

FLF3_EVO_BRUSH FC integrated flysky AFHDS 2A Receiver for QX90/QX90C/QX95

Dimension: 22mm*32.5mm

Thickness: 1.2mm

Weight: 3g

Integrated receiver option:

Flysky 6CH PPM Receiver(AFHDS 2A)

Coreless motor plug: SH1.0

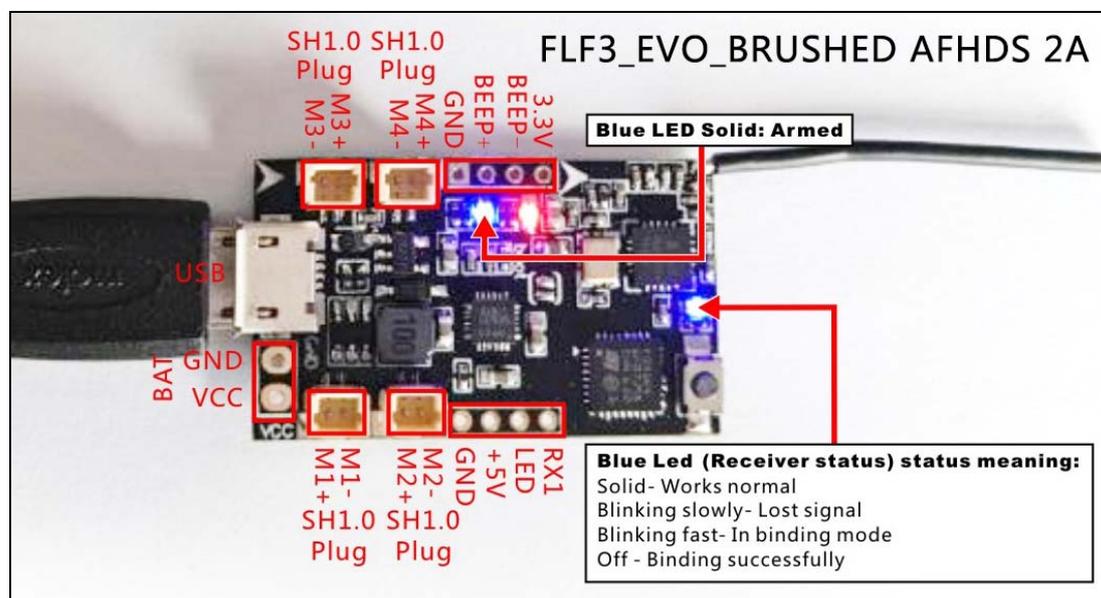
Firmware: SP RACING F3 EVO 1.13.0

Support work voltage: 3.5v~4.2v(1S Lipo battery)

Features:

1. F3_EVO_Brush revision is out of the F3 EVO SP RACING is based on a SP RACING F3 EVO firmware 32 brush flight control.ier
2. Independent design of the circuit structure
3. Using STM32F303CCT6 + MPU6500, advanced hardware platform F3 guarantee more stable flight.
4. With a large and high quality current NMOS transistors, operating current of up to 10A or more. Each Brushed motor is equipped with freewheeling diodes.
5. Integrated 2.4G receiver, there are 3 types receiver option to choose.
6. With battery voltage detection and buzzer interface(solder pad)
7. LED_STRIP Function(solder pad)

Connection diagram:



Receiver configuration:

1. Flysky Receiver Option

Just Set Receiver mode to be RX_PPM

Ports DOCUMENTATION FOR 1.13.0

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
Note: Do NOT disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Identifier	Data	Logging	Telemetry	RX	GPS
USB VCP	<input checked="" type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾
UART1	<input checked="" type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾
UART2	<input type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾
UART3	<input type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾

Receiver Mode

- RX_PPM PPM RX input
- RX_SERIAL Serial-based receiver (SPEKSAT, SBUS, SUMD)
- RX_PARALLEL_PWM PWM RX input (one wire per channel)
- RX_MSP MSP RX input (control via MSP port)

Serial Receiver Provider

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

- SPEKTRUM1024
- SPEKTRUM2048
- SBUS
- SUMD
- SUMH
- XBUS_MODE_B
- XBUS_MODE_B_RJ01
- IBUS

Bind procedure:

1. Connect the battery to the flight controller while holding the binding button on the board ,the Blue LED will blinking fast, this indicates the Receiver is in binding mode. Then release the binding button.
2. Turn on your radio and Set receiver mode to AFHDS 2A, then get your radio into binding mode. The blue LED on the flight controller will turning off for a second and then starting to blinking slowly, this indicates binding successfully.
3. Turn on your radio ,then Reconnect the flight controller and the battery ,the Blue LED on the flight controller board will getting to be solid ,this indicates connection is established with your transmitter.



If you flashed the firmware or erase chip, please first do the following procedure, don't connect the battery otherwise the motor will auto-spin

1. Cleanflight: Go to the CLI tab, type "Set motor_pwm_rate=1000", then enter save

```
Entering CLI Mode, type 'exit' to return, or 'help'  
  
# set motor_pwm_rate=1000  
motor_pwm_rate set to 1000  
# save
```

Betaflight: Go to Configure Tab and set ESC/Motor protocol to BRUSHED

ESC/Motor Features	
BRUSHED ▾	ESC/Motor protocol
<input type="checkbox"/>	Motor PWM speed Separated from PID speed
<input checked="" type="checkbox"/>	MOTOR_STOP Don't spin the motors when armed
<input checked="" type="checkbox"/>	Disarm motors regardless of throttle value (When arming via AUX channel)

***This step is in order to avoid motor auto-spinning when connect the battery**