

ViewLink

Windows Version Instruction

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Profile

Software overview

ViewLink is a professional and easy-to-operate Viewpro Gimbal Camera control software developed by Viewpro. Support IP (RTSP/UDP/RTMP), USB connection, can automatically optimize the player according to the computer configuration, providing the ultimate viewing experience, smooth and delicate. At the same time, it supports multi-channel streaming, virtual nine grid lines, arranges the main scene on the golden section point, and the picture is balanced. It can be connected to Ethernet TCP/UDP or serial TTL to control the gimbal camera. Functionally, the gimbal camera firmware can be upgraded, including encoder settings, 3D map visualization, handle configuration, OSD settings, remote control settings, file location, extended commands, and common settings.

Software Installation

Double click "ViewLink-x.x.xx-windows-xxx.exe" After running the file, choose the installation location according to the prompts. The default installation is the English version. It can be switched to Chinese within the software and takes effect after reopening the software. If ViewLink has been installed before, please uninstall and reinstall it.

The way to achieve:

- (1) You can download the installation package from the foreign website (<http://www.viewprotech.com/index.php>) of "Viewpro"
- (2) Download the installation package from the domestic website (<http://gofile.me/6Wsd2/chT5klRqT>)
- (3) Acquired by contact after sale.

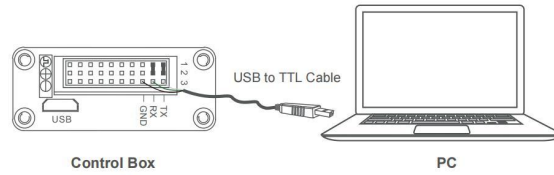
Connection

Serial Port connection

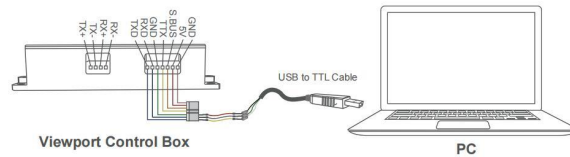
Use USB to TTL serial cable to connect the Viewpro Gimbal Camera serial port to the Windows system computer USB port.

The method to Viewpro Gimbal using

- Black wire GND ——Gimbal GND
- Green wire TX ——Gimbal RX
- White wire RX —— Gimbal TX
- Red wire 5V is reserved.

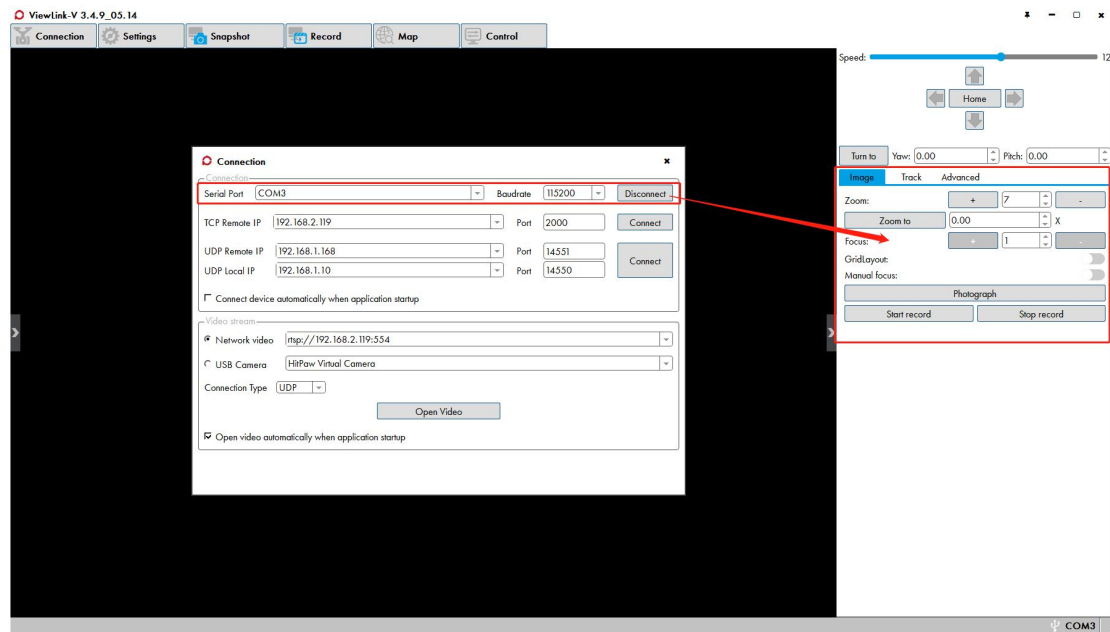


Connection Diagram Standard Version



Connection Diagram Viewport Version

Then power on the Gimbal Camera , open the software interface, click "Connect" and select the corresponding serial port COMX on the computer equipment manager, the default baud rate is: 115200, and then click "Connect", the control bar corresponding to the Viewpro" Gimbal Camera model appears on the right side of the ViewLink interface, at this time the Gimbal Camera can control the gimbal and camera function.



TCP control

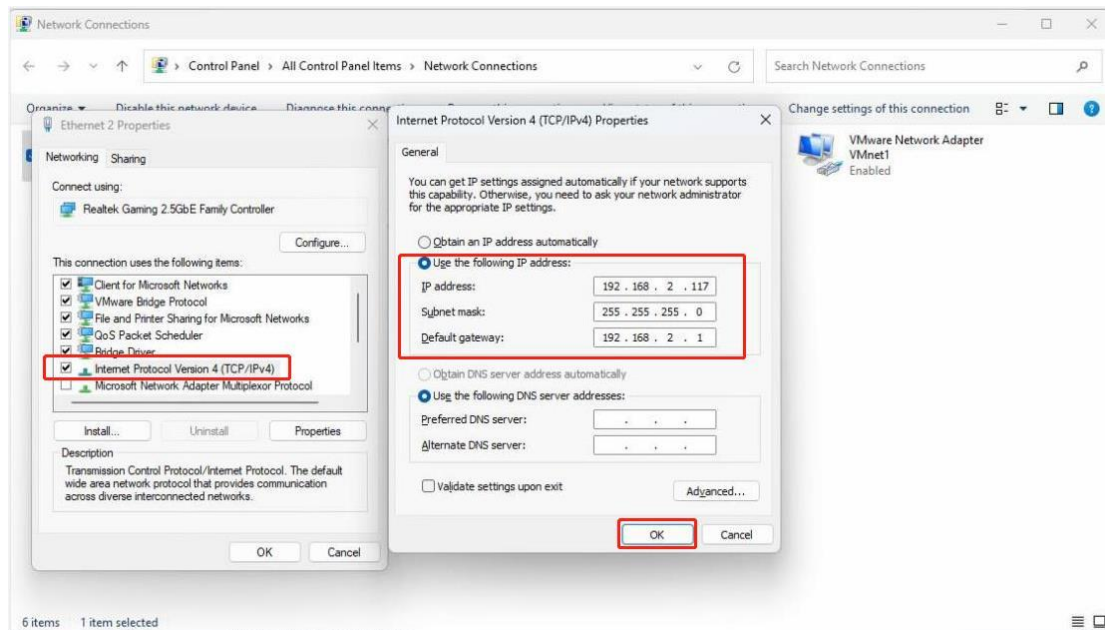
- (1) The Gimbal Camera has Ethernet output, find the "RJ45" of "ETHERNET" 4pin cable, and the other crystal head is connected to the computer network port socket.
- (2) After the Gimbal Camera is powered on (3S~6S stabilized power supply), the computer network connection can display "unidentified network", indicating that the wiring is normal.
- (3) Configure the computer IP as the same network segment as the Viewpro Gimbal Camera IP (the last data cannot be the same as the last data of the camera IP). For example, the IP address of the Viewpro T series gimbal is: 192.168.2.119 (red number 2 is the network segment)

PC IP Address: 192.168.2.117

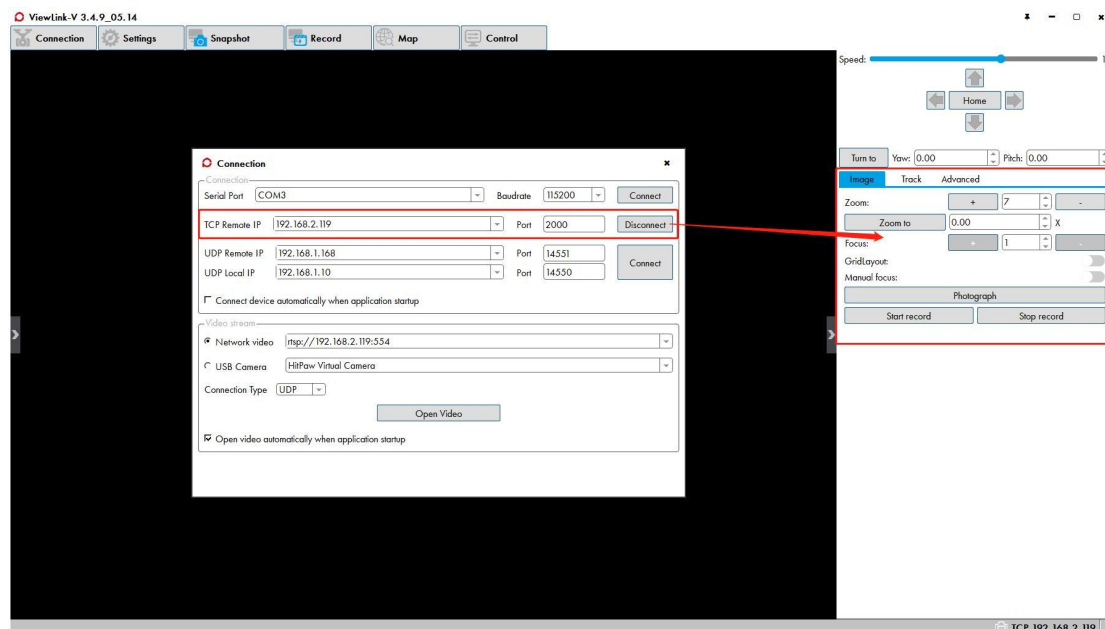
SubMask: 255.255.255.0

Default gateway: 192.168.2.1

Note: For the actual IP address of the Viewpro Gimbal, please refer to the IP label on the Gimbal.



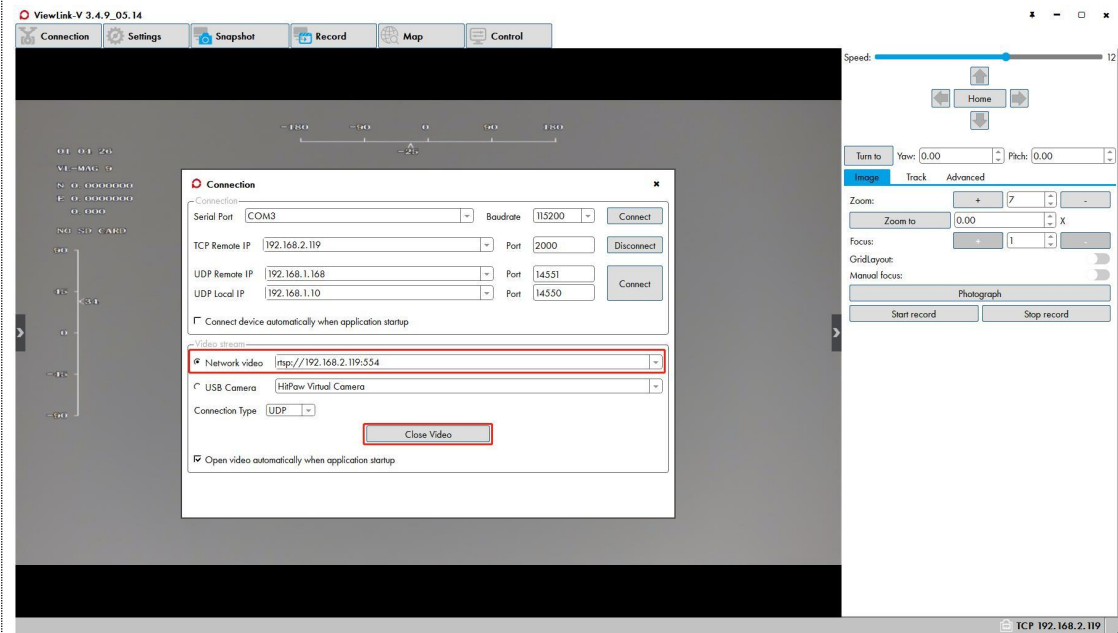
(4) Open the software interface, click "Connect" in the upper left corner, the default IP of the Gimbal model shall prevail, for example, the Viewpro™ Gimbal Camera IP: 192.168.2.119, the TCP control port default: 2000, and then click "Connect" on the same line, the control bar corresponding to the Gimbal model appears on the right side of the ViewLink interface, at this time the Gimbal can control the rotation and movement function.



Net Plotting

Click "Connect" in the upper left corner, enter the IP address after "Video" - "Network Video" under the "Device Connection" column, for example: rtsp://192.168.2.119:554, and check the circular radio box in front of "Network Video", and then click "Open Video", the screen will appear

(please refer to the "Network Control" column before "Open Video" to set the computer IP).



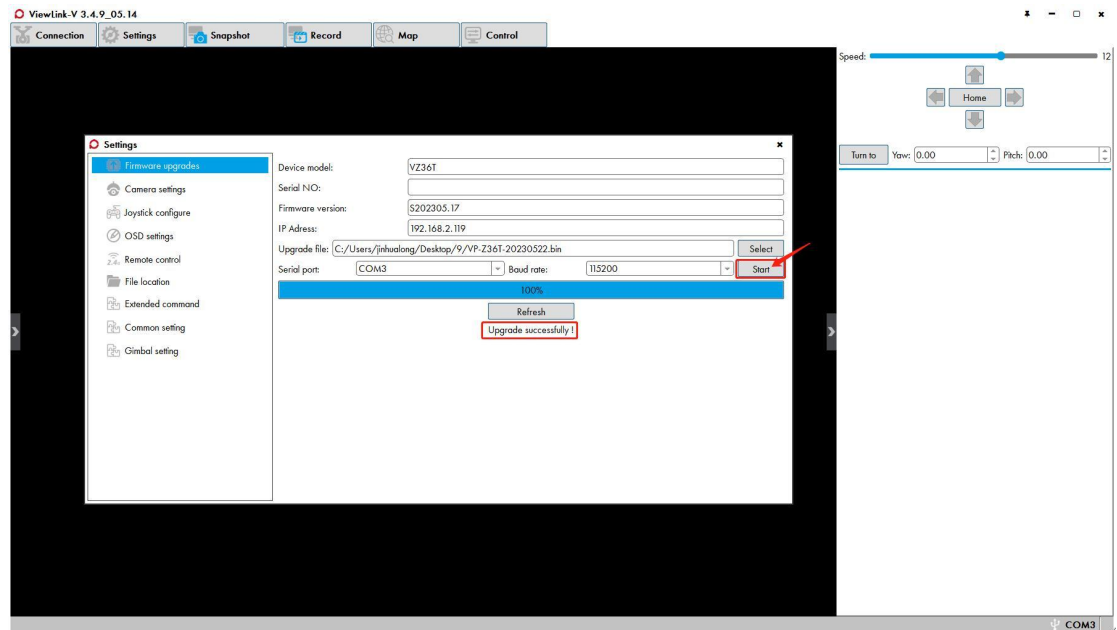
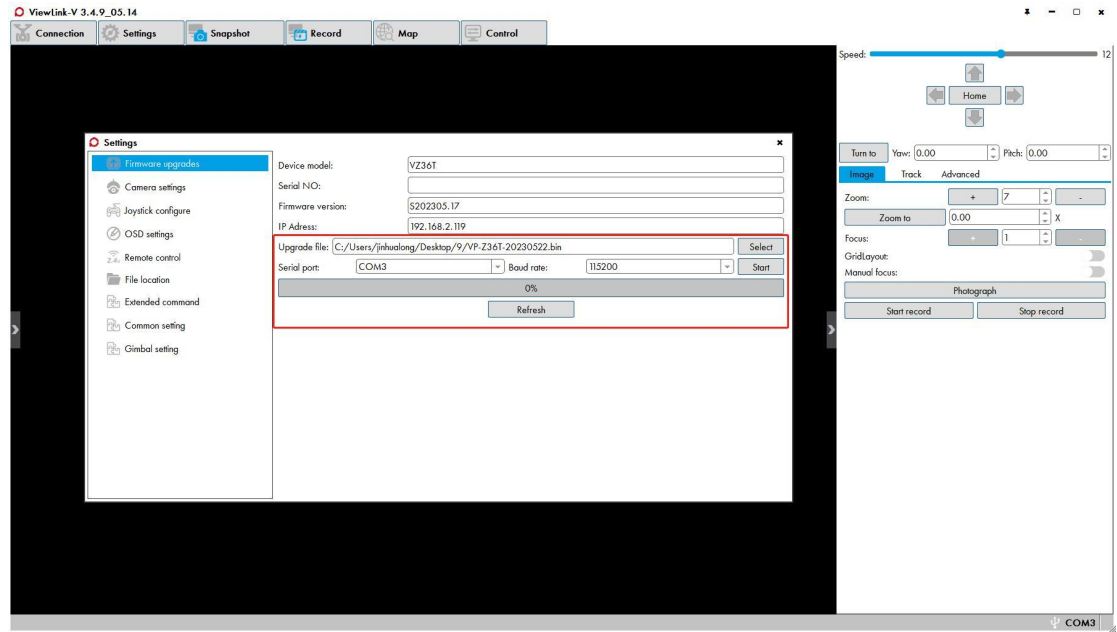
Note: Only support Gimbal with network output or USB output to open video output, single HDMI output Gimbal (Q10F, etc.) cannot use this function; If the network Gimbal cannot be drawn, you can first use the CMD command prompt of the computer to confirm whether the Gimbal IP is connected, enter "ping xxx.xxx.xxx.xxx", press the Enter key, reply to display bytes/time/TTL to indicate normal, display request timeout cannot ping, indicating that the IP has been modified.

Setting

Firmware Upgrades

The wiring steps refer to the "serial port control" column, this function is only used under the serial port connection and cannot be used under the network connection.

Select the path to upgrade the firmware of the CONN board on the computer at the "Upgrade File", click "Open" after checking, click "Start" to start the upgrade, the progress bar on the software will show from 0% to 100%, prompting "Upgrade successful".



You can also check the Gimbal device model/firmware version/IP address here.

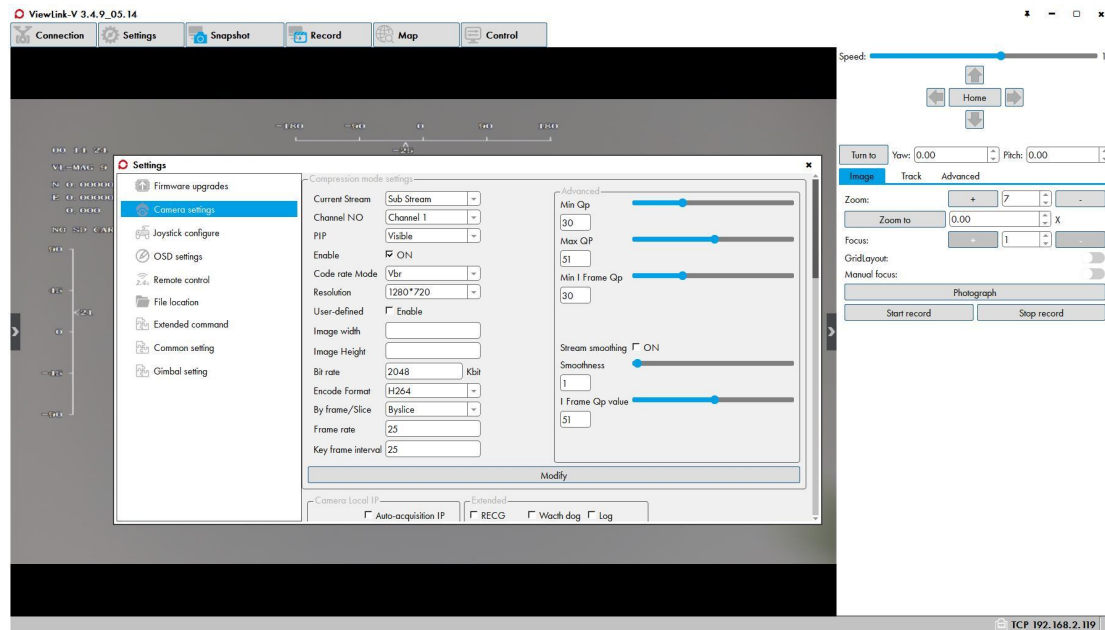
Note: If you forget the IP address after changing the IP, the Gimbal model with tracking function can be controlled through the serial port to query the current IP address of the Viewpro" Gimbal Camera.

Encoding Setting

Currently, two types of Gimbal coding settings are supported: one with tracking without AI recognition, and the other with tracking with AI recognition.

Encoding settings can only be opened under Network Control.

- No AI recognition class with tracking



A. Compression mode settings

The basic parameters are set, and the advanced parameters are set on the right, which affect the image quality and bitrate fluctuations of the video stream. Among them, the larger the Qp value, the blur the image quality, and the smaller the Qp value, the clearer the image quality.

Current stream: "Sub Stream" stands for network push stream (RTSP, UDP, RTMP)

"Mainstream" stands for SD card storage video channel. (Not recommended)

Channel number: The substream has 2 channels.

The mainstream has 2 channels.

Image type: Visible for visible light, IR for infrared

Enable: This channel is enabled, and then enabled to enable video streaming, photography, and storage before it takes effect

Bitrate mode: CBR—fixed bitrate, VBR—variable bitrate

Resolution: The width and height of the image

Bitrate: The encoding bitrate of the video stream

Encoding format: by frame is based on frames, PPS, SPS, IDR frames in one package.

By slice is based on SLICE, PPS, SPS, IDR frames exist in subpackets.

Frame rate: Video frames per second

Keyframe interval: every few P frames with a keyframe

B. Advanced parameter settings

The figure shows that the corresponding bitrate mode of the three QP values is VBR variable bitrate, which takes effect when the by frame encoding format: (It is not recommended to modify)

Minimum QP: adjustment range 0~51, the smaller the value, the better the picture quality, the greater the fluctuation of the bitrate.

Maximum QP: adjustment range 0~51, the same as the minimum QP, the maximum QP should be greater than the minimum QP.

Minimum I-frame QP: The adjustment range is 0~51, which should be equal to the minimum QP.

Enabling code stream smoothing: After enabling the bitrate, the bitrate is stable, and to achieve stable bit rate fluctuations, complex scenes will sacrifice image quality.

Smoothness: adjustment range 1~100, the larger the value, the weakening effect is weakened.

Keyframe QP value: range 0~51, default 51, the smaller the value, the smoothing effect is weakened.

C. Movement IP setting

Automatically obtain IP: Automatically obtain IP and DNS after checking, it is not recommended to check it;

Network speed: 100M is 10/100M adaptive, 10M is fixed network speed 10M.

Local IP: the IP address of the movement.

Gateway address: the gateway at which one network connects to another network.

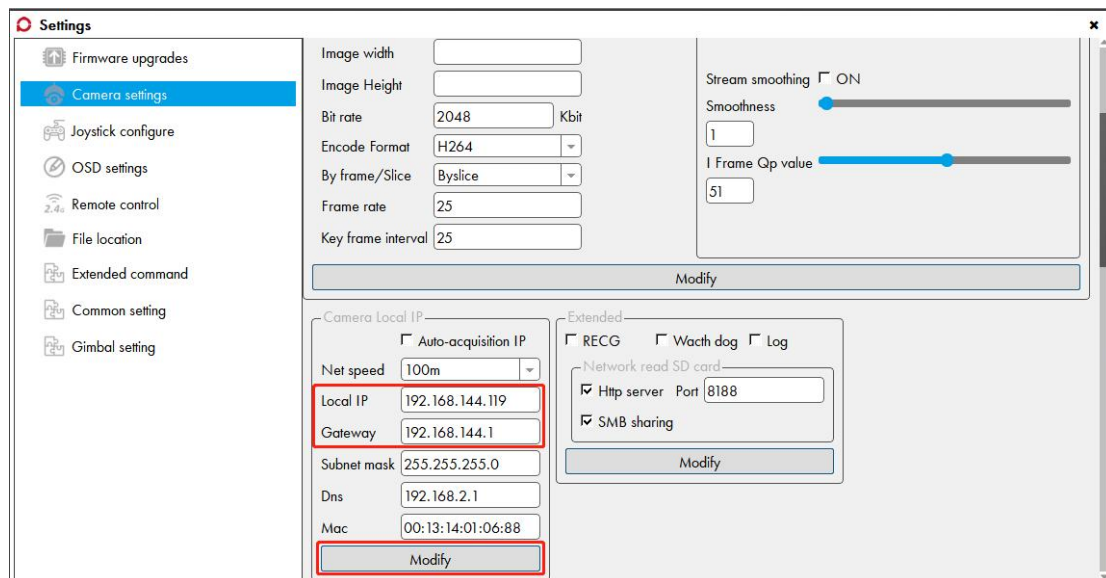
Mask address: consistent when connecting to computer/video transmission, default 255.255.255.0.

DNS: Domain name resolution address, used when connecting to the Internet.

Mac: physical address, movement is randomly assigned by default, this setting, does not take effect.

For example, the following figure changes the caliber IP to:

192.168.144.119



D. Additional Function

Identification: Human-vehicle identification is enabled, which takes effect for the version number starting with 19 and is not enabled by default.

Watch dog: After opening, the movement program runs and flies and restarts, and it is not turned on by default.

Log: movement log record, not enabled by default.

Read over the network: Enable the check box ✓ for the HTTP service, fill in the port: 8188 or 8554, and provide SD card content to be obtained through the network.

Readable card for movement configuration information.

Enter http://IP:port/download/ in the browser to browse the SD card.

For example: http://192.168.2.119:8554/download

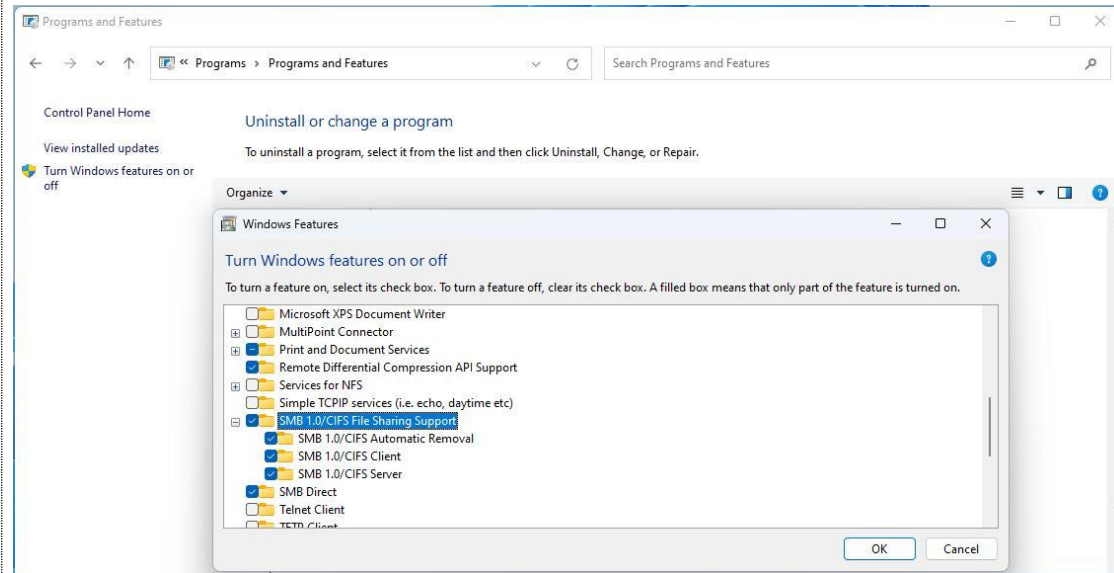
SMB turns on the check ✓, the sharing mode obtains SD card information, the computer should

turn on the Samba function, the opening method is as follows.

Control Panel-->Programs and Features-->Enable or disable Windows features-->Check" SMB 1.0/CIFS File Sharing Support" -->OK

Enter 192.168.XX.XX in My Computer or Computer or Explorer.

Turn on the SMB function on the personal computer, if you cannot enter, please restart the computer, and try again.



E. Real-time video streaming mode

Corresponding to the "sub stream" configuration in [Compression Mode]:

Channel number: The sub stream has 2 channels.

The image type corresponding to the channel number supports visible light, infrared image (supported when dual light)

RTSP enable set the image viewing address, the movement will automatically assign the image viewing address according to the IP address, the user does not need to set.

UDP enablement: After enablement, UDP can be unicast, multicast, broadcast to see the picture, and the address is the IP address and port number of the receiving end.

RTMP enabled: After the RTMP address is enabled, the RTMP server address is enabled, if the public network pushes traffic, you need to configure DNS.

TS enable play UDP metadata stream.

Note: RTSP dual video stream, check RTSP enabled, channel 1 is the output of the main code stream, address: rtsp://xxx.xxx.xxx.xxx:554/stream0, image class is not modified; Channel 2 is the output of the secondary bitstream, address: rtsp://xxx.xxx.xxx.xxx:554/stream1, and the image class selects "Visible" or "IR" as needed. Exceptionally, the "Channel 2" image type for "Sub Stream" in the compression mode setting should also be selected and "Enable" turned on.

F. Monitoring protocol

Onvif enablement: After it is enabled, it can access NVR that supports ONVIF.

GB28181 enable: After checking enable, after configuring the parameters, click [Modify File]-> [Generate File] to generate the configuration file, and after returning to the main interface, click [Download]. (This feature may not work, for viewing purposes only)

G. the transmitted way of Gimbal Camera data

Support customers to control the Gimbal through the network port through the transmission of

instructions.

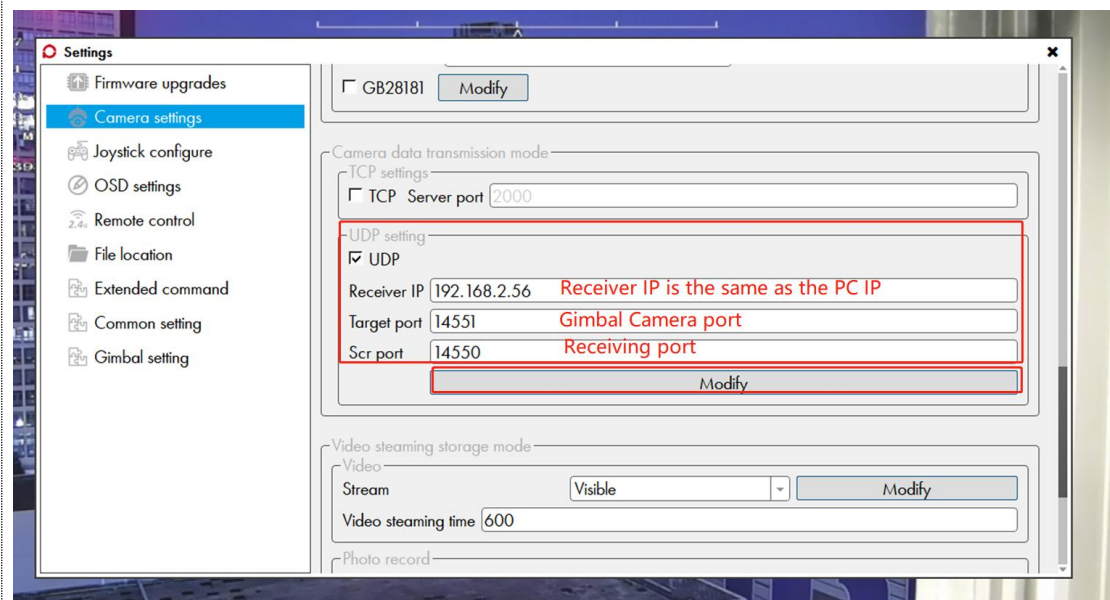
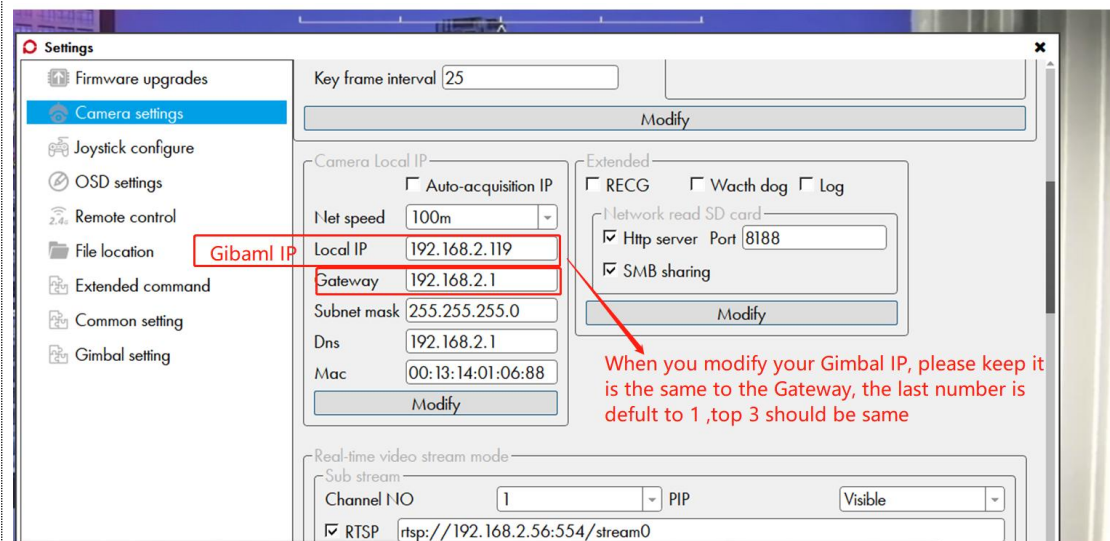
TCP settings: TCP enabled, the movement is a TCP server, the port number can be modified, support multi-client simultaneous control, shipment default.

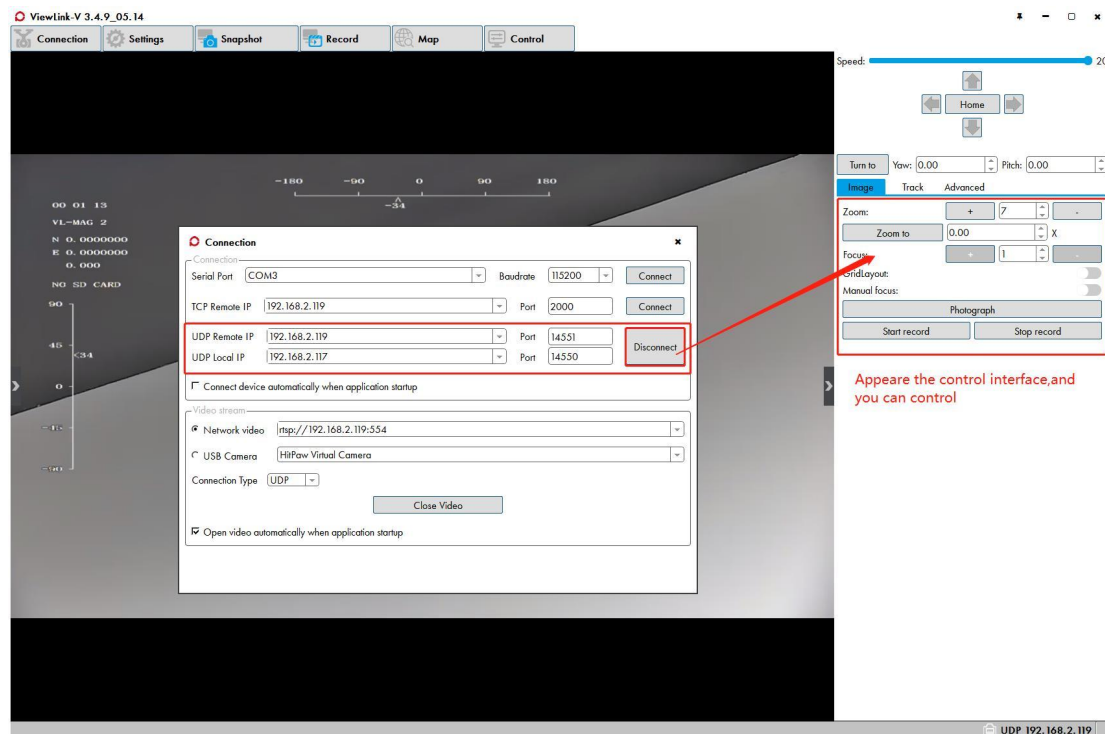
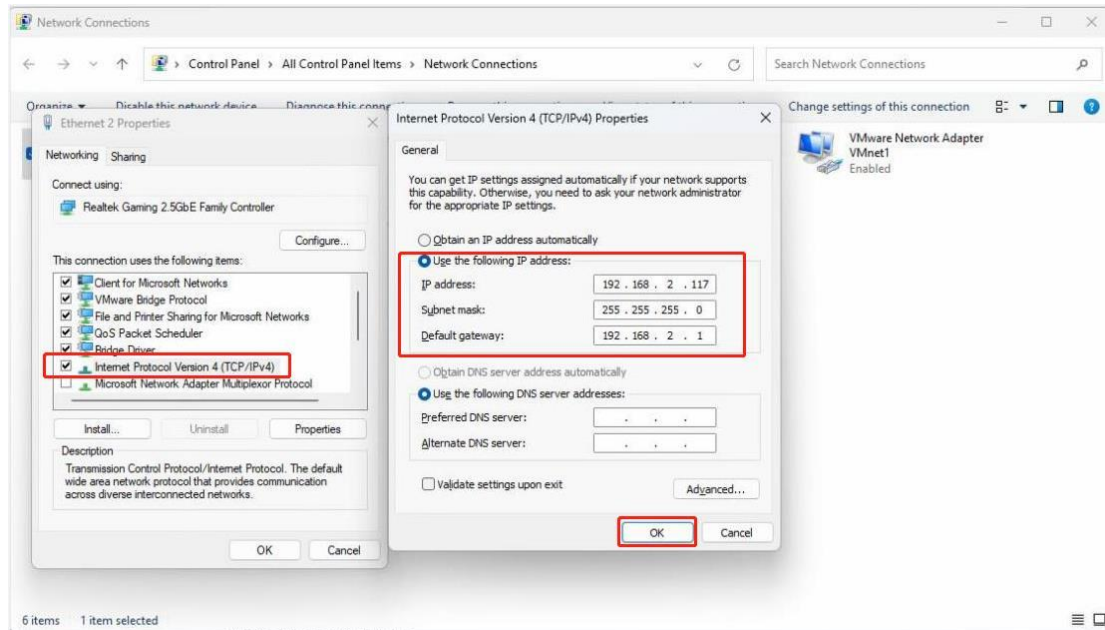
UDP setting: UDP enabled, point-to-point control, support a client side, port number can be bound.

For example, UDP connections:

Select UDP Enable to modify the corresponding receiver address and port, as well as the IP address and port of the Gimbal.

Enter the corresponding settings in the UDP connection field on the "Connection" interface in the upper left corner and click Connect.





H. Video storage capabilities

Video: Video stream recording is divided into visible light storage or IR infrared storage.

The duration of a single file currently only supports serial port protocol modification and does not take effect here.

photo record:

Eo image 1920*1080 2K.jpg , check to take effect.

Eo image 3840*2160 4K.jpg , check to take effect.

IR raw image 640*482 IR.raw , raw Infrared original value picture, check to take effect, the original value picture contains infrared original value information, temperature mapping table,

can restore the temperature value of each pixel, the file format can only be stored in bin format.

IR thermal image 640*480 IR.jpg , check to take effect.

- With tracking with AI recognition class System

a. System info: Encoding board firmware version

b. Device Configuration

Camera IP: The Viewpro" Gimbal Camera IP address

Remote IP: The IP address of the UDP receiver

UDP TS Port: UDP outflow graph port number

Camera UDP Control Port: The UDP receiving port number.

Video Compression Quality: high/medium/low

Save File Type: MP4/TS

HDMI output FPS: 30/60 (HDMI output frame rate)

Resolution: 720P/1080P (network video stream output resolution)

Rtsp Encoder Bitrate: The network output bitrate kbit/s

RTMP Server Name: Enter the RTMP stream domain name.

Gateway: Gateway settings, modified when modifying the Camera IP

Net Mask: Subnet mask, default 255.255.255.0

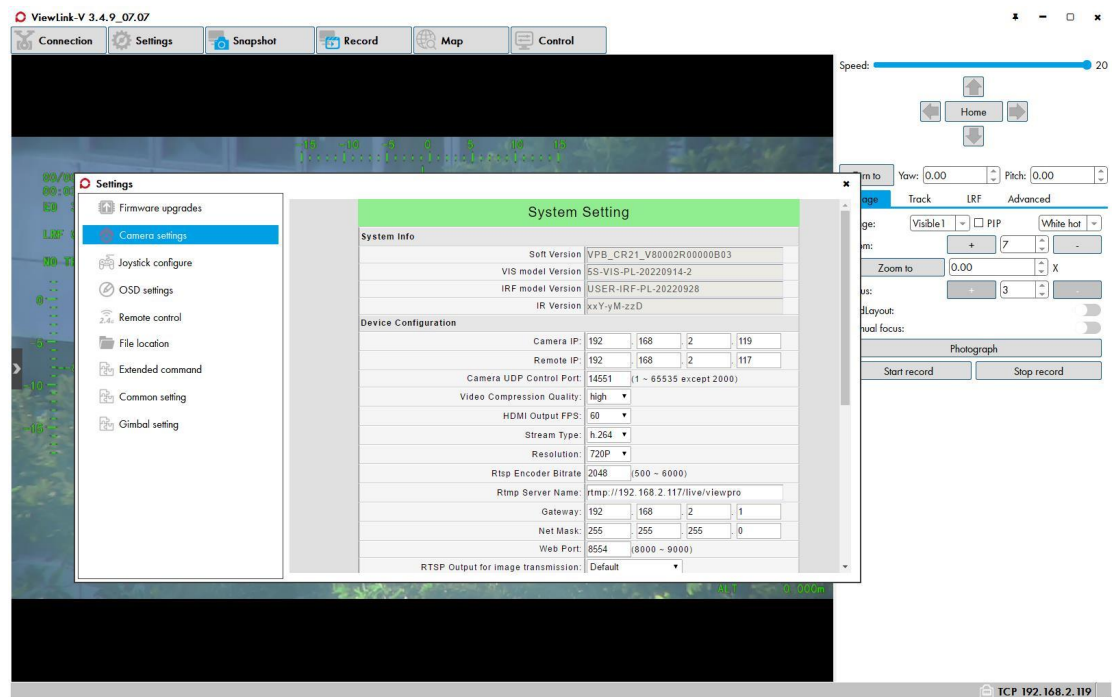
Web Port: Default 8554, encoding settings can be accessed via the "IP:8554" web.

RTSP Output for image transmission: Default/Image Quality Priority/Real-time Priority (When the Viewpro" Gimbal Camera network is lagging, it can be adjusted to other types)

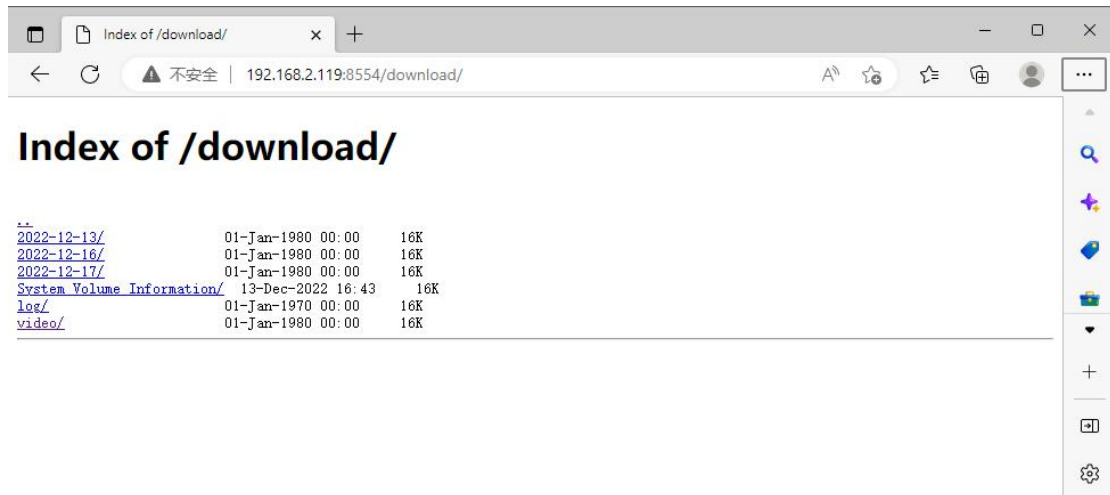
OSD Srt Set: Open/Close

Recognition Class: Both/Human/Car

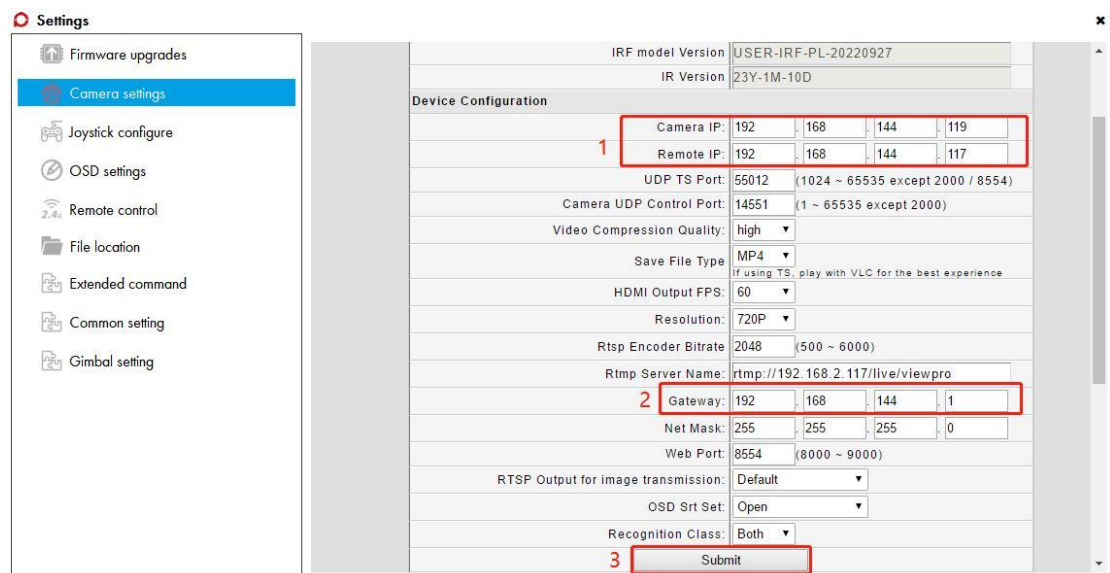
Submit: After modifying the above parameters, click the button to save the current parameters



Download files: Enter the http address to enter the Gimbal Camera TF card to view the file



To change the default address IP to 192.168.144.119, you can either restart the cockpit for the changes to take effect or click on the "Reboot" button at the bottom and wait for a moment.



Joystick Configure

If the PC is connected to a controller (only USB gamepads, such as Logitech/Beitong/Tumasted, etc.), check "Enable Controller", adjust the sensitivity of the joystick, adjust the speed of gimbal rotation, check/empty yaw angle reverse, check/empty pitch angle reverse, click the drop-down button to configure the channel function by yourself, and the unconfigured function is displayed as "unspecified". When the joystick button is operated, the corresponding button will flash once, and the set Gimbal function will also respond.

Settings

Firmware upgrades

Camera settings

Joystick configure

OSD settings

Remote control

File location

Extended command

Common setting

Gimbal setting

Enable joystick

Rocker

Sensitivity: 20

Yaw reverse

Pitch reverse

X Yaw

Y Pitch

Z Zoom

R Unspecified

U Unspecified

Button

Button 1 Home

Button 2 Photograph

Button 3 Zoom in

Button 4 Zoom out

Button 5 Start record

Button 6 Stop record

Button 7 Unspecified

Button 8 Unspecified

Button 9 Stop track

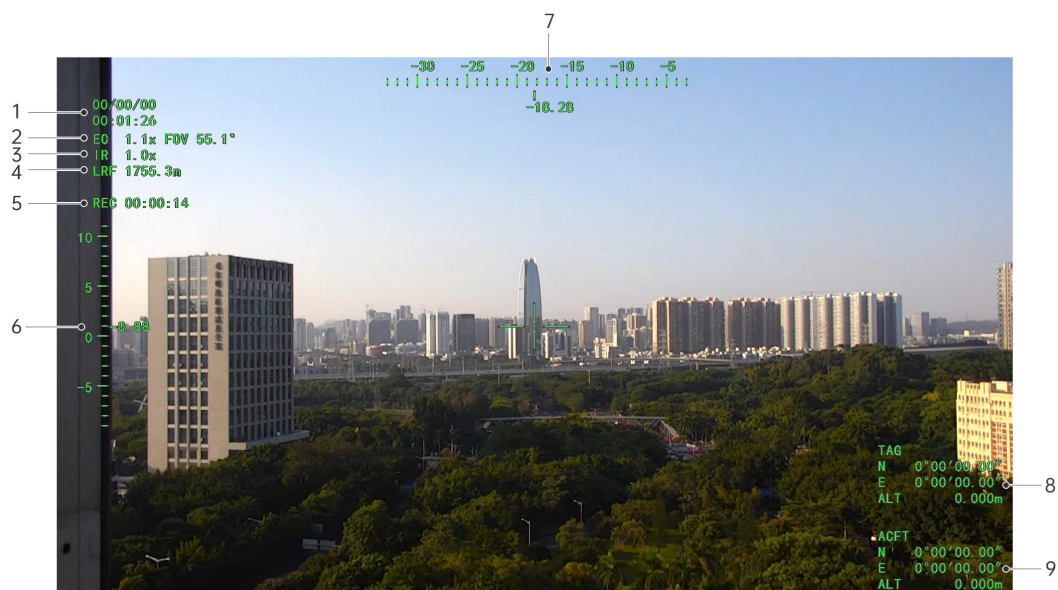
Button 10 Start track

OSD Setting

The columns on the left side of this interface include Enable OSD, Center "+", Pitch Yaw Angle, Degrees/Minutes/Second, GPS, Time, VL-MAG, Large Font Selection Button, and the right column contains: Time Zone, Time Input, GPS Input, Pitch Yaw Angle Input, VL-MAG Input Selection Button. There are also two-choice magnification and FOV, degrees and Degree/min/sec, and two-choice GPS and MGRS functions. After selecting all the OSD display settings you need, you can click the refresh and save buttons at the bottom, which are only available for AI, T series tracking Viewpro" Gimbal Cameras.

- Hide all OSD displays and do not turn on "Enable OSD"; Individual do not need to be displayed, separate off, such as pitch yaw angle, time, etc.
- When GPS time information is entered, the current time is displayed incorrectly, select the time zone of the current location in the 24-time zone.

- OSD1 Introduction:



1. Date + time
2. Visible light magnification + horizontal field of view
3. Thermal image electron magnification
4. The number of meters of straight-line distance from the center point of the screen to the Gimbal
5. Photo/video status display
6. The pitch angle of the Gimbal display
7. The heading angle of the Gimbal is displayed
8. GPS + altitude in the center of the screen
9. GPS + altitude of the aircraft UAV

● OSD2 Introduction:



1. Date + time
2. Visible light magnification
3. GPS + altitude of aircraft UAV (non-ranging type Gimbal)

The center position of the screen GPS + the number of meters of the straight-line distance from the center point of the screen to the Gimbal (ranging type Gimbal)

4. Photo/video status display
5. Viewpro" Gimbal Camera's pitch angle display
6. Gimbal Camera' s heading angle display

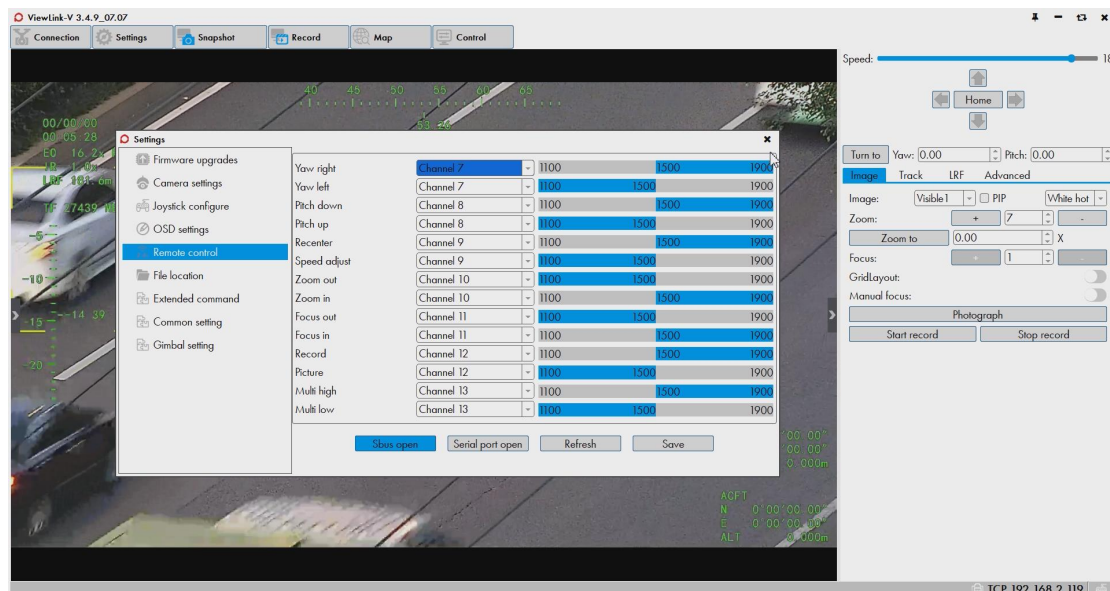
There are two methods for displaying the docking platform parameters:

1. One method is to configure the parameters of the open-source flight controller, with the Telem port connected to the payload's serial port. This allows for setting up the parameters directly on the flight controller and establishing communication with the payload.
2. Another method is based on the Viewlink protocol. In this method, the docking platform sends data such as date, time, GPS data, aircraft attitude angles, and three-axis acceleration to the payload using the Viewlink protocol. This enables the payload to receive and display these parameters.

Remote Controller

On this interface, you can set the S.BUS function or connect to the open-source flight controller digital transmission port telem and click the refresh or save button after the setting is completed. In the case of channels not split, the gimbal camera requires up to 7 channels (three-speed switch or joystick or knob) to operate.

The 7 channels are: Heading Right, Heading Left / Pitch Down, Pitch Up / Re-positioning, Speed Adjustment / Zoom Out, Zoom In / Focus -, Focus + / Video, Capture / Multi High ,Multi Low



Looking at the figure, we can see: the Gimbal Camera uses SBUS control (SBUS open background shows blue, representing the current SBUS mode), occupies channels 7-13, when each channel value is 1500us (1100us: three-speed switch low gear; 1500us: three-speed switch mid-range; 1900us: three-speed switch high position), the Gimbal Camera does not operate.

For example, 7 channel example: the left and right of the Gimbal Camera is controlled in 7 channels, when the 7-channel PWM pulse width value is 1500us-->1100us action, the Gimbal Camera turns left, when the 7-channel PWM pulse width value is 1500us-->1900us action, the Gimbal Camera turns right.

Note: Since this interface is the general setting interface of the Gimbal Camera, the specific functions of YAW, PITCH, MODE, ZOOM, FOCUS, PIC/REC, MULTI for each channel, please refer to the function of name resolution for each channel when using PWM control in the manual of each model.

For example, the analysis of the PWM signal in the specification when it is connected to the MODE channel function is shown in the figure below.

3) Mode (PWM Mode channel in to adjust speed control/one key to Home position etc functions. Rotary knob or 3-gear switch on remote control are optional. 3-gear switch as example.)

15



Position 1: Low speed mode, control pitch / yaw with this mode at lowest speed
Position 2: Middle speed mode, control pitch / yaw with this mode at middle speed
Position 3: High speed mode, control pitch / yaw with this mode at highest speed
(If it is controlled by rotary knob, the speed will change according to switch position)

Function of continuous switching:

3.1) Operate 1 time continuously and quickly, from position 2 - 3, to Home position.

3.2) Operate 2 times continuously and quickly, from position 2 - 3 - 2 - 3, the camera lens looks vertically down.

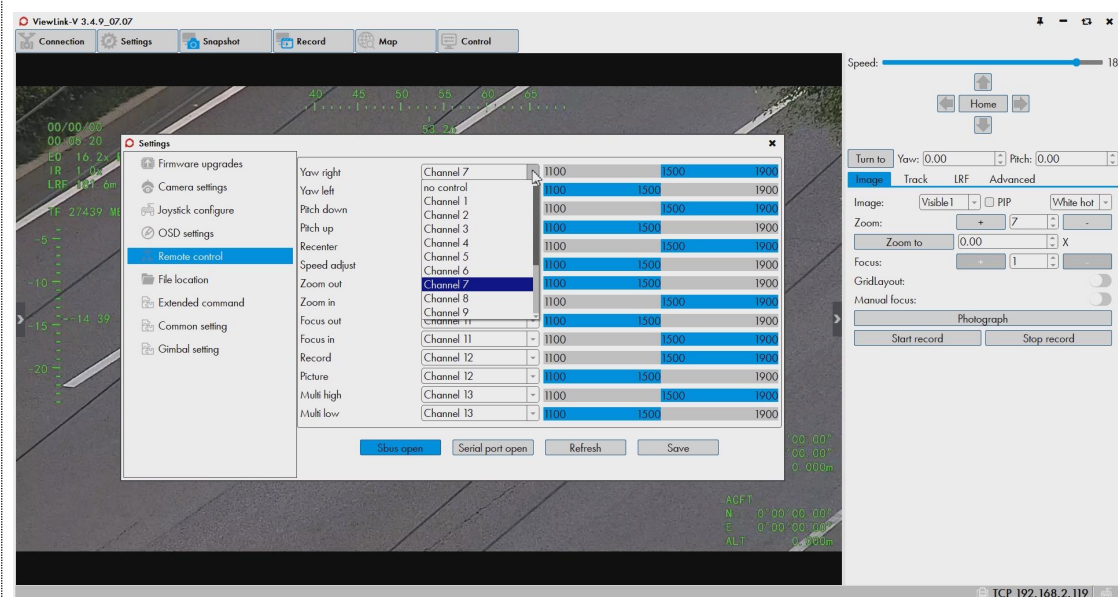
3.3) Operate 3 times continuously and quickly, from position 2 - 3 - 2 - 3 - 2 - 3, to disable Follow Yaw Mode (gimbal yaw not follows by frame)

3.4) Operate 4 times continuously and quickly, from position 2 - 3 - 2 - 3 - 2 - 3 - 2 - 3, to enable Follow Yaw Mode (gimbal yaw follows by frame)

SBUS control:

Through the drop-down menu, select the position of each channel for mapping, range 1-15
channel selection, "no control" means to abandon this channel mapping.

After the channel mapping is completed, click "SBUS open" to modify the SBUS interface of the Gimbal Camera serial port, and then click "Save" to restart the Gimbal Camera to take effect.



Open-source flight controller telem port RC_CHAN control:

Through the drop-down menu, select the position of each channel for mapping, range 1-15 channel selection, "no control" means to abandon this channel mapping.

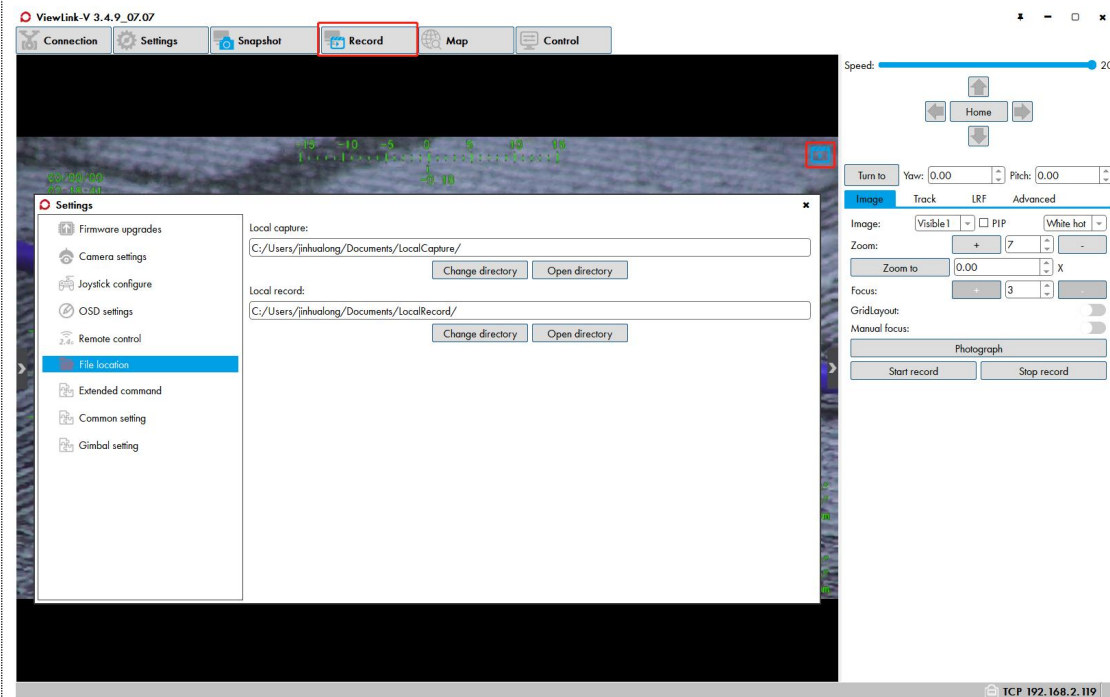
After the channel mapping is completed, click "Serial port open", the Viewpro" Gimbal Camera serial port can respond to the RC_CHANNELS of the Mavlink protocol (#65), and then click "Save" to restart the Gimbal Camera to take effect.

File Save

Set the file where local snapshot and local video are saved, you can change the directory and open the selected file, click the Change directory or Open file button.

Click "Local Snapshot" : Snapshot the current video stream and have a photo path prompt in the lower right corner to view the photo directly.

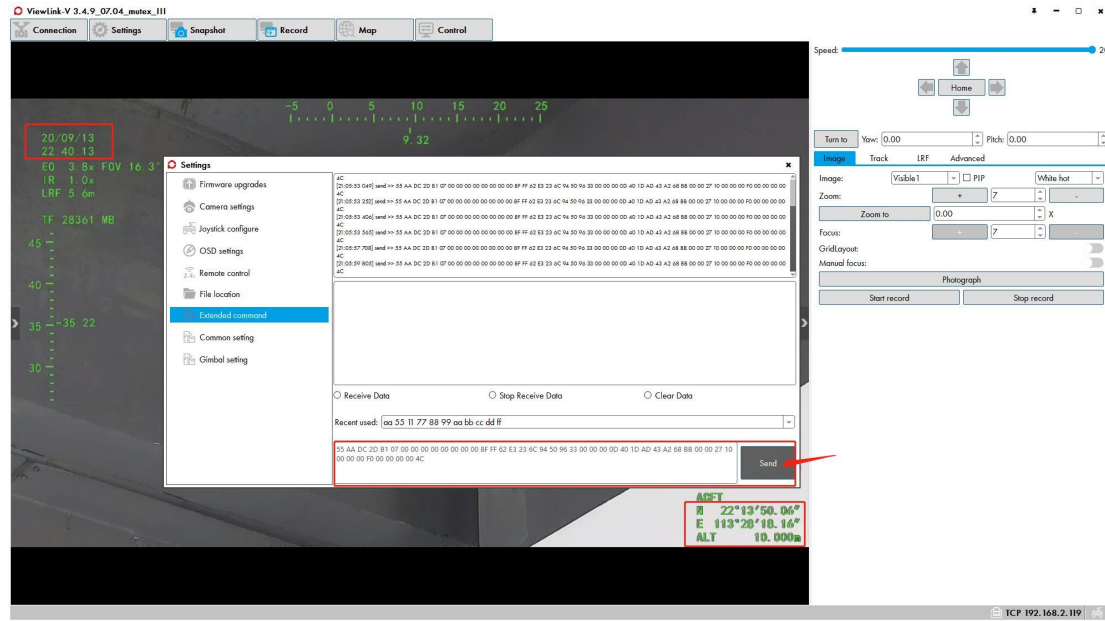
Click "Local Recording": Click once, the blue video icon in the upper right corner of the screen flashes, click again, and there is a recording path prompt in the lower right corner, you can directly see the video



Extended Command

ViewLink can be used as a serial command setting tool to send commands directly to the Gimbal Camera. Type the command you want to send on the left side of the send button, click the send button, and the command will appear in the large box above, indicating that the sending is successful.

For instance, ViewLink M documents send: 55 AA DC 2D B1 07 00 00 00 00 00 00 00 00 8F FF 62 E3 23 6C 94 50 96 33 00 00 00 0D 40 1D AD 43 A2 68 BB 00 00 27 10 00 00 00 F0 00 00 00 00 4C

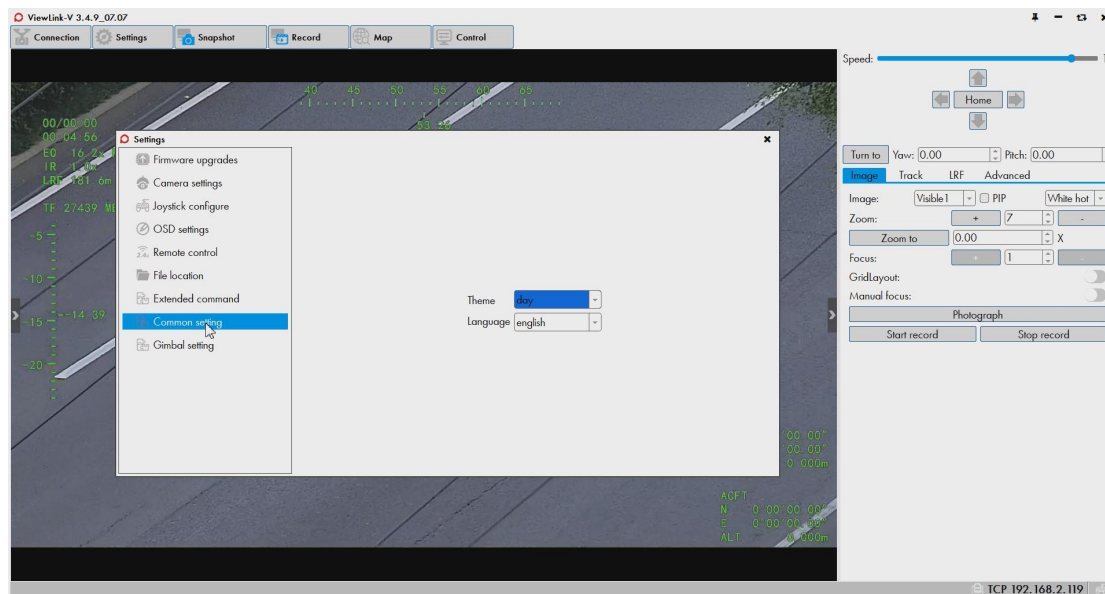


Common Setting

Theme: Day / Night optional;

Language: Chinese / English optional;

Finish the setting, please reboot the Viewlink to make the effect works.

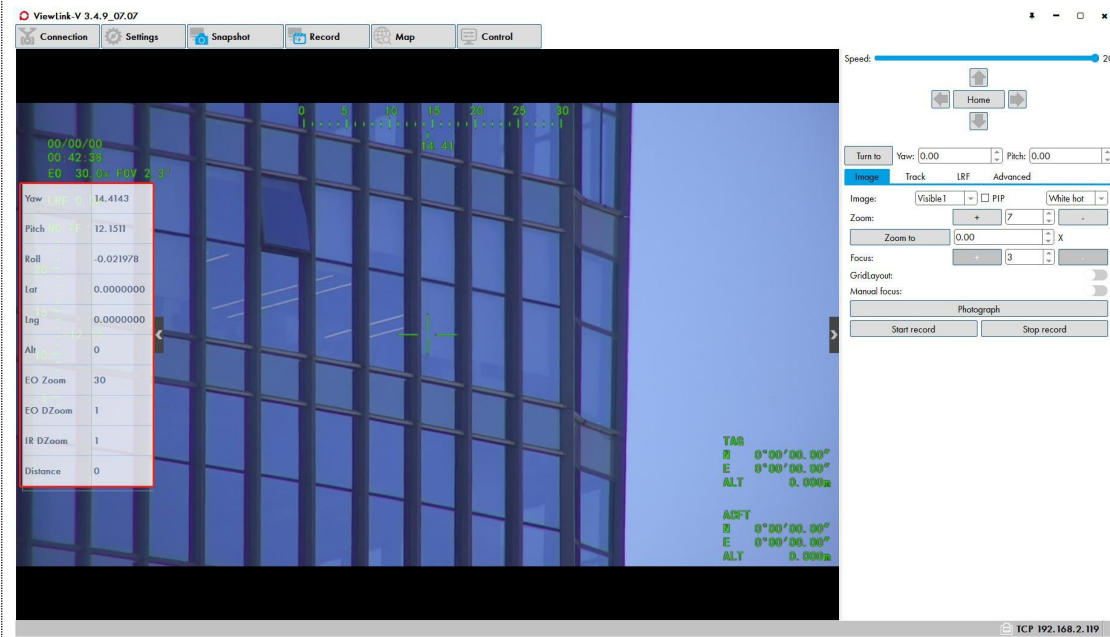


ViewLink Interface

Real Time Information

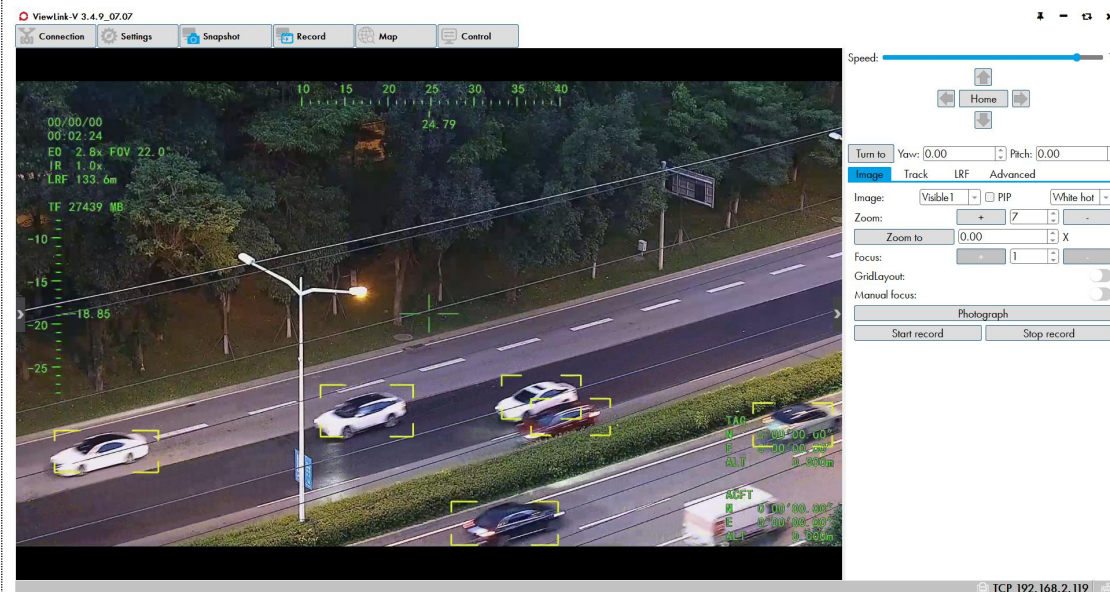
Click the arrow icon on the left to pop up real-time data display, such as Viewpro" Gimbal Camera yaw angle, Viewpro" Gimbal Camera pitch angle, Viewpro" Gimbal Camera roll angle, target latitude, target longitude, target altitude, visible light magnification, visible light electron

zoom, thermal imaging electron zoom, ranging distance, etc.



Function Menu

The icons in the menu on the right control interface will display different menu buttons according to the Gimbal Camera, click on these buttons to find the functions you need to use.



● Gimbal Movement Control

a. Speed Mode Control

Speed: 1~20°/s to adjust the speed value, click the up, down, left, and right arrows to control the movement

Back to the center: The movement state of the Viewpro™ Gimbal Camera returns to the initial position of the boot.

b. Angle mode control

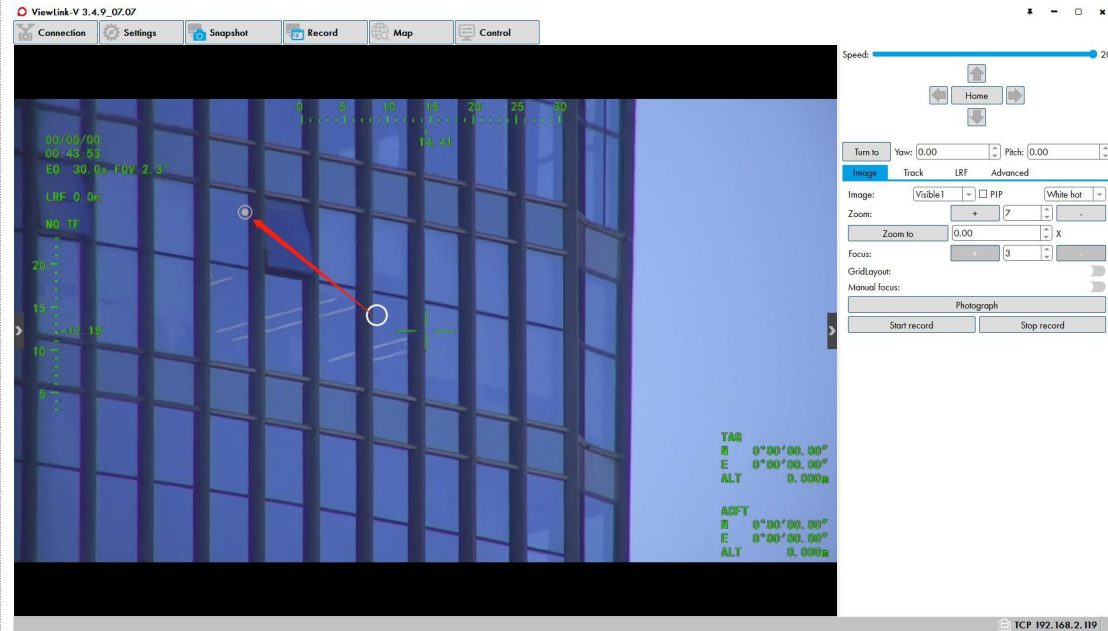
Go to: Yaw angle left minus right plus, angle input range $\pm 180^\circ$.

The pitch angle is plus and minus, and the angle input range is $\pm 90^\circ$.

c. Mouse operation

Press and hold the left mouse button on the ViewLink screen to drag, a small white circle will appear on the screen, drag the small white circle without releasing the mouse, you can move the lens picture of the Viewpro gimbal to any direction.

If the Viewpro Gimbal Camera is in Tracking mode, the small white circle does not work currently.



Holding or clicking the left mouse button on the screen will bring up the on-screen joystick as shown in the image above. It's like a physics joystick: deflecting to the left will make the Gimbal Camera pan to the left, deflecting upwards will tilt the Gimbal Camera upward, and so on. The farther the joystick is offset from the starting point, the faster the gimbal moves. When you release the mouse button or lift the touch, the command stops.

The joystick on the screen can be placed on any part of the ViewLink picture, regardless of the position on the screen. It is important to deviate the joystick from the direction and distance from its initial point.

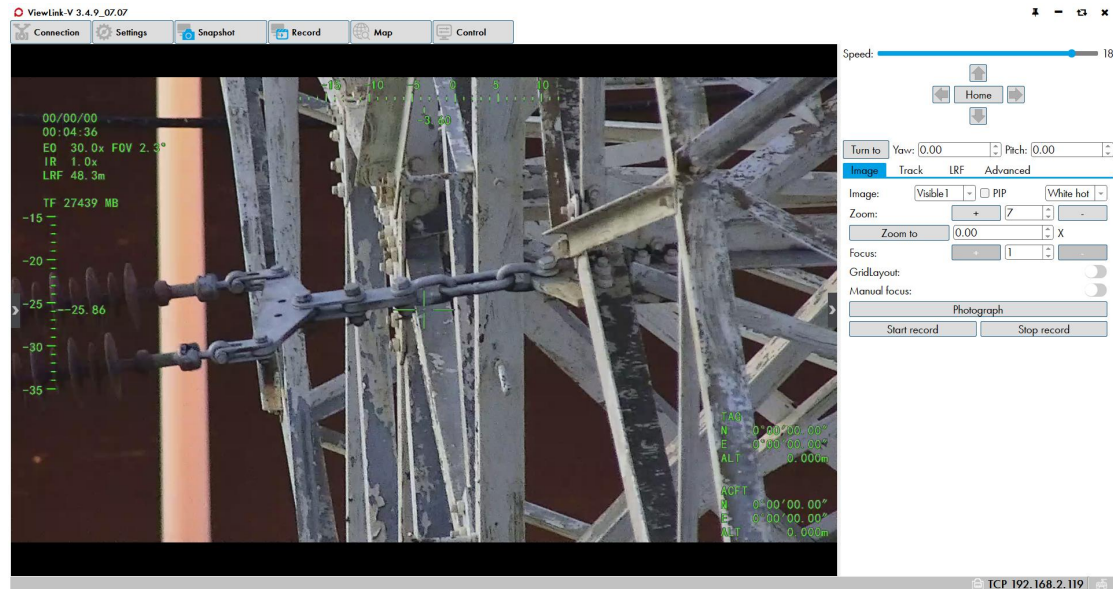
● Image

Image: visible light 1, IR thermal image, check PIP for two-light picture, white hot/black hot/color for thermal image swatch color

Zoom: change the zoom camera magnification, you can control the picture by "+" zoom in, "-" zoom out, the digital selection box in the middle is the zoom speed, the larger the zoom speed; You can also fill in the multiplier by "Zoom to __X", click "Zoom To" to directly reach the specified multiplier; You can also use the mouse wheel to zoom the screen;

Focus: the camera defaults to automatic focus, if you need to manually adjust focus, first open the "manual focus" function, the button turns blue to indicate that it is on, and then you can zoom in by "+", "-" to reduce the clear blur of the picture, the digital selection box in the middle is the focusing speed, the larger the focusing speed, the faster the focusing speed;

Show the nine-grid view: turn on or off.



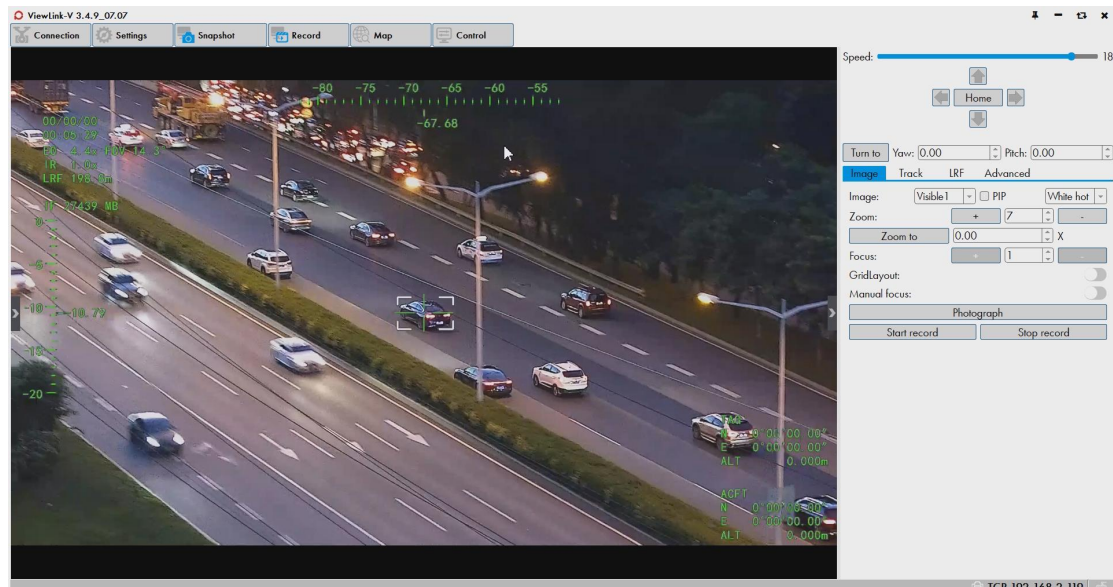
Photography and video: The premise is that the camera card slot needs to be installed with a TF card, and the photo or video operation will be stored in the TF card.

●Tracking

Tracking method 1: Click "Start Tracking", a tracking box will appear in the center of the screen, showing that the object in the frame is being tracked, and then click "Stop Tracking" to cancel the tracking mode.

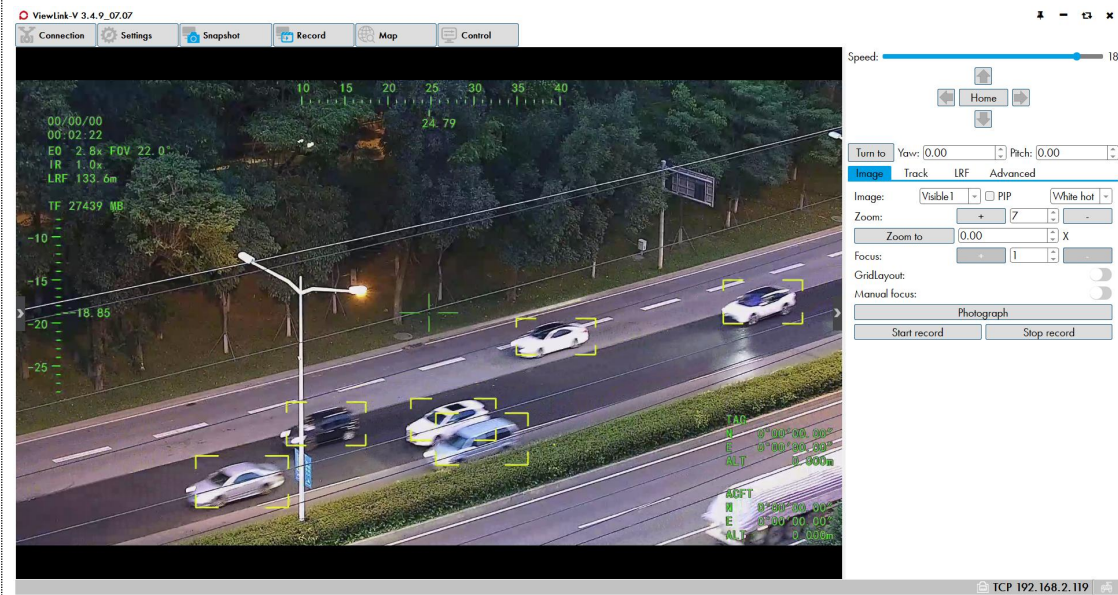
Tracking method 2: double-click the target object on the screen, it will be tracked, and then double-click other positions to track it twice.

Tracking template size: automatically adjust the size of the tracking box by default, or select boxes with 32*32, 64*64, and 128*128 resolution.



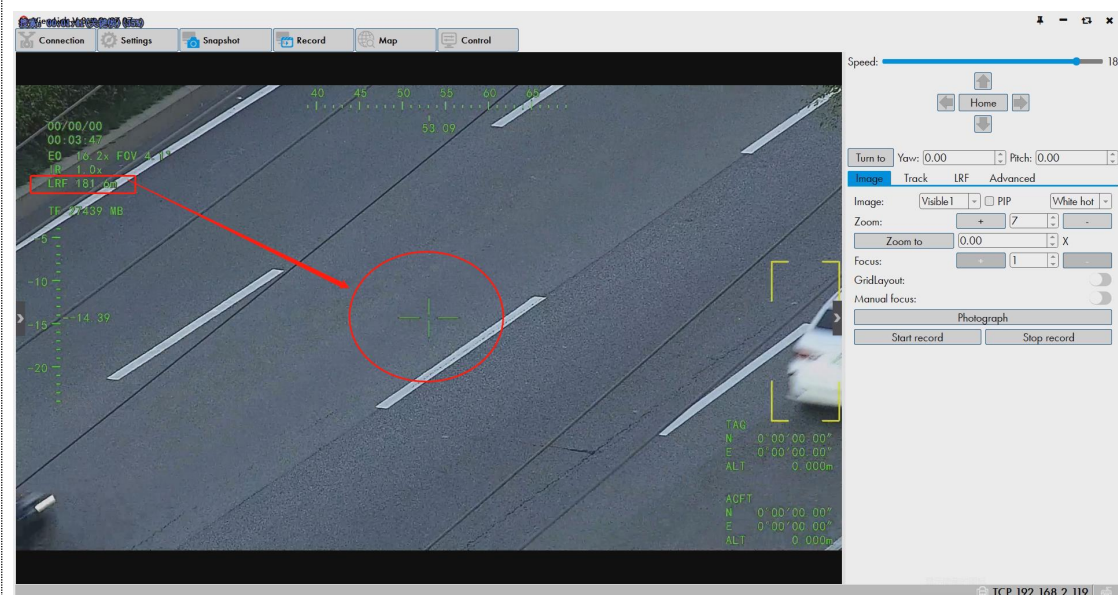
For the AI series Viewpro" Gimbal Camera, "Turn on vehicle recognition" and "Turn off vehicle recognition" will be added, and a marked box will appear on the person or the outer contour of

the car after opening, as shown below:



● Rangefinder

Click "Continuous/Single/Stop", select the ranging mode, and then click "Send" to take effect;
The following screen LRF shows the straight-line distance from the center of the current screen to the lens of 181.6m



● Advanced

"Enable/Disable Follow: The heading of the gimbal follows the nose rotation and automatically follows/does not follow the nose rotation ;

"Turn on Motor/Off Motor": All motors of the gimbal turn on/off.

"Turn on dehazing/off dehazing": used in foggy days, only suitable for cameras with dehazing function, turn on or off dehazing.

"Turn off compensation/only turn on heading compensation/only turn on speed compensation/turn on heading and speed compensation": this button takes effect when the

Viewpro" Gimbal Camera communication interface receives the attitude of the aircraft and the heading angle; Speed compensation solves the problem of Viewpro" Gimbal Camera roll tilt when fixed-wing UAV turns at large angles; Heading compensation is to solve the problem of left and right drift of the lens in lock mode.

"Turn EO ZOOM on/Turn off EO ZOOM": When turned on, zoom in the Image bar, and the single visible zoom camera can be electronically magnified.

Thermal image electronic amplification: click "+" / "-", the gimbal with thermal image can perform thermal image electronic amplification.

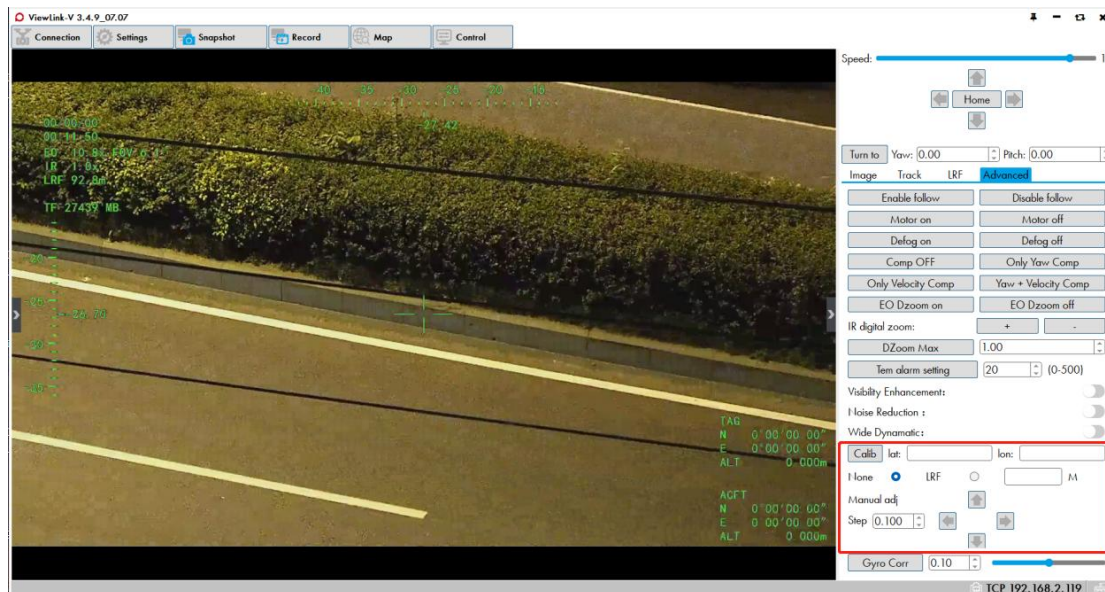
"DZoom Max": Set the maximum limit of visible photoelectron zoom, adjust the value, and take effect after clicking the button.

"Temp. alarm setting": only the temperature measurement version of the thermal image is available, set the thermal image alarm temperature, adjust the value, and take effect after clicking the button.

"Visibility Enhancement": makes darker parts of the camera image brighter.

"Noise reduction": reduce graininess on the picture.

"Wide dynamic": used in situations where the contrast between light and dark is too large;



Target GPS display calibration, only suitable for **LRF Gimbal Camera** method:

Calibration Steps:

- 1) Record the GPS latitude and longitude position of a target point on the ground;
- 2) The drone takes off or put it to on the roof. Within the effective range of LRF, the aircraft remains static and measures the straight-line distance from drone to the GPS longitude and latitude position of the target which recorded in the 1st step.

The distance will be displayed on the OSD.

- 3) Align the center of the screen with the GPS longitude and latitude of the target point, enter the lat of the target point which recorded in the first step : _____, and lng: _____, click "LRF" button, and fill the distance in ____M which recorded in the 2st step.

After completing the above operations, click "Calib" button to complete the preliminary calibration.

- 4) After the preliminary calibration is completed, the GPS coordinates displayed on the OSD will

be close to the target GPS coordinates of the first step, and then adjust the error manually, the default step is 0.001°, the maximum is 0.1°.

Click the up arrow "↑" if the Northern latitude of testing point smaller, click the down arrow "↓" if the north latitude larger.

Click the up arrow "↓" if the Southern latitude smaller, click the down arrow "↑" if the Southern latitude larger.

Click the right arrow "→" if the East longitude smaller, click the left arrow "←" if the East longitude larger

Click the right arrow "←" if the West longitude smaller, click the left arrow "→" if the West longitude larger

The above adjustments make the target GPS on the OSD infinitely close to the position recorded in the first step, and the error calibration is completed.

Failure Recover

ViewLink could not find the "Viewpro" Gimbal Camera on the network

If the "Viewpro" gimbal is directly connected to the computer's network port and the computer does not recognize the hardware connection, you may need to check the network cable connection, unplug the crystal head, restart the gimbal power supply, and reconnect via Ethernet.

- ViewLink connects to the "Viewpro" Gimbal Camera, but screens are not displayed.

The first case: the "Viewpro" Gimbal Camera does not have a network port output. At this time, the ViewLink user interface will not display the screen, but after connecting to UART, there will be a function menu on the right side of the interface.

The second case: "Viewpro" Gimbal Camera with network port output

- In the Video menu of the ViewLink Connect dialog box, click Open Video.
- If this does not work, please verify whether the default IP address of the "Viewpro" Gimbal Camera matches the computer IP address through the operation in "Connect".
- If the Viewpro" Gimbal Camera fails to play the video image, please disable the firewall of the "public network" of the PC.

Note: The default IP of "Viewpro" Gimbal Camera will be affixed to the "Viewpro" Gimbal Camera with a small label when shipping.

- I can't remember which static IP address the Viewpro Gimbal Camera network was set to.

Connect to the Viewpro" Gimbal Camera through the serial port, and then use ViewLink: Click on the interface "Settings" - "Firmware Upgrade" - "IP Address" to view. This method is only applicable to some Viewpro" Gimbal Camera.

- Viewlink is not fully displayed in the full-screen screen on the PC desktop

If the computer resolution is lower than 1920*1080, compatibility problems may occur, and you need to manually modify the properties to solve them. Find the "Viewlink" startup icon, right-click to open "Properties", select the "Compatibility" column, check "Run this program in compatibility mode" - select "Window 8" - click "Change high DPI settings" - check "Replace high DPI scaling behavior". Select "System" - finally click "Confirm" to restart Viewlink.

You can check the compatibility of your ViewLink application by right-clicking on it and selecting the Compatibility option.

