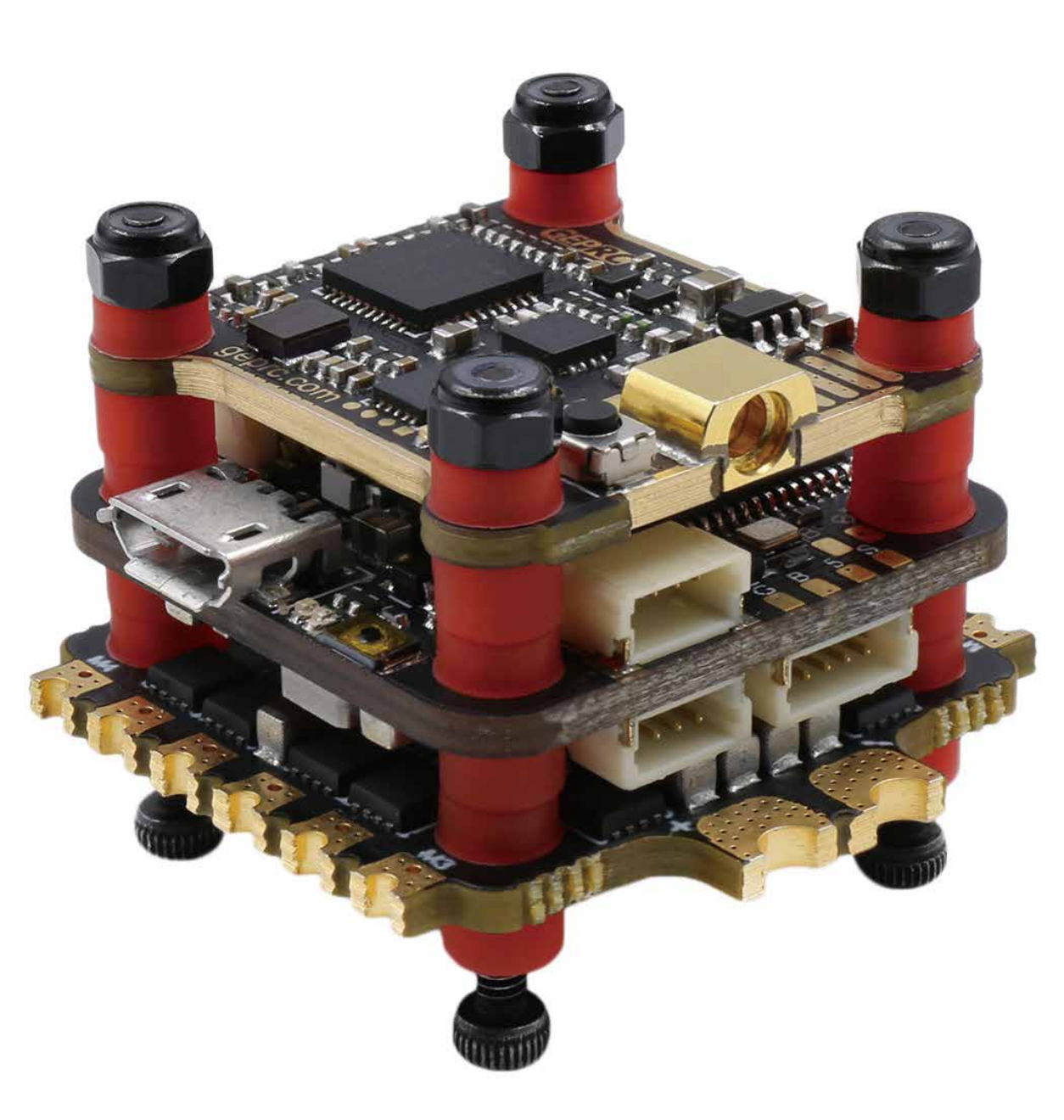
GEPRC

STABLE-PRO-F7-DUAL

Manual V1.1



Specs:

STABLE PRO F7 Flight Controller(20*20mm)

MCU: STM32F722RET6
IMU: 2x ICM20689(SPI)
BlackBox: 32Mb onboard Flash
OSD: BetaFlight OSD w/ AT7456E chip
Baro:NO
BEC Output: 5V@3A
Integrated LC Filter
Input Voltage: 2-6S Lipo
Firmware target: EXF722DUAL
Size: 26x26mm board, 20mm mounting holes (M2)

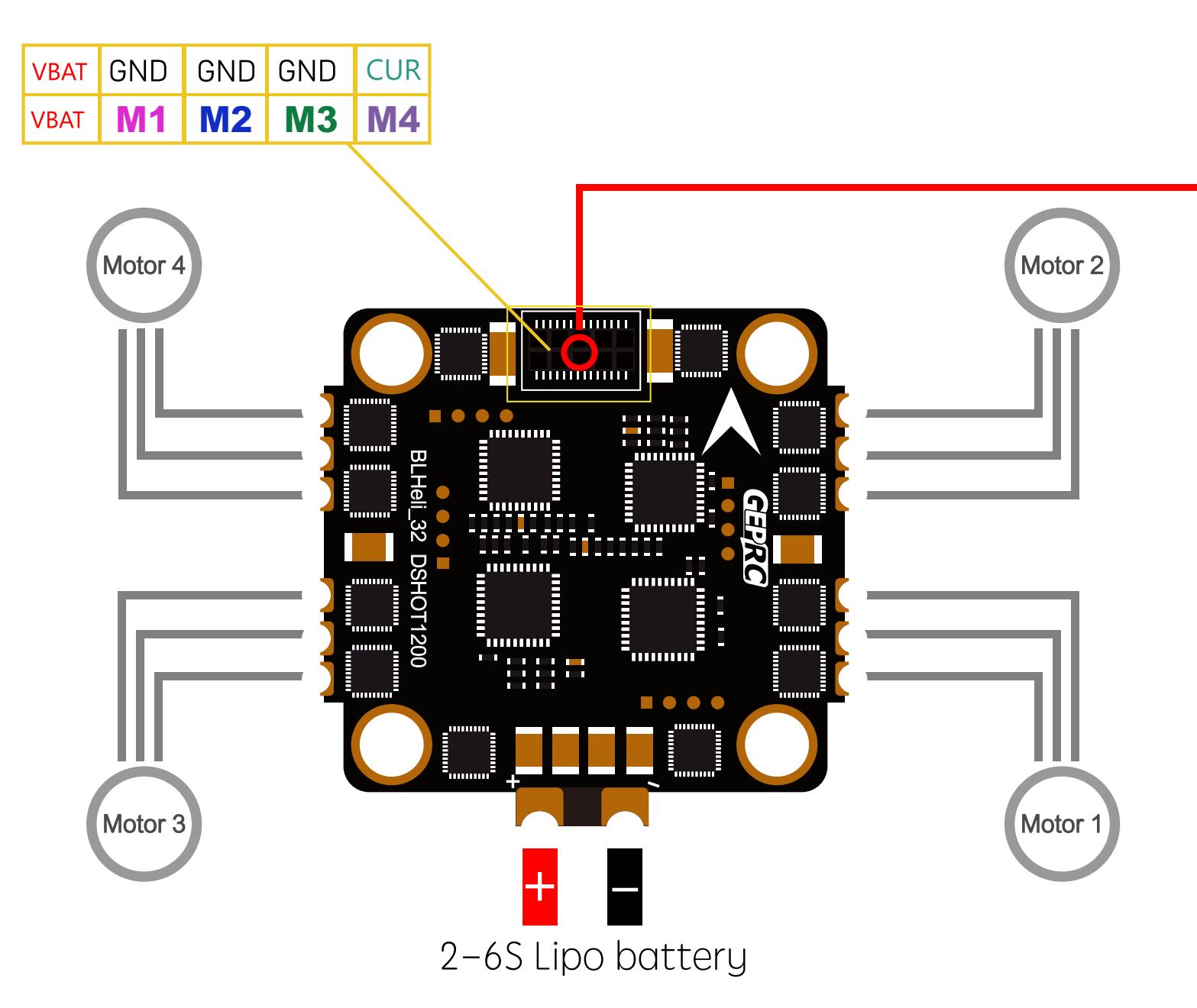
STABLE PRO F7 ESC BL32 2-6S 4in1(20*20mm)

MCU:STM32F051
Input:2-6s lipo
Constant:35Amps
Burst:45Amps (3S)
Dimensions:31*31mm(including the power pads)
Mounting Holes:20*20mm,M2
Supports Dshot1200,Proshot,Oneshot,Multishot
Current meter: 100
Target: GEPRC-BL32-4IN1

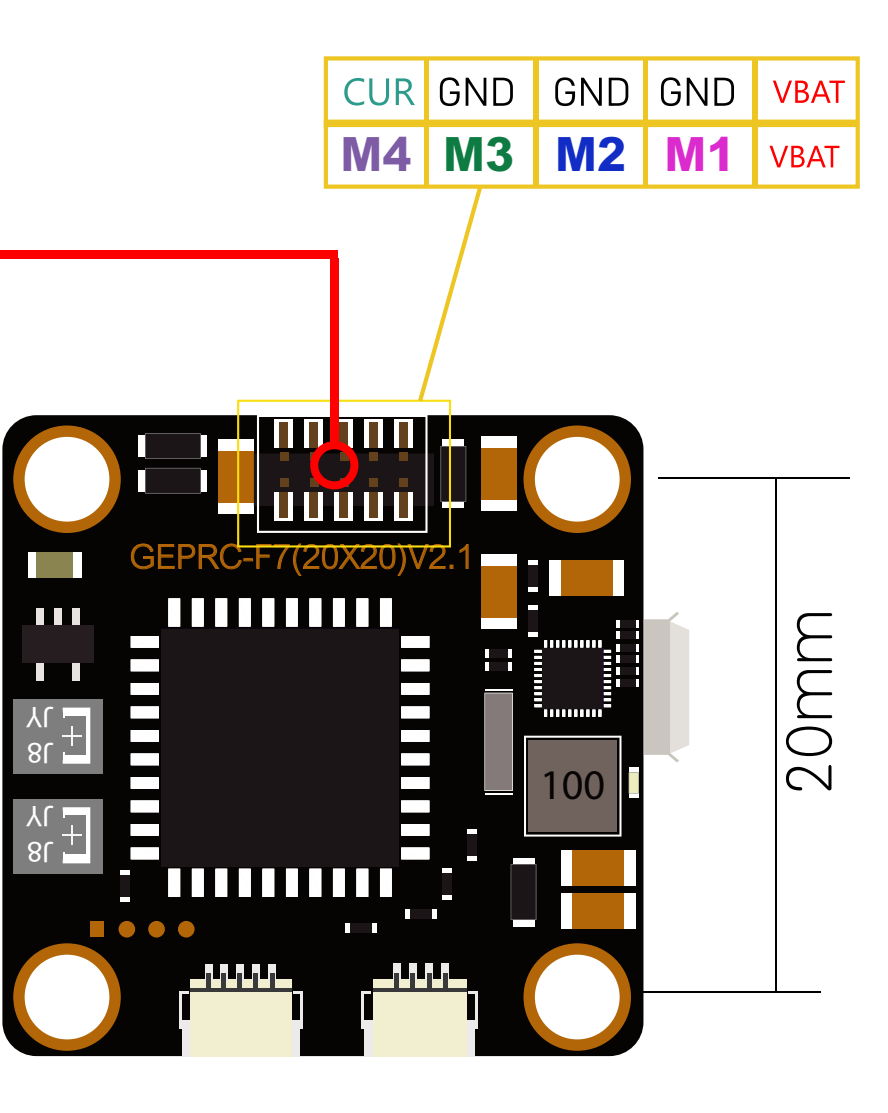
STABLE PRO F7 5.8g 500mW VTX(20*20mm)

Input voltage: 5V
Channel: 48
Power transmission: 0mW(Pit mode) / 25mW / 100mW / 200mW / 400mW/ 500mW
Size: 24 * 26 mm
Mounting Holes Dimension: 20mm x 20mm
Connector type: MMCX Connector
BEC Output：5V/1A for Camera of FC
Weight: 2.3g
Traditional button
IRC Tramp protocol

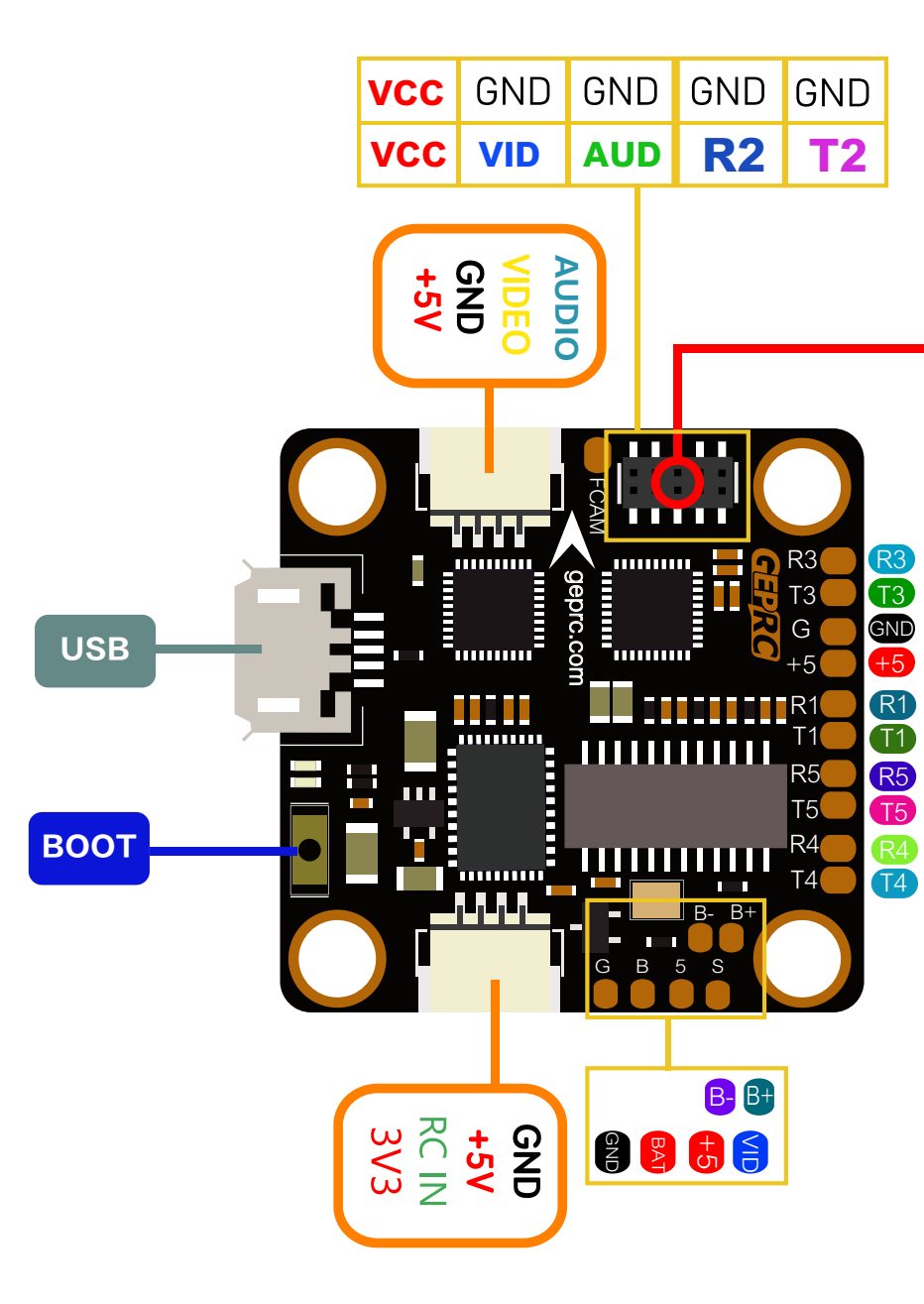
Instruction Diagram


VBAT GND GND GND CUR
VBAT M1 M2 M3 M4
Motor 4
Motor 3
Motor 2
Motor 1
BLHeli_32 DSHOT1200
+
-
2-6S Lipo battery

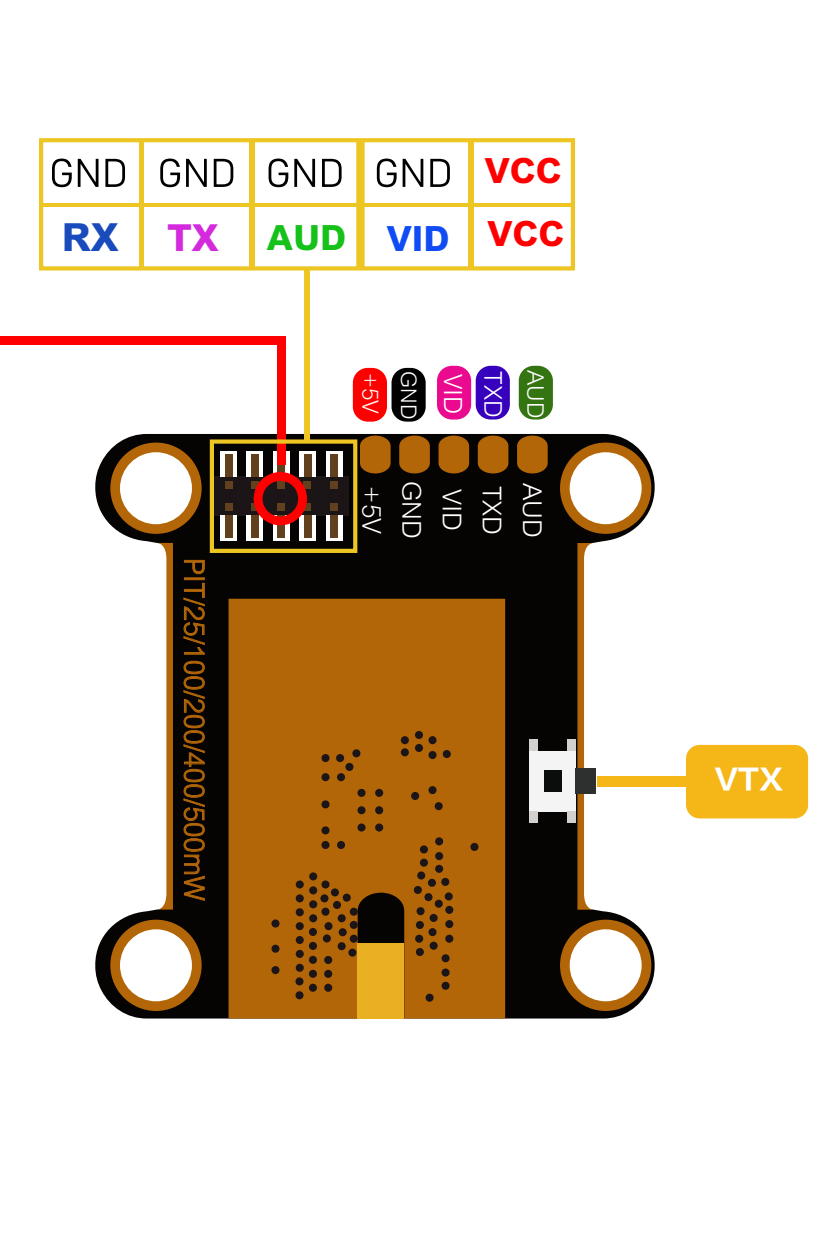
STABLE PRO F7 ESC BL32 2-6S 4in1(20*20mm)


CUR GND GND GND VBAT
M4 M3 M2 M1 VBAT
GEPRC-F7(20X20)V2.1
100
20mm

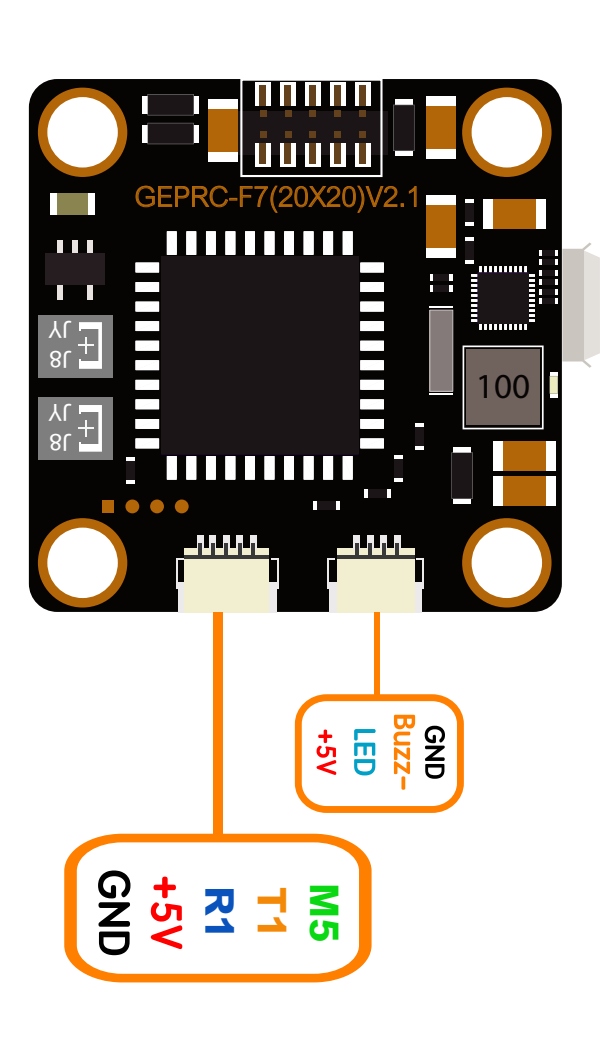
STABLE PRO F7 Flight Controller(20*20mm)

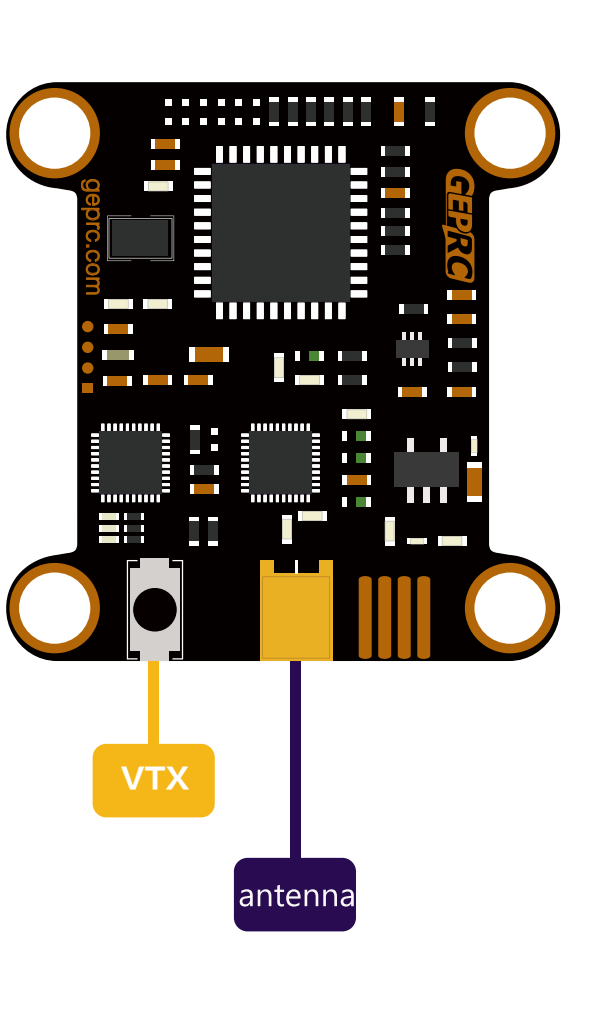

VCC GND GND GND GND
VCC VID AUD R2 T2
AUDIO
GND
+5V
USB
BOOT
GND
+5V
RC IN
3V3
R3 T3 G +5 R1 T1 R5 T5 R4 T4

STABLE PRO F7 Flight Controller(20*20mm)

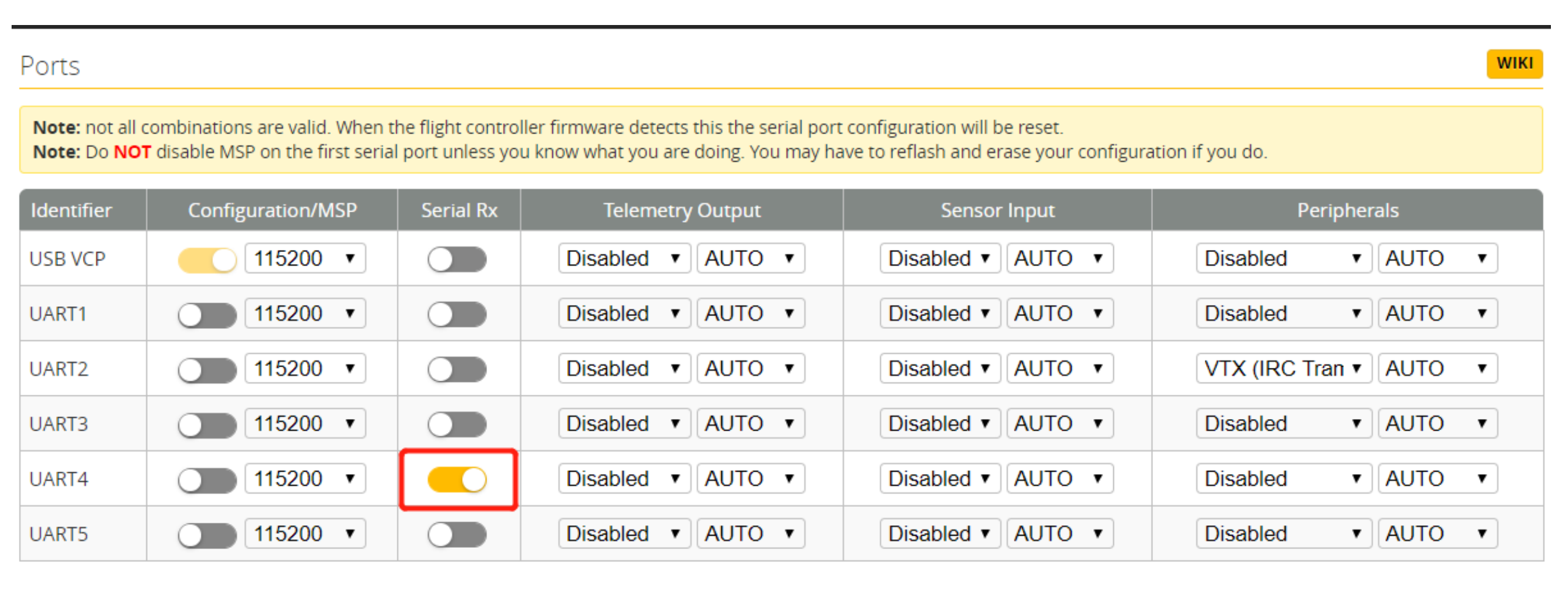

GND GND GND GND VCC
RX TX AUD VID VCC
VTX

STABLE PRO F7 5.8g 500mW VTX(20*20mm)


GEPRC-F7(20X20)V2.1
100
GND
Buzz-
LED
+5V
M5
T1
R1
+5V
GND


VTX
antenna

Receiver



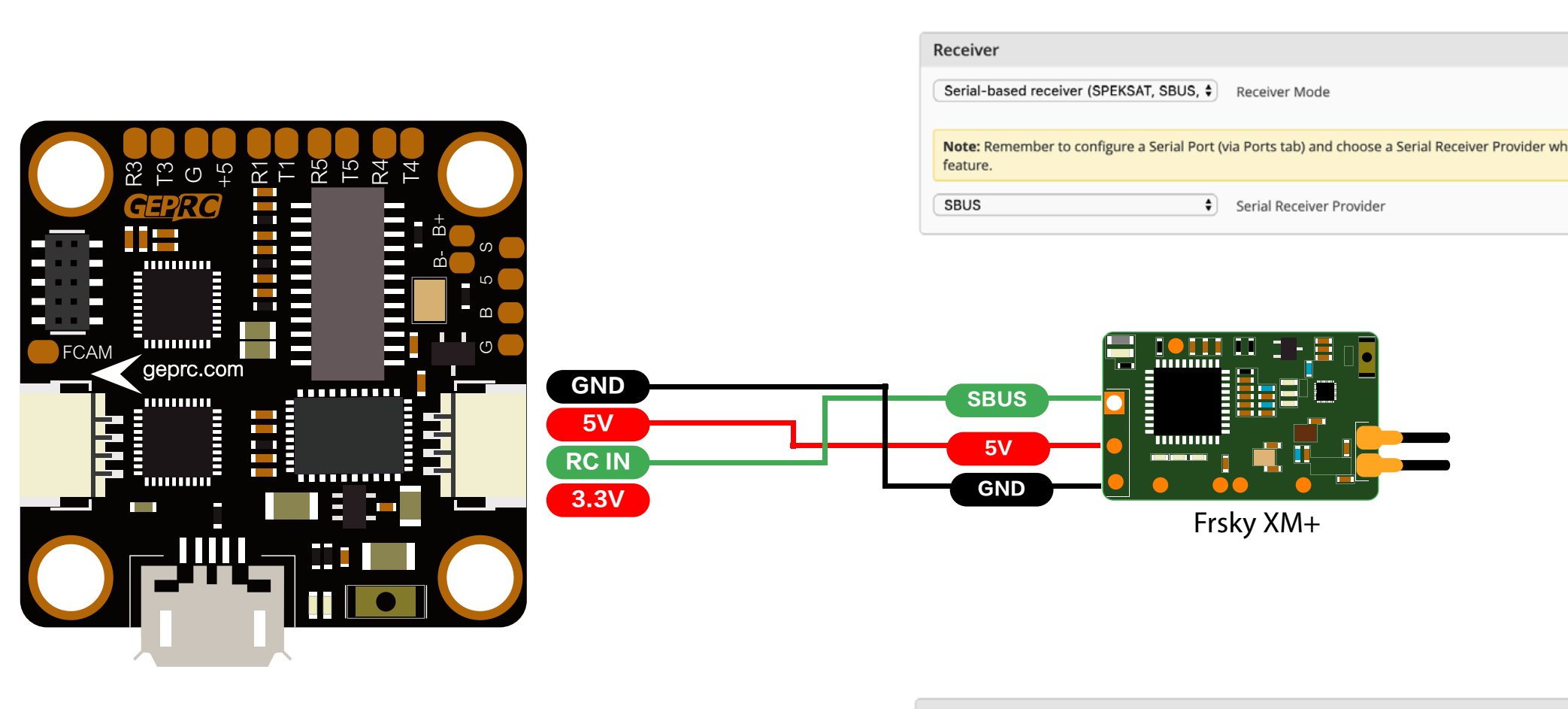
Ports

WIKI

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.

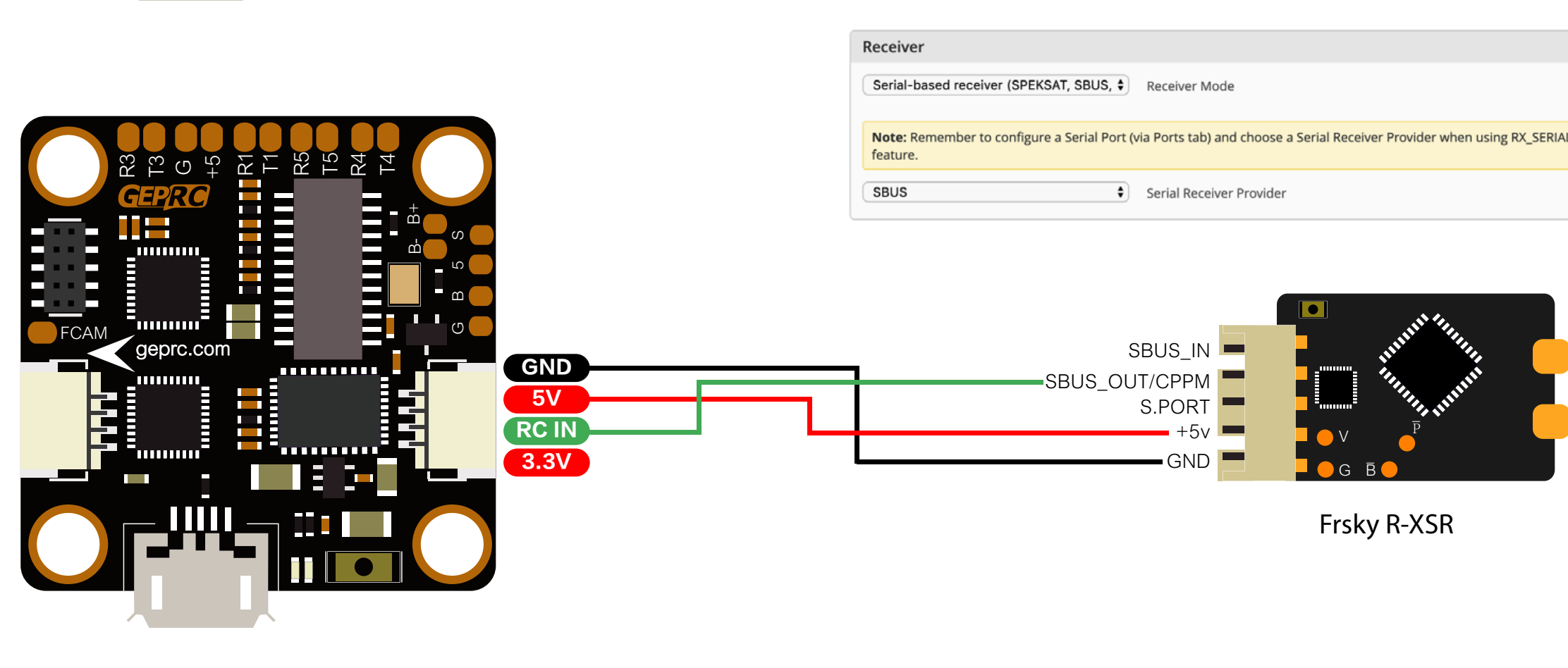
Identifier	Configuration/MSP	Serial Rx	Telemetry Output		Sensor Input		Peripherals	
USB VCP	● 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART1	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART2	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	VTX (IRC Tran ▾	AUTO ▾
UART3	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART4	○ 115200 ▾	●	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART5	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾

SBUS



Receiver
Serial-based receiver (SPEKSAT, SBUS, ⇕ Receiver Mode
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.
SBUS ⇕ Serial Receiver Provider

GND
5V
RC IN
3.3V
SBUS
5V
GND
Frsky XM+



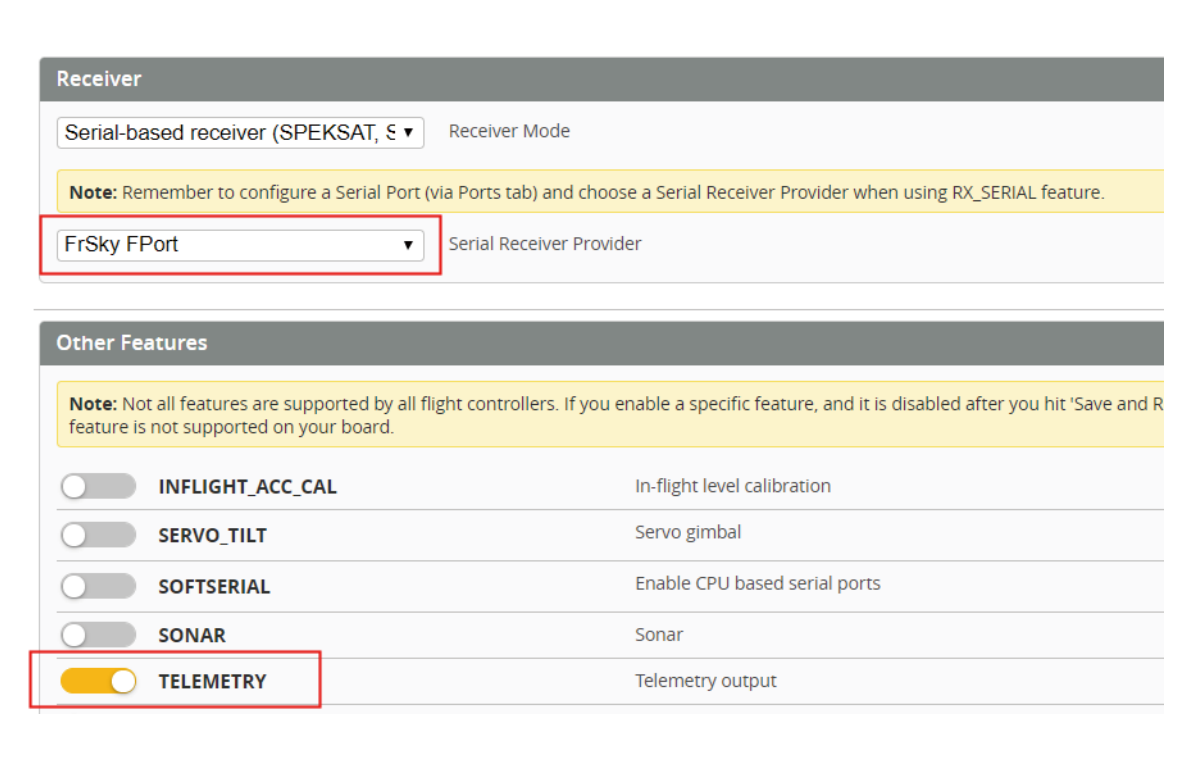
Receiver
Serial-based receiver (SPEKSAT, SBUS, ⇕ Receiver Mode
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.
SBUS ⇕ Serial Receiver Provider

GND
5V
RC IN
3.3V
SBUS_IN
SBUS_OUT/CPPM
S.PORT
+5v
GND
Frsky R-XSR

F.Port

CLI：

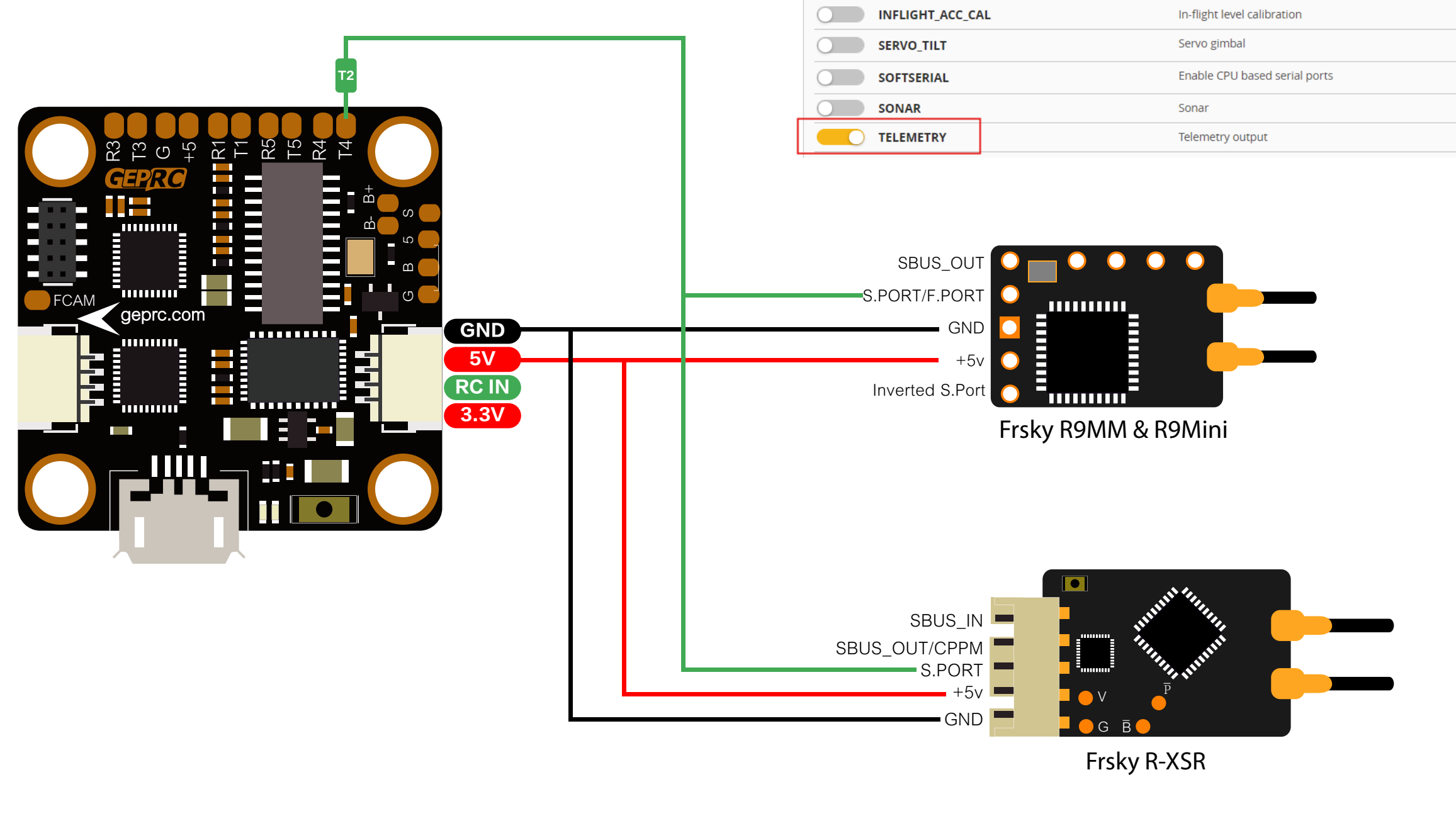
```
set serialrx_halfduplex = ON
set serialrx_inverted = ON
save
```



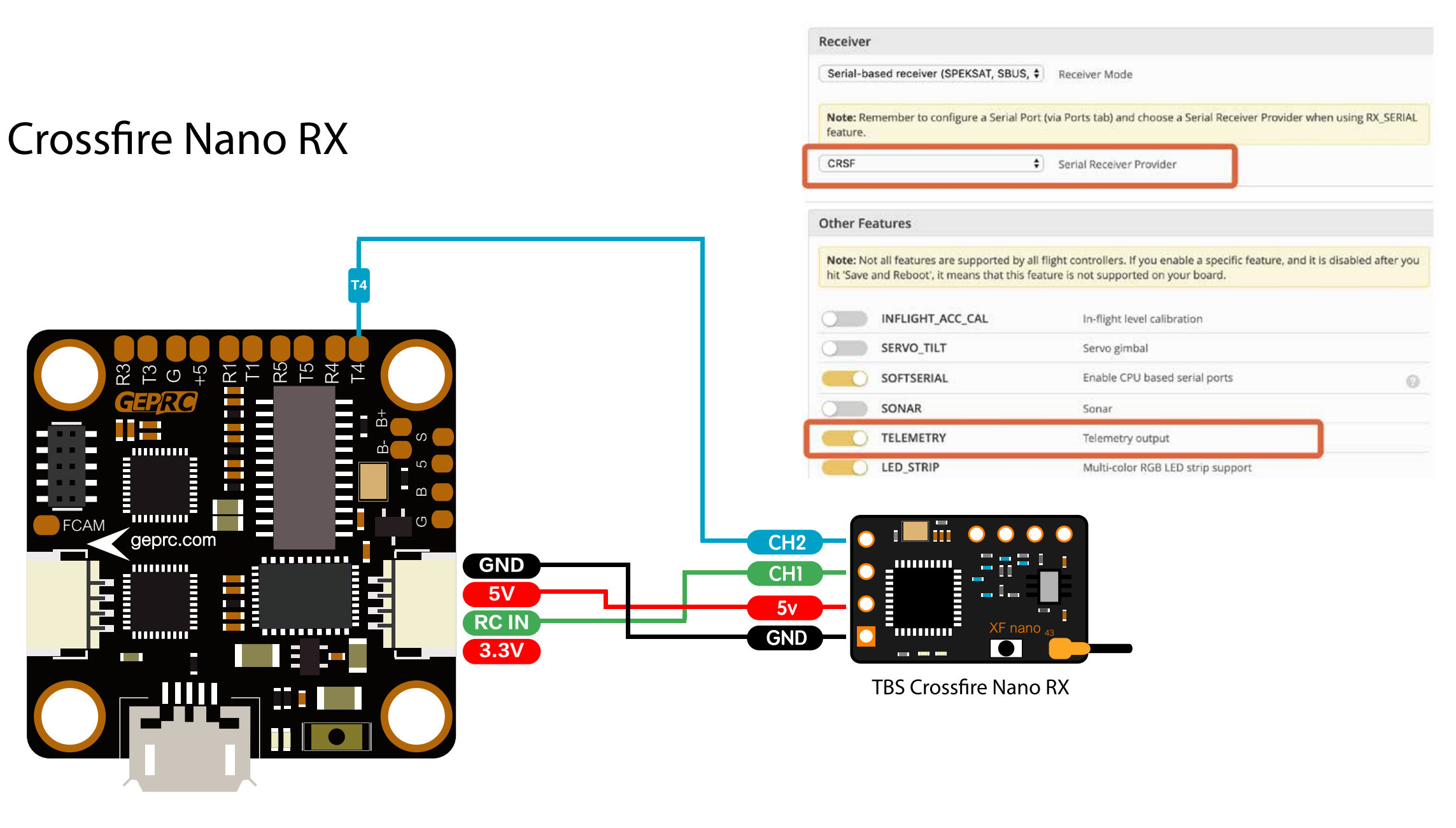
Receiver
Serial-based receiver (SPEKSAT, S ▾ Receiver Mode
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.
FrSky FPort ▾ Serial Receiver Provider

Other Features
Note: Not all features are supported by all flight controllers. If you enable a specific feature, and it is disabled after you hit 'Save and R feature is not supported on your board.

○	INFLIGHT_ACC_CAL	In-flight level calibration
○	SERVO_TILT	Servo gimbal
○	SOFTSERIAL	Enable CPU based serial ports
○	SONAR	Sonar
●	TELEMETRY	Telemetry output


T2
GND
5V
RC IN
3.3V
SBUS_OUT
S.PORT/F.PORT
GND
+5v
Inverted S.Port
Frsky R9MM & R9Mini
SBUS_IN
SBUS_OUT/CPPM
S.PORT
+5v
GND
Frsky R-XSR

TBS Crossfire Nano RX



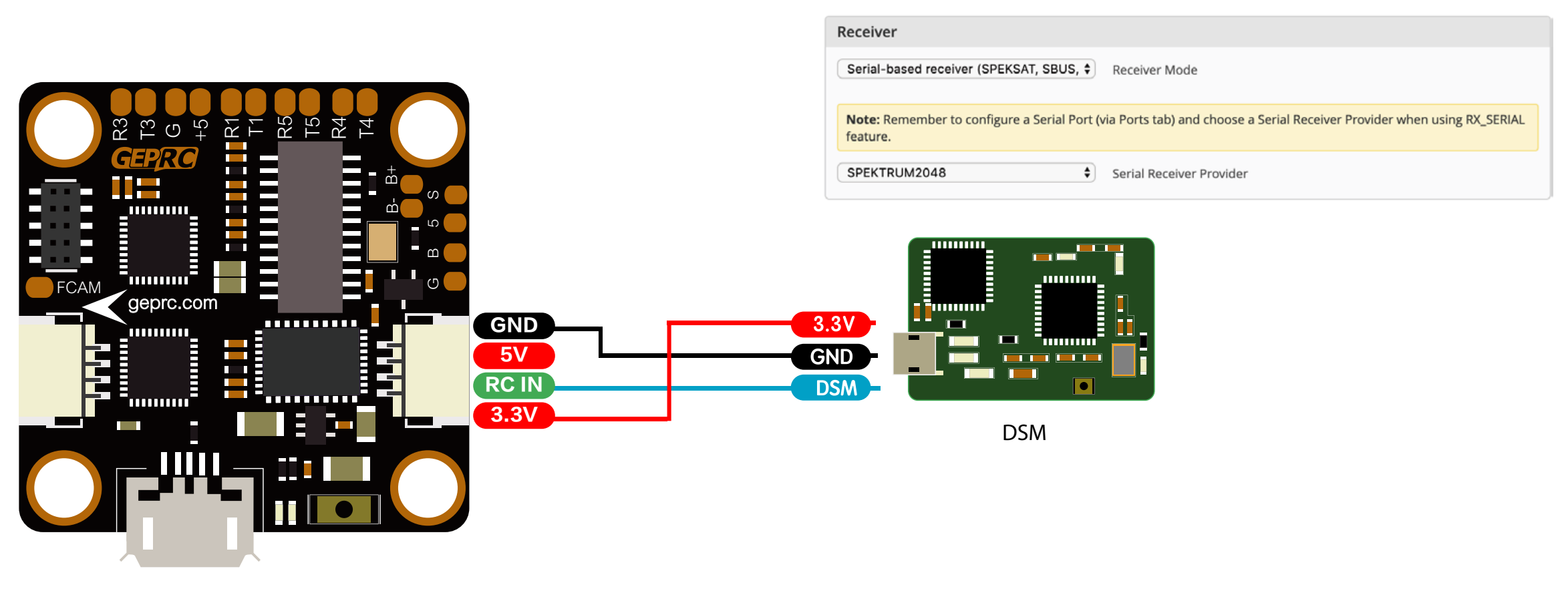
Receiver
Serial-based receiver (SPEKSAT, SBUS, ⇕ Receiver Mode
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.
CRSF ⇕ Serial Receiver Provider

Other Features
Note: Not all features are supported by all flight controllers. If you enable a specific feature, and it is disabled after you hit 'Save and Reboot', it means that this feature is not supported on your board.

○	INFLIGHT_ACC_CAL	In-flight level calibration
○	SERVO_TILT	Servo gimbal
●	SOFTSERIAL	Enable CPU based serial ports
○	SONAR	Sonar
●	TELEMETRY	Telemetry output
●	LED_STRIP	Multi-color RGB LED strip support

T4
GND
5V
RC IN
3.3V
CH2
CH1
5v
GND
XF nano
TBS Crossfire Nano RX

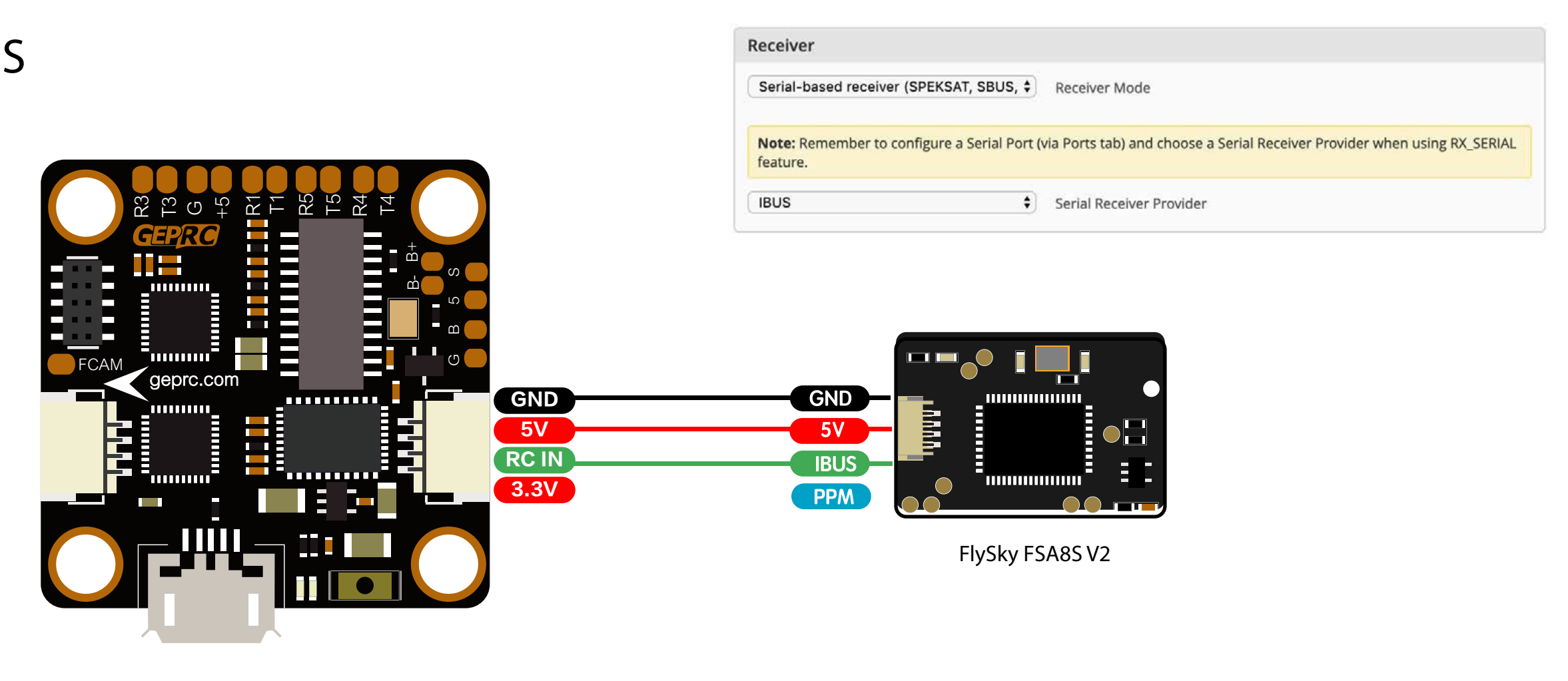
DSM/DSMX



Receiver
Serial-based receiver (SPEKSAT, SBUS, ⇕ Receiver Mode
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.
SPEKTRUM2048 ⇕ Serial Receiver Provider

GND
5V
RC IN
3.3V
3.3V
GND
DSM
DSM

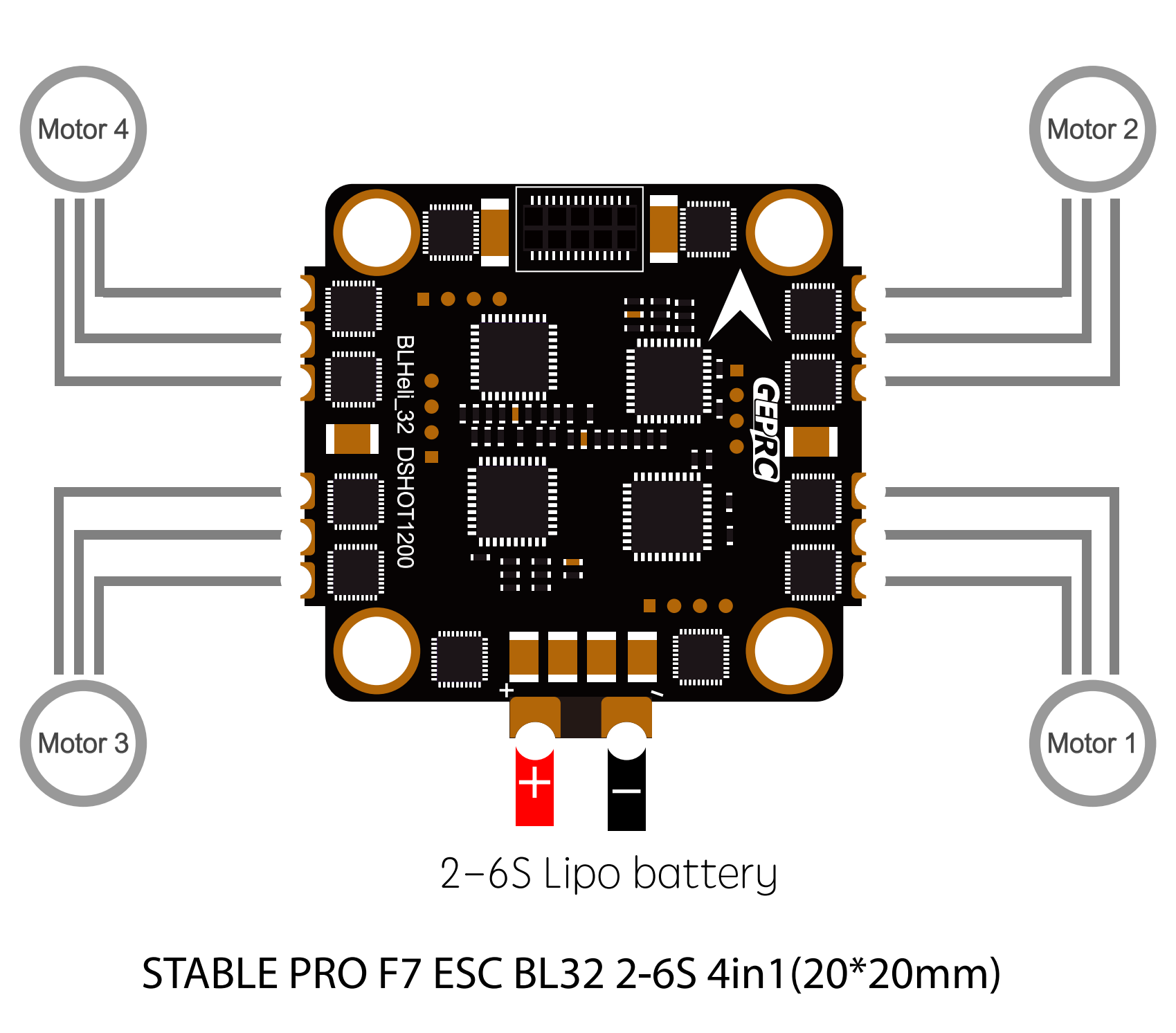
IBUS



Receiver
Serial-based receiver (SPEKSAT, SBUS, ⇕ Receiver Mode
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.
IBUS ⇕ Serial Receiver Provider

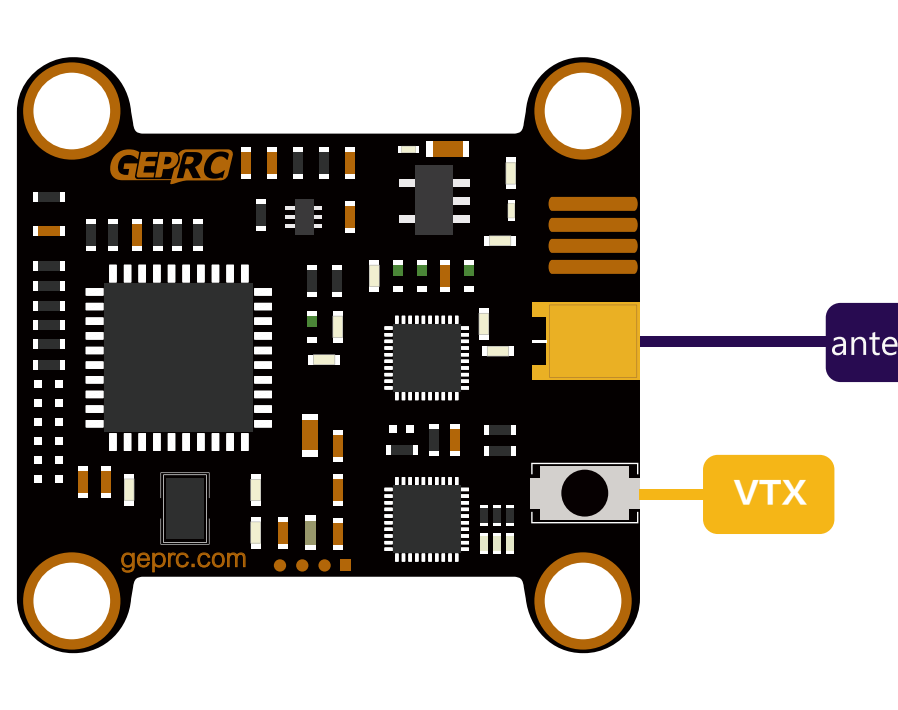
GND
5V
RC IN
3.3V
GND
5V
IBUS
PPM
FlySky FSA8S V2

ESC

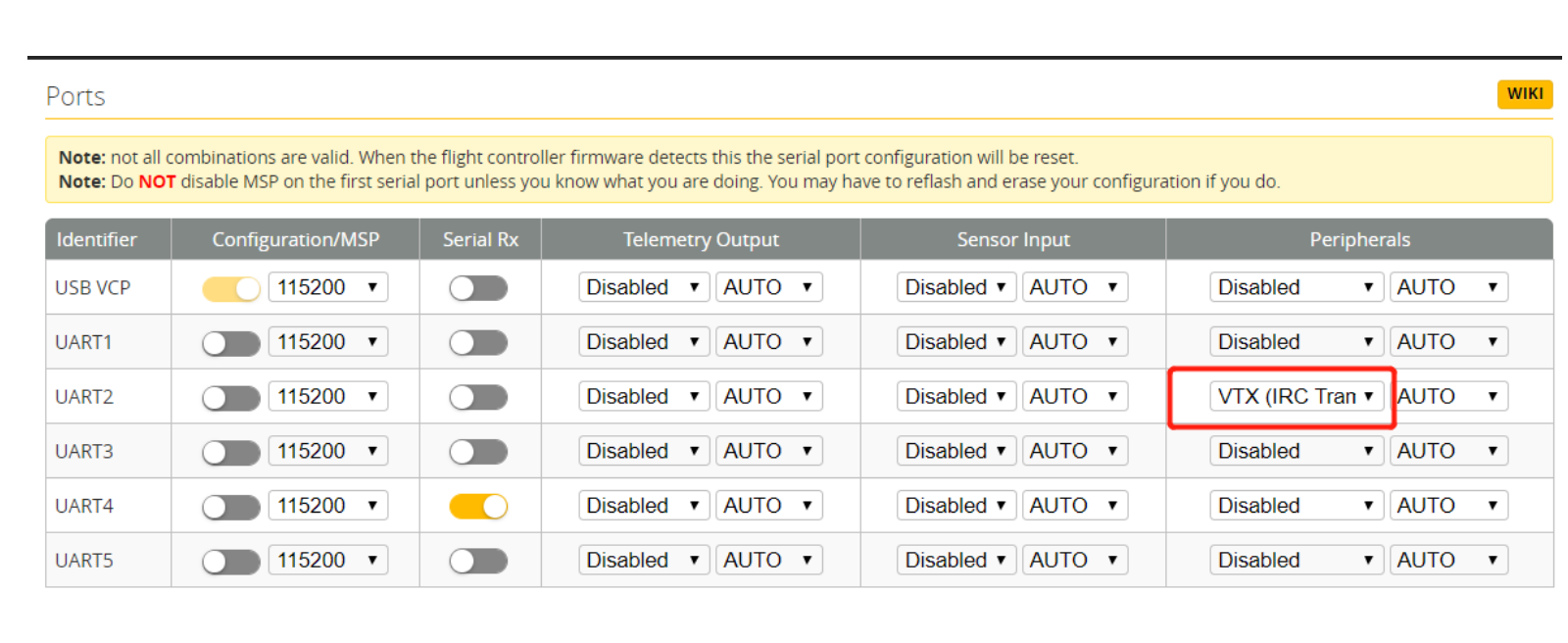

Motor 4
Motor 3
Motor 2
Motor 1
BLHeli_32 DSHOT1200
2-6S Lipo battery

STABLE PRO F7 ESC BL32 2-6S 4in1(20*20mm)

VTX


antenna
VTX
geprc.com

Important note:
If you need to use the VTX button with Betaflight v3.3.0+, please disable the IRC TRAMP peripherals on UART2.



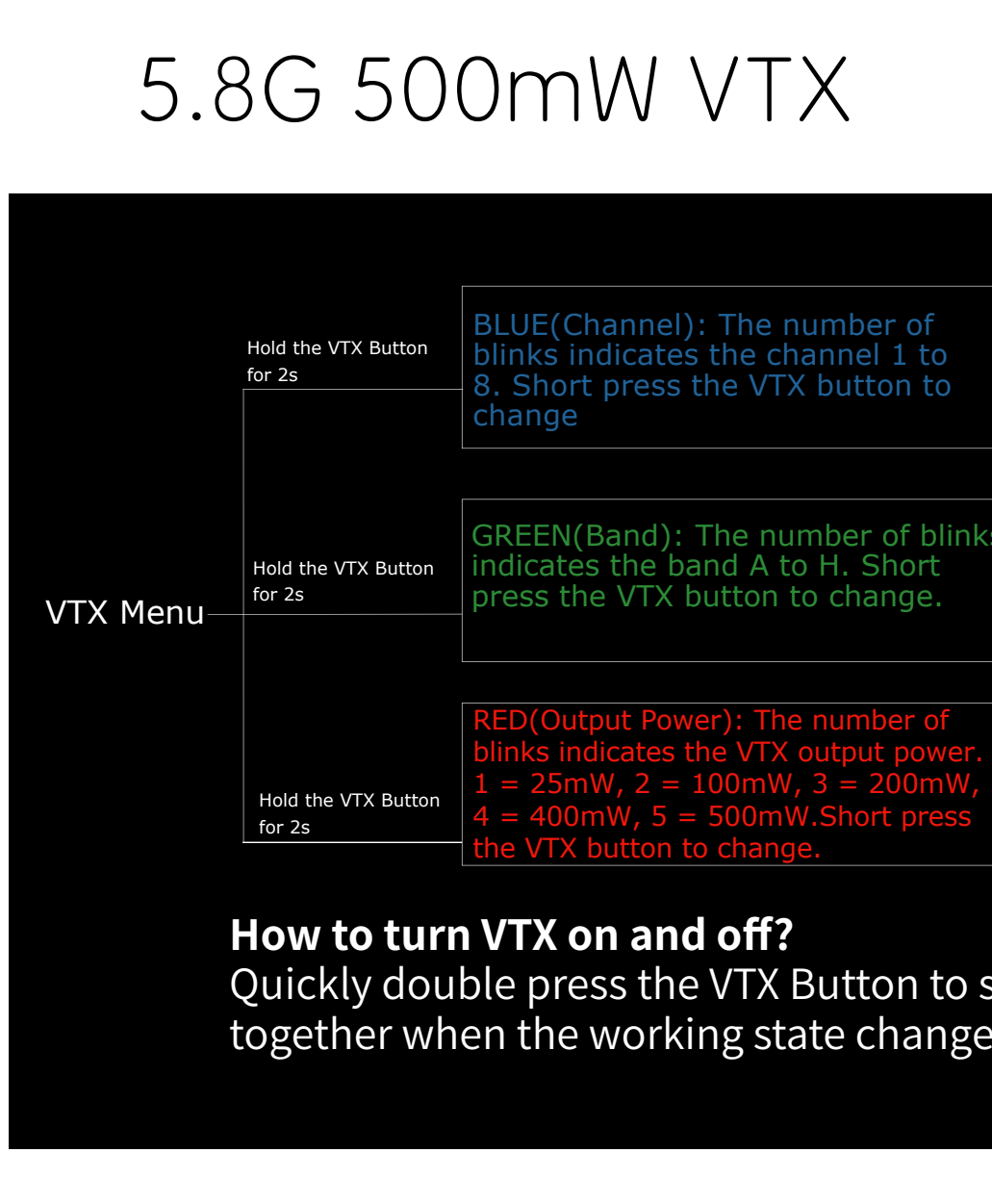
Ports

WIKI

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	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 ▾
UART2	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	VTX (IRC Tran ▾	AUTO ▾
UART3	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART4	○ 115200 ▾	●	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART5	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾

5.8G 500mW VTX



VTX Menu

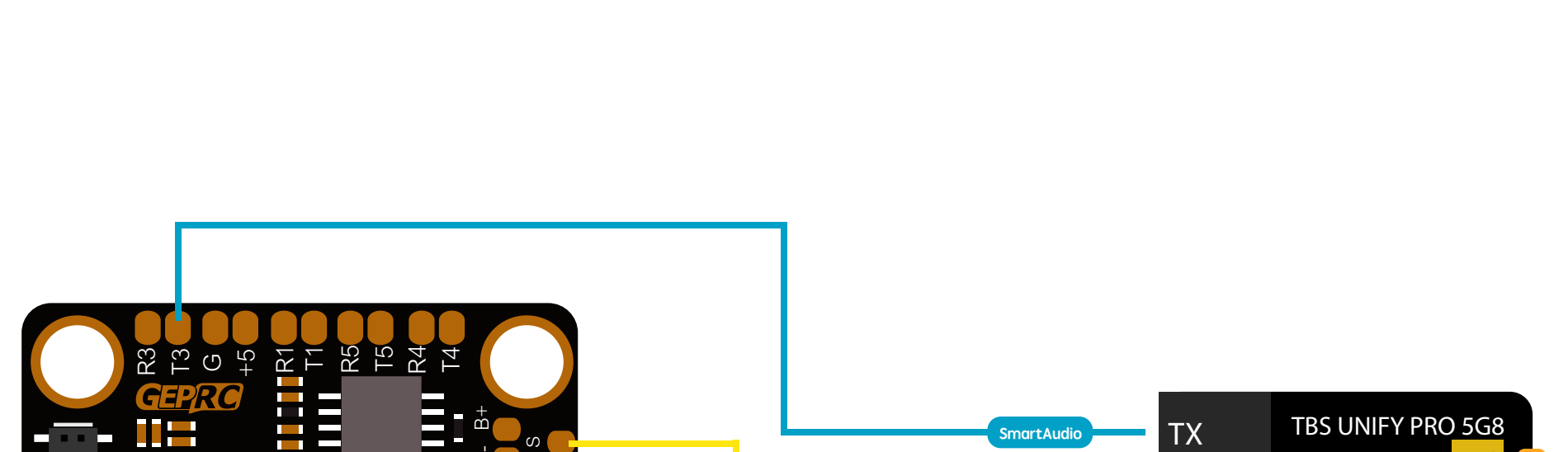
- Hold the VTX Button for 2s: BLUE(Channel): The number of blinks indicates the channel 1 to 8. Short press the VTX button to change
- Hold the VTX Button for 2s: GREEN(Band): The number of blinks indicates the band A to H. Short press the VTX button to change.
- Hold the VTX Button for 2s: RED(Output Power): The number of blinks indicates the VTX output power. 1 = 25mW, 2 = 100mW, 3 = 200mW, 4 = 400mW, 5 = 500mW.Short press the VTX button to change.

Note: Antenna must be installed BEFORE power on.

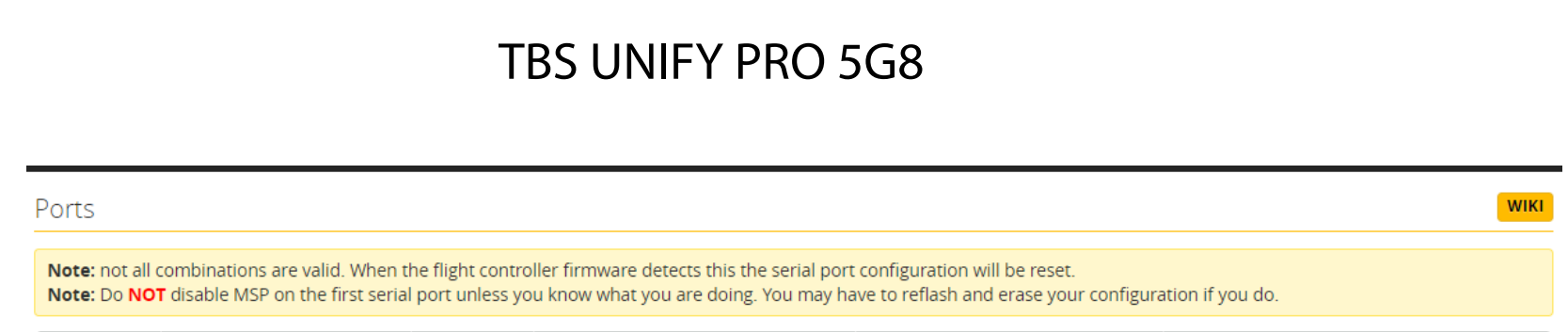
Frequency Table

	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band A	5865	5845	5825	5805	5785	5765	5745	5725
Band B	5733	5752	5771	5790	5809	5828	5847	5866
Band E	5705	5685	5665	5645	5885	5905	5925	5945
Band F	5740	5760	5780	5800	5820	5840	5860	5880
Band R	5658	5695	5732	5769	5806	5843	5880	5917
Band H	5362	5399	5436	5473	5510	5547	5584	5621

How to turn VTX on and off?
Quickly double press the VTX Button to switch between on and off. The VTX LEDs will blink together when the working state changes.


R3 T3 G +5 R1 T1 R5 T5 R4 T4
FCAM
geprc.com
SmartAudio
Video out
5V
GND
TX
VIDEO
5V
GND
TBS UNIFY PRO 5G8
TBS VTX

TBS UNIFY PRO 5G8



Ports

WIKI

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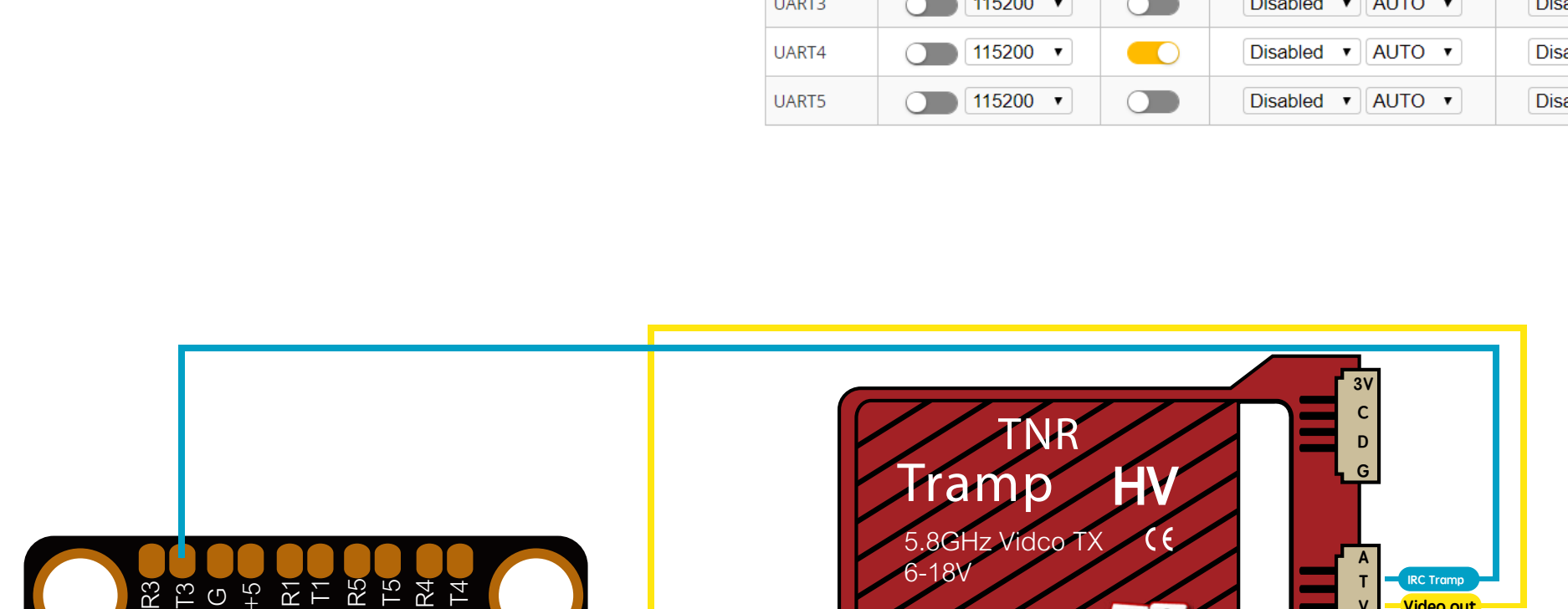
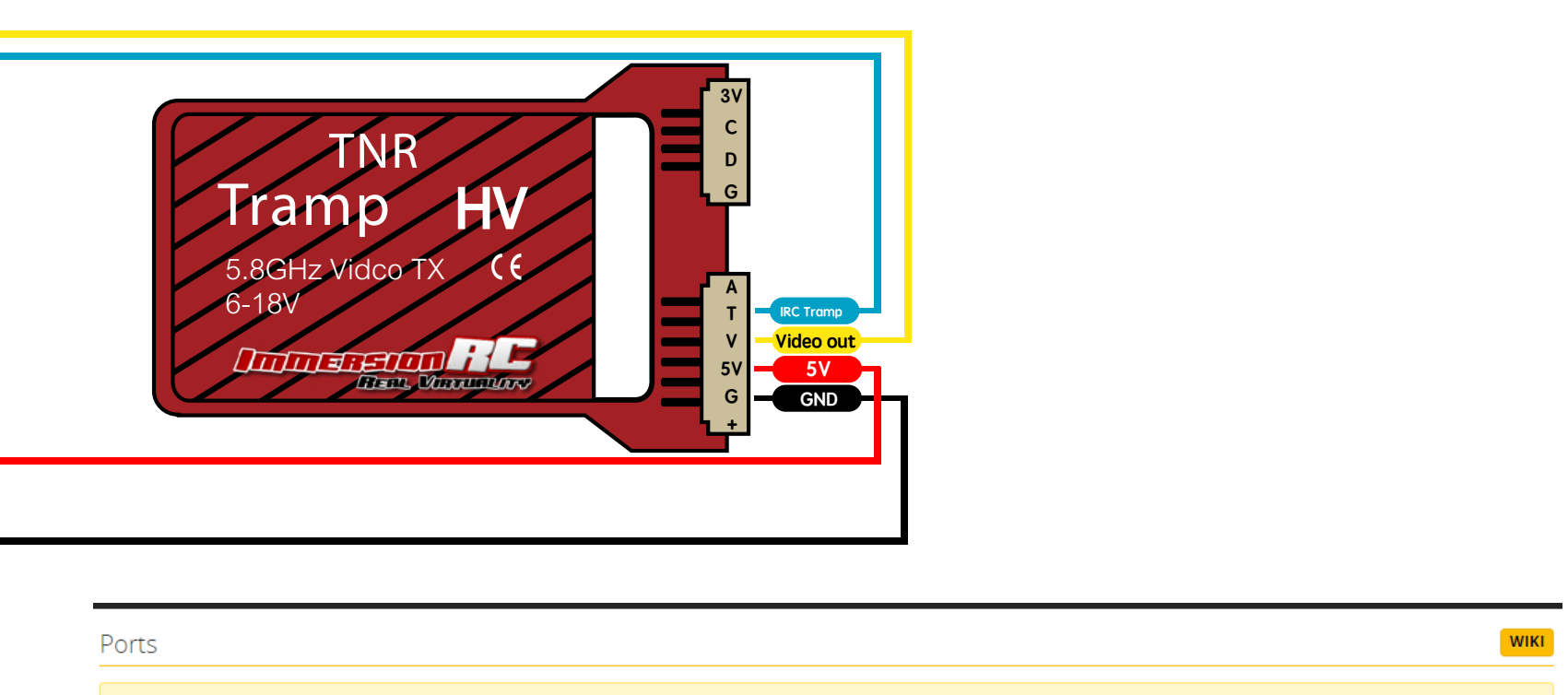
USB VCP	● 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART1	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART2	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART3	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	VTX (TBS Sma ▾	AUTO ▾
UART4	○ 115200 ▾	●	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART5	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾


TNR
Tramp HV
5.8GHz Video TX
6-18V
ImmersionRC
IRC Tramp
Video out
5V
GND



Ports

WIKI

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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.

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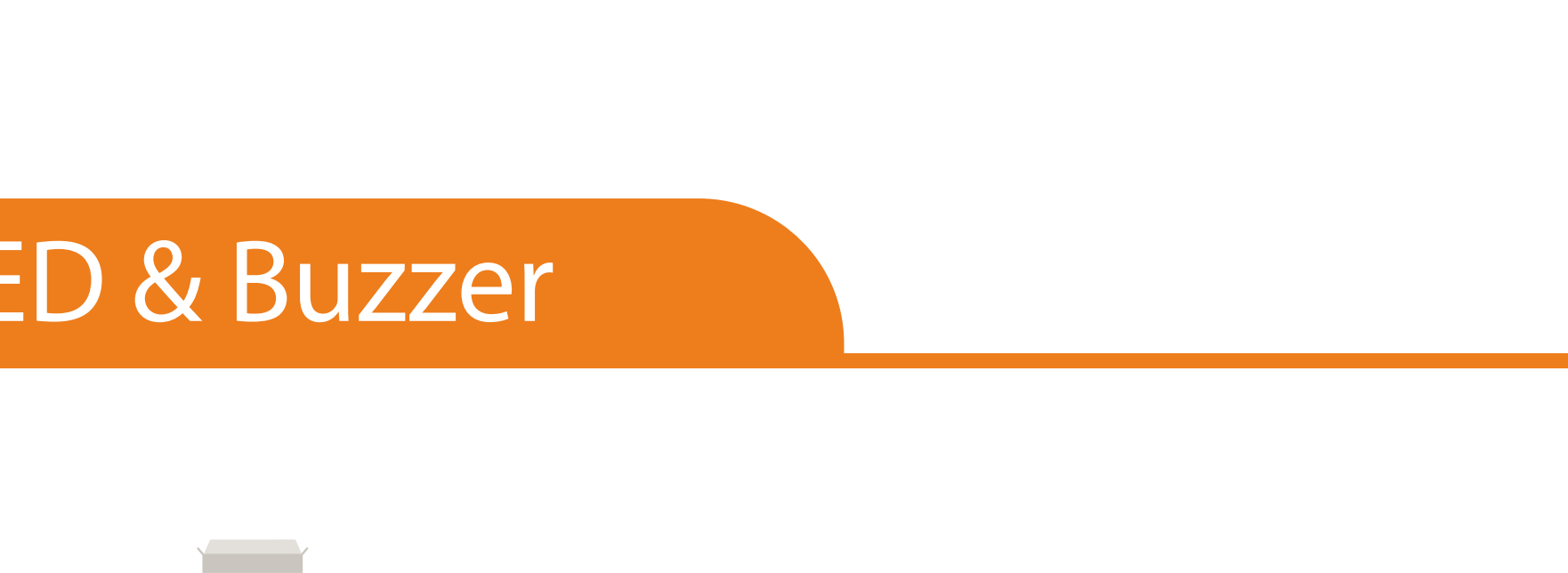
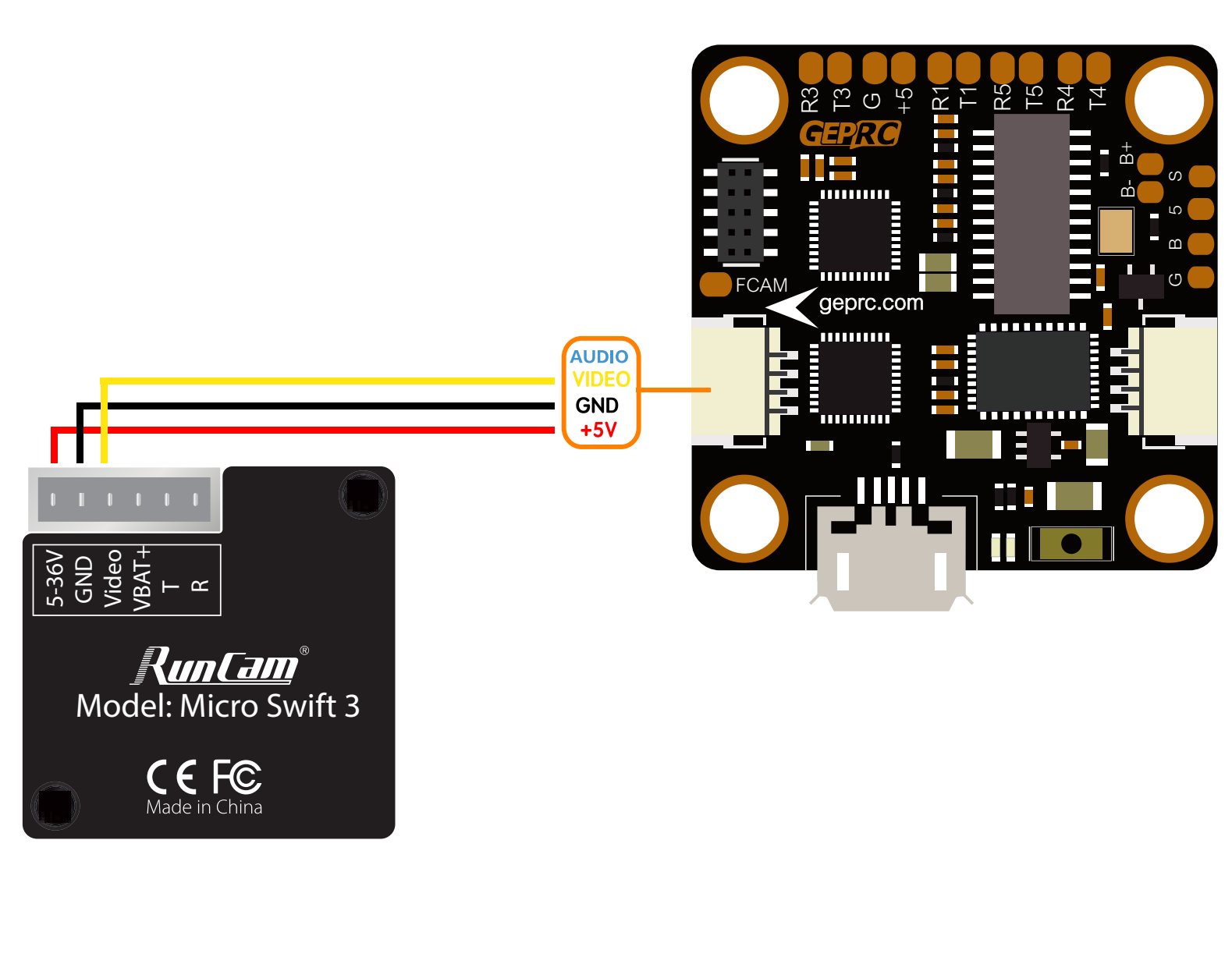
USB VCP	● 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART1	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART2	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART3	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	VTX (IRC Tran ▾	AUTO ▾
UART4	○ 115200 ▾	●	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART5	○ 115200 ▾	○	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾

LED & Buzzer


GEPRC-F7(20X20)V2.1
100
GND
Buzz-
LED
+5V
-
+
BUZZER
GND
LED
5V

LED

Camera


AUDIO
VIDEO
GND
+5V
5-36V
GND
Video
VBAT+
T
R
RunCam
Model: Micro Swift 3
CE FC
Made in China
FCAM
geprc.com

Official website
www.geprc.com

Manual
geprc.com/support

facebook
facebook.com/geprc

Instagram
instagram.com/geprc

GEPRC
www.geprc.com