

# NA211TB3

Thunderbolt 3 PCIe Expansion Chassis



## User Manual

Fourth edition, Jul. 2022

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# 1. Overview

Based on the most up-to-date Thunderbolt 3 technology and PCIe Gen3 architecture, the revolutionary design of NA211TB3 allows different combinations of high-performance PCIe add-on cards to be attached to any Thunderbolt-equipped computer through the blazing-fast 40Gbps Thunderbolt 3 interface to meet professionals' requirements for any demanding configuration at work. This user's manual will help you set up the Thunderbolt 3 NA211TB3 enclosure.

## 2. Package Checklist

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

**A** Enclosure x 1



**B** Thunderbolt 3 cable (2 meters) x 1



**C** Power cord x 1



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

# 3. Panel Layout

## 1. Power-On Indicator LED

- This power-on indicator LED only indicates power's status. When NA211TB3 is powered on, it shows blue. When enclosure is powered off, it shows no light.



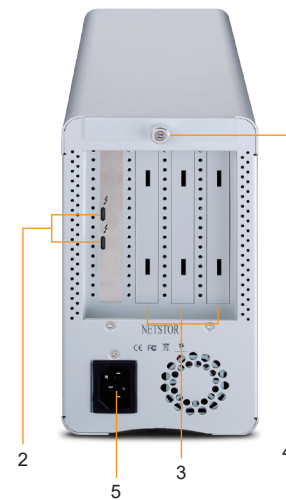
## 2. Thunderbolt 3 Ports

- No specific Thunderbolt 3 port is appointed; when one of the Thunderbolt 3 ports on NA211TB3 is connected to host or upstream device, then the other port will be connected to the downstream device.

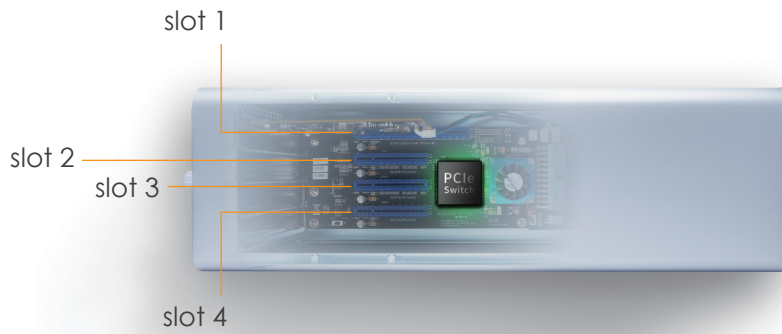
## 3. PCIe Expansion

## 4. Thumbscrew for loosening/tightening the top cover

## 5. Power cord receptacle



## 4. Hardware Configuration



**Slot 1 :** Thunderbolt 3 target card (already fixed in the chassis)

**Slot 2 :** PCIe x8 slot (open-type; supports PCIe card x16/x8/x4/x1)

**Slot 3 :** PCIe x8 slot (closed-type; supports PCIe card x8/x4/x1)

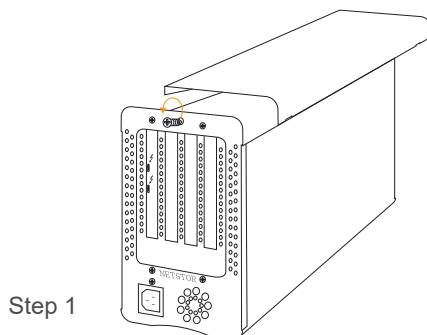
**Slot 4 :** PCIe x8 slot (open-type; supports PCIe card x16/x8/x4/x1)

※ PCIe expansion slot board LEDs Status

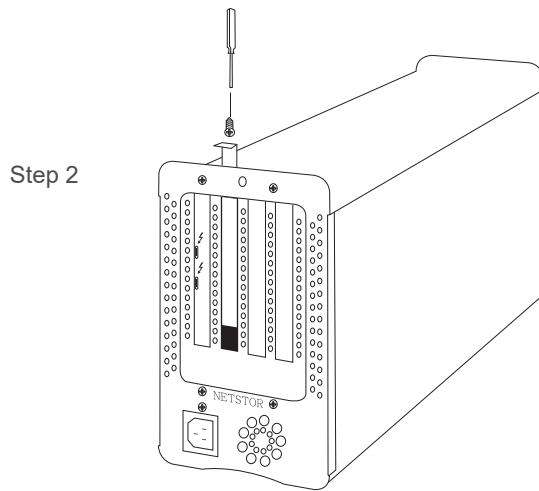
## 5. Installation of PCIe Add-on Cards in NA211TB3

Before proceeding to installation procedure, disconnect the NA211TB3 from power source for prevention of electric shock or damage to PCIe add-on card.

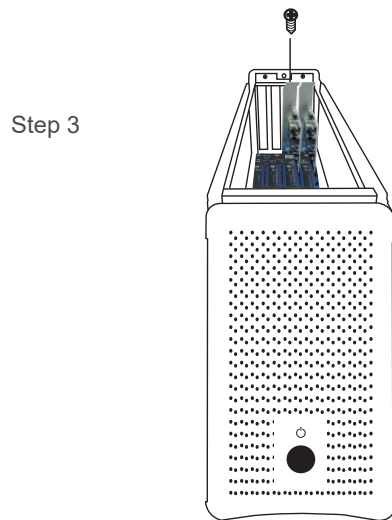
1. Loosen the thumbscrew and remove the top cover of the enclosure.



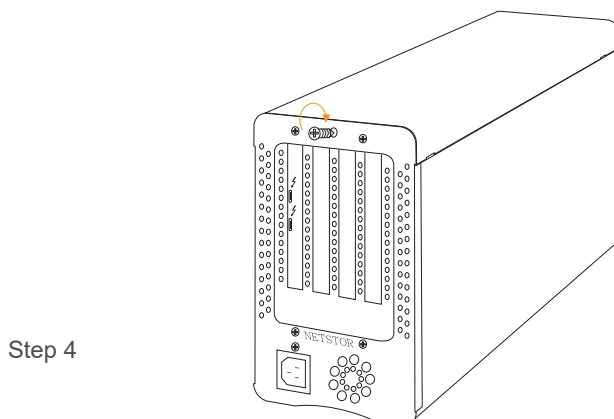
2. Three PCIe slots at rear panel of NA211TB3 are pre-covered by removable L-shape metal brackets. Loosen the screw of the removable L-shape metal bracket for the PCIe add-on cards installation.



3. Insert PCIe add-on cards in the proper PCIe slots within the enclosure and tighten them with screws on PCIe add-on cards' brackets.

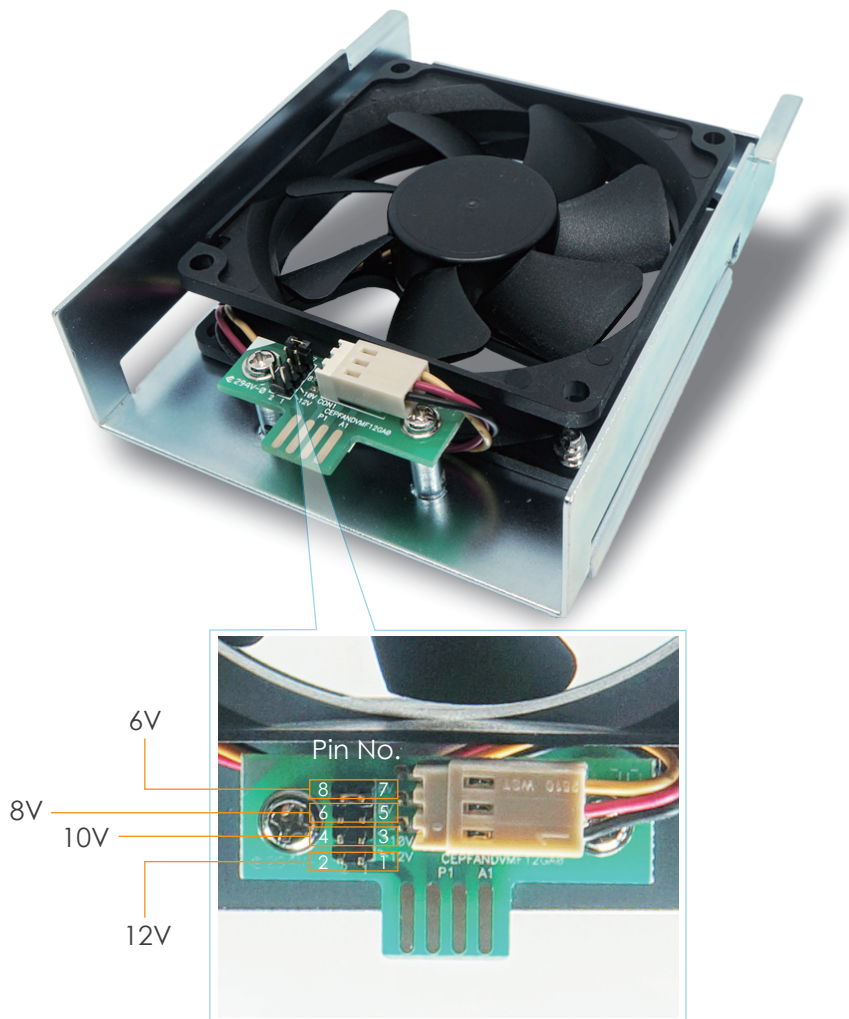


4. Put the top cover back to enclosure and tighten and thumbscrew.



## 6. Fan Speed Adjustment

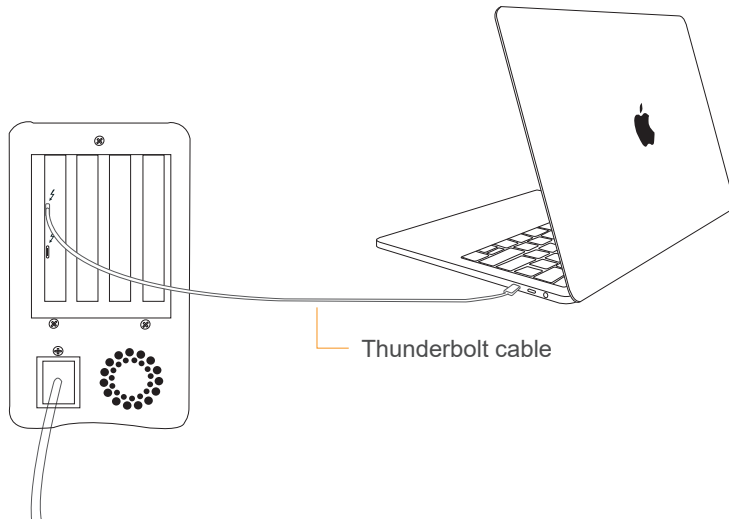
To adjust the fan speed of 8x8 cm cooler on NA211TB3, pull the fan cooler module out. Above cooler's connector, there are four sets of jumpers labeled 6V, 8V, 10V, 12V from top to bottom. The default setting is jumper being placed over pin 7 and pin 8 for 6V for medium fan speed. The fan speed increases from 6V to 12V (12V: full speed). If all pins are open (no jumper placed over pins), the fan will not spin.



# 7. Operation and Verification

## 7.1 Verification steps for Mac

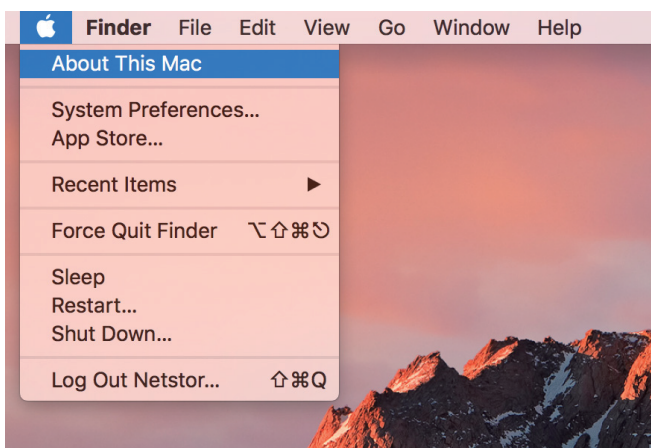
1. Connect NA211TB3 chassis with power source, and then connect Netstor chassis and Thunderbolt computer with Thunderbolt 3 cable.



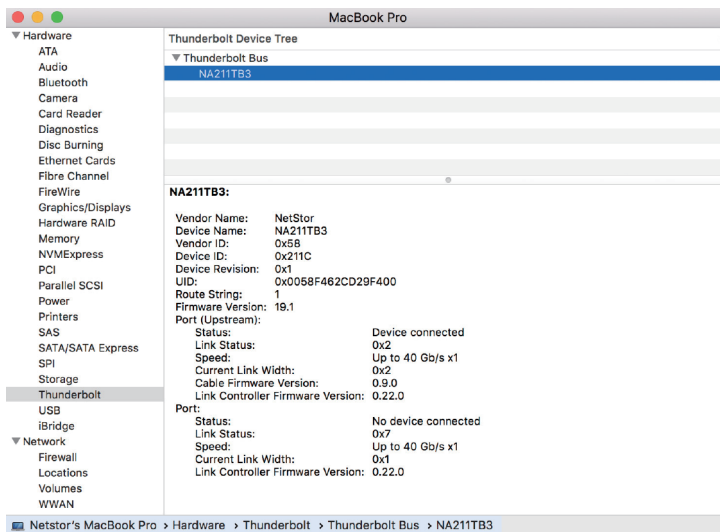
2. The NA211TB3 enclosure is designed to be powered on/off simultaneously with Thunderbolt host computer when Netstor unit is connected to computer by Thunderbolt cable. Therefore, power on computer first, and then Netstor unit will be powered on automatically.

(NA211TB3 also supports hot-plug and hot-unplug for powering on and off)

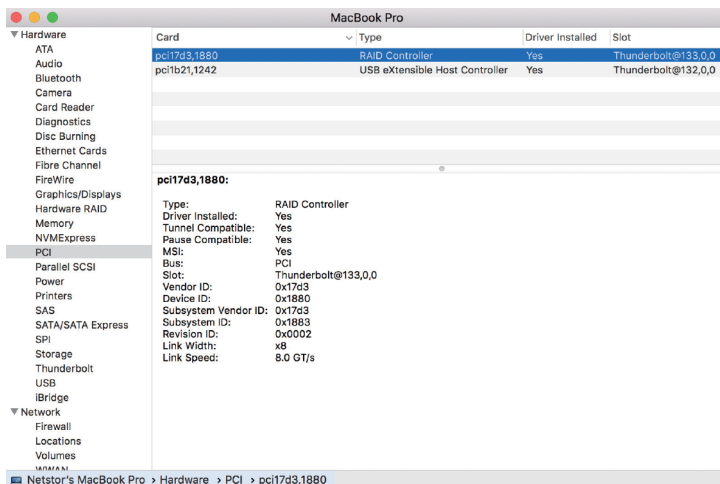
3. Verify Netstor Thunderbolt 3 target card is recognized by computer. Click the Apple icon on top left of the screen, select **About This Mac**, and click **System Report**, and then System Information pane will pop up. Select **Thunderbolt** at the left side of the pane; if NA211TB3 can be selected to see its information, the Netstor Thunderbolt 3 target card is recognized correctly by computer.







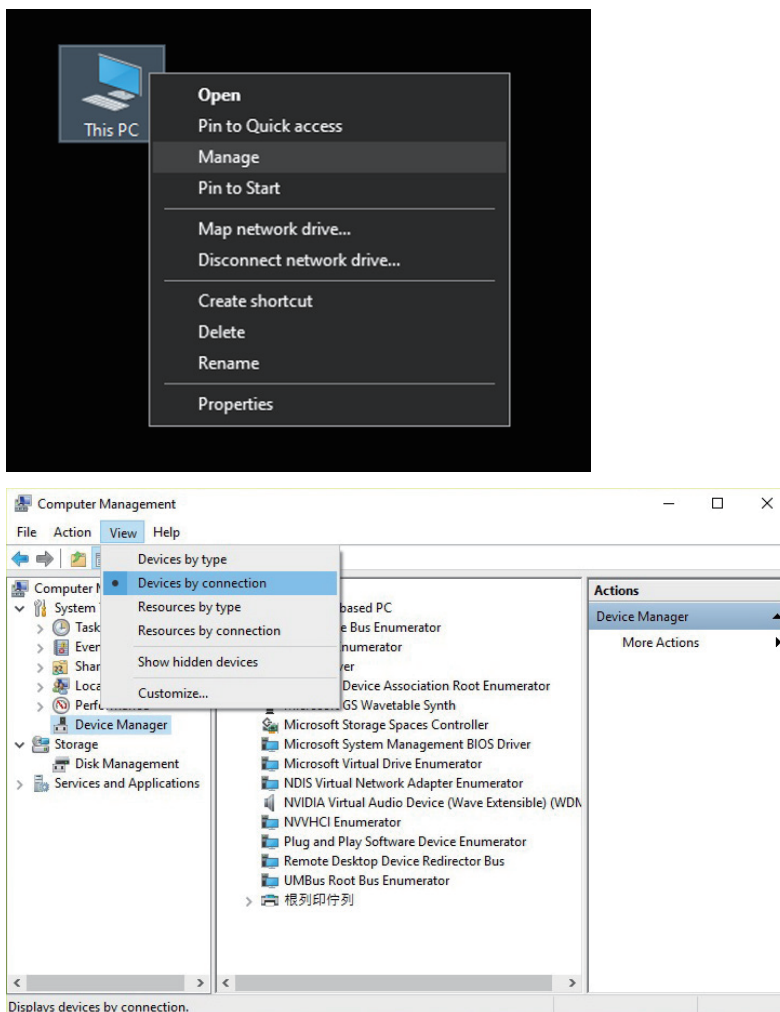
4. Verify the PCIe cards installed in NA211TB3. After the verification of Netstor Thunderbolt 3 target card, click **PCI** at the left side of the pane, and all the PCIe cards installed in NA211TB3 will be shown in the information area within the pane.



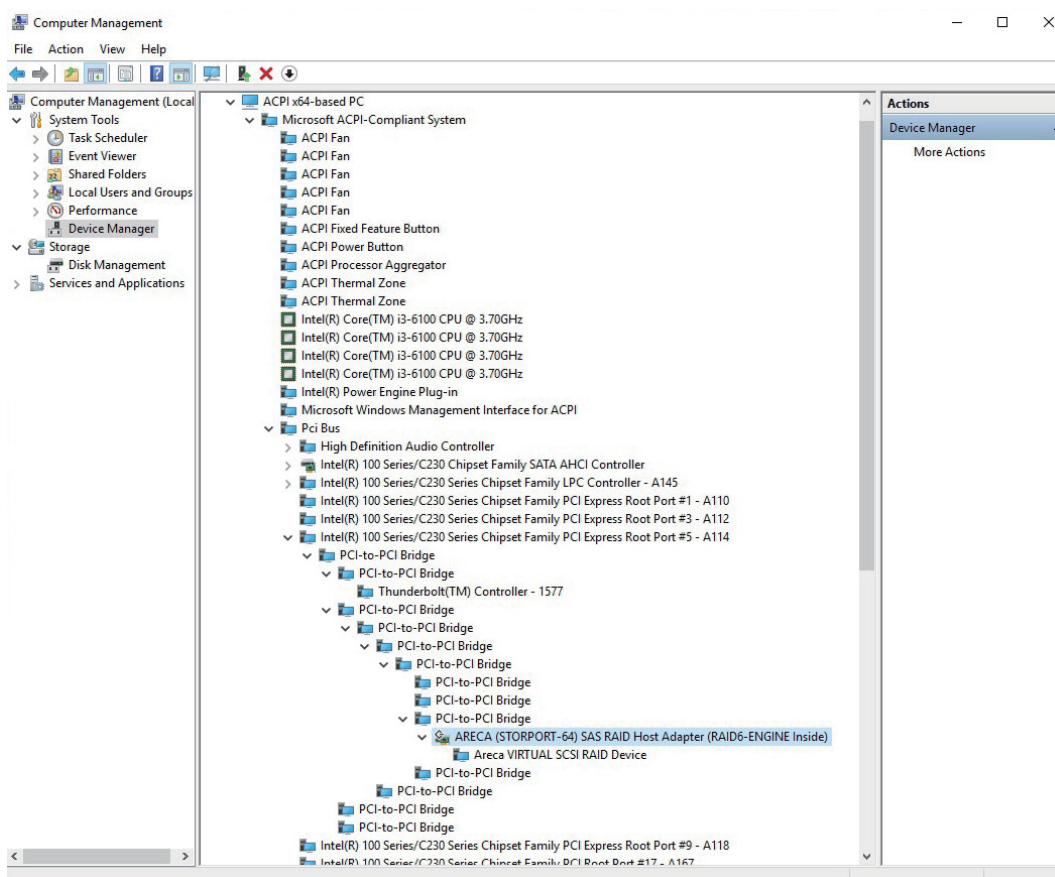
5. Verify the drivers of PCIe cards are installed on macOS. When seeing all the PCIe cards are listed at the last step, there will be a section **Driver Installed** indicating the status of PCIe cards' drivers. If it shows "No" for the status, find and install the Thunderbolt-aware driver for the PCIe card, and then the status will become "Yes" to mean the driver of the PCIe card is installed properly.
6. While NA211TB3 is connected to host computer by Thunderbolt cable, when shutting down computer, the Netstor unit will be shut down simultaneously as well.

## 7.2 Verification steps for Windows

1. Verify NA211TB3 is recognized by computer. Right-click **This PC** at Windows' desktop, and select **Manage**. After window of Computer Management pops up, click **Device Manager** in the left column, and click **View** in the top menu bar, and then select **Devices by connection**.



2. Click **ACPI x64-based PC**, select **Microsoft ACPI-Compliant System**, and click **PCI bus/PCI Express Root Complex**. Then items **Intel Series Chipset Family PCI Express Root Port X** will appear. Find one of the items that shows PCI standard PCI-to-PCI bridge, open the PCI standard PCI-to-PCI bridge to the innermost tier, and the third-party PCIe cards which are installed in NA211TB3 will appear, meaning that the NA211TB3 and third-party PCIe cards are recognized correctly by computer.



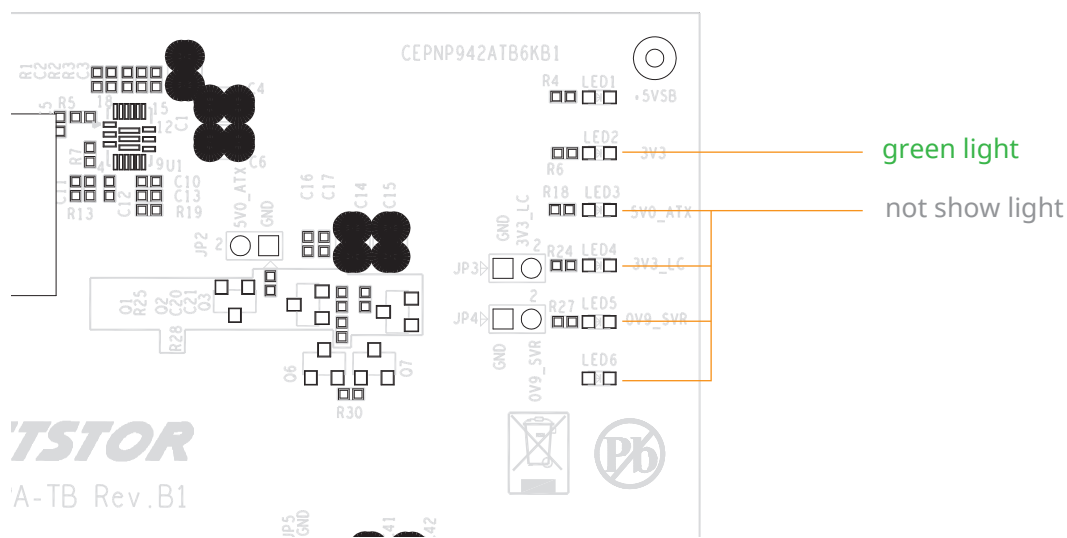
3. Install the Windows drivers of the third-party PCIe cards that are installed in the NA211TB3 chassis for work.
4. As NA211TB3 chassis is connected to host computer by Thunderbolt cable, when shutting down computer, NA211TB3 will be shut down automatically and simultaneously as well.

# 8. Thunderbolt 3 Card LEDs Status

On the Thunderbolt 3 card within the NA211TB3 chassis, there are totally five LEDs. From top to bottom, they are: LED 2 (for 3V3), LED 3 (for 5V0\_ATX), LED 4 (for 3V3\_LC), LED 5 (for 0V9\_SVR), and LED 6 (for 0V9\_USB). The following information describes what the LEDs lighting status will be before NA211TB3 is powered on and after the Netstor unit is powered on.

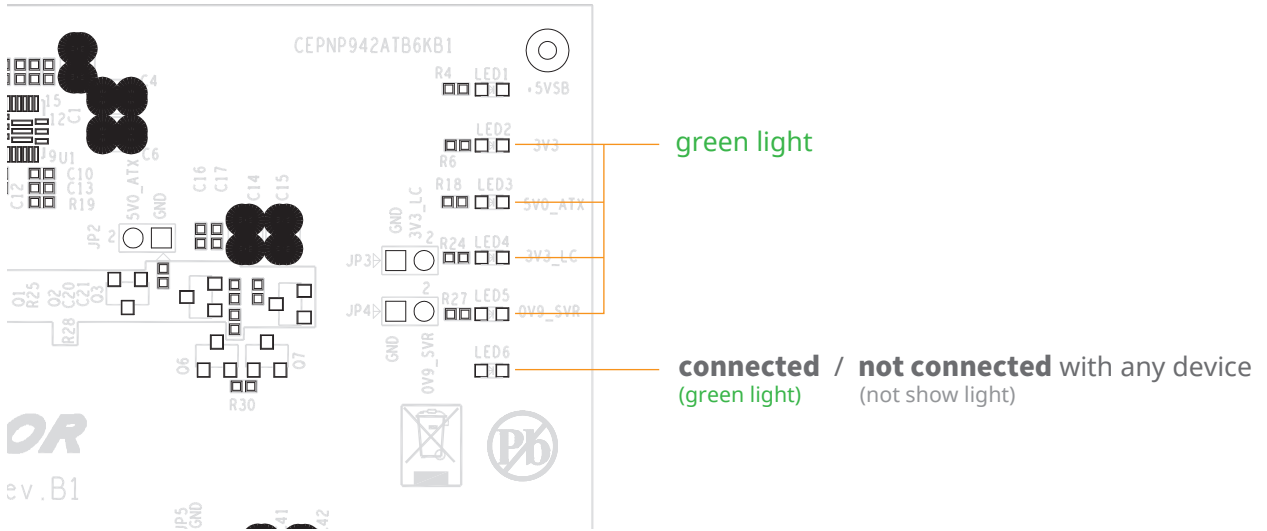
### Power-off:

Before NA211TB3 is powered on, only LED 2 will show green light, and the rest LED 3 through LED 6 will not show light.



### Power-on:

After NA211TB3 is powered on, LED 2 through LED 5 will show green light. At this time, if a USB device or a monitor is daisy chained to the second Thunderbolt 3 port on the Netstor Thunderbolt 3 card, then LED 6 will show green light. On the other hand, provided the second Thunderbolt 3 port is not connected with any device/monitor, LED 6 will not show light.



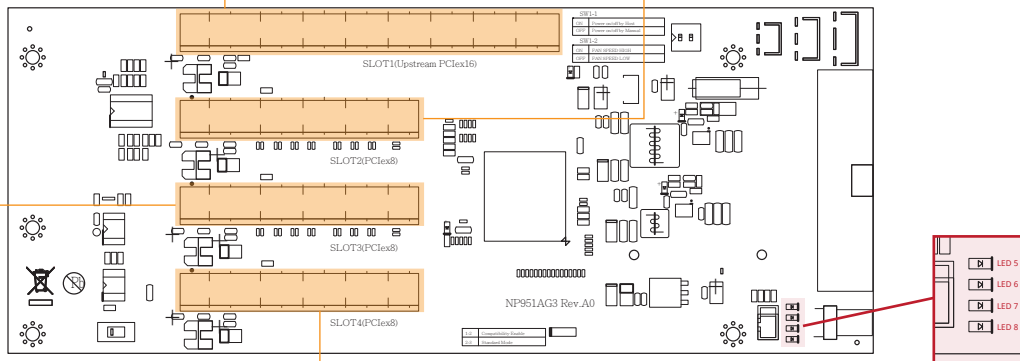
## PCIe expansion slot board LEDs Status

### Slot 1: Target card

- (already fixed in the chassis)

### Slot 2: PCIe ×8 slot

- (open-type; supports PCIe card ×16/×8/×4/×1)
- RAID card is recommended to be installed in this slot as it's closest to backplane's connectors.



### Slot 3: PCIe ×8 slot

- (closed-type; supports PCIe card ×8/×4/×1)

### Slot 4: PCIe ×8 slot

- (open-type; supports PCIe card ×16/×8/×4/×1)

#### LED5 for SLOT1

As LED5 illuminates solid blue light, it indicates Thunderbolt target card in SLOT#1 is in Gen3 mode. As LED5 blinking blue light, Thunderbolt target card in SLOT#1 is in Gen2 mode.

#### LED6 for SLOT2

As LED6 illuminates solid blue light, it indicates the PCIe card in SLOT#2 is in Gen3 mode. As LED6 blinking blue light, PCIe card in SLOT#2 is in Gen2 mode.

#### LED7 for SLOT3

As LED7 illuminates solid blue light, it indicates the PCIe card in SLOT#3 is in Gen3 mode. As LED7 blinking blue light, PCIe card in SLOT#3 is in Gen2 mode.

#### LED8 for SLOT4

As LED8 illuminates solid blue light, it indicates the PCIe card in SLOT#4 is in Gen3 mode. As LED8 blinking blue light, PCIe card in SLOT#4 is in Gen2 mode.

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



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