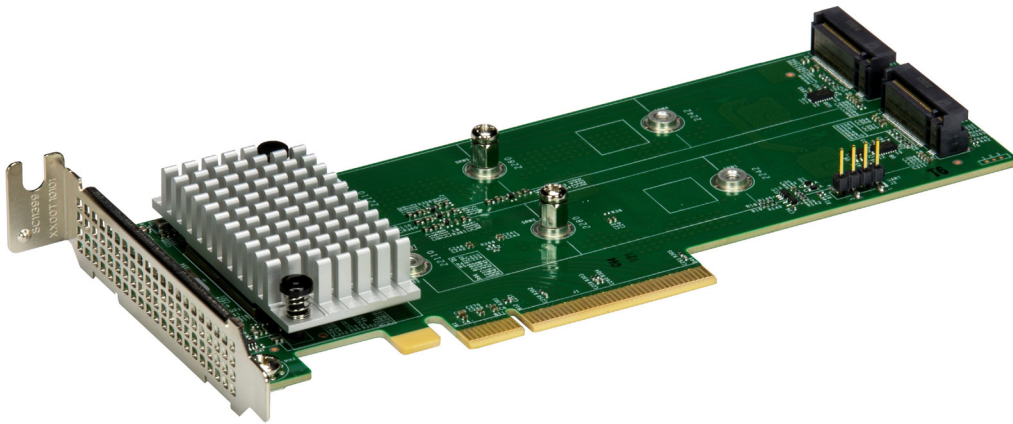




# AOC-SLG4-2H8M2



## USER'S MANUAL

Revision 1.0c

The information in this user's manual has been carefully reviewed and is believed to be accurate. The manufacturer assumes no responsibility for any inaccuracies that may be contained in this document, and makes no commitment to update or to keep current the information in this manual, or to notify any person or organization of the updates. **Please Note: For the most up-to-date version of this manual, please see our website at [www.supermicro.com](http://www.supermicro.com).**

Super Micro Computer, Inc. ("Supermicro") reserves the right to make changes to the product described in this manual at any time and without notice. This product, including software and documentation, is the property of Supermicro and/or its licensors, and is supplied only under a license. Any use or reproduction of this product is not allowed, except as expressly permitted by the terms of said license.

IN NO EVENT WILL Super Micro Computer, Inc. BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, SPECULATIVE OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OR INABILITY TO USE THIS PRODUCT OR DOCUMENTATION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN PARTICULAR, SUPER MICRO COMPUTER, INC. SHALL NOT HAVE LIABILITY FOR ANY HARDWARE, SOFTWARE, OR DATA STORED OR USED WITH THE PRODUCT, INCLUDING THE COSTS OF REPAIRING, REPLACING, INTEGRATING, INSTALLING OR RECOVERING SUCH HARDWARE, SOFTWARE, OR DATA.

Any disputes arising between manufacturer and customer shall be governed by the laws of Santa Clara County in the State of California, USA. The State of California, County of Santa Clara shall be the exclusive venue for the resolution of any such disputes. Supermicro's total liability for all claims will not exceed the price paid for the hardware product.

FCC Statement: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in industrial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

California Best Management Practices Regulations for Perchlorate Materials: This Perchlorate warning applies only to products containing CR (Manganese Dioxide) Lithium coin cells. "Perchlorate Material-special handling may apply. See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)".



**WARNING:** This product can expose you to chemicals including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

The products sold by Supermicro are not intended for and will not be used in life support systems, medical equipment, nuclear facilities or systems, aircraft, aircraft devices, aircraft/emergency communication devices or other critical systems whose failure to perform be reasonably expected to result in significant injury or loss of life or catastrophic property damage. Accordingly, Supermicro disclaims any and all liability, and should buyer use or sell such products for use in such ultra-hazardous applications, it does so entirely at its own risk. Furthermore, buyer agrees to fully indemnify, defend and hold Supermicro harmless for and against any and all claims, demands, actions, litigation, and proceedings of any kind arising out of or related to such ultra-hazardous use or sale.

Manual Revision 1.0c

Release Date: January 06, 2025

Unless you request and receive written permission from Super Micro Computer, Inc., you may not copy any part of this document. Information in this document is subject to change without notice. Other products and companies referred to herein are trademarks or registered trademarks of their respective companies or mark holders.

Copyright © 2025 by Super Micro Computer, Inc.  
All rights reserved.

**Printed in the United States of America**

# 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 AOC-SLG4-2H8M2.

## About This Add-On Card

The Supermicro® AOC-SLG4-2H8M2 is a PCIe Gen 4.0 x8 M.2 SSD carrier card that enables the user to add up to two NVMe or SATA M.2 SSDs with RAID 0 and RAID 1. Leveraging the cutting-edge power of PCI Express 4.0 technology, the M.2 solid state technology is an optimized, high-performance, scalable storage solution.

## 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 card 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 below 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](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/](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](mailto: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](mailto: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 for Storage Adapters

<b>AOC-</b>	<b>S</b>	<b>L</b>	<b>G3</b>	<b>-</b>	<b>2</b>	<b>E4R</b>	<b>-</b>	<b>F</b>
<b>Prefix</b>	<b>1st</b>	<b>2nd</b>	<b>3rd</b>		<b>4th</b>	<b>5th</b>		<b>6th</b>

Character (Set)	Representation	Options (NVMe AOC)
Prefix	Product Family	<ul style="list-style-type: none"> <li>• AOC = Add On Card</li> </ul>
1st	Interface Type	<ul style="list-style-type: none"> <li>• S = Standard PCI-E</li> </ul>
2nd	Tray Height / Form Factor	<ul style="list-style-type: none"> <li>• M = Proprietary size</li> <li>• L = Low Profile</li> <li>• H = Full Height</li> </ul>
3rd	Generation	<ul style="list-style-type: none"> <li>• G3 = PCI-E Gen3</li> <li>• G4 = PCI-E Gen4</li> <li>• G5 = PCI-E Gen5</li> </ul>
4th	Number of Ports	<ul style="list-style-type: none"> <li>• 2 = 2 ports</li> <li>• 4 = 4 ports</li> <li>• 8 = 8 ports</li> </ul>
5th	HBA Type and Connector	<ul style="list-style-type: none"> <li>• E4 = Switch, Mini-SAS HD</li> <li>• E4R = Redriver, Mini-SAS HD</li> <li>• E4T = Retimer, OCuLink (PCI-E Gen3) or SlimSAS (PCI-E Gen4)</li> <li>• E2P = Switch, OCuLink</li> <li>• X4P = Switch, External Mini-SAS HD</li> <li>• X4T = Retimer, External Mini-SAS HD</li> <li>• M2 = Pass Thru and RAID HBA, M.2 M-Key Socket</li> <li>• H8M2 = Hybrid NVMe/SATA, M.2 M-Key Socket</li> <li>• SM2 = SATA, M.2 M-Key Socket</li> <li>• NM2 = NVMe, M.2 M-Key Socket</li> <li>• M2P = Switch, M.2 M-Key Socket</li> <li>• E1S = E1.S/E3.S Socket</li> </ul>
6th	Form Factor	<ul style="list-style-type: none"> <li>• B/BW = BigTwin™ form factor (1U node height)</li> <li>• BW2 = BigTwin™ form factor (2U node height)</li> <li>• U = Ultra form factor</li> <li>• F = Unique form factor</li> </ul>

## Contacting Supermicro

### Headquarters

Address: Super Micro Computer, Inc.  
980 Rock Ave.  
San Jose, CA 95131 U.S.A.

Tel: +1 (408) 503-8000

Fax: +1 (408) 503-8008

Email: marketing@supermicro.com (General Information)  
Sales-USA@supermicro.com (Sales Inquiries)  
Government\_Sales-USA@supermicro.com (Gov. Sales Inquiries)  
support@supermicro.com (Technical Support)  
RMA@supermicro.com (RMA Support)  
Webmaster@supermicro.com (Webmaster)

Website: [www.supermicro.com](http://www.supermicro.com)

### Europe

Address: Super Micro Computer B.V.  
Het Sterrenbeeld 28, 5215 ML  
's-Hertogenbosch, The Netherlands

Tel: +31 (0) 73-6400390

Fax: +31 (0) 73-6416525

Email: Sales\_Europe@supermicro.com (Sales Inquiries)  
Support\_Europe@supermicro (Technical Support)  
RMA\_Europe@supermicro (RMA Support)

Website: [www.supermicro.nl](http://www.supermicro.nl)

### Asia-Pacific

Address: Super Micro Computer, Inc.  
3F, No. 150, Jian 1st Rd.  
Zhonghe Dist., New Taipei City 235  
Taiwan (R.O.C)

Tel: +886-(2) 8226-3990

Fax: +886-(2) 8226-3992

Email: Sales-Asia@supermicro.com.tw (Sales Inquiries)  
Support@supermicro.com.tw (Technical Support)  
RMA@supermicro.com.tw (RMA Support)

Website: [www.supermicro.com.tw](http://www.supermicro.com.tw)

---

---

# Table of Contents

## ***Chapter 1 Introduction***

1.1 Overview.....	8
1.2 Key Features.....	8

## ***Chapter 2 Hardware Components***

2.1 Add-On Card Image and Layout.....	10
2.2 Major Components.....	11
2.3 M.2 Connectors.....	12
2.4 Front LED Indicators.....	15
2.5 Standoffs.....	21
2.6 PCIe 4.0 x8 Connector.....	22

## ***Chapter 3 Installation***

3.1 Static-Sensitive Devices.....	23
3.2 Before Installation.....	24
3.3 Installing Controller Cards.....	25
3.4 Installing the Drivers in Windows.....	28
3.5 Uninstalling the Drivers.....	28

## ***Chapter 4 Configuring the Broadcom 3808 iMR Settings***

4.1 RAID Minimum Drive Requirements.....	29
4.2 Using the Broadcom <SAS 3808> Configuration Utility.....	30
4.3 Managing Physical Drive.....	34
4.4 Creating a Virtual Drive.....	36
4.5 Managing JBOD State.....	45
4.6 Managing Unconfigured Good State.....	49

## ***Chapter 5 Secure Boot Settings***

5.1 Boot Mode Select Feature.....	54
5.2 Secure Boot/Secure Boot Mode/CSM Support Features.....	55
5.3 Secure Boot Settings.....	57

# Chapter 1

## Introduction

### 1.1 Overview

Congratulations on purchasing your add-on card 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/networking/adapters>.

### 1.2 Key Features

The key features of the AOC-SLG4-2H8M2 add-on card include the following:

#### General

- Broadcom® SAS3808 I/O RAID controller
- PCIe Gen4 x8 Host interface
- Dual M-Key sockets (for two M.2 SSD)
- Adjustable stand-offs supporting 22110, 2280, and 2242 M.2 SSD form factors
- Support NVMe Gen 4 (16 Gbps) M.2 modules and SATA Gen 3 (6 Gbps) M.2 modules
- Supports RAID 0 and RAID 1
- Support MCTP over PCIe/I2C
- Support BMC-enabled management
- Support Secure Erase
- Support Hardware Secure Boot
- Support on-board LEDs for SSD Activity and Status
- UEFI Configuration utility
- Thermal operating range: System dependent (55°C or higher with enough airflow)

## **OS Support**

- Windows, Linux, and VMWare

## **Physical Dimensions**

- Card PCB dimensions: 6.6" x 2.71" (167.64 mm x 68.83 mm) (L x W)

# Chapter 2

## Hardware Components

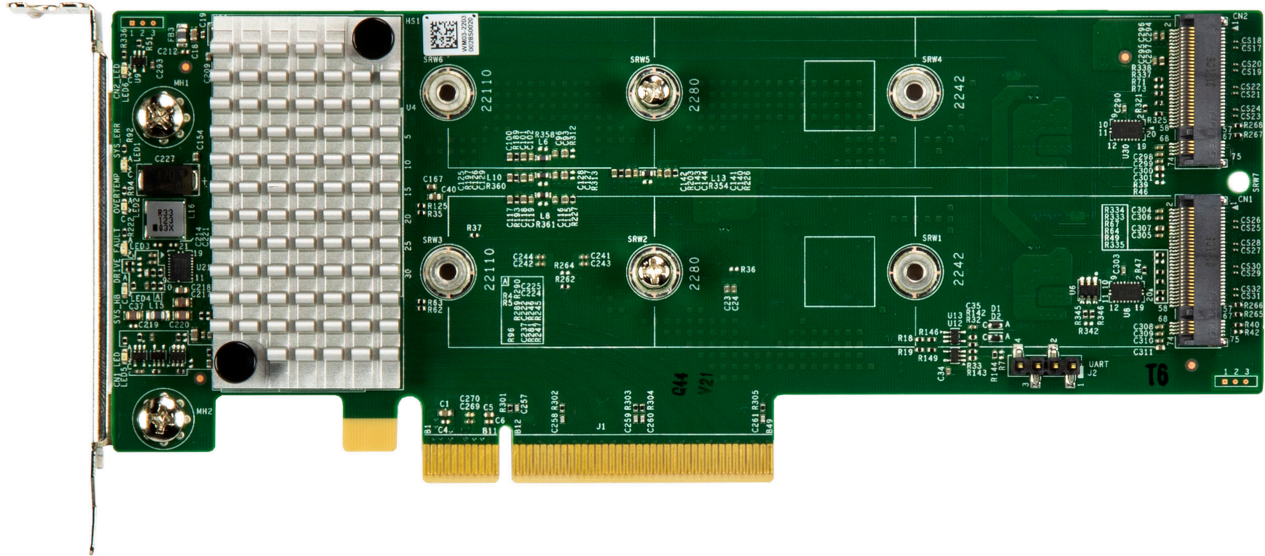


Figure 2-1: AOC-SLG4-2H8M2

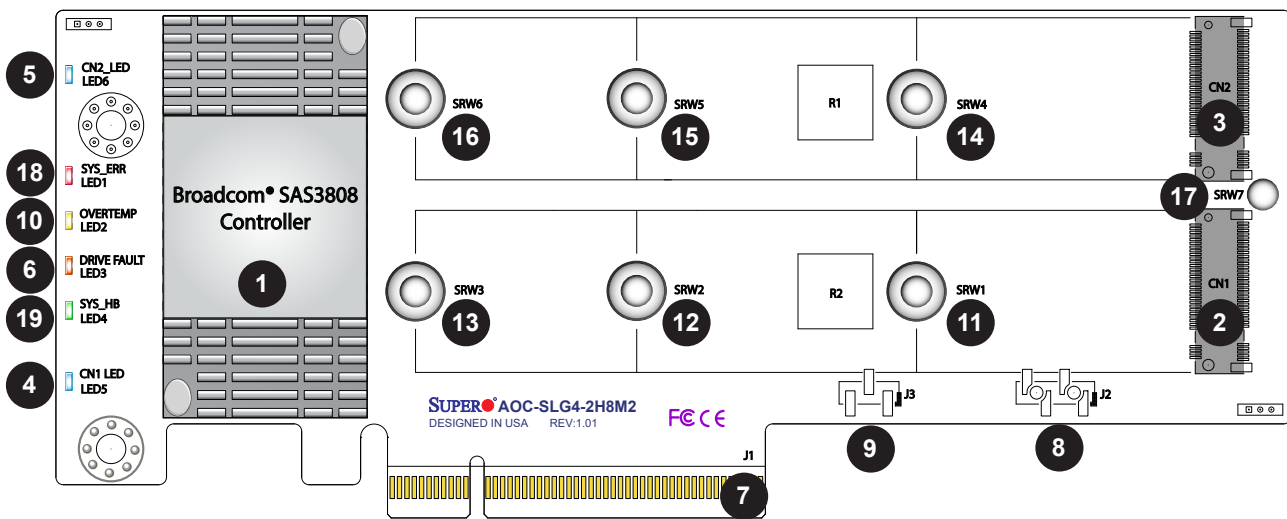


Figure 2-2: AOC-SLG4-2H8M2 Layout

## 2.2 Major Components

The following major components are installed on the AOC-SLG4-2H8M2:

AOC-SLG4-2H8M2 Major Components		
No	Component Name	Definition
1	Broadcom SAS3808 Controller	Broadcom SAS3808 I/O RAID Controller
2	CN1	M.2 Connector 1
3	CN2	M.2 Connector 2
4	CN1_LED (LED5)	Connector 1 Activity LED
5	CN2_LED (LED6)	Connector 2 Activity LED
6	DRIVE FAULT (LED3)	Drive Fault LED
7	J1	PCIe Gen 4.0 x8 connector
8	J2	UART Header
9	J3	SBL Jumper
10	OVERTEMP (LED2)	Overtemp LED
11	SRW1	Screw 1
12	SRW2	Screw 2
13	SRW3	Screw 3
14	SRW4	Screw 4
15	SRW5	Screw 5
16	SRW6	Screw 6
17	SRW7	Screw 7
18	SYS_ERR (LED1)	System Fault LED
19	SYS_HB (LED4)	Heartbeat LED



**Note:** AOC-SLG4-2H8M2 carries a SAS 3808 chipset, a 12 Gb/s SAS/SATA controller. Thus NVMe M.2s populated on the carrier are exposed with SAS addresses and recognized as SATA devices or SAS drives by OS or BIOS.

## 2.3 M.2 Connectors

### M.2 Sockets

This controller card has two M.2 sockets (CN1/CN2) for the two corresponding M.2 slots. CN1 supports Slot 0, and CN2 supports Slot 1. Besides the table below, see Figure 2-4 for the mapping between M.2 socket (CN1/CN2) and M.2 slot (Slot 0/Slot 1) in IPMI or other management utilities. Each slot supports three types of M.2 SSD lengths, and you can refer to section 2.5 for more information.

M.2 Connector Definitions		
Connection Location	Function	M.2 Slot
CN1	M.2 Socket (support 22110, 2280, 2242)	0
CN2	M.2 Socket (support 22110, 2280, 2242)	1

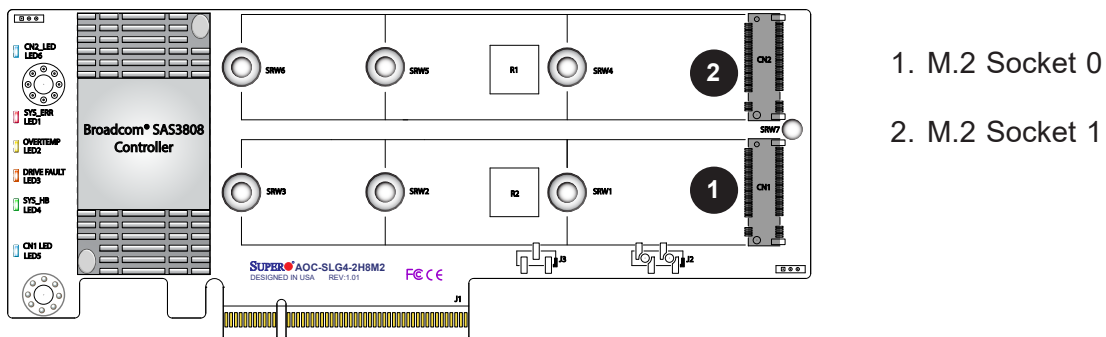


Figure 2-3: AOC-SLG4-2H8M2 NVMe Sockets

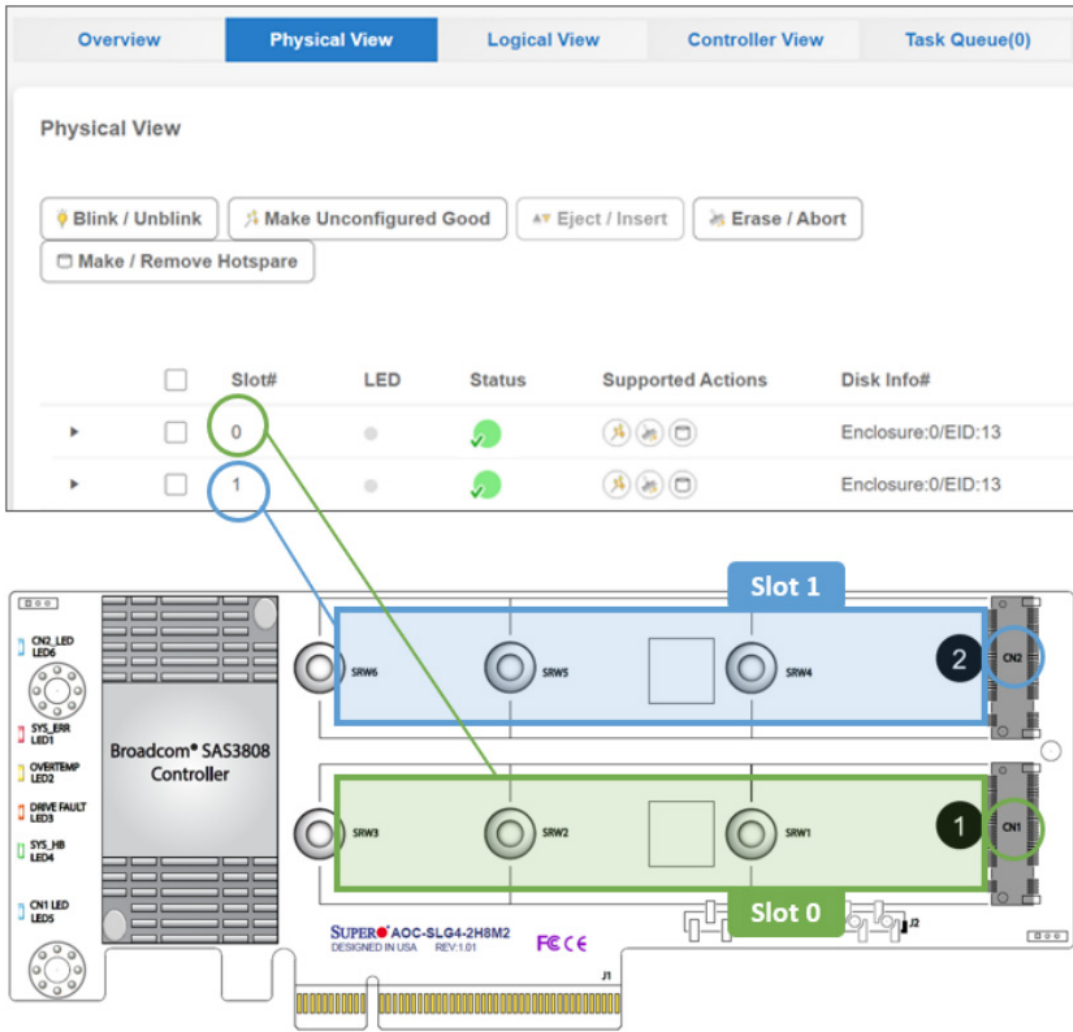
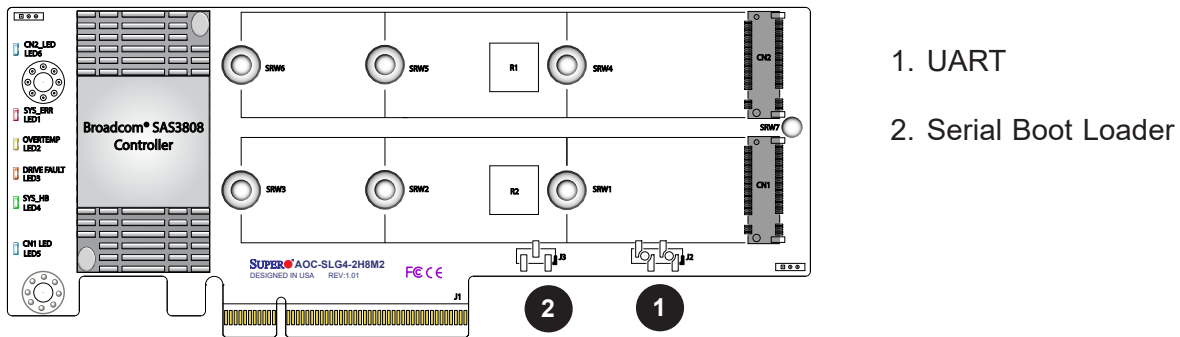


Figure 2-4: Mapping Between Socket Numbers and M.2 Slot Numbers

## Headers and Jumpers

There are two headers/jumpers on the AOC-SLG4-2H8M2. The locations will be designated as J2 and J3. J2 refers to the UART jumper (UART) and serves as a debug console. J3 refers to the Serial Boot Loader jumper (SBL). It is a feature that enables a device to load an embedded software image or firmware from a host through a serial interface.

Header/Jumper Descriptions		
Header/Jumper Location	Defintion	Purpose
J2	UART: UART Jumper	Debug Console
J3	SBL: Serial Boot Loader Jumper	Loads embedded software image or firmware from a host through serial interface.



1. UART
2. Serial Boot Loader

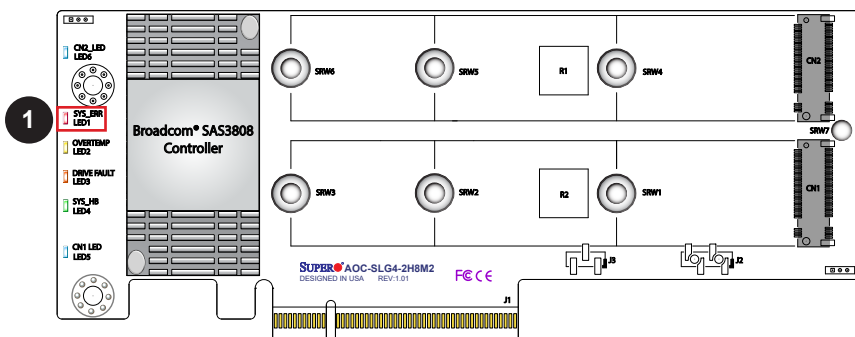
Figure 2-5: Headers and Jumper Positions

## 2.4 Front LED Indicators

### System Fault LED

The System Fault LED is located at LED1 on the add-on card. When a fault has occurred with the controller chip, LED1 will illuminate red.

System Fault LED Status	
Color/State	Definition
Red: Solid	Controller: Fault
Off	Controller: Normal



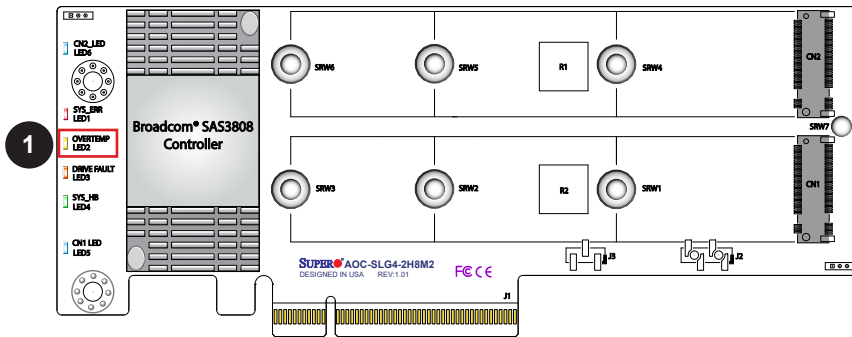
1. System Error LED

Figure 2-6: System Error LED

## Overtemp LED

The Overtemp LED is located at LED2 on the add-on card. When the controller chip temperature exceeds the threshold for the operating temperature, LED2 will illuminate yellow.

Overtemp LED Status	
Color/State	Definition
Yellow: Solid	Controller: Overheat



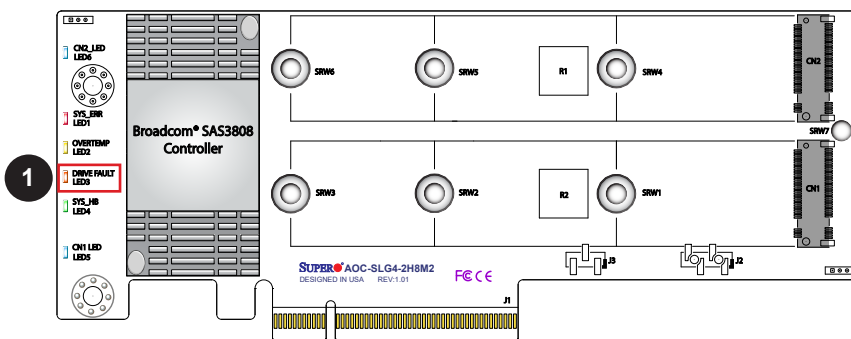
1. Overtemp LED

Figure 2-7: Overtemp LED

## Drive Fault LED

The Drive Fault LED is located at LED3 on the add-on card. When a drive fault occurs, LED3 will illuminate orange.

System Error LED Status	
Color/State	Definition
Orange: Solid	Drive Fault
Off	Normal



1. Drive Fault LED

Figure 2-8: Drive Fault LED

## System Heartbeat LED

The System Heartbeat LED is located at LED4 on the add-on card. When firmware is running normally on the controller chip, LED4 will blink green.

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

1. System Heartbeat LED

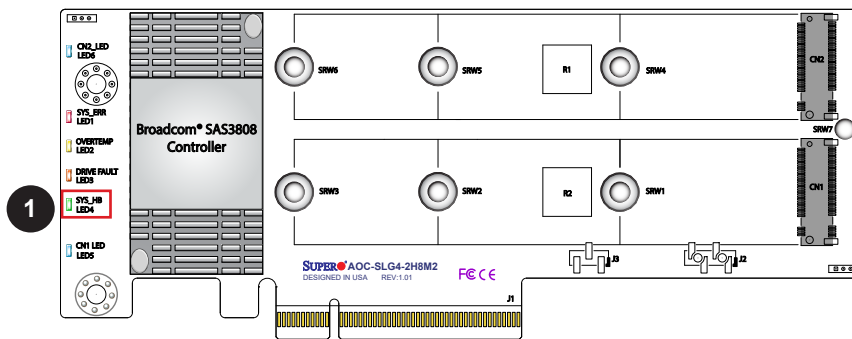


Figure 2-9: System Heartbeat LED

## Connector 1 Activity Status LED

The Activity Status LED for M.2 connector 1 is located at CN1\_LED/LED5 on the add-on card. When there is read or write activity on M.2 socket 0, LED5 will blink blue.

M.2 Connector 1 LED Status	
Color/State	Definition
Blue: Blinking	Activity
Off	No Activity

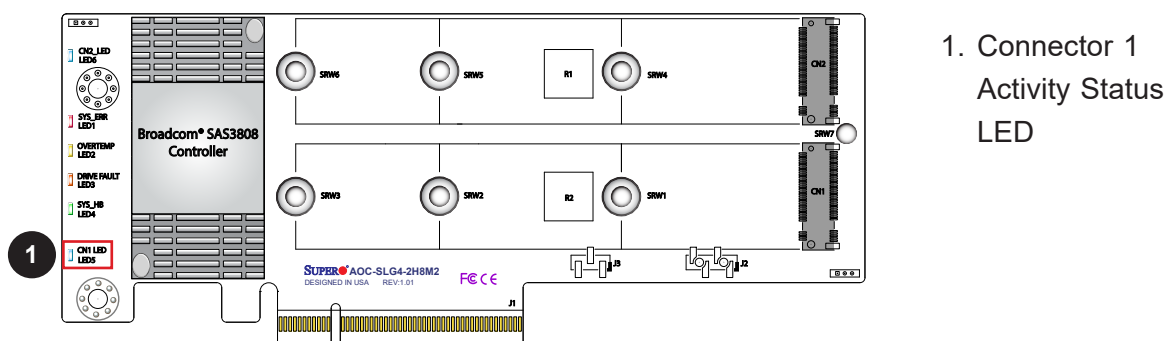
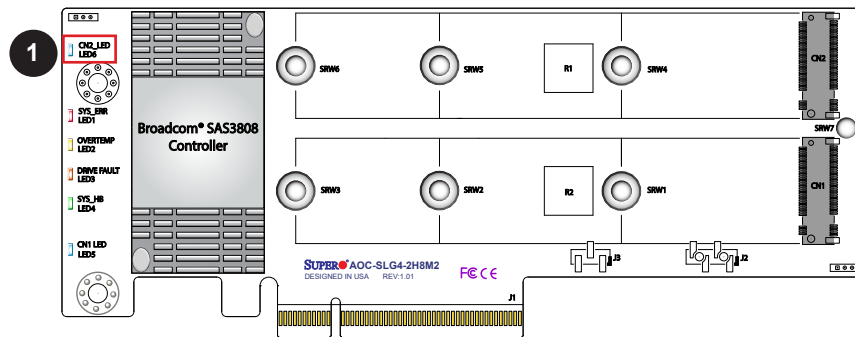


Figure 2-10: Connector 1 Activity Status LED

## Connector 2 Activity Status LED

The Activity Status LED for M.2 connector 2 is located at CN2\_LED/LED6 on the add-on card. When there is read or write activity on M.2 socket 1, LED5 will blink blue.

M.2 Connector 2 LED Status	
Color/State	Definition
Blue: Blinking	Activity
Off	No Activity



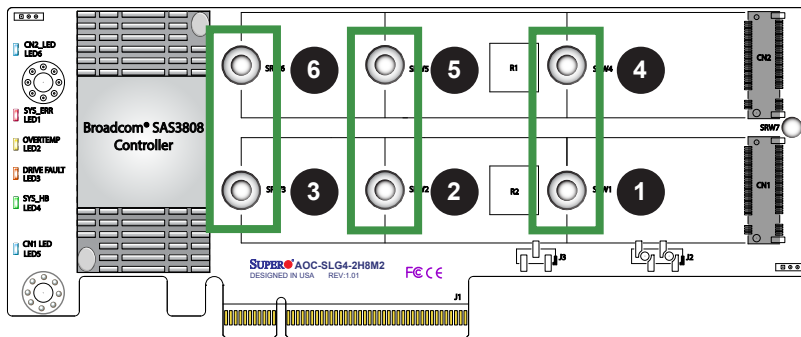
1. Connector 2 Activity Status LED

Figure 2-10: Connector 2 Activity Status LED

## 2.5 Standoffs

The AOC-SLG4-2H8M2 is designed with movable standoffs which support three different M.2 SSD lengths. The three different supported M.2 length types are labeled 2242 (42 mm), 2280 (80 mm), and 2210 (110 mm). Refer to the table and image below for the specific standoff positions and corresponding screws.

Standoff Descriptions		
	M.2 Length	Standoff Position
2242	22 mm x 42 mm	SRW1 and SRW4
2280	22 mm x 80 mm	SRW2 and SRW5
22110	22 mm x 110 mm	SRW3 and SRW6

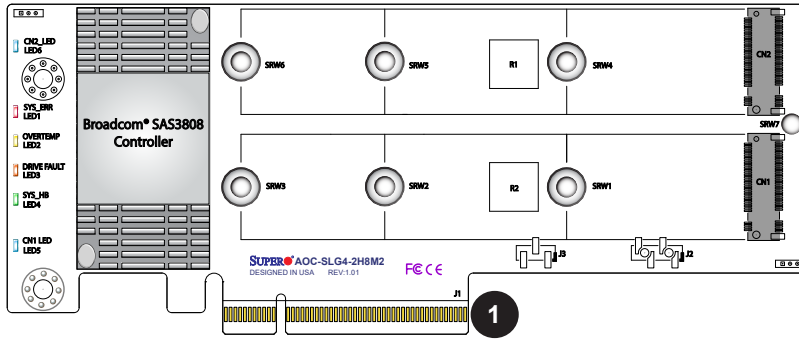


1. SCRW1
2. SCRW2
3. SCRW3
4. SCRW4
5. SCRW5
6. SCRW6

Figure 2-11: AOC-SLG4-2H8M2 Standoff Positions

## 2.6 PCIe 4.0 x8 Connector

A PCIe 4.0 x8 connector is located at J1 on the add-on card. To use the host interface on this expansion card, insert this connector into a PCIe 4.0 x8 slot on a motherboard.



1. PCIe 4.0 x8 controller

Figure 2-12: Standoff Positions

# Chapter 3

## Installation

Your system came with the adapter pre-installed as a part of an integrated solution. We do not recommend removing and reinstalling any part of your system components. However, if you need to remove or re-install a system component, including this add-on card, follow the instructions below to ensure proper system setup. Also, be sure to remove the power cord first before adding, removing, or changing any hardware components to avoid damaging the system or components.

### 3.1 Static-Sensitive Devices

Electrostatic Discharge (ESD) can damage electronic components. To avoid damaging your add-on card, 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 card from the antistatic bag.
- Handle the add-on card by its edges only; do not touch its components or peripheral chips.
- Put the add-on card back into the antistatic bags when not in use.
- For grounding purposes, make sure that your system chassis provides excellent conductivity between the power supply, the case, the mounting fasteners, and the expansion card.

#### Unpacking

The expansion card 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.

## 3.2 Before Installation

To install the add-on card 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 wrist strap) and follow the instructions listed on page 19 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.

## 3.3 Installing Controller Cards

The AOC-SLG4-2H8M2 supports two M.2 SSDs of 42 mm, 80 mm, or 110 mm in length. Visit the Supermicro website for a current list of supported M.2 SSDs.

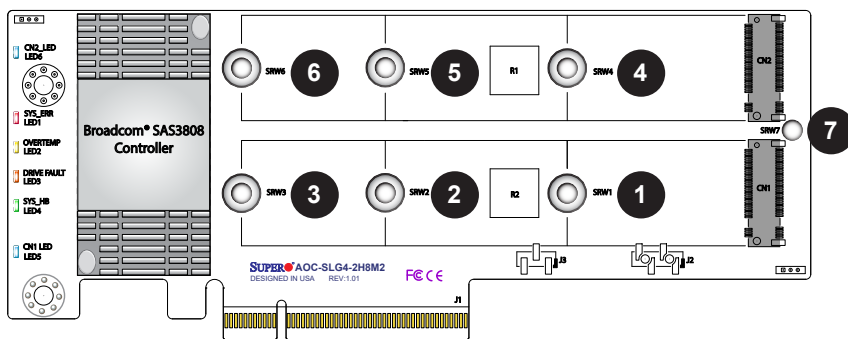
### Installing the M.2 Heatsink

Follow the steps below to install M.2 and heatsink.

1. Install two M.2 heatsink dedicated Studs (black) on SRW3 and SRW6.
2. Install M.2 SSD
  - For 22110 M.2 installation, take the following steps:
    - i. Attach rubbers in R1 and R2 area.
    - ii. Plug the 22110 M.2 card into each slot.
    - iii. Screw on M.2 card with black mounting screws.
    - iv. Follow steps 3 and 4 to finish the installation.
  - For 2280/2242 M.2 installation, take the following steps:
    - i. Install two Studs (silver) on SRW2/5 or SRW1/4.
    - ii. Plug M.2 card into each slot.
    - iii. Screw on M.2 card with mounting screws (black).
    - iv. Follow steps 3 and 4 to finish the installation.
3. Remove the release paper from the thermal pad on the heatsink.
4. Place the heatsink directly on top of the M.2 add-on card, Make sure it aligns with the SRW3/6 studs and SRW7 hole.
5. Screw SRW3/6 with mounting screws (black) from the top.
6. Screw SRW7 from the bottom side.

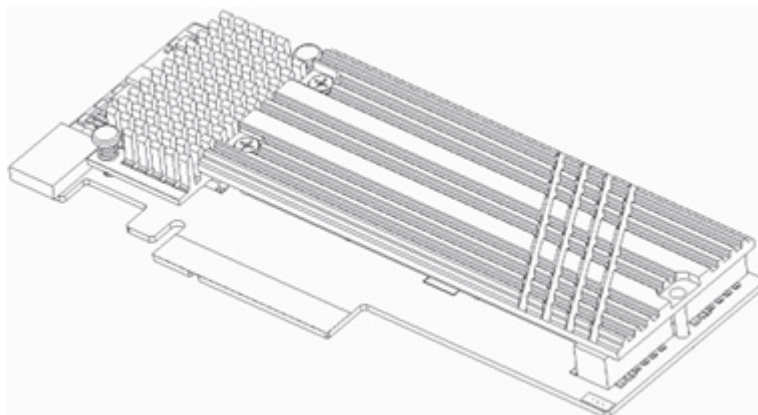


**Note:** If the heatsink is not installed on this card, use M.2 card studs (silver) only. Do not use M.2 heatsink dedicated studs (black) or M.2 card will come loose.



1. SCRW1
2. SCRW2
3. SCRW3
4. SCRW4
5. SCRW5
6. SCRW6
7. SCRW7

**Figure 3-1: Position of Screws**

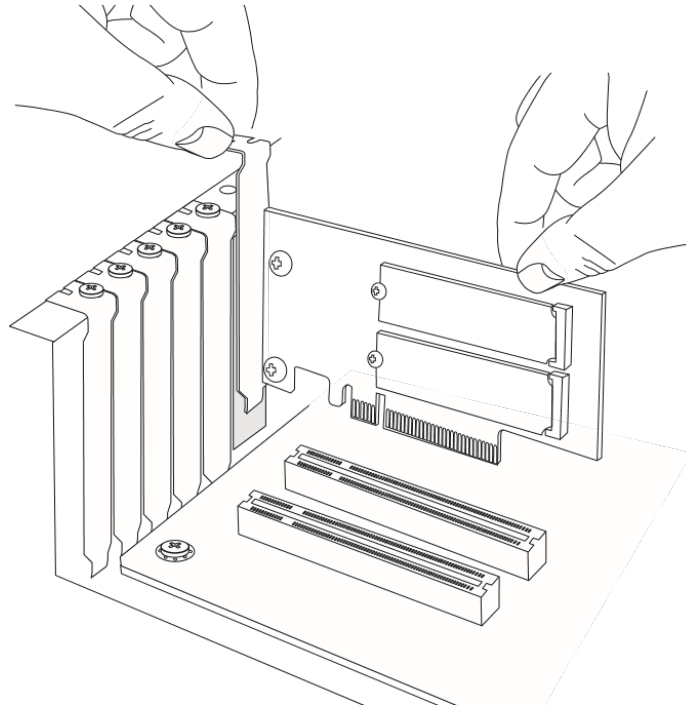


**Figure 3-2: Securing the M.2 Heatsink to the Controller Card**

**Note 1:** Graphics shown above are for illustrative purposes only. Actual products may vary due to product enhancement.

**Note 2:** Keep unused parts in the parts package for future use.

## Installing Controller Card



**Figure 3-3: Plugging Controller Card into the PCIe Slot**

1. Simultaneously slide the controller card bracket into the PCIe slot of the chassis while plugging the controller card into the appropriate slot on the motherboard.
2. Secure the controller card's bracket into the PCIe slot by replacing the PCIe slot screw that was previously set aside.
3. Plug the power cords into the rear of the power supply.
4. Power up the system.

## 3.4 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>.

## 3.5 Uninstalling the Drivers

### To Uninstall the Drivers in Windows

Follow the instructions provided by your M.2 SSD manufacturer.

### To Uninstall the Drivers in Linux

Run the following command to uninstall the NVMe drivers.

```
./RemoveService.sh
```

## Chapter 4

# Configuring the Broadcom 3808 iMR Settings

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

### 4.1 RAID Minimum Drive Requirements

The AOC-SLG4-2H8M2 add-on card supports up to two M.2 SSDs with RAID 0 and RAID 1. Use the table below to determine the minimum number of hard drives needed to set up a RAID environment.

RAID	Minimum Hard Drives
RAID 0	2
RAID 1	2

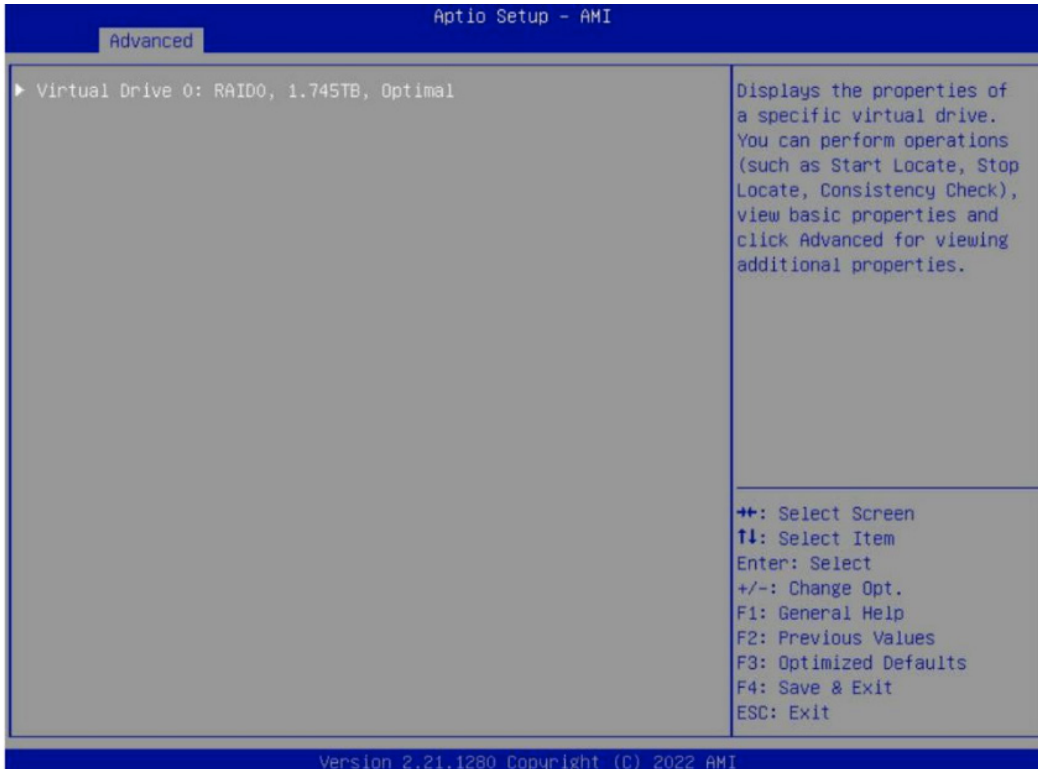
## 4.2 Using the Broadcom <SAS 3808> Configuration Utility

After completing the steps to use the BROADCOM <SAS 3808> Configuration Utility, there are a few optional actions or screenshots that you can observe, act on, or simply ignore. These options include the following. Use the arrow keys to highlight your chosen option, and press <Enter> to select.

### 1. Select **Virtual Drive Management**.



2. Check the virtual drive status.



### 3. Select Drive Management.



### 4. Check the physical drive status.



5. Select **Hardware Components**.

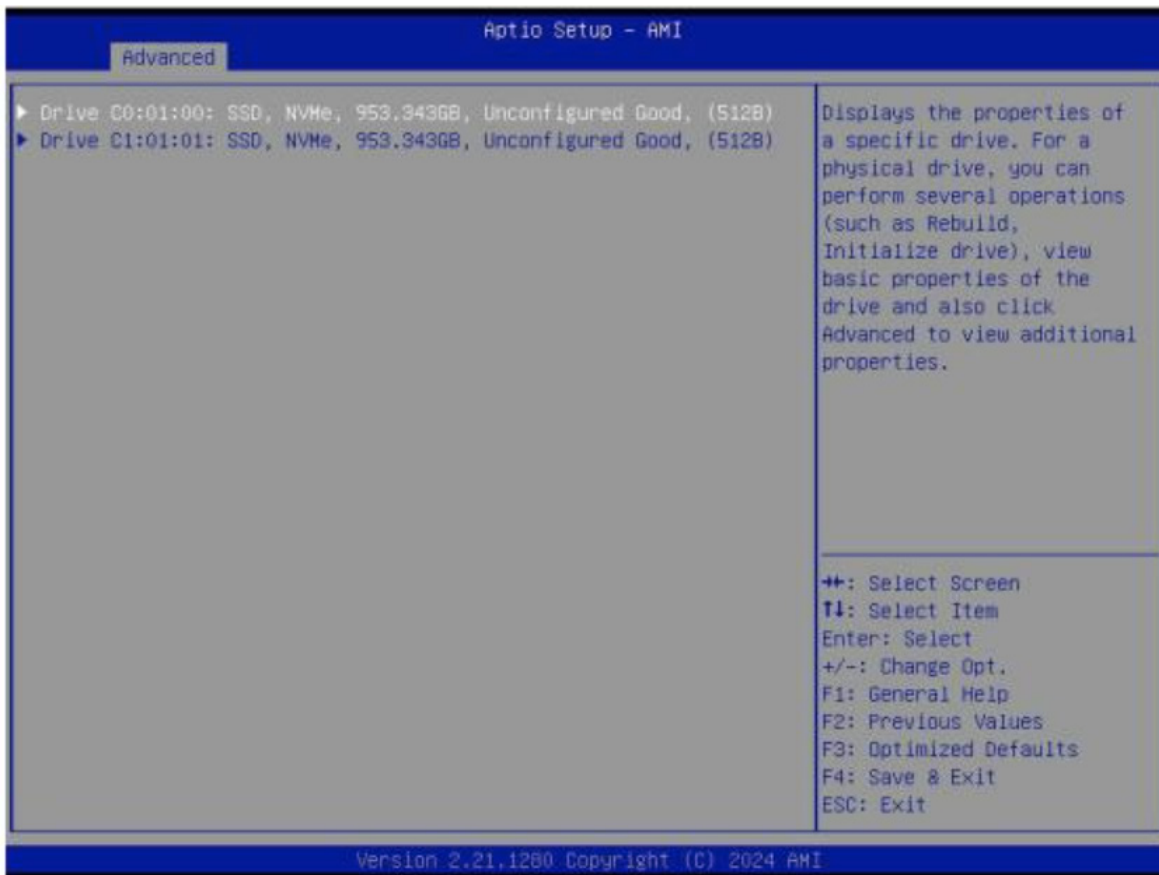
## 4.3 Managing Physical Drive

Follow the steps below to manage the available physical drives through BIOS. Use the arrow keys to highlight your chosen option, and press **<Enter>** to select.

1. Navigate to Controller to enter the **Main Menu**.
2. Select **Drive Management**.



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



**Note:** When using StorCLI to display the drive list, the slot numbering follows the principles listed below:

- SATA M.2 (PCIe x1) slot numbering: #0 and #4
- M.2 (PCIe x4) slot numbering: #0 and #1

Enter the following StorCLI commands:

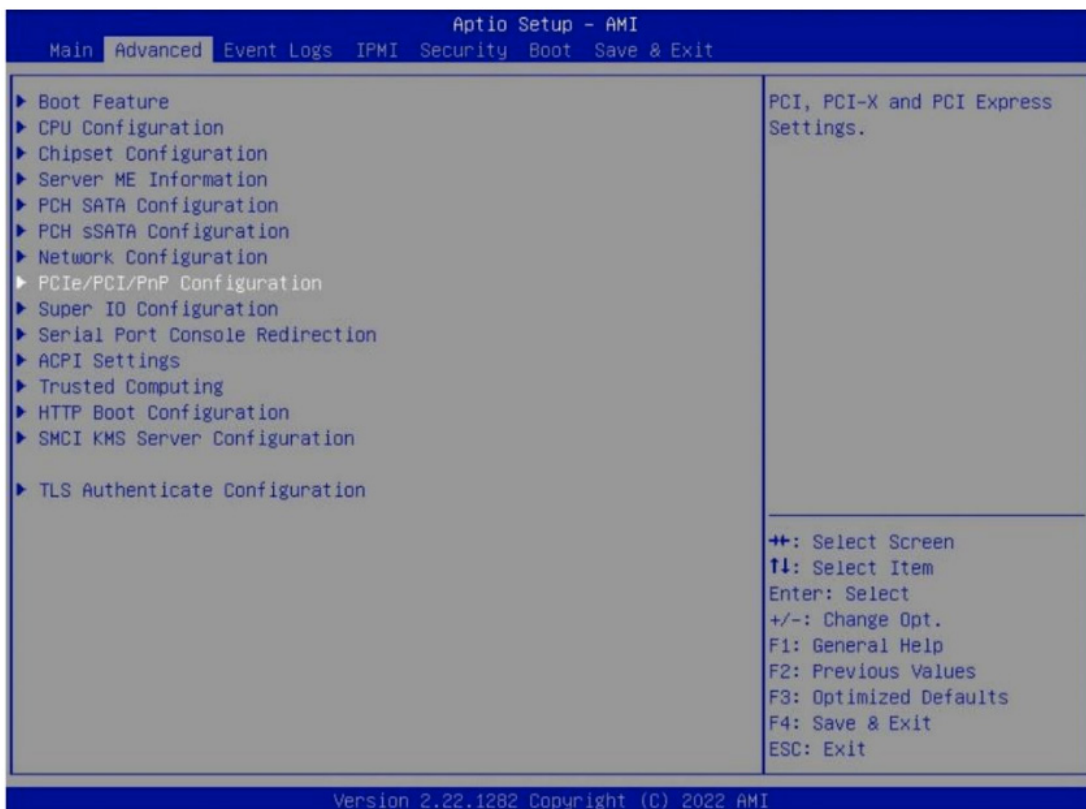
```
storcli /call show all
```

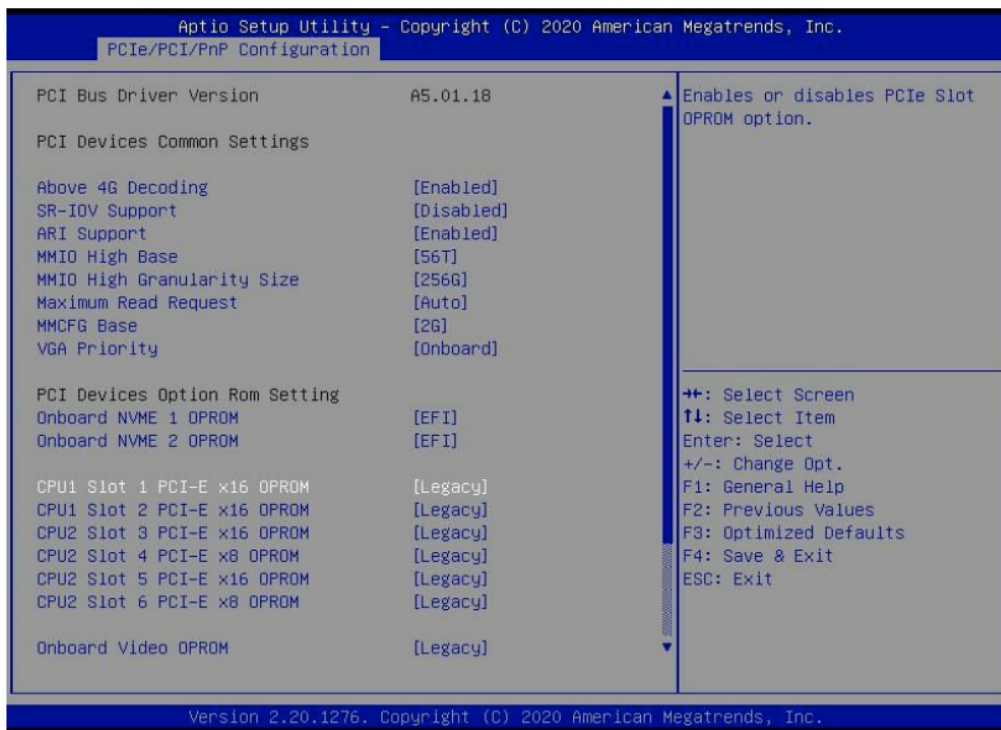
## 4.4 Creating a Virtual Drive

Follow the steps below to create a new virtual drive.

1. Reset the system.
2. Press **<DEL>** to enter the **BIOS Setup Utility**. AOC-SLG4-2H8M2 only supports UEFI mode and a very limited legacy mode.

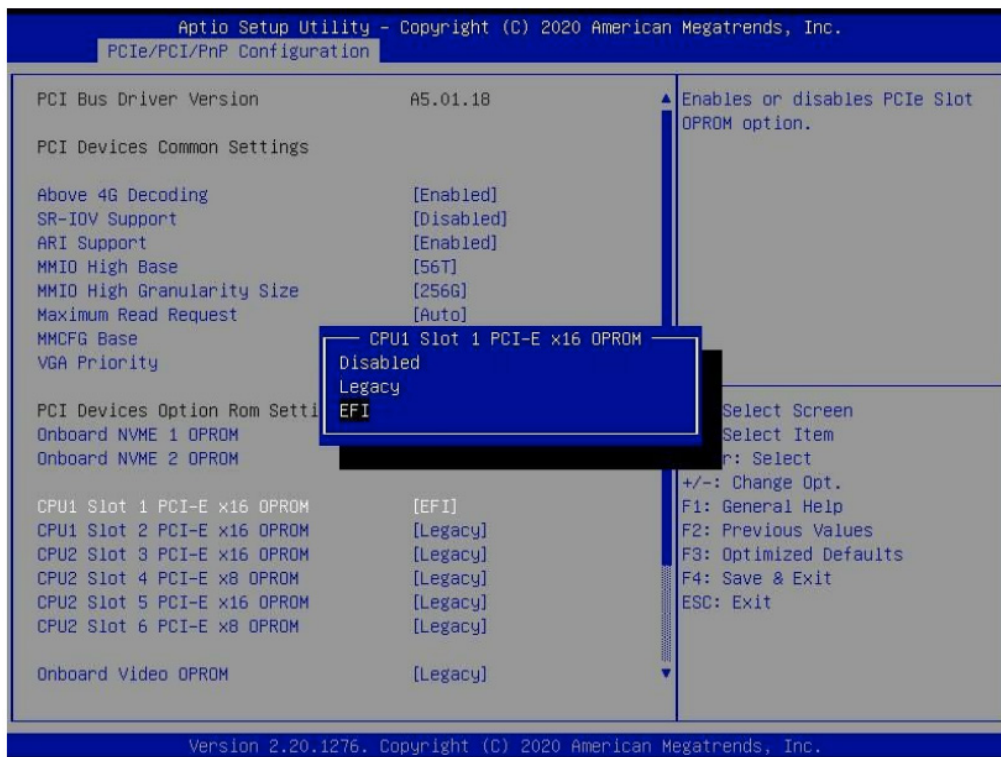
If the **BROADCOM <SAS 3808> Configuration Utility** option is not visible, select **PCIe/PCI/PnP Configuration** and then a CPU slot.

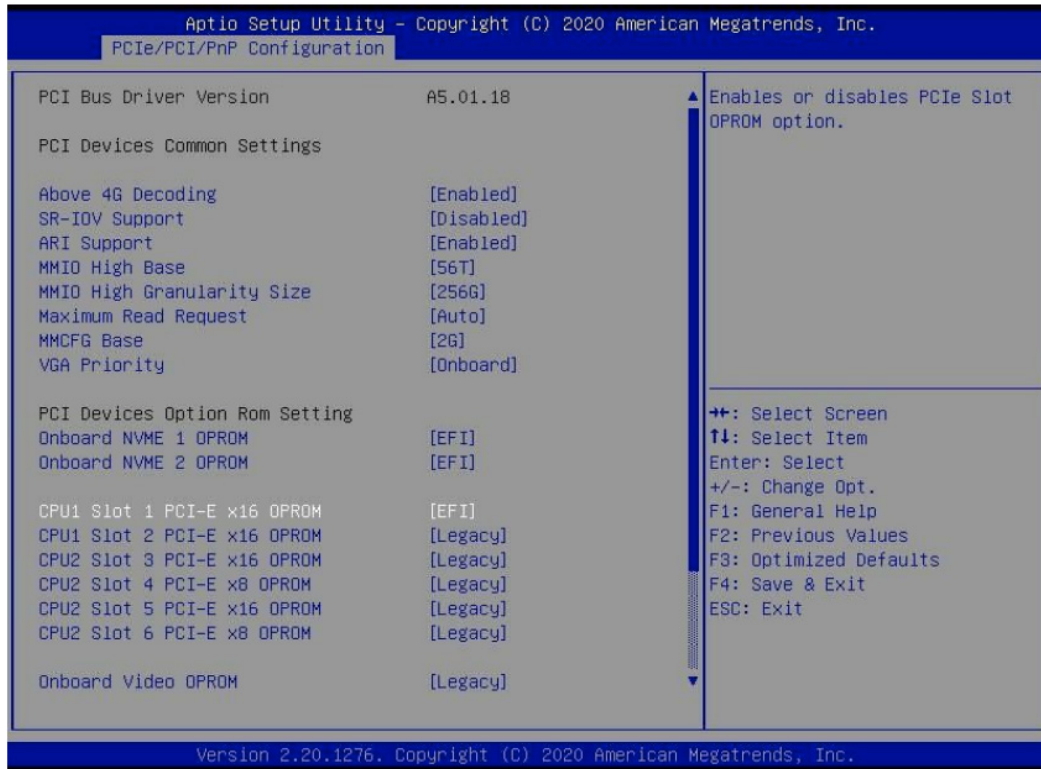




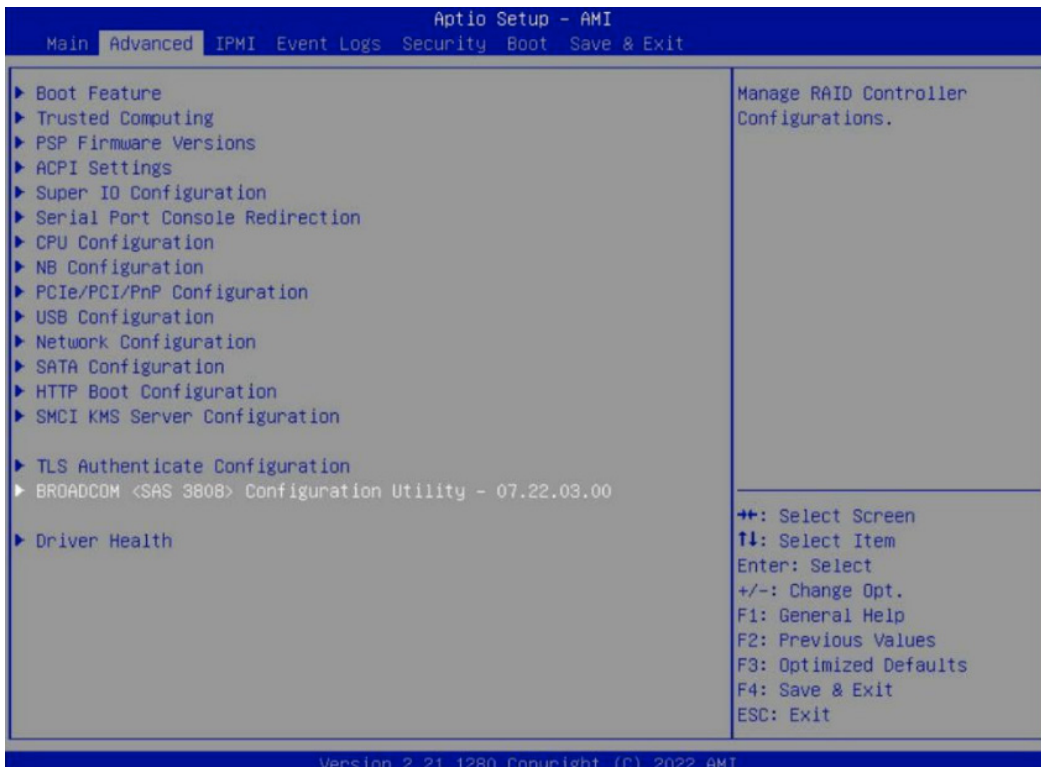
### CPU1 Slot 1 PCI-E X16 OPROM Selected

- When the below screen appears, select **EFI mode**, then press **<F4>** to save and exit.

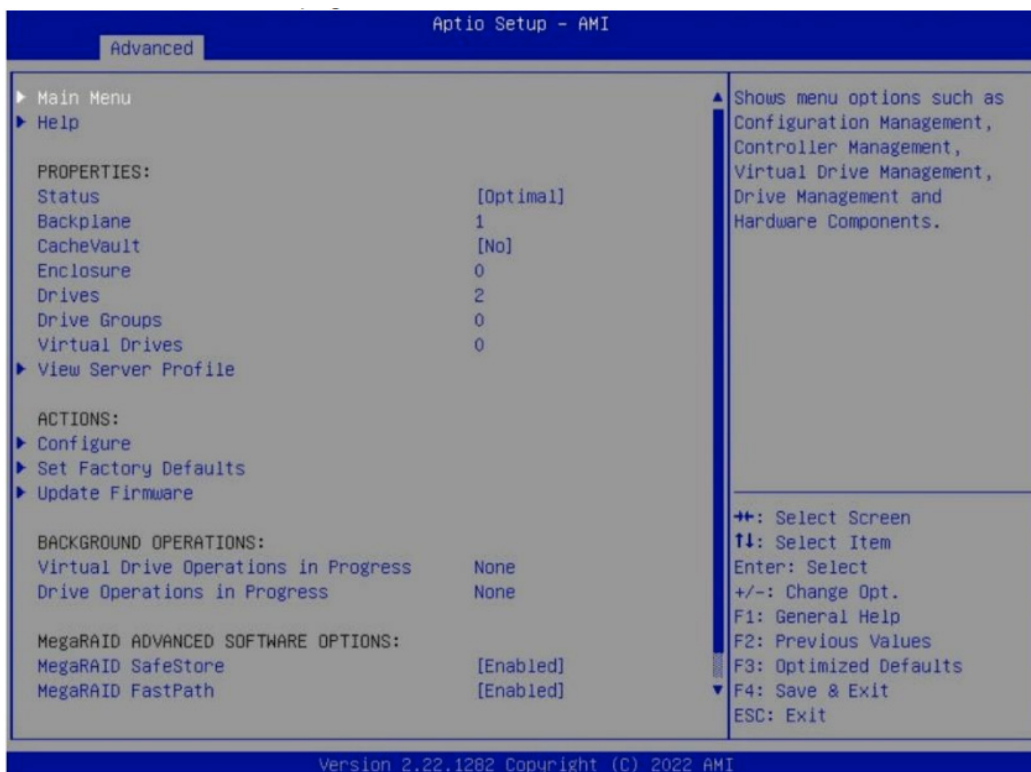




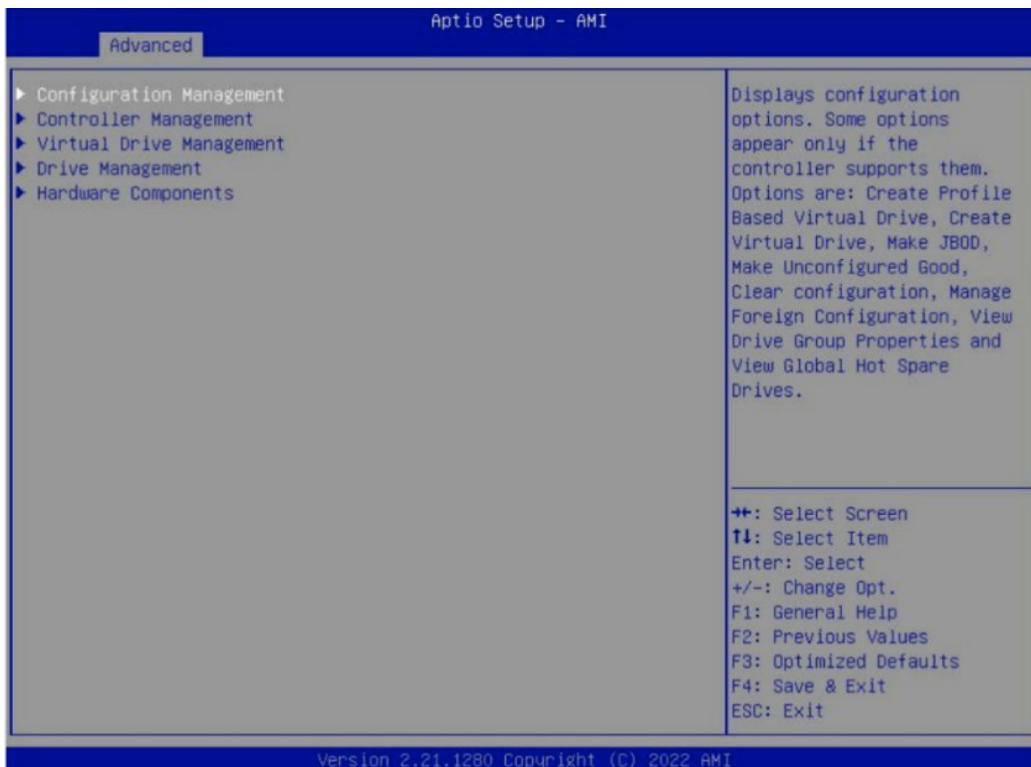
4. Press **<ESC>** to reach the **Advanced** tab, then select **BROADCOM <SAS 3808> Configuration Utility** and press **<Enter>**.



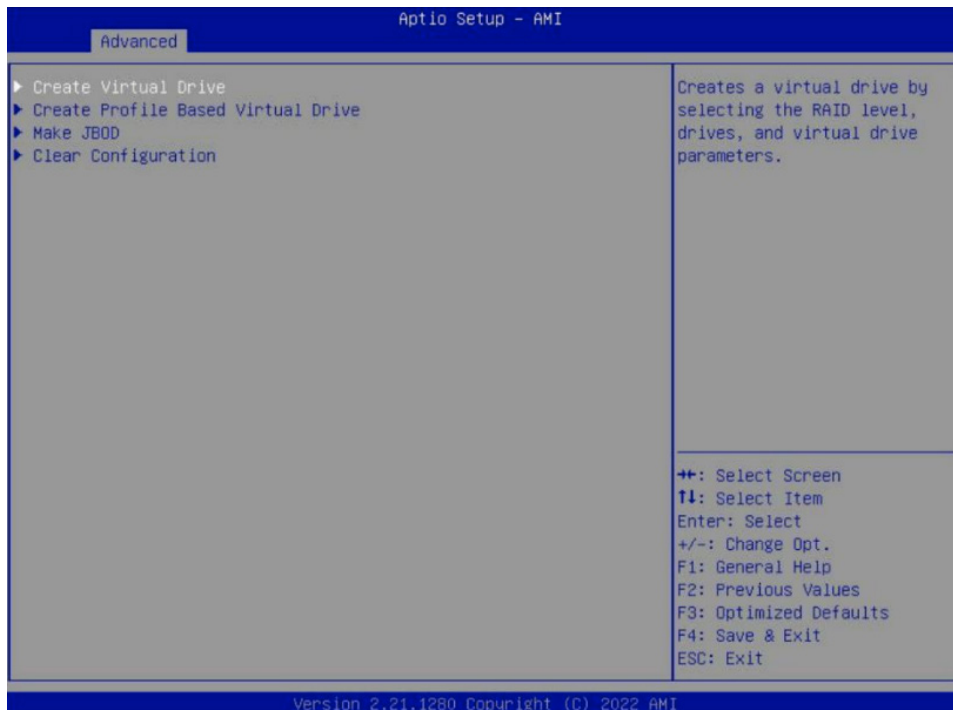
5. Enter the **Main Menu** page.



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



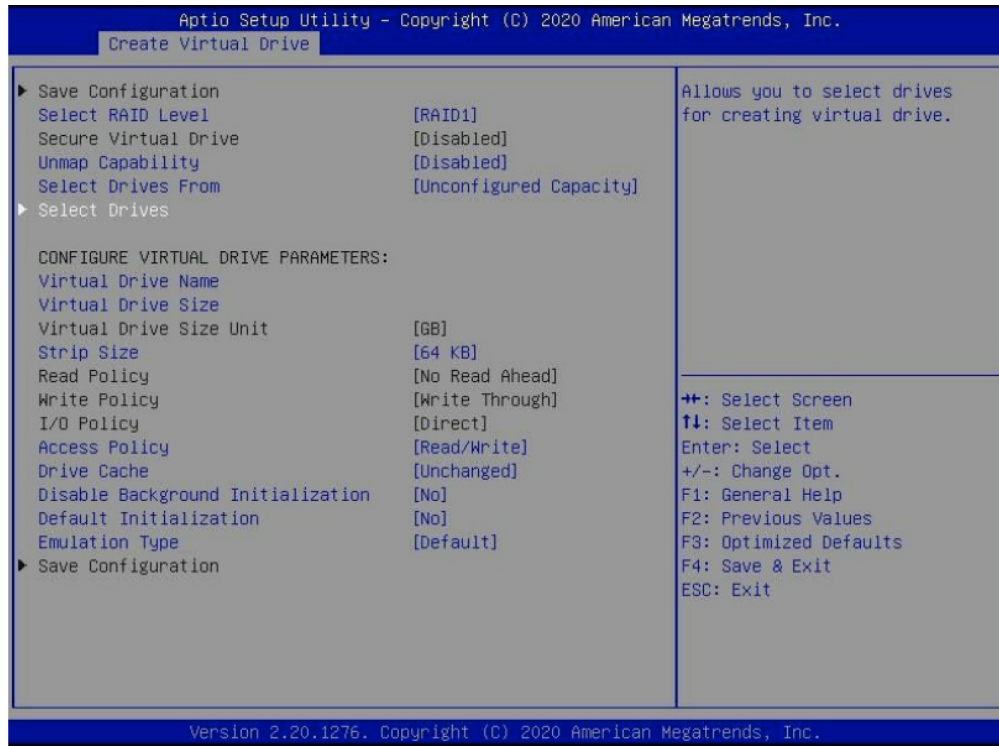
7. Select **Create Virtual Drive** and press **<Enter>**.



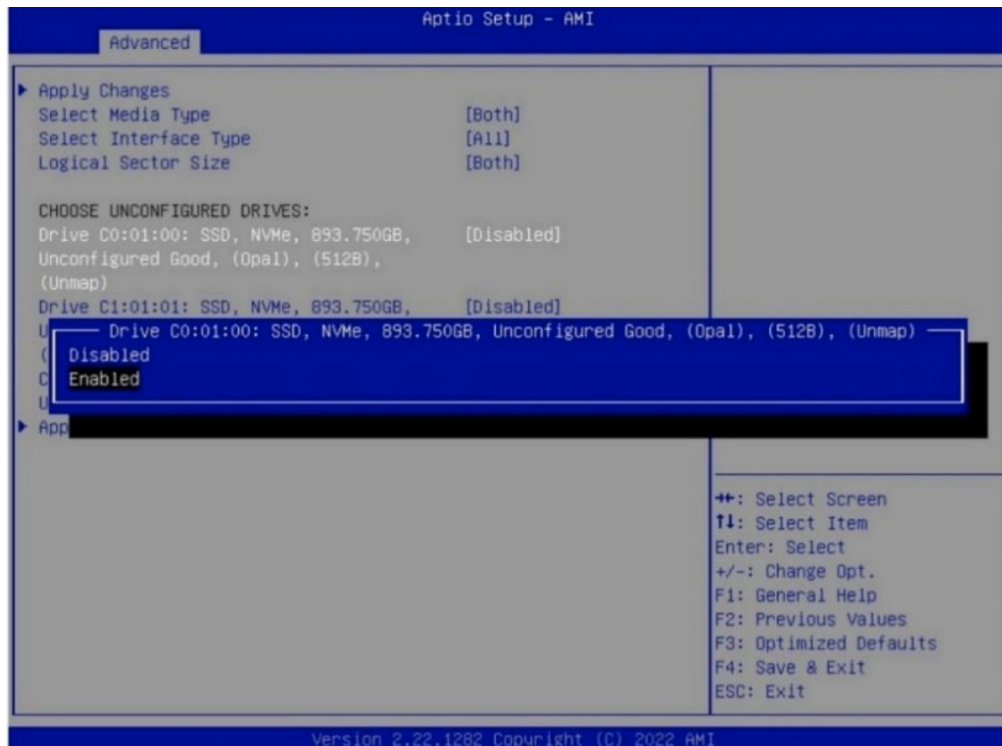
8. On the Create Virtual Drive menu, navigate to **Select RAID Level** and press **<Enter>**. Use the arrow keys to select a RAID level and press **<Enter>**.



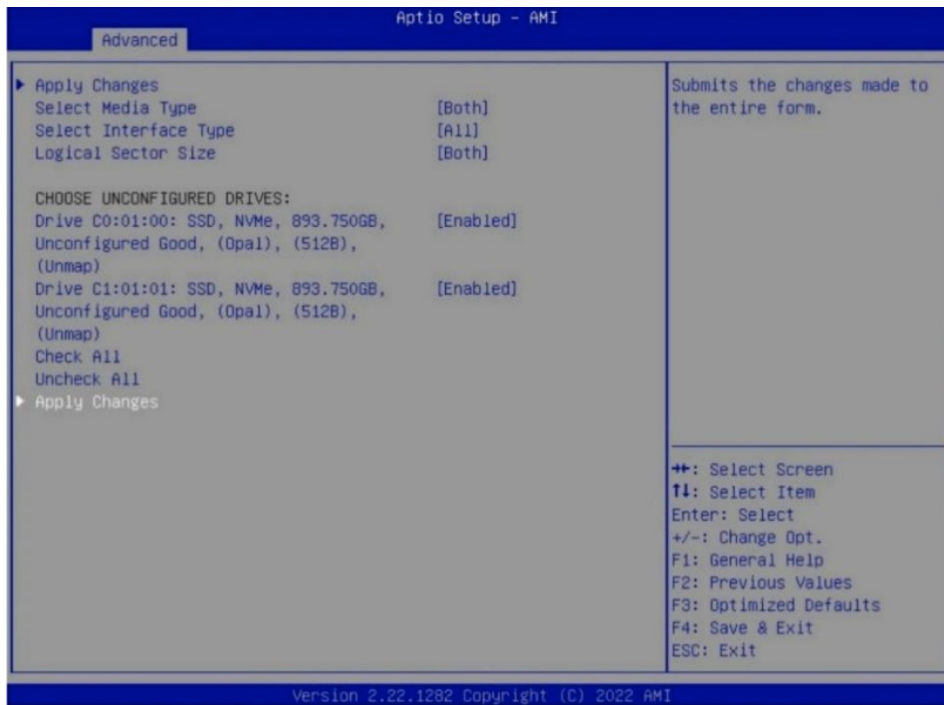
9. Navigate to **Select Drives**, as shown below, and press **<Enter>**.



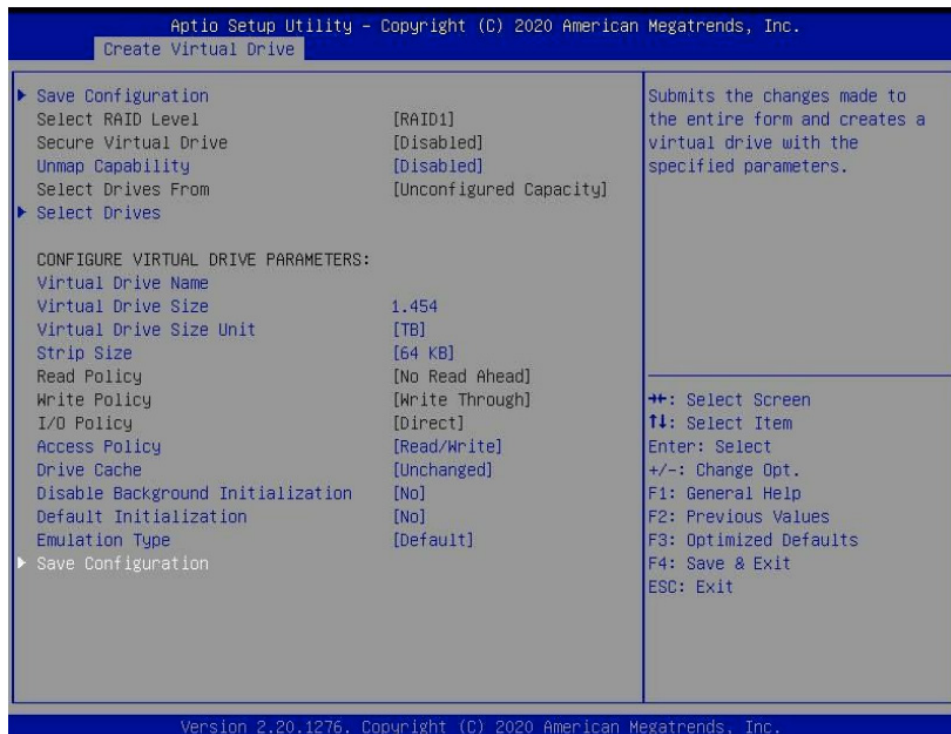
10. On the **Select Drives** menu, select the unconfigured drives and choose **Enabled**.

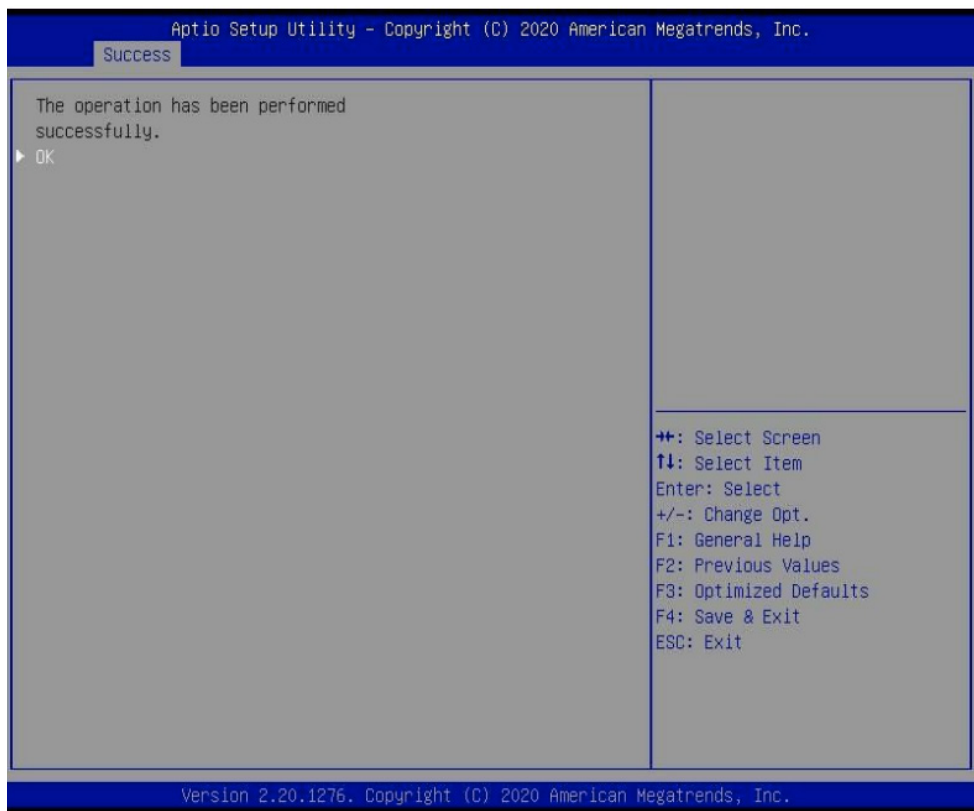


11. Select **Apply Changes** and press **<Enter>**.

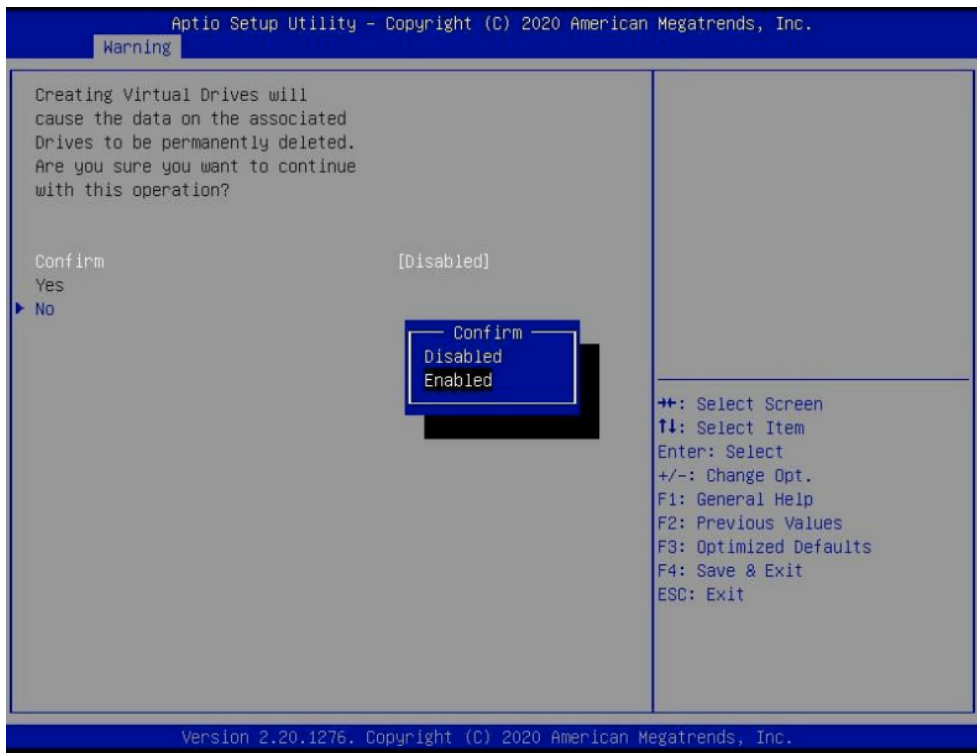


12. On the **Create Virtual Drive** menu, navigate to **Save Configuration** and press **<Enter>**.

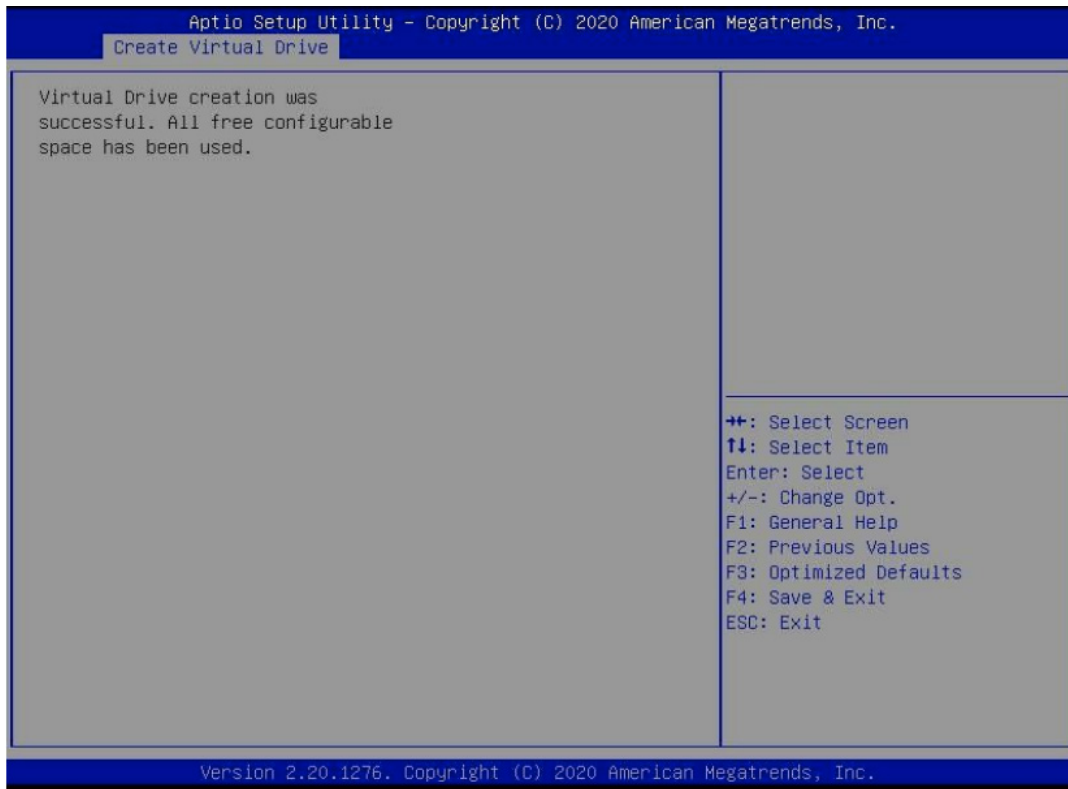




13. Select the **Yes** option and then confirm **Enabled**.



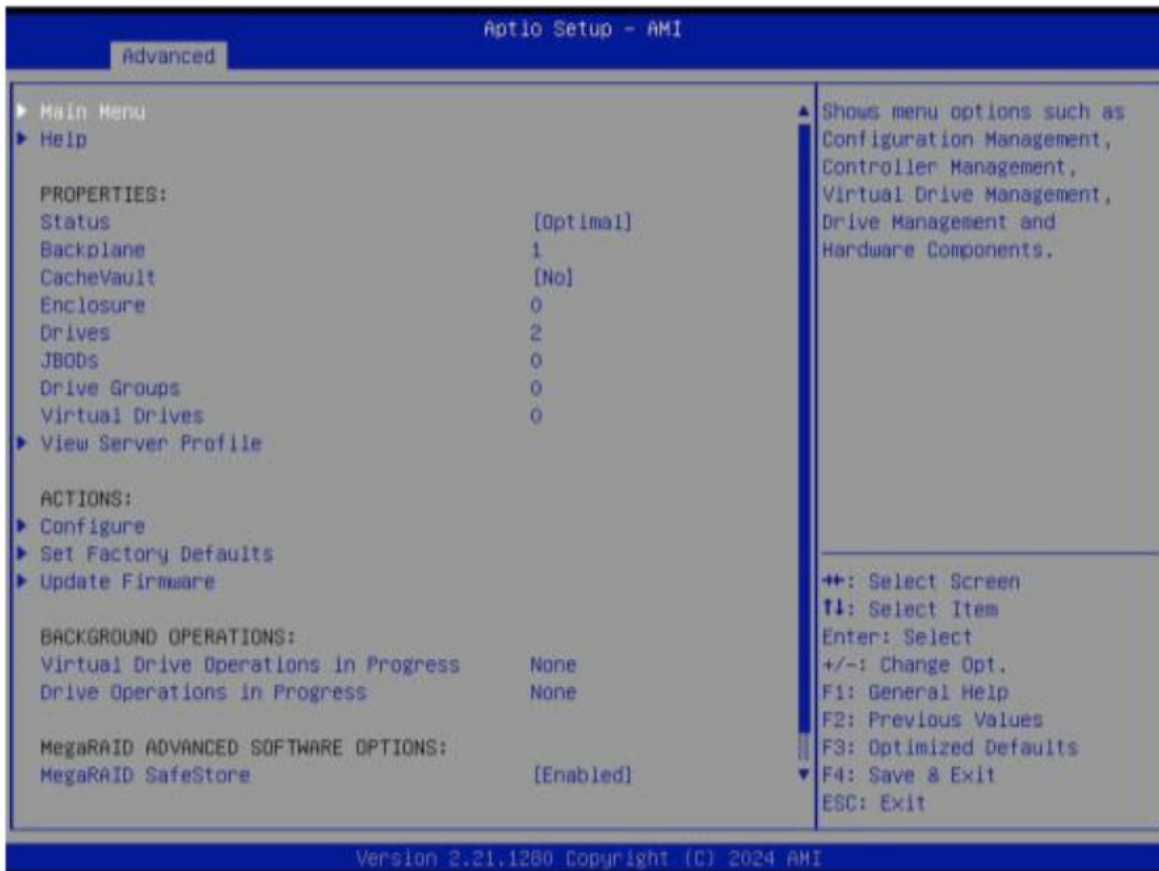
14. The below screen will appear once Virtual Drive creation is successful.



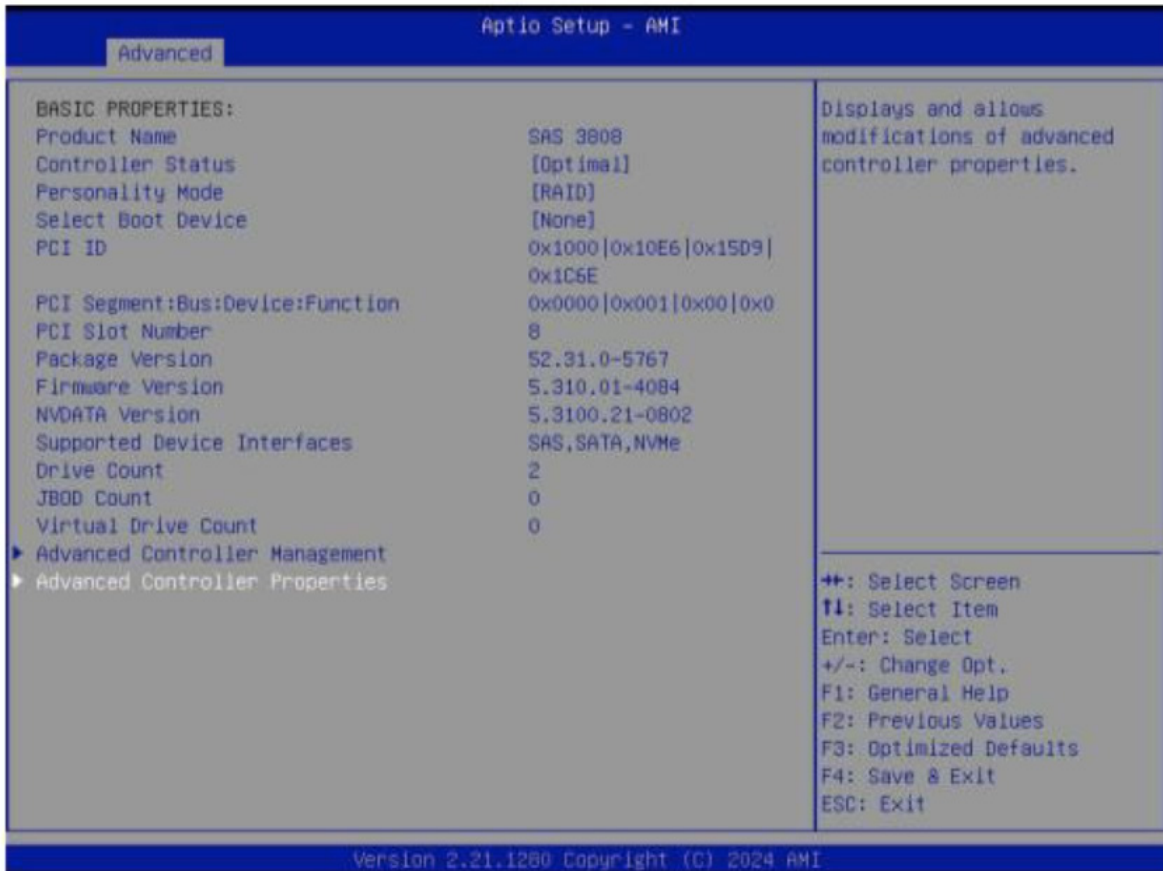
## 4.5 Managing JBOD State

The AOC-SLG4-2H8M2 and all add-on cards are based on the SAS 3808 iMR controller supporting JBOD mode. Under certain conditions, such as when the add-on card has been in JBOD mode, the drive state will change to **JBOD**. Follow these steps to enable/disable JBOD mode. Use the arrow keys to highlight your chosen option, and press **<Enter>** to select.

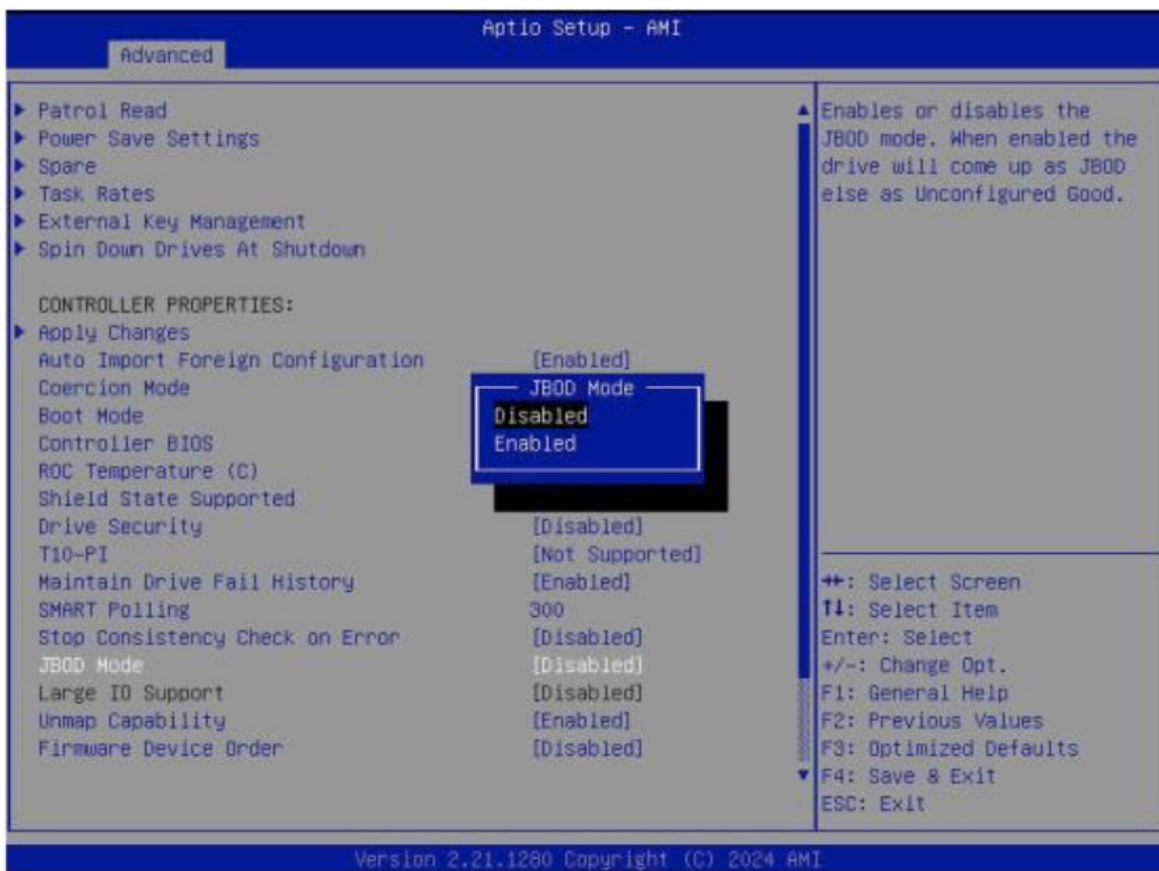
1. Navigate to Controller to enter the **Main Menu**.




2. Select **Controller Management**.
3. Select **Advanced Controller Properties** to view and modify advanced controller properties.



4. Select **JBOD Mode**.
5. Change the settings to **Disabled** or **Enabled**.
6. Confirm by selecting to **Apply Changes**. If you do not want to proceed with changes, select **Cancel**.

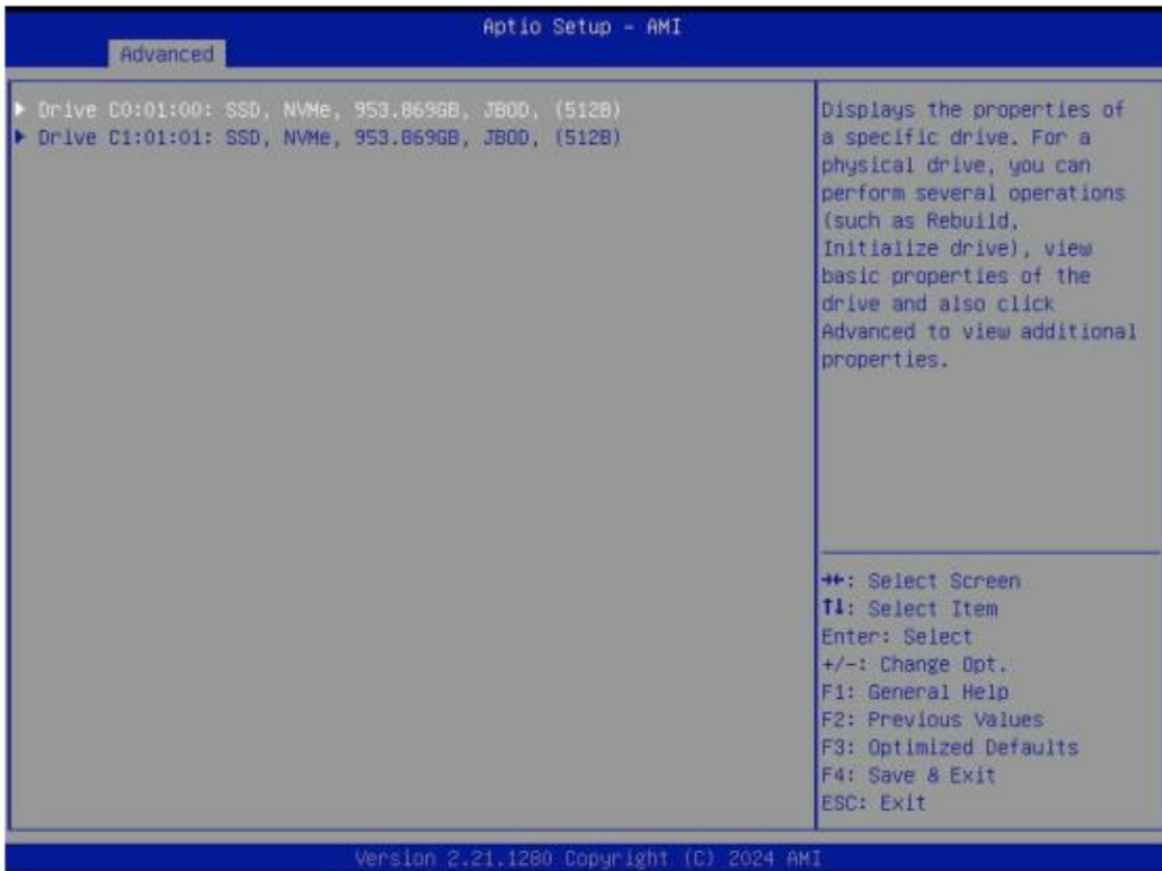


 **Note:** You can also enable or disable JBOD Mode by entering the following StorCLI commands:

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

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

7. Once the JBOD mode is enabled for the add-on card, the drives will display **JBOD** in the listings.



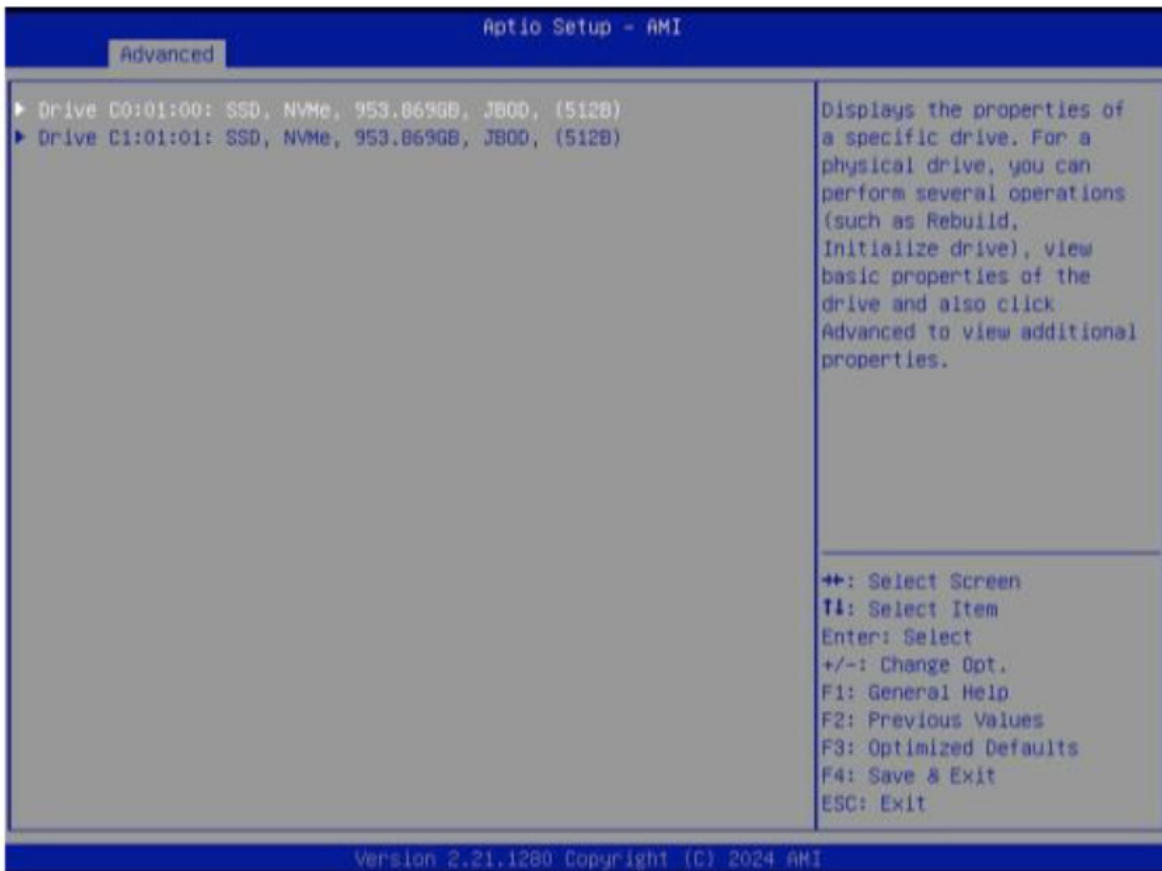
## 4.6 Managing Unconfigured Good State

Under certain conditions, such as when the add-on card 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 as **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 press **<Enter>** to select.

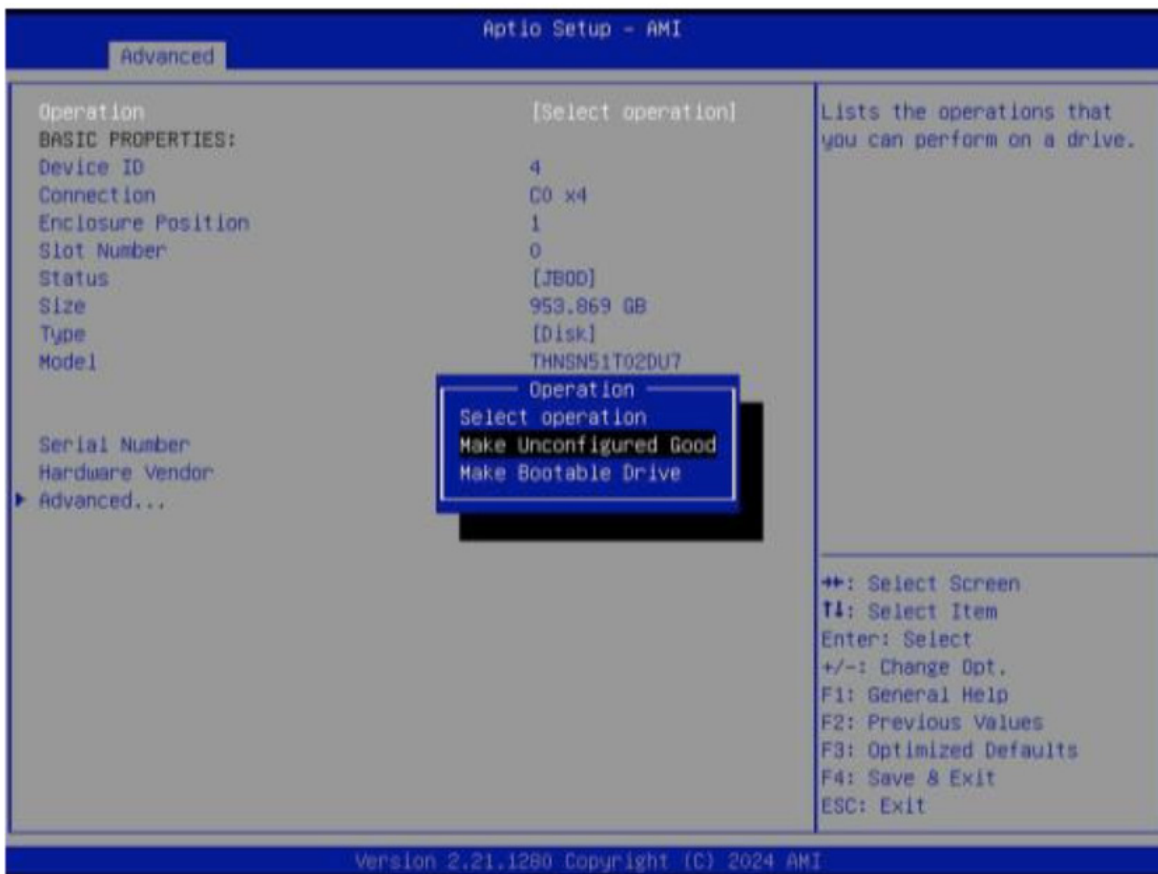
1. Navigate to Controller to enter the **Main Menu**.
2. Select and enter **Drive Management**, which will list all drives. When JBOD Mode is enabled, the drive state will be **JBOD**.



3. Select a drive.



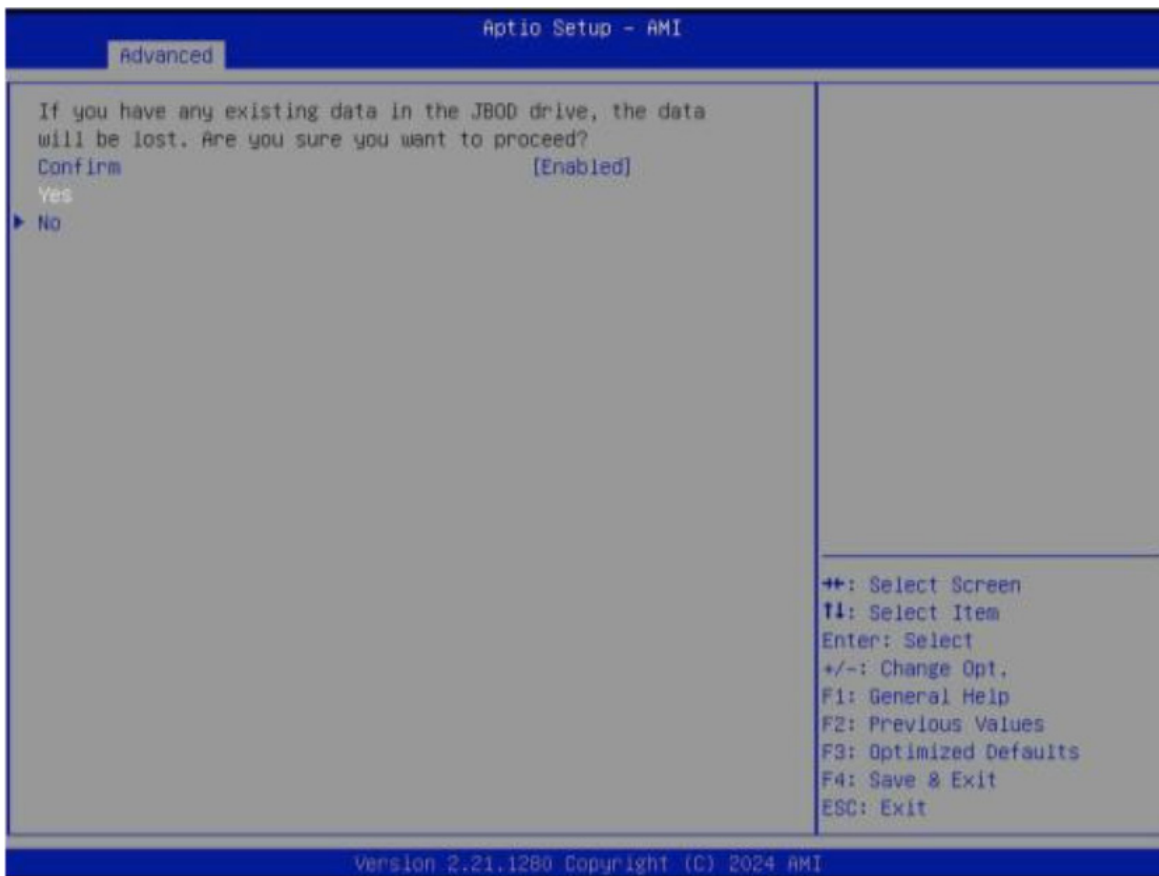
4. Select Operation. The options will include **Select operation**, **Make unconfigured Good**, and **Make Bootable Drive**.
5. Select **Make Unconfigured Good**.




6. Select **Go**.



- 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** and ensure that it is set to **Enabled**.
- Select **Yes** to confirm the change.



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

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

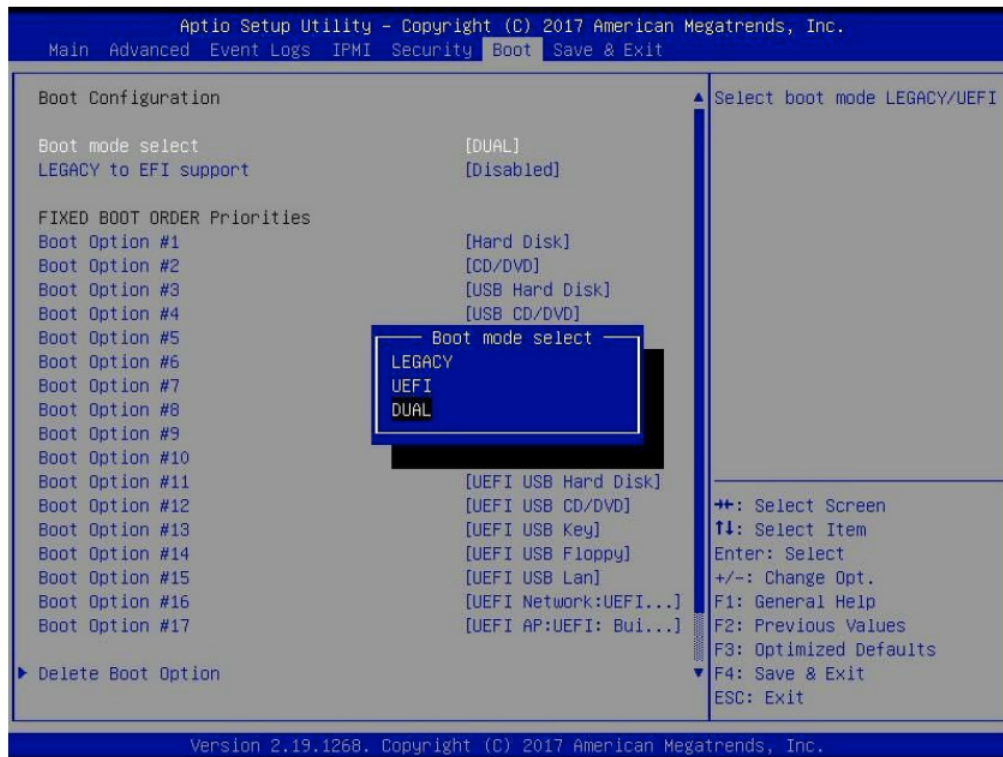
## Chapter 5

# 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.

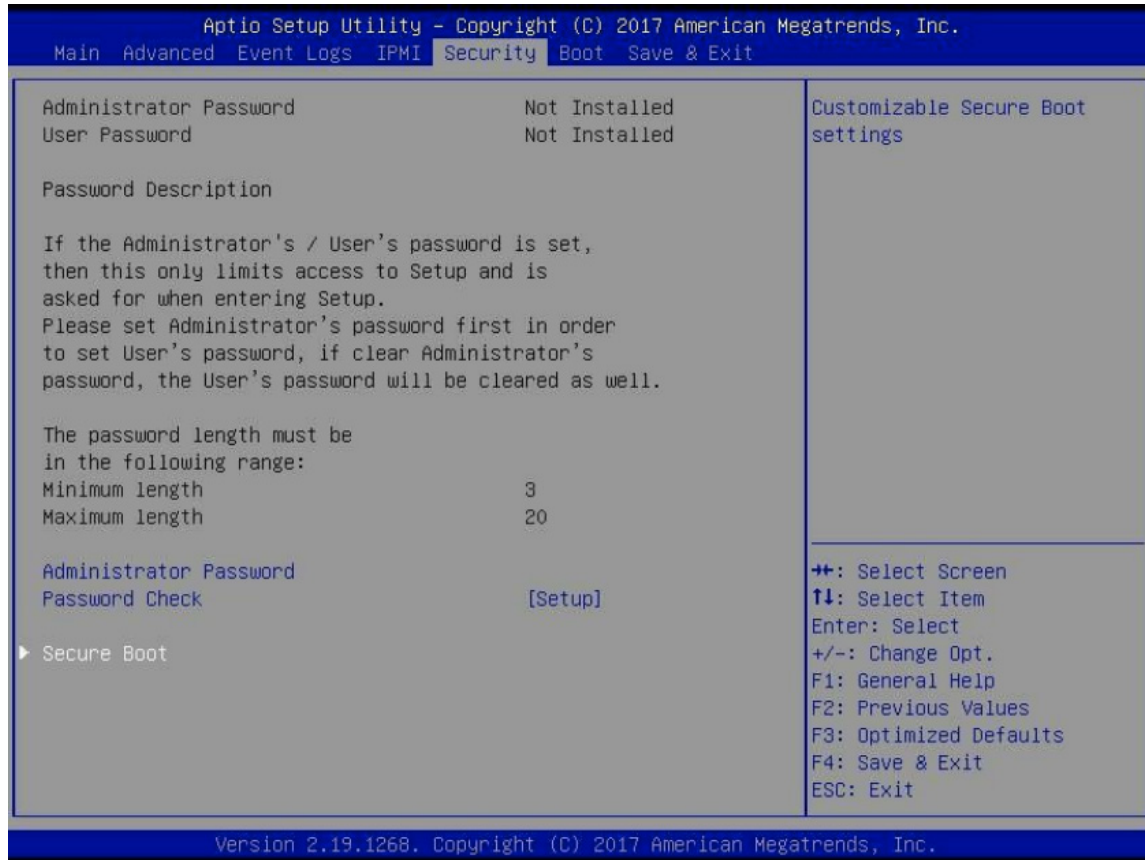
### 5.1 Boot Mode Select Feature

1. Press **<DEL>** during system boot to enter the **BIOS Setup Utility**.
2. Navigate to the **Boot** tab.
3. Use the arrow keys to select **Boot mode select** and press **<Enter>**. The options are **LEGACY**, **UEFI**, and **DUAL**.
4. Set **Boot mode select** to **UEFI**.
5. For the changes to take effect, press **<F4>** to save the settings and exit the BIOS Setup Utility.

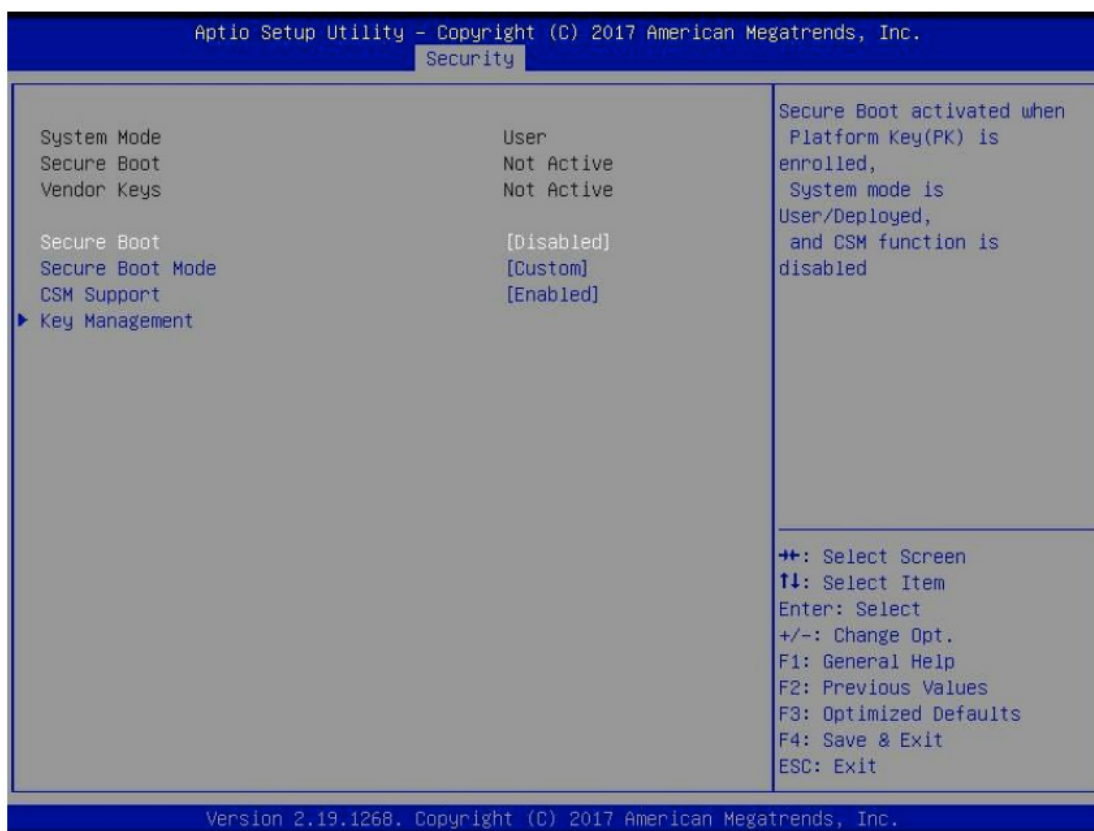


## 5.2 Secure Boot/Secure Boot Mode/CSM Support Features

1. Press <DEL> during system boot to enter the **BIOS Setup Utility**.
2. Navigate to the **Security** tab as shown below.



- Use the arrow keys to select **Secure Boot** and press **<Enter>** to access the menu items. The following screen will appear.



## Secure Boot

This feature is available when the platform key (PK) is pre-registered where the platform operates in the User mode and compatibility support module (CSM) support is disabled 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.

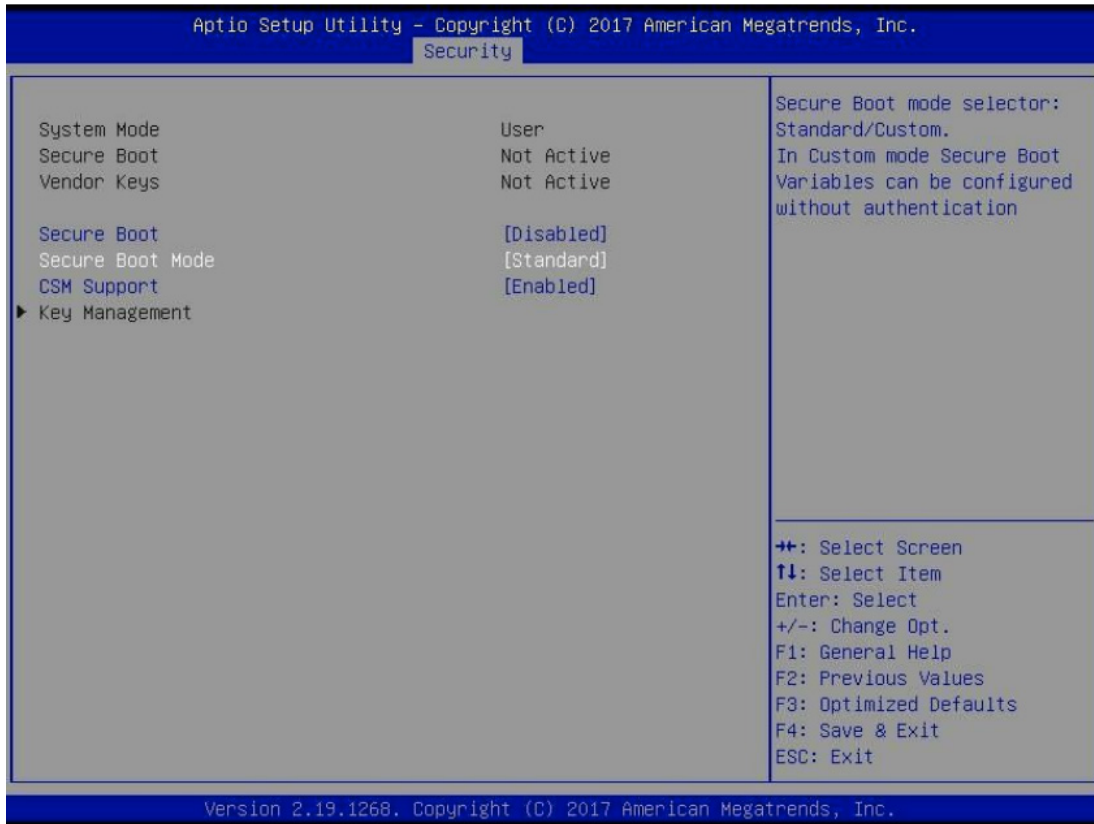
## CSM Support

Select Enabled for legacy Compatibility Support Module (CSM) support, which will provide compatibility support for traditional legacy BIOS used for system boot. The options are Disabled and **Enabled**.

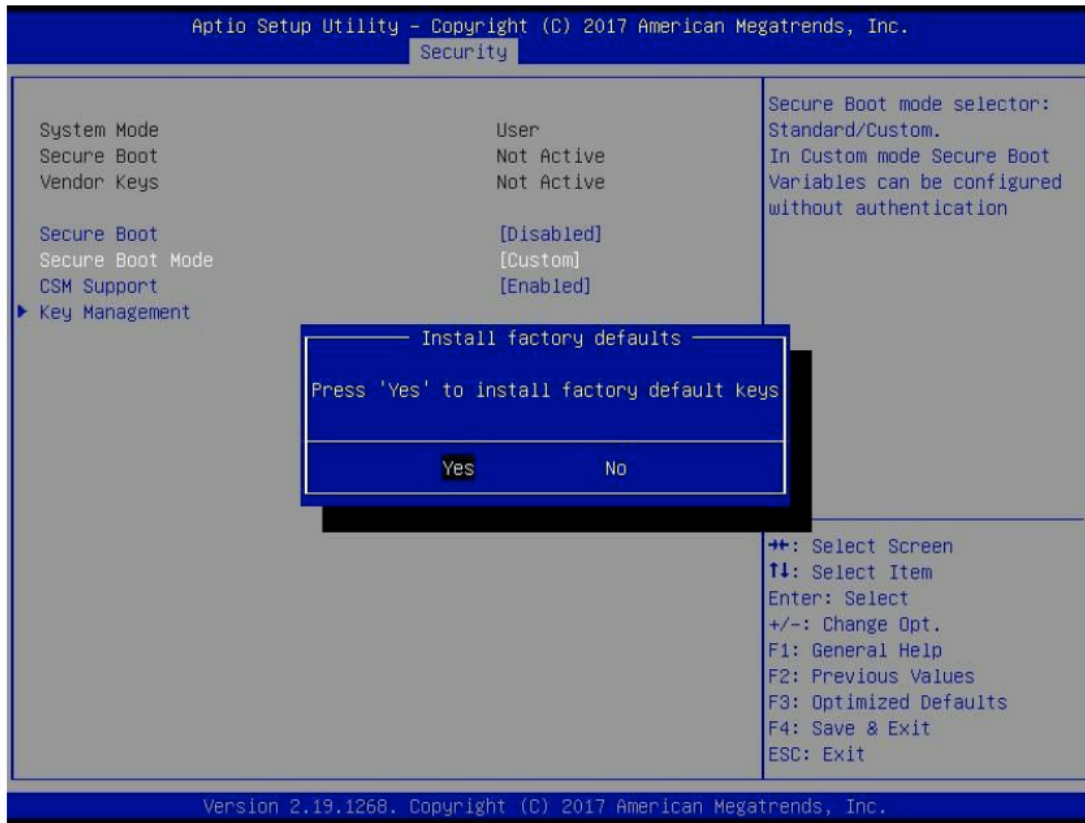
## 5.3 Secure Boot Settings


To have secure boot support, follow the steps below.

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

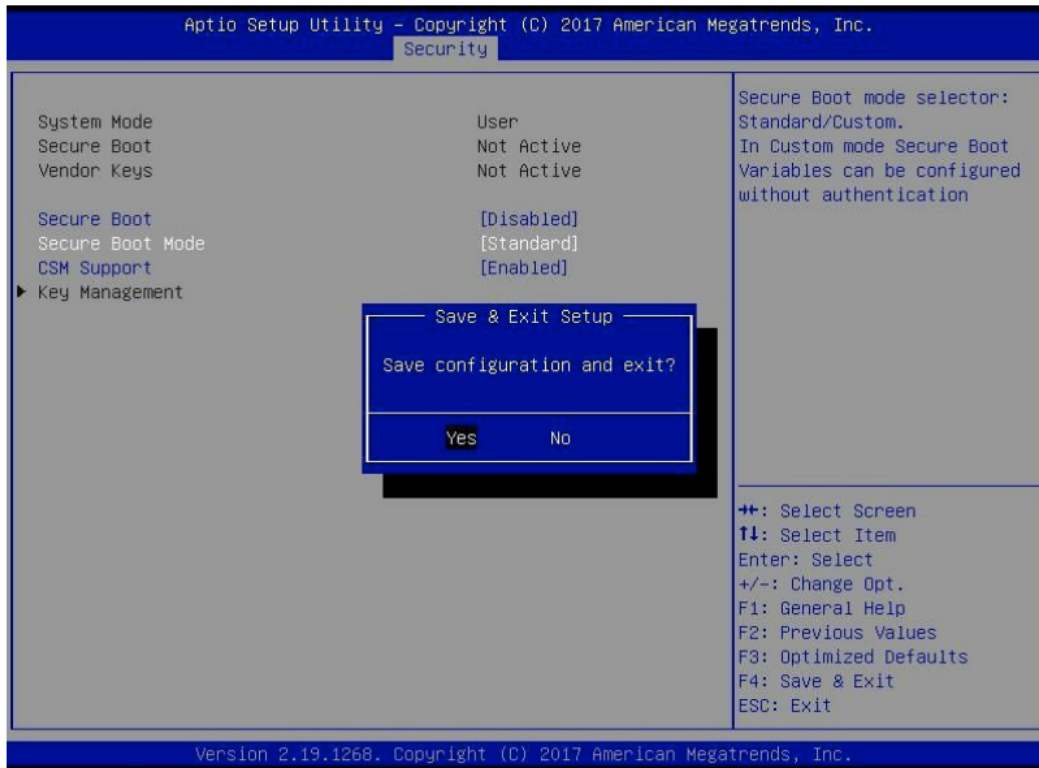


Press **Yes** to install factory default keys as needed.

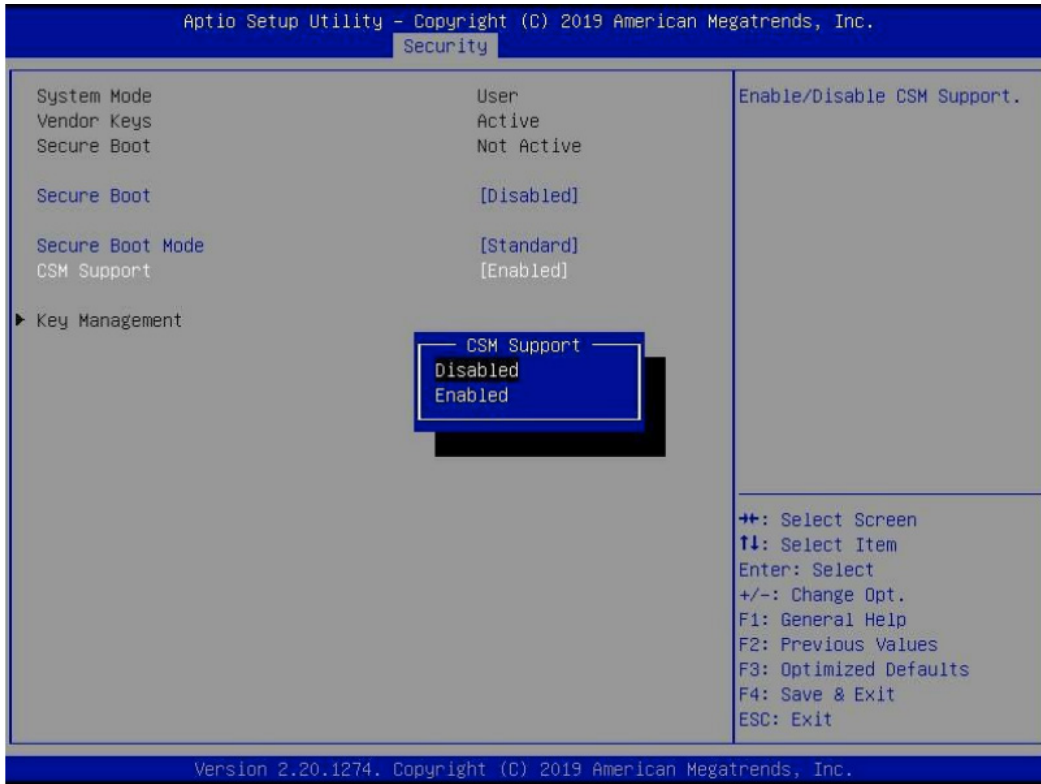


 **Note:** The Key Management menu will become unavailable when Secure Boot Mode is set to Standard.

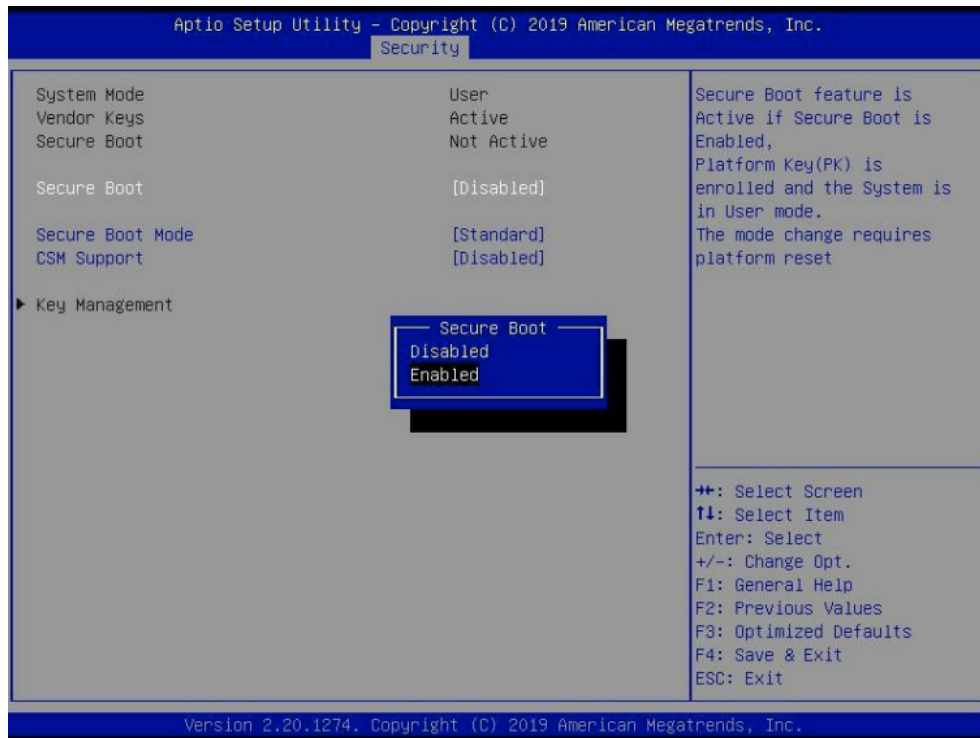
- For the changes to take effect, press **<F4>** to save the settings and exit the **BIOS Setup Utility**.



3. Press **<DEL>** during system boot to enter the **BIOS Setup Utility**.
4. Navigate to the **Security** tab and enter the **Secure Boot** menu.
5. Navigate to the **CSM Support** option and set it to **Disabled**.

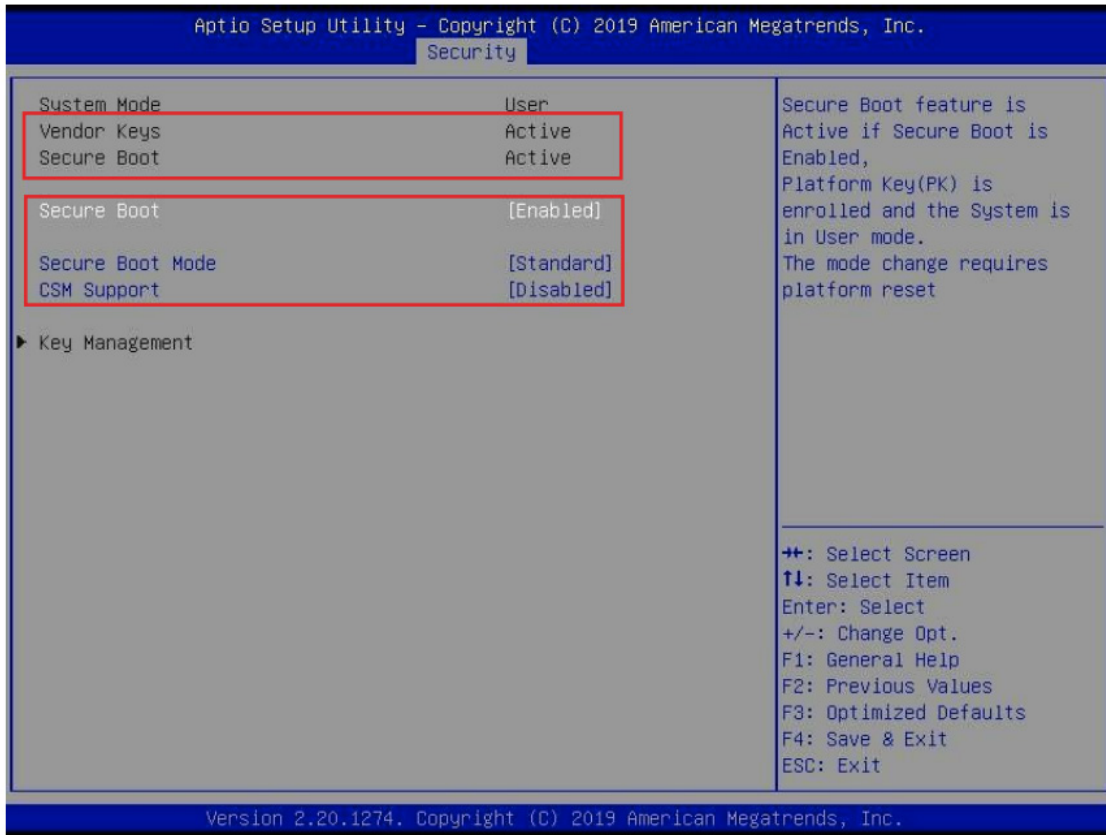



6. For the changes to take effect, press <F4> to save the settings and exit the BIOS Setup Utility.
7. Press <DEL> during system boot to enter the BIOS Setup Utility.
8. Navigate to the **Security** tab and enter the **Secure Boot** menu. Set **Secure Boot** to **Enabled**.



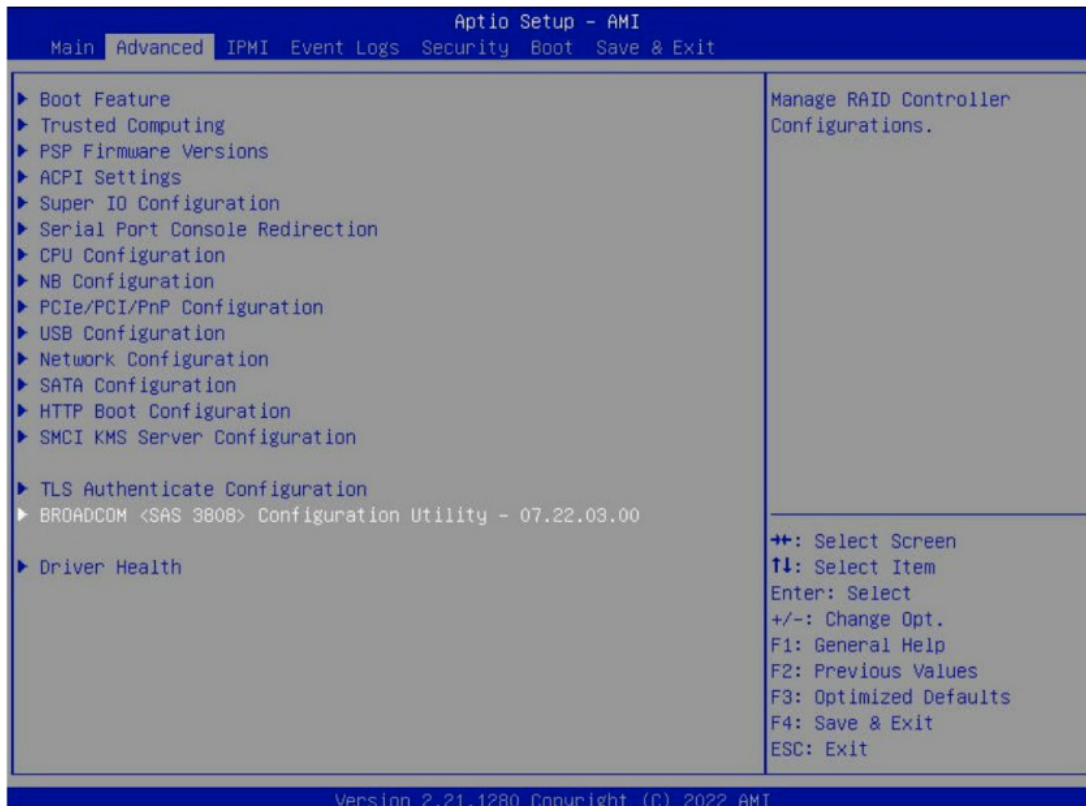
9. For the changes to take effect, press <F4> to save the settings and exit the **BIOS Setup Utility**.
10. Press <DEL> during system boot to enter the **BIOS Setup Utility**.

11. Navigate to the **Security** tab and enter the **Secure Boot** menu. The following screen will appear.

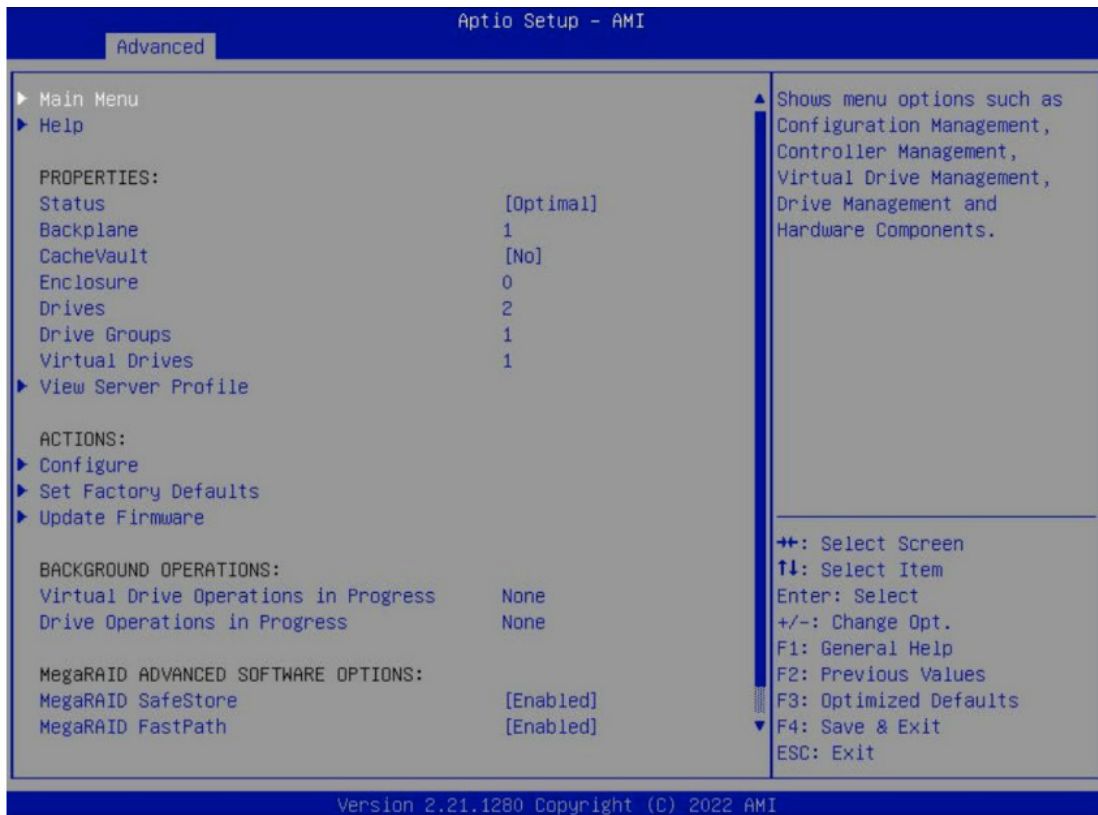


 **Note:** Once Secure Boot is enabled, CSM Support will become disabled and the legacy environment will no longer be valid. The authorized UEFI support includes UEFI OS, AOC UEFI FW, and UEFI PXE server.

- Now that Secure Boot is enabled, navigate to the **Advanced** tab, and select **BROADCOM <SAS 3808> Configuration Utility**.



The BROADCOM <SAS 3808> Configuration Utility Advanced Menu will appear as the following screen will appear as the following screen.



(Disclaimer Continued)

The products sold by Supermicro are not intended for and will not be used in life support systems, medical equipment, nuclear facilities or systems, aircraft, aircraft devices, aircraft/emergency communication devices or other critical systems whose failure to perform be reasonably expected to result in significant injury or loss of life or catastrophic property damage. Accordingly, Supermicro disclaims any and all liability, and should buyer use or sell such products for use in such ultra-hazardous applications, it does so entirely at its own risk. Furthermore, buyer agrees to fully indemnify, defend and hold Supermicro harmless for and against any and all claims, demands, actions, litigation, and proceedings of any kind arising out of or related to such ultra-hazardous use or sale.