

# Racewhoop30 HD

## FPV Racing Drone

# Manual





---

# Contents

Product Specifications.....	1
Interface Description.....	2
Check the flight control drive.....	3
Calibration accelerometer.....	4
URAT serial port use.....	5
Select aircraft model.....	6
Choose ESC protocol.....	7
Voltage parameters setting.....	8
Setting up the receiver.....	9
Check receiver signal.....	10
Select flight mode startup mode.....	11
LED settings.....	12
Troubleshooting.....	13

.....

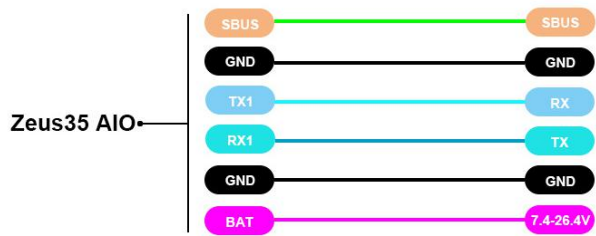
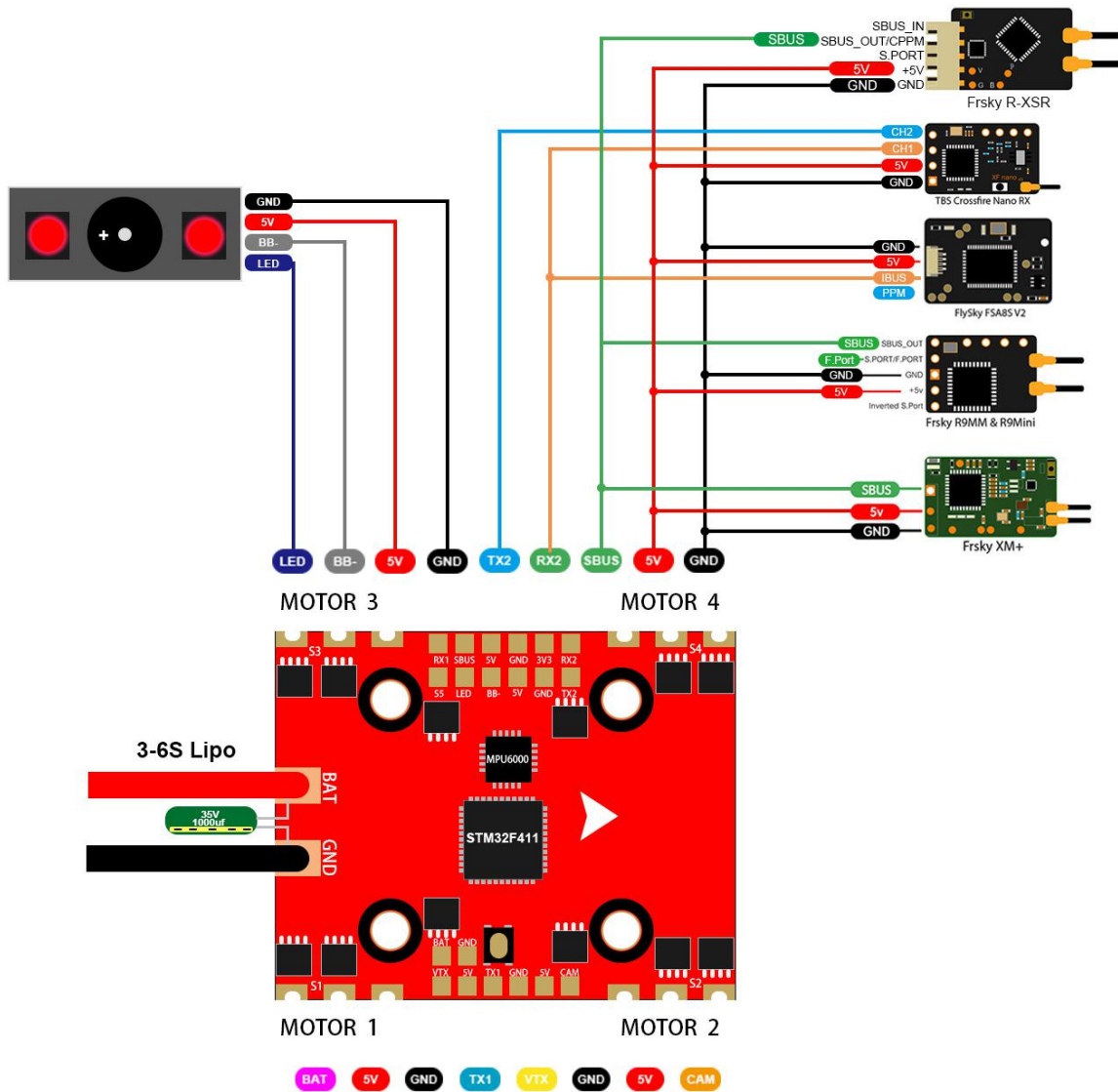
## Package Included

Racwhoop30 HD FPV Racing Drone *1	Accessory Package*1
-----------------------------------	---------------------

# 1. Product Specifications

Product parameters	
Model	Racwhoop30 HD FPV Racing Drone
Frame Kit	Racewhoop30 Frame Kit
Flight Controller	Zeus35 AIO
ESC	35A 4in1
VTX	CADDX Nebula Nano
Motor	2105.5 Motor 4S KV3600 6S KV2800
Support receiver	SBUS .DSMX.i.BUS
Input Voltage	3-6S Lipo

# 2. Interface Description



## 3. Check the flight control drive

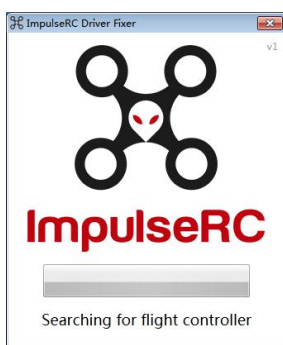
1. Long Press BOOT buttons.connect USB.The system automatically install the driver



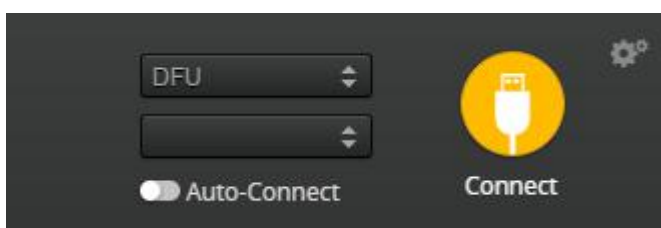
2.Driver cannot be installed, please download ImpulseRC\_Driver\_Fixer



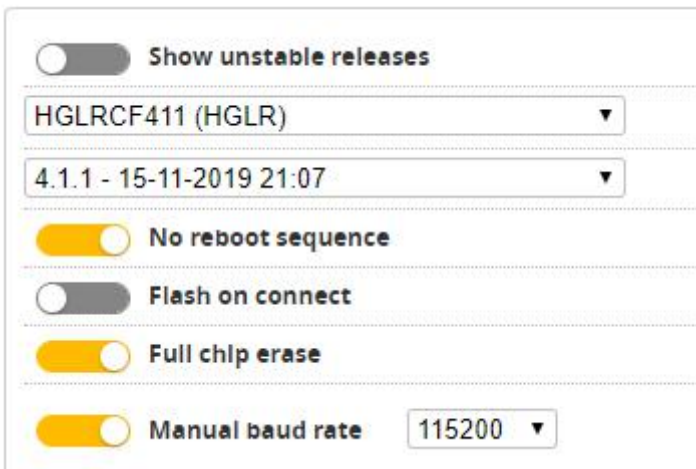
3.Double-click on the run(Plug in the flight controller to automatically install the driver)








4.open betaflyght configurator , enter DFU mode



5. Click  Select firmware version



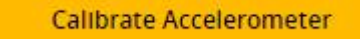
6. Click  Load firmware.  Waiting for completion  It will be prompted upon completion. 

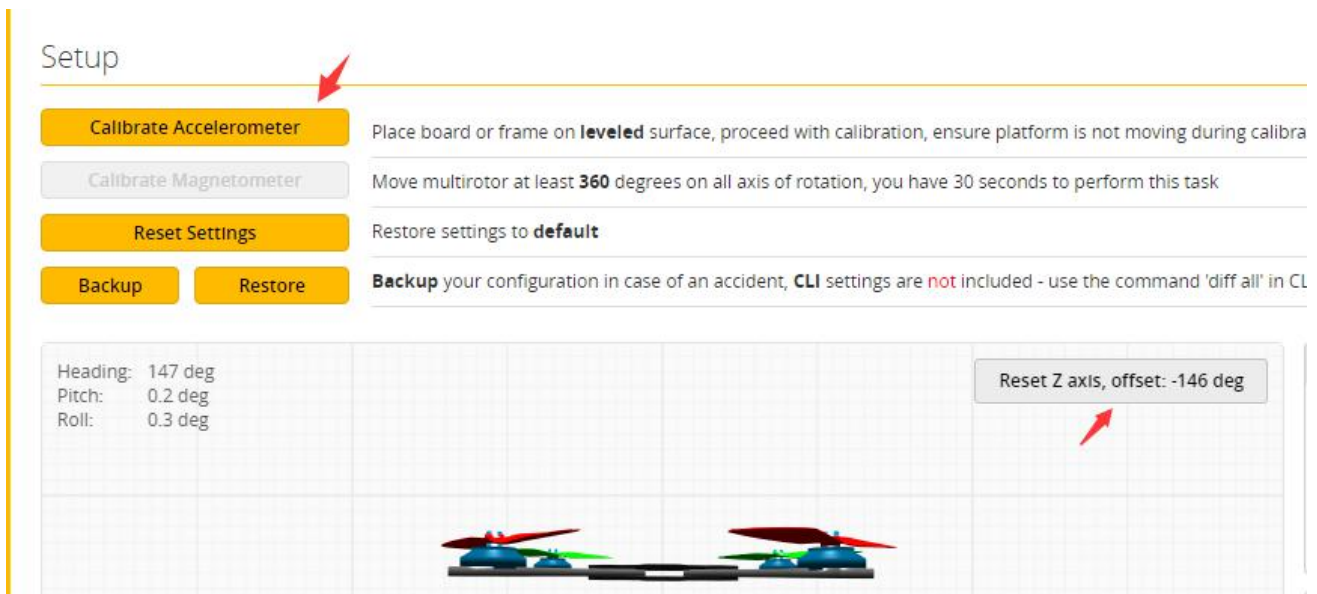
7. open betaflyght configurator  . Controller plugged into the computer. Betaflight Automatically assigned port, click “Connect”  
Enter setup interface ( Different computer COM )



# 4. Calibration accelerometer

1. Put the aircraft horizontal and click “Reset Z axis”

Click again 





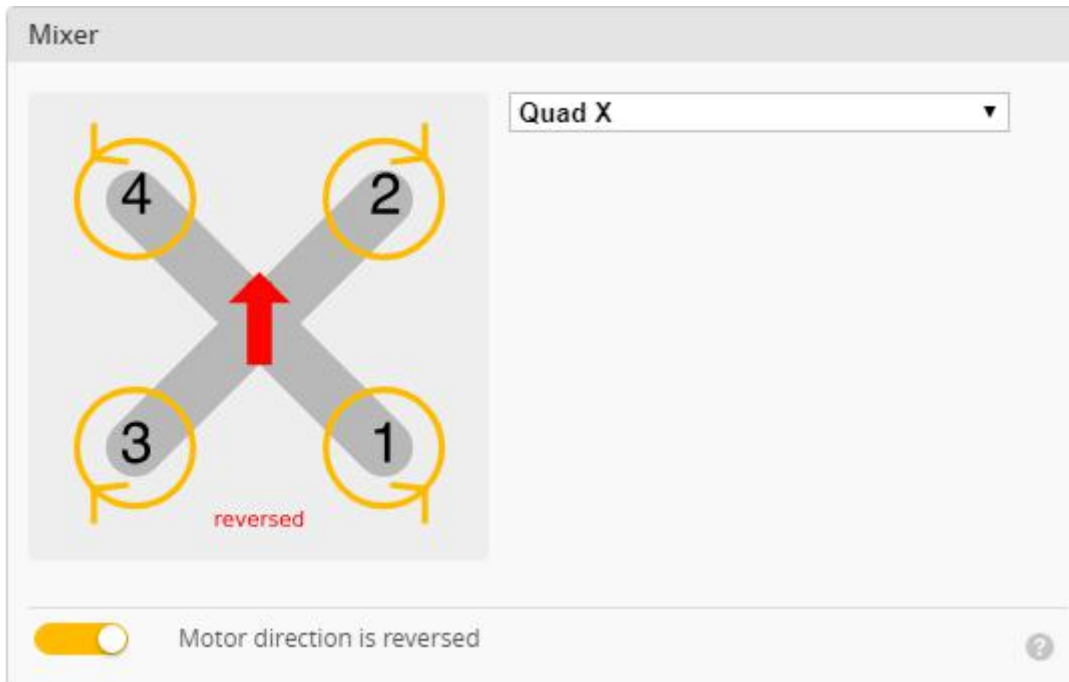
# 5. UART serial port use


UART1 uses VTX image transmission

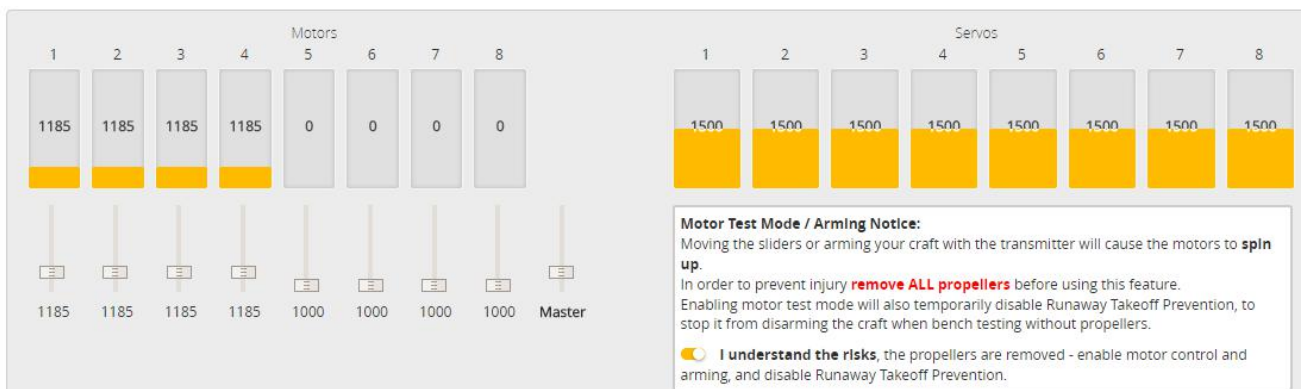
UART2 uses receiver telemetry

# 6. Select aircraft model

1. Click  Configuration  Select model



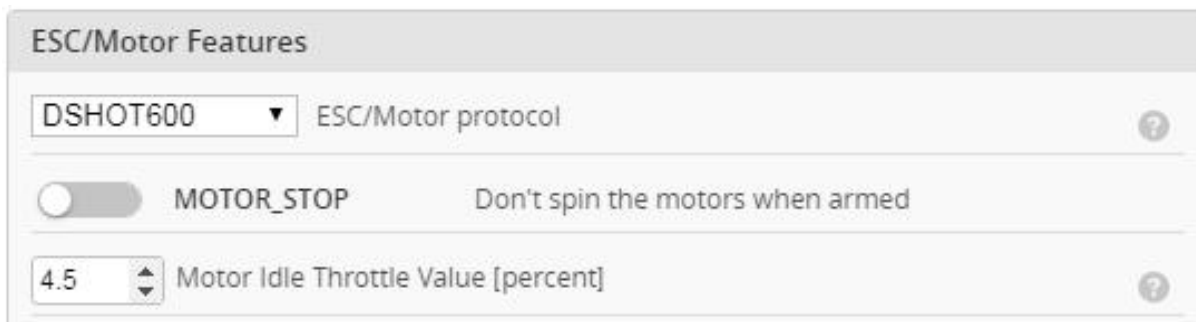
2. Click  Motors Click “**I understand the risks**” Push Master to check motor steering “**Master**” Steering can be changed at [BLHeliSuite](#)





# 7. Choose ESC protocol

1. Choose the right ESC protocol, the optional universal protocol DSHOT600.

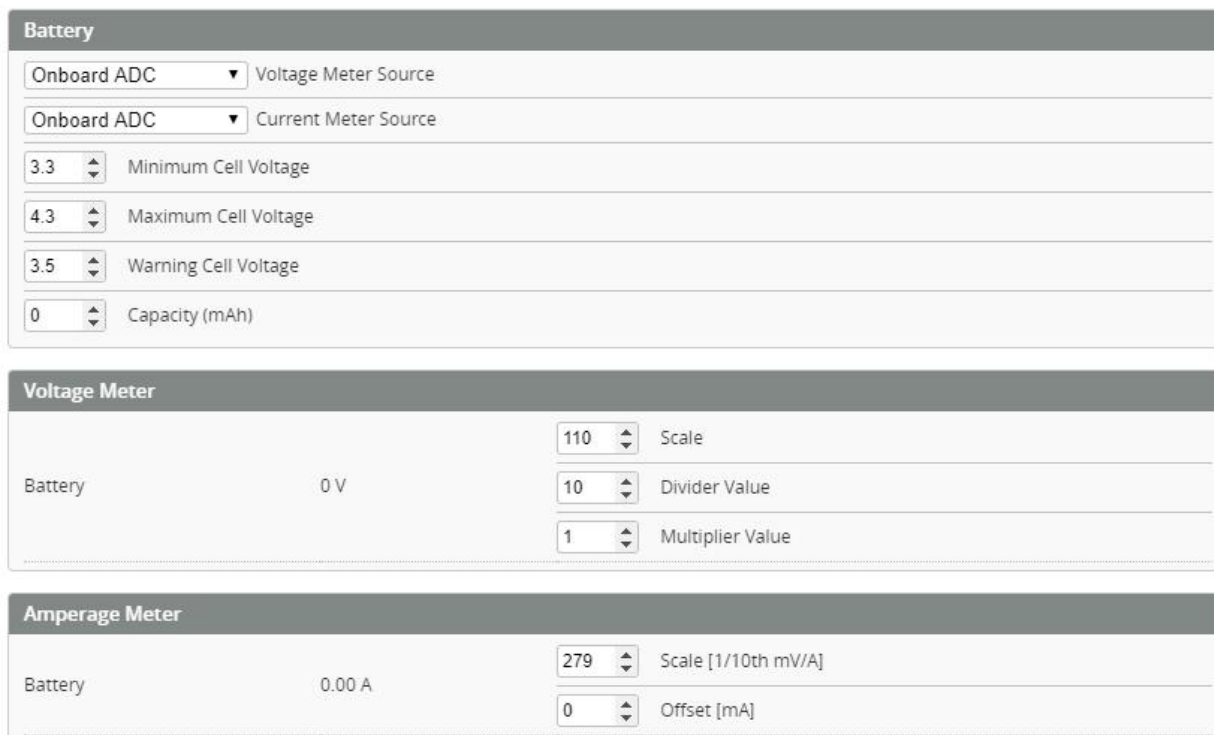


The screenshot shows the 'ESC/Motor Features' configuration panel. It includes a dropdown menu for 'ESC/Motor protocol' set to 'DSHOT600', a toggle switch for 'MOTOR\_STOP' (labeled 'Don't spin the motors when armed'), and a numeric input field for 'Motor Idle Throttle Value [percent]' set to '4.5'.

# 8. Voltage parameters setting

1. Click **Power & Battery** Setting parameters

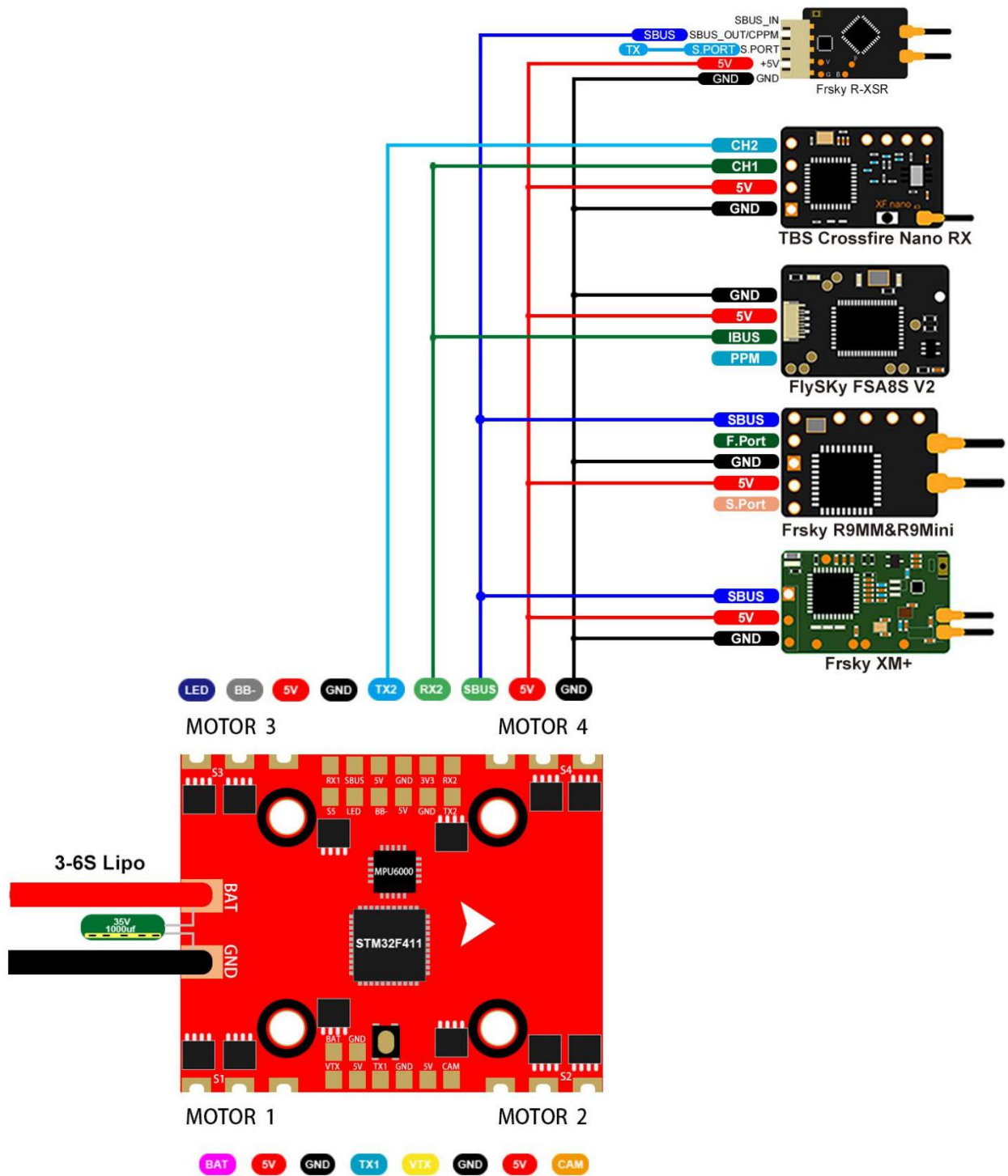
Power & Battery



The screenshot displays the 'Power & Battery' settings page, divided into three sections: 'Battery', 'Voltage Meter', and 'Amperage Meter'.  
- **Battery**: Includes dropdowns for 'Voltage Meter Source' and 'Current Meter Source' (both set to 'Onboard ADC'), and numeric inputs for 'Minimum Cell Voltage' (3.3), 'Maximum Cell Voltage' (4.3), 'Warning Cell Voltage' (3.5), and 'Capacity (mAh)' (0).  
- **Voltage Meter**: Shows a reading of '0 V' and includes numeric inputs for 'Scale' (110), 'Divider Value' (10), and 'Multiplier Value' (1).  
- **Amperage Meter**: Shows a reading of '0.00 A' and includes numeric inputs for 'Scale [1/10th mV/A]' (279) and 'Offset [mA]' (0).

# 9. Setting up the receiver

## 1. Receiver connection diagram



2. Click **Ports**. We have found “**UART2**” Open (**SBUS**) the receiver serial port

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	VTX (IRC Tran ▼ AUTO ▼
UART2	<input type="checkbox"/> 115200 ▼	<input checked="" type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼

3. Open (**i.BUS/DSMX**) receiver serial port

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	VTX (IRC Tran ▼ AUTO ▼
UART2	<input type="checkbox"/> 115200 ▼	<input checked="" type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼

4. Set the **SBUS** receiver

**Receiver**

Serial-based receiver (SPEKSAT, S ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

SBUS ▼ Serial Receiver Provider

5. Set the **i.BUS** receiver

**Receiver**

Serial-based receiver (SPEKSAT, S ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

IBUS ▼ Serial Receiver Provider

6. Set the **DSMX** receiver

**Receiver**

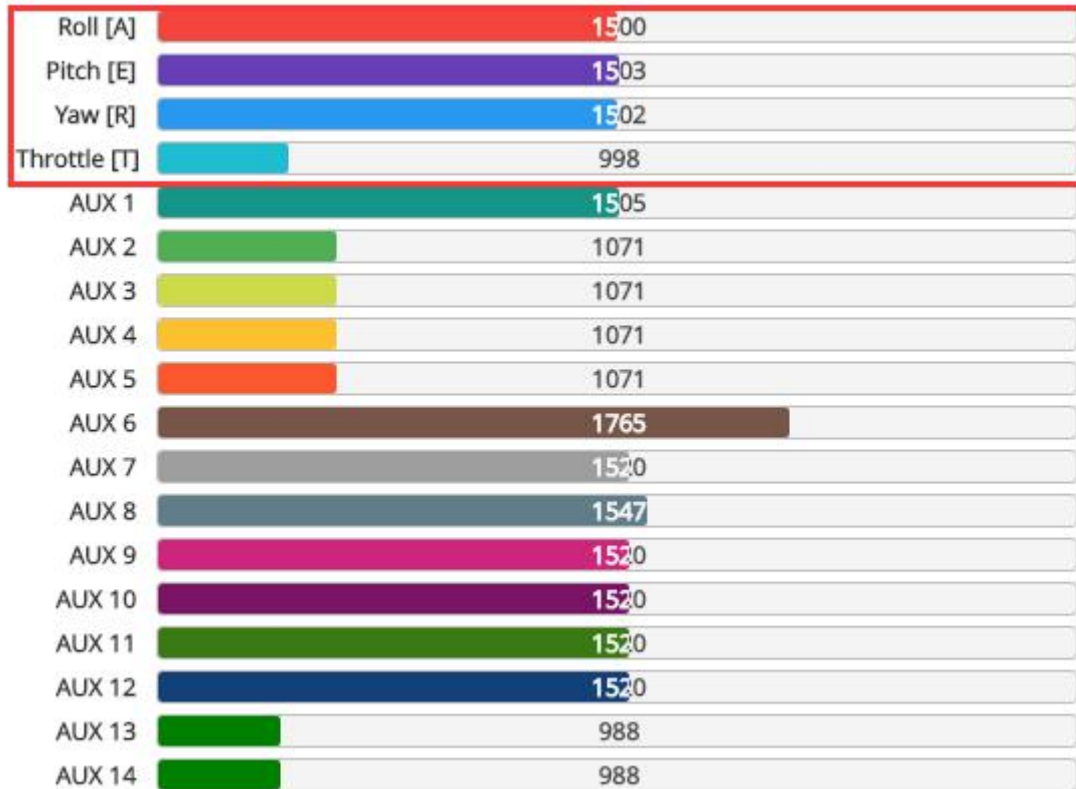
Serial-based receiver (SPEKSAT, S ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

SPEKTRUM2048 ▼ Serial Receiver Provider

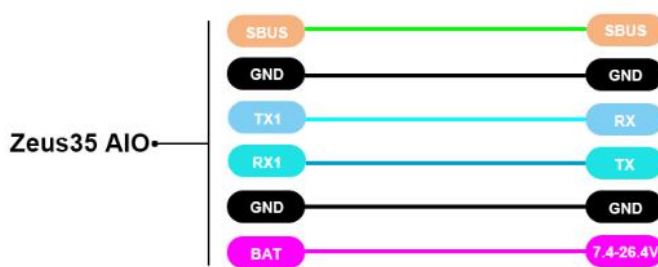
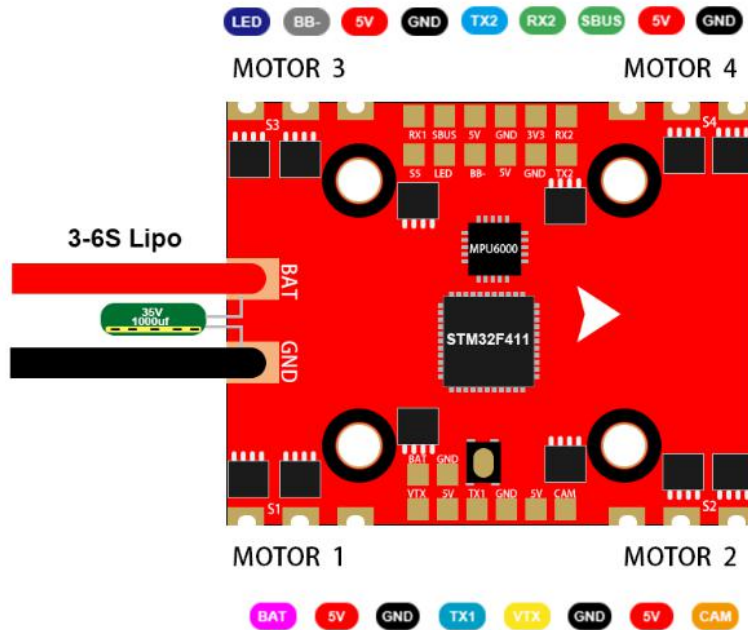
# 10. Check receiver signal

1. Click  Receiver Check the remote control output signal



# 11.VTX serial port use. VTX uses OSD smart audio


## 1.VTX connection diagram



2.VTX serial port opens. The protocol is selected according to its own VTX protocol.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾   AUTO ▾	Disabled ▾   AUTO ▾	Disabled ▾   AUTO ▾
UART1	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾   AUTO ▾	Disabled ▾   AUTO ▾	Disabled ▾   AUTO ▾
UART2	<input type="checkbox"/> 115200 ▾	<input checked="" type="checkbox"/>	Disabled ▾   AUTO ▾	Disabled ▾   AUTO ▾	Disabled ▾   AUTO ▾

# 12.Select flight mode startup mode

1. Click  Modes set up the function of remote control switch across the channel (below are for reference only)

Modes

[WIKI](#)

Use ranges to define the switches on your transmitter and corresponding mode assignments. A receiver channel that gives a reading between a range min/max will activate the mode. Remember to save your settings using the Save button.


Show/hide unused modes



The screenshot shows the Modes configuration interface. It features two mode configuration sections: ARM and ANGLE. Each section has a dropdown menu set to 'AUX 1' and an 'Add Range' button. Below the dropdown is a range slider with a scale from 900 to 2100. The ARM mode slider is set with a minimum of 1300 and a maximum of 2100. The ANGLE mode slider is also set with a minimum of 1300 and a maximum of 2100. A yellow bar highlights the range between the minimum and maximum values on the slider.

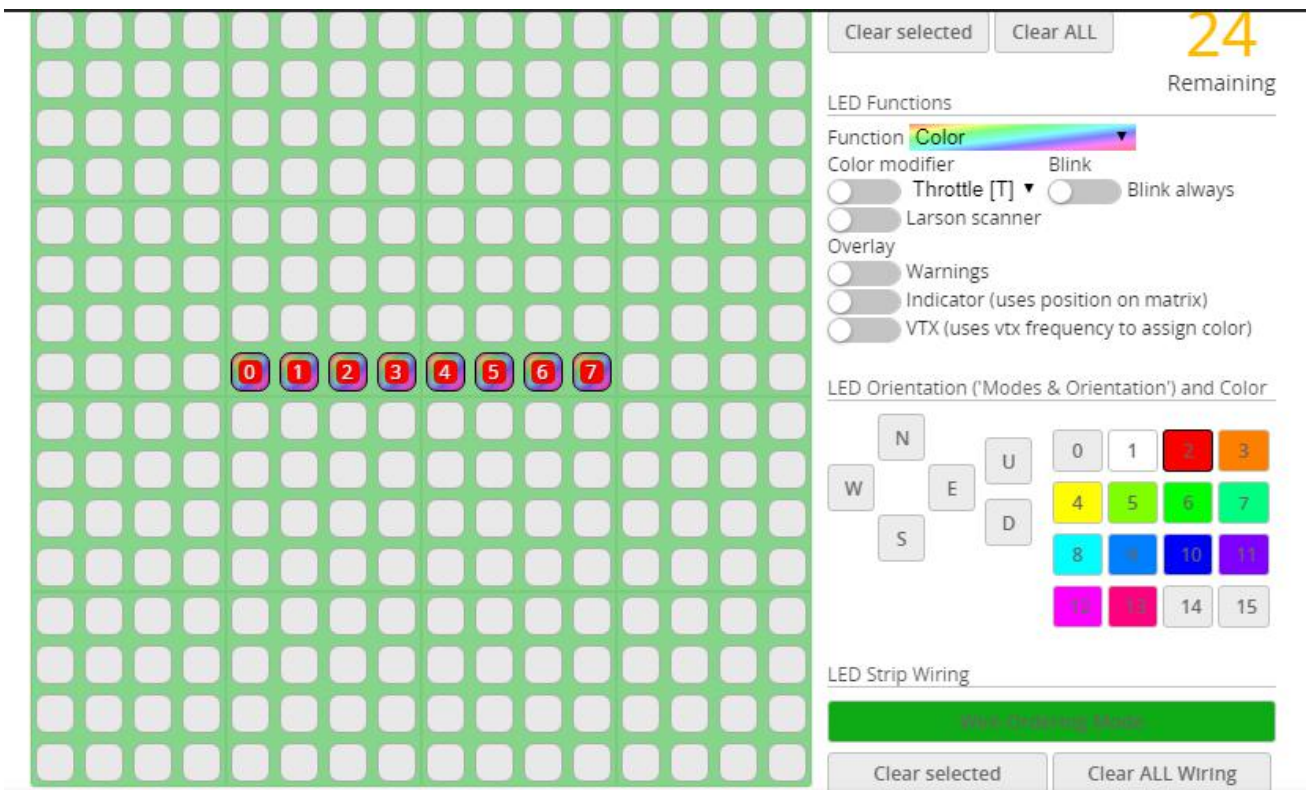


# 13.LED settings

1. Click  Configuration Turn on LED support



2. Click  LED Strip .Click  set according to need



Clear selected Clear ALL **24** Remaining

LED Functions

Function **Color**

Color modifier  Throttle [T]  Blink always

Larson scanner

Overlay

Warnings

Indicator (uses position on matrix)

VTX (uses vtx frequency to assign color)

LED Orientation ('Modes & Orientation') and Color

N	U	0	1	2	3
W	E	4	5	6	7
S	D	8	9	10	11
		12	13	14	15

LED Strip Wiring

**Wire Ordering Mode**

Clear selected Clear ALL Wiring

# 14. Troubleshooting

## Warning:

Please read the cautions as follows, otherwise stability of your flight controller cannot be ensured, your flight controller will even get damaged.

- Keep focus on the polarity. Check carefully before power supply.
- Cut off the power when you connect, plug and pull anything.
- The refresh rate of PID and Gyroscope is up to 8K/8K.

## after sales question:

1. After receiving the goods, it is found that the product can not be used normally. If the return to the factory is a quality problem, the repair service will be provided free of charge.
2. If the product is damaged due to improper operation, the repair service may be provided under the condition that the inspection can be repaired.
3. For domestic customers, please contact the after-sales service personnel. For overseas customers, please contact the official website for after-sales service.



## Product daily problems

### 1.OSD garbled:

If you find garbled characters, please open Betaflight, click “OSD” .and click “Font Manager” clicks on “Upload Font” to update

1. When plugged in the battery, the aircraft does not pass the self-test without "BBB" sound. There is only one sound.

Please check if the ESC agreement is correct

### 3.The spin of the aircraft keeps spinning

1. Please check if the propeller is correct
2. Please check if the motor direction is correct