



PAC Storage 4000 Series

Cloud-integrated Unified Storage Quick Installation Guide



- Only qualified service personal should install and service this product to avoid injury.
- Observe all ESD procedures during installation to avoid damaging the equipment.
- Install the hard drives for operating system and PCIe Add-on cards before rack-mounting the enclosure.
- Due to the weight of the enclosure install storage array HDDs after rack-mounting.
- At least one other person should assist with the installation of the enclosure.

1. Preparing tools

Unpack the equipment and make sure the following tools are available before installation. For the exact number of items included in the package refer to the unpacking list.

1.1 User-provided tools

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

1.2 Accessory box content

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

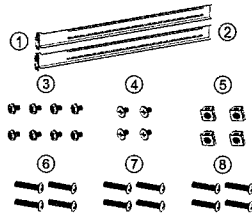
2. Rackmount installation

There are two optional rack mounting kits available. Depending on the one you purchased, refer to the following installation instructions.

2.1 Rack Ear Mount Kit

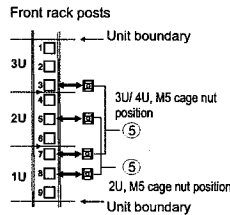
a. Contents

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

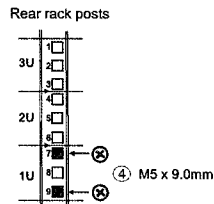


b. Installation

1. Determine the exact position where the enclosure will be installed on the rack post (front and rear).

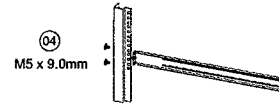


2. Insert the cage nuts into the front rack post.

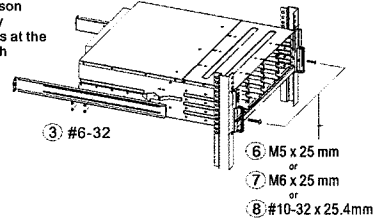


i If the rack does not require M5 cage nuts and has its own screw threads, then use the M6 or #10-32 screws for the front posts.

3. Install the fixed rails to the rear posts and secure them using truss head screws.



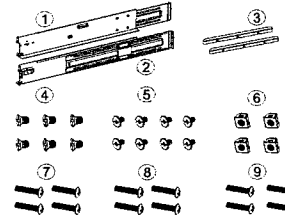
4. With one person holding the enclosure at the installation height, the other person can secure the enclosure in place by placing two M5 or M6 x 25mm screws at the front and eight #6-32 screws on both sides (four on each side).



2.2 Slide Rail Kit

a. 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 9.0mm	8
06	M5 cage nuts	4
07	M5 x 25mm	4
08	M6 x 25mm	4
09	#10-32 x 25.4mm	4

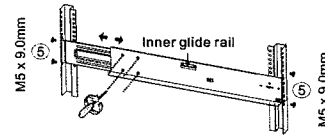


b. Installation

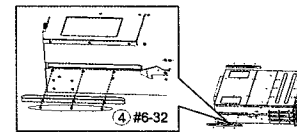
1. Determine the exact position for enclosure installation (front and rear rack posts).
2. Refer to the illustration below to insert cage nuts into the front rack post and truss head screws to secure the slide rail.

Positions for chassis / M5 cage nut: Please refer to Rack Ear Mount Kit's section.

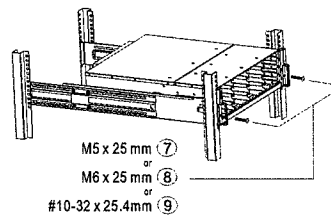
3. Adjust the length by loosening the four screws on the slide rail. Secure the slide rails to front and rear posts using truss head screws and tighten the four screws on the slide to fix the length.



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



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

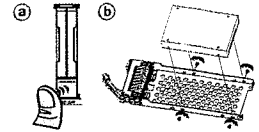


3. Installing HDD

3.1 Small form factor HDD (2.5")

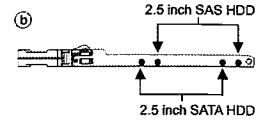
a. Removing the HDD tray

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



b. Attaching the HDD

1. Place the hard drive into the drive tray. The interface connector should face the open side of the tray, while the label side should face up, with the label of the hard drive facing up.



2. Secure the HDD onto the tray according to the following screw positions.

3.2 Standard form factor HDD (3.5")

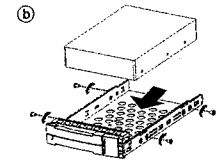
a. Removing the HDD tray

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



b. Attaching the HDD

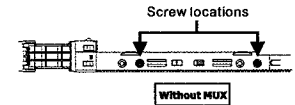
1. The interface connector should face the open side of the tray, while the label side should face up.



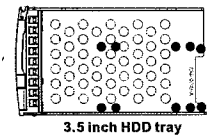
i Use ONLY qualified SSDs and HDDs. Please refer to our Qualified Vendor List (QVL) for more details.

2. Secure the drive by fastening four (4) of the supplied screws.

3.5" SATA HDD in single-controller systems

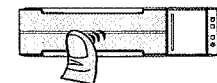
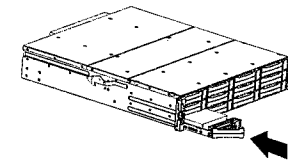


- Screw locations:**
- 2.5 inch SATA HDD / SSD (with MUX board)
 - 2.5 inch SAS HDD / SSD (without MUX board)
 - MUX board screw locations

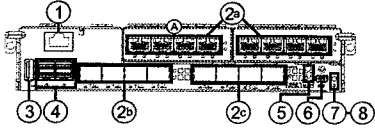


3.3 Inserting and securing the HDD tray

1. Insert with the tray bezel open.
2. Once fully inserted, close the bezel till it's snapped.



4. Controller and Interface overview



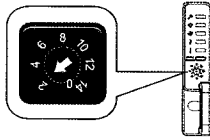
- | | |
|--|----------------------------|
| 1 RJ-45 Management port | 4 SAS Expansion port (2 x) |
| 2a Host ports (Host board is optional) | 5 Controller Status LEDs |
| 2b Host ports (SFP+ interface group 1) | 6 Mini USB port |
| 2c Host ports (SFP+ interface group 2) | 7 Restore default LED |
| 3 USB service port | 8 Restore default button |

- Host boards are optional add-on components. There are two host board slots, if you are installing a host board for the first time, please install it to the slot on the left (A).
- GS 4000 is equipped with two times four SFP+ interfaces on board, named **SFP+ interface group 1** and **SFP+ interface group 2** within this document. Users are advised to add SFP+ transceiver to **SFP+ interface group 1** first. Only the same interface type can be used within one SFP+ interface group.
- A list with compatible host port interface combinations can be found in the hardware manual.

5. Connections

5.1 Preparing JBOD connections

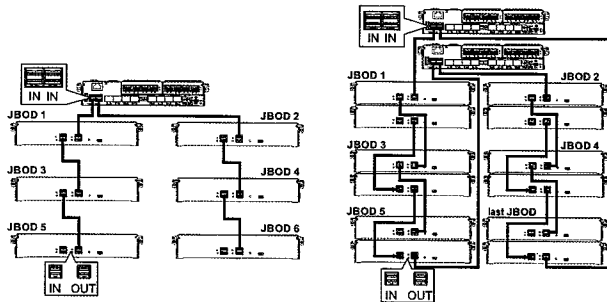
Use a small flat blade screwdriver to set the JBOD enclosure ID(s).



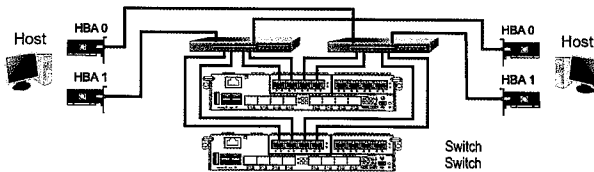
Please set JBOD system ID number starting from "1".
When expanding to multiple JBODs, please acquire same model JBOD(s). When mixing JBOD form factors, please connect larger form factor JBODs at the end of the daisy-chain.

5.2 Recommended connections between RAID and JBOD(s).

When adding JBODs, follow the alternating connection order shown below to balance array performances.

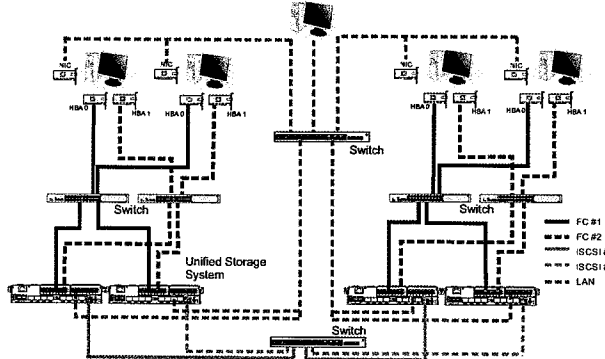


5.3 Recommended connection between host servers, switches and Unified Storage Systems.



Host link cables are not included. When installing host board onto controller, always install to the slot on the left first before installing to the other slot. If you have to remove and, or install a controller, always install to controller slot A (top) first.

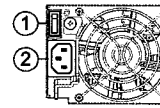
5.4 Recommended topology for remote replication connection.



6. Powering up

6.1 Connecting the power cord and powering up the system.

Connect the power cords to the power socket (in blue & 2) on both PSUs.



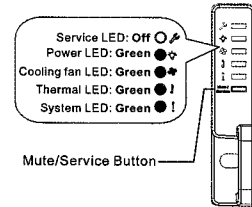
6.2 Powering up the equipment

- Power up the networking devices.
- Power up the JBODs (if applied) by pressing the power switches on the rear panel.
- Power up the Unified Storage System by pressing the power switch on each power supply (shown above in green & 1) on the rear panel.
- Power up the application servers.

6.3 Verifying the status LEDs (front of enclosure)

Observe the front of the enclosure. If the LED indicators show different statuses than what is described below, or if you hear an audible alarm, contact customer support.

1. Front panel status LED:



2. Drive tray status LED:

- Drive Activity LED:
On = Drive plugged-in
Flashing = R/W activity (Blue)
- Power Status LED:
On (Green)
Failure (Red)



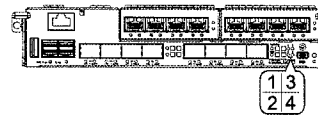
The status LEDs of each 2.5" drive tray are located below the tray itself on the front panel of the enclosure.

6.4 Verifying the status LEDs (rear of enclosure)

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

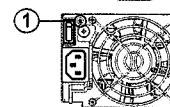
Controller LEDs:

- Ctrl Status LED: On (Green)
- CBM Status LED: On (Green) or Off
- C_Dirty LED: Off
- Hst Bsy LED: On (Green)



Power supply:

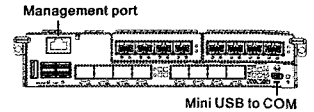
- PSU Status LED:
- On (green)
- Failure (amber)



7. Connecting to Management Interfaces

7.1 Overview of management interfaces

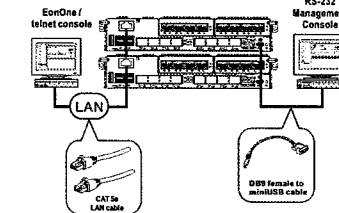
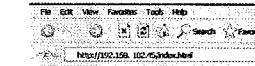
Managing and monitoring the Unified Storage System is available through two types of interfaces. Refer to the sample figures right hand side on controller host ports and management interfaces.



• Host PC (in-band connection):

Users will access the Unified Storage System from the host servers through the host links.

• **Ethernet Management port (Out-of-band connection):** You can access the Unified Storage System from a remotely connected computer using Ethernet cables. You need to obtain the IP address, static IP address or DHCP, from your network administrator. If neither is available, use the default address < 10.10.1.1 >.



Serial port: You can access the Unified Storage System from a directly connected computer through the RS-232C port.

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

The serial cable is user-supplied.

7.2 Accessing management tools

You may control the Unified storage System using the firmware menu (through the RS-232C interface) or the EonOne GUI software (through the Ethernet or host PC interface). For more tools and their details, refer to the manuals in the CD-ROM.

Firmware menu:

- Open a terminal emulation software such as VT-100 on your PC.
- Configure the serial port as shown in the previous section and connect the Unified Storage System. The main firmware menu will appear.
- Here you can check the current IP-settings.

EonOne:

- Connect the Unified Storage System to a remote computer through the Ethernet port or to a host PC through the host links.
- Install the EonOne software suite, included in the CD-ROM, into your computer.
- Start the EonOne software. Type in user name (default: admin) and password (default: admin) to log-in as administrator.
- Add the Unified Storage System to the **Device List**.
- Click the **Gear icon** right, top to configure the Unified Storage System.

Activating a license:

- To activate a license click on **System**.
- Click on **License Management** and generate a License Application File by clicking on **Generate License Apply File**. Save the file.
- Visit <http://www.infotrend.com/license> to register by use of the License Application File. The **License Number** is attached in the software license envelop.
- Type in the **License Number**. Download the **License Key File** and upload it to EonOne to activate the license.



Install EonPath (multi-pathing driver) ONLY to Windows 2003 based servers. Other OS use their build-in native multi-pathing driver.