● NA338TB

THUNDERBOLT 2

2U 2.5" 16-Bay Thunderbolt Storage
with PCIe Expansion

Quick Installation Guide   First Edition, June. 2015

NA338TB 2U 2.5" 16-Bay Thunderbolt Storage with PCIe Expansion

1. Overview

The Netstor NA338TB enclosure accommodates up to sixteen SSDs or 2.5" HDDs for storage. Based on the latest Thunderbolt 2 technology and PCIe architecture, the creative, innovative design of NA338TB features RAID level protection and PCIe expansion to Mac through the blazing-fast Thunderbolt 2 interface.

NA338TB and system installation video hyperlink

2. Package Checklist

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

A Enclosure x 1

B 2.5" drive tray x 16 (installed in chassis)

C Thunderbolt cable (2 meters) x 1

D SFF-8087 to SFF-8643 cable x 4 or SFF-8643 to SFF-8643 cable x 4

E Power cord x 1

F Drive mounting screw x 64

G Key for drive tray x 2

H Manual CD-ROM x 1

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

3. Panel Layout

1. Drive Power LED
◦ White - Power On Indicator

2. Drive Status LED
◦ Flash Blue - Drive Accessing Indicator, Red - Drive Failure Indicator

3. Power on button
◦ Blue – power on
  If Mac mini embedded in enclosure, hold the button until LED shows blue light to power on the NA338TB system.

4. Mute Button
◦ Mute buzzer beeping for enclosure fan failure or over temperature

5. Fan Status LED
◦ Fan Status LED, Failure – Red (too slow RPM or stop)

6. Temperature LED
◦ Normal – Green, Over 50°C – Red

Note: The NA338TB chassis supports SGPIO. When any SSD/HDD fails, the red LED indicator on the tray will light. The SGPIO function will be effective when the RAID card supports SGPIO function (for example, Areca's RAID card).
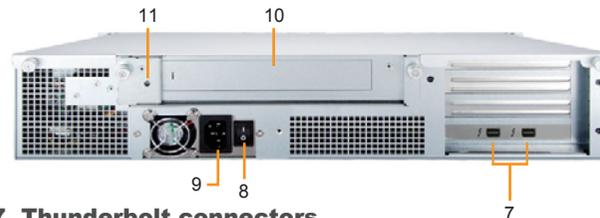
7. Thunderbolt connectors
◦ Connecting Thunderbolt cables to host and downstream device

8. PSU power button
◦ "I" for enable, "0" for disable

9. Power cord receptacle

10. Removable integrated plate drawer for Mac mini

11. Manually power-on hole
◦ When the front power button that interlinked fails, users can choose to power on Mac mini and system manually by inserting a stick into the hole.

4. Enclosure Setup

The enclosure setup includes three parts. **First**, the RAID card and other PCIe cards installation. **Second**, the SSDs or 2.5" HDDs installation for storage. **Third**, Mac host connection.

4.1 RAID card and other PCIe cards installation

1. Place NA338TB chassis on a level surface of a stable table.

2. Open the chassis by removing the top cover.

3. To have the PCIe expansion unit in upright position for RAID/PCIe card installation, unscrew the three black screws at rear right side of NA338TB chassis as well as unscrew the black screw at the front side of PCIe expansion unit. After unscrewing, turn the PCIe expansion unit for upright position.
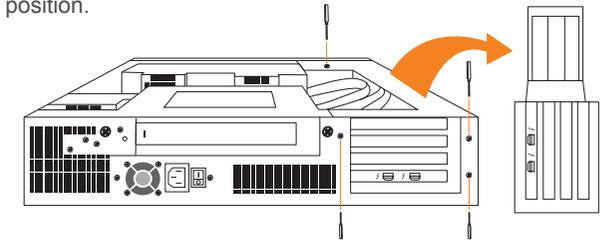
4. Three PCIe slots at rear of PCIe expansion unit are covered by removable L-shape metal brackets. After unscrewing the screw of the L-shape metal bracket, the PCIe slot is ready for PCIe card installation.

5. The layout of the PCIe slots within the PCIe expansion unit is as follows:

   Slot 1: Thunderbolt target card (already fixed in the chassis)
   Slot 2: PCIe x8 slot (RAID card is recommended to be installed in this slot)
   Slot 3: PCIe x8 slot (supports PCIe card x1/x4/x8)
   Slot 4: PCIe x4 slot (supports PCIe card x1/x4)

slot 4 slot 3 slot 2 slot 1
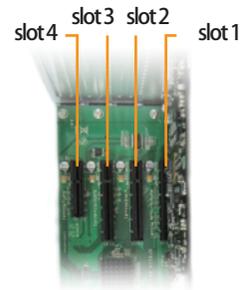
6. Connect the cable between the rightmost HD mini-SAS connector on backplane and the (HD) mini-SAS connector Channel 1~4 on RAID card, and connect the rest cables subsequently to the leftmost connector on backplane and Channel 13~16 on RAID card.

RAID HBA

mini-SAS cable
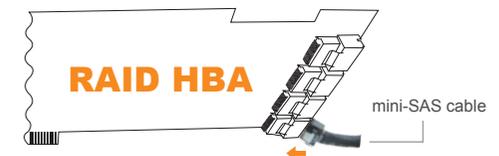
7. Install RAID card and other PCIe cards into proper PCIe slots of NA338TB and tighten them with screws on PCIe cards' brackets.

Enclosure
RAID HBA
Slot 2
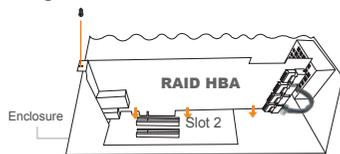
8. When RAID card and other PCIe card are installed properly, restore the PCIe expansion unit from upright position to the original horizontal position. And screw the four black screws back to the unit.

4.2 SSDs or 2.5" HDDs installation for storage

1. Take out the drive trays in front of the NA338TB chassis.

2. Place each SSD or 2.5" HDD in the tray, and fix the drive with four mounting screws.
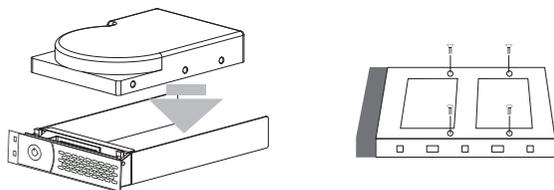
3. Put the trays with SSDs/HDDs back to NA338TB chassis.

4.3 Mac host connection

NA338TB is designed to be capable of embedding a Mac mini; for this application, place a Mac mini in the built-in removable plate drawer for operation. If other Thunderbolt Mac other than Mac mini, connect the TBT Mac to NA338TB externally for work.

4.3.1 Embedded Mac mini installation

1. After loosening the two thumbscrews on removable integrated plate drawer, pull the drawer out of the NA338TB chassis. Use a tool to bend the metal board on the vertical side of plate drawer to separate the metal board.

Step 2
Step 1
Step 3
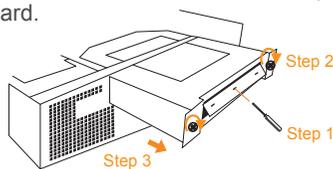
2. Unscrew the thumbscrew on plate drawer's cover, and place Mac mini into the drawer case. Close and screw the thumbscrew to fasten Mac mini with drawer.
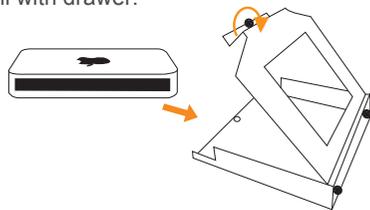
3. Insert the drawer back to NA338TB, and tighten the two thumbscrews on removable integrated plate drawe.

4. Connect NA338TB and Mac mini with Thunderbolt cable.

4.3.2 External connection with Mac

1. Arrange the Thunderbolt Mac computer near NA338TB.

2. Connect NA338TB and Mac computer with Thunderbolt cable.

5. Operation and Verification

1. When NA338TB chassis is connected to power source by power cord, turn the power switch of NA338TB's PSU at rear of the chassis to "I" position to enable the power supply unit.
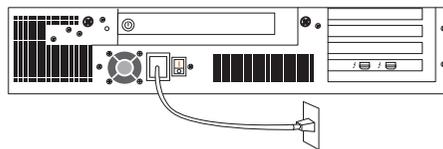
SYSTEM POWER ON

2. Press the power button in front of NA338TB for two seconds until the button shows blue light. The built-in solenoid actuator at rear of enclosure will push Mac mini's power button to have Mac mini and whole system power on.

3. Verify Netstor Thunderbolt target card is recognized by Mac. Click the Apple icon on top left of the screen, select **About This Mac**, and click on **System Report**. When the pane of System Information pops up, select **Thunderbolt** on left side. If **NA338TB** can be selected to see its info, then the Netstor Thunderbolt target card is recognized correctly by Mac.
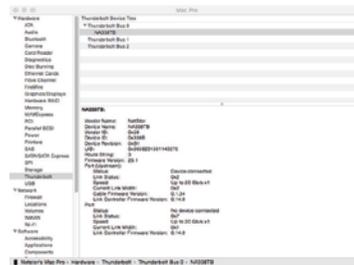
4. Verify the PCIe cards installed in NA338TB. After the verification of Netstor Thunderbolt target card, click **PCI** on left side of the pane, and all the PCIe cards installed in NA338TB will be shown in the information area within the pane. (For RAID card, from starting up, it will take more time for its info to be shown.)

4. Verify the PCIe cards installed in NA338TB. After the verification of Netstor Thunderbolt target card, click **PCI** on left side of the pane, and all the PCIe cards installed in NA338TB will be shown in the information area within the pane. (For RAID card, from starting up, it will take more time for its info to be shown.)
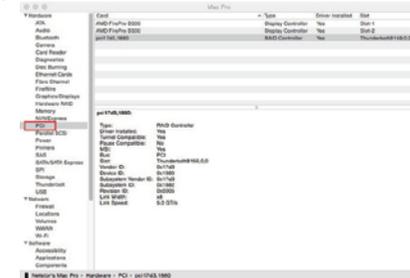
5. Verify the drivers of RAID card and PCIe cards are installed on OS X. When seeing all the PCIe cards listed from step four, there will be a column **Driver Installed** that will indicate the status of PCIe card's driver. If it shows "No" from the status, find and install PCIe card's Thunderbolt-aware driver, and then the status will become "Yes" to mean the PCIe card's driver has been installed correctly.
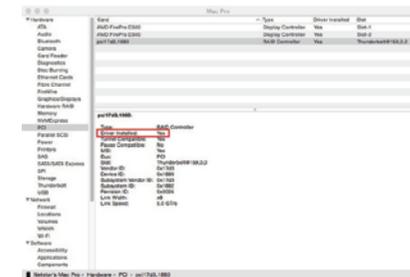
6. After identifying RAID card driver status, follow the operation procedure provided by RAID card's manufacturer to set up the RAID volume.

SYSTEM POWER OFF

7. When NA338TB is connected to Mac by Thunderbolt cable, while shutting down Mac through OS X, the entire NA338TB system will be powered off simultaneously.

Notice: When using the embedded Mac mini, if the user wants to force shut down Mac mini due to OS crash, long-press the power button in front of NA338TB for seven seconds to allow solenoid actuator to long push Mac mini's power button for shutting down

If you have any questions, please contact your regional distributor, or Netstor Technology, Taiwan.