

ARC-8028 SAS Expander Box

24 internal 12Gb/s SAS port expander box



Step 1: Unpack

Unpack and inspect ARC-8028 expander box 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

- ARC-8028 expander box with LCD module
- 1 x RJ11 to RS-232 DB9 cable
- 8 x drive mounting screws (4 screws for each side)
- 1 x ARC-8028 quick installation guide
- Adapter convert two 4 pin peripheral power cables into a PCI-E power cable

Step 2: Power PC/Server Off

Step 3: Mounting ARC-8028 into the Enclosure

Remove the enclosure cover and find a 5.25 inch CD-ROM wide place to fasten the ARC-8028 expander box in the external enclosure. The expander box requires one 5.25" half-height drive bay.

Step 4: Connecting Expander Controller Power

The ARC-8028 series expander box supports 6 pin PCI-E power connector. If your power supply doesn't have a 6 pin PCI-E power cable then you can use the adapter to convert two 4 pin peripheral power cables into a PCI-E power cable. If you use an adapter then be sure to plug the 4 pin peripheral power connectors into separate power cables coming from the power supply.

Step 5: Install the LED Cable (Optional)

For further details about Installing LED cable please refer to the chapter 2.3 of Hardware Installation on the user manual.

Step 6: Connecting SFF-8643 Cable to Backplane

The ARC-8028 expander box supports 6/8 Mini SAS HD SFF-8643 connectors on the back side. User uses suitable cable (depends on the backplane) to connect the expander box connector to the enclosure backplane.

Step 7: Setting Up the Dual Expander Mode (Optional)

For further details about Installing LED cable please refer to the chapter 2.3 of Hardware Installation on the user manual.

Step 8: Install the Enclosure Top Cover

Check the installation thoroughly, reinstall the enclosure cover, and reconnect the power cord cables.

Step 9: Loading Drive to the Drive Tray

You can connect the SAS/SATA drives to the controller through direct cable and backplane solutions.

In the direct connection, SAS/SATA drives are directly connected to SAS PHY port with SAS/SATA cables. The SAS expander module can support up to 12/16/24 PHY internal ports and 12/16 PHY external ports. Remove the front bezel from the computer chassis and install the cages or SAS/SATA drives in the computer chassis. Loading drives to the drive tray if cages are installed. Be sure that the power is connected to the individual drives or cage.

In the backplane solution, SAS/SATA drives are directly connected to SAS system backplane. The number of SAS/SATA drives is limited to the number of slots available on the backplane. Your ARC-8028 expander box supports up to 12/16/24 12Gb/s SAS or SATA 6Gb/s drives, each one contained in its individual drive carrier. Each drive is hot-pluggable, allowing you to remove and insert drives without shutting down your ARC-8028 expander enclosure.

Step 10: Connect to Host Interface

Step 11: Connect Expander Box's RS-232 Port (Optional)

The ARC-8028 expander box's system functions can be managed via a PC running a VT-100 terminal emulation program, or a VT-100 compatible terminal. The provided internal cable converts the RS-232C signals from the RJ11 into the one 9-pin D-Sub male connector.

Step 12: Add More Expander Boxes (Optional)

ARC-8028 expander box can run in one of two modes:

1. Normal Mode
2. Zone Mode

You must select either mode using the CLI utility and restart the ARC-8028 expander enclosure again. The manufacture is default on the Normal Mode. Changing the mode while the ARC-8028 expander box is on. This will not affect expander operation until the ARC-8028 expander enclosure is rebooted.

• In normal mode:

A SAS host can communicate with up to 24 drives in the 24 bay enclosure via a single ARC-8028 expander box. ARC-8028 SAS expander box is a device that contain expander ports. Expander ports may support being attached to SAS initiator ports, SAS and/or SATA target ports, and to other expander ports. The SAS RAID controller or host adapter can support daisy-chain how many enclosures which depend on the RAID controller or the host adapter firmware.

• In zone mode:

The SAS expander box can be split into up to 8 virtual groups. Each group drive channels and external cable connectors are assigned by CLI GROUP command. The following figure is shown the SAS expander box which has split into 2 virtual groups. Each group drive channels are controlled by individual host adapter using SAS CH1 and SAS CH2.

Step 13: Connect the Enclosure Power

Step 14: Configure ARC-8028 Expander Box

The ARC-8028 expander box is normally delivered with LCD preinstalled. Your ARC-8028 expander box can be managed by using the LCD with keypad or a serial device (VT-100 terminal emulation). Please refer to the Chapter 3 "LCD Configuration Manager" or the Chapter 4 "CLI Manager" on user manual.

If you need more detail information, please download user manual from the website below:

- <http://www.areca.com.tw/products/sascableexpander8028.htm>
- <http://www.areca.com.tw/support/main.htm>