

# Raiden 7 User Guide

ZESC



Thank you for choosing our products!

For better experience, please carefully read the following document.

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## Product Specifications:

Model	Warrior 6	Raider 7
Phase current	Cont. current (3m30s) 70A Current (60s) 90A Boost 120A	Cont. current 140A Boost 250A
Battery Voltage & current	12-58v (3-13s) ±60a	24-78v (6-18s) ±140a
Housing	Upper aluminum Down aluminum	Upper plastic Down aluminum
IO	adc1, adc2, uart, ppm, iic, can-bus, usb-c	
Size	56x76x18mm	71x89x25mm
FOC frequency	16-60kHz	16-60kHz
Terminals	12 AWG phase wire 14 AWG battery wire	Five 4mm screw terminals Fit 12 AWG to 6 AWG wires
IMU	X	BMI 160

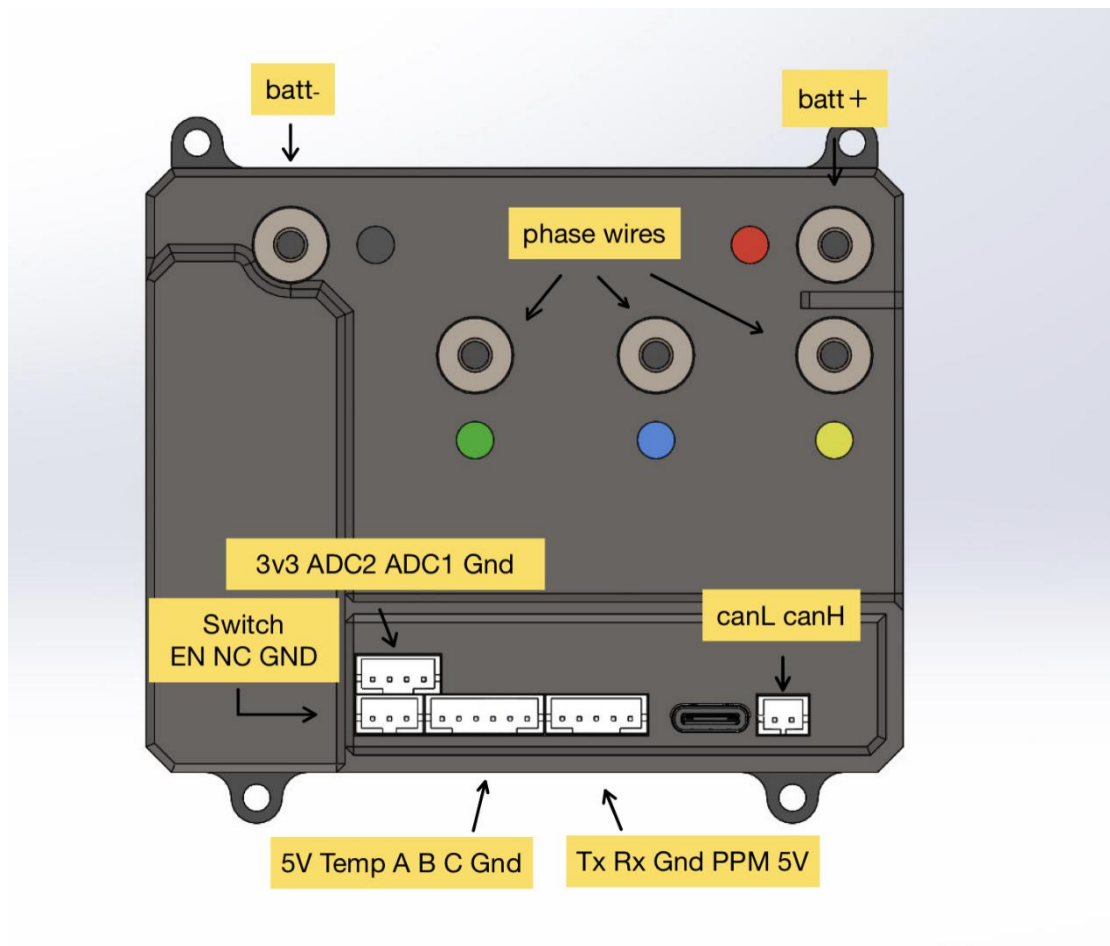
About **phase current test**: How did we determine their runtime?

For **Raider 7**, unlike Warrior 6, its run time depends solely on cooling conditions. **Raider 7** can only safely operate with adequate cooling installed. Under ideal cooling conditions (i.e.: good cooling), **Raider 7** can run at 140A or even higher continuously.

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## Pinout:

**Old** version (purchased **before** June 26, 2021)



For switch:

Pulldown EN to power on and leave EN floating to power off.

Short EN and GND to power on.

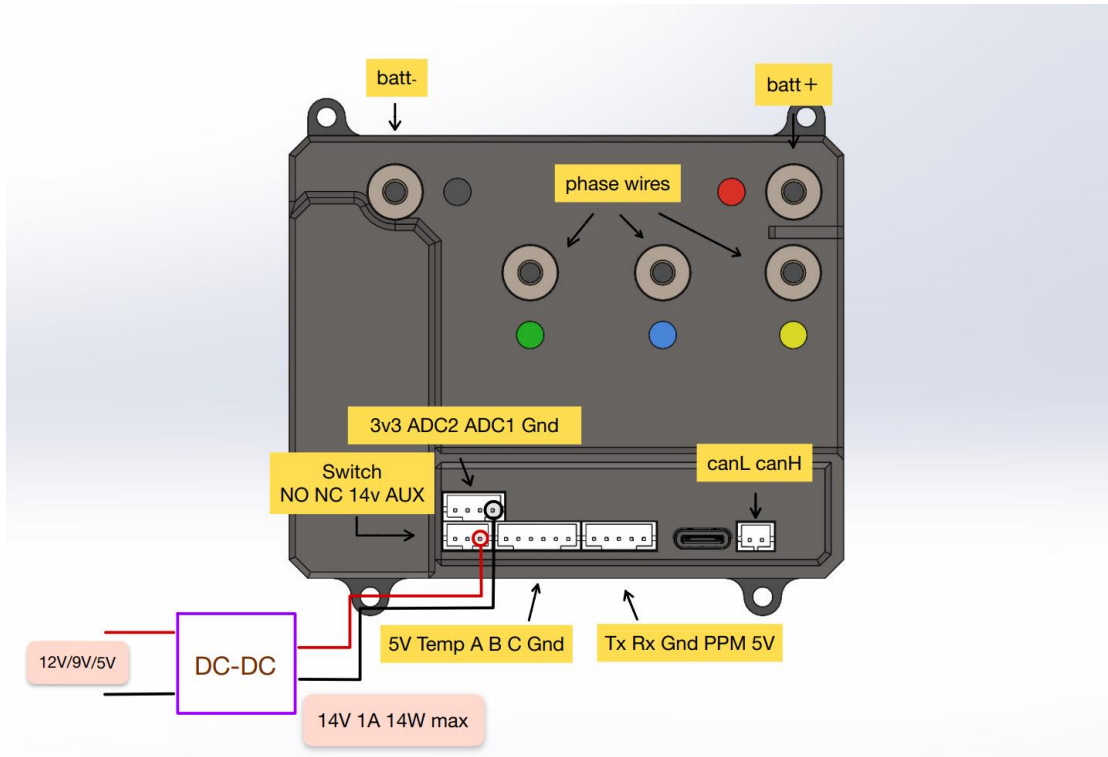
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# Pinout:

**New** version (purchased **after** June 27, 2021)

**\*ADDED** 14V AUX OUTPUT 1A 14W MAX

Short circuit and over load on AUX output will shut down the ESC.



For switch:

Short NO and NC to power on.

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## Good to know:

1. Always **double check the wiring** before powering on!
2. Please use **FOC mode**. It can drive motor smoothly and silently. It also lowers temperature.
3. For **sensorless and sensored** FOC mode, FOC frequency between 20k and 40k are recommended.
4. **Do not push full throttle when motor speed is zero. This will harm your motor.** Push **throttle slowly/gently** to start the motor. When motor is spinning, you can then push full throttle.
5. Do not connect any load on 3v3 and 5v. Only Bluetooth module, receiver and lcd/oled panel are allowed. Something like RC servo motor is not allowed.

## Caution:

1. Avoid full throttle when you are stationary. Only use full throttle when you already are moving.
2. **Be careful with high voltage!**

## More Questions? We got you covered.

If you have any questions, contact us through email: [discoverzesc@gmail.com](mailto:discoverzesc@gmail.com) or private message us on ESK8 forum.

**Again, thank you and be careful when riding!**

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