# PCIe Dual M.2 NVMe RAID Controller Card

## User Manual

**Ver. 1.00**

**All brand names and trademarks are properties of their respective owners.**

# Contents:


***Chapter 1: Introduction ..... 3***

*1.1 Product Introduction ..... 3*

*1.2 Features ..... 4*

*1.3 System Requirements ..... 5*

*1.4 Package Contents ..... 5*

***Chapter 2: Getting Started ..... 6***

*2.1 Hardware Layout ..... 6*

*2.2 Hardware Installation ..... 7*

*2.3 Creating Virtual Disk ..... 8*

*2.4 Deleting Virtual Disk ..... 12*

# Chapter 1: Introduction

## *1.1 Product Introduction*

The A-620/A-660 is an NVMe aggregator with RAID capability. It extends the SATA/SAS RAID controller feature set into the NVMe (PCIe attached) space and creates enterprise-class system reliability,high availability, and serviceability with consumer-class NVMe solid- state drives. With the RAID feature set, the A-620/A-660 can virtualize multiple attached physical back-end devices into a single logical unit for the purposes of data redundancy (RAID 1), performance improvement (RAID 0).

## *1.2 Features*

- PCI-Express 3.0 x8
- A-620 Supports PCIe Gen3 x4 (M) and x2 (B+M), 2280/2260/2242/2230 M.2 form factor NVMe SSD modules

  A-660 Supports PCIe Gen3 x4 (M) and x2 (B+M), 22110/2280/2260/2242/2230 M.2 form factor NVMe SSD modules
- Supports low profile
- Supports Hardware RAID 0,1
- Bootable
- Heatsink on main controller chip
- Optional heatsinks for SSD modules (one per module)
- Operating Environment:

  Temperature: 5℃~ 50℃; Humidity: 20 ~ 80 % RH

## *1.3 System Requirements*

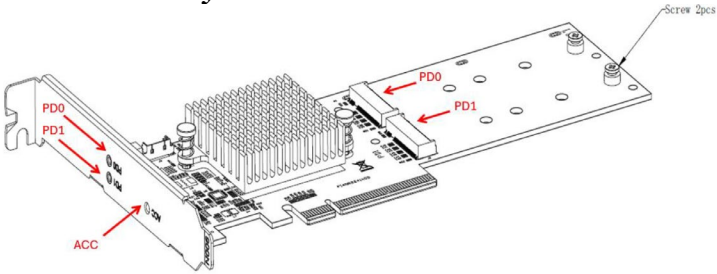
- Windows 7/8.x/10/11, and Windows Server 2008 R2/2012 R2/2016/2019/2022
- Linux 3.2 or later

## *1.4 Package Contents*

- PCIe Dual M.2 NVMe RAID Controller Card (A-620 or A-660)
- 1 x User Manual

# Chapter 2: Getting Started

## *2.1 Hardware Layout*

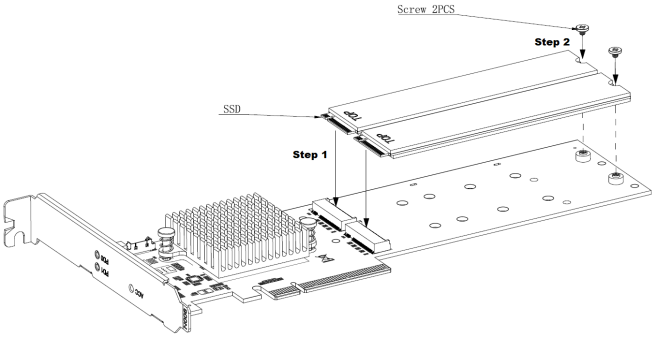



**LED Indicator:**

| LED | Description |
|---|---|
| **ACC LED** | Indicates SSD Status:<br>• Green = SSD Accessing |
| **PD0 / PD1 LED** | Indicates SSD Fault St<br>• Orange = SSD Fault |

## *2.2 Hardware Installation*

1. Insert the SSD into the slot.
2. Fixed the SSD with the screw.




3. Turn off the power to your computer.
4. Unplug the power cord and remove your computer's cover.
5. Locate to an empty PCI Express x8, or x16 slot on the motherboard.
6. To install the board, carefully align the card's bus connector with the selected PCIe slot on the motherboard. Push the board down firmly.
7. Replace the slot bracket's holding screw to secure the card.
8. Replace the computer cover and reconnect the power cord.

## *2.3 Creating Virtual Disk*

This section describes the produce for creating virtual disks using the BIOS **Configuration Wizard**.

**To create a virtual disk**

1. In the **Topology** pane, scroll to **Marvell NVMe Configuration Utility** and press Enter to select. A menu pops-up, as shown in Figure 1/2.

   Select **Configuration Wizard** and press **Enter** to begin creating the virtual disk.

   · Select in order: **“Settings” > “ IO Ports” > “Marvell NVMe Configuration Utility”**

**Figure 1.**

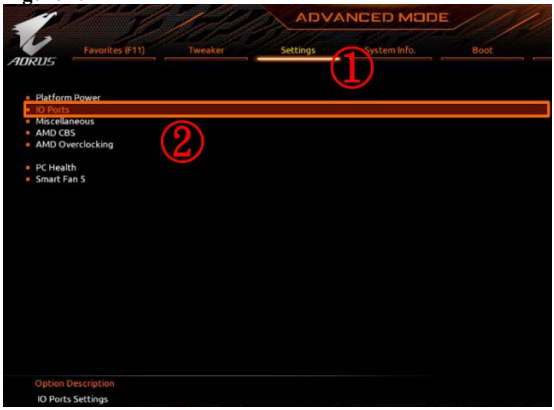
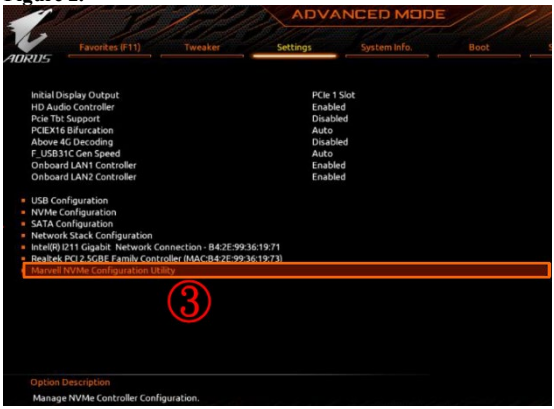



**Figure 2.**



2. Press **Space** to select/unselect a disk, as shown in Figure 3/4. Use the arrow keys to scroll the list of free disks.
3. After selecting the required disks, press **Enter** to continue.
4. **Create Virtual Disk** by configuring its setting in the **Information** pane.
   · Select **“Create RAID Configuraton”** in the **NVMe Configuration** page.
   · Select the devices you want to use in the new RAID build and enable them.

**Figure 3.**

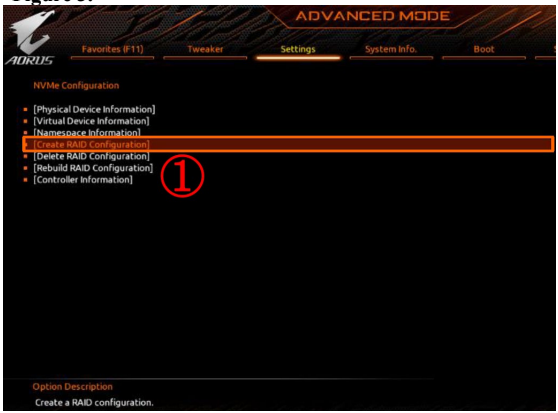
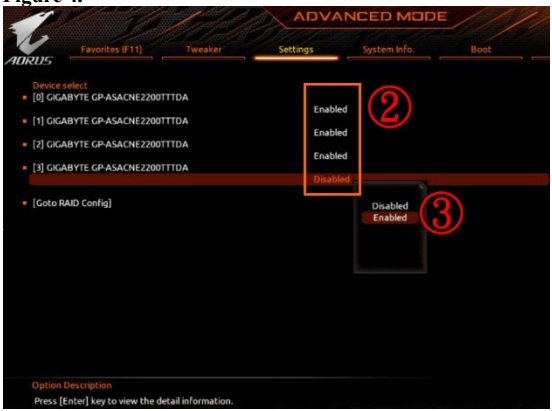



**Figure 4.**



5. **RAID Level**, is highlighted when the **Create Virtual Disk** screen is presented. Press **Enter** to select a **RAID Level**. A menu pops-up, and lists available RAID levels.
6. Scroll the list, and press **Enter** to select a **RAID Level** (RAID 0, RAID 1).

   **Note:** The default Level is RAID 0.
7. Press **Y** to select **Yes** when prompted **Would you like to create this virtual disk?**
8. Press Accept to select **OK**.

## *2.4 Deleting Virtual Disk*

**To delete a virtual disk**

1. In the Topology pane, select Virtual Disk (**New_VD** : Figure) and press **Enable** Enter .

   A menu pops-up, as shown Figure 5/6.

   - Select **"Delete RAID Configuration"** in **NVMe Configuration** page.
   - Select **"[0] New_VD" Device,** and set it as **Enable.**

**Figure** 5.

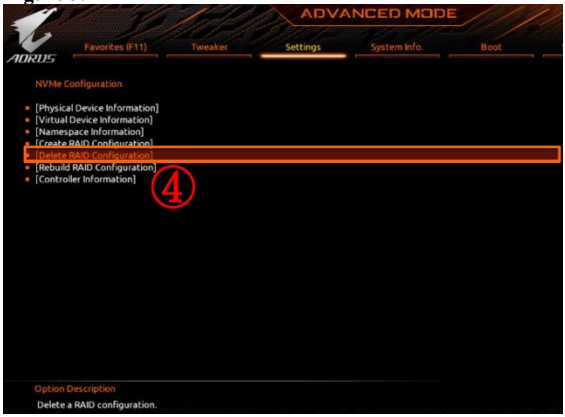
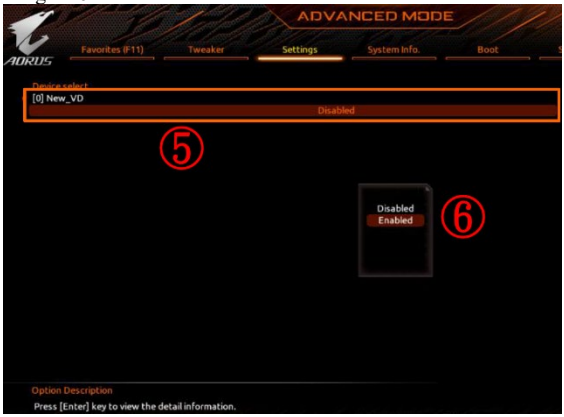



Figure 6.



2. Select **Clear MBR** to delete the virtual disk.
3. When prompted **Are you sure you want to delete the slected virtual disk**?
4. Press **Y** to select **Yes** when prompted Do you want to delete MBR from this virtual disk? as shown Figure 7/8.

・Set“**Clear MBR**”and“**Are you sure you want to delect the selected Virtual Disk**”as **Yes**.

Figure 7.

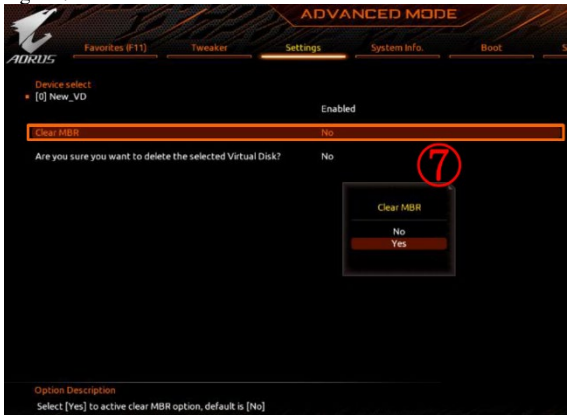
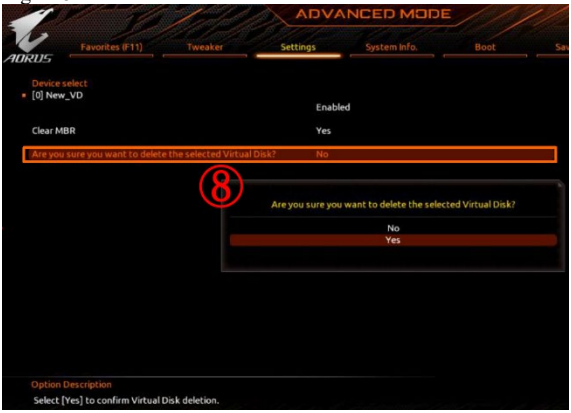
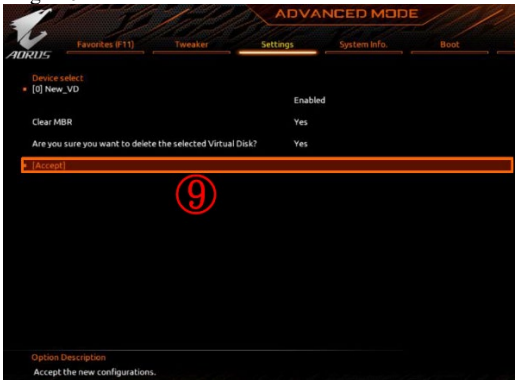



Figure 8.



5. Press **Accept** to select **OK**. as shown Figure 9/10.
   ・Press **“Accept”** to confirm the deletion of the RAID 0 array then the process will be done.

Figure 9.



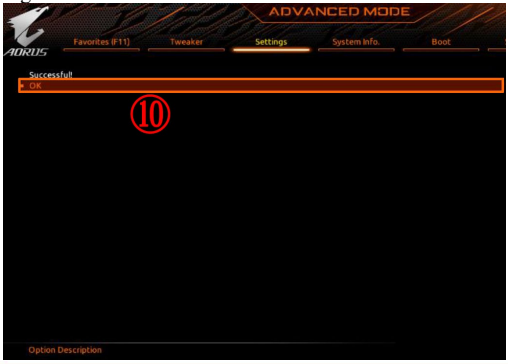


Figure 10.