mAGE316U40-PCI-E-EXP

3U-16 Bay SAS/SATA JBOD Rackmount Chassis

up to 20Gbps PCI EXPRESS Best Choice

Installation Guide

1. Overview

Being built based on the newest PCI-e architecture. The creative design allows the chassis to be either PCI-e slot expandable or capacity expandable. And the chassis is compatible with both SAS and SATA hard drives.

2. Package Checklist

Before installing this unit, verify that package contains the following items.

- **A** Enclosure x 1
- **B** HDD Tray x 16 (Installed in chassis)
- **C** PCI-e x8 Host Adaptor x1
- **D** PCI-e x8 cable(1.5meter) x1
- **E** Internal miniSAS(SFF8087) to miniSAS(SFF8087), 30cm x4
- **F** Power Cord x 1 (if Redundant PSU x2)
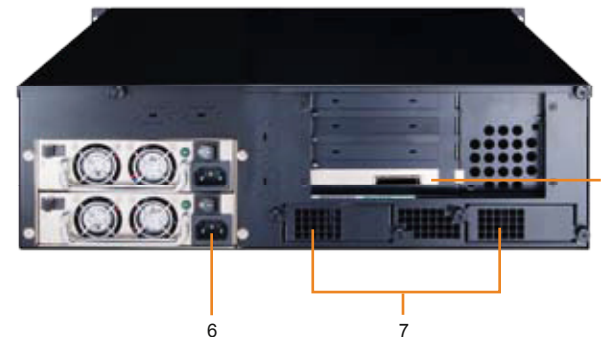- **G** Hard Drive Mounting Screw x 64
- **H** Key for HDD tray x 2

Notify your sales representative if any of the above items are missing or damaged.

3. Description of Panel Layout

1. HDD Power LED

2. HDD Status LED

3. Mute Button
   Reset for Buzzer Beeping

4. Fan Status LED
   Normal – Green;
   Fail – Red (too slow rpm or stop)

5. Temperature LED
   Normal – Green; Over 55°C – Red

6. Power Cord Receptacle

7. How-Swappable Blower Modules

8. PCI-e x8 connector
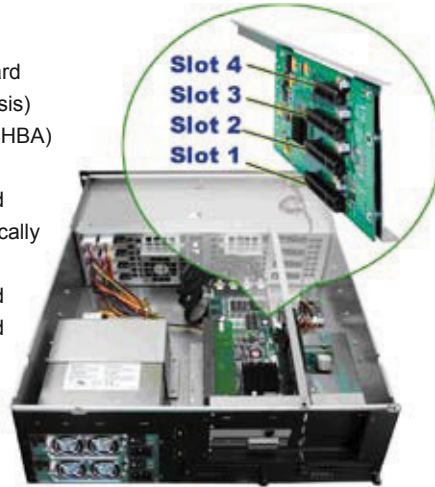   Connecting External PCI-e cable to Host

Installation Guide

4. Hardware configuration

Slot1 : Target Adaptor Card
(already fixed in the chassis)
Slot2 : 8-lane Raid Card (HBA)

Slot3 : Any PCI-e x8 Card
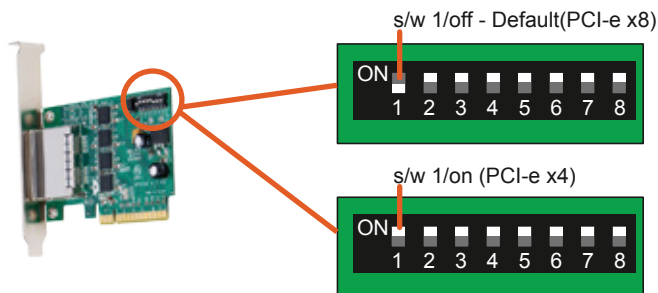Slot4 : Disabled automatically
or
Slot3 : Any PCI-e x4 Card
Slot4 : Any PCI-e x4 Card

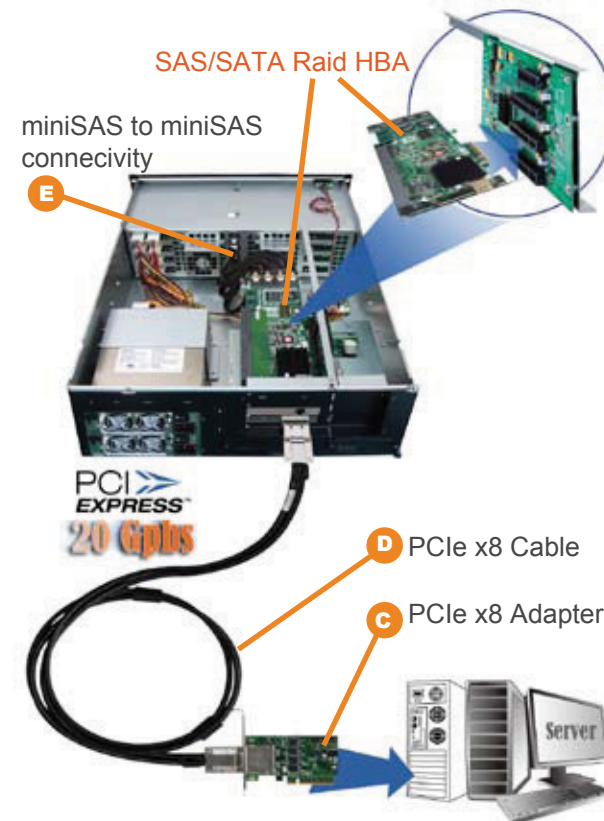Slot 4
Slot 3
Slot 2
Slot 1

⚠ Notice 1

**There must be at least one PCI-e (PCI Express) x8 or x16
"slot" in the HOST (Workstation or Computer). But the slot
could be PCI-e x4 even it is PCI-e x8 or PCI-e x16 in
appearance. Please check the User Manual of the
Motherboard or server to make sure the specification.**

**If only PCI-e x4 is able to be offered, please switch both
Host Adaptor Card and Target Adaptor Card to PCI-e x4 as
the following figure.**

s/w 1/off - Default(PCI-e x8)

ON
1 2 3 4 5 6 7 8
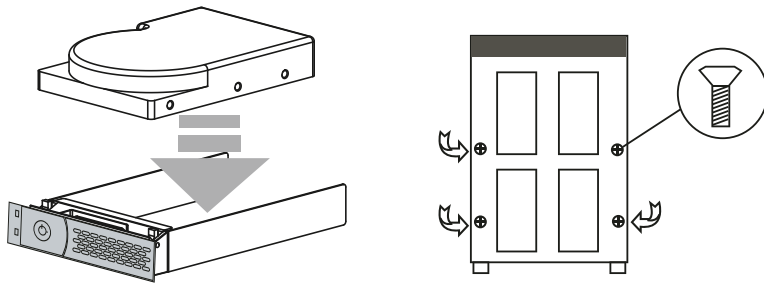
s/w 1/on (PCI-e x4)

ON
1 2 3 4 5 6 7 8

5. Build up procedures

1. Open the chassis by removing the cover.

2. Place PCI-e x8 SAS or SATA control card (HBA) and other PCI-e
   cards into proper PCI-e slots of mAge316U40-PCIE and fix them with
   thumbscrews on the bracket of the cards.

3. Connect all miniSAS to miniSAS cables between the HBA
   backplane. Connect the first (top) of minSAS connector on
   backplane to Channel 1~4 miniSAS connector on the HBA,
   second to Channel 5~8 miniSAS connector of HBA, the third
   Channel 9~12 miniSAS connector of HBA and the fourth
   Channel 13~16 miniSAS connector of HBA.

SAS/SATA Raid HBA

miniSAS to miniSAS
connecivity

E

PCI EXPRESS
20 Gpbs

D PCIe x8 Cable

C PCIe x8 Adapter

Server

Installation Guide

4. Close the chassis and immobilize it on the server rack or other proper place.

5. Connect the chassis and the **HOST** with PCI-e x8 cable. Then connect it with power source.

6. Take out all the trays.

7. Place all Hard Drives in the tray and fix them with Hard Drive Mounting Screws. Put them back to mAge316U40-PCI-E.

6. Operation

1. Turn on the power of chassis before you turn on the power of the **HOST**.

2. After all Drives are indentified by the **HOST**, please follow the operation procedure indicated by HBA.

Q&A (Questions and Answers)

1. What if my PCI-e slots are all occupied?
Remove one of the PCI-e cards and replace it with Host Adaptor Card. Then place the removed card into mAge316U40-PCI-E. See Hardware Configuration.

2. If I move a PCI-e card from Workstation (Host) to mAge316U40-PCIE, will it work well and how do I install the driver?
Yes, don't worry. It will work in mAge316U40-PCIE as well as it was in the HOST. And the installation procedure of the driver is the same.

3. According to iStarUSA's catalogue, the chassis supports SGPIO, what's that for?
When any hard drive fail occurs, the red LED indicator on that tray will light. SGPIO function will be effective while SAS/SATA Raid HBA supports SGPIO function as well. (For instance, Areca's Raid Card)

4. Why does my monitor go blue and the HOST doesn't work after I build up the system?
It's probably because the **HOST** can only offer 4-lane PCI-e channel, even the slot appearance is 16-Lane. Please check "Notice 1" for solution.