

Stack F722 V2 AM32 60A

User manual



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1. Product overview



Fig.1. Pilotix F722 V2 AM32 60A

The F722 V2 AM32 60A from Pilotix is a flight controller and electronic speed controller (ESC) combination designed for FPV applications. It is powered by the STM32F722 microcontroller, supports Betaflight firmware, and features an analog OSD. This model operates with a 4 in 1 ESC configuration, providing a continuous current rating of 60A and peak current of 70A. It operates within an input voltage range of 3 to 6S, and supports multiple protocols including DShot300 and DShot600, with bi-directional DShot capability. The operating temperature range extends from -20°C to 40°C, while the storage temperature range is from -30°C to 50°C, accommodating a humidity range of 20-95% RH (noncondensing).

2. ESC Installation & Wiring

The ESC is designed to handle high current loads. Pay close attention to the power leads.

Wiring Steps:

1. Power Input: Solder high-quality XT60/XT90 leads to the "+" and "-" pads. Ensure the polarity is correct.
2. Capacitor: Solder a high-voltage capacitor to the power pads. This is mandatory for 3S-8S builds to filter voltage spikes.
3. Motor Pads: Solder motor wires to the pads on the left (3 & 4) and right (1 & 2).
4. Link to FC: Connect the 8-pin harness to the socket on the top edge. This transmits power, motor signals (S1-S4), and telemetry to the FC.

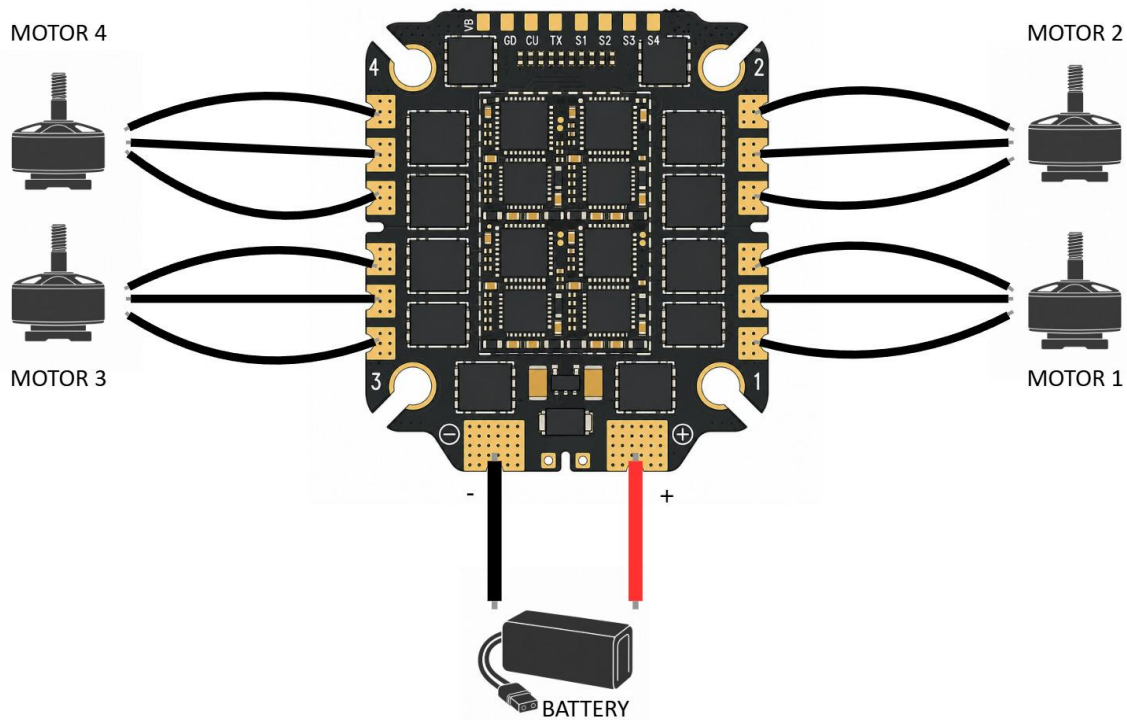


Fig.2. ESC installation & wiring

3. Flight Controller (FC) Wiring

The Pilotix F722 V2 is a high-performance flight controller featuring a powerful MCU, dual camera support, and versatile power options. Follow this guide for a correct and safe installation.

1. Power and Battery Connection

- B+ / B-: Main power input from the PDB or Battery.
- VCC: Monitor battery voltage.
- 5V / 9V Pads: Used to power peripheral devices like receivers, GPS, and video systems.
- Voltage Selection Jumper (Bottom Right): * Bridges the pads to select between B+ (Battery Voltage) or 9V for the video system output.
 - Selection for 3-4S: Use B+.
 - Selection for 6S: Use 9V to prevent overheating your VTX.

2. ESC Connection

- S1, S2, S3, S4: Motor signal outputs (connect to the corresponding ESC signal pads).
- S5 - S8: Additional signal pads for Hexacopters or Octocopters.
- CUR: Analog Current Sensor input. Connect this to the CUR or CRT pad on your ESC/PDB to monitor amperage.

3. Video and Camera System (Dual Camera Support)

The Pilotix F722 V2 supports two cameras:

- Camera 1 / Camera 2: Connect the signal wires (Orange) to C1 and C2.
- GD / 5V: Common ground and power for the cameras.
- VTX Pad: Video output to your Video Transmitter.

4. Digital Video (DJI / Walksnail / HDZero)

For digital systems, use the specific UART mapping:

- T1 / R1: Recommended for the DJI Air Unit or O3 System (MSP DisplayPort).
- Selection Jumper: Bridge the R1 / DIJ UNIT pads to simplify the wiring for digital systems.

5. Receiver and GPS (UART Mapping)

- ELRS / Crossfire: Connect to any free UART.
- GPS: Connect to SDA / SCL pads for the Compass (I2C) and TX/RX for GPS data.
- BZ+ / BZ-: Dedicated pads for an active 5V Buzzer.

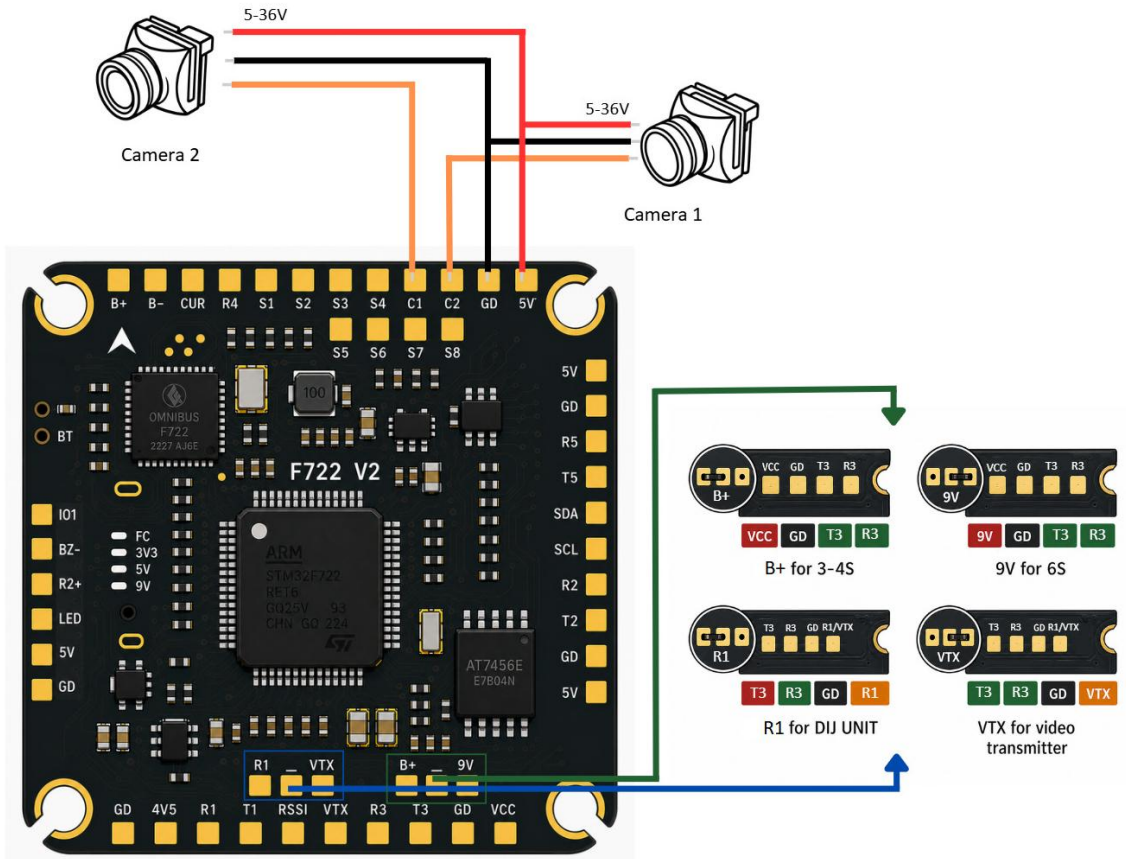


Fig.3. FC wiring diagram

4. Safety & Usage Rules

1. **Bridge Check:** Ensure the voltage selection jumpers (B+/9V) are bridged cleanly without touching adjacent pads.
2. **Polarity:** Triple-check B+ and B- orientation.
3. **Smoke Stopper:** Always use a current-limiting device for the first power-on.
4. **Firmware Updates:** Use esc-configurator for the AM32 ESC.
5. **Mounting:** Use the provided anti-vibration grommets. High-current ESCs create electromagnetic noise; keep the FC physically separated by at least 2-3mm from the ESC.

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