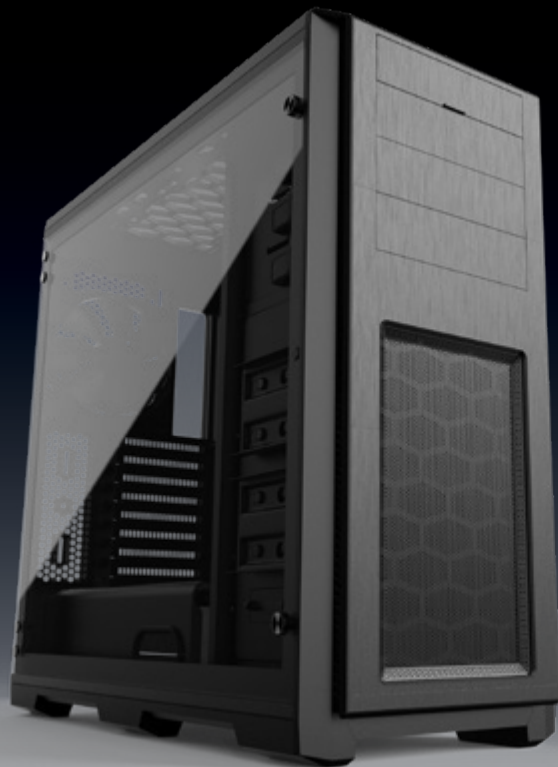


ENTHOO SERIES



USER'S MANUAL

ENTHOO PRO

PHANTEKS
DESIGNED IN THE NETHERLANDS

INTRODUCTION

Congratulations on your purchase of the Phanteks Enthoo Series Case and welcome to the User's Guide. Phanteks believes that meaningful designs are created through the fusion of form and function.

Caution

Please take a moment to carefully go through the installation guide. Phanteks will not take responsibility for any damages incurred due to incorrect installation and incorrect usage of this product. Thank you.

ENTHOO PRO

Continuing with the legacy of the Enthoo Series, the Enthoo Pro is a full tower case with many rich features implemented from the award-winning Enthoo Primo.

This manual applies to the following Enthoo PRO models:

Enthoo PRO - Acrylic Window	(PH-ES614P_BK02)
Enthoo PRO - Closed Sidpanel	(PH-ES614PC_BK02)
Enthoo PRO - Tempered Glass Window	(PH-ES614PTG_BK02)



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1. SPECIFICATIONS

CASE SPECIFICATIONS

Dimension	235 mm x 535 mm x 550 mm (W x H x D)
Form Factor	Full tower
Material(s)	ABS, Steel chassis, Acrylic/Tempered Glass window*
Motherboard support	ATX, EATX, mATX, SSI EEB
Front I/O	2x USB 3.0, USB-C GEN2, Microphone, Headphone, Power Button, Reset Button, RGB Button**
Side window	Closed/Acrylic/Tempered Glass*

EXPANSION & DRIVE BAYS

Expansion slots	8
External 5.25"	3
Internal 3.5"	6 (2x 3HDD cages)
Internal 2.5"	11 (2x SSD Brackets)

COOLING

	120 mm	140 mm	200mm
Front	2x	2x (1x included)***	1x (1x included)***
Top	3x	3x	1x
Rear	1x	1x (1x included)	-
Bottom	2x	1x	-
HDD	2x	-	-

LIQUID COOLING

	120 mm radiator	140 mm radiator
Front	Up to 240	-
Top	Up to 360	Up to 420
Rear	120	140
Bottom	Up to 240	140

CLEARANCE

Graphic card	347 mm
<i>Without HDD cages</i>	472 mm
CPU cooler	193 mm
Cable management	27 mm (39mm at PSU area)
Top Radiator Clearance	65mm to motherboard

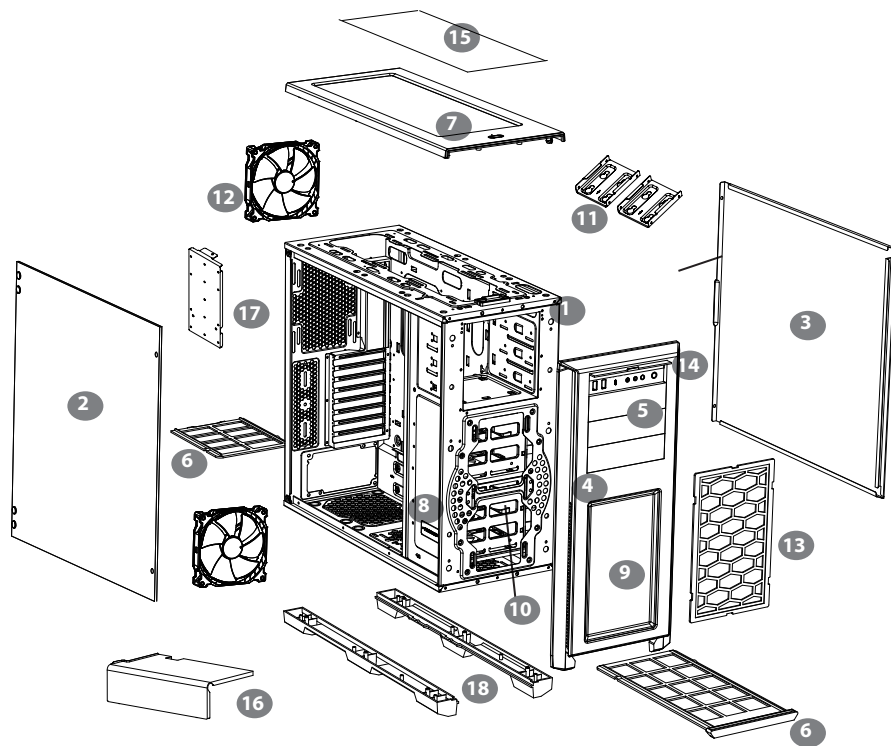
Model number	PH-ES614P/PH-ES614PC/PH-ES614PTG
Warranty	5 Years

*Depending on model number

**PH_ES614PTG only

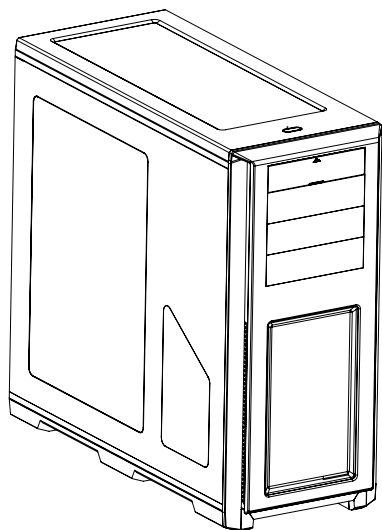
***PH_ES614PTG has a 140mm front fan, other models have a 200mm front fan.

2. EXPLODED VIEW

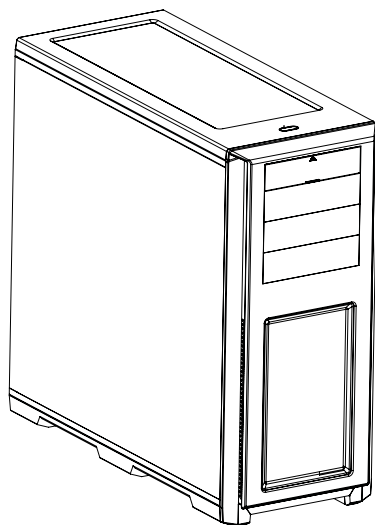


1. Chassis
2. Left Side Panel*
3. Right Side Panel
4. Front Panel
5. ODD Cover
6. Bottom Dust Filters
7. Top Panel
8. Phanteks Logo Plate
9. Front Mesh cover
10. Hard Drive Cage
11. SSD Bracket (2x)
12. PH-F140
13. Front dust filters
14. I/O Ports
15. Top Mesh cover with dust filter
16. PSU Cover
17. Reservoir Bracket
18. Bottom feet

*PH-ES614P Acrylic window / PH-ES614PC Closed window /
PH-ES614PTG Tempered Glass window



PH_ES614P

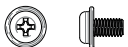


PH_ES614PC



PH_ES614PTG

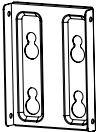
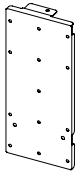
3. ACCESSORIES

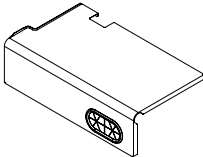
ITEM	DESCRIPTION	USE	QTY
	Screw M3 x 5mm	Motherboard/ ODD/SSD	23
	Stand Off Screws	Motherboard	2
	Screw 6-32 x 6mm	PSU, Brackets	5
	Thumb Screws 6-32 x 6mm	PSU, Brackets, HDD cages	3
	Screw 6-32 x 31mm	HDD fans	10

ITEM	DESCRIPTION	USE	QTY
	Screw 5 x 10KT	Fan installation	12
	CM6 #11	HDD	12
	Screw M4 x 8mm	Reservoir	8
	KM6 #6	Reservoir bracket	3
	PWM6# x 6mm	Hook-n-Loop Screw	2
	CM6 #5	Pumpbracket upgrade	5

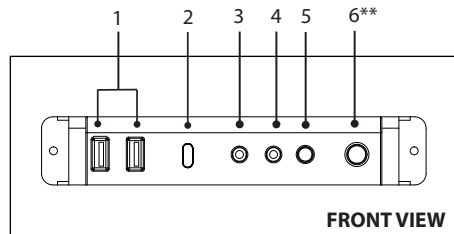
ITEM	DESCRIPTION	USE	QTY
	150mm	Zip Tie	10
	188 x 10 x 1.8mm	Hook n Loop (long)	1
	110 x 10 x 1.8mm	Hook n Loop (short)	1

4. BRACKETS

	SSD Bracket (2x) Supports 2.5" SSD
	Reservoir Bracket Universal Reservoir Bracket

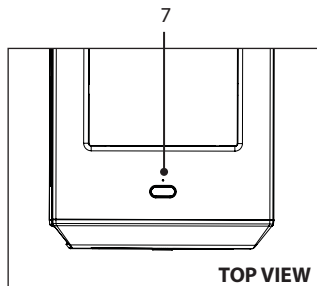
	PSU Cover Removable PSU Cover *PSU Cover not included with Closed Panel models
--	---

5. I/O PORTS AND FRONT PANEL



English

1. USB 3.0
2. USB-C GEN2
3. Microphone
4. Headphone
5. Reset Button
6. RGB Button
7. Power Button



RGB Lighting Control (6) Instructions:**

HOLD

Long Press: On/Off

<1 sec

Short Press (<1sec): Choose LED Color (10 colors)

2 sec

2 Sec Press: Choose Mode
Mode 1: Static Mode 2: Breathing Mode 3: Color Cycle

Deutsch

1. USB 3.0
2. USB-C GEN2
3. Mikrofon
4. Kopfhörer
5. Reset-Knopf
6. RGB Knopf**
7. Ein-/Aus Schalter

Francais

1. USB 3.0
2. USB-C GEN2
3. Microphone
4. Casque
5. Bouton de réinitialisation
6. Bouton de RGB**
7. Bouton de d'alimentation

Espanol

1. USB 3.0
2. USB-C GEN2
3. Micrófono
4. Auricular
5. Botón de reinicio
6. Botón de RGB**
7. Botón de encendido

日本語

1. USB 3.0
2. USB-C GEN2
3. マイクロホン
4. ヘッドホン
5. 電源リセット
6. RGB スイッチ**
7. 電源ボタン

中文

1. USB 3.0
2. USB-C GEN2
3. 麦克风
4. 耳机
5. 重启
6. RGB开关**
7. 电源按钮

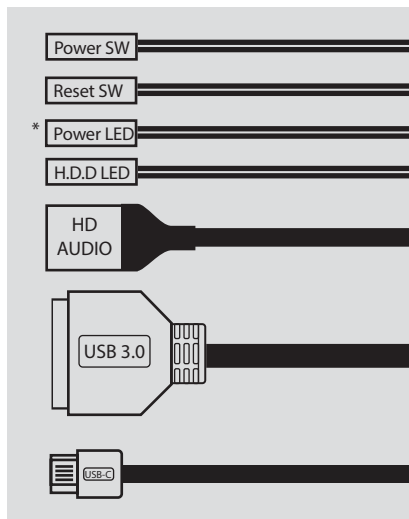
⊠⊠⊠

1. USB 3.0
2. USB-C GEN2
3. ⊠⊠⊠
4. ⊠⊠⊠
5. ⊠⊠⊠⊠
6. RGB ⊠⊠⊠⊠**
7. ⊠⊠⊠⊠

**PH_ES614PTG only

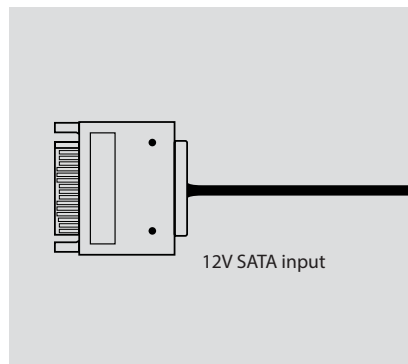
6. CONNECTIONS

TO MOTHERBOARD

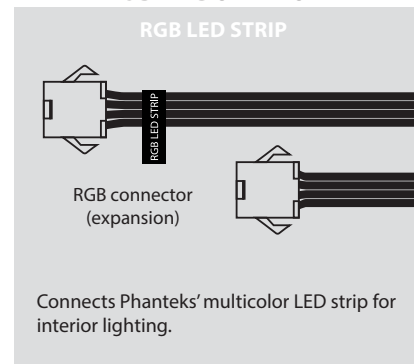


*Power LED is replaced by RGB lighting with
PH_ES614PTG model

TO PSU**

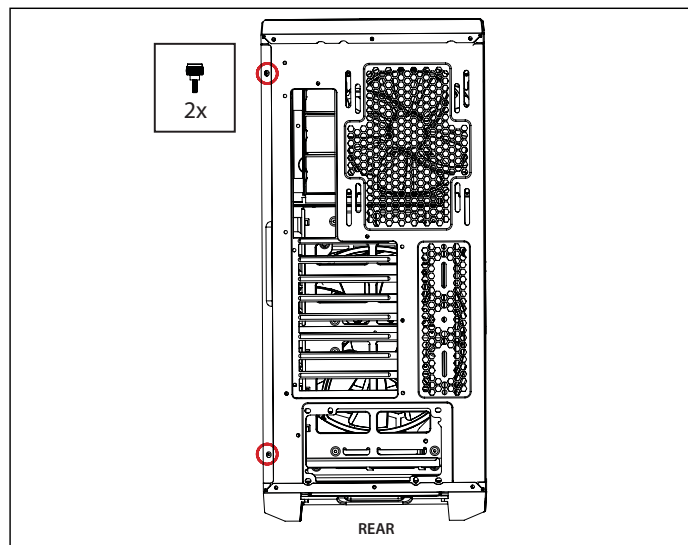


TO PHANTEKS RGB LEDSTRIPS**

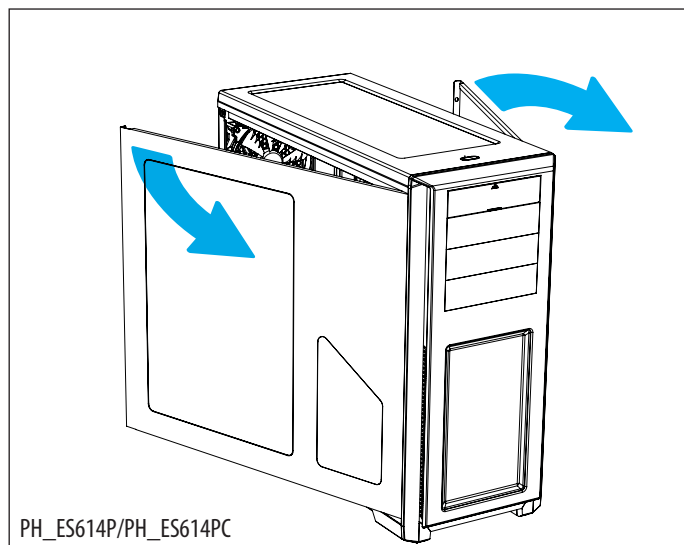


**PH_ES614PTG only

7. PANEL REMOVAL



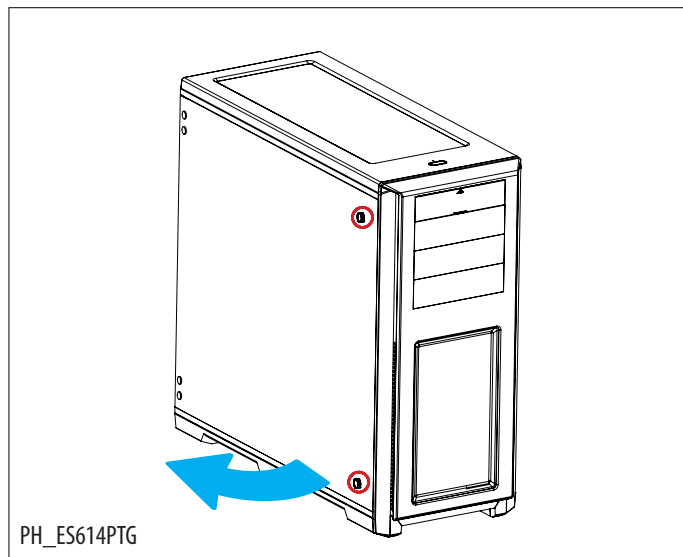
Unscrew the 2 thumb screws to remove the side panels.



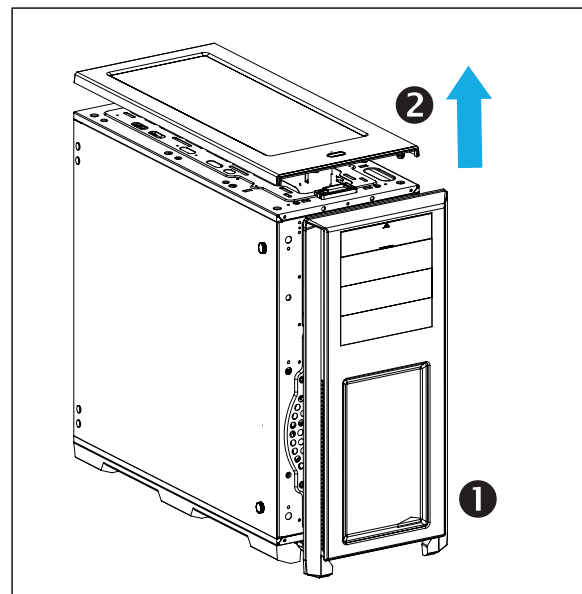
PH_ES614P/PH_ES614PC

Open the sidepanels as shown.

7. PANEL REMOVAL



Unscrew the 2x thumb screws to remove the glass panel.



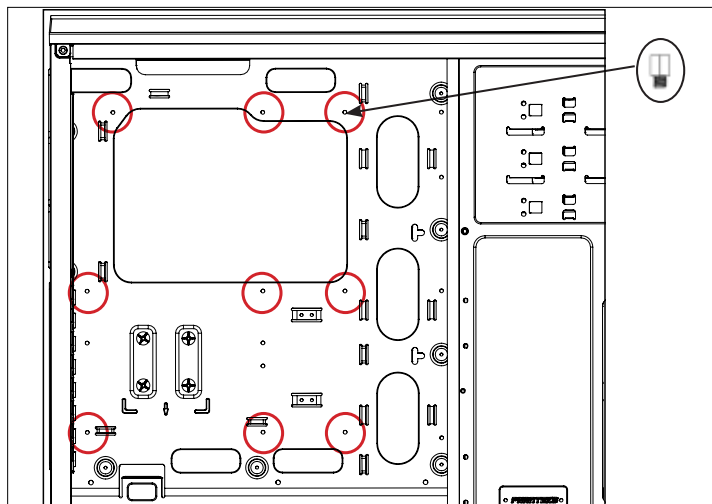
**** Use caution when removing front panel, Power LED wires are attached to front panel.**

**** To prevent damage to the panels, please follow the steps in order.**

Step 1: Pull outward to remove the front panel.

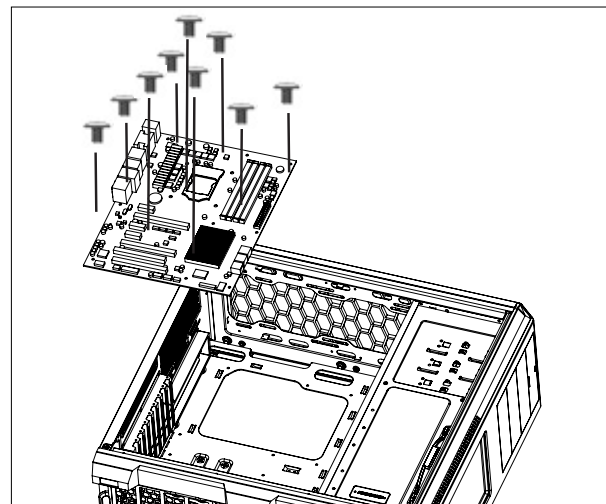
Step 2: Pull up to remove the top panel.

8. MOTHERBOARD INSTALLATION



Step 1

Step 1: Standoff screws are pre-installed for ATX. Extra standoff required for E-ATX

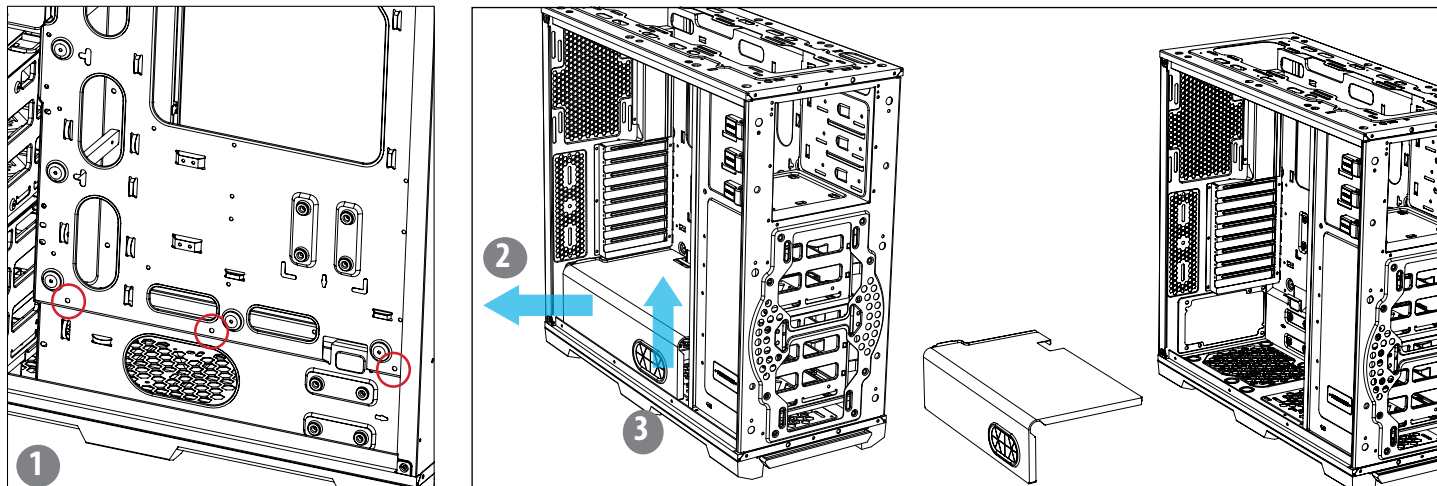


Step 2

Step 2: Install the motherboard with the provided M3 screws.

9. POWER SUPPLY INSTALLATION

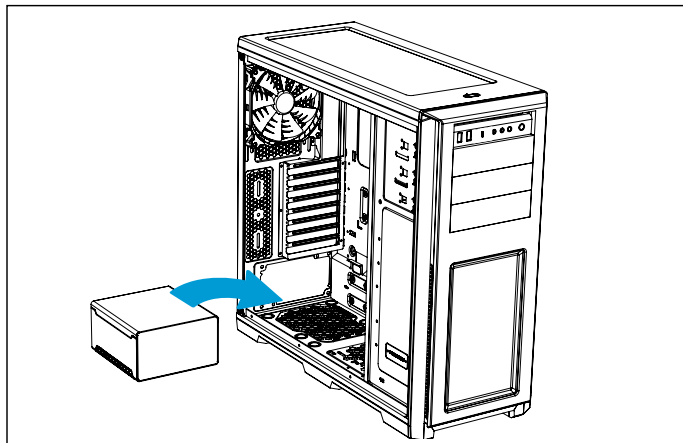
1. Remove PSU cover



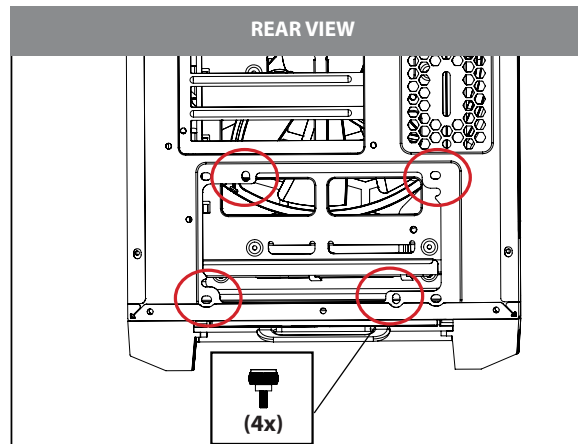
1. Unscrew the thumb screws. 2. Pull out 3. lift up on the right side to remove cover

9. POWER SUPPLY INSTALLATION

2. Install PSU

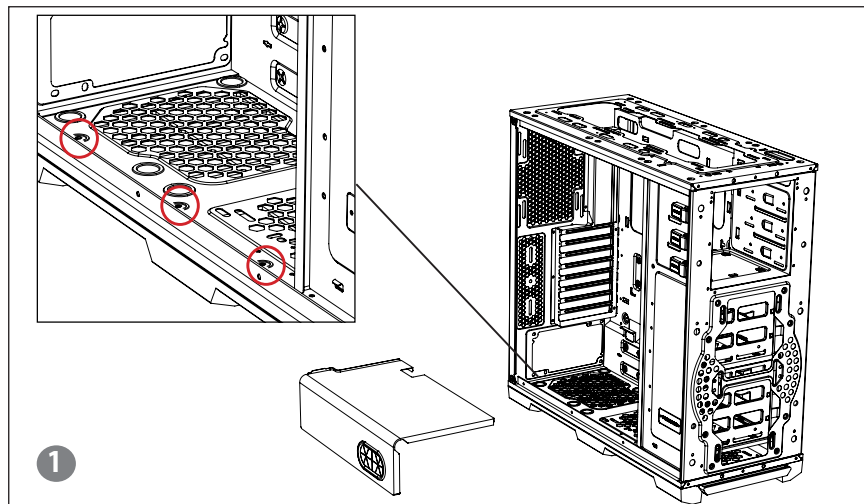


1. Align to the three rubber grommets and slide in.
2. Use the provided thumb screws to lock in place.

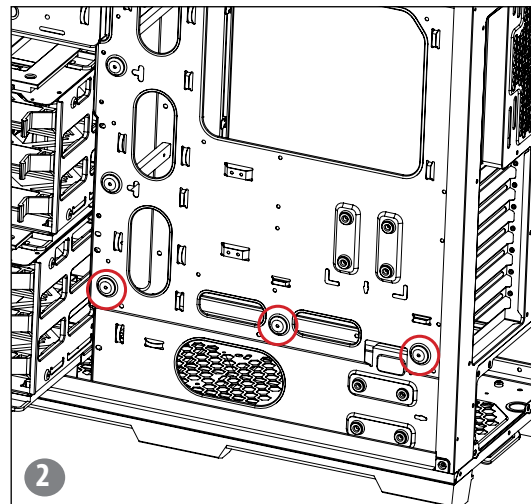


9. POWER SUPPLY INSTALLATION

3. Install PSU cover



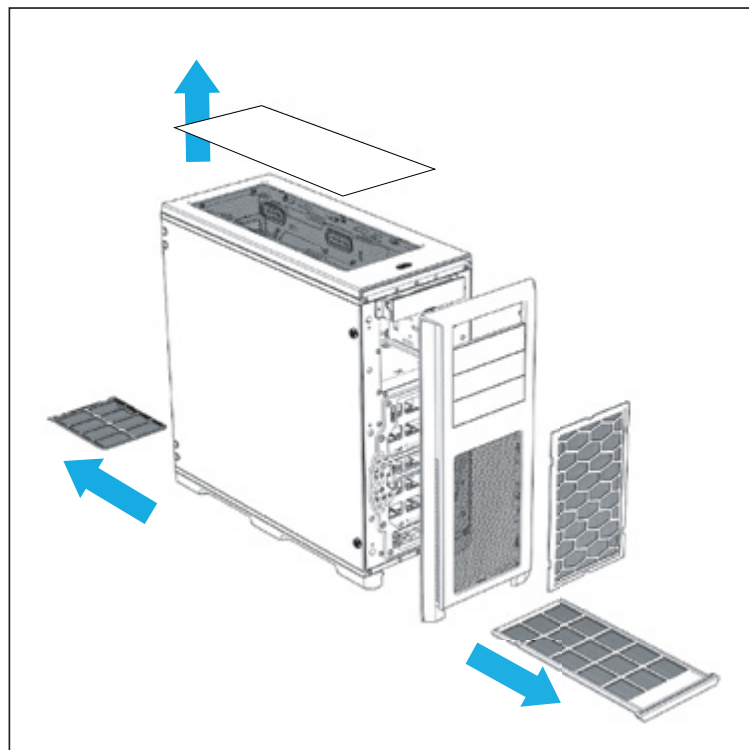
1. Align to the three rubber grommets and slide in. 2. Use the provided thumb screws to lock in place.



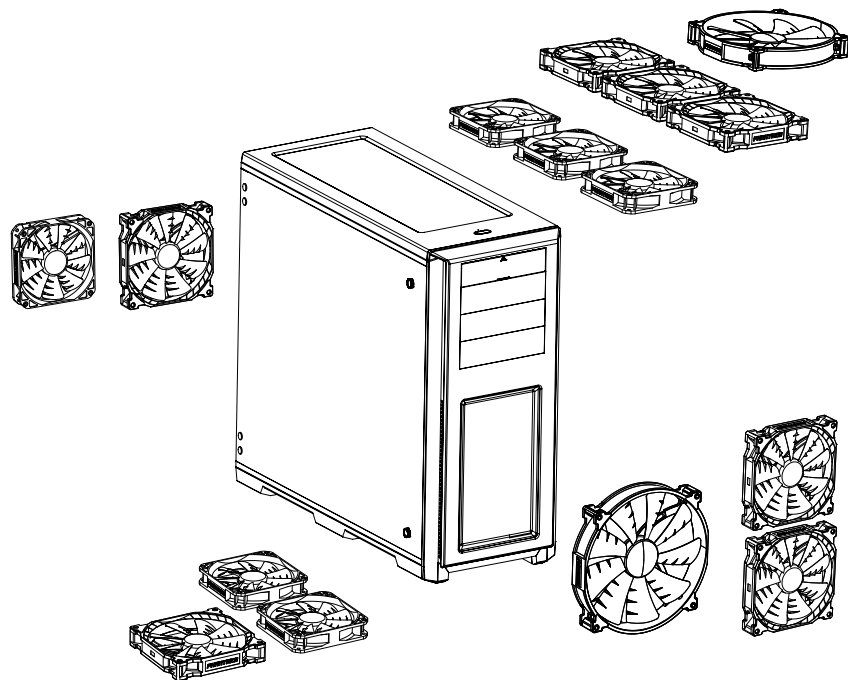
10. FILTERS REMOVAL

To clean the dust filters, run slow moving water through the filters. Dry filters before reinstalling.

To remove the bottom and front dust filters slide the filters out from the case.



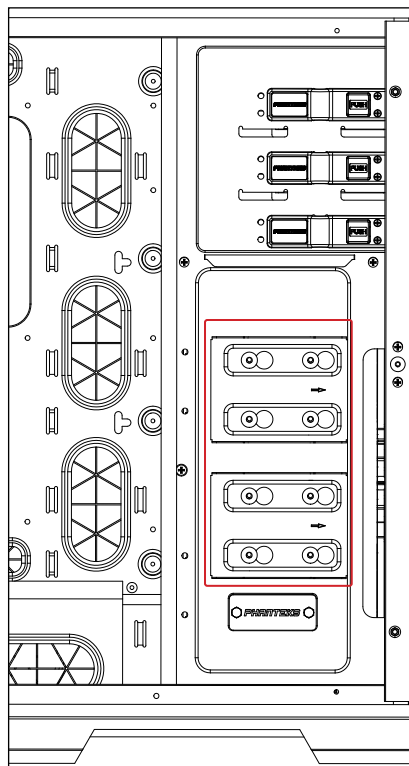
11. FAN COMPATIBILITY



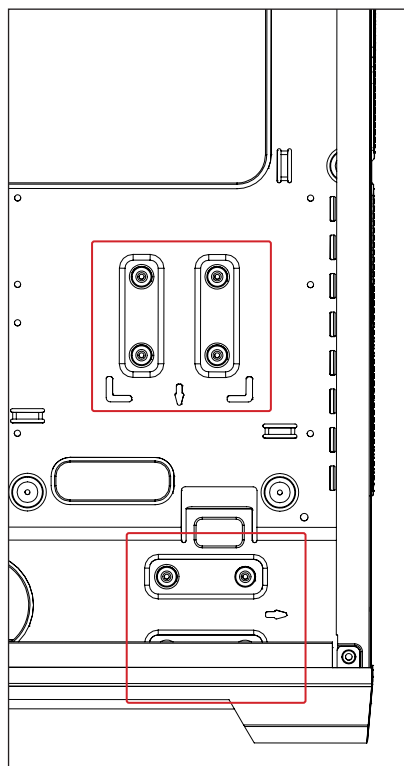
FAN COMPATIBILITY TABLE

	200mm	140mm	120mm
Top	1	3	3
Bottom		1	2
Front	1	2	2
Rear		1	1
HDD Cages			2

12. SSD MOUNTING LOCATION



Side SSD Mounting Location

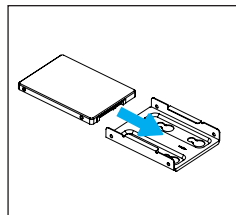


Rear Side (optional SSD mounting location)

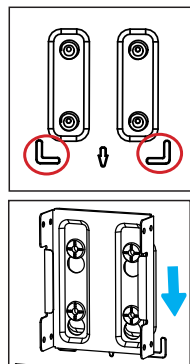
Four mounting locations for the SSD bracket.

13. SSD/ODD INSTALLATION

SSD INSTALLATION



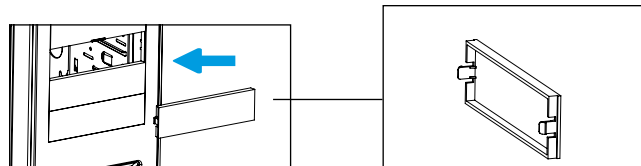
Slide in the SSD and screw in from the side to lock in place.



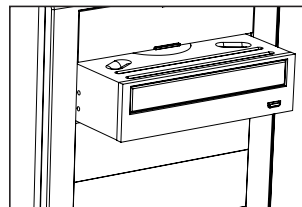
DROP N LOCK

Align corner of bracket to the guide and drop down to lock.

ODD INSTALLATION



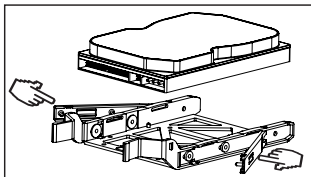
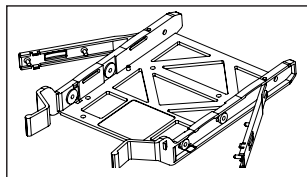
Squeeze the two tabs in and push outward from inside the case.



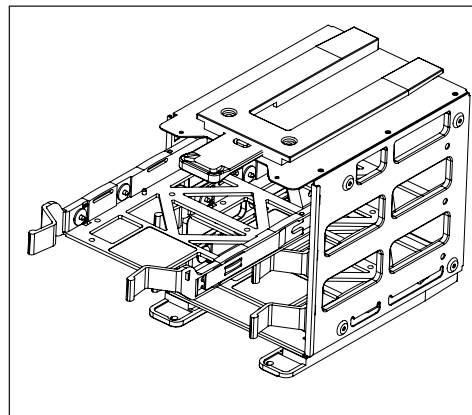
Align and slide in.

14. HARD DRIVE INSTALLATION

3.5" INSTALLATION

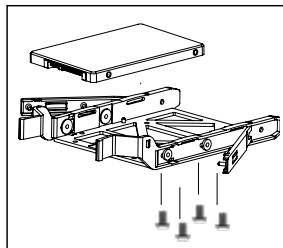


Place hard drive into tray and push in the arms to lock.



Align the tray to the HDD cage and slide in.

2.5" INSTALLATION

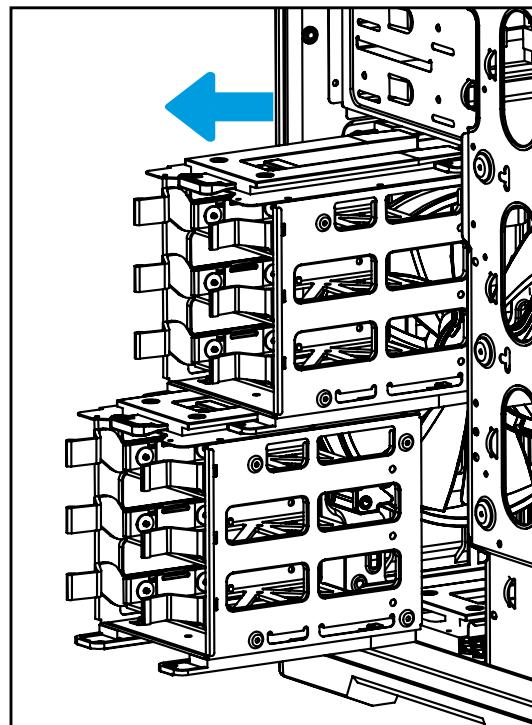
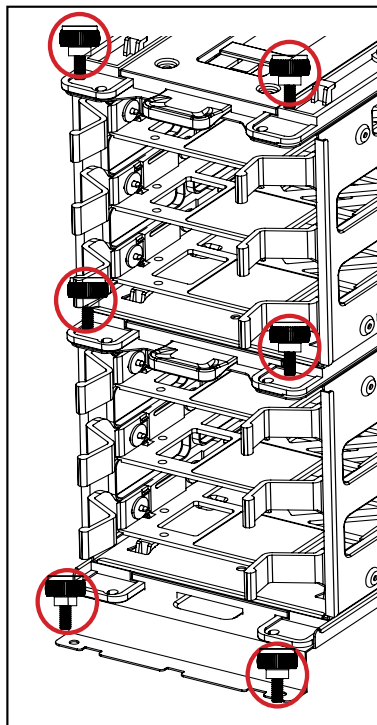


Align the SSD onto the mounting holes and screw in.

14. HARD DRIVE INSTALLATION

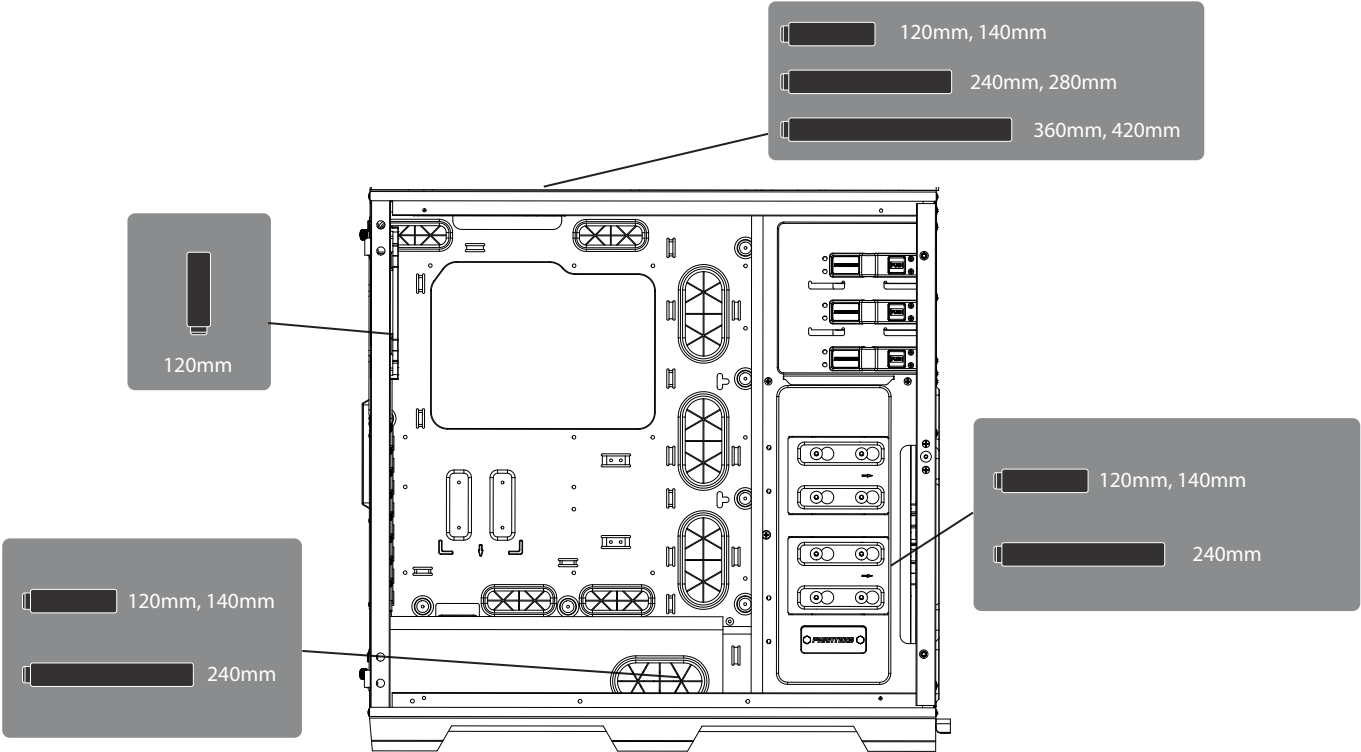
REMOVING HDD CAGES

Unscrew the thumbscrews to remove the cages.



15. WATERCOOLING INSTALLATION

WATERCOOLING RADIATOR COMPATIBILITY



15. WATERCOOLING INSTALLATION

120 MM FORM FACTOR RADIATORS

Radiator Size	Front	Rear	Bottom	Top
120mm	✓	✓	✓	✓
240mm	✓		✓	✓
360mm				✓

Caution: Supported Radiator size and thickness varies depending on your setup.

15. WATERCOOLING INSTALLATION

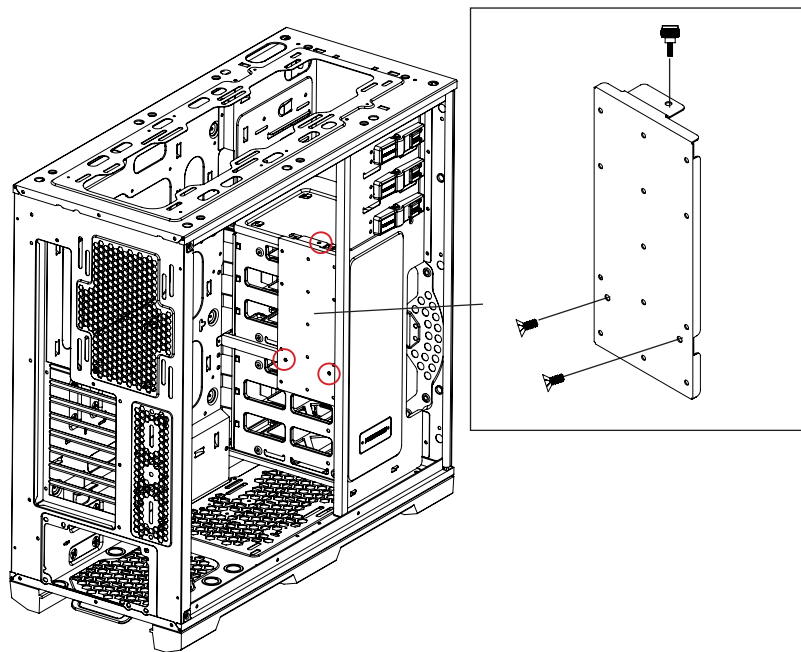
140 MM FORM FACTOR RADIATORS

Radiator Size	Front	Rear	Bottom	Top
140mm	✓	✓	✓	✓
280mm				✓
420mm				✓

Caution: Supported Radiator size and thickness varies depending on your setup.

15. WATERCOOLING INSTALLATION

RESERVOIR BRACKET INSTALLATION



Align the reservoir bracket to the mounting hole and screw into the top of the reservoir bracket. Then use the provide 2x screw to lock the reservoir in place.

16. MORE RGB

The RGB controller in the Enthoo PRO TG supports up to 5 meters of LED strips. This allows you to expand your LED lighting throughout the entire case.



- INTEGRATED MAGNETS
- QUALITY 3M ADHESIVE
- DURABLE WATERPROOF SILICON HOUSING
- EASY INSTALLATION WITH 1 ORIENTATION CONNECTORS
- EXPANDABLE DAISY CHAIN CONNECTORS

WE PROVIDE THE FOLLOWING RGB LED PRODUCTS:

COMBO SET (NOT INCLUDED)

PH-LEDKT_CMBO

- 2x 40cm magnetic RGB-LED strip
- Extension cable
- Motherboard RGB adapter
- High quality 3M adhesive

400 MM EXTENSION (NOT INCLUDED)

PH-LEDKT_M4

- Easy installation thanks to magnets
- High quality 3M adhesive included

1M LED STRIP (NOT INCLUDED)

PH-LEDKT_M1

- Easy installation thanks to magnets
- High quality 3M adhesive included

2M LED STRIP (NOT INCLUDED)

PH-LEDKT_M2

- Easy installation thanks to magnets
- High quality 3M adhesive included

RGB LED ADAPTER

PH-CB_RGB4P

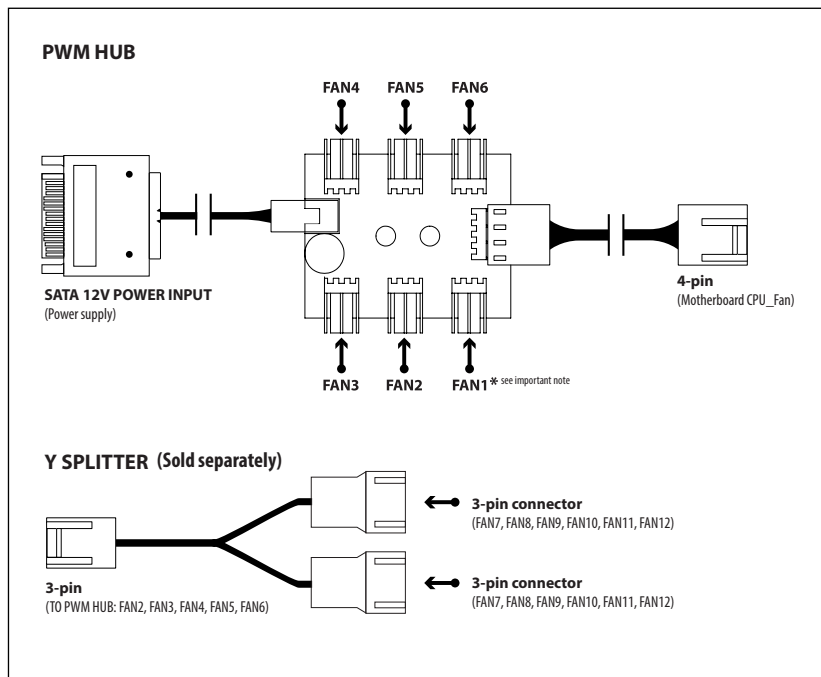
- Also functions as an extension cable
- Allows you to synchronize with other RGB products using the industry standard connector

HALOS FAN FRAMES

PH-FF120RGBP / PH-FF120RGBA / PH-FF140RGBP / FF140RGBA

- Illuminate your fan blades

17. PWM HUB 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 from all other devices will be regulated according to FAN 1. Y-splitter should not be connected to FAN 1.

17. PWM HUB INSTALLATION

PWM风扇控制器受控于主机板的PWM信号时能达到最佳的工作状态,必须接入含PWM功能的4pin接头时,风扇才会被最大控制范围调制。但是,并非主板所有的4pin接头都是PWM信号调制的。请阅读以下使风扇控制器达到最好的工作状态。

链接4pin线到主板的"CPU_FAN"接头

为了让您获得完整的PWM功能,Phanteks的PWM风扇控制器要求用户将4pin线连接到主板的"CPU_FAN"接头,因为所有的主板厂商对这个接头都采用PWM信号调制。然后连接SATA12V电源给PWM风扇控制器供电。并不是所有的主板的默认设置会自动用PWM信号调制,需要用户手动设置或请咨询您的主板厂商

连接4pin到其他4pin接头(除了CPU_FAN)

除了"CPU_FAN"接头,主板上同时从在其他4pin接头(例如"CPU_FAN2", "CHA_FAN", "OPT_Fan"),但不是所有的主板厂商都是用PWM信号来控制风扇转速的,而可能这类型的4pin接头是由电压控制的,相比真正的PWM方式调整转速的接头,它具有较窄的转速调整范围。在这种情况下,12V的SATA电源线是不能接入PWM风扇控制器的,否则风扇将不受控制而全速运行。该PWM控制器设计额定功率为30W,请合理计算功率,请勿超负载工作。

重要注意事项:

该PWM风扇控制器的"Fan1"即白色接头只能接入一个风扇,且不能用"Y"型风扇转接线,因为主板需要从"Fan1"接口上读取其转速信号并反馈到用户界面并读取风扇实时转速。

マザーボードのPWM信号により変調された場合PWMハブが最適に機能して調整範囲が最大に大きくなります。しかし、4ピンのマザーボードのコネクタがPWM信号を変調することはありません。

4ピンをCPU_FANに接続する

PWM機能を最大限に活用するPhanteksのPWMハブでは、ユーザーが4ピンコネクタをマザーボードの「CPU_Fan」コネクタに接続する必要がありますが、これはすべてのマザーボードメーカーの場合、このコネクタからPWM信号を変調するためです。SATA 12V電源を接続してPWMハブに電源を供給します。すべてのマザーボードがデフォルトでCPU_FanコネクタをPWM信号の変調に設定されません。この問題は、マザーボードのマニュアルを参照してください。

4ピンのコネクタを他の4ピンヘッダーに接続する(CPU_Fanのほかに)

他の4ピンコネクタは、「CPU_Fan」コネクタ(例:「CPU_Fan2」、「CHA_Fan」、「OPT_Fan」)に加え、最新のマザーボードでは見ることができますが、すべてのマザーボードの製造元から真のPWM信号の変調をこれらのコネクタに実装されません。これらのタイプの4ピンコネクタは、RPMを電圧で変調するが、真のPWM信号による変調と比較して制御範囲が小さくなります。

これらのタイプの4ピンコネクタに接続する場合は、電圧によってRPM調節障害が発生して(その結果、ファンが最高RPMで実行されます) PWMハブに電源を供給するために12V SATA電源ケーブルを使用することができません。PWMハブは4ピンコネクタから電源を引き込むが、これは総30Wを消費する単一の総合デバイスに制限されます。

重要事項:

1つのマザーボードのコネクタは1 RPM信号のみを読み取ることができます。したがって、マザーボードは、Fan 1に接続された1つのデバイスだけでRPMを読み取ります。他のすべてのデバイスのRPMは、Fan 1に応じて調整ドウェルダ。Yスプリッタは、Fan 1に接続しないでください。

17. PWM HUB INSTALLATION

마더보드의 PWM 신호에 의해 변조될 경우 PWM 허브가 최적으로 작동하여 조절 범위가 최대로 커집니다. 그러나 4핀 마더보드 커넥터가 모두 PWM 신호를 변조하는 것은 아닙니다.

4핀을 CPU_FAN에 연결하기

PWM 기능을 최대화하려면 Phanteks의 PWM 허브에서 사용자가 4핀 커넥터를 마더보드의 "CPU_Fan" 커넥터에 연결해야 하는데, 이는 모든 마더보드 제조업체의 경우 이 커넥터에서 PWM 신호를 변조하기 때문입니다. SATA 12V 전원을 연결하여 PWM 허브에 전원을 공급합니다. 모든 마더보드가 기본으로 CPU_Fan 커넥터를 PWM 신호 변조에 설정하지는 않습니다. 이 문제는 마더보드 설명서를 참조하십시오.

4핀 커넥터를 다른 4핀 헤더에 연결하기(CPU_Fan 외에)

기타 4핀 커넥터는 "CPU_Fan" 커넥터(예: "CPU_Fan2", "CHA_Fan", "OPT_Fan") 외에 최신 마더보드에서 볼 수 있지만, 모든 마더보드 제조업체에서 진정한 PWM 신호 변조를 이러한 커넥터에 구현하지는 않습니다. 이러한 종류의 4핀 커넥터는 RPM을 전압으로 변조하는데, 진정한 PWM 신호에 의한 변조와 비교할 때 제어 범위가 더 작습니다.

이러한 종류의 4핀 커넥터에 연결할 경우 전압에 의해 RPM 조절 간섭이 발생하여(그 결과 팬이 최고 RPM에서 실행됨) PWM 허브에 전원을 공급하는 데 12V SATA 전원 케이블을 사용할 수 없습니다. PWM 허브는 4핀 커넥터에서 전원을 끌어들이는데, 이는 총 30W를 소비하는 하나의 종합 장치로 제한됩니다.

중요 사항:

1개의 마더보드 커넥터는 1 RPM 신호만 읽을 수 있습니다. 따라서 마더보드는 Fan 1에 연결된 1개의 장치에서만 RPM을 읽습니다. 기타 모든 장치의 RPM은 FAN 1에 따라 조정됩니다. Y 분할기는 FAN 1에 연결해서는 안 됩니다.

Модулируется платы ШИМ сигнала, когда ШИМ Оптимальный диапазон эксплуатации концентратора , чтобы расти . Тем не менее, как разъем материнской платы 4-контактный не модуляции сигнала ШИМ .

Подключение к 4-контактному CPU_FAN

Функция Phanteks ШИМ максимизировать пользователю находится на ступице ШИМ 4-контактным разъемом на материнской платы " CPU_FAN " должен быть подключен к разъему , который все разъемы от производителя материнской платы , это потому, что модулированный сигнал ШИМ . Подключить питание ШИМ питания SATA 12V к ступице . CPU_FAN все разъемы к умолчанию платы не установлен модуляцию ШИМ сигнала. Эта проблема , обратитесь к документации по материнской плате.

4-контактный разъем для подключения к другой заголовок 4-контактный (CPU_FAN дополнение)

Другие 4-пиновый разъем является " CPU_FAN " разъем (например : " CPU_Fan2 " , " CHA_FAN " , " OPT_Fan ") можно увидеть в дополнение к последней материнской плате , но все правда ШИМ сигнала от производителя материнской платы модуляции не реализует эти разъемы . 4-контактный разъем этого типа модуляции используется RPM , напряжения, истинную ШИМ модуляцию по сравнению с сигналом управления является меньшим по масштабу.

4-контактный разъем для подключения этого типа случай помех, вызванных напряжением , контролируемой RPM (в результате вентилятор работает на максимальных оборотах) ШИМ питание на концентратор к 12V SATA кабель питания не доступны . 4-контактный разъем ШИМ центром питается от всего , от общего потребления 30 Вт и ограничивается одним комплексного устройства.

Важно:

1 из 1 разъем материнской платы сигнала RPM могут быть прочитаны только . Таким образом, материнская плата только одно устройство подключается Вентилятор 1 RPM читает . Для всех остальных устройств , в зависимости от частоты вращения будет регулировать доерда FAN 1. Y сплиттер не должен быть подключен к вентилятору 1.

18. SERVICES 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 / Contactez-nous à / Kontaktieren Sie uns unter / Contattateci all'indirizzo / Contate-nos em / Contáctenos en/ Neem hier contact met ons op:

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For Warranty Information, please visit Phanteks' website:

www.phanteks.com

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www.phanteks.cn

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