

advidia

M-24-V-T

M-29-V

M-26-V

2MP 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.

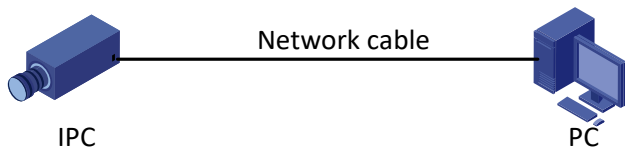
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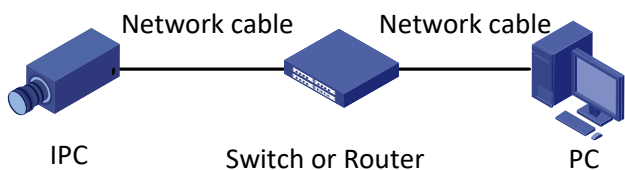
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1 Network Connection

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

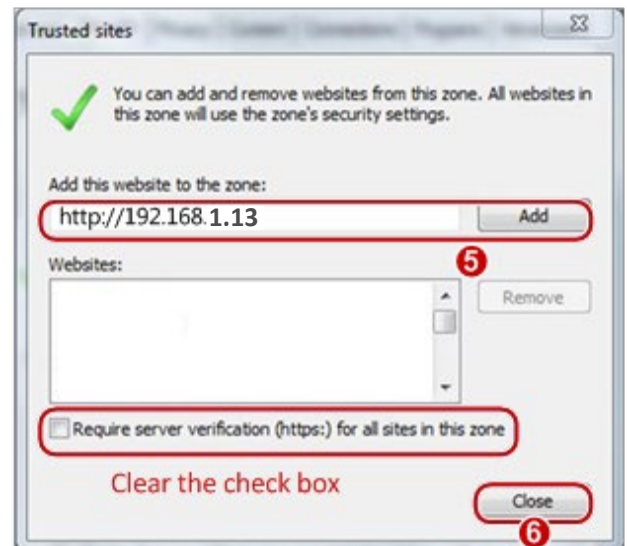
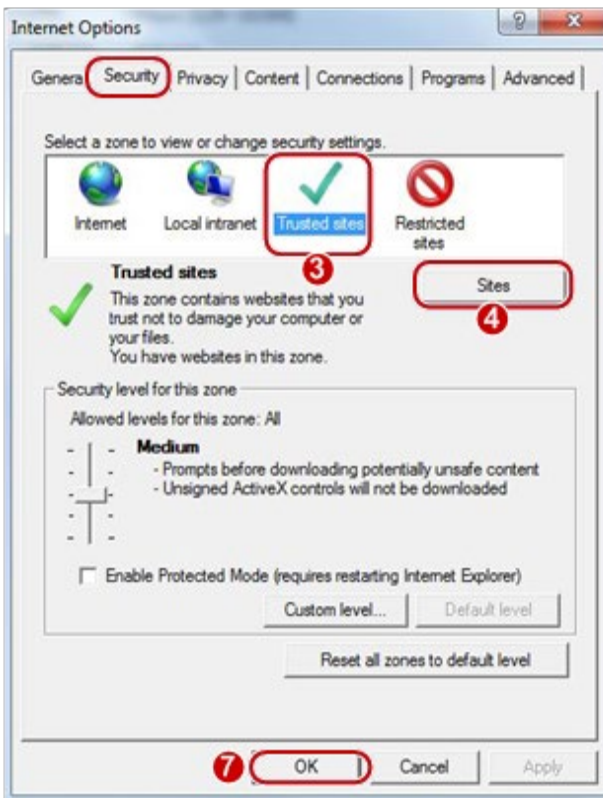
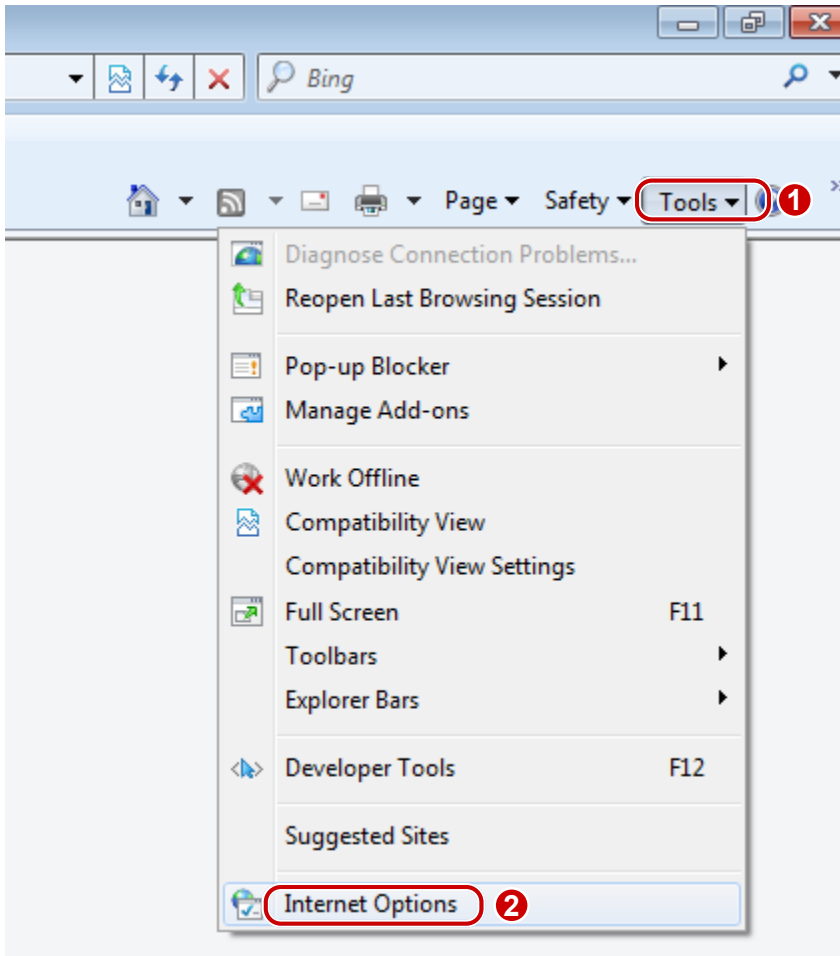
After you have completed the installation in accordance with the quick guide, connect the camera to power to start it. After the camera is started, you can access the camera from a PC client installed with a web browser or the client software Guard Station. Internet Explorer(IE) is a recommended web 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 192.168.1.13 in this example is the default IP address. Please replace it with the actual address of your camera if it has been changed.

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, please install the ActiveX. The ActiveX is provided separately.



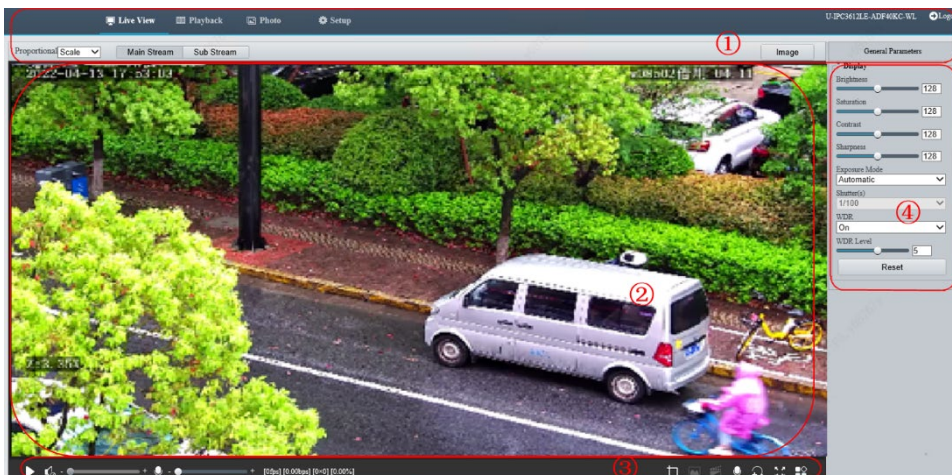
NOTE!

- 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
4	General Parameters

Initial Configuration

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

Item	Description
1. Network	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. Time .	Set the system time based on the actual situation.
4. (Optional) Set the server for storing photos.	Set the server for storing photos based on the actual networking.
5. OSD Setting	Set the information displayed on the screen as needed, for example, time.
6. User	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 Setup

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**.

Smart	
Intelligent Mark	Enable <input type="button" value="v"/>
Display Attributes	Enable <input type="button" value="v"/>
Display Human Body Snaps...	Enable <input type="button" value="v"/> <small>Note: When enabled, snapsh...</small>
Video	
Display Mode	Fluent <input type="button" value="v"/>
Protocol	TCP <input type="button" value="v"/>
Audio	
Encoding Format	G.711U <input type="button" value="v"/>
Recording and Snapshot	
Recording	Subsection By Time <input type="button" value="v"/>
Subsection Time (min)	30 <input type="text"/>
When Storage Full	<input checked="" type="radio"/> Overwrite Recording <input type="radio"/> Stop Recording
Total Capacity(GB)	10 <input type="text"/>
Local Recording	TS <input type="button" value="v"/>
Files Folder	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Open"/>
<input type="button" value="Save"/> Please install the plug-in before local settings.	

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

Parameter		Description
Smart	Intelligent Mark	This function should be used with Cross Line Detection, Intrusion Detection, Enter Area, Leave Area, Mixed-Traffic Detection.
	Display Attributes	When enabled, the attributes of detected objects will be displayed in the live view page. This function should be used with Intelligent > Smart > Attribute Collection.
	Display Human Body Snapshot	When enabled, the camera will display an on-screen mark on the target (e.g., face when face detection is enabled) and track it.
Audio	Encoding Format	Select the audio encoding format, including G.711U and G.711A.
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.

Parameter		Description
Recording and Snapshot	Recording	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

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.

Network

Static Address

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

IPv4

Obtain IP Address

IP Address

Subnet Mask

Default Gateway

IPv6

Mode

Address

Prefix Length

Default Gateway

Basic

MTU

Port Type

Operating Mode

Save

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**.

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 **IPv6** 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**.

Basic

1. Set the MTU value, port type and operating mode.
 - MTU: Set the maximum packet size supported by the network in bytes. The greater the value, the higher the communication efficiency, the higher the transmission delay.
 - Port Type: **FE Port** by default.
 - Operating Mode: **Auto-negotiation** by default.

Basic	
MTU	<input type="text" value="1500"/>
Port Type	<input type="text" value="FE Port"/>
Operating Mode	<input type="text" value="Auto-negotiation"/>

2. Click **Save**.

DNS

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

Preferred DNS Server	<input type="text" value="8.8.8.8"/>
Alternate DNS Server	<input type="text" value="8.8.4.4"/>

2. Set DNS server addresses.
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**.

DDNS Service	<input checked="" type="radio"/> On <input type="radio"/> Off
DDNS Type	<input type="text" value="DynDNS"/>
Server Address	<input type="text"/>
Domain Name	<input type="text"/>
Username	<input type="text"/>
Password	<input type="password"/>
Confirm	<input type="password"/>
<input type="button" value="Save"/>	

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**.

Port



NOTE!

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

Port

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

HTTP Port

HTTPS Port

RTSP Port

Note: Modifying the RTSP port number will cause the device to restart.

Save

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

Port Mapping

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

Port Mapping On Off

Mapping Type

UPnP Mapping

Port Type	External Port	External IP Address	Status
HTTP Port	<input type="text" value="80"/>	0.0.0.0	Inactive
Server Port	<input type="text" value="81"/>	0.0.0.0	Inactive
RTSP Port	<input type="text" value="554"/>	0.0.0.0	Inactive

Save

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**.

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**.

P2P	<input checked="" type="radio"/> On <input type="radio"/> Off
Add Without Signup	<input checked="" type="radio"/> On <input type="radio"/> Off
Address	www.star4live.com
Register Code	315SD1K9CTEQDRJOA6IIQ79YL
Device Status	Offline
Scan	
<input type="button" value="Save"/>	

2. Select **On** to enable cloud service.
3. To add the camera to cloud.
 - At the cloud website: Log in to your account at www.star4live.com and then add the camera by entering the register code and device name.
 - Using the app: Scan the QR code with the app. You need to download and install the app on your mobile phone first. Contact your dealer for details.
4. 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**.

Audio & Video	<input type="text" value="46"/>
Alarm Report	<input type="text" value="0"/>
Configuration Management	<input type="text" value="0"/>
FTP	<input type="text" value="4"/>
<input type="button" value="Save"/>	

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. 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.
- FTP function is unavailable on this device.

E-mail

Configure E-mail so that the camera can e-mail an alarm message to the specified email addresses when an alarm occurs.

1. Go to **Setup > Network > E-mail**.

Sender

Name

Address

SMTP Server

SMTP Port

TLS/SSL On Off

Snapshot Interval(s) Attach Image

Server Authentication On Off

Username

Password

Confirm

Recipient

Name1

Address1

Name2

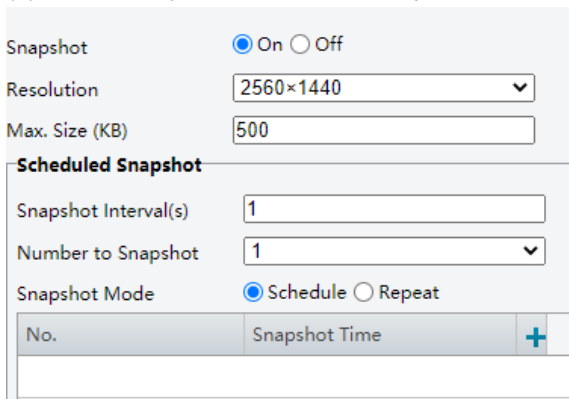
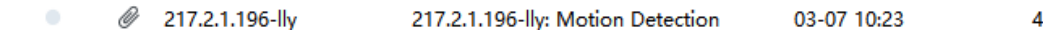
Address2

Name3

Address3

2. Set the sender and recipient information.

Item	Description
Sender Name	Enter the device name.
Sender Address	Enter the device IP.
SMTP Server/SMTP Port	Enter the IP address and port number of SMTP server of the sender's e-mail. The default SMTP port number is 25.
TLS/SSL	Enable TLS/SSL to secure e-mail communication.

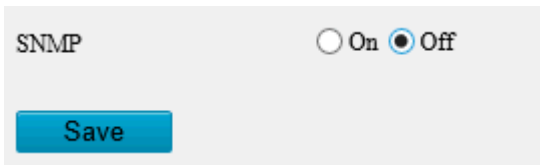
Snapshot Interval	<p>Set the interval for taking snapshots to be attached to alarm e-mails.</p> <p>NOTE!</p> <ul style="list-style-type: none"> The interval for taking snapshots attached to alarm e-mails is subject to the settings on the E-mail page. Deep-learning exception detection functions captures 1 snapshot by default, and you do not need to set the snapshot interval for them.
Attach Image	<p>When enabled, the camera will automatically send an alarm e-mail with 3 attached snapshots taken at set intervals in the event of an alarm.</p> <p>(1) Select the Attach Image check box.</p> <p>(2) Enable Snapshot and set the snapshot resolution as needed.</p> 
Server Authentication	Enable SMTP server authentication to secure e-mail transmission.
Username/Password	<p>Enter the username and password of the SMTP server.</p> <p>NOTE!</p> <ul style="list-style-type: none"> The email only shows the sender name not the username.  <ul style="list-style-type: none"> The password allows special characters.
Recipient Name/Address	<p>(1) Enter the e-mail name and address to receive e-mails.</p> <p>(2) After recipient configuration, you can click Test to test the email sending function.</p>

3. Click **Save**.

SNMP

SNMP is required for the camera to share configuration information to servers.

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



2. Enable **SNMP**.



NOTE!

This function is enabled by default on certain models.

4. Set SNMP parameters.

- SNMPv3



NOTE!

Before you enable SNMPv3, make sure that it is supported both on your camera and the server.

SNMP	<input checked="" type="radio"/> On <input type="radio"/> Off
SNMP Type	<input type="text" value="SNMPv3"/>
Username	<input type="text" value="admin"/>
Authentication Mode	<input type="text" value="MD5"/>
Password	<input type="password"/>
Confirm	<input type="password"/>
Encryption Mode	<input type="text" value="DES"/>
Password	<input type="password"/>
Confirm	<input type="password"/>
Trap Community Name	private
Trap Server Address	0.0.0.0
Trap Port	162
SNMP Port	<input type="text" value="161"/>

Item	Description
SNMP Type	The default SNMP type is SNMPv3.
Password	Set a password for authentication.
Confirm	Confirm the password you entered by entering it again.
Password	Set a password for data
Confirm	Confirm the password you entered by entering it again.
Trap Server Address	Set the trap server address in Management Server.
SNMP Port	The default SNMP port number is 161. You may change it as needed.

- SNMPv2

SNMP On Off

SNMP Type

Read Community

Read/Write Community

Trap Community Name

Trap Server Address

Trap Port

SNMP Port

Item	Description
SNMP Type	Select SNMPv2. After you select SNMPv2, a message pops up to remind you of potential risks and ask if you want to continue. Click OK.
Read Community	The default read community name is public, and you may change it as needed. Make sure the read community names of the server and camera are the same, otherwise the two-way authentication will fail.
Trap Server Address	Set the trap server address in Management Server.
SNMP Port	The default SNMP port number is 161. You may change it as needed.

5. 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 > Video**.

Capture Mode

Main Stream

Video Compression

Resolution

Frame Rate(fps)

Bit Rate(Kbps)

Bitrate Type

Image Quality Bit Rate Quality

I Frame Interval(sec)

Smoothing Clear Smooth

Smart Encoding

Enable Sub Stream

Video Compression

Resolution

Frame Rate(fps)

Bit Rate(Kbps)

Bitrate Type

Image Quality Bit Rate Quality

I Frame Interval(sec)

Smoothing Clear Smooth

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

Parameter	Description
Video Compression	Two options: H.264 and H.265. Note: <ul style="list-style-type: none"> Image Quality 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.
Resolution	Image resolution. The higher the resolution, the clearer the image.
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	<ul style="list-style-type: none"> 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.
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.
Smart Encoding	<ul style="list-style-type: none"> 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 Smart encoding is enabled, the capture mode does not support frame rates higher than 30.

3. Click **Save**.

Snapshot

Configure basic snapshot parameters and scheduled snapshot.

1. Go to **Setup > Video & Audio > Snapshot**.



NOTE!

- For dual-channel devices, you can set snapshot parameters for the channels separately.
- When you configure e-mail and FTP, you only need to enable Snapshot and set the resolution and maximum size, and do not need to configure the scheduled snapshot.

The screenshot shows the 'Snapshot' configuration page. At the top, there is a 'Snapshot' toggle set to 'On'. Below it, 'Resolution' is set to '2560x1440' and 'Max. Size (KB)' is set to '500'. The 'Scheduled Snapshot' section is expanded, showing 'Snapshot Interval(s)' set to '1', 'Number to Snapshot' set to '1', and 'Snapshot Mode' set to 'Schedule'. At the bottom, there is a table with columns 'No.' and 'Snapshot Time', and a '+' button to add new entries.

2. Enable **Snapshot** and set the resolution and maximum size of snapshots to be saved.
3. Set the snapshot mode.
 - **Schedule:** Set a time for snapshot. For example, with snapshot interval set to 20s, number to snapshot set to 3, and snapshot time set to 16:00:00, the camera will take a snapshot at 16:00:00, 16:00:20 and 16:00:40.

This screenshot shows the 'Snapshot' configuration page with a 'Quick Selection' dialog box open. The dialog lists several time slots: 13:55:00, 13:55:30, 13:56:00, 13:56:30, and 13:57:00. The 'Time' field at the bottom of the dialog is set to '13:56:16'. The 'Snapshot' configuration page in the background shows the 'Scheduled Snapshot' section with 'Snapshot Interval(s)' set to '1', 'Number to Snapshot' set to '1', and 'Snapshot Mode' set to 'Schedule'. The table below has one entry with 'No.' 1 and 'Snapshot Time' 13:55:00, and a trash icon to delete it.

To delete a snapshot time, click .

- **Repeat:** Set an interval for snapshot. For example, with snapshot plan set to 16:00:00 to 20:00:00 on Monday, repeat interval set to 120s, snapshot interval set to 20s, and number to snapshot set to 2, the camera will take a snapshot at 16:00:00, 16:00:20, 16:02:00 and 16:02:20.
 - a Select **Repeat** and set the repeat interval. A valid repeat interval ranges from 1 to 86400.
 - b Select the **Enable Snapshot Plan** check box and set the snapshot plan. See Arming Schedule for details. A 24/7 snapshot plan is enabled by default.



NOTE!

- The time periods cannot overlap.
- Up to 4 time periods are allowed.

4. Set the snapshot interval and number to snapshot. For example, if the interval is set to 1s and the number to snapshot is set to 2, the camera will take 2 snapshots (take one first and then take another after 1 second).
5. Click **Save**.

Audio

Audio

1. Go to **Setup > Video & Audio > Audio**.

2. Set audio input parameters.

Item	Description
Audio Input	Enable/disable audio input. NOTE! <i>If audio data is not required, select Off to improve camera performance.</i>
Access Mode	Select the audio input mode, including Line/Mic and RS485 . NOTE! <i>This function is not available on dual-channel cameras.</i>
Input Volume	Set the input volume using the slider.
Audio Compression	Select the audio compression format, including G.711U and G.711A .

Sampling Rate(KHz)	Set the sampling rate according to your required audio compression. In G.711A or G.711U format, only 8KHz is available.
Noise Suppression	Reduce noise in audio to improve audio output quality. NOTE! <i>This function is enabled by default.</i>
Channel 1/Channel 2	Select the Enable check box to enable audio input for the channel. Channel 1 and Channel 2 (if available) cannot be enabled simultaneously. The default audio input mode of Channel 1 is Mic. You can change it to Line.

3. Set audio output parameters.

Item	Description
Audio Output	Select the audio output mode, including Line and Speaker .
Output Volume	Set the output volume using the slider.

4. Click **Save**.

Audio File

1. Go to **Setup > Video & Audio > Audio**.

Alarm Volume


Alarm Audio File

Note: PCM or MP3 files, each no more than 200K.

No.	Audio	Operation
1	You_are_in_the_restricted_area!_Please_leave!	
2	You_are_in_the_danger_zone!_Do_no_approach!	
3	Please_be_aware!_You_are_in_a_monitored_area!	
4	No_parking!_Please_leave!	
5	Restricted_area!_Please_leave!	
6	Restricted_area!_Do_not_enter!	
7	Danger!_Deep_water!	
8	Danger!_Do_not_climb!	
9	Welcome!	
10	Warning!	
11	The_area_is_crowded!_Please_leave!	
12	Please_stop!_No_more_people_allowed!	
13	Entry_forbidden!_Please_wear_a_mask!	

2. Set audio file parameters.

Item	Description
Alarm Volume	Set the alarm volume using the slider.

Item	Description
Alarm Audio File	<p>Click Browse... to import audio files. To play an audio file, click .</p> <p>NOTE!</p> <ul style="list-style-type: none"> This function is available only on certain models. Up to 5 audio files are allowed. Built-in audio files may vary depending on the smart functions supported by the device.

3. Click **Save**.

ROI

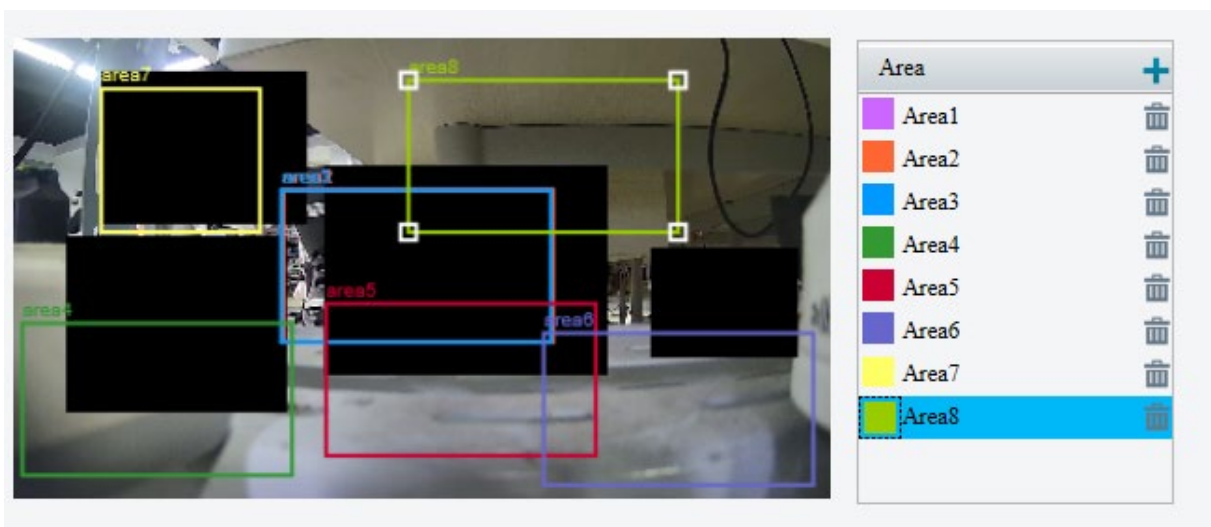
When Region of Interest (ROI) is enabled, the system ensures image quality for ROI first if the bit rate is insufficient.





NOTE!

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

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




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

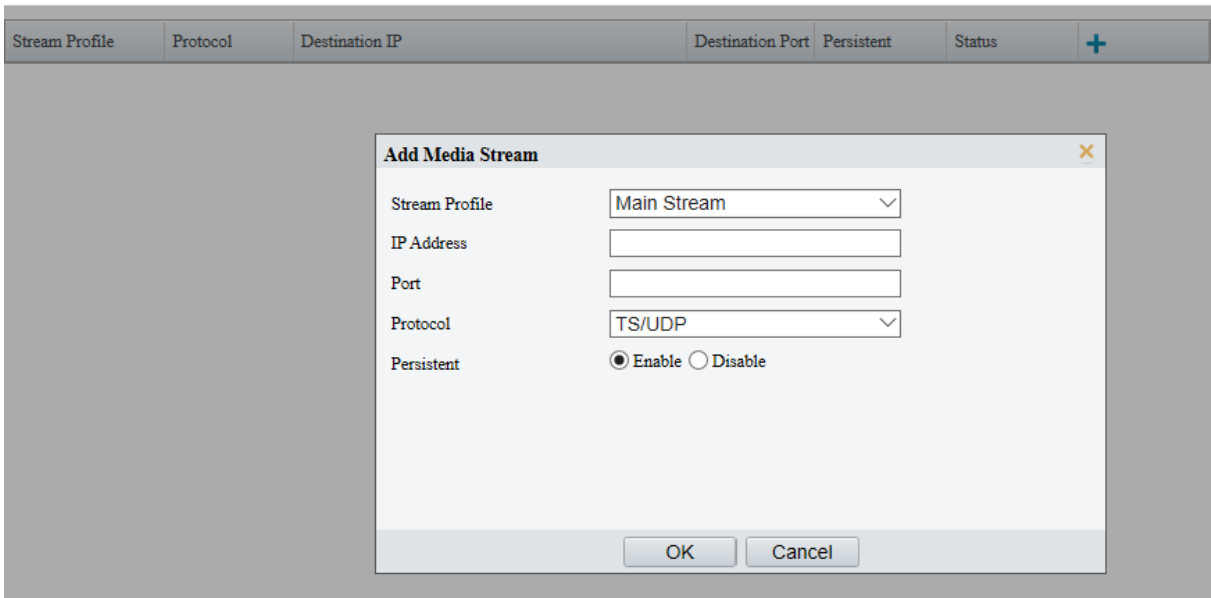
Media Stream

Media Stream

Media streams are multimedia contents of audio and video that transferred in real time in the form of data streams. The **Media Stream** page shown below shows third-party clients such as a PC or a server receiving data streams from the added cameras. You may add a media stream to transfer the image or audio/video data collected by a camera to a specified IP or port via the specified transport protocol.

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

2. Click  to add a media stream.



3. Complete the parameters.

Parameter	Description
Stream Profile	Choose Main Stream or Sub Stream . The device will transfer data collected via the specified stream to the third-party device.
IP Address	IP address or domain name of the third-party device to receive the media stream.
Port	Port of the third-party device to receive the media stream.
Protocol	Choose a media transport protocol. Options include TS/UDP , ES/UDP , and RTMP .
Persistent	When enabled, the device will automatically establish the previously configured media stream after a reboot or a startup.

4. Click **OK**.

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 > Media Stream > RTSP Multicast Address**.

2. Set the multicast address (224.0.0.0 to 239.255.255.255) and port number (0 to 65535).

3. Click **Save**.

Image

Image



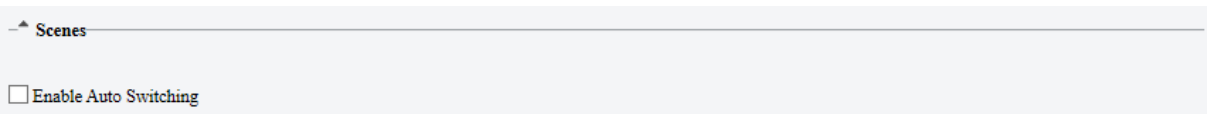
NOTE!

- 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 of following 5 functions.

Scenes

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

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



2. Check **Enable Auto Switching**, 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.

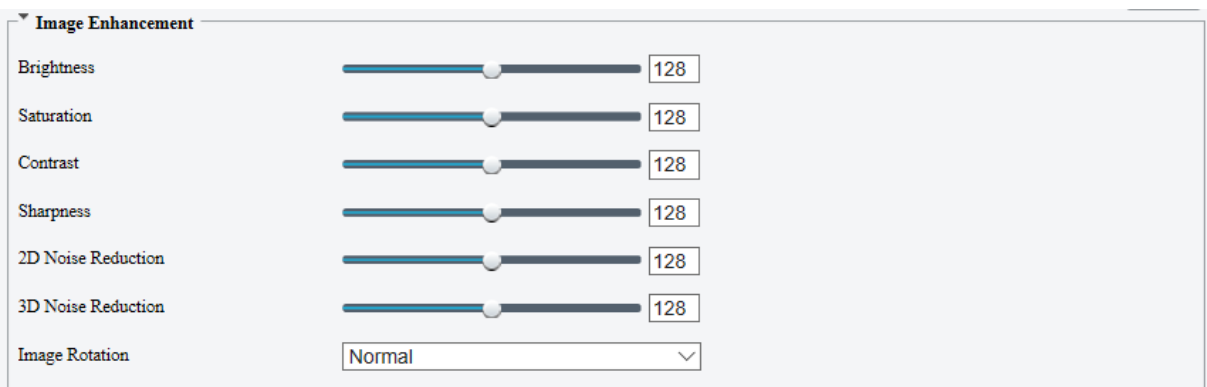
Image Enhancement






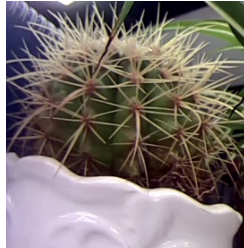
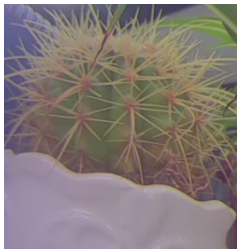
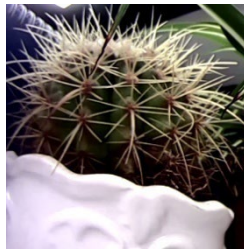
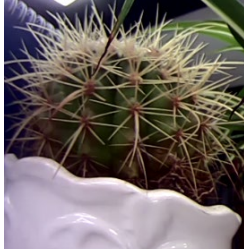

NOTE!







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
<p>Brightness</p>	<p>Set the degree of brightness of images.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Low brightness High brightness </div>
<p>Saturation</p>	<p>The amount of a hue contained in a color.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Low saturation High saturation </div>
<p>Contrast</p>	<p>Set the degree of difference between the blackest pixel and the whitest pixel.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Low contrast High contrast </div>
<p>Sharpness</p>	<p>Contrast of boundaries of objects in an image.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Low sharpness High sharpness </div>
<p>2D Noise Reduction</p>	<p>Reduce the noise of images. The function may cause image blurring.</p>
<p>3D Noise Reduction</p>	<p>Reduce the noise of images. The function may cause motion blur (or ghosting in some applications).</p>
<p>Image Rotation</p>	<p>Rotation of the image.</p>

Item	Description
	<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center;">  <p>Normal</p> </div> <div style="text-align: center;">  <p>Flip Vertical</p> </div> <div style="text-align: center;">  <p>Flip Horizontal</p> </div> <div style="text-align: center;">  <p>180°</p> </div> <div style="text-align: center;">  <p>90°Clockwise</p> </div> <div style="text-align: center;">  <p>90°Anti-clockwise</p> </div> </div>

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**.

▼ Exposure

Exposure Mode: Automatic

Shutter(s): 1/100

Gain: 0

Slow Shutter: On Off

Slowest Shutter: 1/12

Compensation: 0

Metering Control: Center-Weighted Average Metering

Day/Night Mode: Automatic Day Night

Day/Night Sensitivity: Medium

Day/Night Switching(s): 3

WDR: Off

WDR Level: 5

Suppress WDR Stripes: On Off

WDR Open Sensitivity: 5

WDR Close Sensitivity: 5

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

Parameter	Description
Exposure Mode	<p>Select the correct exposure mode to achieve the desired exposure effect.</p> <ul style="list-style-type: none"> 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: Finetune 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)	<p>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.</p> <p>Note:</p> <ul style="list-style-type: none"> 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)	<p>Control image signals so that the camera outputs standard video signals according to the light condition.</p> <p>Note:</p> <p>You can set this parameter only when Exposure Mode is set to Manual or Gain Priority.</p>
Slow Shutter	<p>Improves image brightness in low light conditions.</p> <p>Note:</p> <p>You can set this parameter only when Exposure Mode is not set to Shutter Priority and when Image Stabilizer is disabled.</p>
Slowest	<p>Set the slowest shutter speed that the camera can use during exposure.</p>

Parameter	Description
Shutter	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. <ul style="list-style-type: none"> Center-Weighted Average Metering: Measure light mainly in the central part of images. Evaluative Metering: Measure light in the customized area of images. Highlight compensation: Ignore the brightness of the overexposed area of images. But selecting this setting will decrease the overall brightness of the image. Face Metering: Adjust image quality in poor lighting conditions by controlling the brightness of captured face in Face scene. Note: You can set this parameter only when Exposure Mode is not set to Manual .
Day/Night Mode	<ul style="list-style-type: none"> 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.

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

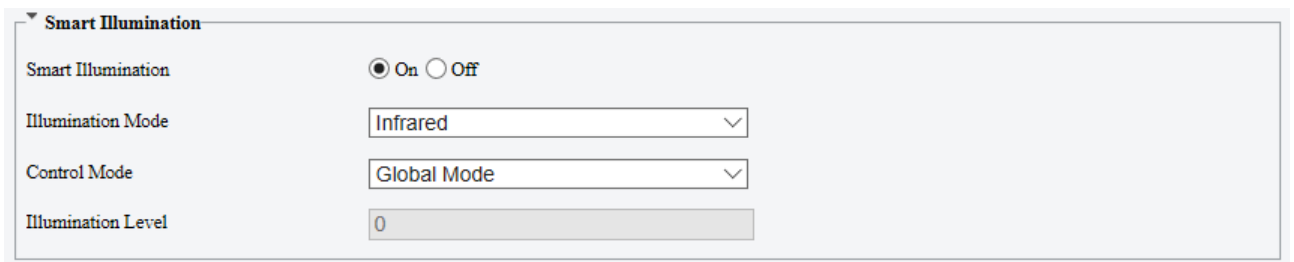
Smart Illumination



NOTE!

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

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



Smart Illumination

Smart Illumination On Off

Illumination Mode

Control Mode

Illumination Level

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

Parameter	Description
Lighting Type	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	<ul style="list-style-type: none"> 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. Manual: 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 .

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

White Balance

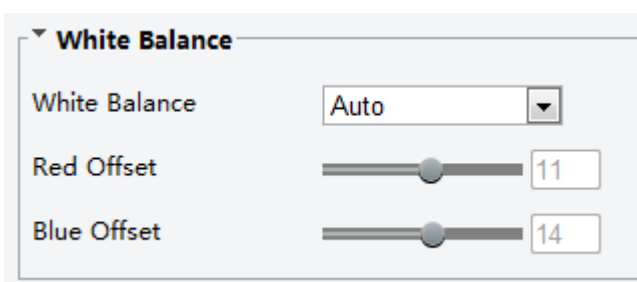
White balance is the process of offsetting unnatural color cast in images under different color temperatures so as to output images that best suit human eyes.



NOTE!

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

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



White Balance

White Balance

Red Offset

Blue Offset

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

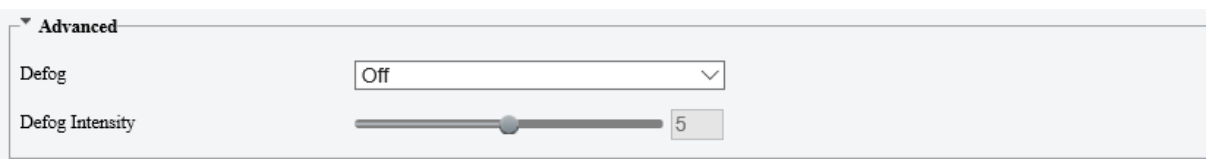
Parameter	Description
White Balance	<p>Adjust the red or blue offset of the image:</p> <ul style="list-style-type: none"> • Auto/Auto2: The camera adjusts the red and blue offset automatically according to the light condition (the color tends to be blue). If the images are still unnaturally red or blue 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	<p>Adjust the red offset manually.</p> <p>Note: You can set this parameter only when White Balance is set to Fine Tune.</p>
Blue Offset	<p>Adjust the blue offset manually.</p> <p>Note: You can set this parameter only when White Balance is set to Fine Tune.</p>

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

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

OSD Setting

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.

- Click **Setup > Image > OSD**.

Enable	No.	Overlay OSD Content	X-Axis	Y-Axis
<input checked="" type="checkbox"/>	1	<Date & Time>	<input type="text" value="2"/>	<input type="text" value="3"/>
<input type="checkbox"/>	2		<input type="text" value="75"/>	<input type="text" value="3"/>
<input type="checkbox"/>	3		<input type="text" value="2"/>	<input type="text" value="75"/>
<input type="checkbox"/>	4		<input type="text" value="0"/>	<input type="text" value="0"/>

Display Style

Effect:

Font Size:

Font Color:

Min. Margin:

Date Format: dd=Day; dddd=Day of the week; M=Month; y=Year

Time Format: hH=12/24 Hour; tt=A.M. or P.M.; mm=Minute; ss=Second

- 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**, **Date**, **Date & Time** and **Network Port**. 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.
- 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 4 privacy masks.

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

No.	Name
1	Mask1
2	Mask2
3	Mask3
4	Mask4

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.

3. Set mask mode. You may select regular or irregular mode as needed. In irregular mode, when the PTZ camera rotates, the privacy mask varies with the shape of the masked object in the image.



NOTE!

Mask mode is only available to certain models.

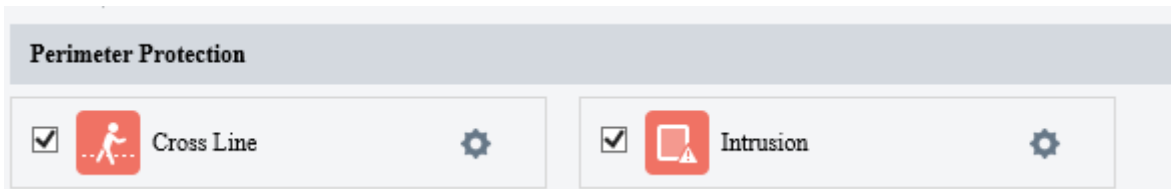
Intelligent

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

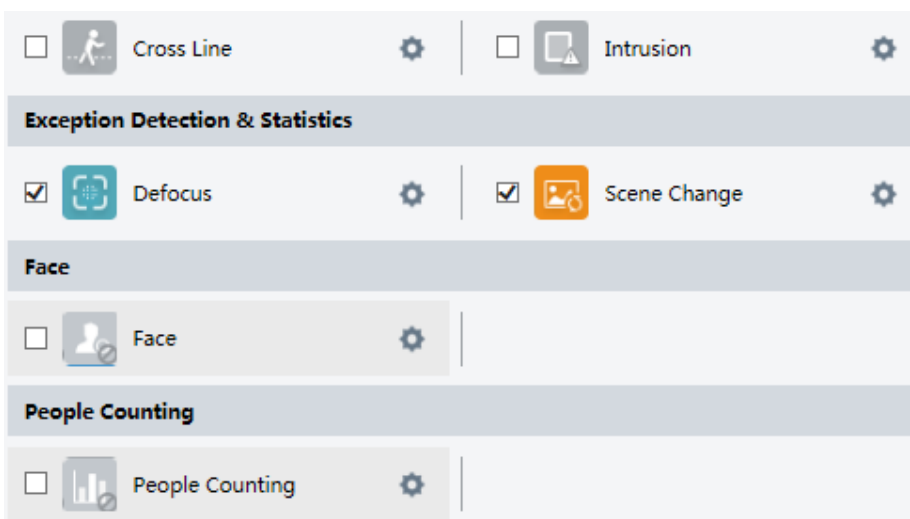
The supported functions may vary with camera model.

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

□ Cross Line Detection

Rule Settings Trigger Actions Plan

4:21:19 PM 2023/03/14

4:21:19 PM 2023/03/14

Detection Rule +

Rule

Trigger Direction A<->B

Sensitivity 1

Save

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

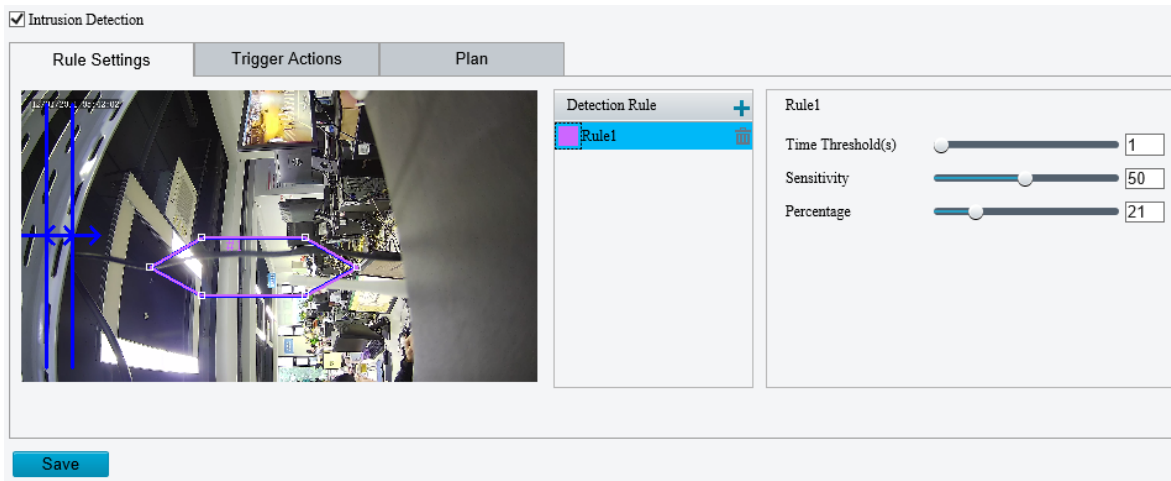
Intrusion detection detects objects that enter a specified area in live video and triggers alarm when such an event is detected.





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

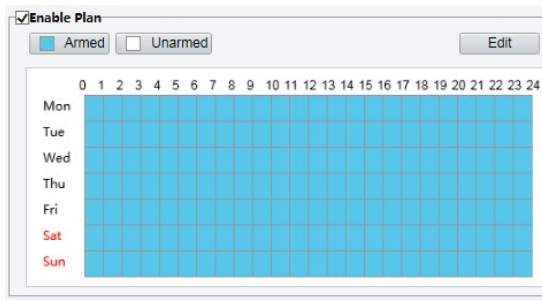
You can schedule alarm reporting and set actions that can be triggered by other devices so that alarms and the triggered actions can be handled in time.

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.

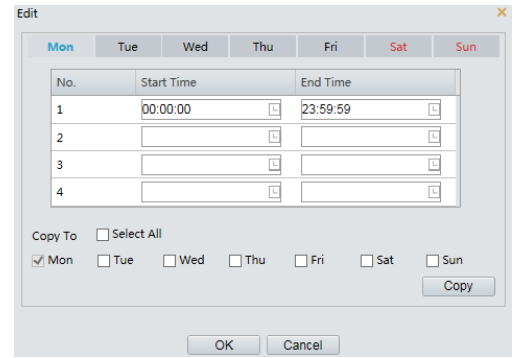
The following table describes the major alarm-triggered actions and how to set a plan.

Item	Description
Alarm Output 1	Select the check box. This setting is the alarm output interface linked to motion detection alarm. Note: <i>When an alarm is reported, the camera triggers alarm output so as to trigger actions by a third-party device.</i>
Go to Preset	Select the check box and set the preset linked to motion detection alarm. Note: <ul style="list-style-type: none"> • Make sure you have set presets. Otherwise, you cannot set this parameter.

	<ul style="list-style-type: none"> When an alarm is reported, the PTZ camera automatically goes to the preset to capture video in the correct scene.
Upload to FTP	<p>With Upload to FTP selected, the camera will automatically upload snapshots to the specified FTP server when an alarm is triggered.</p> <p>Note: Make sure you have completed FTP and Snapshot before using this function.</p>
Recording	<p>With Recording selected, the camera will automatically record video when an alarm is triggered.</p> <p>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.</p>
Alarm the Center	<p>With Alarm the Center selected, the camera will send alarm information to the central server when an alarm is triggered.</p> <p>Note: Please complete settings on the Server page first.</p>
Upload Image(Original)	<p>With Upload Image(Original) selected, The camera uploads the snapshot original image to the server or platform .</p> <p>Note: Make sure you have completed FTP and Snapshot before using this function.</p>
Upload Image(Object)	<p>With Upload Image (Object) selected, The camera uploads the snapshot object image to the server or platform.</p> <p>Note: Make sure you have completed FTP and Snapshot before using this function.</p>
Attribute Collection	<p>With Attribute Collection selected, The camera uploads the attribute information to the server or platform.</p> <p>Note:</p> <ul style="list-style-type: none"> Only some camera models support this function. Please set attribute collection on the Attribute Collection page first.
Trigger Tracking	<p>With Trigger Tracking selected, the camera starts auto tracking when an alarm is triggered.</p> <p>Note:</p> <ul style="list-style-type: none"> Only some camera models support this function. Please set auto tracking on the Smart Settings page first.
Trigger E-mail	<p>With Trigger E-mail selected, the camera will automatically send snapshots to the specified E-mail address when an alarm is triggered.</p> <p>Note: Make sure you have completed E-mail before using this function.</p>
Enable Plan	<p>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.</p> <p>You can select from Monday to Sunday and set four periods for each day.</p>



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.

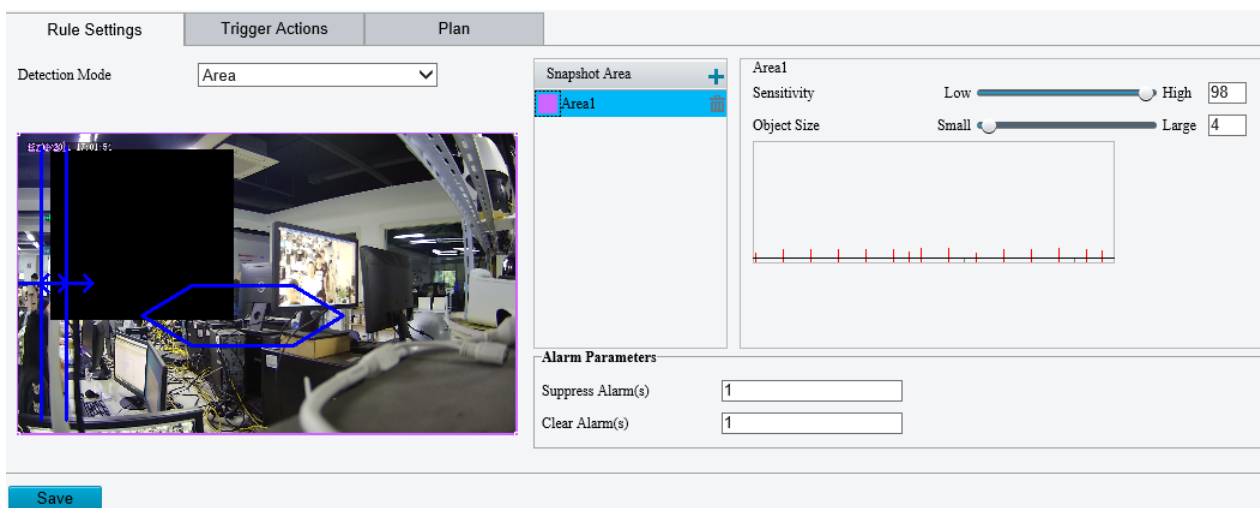


NOTE!

- 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.

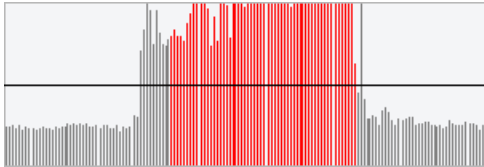
Area Detection

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

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

Rule Settings
Trigger Actions
Plan

Detection Mode

Sensitivity Low High

13:16:24 13:02:57

Alarm Parameters

Suppress Alarm(s)

Clear Alarm(s)

2. Detection area(s) can be irregular on the grid.
3. Set detection sensitivity for the camera to decide whether to report a motion detection alarm (alarm visible on compatible NVR).
4. 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.
- 5. 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](#).
- 6. 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!

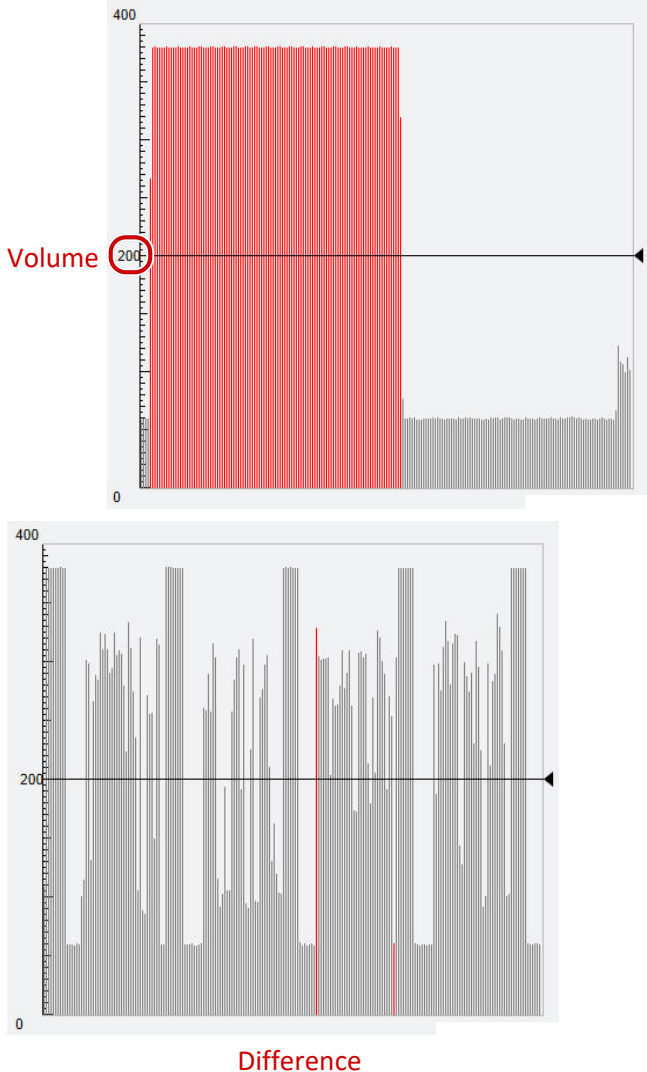
- This function is not supported by some models. Please see the actual web interface for details.
- The alarm triggered actions may vary with models. Please see the actual Web interface for details.

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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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. <p>Note:</p> <ul style="list-style-type: none"> • 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
	 <p>The image contains two graphs. The top graph shows a red waveform on a y-axis ranging from 0 to 400. A horizontal line is drawn at the 200 mark, labeled 'Volume' on the left and 'Scale' on the right with an arrow pointing to the right. The waveform is high (near 400) for the first part and then drops to a lower level (around 100). The bottom graph shows a grey waveform on the same y-axis. A horizontal line is drawn at the 200 mark. The waveform fluctuates between approximately 50 and 400. Two vertical red lines are drawn at approximately 1/3 and 2/3 of the x-axis.</p>

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**.

Storage

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

Storage Medium Enable

Storage Medium Status: Normal

Total Capacity 29 GB, Free Space 27 GB.

Allocate Capacity

Video(GB) (The remaining capacity is used for image storage.)

Common Snapshot(GB) (The remaining capacity is used for smart snapshot storage.)

Smart Snapshot(GB)

Video Storage Info

Storage Policy Manual and Alarm Recording Scheduled and Alarm Recording Alarm Recording Only

When Storage Full Overwrite Stop

Post-Record(s)

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**.

Storage Medium Enable

Storage Medium Status: No card

Total Capacity 0 GB, Free Space 0 GB.

Allocate Capacity

Video(GB) (The remaining capacity is used for image storage.)

Common Snapshot(GB) (The remaining capacity is used for smart snapshot storage.)

Smart Snapshot(GB)

Video Storage Info

Storage Policy Manual and Alarm Recording Scheduled and Alarm Recording Alarm Recording Only

When Storage Full Overwrite Stop

Post-Record(s)

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.

Storage Policy Manual and Alarm Recording Scheduled and Alarm Recording Alarm Recording Only

Stream

When Storage Full Overwrite Stop

Post-Record(s)

- To store scheduled recordings and alarm recordings

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

Storage Policy Manual and Alarm Recording Scheduled and Alarm Recording Alarm Recording Only

Stream

When Storage Full Overwrite Stop

Post-Record(s)

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

Armed Unarmed

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon																									
Tue																									
Wed																									
Thu																									
Fri																									
Sat																									
Sun																									

- To store alarm recordings only

Choose **Alarm Recording Only**.

Storage Policy Manual and Alarm Recording Scheduled and Alarm Recording Alarm Recording Only

When Storage Full Overwrite Stop

Post-Record(s)

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.

Storage Medium	NAS	Format
Server IP	192.161.3.250	
Path	/volume1/IPC-TEST1/I04	NAS Test <input checked="" type="checkbox"/> Test succeeded.



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**.

Storage Medium	NAS	Format
Server IP	192.161.3.250	
Path	/volume1/IPC-TEST1/I04	NAS Test <input checked="" type="checkbox"/> Test succeeded.
Total Capacity 1828 GB, Free Space 1821 GB.		
Allocate Capacity		
Video(GB)	1553	(The remaining capacity is used for image storage.)
Common Snapshot(GB)	275	
Smart Snapshot(GB)	0	
Video Storage Info		
Storage Policy	<input type="radio"/> Manual and Alarm Recording <input type="radio"/> Scheduled and Alarm Recording <input checked="" type="radio"/> Alarm Recording Only	
When Storage Full	<input checked="" type="radio"/> Overwrite <input type="radio"/> Stop	
Post-Record(s)	60	
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**.

Server Parameters

Server IP: Upload Images: Convert Path into UTF8...

Port No.: Upload Video:

Username:

Password:

Confirm:

Photo Recording

Save To:

File Path File Name

No.	Naming Element
1	<input type="text" value="Disable"/> ▼
2	<input type="text" value="Disable"/> ▼
3	<input type="text" value="Disable"/> ▼
4	<input type="text" value="Disable"/> ▼
5	<input type="text" value="Disable"/> ▼
6	<input type="text" value="Disable"/> ▼

Note: Overwrite will take place in the current directory.

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	<p>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.</p> <p>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.</p> <p>NOTE! If you select Overwrite Storage, make sure the last naming element of filename is Photo No.</p> <p>The default overwrite storage threshold is 1000 images, and the maximum is 100,000 images.</p>
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 start local recording. Up to 32 common 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.

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**.

HTTP Port	<input type="text" value="80"/>
HTTPS Port	<input type="text" value="443"/>
RTSP Port	<input type="text" value="554"/>

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

HTTPS	<input checked="" type="radio"/> On <input type="radio"/> Off
SSL Certificate	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/>

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**.

RTSP Authentication	<input type="text" value="Digest"/>
HTTP Authentication	<input type="text" value="Digest"/>
<input type="button" value="Save"/>	

2. Select an authentication mode and then 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**.

ARP Protection	<input checked="" type="radio"/> On <input type="radio"/> Off
Gateway	<input type="text" value="203.3.1.1"/>
Gateway MAC Address	<input type="text" value="0"/>
<input type="button" value="Save"/>	

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**.

IP Address Filtering On Off

Filtering Mode

No.	IP Address	+
1	<input type="text" value="1.1.1.1"/>	

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 **Whitelist**, 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**.

MAC Authentication On Off

Illegal Login Lock On Off

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

Registration Info

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

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

Hide Vendor Info On Off

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



NOTE!

This function will be available when used with NVR.

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**.

Watermark On Off
Watermark Content

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

System



NOTE!

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

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.

Sync Mode
Time Zone
System Time 2011-12-02 14:39:56
Set Time
NTP Server
NTP Server Address
Port
Update Interval(s)

2. Select a synchronization mode.
3. Set the correct time zone, and system time will be updated dynamically after saving the setting.
4. You may also click **Sync with Computer Time** to synchronize the time settings of your camera with that of your PC.
5. Click **Save**.

Synchronizing with the NTP Server

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

Sync Mode: Sync with NTP Server

Time Zone: (UTC+08:00) Beijing, Hong Kong, Urumqi, Singapore, Taipei, Perth

System Time: 2011-12-03 00:03:01

Set Time: 2011-12-03 00:00:22 [Sync with Computer Time]

NTP Server

NTP Server Address: 0.0.0.0 [Test]

Port: 123

Update Interval(s): 600

[Save]

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.

DST

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

DST

DST: On Off

Start Time: Apr | First | Sun | 02 h

End Time: Oct | Last | Sun | 02 h

DST Bias: 60mins

[Save]

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

Maintenance

Software Upgrade

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**.

Software Upgrade

Local Upgrade: [File Input] [Browse...] [Upgrade] Upgrade Boot Program

Cloud Upgrade: [Detect]

Note: The upgrade will take a while. Please do not disconnect power.

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 your 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.

Configuration Management

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) 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.

Diagnosis Info

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 **Export** and the diagnosis information will be directly exported to PC.

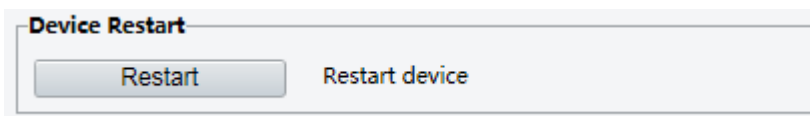


NOTE!

- 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.

Device Restarting

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.

Basic Info

You can view the current status of your camera.

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

Basic Info	
Model	IPC2122LB-SF28-A
Firmware Version	DIPC-B1219.1.92.C038208.220328
Hardware Version	A
Boot Version	V2.1
Serial No.	210235C5A43219000303
Network	202.5.94.62/255.255.0.0/202.5.1.1
MAC Address	6c:f1:7e:9b:a2:61

Status	
System Time	2011/12/3 00:21:13
Operation Time	2 Day(s) 0 Hour(s) 22 Minute(s)

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



NOTE!

You may view device model, firmware version, Serial number, etc, on the basic info page.

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.

Item	Description
	Set the image display ratio in the window. <ul style="list-style-type: none"> Scale: Displays 16:9 images. Stretch: Displays images according to the window size (stretch images to fit the window). Original: Displays images with original size.
	Set the image display mode in the window. <ul style="list-style-type: none"> Single Channel: Displays live video of a single channel. Left/Right Split: Displays live video in left/right split mode. Top/Bottom Split: Displays live video in top/bottom split mode. Picture in Picture: Opens a floating live view window on top of the current window. <p>NOTE! This function is only available on dual-channel cameras.</p>
	<p>1 : Stop/start live view of the selected channel.</p> <p>2 : Start local recording.</p> <p>3 : Switch streams.</p>
	Select a live video stream according to your camera.
	Set image parameters.
	Start/stop live view.
	Turn off/on sound.

	Adjust the output volume for the media player on the PC. Range: 1 to 100.
	Adjust the microphone volume on the PC during audio communication between the PC and the camera. Range: 1 to 100.
	Frame rate/bit rate/resolution/packet loss rate.
	Pixel calculation.
	Take a snapshot from the displayed live video. NOTE! See Local Parameters for the path of the saved snapshots.
	Start/stop local recording. NOTE! <ul style="list-style-type: none"> • See Local Parameters for the path of the saved local recordings. • VLC media player is recommended for playing local recordings of 4K cameras.
	Start/stop two-way audio.
	Start/stop digital zoom.
	Full screen.
	Show/hide general parameters.

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

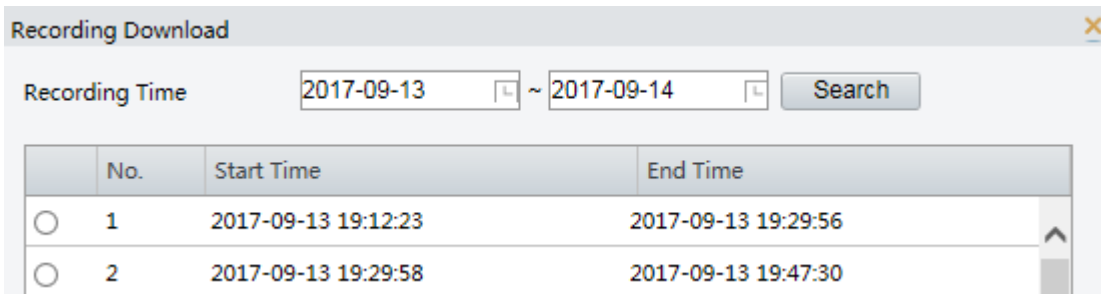
1. Click **Playback** on the home page.






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
5. Select a date from the calendar.
 6. Set the recording type and click **Search**.
 7. Select a recording and click  to play it.
 8. Click  in the toolbar to clip the video
 9. Click  to save the video clip.

6 Photo

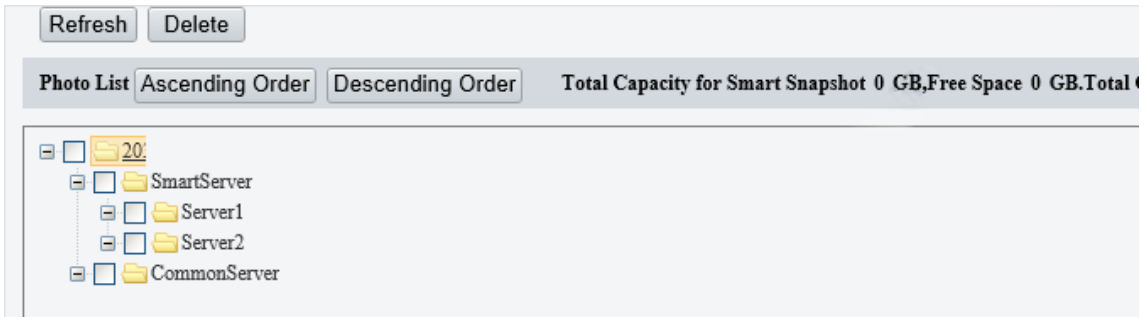
View the photo storage status. See [Storage](#) for photo storage policy.



NOTE!

This function is only available on cameras with storage capabilities.

On the home page, click **Photo**.



Item	Description
Refresh	Refresh the displayed content.
Export	Export the selected photos.
Delete	Delete the selected photos.
Export & Delete	Export the selected photos and delete them on the server.
Ascending Order	Arrange the items in chronological order.
Descending Order	Arrange the items in reverse chronological order.
SmartServer	Used to store smart snapshots.
CommonServer	Used to store common snapshots.



NOTE!

To allocate photo capacity, go to **Setup > Storage > Storage**.

Appendix A Glossary

Acronym	Description
ARP	Address Resolution Protocol
CBR	Constant Bit Rate
DNS	Domain Name Service
DDNS	Dynamic Domain Name Service

Acronym	Description
DHCP	Dynamic Host Configuration Protocol
DST	Daylight Saving Time
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.