Firefly hex nano Manual

VISTA HD BF Version

1/ drone introduction

In an effort to push the boundaries of carry the camera on the smallest platform, Flywoo designed the smallest hexacopter possible in their history.

Firefly Hex nano , a nano- sized fpv drone designed to carry Insta 360go ， SMO 4K camera for some action flying.

Weighing in at just 57.9g , the Firefly hex nano 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 Hex nao is equipped with GOKU HEX 13A STACK and 6pcs 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 6 min flight with Explorer 450mAh 4S battery

About 4 min flight with Explorer 300mAh 4S battery

2/ Configuration and wiring diagram description

Specifications

Item: Firefly hex nano hexacopter
Weight: 57.9g (without battery)
Wheelbase: 90mm
FC & ESC : GOKU HEX F745HEX 16*16 STACK - (FC+13A ESC)
Frame: Firefly hex nano Frame
Motors: Robo 1202.5 5500KV
Props: HQ 40mm 4-Blades Props
Receiver Option: Frsky XM+ / TBS Crossfire
Camera Degree: 15°-90°
VTX: Goku VTX625 450mw
Antenna: Atomic 5.8GHz Antenna Length 30mm (LHCP)
Battery: 4S 450mAh / 4S 300mAh battery (Not including)

Equipped with GOKU HEX F745 16X16 NANO STACK, and NIN 1404 v2-2750kv, support 4s battery. Use powerful F745 BGA chip， barometer, black box, WS2812LED, support 7 complete hardware serial ports, I2C and other functions are all open ! Enough to meet all FPV needs.

Firefly give off flashes of light when they fly at night.
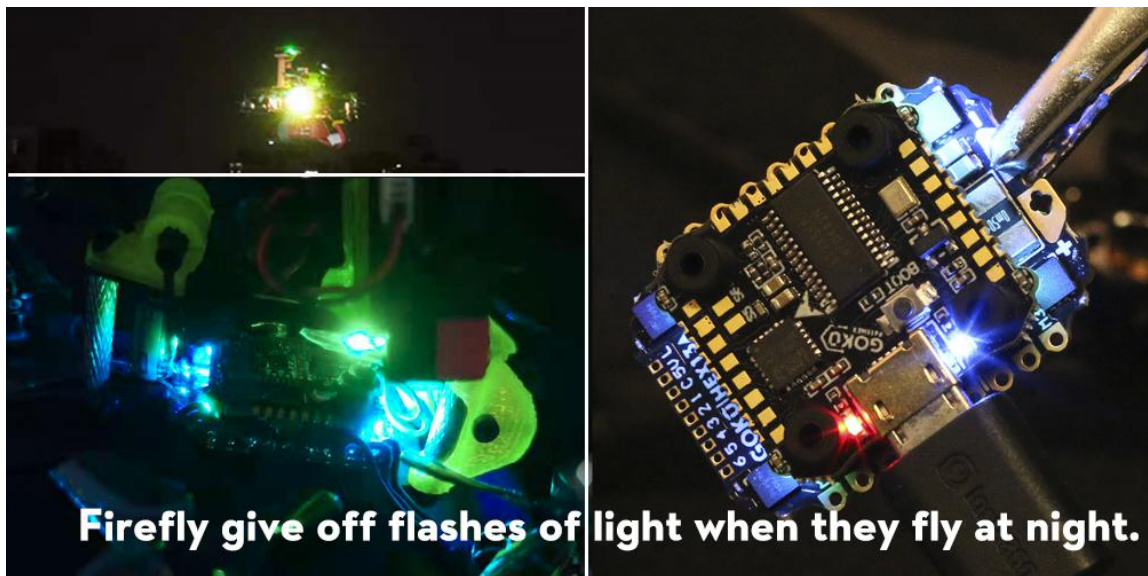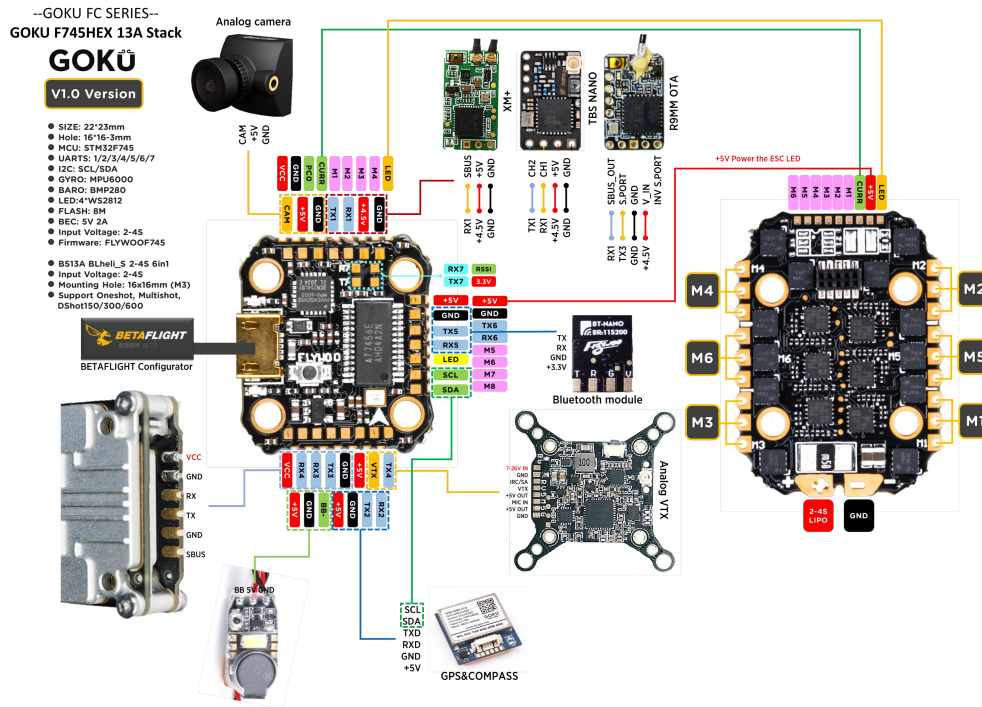
Target firmware：FLYWOOF745HEX

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)
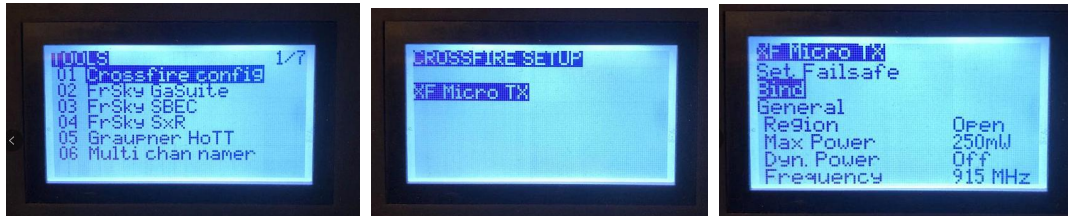
UART5: NULL

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

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

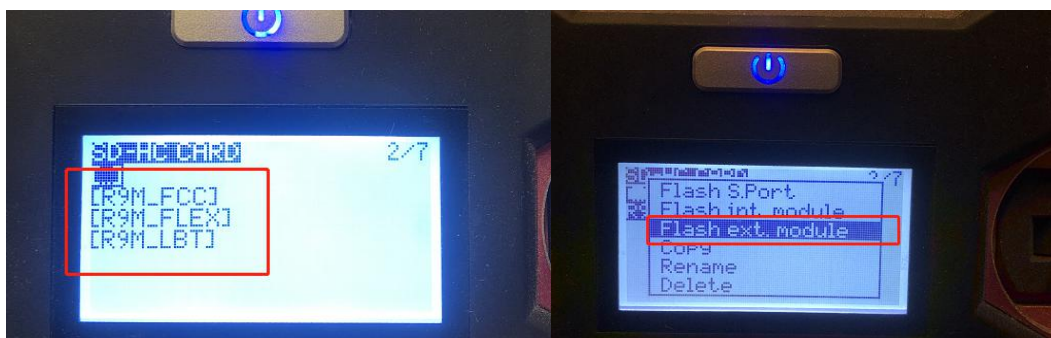*If the remote control is ACCST protocol, please bind as follows:*

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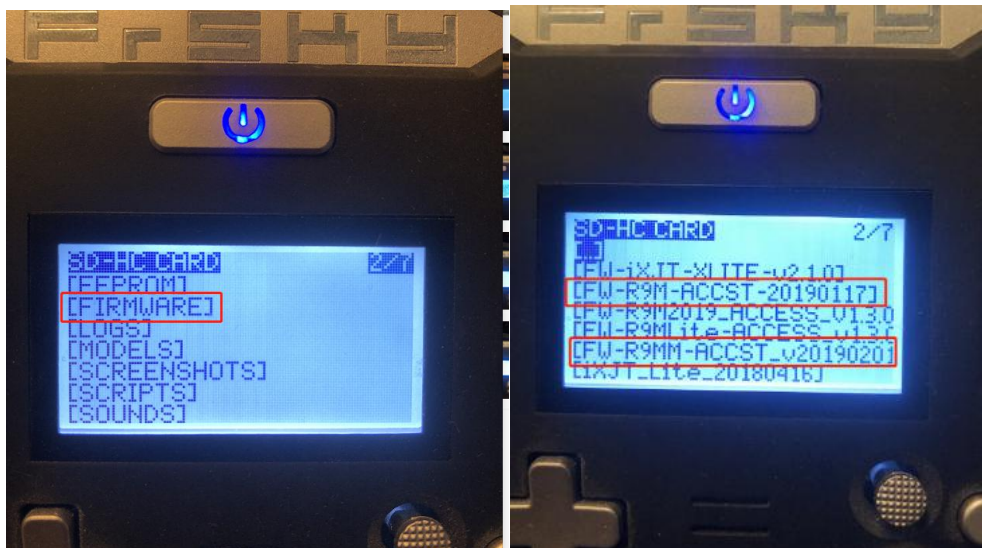
2/ Insert the R9M TX module and write the firmware you need

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.
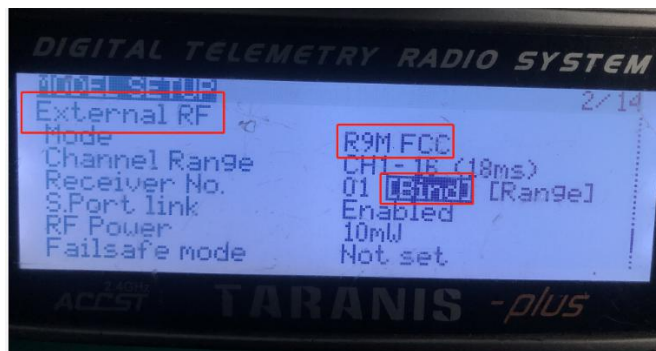
XM+ receiver:

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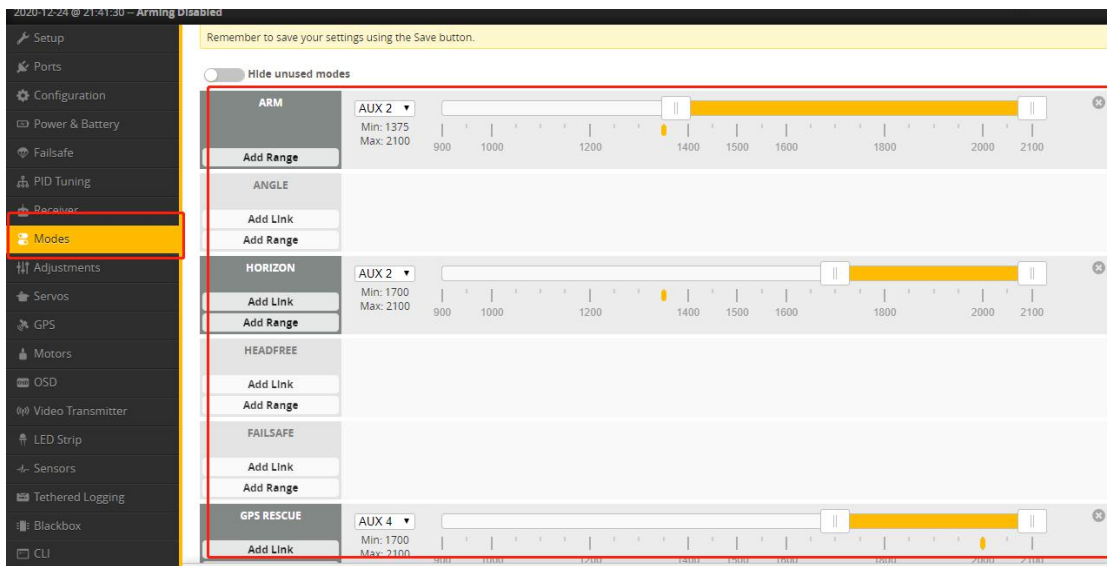
3-1/ Then set the corresponding serial port and receiver protocol to ensure the normal output of each channel of the receiver.
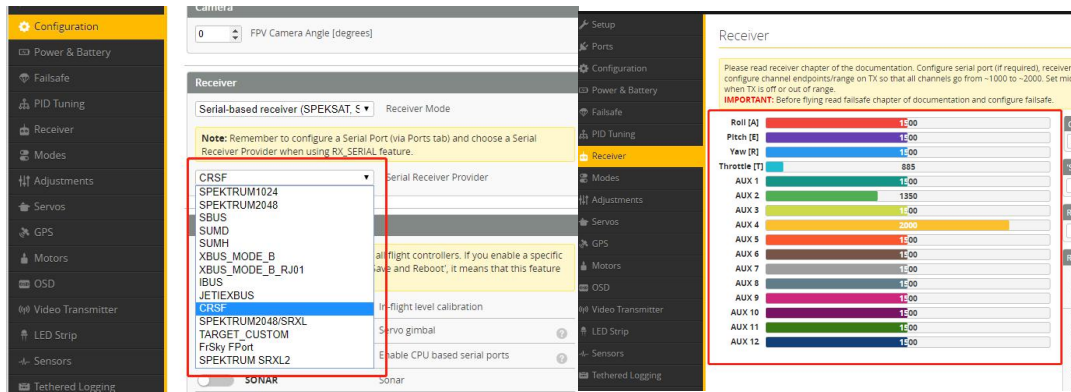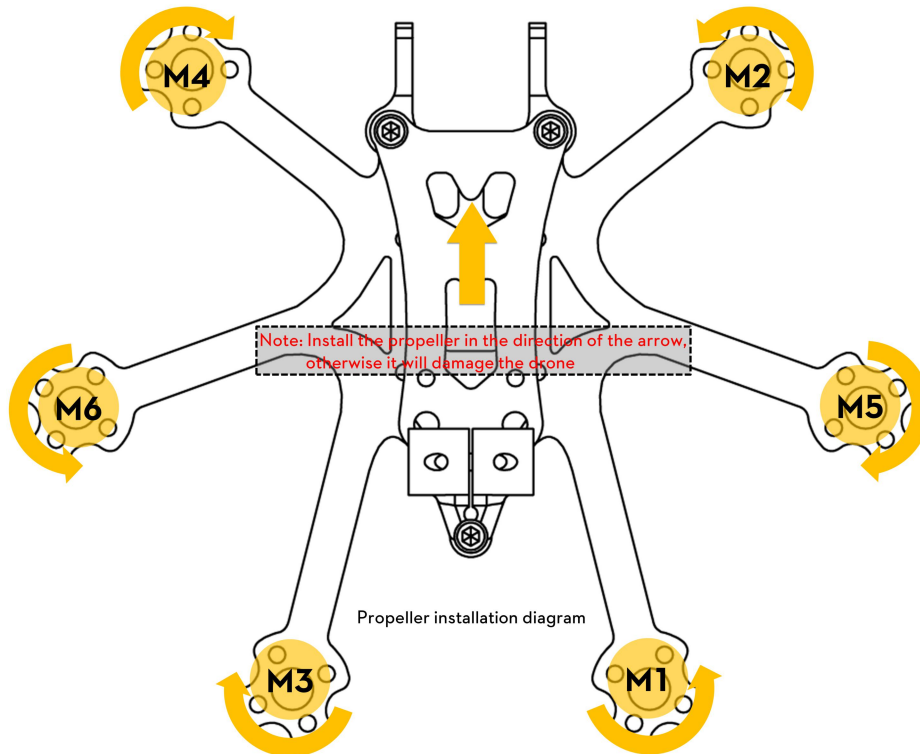

4/ Mode setting:

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.

Propeller installation diagram

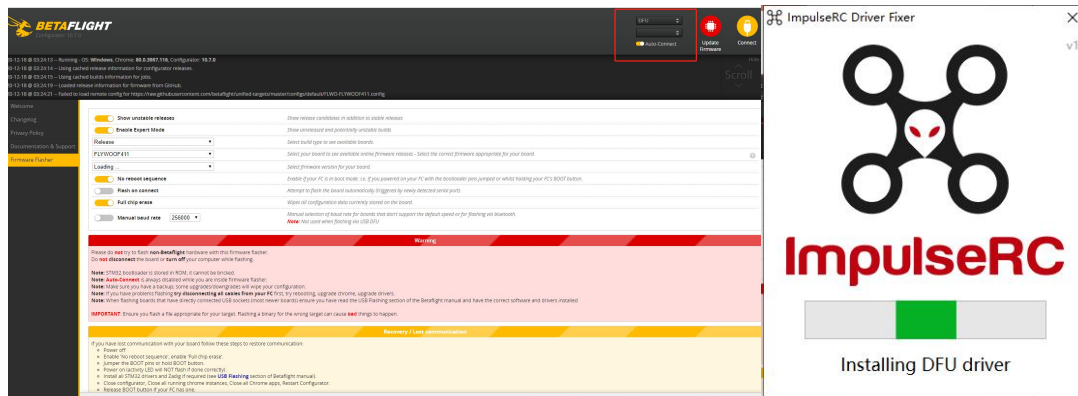Note: Install the propeller in the direction of the arrow, otherwise it will damage the drone

6/ Flight firmware upgrade and write default CLI

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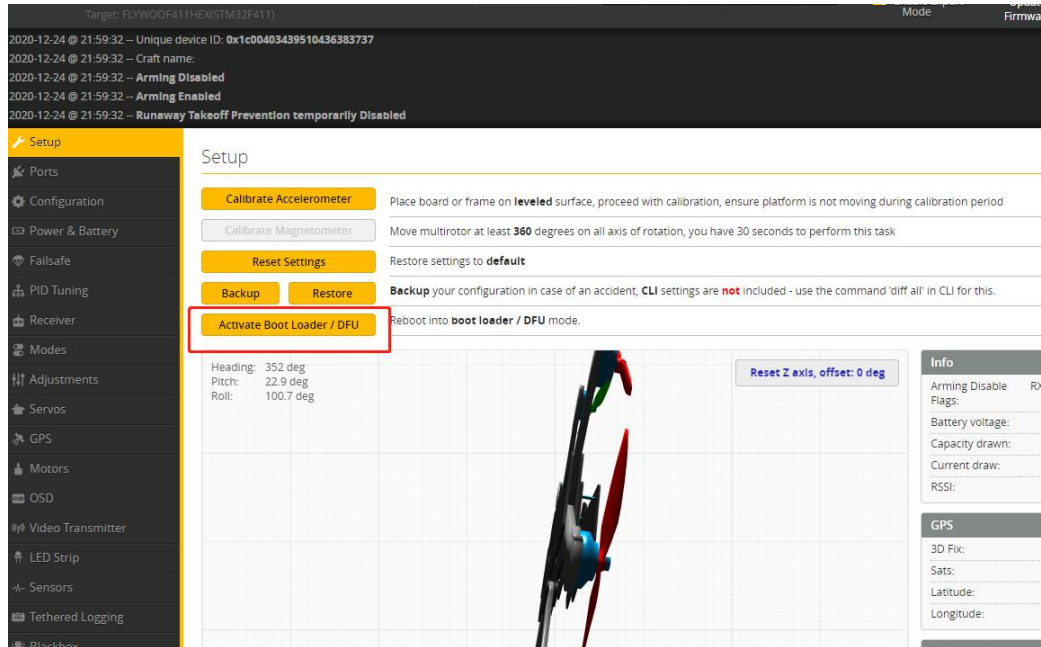
2/ BF Configurator will display to enter DFU mode. If it does not enter DFU mode, it may be that the driver is not installed. The driver can be installed using IMPULSE RC software


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
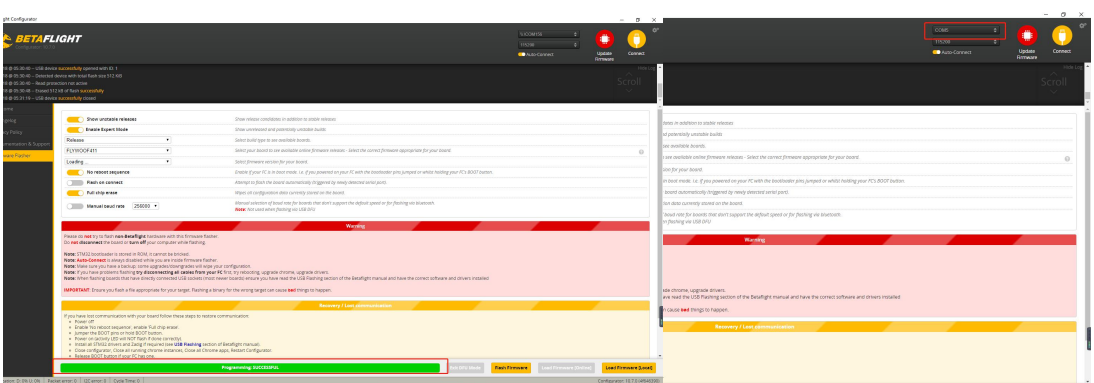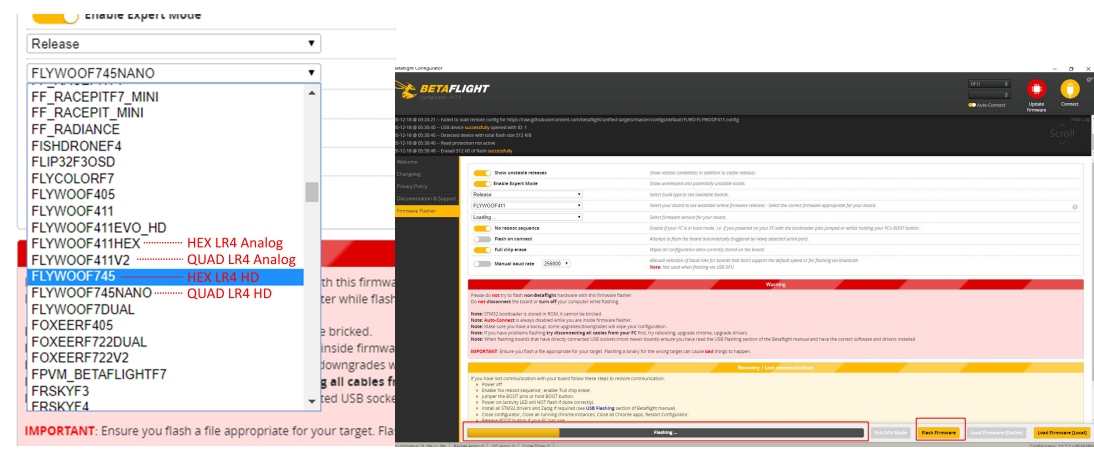
4/ After the connection is entered, it is a blank interface, you need to write CLI commands, Factory CLI LINK: https://flywoo.net/pages/manual
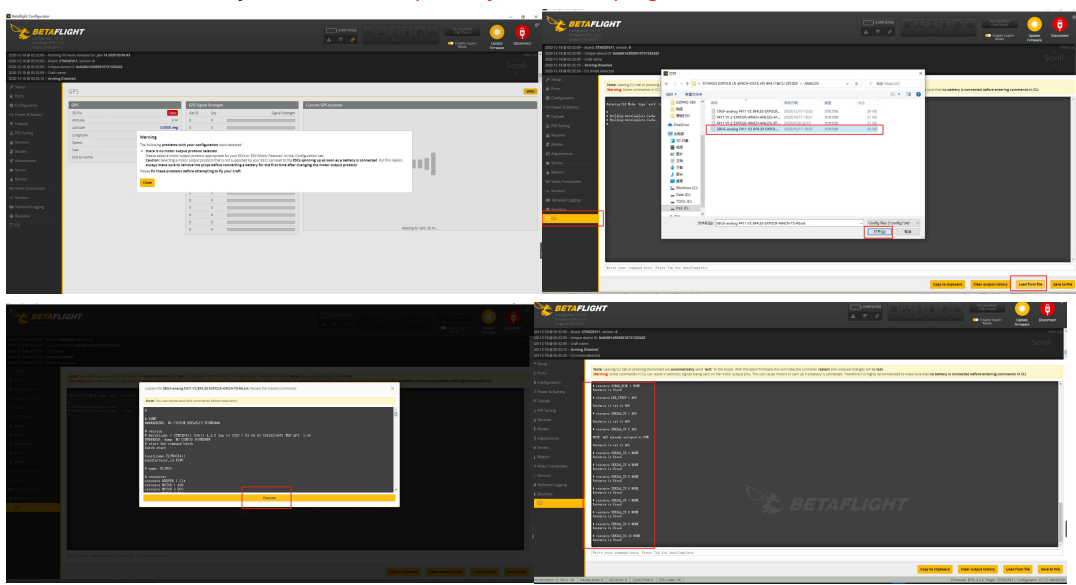
5/ If the command is not restarted after writing the command, please write SAVE and press Enter to save, and the FC will restart

6/ Then all functions of FC return to normal.