MX25 PRO
3-in-1 Ground Control Station

User Manual



For more details please scan the QR code
or visit our website:
www.viewprotech.com

Preface

This product uses the following terms to classify and describe the potential hazards that may arise from improper operation.

Note: Failure to follow the instructions may cause property damage, major accidents, and serious injury.

Warning: Familiarize yourself with the product's functions by reading the entire user manual before operating it. Incorrect operation of this product may cause serious injury to yourself or others, or result in product damage and property damage. This product is relatively complex and requires a period of familiarization before safe use. Basic safety knowledge is also required for operation. Without a strong sense of safety, improper operation may result in product damage and property loss, or even serious injury to yourself or others. This product is not suitable for children. Do not use any parts not provided or recommended by manufacturer. Strictly follow instructions when using the product.

1.Overview

1.1 Product Features

(1) MX25 PRO adopts a new 8-core processor, equipped with an Android 13 (64-bit) embedded system, using advanced SDR technology and a super protocol stack, resulting in clearer images, lower latency, longer range, and stronger anti-interference capabilities. It can be used in drones, unmanned vehicles, unmanned boats, robots, industrial control equipment, etc.

(2) Supports multiple interfaces including HDMI (remote control), Ethernet, and USB, applied in the field of security, fire fighting, power, surveying robots, border survey, etc., providing an immersive experience.

(3) Adopts a grade of IP54 structure, ensuring not only a good hand feel surface and harder durability. MX25 PRO features a 7-inch industrial touchscreen with 1800nit brightness and readable sunlight, ensuring clear review even in sunlight. The resolution is 1920*1200, controllable with ten fingers, and supports 1080P high-definition digital image transmission. 2.4G/5.8G Dual-band antennas complement each other, providing a strong signal and ultra-long range. Combined with algorithmic control and out-of-sync frequency hopping algorithms, this significantly enhances weak signal communication capabilities. Built-in dual speakers support dual-band 2.4G/5.8G and dual-band Wi-Fi 2.4G/5G.

(4) Use high-energy-density lithium-ion battery, it can operate for 8 hours on a full charge, ensuring reliable performance.

(5) MX25 PRO supports a rich array of interfaces, including HDMI, USB, Type-C, RJ45 Ethernet, TF card slot, PPM interface, and TC-25 dual-channel serial port pass-through. It also supports video devices such as cameras, gimbals, and pods with more Ethernet ports. A development kit, SDK, and technical support are provided. It supports video hovering, ground stations for mainstream flight controllers, and the Viewpro ground station for open-source flight controllers. It

also supports QGC and wireless RTSP video stream sharing.

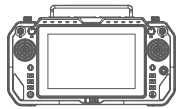
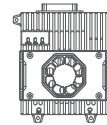
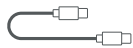
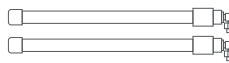
(6) Made of silicone, frosted rubber, stainless steel, and ABS, MX25 PRO offers an exceptional hand feel and fulfill in hard outdoor conditions . Dust proof protection are implemented on the body, control switches, and all peripheral interfaces to ensure stable and smooth operation in harsh environments.

(7) A rich array of ground interfaces are included: an RJ45 network interface for long-distance intranet connection, a Type-C Android high-speed USB interface, an OTG interface for connecting USB flash drives, and an expansion TF card slot.

1.2 Main Uses and Scope of Application

Used for remote control operation of helicopters, fixed-wing drones, multi-rotor drones, unmanned vehicles, unmanned boats, etc. for video image transmission, data transmission, and drone flight control.

1.3 Packing List

MX25 PRO		TC-25	
Air Unit Antenna Feeder Cable			
Air Unit Connection Cable			
Charging Cable		Power Adapter	
Shoulder Strap			
Ground Unit Antenna			
Air Unit Antenna			

1.4 Specification

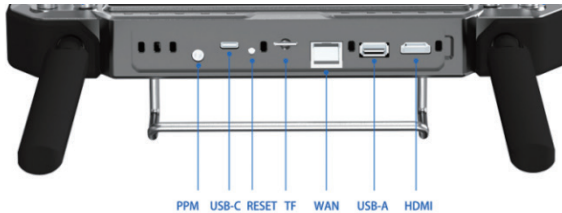
MX25 PRO Parameters			
Model No.	MX25 PRO	Number of Channels	16
Working Voltage	12V (Built-in Battery)	RF Power	23dBm@CE/FCC
Frequency Band	2.4G/5.8G	Dynamic Frequency Modulation	Supports Frequency Hopping
Dimension	291 (L) * 174.5 (W) * 80mm (H)	Weight	1644g
Endurance	8 Hours	Battery	10000mAh
Upgradeable	TF Card	Charging	TYPE-C
RAM	8G	System Storage	64G
Applications	Helicopters, Fixed-wing UAVs, Multi-rotor UAVs, Unmanned Vehicles, Unmanned Boats, etc.		
TC-25 Receiver Parameters			
Model No.	TC-25	Number of Channels	16
Working Voltage	12V	RF Power	23dBm@CE/FCC
Dimension	85 (L) * 73.3 (W) * 25mm (H)	Weight	137g

1.5 Products Buttons Diagram



No.	Description	No.	Description
1	2.4G/5.8G Antenna	10	H Button
2	SW1 Three-level Toggle Switch	11	F6 Button
3	Knob Switch AUX1	12	F5 Button
4	Left Joystick X1、Y1	13	F4 Button
5	Hanging Rope Ring	14	5D Button
6	F1 Button	15	Right Joystick X2、Y2
7	F2 Button	16	Three-level Toggle Switch SW2
8	F3 Button	17	Knob Switch AUX2
9	Power Button		

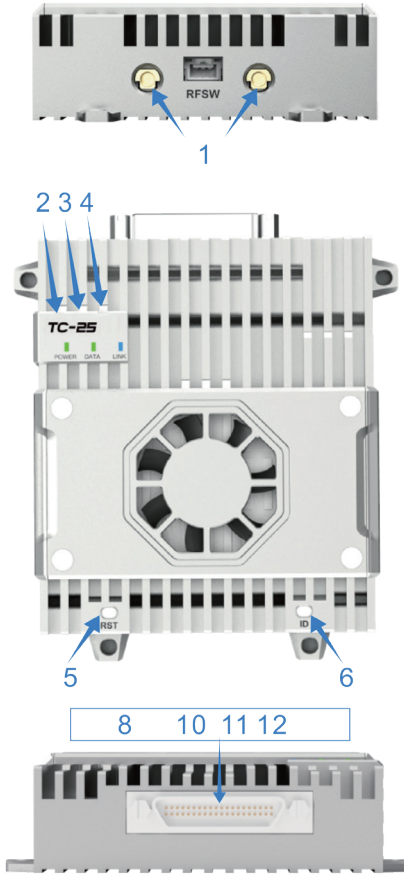
1.6 Interface Description



No.	Description	No.	Description
1	HDMI port	5	RESET
2	USB-A port	6	TYPE-C port
3	RJ45 Ethernet port	7	PPM port
4	TF card slot		

1.7 Air-end Receiver Port Definition

No.	Description	No.	Description
1	Antenna Port	10	Ethernet Port 1
2	Power Indicator	11	Ethernet Port 2
3	Data Indicator	12	SBUS 1
4	Pairing Indicator		
5	Reset Button		
6	Pairing Button ID		
8	Serial Port 1		


RFSW
1
2 3 4
TC-25
POWER DATA LINK
RST
ID
5
6
8 10 11 12

1.8 Using Environmental Conditions

Note:

(A) Environmental temperature: -20°C to +45°C.
(B) Storage temperature: -30°C to +50°C.
(C) Relative humidity: Not exceeding 85%.
(D) Atmospheric pressure: 86kPa to 106kPa.
(E) The using location must not contain explosive media, and the surrounding medium should not contain gases that corrode metals or damage insulation, nor conductive media. It must not be filled with water vapor or have severe mold growth.
(F) The using location of use should have facilities to protect against rain, snow, wind, sand, and dust.

1.9 Operating Conditions

Power Supply and Precautions

MX25 PRO ground unit has a built-in rechargeable lithium battery, compatible with the market standard TYPE-C interface for charging.

If you encounter smoke, unusual odors, or leakage while charging the ground unit, do not continue charging. Please return it to factory for repair.

Do not charge this product in areas accessible to infants/child to avoid the risk of electric shock. Do not charge this product in environments exceeding 60°C.

1.10 Safety Warnings



- Flying is prohibited when fatigued, intoxicated, or in poor physical condition!
- Flying is prohibited in rain, strong winds, or other severe weather conditions!
- Flying near high-voltage power lines, communication base stations, or areas with large crowds or activities is prohibited!
- Flying in airports and other strictly prohibited no-fly zones is prohibited!
- Flying in crowded areas, parking areas, or other areas that may cause property damage or personal injury is prohibited.



Before flight, perform equipment checks on the aircraft, ensuring the transceiver system and the aircraft are functioning properly.

① Please use a reliable professional charger to charge the battery.

② The antenna of this product is a fragile component; avoid excessive force to prevent damage.

2.Operation

2.1 Preparation and Inspection Before Use

Note:

① Check the remote control has sufficient battery power or not before use.

② Check the antenna is positioned as required for optimal performance before use.

③ Users should ensure that they are not under the influence of alcohol or drugs when operating the device.

2.2 Use Guidance

Language Settings

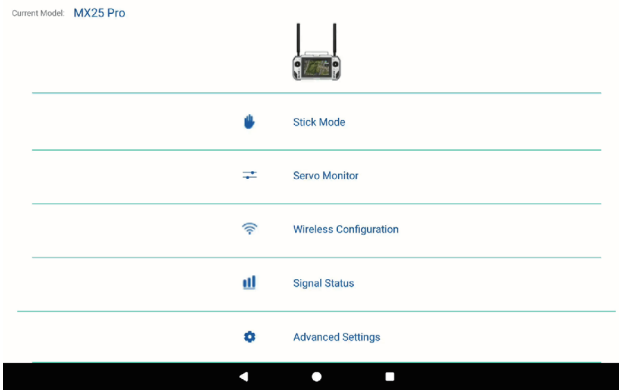
Go to interface of system settings, select System -> Language and Input -> click Language -> Language to switch, add, or delete languages.
For example, switch to English mode, long press English and drag it to the top position (1) and release.

Status Indicator Bar



① WIFI Connection Icon
② Battery Display
③ Return Button
④Return to Main Button Interface
⑤Background Task Managementn

MX25 PRO Assistant Introduction



Stick Mode: Switch the joystick operation mode of the remote control (Stick Mode: American mode, American reverse mode, Japanese mode, Japanese reverse mode. Default is American mode).
1. Read 2. Set 3. Save

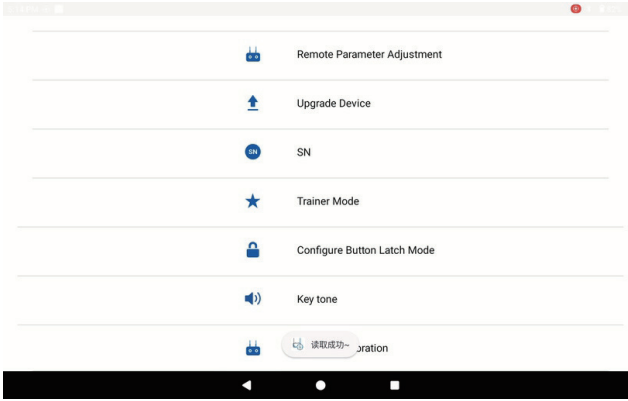
In the rudder position view sub-item, check whether the values of each channel of the remote control are normal or not. The value range is 1045~1945, with a midpoint of 1500.

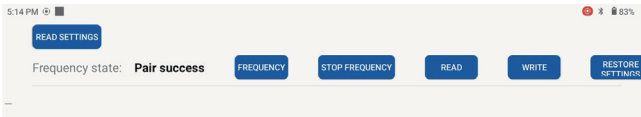


Wireless Parameter Configuration:
Pair the remote control with the aerial receiver (pairing method is described at below)

Signal Check:
Check the signal

Advanced Settings:
In advanced parameters, adjust remote control parameters, upgrade equipment, SN, training mode, button lock, button tone, and calibration (password 666, for professional person use only).


Remote Parameter Adjustment
Upgrade Device
SN
Trainer Mode
Configure Button Latch Mode
Key tone
读取成功~
oration


5:14 PM
83%
READ SETTINGS
Frequency state:
Pair success
FREQUENCY
STOP FREQUENCY
READ
WRITE
RESTORE SETTINGS


TC-25

Note:

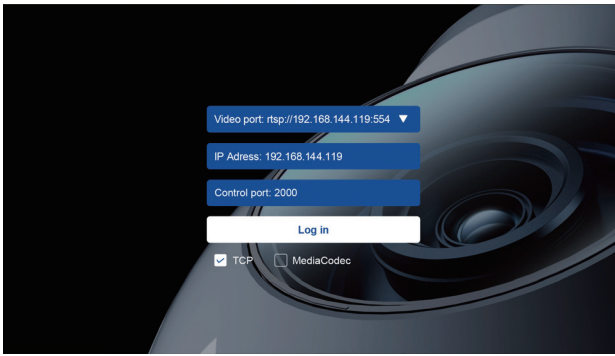
The remote control and receiver are pre-paired at the factory. Power on and wait 20 seconds for automatic pairing.

① Power on the receiver; the power indicator light will be in red. After 20 seconds, press and hold the setting pairing button on the receiver until the green light is on, then release. (Re-pairing is only required if the receiver and remote control are replaced.)

② Open the MX25 PRO Assistant, click pairing, and the pairing status will show "Pairing in progress." Once pairing is successful, the status will display "Connected" and "Pairing successful" (the receiver's green light will be on).

Connection and Settings

① Enter ViewLink, set the Video port, IP Address, Controlport, and select TCP
② Click log in, play the air-end video stream (MX25 PRO Assistant should be closed)

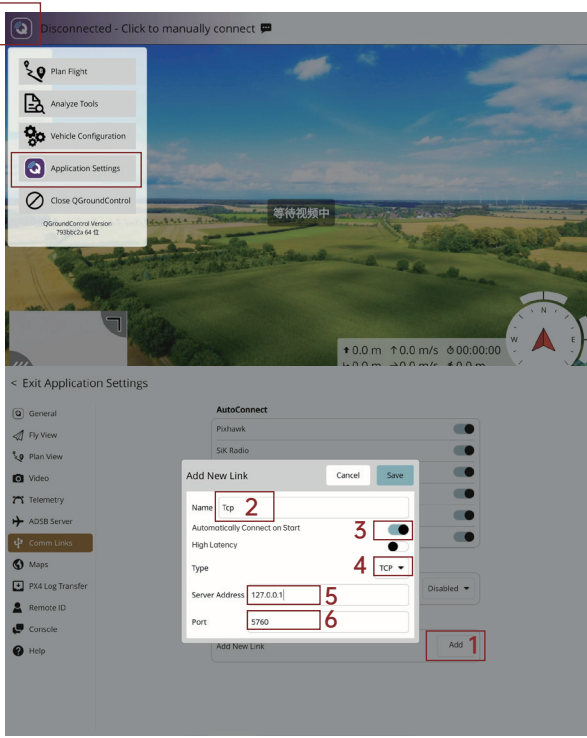


How to display data transmission on the MX25 PRO ?

Connect the flight controller data transmission cable to serial port 0 and the SBUS of air end image transmission module (MX25 PRO Assistant should be disabled).

During normal shipment, the ground station will automatically connect to the data transmission when QGC is turned on.

If you reinstall QGC, you need to configure it. Click Not Ready -> Application Settings -> Comm Links -> Add, configure it as shown in the image below, click OK, and then click Connect.



How to connect the network?

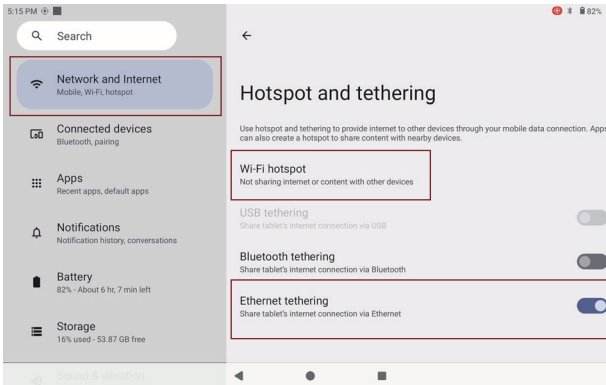
The remote control can connect to the network in two ways:

(1) Via the remote control's 2.4G or 5G Wi-Fi;
(2) Via the remote control's WAN port;

How to share data and image transmission ?

1. Share data and image transmission via network cable

(1) Open settings on the ground station: Network and Internet -> WLAN -> Turn on hotspot -> Turn on Ethernet sharing. (Ground station Wi-Fi sharing should be closed)

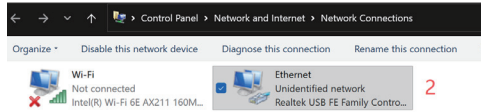


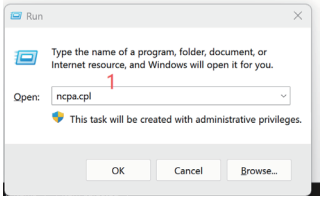
(2) Connect the remote control to the computer's network port via a network cable.

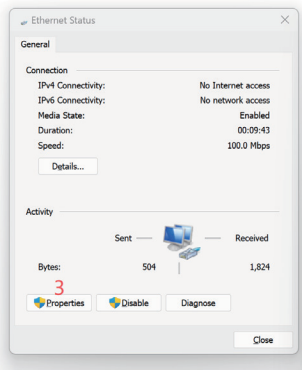
Note: The remote control QGC must be disconnected!

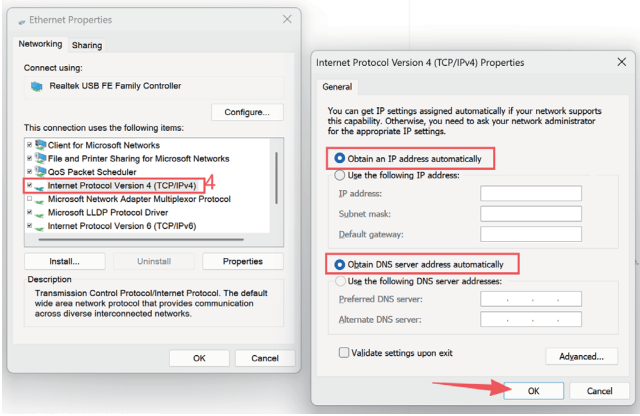
(3) Open computer settings -> click adapter -> select Ethernet -> select IPv4 protocol -> select obtain IP address automatically -> enter the address -> click OK (see the below) (Laptop requires Wi-Fi) .

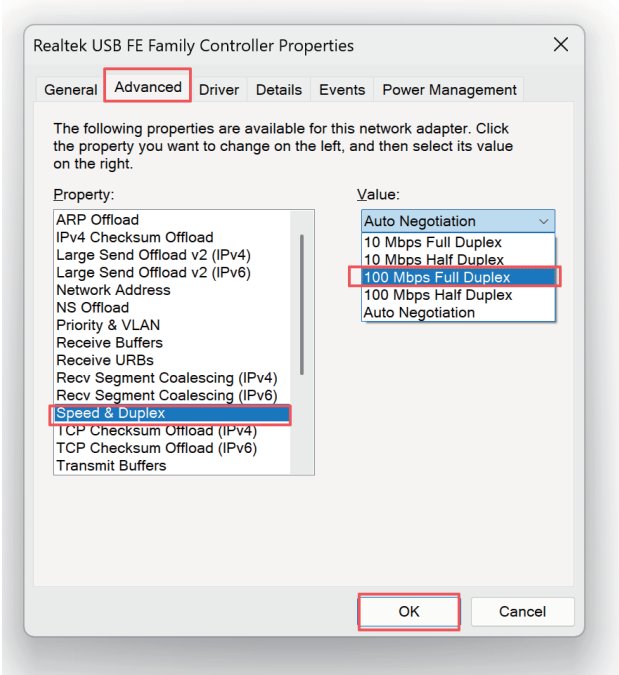
(4) Open Settings of your computer-> Controller Properties -> Ethernet -> Configure -> Advanced -> Speed and Duplex -> 100 Mbps Full Duplex -> OK (see the below picture).


Control Panel › Network and Internet › Network Connections
Organize
Disable this network device
Diagnose this connection
Rename this connection
Wi-Fi
Not connected
Intel(R) Wi-Fi 6E AX211 160M...
Ethernet
Unidentified network
Realtek USB FE Family Contro...
2


Run
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
1
Open:
ncpa.cpl
This task will be created with administrative privileges.
OK
Cancel
Browse...

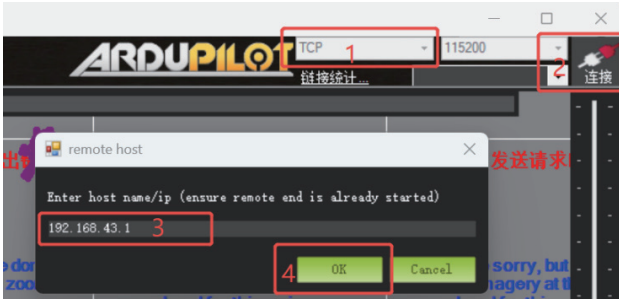

Ethernet Status
General
Connection
IPv4 Connectivity: No Internet access
IPv6 Connectivity: No network access
Media State: Enabled
Duration: 00:09:43
Speed: 100.0 Mbps
Details...
Activity
Sent
Received
Bytes: 504 1,824
3
Properties
Disable
Diagnose
Close


Ethernet Properties
Networking
Sharing
Connect using:
Realtek USB FE Family Controller
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol Version 4 (TCP/IPv4)
4
Microsoft Network Adapter Multiplexor Protocol
Microsoft LLDP Protocol Driver
Internet Protocol Version 6 (TCP/IPv6)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK
Cancel
Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel


Realtek USB FE Family Controller Properties
General
Advanced
Driver
Details
Events
Power Management
The following properties are available for this network adapter. Click the property you want to change on the left, and then select its value on the right.
Property:
ARP Offload
IPv4 Checksum Offload
Large Send Offload v2 (IPv4)
Large Send Offload v2 (IPv6)
Network Address
NS Offload
Priority & VLAN
Receive Buffers
Receive URBs
Recv Segment Coalescing (IPv4)
Recv Segment Coalescing (IPv6)
Speed & Duplex
TCP Checksum Offload (IPv4)
TCP Checksum Offload (IPv6)
Transmit Buffers
Value:
Auto Negotiation
10 Mbps Full Duplex
10 Mbps Half Duplex
100 Mbps Full Duplex
100 Mbps Half Duplex
Auto Negotiation
OK
Cancel

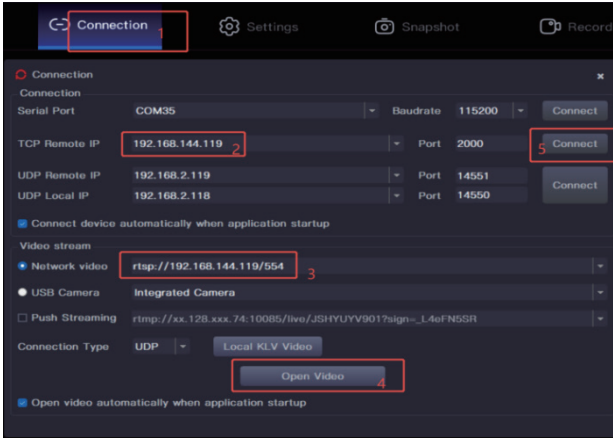
(4) Open Mission Planner on your computer, select TCP -> click Connect -> enter IP: 192.168.43.1 -> click OK -> enter 5760 -> click OK

(3)



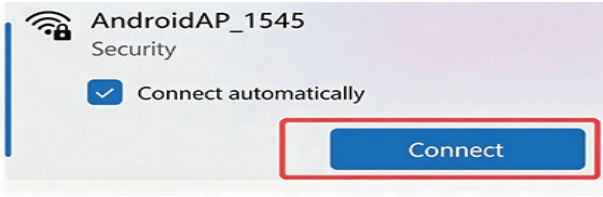
(5) Shared Image Transmission

It is factory defaulted sharing function directly. If the configuration changes, Open ViewLink on computer, reconfigure it again as below:



2. Wi-Fi Shared Video and Data Transmission

(1) The basic configuration is the same as the wired sharing method. When choosing Wi-Fi sharing, you need to turn off the ground station's wired network sharing. When choosing Wi-Fi sharing, your computer needs to be connected to the Wi-Fi hotspot shared by the ground station.

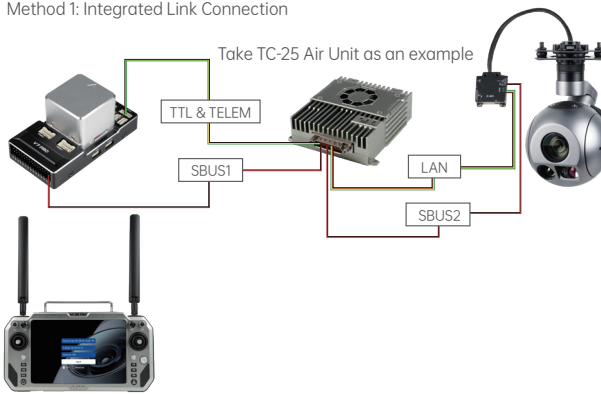


(2) Enter the IP address 192.168.88.1 in Mission Planner. Details are shown in the following figure.

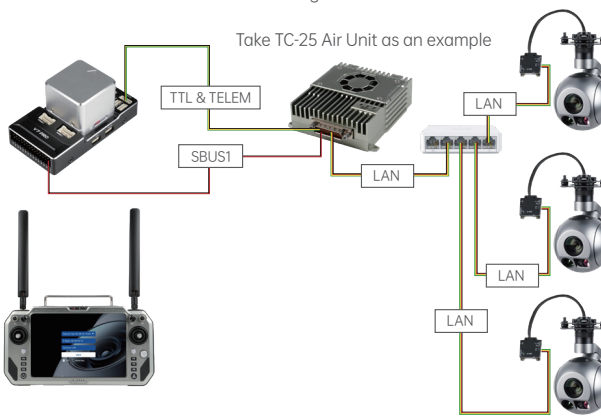


3. Connection Methods

Method 1: Integrated Link Connection



Method 2: Multi-Pod Connection via Integrated Link



Comment Questions And Solutions

1. Can other apps be installed on the remote control?

The remote control has full permissions; there are no proprietary or restricted software installations or uninstalls.

2.How to obtain an RTSP address when using a third-party network camera?

The network segment of the network camera needs to be pre-configured to the 144 (IP 192.168.144.XXX, gateway 192.168.144.55). Connect the camera to the receiver's network port 0 or port 1, please see the "Port Definitions" section of this document for pin definitions. Alternatively, connect the network camera to your computer first, and then use your computer's VLC to stream the video using an RTSP address on the 144 subnet. You need to obtain this RTSP address from the network camera manufacturer before connecting it to the receiver. Open Viewlink and click the video stream address, and enter the link starting with RTSP that you entered in your computer's VLC.

3. Data transmission connection failure

Connect the flight controller's data transmission cable to serial port 0. The flight controller's RX and TX pins to the receiver need to be reversed correctly: RX to TX, TX to RX. Check if the ground station is using TCP to connect to the remote controller (address: 127.0.0.1) and if the listening port is 5760. Check if the baud rate is the same as the flight controller's or not.

4. Unable to share data or video transmission

Please check if the network cable is connected to the remote controller, if the Ethernet is set to dynamically obtain an IP address, and if the camera's network gateway is 192.168.144.55.

3.Maintenance and Storage

Long time storage and maintenance
Store the remote control in a dry, well-ventilated place, avoiding direct sunlight to prevent battery overheating. If storage exceeds one month,
the remote control batteries must be charged to 70-80% periodically to prevent depletion. The recommended storage temperature range is 22℃ to 28℃.
Do not store the batteries in environments below -20℃ or above 45℃.

4.Transportation and Storage

WARNING

To avoid potential injury and loss, please be sure to observe the following:
As the wires and small parts may pose a danger to children, always keep children away from the remote control components.

Caution

1) Never immerse the remote control in water. If it does get wet, wipe it immediately with a soft, dry cloth and turn off the power. Return it to our company for after-sales service.

2) Do not subject the remote control to mechanical impact, crushing, or puncturing. Do not drop the battery.