NETWORK CAMERA

User Manual

Please read this instruction carefully before operating the unit and keep it for further reference

The following symbols or words may be found in this manual.

Symbols/Words	Description
⚠ **Warning**	Indicates a medium or low potential hazardous situation which , if not avoided, will or could result in slight or moderate injury
⚠ **Caution**	Indicates a potential risk which, if not avoided, will or could result in device damage, data loss, lower performance or unexpected results
☞ **Note**	Provides additional information to emphasize or supplement important points of the text.

About the Manual

- This manual is suitable for many models. All examples, screenshots, figures, charts, and illustrations used in the manual are for reference purpose, and actual products may be different with this Manual. The functions may vary by models. If your cameras doesn't support one or more functions described in the manual, please skip the relevant instructions.
- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- Within the maximum scope permitted by the law, the products described in this Manual (including hardware, software, firmware, etc.) are provided "AS IS". The information in this document (including URL and other Internet site reference data) is subject to change without notice. This Manual may contain technical incorrect places or printing errors. This information will be periodically updated, and these changes will be added into the latest version of this Manual without prior notice.
- In this manual, the trademarks, product names, service names and company names that are not owned by our company are the properties of their respective owners.

Use of the Product

- This product should not be used for illegal purposes.
- The company does not allow anyone to use the Company's products to infringe the privacy, personal information, and portrait rights of others. The user shall not use this product for any illegal use or any prohibited use under these terms, conditions, and declarations. When using this product, the user shall not damage, disable, overload or obstruct any of the hardware of this product in any way, or interfere with the use of this

product by any other users. Also, the user should not attempt to use the product or the software, by hacking, stealing the password, or any other means.

Electrical Safety

- This product is intended to be supplied by a Listed Power Unit, marked with 'Limited Power Source', 'LPS' on unit, output rated minimum 12V or POE or AC24V (varies by models), no more than 5000m altitude of operation and Tma=60 Deg.C.
- As for the modes with PoE function, the function of the ITE being investigated to IEC 62368-1 standard is considered not likely to require connection to an Ethernet network with outside plant routing, including campus environment and the ITE is to be connected only to PoE networks without routing to the outside plant.
- Improper handling and/or installation could run the risk of fire or electrical shock.
- The product must be grounded to reduce the risk of electric shock.
- ⚠ Warning: Wear anti-static gloves or discharge static electricity before removing the bubble or cover of the camera.

Environment

- Heavy stress, violent vibration or exposure to water is not allowed during transportation, storage and installation.
- Avoid aiming the camera directly towards extremely bright objects, such as, sun, as this may damage the image sensor.
- Keep away from heat sources such as radiators, heat registers, stove, etc.
- Do not expose the product to the direct airflow from an air conditioner.
- Do not block any ventilation openings and ensure proper ventilation around the camera.
- Do not place the device in a damp, dusty extremely hot or cold environment, or the locations with strong electromagnetic radiation or unstable lighting.
- Make sure that no reflective surface (like shiny floors, mirrors, glass, lake surfaces and so on) is too close to the camera lens, resulting in image blur.

Operation and Daily Maintenance

- There are no user-serviceable parts inside. Please contact the nearest service center if the product does not work properly.
- Please shut down the device and then unplug the power cable before you begin any maintenance work.
- ⚠ Warning: All the examination and repair work should be done by qualified personnel.
- Do not touch the CMOS sensor optic component. You can use a blower to clean the dust on the lens surface.
- Always use a dry soft cloth to clean the device. If there is too much dust, use a cloth cleaning (such as using cloth) may result in poor IR/illumination LEDs functionality and/or IR/illumination LEDs reflection.

- The dome/lens cover is an optical device, please don't touch or wipe the cover surface directly during installation and use. For dust, use an oil-free soft brush or hair dryer to remove it gently; for grease or finger print, use oil-free cotton cloth or paper soaked with detergent to wipe from the lens center outward. Change the cloth and wipe several times if it is not clean enough.

White Light Illuminator (if supported)

- DO NOT turn on the white light when you install or maintain the camera. Please wear appropriate eye protection when you want to test the white light.
- DO NOT stare at the operating light source. It will probably be harmful to your eyes.
- The white light illuminators and/or the IR LED's should at no time be covered when the camera is running to prevent overheating and the possible risk of fire.

Privacy Protection

- When installing cameras in public areas, a warning notice shall be given in a reasonable and effective manner and clarify the monitoring range.
- As the device user or data controller, you might collect the personal data of others, such as face, car plate number, etc. As a result, you shall implement reasonable and necessary measures to protect the legitimate rights and interests of other people, avoiding data leakage, improper use, including but not limited to, setting up access control, providing clear and visible notice to inform people of the existence of the surveillance area, providing required contact information and so on.

Disclaimer

- With regard to the product with internet access, the use of product shall be wholly at your own risks. Our company shall be irresponsible for abnormal operation, privacy leakage or other damages resulting from cyber attack, hacker attack, virus inspection, or other internet security risks; however, Our company will provide timely technical support if necessary.
- Surveillance laws vary from country to country. Check all laws in your local region before using this product for surveillance purposes. We shall not take the responsibility for any consequences resulting from illegal operations.

Cybersecurity Recommendations

- Use a strong password. At least 8 characters or a combination of characters, numbers, and upper and lower case letters should be used in your password.
- Regularly change the passwords of your devices to ensure that only authorized users can

access the system (recommended time is 90 days).

- It is recommended to change the service default ports (like HTTP-80, HTTPS-443, etc.) to reduce the risk of outsiders being able to access.
- It is recommended to set the firewall of your router. But note that some important ports cannot be closed (like HTTP port, HTTPS port, Data Port).
- It is not recommended to expose the device to the public network. When it is necessary to be exposed to the public network, please set the external hardware firewall and the corresponding firewall policy.
- It is not recommended to use the v1 and v2 functions of SNMP.
- In order to enhance the security of WEB client access, please create a TLS certificate to enable HTTPS.
- Use black and white list to filter the IP address. This will prevent everyone, except those specified IP addresses from accessing the system.
- If you add multiple users, please limit functions of guest accounts.
- If you enable UPnP, it will automatically try to forward ports in your router or modem. It is really very convenient for users, but this will increase the risk of data leakage when the system automatically forwards ports. Disabling UPnP is recommended when the function is not used in real applications.
- Check the log. If you want to know whether your device has been accessed by unauthorized users or not, you can check the log. The system log will show you which IP addresses were used to log in your system and what was accessed.

Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1. FCC compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. 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.

2. FCC conditions:

- This device complies with part 15 of the FCC Rules. Operation of this product is subject the following two conditions:
- This device may not cause harmful interface.
- This device must accept any interference received, including interference that may cause undesired operation.

EU Compliance Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Directive 2014/30/EU (EMCD), Directive 2011/65/EU (RoHS).

Note: The products with the input voltage of within 50 to 1000 VAC or 75 to 1500 VDC comply with Directive 2014/35/EU (LVD), and the rest products comply with Regulation (EU)2023/988(GPSR). Please check the specific power supply information for reference.

Directive 2012/19/EU (WEEE Directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

According to the Waste Electrical and Electronic Equipment Regulations 2013: Products marked with this symbol cannot be disposed of as unsorted municipal waste in the United Kingdom. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

Packaging and Packaging Waste Regulation (EU) 2025/40: This Regulation establishes requirements for the entire life-cycle of packaging as regards environmental sustainability and labeling, to allow its placing on the market. It also establishes requirements for extended producer responsibility, packaging waste prevention, such as the reduction of unnecessary packaging and the re-use or refill of packaging, as well as the collection and treatment, including recycling, of packaging waste.

REACH (Regulation (EC) No 1907/2006): REACH concerns the Registration, Evaluation, Authorization and Restriction of Chemicals, which aims to ensure a high level of protection of human health and the environment through better and earlier identification of the intrinsic

properties of chemical substances. The product in this manual refers to conforms to the rules and regulations of REACH. For more information of REACH, please refer to DG GROWTH or ECHA websites.

Table of Contents

1 Network Connection

System Requirement

For proper operating the product, the following requirements should be met for your computer.

Operating System: Windows 7 Home basic or higher

CPU: 2.0GHz or higher

RAM: 1G or higher

Display: 1920*1080 resolution or higher (recommended)

Web browser: IE (plug-in required)/ Firefox/Edge/Safari/Google Chrome

It is recommended to use the latest version of these web browsers.

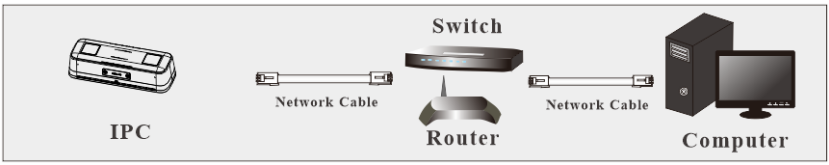
The menu display and operation of the camera may be slightly different by using the browser with plug-in or without plug-in. Installing plug-in will display more functions of the camera.

Connect IP Camera via LAN or WAN. Here only take IE browser for example. The details are as follows:

1.1 Wired Network Connection

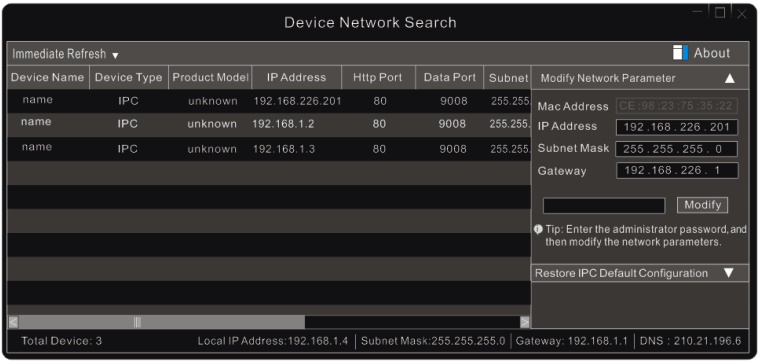
1.1.1 Access through IP-Tool

Network connection:



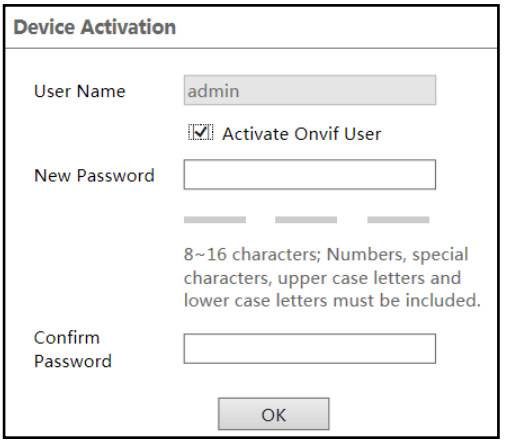
① Make sure the PC and IP Camera are connected to the LAN and the IP-Tool is installed in the PC.

② Double click the IP-Tool icon on the desktop to run this software as shown below:

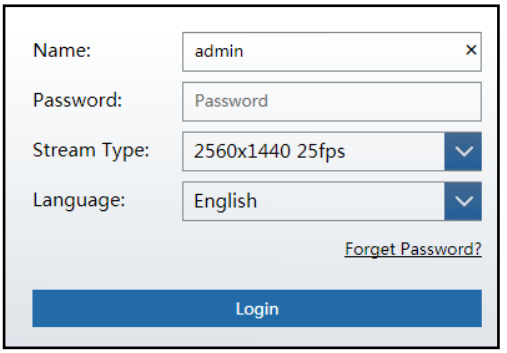


The default IP address of the camera is ***192.168.226.201*.**

③ Double click the IP address and then the system will pop up the IE browser to connect IP CAMERA. After you read the privacy statement, check and click "Already Read". Then activate the device.

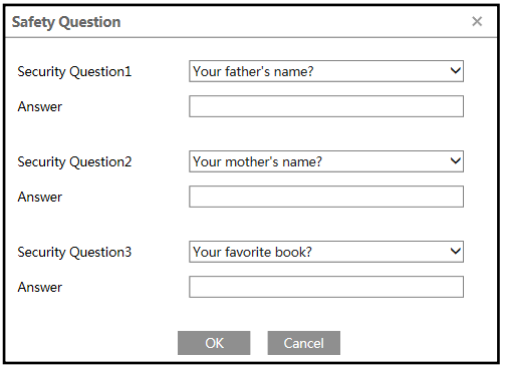


Please self-define the password of admin according to the tip.
If "Activate Onvif User" is enabled, the ONVIF user can be activated simultanously. When you connect the camera through the ONVIF protocol in the third-party platform, you can use the default username and the password set above to connect.
After that, follow directions to download, install and run the Active X control if prompted.
Re-connect your camera via IE browser and then a login box will appear.



Please enter the user name (admin) and password. Then select the stream type and language as needed.
Stream Type: The plug-in free live view only supports1080P or lower resolution.

The security questions should be set after you click "Login" button. It is very important for you to reset your password. Please remember these answers.



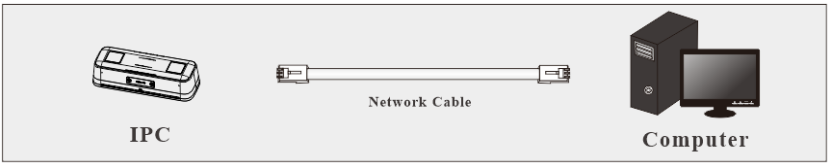
If you forget the admin password, you can reset the password by clicking **Forget Password** on the login page. Then you can reset the password by the security questions and answers you set.
You can set the account security question during the activation, or you can go to **Config→Security→User**, click **Safety Question**, select the security questions and input your answers.

1.1.2 Directly Access through IE

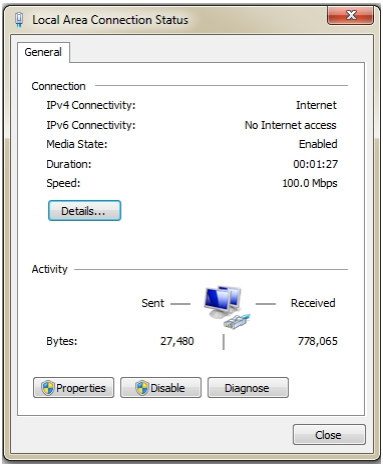
The default network settings are as shown below:
IP address: **192.168.226.201**
Subnet Mask: **255.255.255.0**
Gateway: **192.168.226.1**

HTTP: **80**
Data port: **9008**

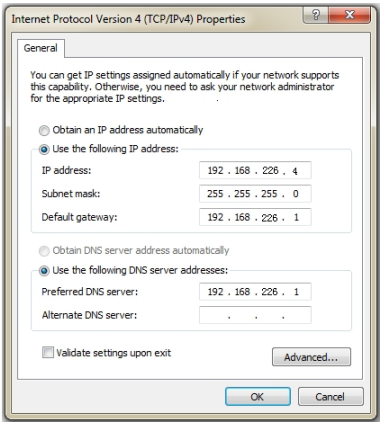
Use the above default settings when logging in the camera for the first time. Directly connect the camera to the computer through network cable.



① Manually set the IP address of the PC and the network segment should be as the same as the default settings of the IP camera. Open the network and share center. Click “Local Area Connection” to pop up the following window.



Select “Properties” and then select internet protocol according to the actual situation (for example: IPv4). Next, click the “Properties” button to set the network of the PC.



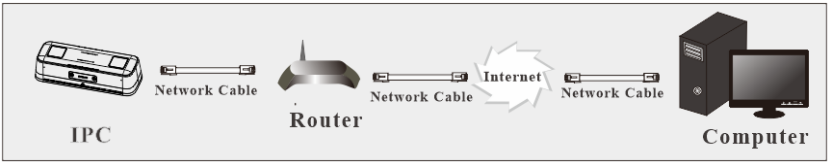
② Open the IE browser and enter the default address of IP CAMERA and confirm.

③ Follow directions to download and install the Active X control.

④ Enter the default username and password in the login window and then enter to view.

1.1.3 WAN

➢ **Access through the router or virtual server**

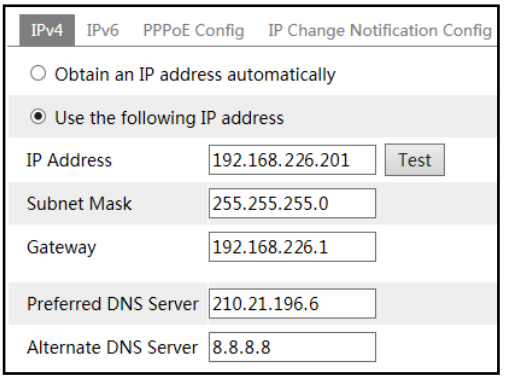


① Make sure the camera is connected to the local network and then log in the camera via LAN and go to **Config→Network→Port** menu to set the port number.

HTTP Port	80
HTTPS Port	443
Data Port	9008
RTSP Port	554

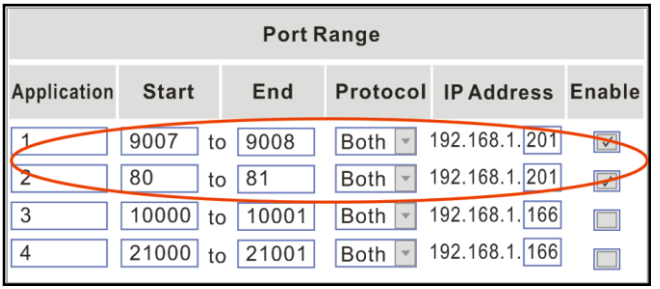
Port Setup

② Go to **Config→Network→TCP/IP** menu to modify the IP address.



IP Setup

③ Go to the router's management interface through IE browser to forward the IP address and port of the camera in the "Virtual Server".

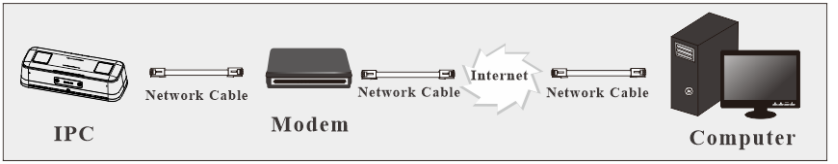


Router Setup

④ Open the IE browser and enter its WAN IP and http port to access. (for example, if the http port is changed to 81, please enter "192.198.1.201:81" in the address bar of web browser to access).

➢ **Access through PPPoE dial-up**

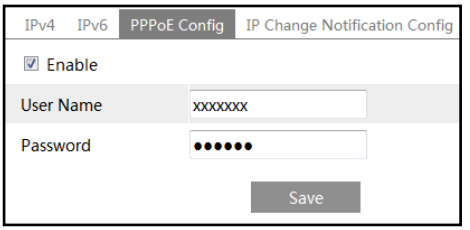
Network connection



Access the camera through PPPoE auto dial-up. The setup steps are as follow:

① Go to **Config→Network→Port** menu to set the port number.

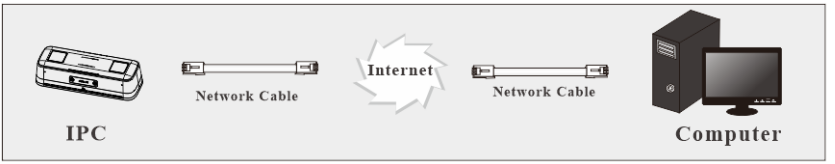
② Go to **Config→Network→TCP/IP→PPPoE** Config menu. Enable PPPoE and then enter the user name and password from your internet service provider.



③ Go to **Config→Network→DDNS** menu. Before configuring the DDNS, please apply for a domain name first. Please refer to DDNS configuration for detail information.
④ Open the IE browser and enter the domain name and http port to access.

➢ **Access through static IP**

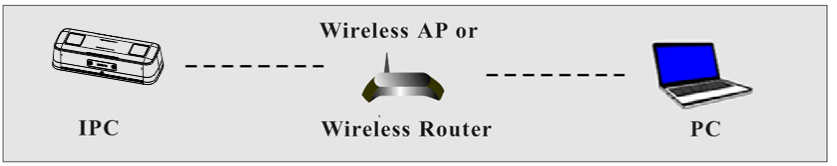
Network connection



The setup steps are as follow:
① Go to **Config→Network→Port** menu to set the port number.
② Go to **Config→Network→TCP/IP** menu to set the IP address. Check "Use the following IP address" and then enter the static IP address and other parameters.
③ Open the IE browser and enter its WAN IP and http port to access.

1.2 Wi-Fi Connection

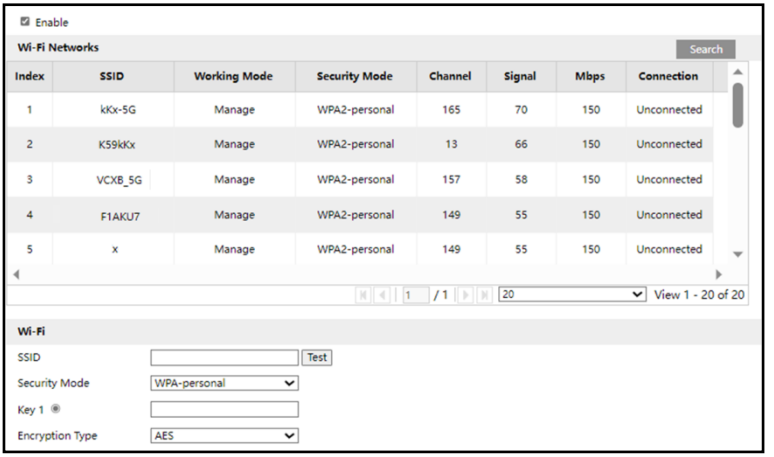
Only some models support Wi-Fi. If your camera doesn't support this function, please skip the following instructions.



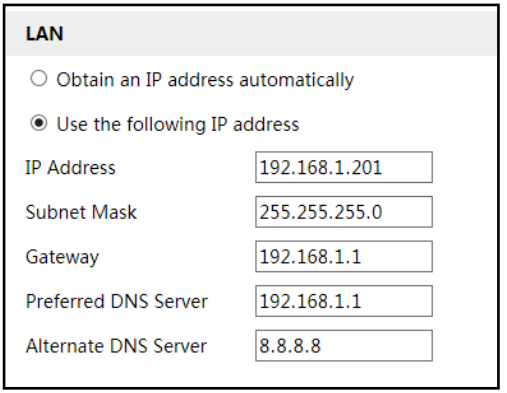
① Use the network cable to connect the camera and wireless router or AP.

② Connect to the above wireless network with your PC. Then run the IP-Tool on your PC and then find the IP address of the camera. The default IP address of this camera is 192.168.226.201. Modify the IP address and gateway of the camera and make sure its network address is in the same local network segment as the computer's. Then double click it. This will bring you to the login interface of the camera. Enter the default username and password to log in. (See 1.1.1 for details)

③ Click **Config→Network→WIFI** to go to the following interface. Enable WI-FI, select the desired router, enter the key and select encryption type.



After that, select "Obtain an IP address automatically" or manually enter the IP address by clicking "Use the following IP address".



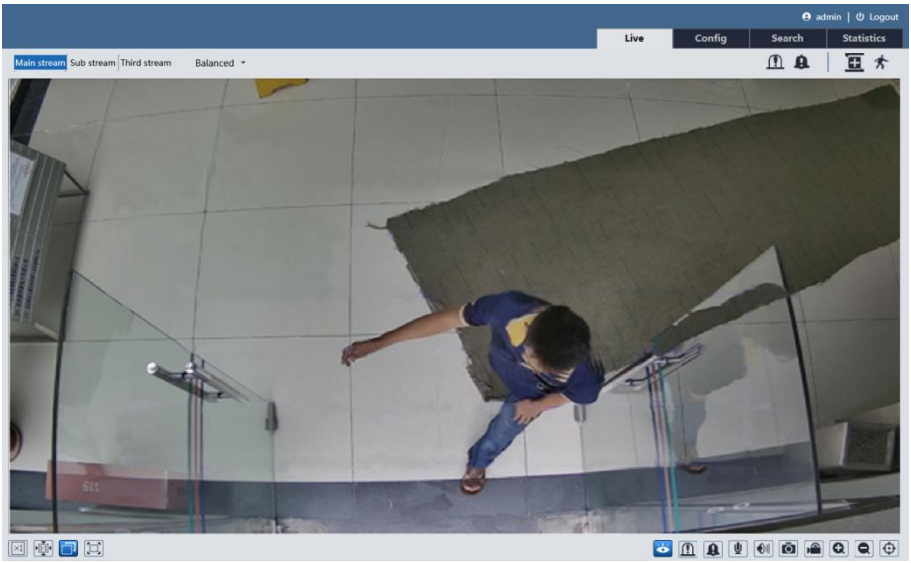
Click "Test" to check whether the wireless network is connected. After successful connection, click "Save" to save the settings.

④ Pull the network cable out of the camera.

⑤ Run the IP-Tool and find the camera through IP address or MAC address. Then double click it listed in the IP-Tool or enter the IP address of the camera in the address bar of the web browser to access the camera.

2 Live View

After logging in, the following window will be shown.



The following table is the instructions of the icons on the live view interface.

Icon	Description	Icon	Description
	Original size		Zoom out
	Fit correct scale		Rule information display
	Auto (fill the window)		SD card recording indicator
	Full screen		Sensor alarm indicator
	Start/stop live view		Motion alarm indicator
	Enable/disable alarm output		Scene change indicator
	Enable/disable audio alarm		Color abnormal indicator
	Start/stop two-way audio (only available for the model with audio input connector)		Abnormal clarity indicator
	Enable/disable audio		Alarm output indicator

Icon	Description	Icon	Description
	Snapshot		Audio alarm indicator
	Start/stop local recording		Overcrowding alarm indicator
	Zoom in		Reverse entering alarm indicator

*Those smart alarm indicators will flash only when the camera supports those functions and the corresponding events are enabled.

*After clicking the audio alarm icon, the sound warning will be triggered according to the set warning times (you can set the warning times by clicking **Config→Alarm→Audio Alarm**). Click this icon again. After the current warning voice completely sounds, it will stop.

*Plug-in free live view: Two-way audio and local recording are not supported and the preview mode switch (real-time/balanced/fluent mode) is not available too.

In full screen mode, double click on the mouse to exit or press the ESC key on the keyboard.

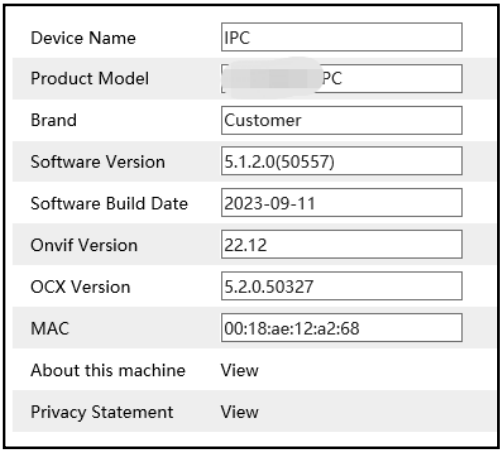
3 Network Camera Configuration

In the Webcam client, choose “Config” to go to the configuration interface.
Note: Wherever applicable, click the “Save” button to save the settings.

3.1 System Configuration

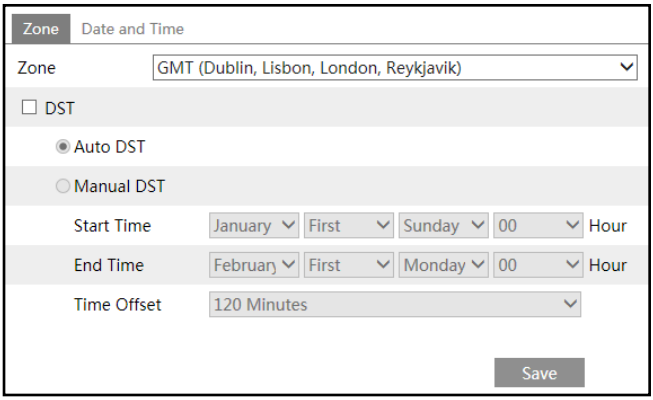
3.1.1 Basic Information

In the “Basic Information” interface, the system information of the device is listed.



3.1.2 Date and Time

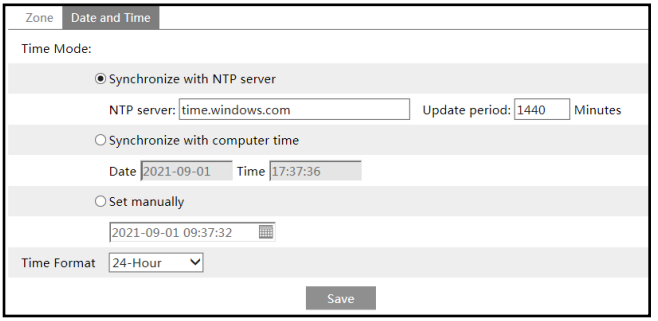
Go to **Config→System→Date and Time**. Please refer to the following interface.



Select the time zone and DST as required.

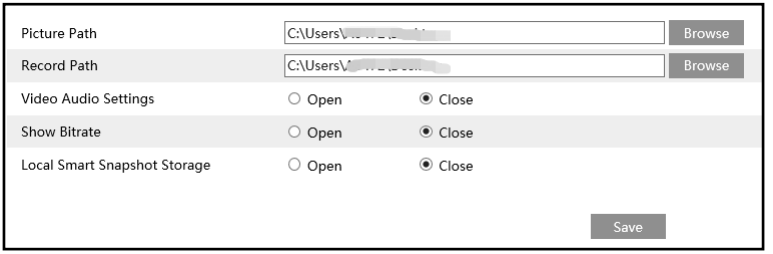
Note: The time zone of the camera and the computer must be the same. It is recommended to modify the time zone of the camera according to the time zone of the computer. If the time zone of the computer is modified, the current web client needs to be closed. Then re-open it and log in again.

Click the "Date and Time" tab to set the time mode and time format.



3.1.3 Local Config

Go to **Config→System→Local Config** to set up the storage path of captured pictures and recorded videos on the local PC. There is also an option to enable or disable the bitrate display in the recorded files.

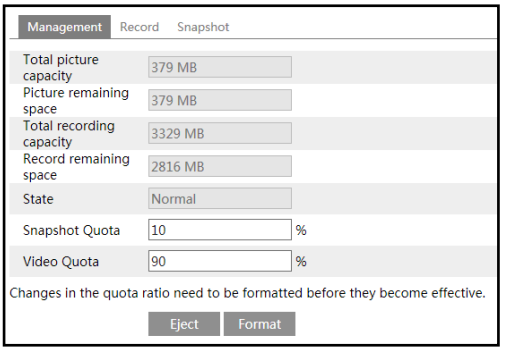


Additionally, "Local smart snapshot storage" can be enabled or disabled here. If enabled, the captured pictures triggered by smart events will be saved to the local PC.

Note: when you access your camera by the web browser without the plug-in, only Show Bitrate can be set in the above interface.

3.1.4 Storage

Go to **Config→System→Storage** to go to the interface as shown below.



- **SD Card Management**

Click the "Format" button to format the SD card. All data will be cleared by clicking this button.

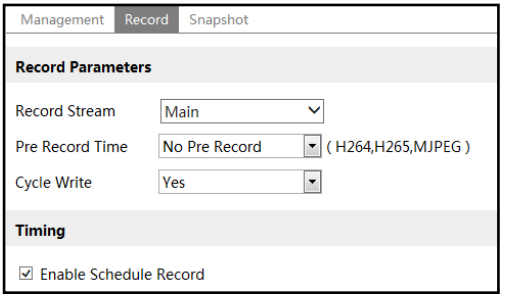
Click the "Eject" button to stop writing data to SD card. Then the SD card can be ejected safely.

Snapshot Quota: Set the capacity proportion of captured pictures on the SD card.

Video Quota: Set the capacity proportion of record files on the SD card.

- **Schedule Recording Settings**

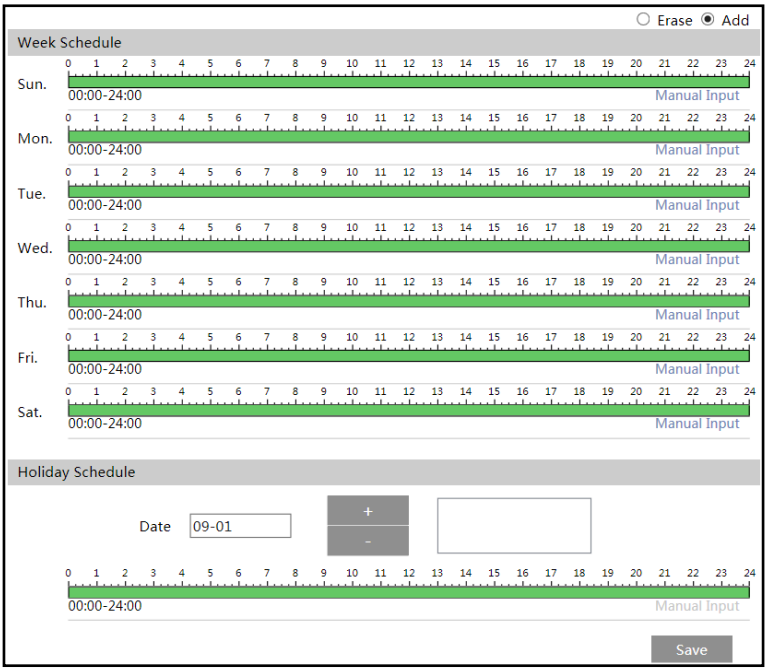
1. Go to **Config→System→Storage→Record** to go to the interface as shown below.



2. Set record stream, pre-record time, cycle writing.

Pre Record Time: Set the time to record before the actual recording begins.

3. Set schedule recording. **C**heck "Enable Schedule Record" and set the schedule.



Weekly schedule

Set the alarm time from Monday to Sunday for a single week. Each day is divided in one hour increments. Green means scheduled. Blank means unscheduled.

"Add": Add the schedule for a special day. Drag the mouse to set the time on the timeline.

"Erase": Delete the schedule. Drag the mouse to erase the time on the timeline.

Manual Input: Click it for a specific day to enter specific start and end times. This adds more granularities (minutes).

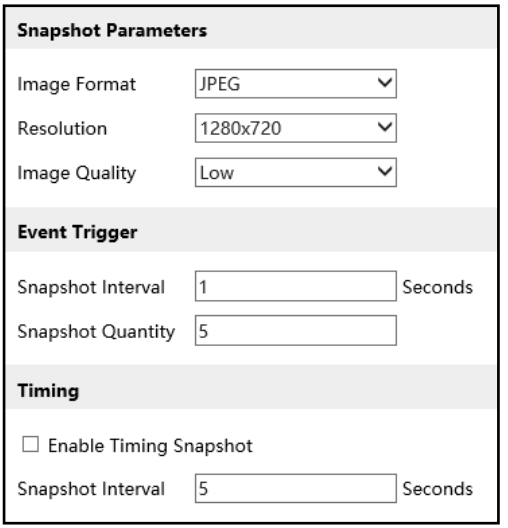
Day schedule

Set the alarm time for alarm a special day, such as a holiday.

Note: Holiday schedule takes priority over weekly schedule.

- **Snapshot Settings**

Go to **Config→System→Storage→Snapshot** to go to the interface as shown below.



Set the format, resolution and quality of the image saved on the SD card and the snapshot interval and quantity and the timing snapshot here.

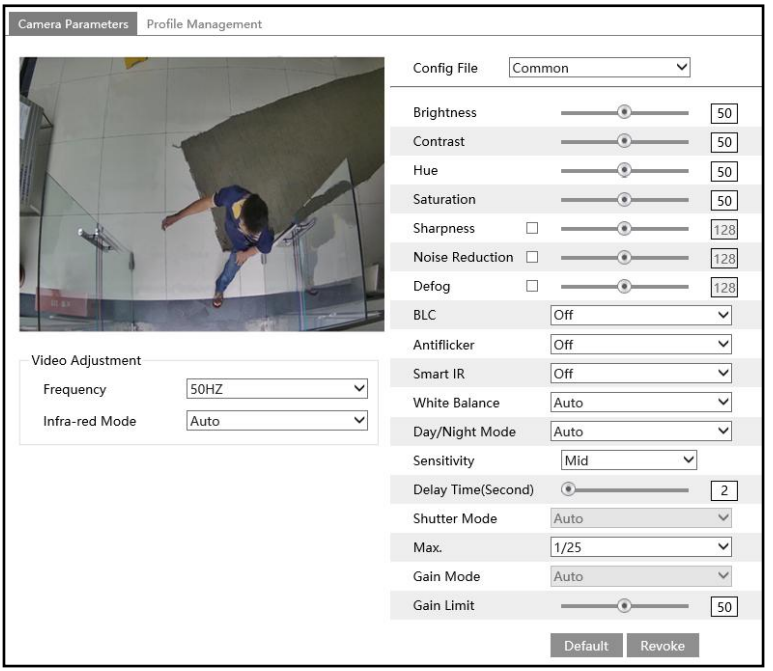
Snapshot Quantity: The number you set here is the maximum quantity of snapshots. The actual quantity of snapshots may be less than this number. Supposing the occurrence time of an alarm event is less than the time of capturing pictures, the actual quantity of snapshots is less than the set quantity of snapshots.

Timing Snapshot: Enable timing snapshot first and then set the snapshot interval and schedule. The setup steps of schedule are the same as the schedule recording (See Schedule Recording).

3.2 Image Configuration

3.2.1 Display Configuration

Go to **Image→Display** interface as shown below. The image's brightness, contrast, hue and saturation and so on for common, day and night mode can be set up separately. The image effect can be quickly seen by switching the configuration file.



Brightness: Set the brightness level of the camera's image.
Contrast: Set the color difference between the brightest and darkest parts.
Hue: Set the total color degree of the image.
Saturation: Set the degree of color purity. The purer the color, the brighter the image is.
Sharpness: Set the resolution level of the image plane and the sharpness level of the image edge.
Noise Reduction: Decrease the noise and make the image more thorough. Increasing the value will make the noise reduction effect better but it will reduce the image resolution.
Defog: Activating this function and setting an appropriate value as needed in foggy, dusty, smoggy or rainy environment to get clear images.
Backlight Compensation (BLC):

- Off: disables the backlight compensation function. It is the default mode.
- HWDR: WDR can adjust the camera to provide a better image when there are both very bright and very dark areas simultaneously in the field of the view by lowering the brightness of the bright area and increasing the brightness of the dark area.

Recording will be stopped for a few seconds while the mode is changing from non-WDR to WDR mode.

- HLC: lowers the brightness of the entire image by suppressing the brightness of the image's bright area and reducing the size of the halo area.
- BLC: If enabled, the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.

Antiflicker:

- Off: disables the anti-flicker function. This is used mostly in outdoor installations.
- 50Hz: reduces flicker in 50Hz lighting conditions.
- 60Hz: reduces flicker in 60Hz lighting conditions.

Smart IR: Choose "ON" or "OFF". This function can effectively avoid image overexposure so as to make the image more realistic. The higher the level is, the more overexposure compensation will be given.

White Balance: Adjust the color temperature according to the environment automatically.

Day/Night Mode: Choose "Auto", "Day", "Night" or "Timing".

Shutter Mode: Choose "Auto" or "Manual". If manual is chosen, the digital shutter speed can be adjusted.

Gain Mode: Choose "Auto" or "Manual". If "Auto" is selected, the gain value will be automatically adjusted (within the set gain limit value) according to the actual situation. If "Manual" is selected, the gain value shall be set manually. The higher the value is, the brighter the image is.

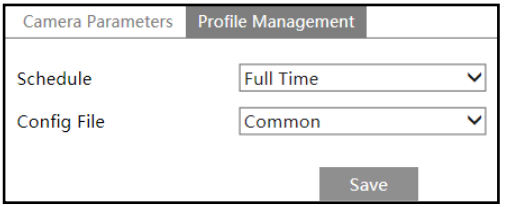
Frequency: 50Hz and 60Hz can be optional.

Infra-red Mode: Choose "Auto", "ON" or "OFF".

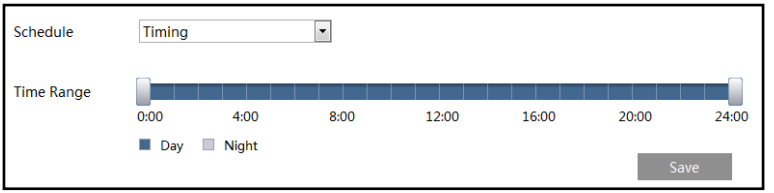
Note: For some items (like HWDR), if selected/enabled, the camera will reboot automatically. After that, clicking "Default" button will not take effect.

Schedule Settings of Image Parameters:

Click the "Profile Management" tab as shown below.



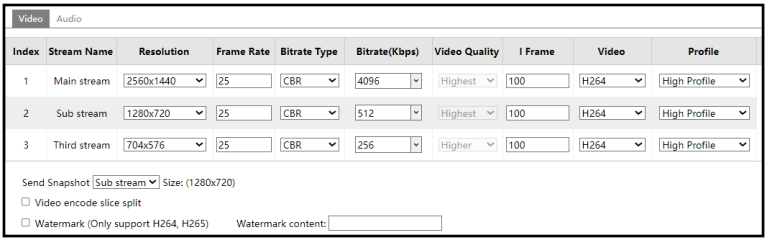
Set full time schedule for common, auto mode and specified time schedule for day and night. Choose "Timing" in the drop-down box of schedule as shown below.



Drag " " icons to set the time of day and night. Blue means day time and blank means night time. If the current mode of camera parameters is set to schedule, the image configuration mode will automatically switch between day and night according to the schedule.

3.2.2 Video / Audio Configuration

Go to **Image→Video/Audio** interface as shown below. In this interface, set the resolution, frame rate, bitrate type, video quality and so on subject to the actual network condition.



Three video streams can be adjustable.

Resolution: The size of image.

Frame rate: The higher the frame rate, the video is smoother.

Bitrate type: CBR and VBR are optional. Bitrate is related to image quality. CBR means that no matter how much change is seen in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according to scene changes. For example, for scenes that do not have much movement, the bitrate will be kept at a lower value. This can help optimize the network bandwidth usage.

Bitrate: it can be adjusted when the mode is set to CBR. The higher the bitrate, the better the image quality will be.

Video Quality: It can be adjusted when the mode is set to VBR. The higher the image quality, the more bitrate will be required.

I Frame interval: It determines how many frames are allowed between a "group of pictures". When a new scene begins in a video, until that scene ends, the entire group of frames (or pictures) can be considered as a group of pictures. If there is not much movement in the scene, setting the value higher than the frame rate is fine, potentially resulting in less bandwidth usage. However, if the value is set too high, and there is a high frequency of movement in the video, there is a risk of frame skipping.

Video Compression: MJPEG, H264+, H264, H265 or H265+ can be optional. MJPEG is not available for main stream. If H.265/H.265+ is chosen, make sure the client system is able to decode H.265/H.265+. Compared to H.265, H.265+ saves more storage space with the same maximum bitrate in most scenes. Compared to H.264, H.265 reduces the transmission bitrate under the same resolution, frame rate and image quality.

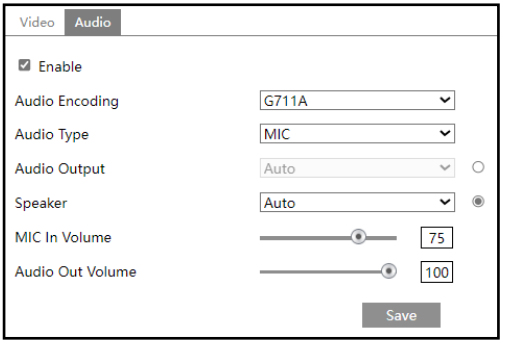
Profile: For H.264. Baseline, main and high profiles are selectable.

Send Snapshot: Set the snapshot stream.

Video encode slice split: If this function is enabled, smooth image can be gotten even though using the low-performance PC.

Watermark: When playing back the local recorded video in the search interface, the watermark can be displayed. To enable it, check the watermark box and enter the watermark text.

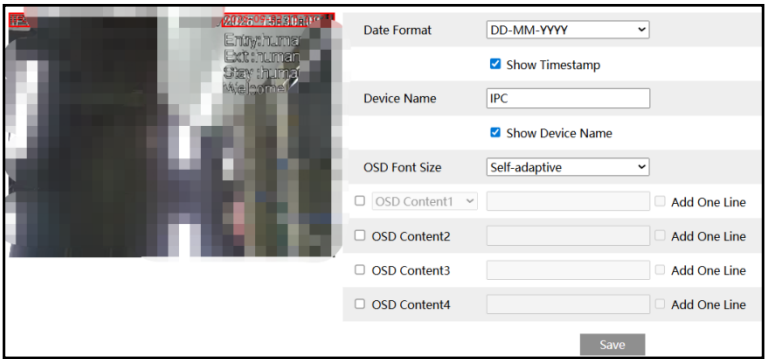
Click the “Audio” tab to go to the interface as shown below.



Audio Encoding: G711A and G711U are selectable.
Audio Type: MIC or LIN.
Audio Output: Talkback, warning or auto can be optional. If “Talkback” is selected, the built-in speaker will be used to output sound for two-way talk. If “Warning” is selected, the built-in speaker will be used to output the pre-defined audio alarm. If “Auto” is selected, the system will output sound for two-way talk or warning voice as needed. But when it is warning and two-way audio is being enabled simultaneously, two-way audio will be output first.
Speaker: Talkback, warning or auto can be optional. If “Talkback” is selected, the built-in speaker will be used to output sound for two-way talk. If “Warning” is selected, the built-in speaker will be used to output the pre-defined audio alarm. If “Auto” is selected, the system will output sound for two-way talk or warning voice as needed. But when it is warning and two-way audio is being enabled simultaneously, two-way audio will be output first.
Audio Out Volume: Set the volume of the speaker as needed.
LIN/MIC IN/Audio Out Volume: Set it as needed.

3.2.3 OSD Configuration

Go to **Image→OSD** interface as shown below.

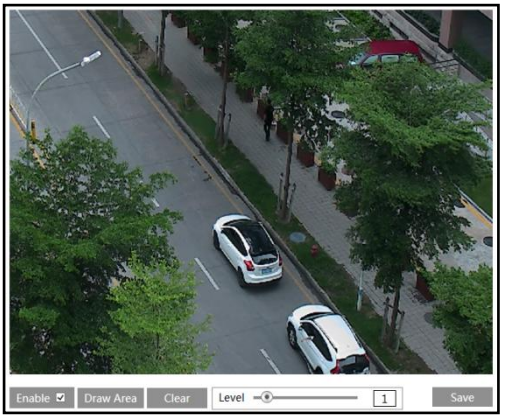


Set time stamp, device name, OSD font size, OSD content and picture overlap here. After enabling the corresponding display and entering the content, drag them to change their position. Then click the "Save" button to save the settings.
OSD Font Size: When the image resolution is less than 720P, the font size will be automatically changed to 16*16, and will not follow the change of the font size you have set.

Picture Overlap Settings:
Check "OSD Content1", choose "Picture Overlay" and click "Browse" to select the overlap picture. Then click "Upload" to upload the overlap picture. The pixel of the image shall not exceed 200*200, or it cannot be uploaded.

3.2.4 ROI Configuration

Go to **Image→ROI Config** interface as shown below. An area in the image can be set as a region of interest. This area will have a higher bitrate than the rest of the image, resulting in better image quality for the identified area.

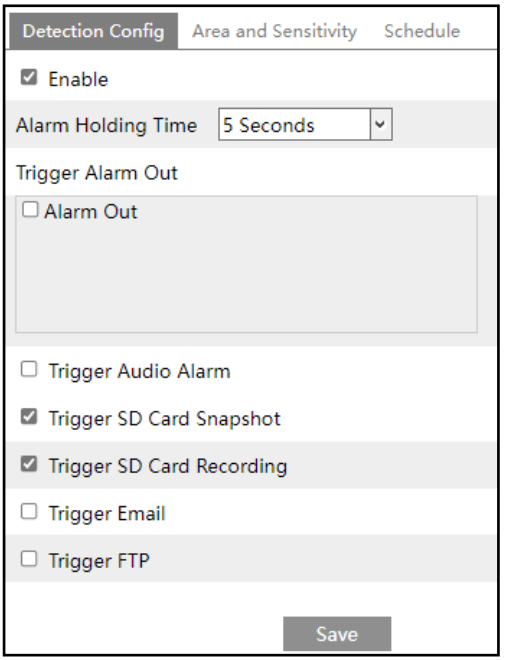


1. Check "Enable" and then click the "Draw Area" button.
2. Drag the mouse to set the ROI area.
3. Set the level.
4. Click the "Save" button to save the settings.

3.3 Alarm Configuration

3.3.1 Motion Detection

Go to **Alarm→Motion Detection** to set motion detection alarm.



1. Check “Enable” check box to activate motion based alarms. If unchecked, the camera will not send out any signals to trigger motion-based recording to the NVR or CMS, even if there is motion in the video.

Alarm Holding Time: it refers to the time that the alarm extends for after an alarm ends. For instance, if the alarm holding time is set to 20 seconds, once the camera detects a motion, it will go to alarm and would not detect any other motion in 20 seconds. If there is another motion detected during this period, it will be considered as continuous movement; otherwise it will be considered as a single motion.

Alarm Out: If selected, this would trigger an external relay output that is connected to the camera on detecting a motion based alarm.

Trigger Audio Alarm: If selected, the warning voice will sound on detecting a motion based alarm. (Please set the warning voice first. See Audio Alarm for details).

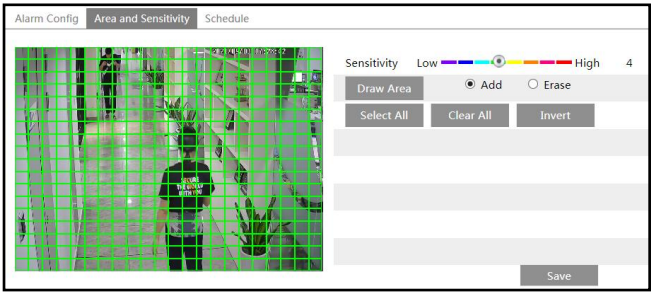
Trigger SD Card Snapshot: If selected, the system will capture images on motion detection and save the images on an SD card.

Trigger SD Card Recording: If selected, video will be recorded on an SD card on motion detection.

Trigger Email: If “Trigger Email” and “Attach Picture” are checked (email address must be set first in the Email configuration interface), the captured pictures and triggered event will be

sent into those addresses.
Trigger FTP: If “Trigger FTP” and “Attach Picture” are checked, the captured pictures will be sent into FTP server address. Please refer to FTP configuration section for more details.

2. Set motion detection area and sensitivity. Click the “Area and Sensitivity” tab to go to the interface as shown below.



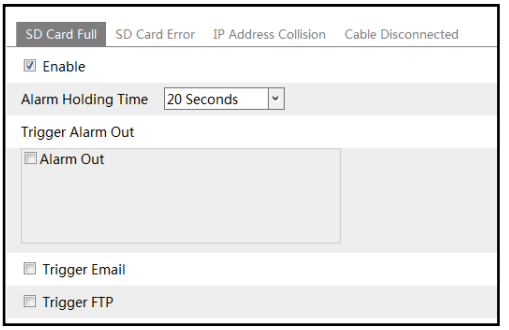
Move the “Sensitivity” scroll bar to set the sensitivity. Higher sensitivity value means that motion will be triggered more easily.
Select “Add” and click “Draw”. Drag the mouse to draw the motion detection area; Select “Erase” and drag the mouse to clear motion detection area.
After that, click the “Save” to save the settings.

3. Set the schedule for motion detection. The schedule setup steps of the motion detection are the same as the schedule recording setup (See Schedule Recording).

3.3.2 Exception Alarm

- **SD Card Full**

1. Go to **Config→Alarm→Exception Alarm→SD Card Full**.



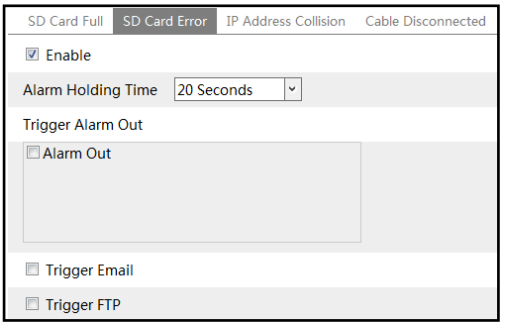
2. Click “Enable”.
3. Set the alarm holding time and alarm trigger options. The setup steps are the same as

motion detection. Please refer to motion detection section for details.

- **SD Card Error**

When there are some errors in writing SD card, the corresponding alarms will be triggered.

1. Go to **Config→Alarm→Exception Alarm→SD Card Error** as shown below.

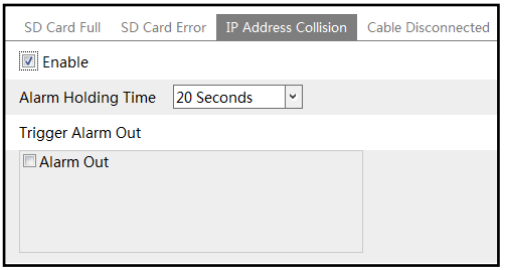


2. Click "Enable".

3. Set the alarm holding time and alarm trigger options. Trigger alarm out, Email and FTP. The setup steps are the same as motion detection. Please refer to motion detection section for details.

- **IP Address Conflict**

1. Go to **Config→Alarm→Exception Alarm→IP Address Collision** as shown below.

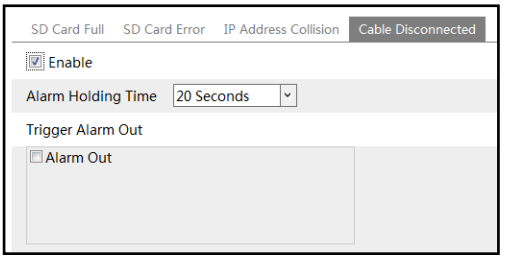


2. Click "Enable" and set the alarm holding time.

3. Trigger alarm out. When the IP address of the camera is in conflict with the IP address of other devices, the system will trigger the alarm out.

- **Cable Disconnection**

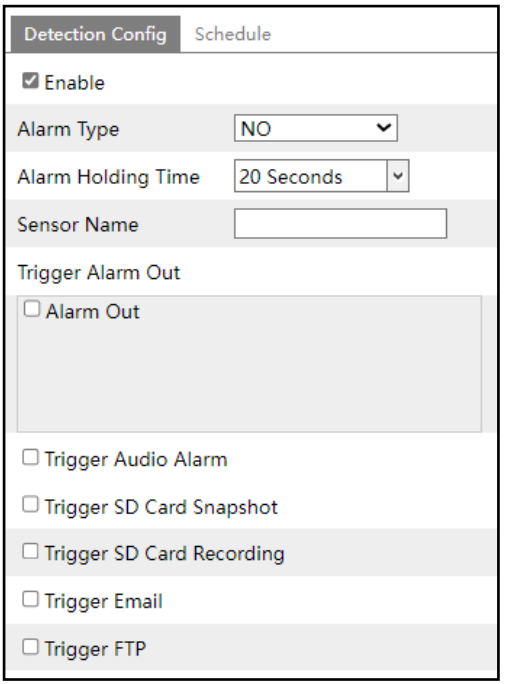
1. Go to **Config→Alarm→Exception Alarm→Cable Disconnected** as shown below.



2. Click “Enable” and set the alarm holding time.
3. Trigger alarm out. When the camera is disconnected, the system will trigger the alarm out.

3.3.3 Alarm In

This function is only available for some models. To set sensor alarm (alarm in):
Go to **Config→Alarm→Alarm In** interface as shown below.

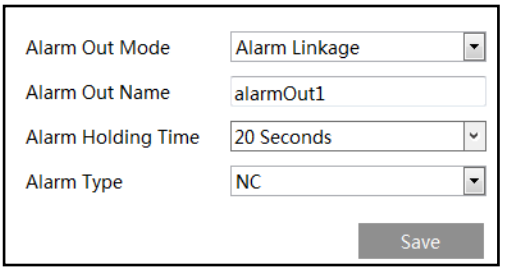


1. Click “Enable” and set the alarm type, alarm holding time and sensor name.
2. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection section for details.
3. Click “Save” button to save the settings.
4. Set the schedule of the sensor alarm. The setup steps of the schedule are the same as the

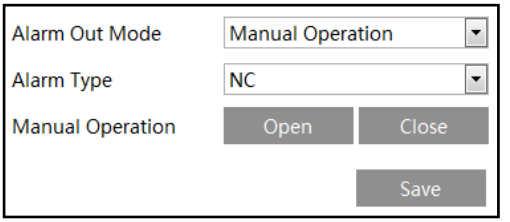
schedule recording setup. (See Schedule Recording).

3.3.4 Alarm Out

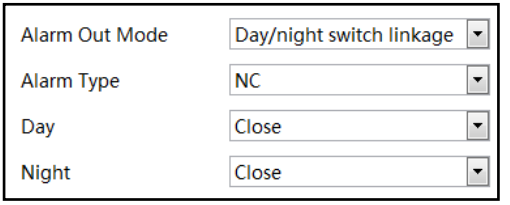
This function is only available for some models. Go to **Config→Alarm→Alarm Out**.



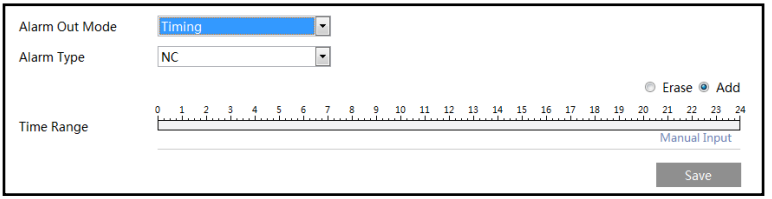
Alarm Out Mode: Alarm linkage, manual operation, day/night switch linkage and timing are optional.
Alarm Linkage: Having selected this mode, select alarm out name, alarm holding time at the "Alarm Holding Time" pull down list box and alarm type.
Manual Operation: Having selected this mode, select the alarm type and click "Open" to trigger the alarm out immediately; click "Close" to stop alarm.



Day/Night Switch Linkage: Having selected this mode, select the alarm type and then choose to open or close alarm out when the camera switches to day mode or night mode.



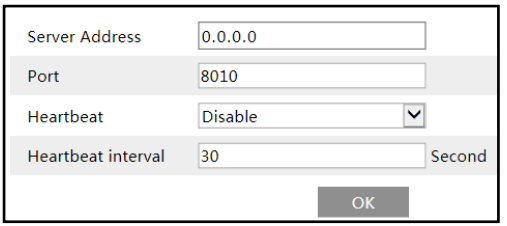
Timing: Select the alarm type. Then click "Add" and drag the mouse on the timeline to set the schedule of alarm out; click "Erase" and drag the mouse on the timeline to erase the set time schedule. After this schedule is saved, the alarm out will be triggered in the specified time.



3.3.5 Alarm Server

Go to **Alarm→Alarm Server** interface as shown below.

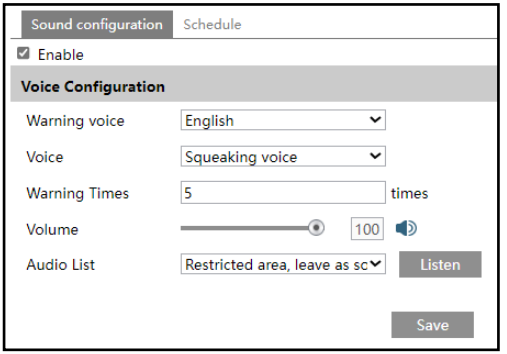
Set the server address, port, heartbeat and heartbeat interval. When an alarm occurs, the camera will transfer the alarm event to the alarm server. If an alarm server is not needed, there is no need to configure this section.



3.3.6 Audio Alarm

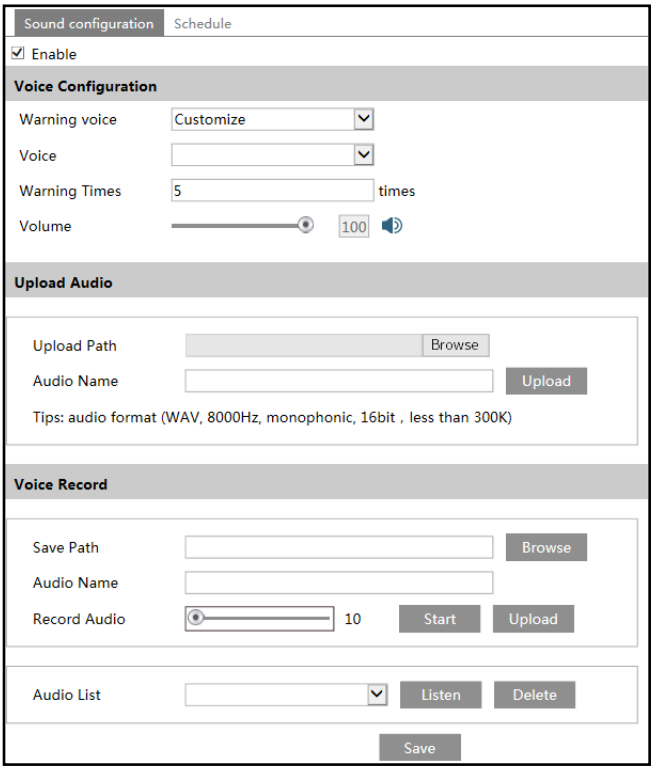
Go to **Alarm→Audio Alarm** interface as shown below.

Enable audio alarm. If disabled, the warning voice will not sound when an event triggers audio alarm. Additionally, you need to enable audio in the audio configuration interface and the audio output/speaker type should be “Warning” or “Auto”, or the warning voice cannot sound too.



① Select the warning voice. If you want to customize the voice, you can choose “Customize”. Click “Browse” to choose the audio file you want to upload and then enter the audio name.

Finally, click “Upload” to upload the audio file. Note that the format of the audio file must meet the requirement (see Tips), or it will not be uploaded. After you upload the audio file, you can select the audio name and click “Listen” to listen to it. Click “Delete” to delete the audio.



You can also record your own voice in the above interface and then upload.

- Insert the microphone into your PC.
- Click “Browse” to choose the save path of the audio you want to record.
- Set the record audio volume and then click “Start” to start recording your voice.
- Click “Upload” to upload your customized voice.

Note: The voice can be recorded only when you log in via IE browser.

② Set the warning times and volume as needed.
Warning times: it ranges from 1 to 50.
③ Set the schedule of audio alarm. The setup steps of the schedule are the same as the schedule recording setup (See Schedule Recording).
④ Click “OK” to save the settings.

3.4 Event Configuration

For more accuracy, here are some recommendations for installation.

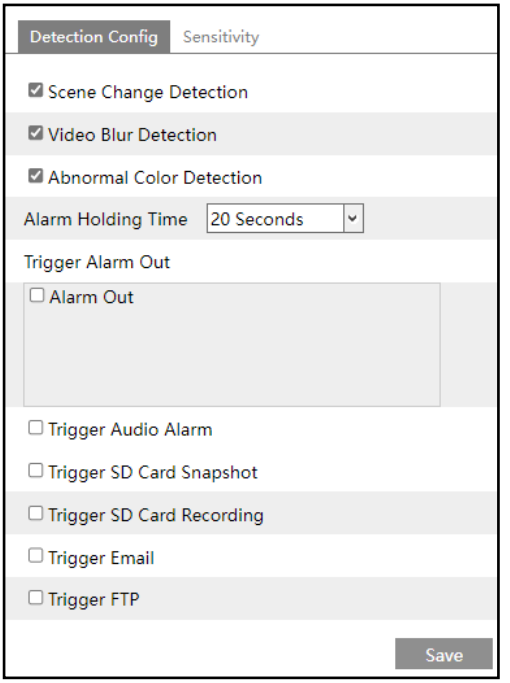
- Cameras should be installed on stable surfaces, as vibrations can affect the accuracy of detection.
- Avoid pointing the camera at the reflective surfaces (like shiny floors, mirrors, glass, lake surfaces and so on).
- Avoid places that are narrow or have too much shadowing.
- Avoid scenario where the object's color is similar to the background color.
- At any time of day or night, please make sure the image of the camera is clear and with adequate and even light, avoiding overexposure or too much darkness on both sides.

3.4.1 Video Exception

This function can detect changes in the surveillance environment affected by the external factors.

To set exception detection:

Go to **Config→Event→Video Exception** interface as shown below.



1. Enable the applicable detection that's desired.

Scene Change Detection: Alarms will be triggered if the scene of the monitor video has changed.

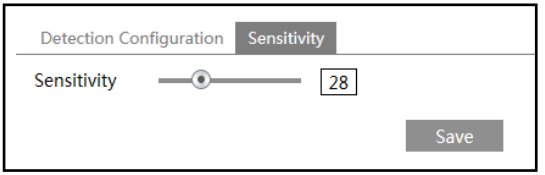
Video Blur Detection: Alarms will be triggered if the video becomes blurry.

Abnormal Color Detection: Alarms will be triggered if the image is abnormal caused by color deviation.

2. Set the alarm holding time and alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection section for details.

3. Click "Save" button to save the settings.

4. Set the sensitivity of the exception detection. Click "Sensitivity" tab to go to the interface as shown below.



Drag the slider to set the sensitivity value or directly enter the sensitivity value in the textbox. Click "Save" button to save the settings.

The sensitivity value of Scene Change Detection: The higher the value is, the more sensitive the system responds to the amplitude of the scene change.

The sensitivity value of Video Blur Detection: The higher the value is, the more sensitive the system responds to the blurriness of the image.

The sensitivity value of Abnormal Color Detection: The higher the value is, the more sensitive the system responds to the color shift of the image.

※ **The requirements of camera and surrounding area**

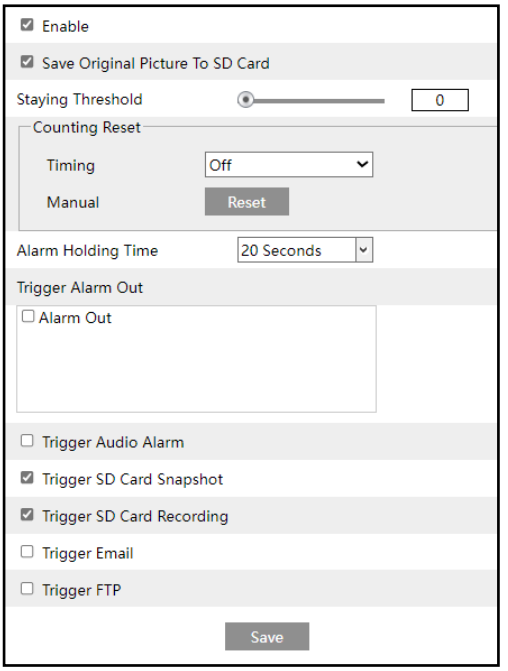
1. Try not to enable exception detection when light changes greatly in the scene.
2. Please contact us for more detailed application scenarios.

3.4.2 People Counting

This function is to calculate the number of the people entering or exiting from the detected area through detecting, tracking and counting the head shapes of the people.

Go to **Config→Event→People Counting** interface. The setup steps are as follows.

1. Enable people counting and set alarm trigger options.



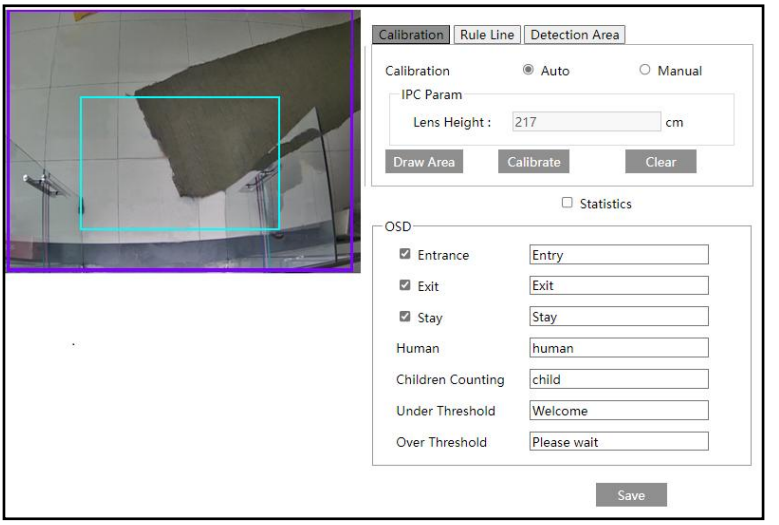
Enable people counting and select "Save Original Picture to SD Card" as needed.

Save Original Picture to SD Card: If it is enabled, the detected original pictures will be captured and saved to the SD card when the staying threshold exceeds the set value.

Staying Threshold: When the targets staying in the specified area exceed the threshold, alarms will be triggered.

Counting Reset: The current number of the people counting can be reset. You can choose to reset the counting daily, weekly or monthly. Click "Reset" to manually reset the current number of people counting.

2. Set the alarm holding time.
3. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection section for details.
4. Click "Save" button to save the settings.
5. Set area of people counting. Click the "Area" tab to go to the interface as shown below.



Set the camera calibration. After calibration, the lens height can be used to estimate the height of detected persons.
Auto calibration and manual calibration are selectable.

- Auto Calibration

Select “Auto” and click “Draw Area” to draw a green box in the middle of the image. After that, click “Calibrate”. The camera will return the lens height automatically. Compare the returned lens height with the actual measurement height. If the height from the lens to the ground is within 4m, the margin of error within ±15cm is allowed. If the height from the lens to the ground is 4m ~6m, the margin of error within ±25cm is allowed. If exceeding the above-mentioned value, repeat the above steps or use manual calibration.

⚠ **Caution:**

- ✧ Please select a flat ground surface as the calibration area and ensure the surface shall have a certain texture (it cannot be a solid-colored surface).
- ✧ The calibration area with adequate and even light is recommended, avoiding overexposure area or reflective surface.
- ✧ Please select the middle of the image as the calibration area.

- Manual Calibration

① Manually measure the height from the lens to the ground.

② In the above interface, select “Manual”, enter the lens height value.

③ Click “Calibrate”.

Statistics: If enabled, you can see the statistical information in the live view interface. If disabled, the statistical information will not be displayed in the live view interface.

Check “Statistics” and move the red box to change the position of the statistical information displayed on the screen. The statistical OSD information can be customized as needed.
Children counting: Please set its name as needed. Before using this function, please enable children counting and set the height of children counting first (see Advanced settings for details).
6. Set detection rule. Two detection rules can be selected. Please select one of them as needed.

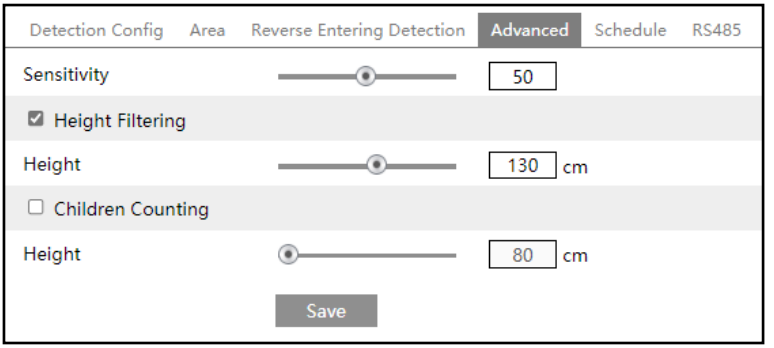
- To set alarm line

Set the alarm line number and direction. Only one line can be added.
Direction：A->B and A<-B can be optional. The direction of the arrow is entrance.
Click the “Draw Area” button and then drag the mouse to draw a line in the image. Click the “Stop Draw” button to stop drawing. Click the “Clear” button to delete the lines.
Click the “Save” button to save the settings.
If the target crosses the line along the direction of the arrow, it is counted as one entering target. If the target crosses the line along the reverse direction of the arrow, it is counted as one exiting target.

- To set detection area

Select the area number and direction.
Direction: A->B and A<-B can be optional. For example: “A->B” is selected. If the target enters from area A to area B, it is counted as one entering target. If the target enters from area B to area A, it is counted as one exiting target.
Click the “Draw A Area” or “Draw B Area” button and then click around the area where you want to set as the detection area in the image on the left side (the area should be a closed area). Click the “Stop Draw” button to stop drawing. Click the “Clear” button to delete the alarm area. After both area A and B are set and make sure these two areas don’t overlap, click the “Save” button to save the settings.

7. Advanced settings.



Sensitivity: The higher the value is, the easier the false detection will occur. The lower the value is, the camera is easier to miss the target.
Height Filtering: Enable the function and set a height value. The target whose height is lower

than the set value will not be counted.

Children Counting: Enable the function and set a height value. The target whose height is higher than the set value will not be counted. Note that the height of children counting should be 20cm (or above) higher than the height of height filtering. For example, the height of children counting is 120cm, so the height of height filtering should be set to 100cm or lower.

Note: In order to get more accurate statistics, it is suggested to disable height filtering and children counting if the installation height of the camera ranges from 210 to 250cm. When the installation height of the camera ranges from 251~600cm, it is recommended to check height filtering and children counting.

8. Set reverse entering detection as needed. If this function is enabled, set the alarm holding time and alarm linkage options. The setup steps are the same as motion detection. Please refer to motion detection section for details.

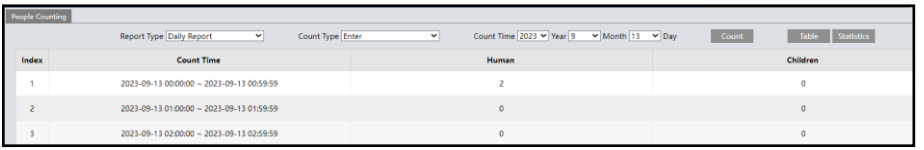
When someone leaves the detection area in the direction opposite to the detection direction, alarms will be triggered. For example, the detection direction is set from A to B. If a person leaves from B to A, alarms will be triggered.

9. Set the schedule of people counting. The setup steps of the schedule are the same as the schedule recording setup (See Schedule Recording).

10. RS485 settings. You can use RS485 to transmit the data between the camera and the computer or terminal. Before using this function, please connect the camera and computer or terminal with RS485 cable. Please set the parameters of RS485 as needed. Note that you should keep the parameters of the camera and the computer or terminal all the same.

11. View the statistical information in the live view interface.

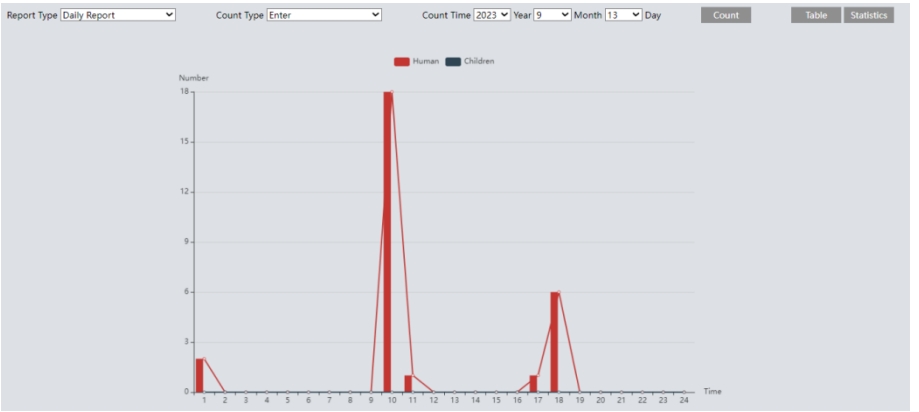
12. View the statistical information of people counting. Click “Statistics” to enter the following interface.



Select the report type. Daily report, weekly report, monthly report and annual report are selectable.

Select the count type. Enter or leave can be optional.

Select the start time and then click “Count”. Then the counting result will display in the statistic result area. Click Table or Statistics to display the result in different way.



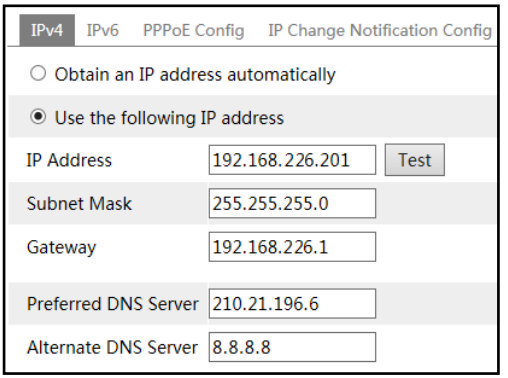
※ Configuration requirements of camera and surrounding area

1. The camera must be installed in the area with stable and adequate light sources.
2. The background color (like floor color) should be light color.
3. The lens of the camera should be straight down to ensure that the whole head of the people can be captured.
4. The recommended installation height of the camera ranges from 2.1m to 6m. The entrance/exit in the image should make up over a half of the width of the entire image and the head of a single person should account for about 1/5 of the height of the entire image. Remember leaving a certain space on both sides to let the entrance/exit lie in the center of the entire image.
5. Various changeable lights will disturb the people counting and the dark scenes will reduce the accuracy of counting.
6. If someone is moving at a high speed (passing the detected area within 2 seconds), it may result in detection failure. However, if someone is moving at a low speed, staying more than 15 seconds in the detected area, the camera will give up tracing.
7. If the cloth colors of people are similar with the color of the background, it may cause detection failure.
8. More headwears which probably conceal the head features will lead to detection failure.

3.5 Network Configuration

3.5.1 TCP/IP

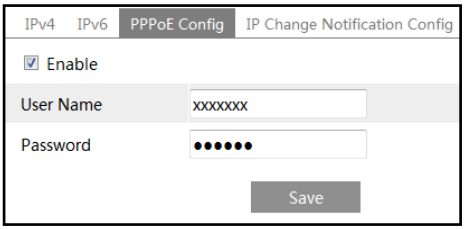
Go to **Config→Network→TCP/IP** interface as shown below. There are two ways for network connection.



Use IP address (take IPv4 for example)-There are two options for IP setup: obtain an IP address automatically by DHCP and use the following IP address. Please choose one of the options as needed.

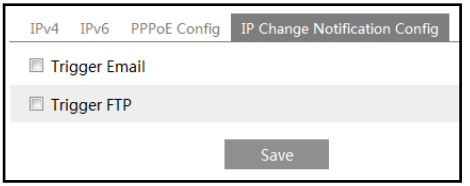
Test: Test the effectiveness of the IP address by clicking this button.

Use PPPoE-Click the "PPPoE Config" tab to go to the interface as shown below. Enable PPPoE and then enter the user name and password from your ISP.



Either method of network connection can be used. If PPPoE is used to connect internet, the camera will get a dynamic WAN IP address. This IP address will change frequently. To be notified, the IP change notification function can be used.

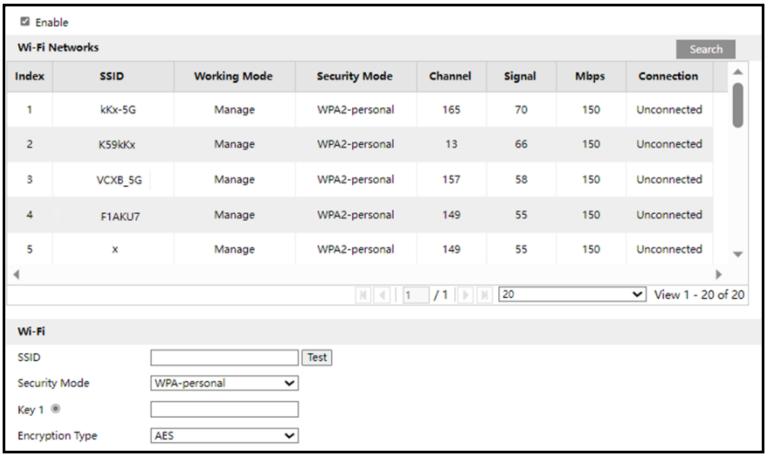
Click "IP Change Notification Config" to go to the interface as shown below.



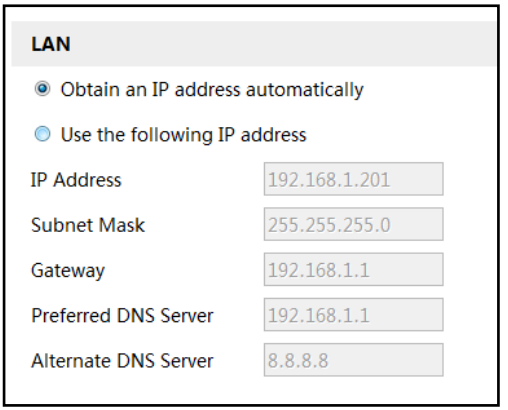
Trigger Email: when the IP address of the device is changed, the new IP address will be sent to the email address that has been set up.
Trigger FTP: when the IP address of the device is changed, the new IP address will be sent to FTP server that has been set up.

3.5.2 Wi-Fi Settings

Only some models support Wi-Fi. If your camera doesn't support this function, please skip the following instructions.
Go to **Config→Network→WIFI** interface as shown below.



1. Checkmark "Enable" to enable Wi-Fi.
Click "Search" to refresh the online wireless devices.
2. Choose a wireless device on the list. The SSID and security mode of the wireless device will be shown automatically. Please don't change it manually.
3. Enter the key to connect the wireless device. This key should be set on the wireless device in advance for wireless network connection.
4. After the above-mentioned wireless network is configured, you can choose "Obtain an IP address automatically" or "Use the following IP address".

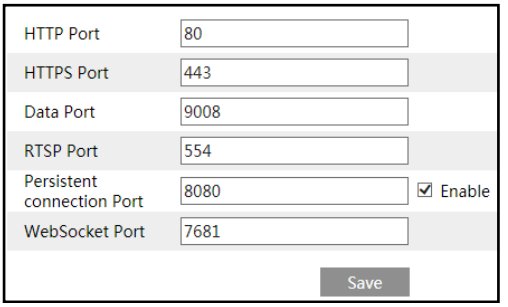


If you choose "Obtain an IP address automatically", you shall get the IP address from the router. Or you can choose "Use the following IP address" to set the network parameters manually. Then you can use this IP address to log in mobile surveillance APP/ web client/CMS/NVR/…

5. Click "Test" to check whether the wireless network is connected. After successful connection, click "Save" to save the settings.

3.5.3 Port

Go to **Config→Network→Port** interface as shown below. HTTP port, Data port and RTSP port can be set.



HTTP Port: The default HTTP port is 80. It can be changed to any port which is not occupied.

HTTPS Port: The default HTTPs port is 443. It can be changed to any port which is not occupied.

Data Port: The default data port is 9008. Please change it as necessary.

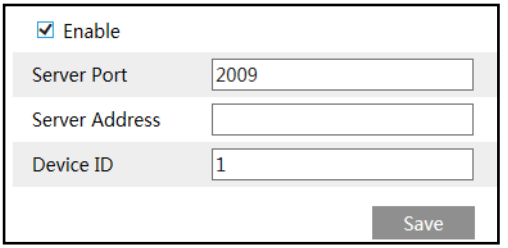
RTSP Port: The default port is 554. Please change it as necessary.

Persistent Connection Port: The port is used for a persistent connection of the third-party platform to push smart data, like face pictures.

WebSocket Port: Communication protocol port for plug-in free preview.

3.5.4 Server Configuration

This function is mainly used for connecting network video management system.



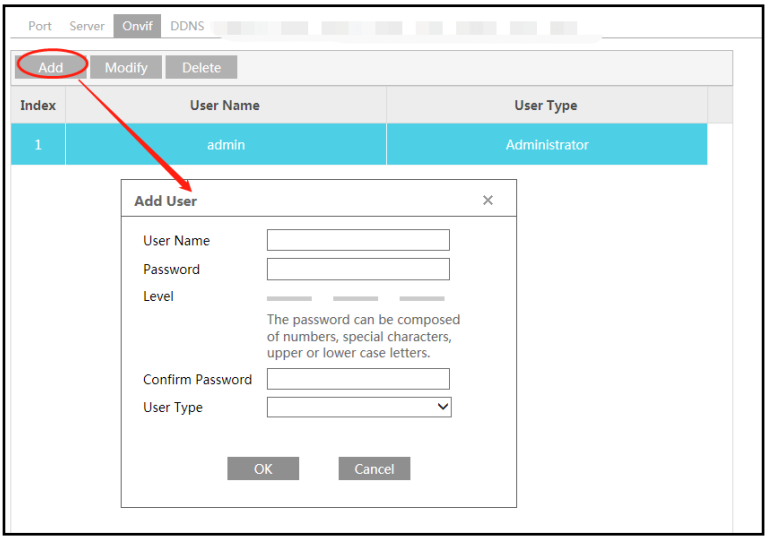
1. Check “Enable”.
2. Check the IP address and port of the transfer media server in the NVMS. Then enable the auto report in the NVMS when adding a new device. Next, enter the remaining information of the device in the NVMS. After that, the system will automatically allot a device ID. Please check it in the NVMS.
3. Enter the above-mentioned server address, server port and device ID in the corresponding boxes. Click the “Save” button to save the settings.

3.5.5 Onvif

The camera can be searched and connected to the third-party platform via ONVIF/RTSP protocol.

If “Activate Onvif User” is enabled in the device activation interface, the ONVIF user can be activated simultanously. When you connect the camera through the ONVIF protocol in the third-party platform, you can use this onvif user to connect.

You can also add new users in the Onvif interface.

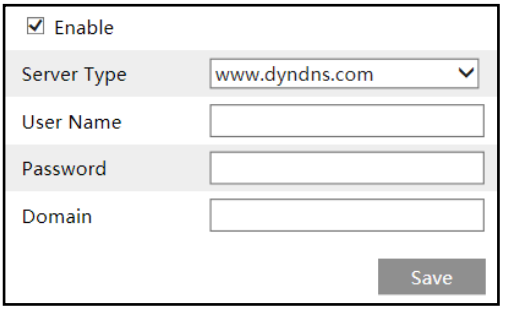


Note: when adding the device to the third-party platform with ONVIF/RTSP protocol, please use the onvif user in the above interface.

3.5.6 DDNS

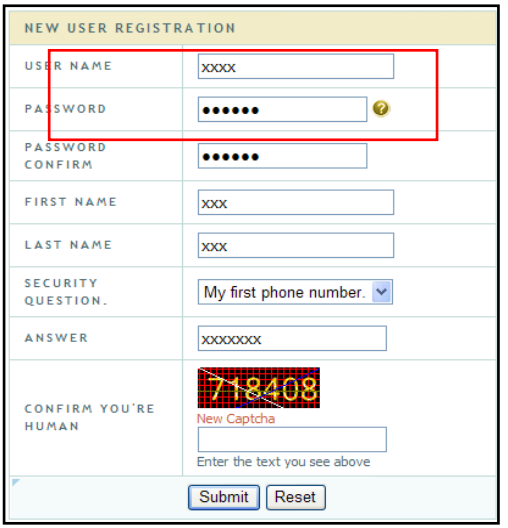
If the camera is set up with a DHCP connection, DDNS should be set for the internet.

1. Go to **Config→Network→ DDNS**.



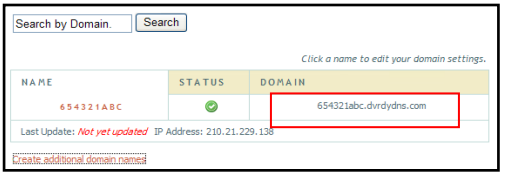
2. Apply for a domain name. Take www.dvrdyndns.com for example.

Enter www.dvrdydns.com in the IE address bar to visit its website. Then Click the "Registration" button.



Create domain name.

After the domain name is successfully applied for, the domain name will be listed as below.

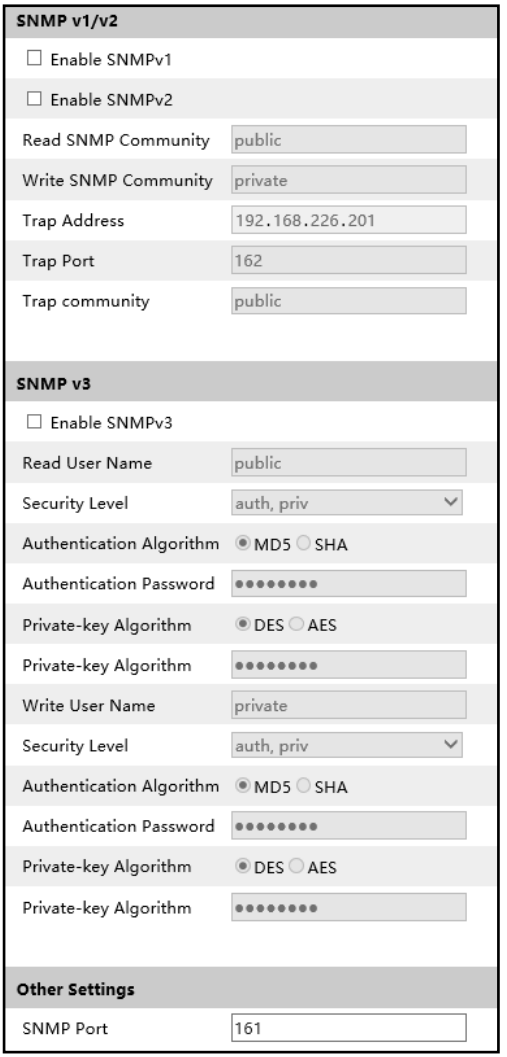


3. Enter the username, password, domain you apply for in the DDNS configuration interface.
4. Click the “Save” button to save the settings.

3.5.7 SNMP

To get camera status, parameters and alarm information and remotely manage the camera, the SNMP function can be used. Before using SNMP, please install an SNMP management tool and set the parameters of the SNMP, such as SNMP port, trap address.

1. Go to **Config→Network→SNMP**.

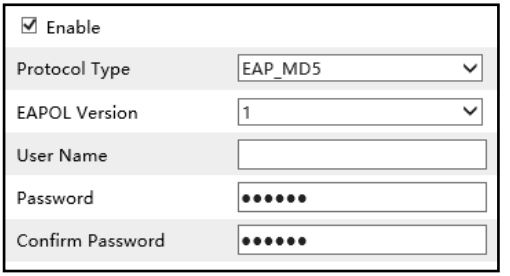


2. Check the corresponding version checkbox (Enable SNMPv1, Enable SNMPv2, Enable SNMPv3) according to the version of the SNMP software that will be used.
3. Set the values for “Read SNMP Community”, “Write SNMP Community”, “Trap Address”, “Trap Port” and so on. Please make sure the settings are the same as that of the SNMP software.
Note: Please use the different version in accordance with the security level you required. The higher the version is, the higher the level of the security is.

3.5.8 802.1x

If it is enabled, the camera’s data can be protected. When the camera is connected to the

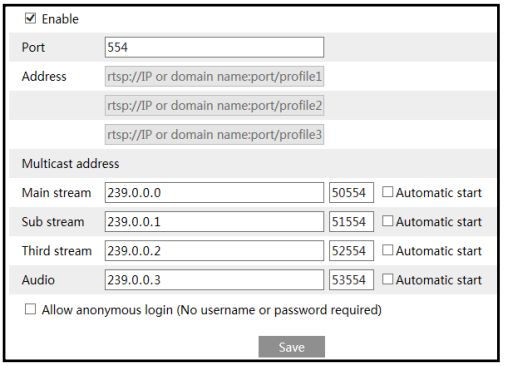
network protected by the IEE802.1x, user authentication is needed.



To use this function, the camera shall be connected to a switch supporting 802.1x protocol. The switch can be reckoned as an authentication system to identify the device in a local network. If the camera connected to the network interface of the switch has passed the authentication of the switch, it can be accessed via the local network.
Protocol type and EAPOL version: Please use the default settings.
User name and password: The user name and password must be the same with the user name and password applied for and registered in the authentication server.

3.5.9 RTSP

Go to **Config→Network→RTSP**.



Select “Enable” to enable the RTSP function.
Port: Access port of the streaming media. The default number is 554.
RTSP Address: The RTSP address (unicast) format that can be used to play the stream in a media player.

Multicast Address
Main stream: The address format is
“rtsp://IP address: rtsp port/profile1?transportmode=mcast”.
Sub stream: The address format is

"rtsp://IP address: rtsp port/profile2?transportmode=mcast".

Third stream: The address format is

"rtsp://IP address: rtsp port/profile3?transportmode=mcast".

Audio: Having entered the main/sub stream in a VLC player, the video and audio will play automatically.

If "Allow anonymous login…" is checked, there is no need to enter the username and password to view the video.

If "auto start" is enabled, the multicast received data should be added into a VLC player to play the video.

Note:1. This camera supports local video preview through a VLC player. Enter the RTSP address (unicast or multicast, eg. rtsp://192.168.226.201:554/profile1?transportmode=mcast) in a VLC player to realize the simultaneous video preview with the web client.

2. The IP address mentioned above cannot be the address of IPv6.

3. Avoid the use of the same multicast address in the same local network.

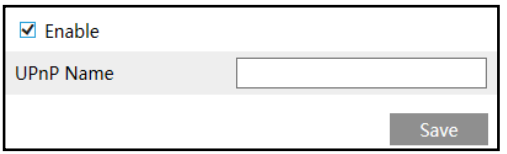
4. When playing the video through the multicast streams in a VLC player, please pay attention to the mode of the VLC player. If it is set to TCP mode, the video cannot be played.

5. If the coding format of the video of the main stream is MJPEG, the video may be disordered at some resolutions.

3.5.10 UPNP

If this function is enabled, the camera can be quickly accessed through the LAN.

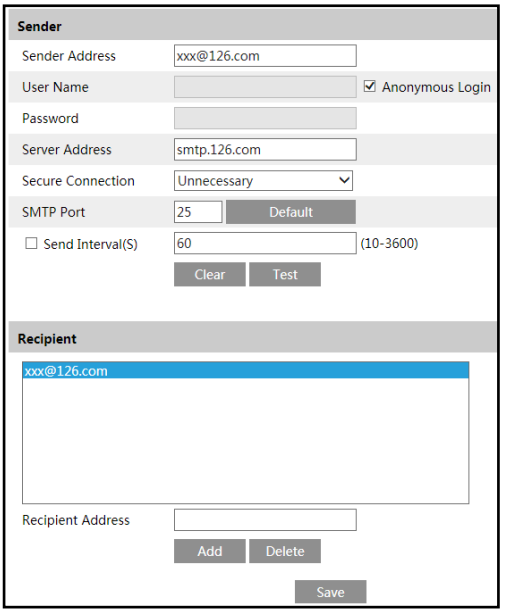
Go to **Config→Network→UPnP**. Enable UPNP and then enter UPnP name.



3.5.11 Email

If you need to trigger Email when an alarm happens or IP address is changed, please set the Email here first.

Go to **Config→Network →Email**.

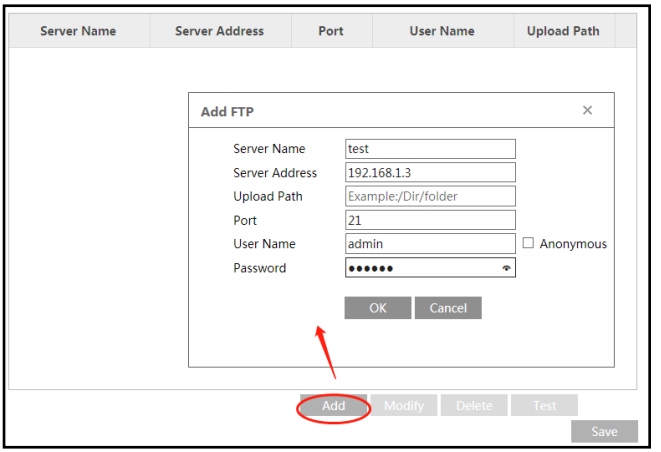


Sender Address: sender's e-mail address.
User name and password: sender's user name and password (you don't have to enter the username and password if "Anonymous Login" is enabled).
Server Address: The SMTP IP address or host name.
Select the secure connection type at the "Secure Connection" pull-down list according to what's required.
SMTP Port: The SMTP port.
Send Interval(S): The time interval of sending email. For example, if it is set to 60 seconds and multiple motion detection alarms are triggered within 60 seconds, they will be considered as only one alarm event and only one email will be sent. If one motion alarm event is triggered and then another motion detection alarm event is triggered after 60 seconds, two emails will be sent. When different alarms are triggered at the same time, multiple emails will be sent separately.
Click the "Test" button to test the connection of the account.
Recipient Address: receiver's e-mail address.

3.5.12 FTP

After an FTP server is set up, captured pictures from events will be uploaded to the FTP server.

1. Go to **Config→Network →FTP**.



2. Click “Add” to add the information of the FTP. After that, click “Save” to save the settings.

Server Name: The name of the FTP server.

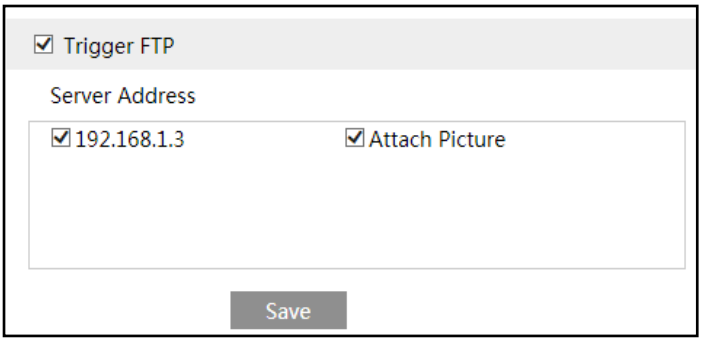
Server Address: The IP address or domain name of the FTP.

Upload Path: The directory where files will be uploaded to.

Port: The port of the FTP server.

User Name and Password: The username and password that are used to login to the FTP server.

3. In the event setting interface, trigger FTP as shown below.



Rule of FTP storage path: /device MAC address/event type/date/time/

For example: a motion detection alarm occurs

FTP file path：\00-18-ae-a8-da-2a\MOTION\2021-01-09\14\

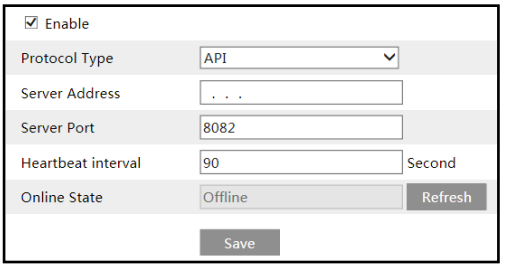
Event name table:

File Name	Event Type
IP	IP address change
MOTION	Motion Detection
SENSOR	Sensor Alarm
AVD	Video Exception
BINOCULARCOUNT	People counting
SDFULL	SD Full
SDERROR	SD Error

TXT file content:
device name: xxx mac: device MAC address Event Type time:
For example:
device name: IPC mac: 00-18-ae-a8-da-2a MOTION time: 2021-03-16 12:20:07

3.5.13 HTTP POST

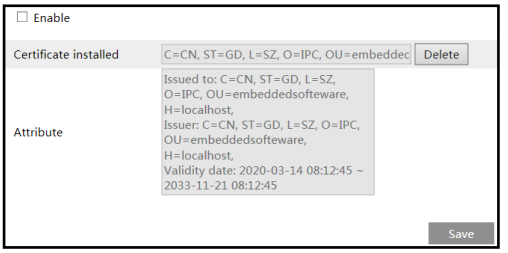
Go to Config→Network →HTTP POST interface.
Check "Enable", select protocol type and then set the server address (IP address/domain name), server port and heartbeat interval.



Server address: the IP address/domain name of the third-party platform.
Server port: the server port of the third-party platform.
After the above parameters are set, click "Save" to save the settings. Then the camera will automatically connect the third-party platform. The online state can be viewed in the above interface. After the camera is successfully connected, it will send the alarm information (HTTP format) to the third-party platform once the smart alarm is triggered. The alarm information includes target tracing coordinates, the captured original image and so on.

3.5.14 HTTPS

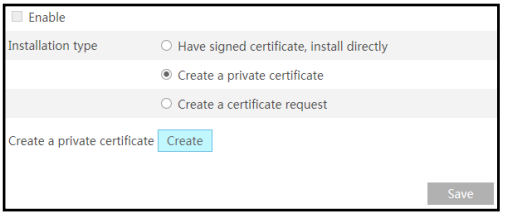
HTTPs provides authentication of the web site and protects user privacy.
Go to **Config→Network→HTTPS** as shown below.



There is a certificate installed by default as shown above. Enable this function and save it. Then the camera can be accessed by entering https://IP: https port via the web browser (eg. https://192.168.226.201:443).

A private certificate can be created if users don't want to use the default one. Click "Delete" to cancel the default certificate. Then the following interface will be displayed.

* If there is a signed certificate, click "Browse" to select it and then click "Install" to install it.
* Click "Create a private certificate" to enter the following creation interface.



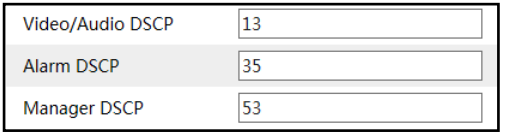
Click the "Create" button to create a private certificate. Enter the country (only two letters available), domain (camera's IP address/domain), validity date, password, province/state, region and so on. Then click "OK" to save the settings.

* Click "Create a certificate request" to enter the following interface.

Click “Create” to create the certificate request. Then download the certificate request and submit it to the trusted certificate authority for signature. After receiving the signed certificate, import the certificate to the device.

3.5.15 QoS

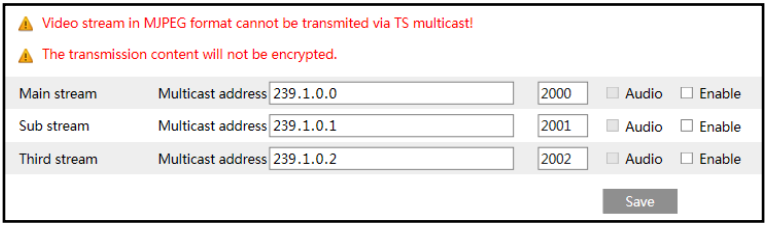
QoS (Quality of Service) function is used to provide different quality of services for different network applications. With the deficient bandwidth, the router or switch will sort the data streams and transfer them according to their priority to solve the network delay and network congestion by using this function.
Go to **Config→Network→QoS**.



Video/Audio DSCP: The range is from 0 to 63.
Alarm DSCP: The range is from 0 to 63.
Manager DSCP: The range is from 0 to 63.
Generally speaking, the larger the number is, the higher the priority is.

3.5.16 TS Multicast

By using transport stream multicast (TS Multicast), multiple users can view the video image simultaneously even if there is not enough bandwidth.



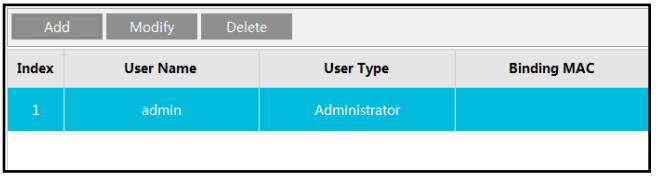
Multicast address: the multicast IP address of Main Stream/Sub Stream/Third Stream ranges

from 224.0.0.0 to 239.255.255.255.
Port: Main stream:2000; sub stream:2001; third stream:2002
Main stream: The address format is "udp://@IP address: main stream port."
Sub stream: The address format is "udp://@IP address: sub stream port."
Third stream: The address format is "udp://@IP address: third stream port."
Audio: if enabled, the video and audio will play automatically.
For example: you can test the TS multicast by using a VLC player. Enter the TS multicast address (eg. udp://@239.1.0.1:2001) in a VLC player.
Note: The TS multicast user also will be counted as an online user. You can go to Config→Security→Online User to view.

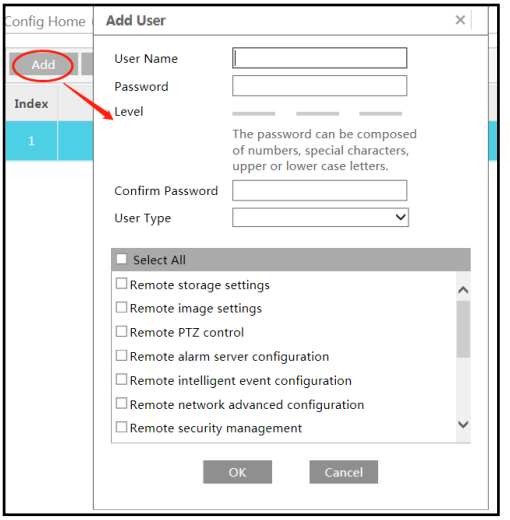
3.6 Security Configuration

3.6.1 User Configuration

Go to **Config→Security→User** interface as shown below.



Add user:
1. Click the "Add" button to pop up the following textbox.



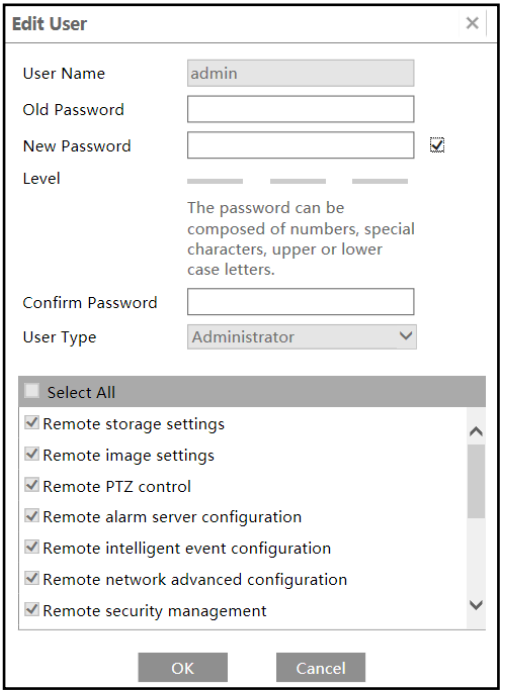
2. Enter user name in the "User Name" textbox.
3. Enter the password in the "Password" and "Confirm Password" textbox. Please set the

password according to the requirement of the password security level (Go to **Config→Security→Security Management→Password Security** interface to set the security level).

4. Choose the user type and select the desired user permissions.
5. Click the "OK" button and then the newly added user will be displayed in the user list.

Modify user:

1. Select a user to modify password if necessary in the user configuration list box.
2. The "Edit user" dialog box pops up by clicking the "Modify" button.



3. Enter the old password of the user in the "Old Password" text box.
4. Enter the new password in the "New password" and "Confirm Password" text box.
5. Select the user permissions for advanced or normal user.
6. Click the "OK" button to save the settings.

Note: When the password level is set to "Strong", the password cannot be modified the same as the previous five.

Delete user:

1. Select the user to be deleted in the user configuration list box.
2. Click the "Delete" button to delete the user.

Note: The default administrator account cannot be deleted.

Safety Question Settings: set the questions and answers for admin so as to reset the password

after you forget the password.

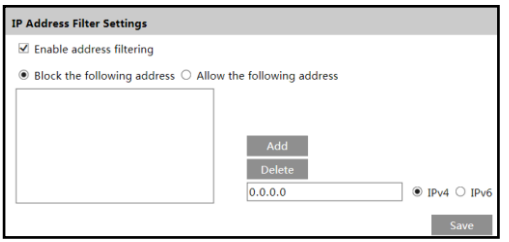
3.6.2 Online User

Go to **Config→Security→Online User** to view the user who is viewing the live video.

An administrator user can kick out all the other users (including other administrators).

3.6.3 Block and Allow Lists

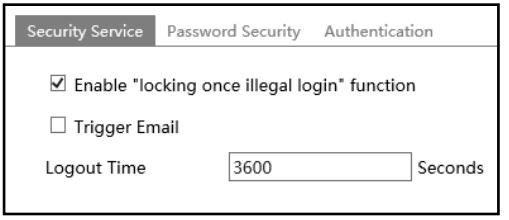
Go to **Config→Security→Block and Allow Lists** as shown below.



The setup steps are as follows:
Check the “Enable address filtering” check box.
Select “Block/Allow the following address”, IPv4/IPv6 and then enter IP address in the address box and click the “Add” button.

3.6.4 Security Management

Go to **Config→Security→Security Management** as shown below.



In order to prevent against malicious password unlocking, “locking once illegal login” function can be enabled here. If this function is enabled, login failure after trying five times will make the login interface locked. The camera can be logged in again after a half hour or after the camera reboots.
Trigger Email: if enabled, e-mail will be sent when logging in/out or illegal login lock occurs.

- **Password Security**

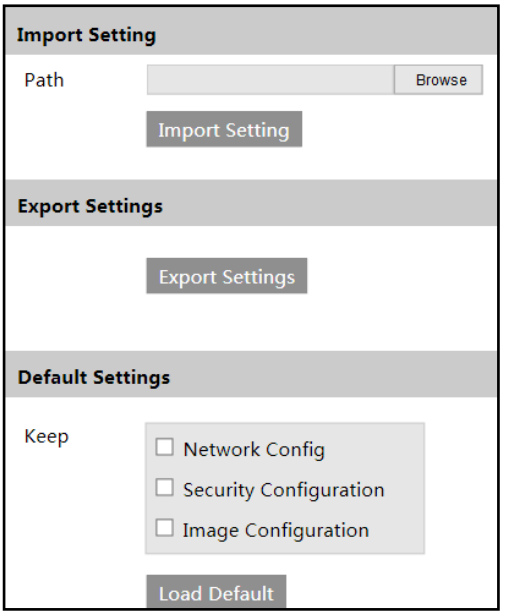
Please set the password level and expiration time as needed.
Password Level: Weak, Medium or Strong.
Weak level: Numbers, special characters, upper or lower case letters can be used. You can choose one of them or any combination of them when setting the password.
Medium Level: 8~16 characters, including at least two of the following categories: numbers, special characters, upper case letters and lower case letters.
Strong Level: 8~16 characters. Numbers, special characters, upper case letters and lower case letters must be included.
For your account security, it is recommended to set a strong password and change your password regularly.

HTTP Authentication: Basic or Token is selectable.

3.7 Maintenance Configuration

3.7.1 Backup and Restore

Go to **Config→Maintenance→Backup & Restore**.



- **Import & Export Settings**

Configuration settings of the camera can be exported form a camera into another camera.
1. Click "Browse" to select the save path for import or export information on the PC.
2. Click the "Import Setting" or "Export Setting" button.
Note: The login password needs to be entered after clicking the "Import Setting" button.

- **Default Settings**

Click the "Load Default" button and then verify the password to restore all system settings to the default factory settings except those you want to keep.

3.7.2 Reboot

Go to **Config→Maintenance→Reboot**.
Click the "Reboot" button and then enter the password to reboot the device.

Timed Reboot Setting:
If necessary, the camera can be set up to reboot on a time interval. Enable "Time Settings", set the date and time, click the "Save" button and then enter the password to save the settings.

3.7.3 Upgrade

Go to **Config→Maintenance→Upgrade**. In this interface, the camera firmware can be updated.
1. Click the "Browse" button to select the save path of the upgrade file
2. Click the "Upgrade" button to start upgrading the firmware.

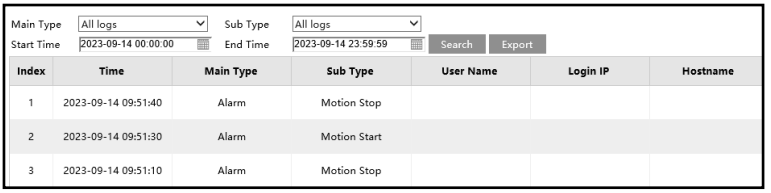
3. Enter the correct password and then the device will restart automatically

Caution! Do not close the browser or disconnect the camera from the network during the upgrade.

3.7.4 Operation Log

To query and export log:

1. Go to **Config→Maintenance→Operation Log**.



2. Select the main type, sub type, start and end time.
3. Click “Search” to view the operation log.
4. Click “Export” to export the operation log.

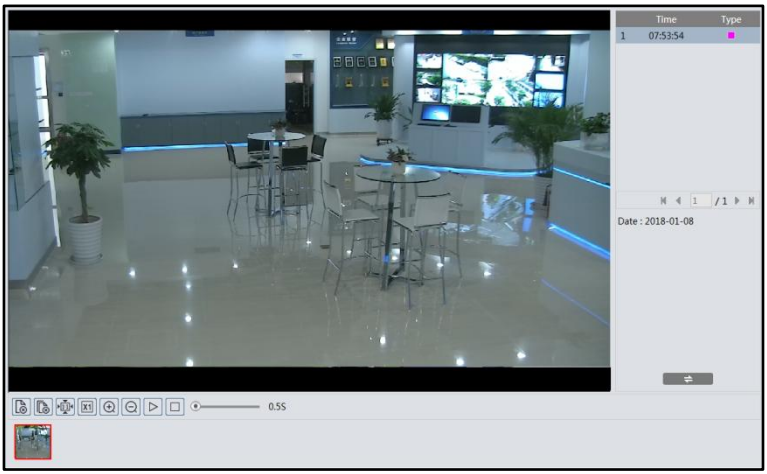
4.1 Image Search

Click Search to go to the interface as shown below. Images that are saved on the SD card can be found here.

Note: When using the plug-in free browser, the local images cannot be searched.

- **Local Image Search**

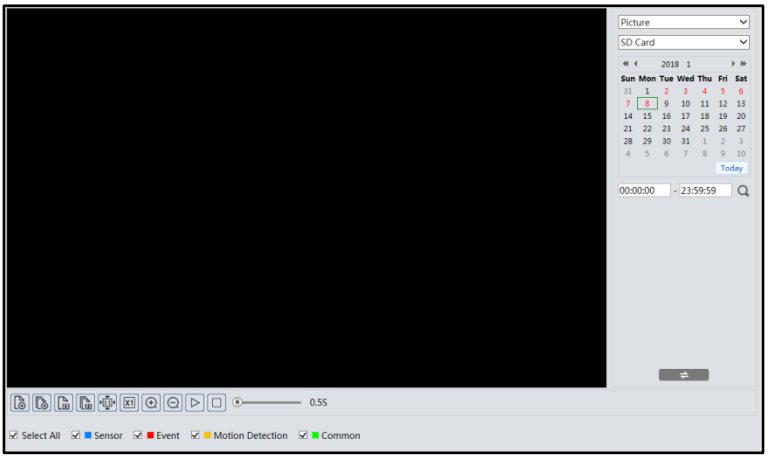
1. Choose “Picture”—“Local”.
2. Set time: Select date and choose the start and end time.
3. Click to search the images.
4. Double click a file name in the list to view the captured photos as shown above.



Click ⇌ to return to the previous interface.

- **SD Card Image Search**

1. Choose “Picture”—“SD Card”.



2. Set time: Select date and choose the start and end time.
3. Choose the alarm events at the bottom of the interface.
4. Click 🔍 to search the images.
5. Double click a file name in the list to view the captured photos.

Click ⇌ to return to the previous interface.

The descriptions of the buttons are shown as follows.

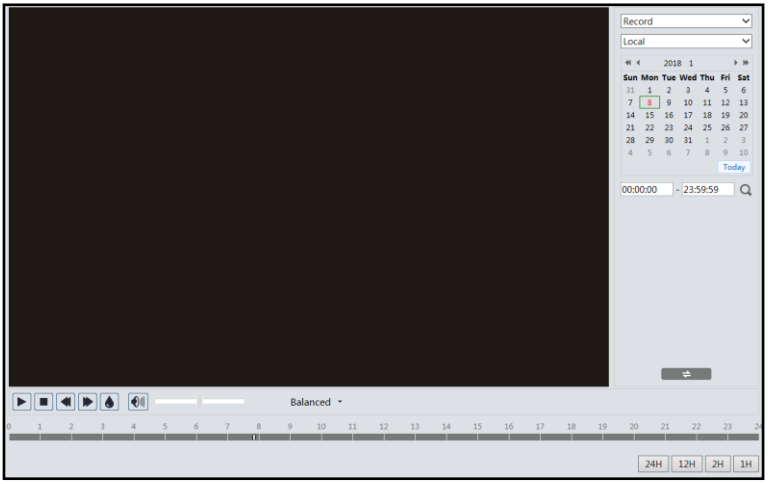
Icon	Description	Icon	Description
	Close: Select an image and click this button to close the image.		Close all: Click this button to close all images.
	Save: Click this button to select the path for saving the image on the PC.		Save all: Click this button to select the path for saving all pictures on the PC.
	Fit size: Click to fit the image on the screen.		Actual size: Click this button to display the actual size of the image.
	Zoom in: Click this button to digitally zoom in.		Zoom out: Click this button to digitally zoom out.
	Slide show play: Click this button to start the slide show mode.		Stop: Click this button to stop the slide show.
5.5S	Play speed: Play speed of the slide show.		

4.2 Video Search

4.2.1 Local Video Search

Click Search to go to the interface as shown below. Videos were recorded locally to the PC can be played in this interface.

Note: When using the plug-in free browser, the local videos cannot be searched.



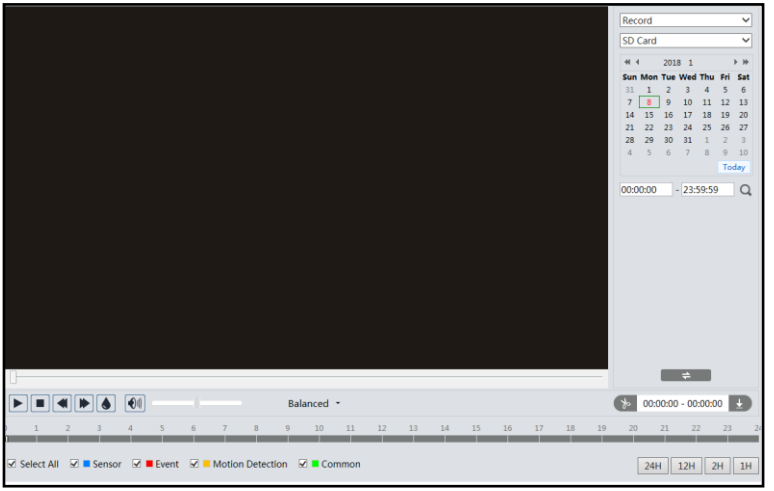
1. Choose “Record”—“Local”.
2. Set search time: Select the date and choose the start and end time.
3. Click to search the images.
4. Double click on a file name in the list to start playback.

Icon	Description	Icon	Description
	Play button. After pausing the video, click this button to continue playing.		Pause button
	Stop button		Speed down
	Speed up		Watermark display
	Enable / disable audio; drag the slider to adjust the volume after enabling audio.		

4.2.2 SD Card Video Search

Click Search to go to the interface as shown below. Videos that were recorded on the SD card can be played in this interface.

1. Choose “Record”—“SD Card”.
2. Set search time: Select the date and choose the start and end time.
3. Click  to search the images.



4. Select the alarm events at the bottom of the interface.
5. Select mix stream (video and audio stream) or video stream as needed.
6. Double click on a file name in the list to start playback.

Note: *1.  and  cannot be displayed in the above interface via the plug-in free browser.

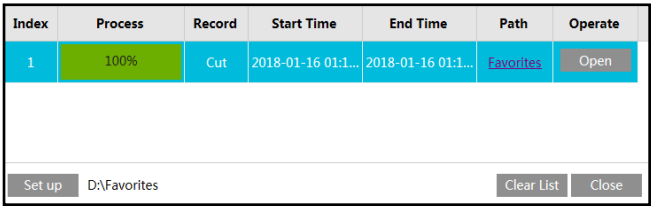
*2. For plug-in free playback, playback mode switch (balanced/real-time/fluent mode) and downloading functions are not supported too.

*3. For the fluent playback, it is recommended to use the plug-in required browser to play the recorded file whose resolution exceeds 2MP.

The time table can be shown in 24H/12H/2H/1H format by clicking the corresponding buttons.

Video clip and downloading

1. Search the video files according to the above mentioned steps.
2. Select the start time by clicking on the time table.
3. Click  to set the start time and then this button turns blue ().
4. Select the end time by clicking on the time table. Then click  to set the end time.
5. Click  to download the video file in the PC.



Click “Set up” to set the storage directory of the video files.

Click “Open” to play the video.

Click “Clear List” to clear the downloading list.

Click “Close” to close the downloading window.

Appendix 1 Troubleshooting

How to find the password?

A: The password for ***admin*** can be reset through "Edit Safety Question" function.

Click "Forget Password" in the login window and then enter the corresponding answer of the selected question in the popup window. After you correctly answer all questions, you can reset the password for ***admin***. If you forget the answer of the question, this way will be invalid, please contact your dealer for help.

B: The passwords of other users can be reset by ***admin***.

Fail to connect devices through IE browser.

A: Network is not well connected. Check the connection and make sure it is connected well.

B: IP address is not available. Reset the IP address.

C: Web port number has been changed: contact administrator to get the correct port number.

D: Exclude the above reasons. Restore to default setting by IP-Tool.

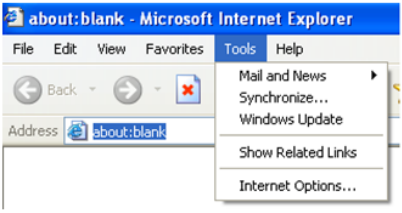
IP tool cannot search devices.

It may be caused by the anti-virus software in your computer. Please exit it and try to search device again.

IE cannot download ActiveX control.

A. IE browser may be set up to block ActiveX. Follow the steps below.

① Open IE browser and then click Tools-----Internet Options.

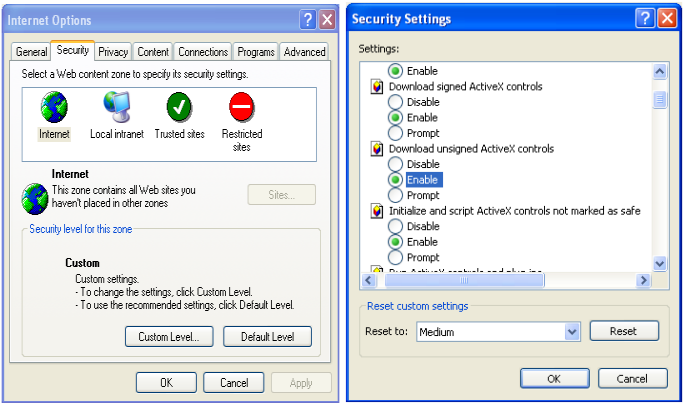


② Select Security------Custom Level….

③ Enable all the options under "ActiveX controls and plug-ins".

④ Click OK to finish setup.

B. Other plug-ins or anti-virus blocks ActiveX. Please uninstall or close them.



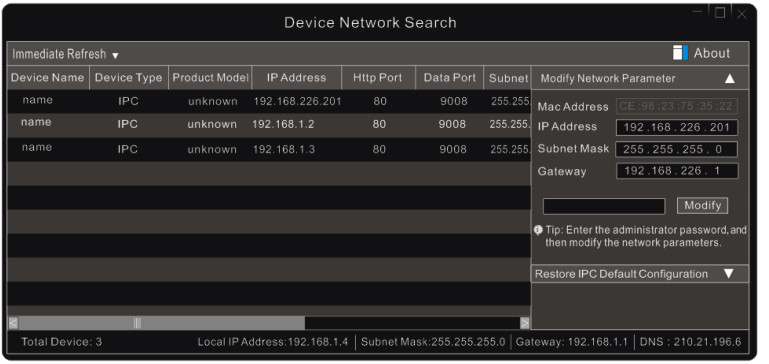
No sound can be heard.

A： Audio input device is not connected. Please connect and try again.

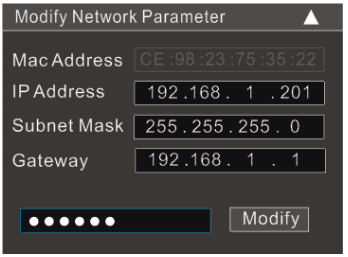
B: Audio function is not enabled at the corresponding channel. Please enable this function.

How to modify IP address through IP-Tool?

A: After you install the IP-Tool, run it as shown below.



The default IP address of this camera is 192.168.226.201. Click the information of the camera listed in the above table to show the network information on the right hand. Modify the IP address and gateway of the camera and make sure its network address is in the same local network segment as the computer's. Please modify the IP address of your device according to the practical situation.



For example, the IP address of your computer is 192.168.1.4. So the IP address of the camera shall be changed to 192.168.1.X. After modification, please enter the password of “admin” which is set in the device activation interface in advance and then click the “Modify” button to change the network parameters.