NA265A

External PCIe 3.0 to GPU Rackmount Enclosure

User Manual

Second edition, Nov. 2020

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1. Unpack the NA265A

The box contains the following items:

- Netstor NA265A
- PCIe 3.0 ×16 host card
- Two PCIe 3.0 ×8 1.5-meter cables
- Power cord ×1 (single PSU) / ×3 (redundant PSU)

2. Expansion Chassis Description

2.1 Panel Layout

1. Power on/off LED button

- Blue - power on

Note: when at powering on/off NA265A manually mode, to power on/off NA265A, hold the power LED button for two seconds until the LED button shows blue light or off.

2. Buzzer mute button

4. Temperature LED

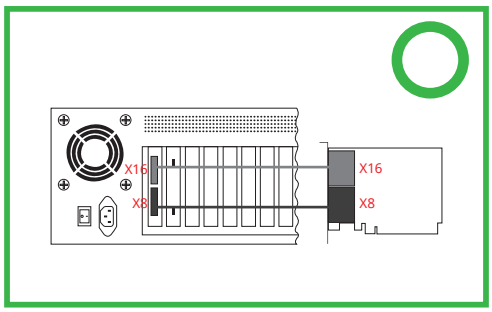
- Green – normal
- Red – over temperature (above 55°C)

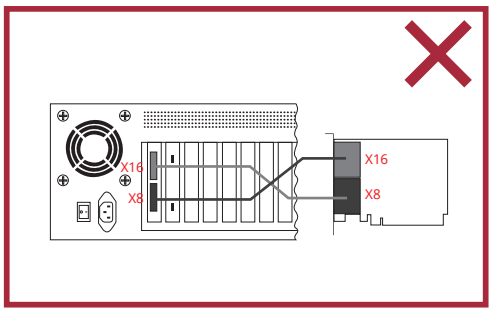
3. Fan LED

- Green – normal
- Red – fan failure (low frequency of RPM or stop)

8. Two external PCIe 3.0 ×8 connectors for host connection

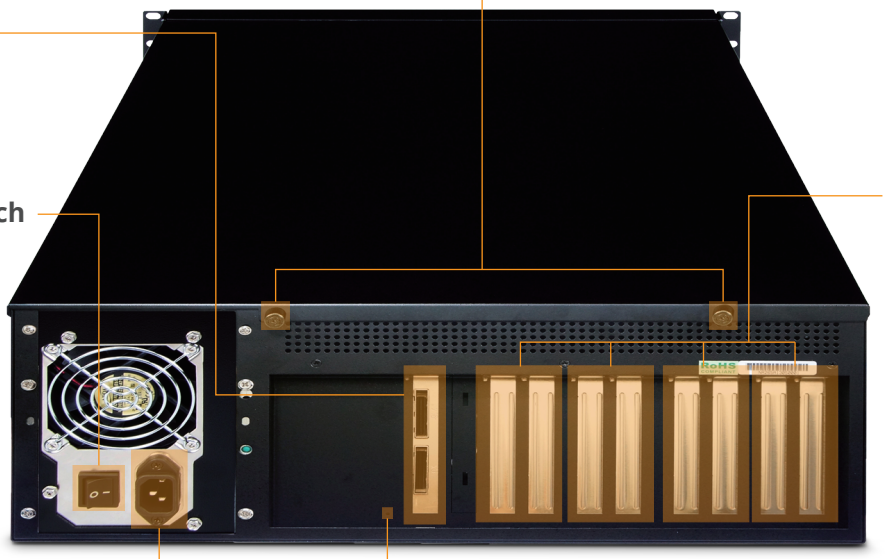
◦ One port is marked with ×8 for lane 1~8; the other port is marked with ×16 for lane 9~16.
Make straight cable connection between target card in NA265A and host card in computer with mark ×8 to ×8, and ×16 to ×16. Do NOT make cross cable connection.





10. Thumbscrews to loosen/ tighten the side door

5. PSU power switch (single PSU)



9. PCIe slots

6. Power receptacle

7. Link status LED

◦ PCIe Gen3 : solid green light
◦ PCIe Gen2 : fast blinking green light (2 flashes/second)
◦ PCIe Gen1 : slow blinking green light (1 flash/second)

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2.2 Slot Board Layout

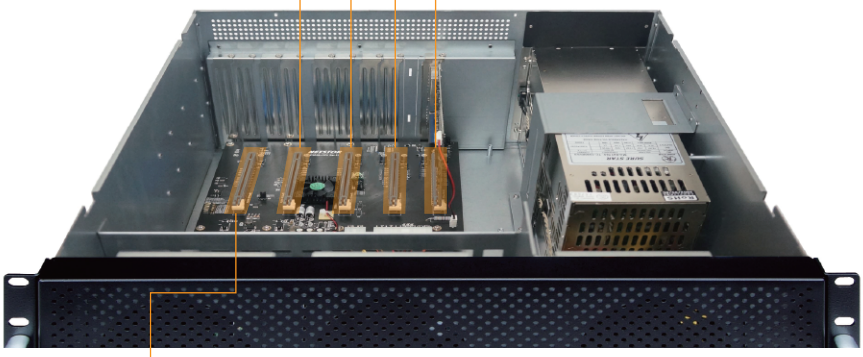
3. Slot 3 : PCIe ×16 connector (×8 signal)

2. Slot 2 : PCIe ×16 connector (×8 signal)

4. Slot 4 : PCIe ×16 connector (×8 signal)

1. Slot 1 : PCIe ×16 connector (×16 signal)

Target card already installed in it



5. Slot 5 : PCIe ×16 connector (×8 signal)

6. 8 × 6+2 pin PCIe power cables for cards

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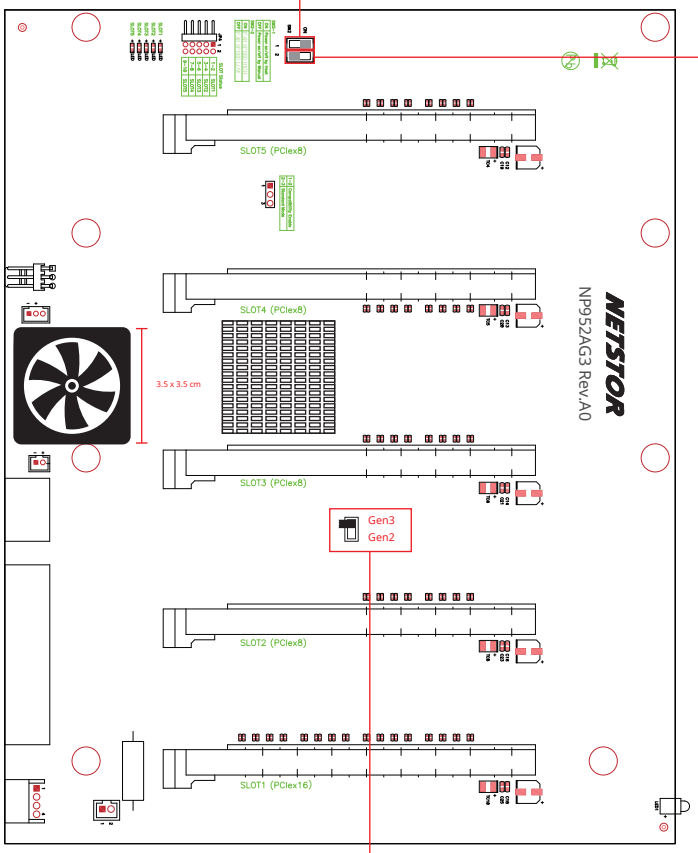
2.3 Switches Function and Location on NA265A Slot Board

SW2-1

Go Back to 4.

- To set NA265A power on/off by host computer, turn SW2-1 switch to ON position. (default)
- To set NA265A power on/off manually, turn SW2-1 switch to OFF position.

※ SW2-1 and SW2-2 switches are near slot 5 on backplane.



SW2-2

- To set 3.5 x 3.5 cm cooling fan speed on backplane to high, turn SW2-2 switch to ON position.
- To set 3.5 x 3.5 cm cooling fan speed on backplane to low, turn SW2-2 switch to OFF position. (default)

SW1

Go Back to 3.

- To set NA265A as Gen3 mode, turn switch to left position. (default)
- To set NA265A as Gen2 mode, turn switch to right position.

※ SW1 switch is between slot 2 and slot 3 on backplane.

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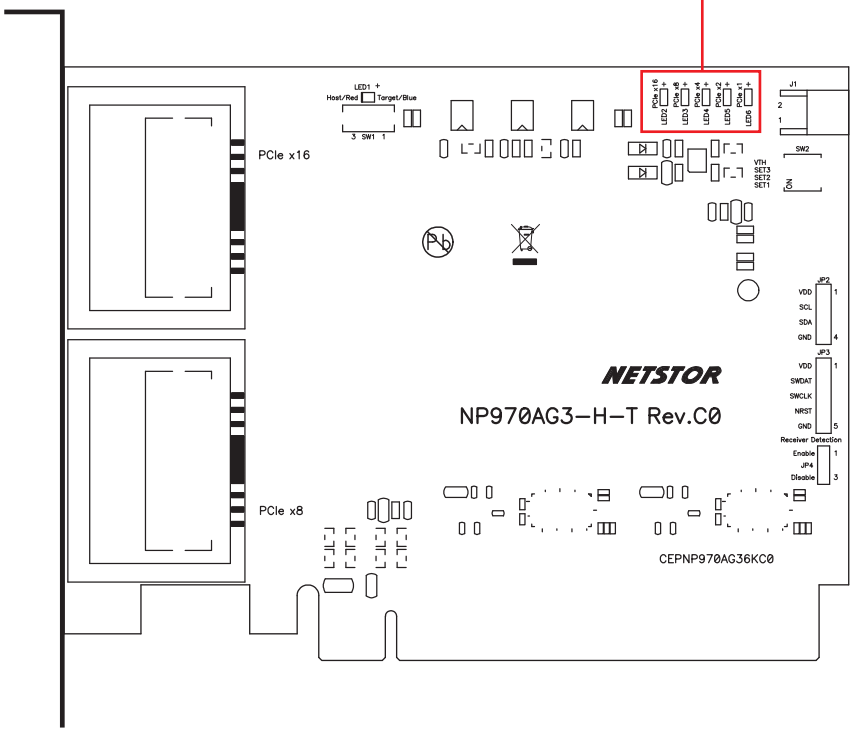
2.4 LED Status on Host card and Target card

- LED2 ~ LED6 show solid green light: PCIe x16 connection between computer and NA265A is linked
- LED3 ~ LED6 show solid green light: PCIe x8 connection between computer and NA265A is linked
- LED2 ~ LED6 no light: PCIe connection between computer and NA265A is NOT linked



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3. Install Graphics/PCIe Cards in NA265A

Before card installation in NA265A, read through the following notice and instructions.

The computer's PCIe slot to be linked with NA265A must be identified first for the correct connection between host computer and NA265A.

Two conditions A and B for connection are listed below:

A. If computer's PCIe slot to be linked with NA265A is PCIe 3.0 ×16 or PCIe 3.0 x8, you don't need to make any change to the switch setting on NA265A slot board because NA265A is already set to work with computer's PCIe 3.0 x16/x8 slot by default.

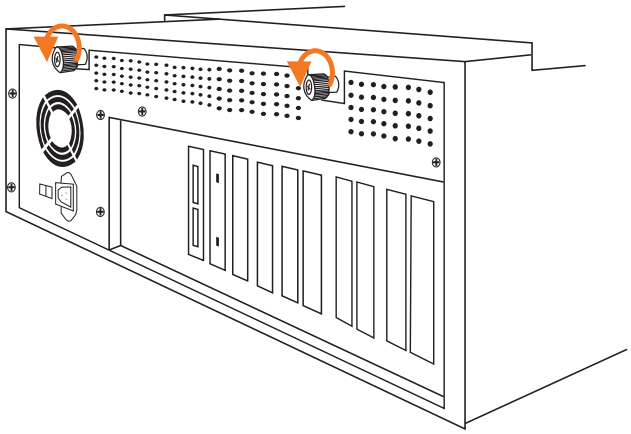
B. If computer's PCIe slot to be linked with NA265A is PCIe 2.0 ×16 or PCIe 2.0 x8, you will need to set NA265A's slot board to PCIe Gen2 to have Netstor unit be compatible with tower Mac Pro or host computer. The approach to set NA265A slot board to PCIe 2.0 is given in **section 2.3 (SW1)** in this user's manual.

3.1 Procedure for Card Installation

Prior to card installation, make sure NA265A is disconnected from power source to prevent electric shock or damage to graphics/PCIe card.

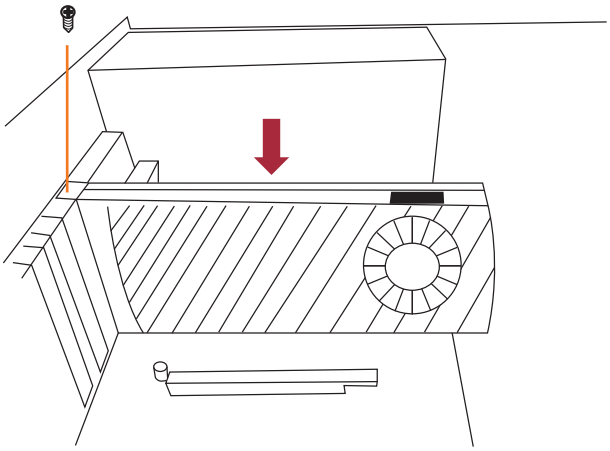
1. Install Netstor NP970AG3-H host card into the PCIe slot on motherboard within computer.

2. Loosen the two thumbscrews and remove the side door from NA265A.

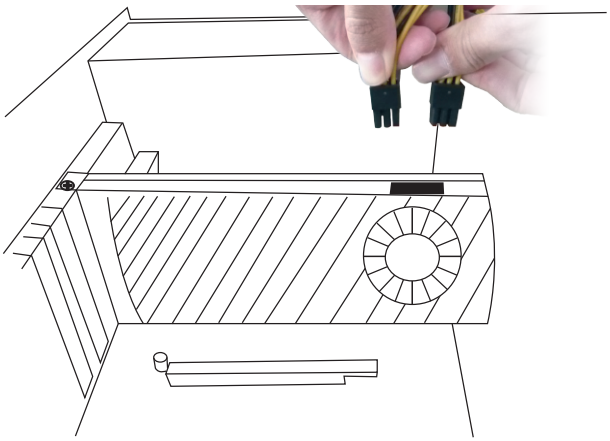


3. Remove the L shape metal bracket at rear of NA265A by loosening the screw on metal bracket.

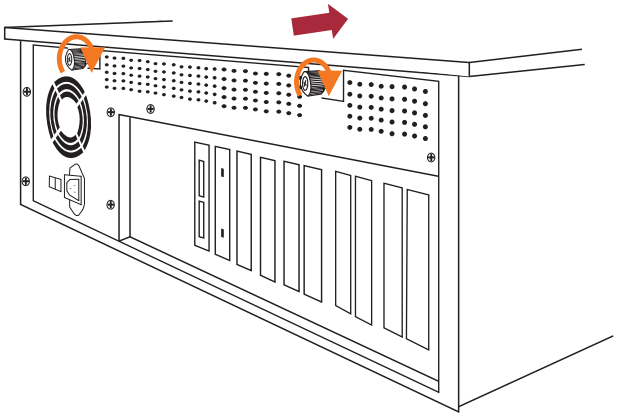
4. Install one graphics/PCIe card into the PCIe ×16 slot in NA265A and tighten the card with screw.



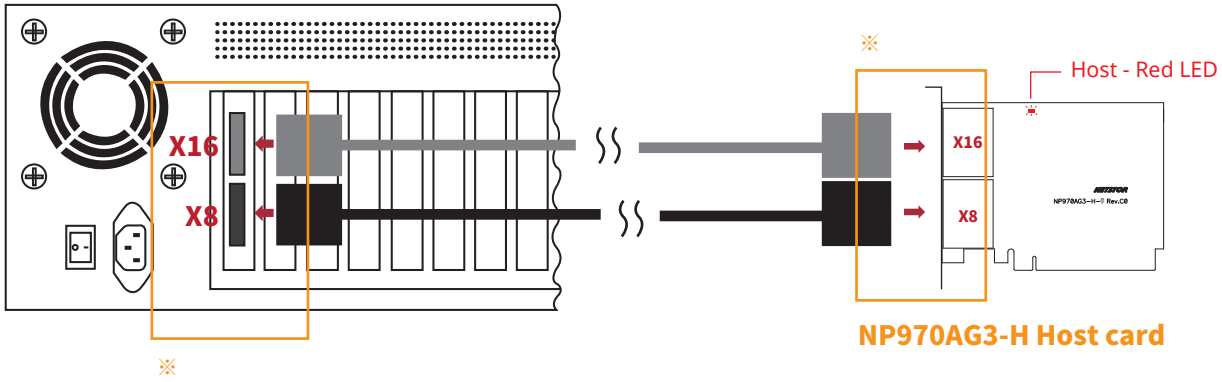
5. Each graphics card in NA265A is provided with two supplementary 6+2 pin PCIe power cables for sufficient power. Up to four dual-width, full-length graphics cards can be installed in slots 2 ~ 5 in the Netstor chassis.



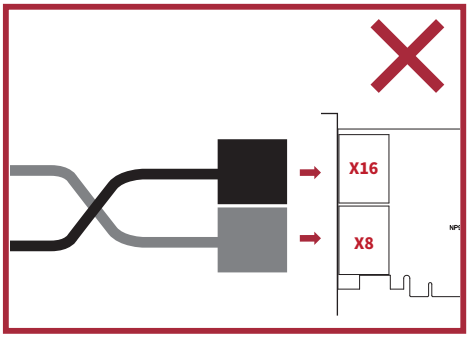
6. Put the top cover back to NA265A, and tighten the two thumbscrews to fasten the top cover with enclosure.



7. Connect one end of two data cables to PCIe connectors at rear of NA265A and connect the other end of two data cables to PCIe connectors on NP970AG3-H host card in computer.



Note: Make straight cable connection between target card in NA265A and host card in computer with mark ×8 to ×8, and ×16 to ×16. Do NOT make cross cable connection.



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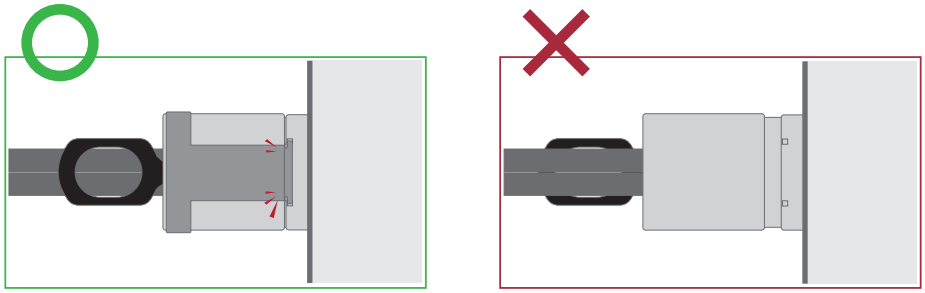
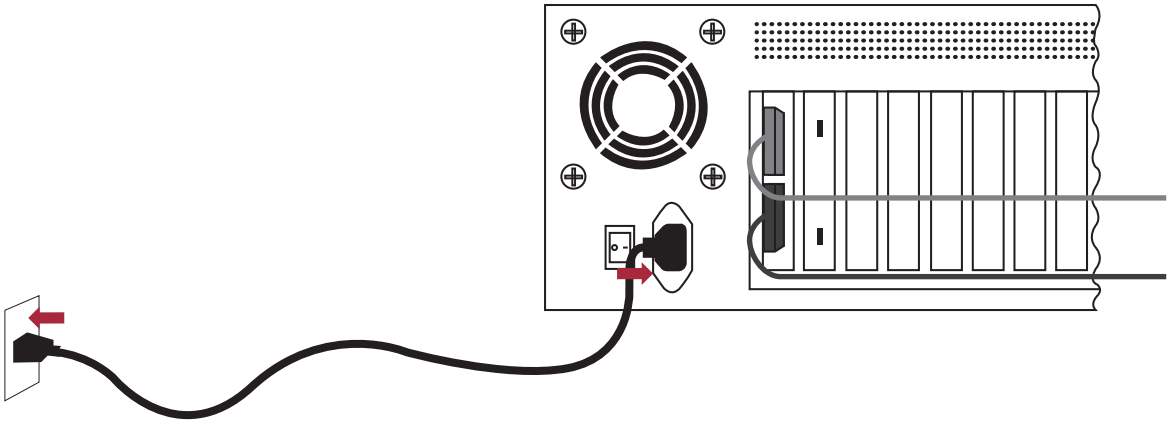
※ Note the ring-pull of the external PCIe ×8 data cable connector must be at the same side as Netstor host card and target card's obverse side when cable is connected to the host/target card.

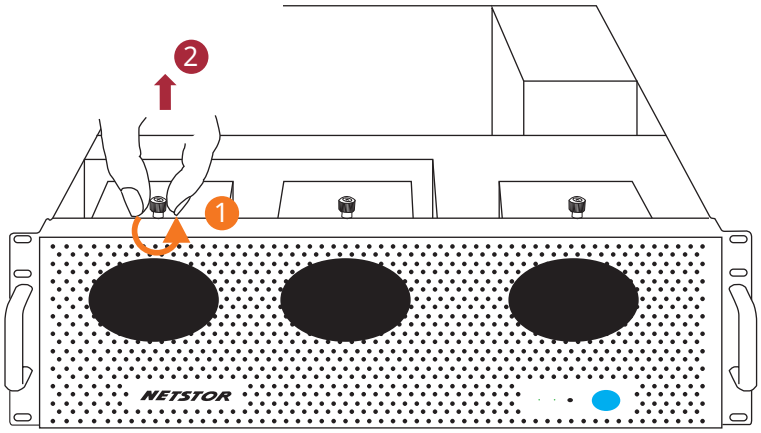


8. Connect one end of power cord to NA265A's power receptacle and the other end of power cord to grounded outlet or power strip.

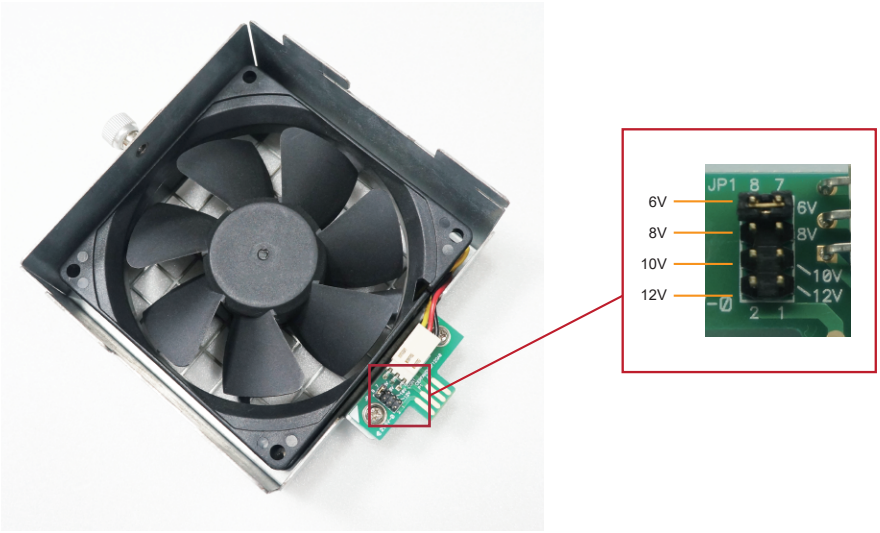


3.2 Cooling Fan Speed Adjustment

1. There are three hot-swappable 90×90×25 mm cooling fans for ventilation inside NA265A. The cooling fans can be drawn out by pulling the L type metal handle on the fan modules.



2. The front 90×90×25 mm cooling fan speed can be adjusted. Pull out the fan module, there are four sets of jumpers labeled with 6V, 8V, 10V, 12V from top to bottom on the fan connector board. The default setting is the jumper being placed over pin 7 and 8 for label 6V for slowest speed. The speed increases from label 8V to label 12V. As jumper is not placed over pins, the fan will spin at 12V full speed.



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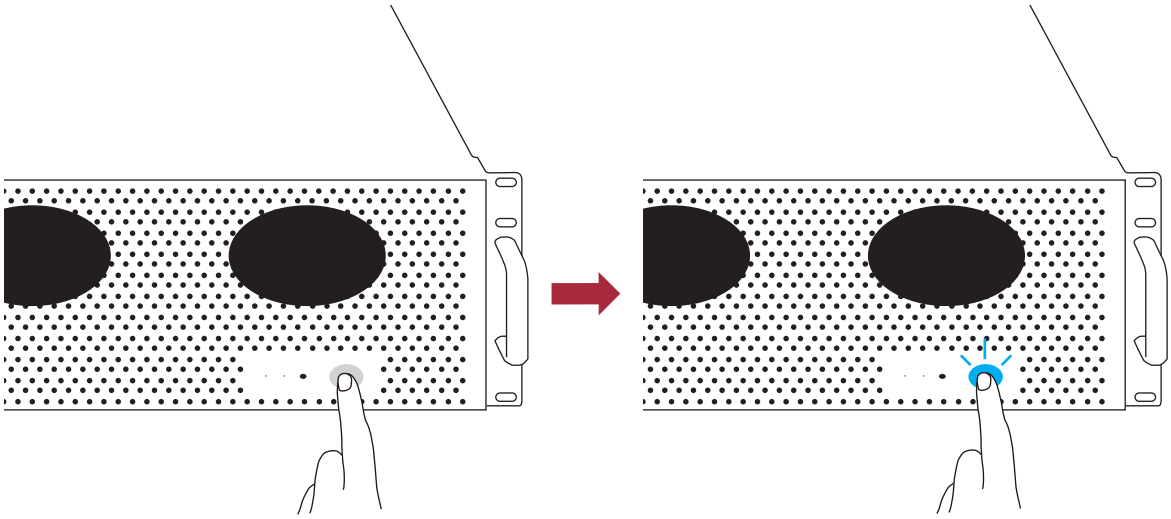
4. Powering On/Off NA265A

When NA265A is set for powering on/off by host, the NA265A will be automatically powered on and off with the host computer. **(Default)**

If NA265A is set for powering on/off manually, the standard powering on/off procedure below must be followed **(go to Section 2.3, SW2-1)**:

1. Power on NA265A by holding the power LED button for two seconds until the LED button shows blue light.



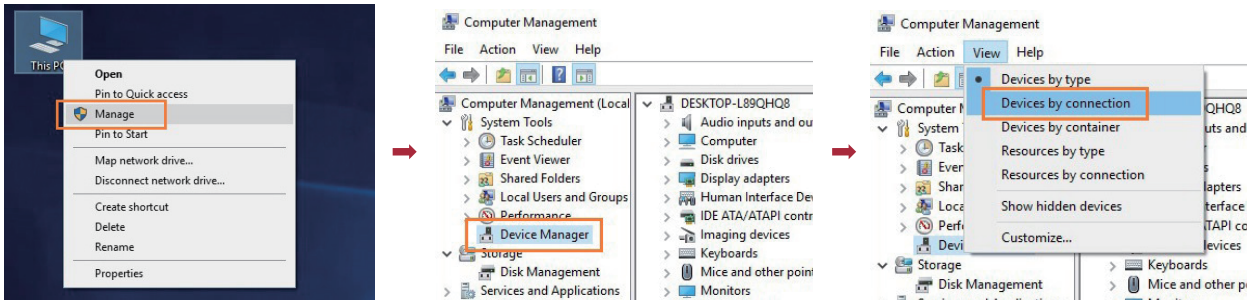
2. In order to let computer's BIOS identify and assign PCIe resources appropriately, always power on NA265A first, and then power on computer.

3. To remove NA265A from computer, always power off computer first, and then power off NA265A.

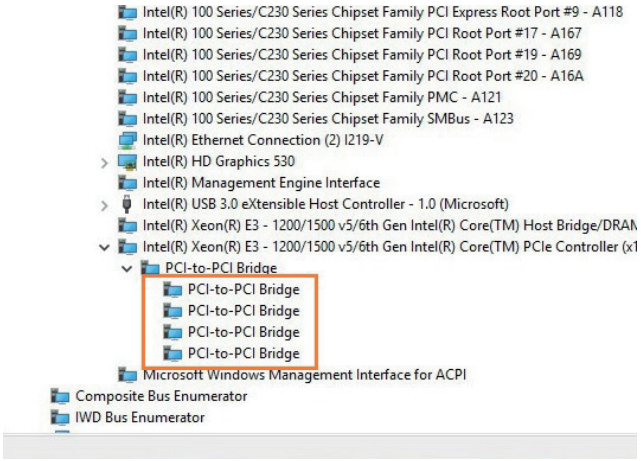
5. Verification

5.1 Windows Operating System

1. Go to Windows' Device Manager. Click **View** at the top menu bar, and select **Devices by connection**.



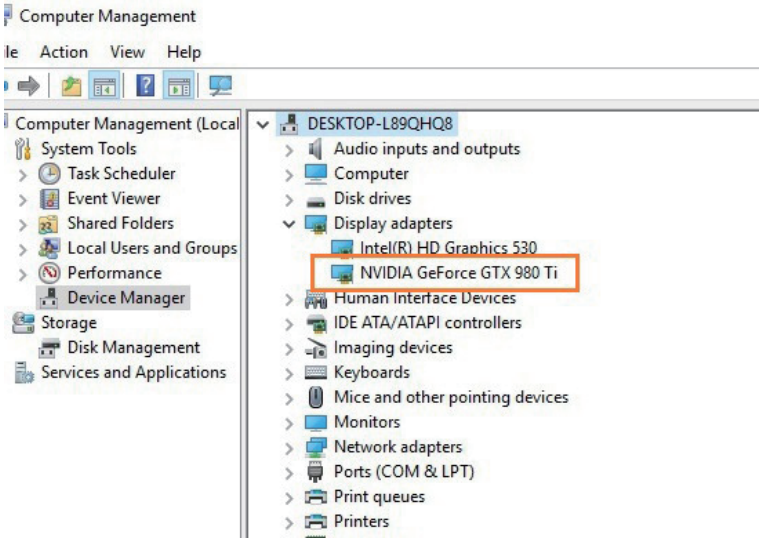
2. Open **ACPI x64-based PC >> Microsoft ACPI-Compliant System >> PCI Express Root Complex**. Then open **PCI Express Root Port >> PCI standard PCI-to-PCI bridge**.
   The graphics/PCIe cards in NA265A will appear under the PCI standard PCI-to-PCI bridge.



3. There will be PCI Express Root Ports with different ending numbers like 1C10, 1C18, and 1C1A. These different ending numbers indicate the different PCIe slots on computer motherboard.

4. No software or driver is required for NA265A itself. As a graphics/PCIe card is in NA265A, the request for the driver of the graphics/PCIe card will be prompted at operating system. Please follow the driver installation instructions given by the manufacturer of the graphics/PCIe card.

5. As the driver is installed on operating system, the graphics/PCIe card in NA265A will work properly with computer, and the graphics/PCIe card within the Netstor unit will be shown correctly in Device Manager.



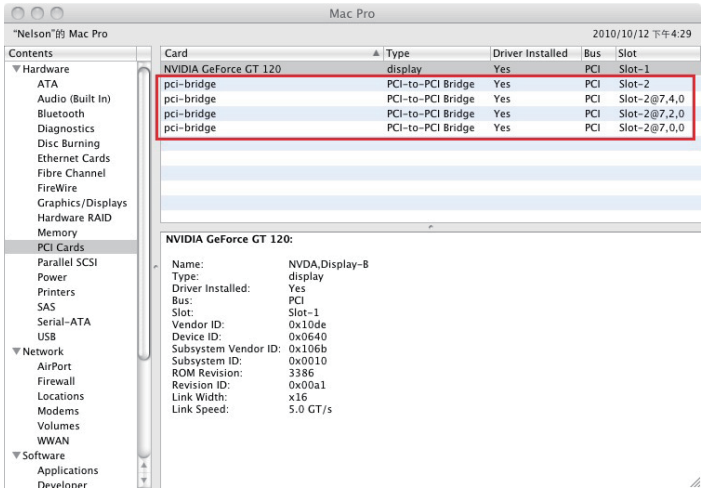
6. Whether a computer motherboard supports four graphics cards depends on the BIOS of motherboard. Consult with the manufacturer of motherboard to see if BIOS's resource supports four graphics cards.

5.2 macOS / tower Mac Pro

1. To check card verification on macOS at tower Mac Pro, click Apple icon at the top menu bar, and select **About This Mac**.

2. As pane of About This Mac pops up, click **System Report**.

3. Click **PCI** in the left column. It will show four pci-bridges that indicate the four PCIe slots in NA265A in the information field.



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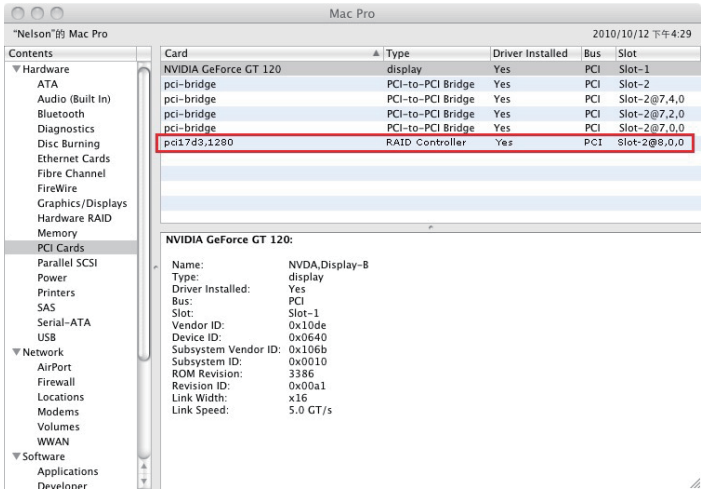
4. As graphics/PCIe cards are installed in NA265A, the graphics/PCIe cards will appear below the four pci-bridges.



5. After graphics/PCIe cards' drivers are installed on macOS, the graphics/PCIe cards in NA265A will be ready to work with tower Mac Pro.

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

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