Argus F7Pro/65A Stack

Description of product characteristics:

Both the FC and the ESC are designed with CNC full aluminum cover wrapped, which has excellent protection and efficient heat dissipation, it protects internal electronics from grass juice and dirt. The aluminum casing significantly enlarge the radiating surface to quickly dissipates the internal heat for stable performance.

The FC adopts a plug-and-play design, and common peripherals such as DJI O3 air unit, GPS, etc. Can be directly connected and used, which is simple and fast.

The FC supports up to 8 motor outputs, making it easy to build an X8 drone. In addition, it also integrates 5V/9V dual BEC, and the 9V BEC can provide independent power supply for VTX to ensure stable operation.

The FC has 4 LED status indicators, which respectively display the working status in different states. Others such as the F722 main control chip, onboard OSD chip, onboard barometer, and onboard black box chip are also readily available.

The ESC adopts large-size MOSFETs with low internal resistance and low heat generation. The high-performance main control chip G071 has a main frequency of up to 64MHz and supports up to 16-96k PWM frequency adjustment. The combination of software and hardware brings a silky flight experience.

Type： ARGUS Pro Stack

Size： 48.6 x 46.6 x 26

Weight： 59g

Type： ARGUS Stack(Regular version)

Size： 48.6 x 44 x 20.8

Weight： 31g

FC Specification:

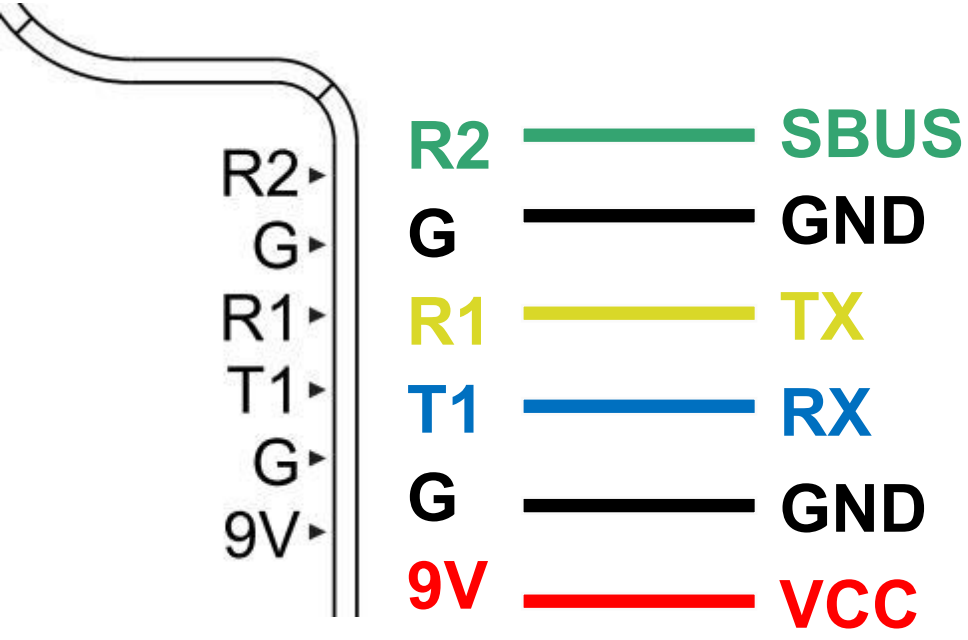
- Master Control：STM32F722RET6
- Gyro：BMI270
- Barometer：support
- OSD：support
- BEC：9V/2A、5V/2A
- UART Ports：6
- Black box：support（16M Flash Memory）
- Number of supported motors：M1-M8
- Firmware name：AXISFLYINGF7PRO
  （Betaflight，INAV Not supported yet）
- Input Voltage：3-6S Lipo（12-50V MAX）
- Installing Hole：30.5 x 30.5mm/M3
- Weight：F7Pro 19.6g/F7(Regular version)8.4g

ESC Specification:

- Rated current：55A /65A
- Instantaneous peak current：65A /75A(< 10s)
- Input Voltage：3-6S Lipo（12-30V MAX）
- ESC Target：BLHeli_32 （ST_G0_04）
- Current proportion value：Scale=400
- PWM frequency range：16-96khz
- Telemetry：support
- Ammeter：support
- BEC：Nothing
- Installing Hole：30.5 x 30.5mm/M3
- Weight：65A/55APro 4IN1 ESC 32g
  65A/55A 4IN1 ESC 16.2g

Interface Definition Peripheral Connection Diagram

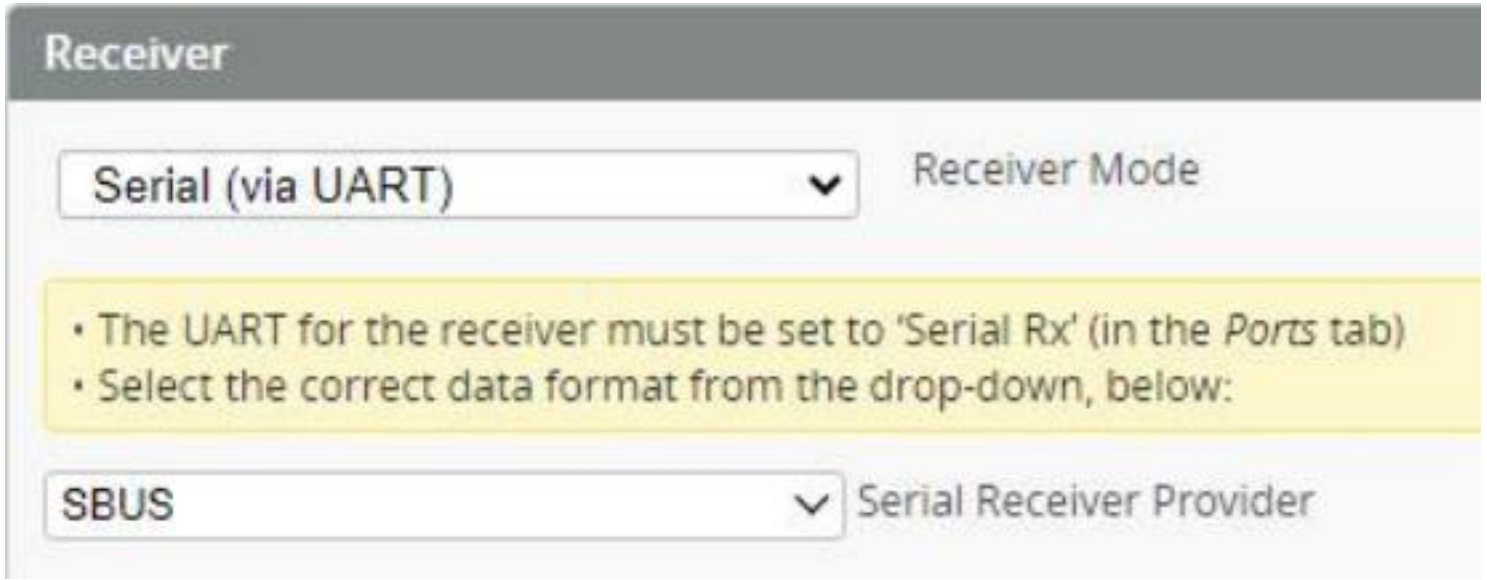
DJI Air unit

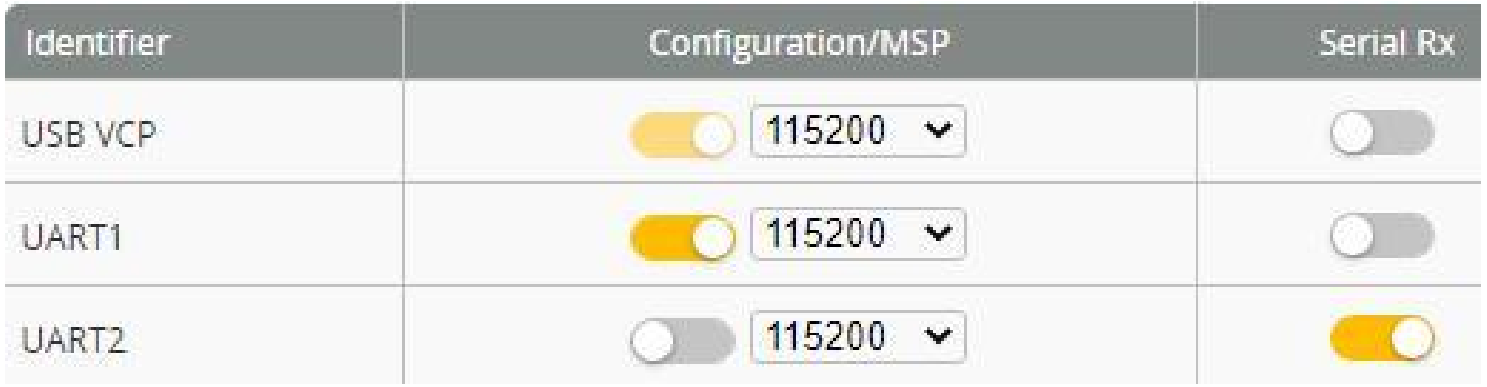


Direct connection	**DJI O3 Air Unit** **DJI Air Unit** **Caddx Vista** **RunCam Link** **Walksnail Avatar**

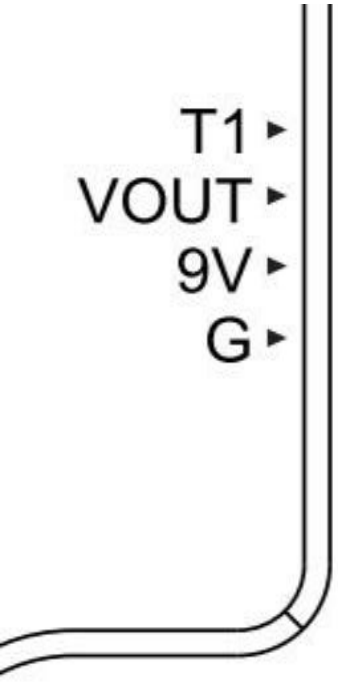
Note: Use DJI FPV remote controller

*Safety tips: Please remove all propellers when connecting to the Betaflight configuration software!
Betaflight is an open source software, flashing the firmware by yourself may cause the product to work unstable.





Analog VTX



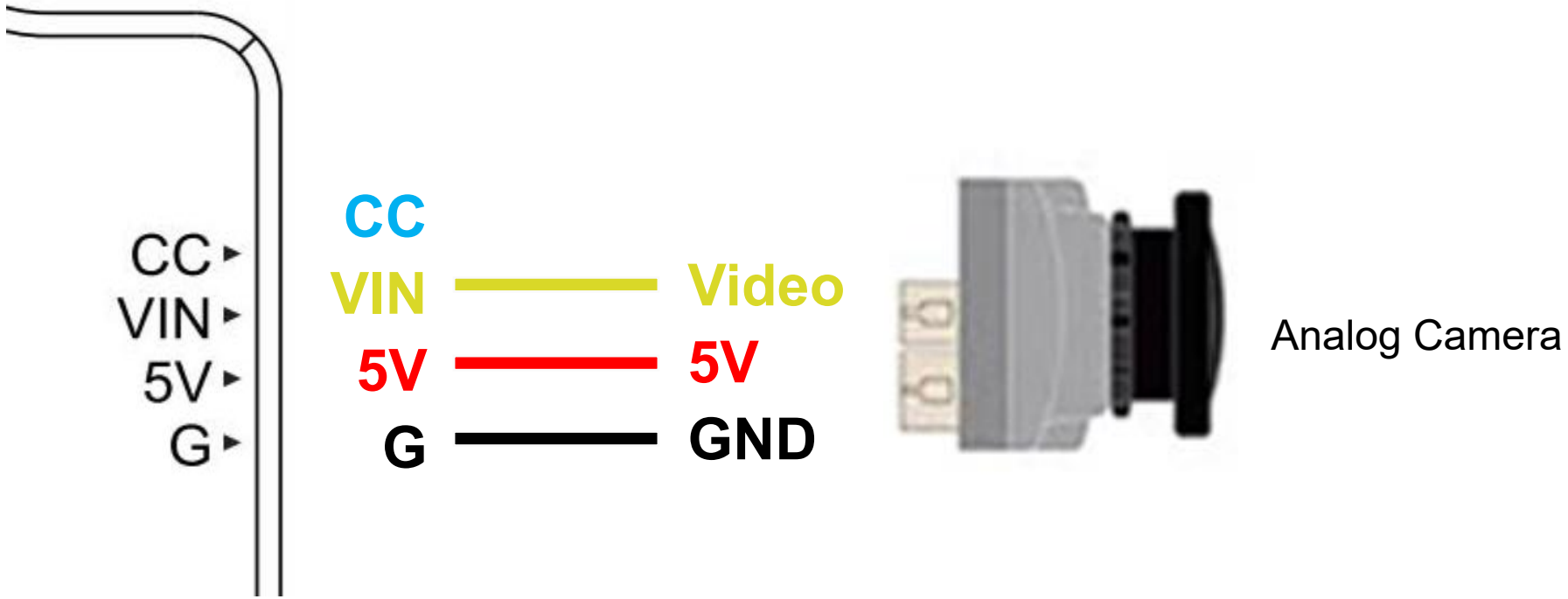
T1	SA
VOUT	Video
9V	DCIN
G	GND

Analog VTX

TRANSPONDER	Race Transponder
AIRMODE	Permanently enable Airmode
OSD	On Screen Display

Identifier	Configuration/MSP	Peripherals	
USB VCP	115200	Disabled	AUTO
UART1	115200	VTX (TBS Sm	AUTO

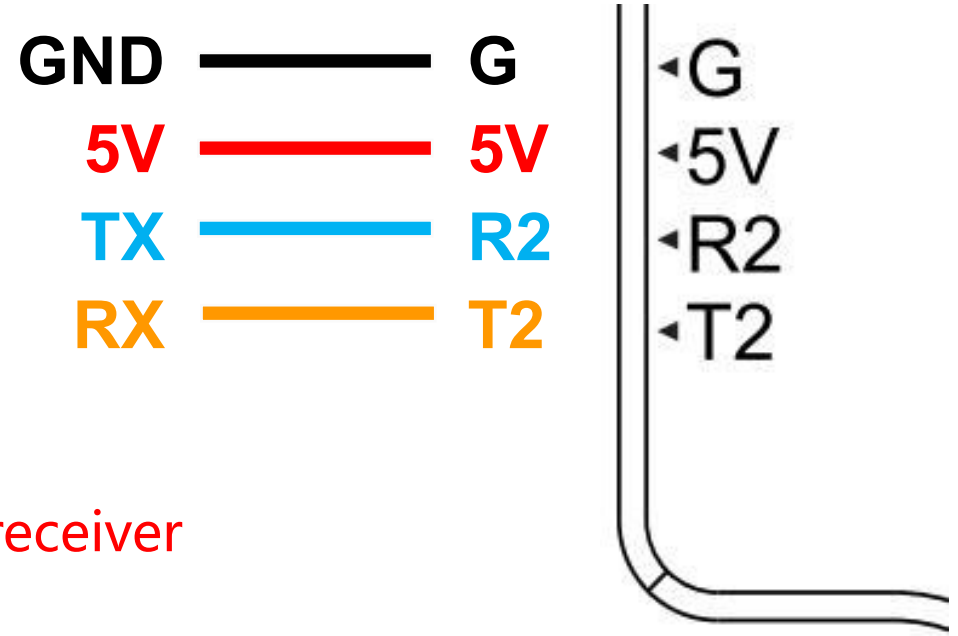
Analog Camera



TRANSPONDER	Race Transponder
AIRMODE	Permanently enable Airmode
OSD	On Screen Display

Receiver

Receiver



Note: Use TBS Nano receiver, ELRS receiver

Identifier	Configuration/MSP	Serial Rx
USB VCP	115200	
UART1	115200	
UART2	115200	

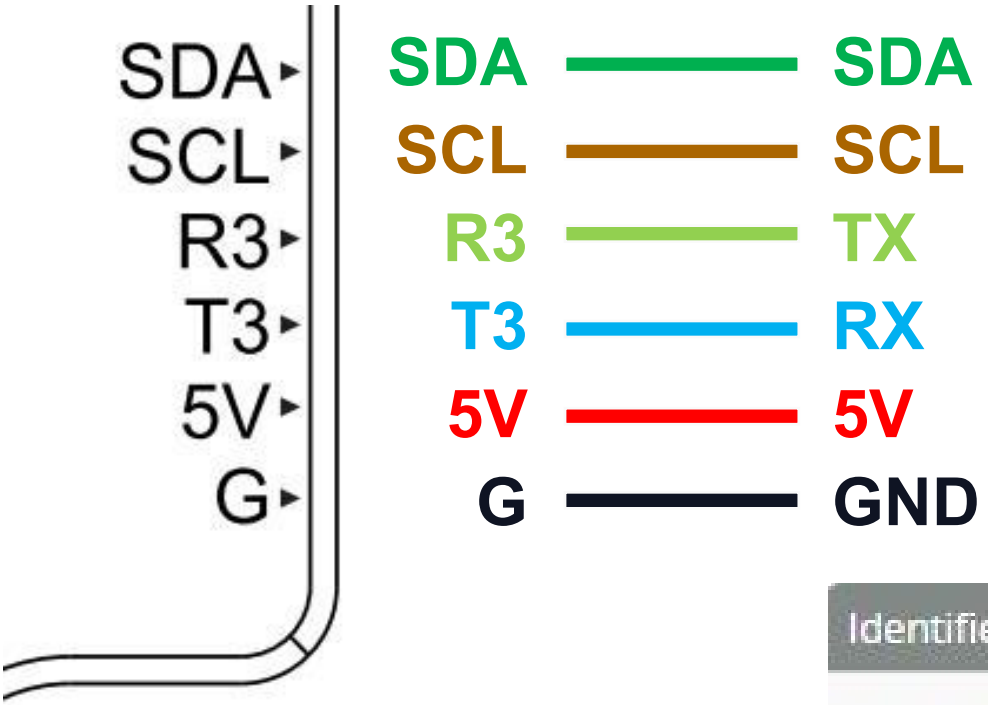
Receiver

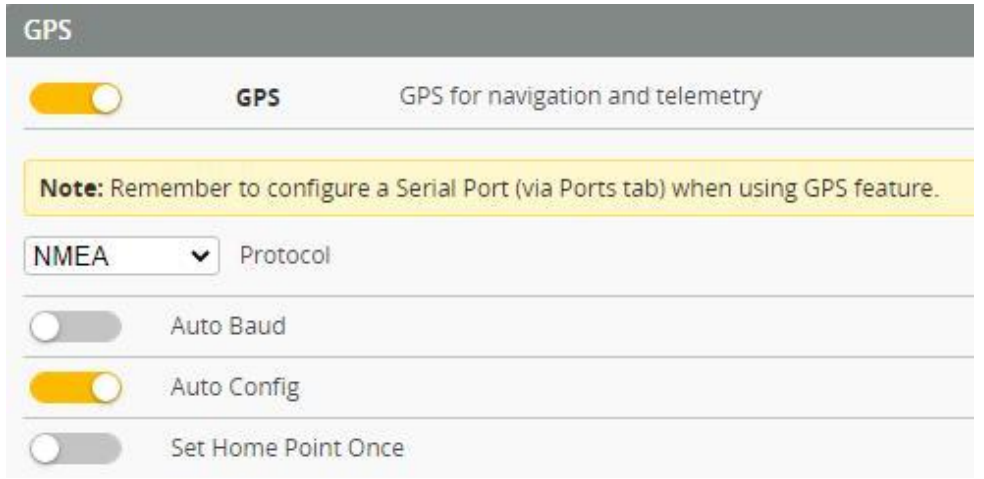
Serial (via UART) — Receiver Mode

- The UART for the receiver must be set to 'Serial Rx' (in the *Ports* tab)
- Select the correct data format from the drop-down, below:

CRSF — Serial Receiver Provider

GPS

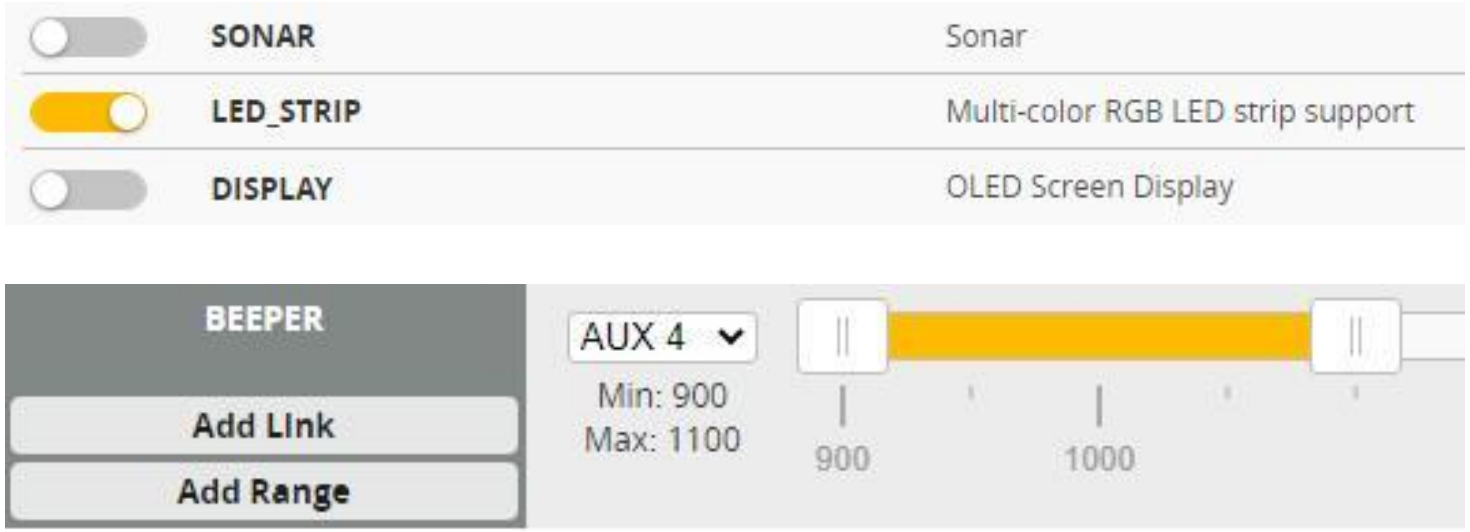




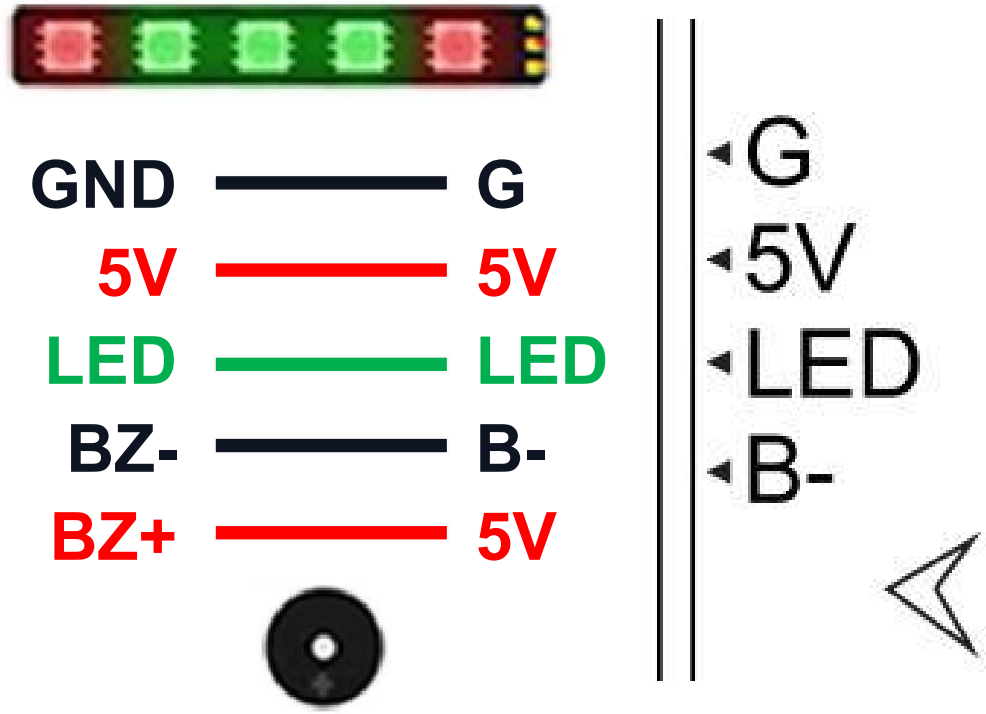
Note: Use Axisflying M80Q GPS

Identifier	Configuration/MSP	Sensor Input
USB VCP	115200	Disabled AUTO
UART1	115200	Disabled AUTO
UART2	115200	Disabled AUTO
UART3	115200	GPS 115200

Beeper LED、LED Light belt

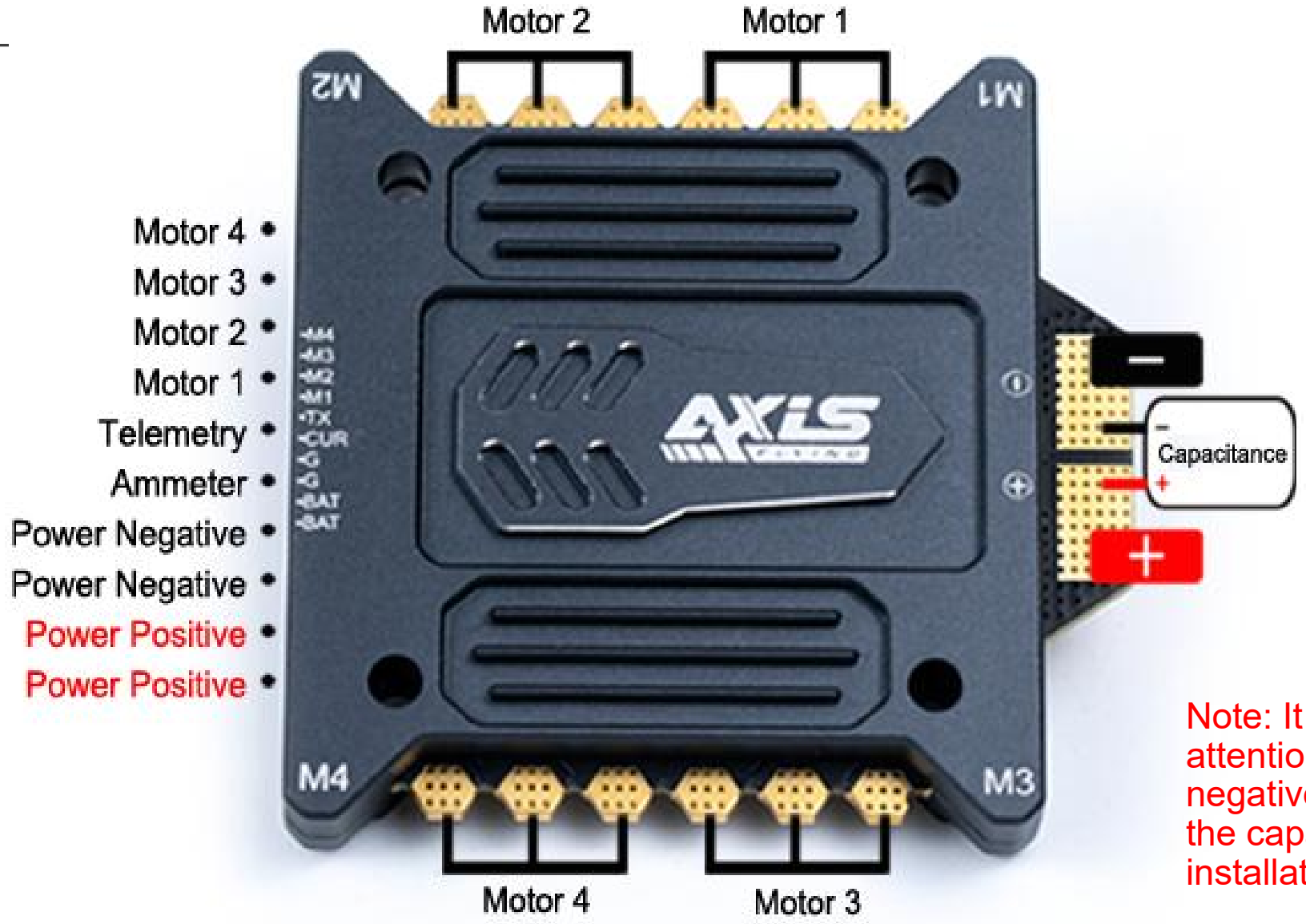


LED Light belt



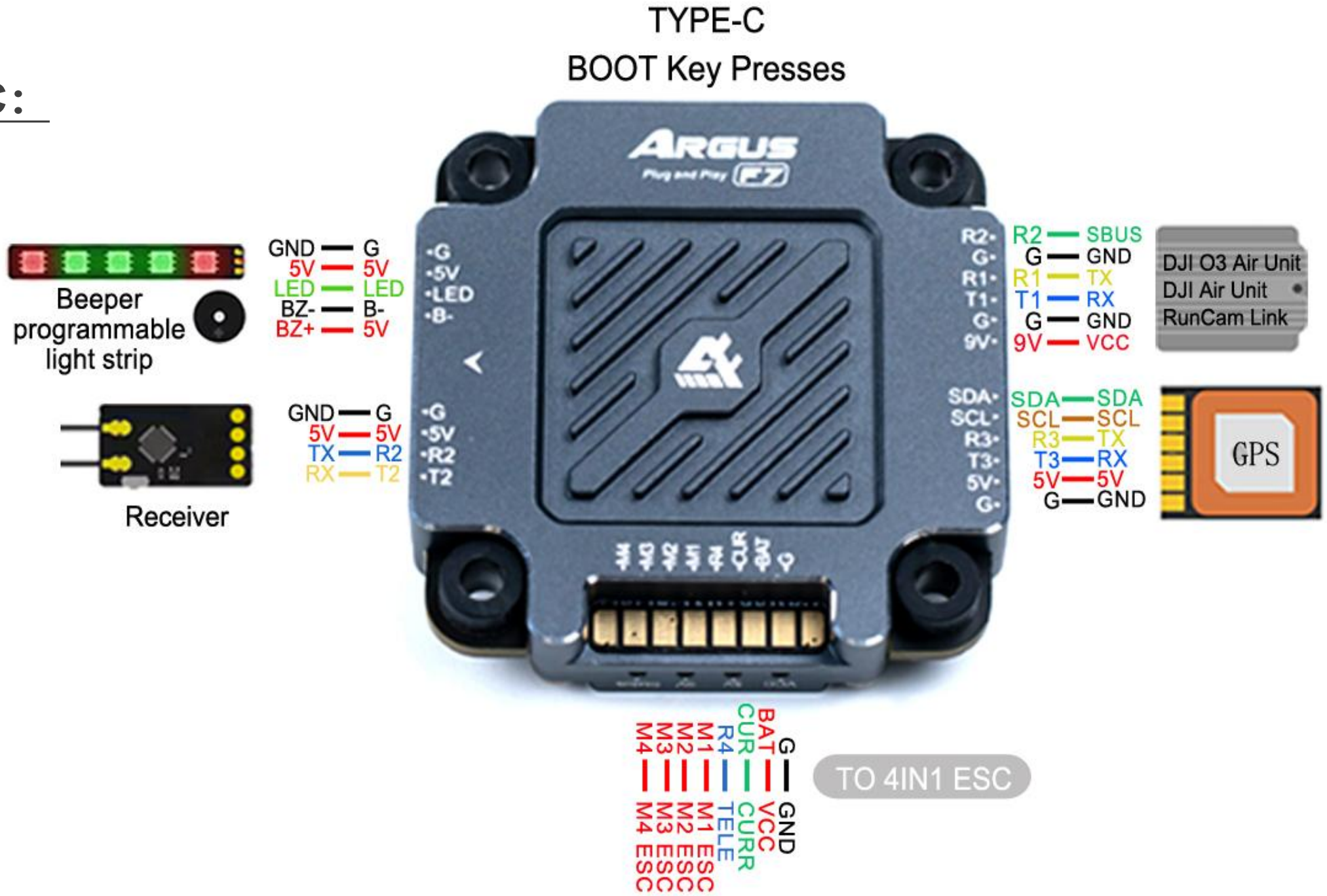
Beeper LED

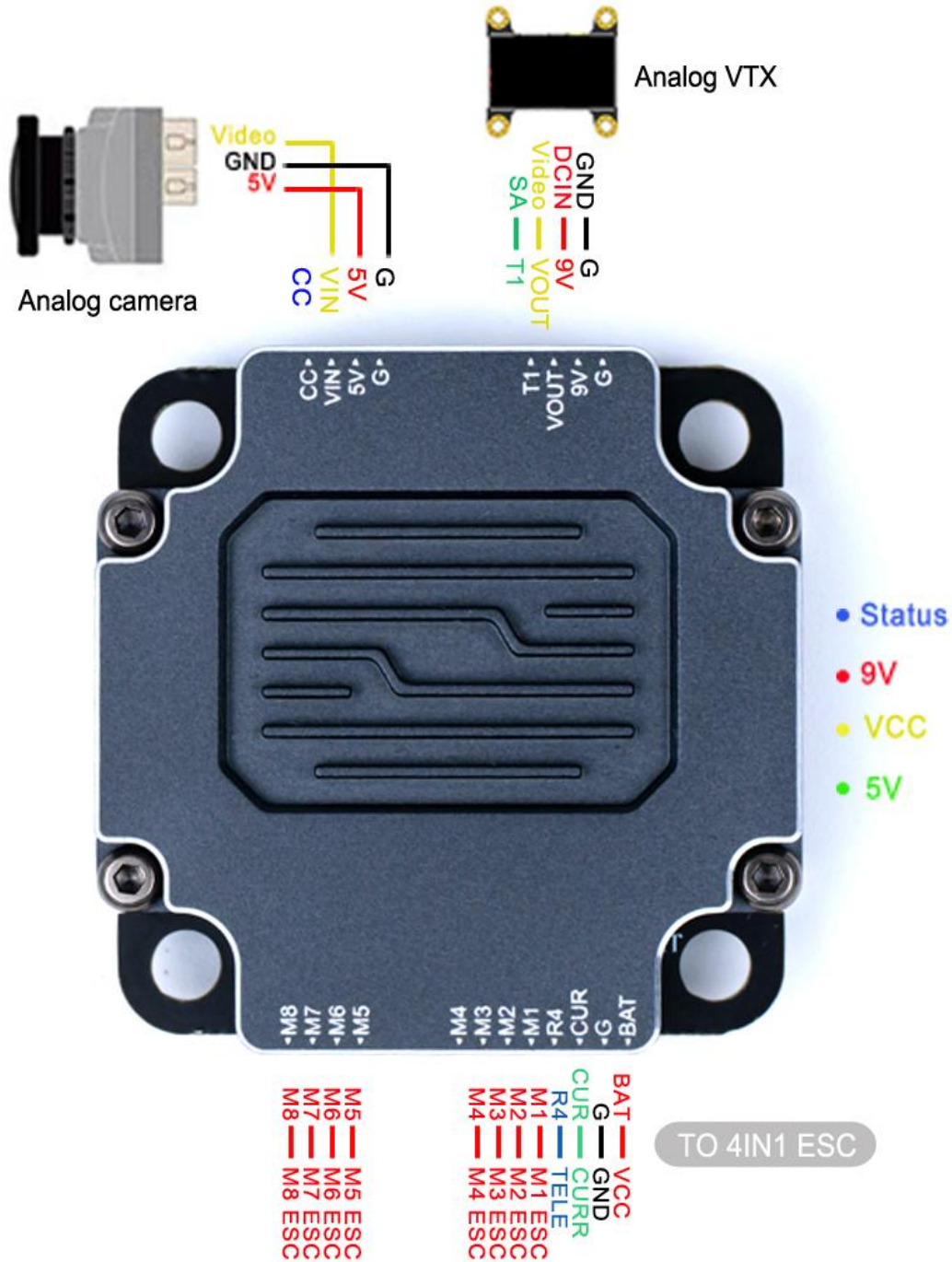
ESC:



Note: It is recommended to pay attention to the positive and negative poles when soldering the capacitors included in the installation package.

FC:


TYPE-C
BOOT Key Presses
ARGUS
F7
Beeper programmable light strip
GND — G
5V — 5V
LED — LED
BZ- — B-
BZ+ — 5V
Receiver
GND — G
5V — 5V
TX — R2
RX — T2
•G
•5V
•LED
•B-
•G
•5V
•R2
•T2
R2•
G•
R1•
T1•
G•
9V•
SDA•
SCL•
R3•
T3•
5V•
G•
R2 — SBUS
G — GND
R1 — TX
T1 — RX
G — GND
9V — VCC
DJI O3 Air Unit
DJI Air Unit
RunCam Link
SDA — SDA
SCL — SCL
R3 — TX
T3 — RX
5V — 5V
G — GND
GPS
BAT
CUR
R4
M1
M2
M3
M4
G
VCC
CURR
TELE
M1 ESC
M2 ESC
M3 ESC
M4 ESC
GND
TO 4IN1 ESC


Analog VTX
Video
GND
5V
Analog camera
CC
VIN
5V
G
GND
DCIN
Video
SA
9V
VOUT
T1
G
CC
VIN
5V
G
T1
VOUT
9V
G
M8
M7
M6
M5
M4
M3
M2
M1
R4
CUR
G
BAT
Status
9V
VCC
5V
M5 ESC
M6 ESC
M7 ESC
M8 ESC
BAT
G
CUR
R4
M1
M2
M3
M4
VCC
GND
CURR
TELE
M1 ESC
M2 ESC
M3 ESC
M4 ESC
TO 4IN1 ESC

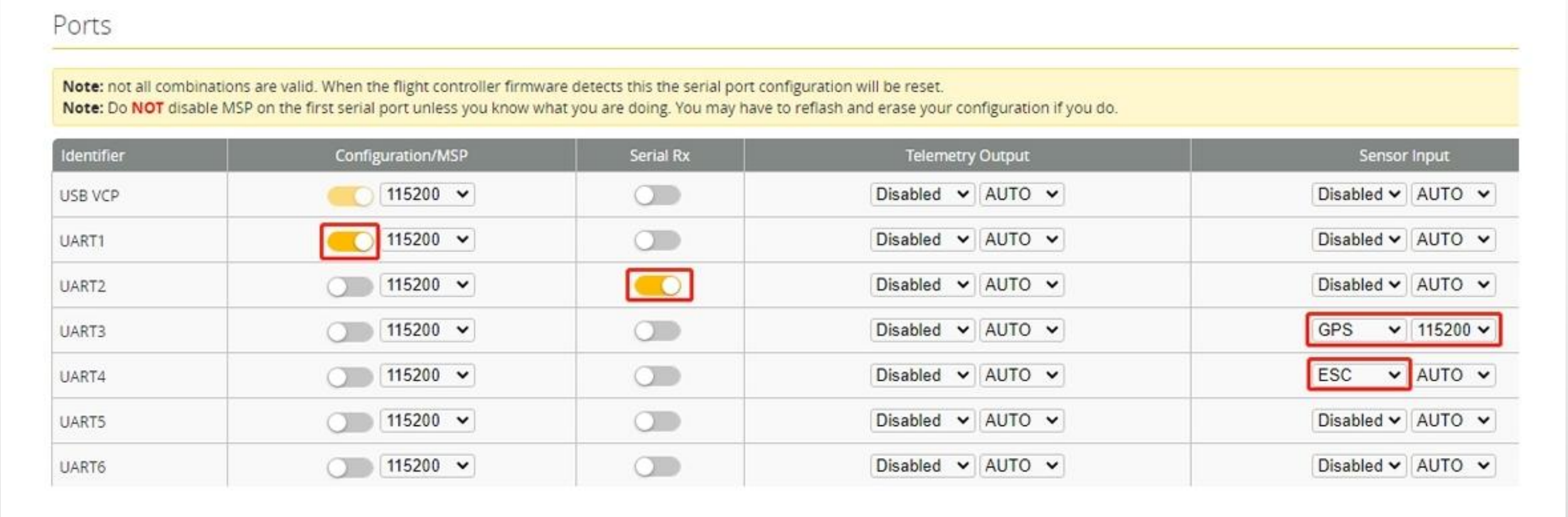
Betaflight Instruction about setting

About FC

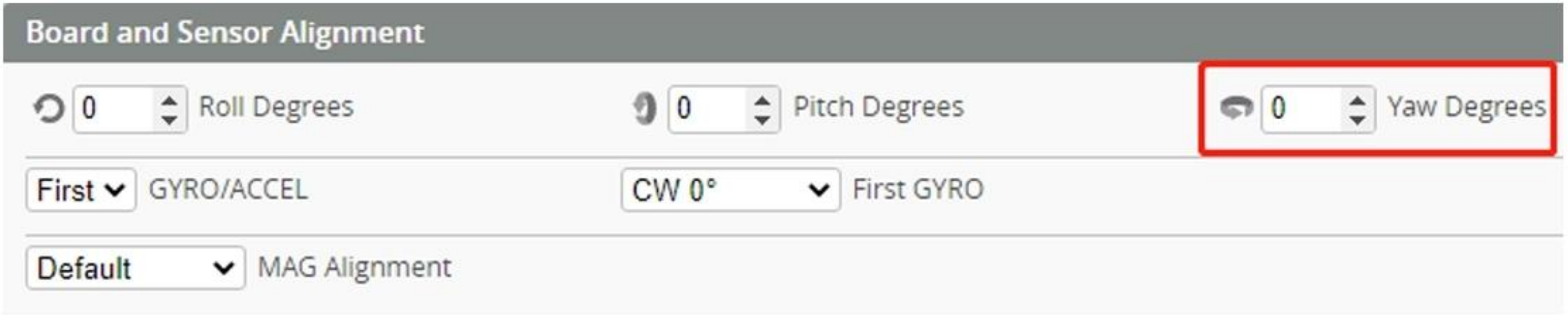
1.Factory default port settings (will be reset after reflashing the firmware)

1.Uart1 MSP 2.Uart2 Receiver 3.Uart3 GPS

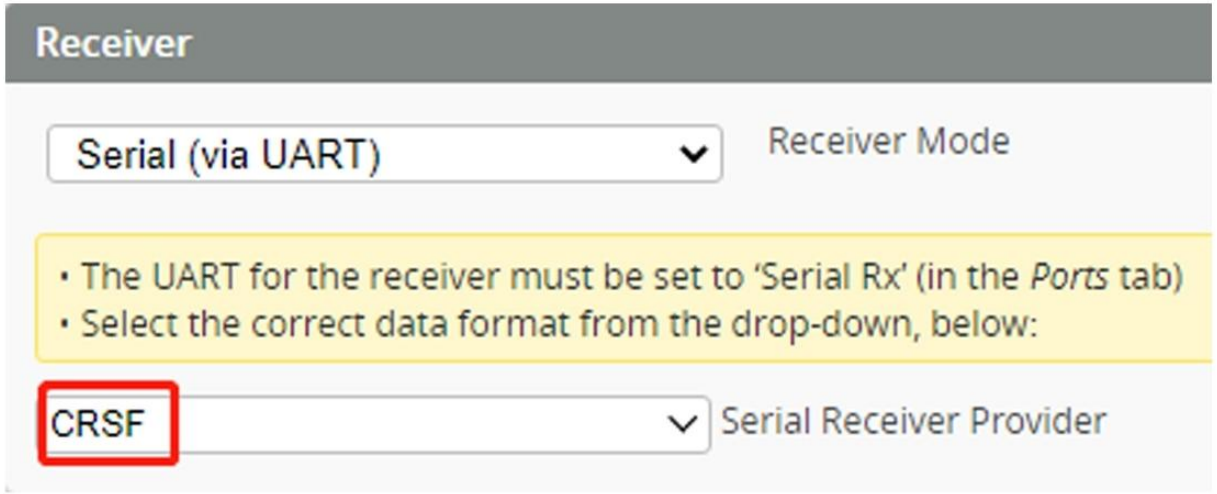
4.Uart4 ESC 5.Uart5 Default 6.Uart6 Default

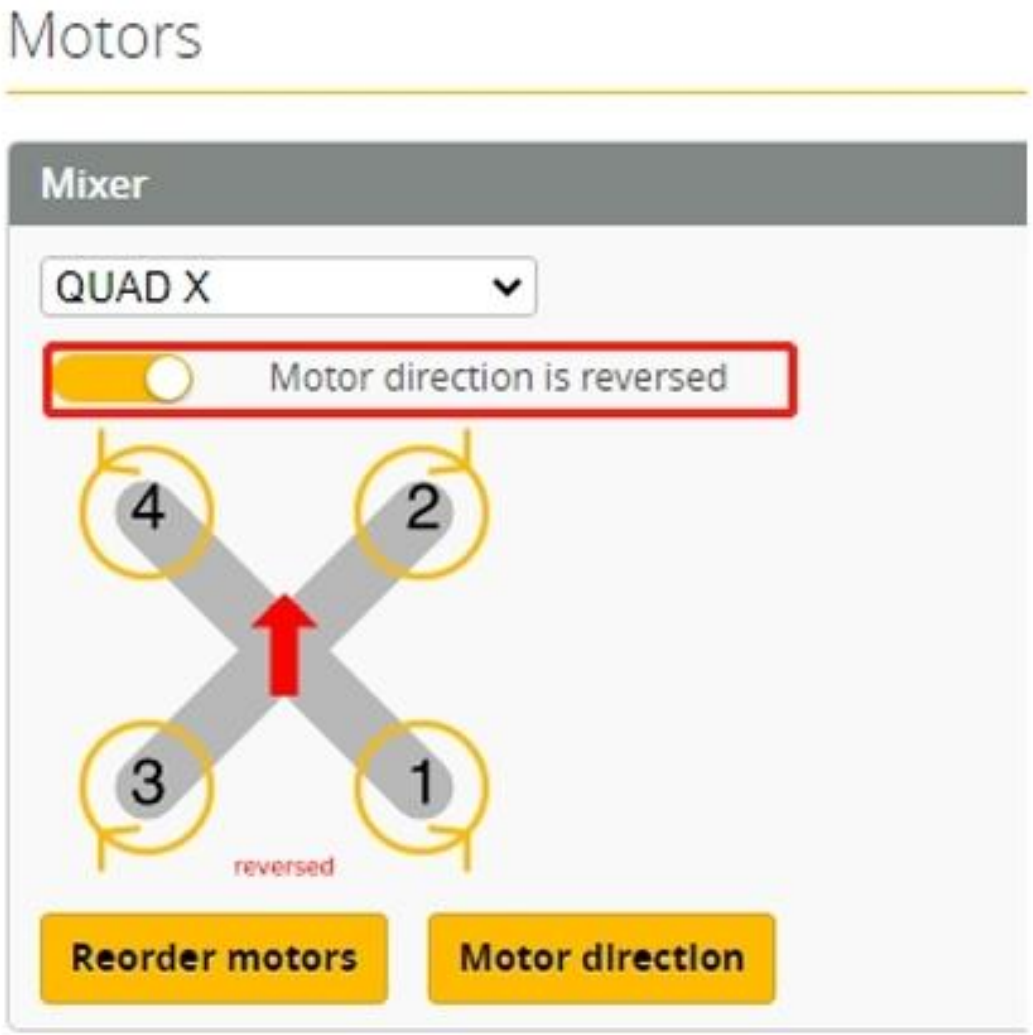


2.If you change the default installation direction of the FC (the default is that the arrow is facing forward), for example, if the arrow is facing backward, you need to change the default yaw from 0° to 180° on the "Flight Control and Sensor Orientation" page. After changing, click Save and reboot.



3.If you use TBS receiver, ELRS receiver, please select the receiver protocol in the "Receiver" page as CRSF, if you use DJI FPV remote controller, DJI FPV remote controller 2, and other SBUS receivers, please select SBUS.





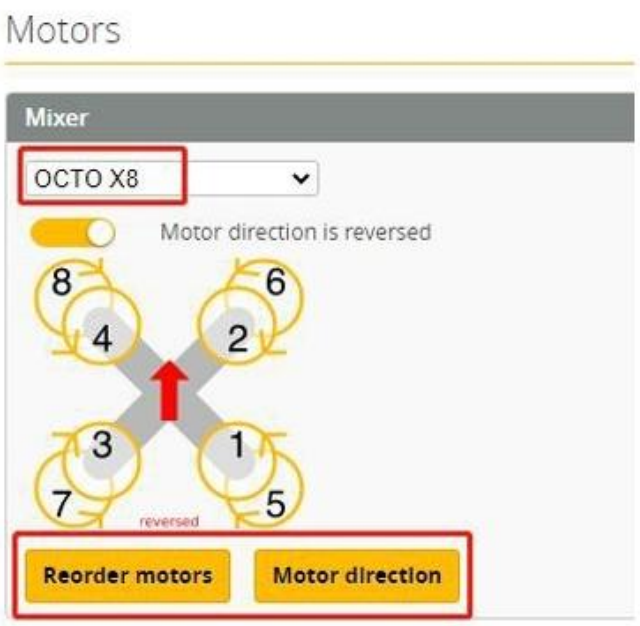
4.The factory default motor rotation direction has been set to "reverse motor rotation", which is

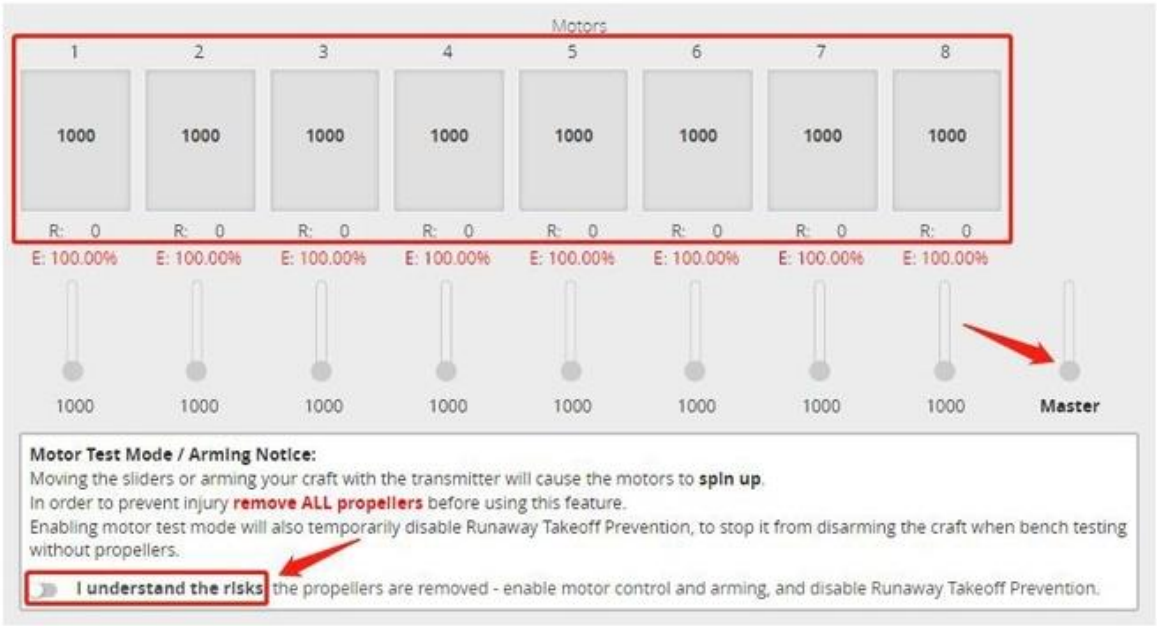
Motor No. 1: Rotate counterclockwise

Motor No. 2: Clockwise rotation

Please pay attention to the direction and front and back when installing the propeller. Incorrect installation will cause the drone to fail to take off.

5.Steps for X8 FC parameter setting



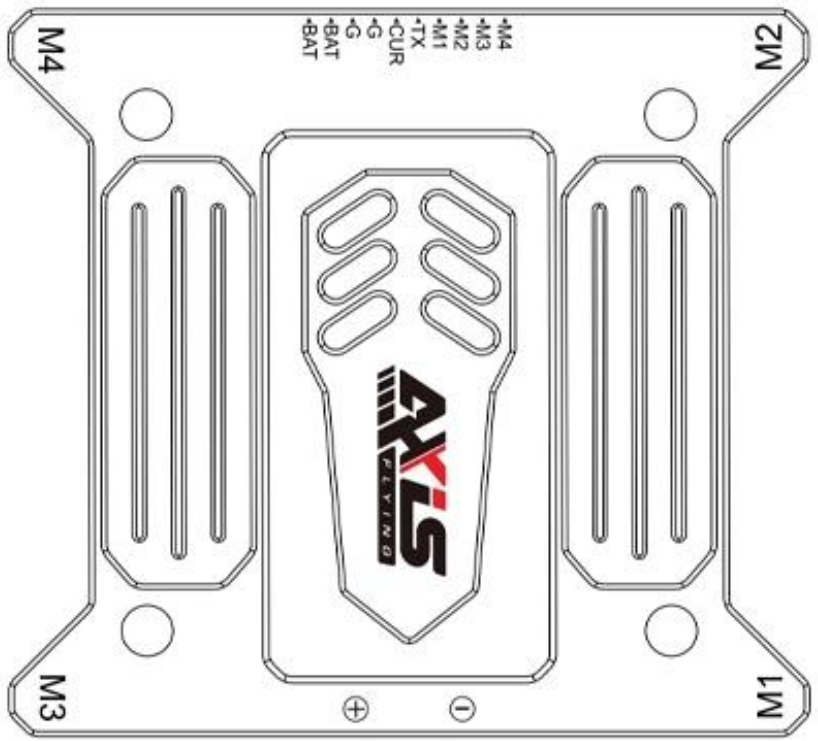


Step 1: On the "Motor" page, change the default QUAD X to OCTO X8, and then click Save and restart.

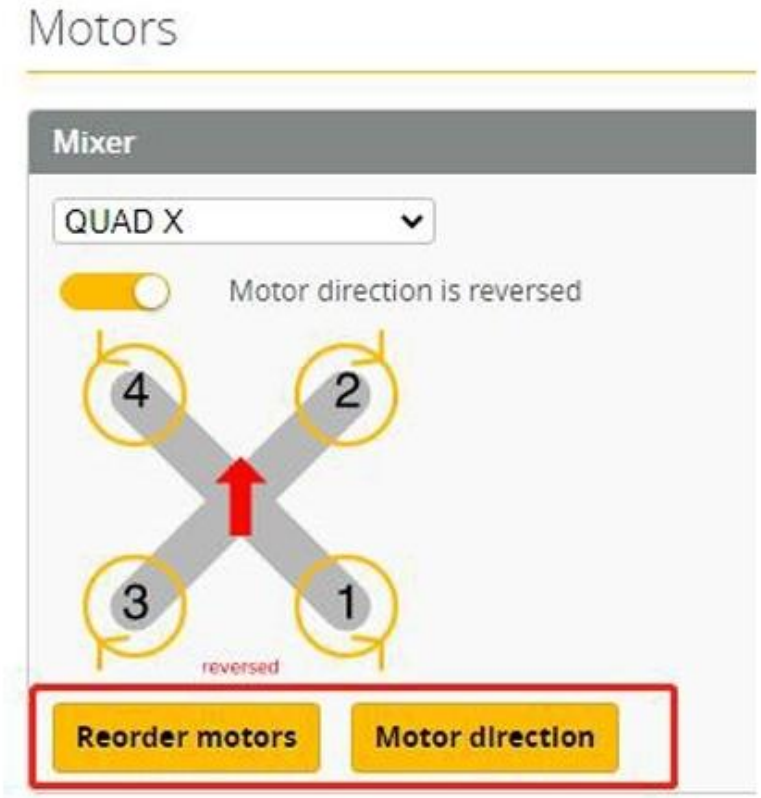
Step 2: After step 1 is completed, eight motors will appear on the right side of the motor page. Please adjust and verify the rotation direction of the eight motors according to the arrow on the left schematic diagram. The actual rotation direction and definition of the motor must be consistent with the left schematic diagram. All propellers must be removed before connecting the battery!

Step 3: Read carefully and tick "I have understood the risk", slowly push the main control to about 1100, observe the motor rotation direction, if it is found that it is inconsistent with the schematic diagram on the left, click "Motor dlrectlon" to adjust according to the wizard, if it is found that the motor sequence is inconsistent with the schematic diagram, click "Reorder motors" to adjust according to the wizard, and click Save and Restart after each adjustment.

About ESC



1.Recommended keep right side up when installed ESC



2.When installed face up, the default motor sequence has been changed if the XT60 power lead are in the front of the drone. At this time, you need to re-adjust the motor sequence and motor steering according to the wizard in the "Motor" page.(All propellers must be removed when connecting the Betaflight!)

3.Current Proportion Scale=400

(Click this parameter to obtain relatively accurate real-time osd current data)

FC Shipping List:

ARGUS 55A/65APro 4IN1 ESC or

ARGUS 55A/65A 4IN1 ESC (Regular version) X1

Wire accessories:

1.ESC to FC Cables	X1
2.Rubber ring	X8
3.XT60 power cord	X1
4.Ruby 35V 470 Capacitor	X1
5.SH1.0 8P Plastic case (to FC Line)	X1

ESC Shipping List:

ARGUS F7Pro FC/ARGUS F7 FC(Regular version) X1

Wire accessories:

1.FC to ESC Cables	X1	8.Shock absorbing rubber ring	X4
2.GPS Cable	X1	9.5678Motor wire	X1
3.DJI Air unit wire	X1	10.Avatar VTX wire	X1
4.Receiver wire	X1	11.SH1.0 8P Plastic case (ESC Cable)	X1
5.Beeper LED wire	X1	12.SH1.0 10P Plastic case (ESC Cable)	X1
6.Analog camera cable	X1	13.SH1.0 6P Plastic case (GPS)	X1
7.Analog VTX wire	X1	14.SH1.0 4P Plastic case (GPS)	X1

Stack Shipping List:

ARGUS 65A/55APro Stack or
ARGUS 65A/55A Stack（Regular version） X1

Wire accessories:

1.FC ESC Cable	X1	11.O Rubber ring	X4
2.GPS Cable	X1	12.High damping rubber ring (FC))	X4
3.DJI Air unit wire	X1	13.Low damping rubber ring (separated)	X4
4.Receiver wire	X1	14.M3*34 Cup head screw	X4
5.Beeper LED wire	X1	15.Ruby 35V 470 Capacitor	X1
6.Analog camera cable	X1	16.SH1.0 6P Plastic case（GPS）	X1
7.Analog VTX wire	X1	17.SH1.0 4P Plastic case（GPS）	X1
8.5678 Motor wire	X1		
9.Avatar VTX wire	X1		
10.XT60 Power cord	X1		

Stack Parameter

Type: ARGUS Pro Stack
Size: 48.6 x 46.6 x 26
Weight: 59g

Type: ARGUS Stack(Regular version)
Size: 48.6 x 44 x 20.8
Weight: 31g

FC

- **Master Control:** STM32F722RET6
- **Gyro:** 42688
- **Barometer:** support
- **OSD:** support
- **BEC:** 9V/2A、5V/2A
- **UART Ports:** 6
- **Black box:** support（16M Flash Memory）
- **Number of supported motors:** M1-M8
- **Firmware name:** AXISFLYING F7 PRO（BF，INAV）
- **Input Voltage:** 3-8S Lipo（12-50V MAX）
- **Installing Hole:** 30.5 x 30.5mm/M3