

ASR-5300I Series Startup Manual

Warnings

- Only qualified service personnel should install and service this product to avoid injury.
- Observe all ESD procedures during installation to avoid damaging the equipment.

Preparing Tools

Unpack the equipment and ensure the following tools are available before installation.

Note: Refer to the Unpacking List for the exact items included in the package.

User-provided tools

- Phillips screwdriver (medium size)
- Flat blade screwdriver (small size)
- Anti-static wrist wrap

Accessory box contents

- Screws: M5, M6, #10-32, #6-32
- Cables: Power cord x 2

Rackmount Installation

Warning: Considering the weight of the enclosure and installation requirements, do not install HDDs before rackmounting. Additionally, at least one other personnel should assist with the installation.

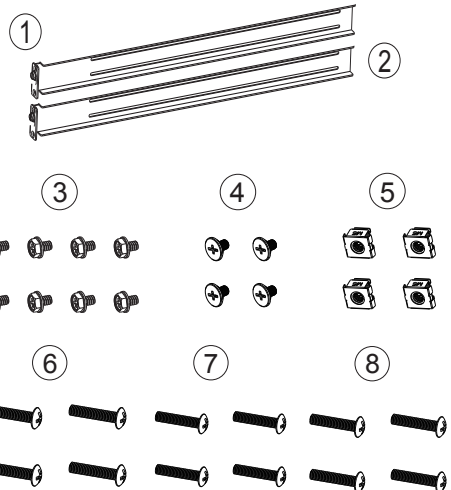


Two optional rackmounting kits are available. Refer to the installation instructions for the specific kit purchased.

Rack Mount Ear Kit

Contents

Item	Description	Quantity
01	Mounting bracket assembly, left side	1
02	Mounting bracket assembly, right side	1
03	Hexagon washer screws #6-32 mm	8
04	Truss head screws M5 x 9.0 mm	4
05	M5 cage nuts	4
06	M5 x 25 mm	4
07	M6 x 25 mm	4
08	#10-32 x 25.4 mm	4



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For technical support and service, please visit our support website at

<http://support.advantech.com>

This manual is for the ASR-5300I Series.

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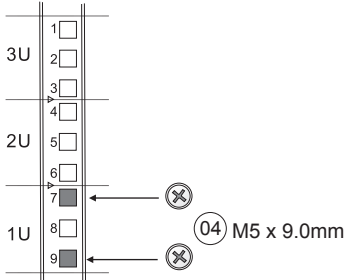
Installation:

Rackmount Installation (cont.)

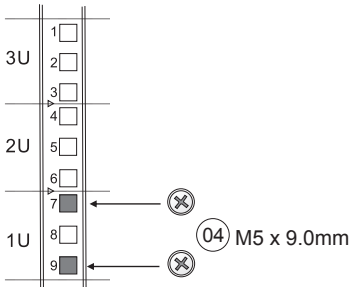
1. Determine the exact position that the enclosure will be installed on the rack post (front and rear).
2. Insert the cage nuts into the front rack post.

Positions for chassis / M5 cage nut

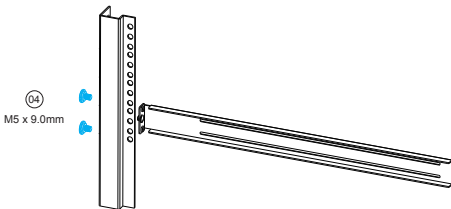
Rear rack posts



Rear rack posts



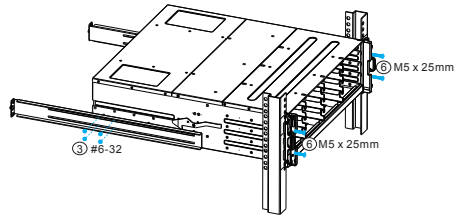
3. Attach the fixed rails to the rear posts and secure the rails in place using truss head screws.



4. With one person holding the enclosure at the installation height, the other person can secure the enclosure in place using four M5 x 25 mm screws at the front and eight #6-32 screws on both sides (four on each side).

Note: If the rack does not require M5 cage nuts and is equipped with screw threads, use the M6 or #10-32 screws for the front posts.

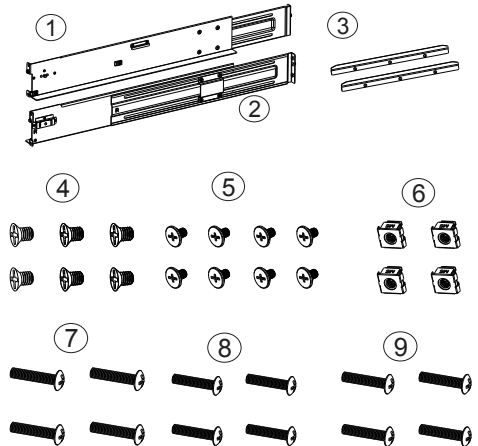
Rackmount Installation (cont.)



Slide Rail Kit

Contents

Item	Description	Quantity
01	Mounting bracket assembly, left side	1
02	Mounting bracket assembly, right side	1
03	Inner glides	2
04	Flathead screws #6-32 L4	6
05	Truss head screws M5 x 9.0 mm	8
06	M5 cage nuts	4
07	M5 x 25 mm	4
08	M6 x 25 mm	4
09	#10-32 x 25.4 mm	4

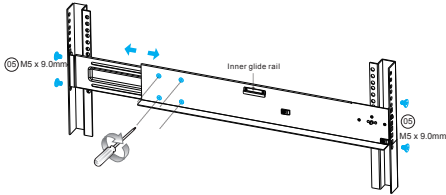


Rackmount Installation (cont.)

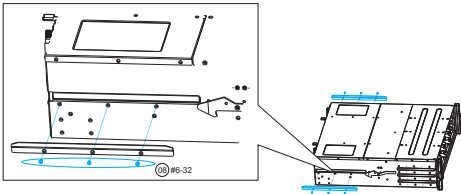
1. Determine the exact position for the enclosure installation (front and rear rack posts).
2. Refer to the illustration below and insert cage nuts into the front rack post and truss head screws to secure the slide rail.

Positions for chassis / M5 cage nut - Please refer to the instructions for the Rack Mount Ear Kit.

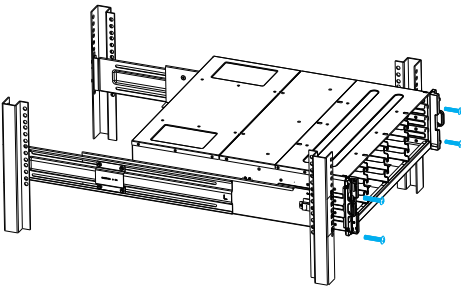
3. Adjust the length by loosening the four screws on the slide rail. Secure the slide rails to the front and rear posts using truss head screws. Tighten the four screws on the slide to fix the length.



4. Attach the inner glides to both sides of the enclosure using flathead screws #6-32.



5. With assistance from another person, lift the enclosure onto the slide rail. Ensure the inner glides on both sides of the enclosure meet the inner glide rail. Secure the enclosure at the front using M5 or M6 screws.

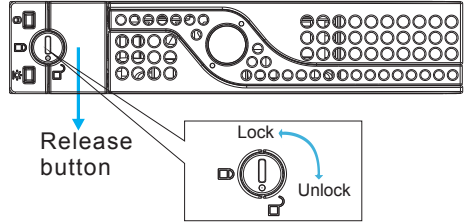


HDD Installation

Small form factor HDD (2.5")

Removing the HDD tray

1. Press the release button to open the bezel and gently pull the hard drive tray out of the enclosure.

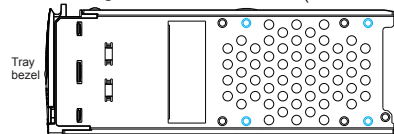


Attaching the HDD

1. Place the hard drive into the drive tray. The interface connector should face the open side of the tray, with the label of the hard drive facing upwards.
2. Secure the HDD to the tray using the screw positions shown below.

○ 2.5 inch SAS HDD (without MUX)

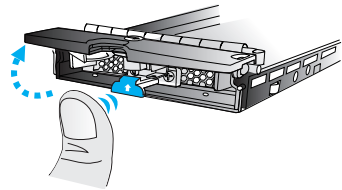
○ 2.5 inch SATA HDD (with MUX)



Standard form factor HDD (3.5")

Removing the HDD tray

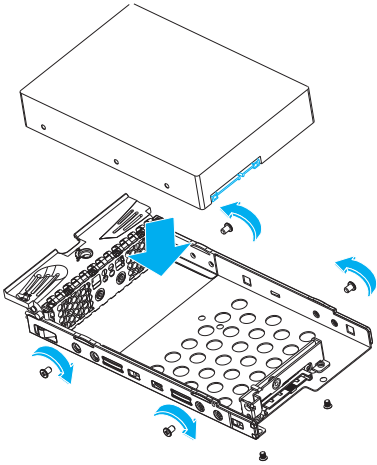
1. Press the release button to open the bezel and gently pull the HDD tray out of the enclosure.



HDD Installation (cont.)

Attaching the HDD

1. The interface connector should face the open side of the tray, and the label side should face upwards.



2. Secure the drive using four of the supplied screws.
A. 3.5" SAS HDD
3.5" SATA HDD in single-controller systems



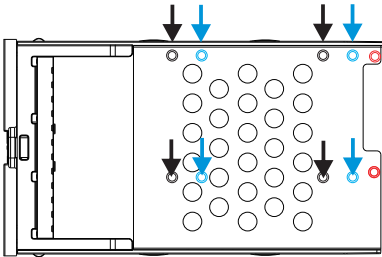
Without MUX

- B. 3.5" SAS HDD
3.5" SATA HDD in single-controller systems



With MUX

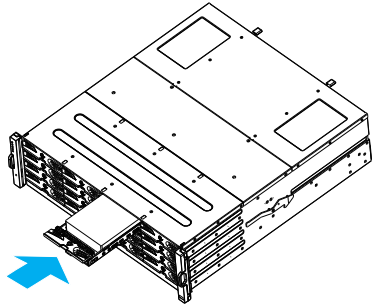
- C. 2.5" SAS HDD (without MUX) ↓
2.5" SATA HDD (with MUX) ↓
MUX board screw locations ○



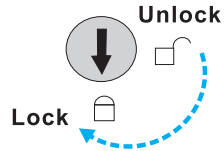
HDD Installation (cont.)

Inserting and securing the HDD tray

1. Insert the HDD tray into the enclosure with the tray bezel open.



2. Close the bezel. Using a small flat-head screwdriver, turn the bezel lock to the lock position.

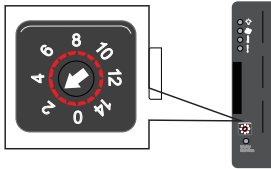


JBOD Connections

Note: RAID systems are assigned an ID of "0" by default.
 2U RAID systems connect only to 2U JBODs.
 3U RAID systems connect only to 3U JBODs.
 For mixed form factor expansion connections, please refer to the appropriate QIG / manual.

Setting JBOD IDs

Use a small flat-head screwdriver to set the JBOD enclosure ID number.

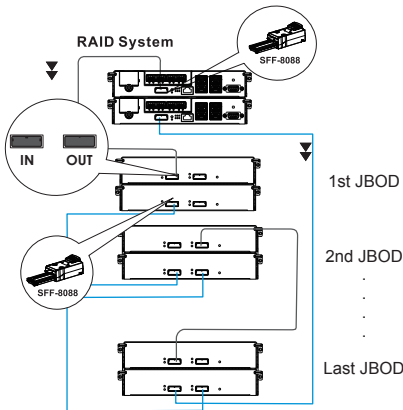


Making connections

Connect the cables between the RAID system and JBOD(s).

Dual controller models

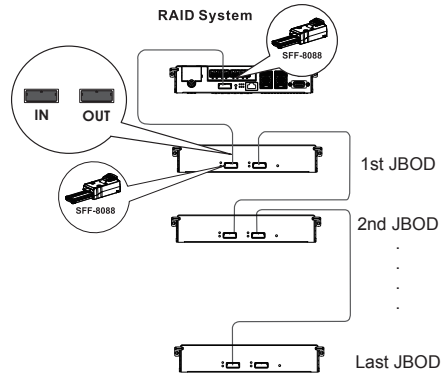
- RAID system top SAS exp. – 1st JBOD top SAS-IN
- 1st JBOD top SAS-OUT – 2nd JBOD top SAS-IN
- 1st JBOD bottom SAS-IN port – 2nd JBOD bottom SAS-OUT
- RAID system bottom SAS exp. – last JBOD bottom SAS-IN



JBOD Connections (cont.)

Single controller models

- RAID system SAS exp. – 1st JBOD SAS-IN
- 1st JBOD SAS-OUT – 2nd JBOD SAS-IN



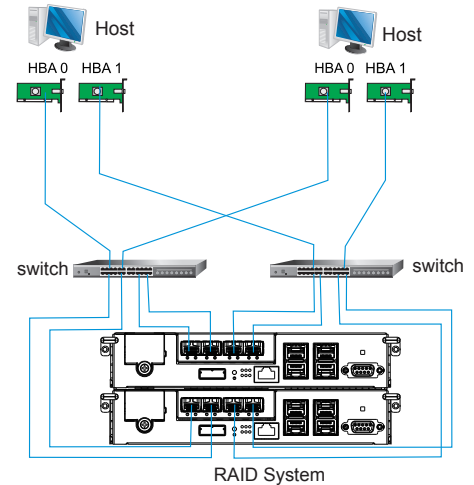
Note: To ensure redundancy, a dual controller SAS expander must be connected to both ends of daisy-chained JBODs (e.g., the first and last JBODs).

Making Host Connections

The following diagrams illustrate the recommended connections between the RAID system, switches, and hosts.

For more information, refer to the hardware manual provided on the product CD-ROM.

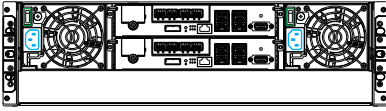
Note: Host link cables are not included in the product package.



Powering Up

Connecting power cords

Connect the power cords to the power sockets (in blue) of both PSUs.



Powering up the equipment

1. Power up the JBODs (if applicable) by pressing the power switches on the rear panel.
2. Power up the RAID system by pressing both power switches (above in green) on the rear panel.
3. Power up the application servers.

Verifying the status LEDs (front of enclosure)

Observe the front of the enclosure. If the LED indicators show a different status than that described below, or if an alarm is audible, contact customer support.

Front pane LEDs:

Service LED: Off (red)
Power LED: Green
Cooling fan LED: Green
Thermal LED: Green
System LED: Green

Drive tray:
• Power Status LED: On (green)

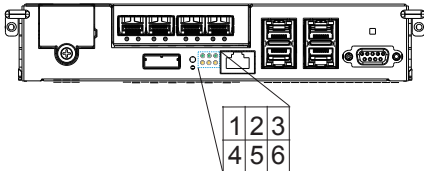


Verifying the status LEDs (rear of enclosure)

Observe the rear of the enclosure. If the LED indicators show a different status than that described below, or if an alarm is audible, contact customer support.

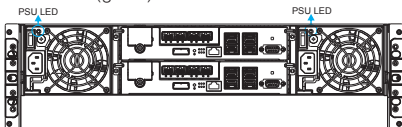
Controller LEDs

1. Ctrl Status LED: On (green)
2. C_Dirty LED: Off
3. Temp LED: Off
4. CBM Status LED: On (green) or Off
5. Hst Bsy LED: On (green)
6. Drv Bsy LED: On (green)



PSU LED

- PSU LED: On (green)

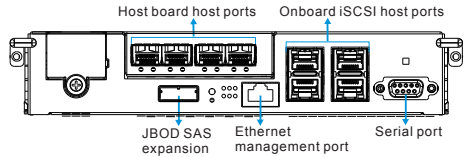


Connecting to Management Interfaces

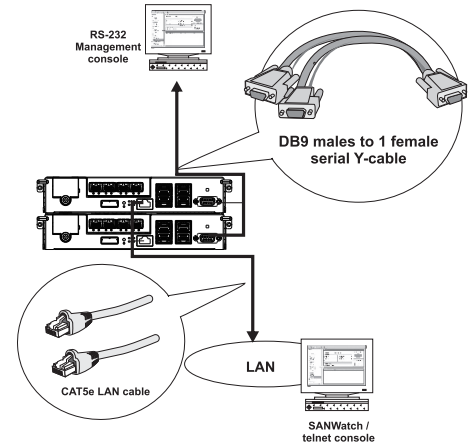
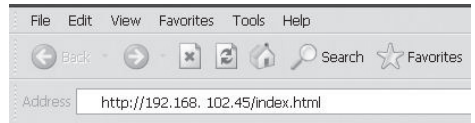
Overview of management interfaces

The RAID system can be managed and monitored using three types of interfaces.

Refer to the sample figures below regarding controller host ports and management interfaces.



- Host PC (in-band connection): Users can access the RAID system from the host servers via the host links.
- Ethernet management port (out-of-band connection): Users can access the RAID system remotely using a computer connected to an Ethernet port. Users must obtain the IP address and static IP address, or DHCP, from the network administrator. If neither are available, use the default address < 10.10.1.1 >.



- Serial port: Users can access the RAID system on a directly connected computer through the RS-232C port. (The serial cable is provided as an accessory for dual-controller models. For single-controller models, the serial cable must be supplied by the user.)

Serial port setting

Baud rate: 38400
Data bit: 8 bit
Parity: none
Stop bit: 1
Flow control: hardware

Connecting to Management Interfaces (cont.)

Accessing management tools

Users can control the RAID system via the firmware menu (through the RS-232C interface) or using SANWatch GUI software (through the Ethernet or host PC interface).

For more tools and details, please refer to the manuals provided on the CD-ROM.

Firmware menu

1. Connect a computer to the RAID system using an RS-232C cable.
2. Open a terminal emulation software such as VT-100 on the computer.
3. Configure the serial port according to the instructions provided in the previous section and connect to the RAID system. The main firmware menu should appear.
4. Use the cursor keys to select the menu.

```
< Main Menu >
Quick installation
view and edit Logical drives
view and edit Logical Volumes
view and edit Host Luns
view and edit SCSI Drives
view and edit SCSI channels
view and edit Configuration parameters
View Statistics
Set IP Address
Routing Table Configuration
WAN0:13139: HWAddr: 00901F26R0103R00-132:135:20:13
Internet Protocol (TCP/IP)
File System Maintenance
```

SANWatch

1. Connect the RAID system to a remote computer through the Ethernet port or to a host PC via host links.
2. Install the SANWatch software suite included on the CD-ROM to the computer.
3. Install EonPath (multi-pathing driver) on servers with fault-tolerant data links.
4. On SANWatch, select the RAID system from the Connection View.
5. Access the Task options and click on the License Information item to generate a License Application File.
6. Activate software features using the license information and continue operating SANWatch.

Note: The functions and settings available differ for each tool. For additional details, please consult the appropriate manual.