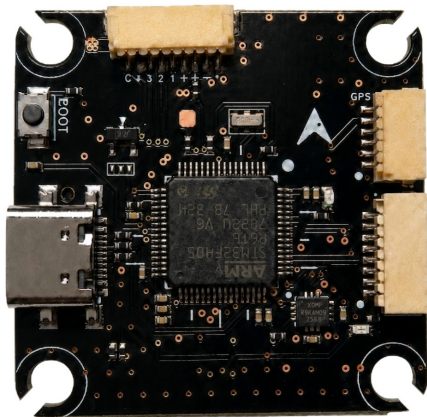
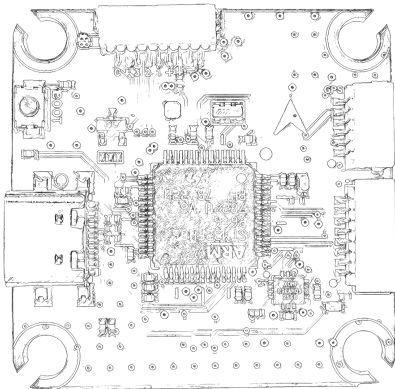


AF-F4 nano v2

User Guide



AF-F4 nano v2 Overview



Compact F4 flight controller with STM32F405, ICM-42688-P and DPS368. GNSS and compass are external, connected through the 6-pin GPS port (USART1 + I2C1).

AF-F4 nano v2 Specifications

• Basic Specifications

MCU	STM32F405
IMU	ICM-42688-P
Barometer	DPS368
GNSS	MAX-M10S — via external GPS module (not onboard)
Compass	QMC5883P — on external GPS module (not onboard)
GPS Port	6-pin connector (UART TX/RX + I2C SCL/SDA)
Operating Voltage	9 – 25 V DC
Output Voltage	3.3V/1A · 5V/3A · 10V/3A
PWM Output	5 channels in current novaX ArduPilot configuration

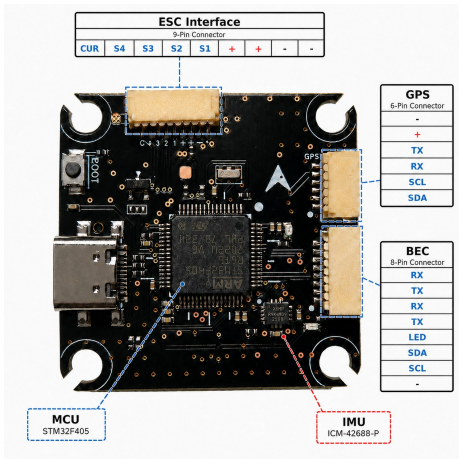
AF-F4 nano v2 Specifications

• Basic Specifications

Serial Ports	3 hardware UARTs + USB in current novaX ArduPilot configuration
Blackbox	microSD card
RC Input	PWM / PPM / S.Bus
Size	39.4 × 39.4 mm
Mount Hole	30.5 × 30.5 mm / M4
Weight	9.3 g
Supported F/W	ArduPilot

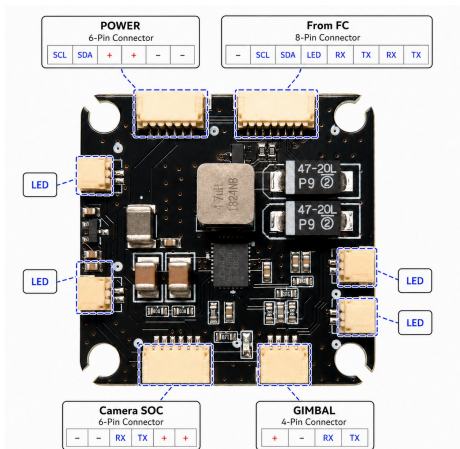
AF-F4 nano v2 Pinout

• Pinout



AF-F4 nano v2 Pinout

• Pinout



AF-F4 nano v2 Setup

1. **Mounting** — Align the board's forward direction with the vehicle nose on a vibration-damped mount; otherwise set `AHRS_ORIENTATION`. Mounting: 30.5 × 30.5 mm / M4.
2. **Power** — Supply power within the operating range and check polarity first. Operating voltage: 9 – 25 V DC.
3. **Peripherals** — Connect the receiver, GPS / compass and ESCs according to the pinout.
4. **Firmware** — Load this product's novaX ArduPilot image from the catalog Web Updater; never use another board's firmware.
5. **Setup** — In Mission Planner or similar, choose the frame, calibrate accelerometer, compass and radio, and set flight modes and failsafes.

AF-F4 nano v2 Firmware

• Available Firmware

Type	Version	Date
ArduPilot (.apj package)	1.0.11	2026-08-31
Bootloader + App (merged HEX · DFU / SWD)	1.0.11	2026-08-31

Download files from the product page (QR).

AF-F4 nano v2 Safety Notes

- Always remove propellers while wiring, configuring or updating firmware.
- Pull connectors by the housing, never by the wires.
- Beware of static discharge; do not operate in wet or dusty conditions.
- Without the external GPS / compass, position- and heading-based flight modes are unavailable.



<Detailed Manual>

novaX