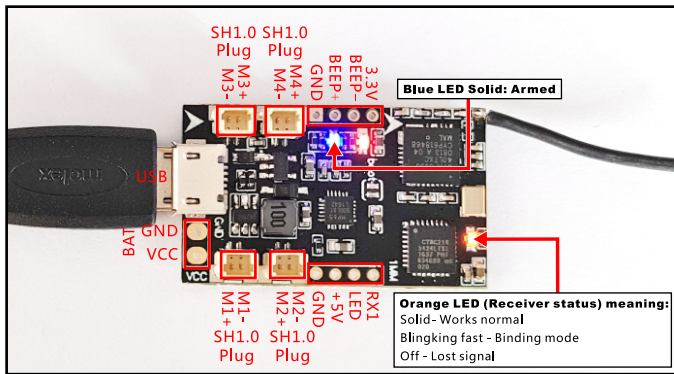


F3_EVO_BRUSH flight controller built-in DSM2/DSMX Receiver for QX90/QX90C/QX95

Specification	
Dimension:	22mm*32.5mm
Thickness:	1.2mm
Weight:	3g
Integrated receiver option:	DSM2/DSMX compatible satellite Receiver
Coreless motor plug:	SH1.0
Firmware:	SP RACING F3 EVO 1.13.0
Support work voltage:	3.6v~4.2v(1S Lipo battery)

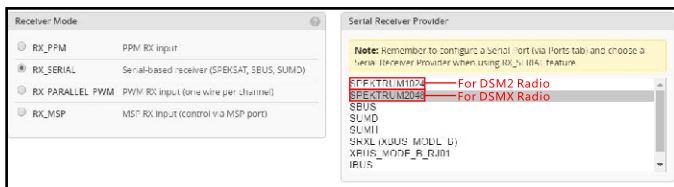
Connection diagram:



Receiver configuration:

1.DSM2/DSMX Receiver:

Enable Serial RX for UART3 from the ports tab in Cleanflight configurator
 Set Receiver mode to RX_SERIAL, Select SPEKTRUM1024 for DSM2 Radio and Select SPEKTRUM2048 for DSMX Radio from the Receiver tab in Cleanflight configurator



2.Bind procedure:

- Connect Flight controller to computer and open Cleanflight configurator From CLI tab type: "set spektrum_sat_bind = 9" for DSMX or "set spektrum_sat_bind = 5" for DSM2
- Type "save" and after Flight controller reboot remove USB cable (=Power off the board)
- Wait a second and reconnect the USB cable. After cold start satellite led(Orange color LED)should start blinking and transmitter should be turned on while pressing the bind button
- After binding satellite led should be solid. Connect Betaflight and use receiver tab to test that satellite is working correctly.
- Final step is to go to CLI tab and type "set spektrum_sat_bind = 0" and then type "save". This must be done so that satellite doesn't go back to binding mode when the Flight controller is repowered again.

```
Entering CLI Mode, type 'exit' to return, or 'help'

# Set spektrum_sat_bind=9
spektrum_sat_bind set to 9
# save
```

For DSMX

```
Entering CLI Mode, type 'exit' to return, or 'help'

# Set spektrum_sat_bind=5
spektrum_sat_bind set to 5
# save
```

For DSM2

```
Entering CLI Mode, type 'exit' to return, or 'help'

# Set spektrum_sat_bind=0
spektrum_sat_bind set to 0
# save
```

Close Binding

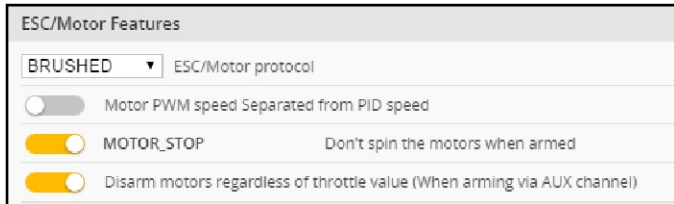
⚠ If you flashed the firmware or erase chip, please first do the bellowing procedure, don't connect the battery otherwise the motor will auto-spin

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



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