



*Built up your professional Mac mini  
server storage through*

# NA381TB

**Quick Installation Guide**

First edition, Nov. 2013

# NA381TB 4U 24-bay Thunderbolt Storage with PCIe Expansion

## 1. Overview

Based on the latest Thunderbolt technology and PCIe architecture, the creative, innovative design of NA381TB features RAID level protection and high-performance with PCIe expansion ability to Mac mini or Mac mini Server through the blazing-fast Thunderbolt interface. Moreover, the Thunderbolt NA381TB enclosure accommodates SAS/SATA 6G/3Gbps hard drives and can be installed with FC/10GbE network card for high-speed SAN application.

## 2. Package Checklist

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



**A** Enclosure x 1



**B** HDD Tray x 24 (installed in chassis)



**C** Thunderbolt cable (2 meters) x 1



**D** Internal mini-SAS (SFF-8087) to mini-SAS (SFF-8087) cable 30 cm x 6



**E** Power cord x 2



**F** HDD mounting screw x 96



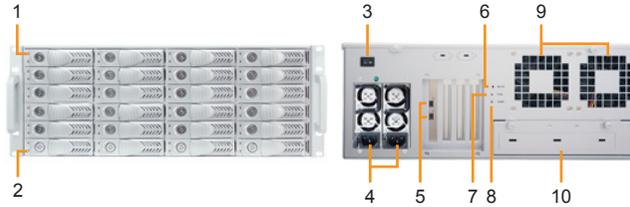
**G** Key for HDD tray x 2



**H** Manual CD-ROM x 1

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

## 3. Panel Layout



### 1. HDD Power LED

- White - Power On Indicator

### 2. HDD Status LED

- Flash Blue - HDD Accessing Indicator, Red - HDD Failure Indicator

### 3. PSU power button

- "I" for enable, "O" for disable

### 4. Power cord receptacles

### 5. Thunderbolt connectors

- Connecting Thunderbolt cables to host and downstream device

### 6. Mute Button

- Reset for buzzer beeping

### 7. Fan Status LED

- Normal - Green
- Failure - Red (too slow RPM or stop)

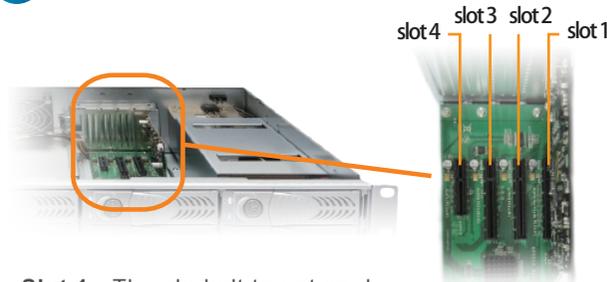
### 8. Temperature LED

- Normal - Green
- Over 50°C - Red

### 9. Cooling fans

### 10. Swappable integrated plate drawer for Mac mini/Mac mini Server

## 4. Hardware Configuration



**Slot 1** : Thunderbolt target card (already fixed in the chassis)

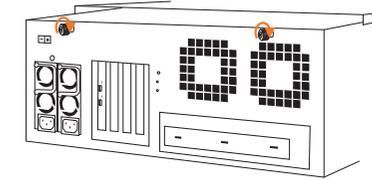
**Slot 2** : PCIe x8 slot (RAID controller card is recommended to be installed in this slot because it is closest to the connectors of backplane)

**Slot 3** : PCIe x8 slot (Supports PCIe card x1/x4/x8)

**Slot 4** : PCIe x4 slot (Supports PCIe card x1/x4)

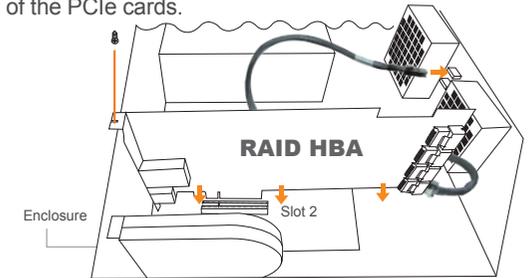
## 5. Building Up Procedures

1. Place NA381TB chassis on a level surface of a stable table.
2. Open the chassis by removing the top cover.



3. Three PCIe slots on rear of NA381TB are covered by removable L-shape metal brackets. Unscrew the screw of the removable L-shape metal bracket, and the PCIe slots are ready for installation of PCIe cards.

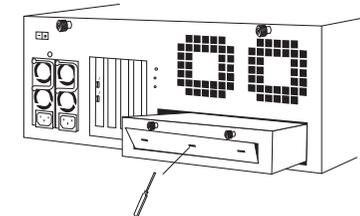
4. Install one SAS/SATA RAID controller card and other PCIe cards into proper PCIe slots of NA381TB and tighten them with screws on the brackets of the PCIe cards.



5. Connect the cable between the topmost mini-SAS connector on backplane and the mini-SAS connector Channel 1~4 on RAID card, and connect the rest cables subsequently to the bottommost one on backplane and Channel 21~24 on RAID card.

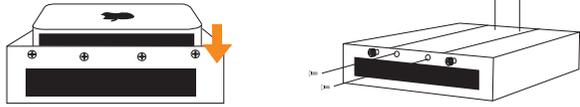


6. Loosen the two thumbscrews on swappable integrated plate drawer, and pull it out. Use a tool to bend the metal board on plate drawer to separate the metal board from drawer.



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7. Unscrew the four screws on L-type bracket on plate drawer, place the Mac mini Server into drawer, and restore the L-type bracket to fasten Mac mini Server with drawer.



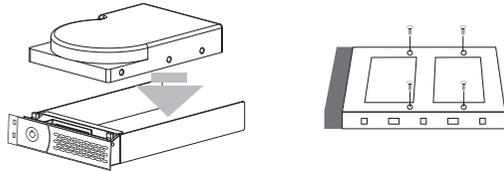
8. Connect NA381TB and Mac mini Server with Thunderbolt cable

9. Restore the top cover of NA381TB and immobilize the chassis on a server rack or proper place.

10. Connect NA381TB with power source.

11. Take out the HDD trays.

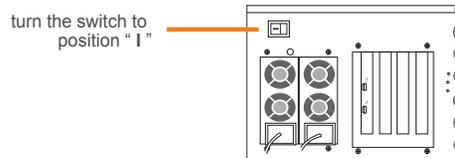
12. Place the HDDs in the trays and fix them with hard drive mounting screws. Put the trays with HDDs back to NA381TB.



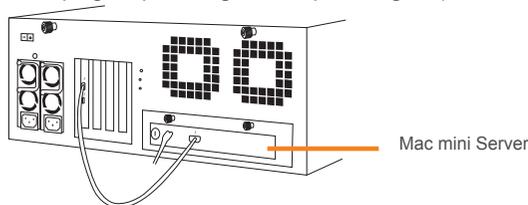
## 6. Operation and Verification

• The following verification steps are for Mac OS X.

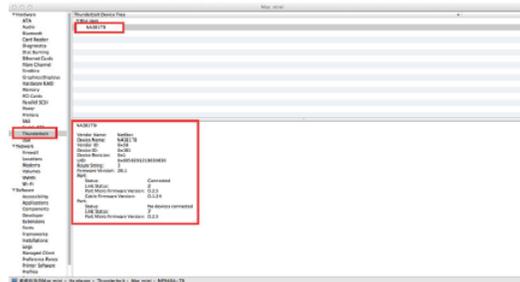
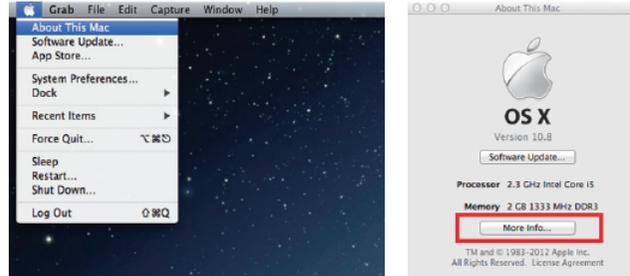
1. When NA381TB is connected to the power source with two power cords connecting to PSU of NA381TB, turn on the power switch of PSU (turn the switch to "I" position to enable the power supply).



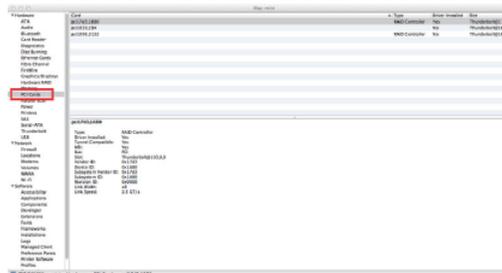
2. The NA381TB is designed to be powered on/off simultaneously with Mac mini Server when NA381TB is connected to Mac mini Server by Thunderbolt cable. Therefore, power on Mac mini Server first, and then NA381TB will be powered on automatically. (NA381TB also supports hot-plug and hot-unplug for powering-on and powering-off.)



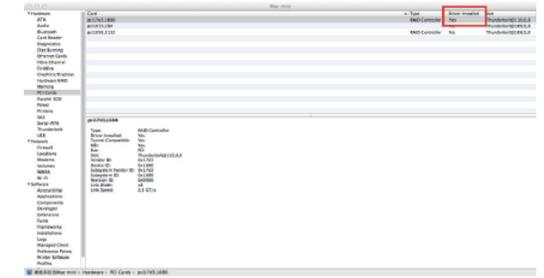
3. Verify Netstor Thunderbolt target card is recognized by Mac mini Server. Click the Apple icon on top left of the screen, select **About This Mac**, and then select **More Info**. Next, click **System Report**, and a pane will pop up. Select **Thunderbolt** on left side of the pane, and if **NA381TB** can be selected to see the information, then the Netstor Thunderbolt target card is recognized by Mac mini Server.



4. Verify the PCIe cards installed in NA381TB. After the verification of Netstor Thunderbolt target card, click PCI Cards on left side of the pane, and then all the PCIe cards installed in NA381TB will be shown in the information area in the pane. (For RAID controller card, from starting up, it will take more time for its info to be displayed.)



5. Verify that the drivers of RAID controller card and PCIe cards are installed on OS X. When seeing all the PCIe cards listed from the last step, there will be a column **Driver Installed** which indicates the status of PCIe cards' drivers. If it shows "No" in the status, then find and install the Thunderbolt-aware driver of the PCIe card, and then the status will become "Yes" to show the driver of the PCIe card has been installed successfully.



6. After verifying that the driver of the RAID controller card is installed, follow the operation procedure instructed by the manufacturer of the RAID card to set up the RAID volume.

7. While NA381TB is connected to Mac mini Server by Thunderbolt cable, when shutting down Mac mini Server, the NA381TB will be shut down simultaneously as well.

**Notice:** The NA381TB chassis supports SGPIO. When any HDD fails, the red LED indicator on that tray will light. The SGPIO function will be effective when the SAS/SATA RAID card supports SGPIO function (for example, Areca's RAID controller card).

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

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