netstor

HL23T-PRO

Thunderbolt™3 eGFX Enclosure

User Manual

Second edition, Mar. 2019

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1. Unpack the HL23T-PRO

The box contains the following items:

A. Enclosure × 1
B. Thunderbolt 3 cable (0.5 meter) × 1
C. Power cord × 1

2. Panel Layout

1. Power-On Indicator LED

- This power-on indicator LED only indicates power state. When HL23T-PRO is powered on, it shows blue. When enclosure is powered off, it shows no light.

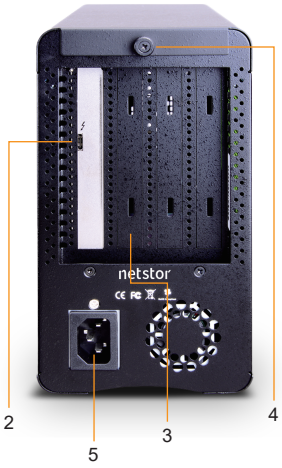
2. Thunderbolt 3 Port

- The Thunderbolt 3 port on HL23T-PRO will be connected to the host computer.

3. Graphics/GPU card slot

4. Thumbscrew for loosening/tightening the top cover

5. Power cord receptacle



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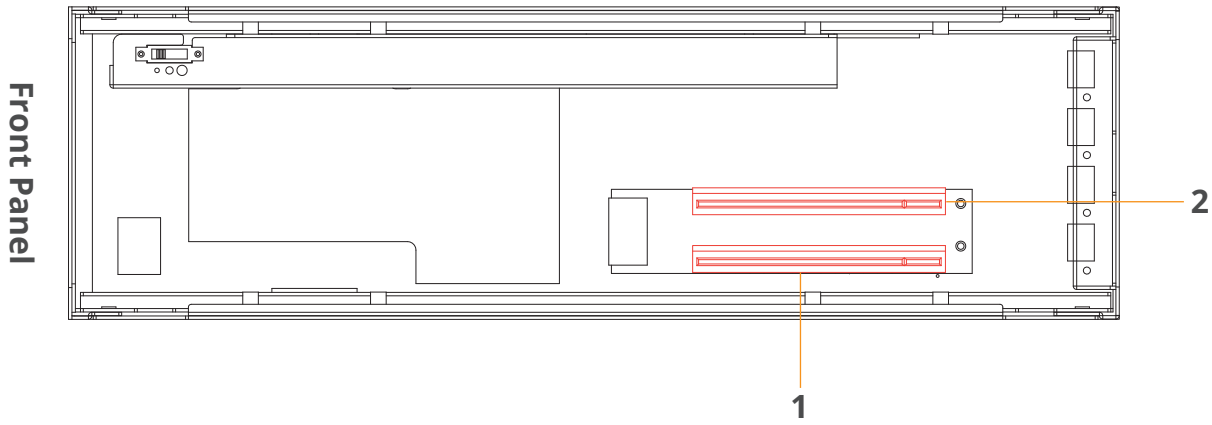
3. Graphics Card Hardware Configuration

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

Slot 2: PCIe x16 slot (supports graphics/GPU card x16)



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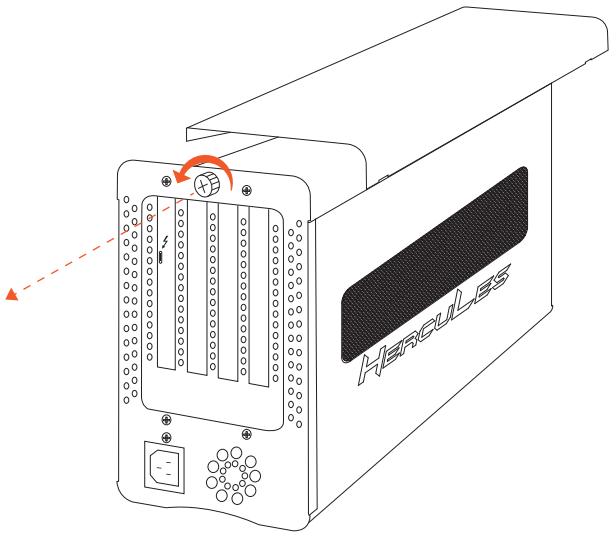
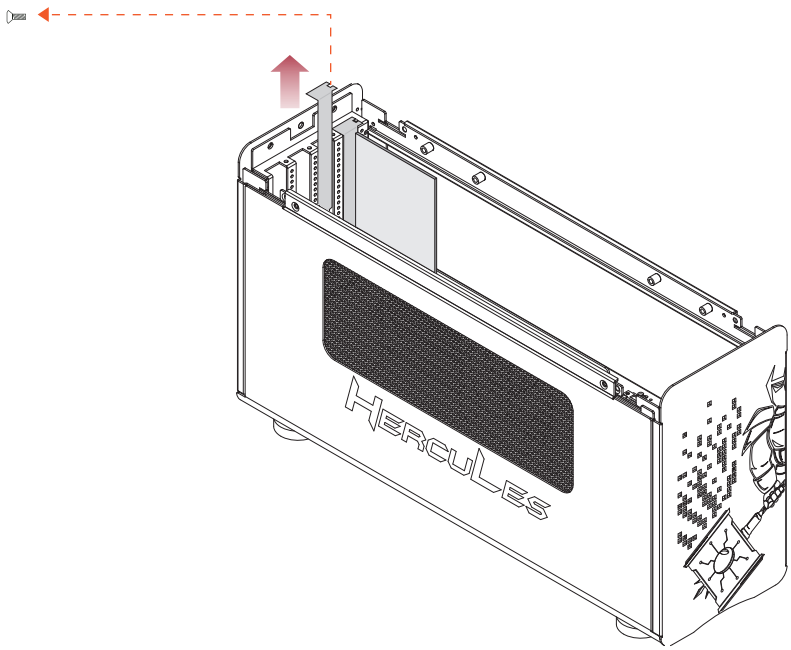
4. Installation of Graphics/GPU Card in HL23T-PRO

Before proceeding to installation procedure, disconnect the HL23T-PRO from power source for prevention of electric shock or damage to graphics/GPU card.

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



2. The PCIe slot at rear panel of HL23T-PRO is pre-covered by two removable L-shape metal brackets. Loosen the screws of the removable L-shape metal brackets for graphics card installation.



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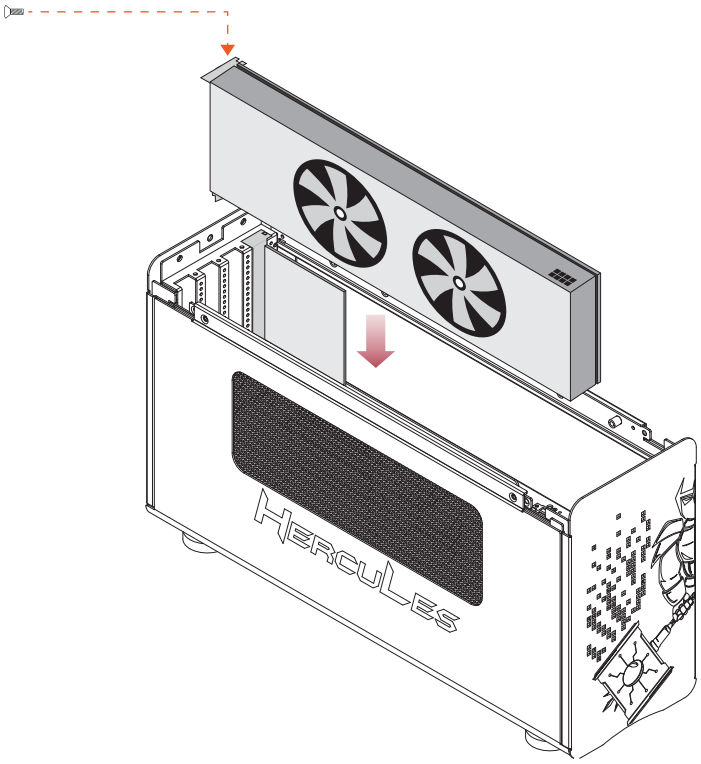
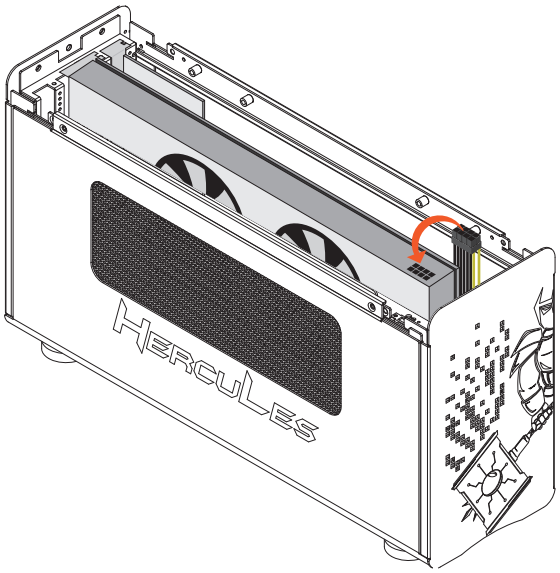
3. Install graphics card in the PCIe slot within the enclosure and tighten it with screw on graphics card's bracket.



4. Based on the spec of graphics card used, connect the supplementary PCIe power cable(s) from Netstor unit's PSU to the GPU card for sufficient power.

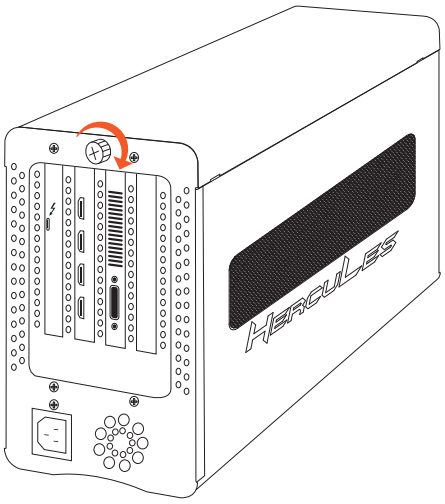


※Go To "5. Fan Cooler Shift"

※Go To "6. Fan Speed Adjustment"

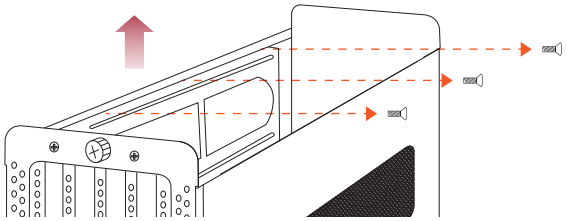
※ Two PCIe 6+2 pin power cables are provided within the unit.

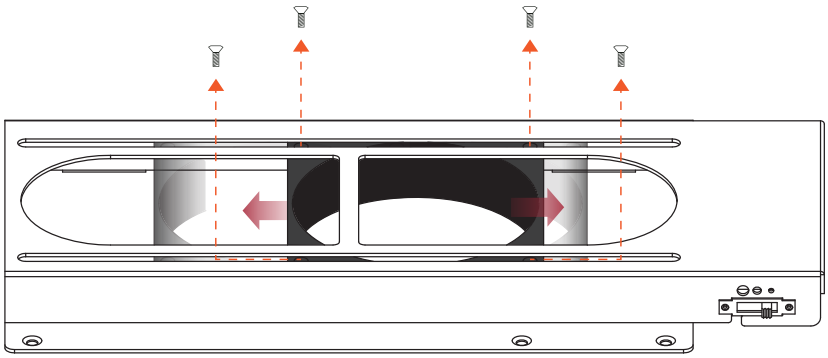
5. Put the top cover back to enclosure and tighten the thumbscrew.



5. Fan Cooler Shift

To adjust the position of the side movable 8x8 cm fan cooler on HL23T-PRO, firstly loosen the four screws on the cooling fan, and shift cooler's position to graphics card's blower location, and then tighten the four screws on cooling fan to have the cooler fastened to the place.





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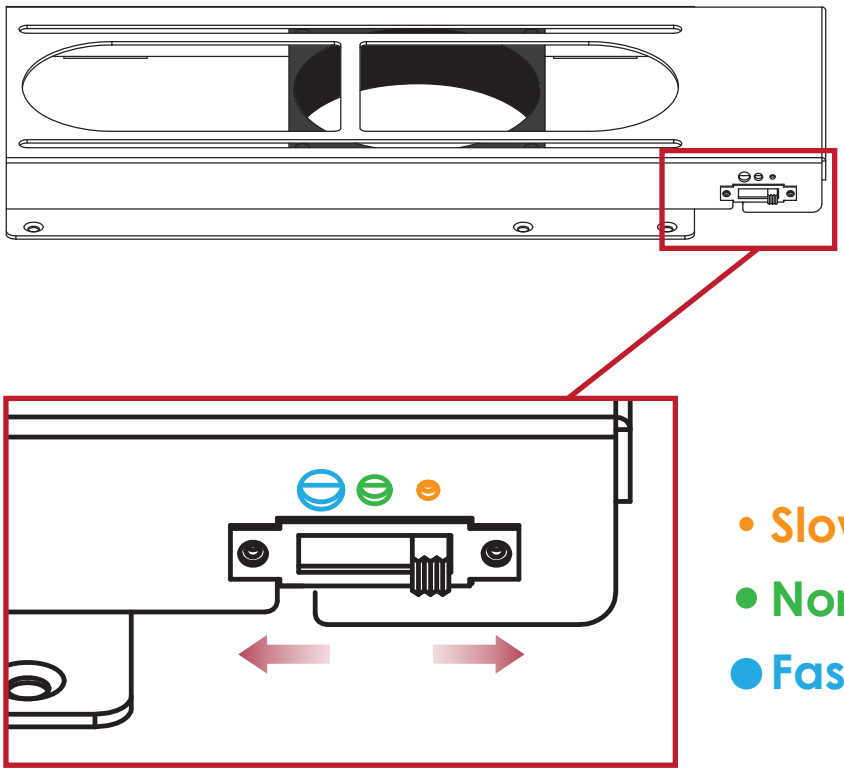
6. Fan Speed Adjustment

To adjust the fan speed of 8x8 cm cooler on HL23T-PRO, just fine-tune the fan speed switch on top of the side fan rail bracket within the Netstor enclosure. There are three levels for the cooling fan; the default setting is set at the slowest speed.



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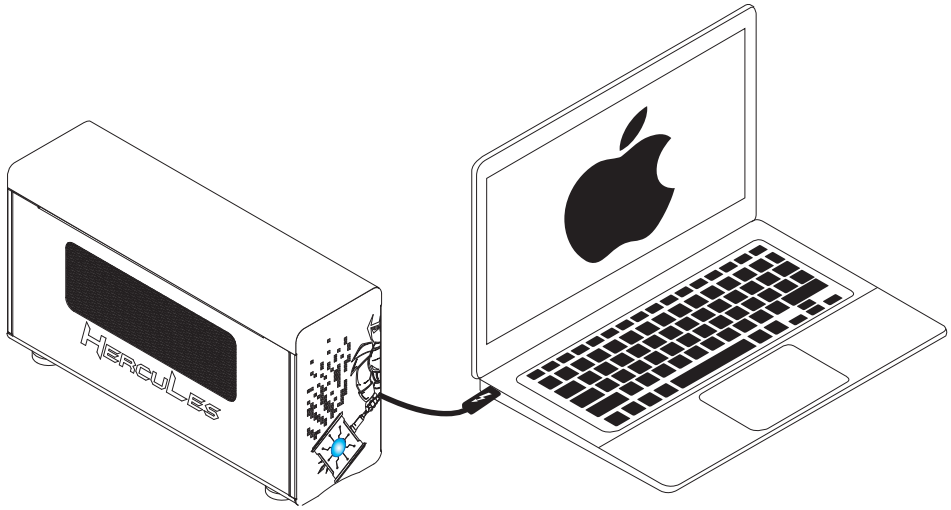
7. Operation and Verification

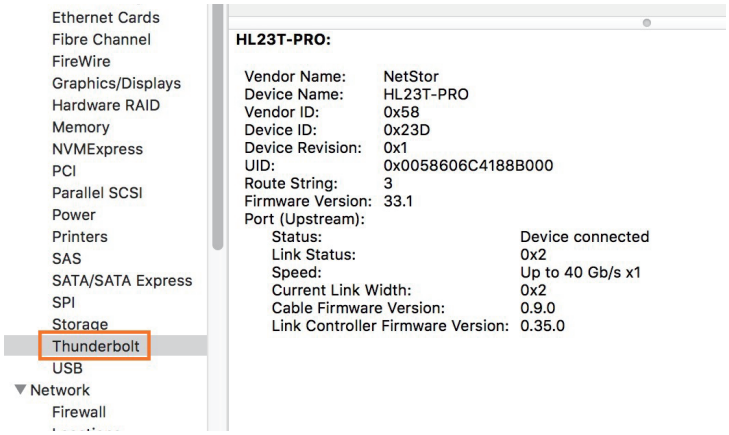
7.1 macOS

1. Connect HL23T-PRO chassis with power source, and then connect Netstor chassis and Thunderbolt computer with Thunderbolt 3 cable.

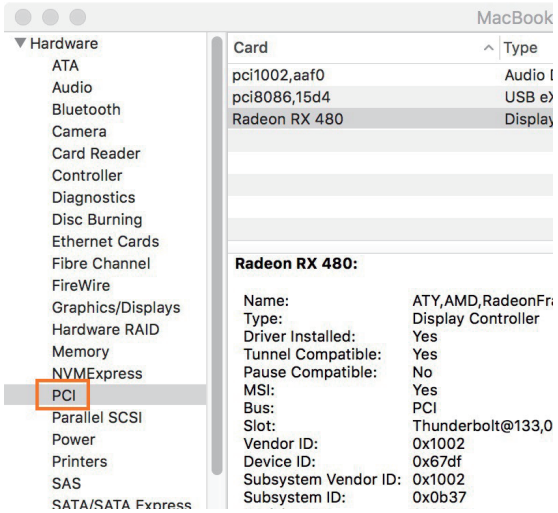


2. The HL23T-PRO enclosure is designed to be powered on/off simultaneously with Thunderbolt host computer when Netstor unit is connected to computer by Thunderbolt cable. Therefore, power on computer first, and then Netstor unit will be powered on automatically.
   (HL23T-PRO also supports hot-plug and 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 HL23T-PRO can be selected to see its information, the Netstor Thunderbolt 3 target card is recognized correctly by computer.



4. Verify the graphics/GPU card installed in HL23T-PRO. After the verification of Netstor Thunderbolt 3 target card, click **PCI** at the left side of the pane, and the graphics card installed in HL23T-PRO will be shown in the information area within the pane.



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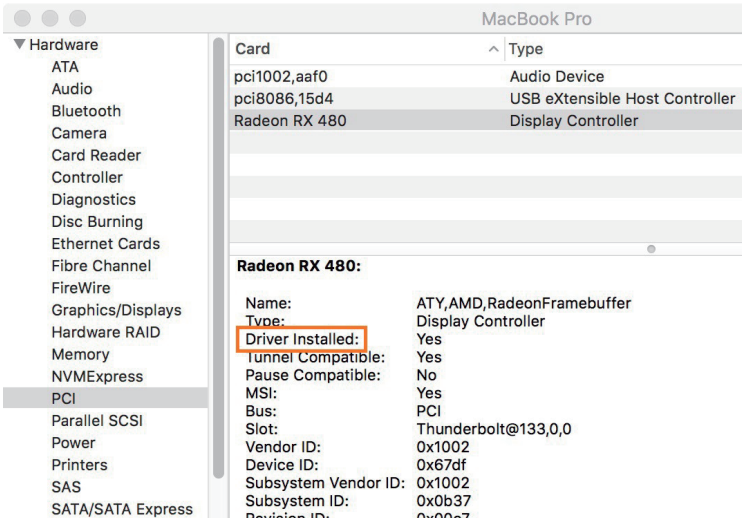
5. Verify the driver of graphics card has been installed on macOS. When seeing the graphics card is listed at the last step, there will be a section **Driver Installed** indicating the status of graphics card's driver. If it shows "No" for the status, find and install the driver for the graphics card, and then the status will become "Yes" to mean the driver of the card is installed properly.



6. While HL23T-PRO is connected to host computer by Thunderbolt cable, when shutting down computer, the Netstor unit will be shut down simultaneously as well.

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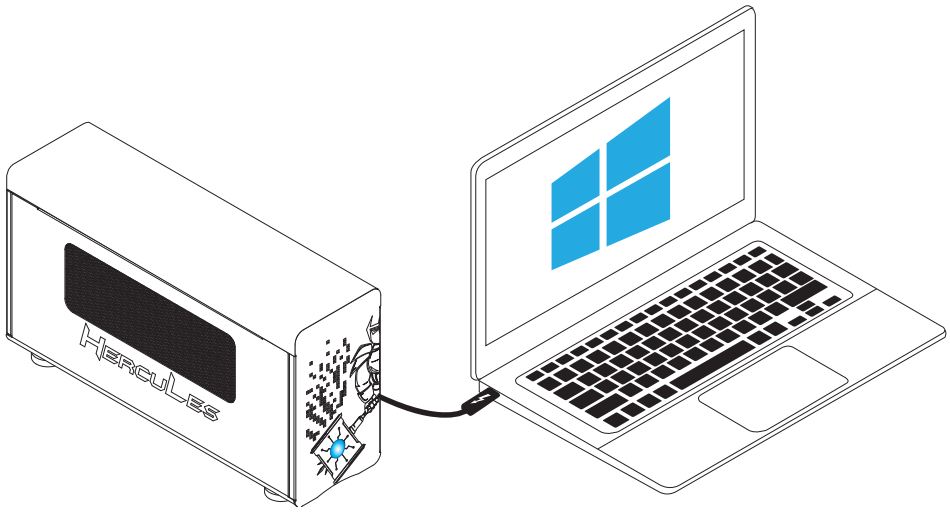
7.2 Windows 10

1. Connect HL23T-PRO with power source, and then connect Netstor unit and Thunderbolt computer by Thunderbolt 3 cable.



2. The HL23T-PRO is designed to be powered on/off simultaneously with Thunderbolt host computer as Netstor unit is connected to computer by Thunderbolt cable. Thus power on computer first, and then Netstor unit will be powered on automatically.
   (HL23T-PRO also supports hot-plug and hot-unplug for powering on and off)

3. Verify the graphics/GPU card installed in HL23T-PRO is recognized by computer's Windows 10. Go to Windows' Device Manager, click **View** at the top menu bar, and select **Devices by connection**. Click ACPI x64-based PC >> Microsoft ACPI-Compliant System >> PCI Express Root Complex, open the PCI Express Root Port that belongs to computer's Thunderbolt port, and the graphics card installed in HL23T-PRO will appear under the PCI Express Root Port item.

4. Verify the driver of graphics card has been installed on Windows 10. When seeing the graphics card appears under PCI Express Root Port at the last step, right-click on the graphics card and select **Properties**. As window of Properties pops up, check if it shows driver is installed. Provided it shows driver is not installed, find and install the driver for the graphics card.

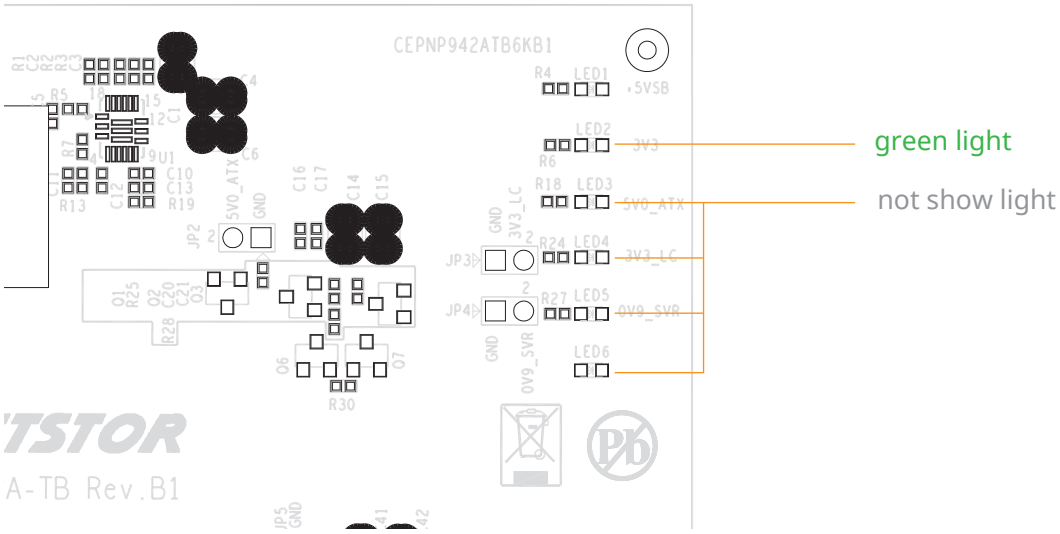
5. While HL23T-PRO is connected to host computer by Thunderbolt cable, when shutting down computer, the Netstor unit will be shut down simultaneously as well.

8. Thunderbolt 3 Card LEDs Status

On the Thunderbolt 3 card within the HL23T-PRO 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 HL23T-PRO is powered on and after the Netstor unit is powered on.

Power-off:

Before HL23T-PRO is powered on, only LED 2 will show green light, and the rest LED 3 through LED 6 will not show light.



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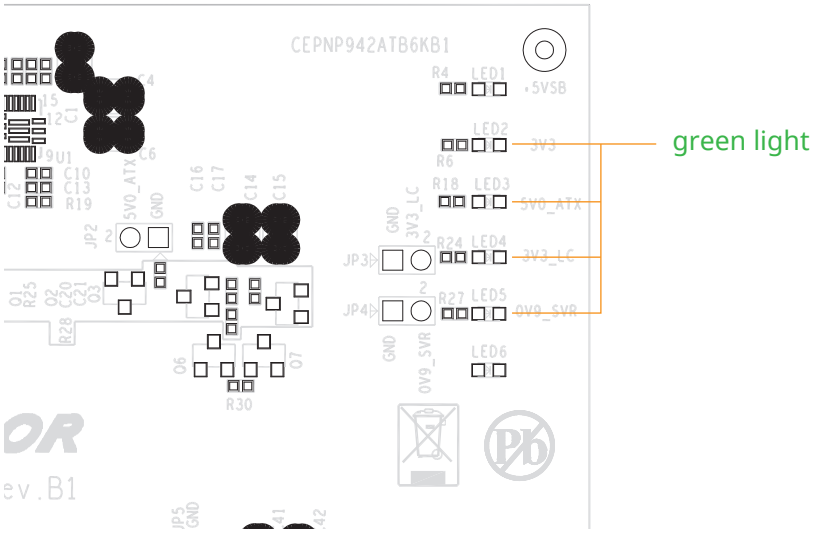
Power-on:

After HL23T-PRO is powered on, LED 2 through LED 5 will show green light.



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or Netstor Technology, Taiwan.

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