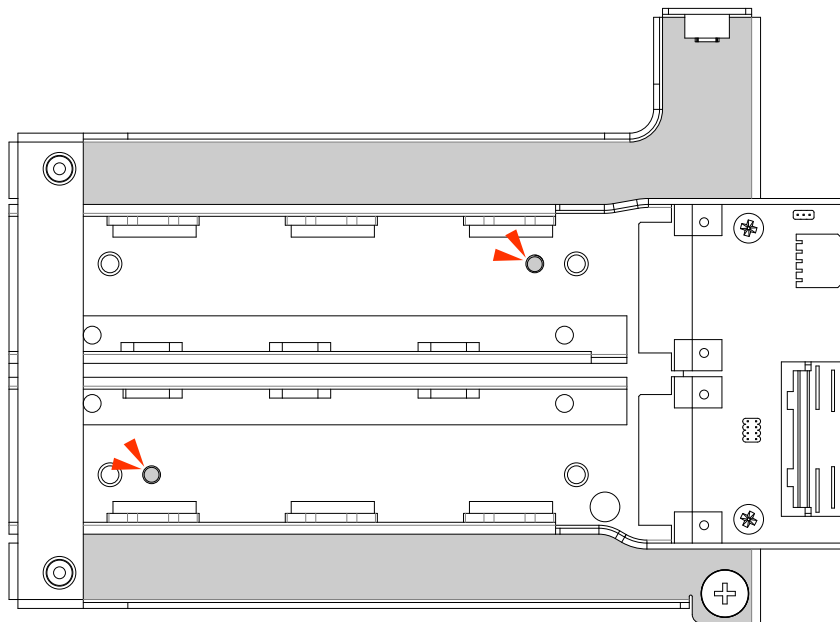


Figure 3-13: Locations of Raised Embossments

10. Locate the mounting holes on the bottom of the plate.
11. To secure the MCP-290-24601-0N side-by-side holder bracket to the CSE-246E3 chassis, place and tighten the four screws on the bottom through the mounting holes.

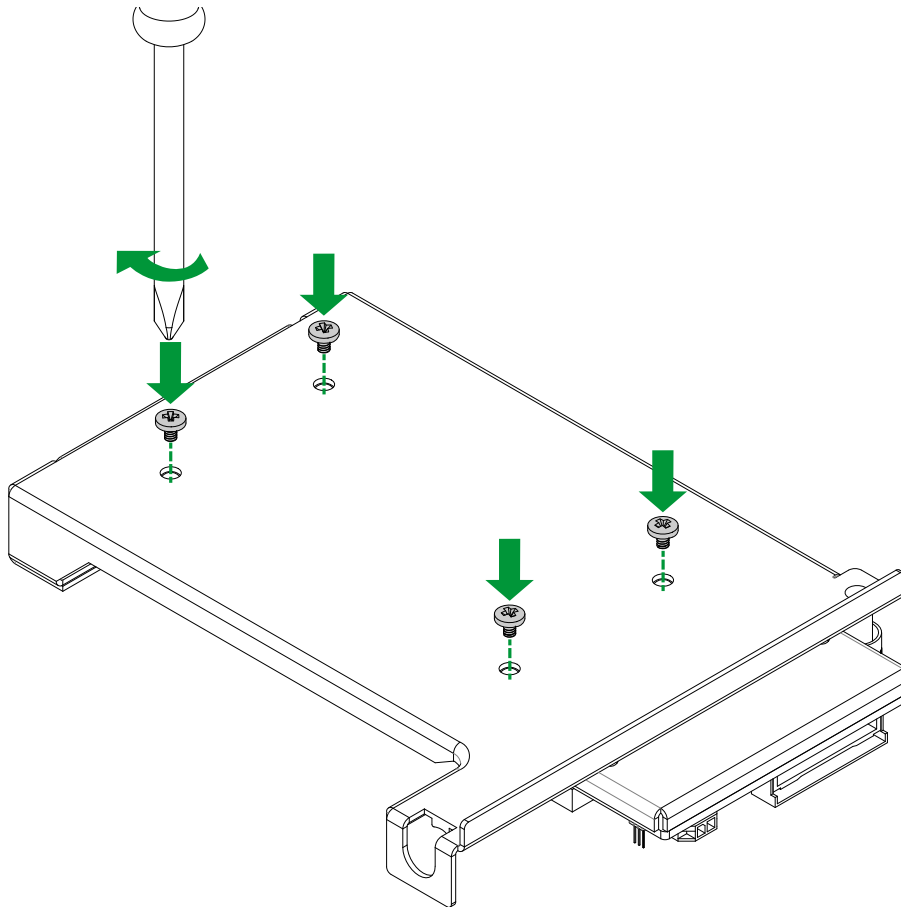


Figure 3-14: Attach the Carrier Module Onto the Holder Bracket

12. Locate the MCIO x8 slot (JPCIE1) on AOM-M3808NI-4HM.
13. Plug the MCIO x8 cable into the slot.

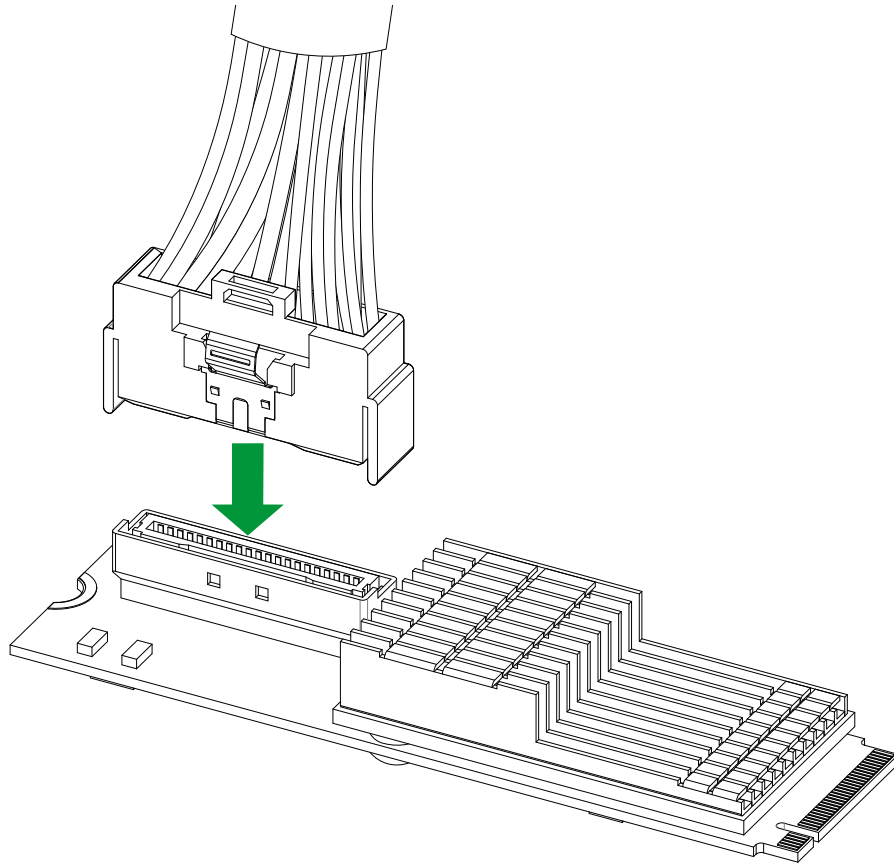


Figure 3-15: Plug MCIO Cable Into AOM-M3808NI-4HM

14. On the motherboard, locate the M.2 slot.
15. Pull back and hold the security pin.
16. Slide and insert AOM-M3808NI-4HM into the M.2 slot.

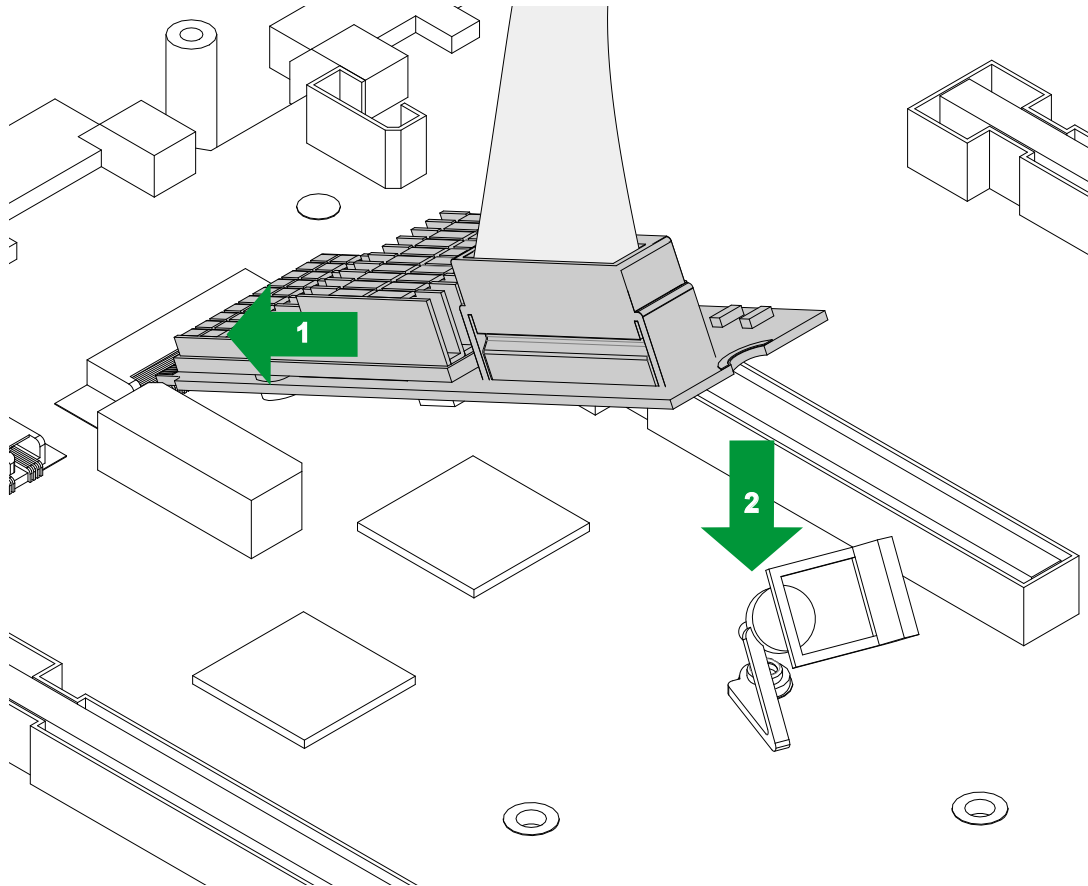


Figure 3-16: Install AOM-M3808NI-4HM Into the Motherboard M.2 Slot

17. Press the pin and lock the AOM-M3808NI-4HM onto the motherboard.

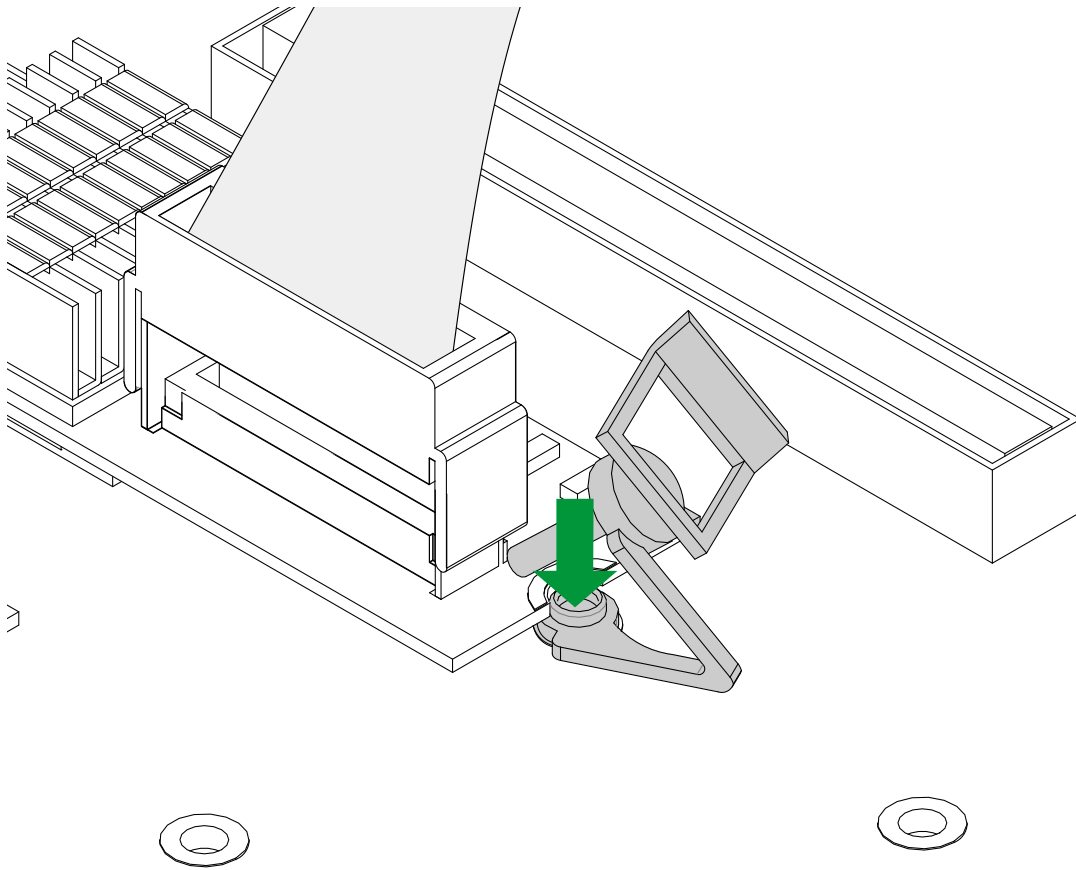


Figure 3-17: Release and Pushing the Pin to Secure

18. Turn the pin to secure it.

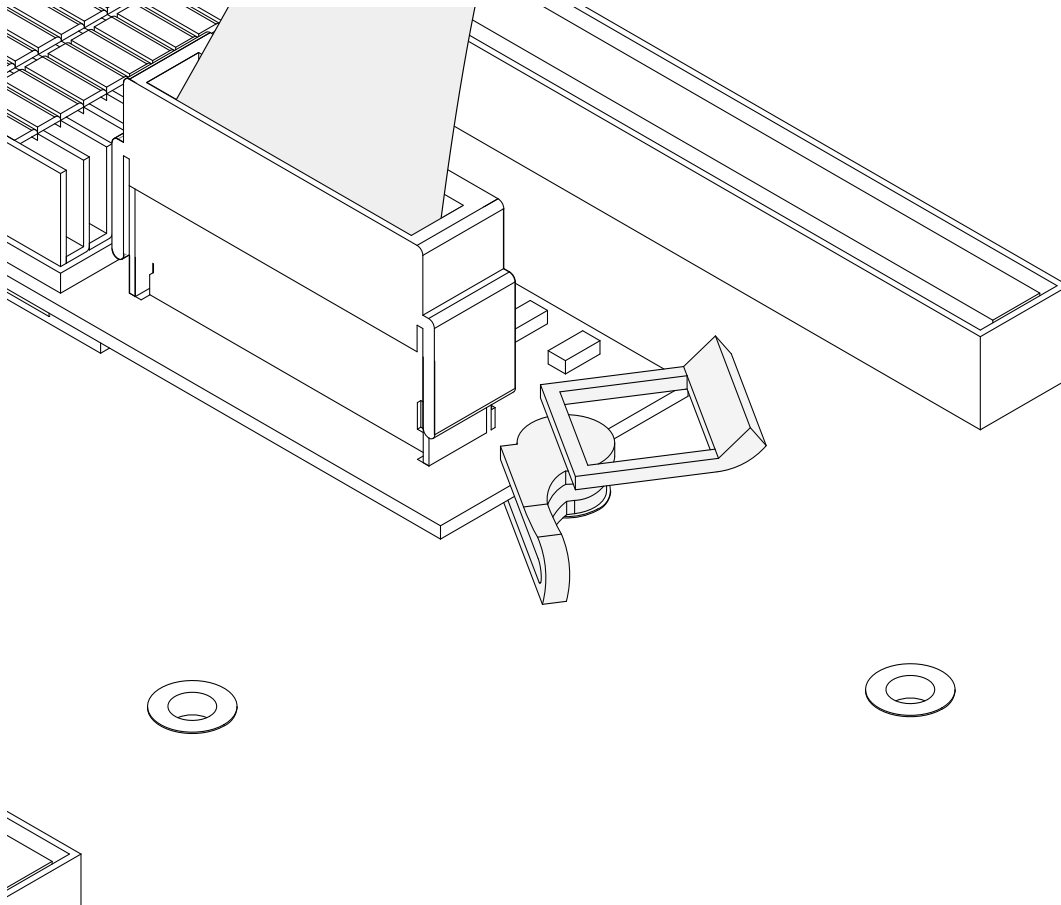


Figure 3-18: Turn Pin To Lock

19. Install the side-by-side holder bracket of the motherboard. Be sure the bracket is properly mounted with the vertical knob threaded through the appropriate mounting hole and that the blue knob is aligned with the boss.

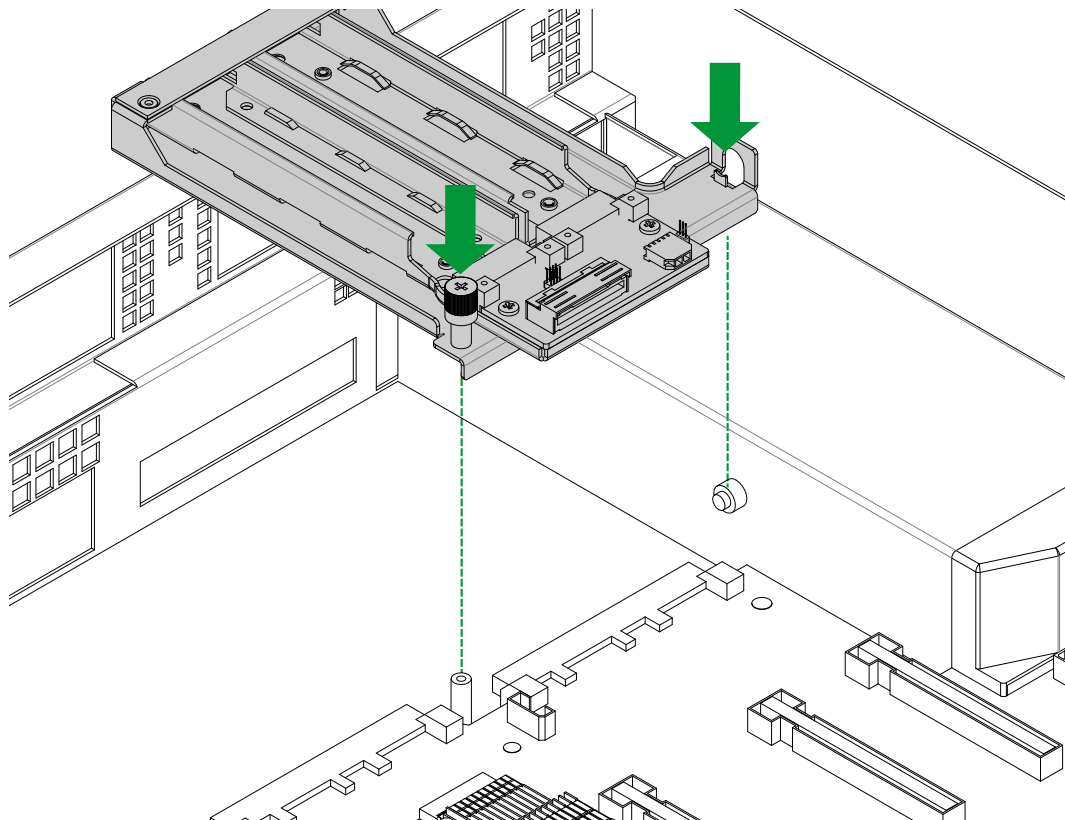


Figure 3-19: Secure Holder Bracket to the Motherboard

20. Add a nut to the vertical knob to secure the bracket in place.
21. Turn the blue knob to secure the bracket in place.

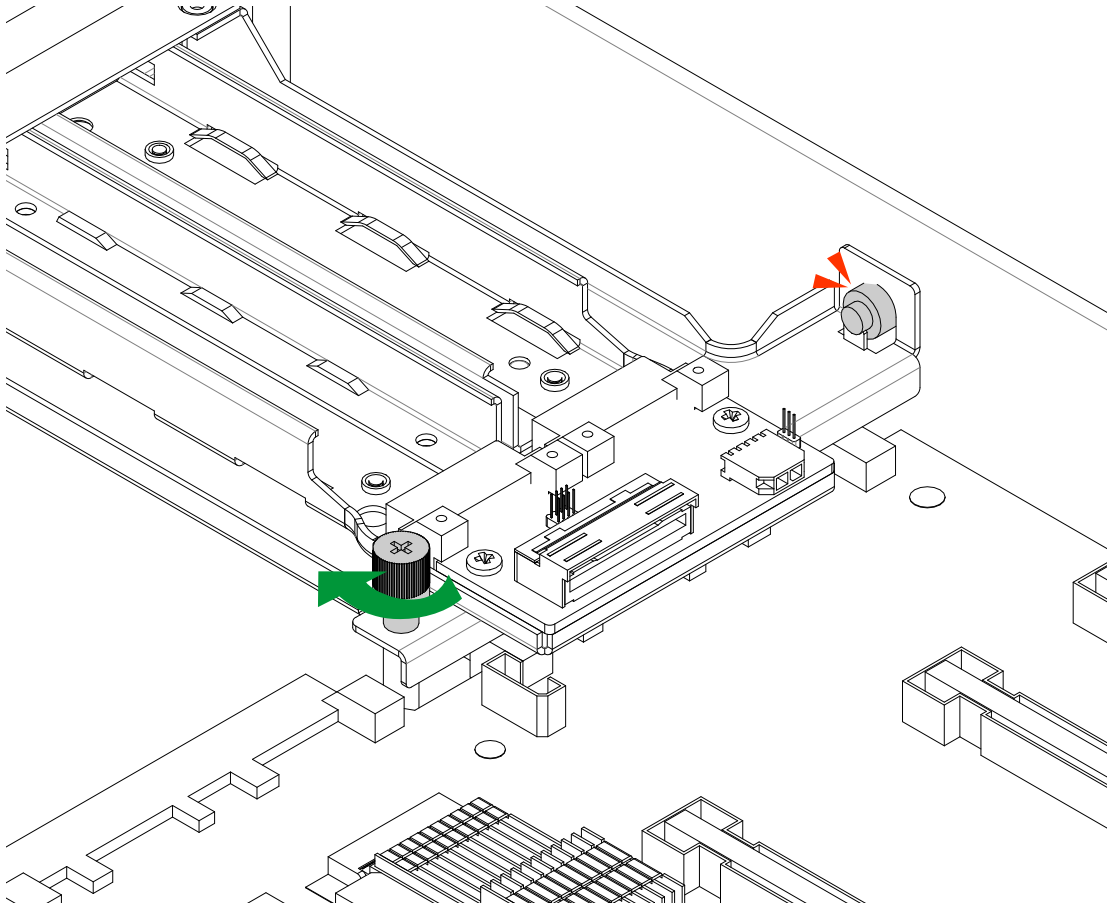


Figure 3-20: Turn the Blue Knob and Adding the Nut

22. Connect the power cable from AOM-PN-4NMS to the motherboard.

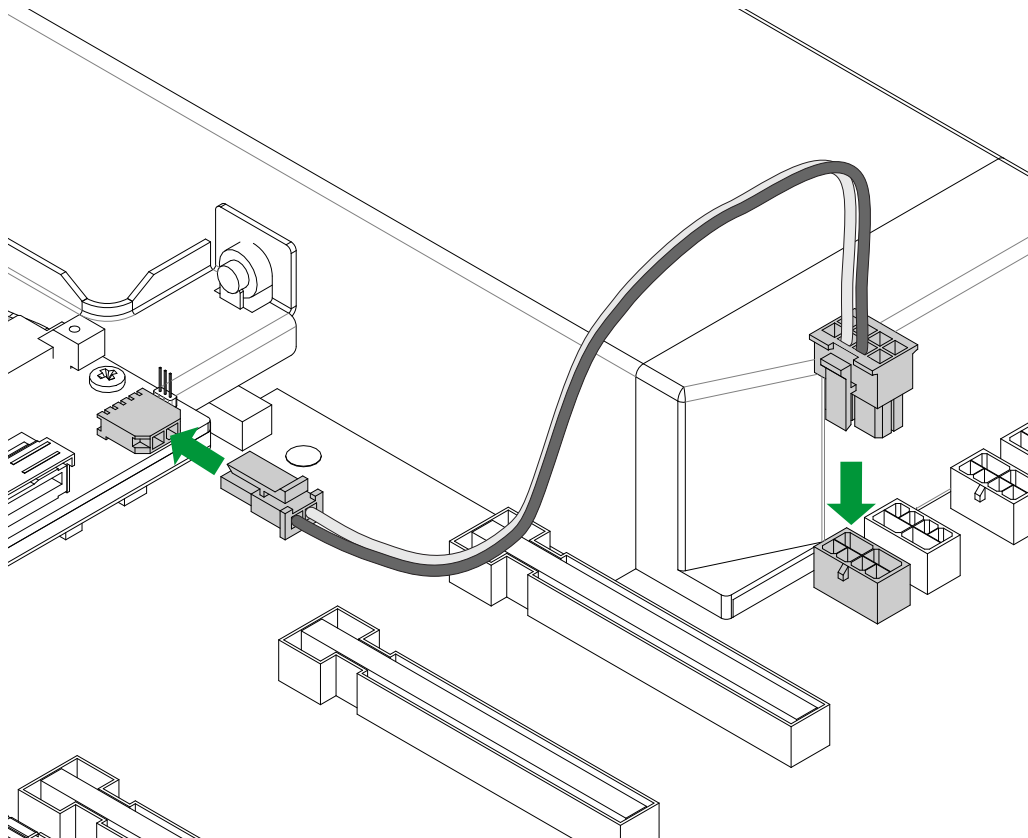


Figure 3-21: Connect the Power Cable

23. Connect the MCIO cable to the AOM-PN-4NMS side-by-side module

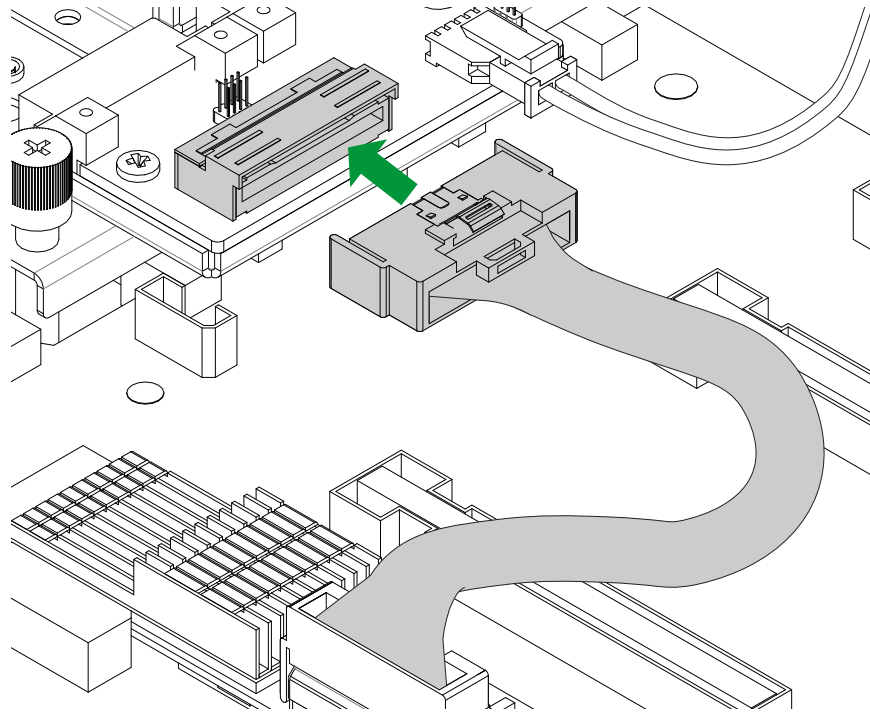


Figure 3-22: Attach the MCIO Cable

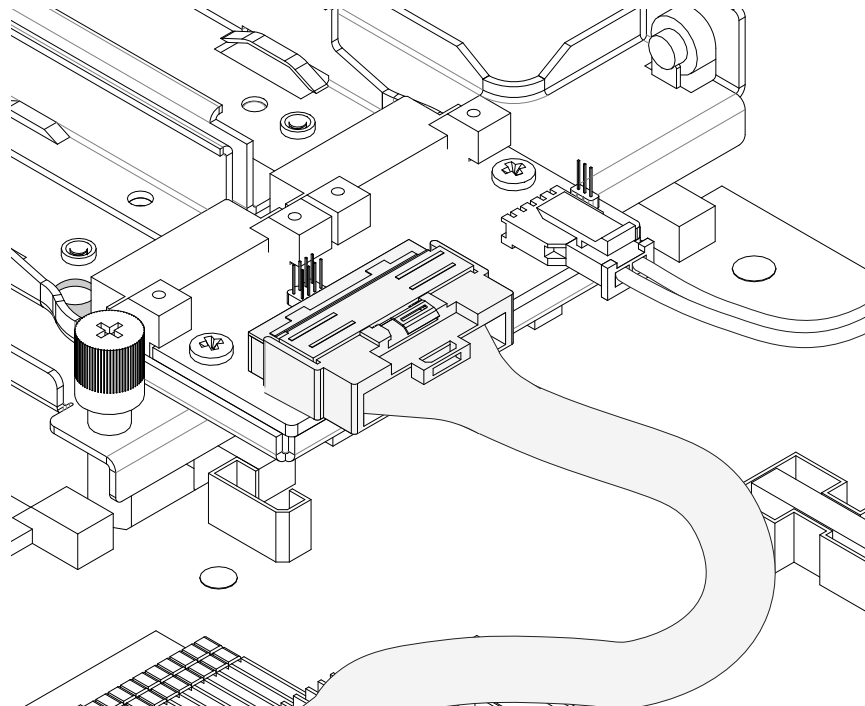


Figure 3-23: MCIO Cable Connected

24. Slide the M.2 adapter tray assembly into the side-by-side holder bracket slot.

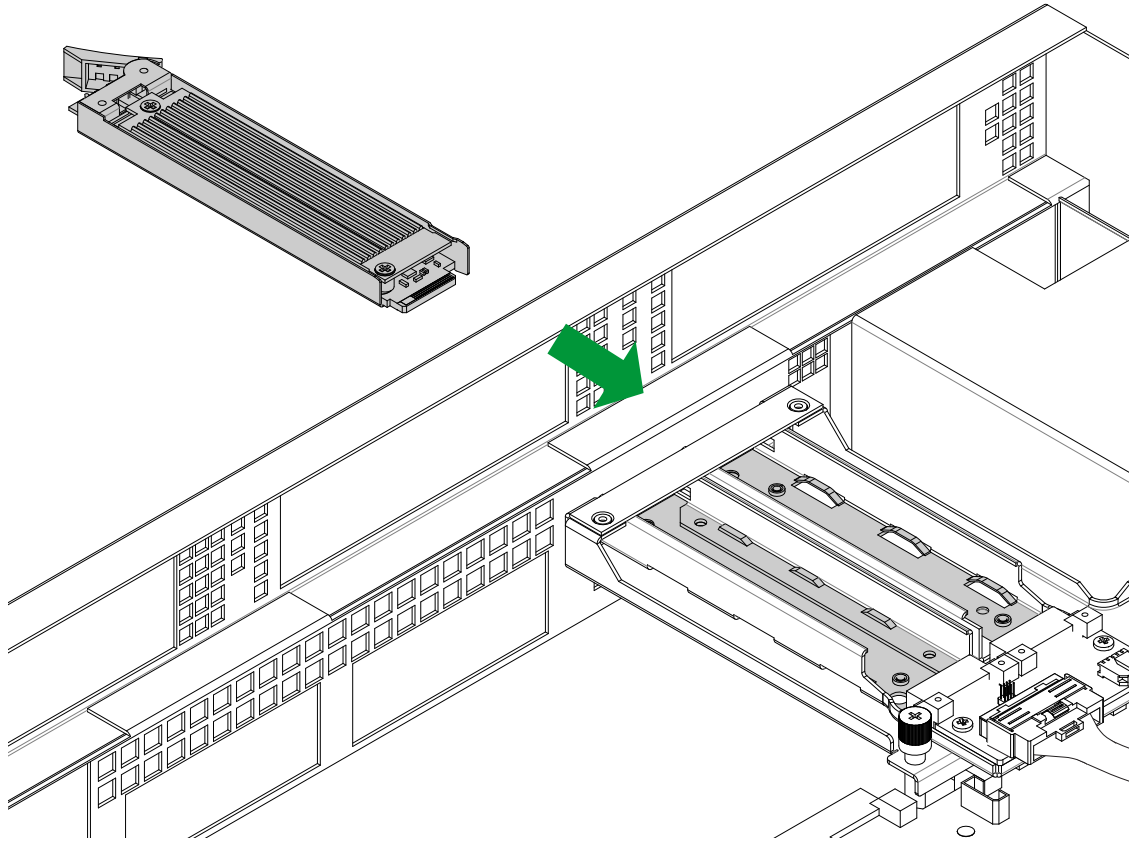


Figure 3-24: Slide the M.2 Adapter Tray Assembly Into the Holder Bracket

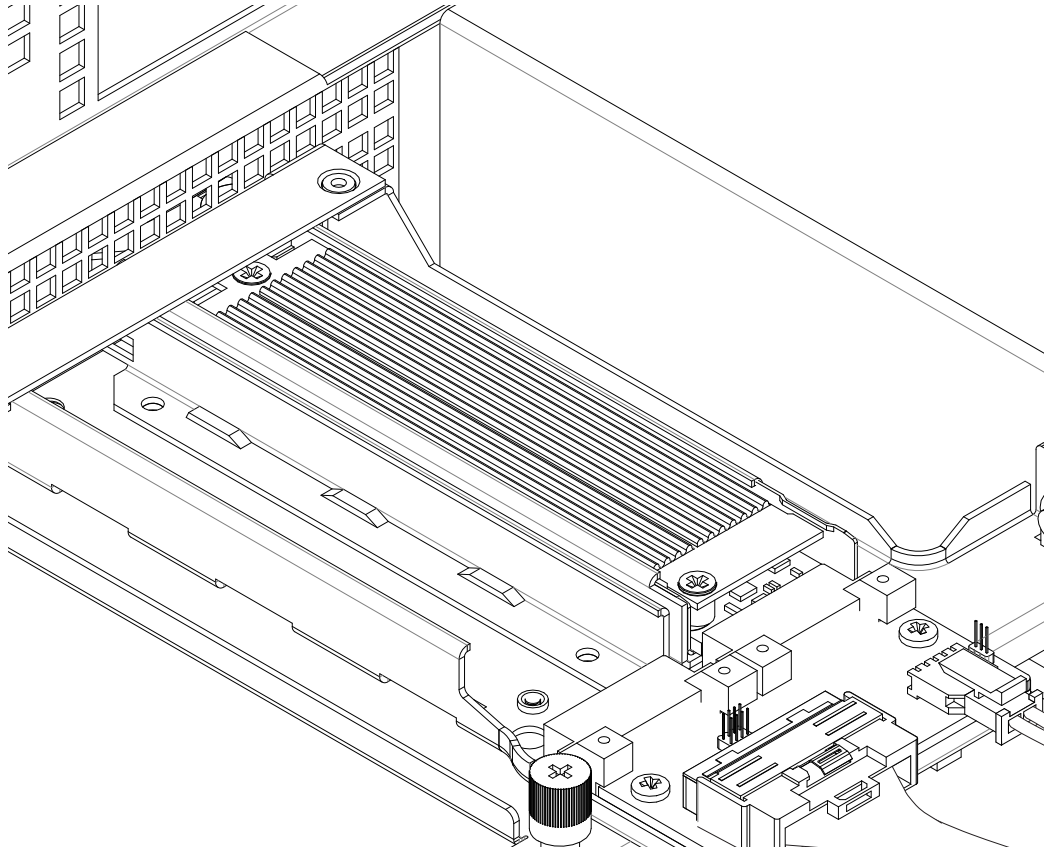


Figure 3-25: M.2 Adapter Tray Assembly In the Holder Bracket

25. Once fully slotted in, close the latch to secure and lock the M.2 drives in place.

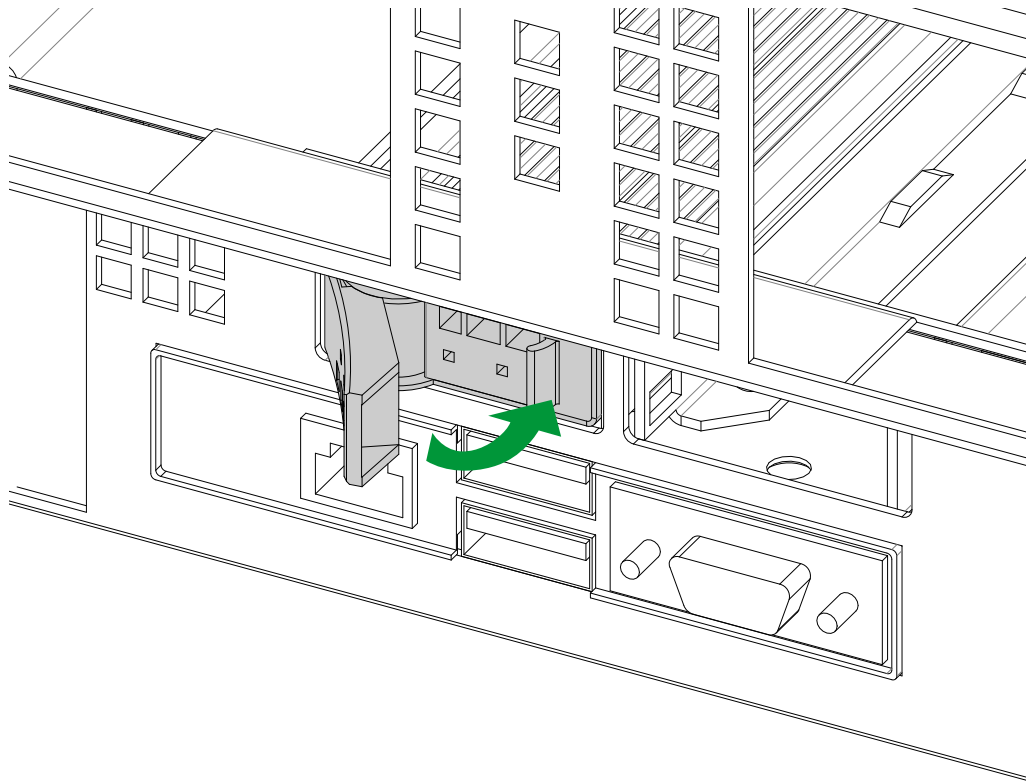


Figure 3-26: Close the Latch To Lock the M.2 Drives in the Slot

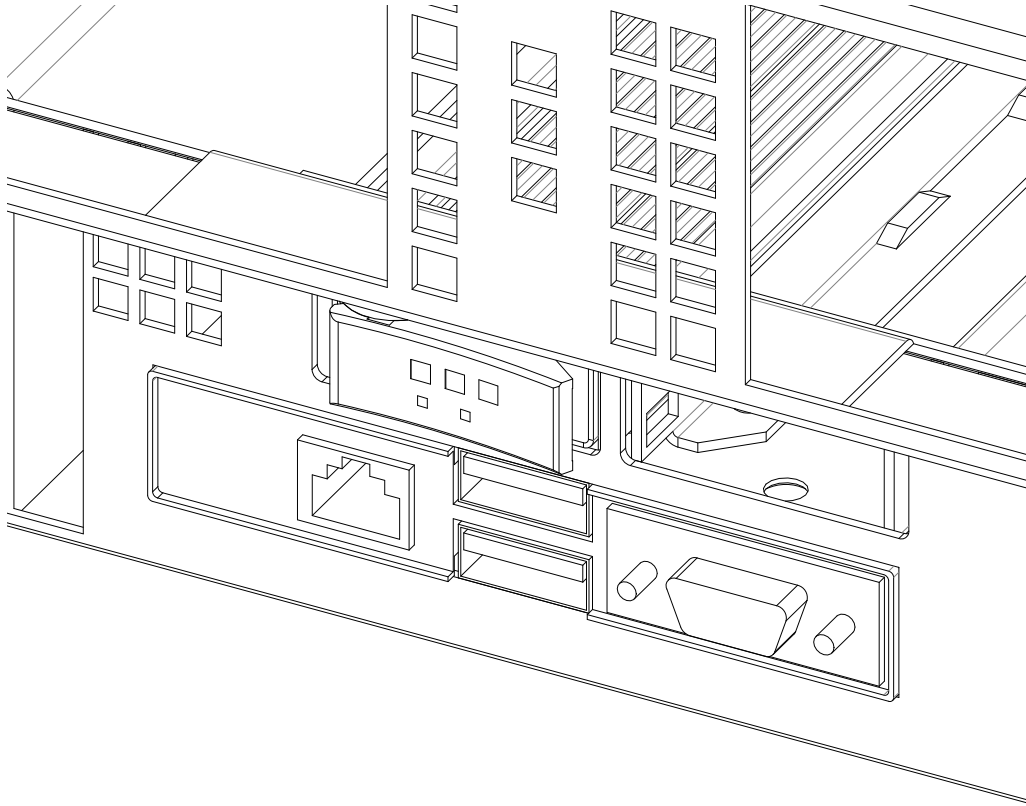


Figure 3-27: Latch Closed To Lock the M.2 Drives In the Slot

3.5 Installing the Drivers in Windows

Refer to the instructions that came with your M.2 SSD and follow the manufacturer's recommended steps for installing the NVMe driver. Download the latest drivers from the Supermicro project board at <https://www.supermicro.com/wdl/driver>.

3.6 Uninstalling the Drivers

To Uninstall the Drivers in Windows

Follow the instructions provided by your driver's manufacturer.

To Uninstall the Drivers in Linux

Run the following command to uninstall the NVMe drivers:

```
./RemoveService.sh
```

Chapter 4

Firmware Update

4.1 Update Firmware in the BIOS

This chapter provides instructions on how to update the firmware in the BIOS. Use the arrow keys to navigate and highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page.

1. Navigate to the **Advanced** tab, where the RAID Controller configurations can be managed.
2. Navigate to and select **BROADCOM <SAS 3808N> Configuration Utility**.

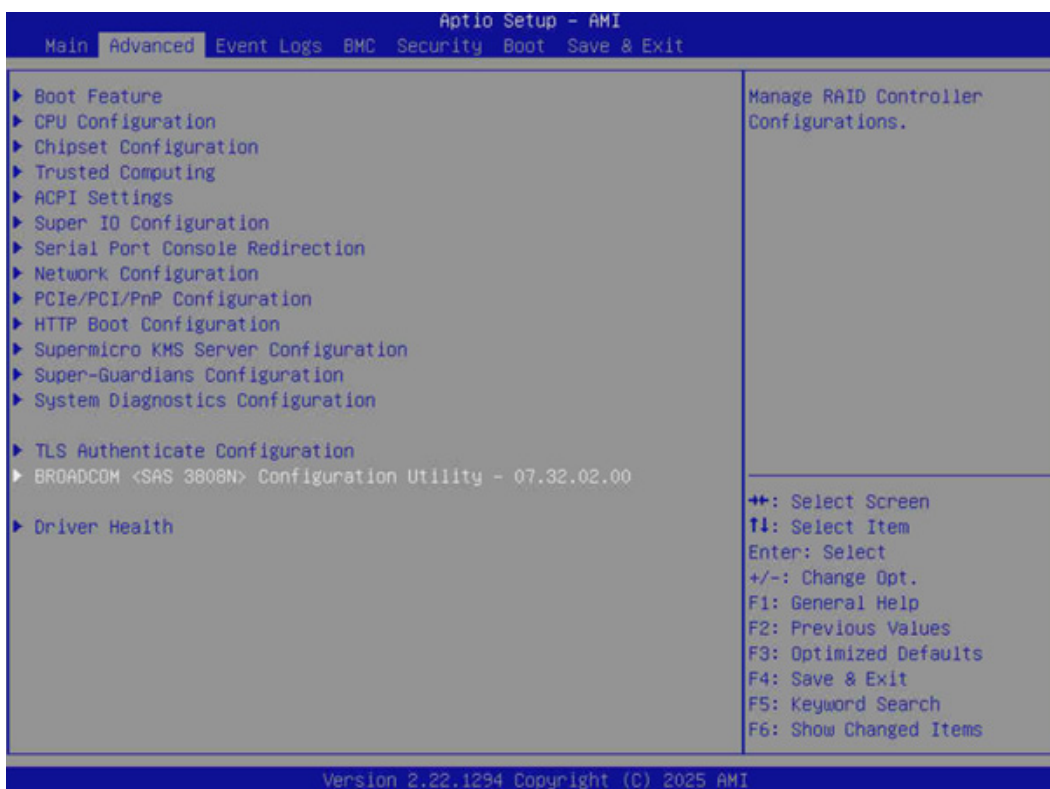


Figure 4-1: BROADCOM Configuration Utility Selected

3. Select **Update Firmware**, which will allow you to update the controller firmware to the necessary newer version.



Figure 4-2: Update Firmware Selected

4. Navigate to and choose **Select Directory**.
5. Select **Update**.

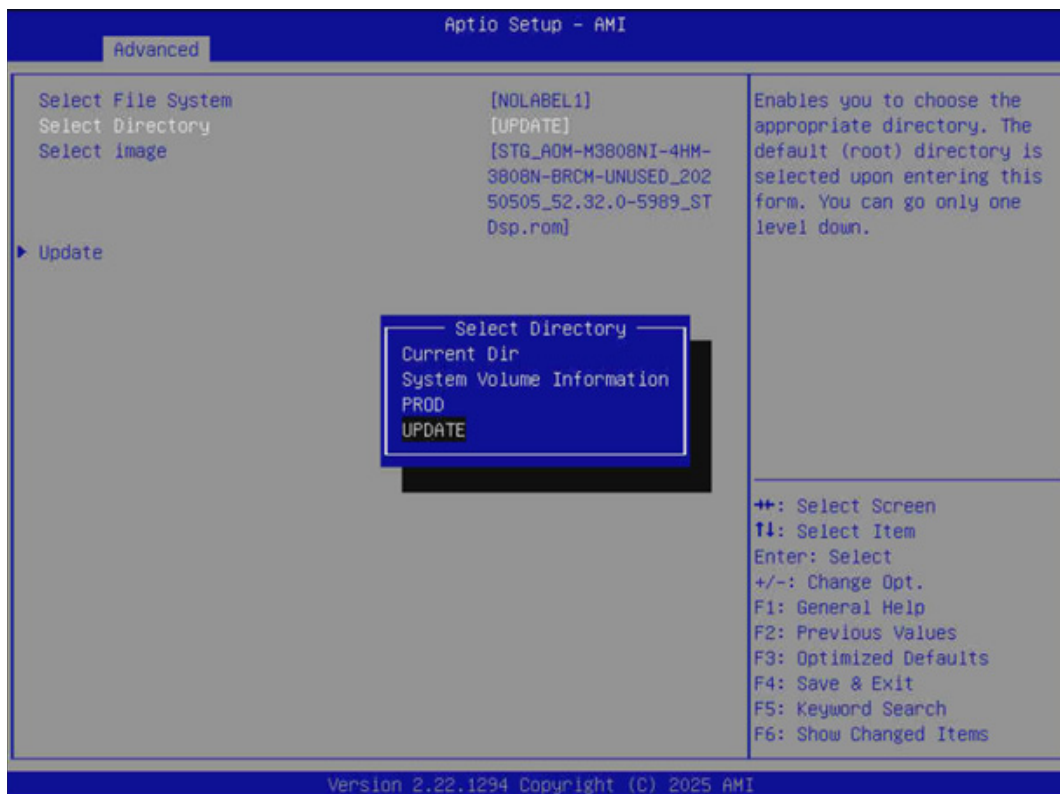


Figure 4-3: Directory Update Selected

6. Navigate to **Select Image**.
7. Select the appropriate firmware image. Be aware that the applicable image size restriction depends on the controller type.

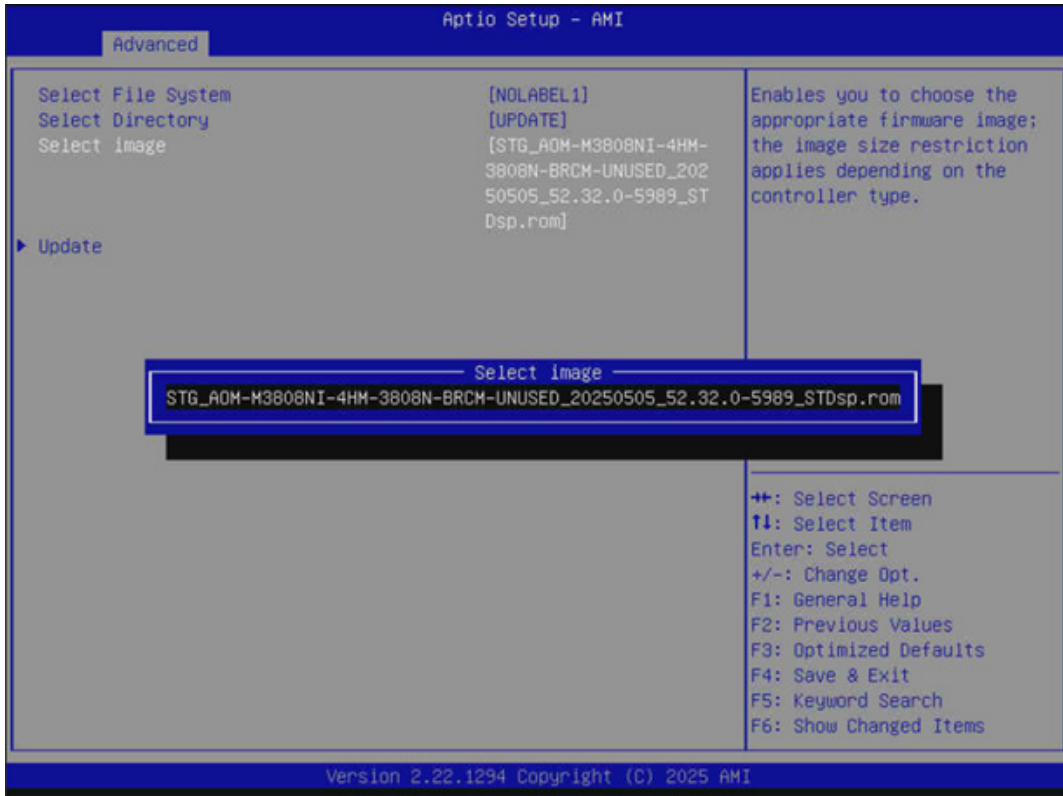


Figure 4-4: Appropriate Image Selected

8. Once all chosen options are in place, select **Update**.



Figure 4-5: Update Selected

9. You will be presented with a confirmation window where you can review the current and selected firmware versions. To proceed and make the **Yes** option available, select **Confirm** and ensure that it is set to **Enabled**.




Figure 4-6: Enabling Confirm to Enable Yes Option

- Once the **Confirm** option is enabled, select **Yes** to proceed with the update.



Figure 4-7: Confirm Enabled and Yes Option Selected

11. You will be presented with a window confirming that the operation has been performed successfully. Select **OK** to proceed and return to the main menu.

 **Note:** Updates may take a few minutes to complete. Be sure you see the confirmation window *first* before rebooting the system.

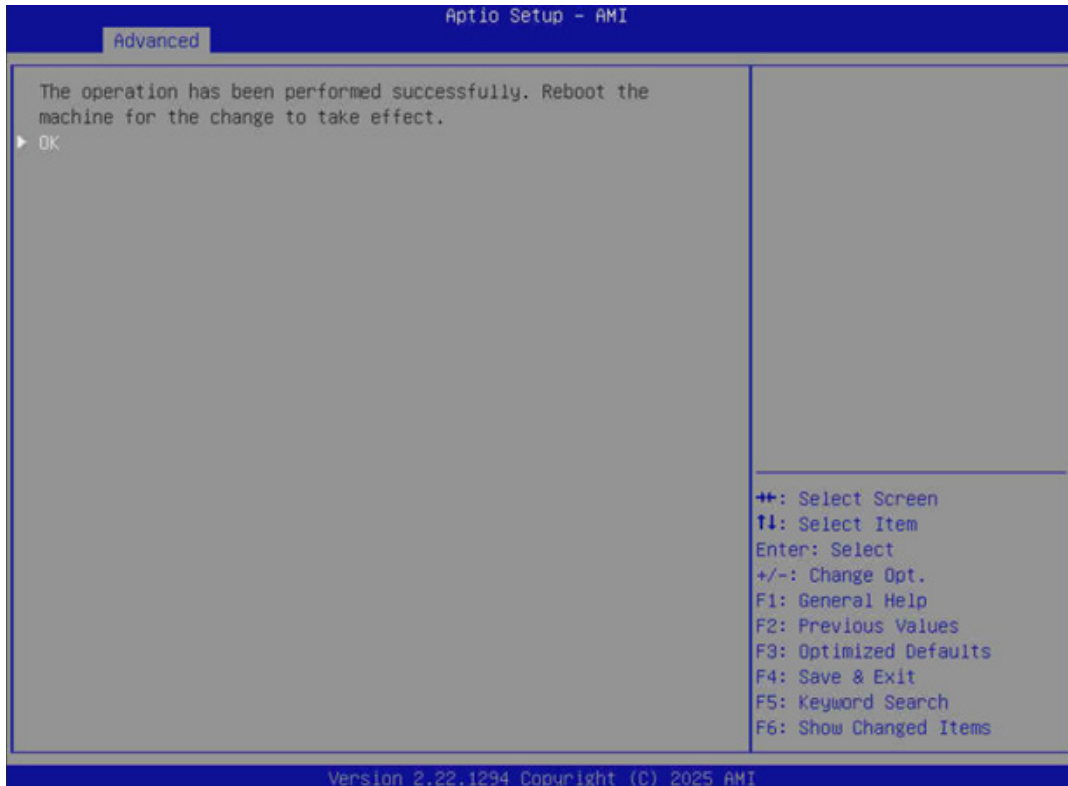


Figure 4-8: Confirmation Message

12. To save this update, navigate to the **Save & Exit** tab.
13. Navigate to and select the updated component.
14. Select **Yes** to save the updated configuration of setup values. If you do not wish to save the configuration as it currently is, select **No** to cancel and exit the confirmation menu.

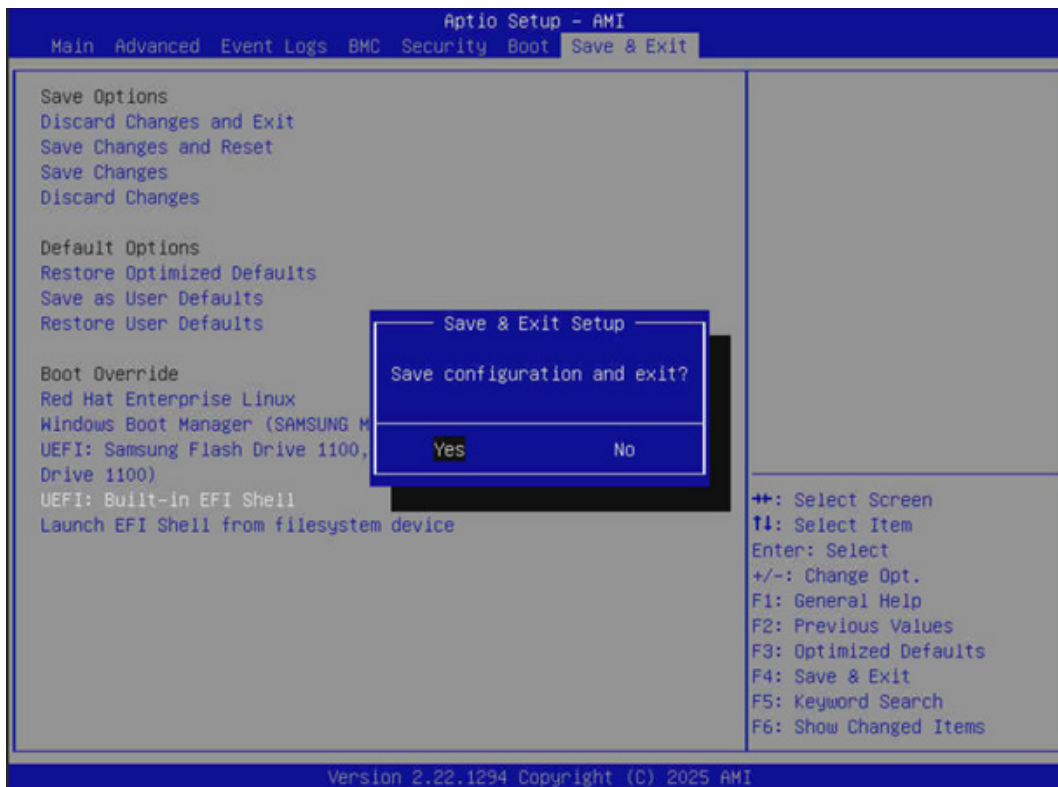


Figure 4-9: Yes Option to Save Configuration Selected

4.2 Update Firmware in UEFI

The section provides instructions on how to update the firmware in UEFI.

1. Utilize the following commands to access the directory:

```
Shell> fs0:
```

```
FS0:\> ls
```

2. Utilize the following command, typing the directory containing the firmware in the place of XXX:

```
FS0:\> cd bin XXX
```

```
BLK0: Alias(s):
      PciRoot(0x0)/Pci(0x9,0x0)/Pci(0x0,0x0)/USB(0x6,0x0)/USB(0x1,0x0)
Press ESC in 1 seconds to skip startup.nsh or any other key to continue.
Shell> fs0:
FS0:\> echo -off
Loop Cycle = 1
Unable to redirect file.
Script Error Status: Invalid Parameter (line number 34)
FS0:\> cd STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp> cd STG_AOM-M3808NI-4HM-3808-
BRCM-UNUSED_20250505_52.32.0-5989_STDsp
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp> cd UPDATE
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE> cd CUSTOMER
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER> ls
Directory of: FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-
4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER\
06/27/2025  10:20 <DIR>          32,768  .
06/27/2025  10:20 <DIR>          32,768  ..
03/18/2025  10:31                584  README.txt
05/02/2025  13:29          7,471,104  STG_AOM-M3808NI-4HM-3808N-BRCM-UNUSED_20250505_52.32.0-5989_S
TDsp.rom
10/09/2024  23:38          12,435,808  storcli.efi
05/05/2025  14:02             188  UPDATE.NSH
           4 File(s) 19,907,684 bytes
           2 Dir(s)
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER> storcli.efi / c0 download file= STG_AOM-M3808NI-
4HM-3808N-BRCM-UNUSED_20250505_52.32.0-5989_STDsp.rom noverchk_
```

Figure 4-10: Flash Firmware in UEFI

- Depending on the firmware package file location, run the following command to update the firmware. Be sure to input the correct file location in your command.

```
FS0:\bin\> storcli.efi /c0 download file=STG_AOM-M3808NI-4HM-3808N-
BRCM-UNUSED_20250505_52.32.0-5989_STDsp.rom
```

```
BRCM-UNUSED_20250505_52.32.0-5989_STDsp
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\> cd UPDATE
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\> cd CUSTOMER
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER\> ls
Directory of: FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-
4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER\
06/27/2025 10:20 <DIR>          32,768 .
06/27/2025 10:20 <DIR>          32,768 ..
03/18/2025 10:31             584 README.txt
05/02/2025 13:29       7,471,104 STG_AOM-M3808NI-4HM-3808N-BRCM-UNUSED_20250505_52.32.0-5989_S
TDsp.rom
10/09/2024 23:38       12,435,808 storcli.efi
05/05/2025 14:02           188 UPDATE.NSH
           4 File(s) 19,907,684 bytes
           2 Dir(s)
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER\> storcli.efi / c0 download file= STG_AOM-M3808NI-
4HM-3808N-BRCM-UNUSED_20250505_52.32.0-5989_STDsp.rom noverchk
Download Completed.
Flashing image to adapter...
CLI Version = 007.3205.0000.0000 Oct 09, 2024
Operating system = EFI Shell
Controller = 0
Status = Success
Description = F/W Flash Completed. Please reboot the system for the changes to take effect
FS0:\STG_AOM-M3808NI-4HM-3808-BRCM-UNUSED_20250505_52.32.0-5989_STDsp\STG_AOM-M3808NI-4HM-3808-BRCM-
UNUSED_20250505_52.32.0-5989_STDsp\UPDATE\CUSTOMER\> _
```

Figure 4-11: Flash Firmware in UEFI



Note: Due to the firmware version being the same as the current one, the command needs the addition of 'noverchk.'

4.3 Update Firmware in BMC

The section provides instructions on how to update the firmware in the BMC.

1. Select the **Dashboard** tab on the left navigation menu after entering the BMC.
2. On the Dashboard page, select the blue **Firmware Update** option at the top of the page.

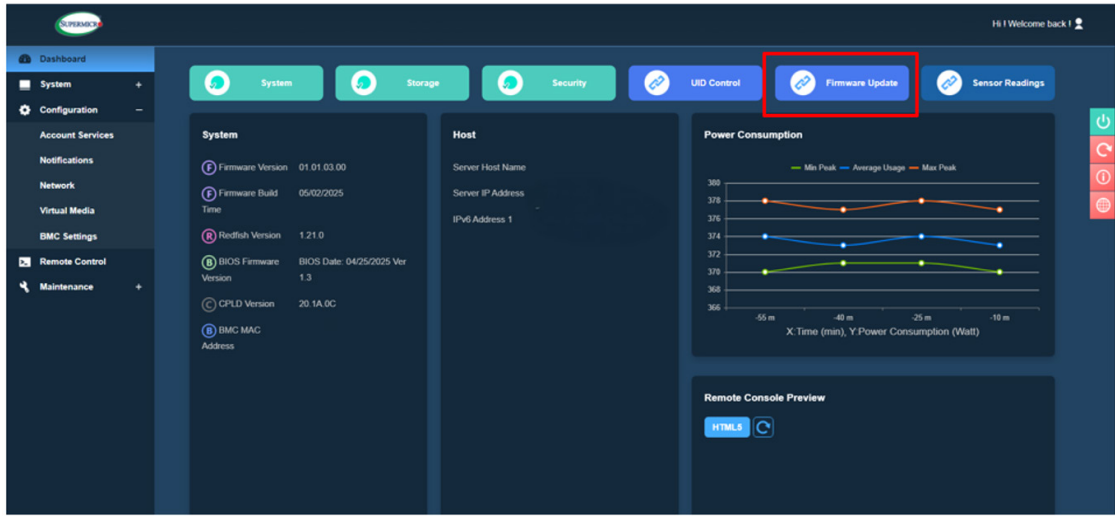


Figure 4-12: Dashboard Page Firmware Update Selected

3. Among the file format types, select **SAS3808N**.
4. Once the option is selected, click **Next**.

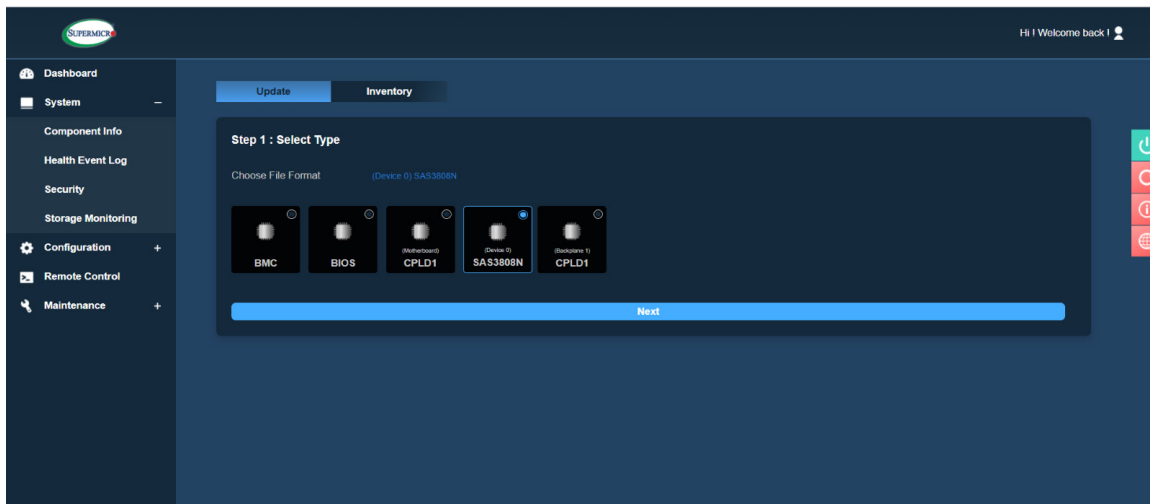


Figure 4-13: Firmware Update Step 1

5. This will make Step 2 available. Select **Select File** to upload the chosen firmware file.
6. Once the file is selected and appears listed, click **Upload**. Loading the firmware might take a few minutes.

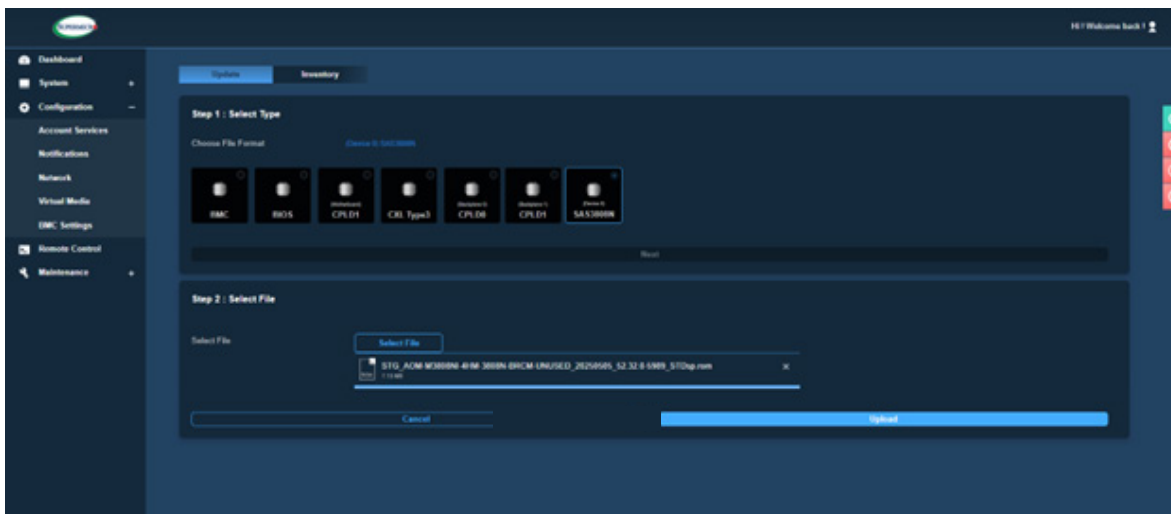


Figure 4-14: Firmware Update Step 2

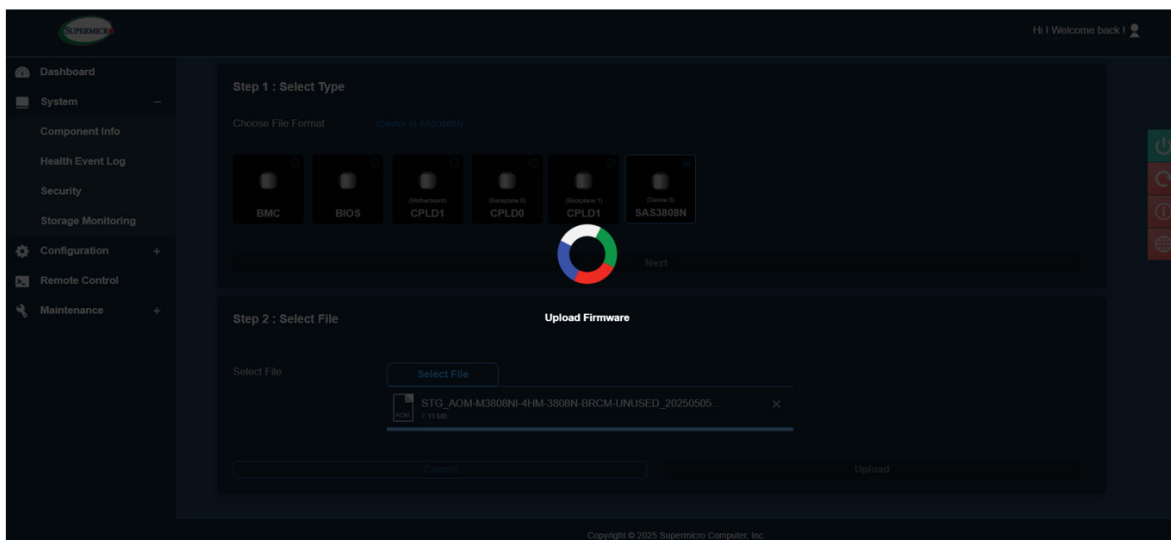


Figure 4-15: Upload Loading

7. This will make Step 3 available with the uploaded firmware file info listed. Review to ensure that it is the correct file version.
8. Click **Update** to proceed with updating the firmware. The update process might take a few minutes.

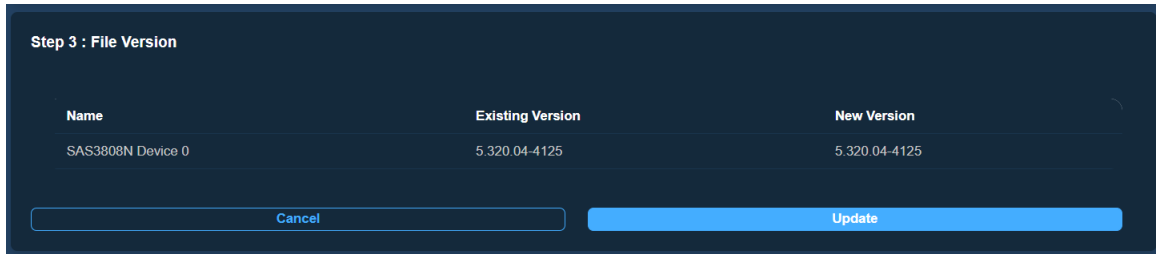


Figure 4-16: Firmware Update Step 3

To review if the firmware update is successful, take the following steps:

1. Select the **System** tab on the left navigation menu.
2. Select the **Storage Monitoring** tab from the System tab's drop-down submenu.

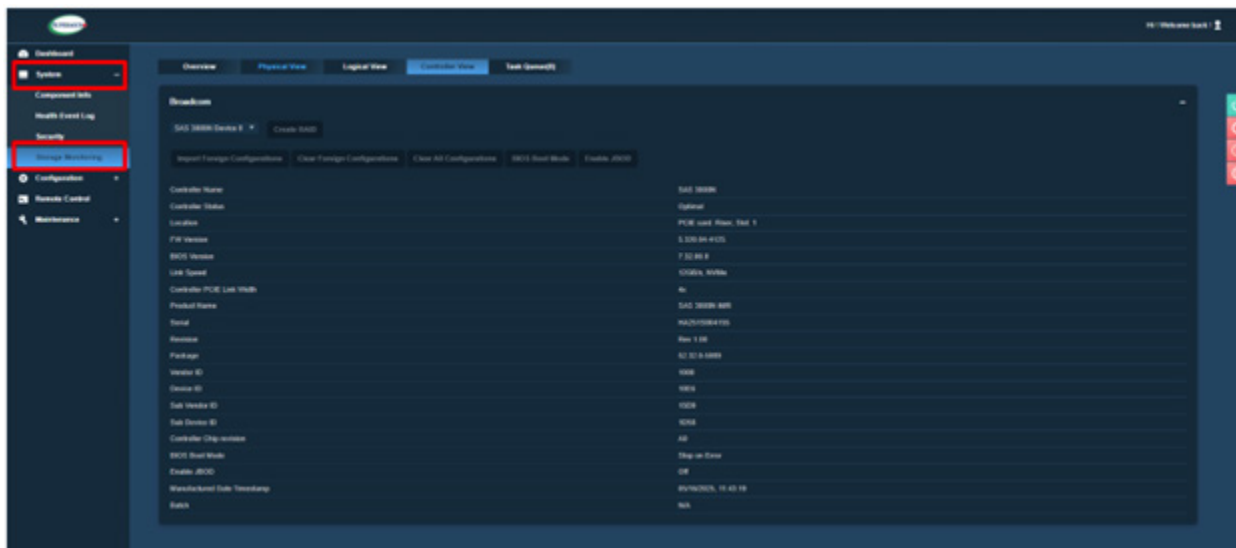


Figure 4-17: Dashboard Page System and Storage Monitoring Selected

3. Select the **Controller View** tab at the top of the page.
4. Be sure that you are on the correct device. It will be listed in the scroll-down menu below **Broadcom**. This will allow you to view device information.
5. Scroll to find the **View-Broadcom** item. It should display the new firmware file's version number.

Chapter 5

Drive Management

This chapter provides instructions on how to configure RAID using the BROADCOM <SAS 3808N> Configuration Utility and reference the FAQ regarding managing the AOM with BMC IPMI WebGUI or Broadcom 3rd Party Utility. If you do not wish to configure the RAID settings, you may skip this section and go directly to OS installation.

5.1 RAID Minimum Drive Requirements

The AOM-M3808NI-4HM add-on module supports up to two M.2 SSDs with RAID 0 or RAID 1. Use the table to determine the minimum number of drives needed to set up a RAID environment.

RAID	Minimum Number of Drives
RAID 0	2
RAID 1	2

5.2 Managing Physical Drive

Take the following steps to manage the available physical drives through BIOS. Use the arrow keys to highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page.

1. Navigate to the **Advanced** tab, where the RAID Controller configurations can be managed.
2. Navigate to and select **BROADCOM <SAS 3808N> Configuration Utility**.

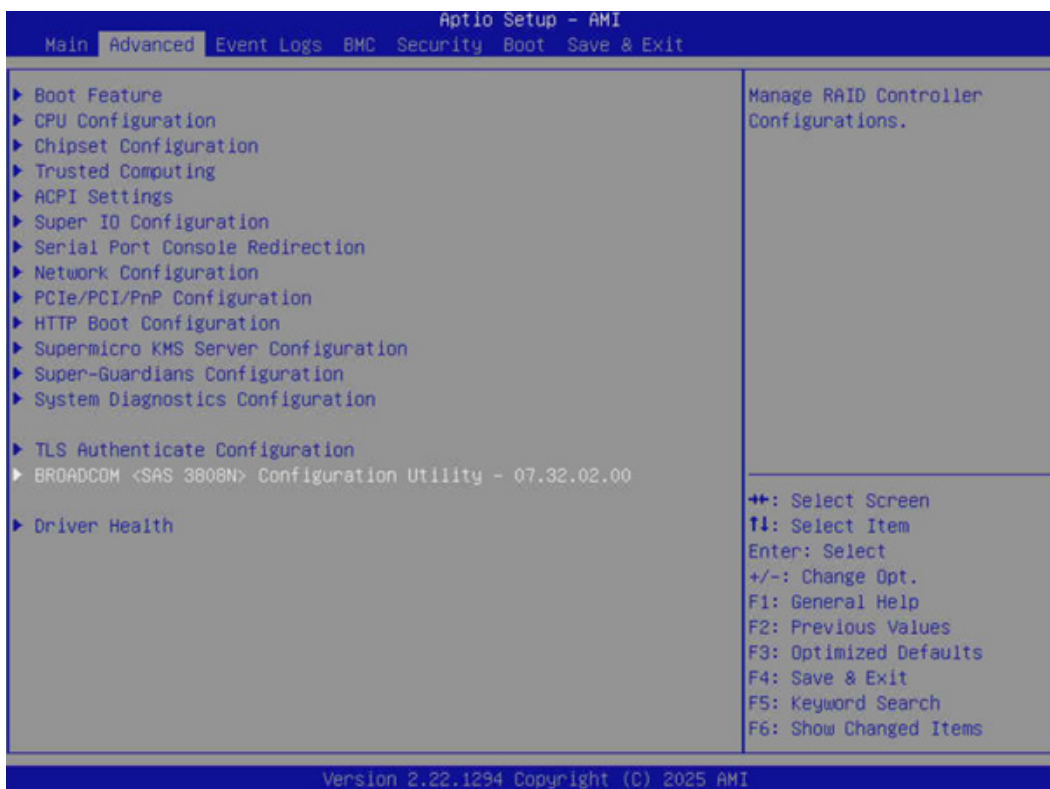


Figure 5-1: Advanced Page

3. Select **Main Menu**.



Figure 5-2: Main Menu Selected

4. Select **Drive Management**.**Figure 5-3: Drive Management Selected**

5. Select a physical drive from the list. You will be able to use this menu to perform several operations (including **Rebuild** and **Initialize drive**), view basic properties of the drive, and navigate to view additional advanced properties.



Figure 5-4: Physical Drive Selected

5.3 Creating RAID

Follow the steps to create a virtual drive through BIOS. Use the arrow keys to highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page.

1. Reset the system.
2. Click to enter the BIOS Setup Utility.
3. Navigate to the **Advanced** tab, where the RAID Controller configurations can be managed.
4. Navigate to and select **BROADCOM <SAS 3808N> Configuration Utility**.

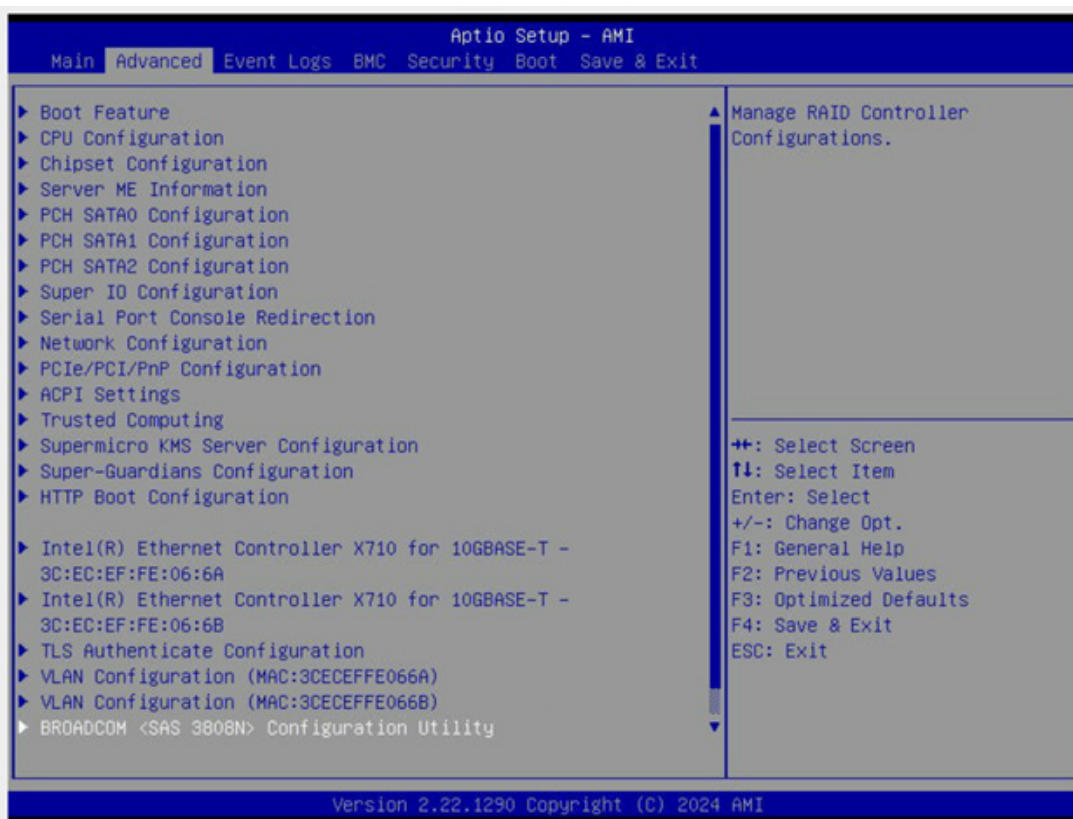


Figure 5-5: BROADCOM <SAS 3808N> Configuration Utility Selected

5. Enter the **Main Menu** page.

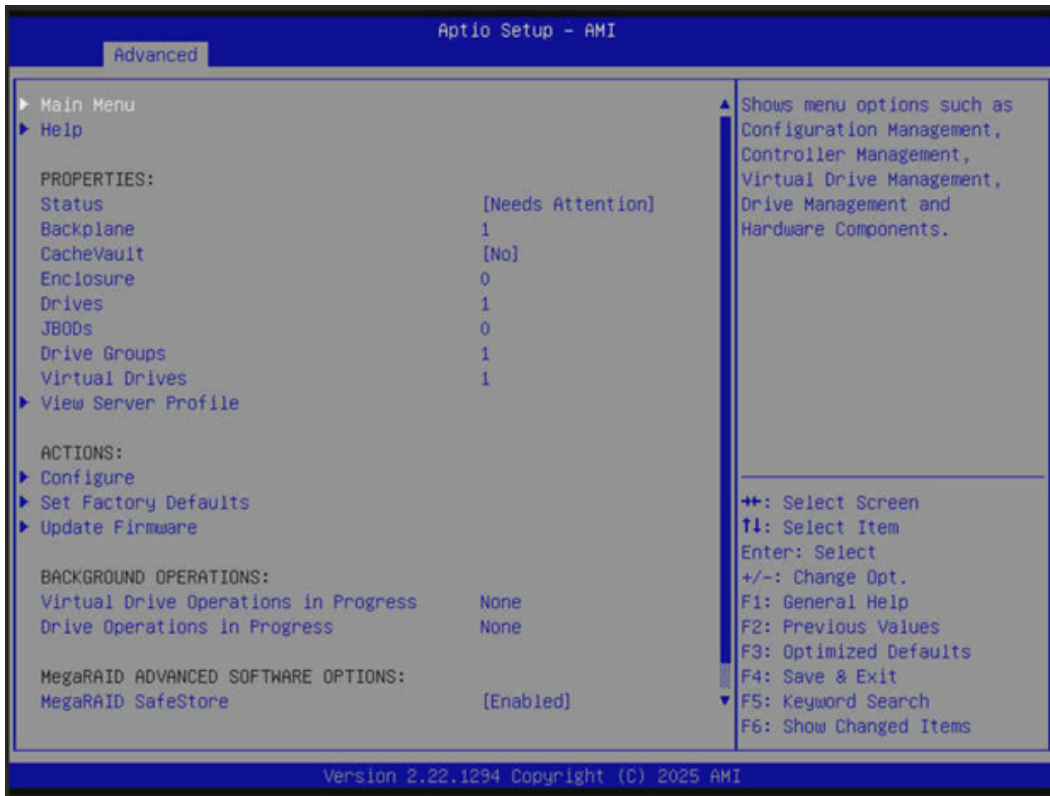


Figure 5-6: Main Menu Selected

6. Select **Configuration Management** from the Main Menu's submenu.

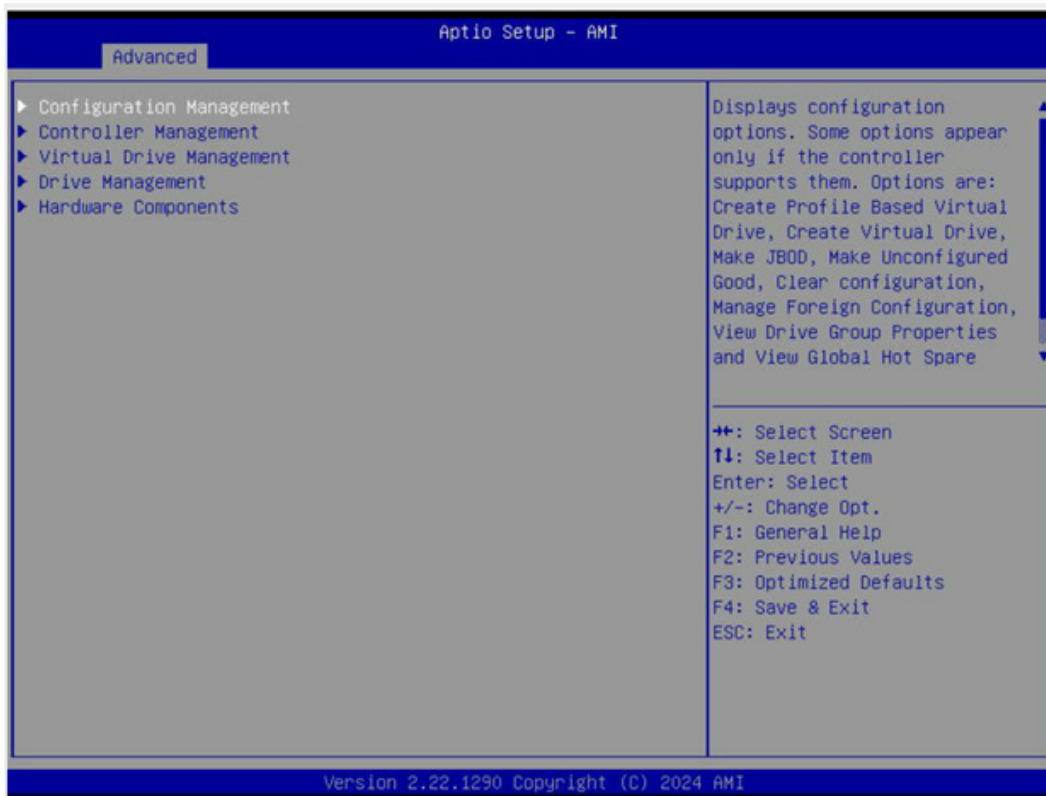


Figure 5-7: Configuration Management Selected

7. Select **Create Virtual Drive**.



Figure 5-8: Create Virtual Drive Selected

8. On the **Create Virtual Drive** menu, navigate to **Select RAID Level**.
9. Select a RAID level.

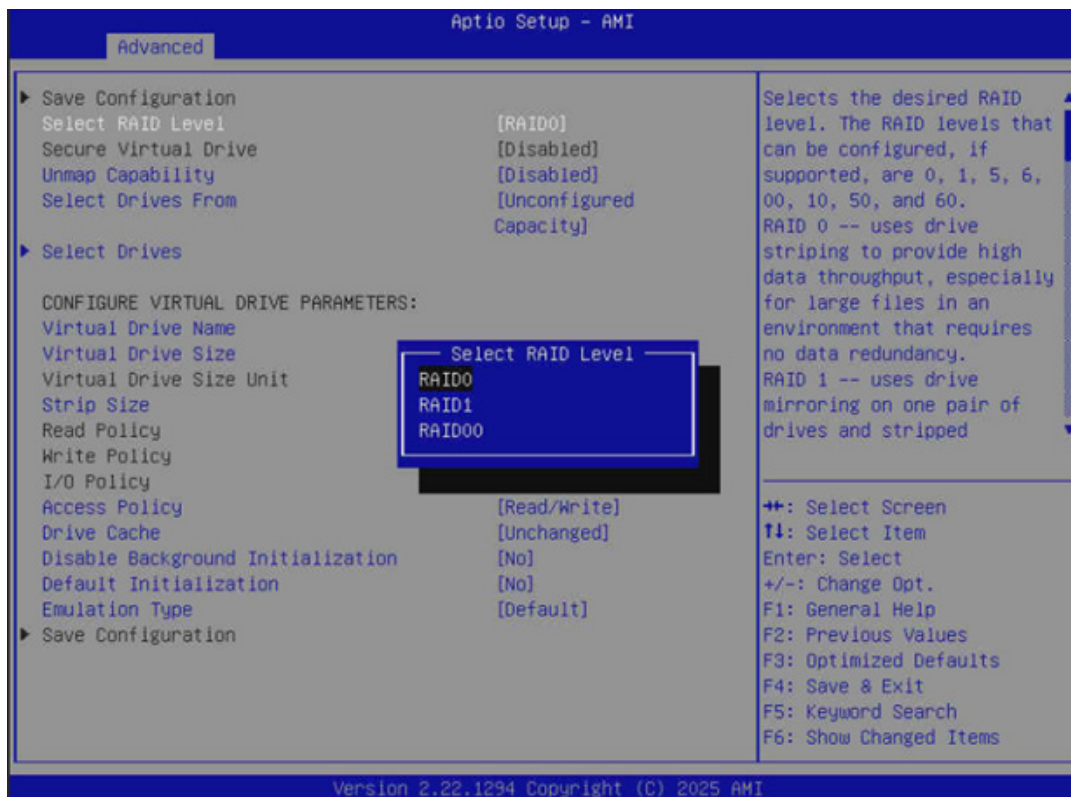


Figure 5-9: RAID Level Selected

10. Navigate to **Select Drives**.



Figure 5-10: Select Drives Selected

11. On the **Select Drives** menu, select an unconfigured drive.
12. Choose **Enabled**.

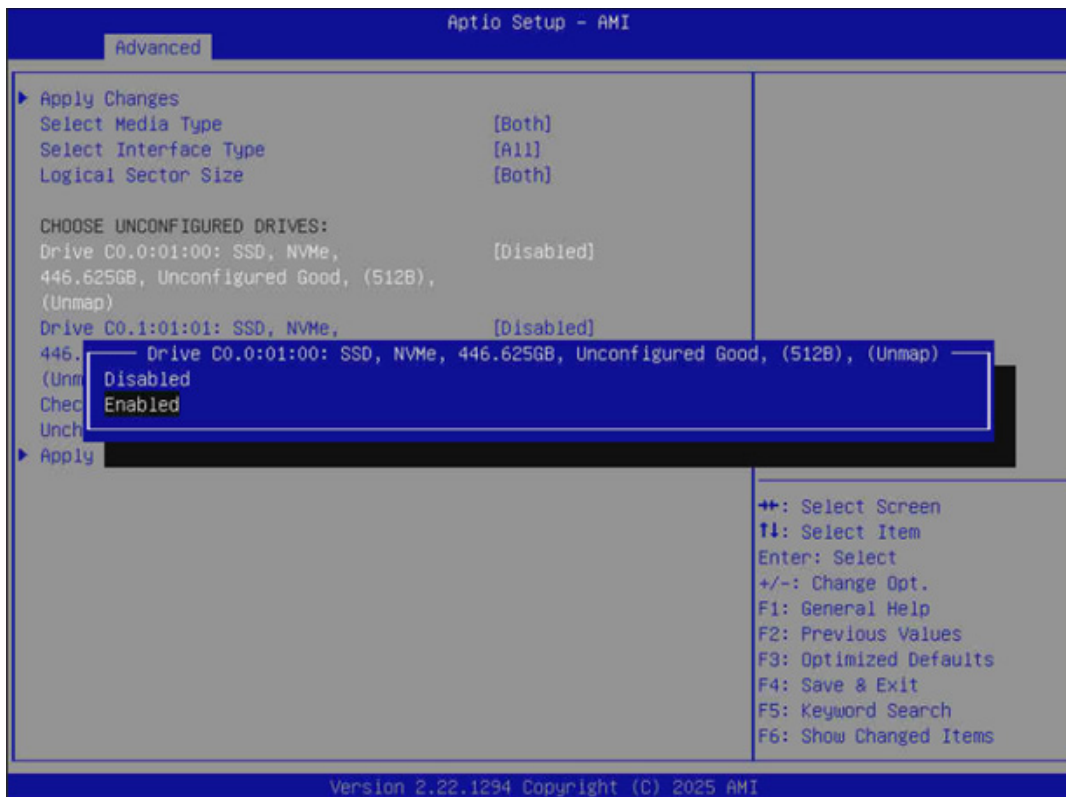


Figure 5-11: Enabled Selected

13. Select **Apply Changes**.

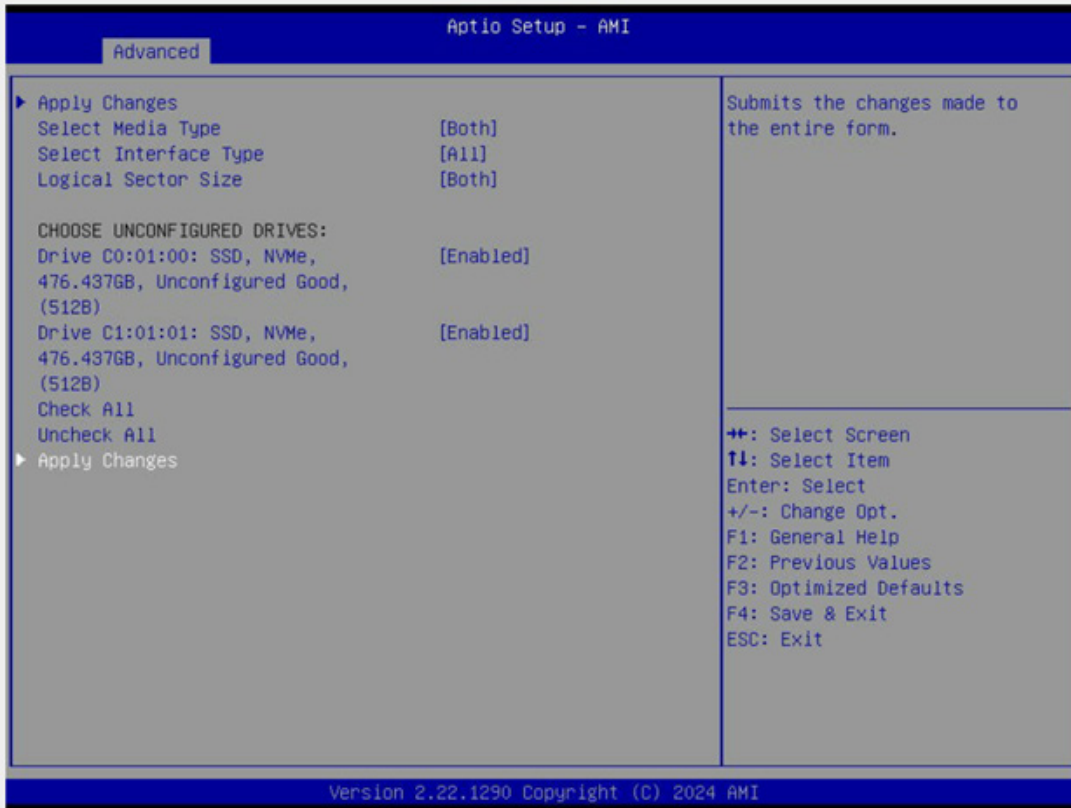


Figure 5-12: Apply Changes Selected

The virtual drives were successfully saved. You will get a prompt message confirming that the operation was performed successfully.

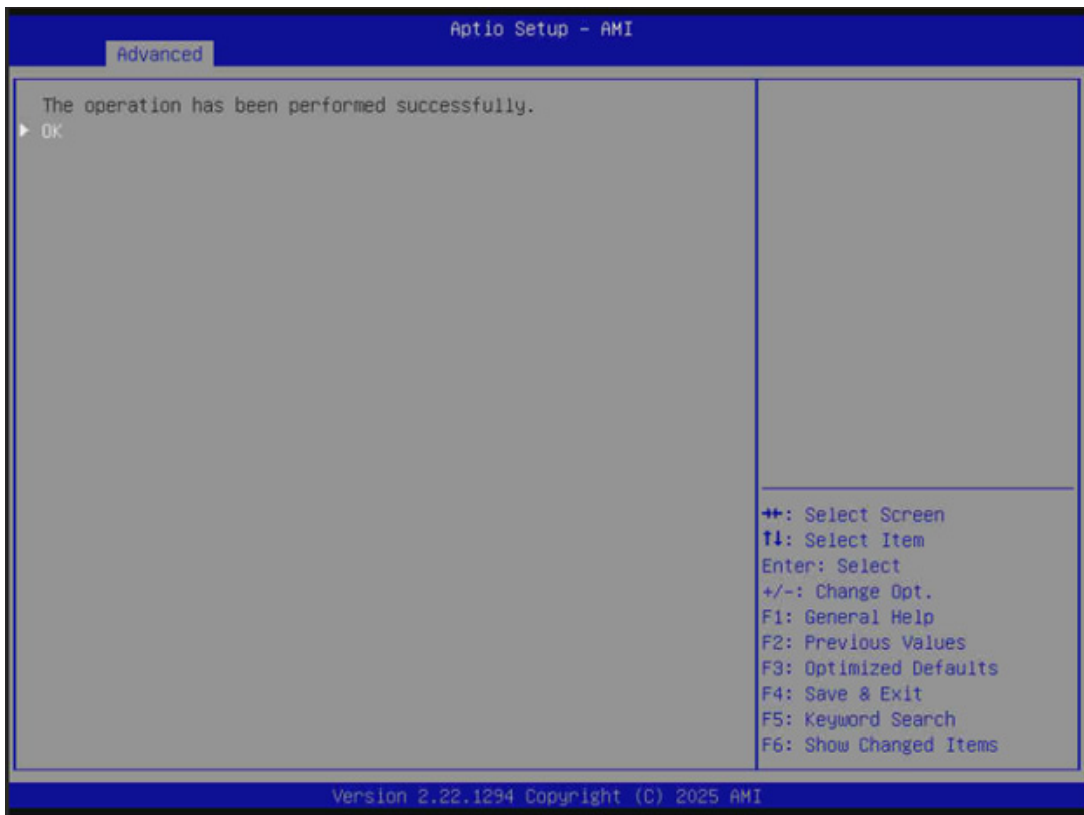


Figure 5-13: OK Option Selected

You will then need to save the system configuration. To do so, take the following steps:

1. On the **Create Virtual Drive** menu, navigate to **Save Configuration**.

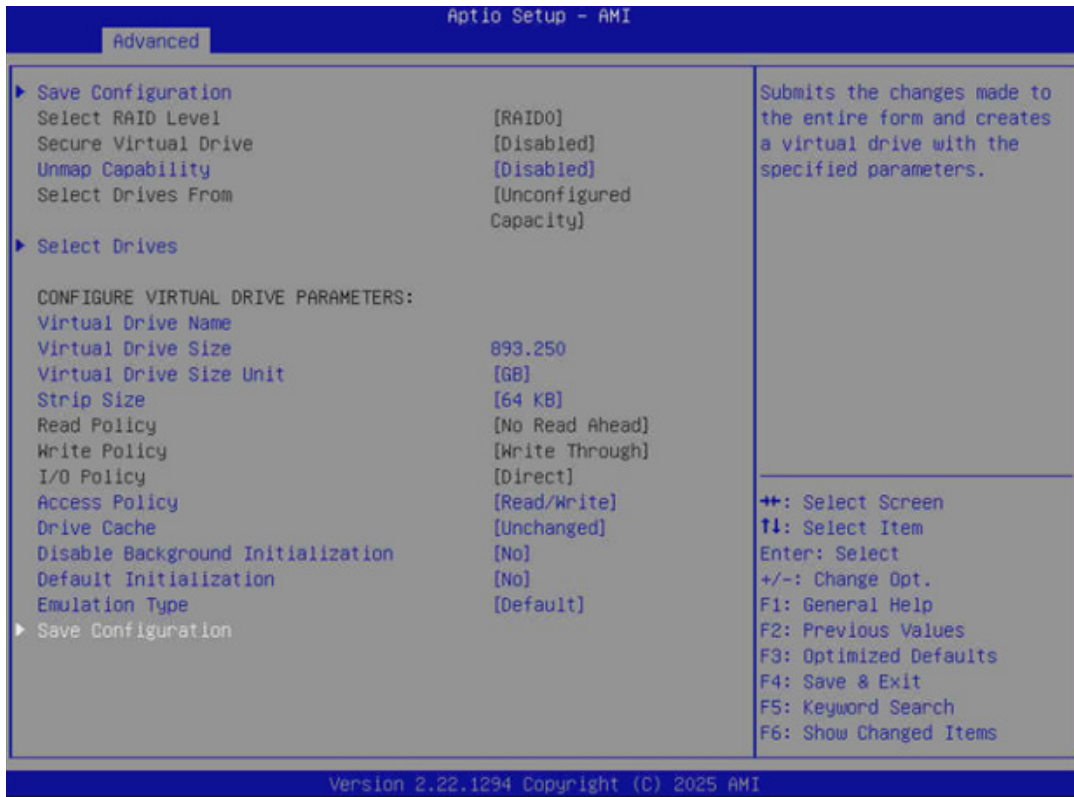


Figure 5-14: Save Configuration Selected

2. To proceed and make the **Yes** option available to you, first select **Confirm**.
3. Select **Enabled** to enable the **Yes** option.
4. Select **Yes**. If you do not want to proceed with changes, select **No**.

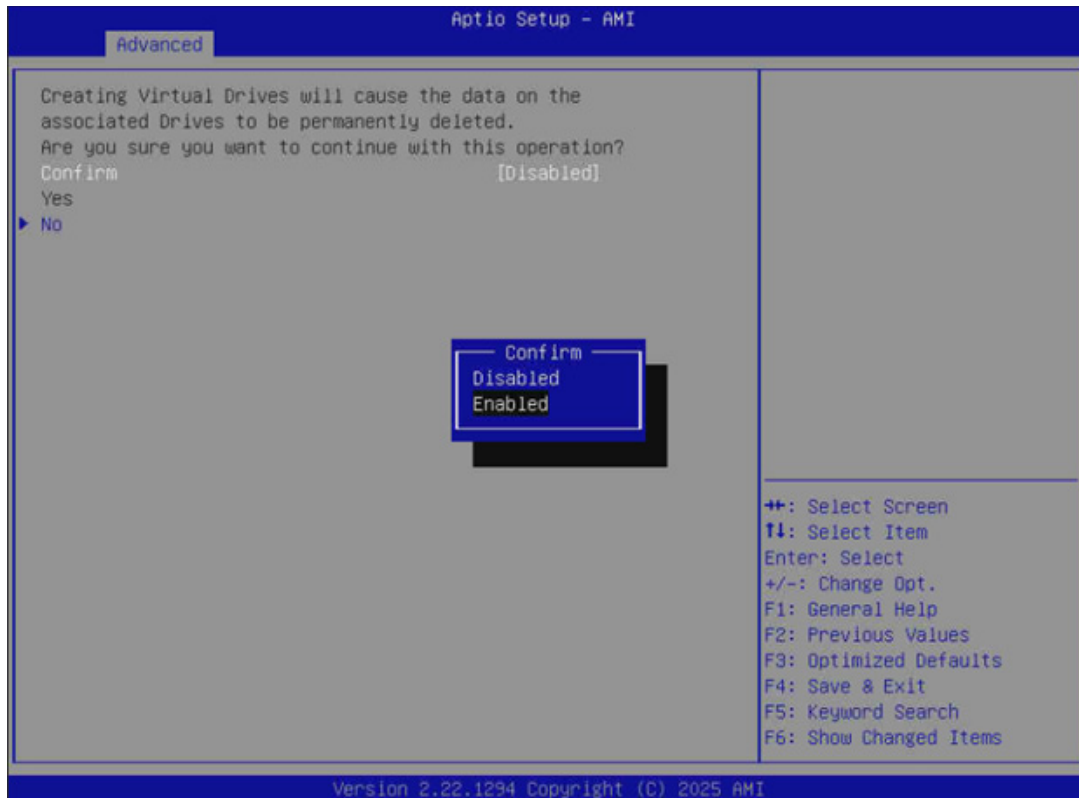



Figure 5-15: Confirm State Menu

5. You will be presented with a window confirming that the operation has been performed successfully. Select **OK** to proceed and return to the main menu.

 **Note:** Updates may take a few minutes to complete. Be sure you see the confirmation window *first* before rebooting the system.

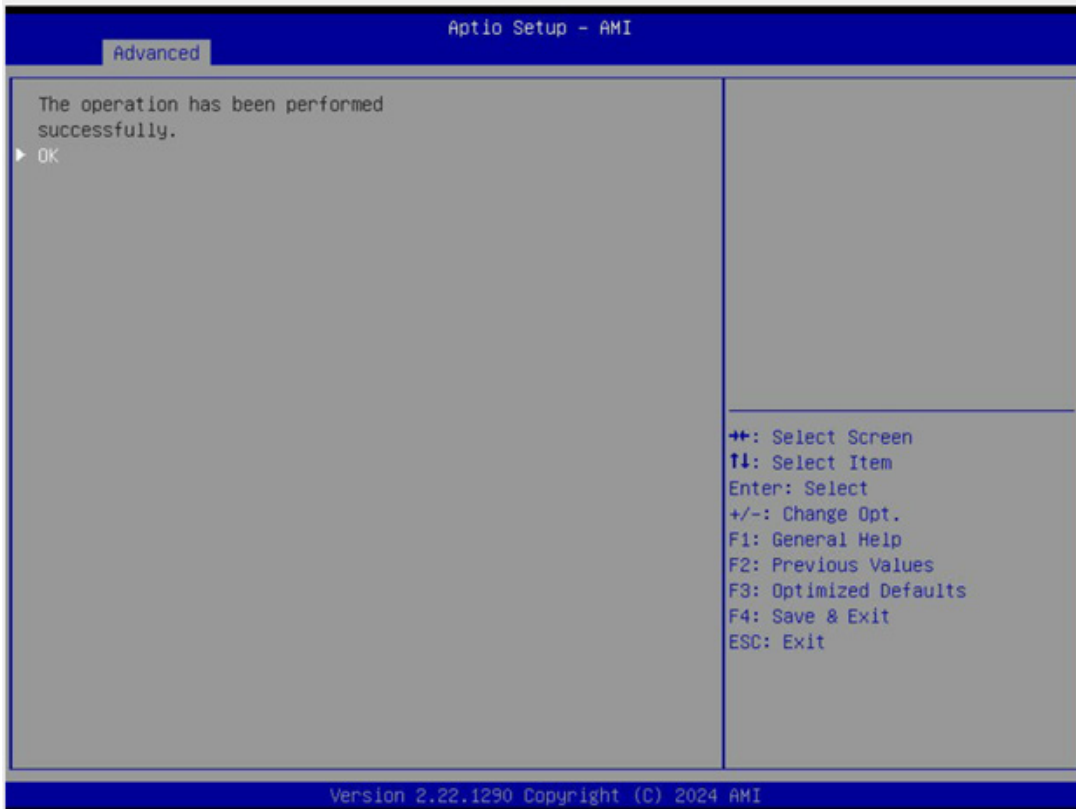


Figure 5-16: Confirmation Message

A prompt message will appear once the virtual drive creation is successful



Figure 5-17: Prompt Message

5.4 Deleting RAID in BIOS

Follow the steps to delete RAID through the BIOS. Use the arrow keys to highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page.

1. Navigate to the **Advanced** tab, where you can manage RAID Controller configurations.
2. Navigate to and select **BROADCOM <SAS 3808N> Configuration Utility**.

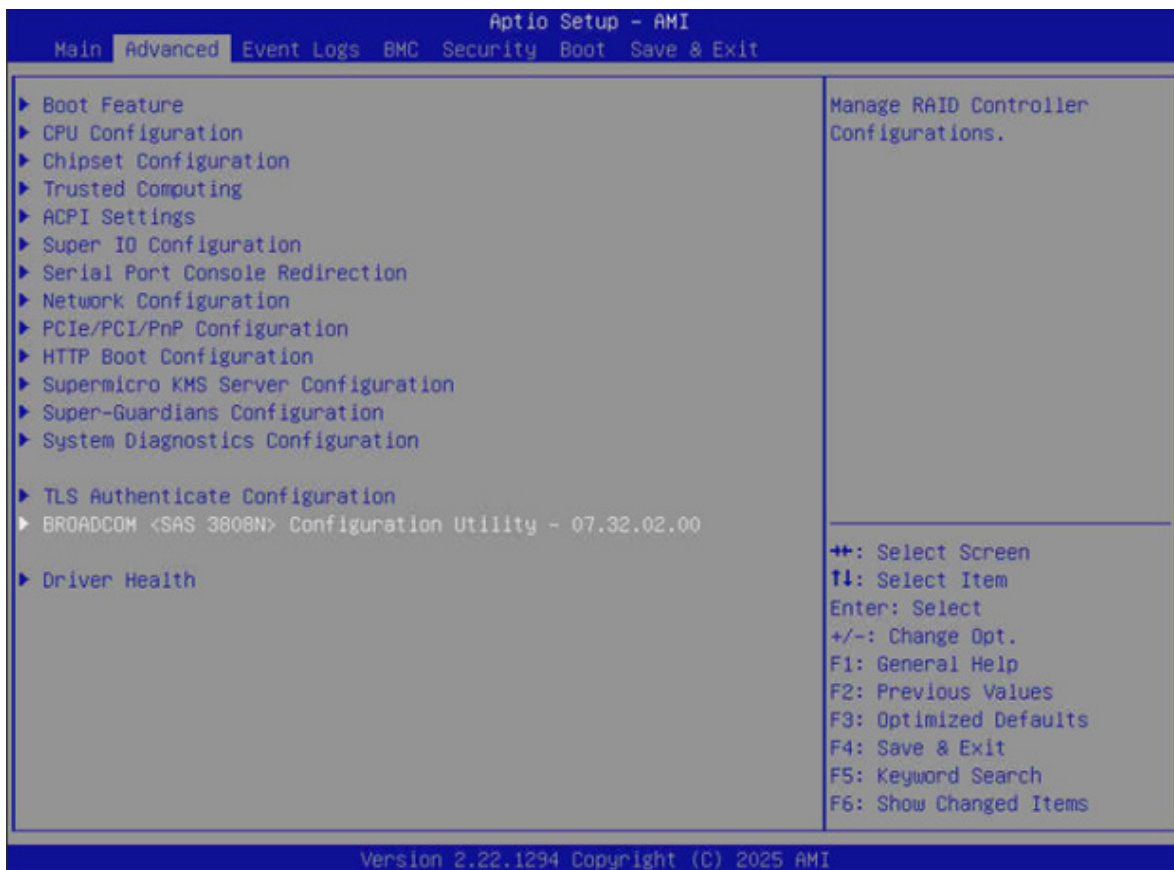


Figure 5-18: BROADCOM <SAS 3808N> Configuration Utility Selected

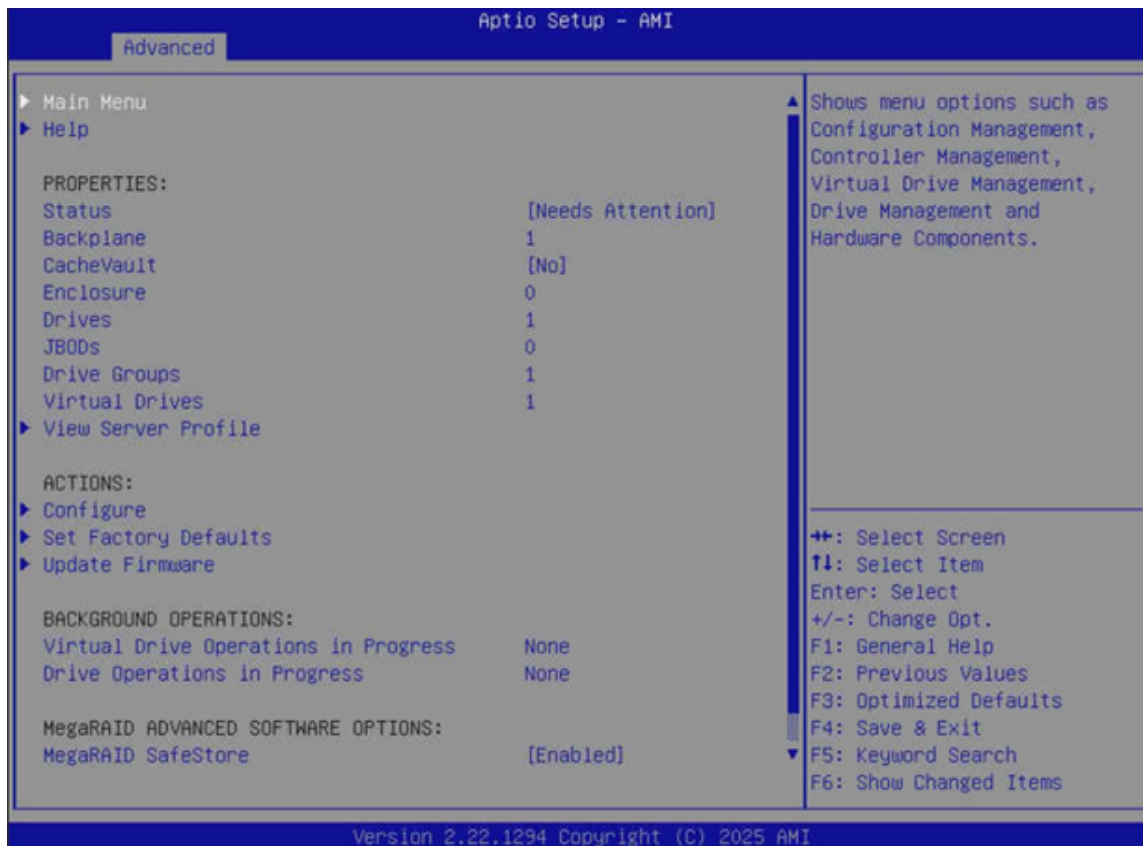
3. Select **Main Menu**.

Figure 5-19: Main Menu Selected

4. Select **Configuration Management**.

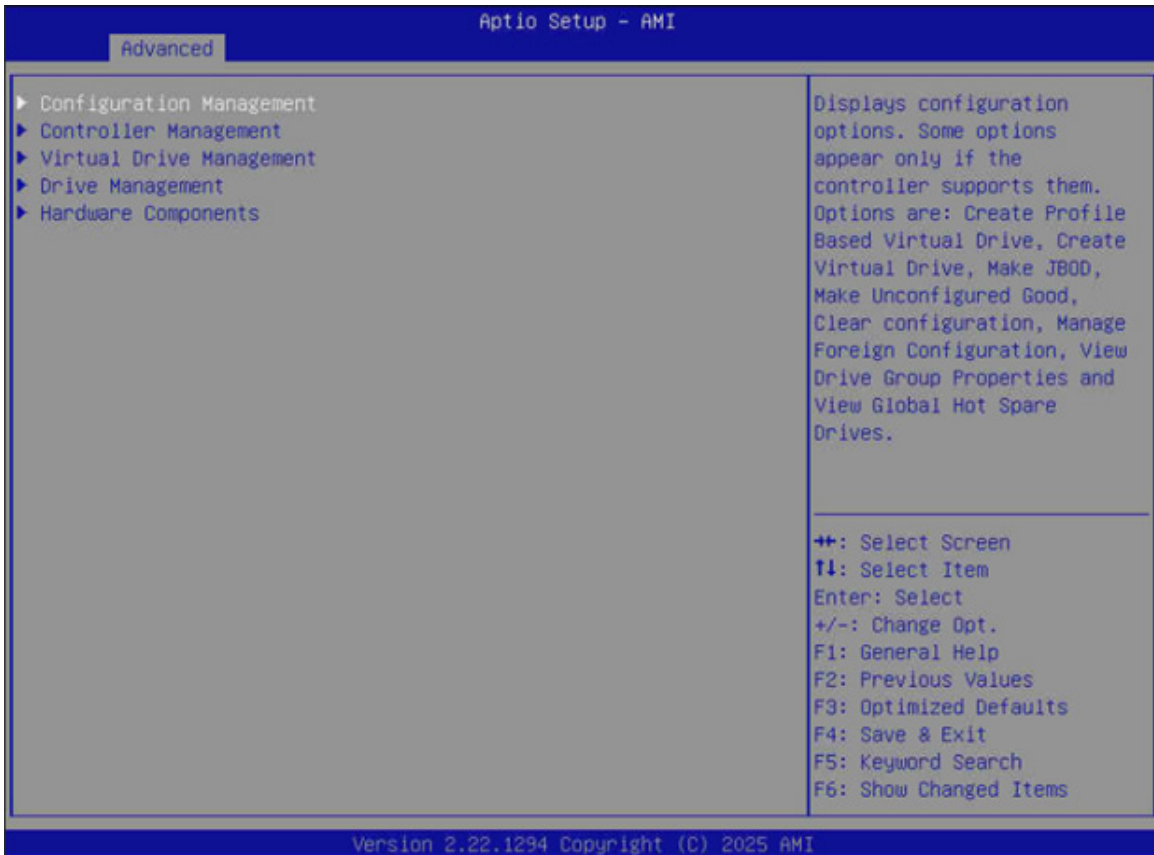


Figure 5-20: Configuration Management Selected

5. Select **Clear Configuration**.**Figure 5-21: Clear Configuration Selected**

- You will be presented with a confirmation window to delete all virtual drives, hot spare drives, pinned caches, and applicable JBODs attached to this controller. To proceed and make the **Yes** option available, select **Confirm** and ensure that it is set to **Enabled**.
- Once the **Confirm** option is enabled, select **Yes** to confirm the update. If you do not want to proceed with deleting all virtual drives, hot spare drives, pinned caches, and applicable JBODs attached to this controller at this time, select **No**.

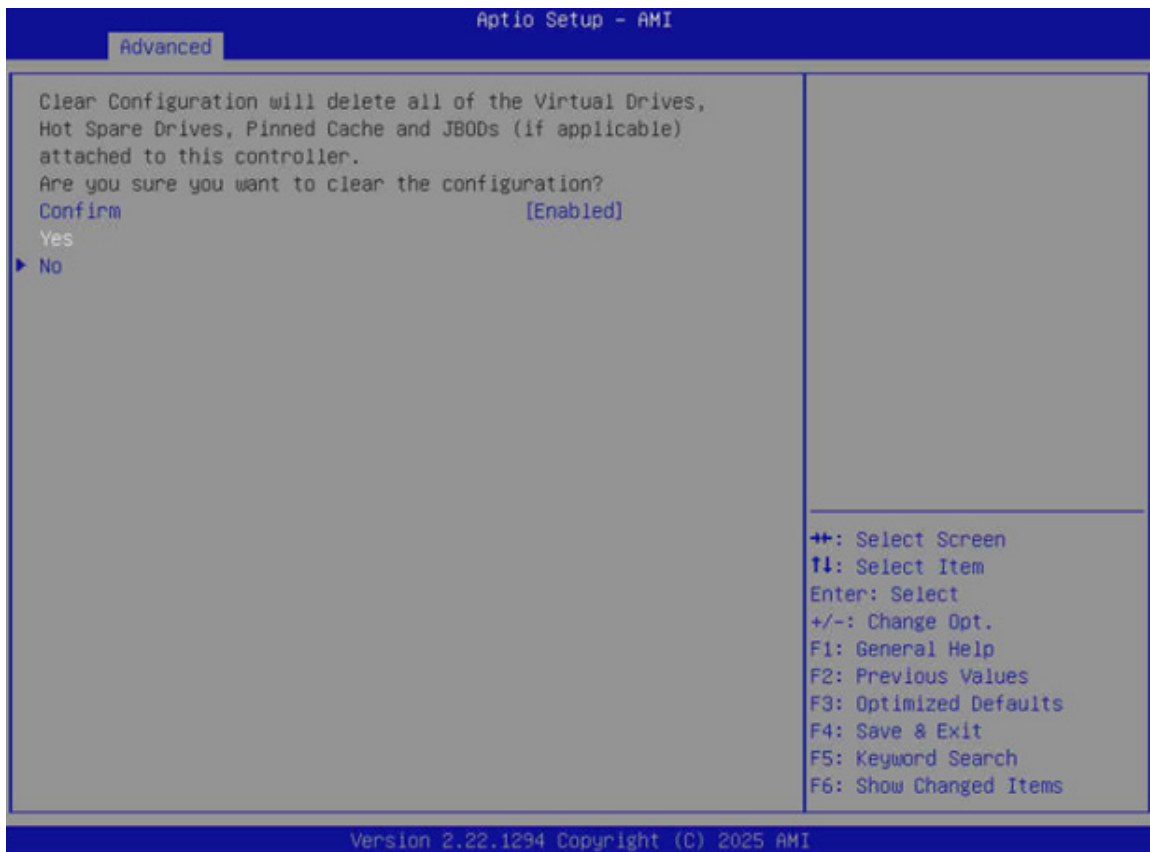



Figure 5-22: Yes Option Selected

- You will be presented with a window confirming that the operation has been performed successfully. Select **OK** to proceed and return to the main menu.



Figure 5-23: Confirmation Message

 **Note:** Updates may take a few minutes to complete. Be sure you see the confirmation window *first* before rebooting the system.

- Confirm that the RAID has been deleted.

5.5 Managing JBOD State

This add-on module is based on a SAS 3808N controller, and therefore supports a JBOD mode. Under certain conditions, such as when the add-on module is in JBOD mode, the drive state will then also change to JBOD. Use the arrow keys to highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page. Take the following steps to enable/disable JBOD mode:

1. Navigate to the **Advanced** tab, where the RAID Controller configurations can be managed.
2. Navigate to and select **BROADCOM <SAS 3808N> Configuration Utility**.

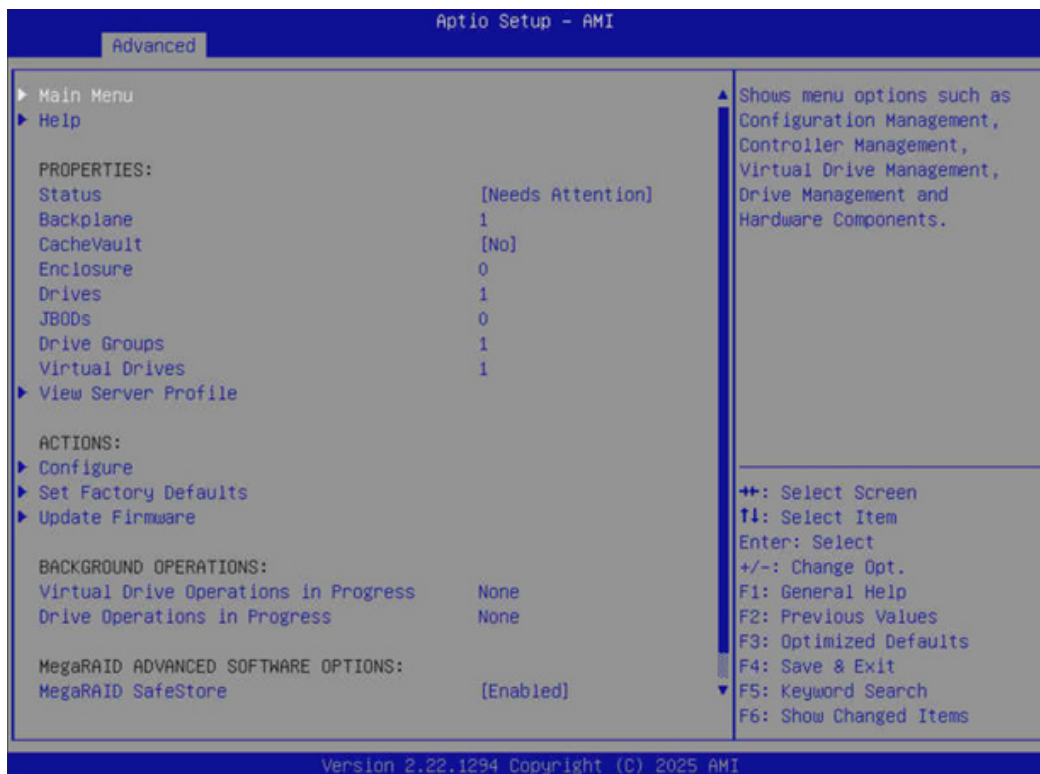


Figure 5-24: Main Menu Selected

3. Select **Controller Management**.

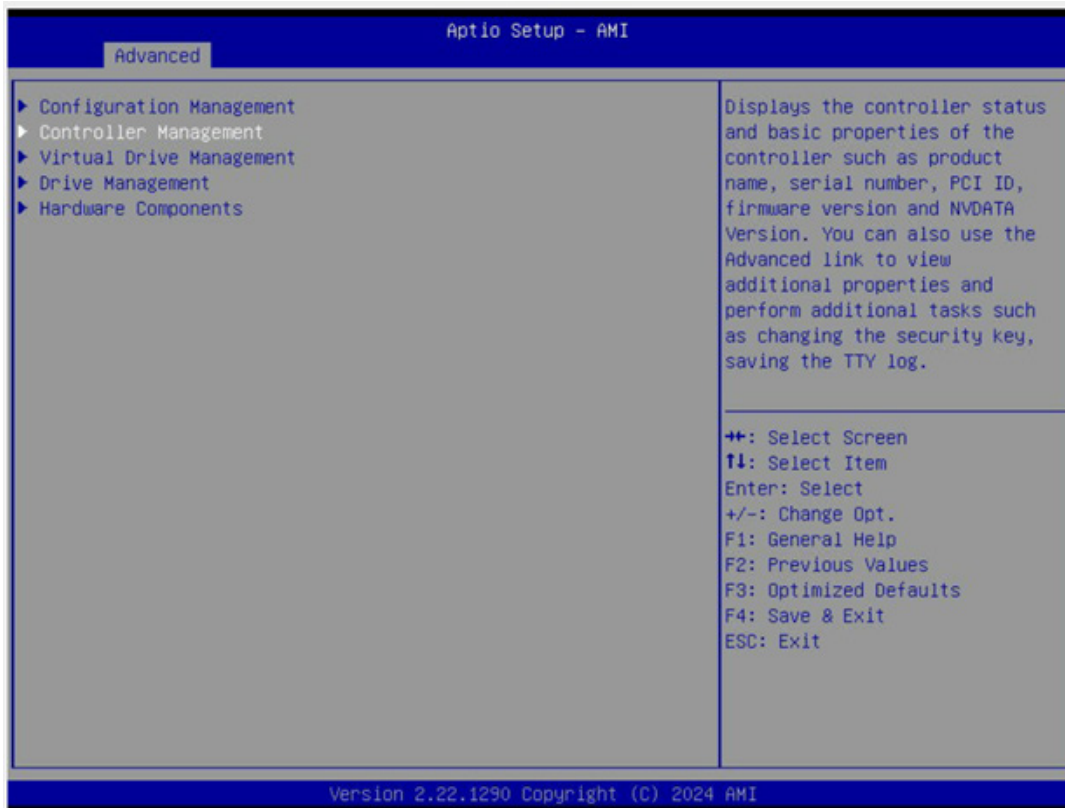


Figure 5-25: Controller Management Selected

4. Select **Advanced Controller Properties** to view and modify advanced controller properties.

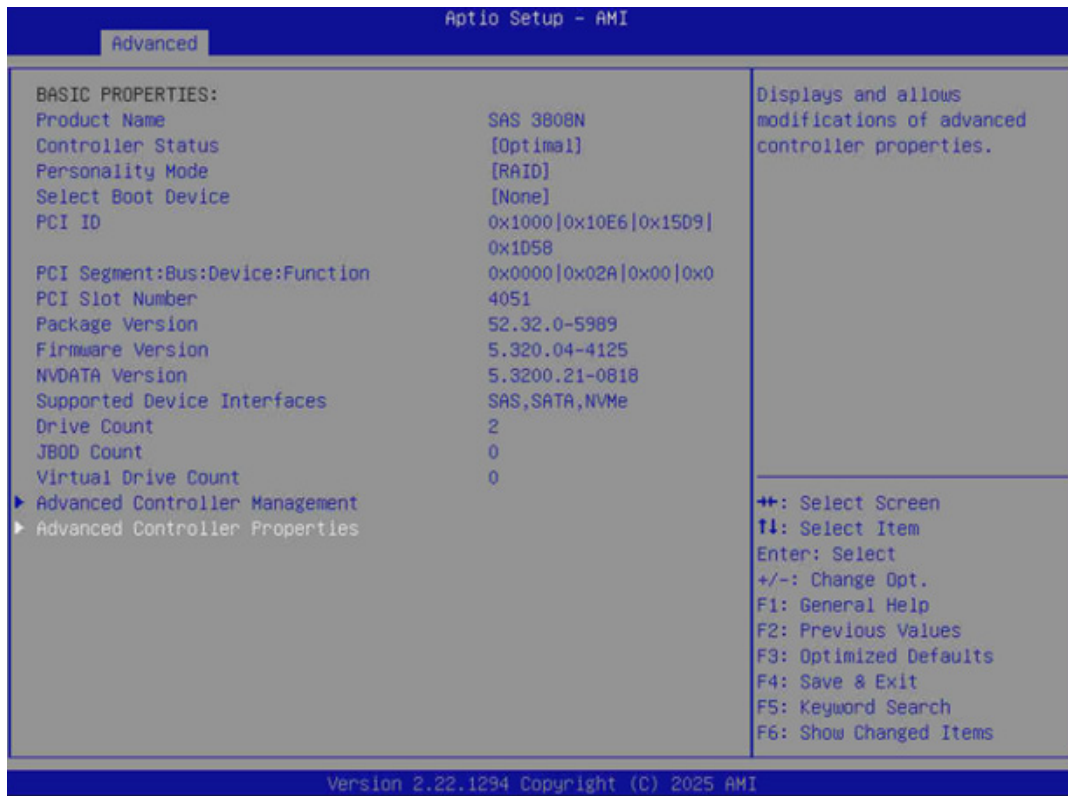


Figure 5-26: Advanced Controller Properties Selected

5. Select **JBOD Mode**.
6. Change the settings to **Disabled** or **Enabled**.

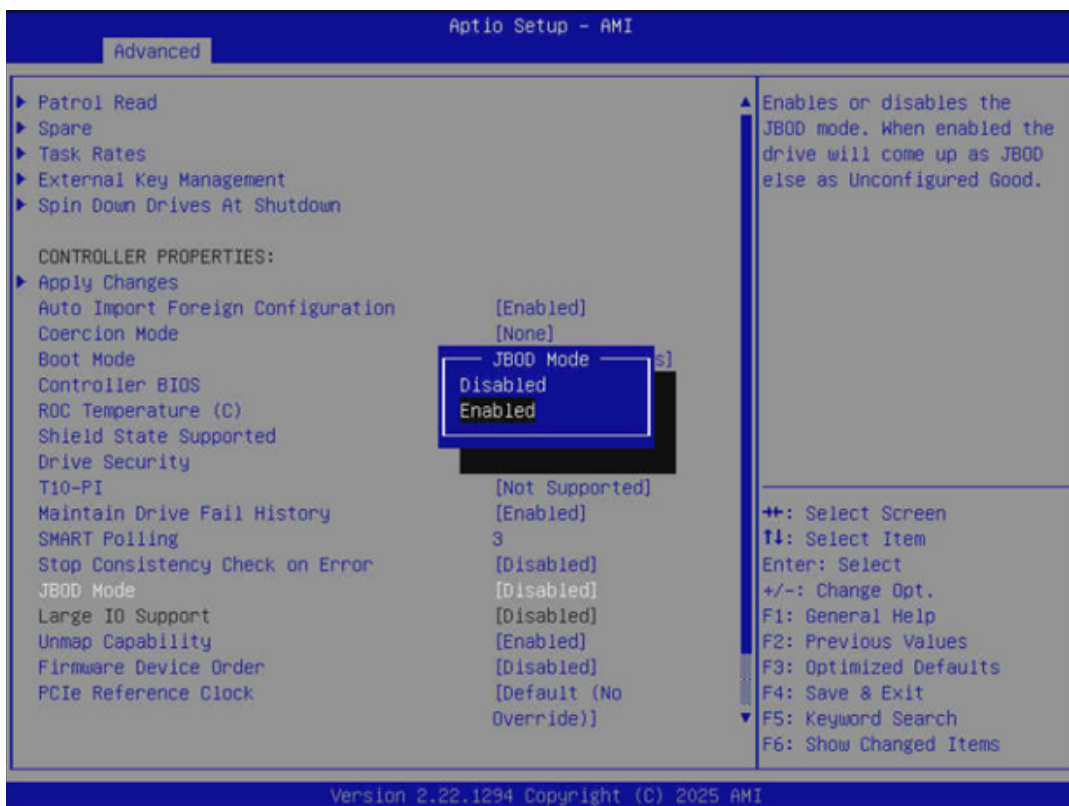


Figure 5-27: JBOD Mode State Menu

7. Confirm by selecting **Apply Changes**. If you do not want to proceed with changes, select **Cancel**.

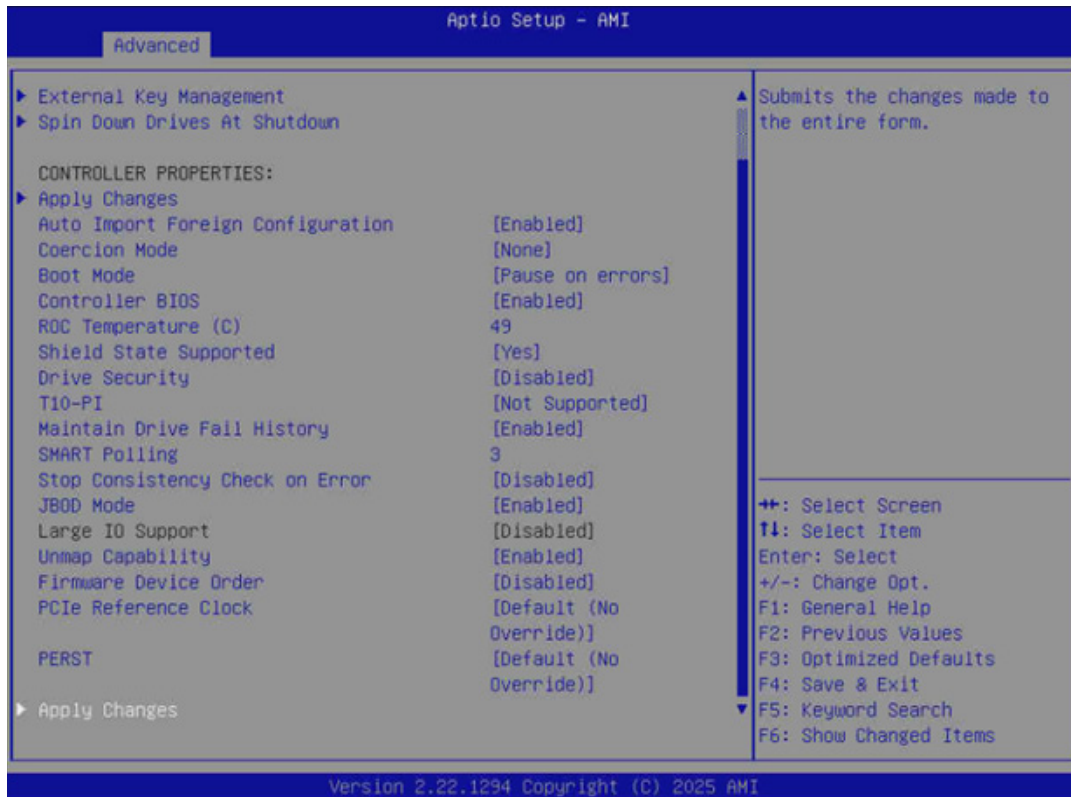



Figure 5-28: Apply Changes Selected

 **Note:** You can also enable or disable JBOD Mode by entering the following StorCLI commands.

```
storcli /cx set JBOD=on
```

```
storcli /cx set JBOD=off
```

- You will be presented with a window confirming that the operation has been performed successfully. Select **OK** to proceed and return to the main menu.


 **Note:** Updates may take a few minutes to complete. Be sure you see the confirmation window *first* before rebooting the system.



Figure 5-29: Confirmation Message

9. Once the JBOD mode is enabled for the add-on module, you can configure the JBOD. Navigate to the **Advanced** tab, where the RAID Controller configurations can be managed.
10. Navigate to and select **BROADCOM <SAS 3808N> Configuration Utility**.
11. Under BROADCOM <SAS 3808N> Configuration Utility's **Advanced** menu, select **Configure**.

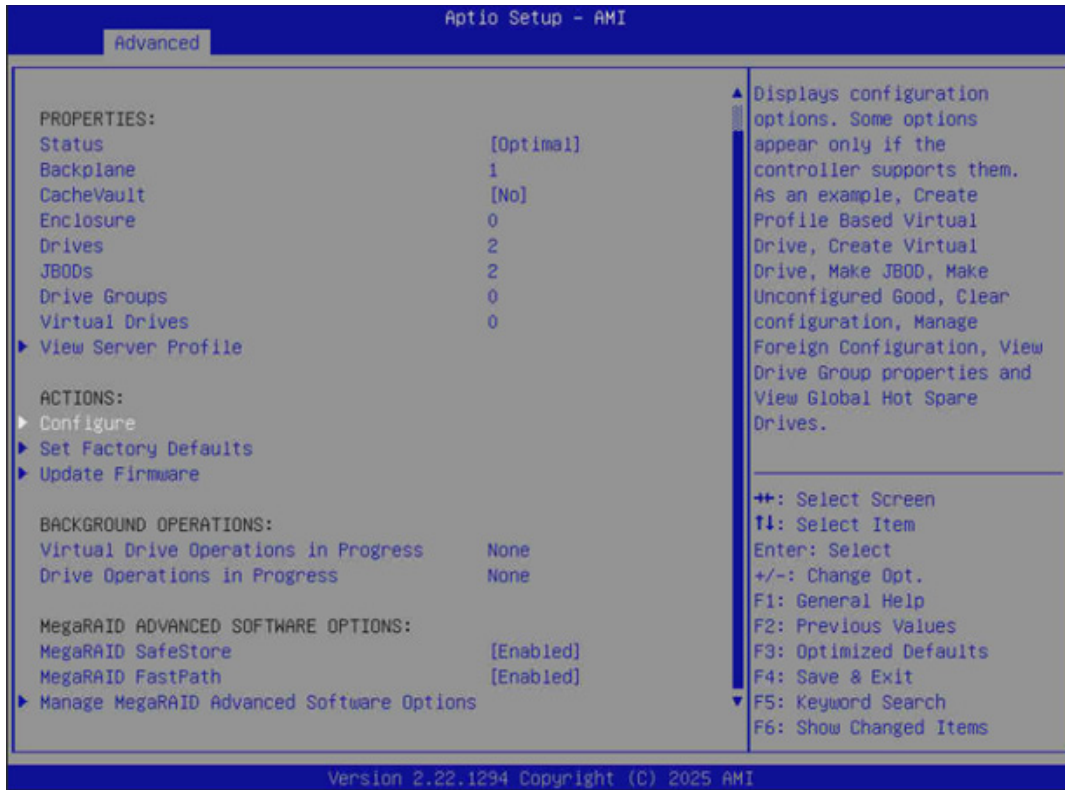
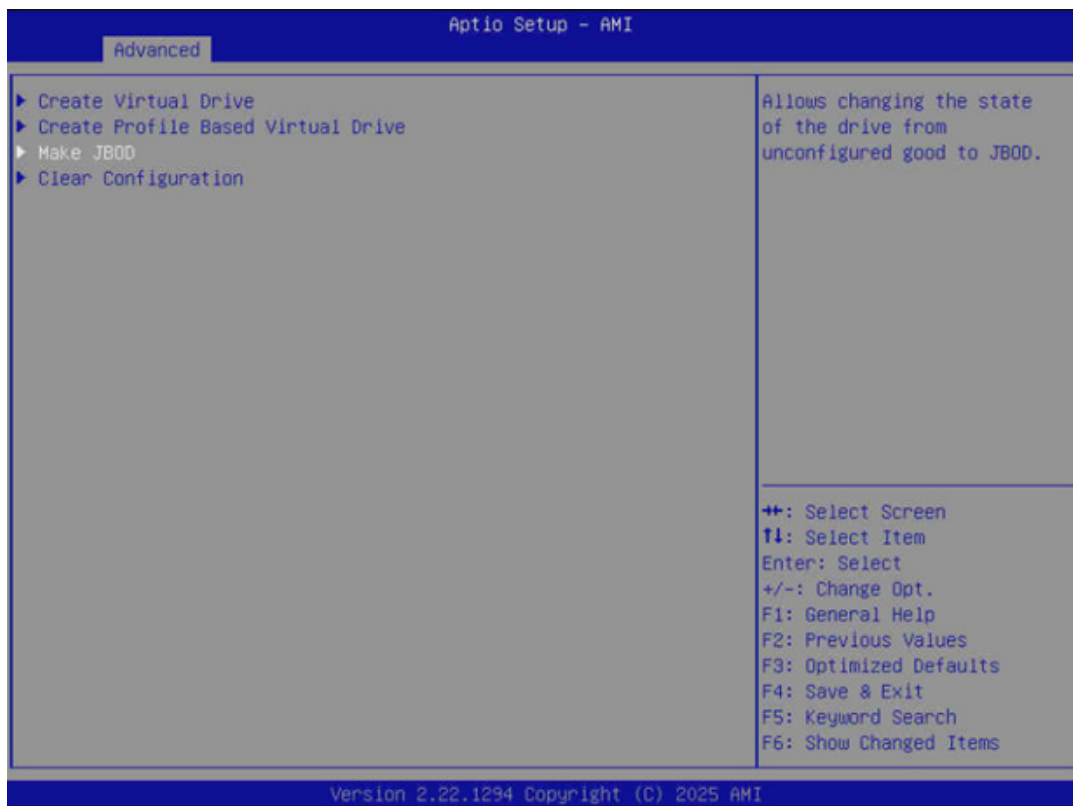


Figure 5-30: Configure Selected

12. Select **Make JBOD**.**Figure 5-31: Make JBOD Selected**

13. Select drive.

14. Choose **Enabled**.

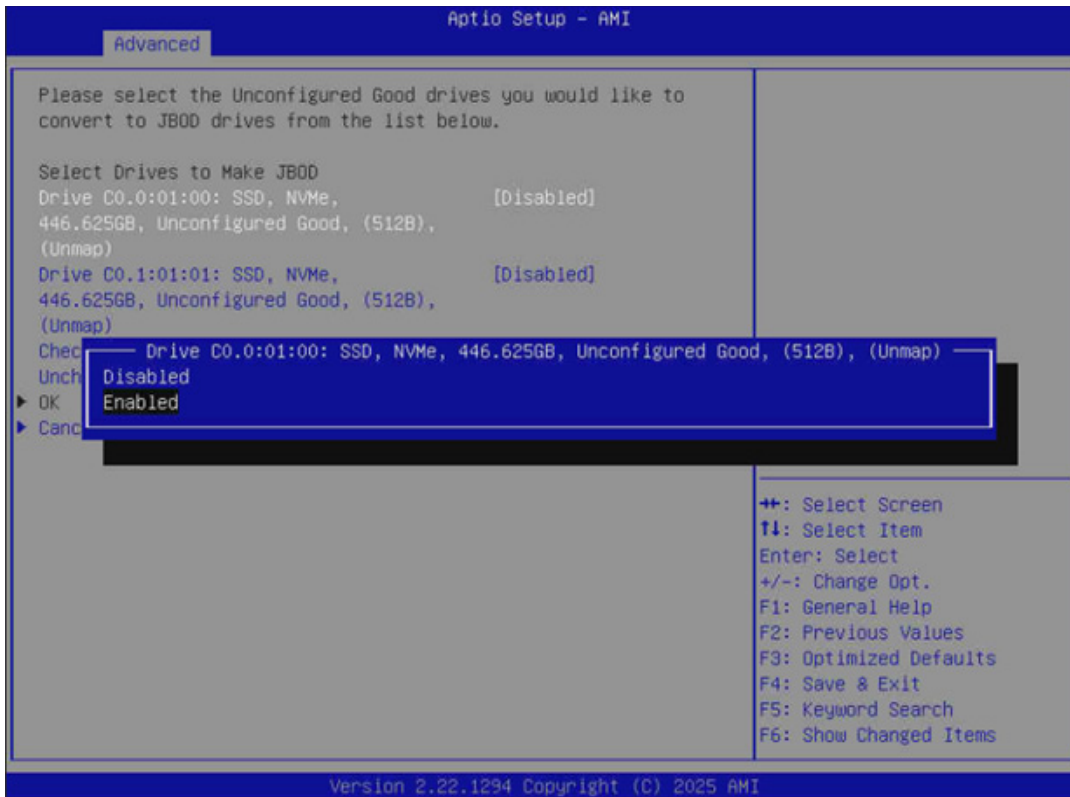


Figure 5-32: Enabled Selected

15. Select **OK** to commit to the changes.

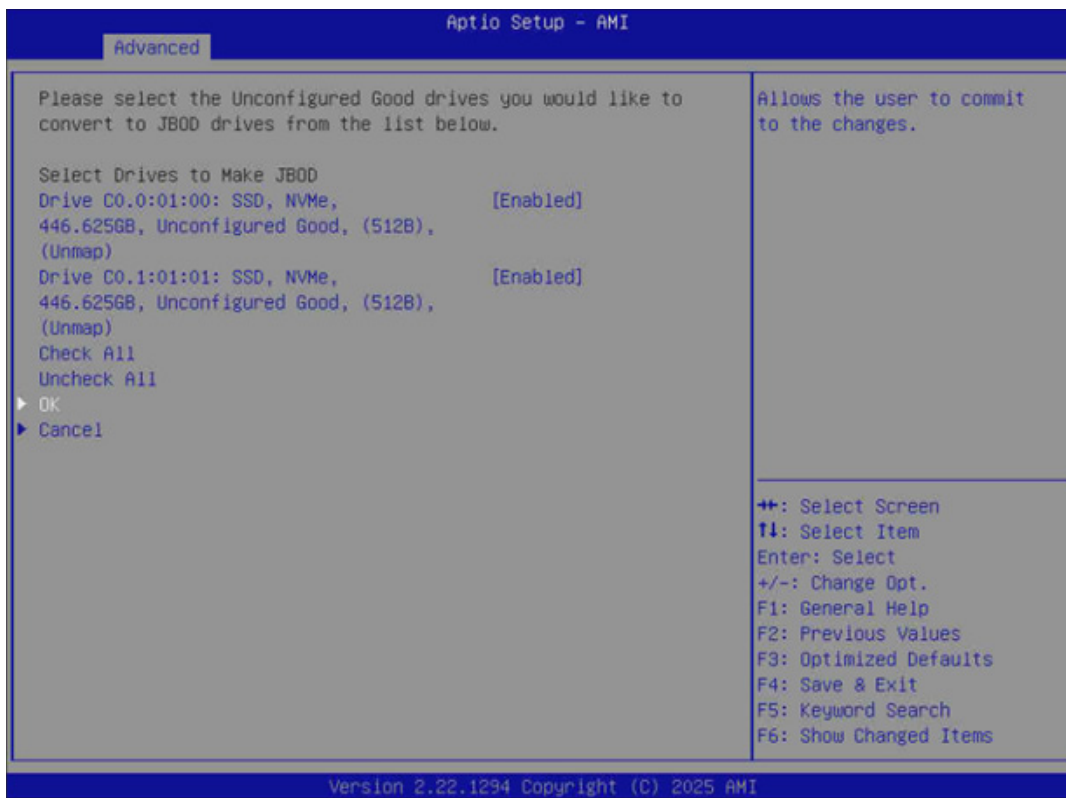



Figure 5-33: OK Option Selected

16. You will be presented with a window confirming that the operation has been performed successfully. Select **OK** to proceed and return to the main menu.

 **Note:** Updates may take a few minutes to complete. Be sure you see the confirmation window *first* before rebooting the system.

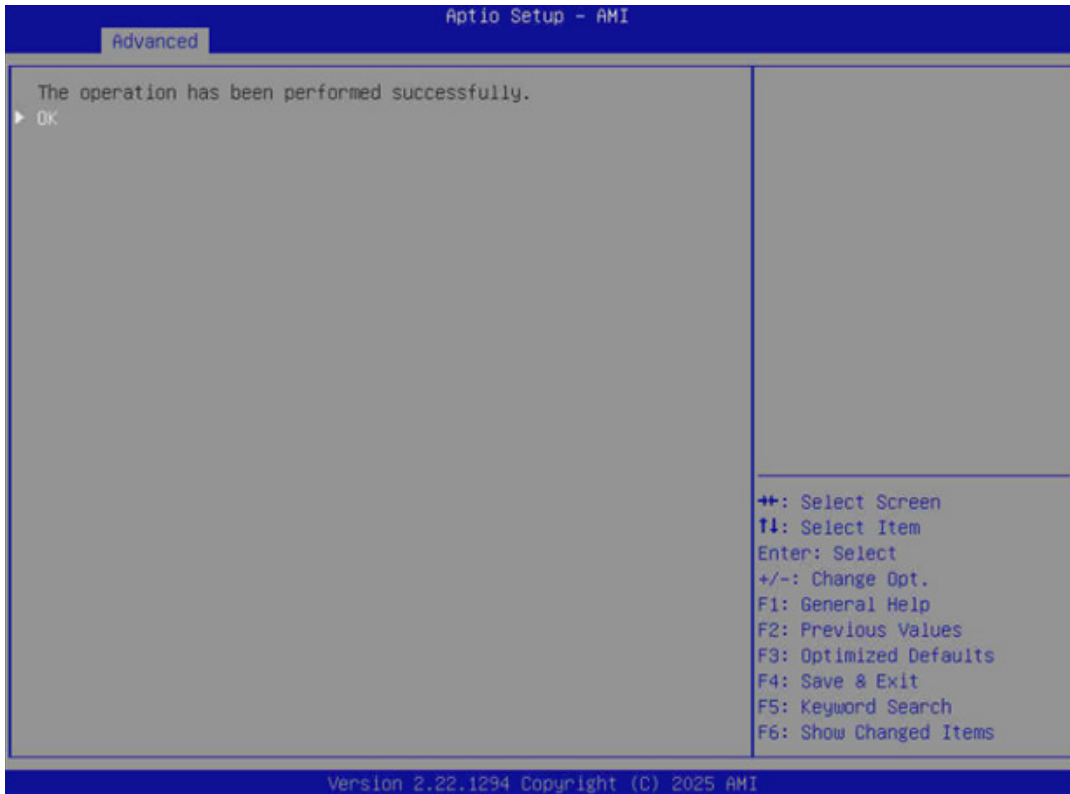


Figure 5-34: Confirmation Message

The drives will display the JBOD state in the listings.

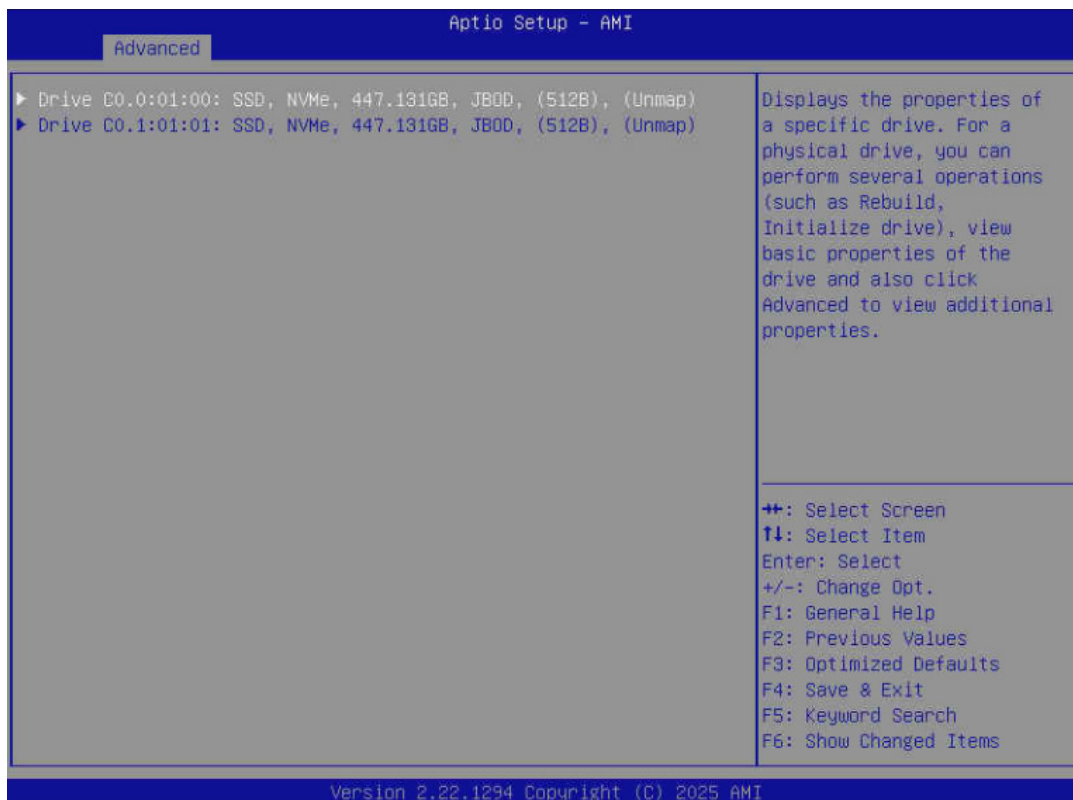


Figure 5-35: JBOD Created

5.6 Managing Unconfigured Good State

Under certain conditions, such as when the add-on module has been in JBOD mode, the drive state will change to JBOD. To build a Virtual Drive (VD) or RAID, the drive state must be reset to **Unconfigured Good**. To do so, JBOD Mode must first be disabled. Follow these steps to change the drive state to **Unconfigured Good**. Use the arrow keys to highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page.

1. Navigate to **Controller** to enter the **Main Menu**.
2. Select to enter **Drive Management**, which will list all drives. When **JBOD Mode** is enabled, the drive state will be **JBOD**.



Figure 5-36: Drive Management Selected

**Figure 5-37: Drive Selected**

3. Once the drive is chosen, select **Operation**. The options will include **Select operation**, **Start Locate**, **Stop Locate**, **Make Unconfigured Good**, and **Make Bootable Drive**.
4. Select **Make Unconfigured Good**.

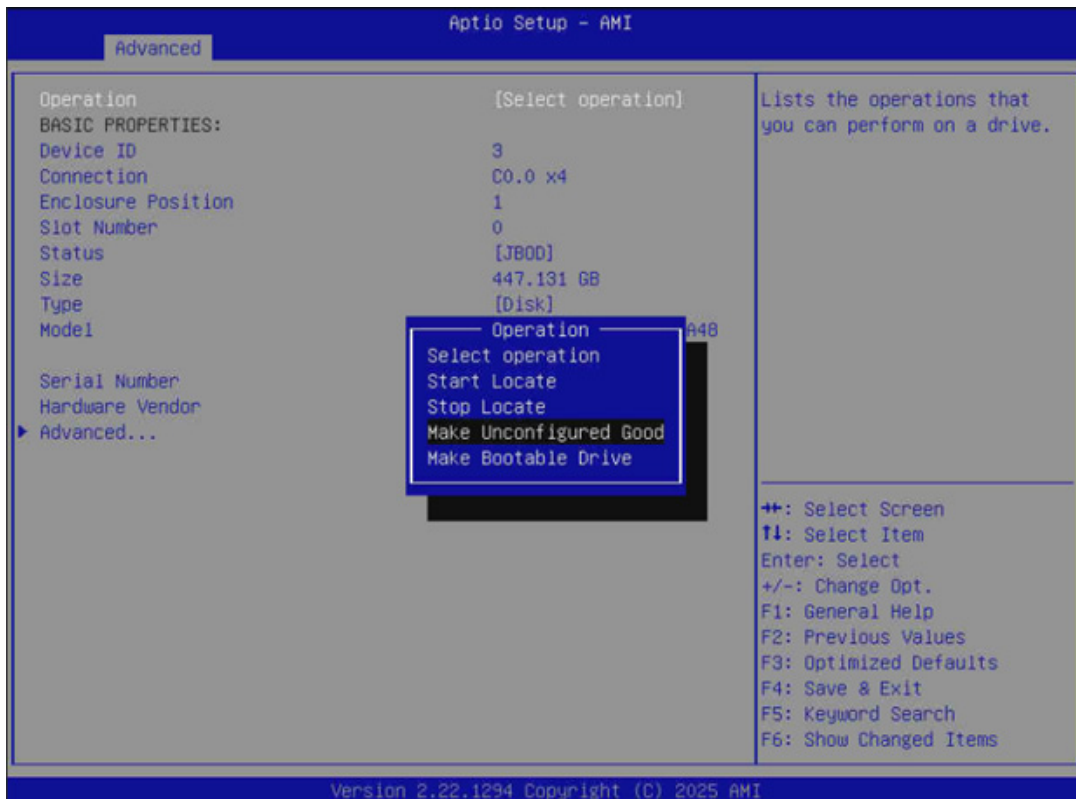


Figure 5-38: Make Unconfigured Good Selected

5. Select **Go**.

Figure 5-39: Go Option Selected

- You will be presented with a warning that any existing data in the JBOD drive will be lost if you proceed. To proceed and make the **Yes** option available to you, first select **Confirm**.
- Select **Enabled** to enable the **Yes** option.
- Select **Yes**. If you do not want to proceed with changes, select **No**.



Figure 5-40: Yes Option Selected



Note: You can also set the drive state as Unconfigured Goods by entering the following StorCLI command.

```
storcli /cx/ex/sx set good force
```

Chapter 6

Secure Boot Settings

Secure boot is a Unified Extensible Firmware Interface (UEFI) feature that ensures boot loaders are digitally signed and validated. This chapter provides instructions on how to enable the secure boot features. Use the arrow keys to highlight your chosen option, and click <Enter> to select. Click <Esc> to exit an option menu or return to the previous page.

6.1 Boot Mode Select Feature

1. Click during system boot to enter the **BIOS Setup Utility**.
2. Navigate to the **Boot** tab.
3. Select **Boot Mode Select**.
4. Set **Boot Mode Select** to **UEFI**.
5. For the changes to take effect, click <F4> to save the settings and exit the BIOS Setup Utility.

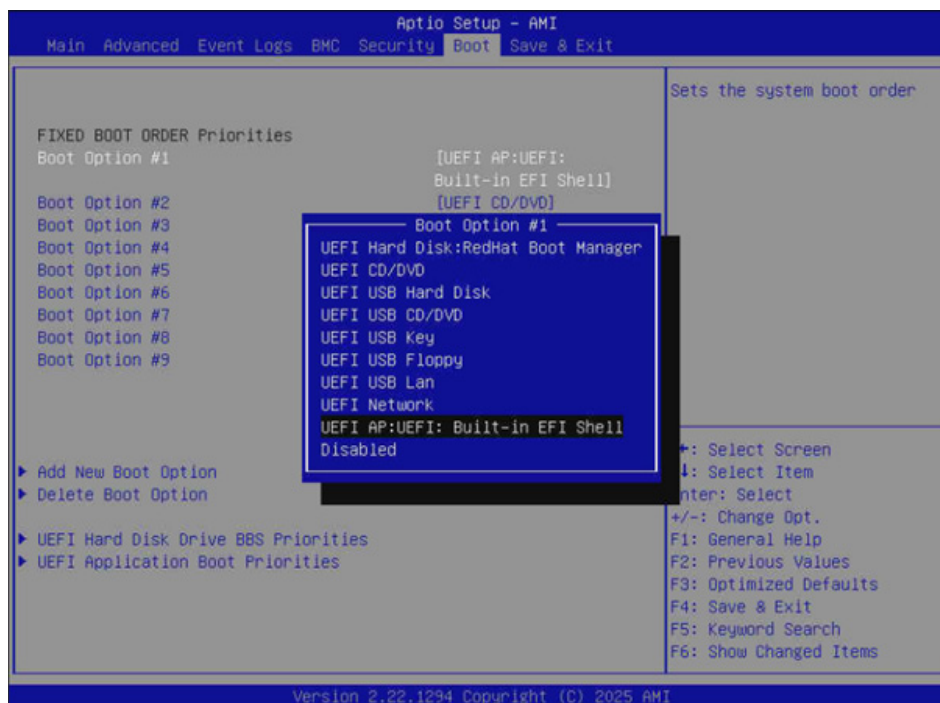


Figure 6-1: Boot Option #1 Menu

6.2 Secure Boot/Secure Boot Mode

1. Click **** during system boot to enter the **BIOS Setup Utility**.
2. Navigate to the **Security** tab.
3. Select **Secure Boot** to access the menu items. The following screen will appear.

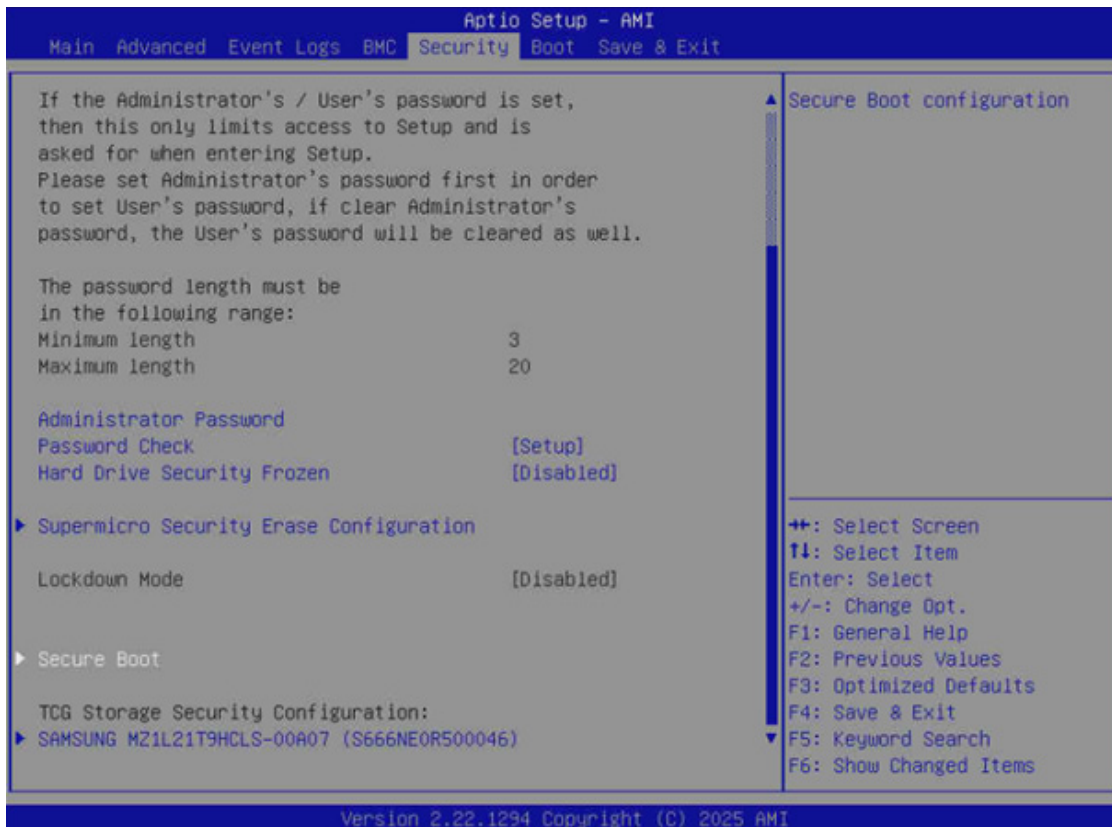
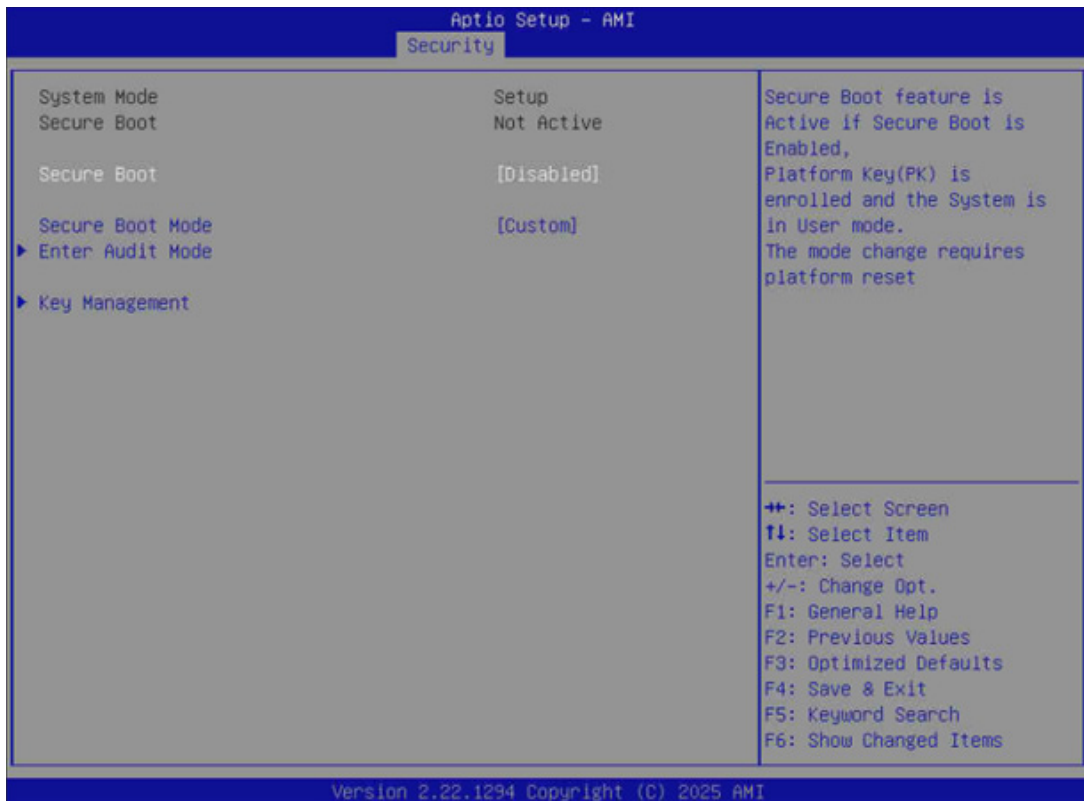


Figure 6-2: Selecting Secure Boot

**Figure 6-3: Secure Boot Option**

Secure Boot

This feature is available when the Platform Key (PK) is pre-registered, where the platform operates in the User mode in the BIOS Setup Utility. Select Enabled for secure boot flow control. The options are **Disabled** and Enabled.

Secure Boot Mode

Use this feature to set the secure boot mode. The options are Standard and **Custom**. Select Standard to load the manufacturer's default secure variables. Select Custom to change the image execution policy and to manage secure boot keys.

6.3 Secure Boot Settings

To have secure boot support, take the following steps:

1. Set **Secure Boot Mode** to **Standard**.

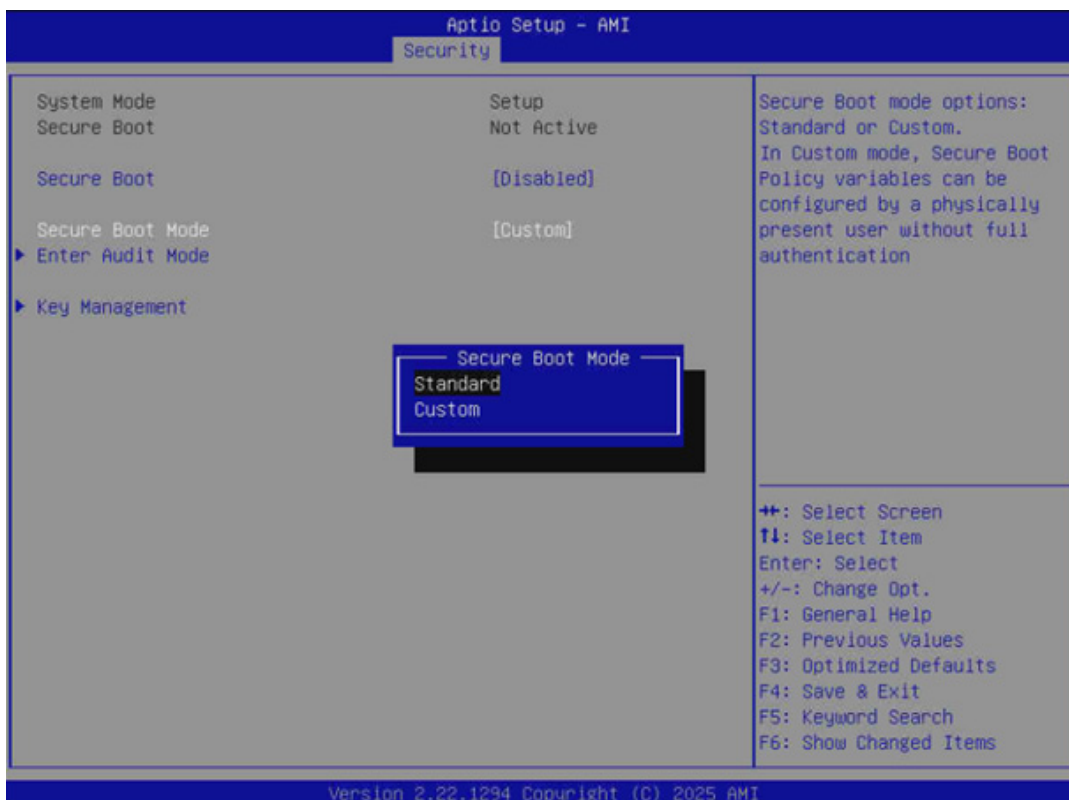



Figure 6-4: Secure Boot Standard Option Selected

2. Select **Yes** to install factory default keys as needed.

 **Note:** The Key Management menu will become unavailable when Secure Boot Mode is set to Standard.

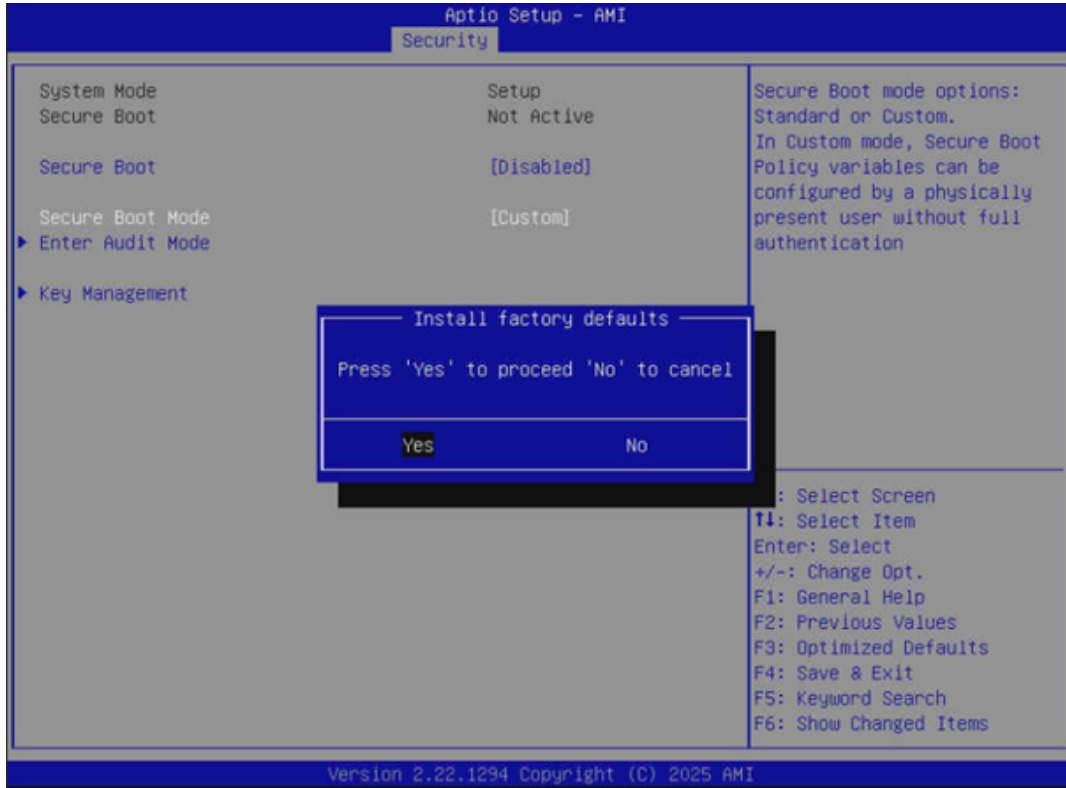


Figure 6-5: Install Factory Default Option Menu

3. Set **Secure Boot** to **Enabled**.

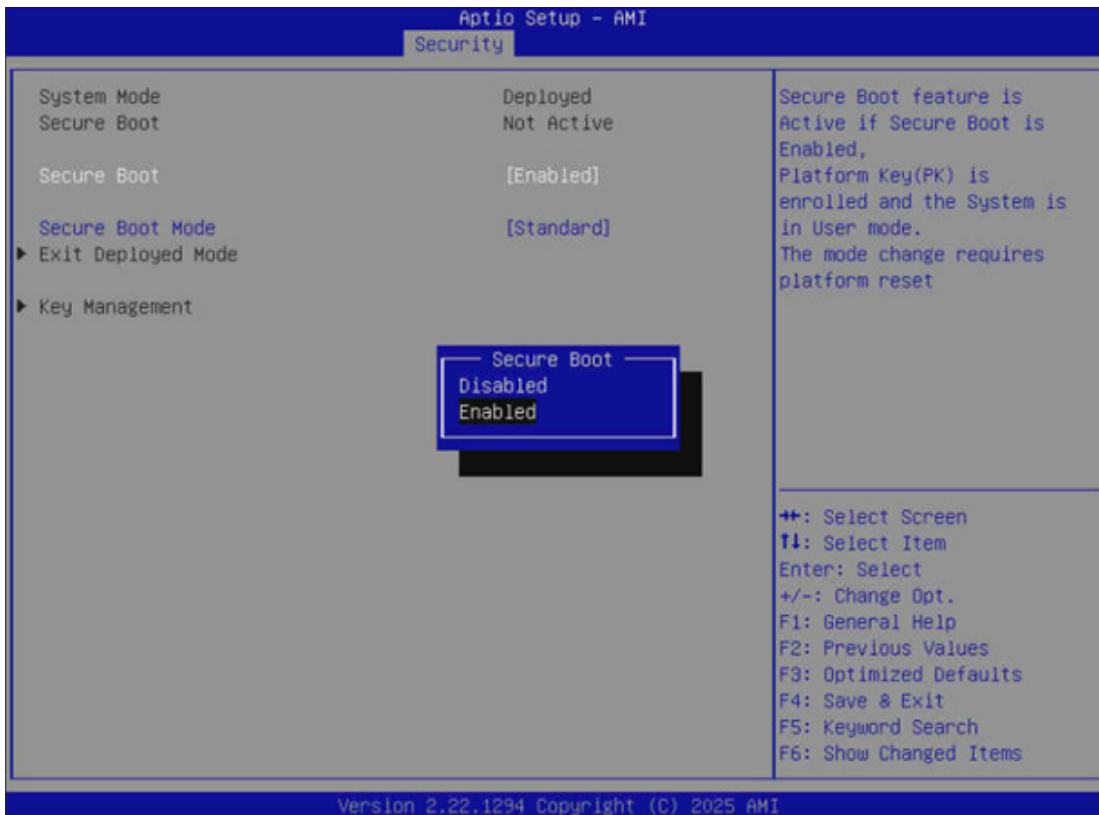


Figure 6-6: Secure Boot Enabled Option Selected

4. For the changes to take effect, click <F4> to save the settings and exit the **BIOS Setup Utility**.

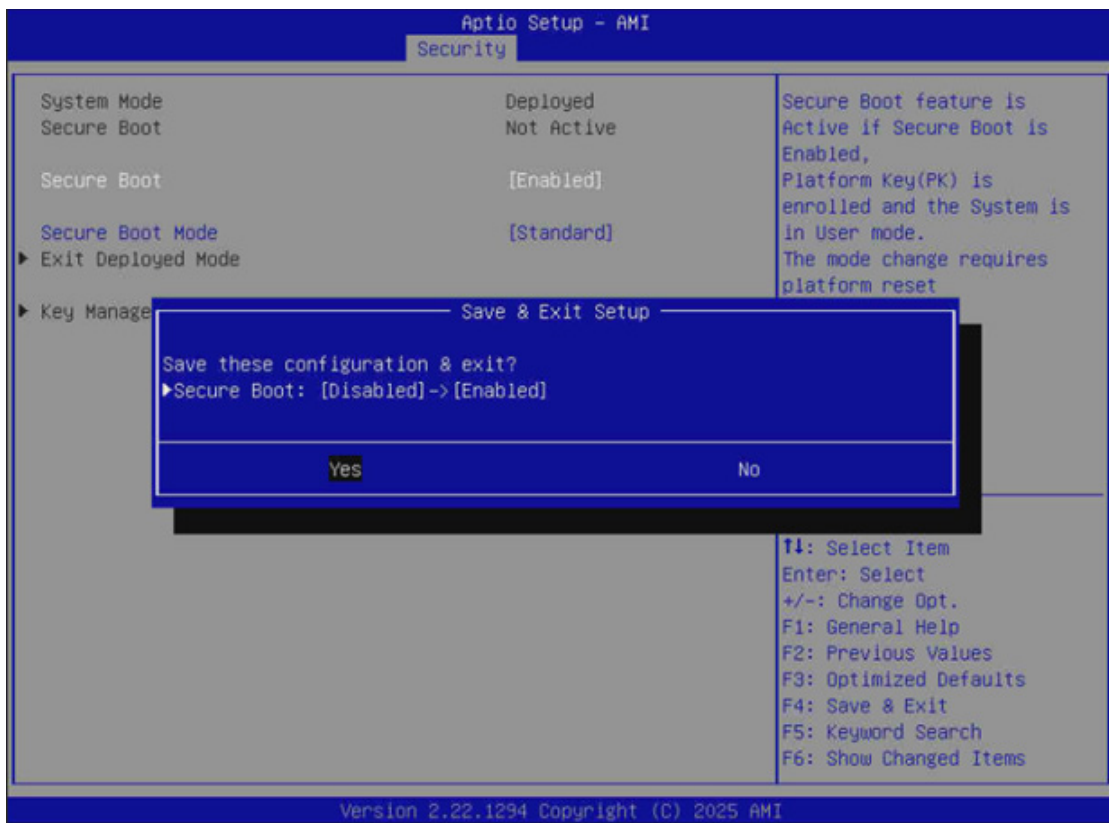


Figure 6-7: Save & Exit Confirmation Option Menu

5. Click **** during system boot to enter the **BIOS Setup Utility**.
6. Navigate to the **Security** tab.
7. Enter the **Secure Boot** menu. The following screen will appear

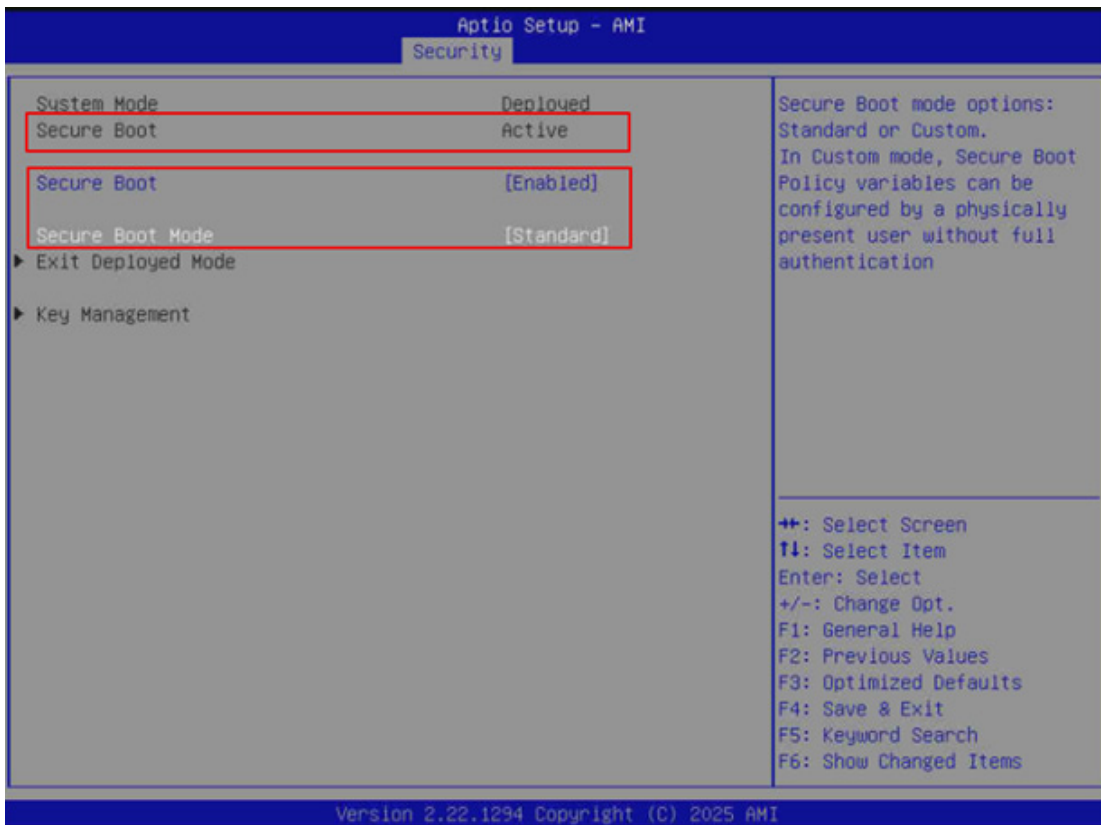


Figure 6-8: Secure Boot Menu

8. Now that Secure Boot is enabled, navigate to the **Advanced** tab.
9. Select **BROADCOM <SAS 3808> Configuration Utility**.

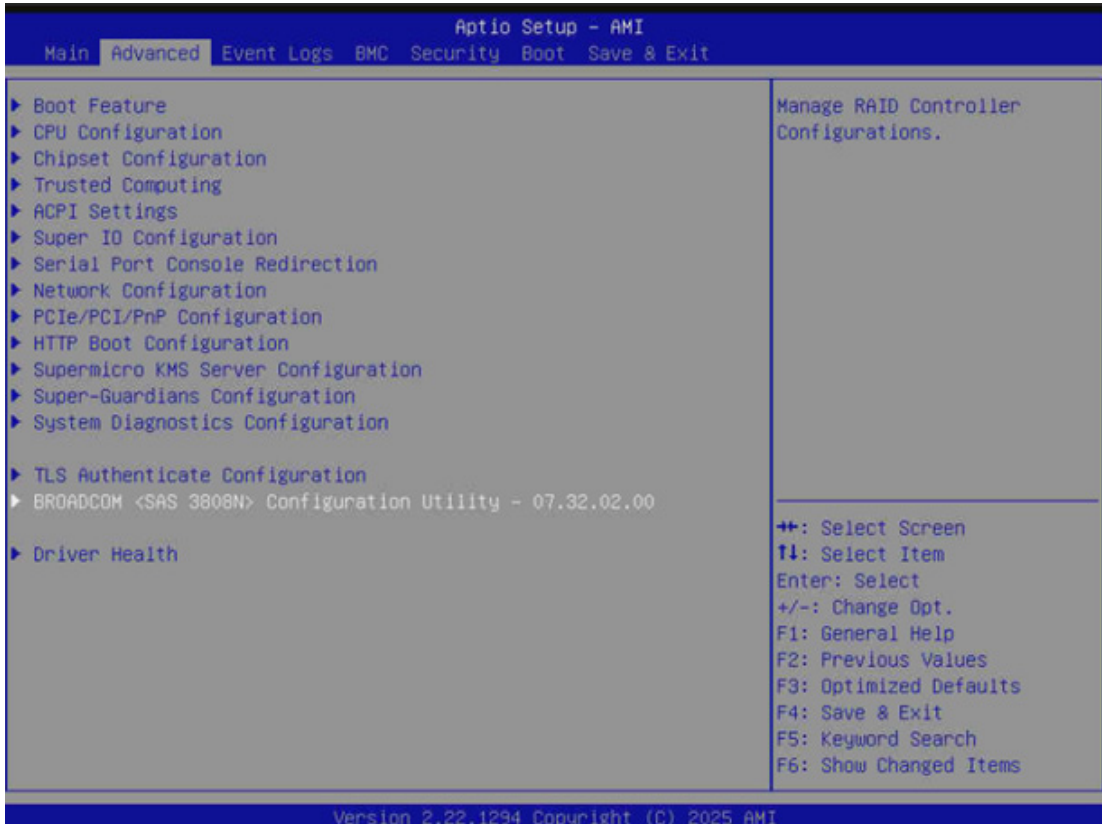


Figure 6-9: BROADCOM <SAS 3808> Configuration Utility Option Selected

The BROADCOM Configuration Utility Advanced Menu will appear as the following screen.

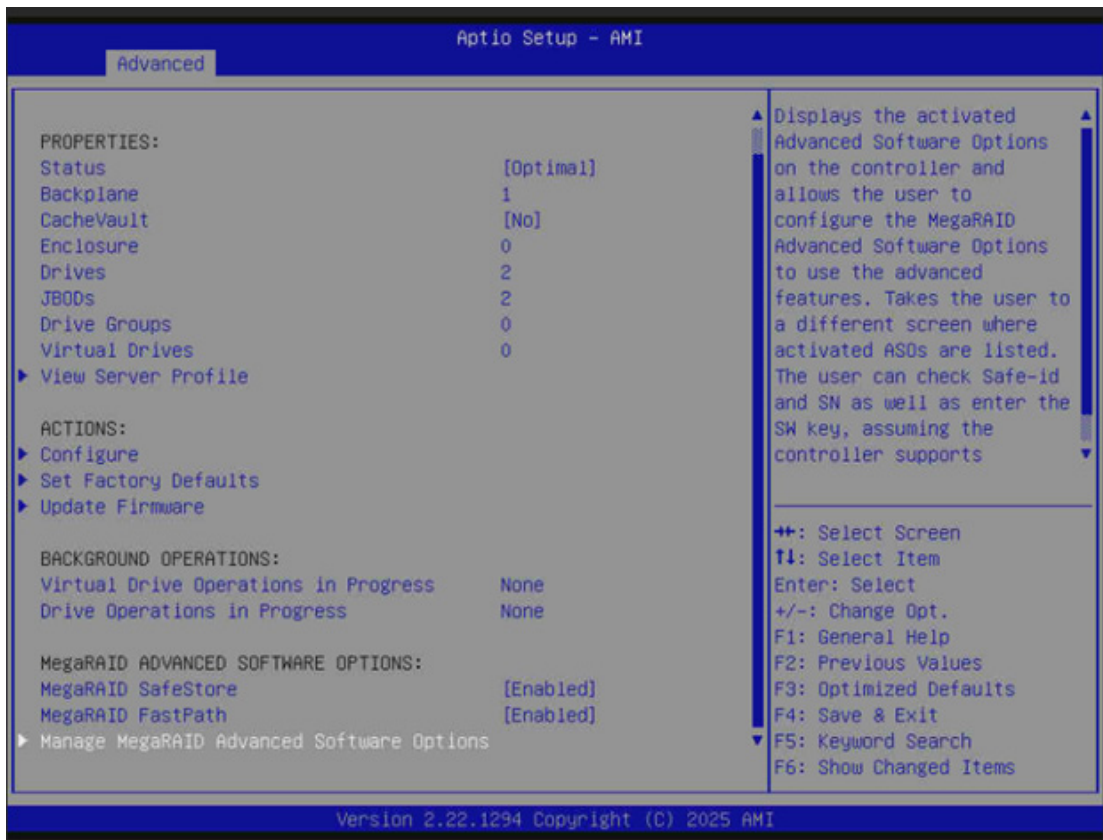


Figure 6-10: BROADCOM Configuration Utility Advanced Menu

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