

# INSTALLATION

The PWM hub functions optimally when modulated by a PWM signal from the motherboard, which will allow the greatest control range. However, not all 4-pin motherboard connectors implement the PWM signal modulation.

## Connecting the 4-pin to CPU\_FAN

For full PWM functionality, Phanteks' PWM hub requires users to connect the 4-pin connector to the "CPU\_Fan" connector of the motherboard, because all motherboard manufacturers implements a PWM signal modulation on this connector. Connect the SATA 12V power to power the PWM hub. Not all motherboards have their CPU\_Fan connector set on PWM signal modulation by default. Please consult your motherboard documentation for this matter.

## Connecting the 4-pin to other 4-pin header (besides the CPU\_Fan)

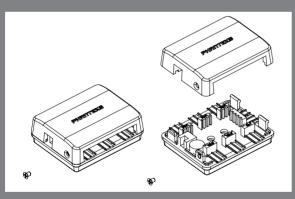
Other 4-pin connectors can be found on modern motherboards besides the "CPU\_Fan" connector (e.g. "CPU\_Fan2", "CHA\_Fan", "OPT\_Fan"), however not all motherboard manufacturers implement a true PWM signal modulation onto these connectors. These type of 4-pin connectors modulate the RPM by voltage, which has a smaller control range compared to modulation by true PWM signal.

The 12V SATA power cable can not be used to power the PWM hub if connecting to these types of 4-pin connectors, due to the interference with the RPM regulation by voltage (resulting in the fans running on full RPM). The PWM hub will draw its power from the 4-pin connector, which is limited to a total device consuming 30W in total.

#### **Important Note:**

1 motherboard connector can only read 1 RPM signal. Therefore, the motherboard will only read the RPM signal from 1 device connected to Fan 1. The RPM form all other devices will be regulated according to FAN 1. Y-splitter should not be connected to FAN 1.

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# 1. Installing in Phanteks' case:

- Step 1. Unscrew the side screw to open top cover.
- Step 2. Place the pwm board (without top cover) onto the mounting area of the Phanteks chassis.
- Step 3. Screw in the 2 included screws
- Step 4. close the top cover and screw in the side screw.

## 2. Installing in universal case:

\*Make sure the pwm hub will fit in the mounting area (18mm clearance)

- Step 1: Stick 1 of the velcro sheet on the PWM hub bottom.
- Step 2: Stick the other velcro sheet on the desired installation area in the chassis.
- Step 3: Place the PWM hub onto the velcro sheet.

# SERVICE AND SUPPORT

If you have any questions or concerns, please visit Phanteks' website for technical support. We consider customer support, satisfaction and feedback an essential element of our overall marketing effort. Please feel free to contact our support team. Thank you!

Contact Us at: www.phanteks.com www.phanteksusa.com www.phanteks.cn

For Warranty Information, please visit Phanteks' website.