

AE-6S 60A

FOGTL

User Guide

AE-6S 60A FOC TI Overview

Field-oriented-control ESC on the TI C2000 real-time MCU (TMS320F280049C). Runs sensorless FOC, uses DroneCAN for throttle and telemetry, and parks the propeller with an MT6701 magnetic encoder.

AE-6S 60A FOC TI Specifications

• Basic Specifications

MCU	TI TMS320F280049C (C2000 · 100 MHz · FPU/TMU)
Control	Sensorless FOC (InstaSPIN- FAST)
Voltage Range	6S LiPo (max 25.2 V)
Constant Current	60 A
Power Stage	JSM6288T half-bridge modules
Interface	DroneCAN (CAN 2.0 · 1 Mbit)
Position Sensor	MT6701 magnetic encoder (prop parking)
Telemetry	DroneCAN ESC status + flight recorder (on-board flash)

AE-6S 60A FOC TI Specifications

• Basic Specifications

Protection	CMPSS hardware overcurrent, trip-zone safe-off, stall supervision
Firmware	novaX FOC (TI) v1.0.46

AE-6S 60A FOC TI Setup

1. **Mounting** — Mount close to the motor with airflow for cooling.
2. **Wiring** — Connect the battery (+/-) observing polarity and the three motor wires. Input: 6S LiPo (max 25.2 V).
3. **Communication** — Connect CAN to the flight controller and enable DroneCAN and the ESC outputs there.
4. **Firmware** — Flash the BootApp .hex once over SWD/JTAG on a blank board; afterwards update the .bin over DroneCAN.
5. **Spin check** — Without a propeller, check the direction at low throttle.

AE-6S 60A FOC TI Firmware

• Available Firmware

Type	Version	Date
BootApp (Intel HEX · SWD/JTAG)	1.0.46	2026-09-02
Application (flat .bin · DroneCAN OTA)	1.0.46	2026-09-02

Download files from the product page (QR).

AE-6S 60A FOC TI Safety Notes

- Do not exceed the input voltage range — 6S LiPo (max 25.2 V).
- Do not exceed the rated current; provide cooling.
- Reverse battery polarity destroys the ESC instantly — check before connecting.
- Long battery leads raise voltage spikes; keep them short.
- Always remove propellers while wiring, configuring or updating firmware.
- Flash the BootApp .hex once over SWD/JTAG (UniFlash); after that update the application .bin over DroneCAN.



<Detailed Manual>

novaX