ZYRO LINK SERIES

ZYRO

LINK SERIES

C403 Max User Guide

Brand Style Edition



Figure 1. VTX product image (original product image retained)

Series Positioning	Unified brand-style documentation for ZYRO wireless video transmission products
Product Composition	VTX wireless transmitter + RBox ground receiver
Signal Profile	3–7 GHz, 5 MHz bandwidth, 1080p60fps / 720p60fps
Supported FC Systems	Betaflight / INAV, with MSP OSD canvas mode support

01 Product Overview

The C403 Max kit includes a VTX (wireless transmitter) and an RBox (ground receiver).



Figure 2. VTX antenna and interface illustration (original product image retained)

- The VTX supports both visible-light and infrared camera inputs for multi-scenario image capture.
- The RBox handles ground reception, display, and menu operation, and works together with the dedicated keypad board.
- The system establishes the wireless link through pairing. After successful pairing, the green LEDs on both the VTX and RBox remain on.

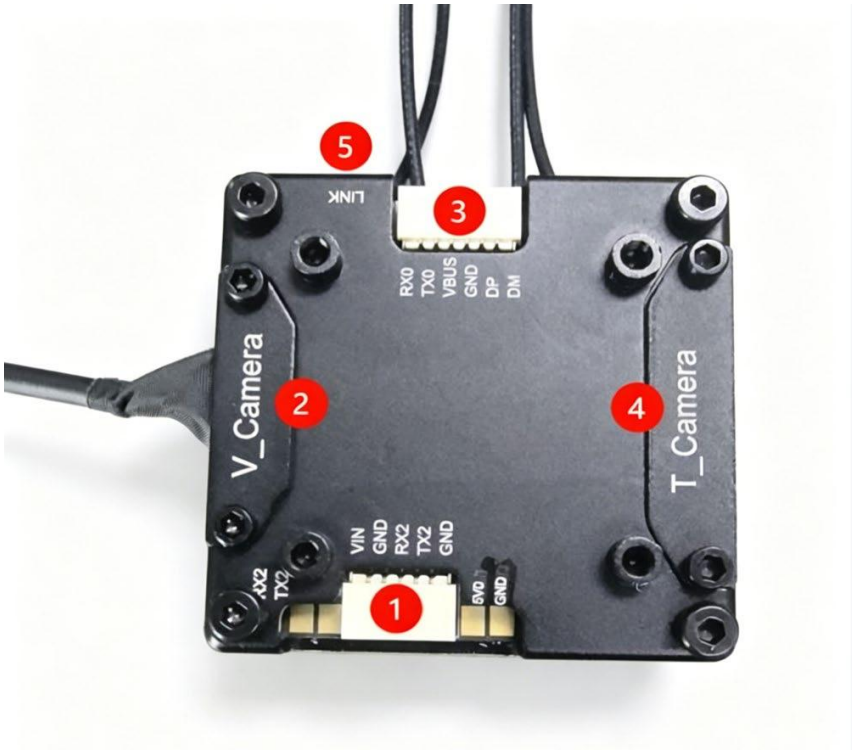
02 VTX Interface Description

Main VTX Interfaces

No.	Interface	Description
①	Power interface	VIN input power: 8–40 V; GND ground; RX2/TX2 are flight-controller serial signals at 3.3 V level.
②	Visible camera interface	Supports MIPI 2-lane or 4-lane signals.

③	Debug interface	For the original factory debug sub-board. Includes RX0, TX0, VBUS, GND, DP, and DM. Connecting other peripherals is not recommended.
④	Infrared camera interface	Supports MIPI 1-lane or DVP signals.
⑤	Pairing button	Used to pair the wireless link between the VTX and RBox.

- Connect the antennas before powering on to avoid damage caused by unloaded transmission.
- A 3.3 V TTL serial interface is recommended for the flight controller. Confirm pin orientation before wiring.



03 RBox and Quick Pairing

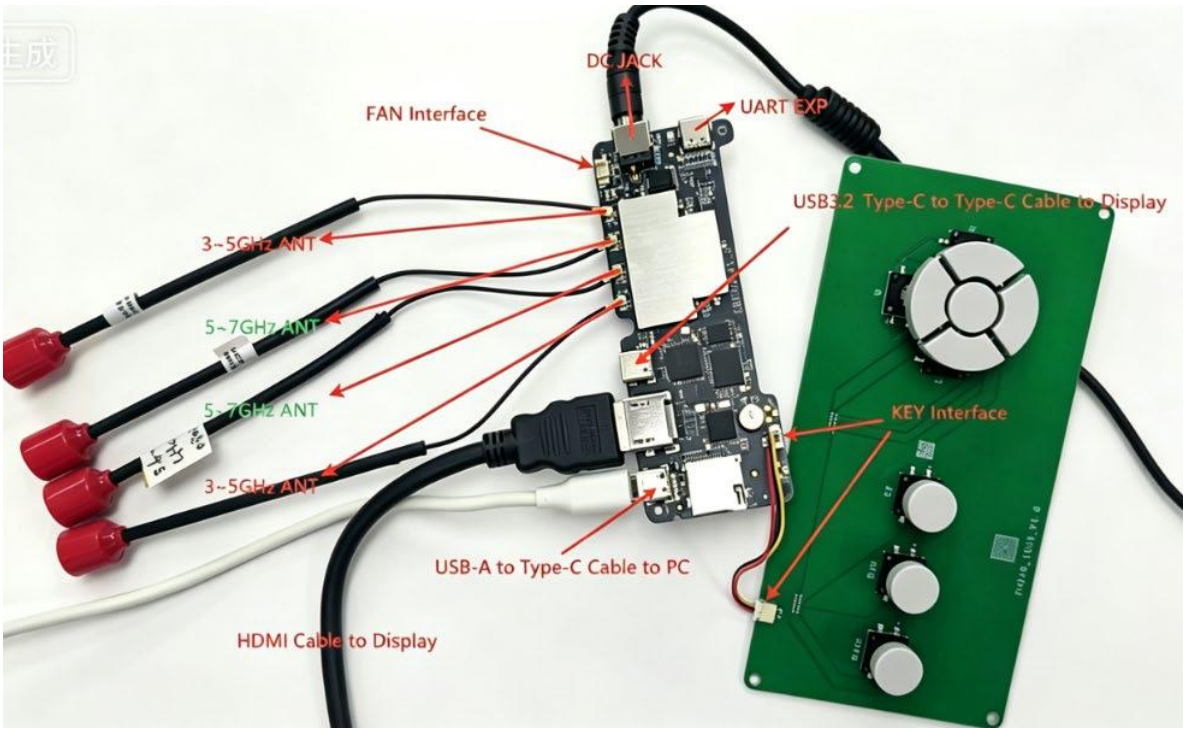


Figure 3. RBox and keypad board (original product image retained)

1. Connect power to the VTX and RBox, and confirm that the antennas on both ends are installed correctly.
2. Briefly press the pairing button on the VTX and RBox. In pairing mode, the dual-color LEDs flash rapidly and the buzzer emits short prompts.
3. After the wireless connection is established, the RBox buzzer emits a long prompt tone and the green LEDs on both the VTX and RBox stay on, indicating that the link is active.

Important: Connect the antennas correctly before powering on the VTX and RBox. Otherwise, the devices may be damaged.

04 Firmware Upgrade

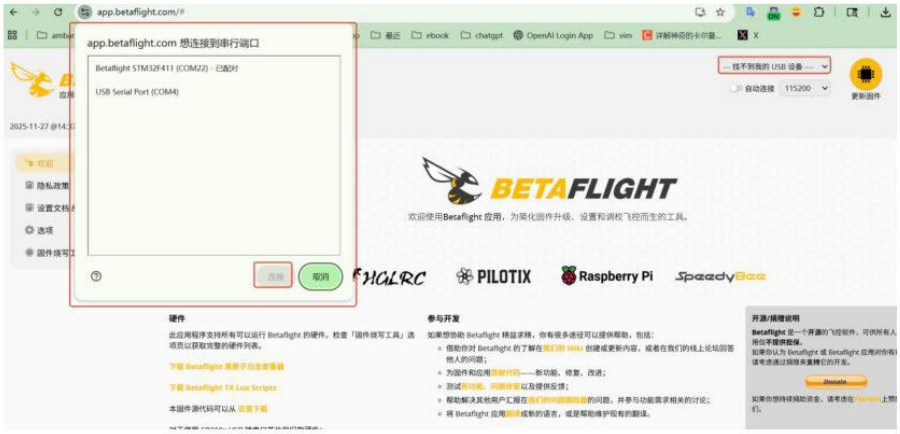
4. Copy the upgrade files to the root directory of the TF card. It is recommended to use a TF card that has already been formatted in the RBox and can be recognized correctly.
5. Keep the firmware filenames as A1_SKY_v1.0.0_20251127.img and A1_GND_v1.0.0_20251127.img.
6. Maintain a normal wireless connection between the VTX and RBox. After inserting the TF card, confirm that the TF card icon in the lower-right corner turns blue and shows the capacity.
7. In the menu, select [Settings] → [System] → [System Upgrade], then confirm and wait for the upgrade to finish.
8. After the upgrade, the buzzer will sound and a restart prompt will appear. The new firmware takes effect after restart and typically does not require re-pairing.
9. After the upgrade, the current version information can be checked under [Settings] → [System] → [About].

05 Flight Controller Connection and MSP OSD Setup

UI OSD font note in this document: the Betaflight section corresponds to HD video format, and the INAV section corresponds to HDZERO video format.

Betaflight MSP OSD Output Setup

Step	Operation
1	Connect the relevant wires from the 4-pin cable to the flight controller.
2	Connect to the flight controller through Betaflight Configurator.
3	Select any serial port as the MSP display port. The original document uses UART2 as an example.
4	Save and reboot the flight controller to complete the MSP OSD output configuration.

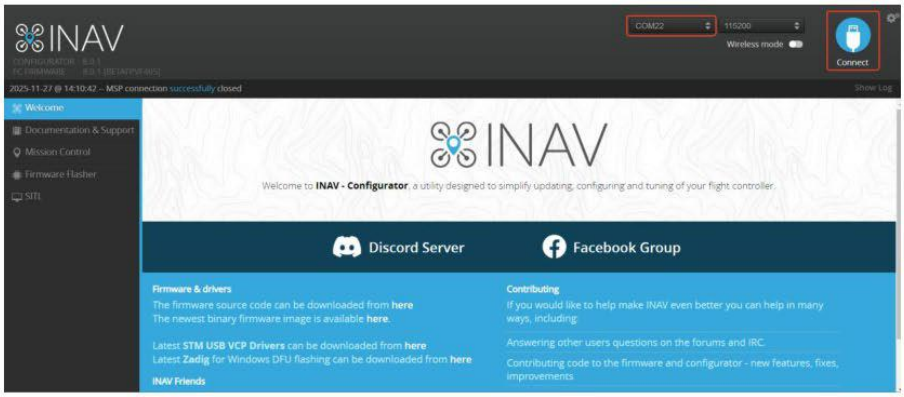


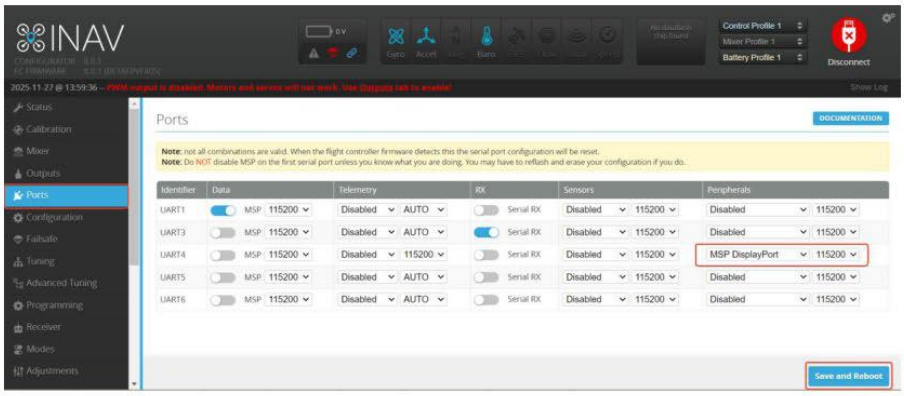
3. 使用 Betaflight Configurator 连接飞控，选择任意串口作为 MSP 显示接口（下图用 UART2 作为例子）。

Figure 4. Betaflight configuration example (original screenshot retained)

INAV MSP OSD Output Setup

Step	Operation
1	Connect the relevant flight-controller signals to the VTX.
2	Connect to the flight controller through INAV Configurator.
3	Select any serial port as the MSP display port. The original document uses UART4 as an example.
4	Save and reboot the flight controller to complete the MSP OSD output configuration.





3. 保存并重启飞控，msp osd 输出设置完成（当前我们的界面字体只支持 HDZERO 视频格式）。

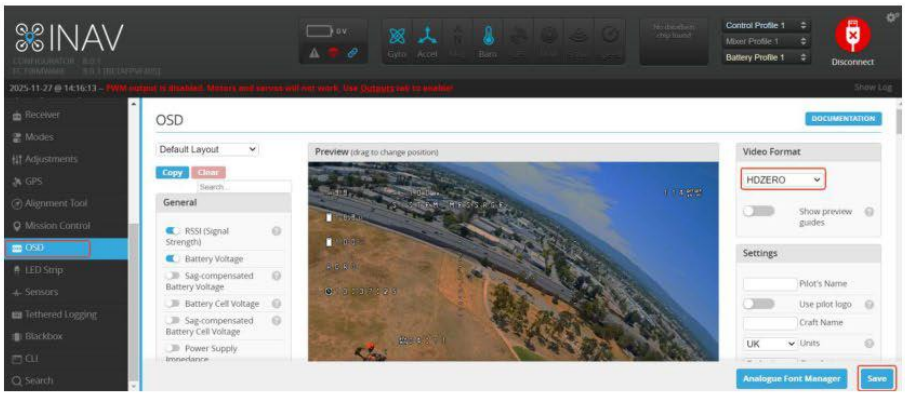


Figure 5. INAV configuration example (original screenshot retained)

06 Status Indicators

Buzzer Indications (RBox)

Status	Prompt
Pairing in progress	beep.... beep.... beep.... beep....

Pairing successful	beep.....
Signal weakening	beep..
Firmware upgrade successful	beep....
RBox low voltage	beep.. beep.. beep.. beep..
Restore factory settings	beep.....
Channel selection	beep.....

LED Indications

Status	Description
Unpaired state	The red LEDs on the VTX and RBox stay on.
Pairing in progress	The dual-color LEDs on the VTX and RBox flash rapidly.
Pairing successful	The green LEDs on the VTX and RBox stay on.

07 Key Specifications

VTX Specifications

Item	Parameter
Model	C403 Max
Communication frequency	3–7 GHz
Communication bandwidth	5 MHz
Transmit power (EIRP)	MAX: 33 dBm; FCC: <30 dBm; CE: <14 dBm; SRRC: <20 dBm; MIC: <25 dBm
Interfaces	JST1.0×4 (power cable), TF card slot
Mounting hole spacing	25.5 mm × 25.5 mm
Dimensions	34 mm × 34 mm × 18 mm
SD card slot	Supports up to 1 TB
Video resolution	1080p60fps / 720p60fps
Weight	22.41 g
Operating temperature	-20 to 60 °C
Number of channels	36

Power input	11.1–40 V
Supported FC systems	Betaflight, INAV
OSD	Canvas Mode
Antenna	4 IPEX connectors; one antenna covers 3–5 GHz and one covers 5–7 GHz.

RBox Specifications

Item	Parameter
Model	C403 Max
Communication frequency	3–7 GHz
Communication bandwidth	5 MHz
SD card slot	Supports up to 1 TB
Type-C interfaces	Three in total: USB-A to Type-C for PC upgrade; USB 3.2 Type-C to Type-C for DP display; UART EXP for TTL 3.3 V serial communication.
Power input	9–30 V, 2 A
Fan interface	Provides 5 V / 200 mA supply capability
Keypad interface	Connects to the original dedicated keypad board; a custom keypad can also be developed.

Camera and Antenna Specifications

Item	Parameter
Image sensor	1/1.8 inch, 2 MP
Resolution	1080p60fps / 720p60fps
Aspect ratio	16:9 / 4:3
FOV	160°
Aperture	F2.2
Shutter	Rolling shutter
Weight	13.47 g
Camera dimensions	19 mm × 19 mm × 24 mm
Minimum illumination	0.0001 Lux
Coaxial cable length	140 mm
VTX antenna	LHCP, 3–5 GHz / 5–7 GHz, average gain 2 dBi, 50 Ω, VSWR < 1.5, IPEX-1
RBox antenna	LHCP, 3–5 GHz / 5–7 GHz, average gain 10 dBi, 50 Ω, VSWR ≤ 2.5, SMA-J

08 Brand Layout Notes

- This file has been unified into the ZYRO series style, including the cover, section headings, table colors, and header/footer treatment.
- Original product images and configuration screenshots have been retained and reorganized into a cleaner reading structure.
- The same layout can be extended to other ZYRO products by replacing the product name, images, and specification tables.