

advidia

M-24-FW-T

M-26-FW

M-29-FW

2MP Network Cameras

User Manual



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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.

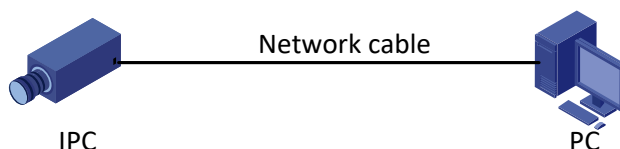
Symbols

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.

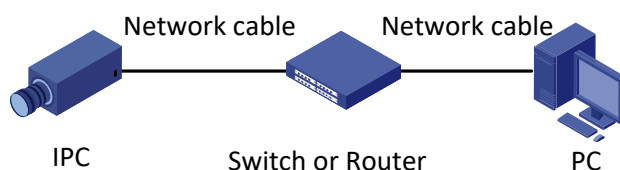
Symbol	Description
 WARNING!	Contains important safety instructions and indicates situations that could cause bodily injury.
 CAUTION!	Means reader be careful and improper operations may cause damage or malfunction to product.
 NOTE!	Means useful or supplemental information about the use of product.

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.

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 Advidia Guard. Internet Explorer (IE) is a recommended web browser. For more information about Advidia Guard, refer to the *Advidia Guard User Manual*.

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

1. Check before login

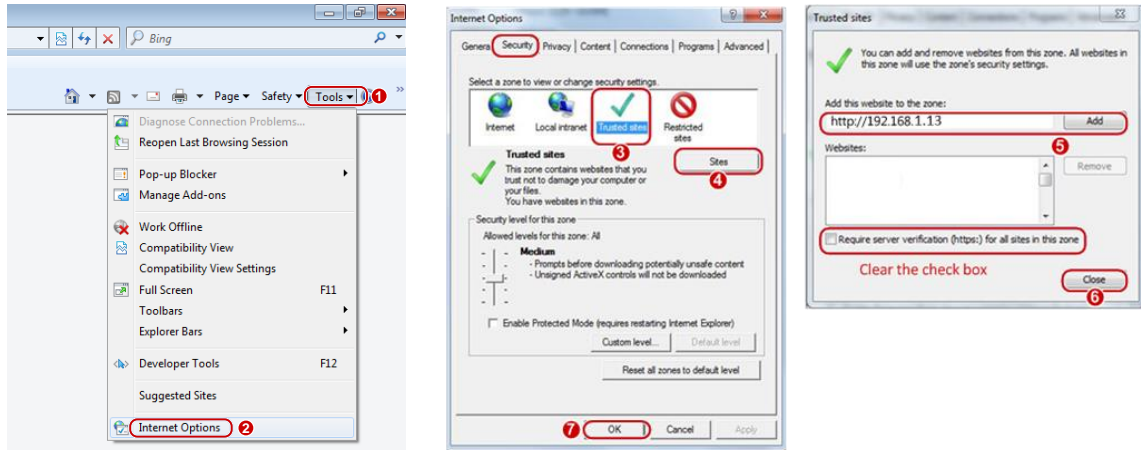
The camera is operating correctly.

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.

2. Add the IP address as a trusted site

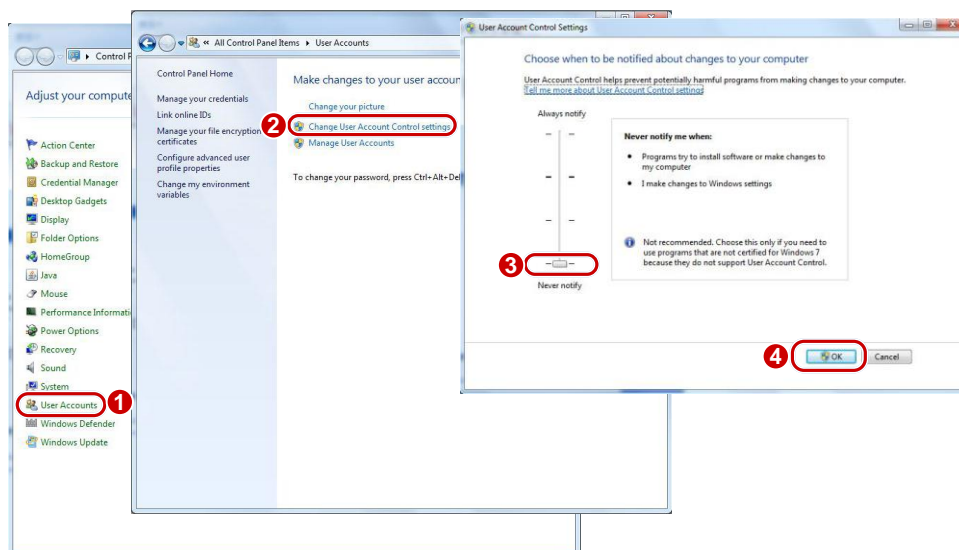


NOTE!

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.

3. (Optional) Modify user access control settings

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



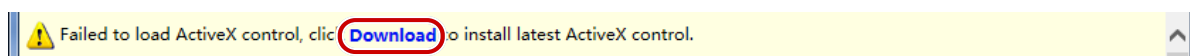
Logging In to the Web Interface

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 Advidia Guard 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.



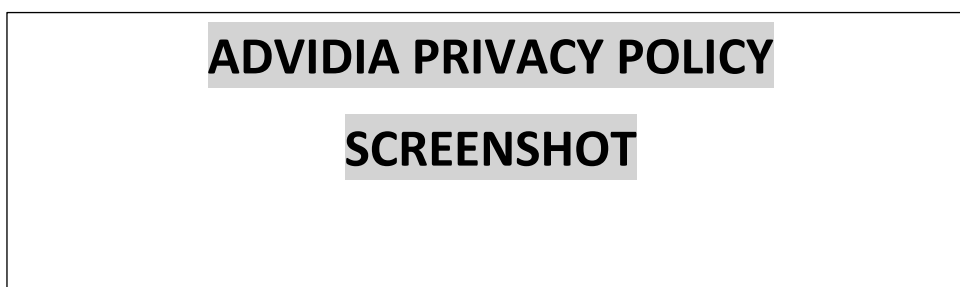
NOTE!

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. Privacy policy is displayed on the screen when the user logs in for the first time. After reading the privacy policy, you need to check in the “I have read and agree to the above policy” box, then click the 'OK' button to proceed to the next step.



4. 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.



- 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
Ethernet.	Reconfigure the device IP and network parameters based on the actual networking.
Log out and log in again to the Web using the new IP address.	
Set the system time.	Set the system time based on the actual situation.
(Optional) Set the management server.	Set the management server based on the actual networking.

Item	Description
(Optional) Set the server for storing photos.	Set the server for storing photos based on the actual networking.
Set OSD.	Set the information displayed on the screen as needed, for example, time.
(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 greyed 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](#).

Configuring Parameters

Local Parameter

Set local parameters for your PC.



NOTE!

The local parameters may vary with models. Please see the actual Web interface for details.

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

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

Parameter		Description
Video	Processing Mode	Real-Time Priority: Recommended if the network is in good condition. Fluency Priority: Recommended if you want short time lag for live video. Ultra-Low Delay: Recommended if you want the minimum time lag for live video.
	Protocol	Set the protocol used to transmit media streams to be decoded by the PC.
Record 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.
	Record Overwrite	Overwrite: When the assigned storage space on the computer is used up, the camera deletes the existing recording files to make room for the new recording file. Full Stop: When the assigned storage space on the computer is full, recording stops automatically.
	Files Folder	The save path of snapshots and recordings. The max. 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 (Network)

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



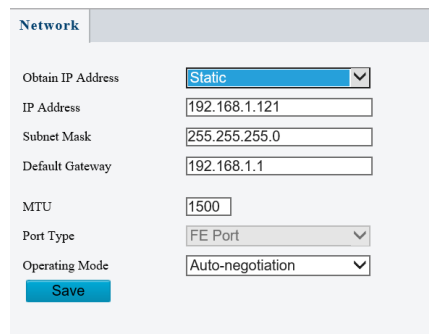
NOTE!

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.

1. Static Address

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



The screenshot shows the 'Network' configuration page. The 'Obtain IP Address' dropdown is set to 'Static'. The IP Address field contains '192.168.1.121', the Subnet Mask field contains '255.255.255.0', and the Default Gateway field contains '192.168.1.1'. The MTU field is set to '1500'. The Port Type dropdown is set to 'FE Port' and the Operating Mode dropdown is set to 'Auto-negotiation'. A 'Save' button is visible at the bottom.

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**.



NOTE!

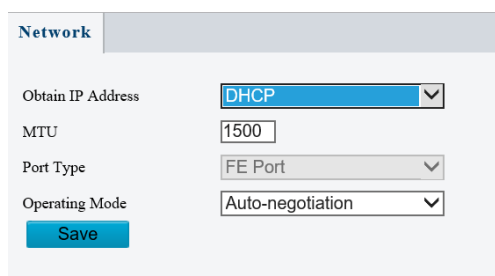
This function is not supported by some models. Please see the actual model for details.

2. 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**



The screenshot shows the 'Network' configuration page. The 'Obtain IP Address' dropdown is set to 'DHCP'. The MTU field is set to '1500'. The Port Type dropdown is set to 'FE Port' and the Operating Mode dropdown is set to 'Auto-negotiation'. A 'Save' button is visible at the bottom.

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

Port



NOTE!

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

4. Click **Setup>Network>Port**.

5. Configure relevant port numbers.

6. 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.

Port Type	External Port	External IP Address	Status
HTTP Port	80	0.0.0.0	Inactive
Server Port	81	0.0.0.0	Inactive
RTSP Port	554	0.0.0.0	Inactive

3. Click **Save**

DNS

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

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

DDNS Service On Off

DDNS Type

Server Address

Domain Name

Username

Password

Confirm

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**.

Image Adjustment



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 scene

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

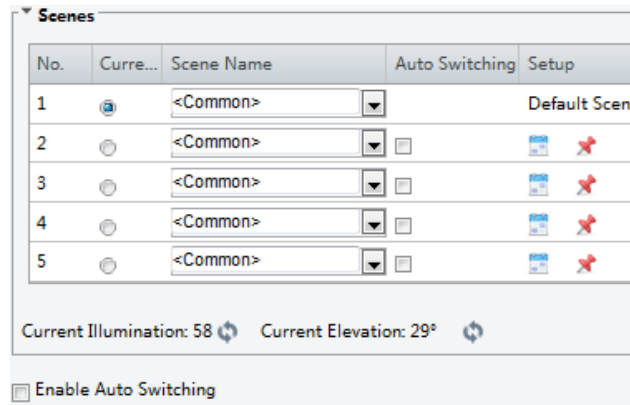
1. Click **Setup>Image>Image**.

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

Scene


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	<p>Indicates the scene that is being used.</p> <p>Note:</p> <p>Select an option button to switch to the scene and display the corresponding image parameters for the scene.</p> <p>The camera switches the current scene automatically when Enable Auto Switching is selected.</p>
Scene Name	<p>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.</p> <p>Common: recommended for outdoor scenes.</p> <p>Indoor: recommended for indoor scenes.</p> <p>High Sensitivity: recommended for low light environment.</p> <p>Highlight Compensation: can suppress strong light such as headlights on roads and spotlight in parks. Recommended for capturing vehicle license plates.</p> <p>WDR:recommended for scenes with high-contrast lighting, such as window, corridor, front door or other scenes that are bright outside but dim inside.</p> <p>Custom: set a scene name as needed.</p> <p>Face: Capture faces in motion in complicated scenes.</p>
Auto Switching	Indicates whether to add a scene to the auto-switching list.

Column	Description
	<p>Note:</p> <p>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.</p>
Setup	<p>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.</p>

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).

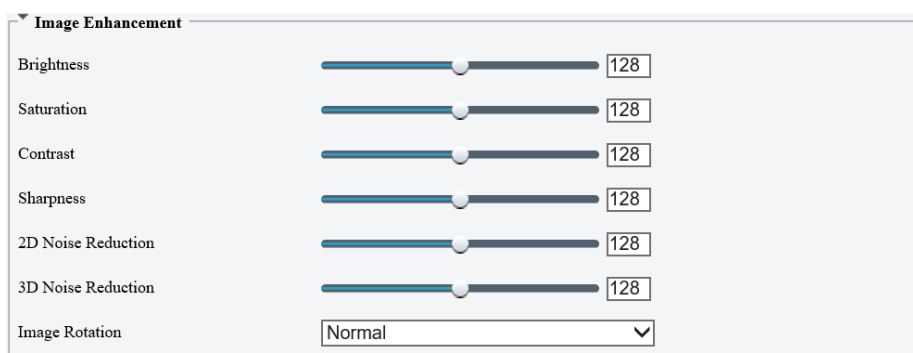
Image Enhancement











NOTE!







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

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



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

Item	Description
Brightness	<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>
Saturation	<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>
Contrast	<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>
Sharpness	<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>
2D Noise Reduction	<p>Reduce the noise of images. The function may cause image blurring.</p>

Item	Description
3D Noise Reduction	Reduce the noise of images. The function may cause motion blur (or ghosting in some applications).
Image Rotation	<p data-bbox="379 360 647 387">Rotation of the image.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p data-bbox="379 730 469 757">Normal</p> </div> <div style="text-align: center;">  <p data-bbox="794 730 935 757">Flip Vertical</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p data-bbox="379 1075 552 1102">Flip Horizontal</p> </div> <div style="text-align: center;">  <p data-bbox="794 1075 852 1102">180°</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p data-bbox="379 1579 536 1606">90°Clockwise</p> </div> <div style="text-align: center;">  <p data-bbox="810 1579 1027 1606">90°Anti-clockwise</p> </div> </div>

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

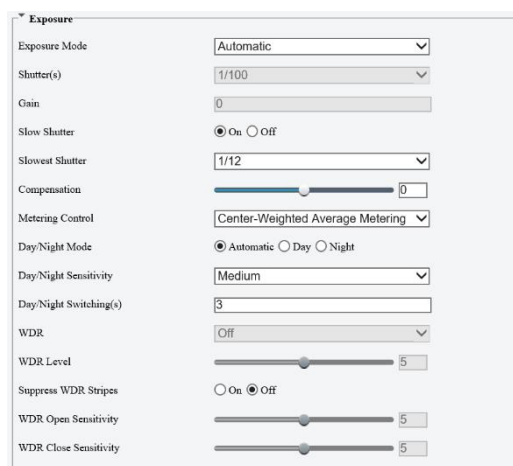
Exposure



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.

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



9. 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. <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)	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 .

Parameter	Description
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. 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	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 colour 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.

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

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

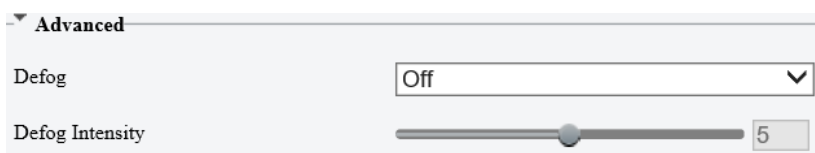
Parameter	Description
White Balance	Adjust the red or blue offset of the image: Auto/Auto2: The camera adjusts the red and blue offset automatically according to the light condition (the colour tends to be blue). If the images are still unnaturally red or blue in Auto mode, please try Auto2. Fine Tune: Allow you to adjust the red and blue offset manually. Outdoor: Suitable for outdoor environment with a relatively greater colour temperature range. Locked: Lock the current colour temperature without change. Sodium Lamp: The camera adjusts red and blue offset automatically according to the light condition (the colour 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 .

6. 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 colour 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**

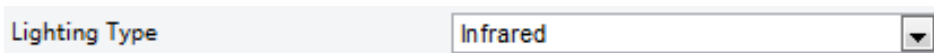
Lighting type



NOTE!

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

- Click **Setup>Image>Image** and then click **Smart Illumination**



- Select an option from the **Lighting Type** drop-down list
- 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 checked="" type="checkbox"/> 89	<input type="checkbox"/> 5
<input checked="" type="checkbox"/>	2	M-26	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3
<input type="checkbox"/>	3		<input type="checkbox"/> 2	<input type="checkbox"/> 75
<input type="checkbox"/>	4		<input type="checkbox"/> 89	<input type="checkbox"/> 81

Display Style

Effect	<input type="text" value="Normal"/>
Font Size	<input type="text" value="Medium"/>
Min. Margin	<input type="text" value="None"/>
Date Format	<input type="text" value="dd/MM/yyyy"/>
Time Format	<input type="text" value="HH:mm:ss"/>

dd=Day; dddd=Day of the week; M=Month; y=Year
h/H=12/24 Hour; t=A.M. or P.M.; mm=Minute; ss=Second

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**, **Pre-set** 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 v 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

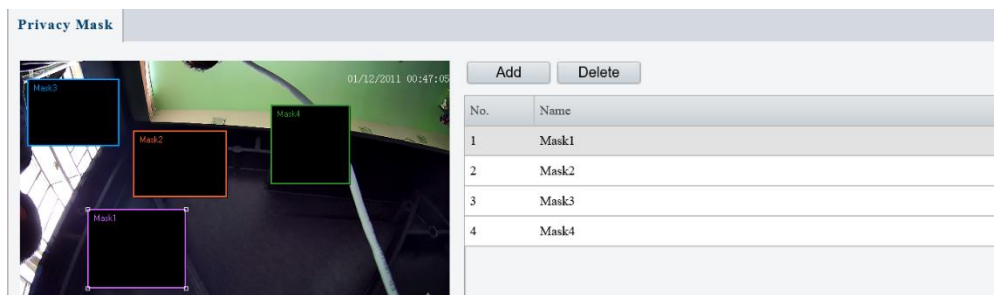
On certain occasions, you may need to set a mask area on the camera image to protect privacy, for example, the keyboard of an ATM machine. When PTZ changes its position or zooms, the Privacy Mask will be adjusted accordingly to protect the area all along.



NOTE!

1. This function may vary with models. Please see the actual Web interface for details.
 2. Some models support up to 24 privacy masks. The same picture shows up to only 8 privacy masks.
 3. 2MP cameras only support up to 4 privacy masks.
-

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



NOTE!

1. Mask mode is only available to certain models.
-

Video Configuration

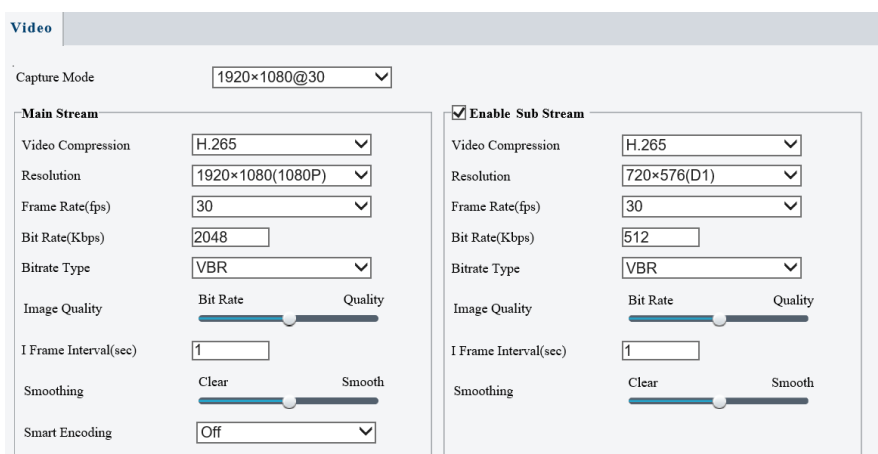
You can set video parameters that your camera supports. If available, you may also enable sub-stream and third stream as required.



NOTE!

1. 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.
 2. 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 mainstream.
-

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



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

Parameter	Description
Video Compression	Two options: H.265, H.264 Note: Image Quality cannot be set when Video Compression is set to H.265 or H.264. When set to MJPEG, only three frame rates are available: 1, 3 and 5; and Bit Rate, I Frame Interval, Smoothing and U-Code 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. 2MP Camera not support MJPEG
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 Coding	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 U-Code is enabled, video compression only supports H.264 and H.265. MJPEG is not supported.

Parameter	Description
	When U-Code is enabled, the capture mode does not support frame rates higher than 30.
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.

ROI

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

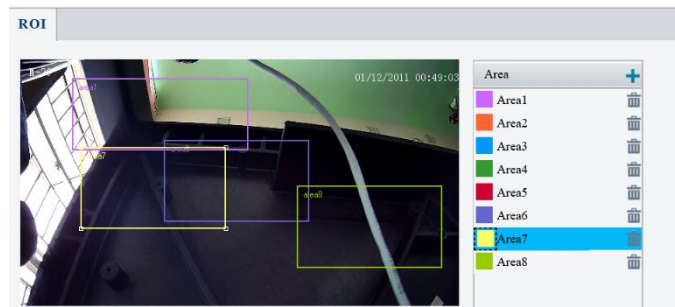




NOTE!

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

2MP camera model supports up to 8 ROI areas.

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 configuration

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!

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

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

The screenshot shows a dialog box titled "Add Media Stream" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Stream Profile: A dropdown menu with "Main Stream" selected.
- IP Address: An empty text input field.
- Port: An empty text input field.
- Protocol: A dropdown menu with "TS/UDP" selected.
- Persistent: Two radio buttons, "Enable" and "Disable", with "Disable" selected.

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**.

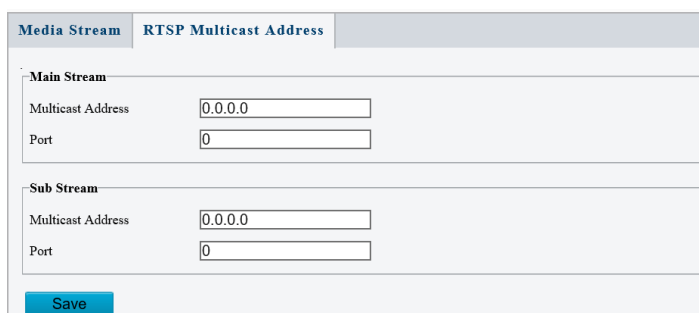
3. To delete a stream, click **🗑**.
4. Click **Submit** to complete the operations.

The screenshot shows a table with the following columns: Stream Profile, IP Address, Port, Protocol, and Persistent. A plus sign (+) is visible at the end of the table. Overlaid on the table is the "Add Media Stream" dialog box, which is identical to the one shown in the previous screenshot.

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**.



Security

User Management

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 (if camera has SD card). 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!

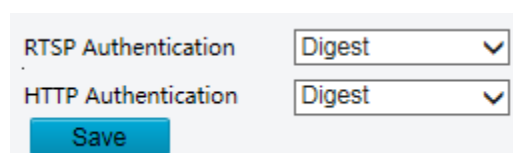
Only admin can change passwords. Changing the username or password for a user when the user is still logged in will force the user to log out. The user must use the new username or password to log in.

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.

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**.

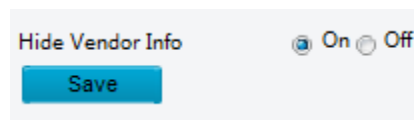


2. Select an authentication mode and then click **Save**.

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**.



Hide Vendor Info On Off

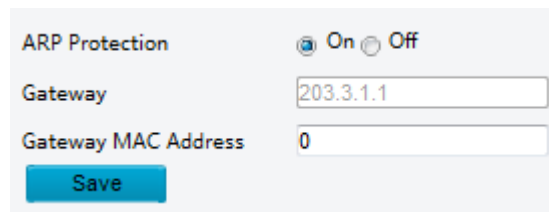
Save

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

ARP 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 On Off

Gateway

Gateway MAC Address

Save

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

IP Address Filtering

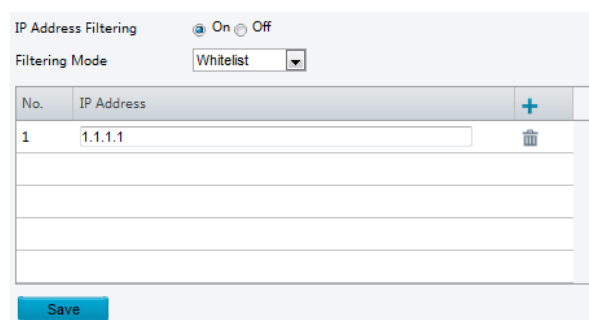
Use IP address filtering to allow or forbid access from specified IP address(es).



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"/>	

Save

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
Save

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**.

Watermark On Off
Watermark Content
Save

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

Setting the System Time

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

1. Manually Setting or Synchronizing the System Time

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

The screenshot shows the 'Time' configuration interface. It includes three main sections: 'Sync Mode' with a dropdown menu set to 'Sync with Latest Server Time', 'Time Zone' with a dropdown menu set to '(UTC) London, Casablanca, Coordinated Universal Time', and 'System Time' with a text input field showing '2017-09-12 08:07:09' and a 'Sync with Computer Time' button.

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.

The screenshot shows the 'NTP Server' configuration interface. It includes a 'Sync Mode' dropdown set to 'Sync with NTP Server', a 'Time Zone' dropdown set to '(UTC) London, Casablanca, Coordinated Universal Time', and a 'System Time' text input field showing '2018-05-10 08:48:53' with a 'Sync with Computer Time' button. Below these are the 'NTP Server' settings: 'NTP Server Address' (0.0.0.0), 'Port' (123), and 'Update Interval(s)' (600).

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.

The screenshot shows the 'DST' configuration interface. It includes a 'DST' section with radio buttons for 'On' (selected) and 'Off'. Below are 'Start Time' (Apr, First, Sun, 02 h), 'End Time' (Oct, Last, Sun, 02 h), and 'DST Bias' (60mins).

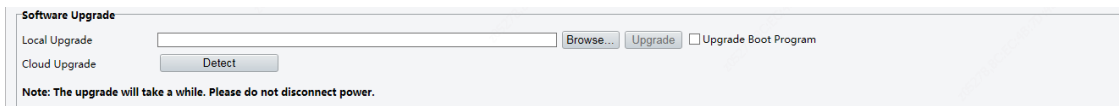
2. Select **On** for **DST**, set the start time, end time, and DST bias.
3. Click **Save**.

System

Maintenance

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.

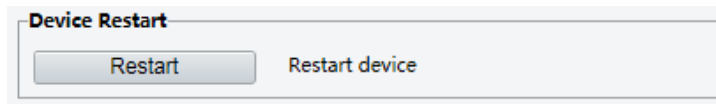


NOTE!

1. You must use the correct upgrade file for your camera. Otherwise, unexpected results may occur.
2. The upgrade file is a ZIP file and must include all the necessary files.
3. 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.
4. 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**.

Config Management

Restore all settings to defaults without keeping current network and user settings.

Importing

Exporting

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**.

Diagnosis Info

Export Diagnosis Info

Collect Image Debugging Info

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.

Focus Configuration

The device can adjust the speed of auto-focus according to the minimum focus distance. To shoot clear objects, it is recommended that the minimum focus distance is set shorter than the distance between the objects and lens, for example, if the minimum focus distance is 3m, then the objects within 3m from lens will be out of focus.



NOTE!

This function is only supported by the devices with auto-focus. Please see the actual model for details.

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

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.
	Take a snapshot of the current image displayed on the PC. Note: The path for saving snapshots is set in Local Parameter.
	Start/stop local recording. Note: The path for saving local recordings is set Local Parameter.
	Start/stop digital zoom. For more details, see Using Digital Zoom .
	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.

Button	Description
	Display in full screen mode.
<div data-bbox="199 331 351 376" style="border: 1px solid gray; padding: 2px; margin-bottom: 2px;">Main</div> <div data-bbox="199 398 351 443" style="border: 1px solid gray; padding: 2px;">Sub</div>	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.

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

1. 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.

2. 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.

3. 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.