advidia

M-44-FW-L

4MP Network Cameras
User Manual

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

Disclaimer

CAUTION!

The default password is intended for your first login. For security, please set a strong password after your first login. A strong password shall include at least nine characters comprising digits, letters, and special characters.

- To the maximum extent permitted by applicable law, the product described, with its hardware, software, firmware and documents, is provided on an “as is” basis.
- Best effort has been made to verify the integrity and correctness of the contents in this manual, but no statement, information, or recommendation in this manual shall constitute formal guarantee of any kind, expressed or implied. We shall not be held responsible for any technical or typographical errors in this manual. The contents of this manual are subject to change without prior notice. Update will be added to the new version of this manual.
- Use of this manual and the subsequent result shall be entirely on the user’s own responsibility. In no event shall we be reliable to you for any special, consequential, incidental, or indirect damages, including, among others, damages for loss of business profits, business interruption, or loss of data or documentation in connection with the use of this product.
- Video and audio surveillance can be regulated by laws that vary from country to country. Check the law in your local region before using this product for surveillance purposes. We shall not be held responsible for any consequences resulting from illegal operations of the device.
- The illustrations in this manual are for reference only and may vary depending on the version or model. The screenshots in this manual may have been customized to meet specific requirements and user preferences. As a result, some of the examples and functions featured may differ from those displayed on your monitor.
- This manual is a guide for multiple product models and so it is not intended for any specific product.
- Due to uncertainties such as physical environment, discrepancy may exist between the actual values and reference values provided in this manual. The ultimate right to interpretation resides in our company.

Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

Symbols

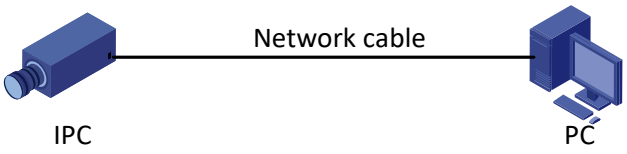
The symbols in the following table may be found in this manual. Carefully follow the instructions indicated by the symbols to avoid hazardous situations and use the product properly.

Symbol	Description
 **WARNING!**	Contains important safety instructions and indicates situations that could cause bodily injury.
 **CAUTION!**	Means reader be careful and improper operations may cause damage or malfunction to product.
 **NOTE!**	Means useful or supplemental information about the use of product.

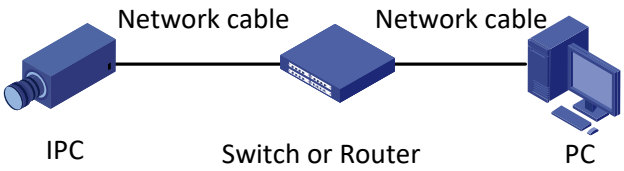
Contents

1 Network Connection

Before accessing a network camera (also known as IP Camera or IPC) from a PC, you need to connect the network camera to the PC directly with a network cable or via a switch or router.



Use a Shielded Twisted Pair (STP) cable to connect the network interfaces of the network camera and the PC.



Use Shielded Twisted Pair (STP) cables to connect the network interfaces of the camera and the switch or router.

2 Login

Preparation

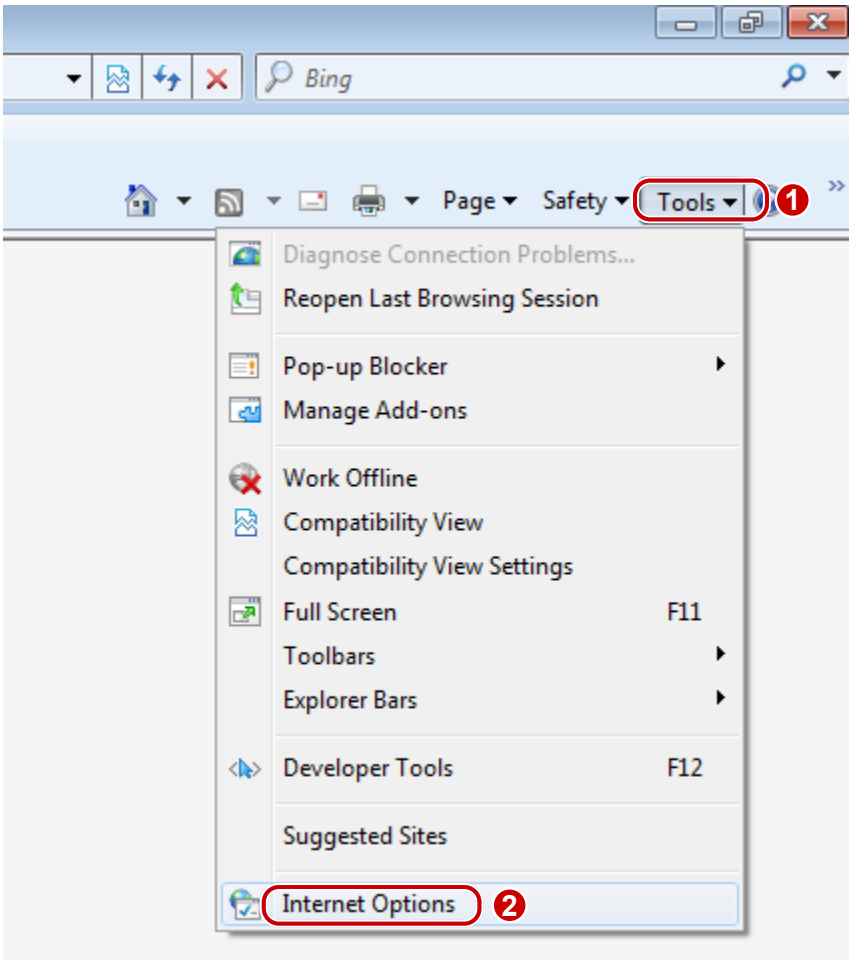
After you have completed the installation in accordance with the quick guide, connect the camera to power to start it. After the camera is started, you can access the camera from a PC client installed with a web browser or the client software Guard Station. Internet Explorer(IE) is a recommended web browser. For more information about Guard Station, refer to the *Guard Station User Manual*.

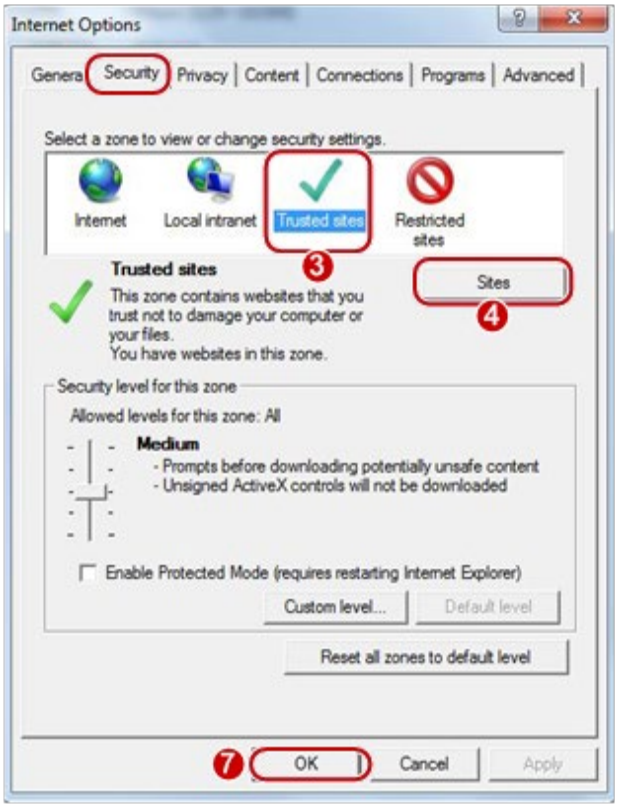
The following takes IE on a Microsoft Windows7 operating system as an example.

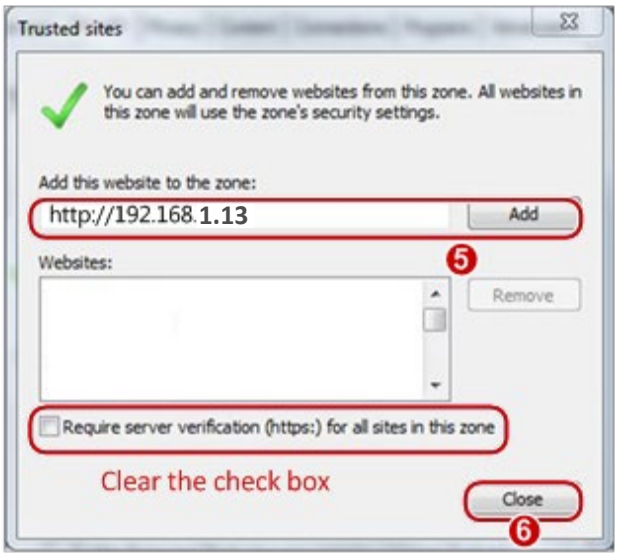
Check before login

- The camera is operating correctly.
- The network connection between the PC and the camera is normal.
- The PC is installed with Internet Explorer 10.0 or higher.
- (Optional) The resolution is set to 1440 x 900.

Add the IP address as a trusted site





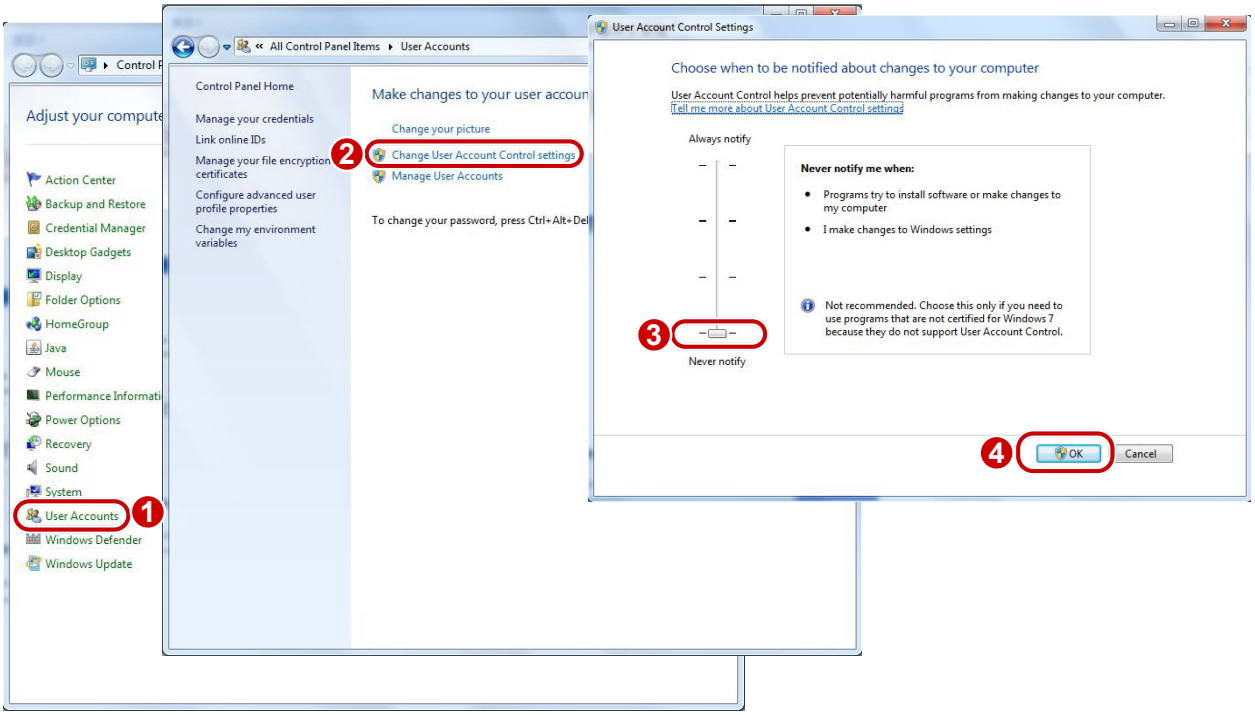


NOTE!

The IP address 192.168.1.13in this example is the default IP address. Please replace it with the actual address of your camera if it has been changed.

(Optional) Modify user access control settings

Before you access the camera, follow the steps to set **User Account Control Settings** to **Never notify**.



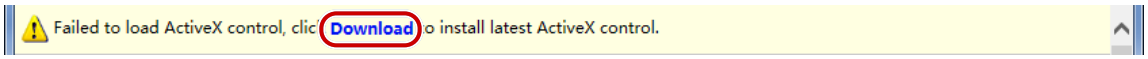
Logging In to the Web Interface

The default static IP address of the camera is 192.168.1.13, and the default subnet mask is 255.255.255.0.

DHCP is turned on by default. If a DHCP server is used in the network, the IP address of your camera may be assigned dynamically, and you need to use the correct IP address to log in. Use the Guard Station client to view the dynamic IP address of your camera.

The following takes IE as an example to describe the login procedure.

1. Browse to the login page by entering the correct IP address of your camera in the address bar.



2. If you log in for the first time, follow system prompts and install the ActiveX. You need to close your browser to complete the installation.

NOTE!

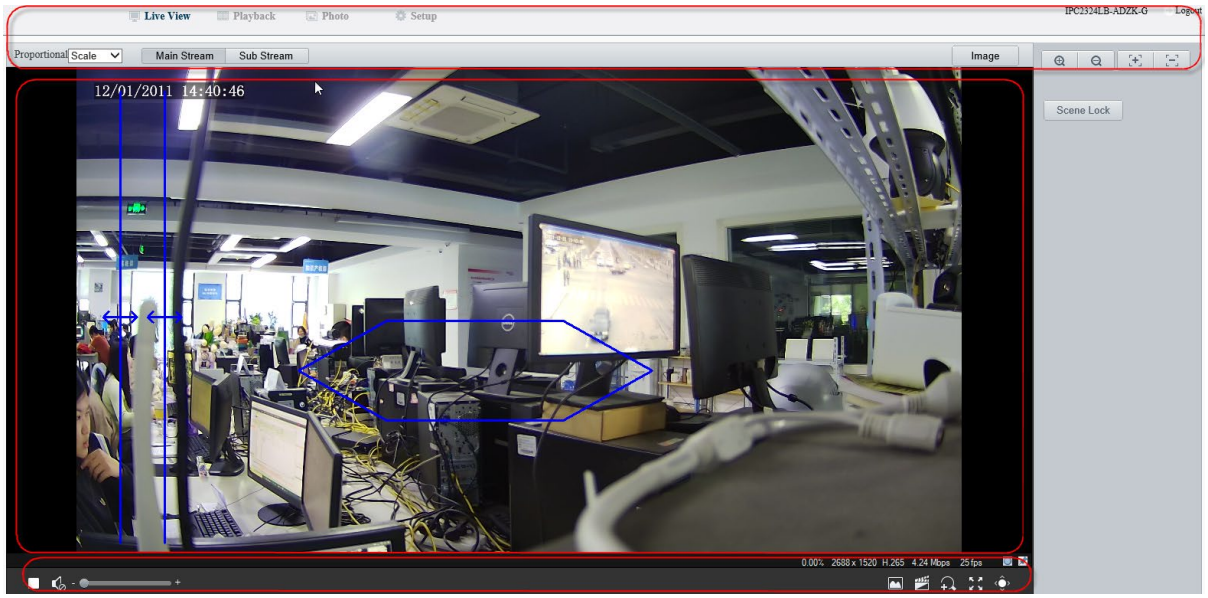
- To manually load the ActiveX, type*http://IP address*/ActiveX/Setup.exe in the address bar and press Enter.
- The default password is intended for your first login. For security, please set a strong password after your first login. A strong password shall include at least nine characters comprising digits, letters, and special characters.
- The camera protects itself from illegal access by limiting the number of failed login attempts. If login fails six times consecutively, the camera locks automatically for ten minutes.

3. Enter the username and password, and then click **Login**. For the first login, use the default username "admin" and password "123456".

- If you log in with **Save Password** selected, you do not need to enter the password each time when you log in. To ensure security, you are not advised to select **Save Password**.
- To clear the **Username** and **Password** text boxes and the **Save Password** checkbox, click **Reset**.

Introduction to the Web Interface

By default the live view window is displayed when you are logged in to the Web interface. The following shows an example.



No.	Description
1	Menu
2	Live view window
3	Live view toolbar

Initial Configuration

After you log in to the device, please perform the following initial configuration.

Item	Description
1. Ethernet.	Reconfigure the device IP and network parameters based on the actual networking.
2. Log out and log in again to the Web using the new IP address.	-
3. Set the system time.	Set the system time based on the actual situation.
4. (Optional) Set the management server.	Set the management server based on the actual networking.
5. (Optional) Set the server for storing	Set the server for storing photos based on the actual

Item	Description
photos.	networking.
6. Set OSD.	Set the information displayed on the screen as needed, for example, time.
7. (Optional) Manage users.	Change the default password and add common users as needed.

You can watch the live video after finishing the initial configuration. Please configure other parameters as needed.

NOTE!

- The displayed live view interface, parameters displayed and value ranges may vary with models. Please see the actual Web interface for details.
- The parameters that are grayed out cannot be modified. For the actual settings, see the Web interface.
- It is recommended that you change the password when you are logged in the first time. For details about how to change a password, see Security.

3 Configuring Parameters

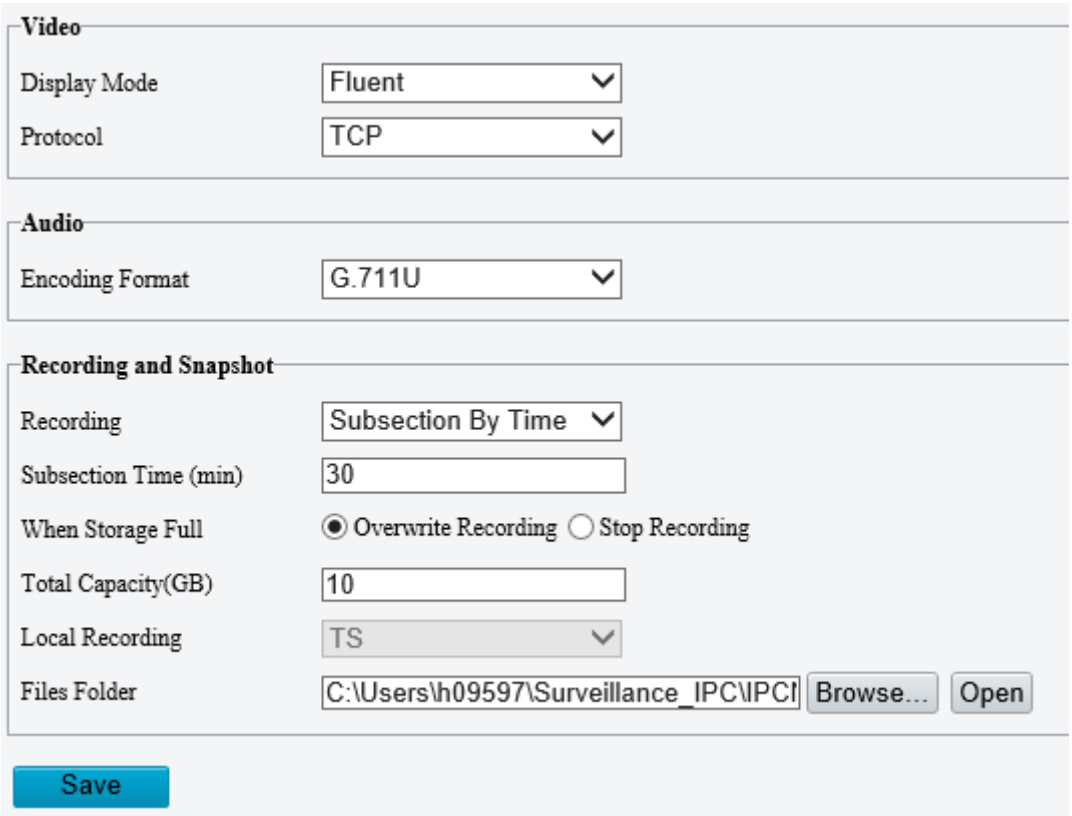
Local Parameters

Set local parameters for your PC.

NOTE!

The local parameters displayed may vary with device model. Please see the actual Web interface for details.

1. Click **Setup** > **Common** > **Local Parameters**.



2. Modify the settings as required. The following table describes some major parameters.

Parameter		Description
Video	Display Mode	Set the display mode according to the network status, including **Min. Delay**, **Balanced**, **Fluent** and **Custom** (from low delay to high delay). You may also customize the display mode as needed.
	Protocol	Set the protocol used to transmit media streams to be decoded by the PC.
Audio	Encoding Format	Select the audio encoding format, including G.711U and G.711A.
Recording and Snapshot	Recording	• Subsection By Time: Duration of recorded video for each recording file on the computer. For example, 2 minutes. • Subsection By Size: Size of each recording file stored on the computer. For example, 5M.
	When Storage Full	• Overwrite Recording: When the allocated storage space on the computer is used up, the camera deletes the existing recording files to make room for the new recording file. • Stop Recording: When the allocated storage space on the computer is used up, recording stops automatically.
	Files Folder	The path for saving snapshots and recordings. The maximum path length is 260 bytes. If the limit is exceeded, recording or snapshot during live view will fail, and messages will appear on the screen.

3. Click **Save**.

Network Configuration

Ethernet

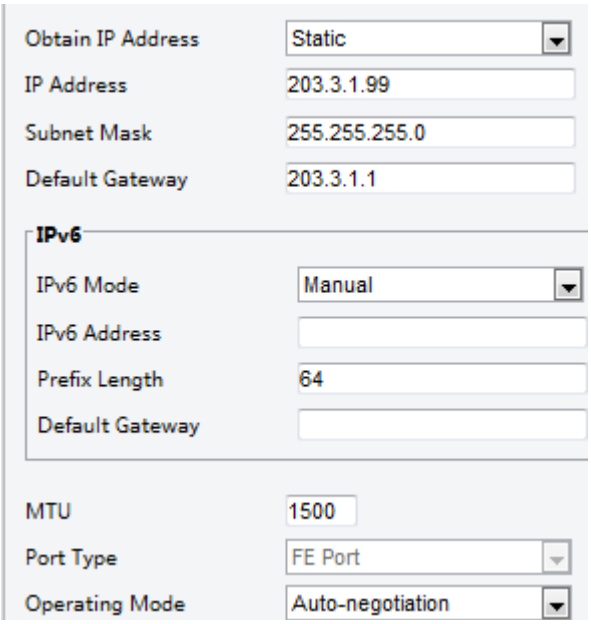
Modify communication settings such as the IP address for the camera so that the camera can communicate with other devices.

NOTE!

- After you have changed the IP address, you need to use the new IP address to log in.
- The configurations of DNS (Domain Name System) server are applicable when the device is accessed by domain name.

Static Address

1. Click **Setup** > **Network** > **Network**.



2. Select **Static** from the **Obtain IP Address** drop-down list.
3. Enter the IP address, subnet mask, and default gateway address. Make sure that the IP address of the camera is unique in the network.
4. Click **Save**.

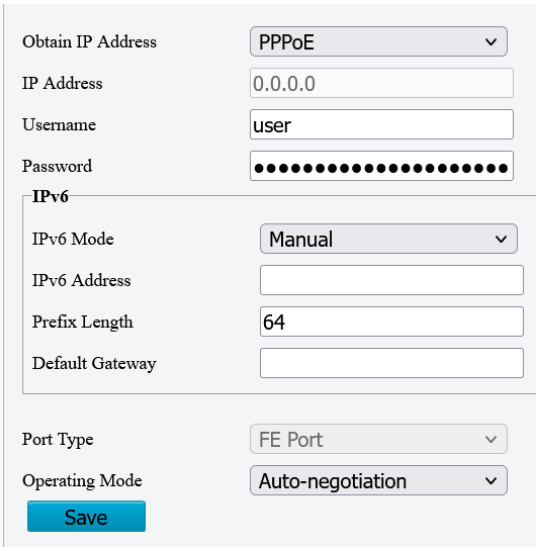
PPPoE

NOTE!

This function is not supported by some models. Please see the actual model for details.

If the camera is connected to the network through Point to Point over Ethernet (PPPoE), you need to select PPPoE as the IP obtainment mode.

1. Click **Setup** > **Network** > **Network**.



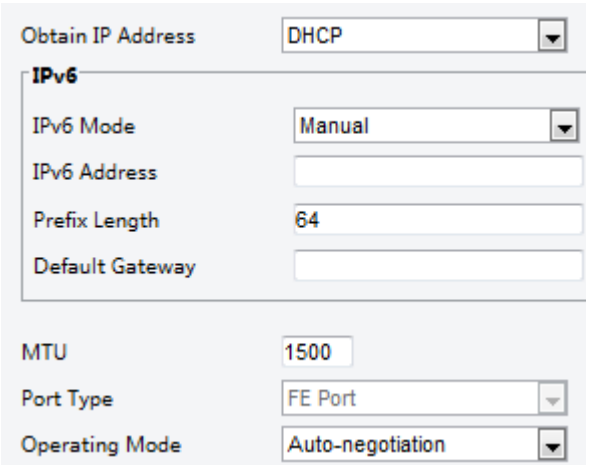
2. Select **PPPoE** from the **Obtain IP Address** drop-down list.
3. Enter the username and password provided by your internet Service Provider (ISP).
4. Click **Save**.

DHCP

The Dynamic Host Configuration Protocol (DHCP) is enabled by default when the camera is delivered. If a DHCP server is deployed in the network, the camera can automatically obtain an IP address from the DHCP server.

To manually configure DHCP, follow the steps below:

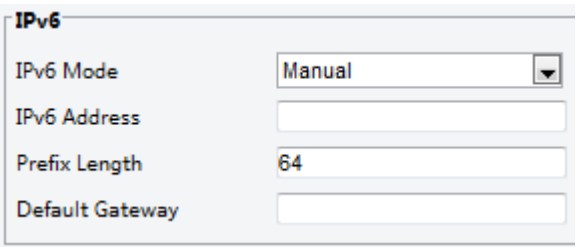
1. Click **Setup** > **Network** > **Network**.



2. Select **DHCP** from the **Obtain IP Address** drop-down list.
3. Click **Save**.

IPv6

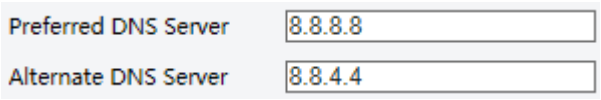
1. Click **Setup** > **Network** > **Network**.



2. By default the **IPv**6 mode is set to **Manual**.
3. Enter the IPv6 address, set the prefix length and default gateway. The IP address must be unique on the network.
4. Click **Save**.

DNS

1. Click **Setup** > **Network** > **DNS**.



2. Set DNS server addresses.
3. Click **Save**.

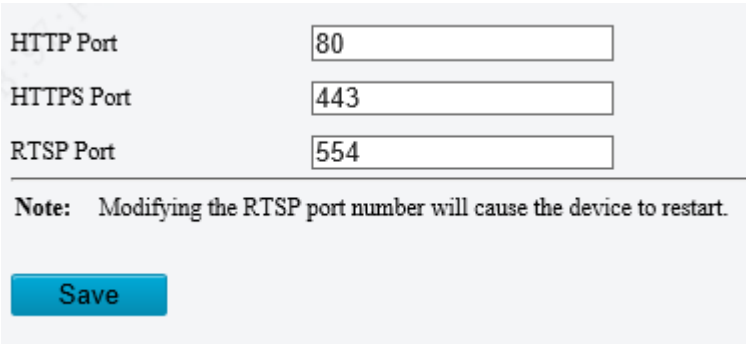
Port

Port

NOTE!

This function is not supported by some models. Please see the actual model for details.

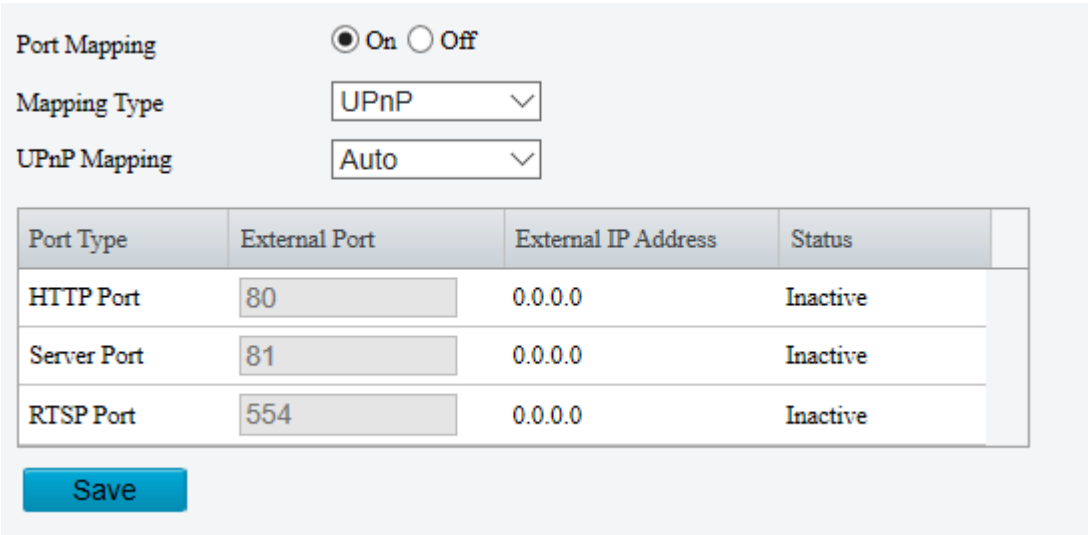
1. Click **Setup** > **Network** > **Port**.



2. Configure relevant port numbers.
3. Click **Save**.

Port Mapping

1. Click **Setup** > **Network** > **Port**. Go to **Port Mapping** tab**.**



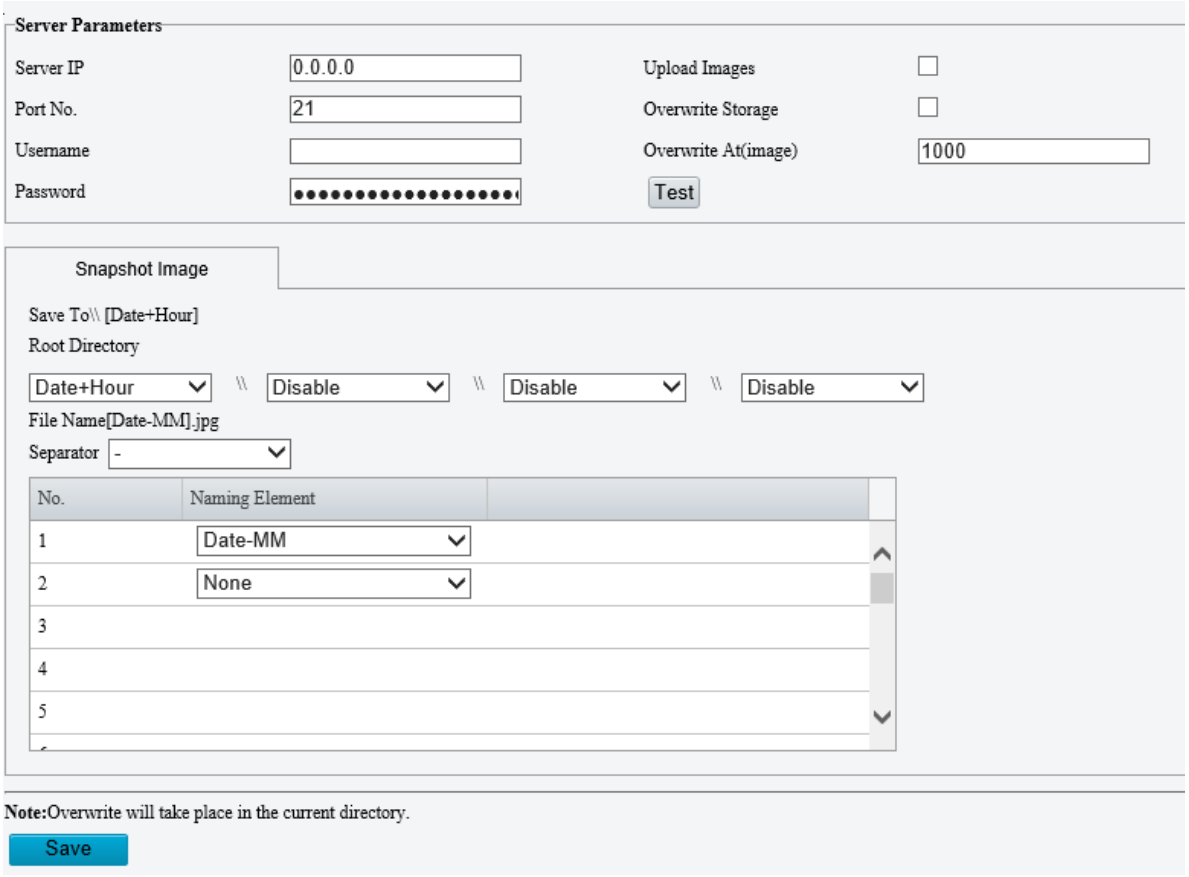
2. Enable **Port Mapping** and select mapping type. If **Manual** is selected, then external ports must be configured (external IP is obtained automatically by the camera). If the configured port is occupied, then the **Status** will show Inactive.
3. Click **Save**.

FTP

All snapshots (except face detection) are saved through the general FTP service. After the configuration of FTP, you will be able to upload snapshots from network cameras to the specified FTP server.

General

1. Click **Setup** > **Storage** > **FTP**. Go to **General** tab.

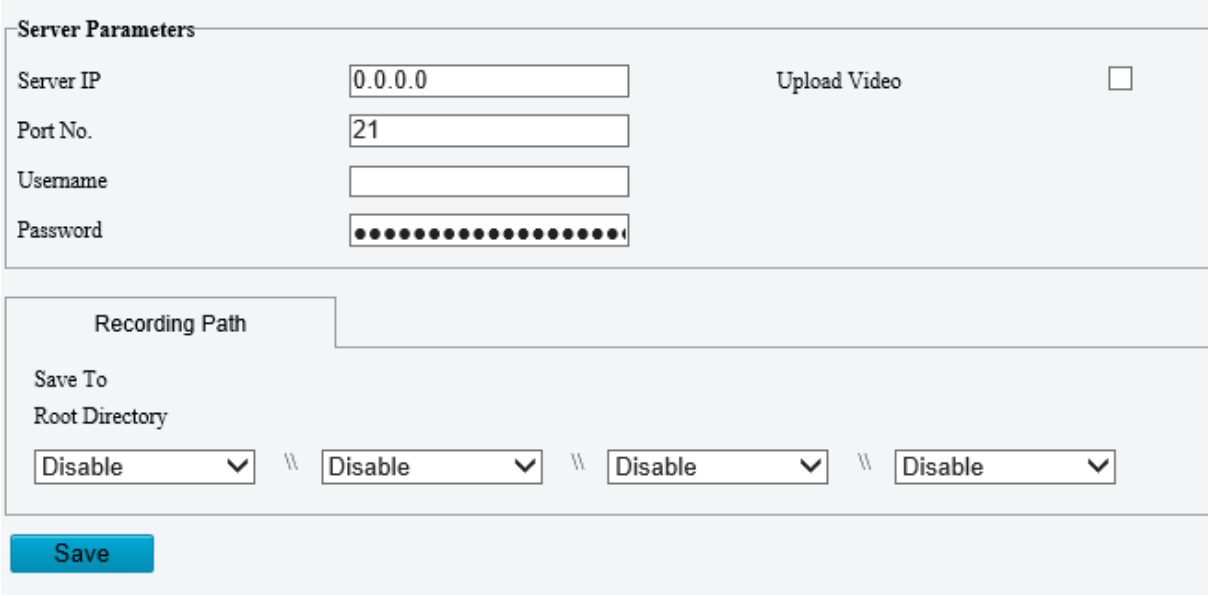


2. Set the IP address and port for the FTP server, username and password used to upload images to the FTP server, select **Upload Images**, **Overwrite Storage** and set **Overwrite At** (threshold for overwriting images).Some camera models support FTP test. You may test FTP after completing FTP settings correctly.
3. Set the path for saving snapshots on the FTP server and the file name format. For example, set path as Preset No.\\IP Address\\Date\\Hour(s), and set file name as Preset No.-PTZ Zoom-PTZ Latitude-PTZ Longitude.jpg.
4. Click **Save**.

Video

This function is used to store video taken for smart functions such as face recognition.

1. Click **Setup** > **Storage** > **FTP**. Go to **Video** tab.

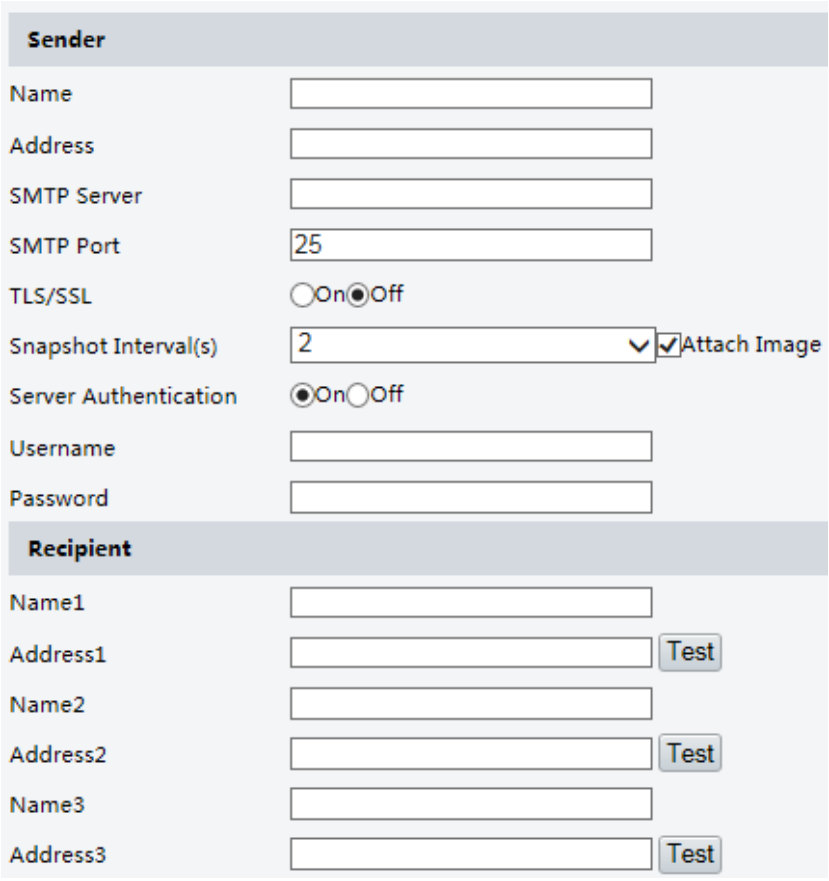


2. Set the IP address and port of the FTP server, username and password used to upload video to the FTP server.
3. Set the path for saving video on the FTP server and the file name format.
4. Click **Save**.

E-mail

After the configuration of E-mail, when alarms are triggered, you will be able to send messages to the specified E-mail address.

1. Click **Setup** > **Network** > **E-mail.**



2. Configure relevant parameters of the sender and the recipient. Some camera models support Email test. You may test email after setting the recipient address. The following table describes some major parameters.

Parameter	Description
TLS/SSL	When enabled, the e-mail will be encrypted using TLS (Transport Layer Security) or Secure Socket Layer (SSL) to protect privacy. First it tries to send through an SSL connection. If the SMTP server supports SSL, the e-mail will be sent through the SSL connection; otherwise, it tries to send using STARTTLS.
Attach Image	When enabled, the e-mail will contain 3 instant snapshots as attachment according to the Capture Interval.
Username/Password	Username and password of the registration email address. The password allows the following special characters \ / : * ? ' " <> | % &

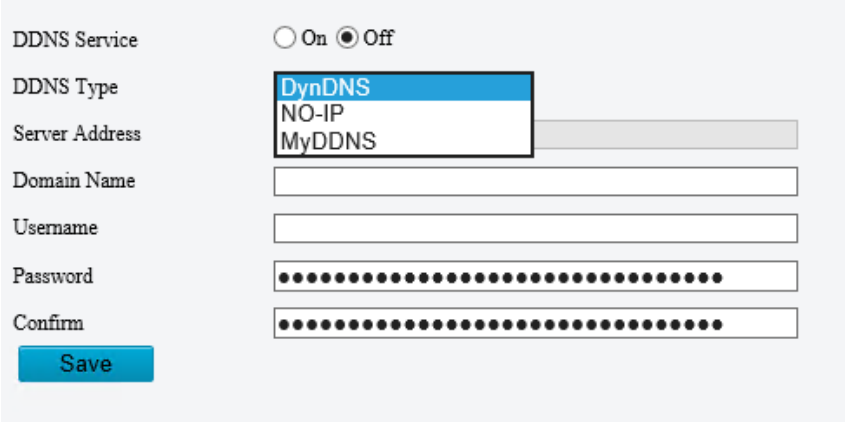
3. Click **Save**.

DDNS

NOTE!

This function is not supported by some models. Please see the actual model for details.

1. Click **Setup** > **Network** > **DDNS**.



2. Enable **DDNS Service**.
3. Select a DDNS type: DynDNS, NO-IP, or MYDDNS.
4. Complete other settings including server address, domain name, username and password.
5. Click **Save**.

P2P

NOTE!

- This function is not available to all models.
- Scan the QR code with your mobile phone (iOS or Android) to download the APP.
- When installed, run the APP to add the camera. Please refer to the online help in the APP for detailed steps.

1. Click **Setup** > **Network** > **P2P>Star4live**.

2. Select **On** to enable cloud service.
3. Click **Save**.

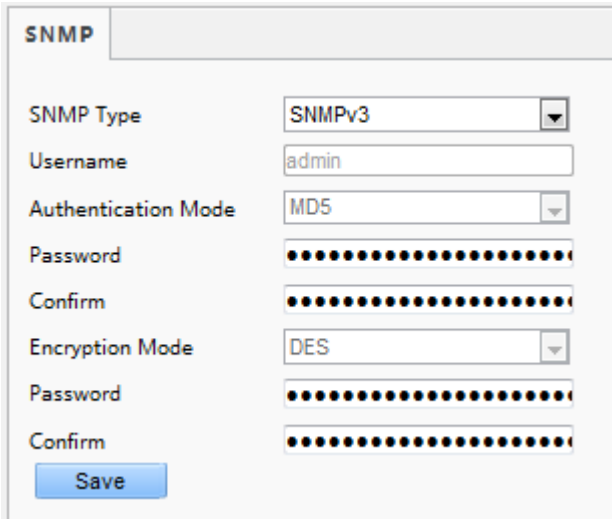
SNMP

SNMPv3 is recommended when a camera needs to transfer configuration with the central server. Both the camera and the central server should support SNMPv3.

NOTE!

- Two options are available: SNMPv3 (default) and SNMPv2.
- If you choose SNMPv2, an onscreen message will remind you of potential risks and ask if you want to continue.

1. **Click Setup** > **Network** > **SNMP**



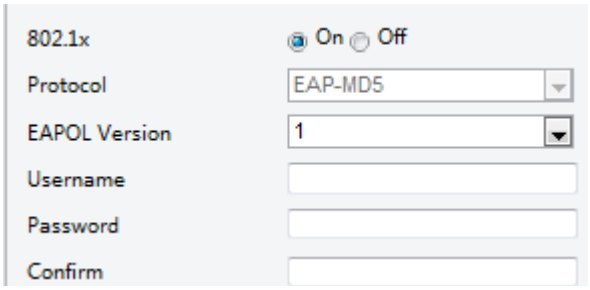
2. **Select SNMPv3 and complete settings.**
3. Click **Save**.

On the SNMPv2 setting page, **Read-Only Community Name** is used for two-way authentication between a camera and the central server. The default name is **public**, and you may change it as needed. If you change the **Read-Only Community Name**, you should change it into the same one on the central server, or the two-way authentication will not be completed.

802.1x

802.1x provides authentication to devices (e.g., cameras) trying to connect to a network. Only the authenticated devices can connect the network. This enhances security.

1. Click **Setup** > **Network** > **802.1x**.

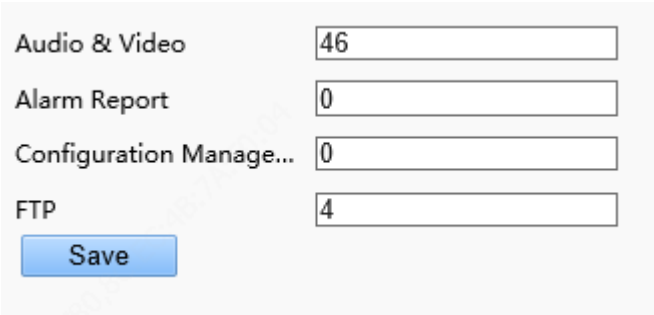


2. Select **On** and then complete other settings.
3. Click **Save**.

QoS

QoS(Quality of Service) is the ability to provide better service for specified network communication. As a network security mechanism, QoS is used to address problems like network delay and blocking. When the network is overloaded or congested, QoS ensures that critical services are not delayed or discarded and that the network runs efficiently.

1. Click **Setup** > **Network** > **QoS.**



2. Set a priority level (0~63) for each service. At present, QoS allows you to assign different priority to audio and video, alarm report, configuration management and FTP transmission. The greater the value, the higher the priority. For example, if the value of audio and video is set to 60, alarm report and configuration management is set to 0, and FTP is set to 4, when network congestion occurs, the priority is to ensure the smooth running of audio and video.
3. Click **Save**.

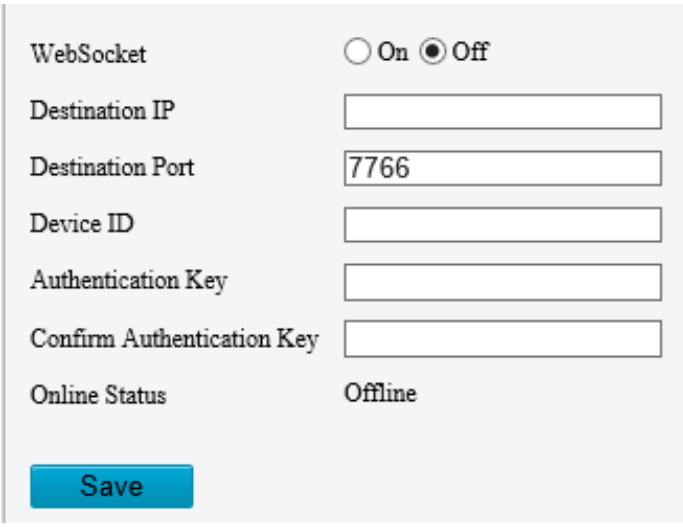
NOTE!

To use QoS, make sure that the switch support QoS mode.

WebSocket

WebSocket allows you to manage your camera on a third-party platform, such as device version and capability information acquisition, PTZ control, alarm reporting, etc.

1. Go to **Setup** > **Network** > **WebSocket**.



2. Set the parameters.

Item	Description
WebSocket	Select to enable or disable WebSocket.
Destination IP	Enter the IP address of the third-party platform.
Destination Port	Enter the listener port of the third-party platform.
Device ID	The default device ID is the device's serial number. You can set a device ID as needed.
Authentication Key	Enter the authentication key used to connect the camera to a third-party platform. Make sure the authentication key configured on the camera and the third-party platform is the same.
Confirm Authentication Key	Confirm the authentication key you entered by entering it again.
Online Status	Check whether the device is successfully connected to the third-party platform.

3. Click **Save**.

Video & Audio

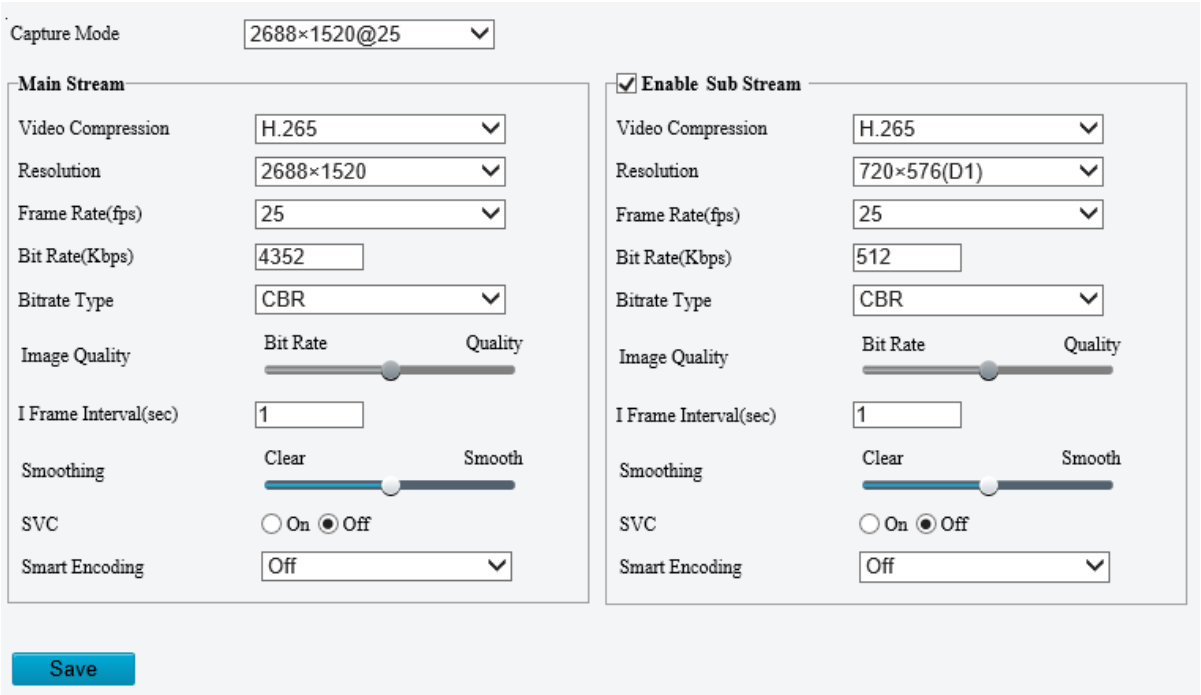
Video

You can set video parameters that your camera supports and view the current status of BNC output. If available, you may also enable sub-stream and third stream as required.

NOTE!

- This function may vary with models. Only some camera models support the third stream. To determine if your camera supports this function, see the Web interface.
- After enabling the sub or third stream, modify the parameters as required. The parameters for the sub and third stream have the same meanings as that for the main stream.

1. Click **Setup** > **Video & Audio** > **Video**.



2. Modify the settings as required. The following table describes some major parameters.

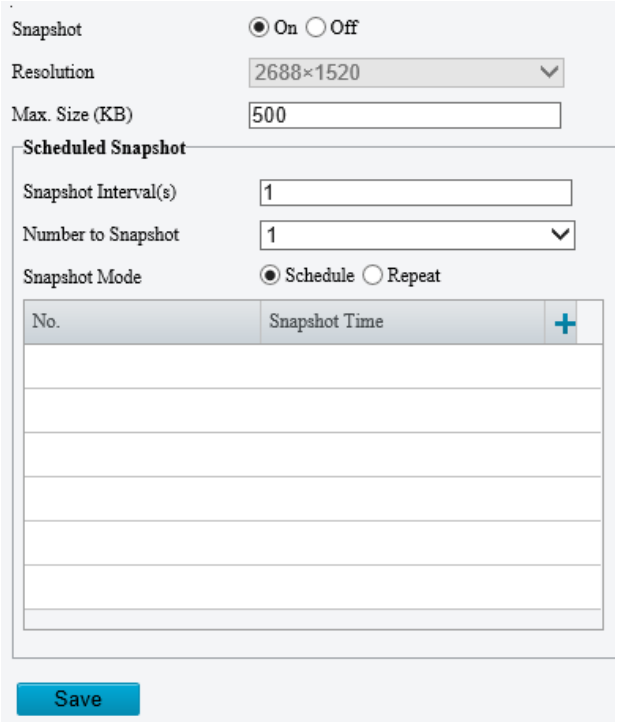
Parameter	Description
Video Compression	Three options: H.265, H.264 and MJPEG. **Note:** • Image Quality cannot be set when Video Compression is set to H.265 or H.264. When set to MJPEG, only five frame rates are available: 1,2, 3,4 and 5; and Bit Rate, I Frame Interval, Smoothing and Smart Encoding cannot be set. • The bit rate changes to the default when you change the setting between H.264 and H.265. The default bit rate for H.265 is half of that for H.264.
Frame Rate	Frame rate for encoding images. Unit: FPS (frame per second). **Note:** To ensure image quality, note that the frame rate should not be greater than the reciprocal of shutter speed.
Bitrate Type	• CBR: Constant Bit Rate, which means that the camera transmits data at a constant data rate. • VBR: Variable Bit Rate, which means that the camera adjusts the bit rate dynamically according to image quality.
Image Quality	When **Encoding Mode** is **VBR**, you can move the slider to adjust quality level for images. Moving the slider toward **Bit Rate** decreases the bit rate and may affect image quality. Moving the slider toward **Quality** increases the bit rate and improves image quality.
I Frame Interval	Interval at which an I frame is encoded. Normally, a shorter I frame interval offers better image quality but consumes more bandwidth.
SVC	SVC (Scalable Video Coding) can reduce storage without compromising playback quality.
Smart Encoding	• Basic Mode: The actual bit rate is around 3/4 of the set bit rate. • Advanced Mode: The actual bit rate is around 1/2 of the set bit rate. **Note:** • When MJPEG is enabled, Smart Encoding is not supported. Smart Encoding is only supported on H.264/H.265. • When Smart Encoding is enabled, the capture mode does not support frame rates higher than 30.

Parameter	Description
Smoothing	Set the extent of smoothing. Choosing **Clear** means disabling **Smoothing**. Moving the slider toward **Smooth** increases the level of smoothing but will affect image quality. **Note**: In a poor network environment, you can enable smoothing to get more fluent video.

3. Click **Save**.

Snapshot

1. Click **Setup** > **Video & Audio** > **Snapshot**.



2. Select **On**, and then set resolution, max. size and schedule as needed. Some parameters are described in the table below.

Parameter	Description
Snapshot Interval	Interval between two snapshots. For example, with Snapshot Interval set to 1 and Number of Snapshot set to 2, the camera will take 2 snapshots (take one first and then take another after 1 second).
Number to Snapshot	Currently 1, 2, and 3 snapshots are allowed.
Snapshot Mode	**Schedule**: You need to set a snapshot time, e.g., 19:12:00, which means the camera takes a snapshot at 19:12:00. **Repeat**: Allows you to set an interval (unit: sec). For example, according to the settings shown in the figure above, 60 seconds must elapse before the camera takes another two snapshots.

3. Click **Save**.

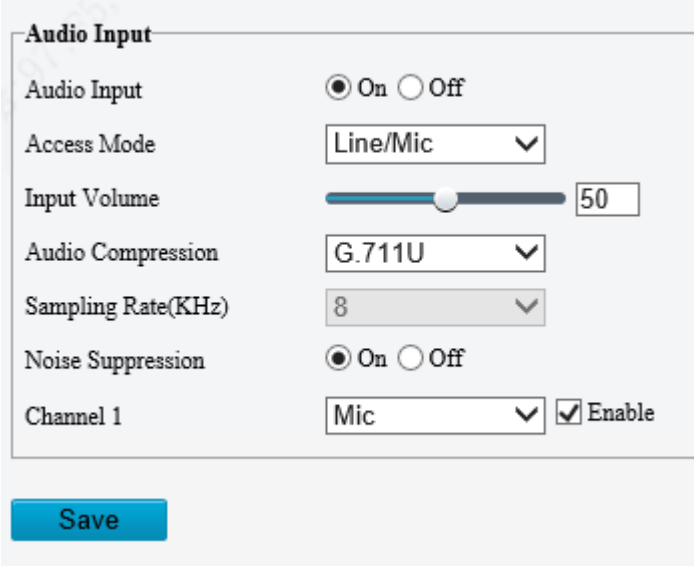
Audio

Audio configuration means setting audio encoding parameters for your camera.

NOTE!

This function is not supported by some models. Please see the actual model for details.

1. Click **Setup** > **Video & Audio** > **Audio**.



2. Modify the settings as required. The following table describes some major parameters.

Parameter		Description
Audio Input	Audio Input	Turn on or off **Audio Input**. **Note**: It is recommended to select **Off** if you do not need audio. This can improve device performance to some extent.
	Access Mode	Currently only supports the **Line/Mic** mode. **Note**: This function is not available to devices with two audio output channels.
	Audio Compression	Two options: **G.711U** and **G.711A**. G.711U and G.711A support 8K sampling rate only.
	Noise Suppression	Used to reduce noise in images. To enable noise suppression, select **On**.
	Channel	Audio output channel. Select the **Enable** check box to enable audio output **Note**: Only some camera models support two channels.

3. Click **Save**.

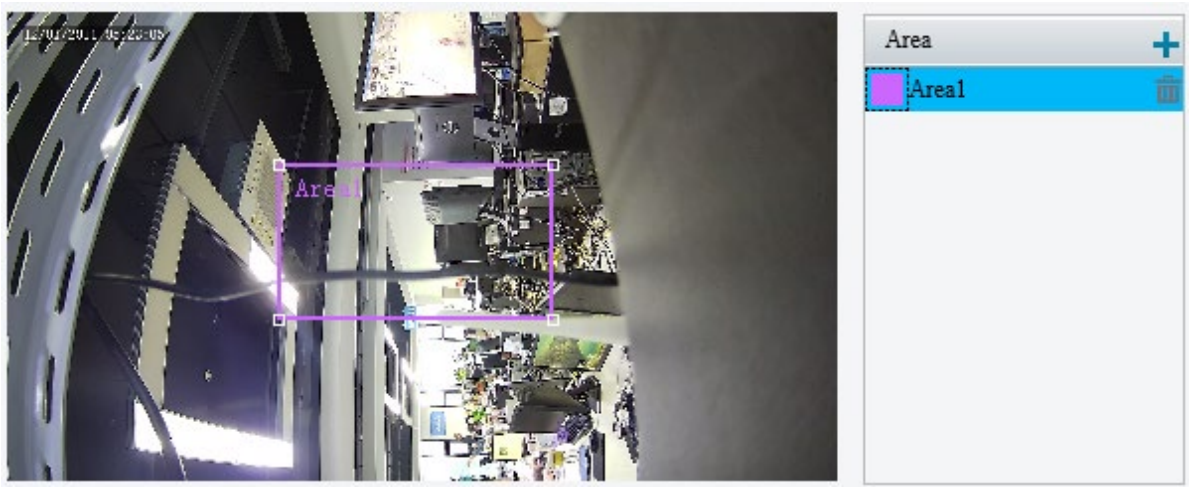
ROI

When Region of Interest (ROI) is enabled, the system ensures image quality for ROI first if the bit rate is insufficient.

NOTE!

This function is not supported by some models. Please see the actual model for details.

1. Click **Setup** > **Video & Audio** > **ROI**.



2. Click , and then drag the mouse to cover the intended part of the images. To delete, select the area and then click .

Media Stream

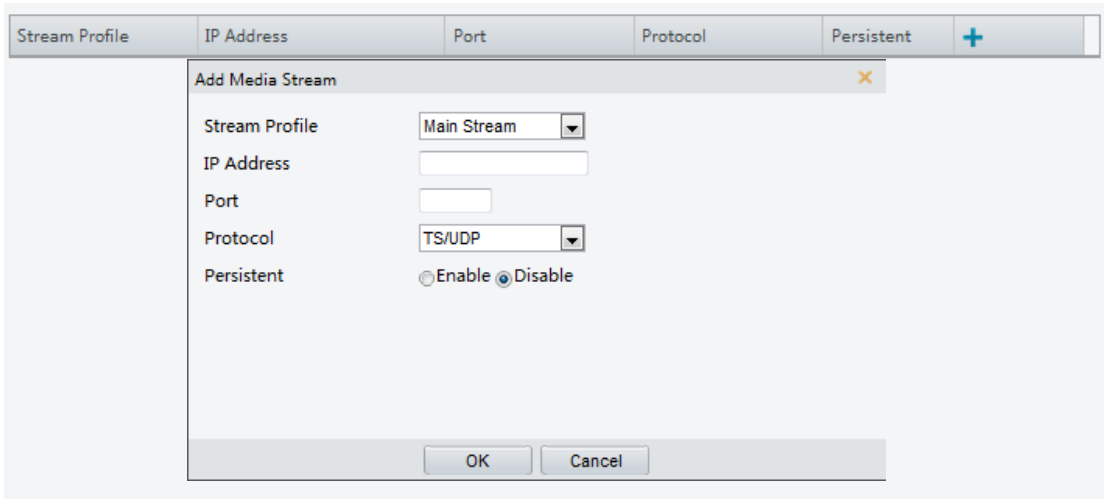
Media Stream

You can display the established media streams from a camera. You may also set the camera so it transmits code streams by the UDP or TCP protocol to a specified IP address and port number. The settings can be saved and take effect after the camera is restarted.

NOTE!

- This function is not supported by some models. Please see the actual model for details.
- Choosing a transport protocol based on your actual needs and network performance. Generally speaking, TCP enables better image quality than UDP but also causes higher latency.

1. Click **Setup** > **Video & Audio** > **Media Stream**.



2. Click , select a stream type, and then set the IP address and port number of the unicast or multicast group for the decoding device that receives audio and video streams from the camera.

   If you want the device to establish the media stream that has been configured before automatically after the restart, select **Yes** for **Persistent**.

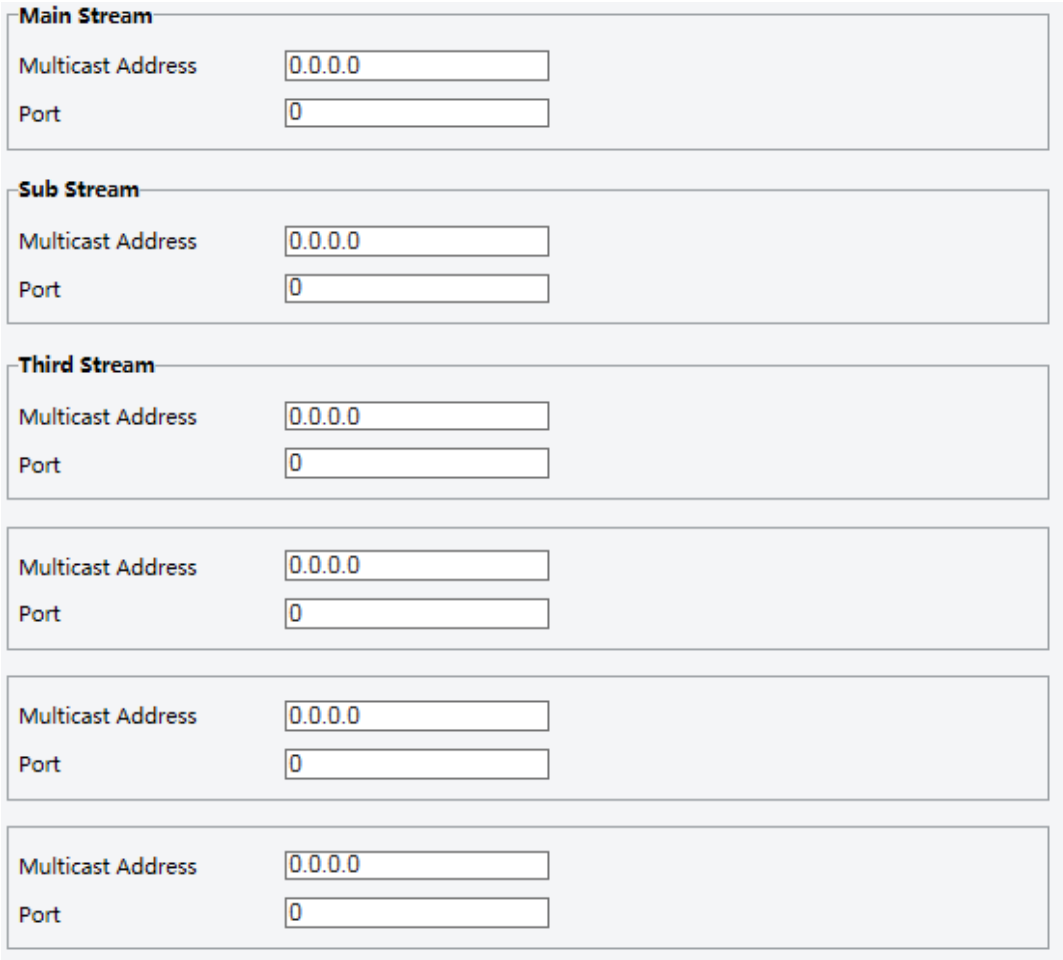
3. To delete a stream, click .
4. Click **Submit** to complete the operations.

RTSP Multicast Address

After an RTSP multicast address is configured, the third-party player can request the RTSP multicast media stream from the camera through the RTP protocol.

1. Click **Setup** > **Video & Audio** > **Media Stream** > **RTSP Multicast Address**.

For some camera models, the page is displayed as follows.



2. Set the multicast address (224.0.0.0to239.255.255.255) and port number (0 to65535).
3. Click **Save**.

Image

Image

NOTE!

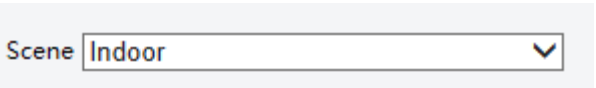
- The image parameters displayed and value ranges allowed may vary with camera model. For the actual parameters and value ranges of your camera, see the Web interface. You may move the sliders to adjust settings or enter values in the text boxes directly.
- Clicking **Default** will restore all the default image settings.

Setting the Scene

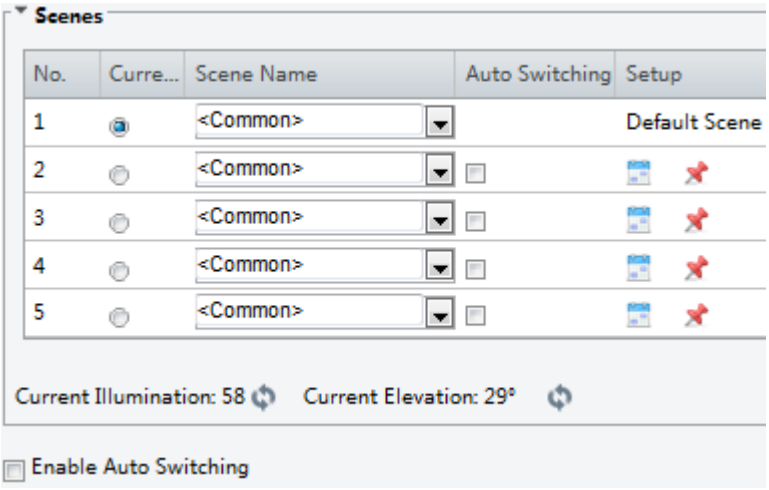
Set image parameters to achieve the desired image effects based on live video in different scenes.

Click **Setup** > **Image** > **Image**.

The scene management page for some models is displayed as follows, you can select the desired scene in the drop-down list.



The scene management page of some models is displayed as follows, you can take the following steps to configure the scene.



1. Click **Scenes**.
2. Select a scene, and then set scene switching parameters. The following table describes some major parameters.

Column	Description
Current	Indicates the scene that is being used. **Note**: • Select an option button to switch to the scene and display the corresponding image parameters for the scene. • The camera switches the current scene automatically when **Enable Auto Switching** is selected.
Scene Name	Name of the current scene. The device provides several preset scene modes. When you select a scene, the corresponding image parameters are displayed. You can adjust image settings according to actual needs. • Common: Recommended for outdoor scenes. • Indoor: Recommended for indoor scenes. • Road Highlight Compensation(HLC): Suppress strong light such as headlights on roads and spotlight in parks. Recommended for capturing vehicle license plates. • WDR: Recommeded for scenes with high-contrast lighting, such as window, corridor, front dooror other scenes that are bright outside but dim inside. • Starlight: Recommeded for scenes with low lighting. • Custom: Set a scene name as needed.
Auto Switching	Indicates whether to add a scene to the auto-switching list. **Note**: If **Auto Switching** is selected, the system switches to a scene automatically when the condition for switching to the scene is met. By default the auto-switching list includes the default scene.
Setup	Click to set conditions for auto-switching, including schedule, illumination, and current elevation (angle between the PTZ and the horizontal direction). It means that auto-switching is triggered only when illumination and the current elevation during the set time period meet the set conditions. A condition is invalid if both the start and end values are set to 0.

3. Select a scene and then click to set it as the default scene.

4. If auto-switching is enabled, the camera can switch to the scene automatically when the condition for switching to a non-default scene is met. Otherwise, the camera remains in the default scene. When auto-switching is not enabled, the camera remains in the current scene.

NOTE!

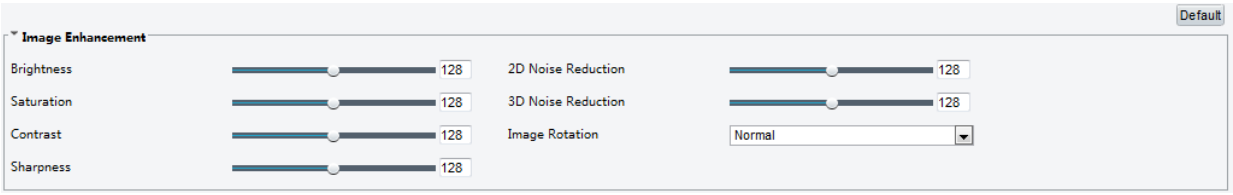
- If Auto Switching is enabled (scene settings will be unavailable), the device will switch between the set scenes. If not, the device will stay at the current scene. The device will stay at default scenes unless the non-default scenes are triggered.
- If multiple non-default scenes are triggered, then the device will switch to the scene with the minimum number (starts from 1 to 5).

Image Enhancement

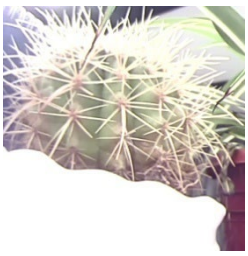
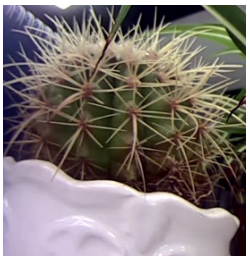
NOTE!

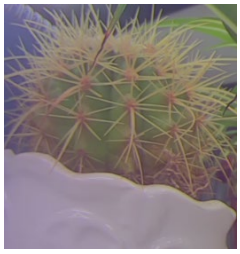
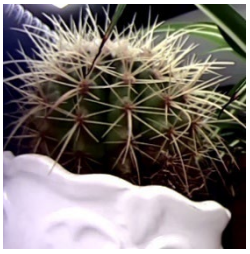
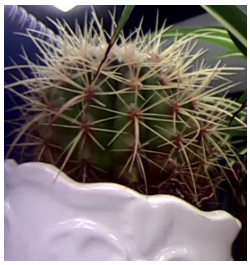
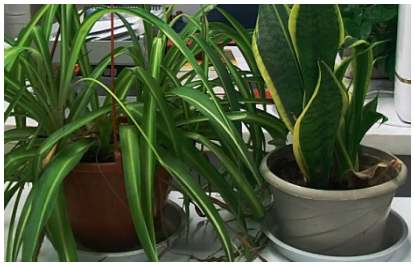
This function may vary with models. Please see actual Web interface for details.

1. Click **Setup** > **Image** > **Image** and then click **Image Enhancement**.



2. Use the sliders to change the settings. You may also enter values directly. The following table describes some major parameters.

Item	Description
Brightness	Set the degree of brightness of images.   Low brightness High brightness
Saturation	The amount of a hue contained in a color.   Low saturation High saturation

Item	Description
Contrast	Set the degree of difference between the blackest pixel and the whitest pixel.   Low contrast High contrast
Sharpness	Contrast of boundaries of objects in an image.   Low sharpness High sharpness
2D Noise Reduction	Reduce the noise of images. The function may cause image blurring.
3D Noise Reduction	Reduce the noise of images. The function may cause motion blur (or ghosting in some applications).
Image Rotation	Rotation of the image.   Normal Flip Vertical   Flip Horizontal 180°

Item	Description
	 90°Clockwise  90°Anti-clockwise

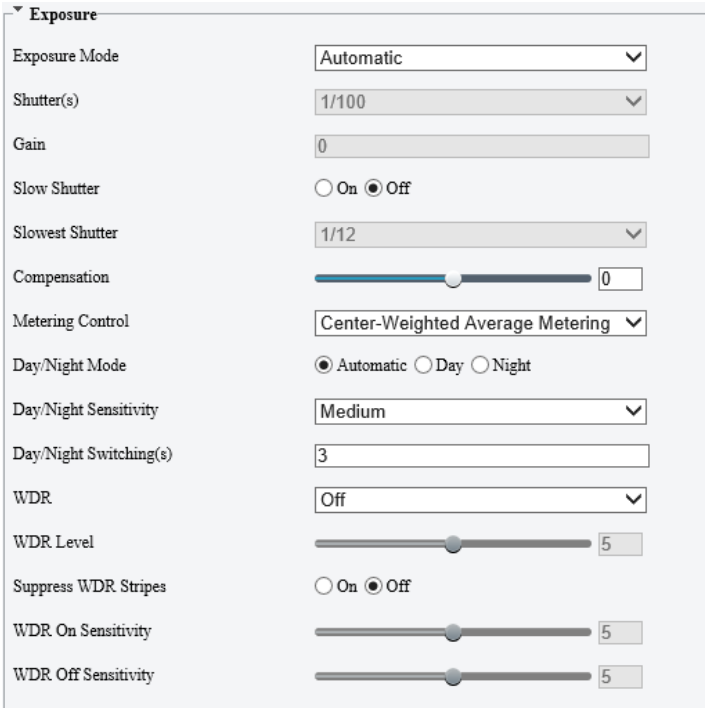
3. To restore default settings in this area, click **Default**.

Exposure

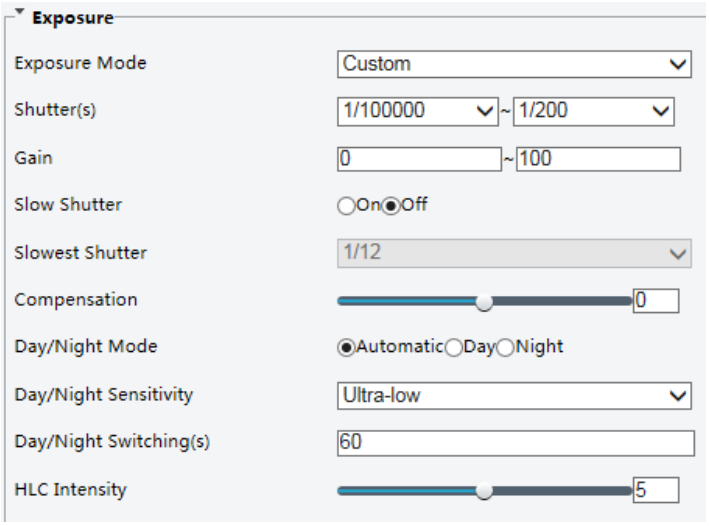
NOTE!

- This function may vary with models. Please see actual Web interface for details.
- The default settings are scene-adaptive. Use default settings unless modification is necessary.

1. Click **Setup** > **Image** > **Image** and then click **Exposure**.



For some camera models, the page is displayed as follows.



2. Set the parameters as required. The following table describes some major parameters.

Parameter	Description
Exposure Mode	Select the correct exposure mode to achieve the desired exposure effect. • Automatic: The camera automatically adjusts exposure according to the environment. • Custom: The user sets exposure as needed. • Indoor 50Hz: Reduce stripes by limiting shutter frequency. • Indoor 60Hz: Reduce stripes by limiting shutter frequency. • Manual: Fine tune image quality by setting shutter, gain and iris manually. • Low Motion Blur: Control the minimum shutter to reduce motion blur in faces captured in motion.
Shutter (s)	Shutter is used to control the light that comes into the lens. A fast shutter speed is ideal for scenes in quick motion. A slow shutter speed is ideal for scenes that change slowly. **Note**: • You can set a shutter speed when **Exposure Mode** is set to **Manual** or **Shutter Priority**. • If **Slow Shutter** is set to **Off**, the reciprocal of the shutter speed must be greater than the frame rate.
Gain (dB)	Control image signals so that the camera outputs standard video signals according to the light condition. **Note:** You can set this parameter only when **Exposure Mode** is set to **Manual** or **Gain Priority**.
Slow Shutter	Improves image brightness in low light conditions. **Note:** You can set this parameter only when **Exposure Mode** is not set to **Shutter Priority** and when **Image Stabilizer** is disabled.
Slowest Shutter	Set the slowest shutter speed that the camera can use during exposure. **Note:** You can set this parameter only when **Slow Shutter** is set to **On**.
Compensation	Adjust the compensation value as required to achieve the desired effects. **Note:** You can set this parameter only when **Exposure Mode** is not set to **Manual**.
Metering Control	Set the way the camera measures the intensity of light. • Center-Weighted Average Metering: Measure light mainly in the central part of images. • Evaluative Metering: Measure light in the customized area of images.

Parameter	Description
	• Spot Metering: Measure light in the customized area of images but can't increase the image brightness. **Note:** You can set this parameter only when **Exposure Mode** is not set to **Manual**.
Day/Night Mode	• Automatic: The camera outputs the optimum images according to the light condition. In this mode, the camera can switch between night mode and day mode automatically. • Night: The camera provides high-quality black and white images using the existing light • Day: The camera provides high-quality color images using the existing light.
Day/Night Sensitivity	Light threshold for switching between day mode and night mode. A higher sensitivity means that the camera is more sensitive to the change of light and becomes more easily to switch between day mode and night mode. **Note:** You can set this parameter only when **Day/Night Mode** is set to **Automatic.**
Day/Night Switching(s)	Set the length of time before the camera switches between day mode and night mode after the conditions for switching are met. **Note:** You can set this parameter only when **Day/Night Mode** is set to **Automatic.**
WDR	Enable WDR to distinguish the bright and dark areas in the same image. **Note:** You can set this parameter only when **Exposure Mode** is neither **Customize** nor **Manual** and when **Image Stabilizer** is disabled**.**
WDR Level	After enabling the WDR function, you can improve the image by adjusting the WDR level. **Note:** Use level 7 or higher when there is a high contrast between the bright and dark areas of the scene. In the case of low contrast, it is recommended to disable WDR or use level 1-6.
Suppress WDR Stripes	When enabled, the camera can automatically adjust slow shutter frequency according to the frequency of light to minimize stripes that may appear in images.
WDR On Sensitivity	When enabled, the camera can automatically switch sensitivity.
WDR Off Sensitivity	When enabled, the camera can automatically adjust the frequency of shutter same to light frequency to eliminate the streak effect in the image.

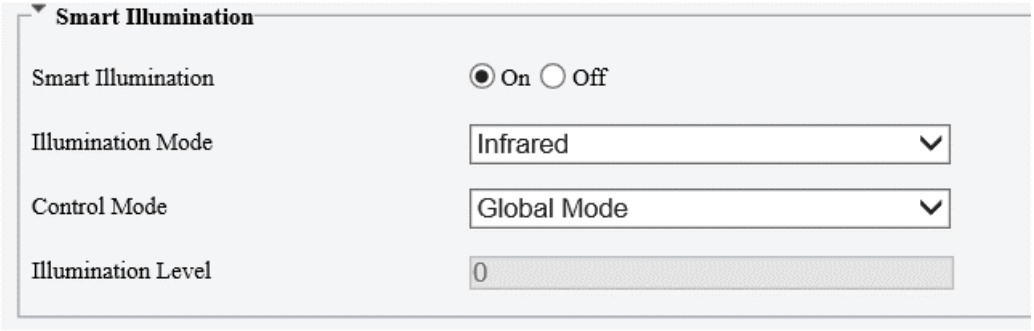
3. To restore the default settings, click **Default**.

Smart Illumination

NOTE!

This function may vary with models. Please see actual Web interface for details.

1. Click **Setup** > **Image** > **Image** and then click **Smart Illumination**.



2. Select the correct IR control mode and set the parameters. The following table describes some major parameters.

Parameter	Description
Illumination Mode	**Infrared**: The camera uses infrared light illumination. **Note**: When **Control Mode** is set to **Manual**, camera can set illumination level from 0~1000.
Control Mode	• **Global Mode**: The camera adjusts IR illumination and exposure to achieve balanced image effects. Some areas might be overexposed if you select this option. This option is recommended if monitored range and image brightness are your first priority. • **Overexposure Restrain**: The camera adjusts IR illumination and exposure to avoid regional overexposure. Some areas might be dark if you select this option. This option is recommended if clarity of the central part of the image and overexposure control are your first priority. • **Custom**: This mode allows you to manually control the intensity of IR illumination.
Illumination Level	Set the intensity level of the IR light. The greater the value, the higher the intensity. 0 means that the IR light is turned off. **Note**: You can set this parameter only when **Control Mode** is set to **Manual**.

3. To restore the default settings, click **Default**.

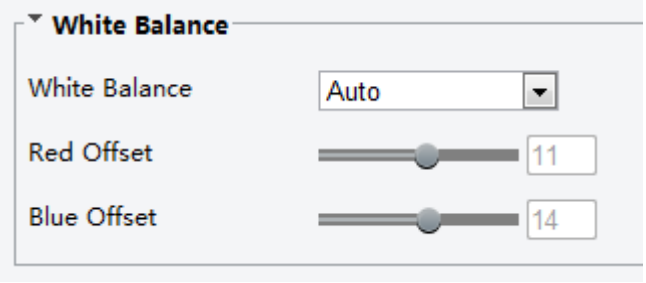
White Balance

White balance is the process of offsetting unnatural color cast in images under different color temperatures so as to output images that best suit human eyes.

NOTE!

This function may vary with models. Please see the actual Web interface for details.

1. Click **Setup** > **Image** > **Image** and then click **White Balance**.



2. Select a white balance mode as required. The following table describes some major parameters.

Parameter	Description
White Balance	Adjust the red or blue offset of the image:

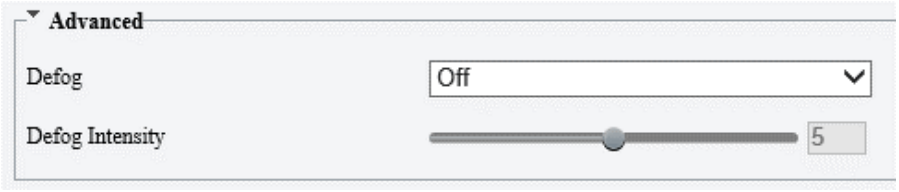
	• Auto/Auto2: The camera adjusts the red and blue offset automatically according to the light condition (the color tends to be blue).If the images are still unnaturally red or blue in Auto mode, please try Auto2. • Fine Tune: Allow you to adjust the red and blue offset manually. • Outdoor: Suitable for outdoor environment with a relatively greater color temperature range. • Locked: Lock the current color temperature without change. • Sodium Lamp: The camera adjusts red and blue offset automatically according to the light condition (the color tends to be red).
Red Offset	Adjust the red offset manually. **Note**: You can set this parameter only when **White Balance** is set to **Fine Tune**.
Blue Offset	Adjust the blue offset manually. **Note**: You can set this parameter only when **White Balance** is set to **Fine Tune**.

3. To restore the default settings, click **Default**.

Advanced

Use the defog function to adjust the clarity of images captured in fog or haze conditions.

1. Click **Setup** > **Image** > **Image** and then click **Advanced**.



NOTE!

- You can set this parameter only when WDR is turned off.
- Only some camera models support optical defog. When **Defog** is set to **On**, defog intensity level 6-9 represent optical defog, and images change from color to black/white when defog intensity is set from level 5 to 6; if **Defog** is set to **Auto** and defog intensity level is somewhere between 6-9, images do not automatically change to black/white in light fog conditions; the camera automatically switches to optical defog only in heavy fog conditions.

2. Enable the defog function and then select a level for the scene. Level 9 achieves the maximum defog effects, and level 1 achieves the minimum.

Defog Off

Defog On

3. To restore the default settings, click **Default**.

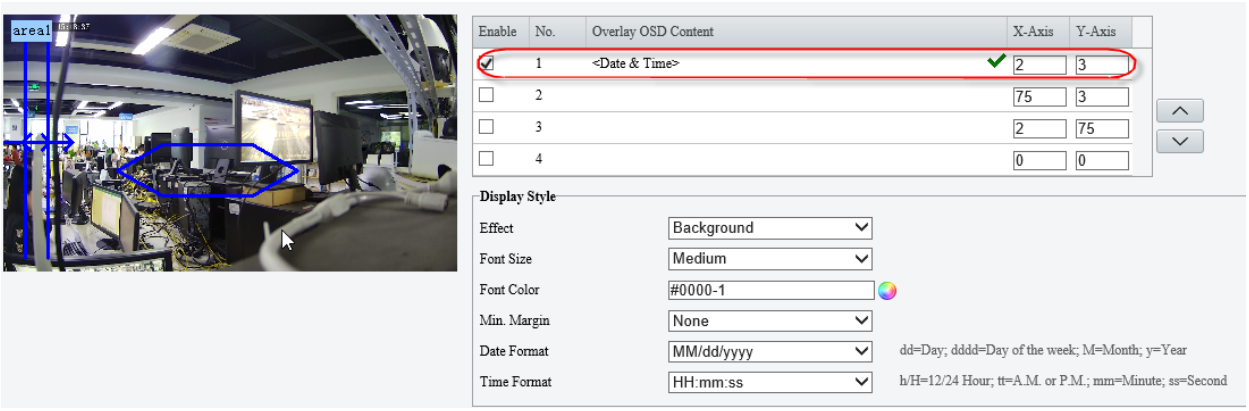
OSD

On Screen Display (OSD) is the text displayed on the screen with video images and may include time and other customized contents.

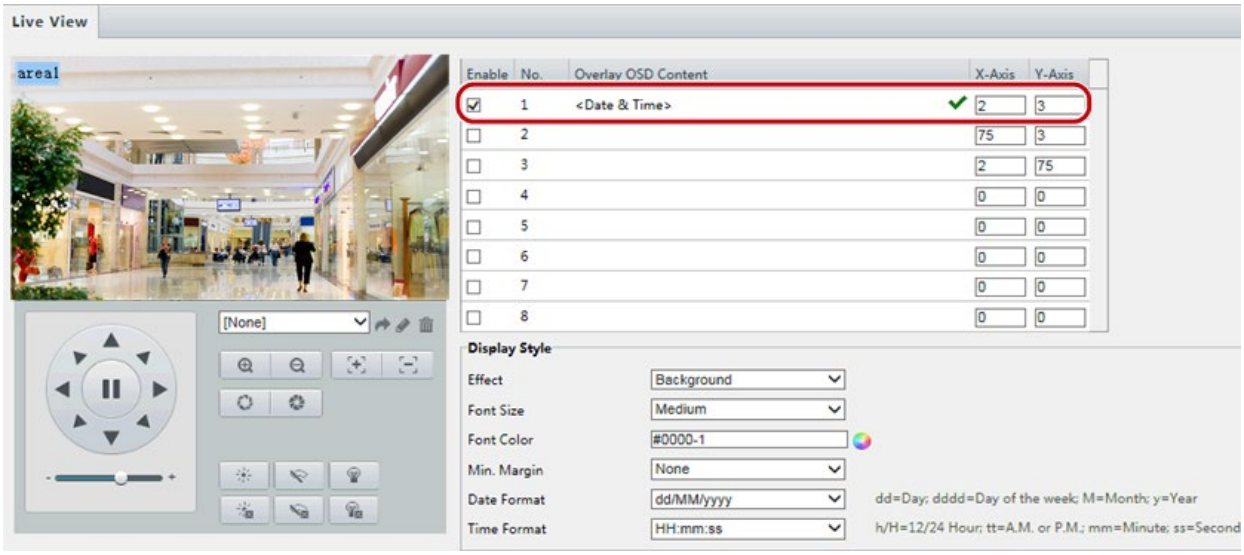
NOTE!

This function may vary with models. Please see the actual Web interface for details.

1. Click **Setup** > **Image** > **OSD**.



The OSD interface of some models is displayed as follows.



2. Select the position and content of the OSD.

- Position: Click the desired box in the **Live View** area. After the cursor shape is changed, click and hold the button to move the box to the desired position. To set the position precisely, use the X and Y coordinates under **Overlay Area**.
- Overlay OSD Content: The drop-down list provides **Time**, **Preset** and **Serial Info**. You may also select **Custom** and enter the content you want.
- After you have set the position and OSD content, the ✔ symbol appears in the **Status** column, which means that the OSD is set successfully. You may set multiple lines of contents for each area and use ∧ and ∨ to adjust the sequence of display.

3. After you have completed the settings, a message appears to indicate the successful settings.

You may right-click in the preview window and then choose to view in full screen mode or at an aspect ratio. You may also double-click the preview window to enter or exit full screen mode.

To cancel OSD for an area, clear the OSD content in the **Overlay OSD Content** column or select **None** in the **Position** column.

The following shows an example time OSD.

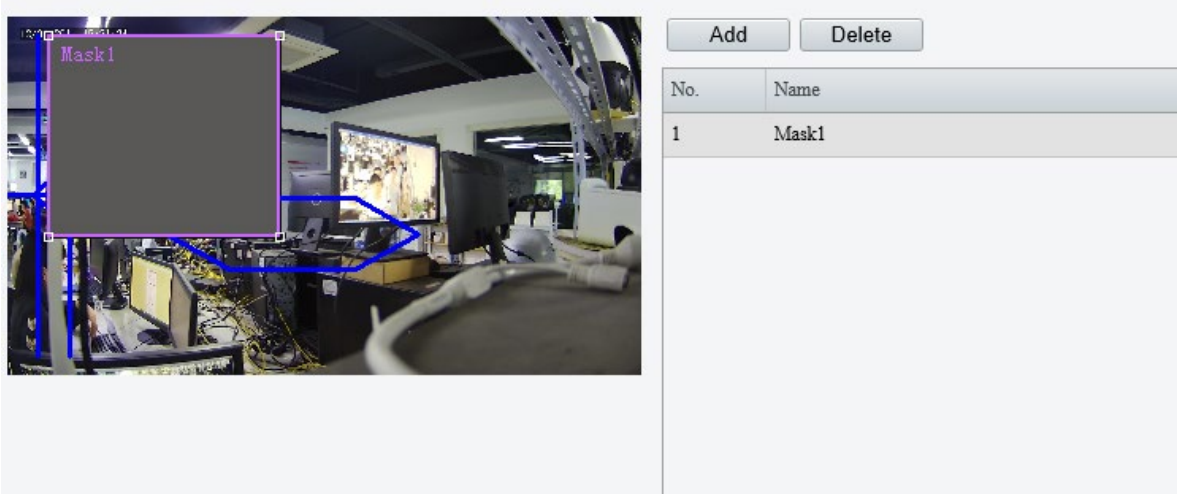
Privacy Mask

On certain occasions, you may need to set a mask area on the camera image to protect privacy, for example, the keyboard of an ATM machine. When PTZ changes its position or zooms, the Privacy Mask will be adjusted accordingly to protect the area all along.

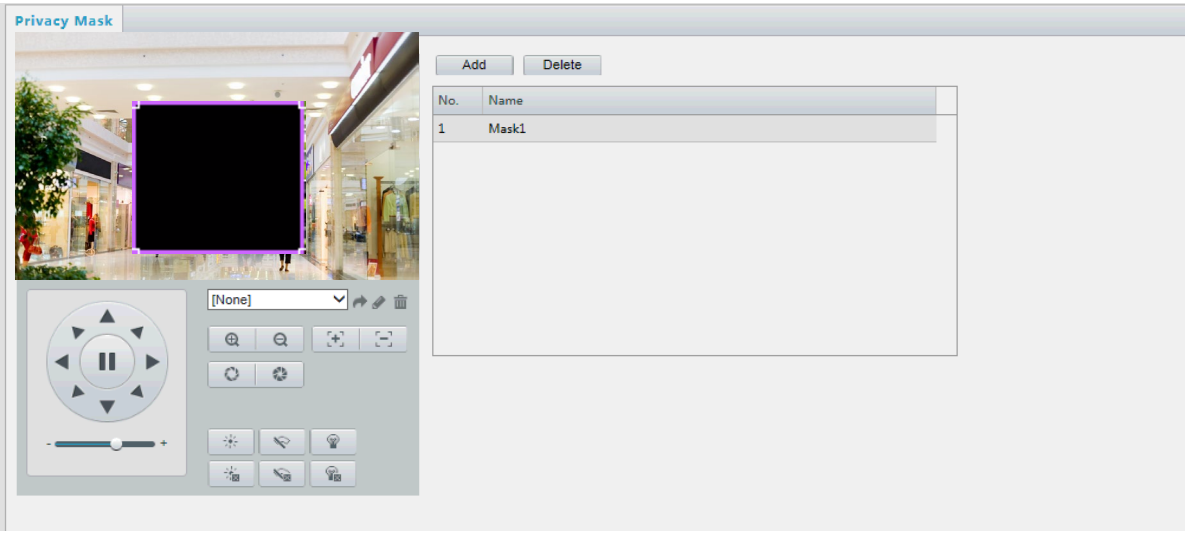
NOTE!

- This function may vary with models. Please see the actual Web interface for details.
- Some models support up to 24 privacy masks. The same picture shows up to only 8 privacy masks.

1. Click **Setup** > **Image** > **Privacy Mask**.



For some camera models, the page is displayed as follows:



2. Click + to add a privacy mask, and click 🗑 to delete a mask

- To mask a position: Click the box (with **Mask** displayed on it) to activate the mask. After the cursor shape has changed, drag the box to the intended position.
- To mask an area: Use the mouse to draw a box on the area you want to mask.

When privacy mask is configured, the intended area is blocked. The following shows an example.

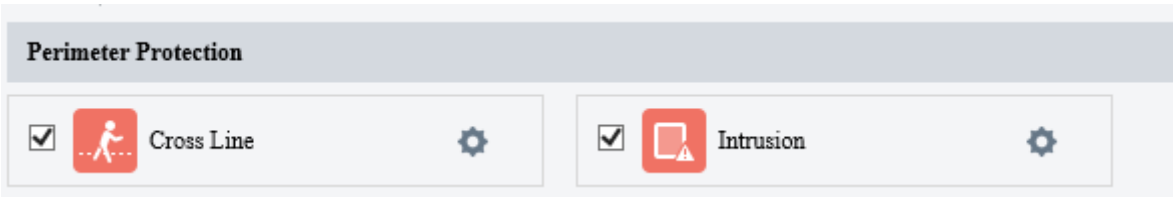
Intelligent

You can configure intelligent monitoring to count people and monitor moving objects. Intelligent monitoring includes people counting, intrusion detection, and auto tracking.

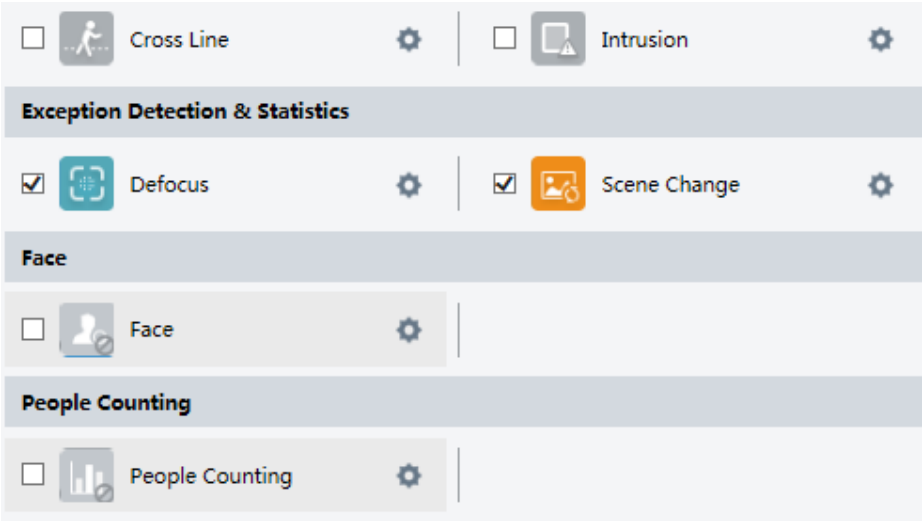
The supported functions may vary with camera model.

Smart

Click **Setup** > **Intelligent** > **Smart** .



For some camera models, the page is displayed as follows.



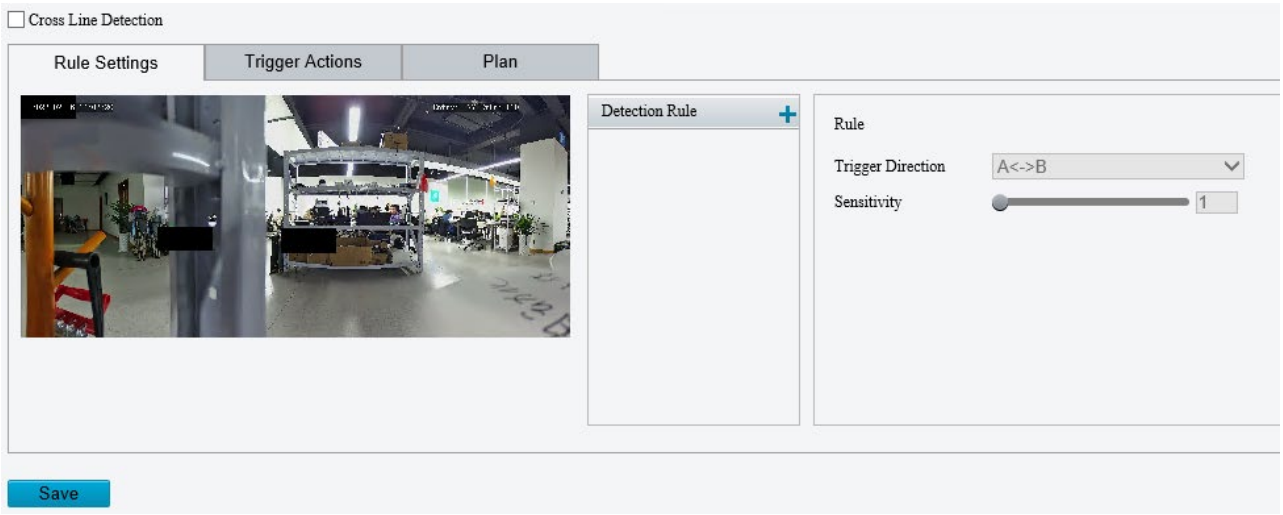
Cross Line Detection

Cross line detection detects objects that cross a virtual line in live video and triggers alarm when such an event is detected.

NOTE!

- Only some camera models support this function.
- The supported alarm triggering and arming schedule may vary with camera model. Please see the actual Web interface for details.
- The camera takes the snapshot and sends the snapshot to the back end.

1. Click **Setup** > **Intelligent** > **Smart**. Choose **Cross Line** and then click .



2. Select **Cross Line Detection**.
3. In the **Detection Rule** area, click to add a new detection area. To delete a detection area, click .
4. On the small preview window, drag the line to the intended position and set the detection range.
5. Set the direction and sensitivity for the camera to decide whether to report a cross line detection alarm.
6. Set the priority of detection to judge the trigger sequence when detection rules are triggered at the same time.
7. Set snapshot object type to judge whether to snap small pictures
8. Set object filter type and size, alarm-triggered actions and arming schedule as required.

9. Set the alarm-triggered actions and arming schedule as required. For the detailed steps, see the descriptions of alarm-triggered actions in Common Alarm Configuration.
10. Click **Save**.

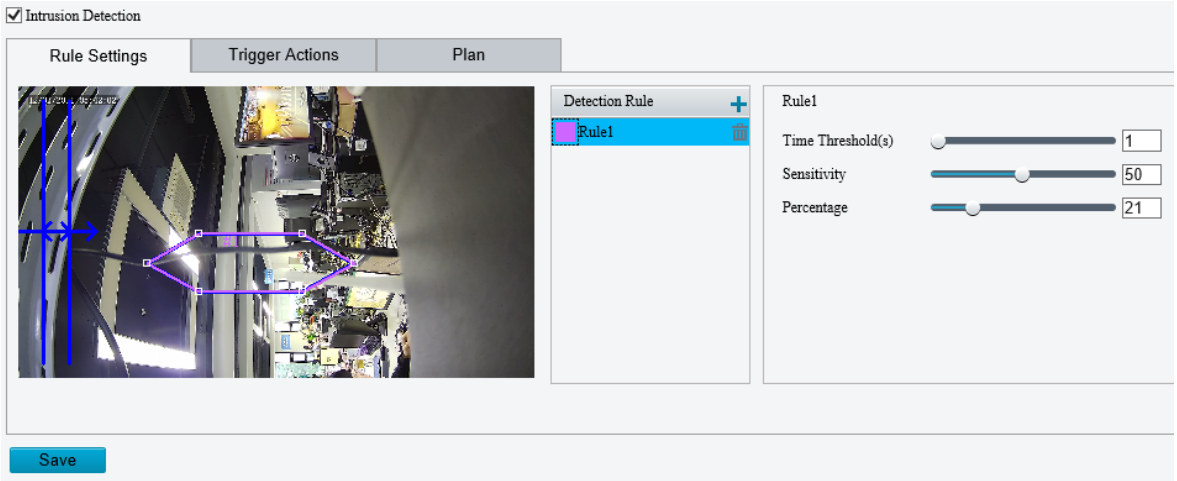
Intrusion Detection

Intrusion detection detects objects that enter a specified area in live video and triggers alarm when such an event is detected.

NOTE!

- Only some camera models support this function.
- The supported alarm triggering and arming schedule may vary with camera model. Please see the actual Web interface for details.
- The camera takes the snapshot and sends the snapshot to the back end.

1. Click **Setup** > **Intelligent** > **Smart**. Choose **Intrusion** and then click .



2. Select **Intrusion Detection**.
3. In the **Detection Rule** area, click to add a new detection area. To delete a detection area, click .
4. Drag the borders of the box to set the intended position and range.
5. Set time threshold, sensitivity for the camera to decide whether to report an intrusion detection alarm.

- Time Threshold: The minimum length of time that the intruder stays in the detection area before an alarm will be reported.
- Sensitivity: Sensitivity of detection. A greater value means higher detection sensitivity.
- Percentage: The percentage of the intruder object in the area is larger than the percentage before an alarm will be reported.

6. Click **Save**.

Events

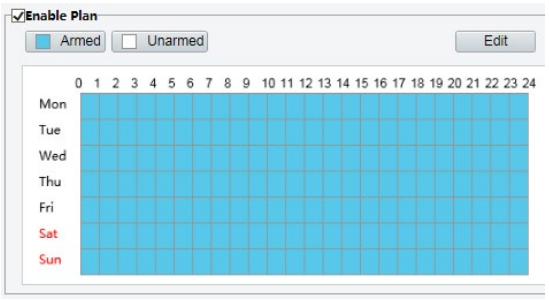
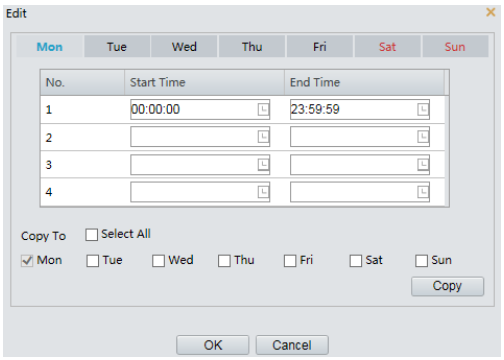
Common Alarm

You can schedule alarm reporting and set actions that can be triggered by other devices so that alarms and the triggered actions can be handled in time.

Alarm reporting can be scheduled for motion detection alarm, alarm input, alarm output, tampering detection alarm, and audio detection alarm. The supported alarms may vary with device model. For the alarm types that your camera supports, see the Web interface.

The following table describes the major alarm-triggered actions and how to set a plan.

Item	Description
Alarm Output 1	Select the check box. This setting is the alarm output interface linked to motion detection alarm. **Note:** When an alarm is reported, the camera triggers alarm output so as to trigger actions by a third-party device.
Go to Preset	Select the check box and set the preset linked to motion detection alarm. **Note:** • Make sure you have set presets. Otherwise, you cannot set this parameter. • When an alarm is reported, the PTZ camera automatically goes to the preset to capture video in the correct scene.
Upload to FTP	With **Upload to FTP** selected, the camera will automatically upload snapshots to the specified FTP server when an alarm is triggered. **Note:** Make sure you have completed FTP and Snapshot before using this function.
Recording	With **Recording** selected, the camera will automatically record video when an alarm is triggered. **Note:** Please set **Post-Record(s)** on the **Storage** page first. **Post-Record(s)** specifies how long recording continues after the end of an alarm.
Alarm the Center	With **Alarm the Center** selected, the camera will sends alarm information to the central server when an alarm is triggered. **Note:** Please complete settings on the **Server** page first.
Upload Image(Original)	With Upload Image(Original) selected, The camera uploads the snapshot original image to the server or platform . **Note:** Make sure you have completed FTP and Snapshot before using this function.
Upload Image(Object)	With Upload Image (Object) selected, The camera uploads the snapshot object image to the server or platform. **Note:** Make sure you have completed FTP and Snapshot before using this function.
Attribute Collection	With **Attribute Collection** selected, The camera uploads the attribute information to the server or platform. **Note:** • Only some camera models support this function. • Please set attribute collection on the Attribute Collection page first.
Trigger Tracking	With **Trigger Tracking** selected, the camera starts auto tracking when an alarm is triggered. **Note:** • Only some camera models support this function. • Please set auto tracking on the Smart Settings page first.
Trigger E-	With **Trigger E-mail** selected, the camera will automatically send snapshots to the specified E-mail

mail	address when an alarm is triggered. **Note:** Make sure you have completed E-Mail before using this function.
Enable Plan	Select the check box and set the start and end times during which motion detection alarm is effective. You can directly drag the mouse to draw a plan and click **Edit** to edit time periods in the table. The time periods cannot overlap. The camera reports alarms during the specified period(s) only. You can select from Monday to Sunday and set four periods for each day.  Drag the mouse to draw a plan  Edit time periods in the table **Note:** Plan drawing using a mouse is only supported by IE versions later than 8.0. After setting the plan for one day, you can apply the same settings to other days by clicking **Copy** and **Paste**.

Click **Save**.

Configuring Motion Detection Alarm

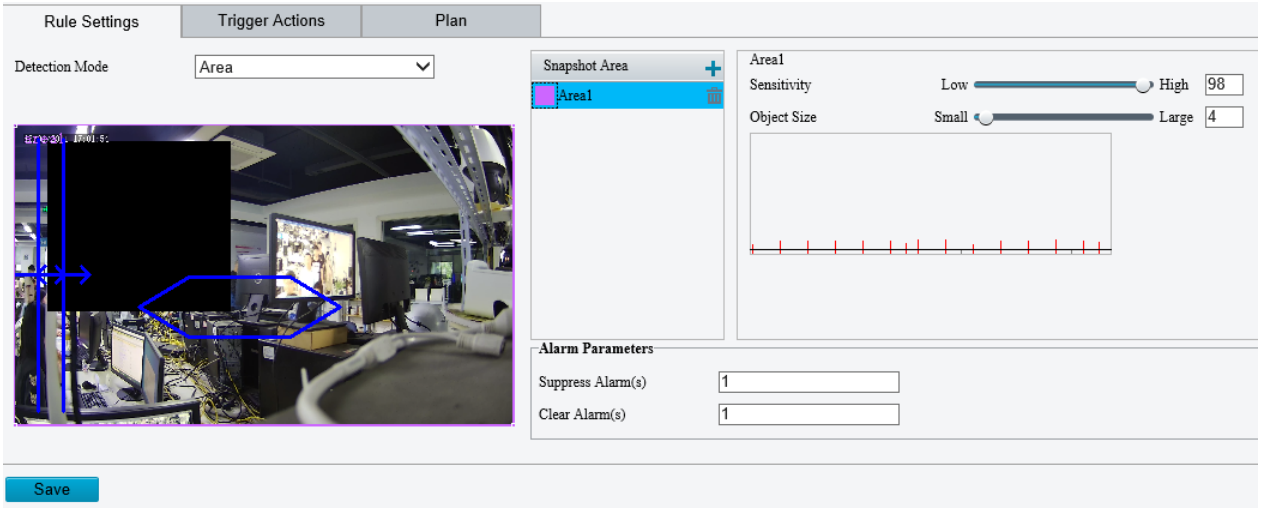
Motion detection detects the object motion in a specified rectangular area during a period. You need to set a detection area, sensitivity of detection, object size, and history for the camera to decide whether to report a motion detection alarm when it detects motion.

NOTE!

- This function is not supported by some models. Please see the actual model for details.
- The alarm triggered actions may vary with models. Please see the actual Web interface for details.

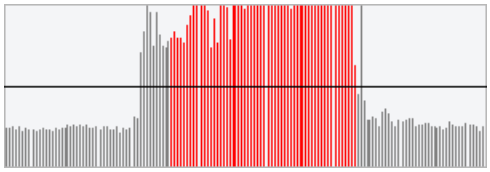
Area Detection

1. Click **Setup** > **Events** > **Common Alarm** > **Motion Detection**. Set **Detection Mode** to **Area**.



2. In the **Detection Area**, click + to add a new detection area. To delete a detection area, click 🗑.
3. Click and drag the mouse to set a detection area.
4. Set the detection sensitivity, object size, and history for the camera to decide whether to report a motion detection alarm.

- Moving the slider to the right increases detection sensitivity. When the extent of motion within the detection area exceeds the set object size, the camera reports an alarm.
- Object size specifies the minimum ratio of the object's size to the size of the total detection area before an alarm will be reported. That is to say, to detect motion of tiny objects, you need to draw a small box (detection area) in the actual motion area accordingly.
- Motion detection results are shown in real time. The red lines represent the raised motion detection alarms. The longer a line, the greater the extent of motion. The denser the lines, the greater the frequency of motion.



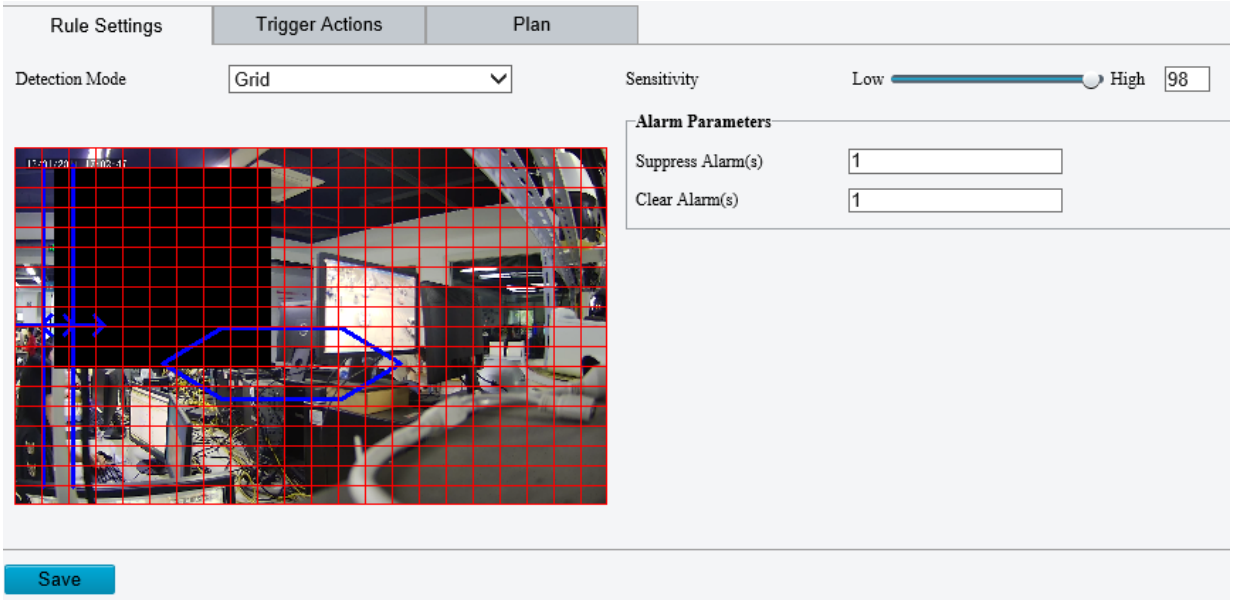
5. Set the alarm parameters.

- Suppress Alarm(s): After an alarm is triggered, the same alarm will not be reported within the set time.
- Clear Alarm(s): After an alarm is triggered,
  - **a.** If the same alarm is not triggered within the set time, the alarm will be cleared and the same alarm can be reported again.
  - **b.** If the same alarm is triggered within the set time, the alarm will not be cleared until the suppress alarm time expires. Then the same alarm can be reported again.

6. Set actions to be triggered by motion detection alarm and the plan.

Grid Detection

7. Click **Setup** > **Events** > **Motion Detection**. Set **Detection Mode** to **Grid**.



8. Detection area(s) can be irregular on the grid.
9. Set detection sensitivity for the camera to decide whether to report a motion detection alarm (alarm visible on compatible NVR).
10. Set alarm parameters.

- Suppress Alarm(s): After an alarm is triggered, the same alarm will not be reported within the set time.
- Clear Alarm(s): After an alarm is triggered,
  - **a.** If the same alarm is not triggered within the set time, the alarm will be cleared and the same alarm can be reported again.
  - **b.** If the same alarm is triggered within the set time, the alarm will not be cleared until the suppress alarm time expires. Then the same alarm can be reported again.

11. Set actions to be triggered by motion detection alarm and the plan. For the detailed steps, see the descriptions of alarm-triggered actions in Area Detection in Configuring Motion Detection Alarm.
12. Click **Save**.

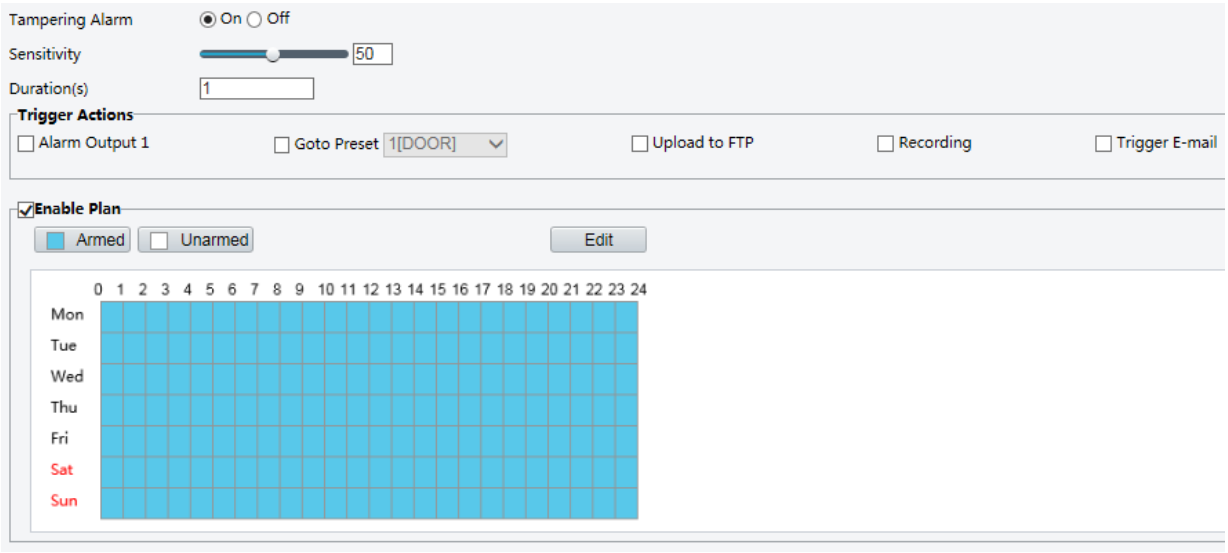
Configuring Tampering Alarm

Configure tampering alarm so that the camera reports a tampering alarm when the lens is blocked for a certain length of time.

NOTE!

- This function is not supported by some models. Please see the actual model for details.
- The alarm triggered actions may vary with models. Please see the actual Web interface for details.

1. Click **Setup** > **Events** > **Common Alarm** > **Tampering Alarm**.



2. Select **On** for **Tampering Alarm**.
3. Set detection sensitivity and duration for the camera to decide whether to report a tampering alarm.

   Sensitivity is divided into three levels: high-level, mid-level and low-level. Compared with mid-level sensitivity, the camera can detect blocking from a farther location when sensitivity is set to high. The camera reports an alarm when the lens is blocked for a specified length of time.

   Tampering alarm is effective to the whole screen. To disable tampering alarm, clear the **Tampering Alarm** check box.
4. Set actions to be triggered by tampering alarms and the plan. For the detailed steps, see the descriptions of alarm-triggered actions in Configuring Motion Detection Alarm.
5. Click **Save**.

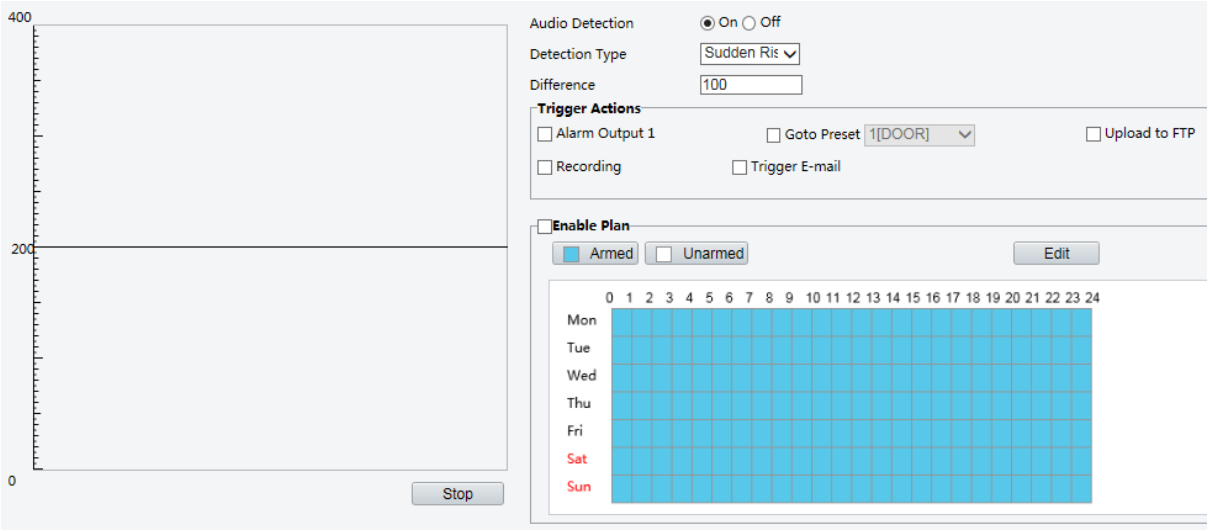
Configuring Audio Detection Alarm

The camera can detect input audio signals for exceptions. When the rise or fall of volume exceeds the set limit, or when the input volume reaches the threshold, the camera reports an alarm and triggers the set actions.

NOTE!

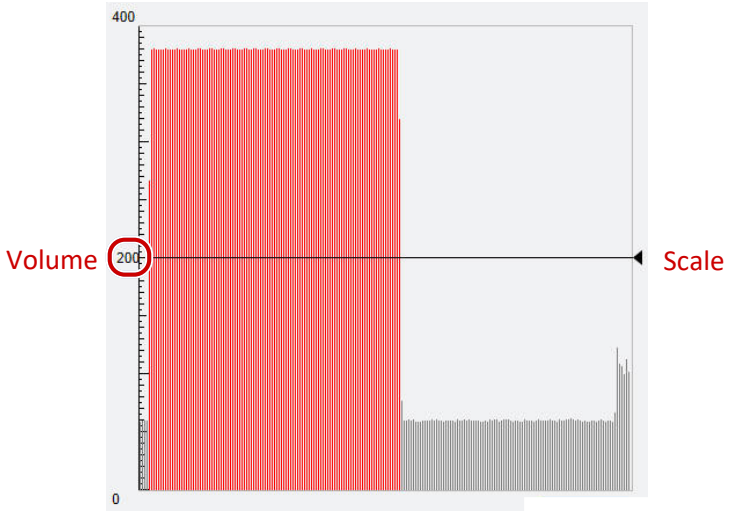
- This function is not supported by some models. Please see the actual web interface for details.
- The alarm triggered actions may vary with models. Please see the actual Web interface for details.

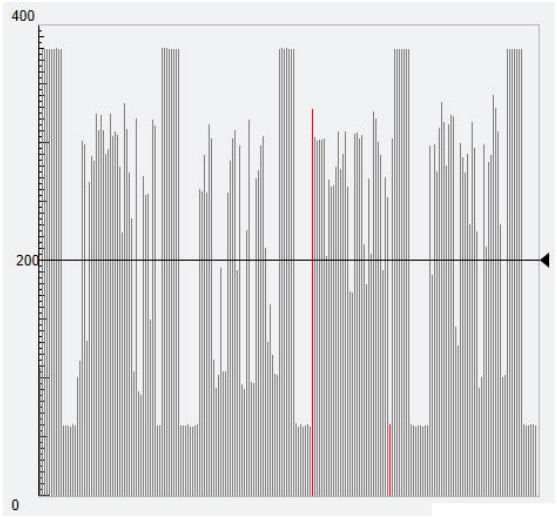
1. Click **Setup** > **Events** > **Common Alarm** >**Audio Detection**.



2. Select **Enable** for **Audio Detection**, select a detection type and set the difference or threshold. To disable audio detection, clear the **Enable** check box.

The following table describes some major parameters.

Parameter	Description
Detection Type	• Sudden Rise: An alarm is reported when the rise of volume exceeds the difference. • Sudden Falls: An alarm is reported when the fall of volume exceeds the difference. • Sudden Change: An alarm is reported when the rise or fall of volume exceeds the difference. • Threshold: An alarm is reported when the volume exceeds a threshold.
Difference	• Threshold: After a volume is set as the threshold, an alarm is reported when the threshold is exceeded. • Difference: the difference between two volumes. When the rise or fall of volume exceeds the difference, an alarm is reported. **Note**: • The scale in the audio detection area is used to measure sound volume. • Audio detection results are shown in real time. The red part indicates the reported audio detection alarms. 

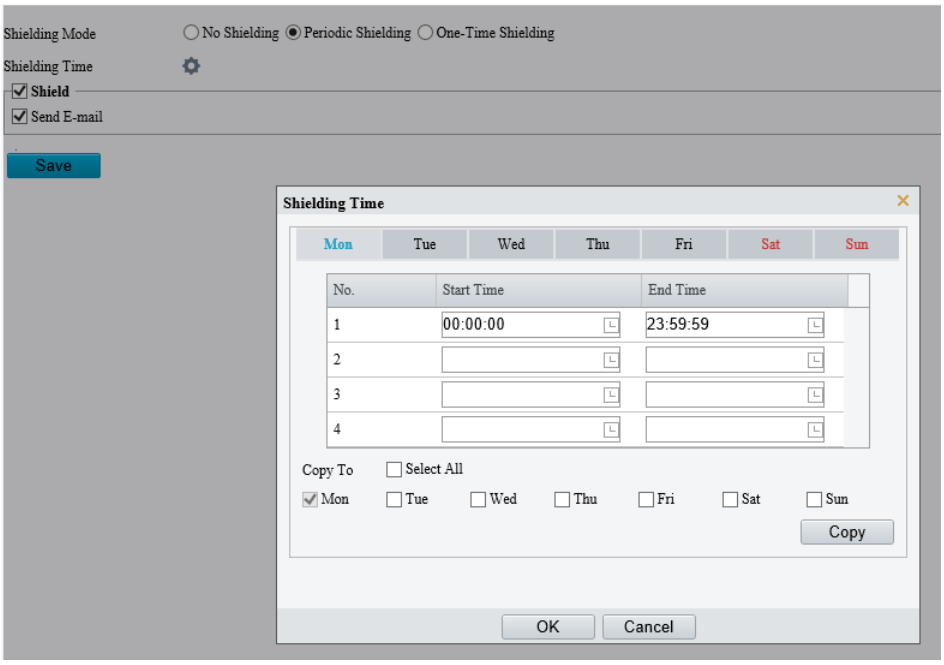
Parameter	Description
	 Difference

3. Set the alarm-triggered actions and arming schedule as required. For the detailed steps, see the descriptions of alarm-triggered actions in Configuring Motion Detection Alarm.
4. Click **Save**.

One-Key Shielding Linkage

You can disarm alarm-triggered actions by one-key operation.

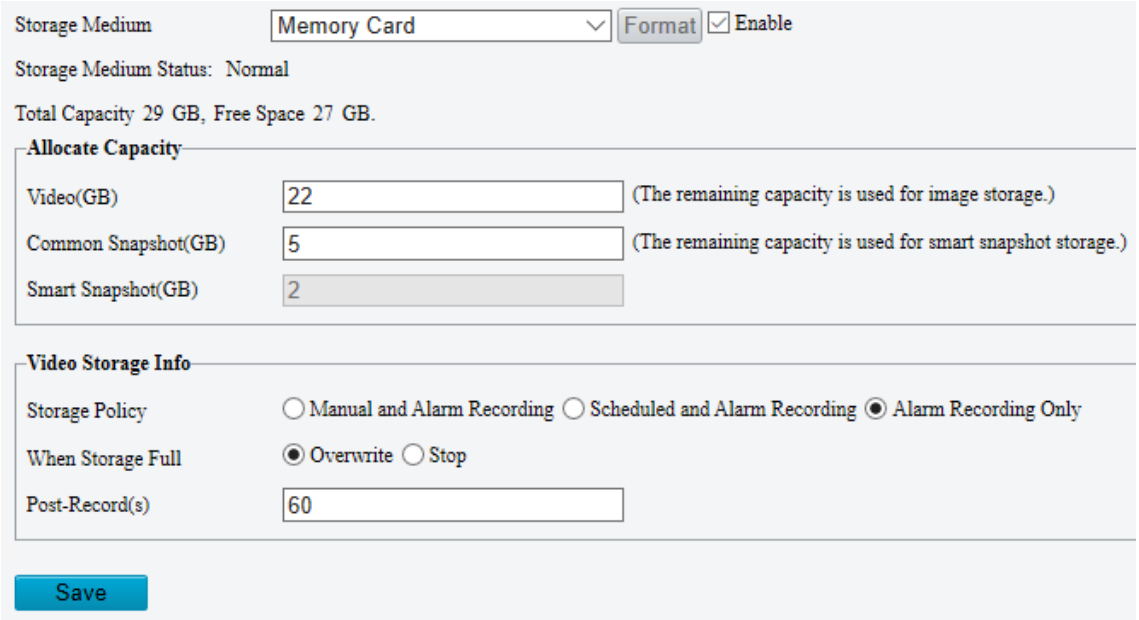
1. Click **Setup** > **Events** > **One-Key Shielding Linkage**.



2. Select a disarming mode. When enabled, you need to click to set the shielding time.
3. Select the action(s) you want to shield.
4. Click **Save**.

Storage

Go to **Setup** > **Storage** > **Storage**.

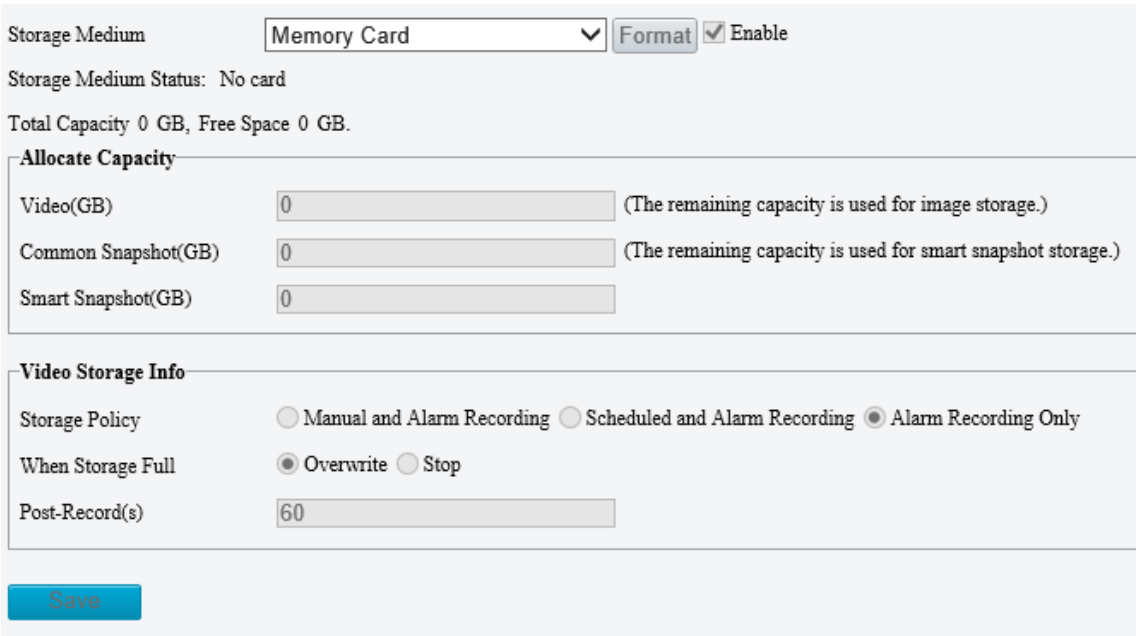


Memory Card

NOTE!

Before you use this function, make sure a memory card has been mounted on the camera.

1. Set **Storage Media** to **Memory Card**, and select **Enable**.



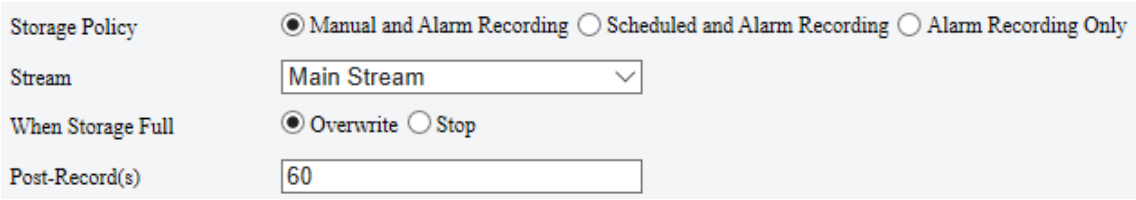
Item	Description
Storage Media	Includes **Memory Card** and **NAS**.
Format	Stop using the storage resource and then click **Format**. The camera will restart after completing the formatting.
Memory Card Health Index	Show the health status of the memory card. ***NOTE!*** This feature is not available to all devices. This feature is available to TF cards only.

Item	Description
When Storage Full	Overwrite: When space is used up on the memory card, new data overwrites old data. Stop: When space is used up on the memory card, the camera stops saving new data.
Post-Record(s)	Sets the duration of alarm-triggered recording after the alarm ended.

2. Allocate storage space as needed.
3. Configure storage information.

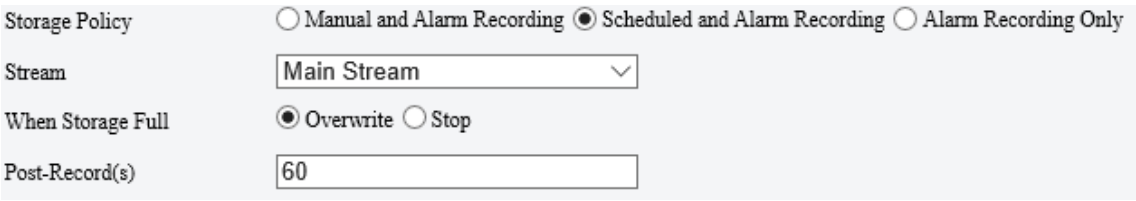
- To store manual recordings and alarm recordings

Choose **Manual and Alarm Recording**. By default, the main stream is stored.

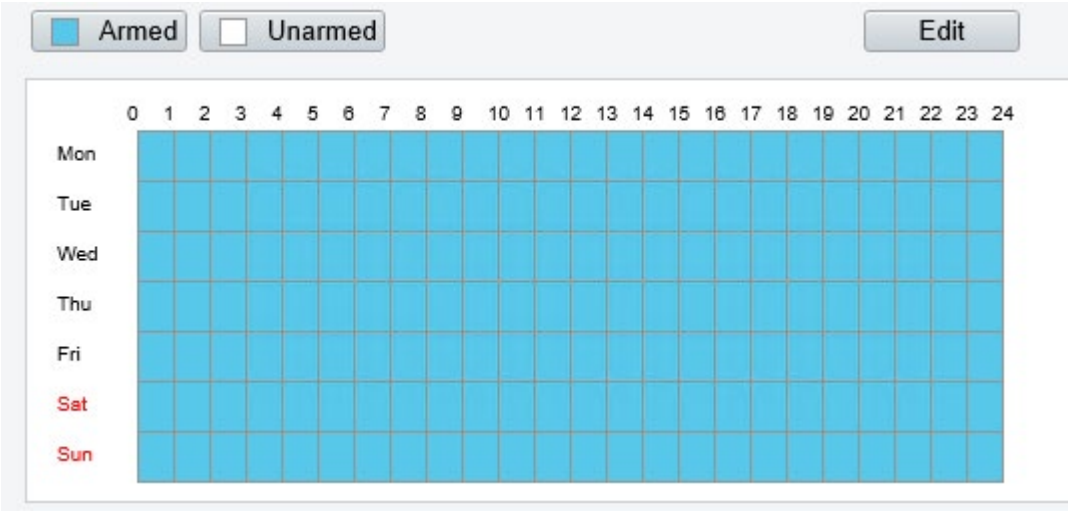


- To store scheduled recordings and alarm recordings

(1) Choose **Scheduled and Alarm Recording**.

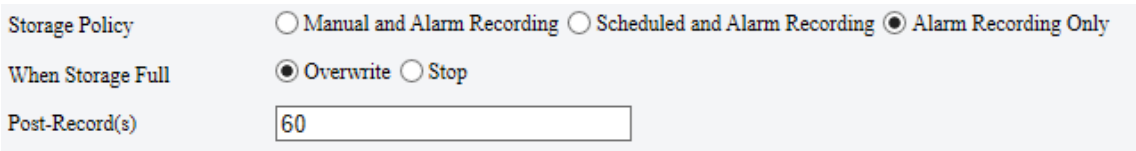


(2) The default recording schedule is 24/7. To change the schedule, drag on the calendar or click **Edit**.



- To store alarm recordings only

Choose **Alarm Recording Only**.

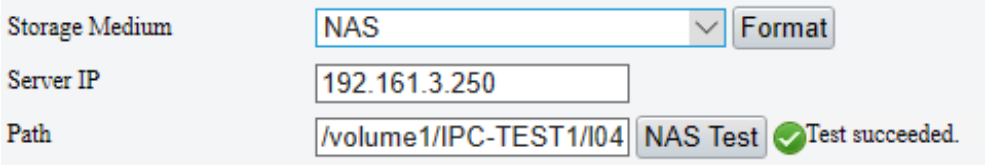


Network Disk

Use a Network Attached Storage (NAS) server to store camera videos.

1. Set **Storage Medium** to **NAS**.
2. Enter the server address.

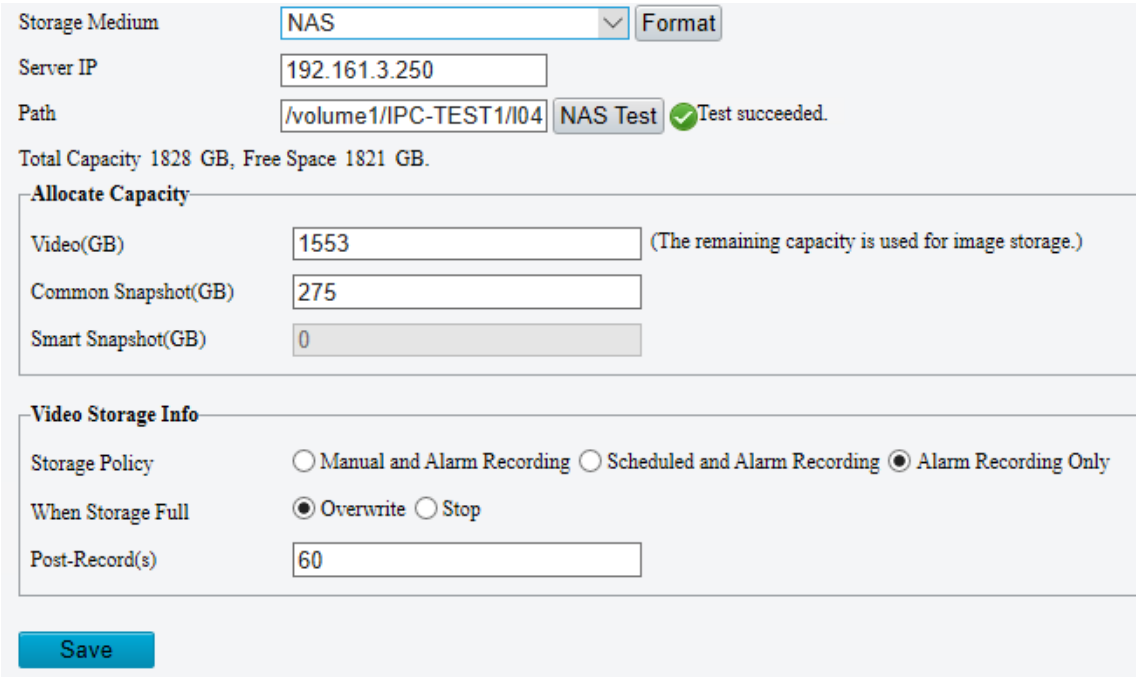
- Enter the path to the destination folder on the NAS server. You can find the path by viewing the folder properties.



NOTE!

Letters, digits, dots, spaces, and symbols / : , - _ @ = are allowed in the path.
Other characters are not allowed and will cause failed NAS test.

3. After the test succeeded, click **Save**.



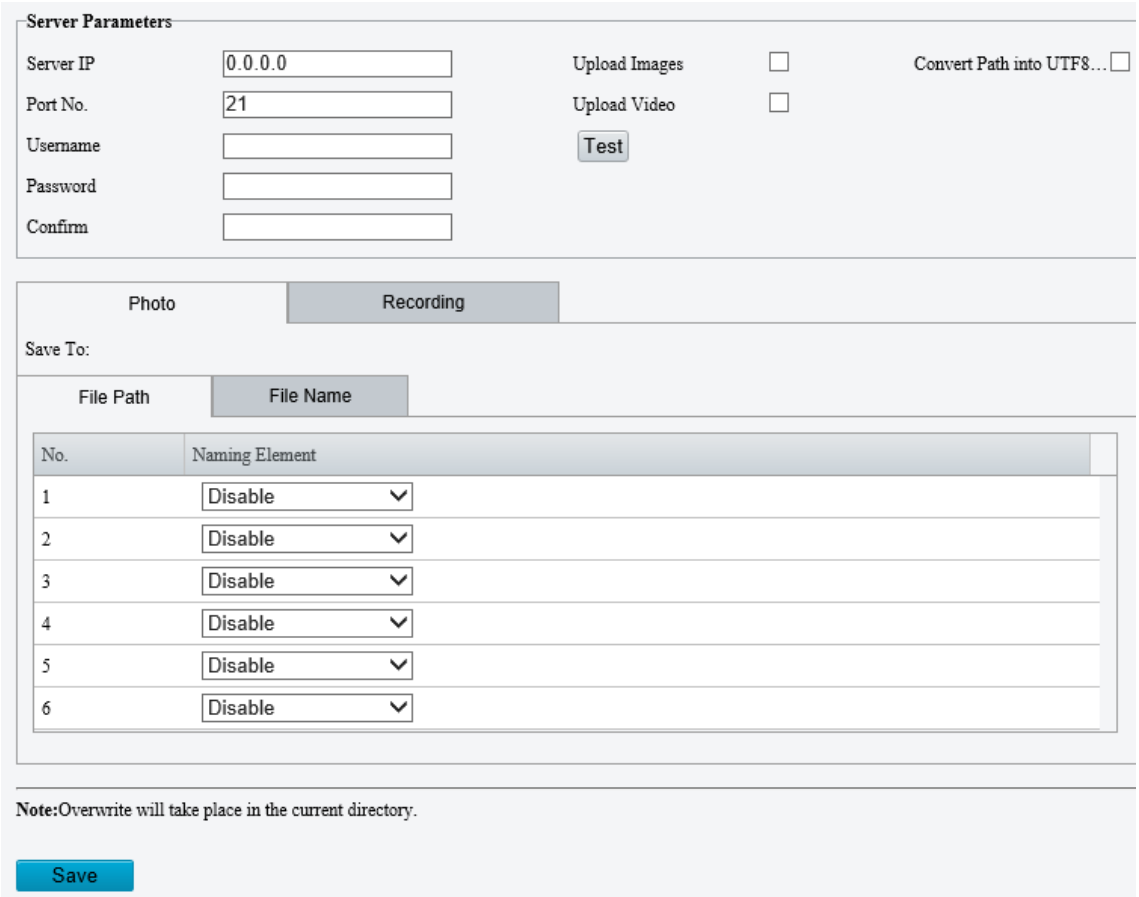
NOTE!

- The capacity status appears after you click **Save**. So to change the settings, click **Save** first.
- By default, 85% of the folder space is used to store videos, and the remaining 15% is used to store common snapshots. To allocate space for smart snapshots, you need to reduce space for videos and common snapshots.

FTP

Upload images and videos to an FTP server for storage.

1. Go to **Setup** > **Storage** > **FTP**.



2. Configure server parameters.

Item	Description
Server IP	IP address of the FTP server.
Port No.	The default is 21. You can set a different port as needed.
Username	Username used to log in to the FTP server.
Password	Password used to log in to the FTP server.
Test	Test the connection to the FTP server.
Upload Images	Select the check box if you want to upload common (non-smart) snapshots. To configure an FTP server for smart snapshots, go to **Setup** > **System** > **Server** > **Intelligent Server**. Overwrite Storage: When the number of images in the folder of the lowest level reaches the threshold, the server continues to save new images by overwriting the existing images. For example, if the folder path is \IP\date, the level-2 folder "date" is the lowest. When the images uploaded on Jan. 4, 2022 exceeds 1,000, existing images in the 20220104 folder will be overwritten by new images. ***NOTE!*** *If you select **Overwrite Storage**, make sure the last naming element of filename is **Photo No.**.* The default overwrite storage threshold is 1000 images, and the maximum is 100,000 images.
Upload Video	Select if you want to upload alarm-triggered recordings.
Convert Path into UTF8 Format	Select if you want to convert the path into UTF8 format.

Item	Description
Post-Record(s)	Fill in the number of seconds, which is the duration of the alarm-triggered recording after the alarm has ended.

3. Configure the storage path.

Item	Description
Photo	File path, up to 6 levels. If not specified, the default path “\IP\Date\Common” will be used. Common means common snapshots.
	Filename, up to 20 fields are allowed. If not specified, the sequence number such as 1, 2, 3, … will be used as the filename.
Recording	File path, up to 6 levels. If no path is specified, the default path “\IP\Date\Common” will be used.
	The default filename is “S+recording start time+E+recording end time”. For example, S20220104174903E20220104175002.

4. Click **Save**.

Security

User

There are two types of users in the system:

Administrator: referred to as “admin” in this manual. The default name of the administrator is admin, which cannot be modified. Admin has full permission and can manage all users and devices. Only one admin user is allowed in the system.

Common user: referred to as “user” in this manual. User only has permission to play live and recorded video. Up to 32common users are allowed in the system.

You can add a user on the user management interface (under **Setup**>**Security**> **User**).

After the user is added successfully, you can change the password by entering the new password or delete the user by clearing the username.

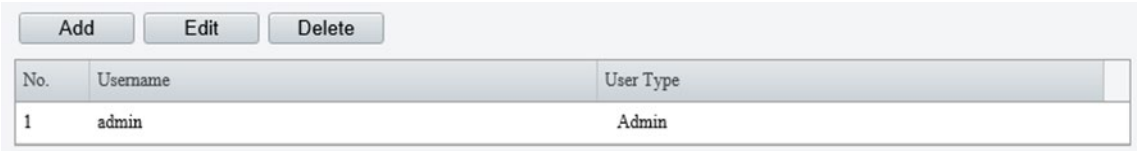
NOTE!

Only admin can change passwords. Changing the username or password for a user when the user is still logged in will force the user to log out. The user must use the new username or password to log in.

Only admin can add and delete users. Deleting a user when the user is still logged in will force the user to log out. A deleted user cannot log in.

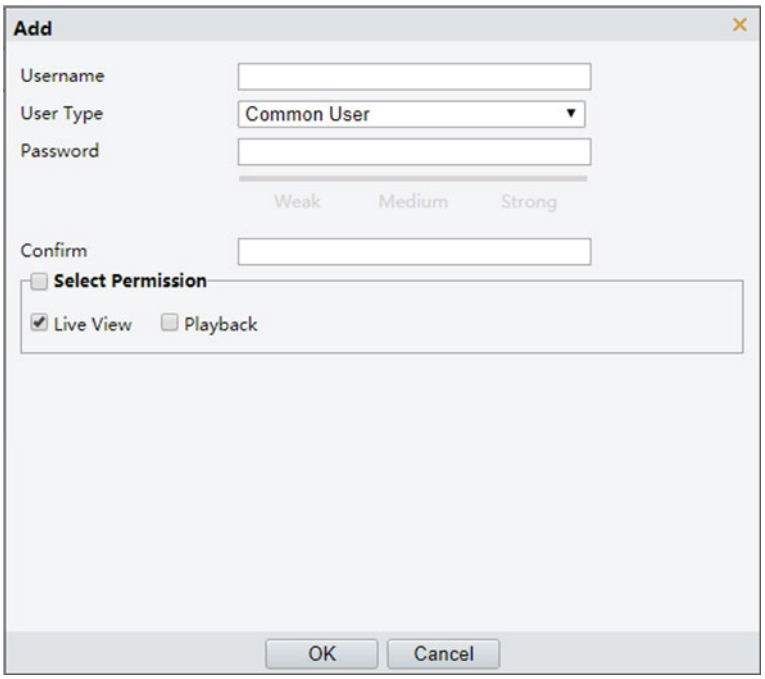
Add, delete or edit user information.

Click **Setup** > **Security** > **User**.



- Adding a User

1. Click **Add**.



2. Set the parameters.

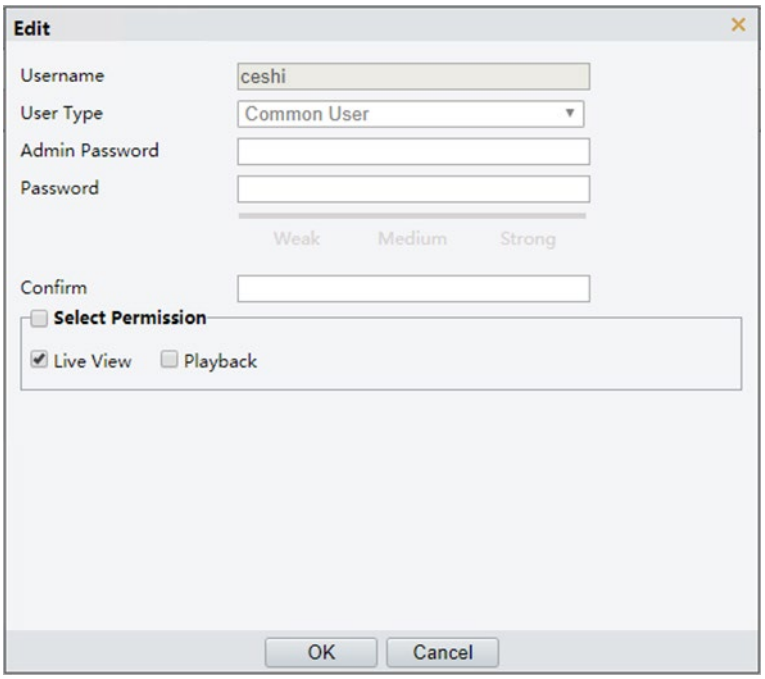
Parameter	Description
Username	Set the username. **Note:** The default administrator name is admin, which cannot be modified.
User Type	Set the user type. Two types: **Admin** and **Common User**. **Note:** • Only 1 administrator is allowed. • Up to 31 common users are allowed. • The admin user has all permissions for managing the device and other users, and the common user only has the live view and playback permissions.
Password	Set the password. A strong password is required.
Confirm	Confirm the password you entered by entering it again. Make sure that the two passwords you entered are the same.
Select Permission	Assign permissions to the user. **Note:** To select/clear all permissions, select/clear the **Select Permission** check box.

3. Click **Save**.

- Editing User Info

1. Select the user you want to edit.

2. Click **Edit**.



3. Set the parameters.

Parameter	Description
Admin Password	Enter the admin password.
Password	Enter a new password.
Confirm	Confirm the new password you entered by entering it again. Make sure that the two new passwords you entered are the same.
Select Permission	Assign permissions to the user. **Note:** To select/clear all permissions, select/clear the **Select Permission** check box.

4. Click **Save**.

NOTE!

- The username and user type cannot be modified.
- When editing admin information, you can change the email address set for password retrieval.
- Only admin can change passwords. The new password cannot be the same as the old password.
- Changing the username or password for a user when the user is still logged in will force the user to log out. The user must use the new username or password to log in.

- Deleting a User

1. Select the user you want to delete.

2. Click **Delete**.

3. Click **OK**.

- Forgot Password

Click **Forgot Password** in the login page, then follow the on-screen instructions to retrieve your password.

NOTE!

The account will be locked if you enter the security code wrongly five times.

Network Security

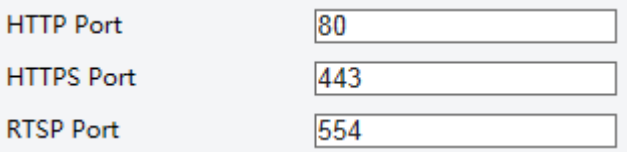
HTTPS

Set a secure channel for data transmission to ensure security.

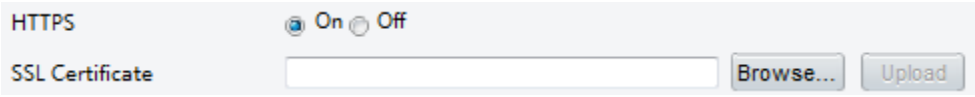
NOTE!

This function is not supported by some models. Please see the actual model for details.

1. Click **Setup** > **Network** > **Port**.



2. Enter the port number in the **HTTPS Port** text box.
3. Click **Save**.
4. Click **Setup** > **Security** > **Network Security** > **HTTPS**.



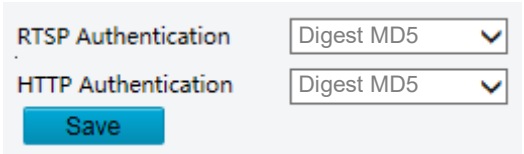
5. Select **On** for **HTTPS**. You may import a custom SSL certificate as needed.
6. Click **Save**.

Next time you log in, enter the address in *https://IP:HTTPS port number* format, for example, *https://192.168.1.13:443* to enter secure channel mode. If you use the default HTTPS port, enter *https://IP*.

Authentication

RTSP (Real Time Streaming Protocol) is an application layer protocol. To transmit and control the audio and video, set RTSP authentication on the Web interface.

1. Click **Setup** > **Security** > **Network Security** > **Authentication**.

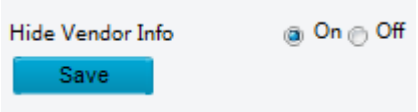


2. Select an authentication mode and then click **Save**.

Hide Vendor Information

You can set to hide the vendor information of the network camera on the Web interface.

1. Click **Setup** > **Security** > **Registration Info**.

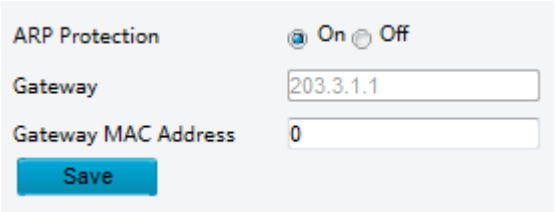


2. Under **Registration Info**, select **On**.
3. Click **Save**.

APR Protection

This function protects a camera from ARP attacks. The gateway and the MAC address must be set properly before a PC can access the camera from another network; if an incorrect MAC is set, only PCs on the same LAN can access.

1. Click **Setup** > **Security** > **Network Security** > **ARP Protection**.



2. Select the check box to enable the ARP binding function and set the gateway MAC address.
3. Click **Save**.

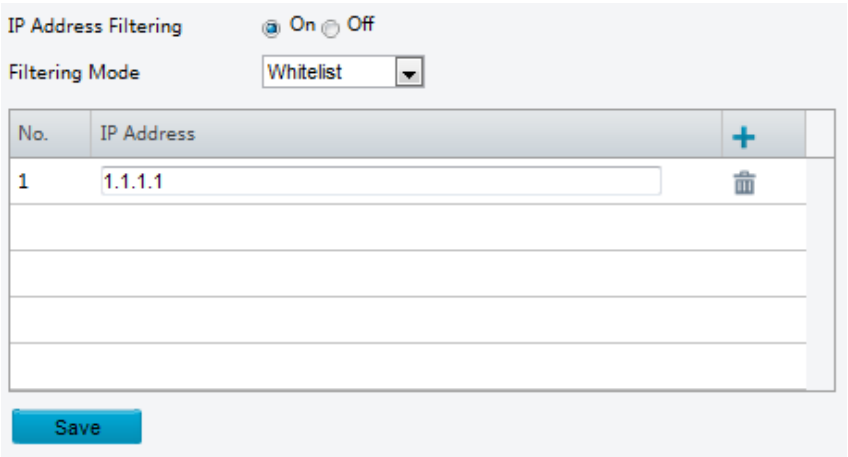
IP Address Filtering

Use IP address filtering to allow or forbid access from specified IP address(es).

NOTE!

This function is not supported by some models. Please see the actual model for details.

1. Click **Setup** > **Security** > **Network Security** > **IP Address Filtering**.



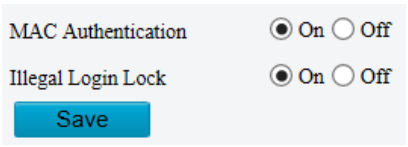
2. Select **On** to enable IP address filtering.
3. Select a filtering mode, and then add IP address(es).
4. Click **Save**.

NOTE!

- If **Filtering Mode** is set to **PTZ**, then only the added IP address(es) are allowed to access the camera. If **Filtering Mode** is set to **Deny Access**, then only the added IP address(es) are not allowed to access the camera.
- Up to 32 IP addresses are allowed. Each IP address can be added once only.
- The first byte of each IP address must be 1-223, and the fourth cannot be 0. For example, the following IP addresses are illegal and cannot be added: 0.0.0.0, 127.0.0.1, 255.255.255.255, 224.0.0.1.

Access Policy

1. Click **Setup** > **Security** > **Network Security** > **Access Policy.**



2. Select **On** to enable Illegal Login Lock and MAC Authentication.
3. Click **Save**.

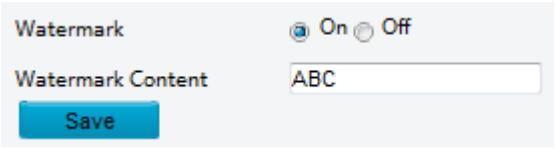
Watermark

Use watermark to encrypt custom information with video to prevent unauthorized delete or alteration.

NOTE!

Only some camera models support this function.

1. Click **Setup** > **Security** > **Watermark.**

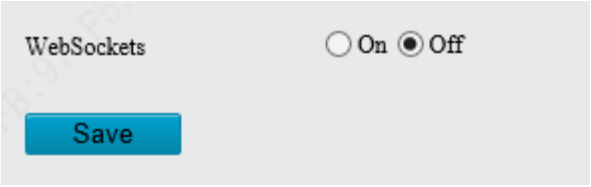


2. Select **On** to enable watermark, and then input watermark content.
3. Click **Save**.

WebSockets

WebSockets encrypts data based on SSL. You can enable WebSockets to enhance the security of data transmission.

1. Go to **Setup** > **Security** > **Network Security** > **WebSockets**.

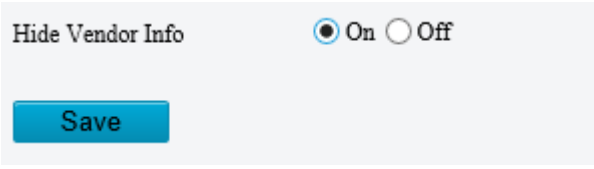


2. Enable **WebSockets**.
3. Click **Save**.

Registration Information

You can set to hide vendor information of the camera from the server.

1. Go to **Setup** > **Security** > **Registration Information**.
2. Enable **Hide Vendor Info**. Vendor information will not be displayed on the management platform.



3. Click **Save**.

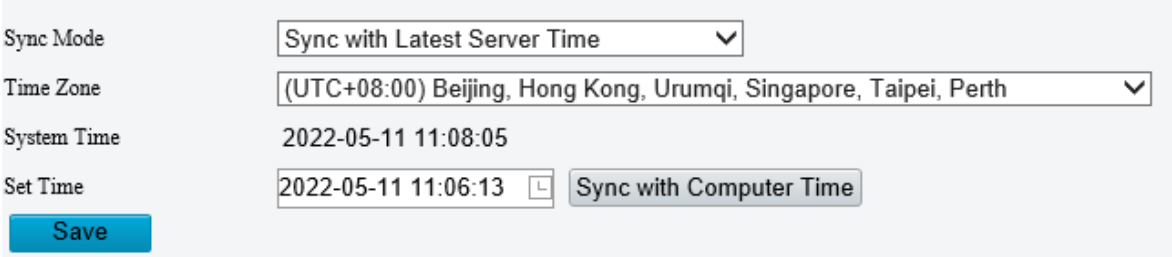
System

Time

You can use the following methods to adjust the system time of your device.

Manually Setting or Synchronizing the System Time

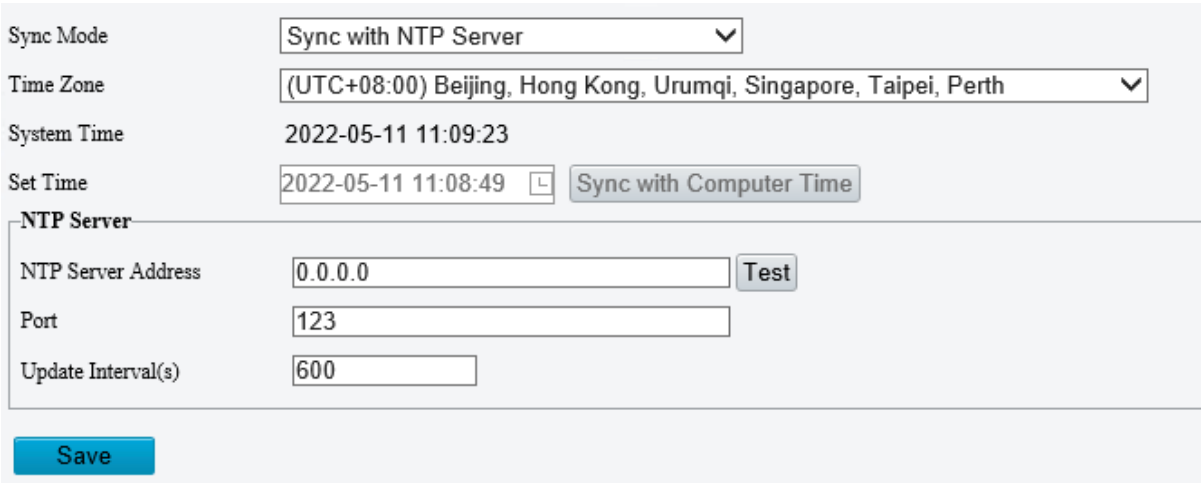
1. Click **Setup** > **Common** > **Time**, and then click the **Time** tab.



2. Select a synchronization mode.
3. Set the correct time zone and system time. You may also click **Sync with Computer Time** to synchronize the time settings of your camera with that of your PC.
4. Click **Save**.

Synchronizing with the NTP Server

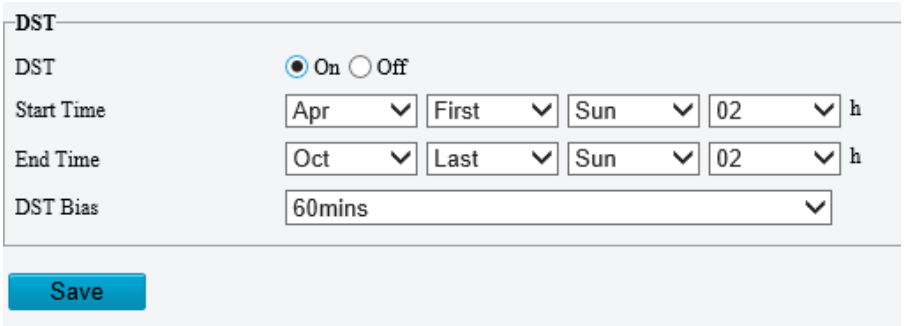
1. Click **Setup** > **Common** > **Time**, and then click the **Time** tab.



2. Set **Sync Mode** to **Sync with NTP Server**, and then set the IP address and port of the NTP server and update interval.
3. Click **Save**. The camera will periodically synchronize time with the NTP server.

Setting the DST

1. Click **Setup** > **Common** > **Time**, and then click the **DST** tab.

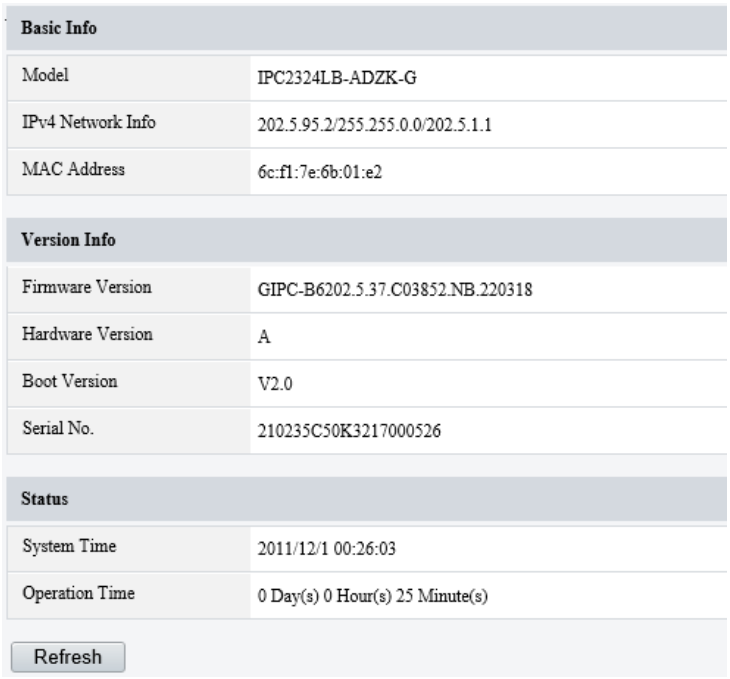


2. Select **On** for **DST**, set the start time, end time, and DST bias.
3. Click **Save**.

Viewing Device Status

You can view the current status of your camera.

1. Click **Setup** > **Common** > **Basic Info**.



2. Click **Refresh** for the latest status information.
3. View the device information.

NOTE!

You may view device model, firmware version, intelligent server status, etc, on the basic info page.

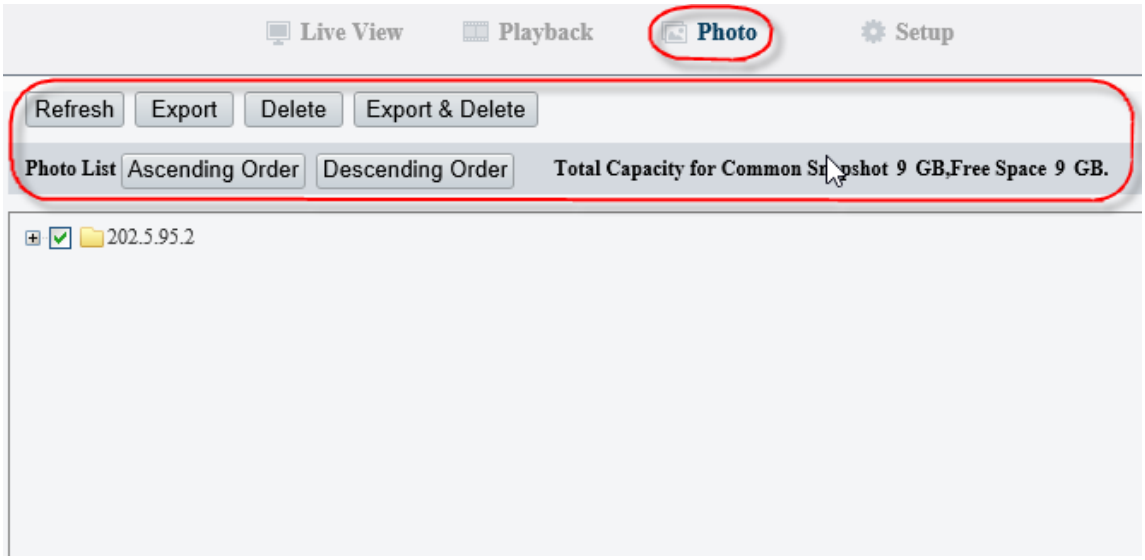
Photo Storage Status

View the current photo storage status. See Memory Card Storage for the full storage policy.

NOTE!

Only models with storage function support this function. Please see the actual model for details.

1. Click **Photo**.

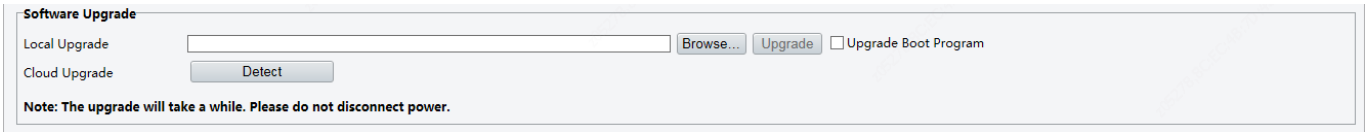


2. Click **Refresh** to update the storage status.
3. You can export or delete photos in the **Image List** area.

Upgrading the Device

If the device is managed by the central management server and you want to upgrade the devices in batch mode, it is recommended to perform the upgrade operation on the central server. For detailed steps, see the user manual for the central management server.

1. Click **Setup** > **System** > **Maintenance**.



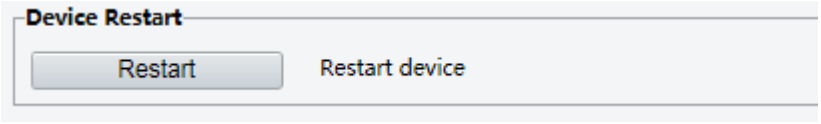
2. Under **Software Upgrade**, click **Browse** and select the correct upgrade file.
3. Click **Upgrade** and then confirm to start. The camera will restart automatically after the upgrade is completed. Some devices support boot program upgrade. To upgrade, select **Upgrade Boot Program**.
4. You may click **Detect** to check for new versions available to cloud upgrade.

NOTE!

- You must use the correct upgrade file for you camera. Otherwise, unexpected results may occur.
- The upgrade file is a ZIP file and must include all the necessary files.
- The boot program loads the operating system and then the system starts running. The upgrade boot program function is disabled by default, and only the camera will be upgraded to the latest version. If enabled, both the camera and the boot program are upgraded, and the operating system of the following new versions can be booted properly and the camera can be upgraded conveniently.
- Ensure that the power supply is normal during upgrade. The device will restart after the upgrade is completed.

Restarting the System

1. Click **Setup** > **System** > **Maintenance**.



2. Under **Device Restart**, click **Restart**. The device will restart after you confirm the operation.

CAUTION!

Perform this operation with caution because restarting the system interrupts the ongoing service.

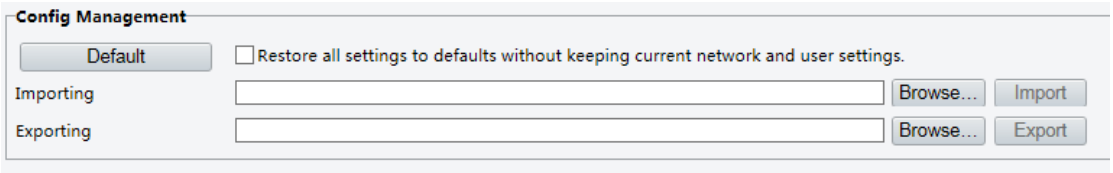
Importing and Exporting System Configuration File

Export the current configurations of the camera and save them to the PC or an external storage medium. You can also quickly restore configurations by importing backup configurations stored on the PC or an external storage medium back to the camera.

CAUTION!

- After you perform the Default operation, all settings are restored to factory defaults, except the following: login password of the system administrator, network settings, and system time.
- Make sure you import the correct configuration file for your camera. Otherwise, unexpected results may occur.
- The camera will restart when the configuration file is imported successfully.

1. Click **Setup** > **System** > **Maintenance**.

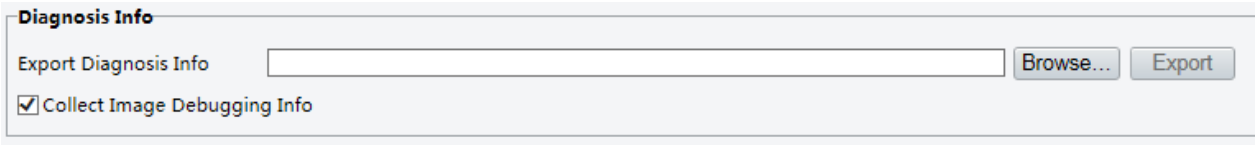


2. To import configurations that you have backed up, click **Browse** next to the **Import** button and select the configurations you want to import, and then click **Import**. The result will be displayed.
3. To export current system configurations, click **Browse** (next to the **Exporting** field), set the destination and then click **Export**.
4. To restore default configurations, click **Default** and then confirm the operation. The device will restart and restore the default configurations. Clicking **Default** with the check box selected will completely restore the device to factory default settings.

Collecting Diagnosis Information

Diagnosis information includes logs and system configurations. You can export diagnosis information to your PC.

1. Click **Setup** > **System** > **Maintenance**.



2. In the **Diagnosis Info** area, click **Browse** to set the destination and then click **Export**.

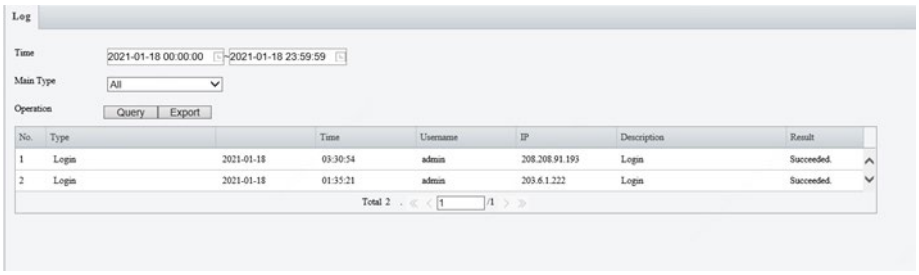
NOTE!

- Diagnosis information is exported to the local folder in form of a compressed file. You need to decompress the file using a tool such as WinRAR and then open the file using a text editor.
- By selecting **Collect Image Debugging Info**, you can display video with debugging information at the same time, which makes troubleshooting easier.

Log

View device operation information and export it to the PC.

1. Click **Setup** > **System** > **Log**.



2. Set the start time and end time of the logs you want to query.
3. Set the main log type, and then click **Query**.
4. To export all the retrieved results, click **Export**.

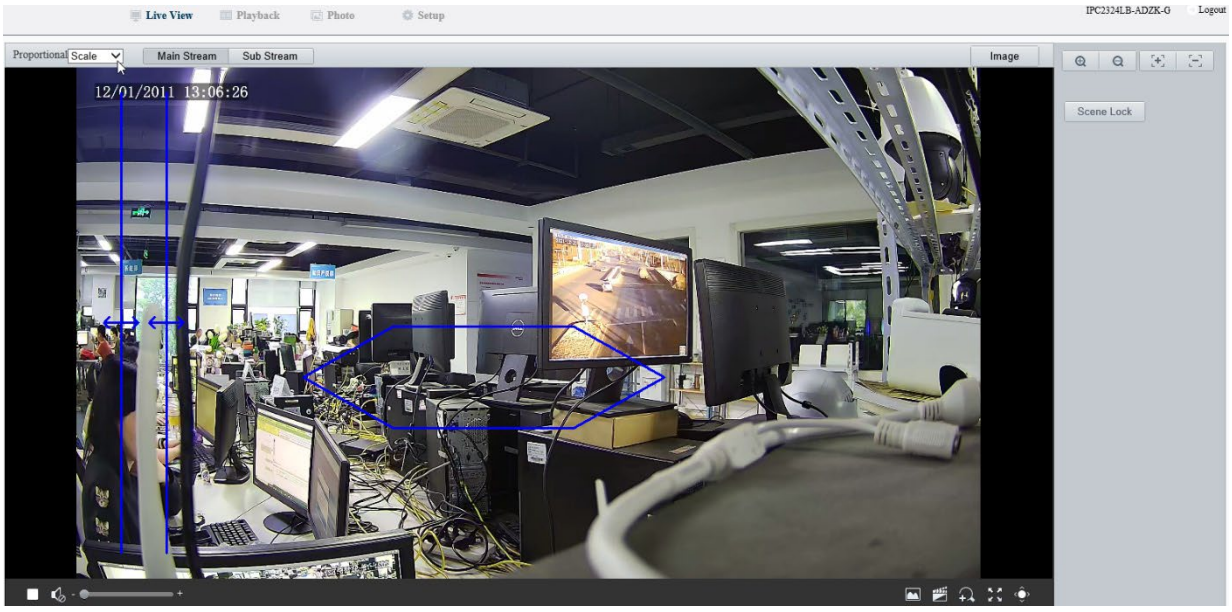
NOTE!

Up to 100 logs can be displayed. The logs are sorted by time in descending order (latest logs listed first).

4 Live View

Live view means playing live video (real-time audio and video) received from a camera in a window through the Web interface.

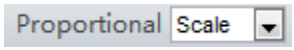
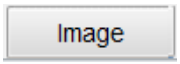
If you log in with the **Live View** check box selected, live video appears by default when you are logged in. You may double-click the window to enter or exit full screen mode.



Live View Toolbar

NOTE!

The supported live view operations may vary with camera model. For the operations that your camera supports, see the Web interface.

Button	Description
	Play/stop live video.
	Adjust the output volume for the media player on the PC.
	Take a snapshot of the current image displayed on the PC. **Note:** The path for saving snapshots are setin**System Configuration**.
	Start/stop local recording. **Note:** The path for saving local recordings is setin**System Configuration.**
	Start/stop digital zoom. For more details, see Using Digital Zoom.
	Display in full screen mode.
	Show/hide the PTZ control panel.
	Set image display ratio in the window. For example, to display high-definition images at original 16:9, select **Scale**; to display according to window size, select **Stretch**; to display with the original image size, select **Original**.
	Reset the packet loss rate to zero. **Note:** After you move the mouse cursor on a live view window, this button appears on the floating toolbar.
	Display packet loss rate and bit rate information at the bottom of the window. **Note**: After you move the mouse cursor on a live view window, this button appears on the floating toolbar. Click this button to always display the information. With another click, the information appears only when you move the mouse cursor over the window or place it at the bottom. If the mouse cursor rests on the window for around 3 seconds or leaves the window, the information disappears.
	Click this button to open the image setting page.
	Select a live video stream that the camera supports: main stream, sub stream or third stream.

Viewing Certain Area of Images

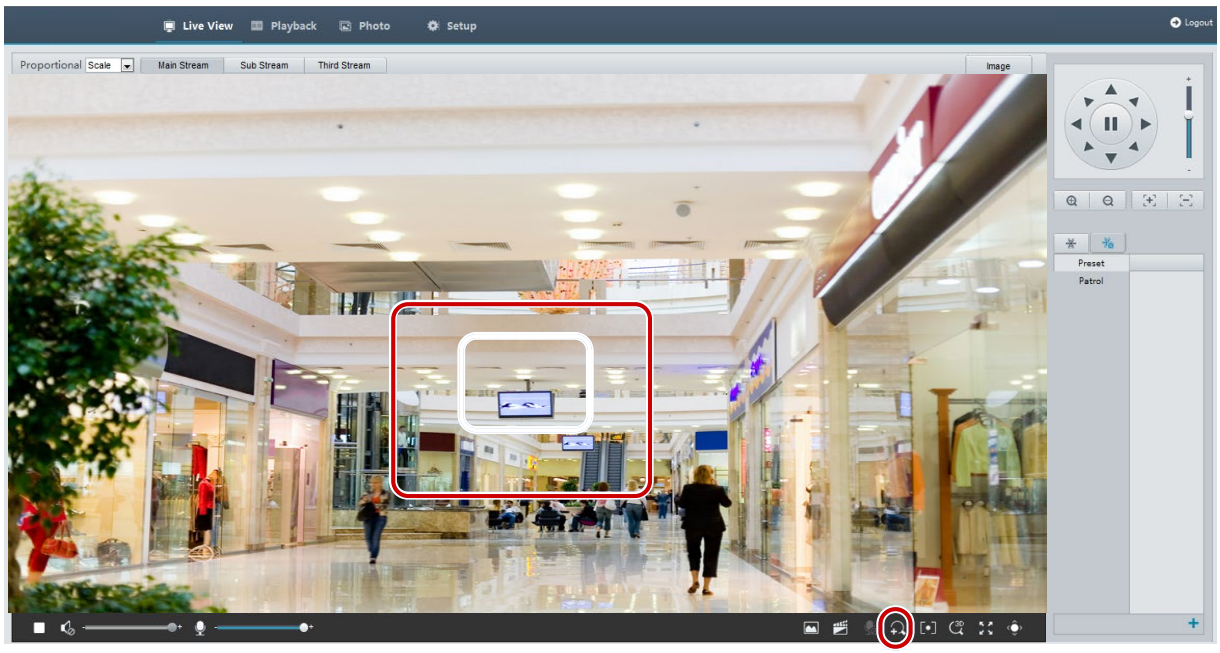
Digital zoom, area focus and 3D positioning allow you to get more details of certain part of images. Digital zoom enlarges an image with loss in image quality, while 3D positioning enlarges an image without.

Using Digital Zoom

NOTE!

The supported live view operations may vary with camera model. For the operations that your camera supports, see the Web interface.

1. In the **Live View** page, click on the toolbar.



2. Click and hold the mouse button, and then drag from top down (draw a rectangle) to specify an area. To restore the original image size and zoom in on other areas of the image, right-click the mouse.

3. To exit, click .

5 Video Playback and Download with Edge Storage

NOTE!

- Edge storage refers to recording video to the memory card of a frontend device (mostly a camera). Local recording refers to recording video to a local PC client.
- Before you play back video with edge storage, check that the camera has been installed with a memory card and storage has been configured.
- This function is not supported by some models. Please see actual models for details.

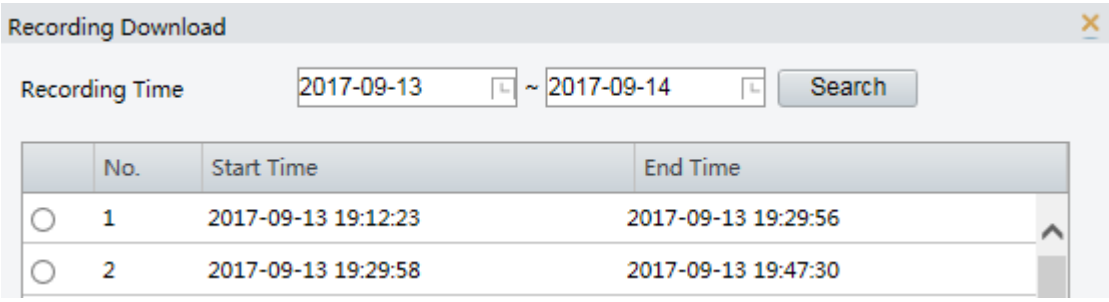
Video Playback

1. Click **Playback** on the home page.

2. Set the date and type of recordings you want to search.
3. Click **Search**.
4. Under **Results**, double-click the time period to start playing the recording.

Download

Go to the **Playback** page.



- Batch download

1. Click **Recording Download**.
2. Set search conditions, and then click **Search**. Search results are displayed.
3. Set the path to save recordings.
4. Select the desired recording(s) and then click **Download**.

- Slice download

1. Select a date from the calendar.
2. Set the recording type and click **Search**.
3. Select a recording and click  to play it.
4. Click  in the toolbar to clip the video

5. Click  to save the video clip.

Appendix A Glossary

Acronym	Description
ARP	Address Resolution Protocol
CBR	Constant Bit Rate
DNS	Domain Name Service
DDNS	Dynamic Domain Name Service
DHCP	Dynamic Host Configuration Protocol
DST	Daylight Saving Time
FTP	File Transfer Protocol
GOP	Group Of Pictures
GUI	Graphical User Interface
HTTPS	Hyper Text Transfer Protocol over SSL
IE	Internet Explorer
IMOS	IP Multimedia Operation System
IP	Internet Protocol
IPC	IP Camera
MTU	Maximum Transmission Unit
NTP	Network Time Protocol
OSD	On Screen Display
PoE	Power over Ethernet
PPPoE	Point-to-Point Protocol over Ethernet
PTZ	Pan, Tilt, Zoom
ROI	Region of Interest
SMTP	Simple Mail Transfer Protocol
SSL	Secure Socket Layer
UNP	Universal Network Passport
USB	Universal Serial Bus
VBR	Variable Bit Rate
WDR	Wide Dynamic Range

Appendix B FAQ

What to do if no message prompts me to install ActiveX when I log in on a Windows 7 PC the first time

Answer: Follow these steps to turn off UAC and then log in again:

1. Click the **Start** button, and then click **Control Panel**.
2. In the search box, type uac, and then click **Change User Account Control Settings**.
3. Move the slider to the **Never Notify** position, and then click **OK**.
4. After UAC is turned off, log in again.

What to do if the installation of ActiveX failed

Answer: If the installation failed, add the IP address of the camera as a trusted site: open **Internet Option** in IE, click the **Security** tab, click **Trusted sites**, and then click **Sites** to add the website.

If you use Windows 7, you need to save the **setup.exe** to your PC first, right-click the file, select **Run as administrator**, and then install it according to instructions.

What to do if live video fails when I log in for the first time

Answer: Close the firewall on your PC and then log in to the Web interface again.