

Operating Instructions



1080P crane hoist 30x zoom camera

Read the manual in its entirety before installing and setting up the device. And keep this manual safe for future reference.

V1.2

Contents

1. Precautions	1
1.1 Device Storage	1
1.2 Device Use	1
1.3 Maintenance	2
2. Product Features	2
2.1 External Wi-Fi and Network Cable Communication	3
2.2 Algorithm Support	3
2.3 Manual Zoom Control/Focus/Digital Magnification	3
2.4 Wireless Coding	3
2.5 Night Vision Function	3
3. Detailed Technical Parameters	4
4. Components and Accessories	5
5. Diagram of System Connection	6
6. System Installation	7
6.1 Bracket Installation	7
6.2 Antenna Installation Direction	8
7. Web Configuration and Upgrade	9
7.1 Web Focus and Calibration Tool	9
7.2 Status Query	10
7.3 Configuration Interface	11
7.4 System Function	12
7.5 Protocol Use	14
7.6 System Upgrade	15
8. FAQ	16

1. Precautions

1.1 Device Storage

- 1) Storage temperature:-30 ~ +80°C, working temperature:-20 ~ +70°C.Do not knock the device and drop it from a height.
- 2) Do not damage the device housing with sharp objects.
- 3) Do not damage the external cable of the device.
- 4) The device can not be as a wet, dusty and smoky places.
- 5) Do not knock the device and drop it from a height.

1.2 Device Use

- 1) Working voltage:10 ~ 32V, stop working below 7V. Beyond the limited working voltage may damage the device.
- 2) Make sure that all cables are correctly connected before the device is powered on.
- 3) The main function of the device is monitoring assistance, which cannot assist the driver's operation, nor can it guarantee 100% recognition rate.
- 4) The camera end of the device should not be blocked by obstacles.
- 5) If the installed device is manually adjusted again, it needs to be re-calibrated to show the normal detection effect

Warning!



- 1) Too high an operating voltage will damage the device.
- 2) When the device is connected to the display, the driver should not over-rely on the device while driving.
- 3) It is forbidden to disassemble the device without professional assistance. If you find any abnormality of the device, please contact our customer service.

Special Notice!

Do not lightly attempt to repair the device yourself. If you have any problems, turn off the power immediately and notify our company or an authorized dealer. Any removal or modification may result in damage and void the warranty.

1.3 Maintenance

- 1) Remove all cable connectors from the device before cleaning it.
- 2) Use a mild household cleaner and clean the device with a slightly damp soft cloth.
- 3) Never use strong solvents such as thinners or benzyl classes, as they may damage the surface of the device.

	Precautions	
	Electric shock risk Do not open	
Precautions: To reduce the risk of electric shock, do not remove the cover (or back). There are no user repairable parts inside. Forward the service to a qualified service person.		



This symbol is intended to alert the user to the presence of an uninsulated "dangerous voltage" within the product housing, which may be sufficient to pose a risk of electrocution to a person.



This symbol is intended to alert the user to the existence of important operating and maintenance (repair) instructions in the literature that comes with the device.



This symbol is intended to remind the user not to waste electrical and electronic device.

Attention

Be aware that any changes or modifications not explicitly approved in this manual may void your warranty and require expensive repairs.

2. Product Features



Wireless zoom camera

2.1 External Wi-Fi and Network Cable Communication

- 1) The mobile phone can be connected to the device through the external Wi-Fi module to calibrate and set the device.
- 2) Compatible with external USB to network cable, use network cable to view RTSP stream.

2.2 Algorithm Support

- 1) Pedestrian detection algorithm, the algorithm needs the user to provide the relevant data set and target height angle information, otherwise the false detection rate will be high, the function is closed by default.
- 2) Automatic target tracking, which requires users to provide relevant data sets and information of tracking targets, this function is turned off by default.

2.3 Manual Zoom Control/Focus/Digital Magnification

- 1) Control image magnification and reduction, focus and digital magnification size through corresponding function buttons on the monitor.
- 2) Control image magnification and reduction by stepping foot switch.
- 3) Control image zoom in and zoom out, focus and digital zoom size through the web end.

2.4 Wireless Coding

- 1) For the first time, when the camera starts up or is powered on for a period of time, set the search device and automatic connection through the on-screen matching code.
- 2) There is no need to do the code alignment again in the future, unless the relevant information is cleared on the display side and the code alignment operation is performed again.

2.5 Night Vision Function

- 1) When it is dark at night, the camera will automatically switch to night vision mode and turn on the infrared night vision light to fill in the light.
- 2) Note that the power consumption of the device will further increase in the case of night vision, and it is necessary to pay attention to power consumption when using battery power supply.

3. Detailed Technical Parameters

Image sensor	1/2.9
Wireless transmission	Built-in 2.4G digital wireless transmitter
Transmit power	CE: ≤ 20dBm MIC: ≤10dBm
Launch distance	CE: 150m MIC: 60m
Operating frequency	2408 ~ 2478MHz
Resolution	1080P
Effective pixels	1920(H) X 1080(V)
Optical zoom	30x
Focus distance	4.85 ~ 138.66mm
Aperture value	1.65(W) ~ 4.70(T)
Horizontal view	57.69°(W) ~ 2.2°(T)
Visible distance	5 ~ 200M
Focus mode	Autofocus
Day and Night mode	IR-CUT Automatic switching
Infrared distance	50M
Waterproof rating	IP69K
Operating voltage	DC10 ~ 32V
Operating temperature	-20°C ~ +70°C
Vibration resistance rating	5.9G (compliant with GB-T2423056-2006)
Overall dimensions	220(W) x 110(H) x 106(D) mm

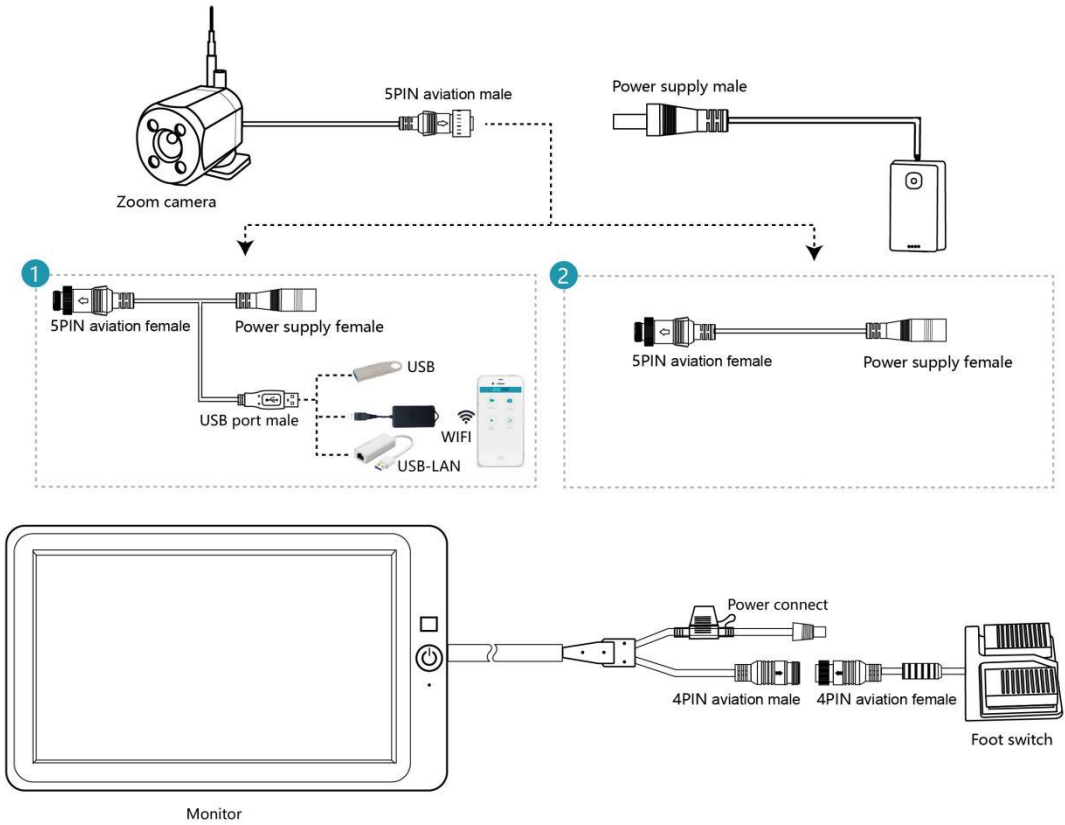
4. Components and Accessories

Components or accessories	Quantity(PCS)	Description
	1	Zoom camera
	1	Connect the external power cable DC connector
	1	Wireless monitor
	1(Optional)	Foot switch
	1(Optional)	Magnetic battery
	1(Optional)	Bare cable for power supply

5. Diagram of System Connection

The connection of the wireless monitoring system of the zoom camera is shown in the figure. The device can be connected in two ways according to the actual use.

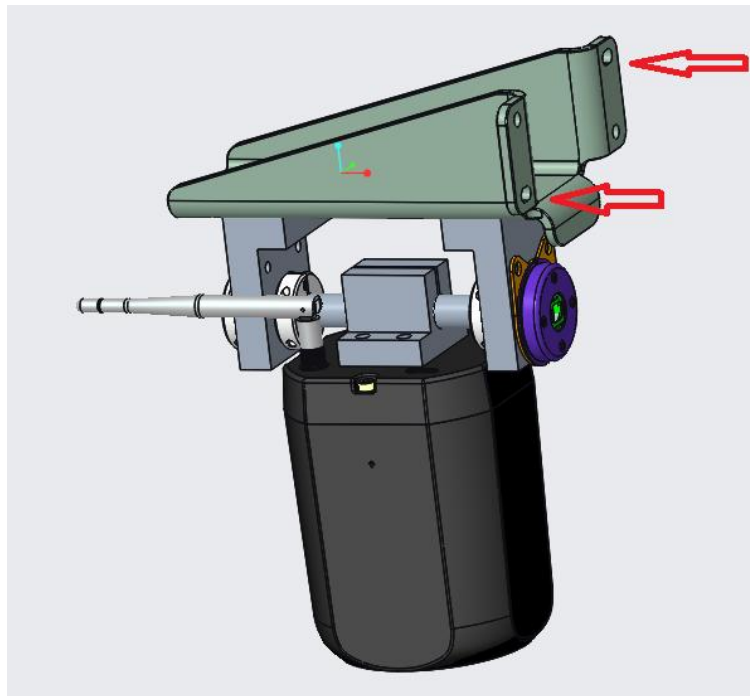
You can choose one of the following 2 types:



The overall connection is that the camera is connected through the aviation head. If you need to configure some functional parameters, you can connect the cable through type 1. In actual use, directly use type 2 wiring, the power source can be directly connected to the power supply on the required installation vehicle, or the magnetic battery can be used to supply power. The display is installed in the cab, the power supply is provided by the cab, and the foot switch is connected to the display end through the 4Pin aviation head.

6. System Installation

6.1 Bracket Installation



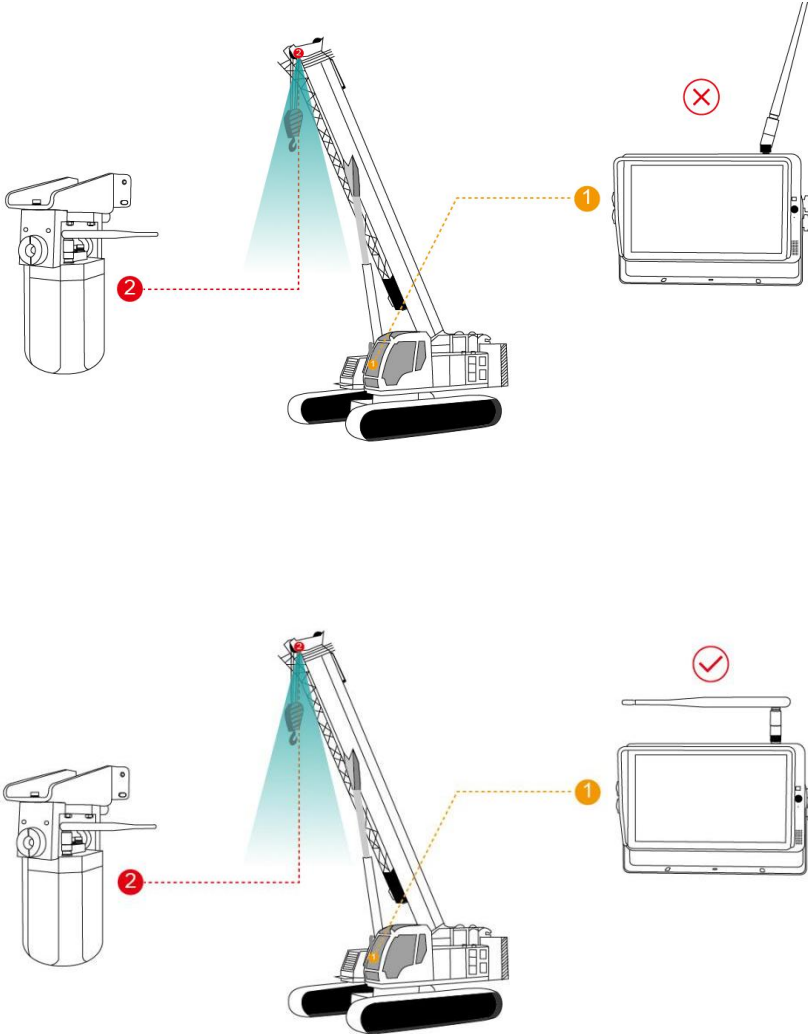
The installation holes are indicated by the red arrow in the figure above. The specific installation steps are as follows:

- 1) On the vehicle or device to be installed, find the appropriate position, fix the green connecting plate, weld or screw to fix the vehicle.
- 2) Insert the long shaft of the camera into the position of the bearing, and then tighten the screw hole on the bearing.
- 3) If it is installed on the engineering car whose angle will change, pay attention to the installation direction to avoid pressing the antenna in the process of rotation, as shown in the following figure:



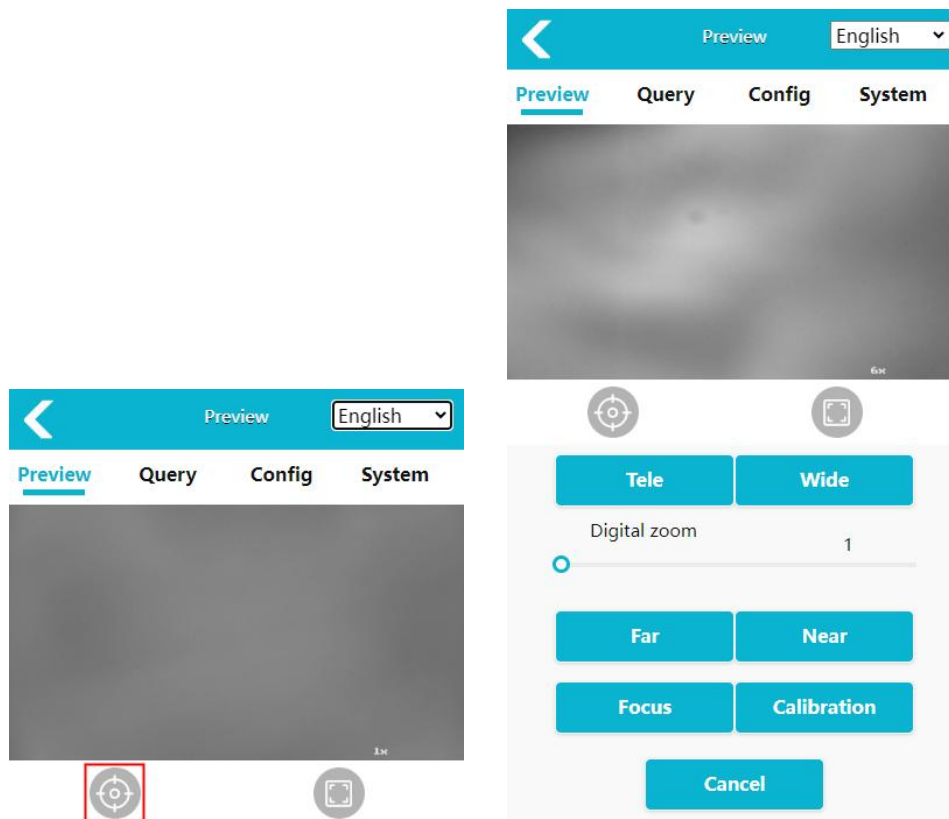
6.2 Antenna Installation Direction

The antenna of the camera should be parallel to the antenna of the wireless LCD display. If there is no parallel, the signal strength will be affected, as shown in the figure below:




7. Web Configuration and Upgrade

7.1 Web Focus and Calibration Tool



Connect to wireless WiFi (default IP address 192.168.60.1) or wired network (default IP address 192.168.66.89) after entering the web page, enter the password to log in, the default is no

password, you can enter the image preview interface. click the  button, pop up the zoom related control interface.

- 1) Tele: Manually enlarge the zoom multiple.
- 2) Wide: Manually zoom out the zoom multiple.
- 3) Calibration: The default factory has calibrated the relevant parameters, the user does not need to change, if the user feels the effect of calibration is not satisfied, you can calibrate yourself. Calibration process will have the relevant progress prompt and calibration result prompt, calibration steps are as follows:
 - <1> The definition card is placed 50m outside the camera (if there is no definition card large enough, try to select a marker with obvious contrast).
 - <2> Preliminarily adjust the center of the camera picture to align with the definition card (marker), enlarge the Web side to the maximum multiple, and fine-tune the alignment with the center of the card.

- <3> Fix/place the camera and keep the body stable.
- <4> Click the calibration button on the Web side to start the calibration.
- <5> The calibration process should not have screen interference, otherwise it should be re-calibrated.
- <6> The end of the calibration will prompt the calibration result.
- <7> Magnify to verify the calibration result.

- 4) Focus: If the picture is blurred, try to click the focus button to manually open the focus once.
- 5) Far: Manually focus the far-focus distance, you can see the picture in the distance originally blurred things.
- 6) Near: Manual close focus, you can see things in the picture that were originally blurred.
- 7) Digital zoom: you can manually drag and drop the digital magnification to view the image, up to 5 times magnification.

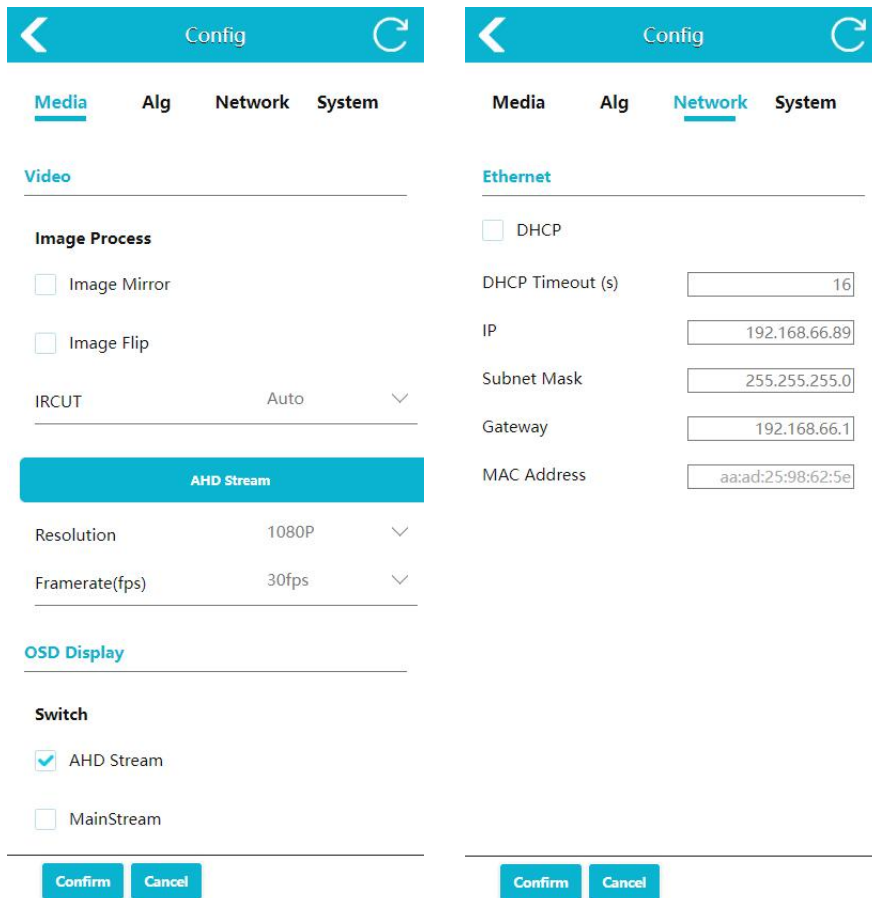
7.2 Status Query

Query	
Status	Log
Ethernet	
IP	192.168.66.89
Subnet Mask	255.255.255.0
MAC Address	aa:ad:25:98:62:5e
WiFi	
Module	unknown
Dual Band	false
Country Code	
Tx Power(dBm)	0
Current Channel	0
Media	
Night Mode	On
Main Bitrate(kbps)	4848
Sub Bitrate(kbps)	1136
Sensor Type	GC2053
Filter Type	
RTSP Client	

You can click the query button to enter the status query page, where you can view the wireless and media status information of the device

7.3 Configuration Interface

You can press the "Config" button to enter the configuration screen of related parameters.

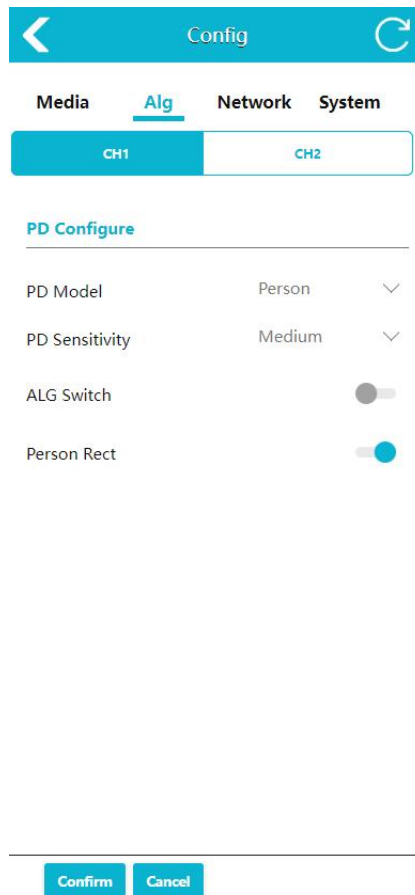


- Media Configuration

Image Mirror	Switch controls whether image mirroring is turned on.
Image Flip	Switch controls whether image flip is turned on.
AHD Stream	Set your monitor's resolution and output frame rate.
OSD	Select whether to enable the display of related stack information.

- Network Configuration

Configure information such as web address IP address and related gateway.



- Algorithm Configuration

The pedestrian detection algorithm can be configured with the sensitivity of the detection, the switch of the algorithm, and whether the pedestrian frame is drawn on the interface as a result of the algorithm.

The tracking algorithm can set the tracking target threshold and sensitivity parameters.

7.4 System Function

Click the "System" button to enter the system page, you can view the serial number, software version, hardware version and UUID of the current device.

System Maintenance

Serial Number

Software Version

Hardware Version

UUID

Upgrade

Drag & Drop Packet Here

Click to open the file Browser

Import Config

Import Config

Export Config

Export Config

Export Log

Export Log

Run Factory Test

Run Factory

Restore Factory

Select restore type: hard-restore ▾

Action Restore

Reboot

Action Reboot

Change Password

Change Password

Device Time

Device Time

Calibration system

Import Config	You can import a configuration file
Export Config	You can export your device's configuration file.
Export Log	You can export your device's log files.
Action Restore	To restore the device to factory defaults, restore all parameters to default.
Action Reboot	Perform a device reboot.
Change Password	Change your device login password.
Device Time	Manually synchronize the device time.

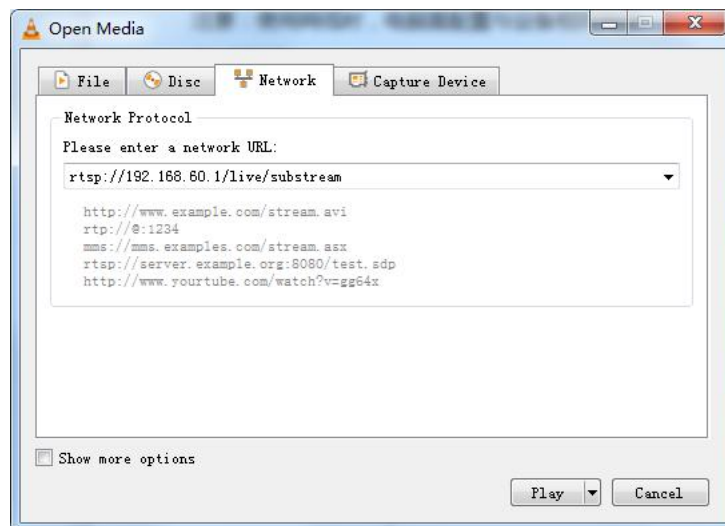
7.5 Protocol Use

Currently, the device supports two protocols, RTSP and ONVIF, which need to be used together with the USB port cable.

Note: When using the network cable, the computer must be configured with the same network segment as the device

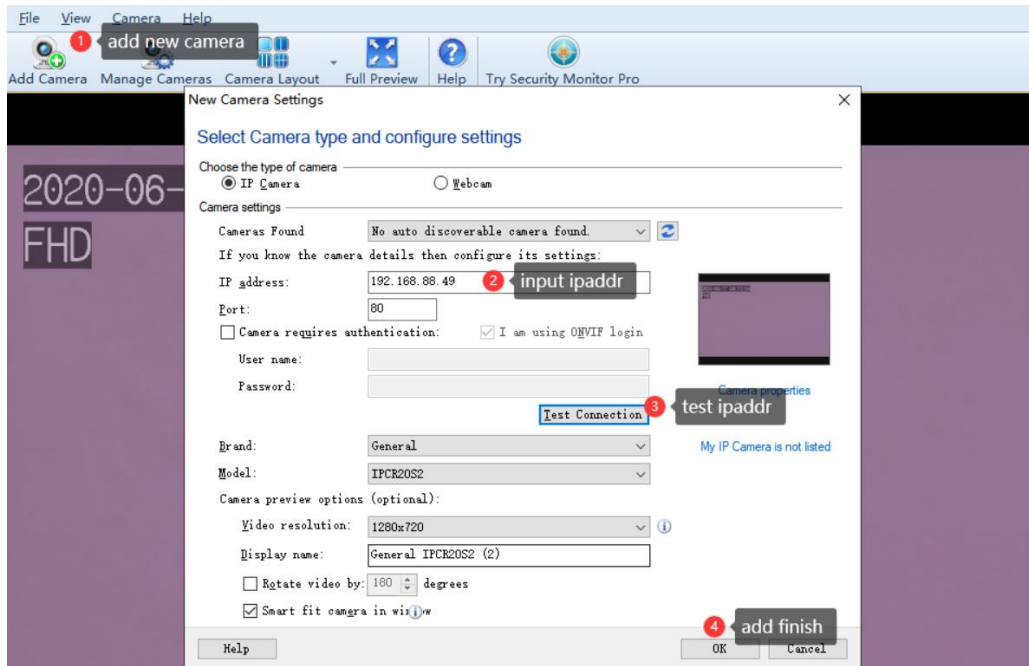
1) RTSP

Use video software to open the RTSP stream, in the case of VLC, even the Internet line, open the VLC, click -> open network streaming media -> rtsp://IP/live/mainstream. (If the device Wi-Fi, the rtsp://192.168.60.1/live/mainstream) -> click play. (mainstream: mainstream, substream: substream)



2) ONVIF

IP Camera Viewer or other software that supports the ONVIF protocol, the IP Camera Viewer is used as an example below.



Make sure the network is connected and click add new camera -> input ipaddr -> test ipaddr-> ok.
 Note: The port number defaults to 80.

7.6 System Upgrade

The device can be upgraded through the USB flash drive. Specific practices:

- (1) Format the USB flash drive to Fat32 file system.
- (2) Place the upgrade package whose file name is "HDW84X_upgrade_XXXXXXXX.XXXX.bin" on the USB flash drive, connect the USB flash drive to the device, restart the device, and wait a few minutes for the upgrade to complete. If you want to implement batch upgrades without automatically deleting the upgrade package after the upgrade, rename the upgrade package to HDW84X_upgrade_fixed_XXXXXXXX.XXXX.bin.
- (3) After the upgrade is complete, the software version of the device will also be changed. Check the Version number in the lower left corner of the monitor when the device is powered on or check the version information in "System" -> "Software Version" on the web page.

8. FAQ

The description of the following problems may not be caused by equipment damage. When you encounter similar situations, please check according to the following instructions and contact customer service for repair when it is confirmed that it cannot be solved.

Problems	Possible causes/solutions
The display has no image and no sound	There is a problem with the way the device is connected. The power supply of the device is faulty. Check whether the power indicator of the device is normal. The volume is set to 0 through your phone.
Unable to log into the settings web page	Confirm that the external Wi-Fi module is connected to the USB port. Confirm to select Connect when prompted to select a Wi-Fi, that is currently not available to the Internet. Confirm that you have successfully connected to your device's Wi-Fi.
Upgrade failed	Remove the extension cord connection and upgrade again; Or replace the USB stick.
Unable to connect the camera	Re-match the device, or re-power the device.