Firefly baby quad Manual

VISTA HD BF Version

1/ drone introduction

Review: Flywoo Baby Quad – Tiny Whoop Sized Drone Carrying GoPro

In an effort to push the boundaries of carry the camera on the smallest platform, Flywoo designed the smallest quadcotper possible in their history.
Firefly Baby Quad , a nano- sized fpv drone designed to carry Insta 360go ， SMO 4K camera for some action flying.
Weighing in at just 59g , the Firefly Baby Quad is small , flexible, stable , but is full of power and offers unmatched control . Pilots can quietly enjoy the fun of shooting a video without jelly.
The Baby Quad is equipped with GOKU F745 13A STACK and 4pcs ROBO 1202.5 5500KV motors, to bring the Firefly a quiet, stable, flexible and long flight time characteristics. Perfect for the indoor and outdoor recording every beautiful flying moment!

Battery recommend
Flight time:
About 4:30min flight with Explorer 450mAh 4S battery
About :3:30 min flight with Explorer 300mAh 4S battery

2/ Configuration and wiring diagram description

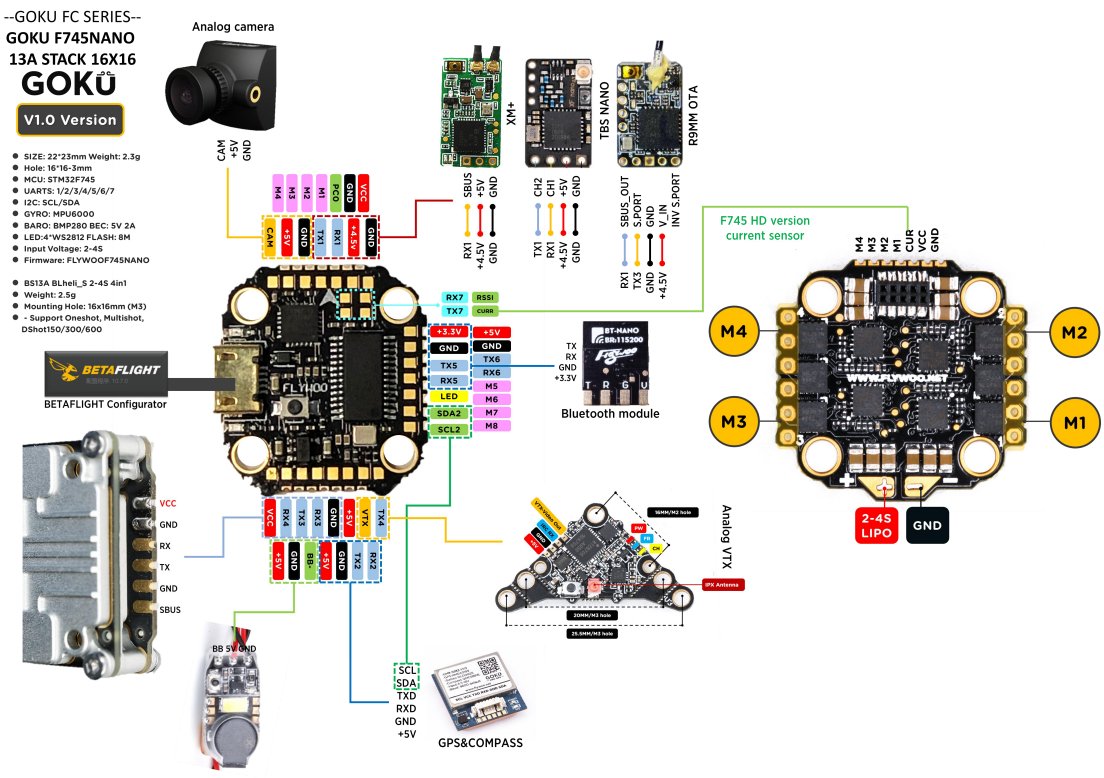
Specifications

Item: Firefly hex nano HD 1.6'' quadcopter w/Caddx Vista
Weight: 59g (without battery)
Wheelbase: 80mm
FC & ESC : GOKU F745 16*16 STACK - (FC+13A ESC)
Frame: Firefly Baby Quad Frame (HD Verison)
Motors: Robo 1202.5 5500KV
Props: HQ 40mm 4-Blades Props
Receiver Option: Frsky XM+ / TBS Crossfire
HD digital camera & VTX: Caddx Nebula Nano HD System
Antenna: Atomic 5.8GHz Antenna Length 30mm (LHCP)
Battery: 4S 450mAh / 4S 300mAh battery (Not including

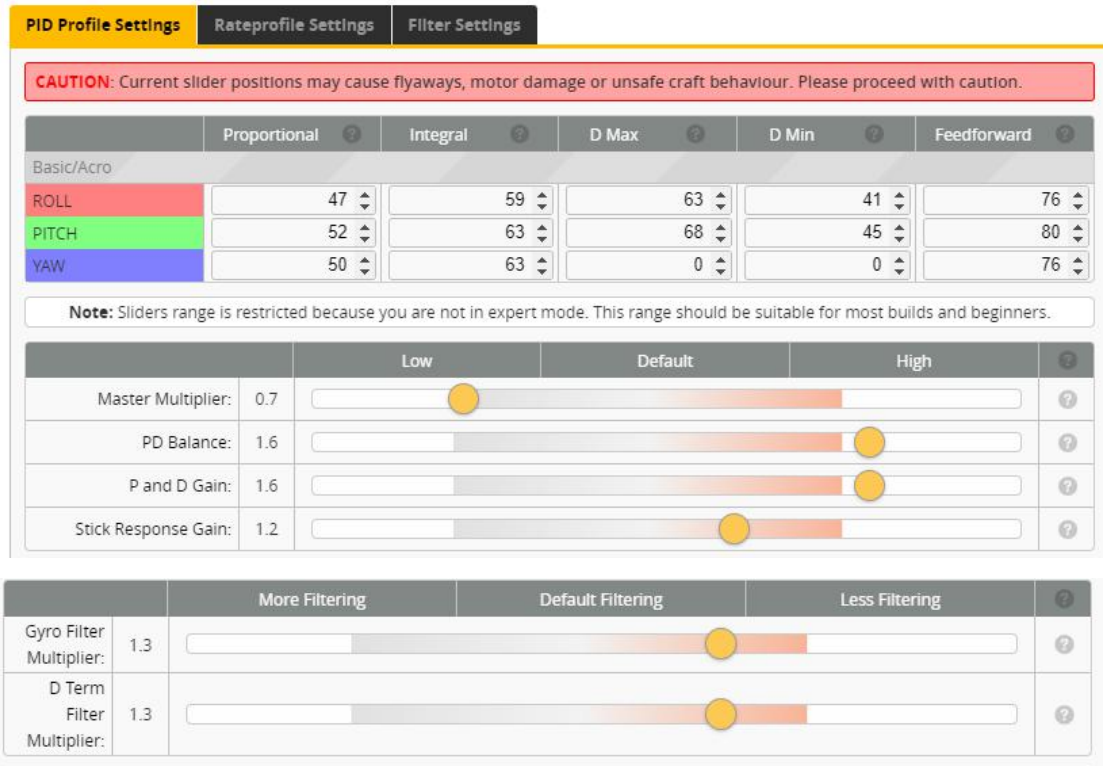
Naked Polar Nano V2

To keep minimizing weight and optimal performance, we modified Polar HD Nano kit to save 10g weight. Flywoo is exploring more possibilities in the ultralight field. . This kit also can support with DJI goggles. With DJI goggles, Users can choose 25mW/200mW/500mW/700mW from DJI goggle
settings.

Super non-slip upgrade
High Quality sticky battery pad for your LiPo Batteries. This durable battery pads made from PU material can stick to a battery at 90° on its side and even rotate 180° without falling! Flywoo's newest strap offering is a perfect balance of light weight, functionality and durability. The surface of the Strap is covered with non-slip silicone . Perfect for micro drones



PID and filter settings



Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals	
USB VCP	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	
UART1	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	RX IN
UART2	115200		Disabled AUTO	GPS 9600	Disabled AUTO	GPS Serial Port
UART3	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	VISTA OSD UART
UART4	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	VISTA SBUS IN
UART5	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	Bluetooth Module
UART6	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	NULL
UART7	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO	NULL

If using DJI remote control, turn on UART4 RX and turn off UART1 RX, Set the receiver protocol to SBUS

UART1: TBS/R9M/XM+/DSMX/SBUS receiver
UART2: NULL
UART3: VISTA OSD TX/RX
UART4: VISTA SBUS RX (Only use DJI remote control to turn on, and turn off RX1)
UART5: NULL
UART6: NULL
UART7: NULL

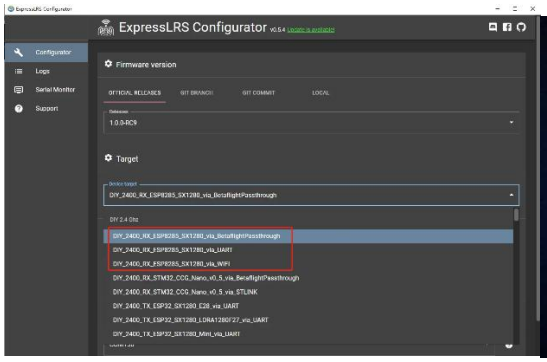
3/ Receiver binding

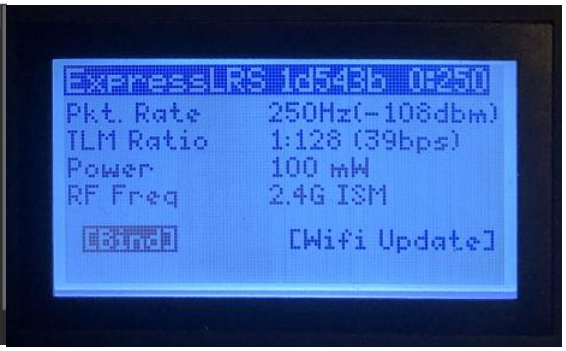
TBS NANO 915:

When the USB is connected, the green light of the receiver flashes, and then bind according to the picture operation.

https://www.youtube.com/watch?v=-iNkVcOLITM&ab_channel=Danimal3D

ELRS 2.4G RX:





Bind procedure:

- Supply power to the EL24E/EL24P rx, wait until the LED on the RX is off, immediately turn off the power, and then repeat again the above steps. When the RX is powered on

for the third time, the LED light will start to double-flash, which means that the RX enters the binding mode

- Insert the 2.4G ELRS TX to Radio transmitter, and choose External RF mode to CRSF protocol, then you can find ELRS menu from the Radio systems(Need to copy the ELRS.LUA file to the SD-Card tools first), Enter into ELRS and press [Bind], the LED on the RX module will getting to be solid if bind successfully.

- Receiver LED status meanings:

EL24E/EL24P RX: LED solid means bind successful or Connection established; LED double-flash means in bind mode; LED flash slowly means no signal connection from the TX module; LED flash fast means in WIFI hotspot mode, you can connect the WIFI of the RX and upgrade firmware of the RX via visit 10.0.0.1 from the web browser(password: expresslrs)

R9MM FCC ACCESS OTA：

Make sure your remote control supports ACCESS protocol, then follow the link to register and bind

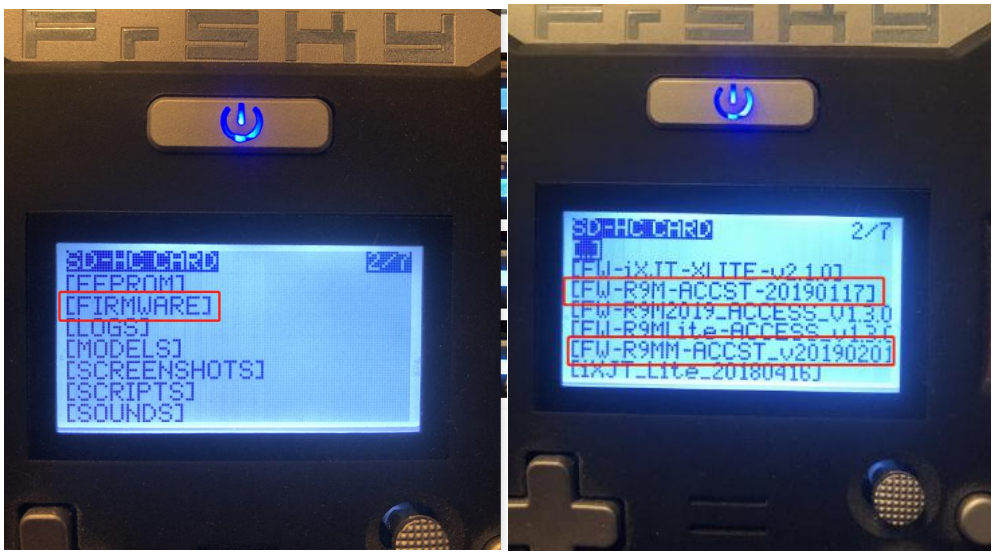
https://www.youtube.com/watch?v=az5hDdNBcjg&t=9s&ab_channel=FrSkyRC

If the remote control is ACCST protocol, please bind as follows:

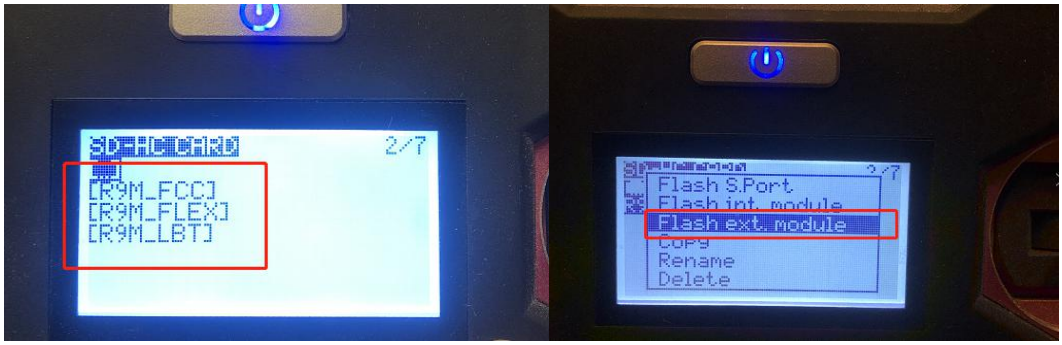
1/ Put these two files into the firmware directory of the SD card of the remote control.

R9MM firmware: FW-R9MM-ACCST_v20190201

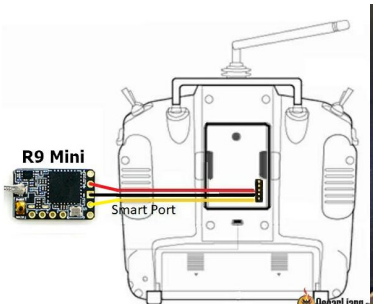
R9M TX module: FW-R9M-ACCST-20190117

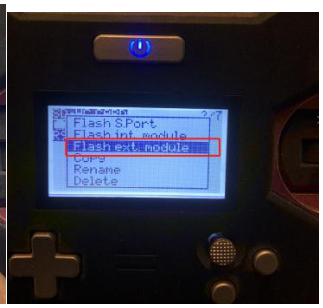


2/ Insert the R9M TX module and write the firmware you need



3/ To write the firmware of the R9MM receiver, you need to remove the R9MM receiver, and then write the firmware by connecting to the S.PORT port.





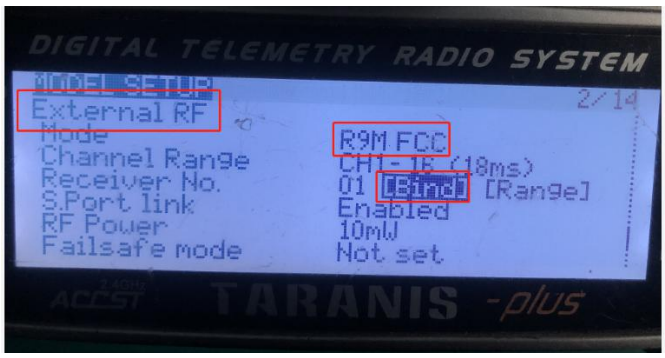
4/ After both R9M TX and R9MM RX are written into the ACCST firmware.

Binding method:

1/ Press and hold the button of RX, power on, the red and green lights are always on.

2/ Then after R9MM selects binding, RX red light flashes, and then exit

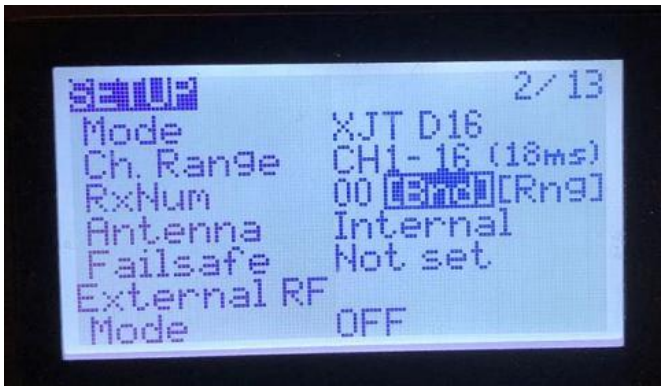
3/ RX is powered on again, and only a green light is displayed, indicating that the binding is successful.



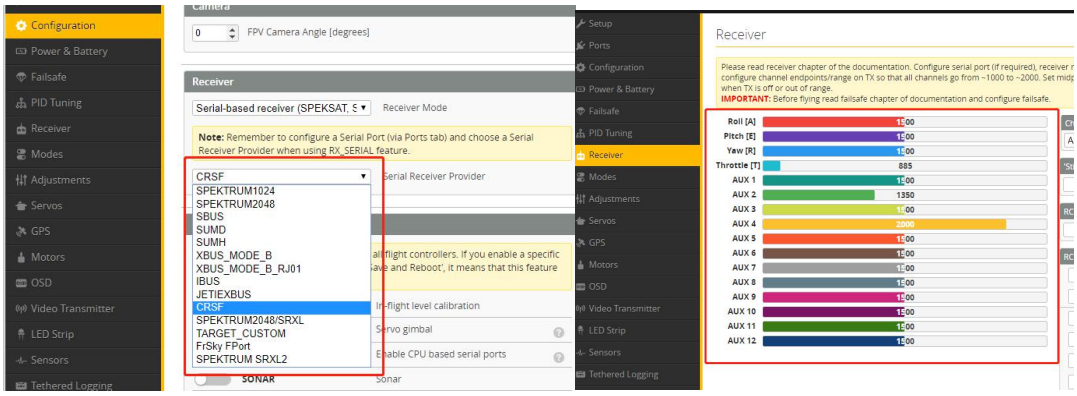
XM+ receiver:

1/ Press the XM+ receiver button, USB power supply, the red and green lights are always on

2/ The remote control turns on the binding mode, the green light flashes to indicate successful binding, turn off and restart

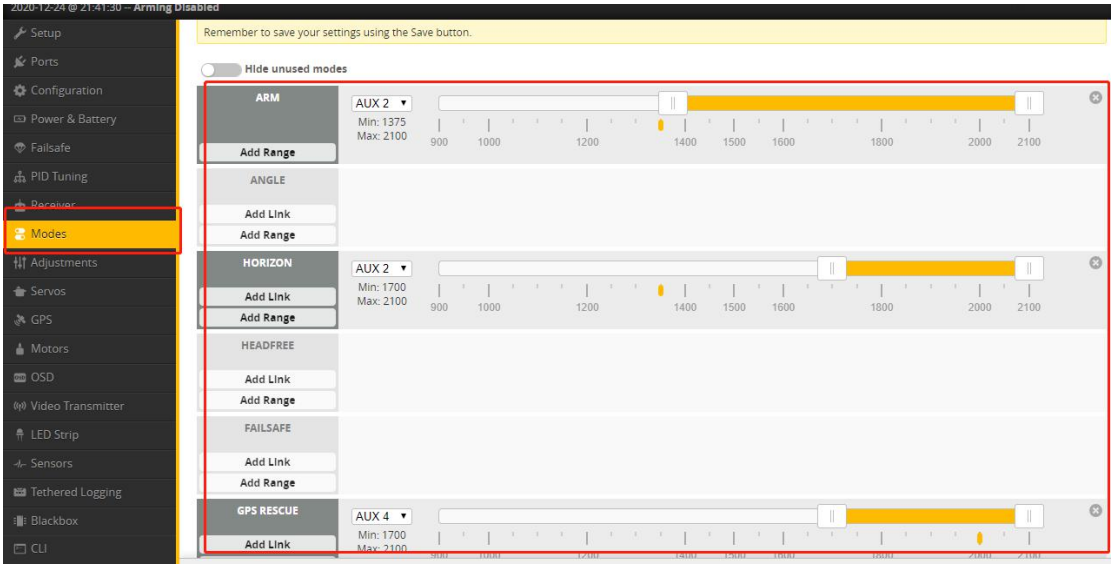


3-1/ Then set the corresponding serial port and receiver protocol to ensure the normal output of each channel of the receiver.



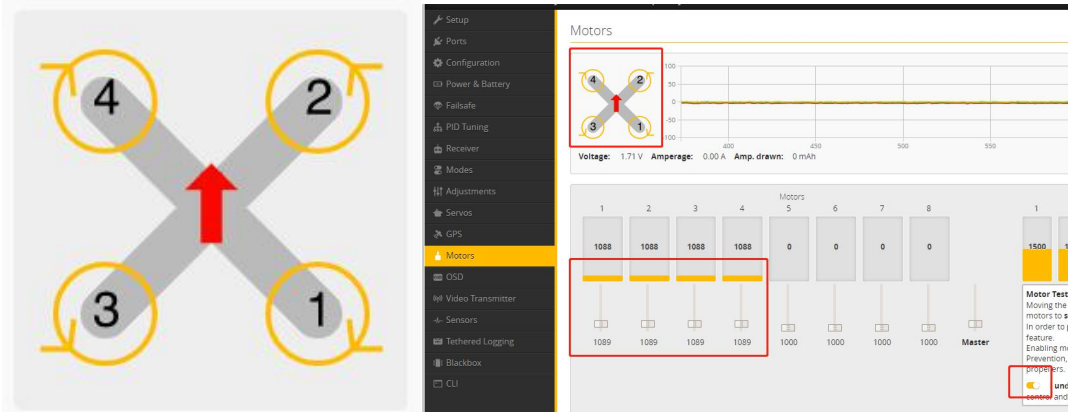
4/ Mode setting:

Set the ARM switch and flight mode switch, AUX* corresponds to the remote control switch, and the yellow area mark is turned
on.



5/ Motor test:

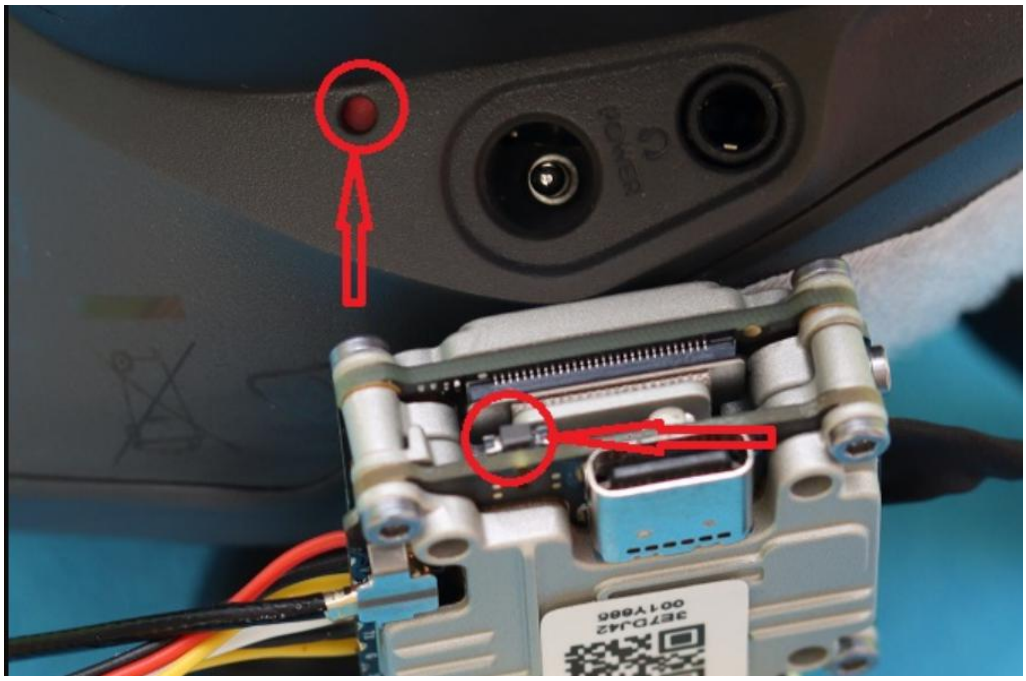
Unload the propeller, test the rotation direction of the motor, turn on the safety switch, and test the rotation of the motors one by one.



6/ VISTA activation and binding

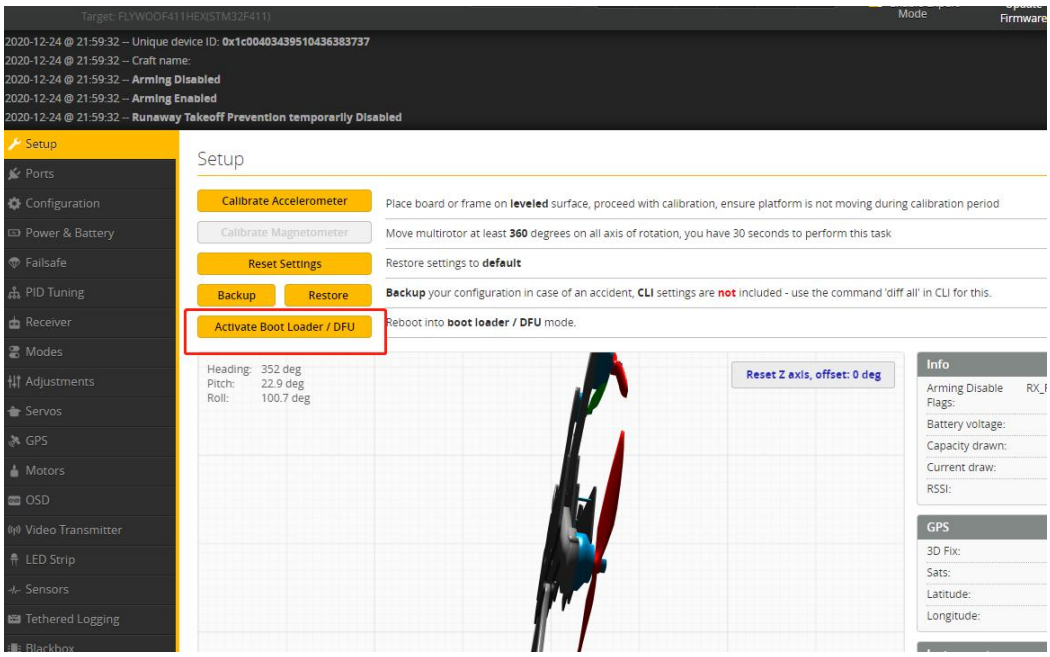
Tip: For the convenience of use, VISTA has been activated by default at the factory and updated to the latest version of the firmware. The BNF version can be used directly without updating again.

https://www.youtube.com/watch?v=nptTbbWKMZs&ab_channel=DJITutorials

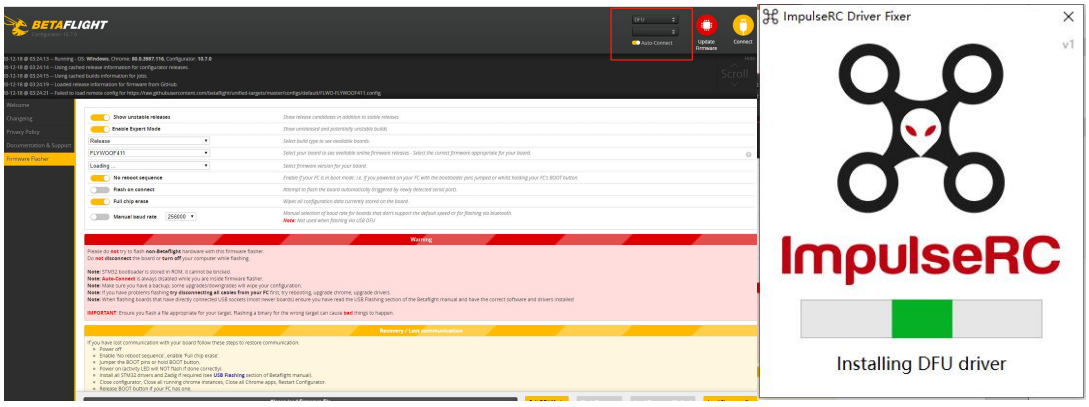


7/ Flight firmware upgrade and write default CLI

1/ Activate DFU mode

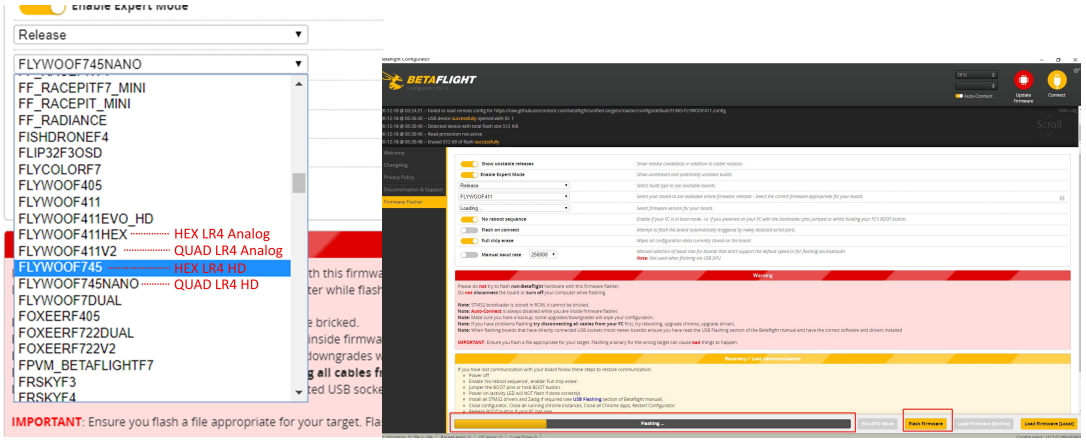


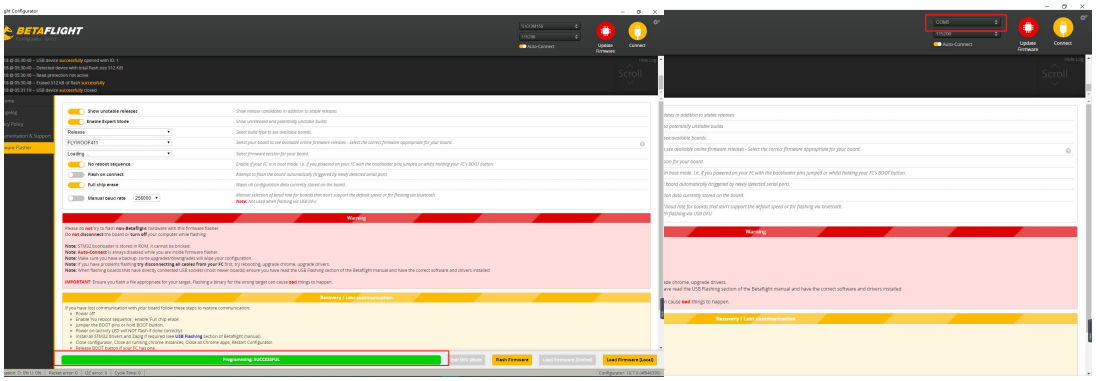
2/ BF Configurator will display to enter DFU mode. If it does not enter DFU mode, it may be that the driver is not installed. The driver can be installed using IMPULSE RC software



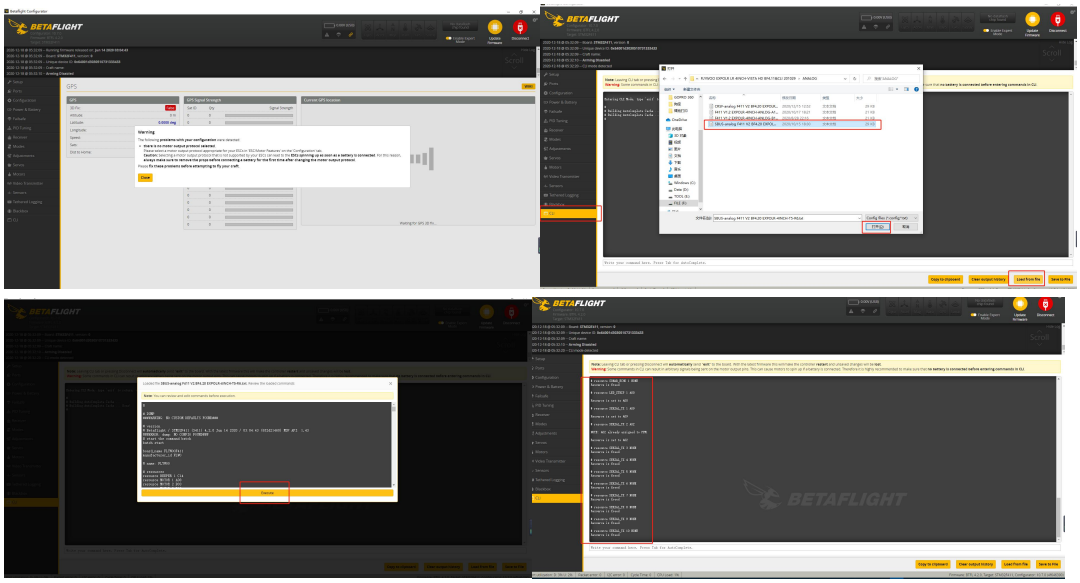
Driver software:
https://impulserc.blob.core.windows.net/utilities/ImpulseRC_Driver_Fixer.exe

3/ Then load the local HEX firmware and wait for the flashing to complete. A green progress bar is displayed to indicate completion, and DFU will become a COM port

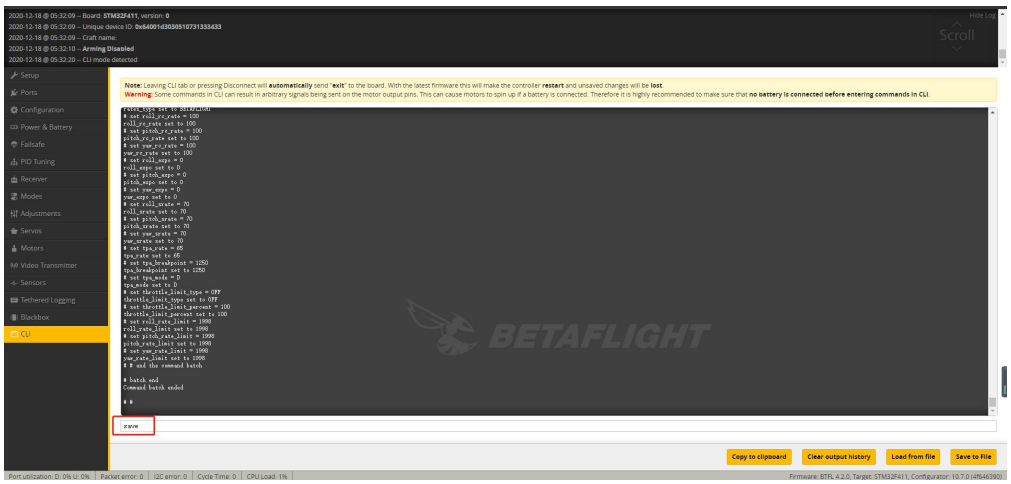




4/ After the connection is entered, it is a blank interface, you need to write CLI commands, Factory CLI LINK: https://flywoo.net/pages/manual



5/ If the command is not restarted after writing the command, please write SAVE and press Enter to save, and the FC will restart



6/ Then all functions of FC return to normal.