The Viewlink Gimbal Docking open-source flight control settings

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Contents

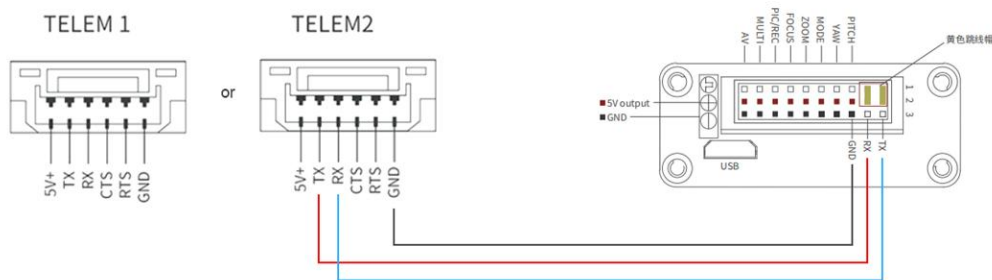# The connection between the gimbal and flight control hardware

Wiring connection diagram:

A gimbal serial port is connected to an open-source flight control port (e.g., Pixhawk, Telem1 or Telem2).

Standard Version:
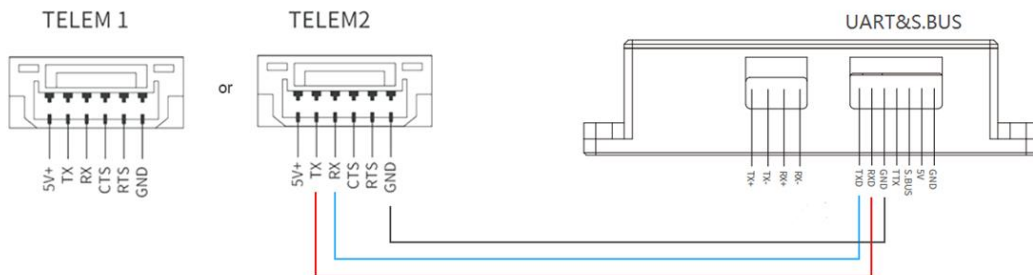

pixhawk — Connection Diagram Standard Version

A quick release version:

pixhawk — Connection Diagram Viewport Version

The gimbal is connected to the flight control software

Setting up Gimbal Camera on the computer

Click "ViewLink-x.x.xx-windows-xxx.exe" to run the file, then choose the installation location. After installation, the English version is default. You can switch to Chinese in the software and restart it. After agreeing to uninstall ViewLink, you can re-install it.

How to get it:

(1)   On Viewpro's website, you can download the software for free.
      (http://www.viewprotech.com/index.php?ac=article&at=list&tid=164) Download the

installation package；

(2) Get in touch with the sales channels。

MP Ground station software installation

Install the flight control ground station software through the "Mission Planner" official website.

● MP ground station to set flight control parameters

● According to the wiring, select the correct data transmission port, set the baud rate of the flight control Telem1 or Telem2 to "115200", and the protocol to "Mavlink1"
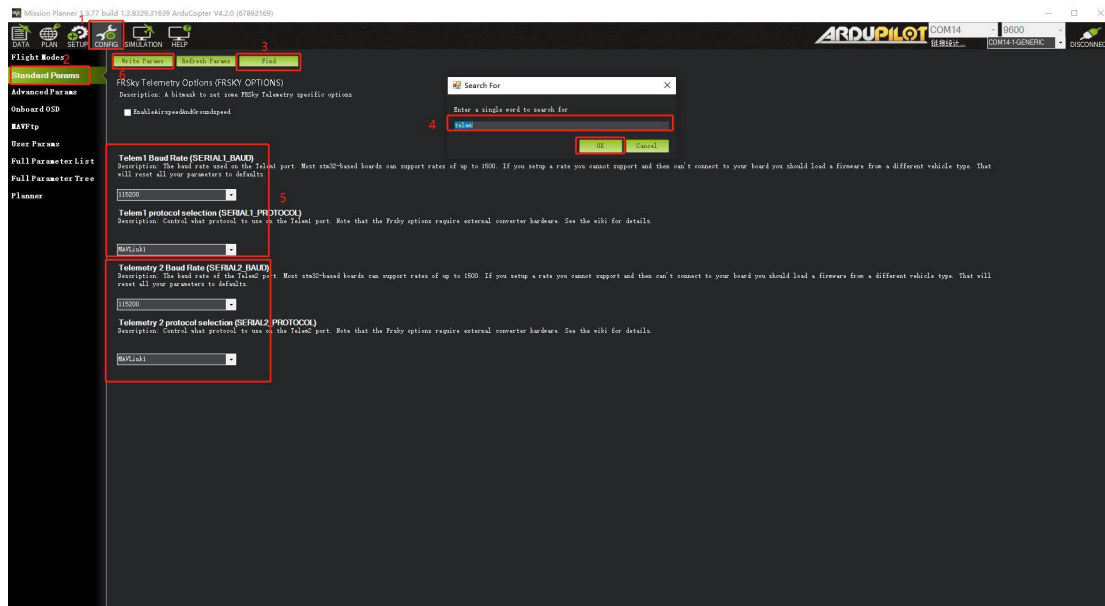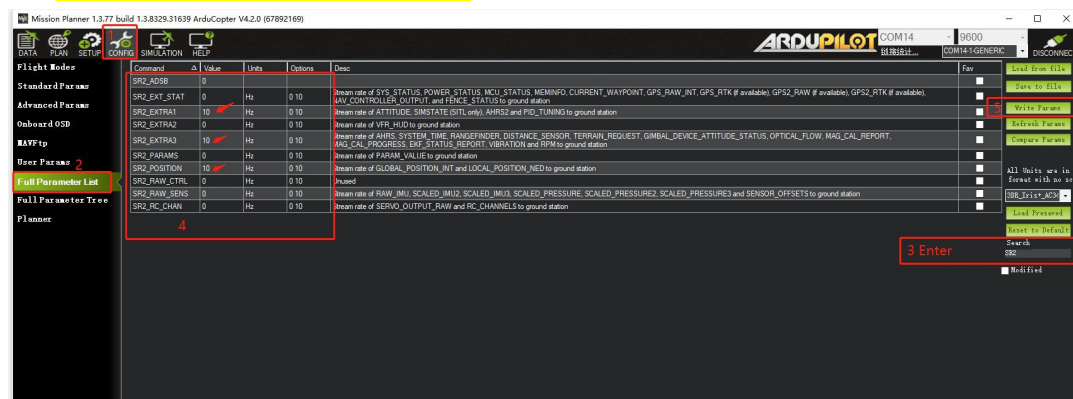

Set the data type of the data transmission port,

When selecting "Telem1", input "SR1", set "SR1_EXTRA1", "SR1_EXTRA3", "SR1_POSITION" to 10Hz, and "Write Params"; Then save it.

When selecting "Telem2", input "SR2", set "SR2_EXTRA1", "SR2_EXTRA3", "SR2_POSITION" to 10Hz, and "Write Params"; then save it.

Figure below shows setting "SR2"::

Gimbal camera OSD display

plot display:

When the GPS data is viewed on the MP, the corresponding OSD information can be displayed on the pod screen
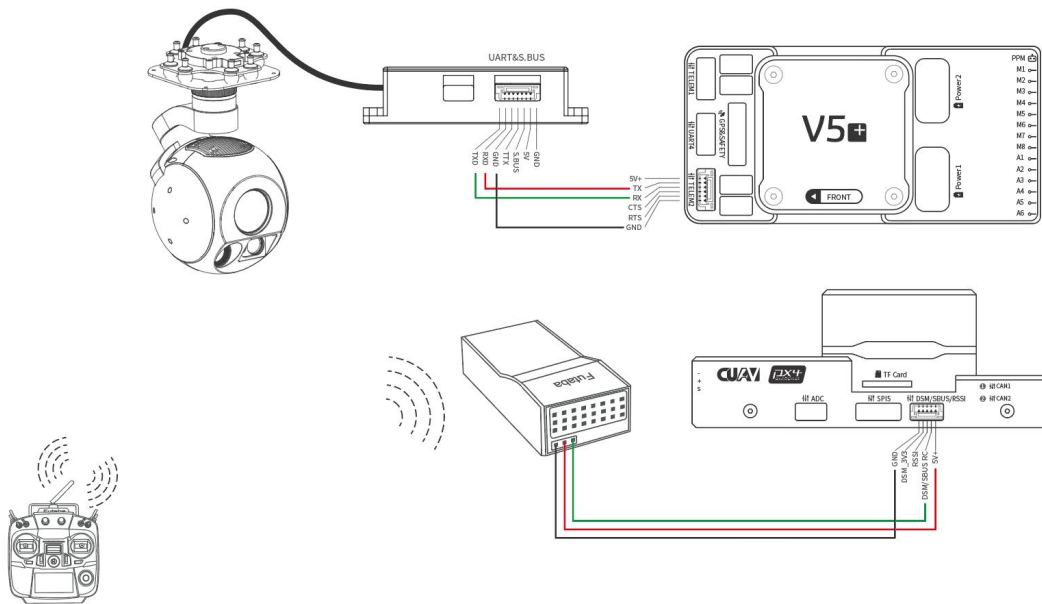
Gimbal RC Control

Flow Chart

Output the S.BUS signal through the remote control RC --> open source flight control RC IN --> set the flight control TELEM port parameter RC_CHAN 10Hz --> the pod serial port receives the response, and you can use the "Settings" of the PC version Viewlink host computer- "Remote control" modifies the channel number, and the channel number ranges from 1 to 15.
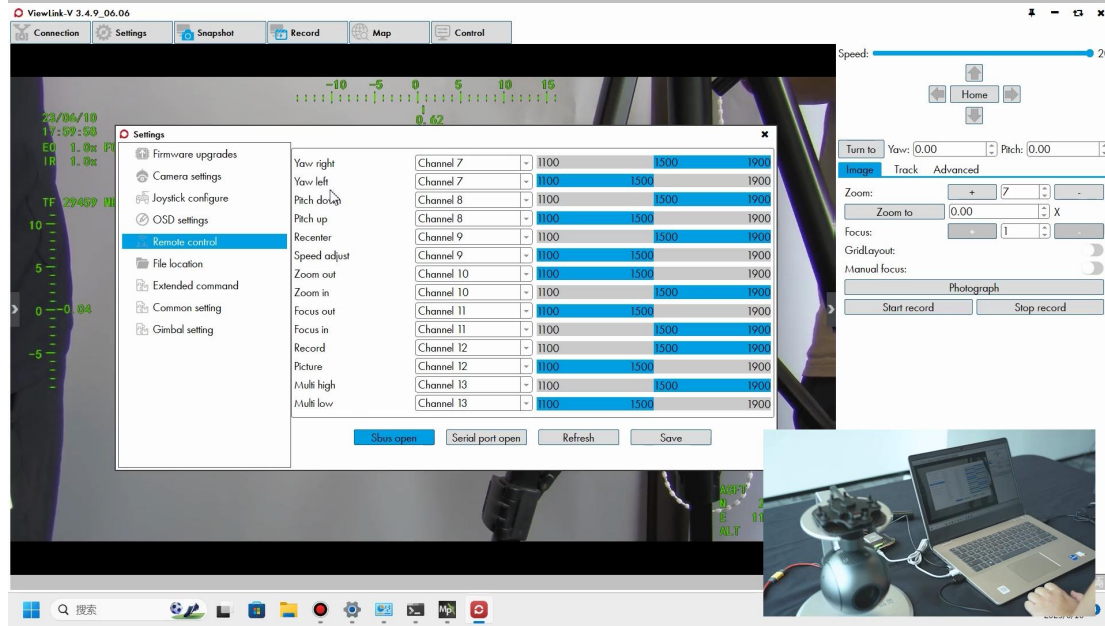
For example: V5+ open-source flight control, quick release version gimbal, RC wiring


Flight control setup diagram

Viewlink setup diagram

Operation RC control

For example, YAW right control:

YAW right is set to Channel 7, and the blue signal bar represents the effective value of the rudder volume setting. When the pulse width of the rudder volume is 1500us, the pod Yaw does not move; if the RC third gear lever moves from 1500us-->1900us, the pod moves to the right turn.
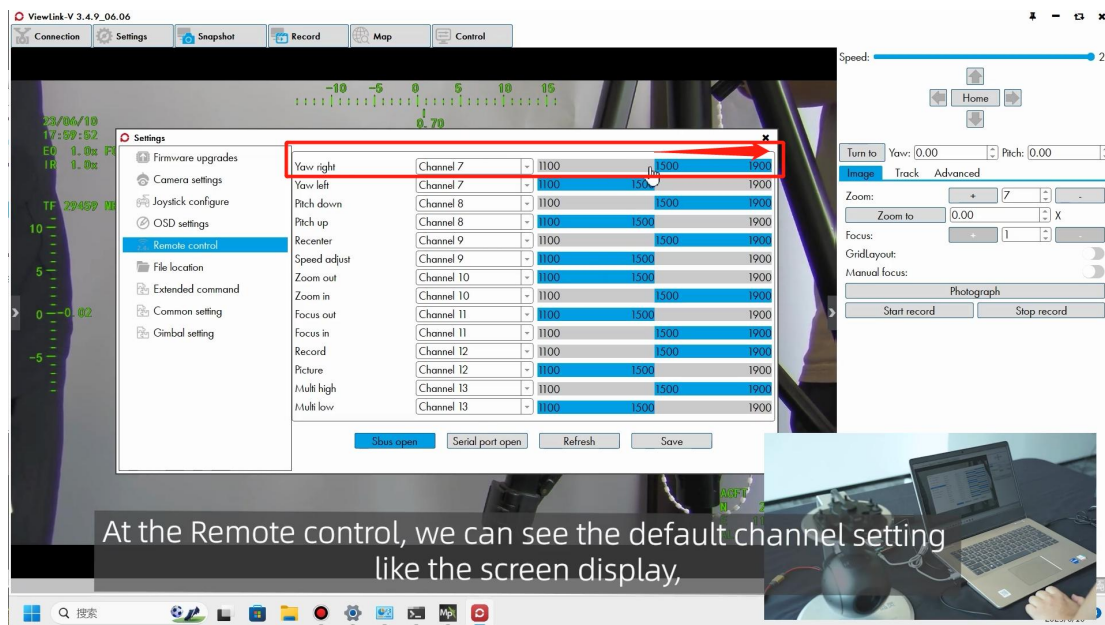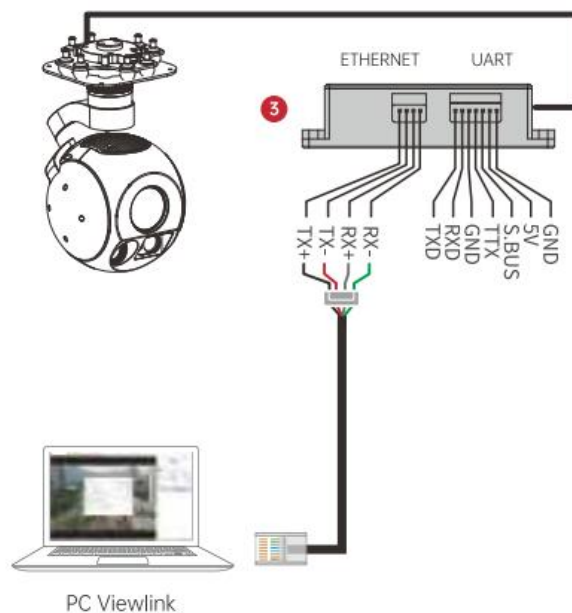
Gimbal attitude compensation

Gimbal connection Viewlink software

Choose a method to connect based on the gimbal model

1. Connect the gimbal's network port to the Viewlink software (PC):

PC Viewlink

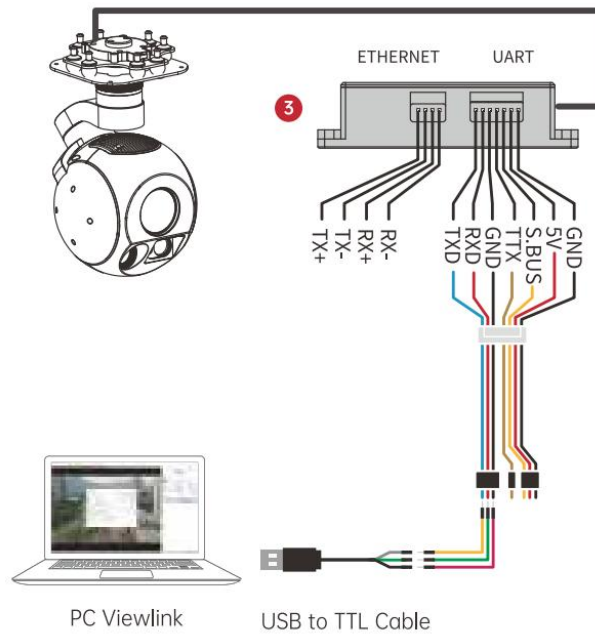2. Connect the gimbal's serial port to the Viewlink host computer (PC).

TTL Connection Logic:

TX ↔ RX Cross-Connection

Pod TX → Host RX

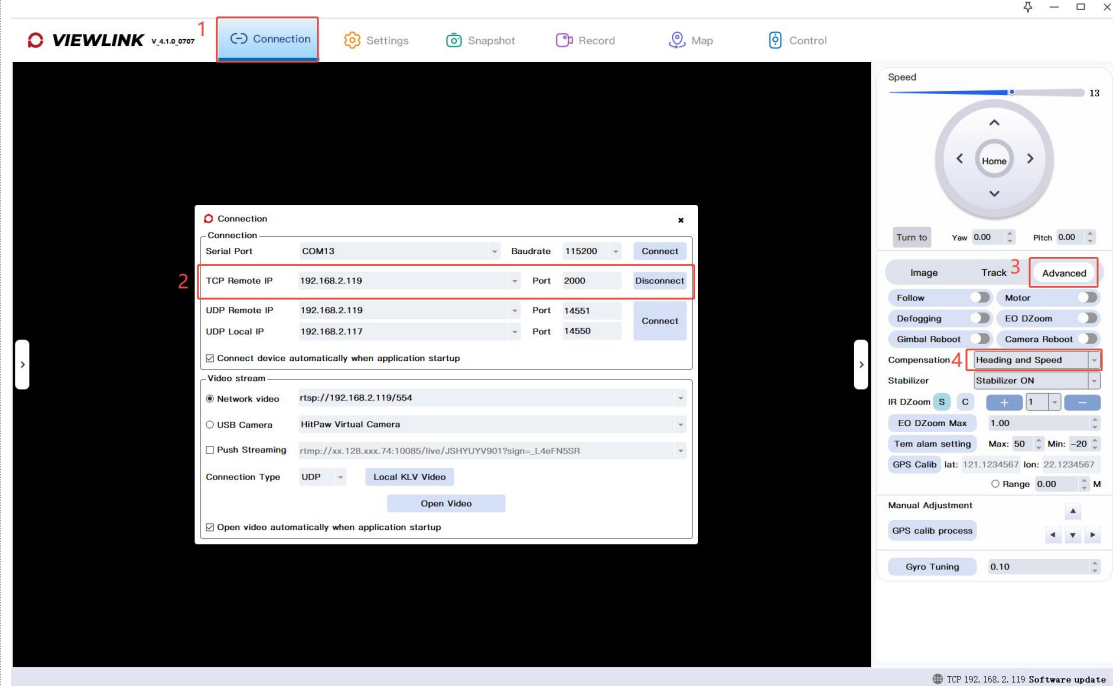Pod RX → Host TX

GND ↔ GND Direct Connection

PC Viewlink   USB to TTL Cable

Viewlink software to set compensation parameters

Setting steps:

1) Click the "Connection" button

2) In the "Serial port" line, select the correct serial port COM X interface, the "Baudrate" defaults to 115200, click the "Connect" button, the button will change to "Disconnect", and the "Advanced" column will appear in the blank space on the right side of the interface;
Or enter the gimbal IP (if the IP has been changed, please enter it), port:2000, click the "Connect" button, the button will change to "Disconnect", and the "Advanced" column will appear in the blank space on the right side of the interface;

3) Click the "Advanced" button to enter this parameter interface;

4) Click the "Heading and Speed" button in the drop-down menu to turn on the gimbal heading/speed compensation; this function is to solve the problem of rolling tilt when the gimbal turns quickly;

The setting sequence operation diagram is as follows:

network port:

Serial port: