FLYWOO.

FIREFLY 20/25 QUICK START MANUAL

1. OVERVIEW

FIREFLY 20 PRO

Designed for extreme lightweight, the 2-inch ruler, featuring exceptional power and stunning design.

FIRMWARE: BETAFLIGHT 4.5+

PROTOCOL: ELRS, DJI HD

BATTERY: 4S 550/750MAH

FIREFLY 25 MINI

Superior 2.5-inch flight experience, balancing flight time and freestyle performance.

FIRMWARE: BETAFLIGHT 4.5+

PROTOCOL: ELRS, DJI HD

BATTERY: 3S 450/750MAH

2. SPECIFICATIONS

FIREFLY 20 PRO

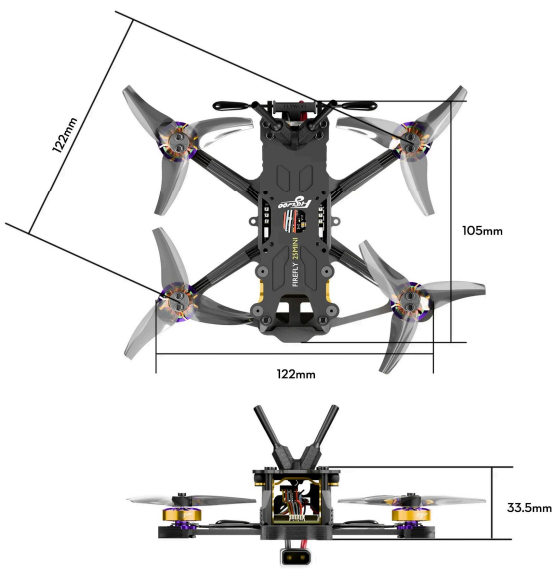
PARTS	FIREFLY 20 PRO 4S
FC MCU	STM32F405
AIO	GOKU F405 SE 3-4S 20A AIO
GYRO	ICM42688-P/MPU6000
MOTOR	ROBO 1303 6000KV
PROPS	2023-3 3 Blade 1.5mm shaft
VOLTAGE	4S LiHV Recommend: 550mAh / 750mAh
MAX SPEED	120km/h

FIREFLY 25 MINI

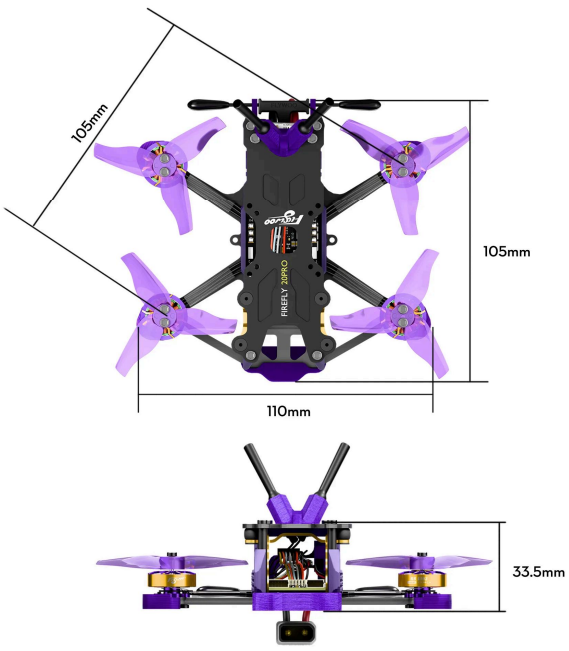
PARTS	FIREFLY 25 MINI 3S
FC MCU	STM32F405
AIO	GOKU F405 SE 3-4S 20A AIO
GYRO	ICM42688-P/MPU6000
MOTOR	ROBO 1303 6000KV
PROPS	2520-3 3 Blade 1.5mm shaft
VOLTAGE	3S LiHV Recommend: 450mAh / 750mAh
MAX SPEED	95km/h

3. DIMENSIONS

FIREFLY 25 MINI



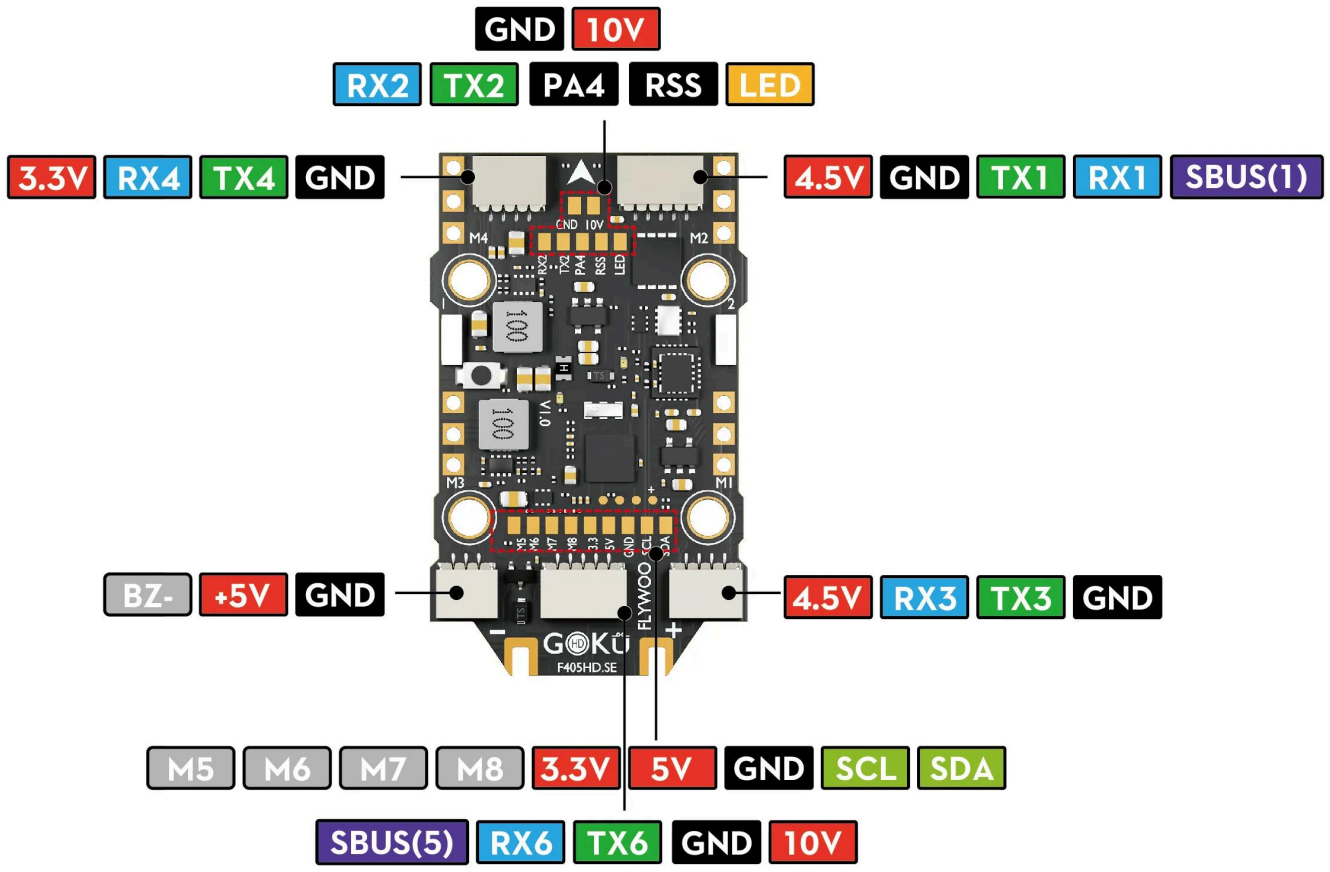
FIREFLY 20 PRO



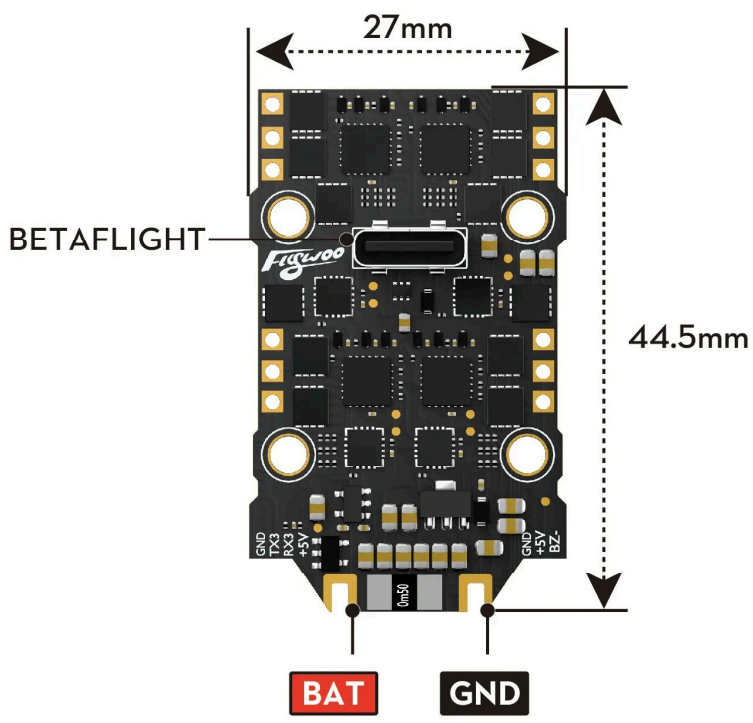
4. FC LAYOUT & DIMENSIONS

Detailed port definitions and dimensions for the GOKU F405HD-SE FC.

TOP VIEW



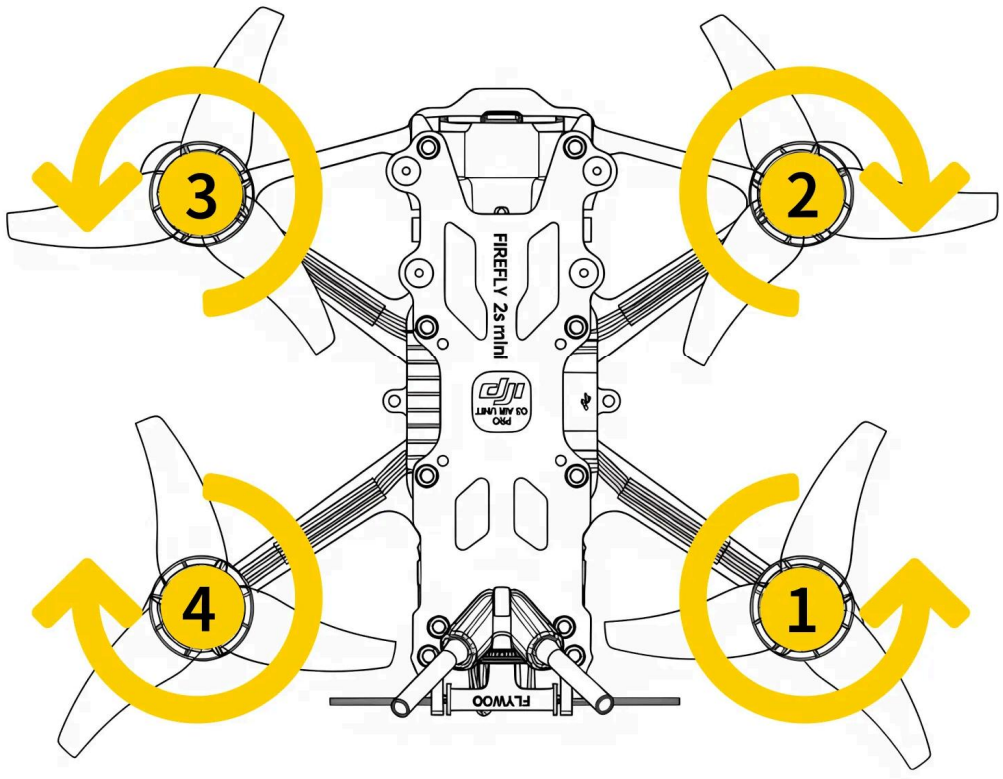
BOTTOM VIEW



5. INSTALLATION GUIDE

01 PROPELLERS

Install props according to motor sequence and rotation.



02 EXPLODED VIEW

Reference for maintenance and component installation.

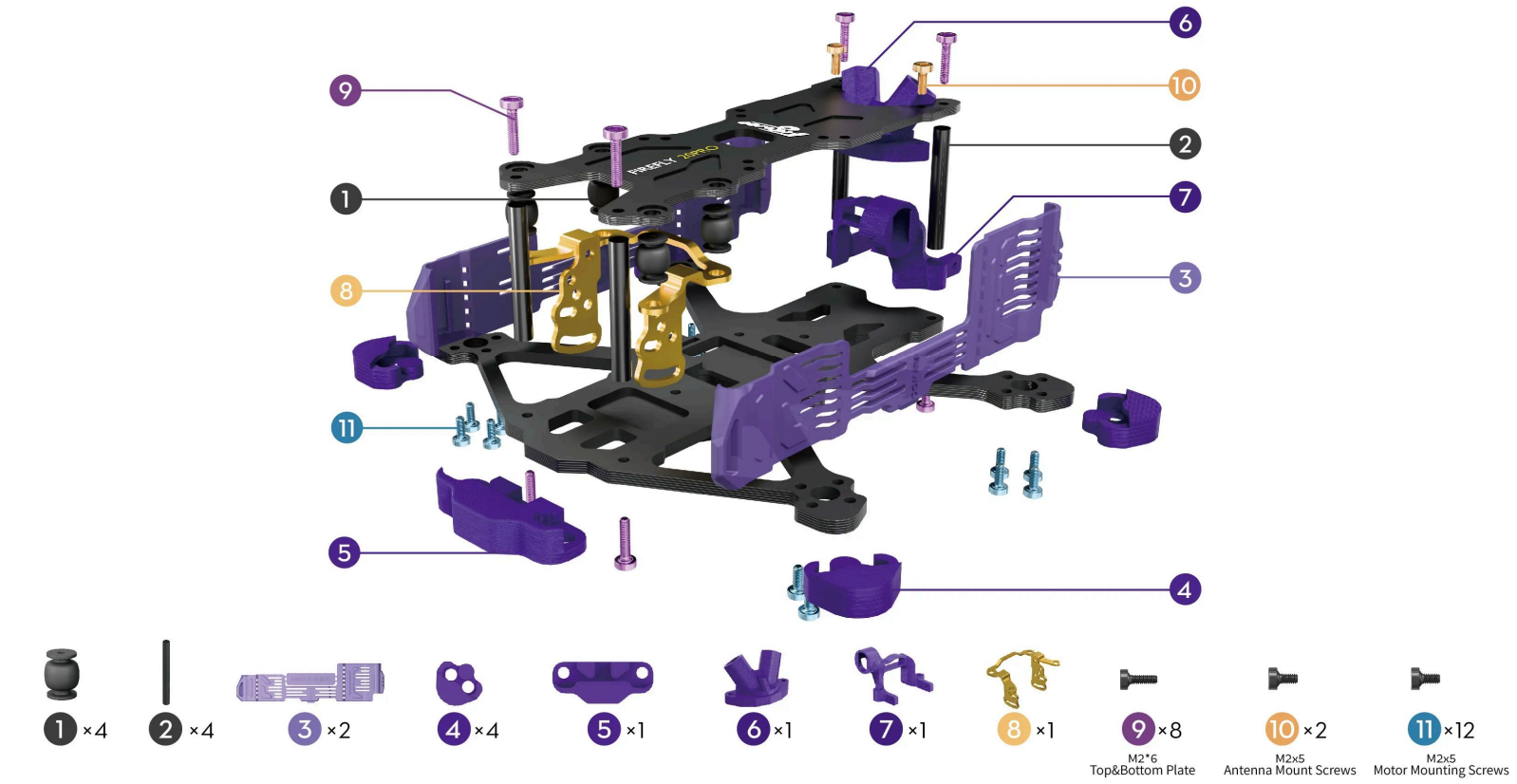
O4 INSTALL

1 M2×6 Top Plate Screws
2 M2×10 Fixed Screw for DJI O4
3 M2×5 Antenna Mount Screws
4 M3×8 Custom Damping Balls
5 M2×3 Lens Fixing Screw
6 M2*2 Nylon Nut

O4 PRO INSTALL

1 M2×6 Top Plate Screws
2 M2×5 Fixed Screw for DJI O4 Pro
3 M2×5 Antenna Mount Screws
4 M2×3 Lens Fixing Screw
5 M3×8 Custom Damping Balls

FRAME EXPLODED



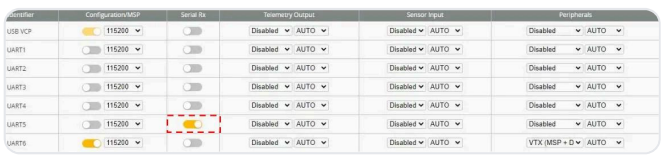
6. SETTINGS OVERVIEW

Refer to the guides below for configuration.

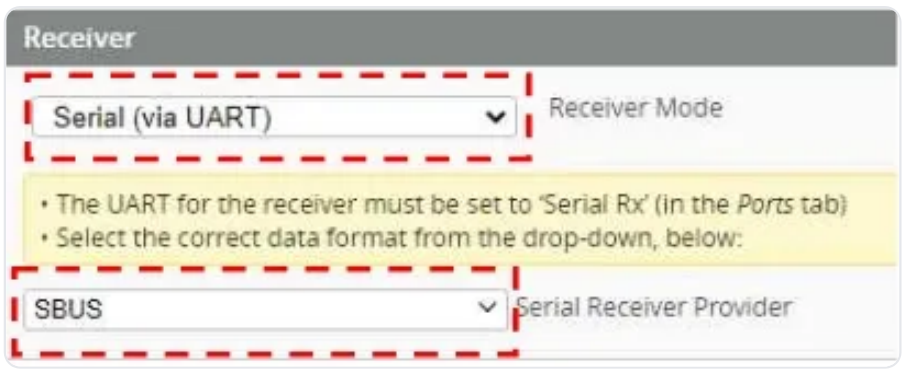
DJI O4 AIR UNIT SETTINGS

1 In Ports tab, enable MSP for **UART6** and set Peripherals to **VTX (MSP+Displayport)**.

2 If using DJI FPV RC, disable Serial Rx for **UART3** and enable for **UART5**.



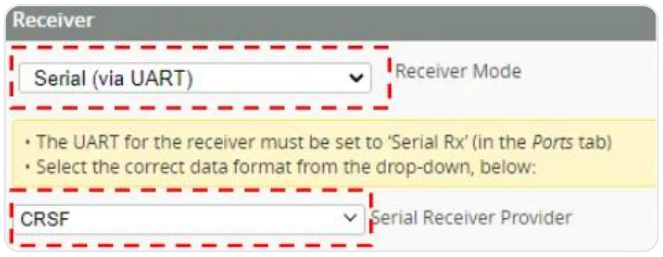
3 In Receiver tab, change Mode to **Serial (via UART)**, provider to **SBUS**.



EXTERNAL ELRS SETTINGS

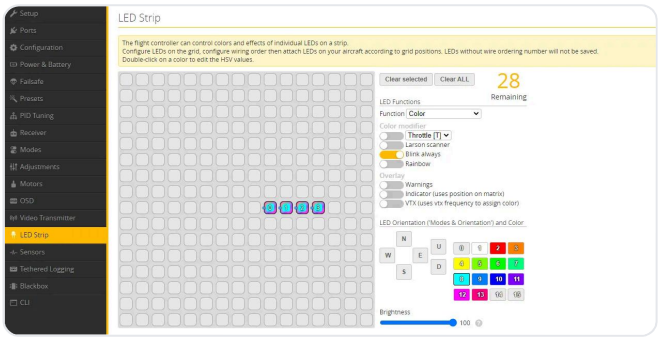
1 **In Ports tab, enable Serial Rx for UART3.**
(Note: UART3 is PNP default.)

2 **In Receiver tab, Mode to Serial (via UART), provider to CRSF.**

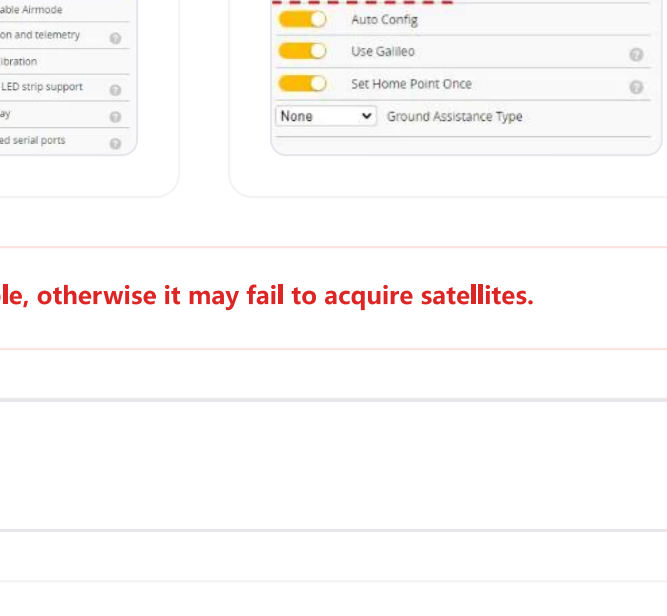


ONBOARD LED SETTINGS

1 **In "LED Strip" tab, select 0/1/2/3, set color on right.**

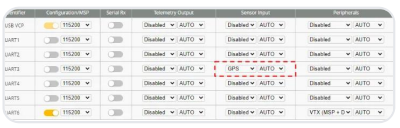


2 **If reflashing, manually add LEDs using the wire setup in the bottom right.**



GPS SETTINGS

1 **Set Sensor for UART3 to GPS and Baud to Auto.**



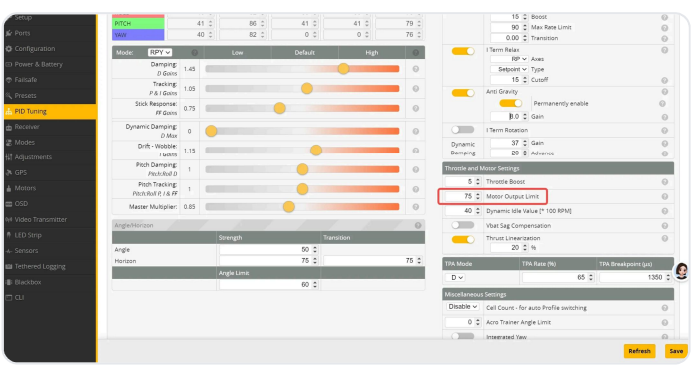
2 **In Configuration tab, enable GPS.**

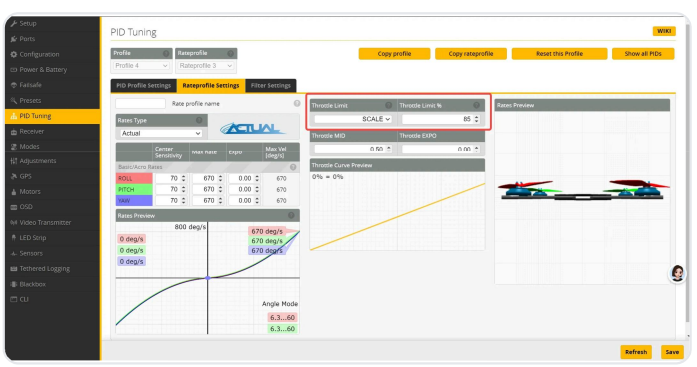
3 **In GPS tab, select Protocol (usually UBLOX).**

⚠ WARNING: Keep the GPS as far away from the VTX as possible, otherwise it may fail to acquire satellites.

FIREFLY 25MINI 4S BATTERY SETTINGS

Limit the throttle for the two options shown below to safely use a 4S battery.

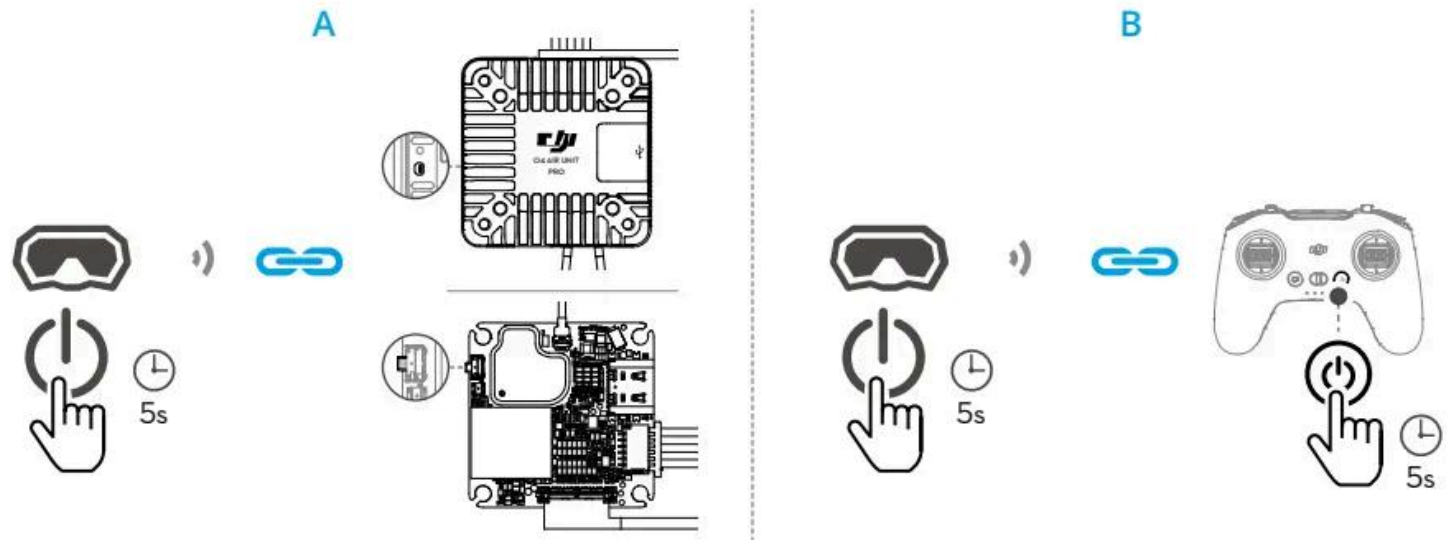




⚠ WARNING: If you do not apply this modification, using a 4S battery will absolutely burn out the motors.

7. O4 BINDING

Below is an example of the binding method using DJI Goggles 3 and DJI FPV RC 3.



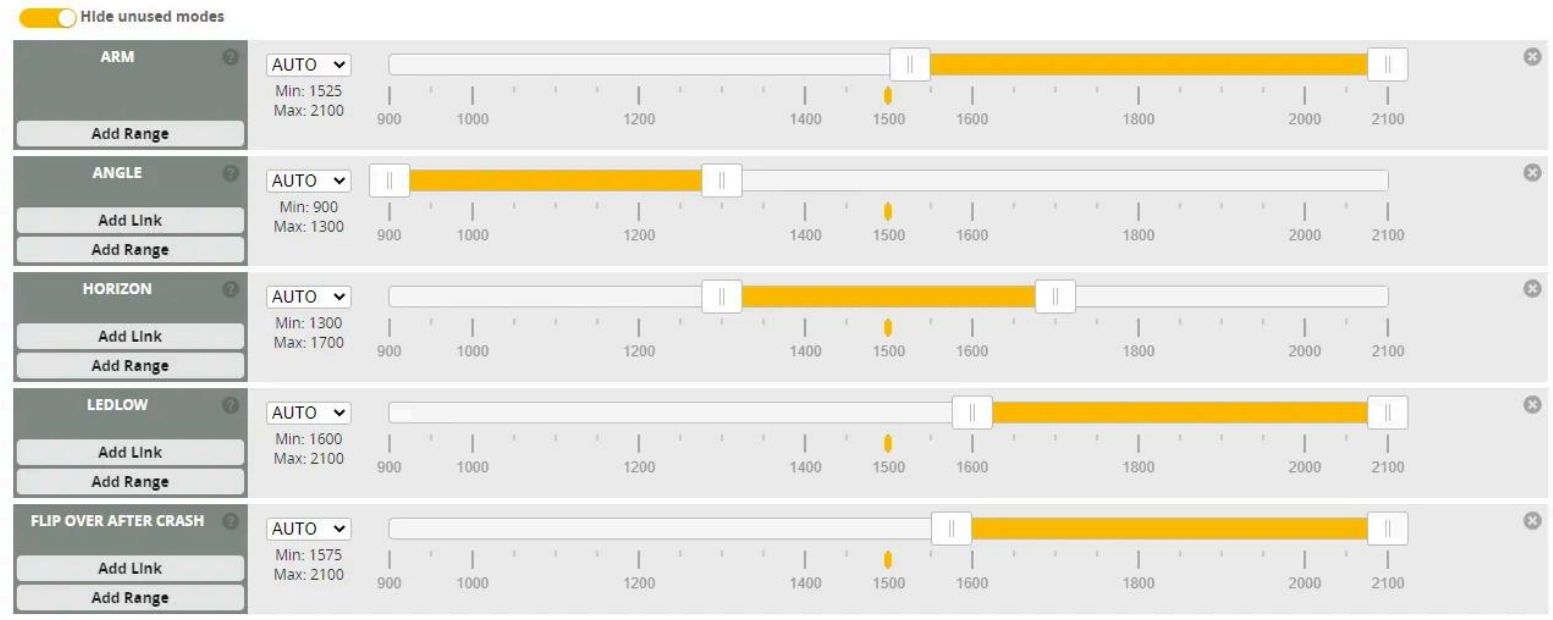
GOGGLES & AIR UNIT

1. Power on, select Air Unit in menu.
2. Ensure solid red, press button to flash.

GOGGLES & RC

1. Hold Power until beeping starts.
2. Success: LEDs solid & video links.

8. MODES SETTING



Arm Mode (ARM)
Motors spin at idle.

Angle Mode (ANGLE)
Auto-levels.

Horizon Mode (HORIZON)
Allows flips.

Acro Mode (ACRO)

Beeper Mode (BEEPER)

LED Low (LEDLOW)

No angle limits.

Emits beep.

Turns off frame LEDs.

AUX Channel Binding Guide

1. Channels: Every switch on your radio corresponds to an AUX channel (e.g., AUX1) on the receiver.

2. Set Range: In "Modes" tab, click "Add Range", assign a channel, and drag the yellow sliders.

3. Verify: Toggle the switch. The yellow marker should move into your set range.

Flip Over After Crash

Description: Allows the drone to flip itself upright after crashing upside down by temporarily reversing the motor direction.

STEP 1:
Activate TURTLE Switch

STEP 2:
Activate ARM Switch

STEP 3:
Move Pitch/Roll stick

WARNING: If motors are obstructed by grass or debris, DO NOT force this mode, as it may burn the motors or ESC! Always turn off Turtle mode before attempting to fly again.