

ESC 4in1 90A AM32

User manual



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1. Product overview



Fig.1. ESC 4in1 90A AM32

The ESC 4in1 90A AM32 is an electronic speed controller featuring a 4-in-1 design that supports an input voltage range from 3 to 8S. With a continuous current handling capability of 90A and a peak current of 100A, it is equipped with an AT32F421K8U7 microcontroller and operates with firmware labeled AM32. The ESC supports various protocols including DShot150, DShot300, DShot600, Multishot, ProShot, PWM, and OneShot, with bi-directional DShot functionality.

2. Wiring guide

According to the diagram, please follow these steps for a safe and reliable installation:

2.1. Power Input (Battery Connection)

- Positive (+): Solder the Red wire from your battery lead (XT60/XT90) to the large pad marked with a (+) sign at the bottom.
- Negative (-): Solder the Black wire from your battery lead to the large pad marked with a (-) sign at the bottom.
- Capacitor: You MUST solder a Low ESR capacitor to these same pads. Keep the legs of the capacitor as short as possible to minimize electrical noise.

2.2. Motor Connections

The ESC has 12 side pads grouped for 4 motors.

- Motor 1 (Bottom right): Connect the three wires from your motor to the pads marked 1.
- Motor 2 (Top right): Connect to pads marked 2.
- Motor 3 (Bottom left): Connect to pads marked 3.
- Motor 4 (Top left): Connect to pads marked 4.

Note: If a motor spins in the wrong direction, you can swap any two wires or change the direction in the AM32 Configurator.

2.3. Control Connector (8-Pin JST-SH)

The top connector links the ESC to your Flight Controller (FC).

- VCC: Battery voltage output to FC (for voltage monitoring).
- GND: Common ground.
- CUR: Current sensor output.
- S1 - S4: Motor signals 1 through 4.

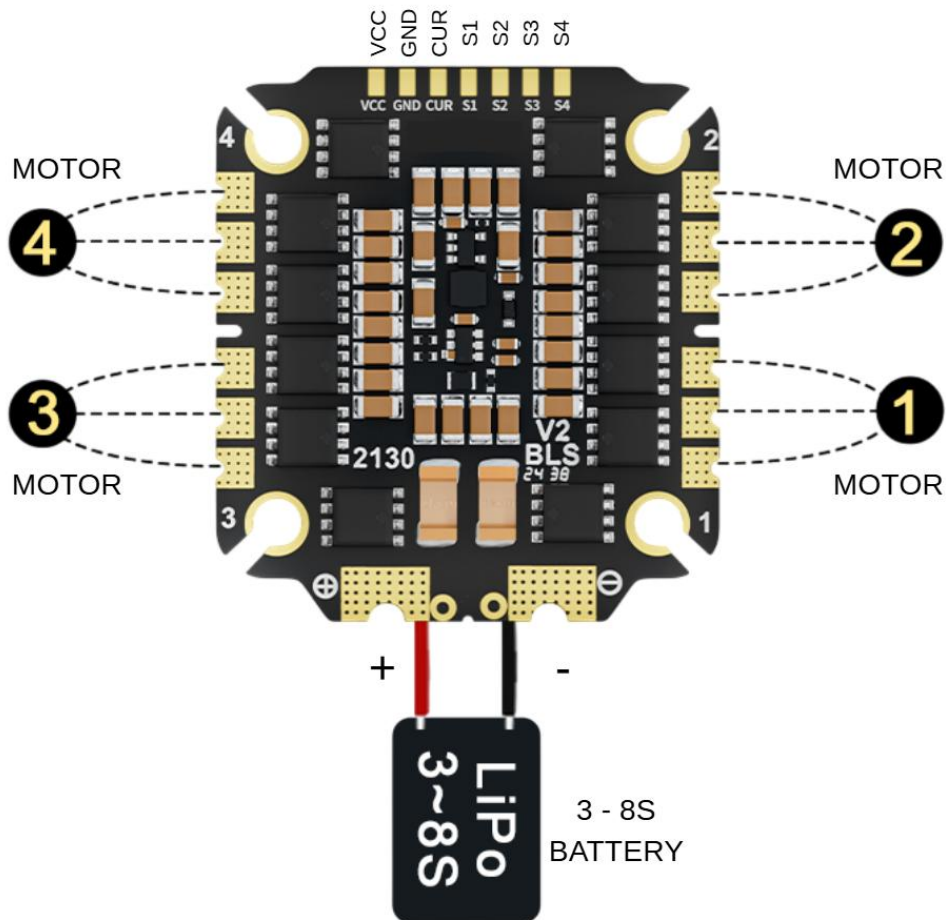


Fig.2. Wiring diagram

3. Safety warnings

- Smoke stopper: Always use a smoke stopper for the first power-on.
- Polarity: Double-check (+) and (-) before connecting the battery. Reversed polarity will destroy the ESC instantly.
- Condensation: If bringing the drone from a cold environment to a warm room, wait 30-60 minutes for moisture to evaporate before powering on.

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