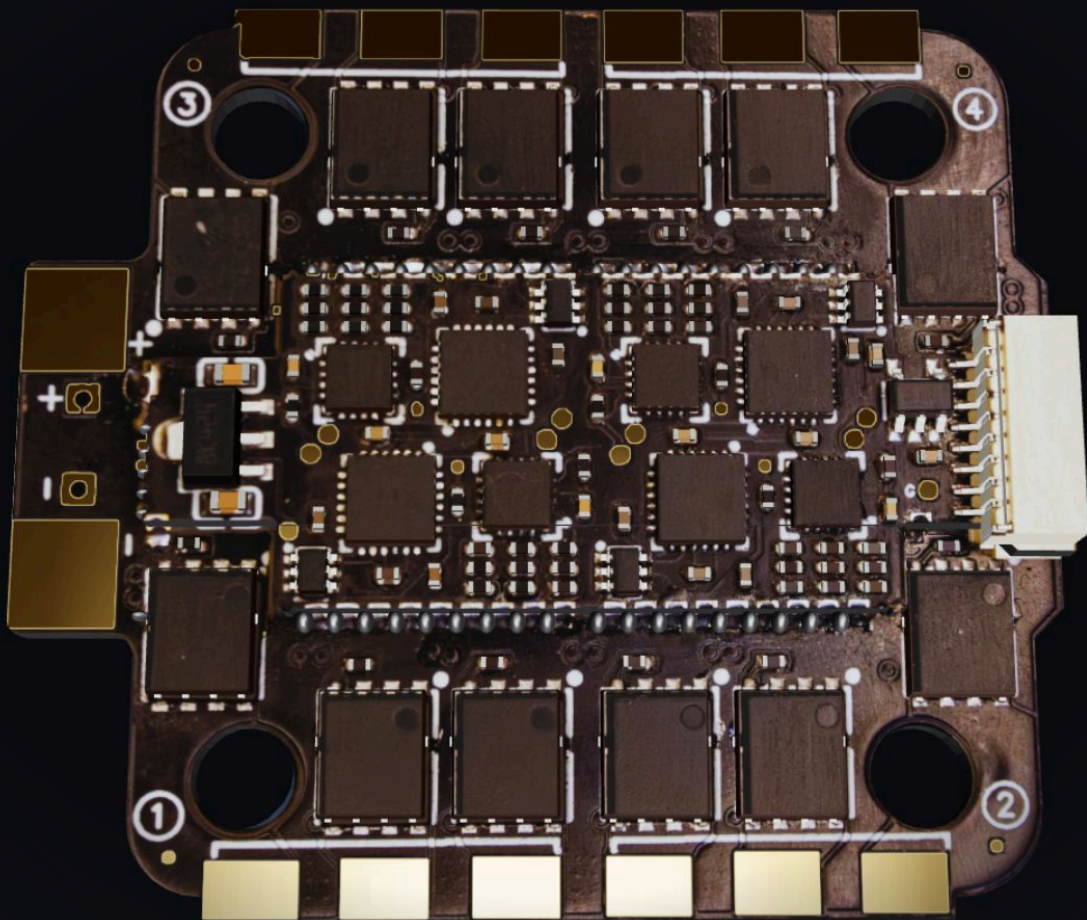


4-IN-1 ESC · USER GUIDE

Vishnu 60



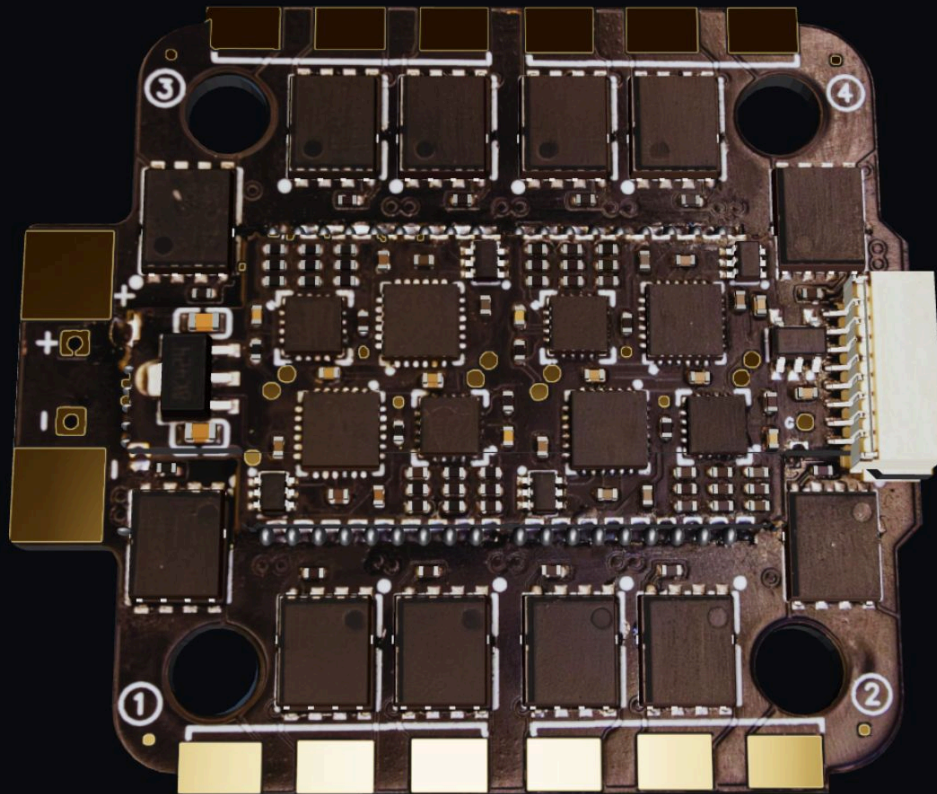
Contents

01 Vishnu 60 4-in-1 ESC

Need help?

WhatsApp or call **+91 80171 93277** (Mon–Sat, 12 PM–8 PM) · **info@thedarkmatter.in** · join the DM Community from thedarkmatter.in. The docs have this guide with every 3D view live: turn the board, click a step, and the pads light up: thedarkmatter.in/pages/docs?doc=vishnu-60

01 Vishnu 60 4-in-1 ESC

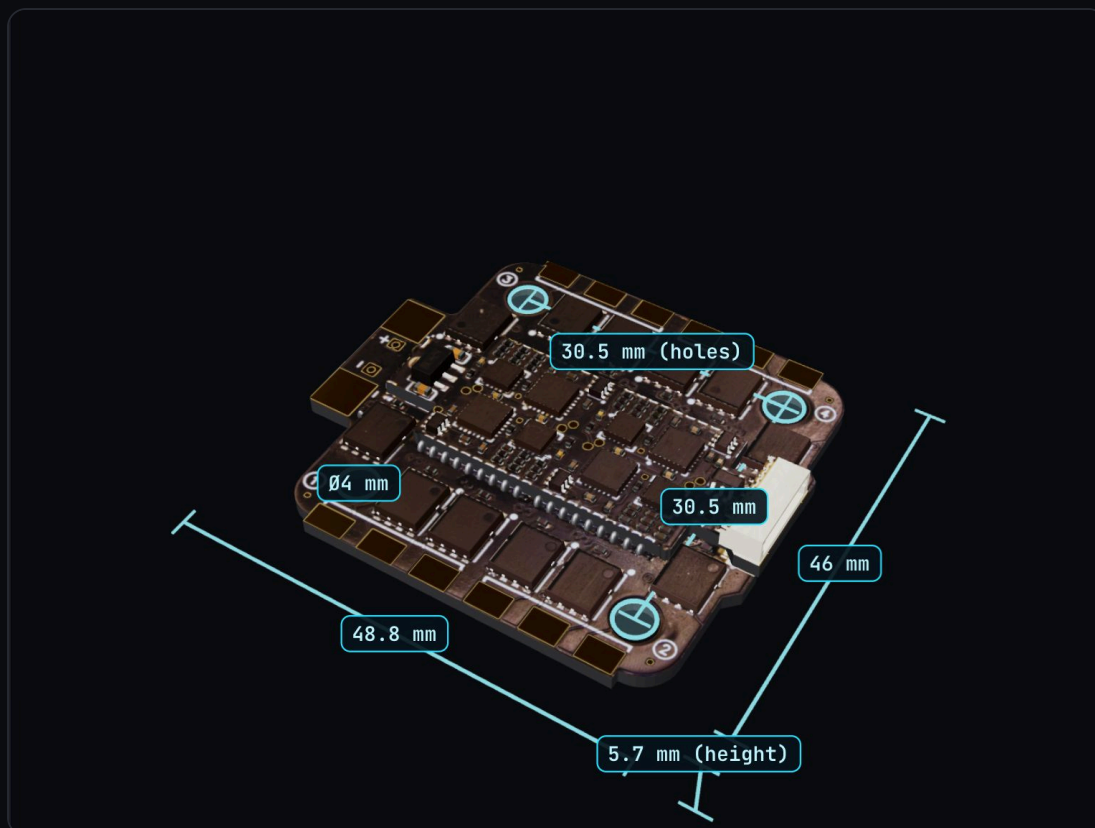


A 4-in-1 ESC for 2–6S builds: 60A continuous per motor, 90A burst, ships with BLHeli_S (BlueJay ready), DShot300/600 and a built-in current sensor, on a 30.5 × 30.5 mm mount.

Specifications

Product	Darkmatter® Vishnu 60 4-in-1 ESC
Firmware	Ships with BLHeli_S. For RPM filtering (bidirectional DShot), flash BlueJay in ESC Configurator: target J-H-50
Continuous current	60A × 4 = 240A
Burst current	90A for 7 seconds
Protocol	DSHOT300 / DSHOT600
Power input	2–6S LiPo
Power output	VBAT
Current sensor	Built in
Mounting	30.5 × 30.5 mm, 4 mm holes
Dimensions	46 × 48.8 × 5.7 mm
Weight	14 g
Motors	Check the maximum current in your motor maker's data: it should stay below 70–80A. If you will fly at full throttle most of the time with the biggest propeller the motor supports, stay at 60A or below.
Operating temperature	–20 °C to 70 °C
Made in	India

Dimensions and mounting



46 × 48.8 mm, 5.7 mm tall, 1.6 mm PCB. Holes 4 mm on the standard 30.5 × 30.5 mm pattern, so it stacks under any Brahma.

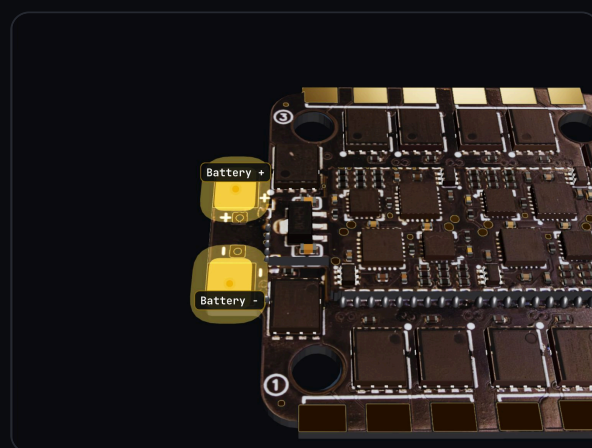
Battery and capacitor

1 Solder the capacitor first

Solder the 1000 μ F low-ESR capacitor from the box across the battery pads: + to +, - to -. Connect the battery - lead to the capacitor's - side only.

IMPORTANT

Without the capacitor, voltage spikes from the motors can destroy the ESC.



2 Battery leads

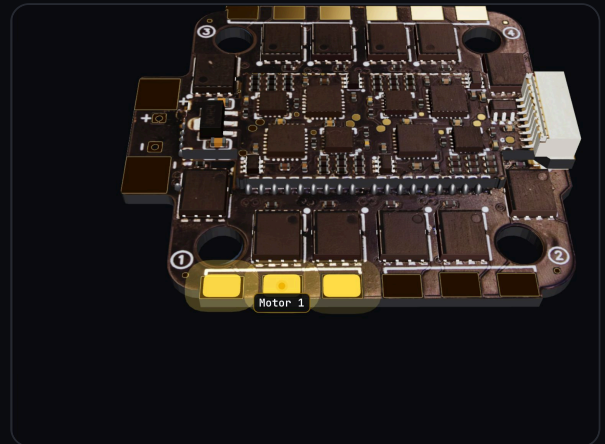
Solder the 12 AWG leads and the XT60 connector from the box to the same pads. Red to +, black to -. Check twice: reversed polarity is not covered by the warranty.

Motor numbering

With the board this side up, motor 1 is bottom left, 2 bottom right, 3 top left and 4 top right, matching the numbers printed on the board. Each motor has three pads; swap any two of a motor's wires to reverse it (or reverse it in BLHeli/BlueJay).

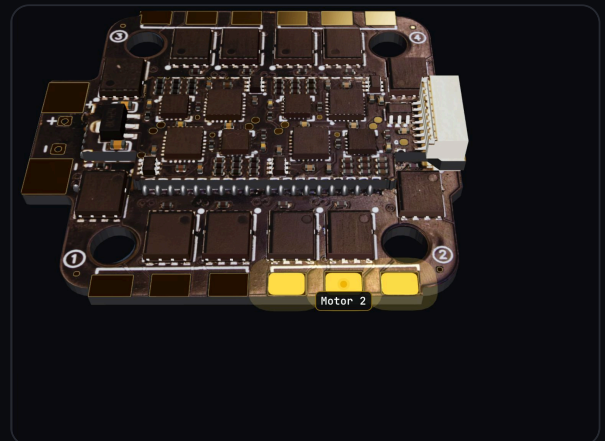
1 Motor 1

The three pads for motor 1.



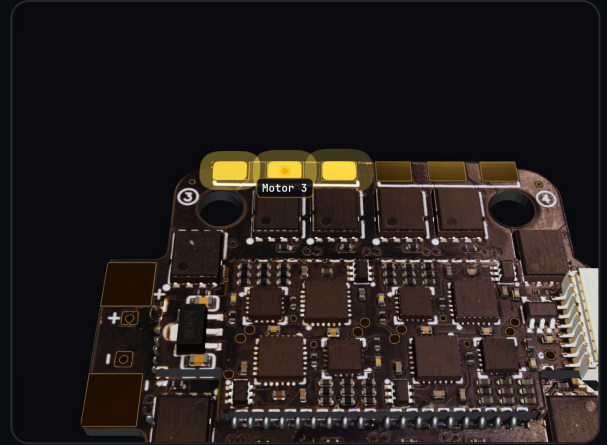
2 Motor 2

The three pads for motor 2.



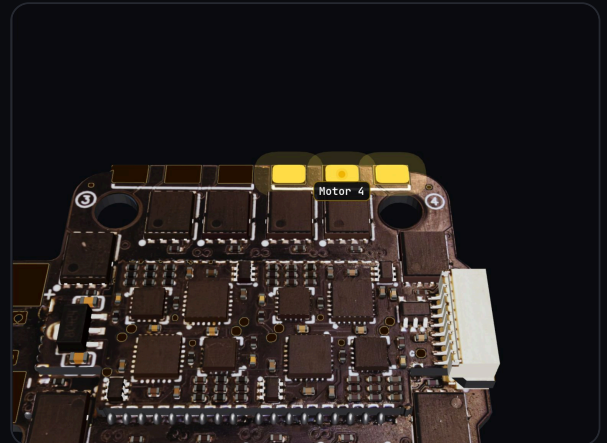
3 Motor 3

The three pads for motor 3.



4 Motor 4

The three pads for motor 4.

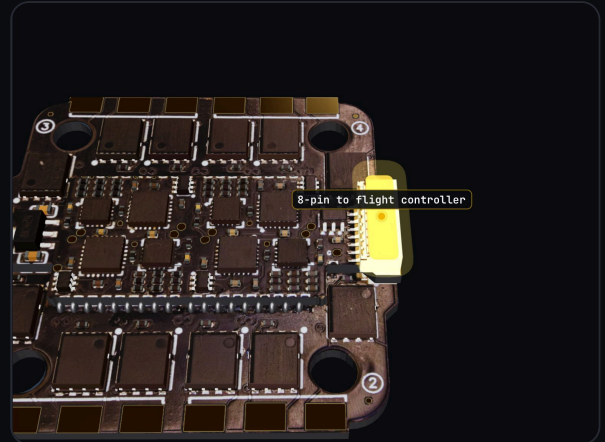


Connect to the flight controller

Use the 8-pin cable from the box. It carries the four motor signals, current, telemetry, ground and battery voltage in one plug, straight into any Brahma. Or solder to the 7 pads on the underside (4, 3, 2, 1, C, G, V).

1 8-pin plug

Plug one end here and the other into the flight controller's ESC port.



2 Direct-solder pads

On the underside: 4, 3, 2, 1 (motor signals), C (current), G, V (battery voltage).



Stacks: Stack H760, Stack 760, Stack 460.

Before the first flight

- **First power-up through a smoke stopper** (or a current-limited bench supply). A solder bridge then costs you a fuse, not an ESC.
- **Bidirectional DShot:** with BlueJay on the ESC, use DShot300 and turn on bidirectional DShot in Betaflight (Configuration tab, or `set dshot_bidir = 0N`) and set your motor pole count (`set motor_poles = 14` for most 5-inch motors). That enables the RPM filter, the biggest single improvement to a tune. Stock BLHeli_S does not support it.
- **Motor order:** check it in the Motors tab with the props off. The flight controller expects its own motor order; if a motor spins in the wrong place, remap it rather than swapping wires around.

IMPORTANT

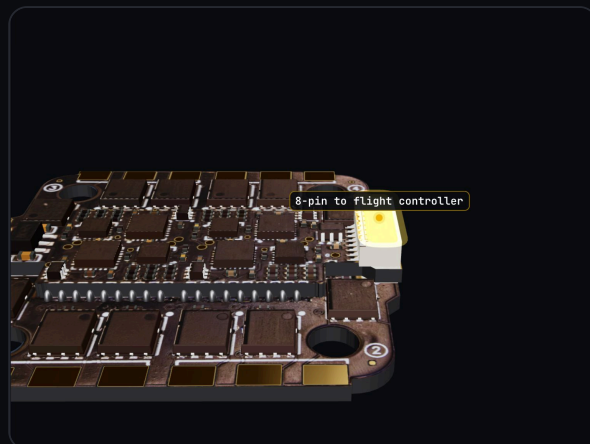
Test motor direction **without propellers** and keep it below 15% throttle. Never arm without propellers in Angle mode: the flight controller tries to level the craft and the motors will not slow down when you lower the throttle.

BlueJay and PWM frequency

The Vishnu 60 ships with BLHeli_S. For the RPM filter (bidirectional DShot) you need BlueJay.

1 Flash BlueJay

For RPM filtering (bidirectional DShot), flash BlueJay in the [ESC Configurator](#): target **J-H-50**.



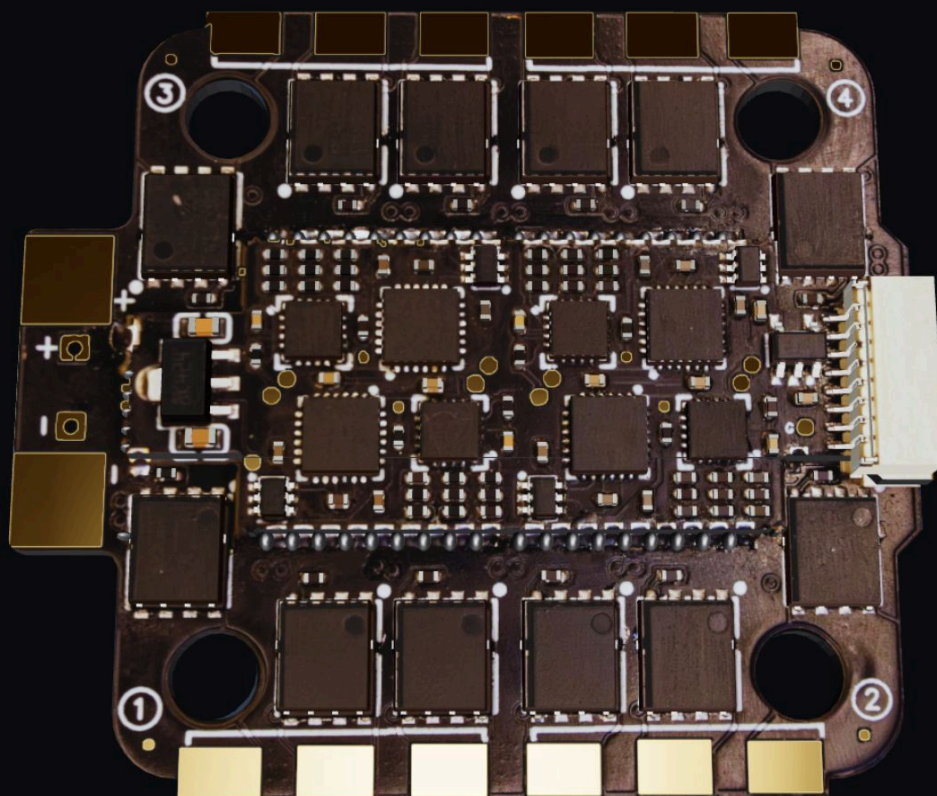
2 Set PWM by prop size

After flashing BlueJay, set PWM by prop size:

Props	PWM frequency
Larger than 5"	24 kHz
5"	48 kHz
Smaller than 5"	96 kHz

A lower PWM frequency gives the motors firmer braking and keeps switching heat in the ESC down, which suits bigger props; it does not add thrust. A higher frequency runs the motors smoother and more efficiently at part throttle, which helps small motors most. If motors stutter, desync or will not start, flash again one step lower.

In the box



- 1 × Vishnu 60 4-in-1 ESC
- 1 × 1000 μ F 35V low-ESR capacitor
- 12 AWG battery wire
- 1 × XT60 connector
- 1 × SH 1.0 mm 8-pin cable, 30 mm

Downloads

Vishnu 60 manual (PDF)

The original slide manual

Warranty

The Vishnu 60 ESC has a 6-month warranty against manufacturing defects from the date of purchase. Keep your invoice: we need a copy for any claim.

Not covered:

- Physical damage from use, such as water damage or tampered components.
- A burnt circuit from wrong wiring or overloading.
- A burnt ESC from spinning motors without propellers above 15% throttle while checking motor direction.
- A burnt ESC from arming without propellers in Angle mode: the flight controller keeps trying to level the craft and the motors will not slow down when you lower the throttle.

How a claim works: we inspect the board for physical damage and the points above. If it is eligible we replace it at no cost, and help you with your build. WhatsApp or call [+91 80171 93277](tel:+918017193277).