



# HGLRC Zeus10 AIO Flight Controller User Manual

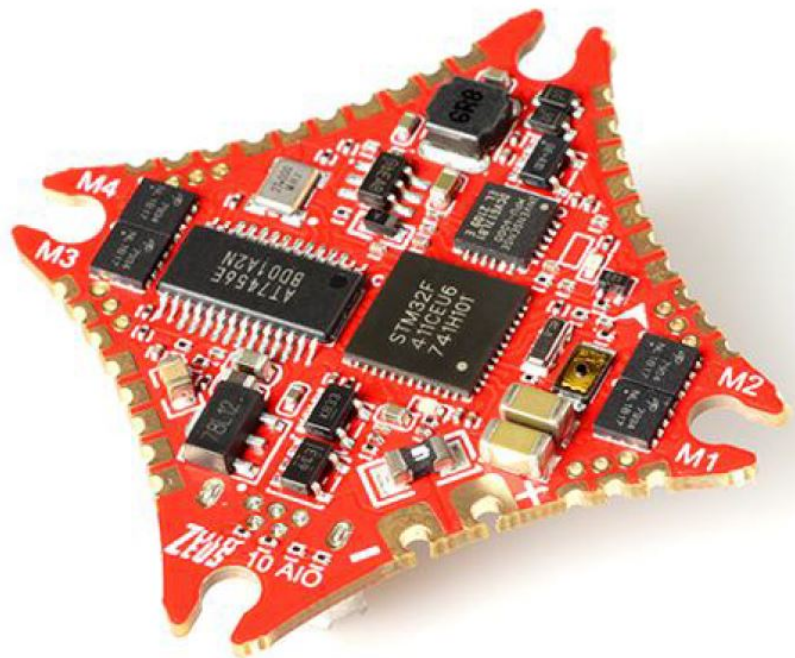
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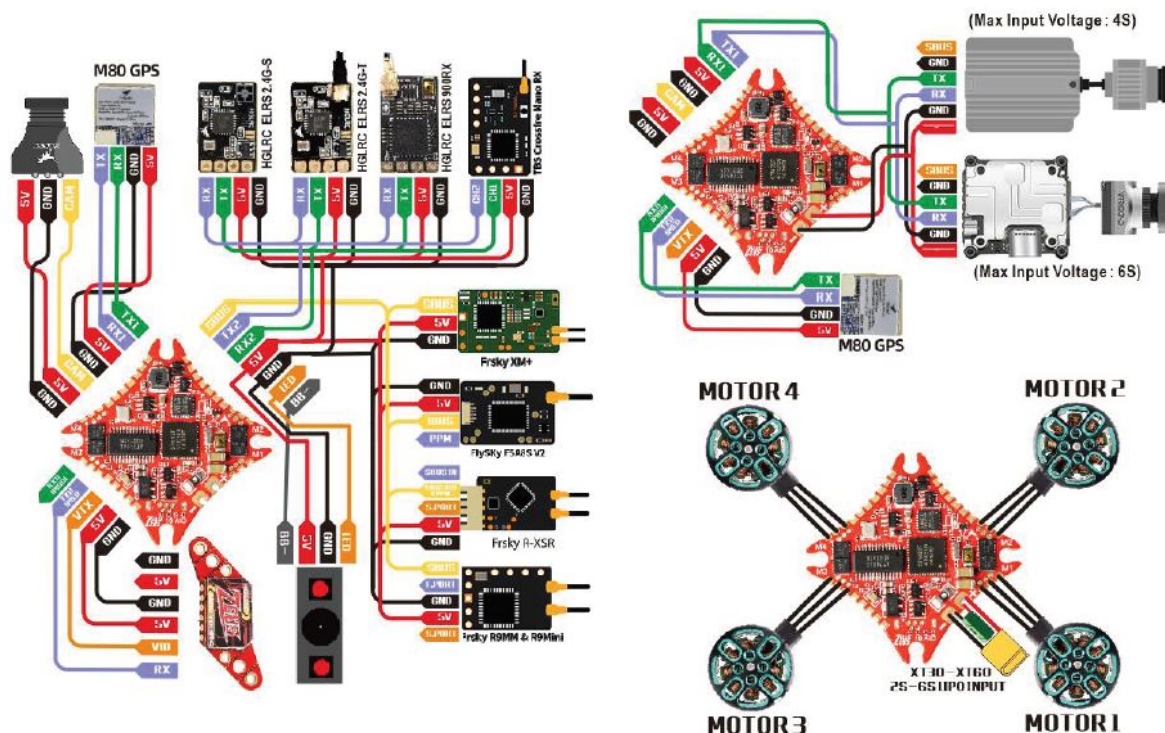
## HGLRC Zeus10 AIO Flight Controller



## Product Specifications

Product parameters	
Model	Zeus10 AIO Flight Controller
Weight	5.1g
Input Voltage	2-6S
Usage	for 100mm-250mm Frame Kit
Installing Hole	25.5×25.5mm/M3
Dimensions	32.5×32.5mm
FC Firmware	BF ZEUSF4EVO
CPU	STM32F411
MPU	MPU6000
BEC	5/2A
BlackBox	8M
UARTS	3
ESC Firmware	BL_S/(P_H_10)
Current Sensor	not support
Constant Current	10A
Peak Current	15A 5S

## Interface Description



## Check the flight control drive

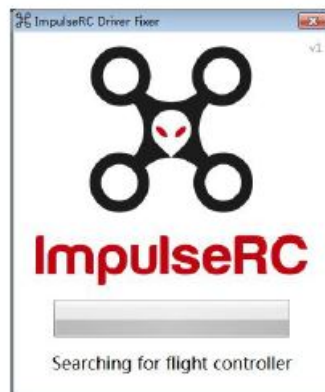
1. Long Press BOOT buttons. connect USB. The system automatically installs the driver



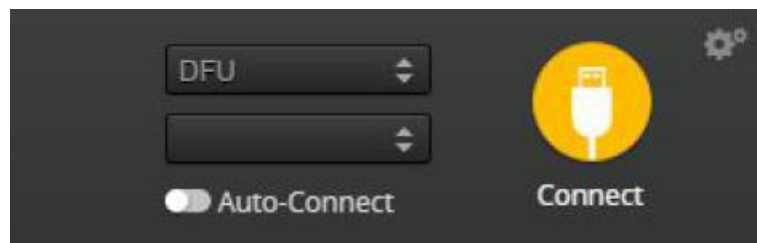
2. The driver cannot be installed, please download ImpulseRC\_Driver\_Fixer



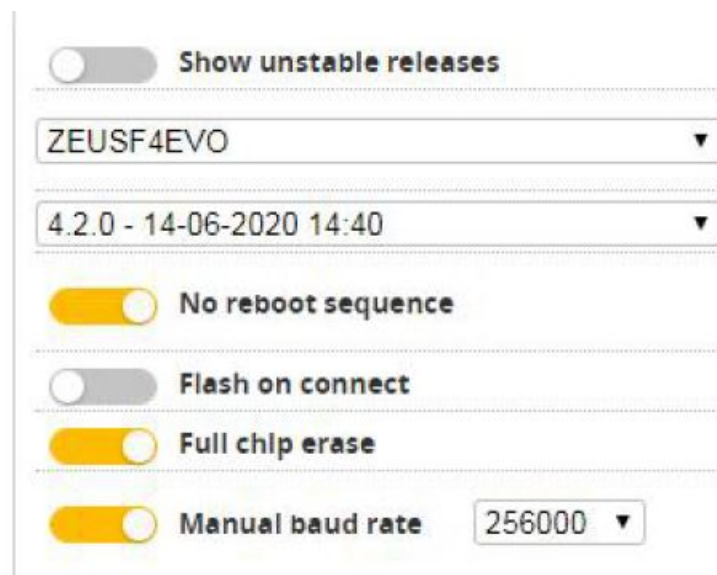
3. Double-click on the run(Plug in the flight controller to automatically install the driver)



4. open beta flight configurator enter DFU mode

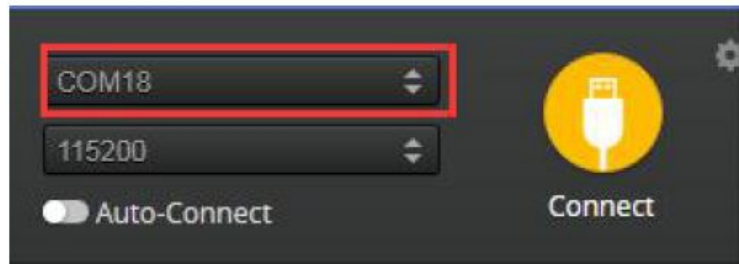


5. Click Select firmware version



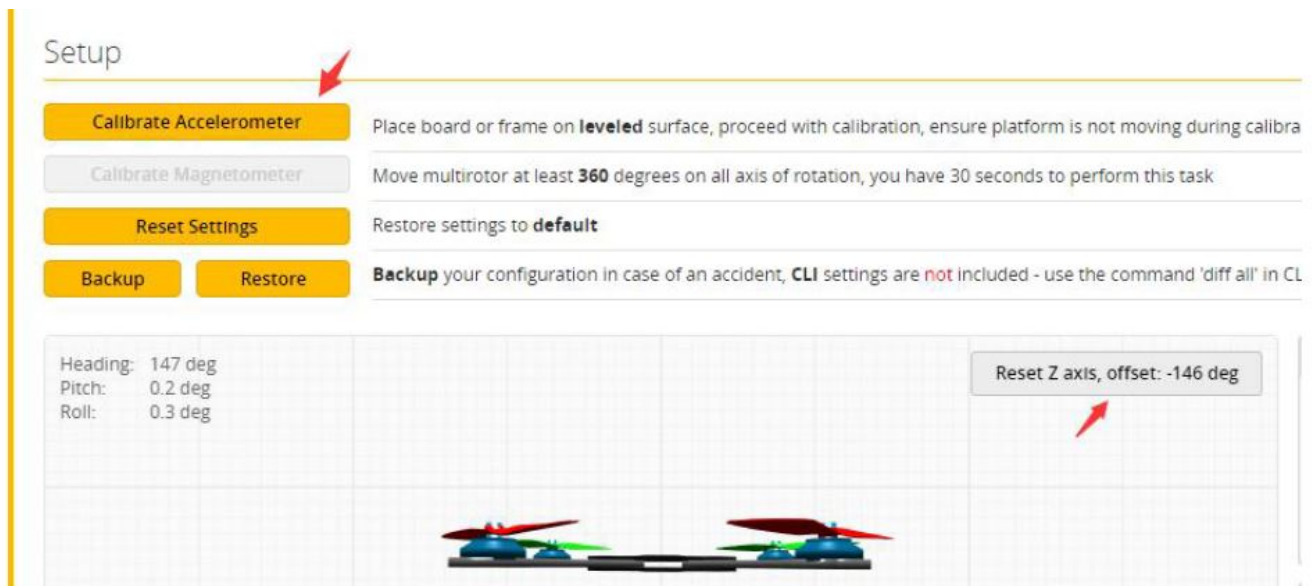
6. .Click Load firmware. Waiting for completion It will be prompted upon completion.

7. open beta flight configurator. Controller plugged into the computer. Betaflight Automatically assigned port click "Connect" Enter setup interface Different computer COM



### Calibration accelerometer

1. Put the aircraft horizontal and click "Reset Z axis" Click again

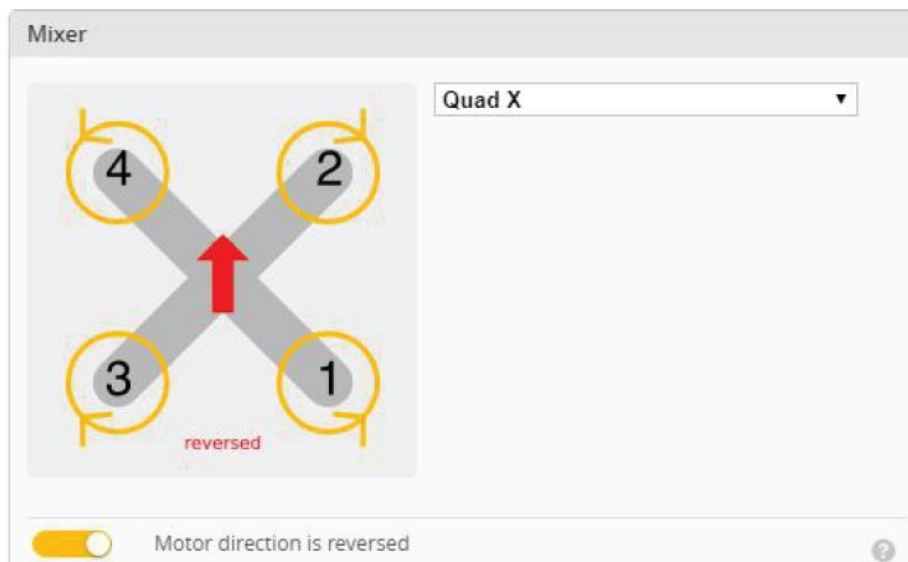


### UART serial port use

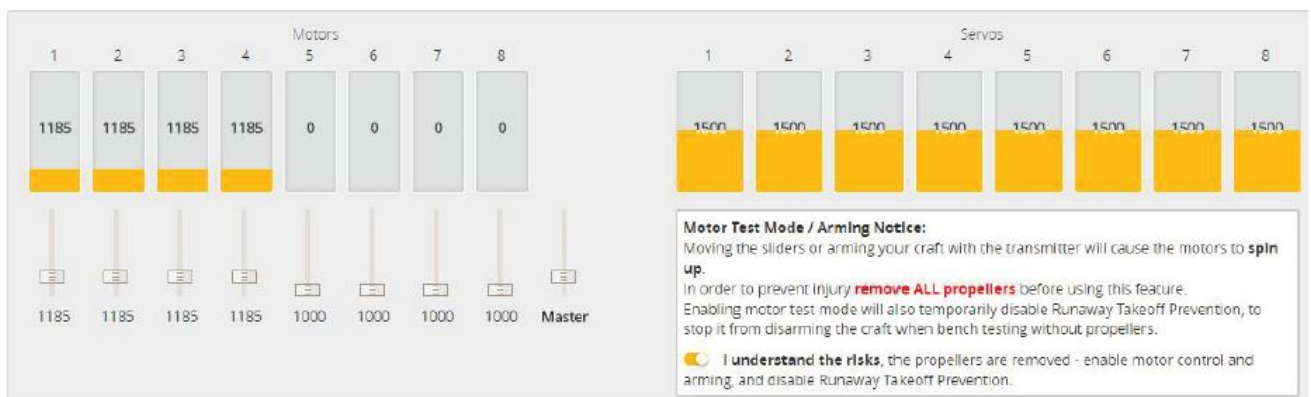
1. UART1 uses DJI/GPS
2. UART2 uses Receiver
3. SOFTSERIAL1 uses VTX/GPS

### Select aircraft model

1. Click Select model

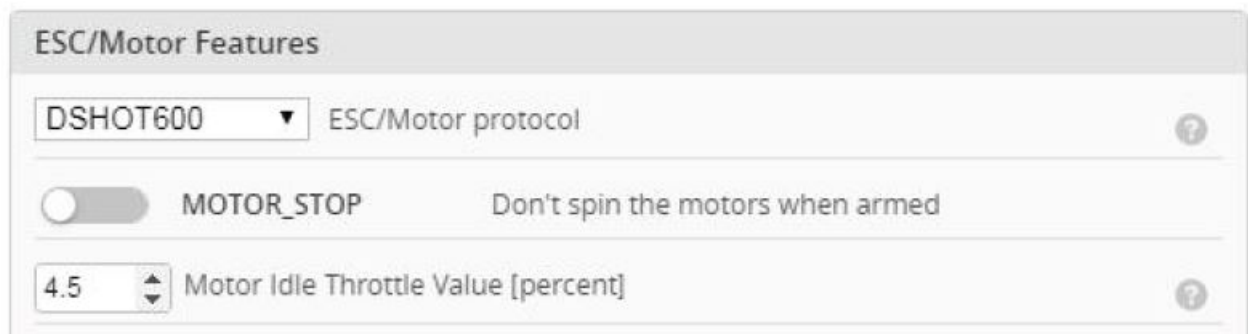


2. Click Click "I understand the risks"Push Master to check motor steering"Master"Steering can be changed at BLHeliSuite



## Choose ESC protocol

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



## Voltage and current parameters setting

1. Click Setting parameters



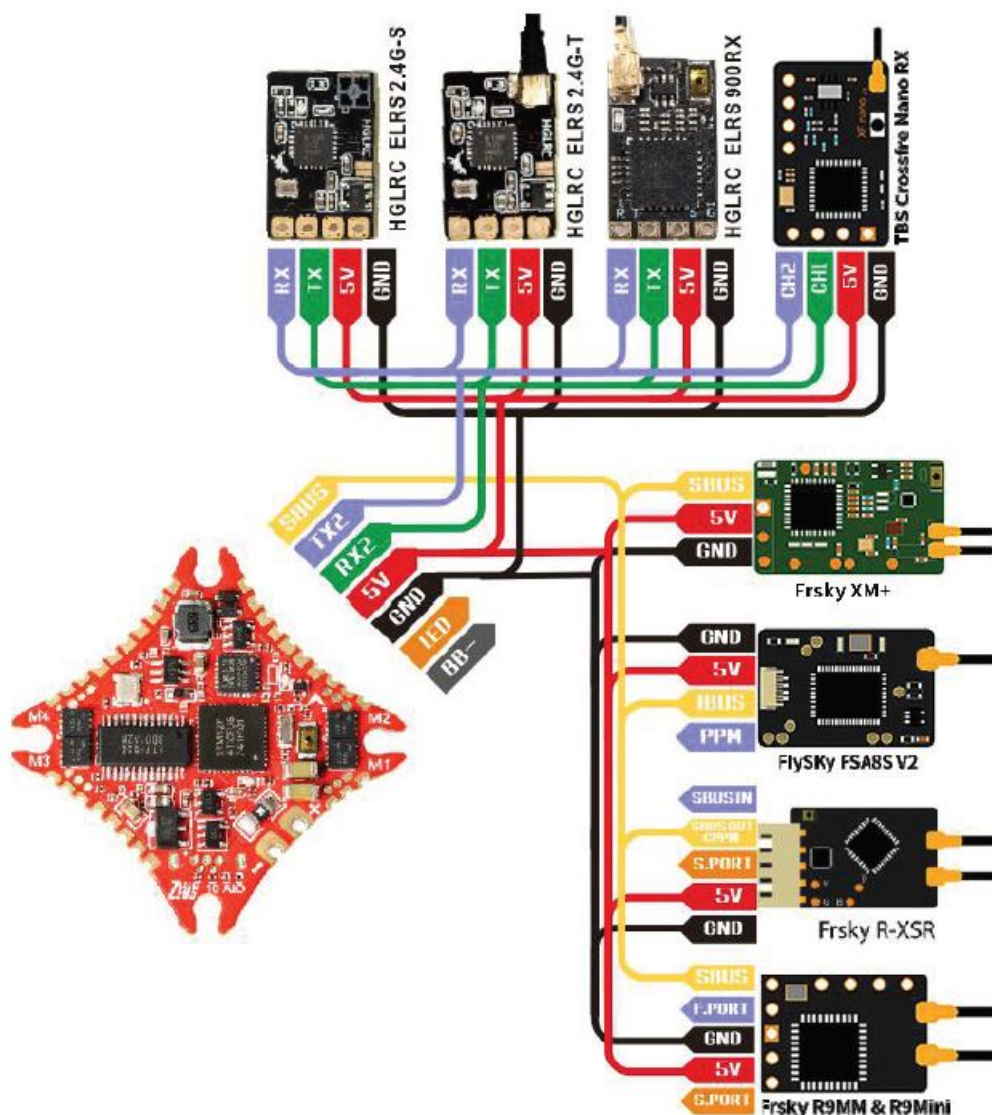
Battery	
Onboard ADC	Voltage Meter Source
Onboard ADC	Current Meter Source
3.3	Minimum Cell Voltage
4.3	Maximum Cell Voltage
3.5	Warning Cell Voltage
0	Capacity (mAh)

Voltage Meter	
Battery	0 V
110	Scale
10	Divider Value
1	Multiplier Value

## Setting up the receiver

### 1. Receiver connection diagram

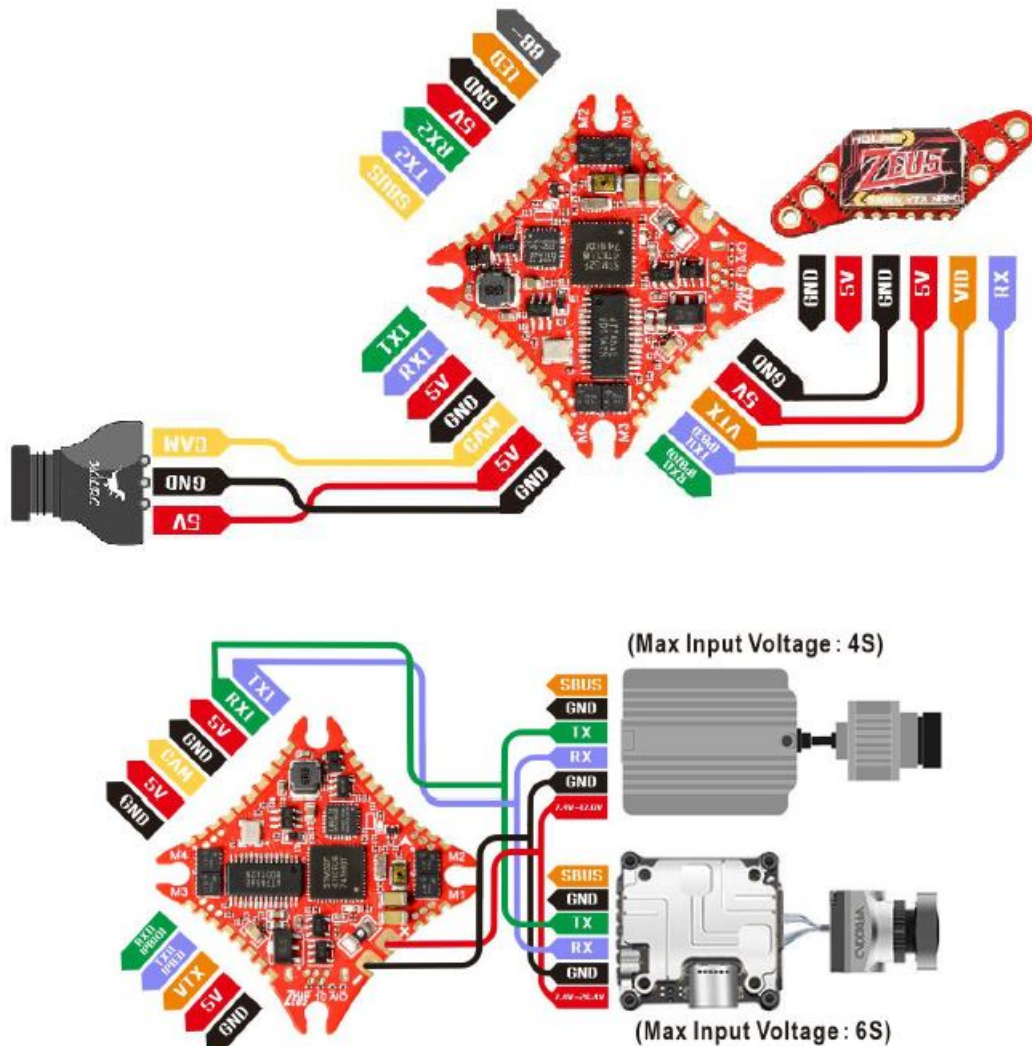


### 2. Click .have found“UART2”Open the receiver serial port

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 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 ▾
SOFTSERIAL1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	VTX (IRC Tran ▾ AUTO ▾

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 ▾
SOFTSERIAL1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	VTX (IRC Tran ▾ AUTO ▾

#### 3. DJI serial port opens

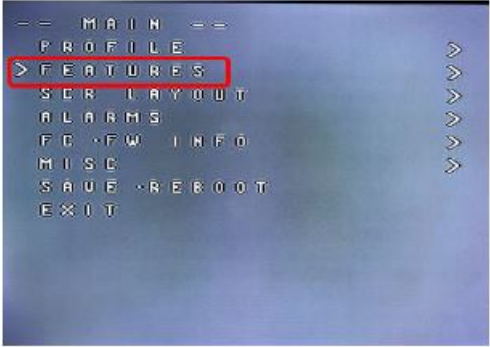
Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART2	<input type="checkbox"/> 115200 ▾	<input checked="" type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
SOFTSERIAL1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	GPS ▾ 115200 ▾	Disabled ▾ AUTO ▾

#### 4. Use OSD to adjust VTX

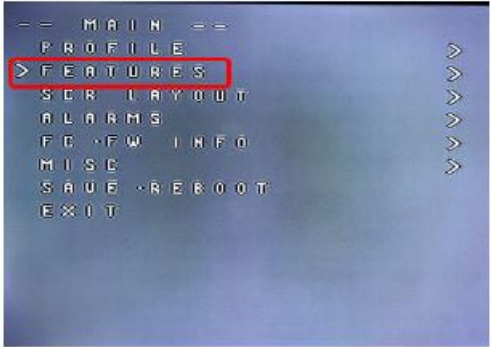
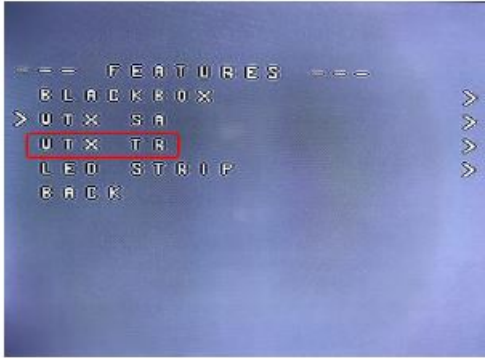
which displays information like battery voltage and mAh consumed while you fly. In addition, the Betaflight OSD



can be used to configure the quadcopter, making in-field adjustments and tuning more convenient. The graphics above show the stick command to bring up the OSD menu. The stick command is: throttle centered, yaw left, pitch forward. The exact stick command therefore depends on which mode your transmitter sticks are in. In the OSD menu, use pitch up/down to move the cursor between menu items. When a menu option has a > symbol to the right of it, this indicates that it contains a sub-menu. Roll-right will enter the sub-menu. For example, in the screen to the right, moving the cursor to “Features” and then moving the roll stick to the right will enter the “Features” sub-menu.

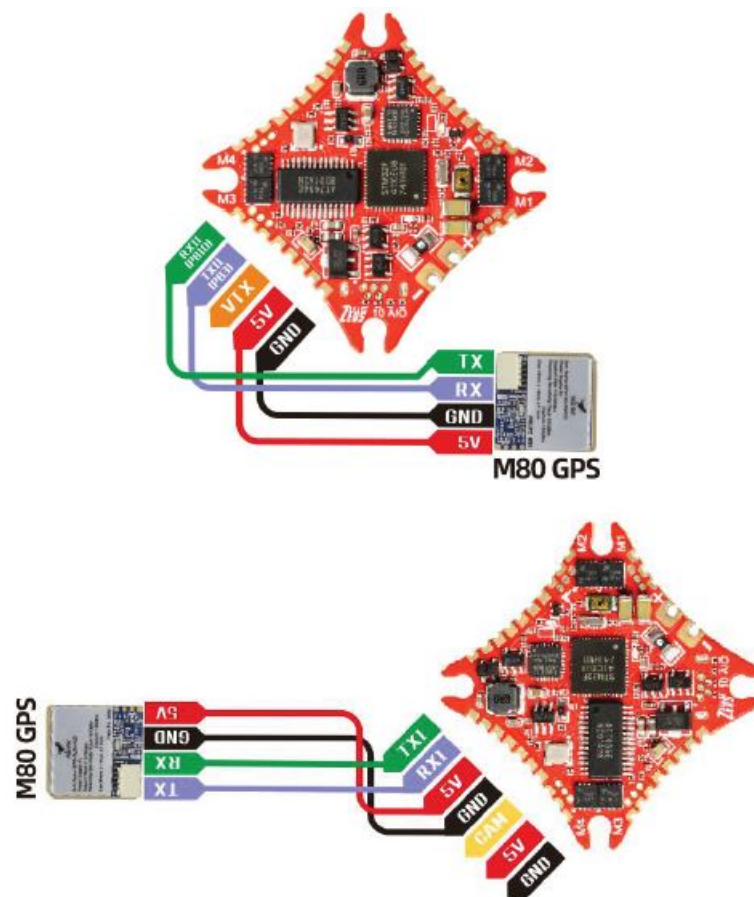


configuration, enter the “Features” menu to configure the vTX. From there, enter either “VTX SA” if you are using SmartAudio (TBS Unify) or “VTX TR” if you are using IRC Tramp Telemetry. To adjust PIDs, rates, and other tuning-related parameters, enter the “Profile” sub-menu. In the “Scr Layout” sub-menu, you can move the OSD elements (like battery voltage, mAh, and so forth) around on the screen. The “Alarms” sub-menu lets you control when the OSD will try to alert you that battery voltage is too low or mAh consumed is too high. When a parameter can be modified, the parameter’s current value will be shown on the right-hand side of the screen. In this case, roll left/right will adjust the parameter up and down. The screen to the right shows the current vTX settings. From here, you can change the frequency band, channel, and power level of the video transmitter. After making the changes, move the cursor to “Set” and press roll-right to confirm the settings.



**GPS parameters setting**

- 1. GPS connection diagram



- GPS only can use for soft serial port if using hd(dji,vista) vtx.
- GPS only can use for RX1 TX1 if using analog vtx.

2. Open the GPS serial port: GPS only can use for RX1 TX1 if using analog vtx

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 ▼	GPS ▼ 115200 ▼	Disabled ▼ AUTO ▼
UART2	<input type="checkbox"/> 115200 ▼	<input checked="" type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
SOFTSERIAL1	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	VTX (IRC Tran ▼ AUTO ▼

3. GPS only can use for soft serial port if using hd(dji,vista) vtx

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 ▼
SOFTSERIAL1	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	GPS ▼ 115200 ▼	Disabled ▼ AUTO ▼

4. When using the GPS function, remember to configure the serial port (via the Ports tab)

GPS

☒ GPS
GPS for navigation and telemetry

Note: Remember to configure a Serial Port (via Ports tab) when using GPS feature.

UBLOX ▼ Protocol

☐ Auto Baud

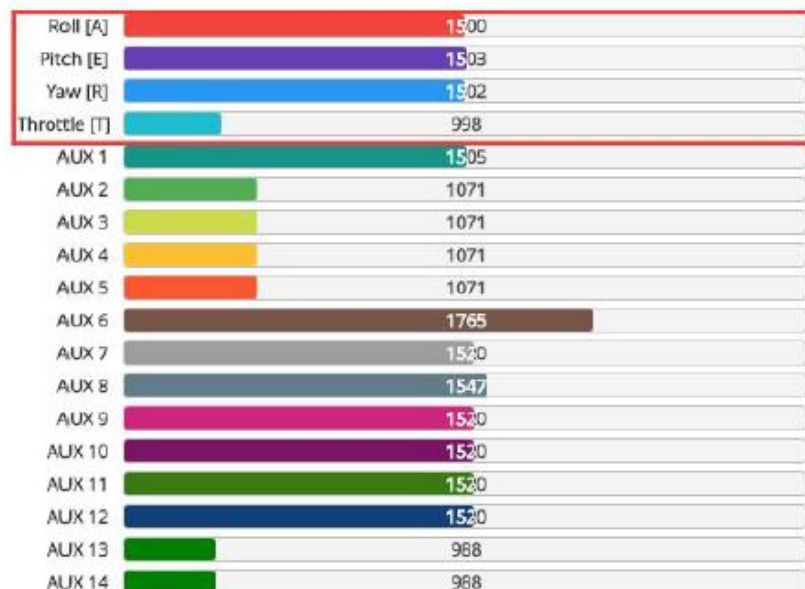
☒ Auto Config

Auto-detect ▼ Ground Assistance Type

0.00 ▼ Magnetometer Declination [deg]

Check receiver signal

1. Click Check the remote control output signal



## Select flight mode startup mode

1. Click 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

ARM

AUX 1

Min: 1300 Max: 2100

900 1000 1200 1400 1500 1600 1800 2000 2100

Add Range

ANGLE

AUX 1

Min: 1300 Max: 2100

900 1000 1200 1400 1500 1600 1800 2000 2100

Add Range

## OSD settings

1. Click the OSD Settings, according to the need to choose, drag the OSD schematic diagram of the parameters can be adjusted

Elements

Switch all: ☐

- ☐ RSSI Value
- ☒ Main Batt Voltage
- ☐ Crosshairs
- ☐ Artificial Horizon
- ☐ Horizon Sidebars
- ☐ Timer 1
- ☐ Timer 2
- ☐ Flymode
- ☐ Craft Name
- ☐ Throttle Position
- ☐ Vtx Channel
- ☐ Current Draw
- ☐ Mah Drawn
- ☐ GPS Speed

Preview (drag to change position)

Logo: ☒

Video Format

☒ AUTO ☐ PAL ☐ NTSC

Units

☐ IMPERIAL ☒ METRIC

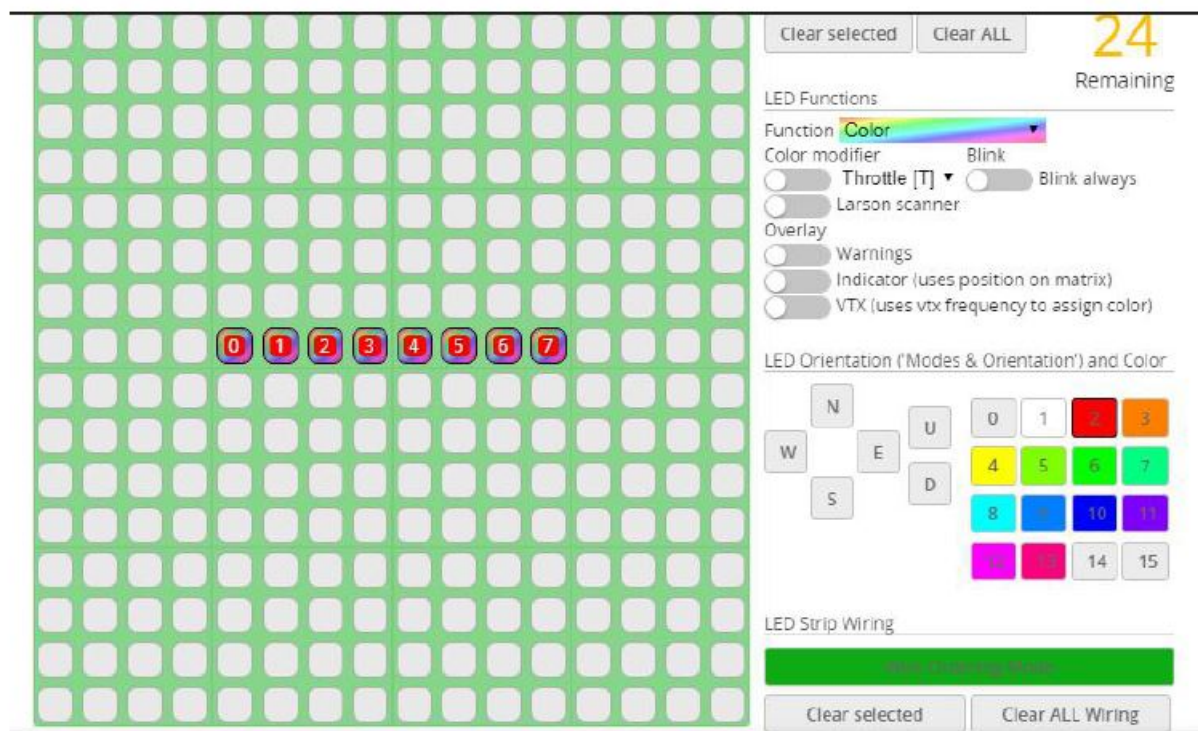
Timers

1 Source: ON TIME Precision: SECOND Alarm: 10

2 Source: TOTAL ARMED TIME Precision: SECOND Alarm: 10

## LED settings

1. Click Turn on LED support



## 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

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.
2. Please check if the ESC agreement is correct
3. The spin of the aircraft keeps spinning
  - Please check if the propeller is correct

- Please check if the motor direction is correct

## Documents / Resources

	<p><a href="#">HGLRC Zeus10 AIO Flight Controller</a> [pdf] User Manual Zeus10 AIO Flight Controller, Zeus10 AIO, Flight Controller</p>
	<p><a href="#">HGLRC Zeus10 AIO Flight Controller</a> [pdf] User Manual Zeus10 AIO Flight Controller, Zeus10 AIO, Flight Controller, Controller</p>

Manuals+