M.2 NVMe Tri-Mode RAID Adapters

ARC-1886-6N2I

Adapter Architecture

- Dual Core RAID-on-Chip (ROC) 1.6GHz processor
- PCIe Gen 4.0 x8 lane host interface
- 8GB on-board DDR4-2666 SDRAM with ECC
- Support both 2280 and 22110 form factor M.2 drives

Step 1: Unpack

Inspect ARC-1886-6N2I RAID adapter from the package. If it appears damaged, or if any items of the contents listed below are missing or damaged, please contact your dealer or distributor.

Checklist

- 2 x SATA cable
- 1 x RAID adapter in an ESD-protective bag
- 1 x ARC-1886-6N2I quick installation guide

Step 2: Mount the M.2 NVMe SSD

(1) Remove four screws that secure unit's front panel

If you use 2280 M.2 NVMe SSD...

(2) Gently insert the SSD into slot and fasten SSD with the board latch

(3) Repeat steps 2 to install the remaining SSDs
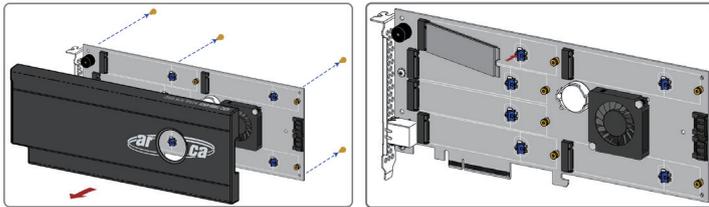
If you use 22110 M.2 NVMe SSD...

(※2) Turn the latch 90° clockwise or counterclockwise to remove it and also remove six screws on the board

(※3) Gently insert the SSD into slot, meawhile put the screw into the groove and fasten the screw to secure SSD
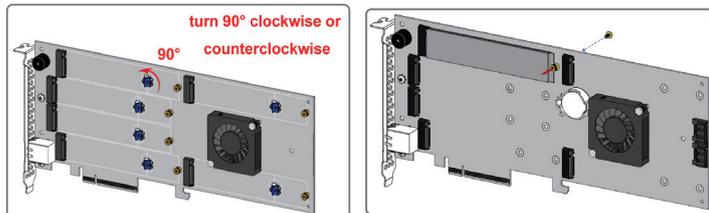
(4) Refasten four screws to secure unit's front panel
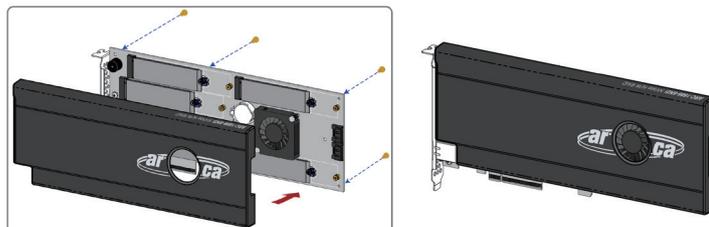
Step 3: Power PC/Server Off and Discoennect Power Cable

Step 4: Install the RAID Adapters

Remove the mounting screw and existing bracket from the rear panel behind the selected PCIe 4.0 slot. Align the gold-fingered edge on the card with the selected PCIe 4.0 slot. Press down gently but firmly to ensure that the card is properly seated in the slot. Then, screw the bracket into the computer chassis.

Step 5: Install SAS/SATA Connection Cable (Optional)

The ARC-1886-6N2I can use two SAS/SATA ports to support secondary array module.

Connecting to HDD   Connecting to Expander Backplane
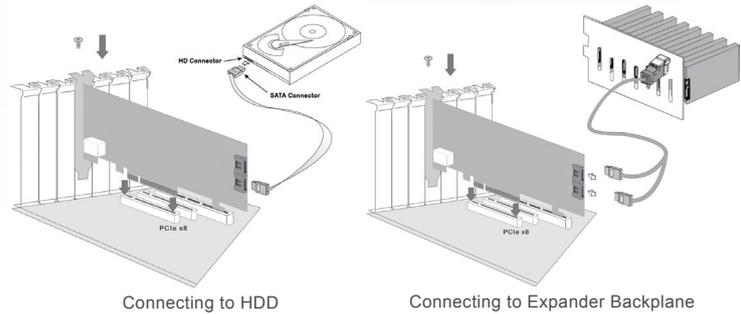
Below is an example using the space and connections inside the 2019 Mac Pro next to the PCIe card slots to install and connect ARC-CD2I up to two SAS/SATA drives in the 2019 Mac Pro.
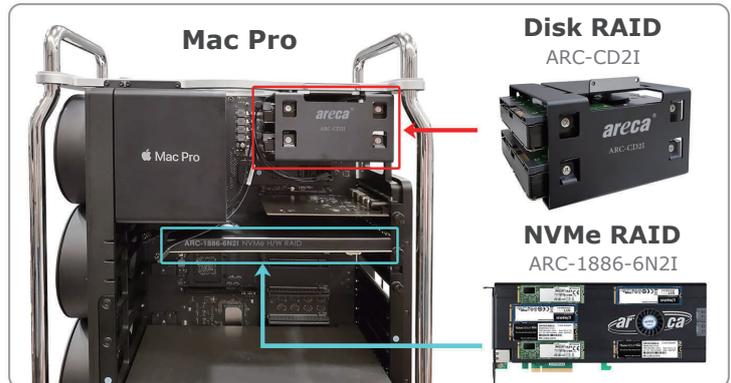
Automatically backup to Disk RAID when workload does not reach the preset values.

Step 6: Connect Monitor Port - LAN Port

User can remote manage the RAID adapter without adding any user specific software (platform independent) via standard web browsers directly connected to the RJ45 LAN port.

Step 7: Adding a CBM Backup Module (Optional)

The ARC-1886-6N2I utilizes the optional CBM module to provide below function:

(1). Support Off module (PLP) hold-up power, eliminating the need for capacitors on the NVMe SSDs which helps reduce cost.

(2). Support M.2 slot fault LED status and easily be identified as a failed drive when it is removed from the system PCIe slot.

(3). Support power to the 8GB cache if it contains data not yet written to the drives when power is lost.

Please refer to Appendix B of the user manual for installing the cache backup module (CBM) in your ARC-1886 RAID adapter.

Step 8: Power up the System

Step 9: Install the Adapter Driver

Please refer to Chapter 4 "Diver Installation" of the user manual for the detailed installation procedure.

Step 10: Install ArcHTTP Proxy Server (Optional)

ArcHTTP has to be installed for GUI RAID console (MRAID storage manager) to run. It is used to launch the web browser MRAID storage manager. It also runs as a service or daemon in the background that allows capturing of events for mail and SNMP traps notification. The on-board RJ45 LAN port [Step 6] can provide the same function as above.

Follow the steps below to install the ArcHttp utility.

1. Download ArcHttp proxy server (or MRAID software) from Areca website: *https://www.areca.com.tw/support/downloads.html*

2. Follow the steps on the user manual to complete the installation

If you need additional information about installation and start-up of this function, see the ArcHTTP Proxy Server Installation section in Chapter 5 of the user manual. For SNMP agent function, please refer to Appendix C of the user manual.

Step 11: Configure RAID Set & Volume Set

You can create and configure a RAID adapter using any of these tools:
• McBIOS RAID Manager
  — BIOS-based menus and keyboard navigation.
• MRAID Storage Manager
  — Web browser firmware-based manager, which is accessible via the web browser installed on your operating system. It can be launched through ArcHttp utility or onboard LAN port.

※ Method 1: McBIOS RAID Manager (Not For Mac User)

The McBIOS RAID manager is a menu-driven program, residing in the firmware, which allows you to scroll through various menus and sub-menus and select among the predetermined configuration options.

1. Power on your computer. When prompted, press **Tab** or **F6**.

2. The McBIOS RAID manager window appears showing a selection dialog box listing the RAID adapters, select your adapter, then press **Enter** to show the McBIOS RAID manager message.

```
ARC-1886   PCIEx8/16G  RAID  Controller - DRAM: 8192(MB) / #Channels: 16
BIOS: V1.31 / Date: 2020-08-15 - F/W: V1.56 / Date: 2020-08-15

   Bus/Dev/Fun= 4/0/0, I/0-Port=28000000h, IRQ=11,  BIOS=C800 : 0h
   ID-LUN=00-0, Vol="Areca  ARC-1886-VOL#000R001", Size=3.6 (TB)
   ID-LUN=00-1, Vol="Areca  ARC-1886-VOL#001R001", Size=3.6 (TB)
   ID-LUN=00-2, Vol="Areca  ARC-1886-VOL#002R001", Size=3.6 (TB)
   RAID controller BIOS not installed
     Press <Tab/F6> to enter SETUP menu.  9 second(s) left <ESC to Skip>..
```

3. Follow the McBIOS RAID manager to complete the configuration.

※ Method 2: MRAID Manager From LAN Port

User can remote manage the ARC-1886-6N2I without adding any user specific software (platform independent) via standard web browsers directly connected to the RJ45 LAN port. You can find controller Ethernet port default IP address in McBIOS RAID manager "System Information" option. Launch the Web Browser-based MRAID storage manager by entering http://[IP Address] in the web browser.
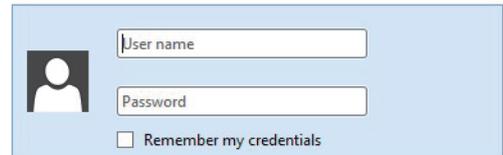
Type the User Name and Password. The RAID adapter default User Name is "admin" and the Password is "0000". After entering the user name and password, click the button to access the MRAID storage manager.
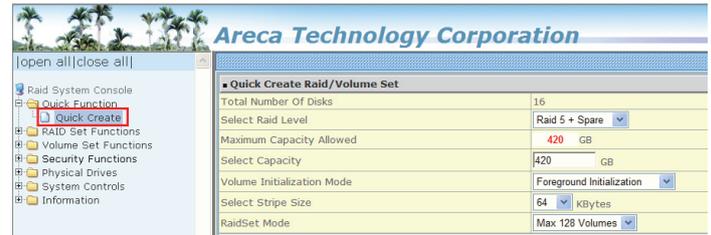
Click on the "Quick Create" in the main menu, your volume is automatically configured based on the number of disks in your system. You can create a RAID set associated with exactly one volume set.

See the chapter 6 of Web Browser-based Configuration on the user manual detailing the MRAID storage manager to customize your RAID configuration.

※ Method 3: MRAID Storage Manager From ArcHTTP

1. Start ArcHTTP– Browser Edition:
   (1) In Windows, right-click on "Start" menu and choose "Programs". Clicking "MRAID" program icon starts the ArcHTTP utility (From the Start menu, choose Programs > MRAID > ArcHTTP).
   (2) On a Mac, there is one MARID icon showing on your desktop. This icon is for you to start up the ArcHTTP utility.

2. When you double-click on the "ArcHTTP64", it shows all RAID adapters available on the system and create an individual RAID adapter icon located on left column of the "ArcHTTP Configurations" screen.

3. Locate "ARC-1886-6N2I Web Management" and launch the selected MRAID storage manager.
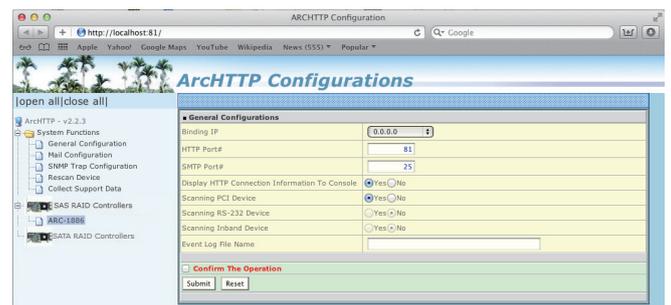
4. Type the User Name and Password when the login page prompt. The RAID adapter default User Name is "admin" and Password is "0000". After logging in, the MRAID storage manager process starts.

5. Click on the "Quick Create" in the main menu, your volume is automatically configured based on the number of disks in your system. You can create a RAID set associated with exactly one volume set.

See chapter 6 of ARC-1886-6N2I user manual for information on customizing your RAID volumes using MRAID storage manager.

If you need more detail information, please download user manual from the website below:
· *https://www.areca.com.tw/products/nvme-1886.html*
· *https://www.areca.com.tw/support/downloads.html*