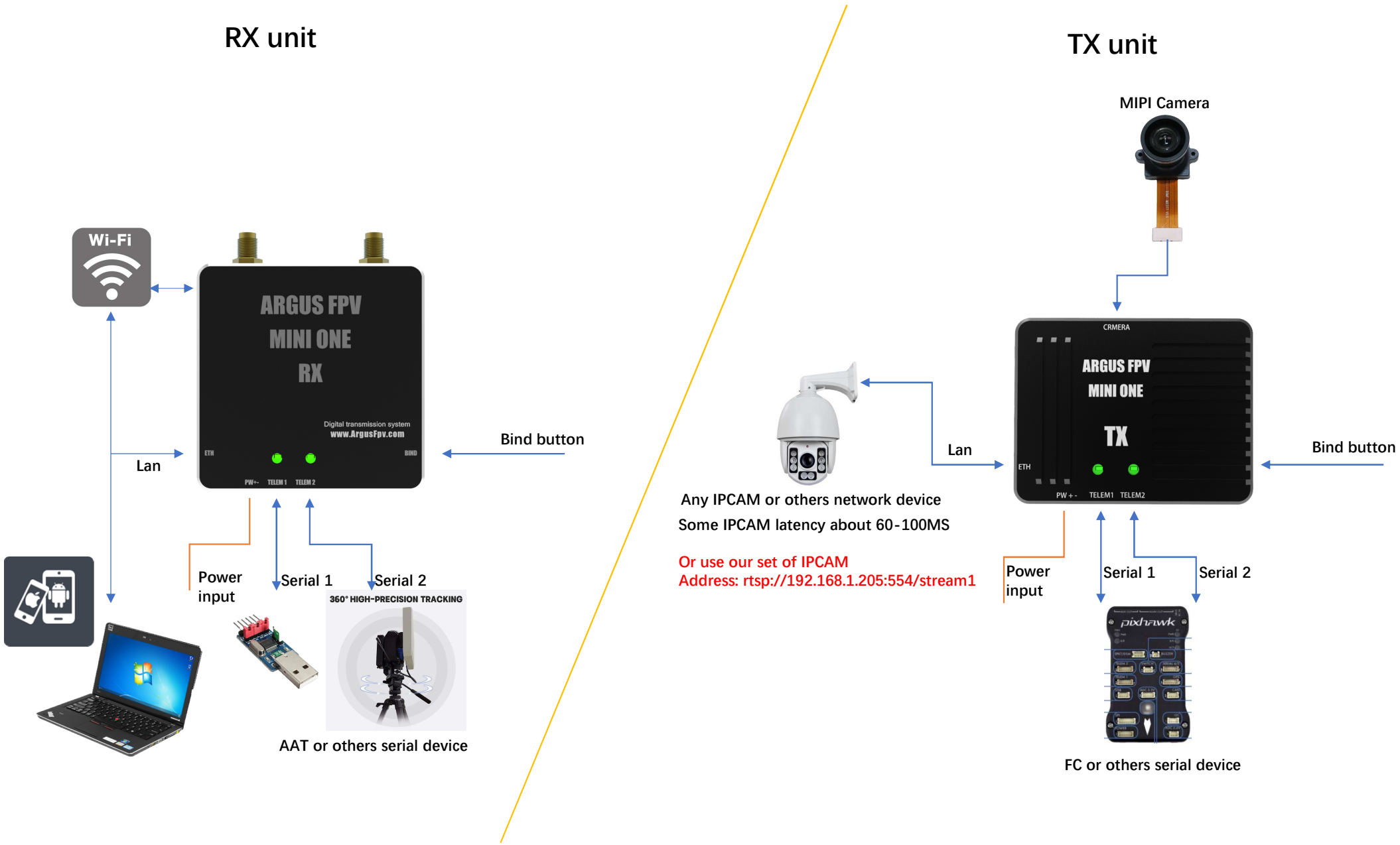
ArgusFpv

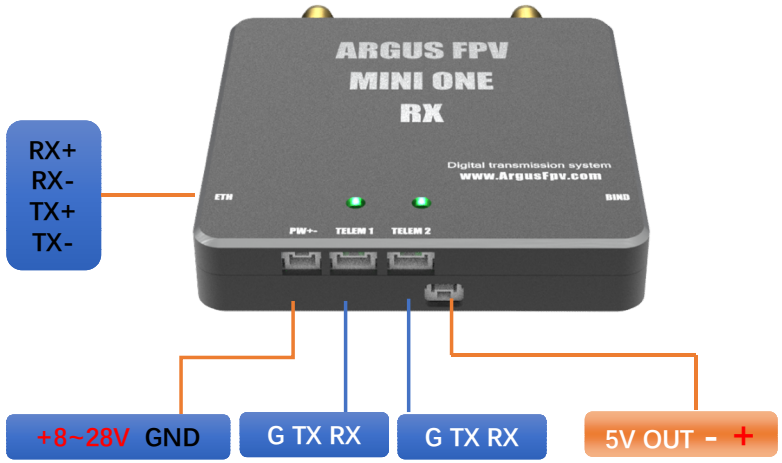
TECHNOLOGY

MINI ONE Quick Use Manual

www.ArgusFpv.com


RX unit
Wi-Fi
ARGUS FPV
MINI ONE
RX
Digital transmission system
www.ArgusFpv.com
ETH
BIND
PW+-
TELEM 1
TELEM 2
Lan
Bind button
Power input
Serial 1
Serial 2
360° HIGH-PRECISION TRACKING
AAT or others serial device
TX unit
MIPI Camera
CRMERA
ARGUS FPV
MINI ONE
TX
ETH
PW + -
TELEM1
TELEM2
Lan
Bind button
Any IPCAM or others network device
Some IPCAM latency about 60-100MS
Or use our set of IPCAM
Address: rtsp://192.168.1.205:554/stream1
Power input
Serial 1
Serial 2
pixhawk
FC or others serial device

1、Interface


ARGUS FPV
MINI ONE
RX
Digital transmission system
www.ArgusFpv.com
ETH
BIND
PW+-
TELEM 1
TELEM 2
RX+
RX-
TX+
TX-
+8~28V GND
G TX RX
G TX RX
5V OUT - +

CRMERA
ARGUS FPV
MINI ONE
TX
ETH
PW + -
TELEM1
TELEM2
RX+
RX-
TX+
TX-
+8~28V GND
G TX RX
G TX RX
5V OUT - +

2、Connect the FC

Connect the data transmission interface of FC to the TELEM1 interface of RX. Simply connect your PC or phone/tablet to RX's client Wi Fi to automatically connect to QgroundControl or Mission Planner.

S.BUS out

SSID:A1-XXXXX
Password：12345678
Or connect the wire of RX
Build-in DHCP server

S.BUS in

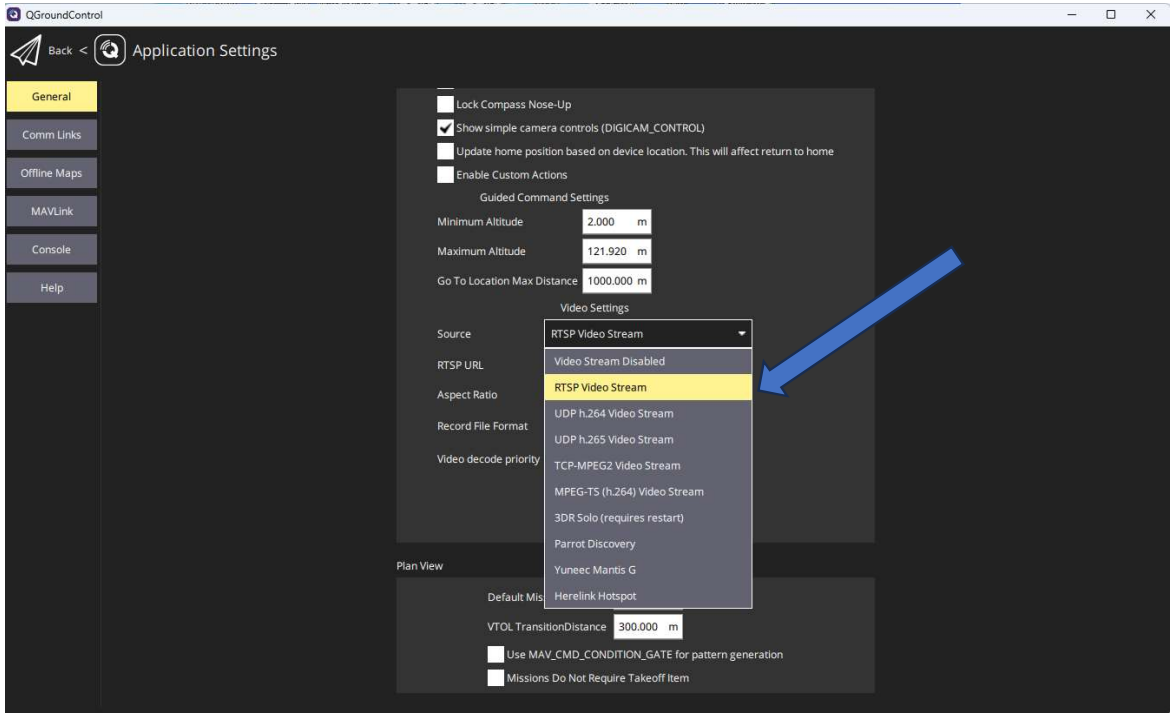
3、TTL serials

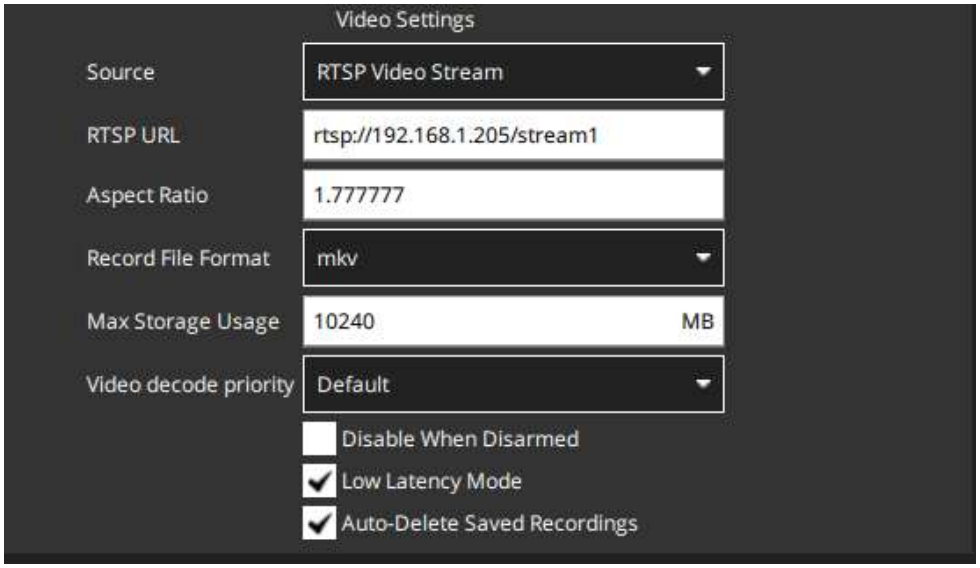
The TLEME1 and TELME2 of the transmitter communicate directly with the TLEME1 and TELME2 of the receiver, and are also forwarded to the network protocol for communication. After connecting the client device to the receiver, refer to the following settings:
TELEM1 baud rate 115200 TCP/IP 192.168.0.2:2021
(Retail version TELEM1 baud rate 100000 Stop Bits:2 Parity:Even for S.BUS specific)
TELEM2 baud rate 115200 TCP/IP 192.168.0.2:2020
(Retail version TELEM2 baud rate 115200 UDP14550 for Mavlink only)

According to actual needs, you can use the software we provide to change the serial port settings.
For example:
The TELEM1 serial port of TX is set as the S.BUS control signal output port.
RX's TELEM1 becomes an S.BUS remote control signal input port to extend your remote control signal distance.
TX's TELEM2 is set to enable MAVLINK, and the ground station software can automatically link UDP/14550/baud rate 115200.
The TELEM2 serial port of RX can directly communicate with TX serial port 2, and you can use TTL TO USB to connect to the computer to obtain data.
(If your device does not support S.BUS input, you will need to use the included dedicated connection cable)

4、 Using QGroundControl to Get Data and Videos

We recommend that you use the option from http://qgroundcontrol.com/ The QGroundControl ground station software downloaded from the website. Just select the video source RTSP video stream as shown in the figure below and enter the video stream address where you want to connect the lens.
For example:
rtsp://192.168.1.205/stream1
If you are using the lens we provide, please enter rtsp://192.168.1.1/live/ch1/main
(You can also use your own lens or other device to connect to TX. Before connecting, please confirm that your device has been set to automatically obtain an IP address or the static IP address is 192.168.1.XXX. If your device is set to automatically obtain an IP address, the address will be calculated starting from 192.168.1.2.)





5、 Using Mission Planner to Obtain Video Data

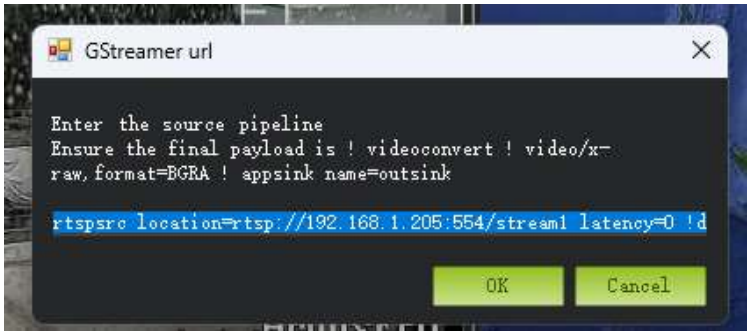
Set the video source as shown in the following figure

Set Gsteamer Source: Enter the video stream address (please replace the red part according to the actual link address):

rtspsrc location=rtsp://192.168.1.205/stream1 latency=0 ! decodebin ! videoconvert ! video/x-raw,format=BGRA ! appsink name=outsink

If using our mipi lens, please enter (please replace the red part according to the actual link address):

rtspsrc location=rtsp://192.168.1.1/live/ch1/main latency=0 ! decodebin ! videoconvert ! video/x-raw,format=BGRA ! appsink name=outsink

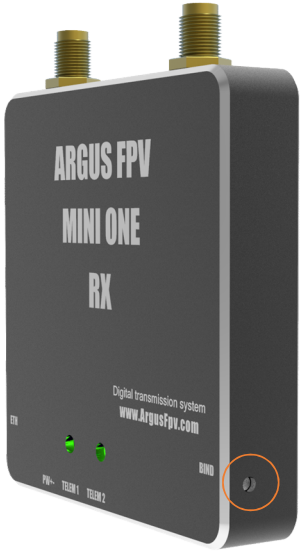


Flight data will be automatically connected

6、BIND

RX
1. The left light is powered on and starts for a long time.
2. The light on the right side is constantly on, indicating that the transmitter has been connected.
3. If the right light goes off, it indicates that there is no transmitter connected.

TX
1. After the left side light is powered on and started, it will flash slowly at 1Hz.
2. If the right light stays on, it indicates that the receiver has been connected.
3. On the right side, if it goes off, it indicates pairing.
4. The right light flashes rapidly at 2Hz to indicate pairing, but it is not connected to the receiver at this time.



Bind
1. After starting up, wait for 30 seconds for the RX left light to stay on/the TX left light to flash slowly at 1Hz.
2. Short press the receiver and transmitter pairing button (BIND) separately (as shown in the above figure)
3. The lights on the right side of the transmitter and receiver start flashing to enter pairing mode. (lasting for 1 minute)
4. Pairing the transmitter and receiver takes about 10 seconds. If the pairing is completed, the right side light of the transmitter and receiver will remain on continuously, indicating that the pairing is complete.

7、 Reset

Long press and release the BIND button for 20 seconds, and the left system light will flash quickly. Wait for a restart to reset.

8、 Role exchange function

This function only converts the roles of the transmitter TX and receiver in special circumstances.
Long press and release the BIND button for 3-8 seconds, and the left system light will flash quickly. Wait for restart.

9、 Channels

Channels	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Frequency	5.18	5.2	5.22	5.24	5.26	5.28	5.3	5.32	5.5	5.52	5.54	5.56	5.58	5.6
Channels	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Frequency	5.62	5.64	5.66	5.68	5.7	5.72	5.745	5.765	5.785	5.805	5.825	5.845	5.885	5.865

1. As shown in the table above, we provide you with 27 communication frequencies. Please comply with local laws and regulations when using them.
2. When you choose an automatic channel, the device will scan nearby interference sources in real-time and automatically avoid interference frequencies. The link will not be disconnected during channel switching.
3. If the frequency range of the antenna you are using is not the full frequency range (5.18-5.9), we recommend using manual mode.

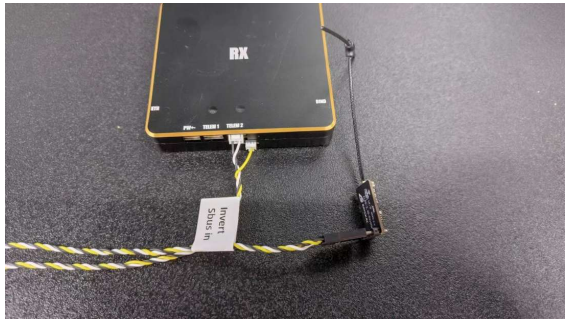
10、 SD card video storage

Video storage only supports video stream storage with standard MIPI lenses. The lens received by the network port does not currently support storage function.

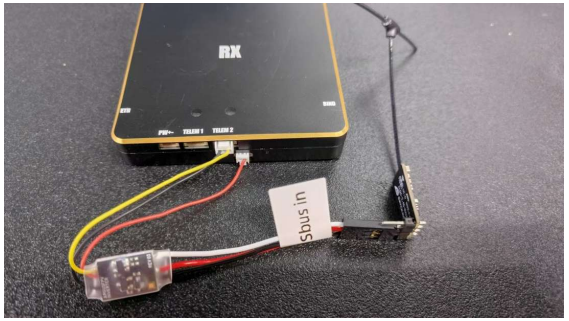
11. Instructions for using S.BUS

Currently, newer RC receivers all support Invert S.BUS. Such as ELRS receivers. If set as shown in the following figure, no special conversion lines are required.

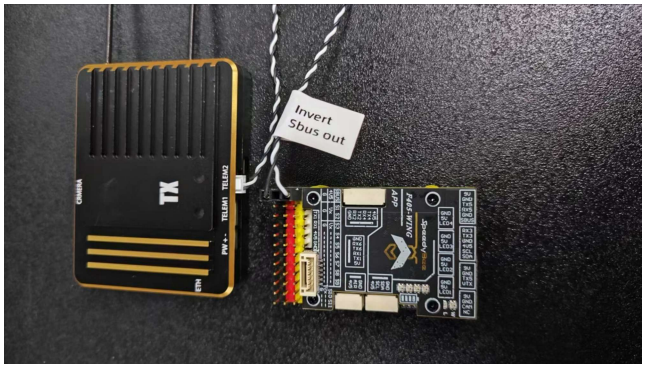
As shown in the figure below, connect the RC receiver to RX to forward the Invert S.BUS signal. And you need to refer to the serial port settings of the APP on page 4, regardless of whether your flight controller supports Invert S.BUS.



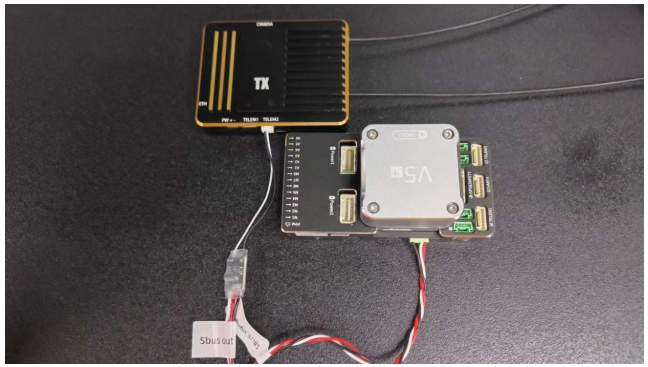
If the RC receiver you are using does not support setting to Invert S.BUS. As shown in the figure below, you need to use a dedicated conversion cable to connect to RX



If your flight control supports Invert S.BUS, regardless of whether your RC receiver supports Invert S.BUS or not. You can connect them as shown in the following picture.

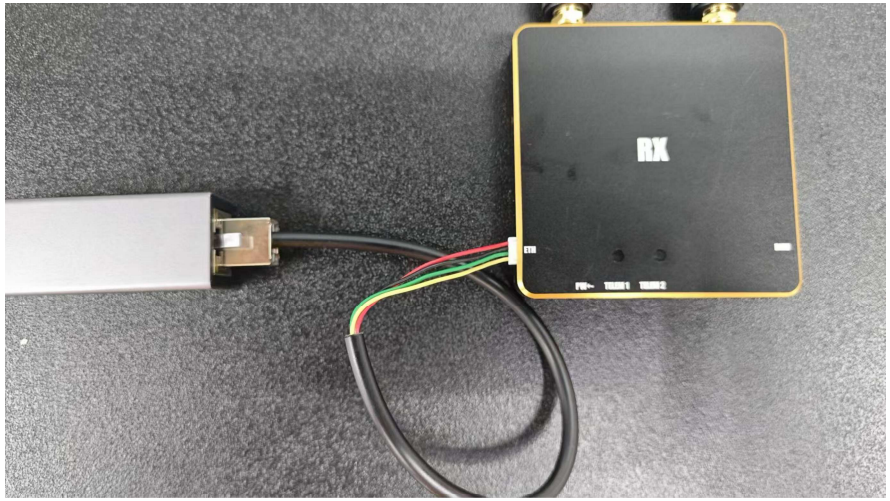


If your flight controller does not support Invert S.BUS. So you must use a conversion cable to connect your flight controller, regardless of the type of RC receiver you have.



12. Precautions for use

If RX and TX are placed in close proximity, stuttering may occur. It may be due to antenna blind spots, or the RC's 2.4G frequency interfering with RX's 2.4G Wi-Fi. At this point, it is recommended that you use the wired network port of RX to connect your device, or keep your device as close to RX as possible.



13. FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

Items	Parameters
Range（Outdoor）	Standard 7km version High gain antenna for ground use up to 33km
Latency	<10ms
Frequency	5.18GHz-5.95GHz
Modulation	OFDM
Interface	LAN UART * 2 2.4G WI-FI（Client）
Network segment	192.168.1.XXX
Bandwidth	Max 6Mbps Min 2Mbps
Channels	27 Channels
Supported Devices	All mobile devices (Request 2.4G WI-FI支持802.11n)
Supported Systems	Android IOS Windows
Extended Support	S.BUS
Encryption	AES256
Operation Temperature	-10℃-70℃
Certification	CE/FCC

RX unit
Interface（RX）： LAN\2.4G Wi-Fi\TTL
Power（RX）： DC 8-28v
Shell（RX）： Aluminum Alloy
Size（RX）： 68*68*12(mm)
Weight（RX）： 100g

TX unit
Interface（TX）： LAN\2.4G Wi-Fi\TTL
Power（TX）： DC 8~28V
Shell（TX）： Aluminum Alloy
Size（TX）： 68*53*12.9（mm）
Weight（TX）： 61g