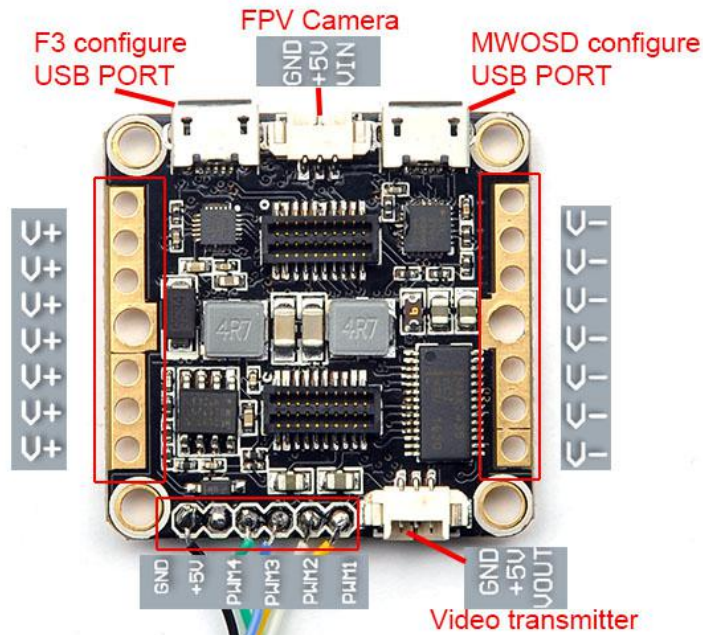
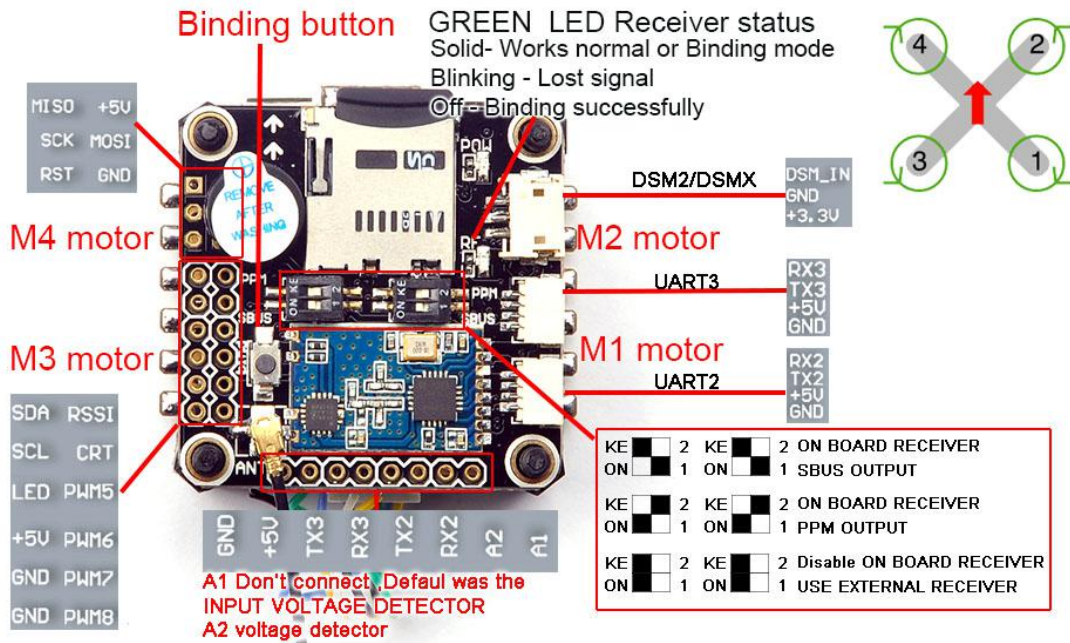


RacerCube Manual

Connection Diagram



Racercube FEATURES

F3_EVO FLIGHT CONTROLLER Jaw-Dropping Flight Performance

CLEANFLIGHT/BETAFLIGHT support

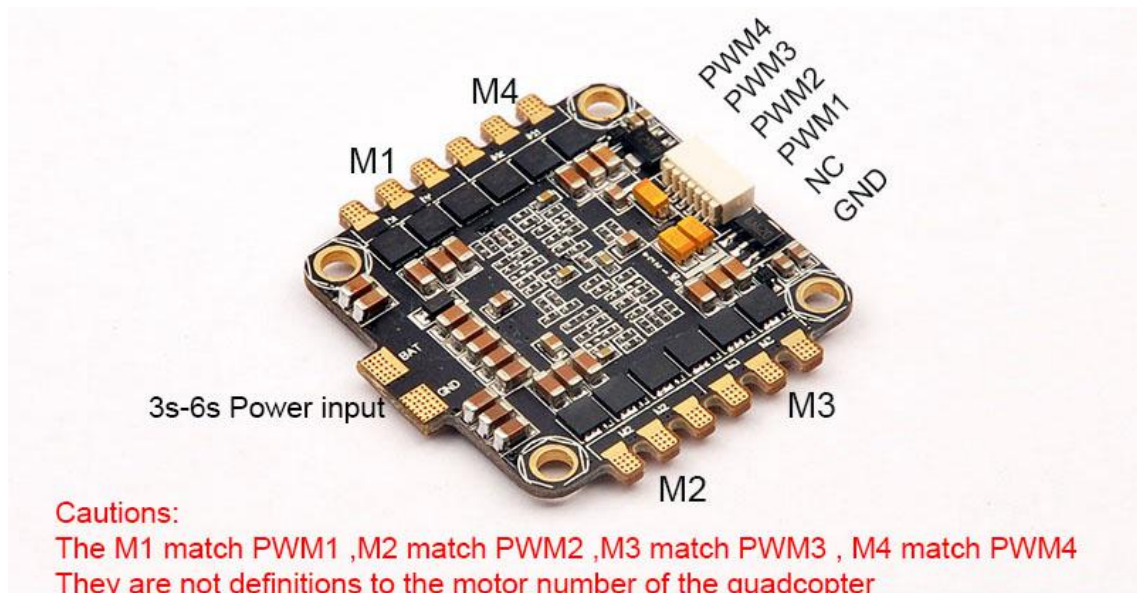
4IN1 ESC Little BEE 20A F396 Chip ESC Ready, BLHELI Pass-through Ready

FRSKY Compatible RX-F802 D8 MODE SBUS/PPM RECEIVER Ready

MWOSD Ready

RSSI/ VOLTAGE DETECOTR Ready

BUZZER READY



Cautions:

The M1 match PWM1 ,M2 match PWM2 ,M3 match PWM3 , M4 match PWM4
They are not definitions to the motor number of the quadcopter
in CLEANFLIGHT/BETAFLIGHT CONFIGURATOR

SPECIFICATION:

1.Racercube Flight controller

Firmware: Cleanflight 1.13.0
Target: SP RACING F3 EVO
STM32F303 CPU, 72Mhz inc FPU
MPU9250 accelerometer/gyro/compass (connected via SPI)
BMP280 barometer
Compatible PPM/CPPM/SBUS/DSM2/DSMX Receiver
Built-in MW OSD
Integrate PDB support 2s-6s Input

2.Racercube Receiver module

Channel: 8
Working voltage: 4-6.5V
Frequency range: 2400-2483.5Mhz
Output signal: SBUS/PPM
Dual way transmission: Yes(D8 mode)
Transmit distance: > 1Km
Feedback signal: RSSI, 3S voltage (A1)
With Failsafe @Throttle 3ch
Compatible with X9D(D8 mode)/XJT (D8 mode)/DJI/DFT/DHT

Receiver configuration in Cleanflight:

Enable Serial_RX for UART2 and Set Receiver mode RX_SERIAL ,Select SBUS in Cleanflight or Betaflight Configurator.

The screenshot shows the configuration interface for a flight controller. It is divided into three main sections:

- Ports:** A table with columns for Identifier, Data, Logging, Telemetry, RX, and GPS. The RX column has a 'Serial RX' toggle. UART2 has its Serial RX toggle turned on (green).
- Receiver Mode:** A list of radio receiver modes with radio buttons. 'RX_SERIAL' is selected.
- Serial Receiver Provider:** A list of protocols. 'SBUS' is selected and highlighted in blue.

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

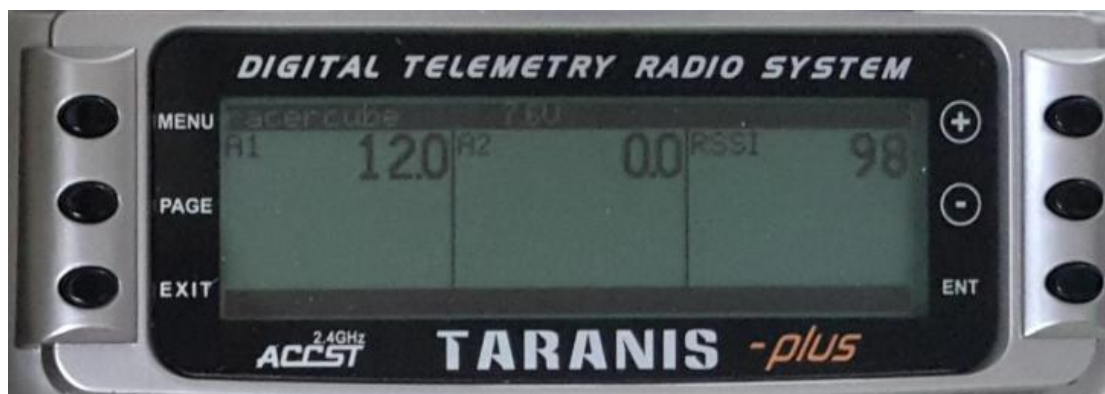
Binding procedure:

Power for the Racercube while holding the binding button, the green LED will getting to be solid, this indicate the receiver is in binding mode

Turn on the transmitter and set the receiver mode to D8 mode , then move to ENT, press it and the transmitter beeps. The green LED will turn off once the binding procedure successfully.

RSSI and Telemetry

A1/A2 Voltage detector , RSSI



After binding successful, turn on the transmitter ,move to the option TELEMTRY, then click “Discover new sensors”



Set Screen to show the Telemetry info



2.Racercube 4in1 ESC module

F396 MCU, 48Mhz Runs BLHELI LittieBee Pro 20A firmware

Support 3-6S Li-po

4PWM input,

Supports oneshot PWM

Only 35x35mm, mount holes 30x30mm (on new batch, the holes will bechanged to 30.5x30.5mm)

Supports damped light

no BEC output