



- Support 48CH
- Frequency range 5.8 GHz
- Output power up to 2.5W, ensuring long-range video transmission
- IRC Tramp protocol, allowing direct VTX control
- Intelligent indication and control system with LED backlighting
- Built-in fan for cooling prevents overheating

Product	
Product Name	VTX Pilotix R2500 5.8G 2.5W
Model	2.5W
SKU	4138
VTX Specification	
Frequency range	5.8 GHz
Output Power	Up to 2.5W (2500mW)
Power Consumption	120-860mA(12V/25mW-2500mW)
Protocol	IRC Tramp
Video Format	NTSC/PAL
Channels	48CH
Supported Bands	A-B-E-F-R-L
Power Levels	PIT/25mW/400mW/800w/1500mW/2500mW
Built-in microphone	+
Antenna Connector	MMCX
Impedance	75Ω
Input Voltage	DC7-36V(2-8S)
Cooling	Built-in fan
Indication	Three-color indication
Controls	×2 buttons
Size (mm)	39.2×29×12
Weight (g)	16.5
Mounting	25.5×25.5mm, M2
Working temperature	-10 - 60°C
Package includes	
×1 VTX Pilotix R2500 5.8G 2.5W	
×1 5.8G antenna MMCX	
×1 Pigtail adapter MMCX to SMA female connector 100mm	
×1 Cable SH1.0 - 6P on VTX to FC (90mm cable, connector on one end only)	

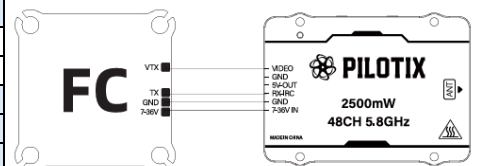
! Precautions

1. Before turning on the power, make sure an antenna is plugged in - otherwise components may be damaged.
2. While in operation, the VTX may generate high temperatures. Do not touch directly to avoid burns.
3. Ensure air convection at the image transmission installation site for proper heat dissipation.
4. Comply with local radio laws and use locally approved channel frequencies.
5. Confirm correct voltage range (7-36V) and polarity before powering on to avoid damage.
6. Use high-quality antennas to ensure effective image transmission.
7. If the transmitter is idle for long after powering on, set power to minimum to prevent overheating.

Wiring diagram:

Make sure the pin assignments on your flight controller match the required connections.

Pin	VTX Pin Name	Signal	Line	Color	FC Pin Name
1	VIDEO	CVBS	Yellow		VTX
2	GND-OUT	GND			- to external camera
3	5V-OUT	5V out			+ to external camera
4	RX-IRC	IRC Tramp	White		TX
5	GND	-	Black		GND
6	7-36V DC-IN	+	Red		2-8S



VTX Channel table:

! Protocol: **IRC Tramp** in BetaFlight when using

FR/CH	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
A	5865	5845	5825	5805	5785	5765	5745	5725
B	5733	5752	5771	5790	5809	5828	5847	5866
E	5705	5685	5665	5645	5885	5905	5925	5945
F	5740	5760	5780	5800	5820	5840	5860	5880
R	5658	5695	5732	5769	5806	5843	5881	5917
L	5362	5399	5436	5473	5510	5547	5584	5621

VTX Table

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Number of bands

8

Number of channels by band

Name	Letter	1	2	3	4	5	6	7	8	
BOSCAM_A	A	5865	5845	5825	5805	5785	5765	5745	5725	Band 1
BOSCAM_B	B	5733	5752	5771	5790	5809	5828	5847	5866	Band 2
BOSCAM_E	E	5705	5685	5665	5645	5885	5905	5925	5945	Band 3
FATSHARK	F	5740	5760	5780	5800	5820	5840	5860	5880	Band 4
RACEBAND	R	5658	5695	5732	5769	5806	5843	5881	5917	Band 5
RACE_LOW	L	5362	5399	5436	5473	5510	5547	5584	5621	Band 6

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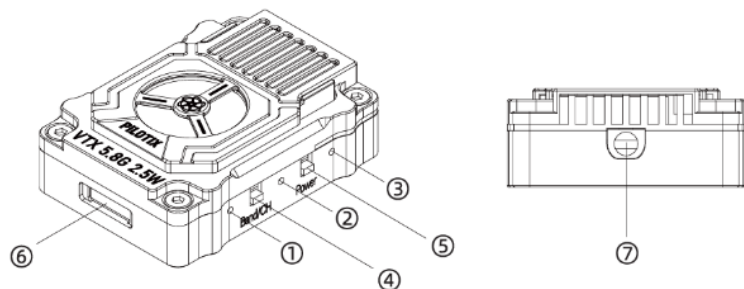
Number of power levels

1	2	3	4	5	
25	100	200	400	600	Value
25	400	800	1.5	2.5	Label

Operating Instructions:

Buttons and LED Indicator Definitions:

- Frequency indicator: Blue LED
- Frequency group indicator: Green LED
- Power indicator: Red LED
- Band and channel adjustment button
- Power adjustment button
- Connector: SH1.0mm-6P
- Connector: MMCX



1. Band switching:

Long press button ④ for 5 seconds, the green light will start blinking.

Short press button ④ each time to switch to the next frequency band.

The corresponding blue LED will flash, and the number of flashes represents the corresponding frequency band: A.B.E.F.R.L.

Press and hold button ④ for 5 seconds to switch to the frequency band, and short press for 1 second to switch to the next frequency band.


	BAND A	BAND B	BAND E	BAND F	BAND R	BAND L
● ● ●	1 Flash	2 Flashes	3 Flashes	4 Flashes	5 Flashes	6 Flashes

2. Frequency channel switching:

Short press button ④ to switch channels.

The corresponding green LED will flash each time the button is short pressed.

The number of flashes represents the corresponding channels 1.2.3.4.5.6.7.8


Short press the button ④								
	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
	1 Flash	2 Flashes	3 Flashes	4 Flashes	5 Flashes	6 Flashes	7 Flashes	8 Flashes

3. Power output switching:

Each short press of button ⑤ switches the power level once among 25mW, 400mW, 800mW, 1500mW, and 2500mW, cycling between these five settings.

The number of flashes of the red LED corresponds to the power level, as shown in the diagram below.

Long-pressing button ⑤ for 5 seconds enters or exits Pit mode; when Pit mode is activated, the red light remains on continuously.

Short press button ⑤ to switch power levels						
Long press button ⑤ for 5 seconds to enter or exit Pit mode						
	PIT Mode	25mW	400mW	800mW	1500mW	2500mW
	Continuous	1 Flash	2 Flashes	3 Flashes	4 Flashes	5 Flashes