



# **OPI Camera**

## **User Guide**

*Please read this manual thoroughly before use and keep it handy for future reference.*

## Before You Begin

Read these instructions before installing or operating this product.

- Note: This installation should be made by a qualified service person and should conform to local codes.
- This manual provides installation and operation information. To use this document, you must have the following minimum qualifications:
  - A basic knowledge of CCTV systems and components
  - A basic knowledge of electrical wiring, low-voltage electrical connections and IP networking/infrastructure

## Intended use

Only use this product for its designated purpose; refer to the product specification and user documentation.

### Customer Support

For assistance in installing, operating, maintaining and troubleshooting this product refer to this document and any other documentation provided. If you still have questions, please contact Norbain Technical Support and Sales:

Norbain SD, 210 Wharfedale Road, Winnersh Triangle, Wokingham, Berkshire RG41 5TP, England.

UK +44 (0) 118 912 5000 / Vista Technical Support +44 (0) 118 912 5125

- Note: You should be at the equipment and ready with details before calling Technical Support.

## Conventions Used in this Manual

Boldface or button icons highlight command entries. The following WARNING, CAUTION and Note statements identify potential hazards that can occur if the equipment is not handled properly:



\* WARNING:

Improper use of this equipment can cause severe bodily injury or equipment damage.



\* CAUTION:

Improper use of this equipment can cause equipment damage.

- 
- Note: Notes contain important information about a product or procedure.



This apparatus is manufactured to comply with the radio interference. A Declaration of Conformity in accordance with the following EU standards has been made. The manufacturer declares that the product supplied with this document is compliant the provisions of the EMC Directive 2004/108/EC, the CE Marking Directive 93/68 EEC and all associated amendments.

**RoHS**  
COMPLIANT

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive: 2011/65/EU, which means our manufacture processes and products are strictly "lead-free" and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste.

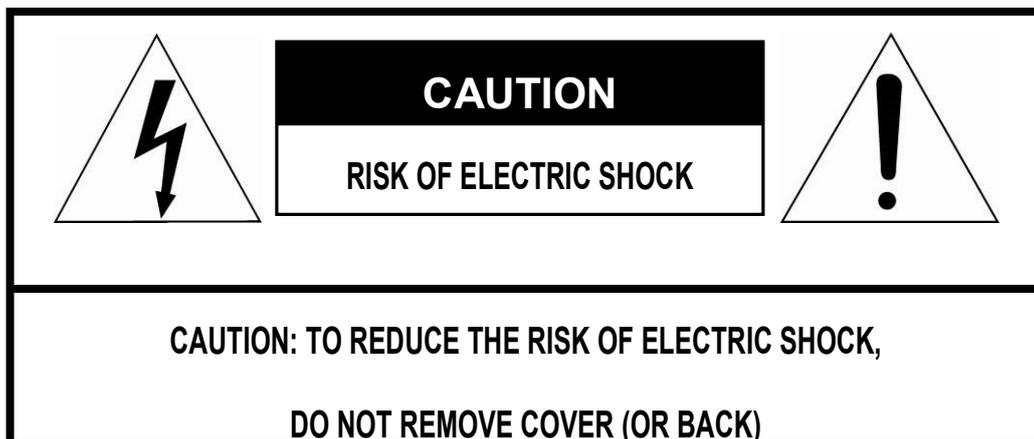
\* This symbol indicates electrical warnings and cautions.

\*\* This symbol indicates general warnings and cautions.

NORBAIN SD reserves the right to make changes to the product and specification of the product from time to time without prior notice.

#### WARNINGS AND CAUTIONS:

To reduce the risk of fire or electric shock, do not insert any metallic objects through the ventilation grills or other openings on the equipment.



## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Clean only with dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Unplug this apparatus during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. CAUTION – THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.
14. Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

## CE COMPLIANCE STATEMENT

### WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## Table of Contents

<b>1</b>	<b>Product Range Overview</b> .....	1
<b>2</b>	<b>Initial Config</b> .....	2
2.1	Device Initialization .....	2
	Config Tool - Initialization .....	2
	Web Browser - Initialization .....	4
<b>2.2</b>	<b>Login and Logout</b> .....	6
2.2.1	<b>Log in via web Interface</b> .....	6
2.2.2	<b>Logout</b> .....	7
2.2.3	Reset Password .....	7
<b>3</b>	<b>Live</b> .....	10
3.1	Encode setup bar .....	10
3.2	System menu .....	11
3.3	Video window function option bar .....	11
3.4	Video Window Setup .....	11
3.4.1	Image Adjustment .....	12
3.4.2	Zoom and Focus .....	13
<b>4</b>	<b>Playback (not applicable to all models)</b> .....	15
4.1	Playback .....	15
4.1.1	Function of Play .....	16
4.1.2	Playback File .....	16
4.1.3	Playback Clips .....	18
4.1.4	Record Type .....	18
4.1.5	Progress Bar .....	19
4.1.6	Assistant Function .....	19
4.1.7	Snapshot Type .....	19
<b>5</b>	<b>Setup</b> .....	20
5.1	Camera .....	20
5.1.1	Conditions .....	20
5.1.2	Video .....	29
5.2	Network .....	37
5.2.1	TCP/IP .....	37
5.2.2	PORT .....	39
5.2.3	PPPoE .....	40
5.2.4	DDNS .....	41
5.2.5	SMTP (e-mail) .....	43
5.2.6	UpnP .....	44
5.2.7	Bonjour .....	45

5.2.8	Multicast .....	45
5.2.9	802.1x .....	46
5.2.10	QoS .....	47
5.3	Event .....	49
5.3.2	Abnormity .....	55
5.4	Storage Management (only available on selected models) .....	57
5.4.1	Schedule .....	57
5.4.2	Destination .....	60
5.4.3	Record control .....	62
5.5	System .....	63
5.5.1	General .....	63
5.5.2	Account .....	65
5.5.3	IP filter .....	69
5.5.4	HTTPs .....	69
5.5.5	Default .....	77
5.5.6	Import/Export .....	77
5.5.7	Auto Maintenance .....	78
5.5.8	Upgrade .....	78
5.6	Information .....	79
5.6.1	Version .....	79
5.6.2	Log .....	79
5.6.3	Online User .....	80
6	Alarm .....	82
7	Log out .....	83

# 1 Product Range Overview

High resolution 4MP network camera with integrated IR illumination for use in internal and external environments. Supports H.264 and H.265 compression with dual stream encoding that can be configured to a variety of resolutions, bit rates and frame rates.

## 2 Initial Config

The following section in the manual covers the initial configuration, which includes the initialization process, device login, web interface and password reset.

### 2.1 Device Initialization

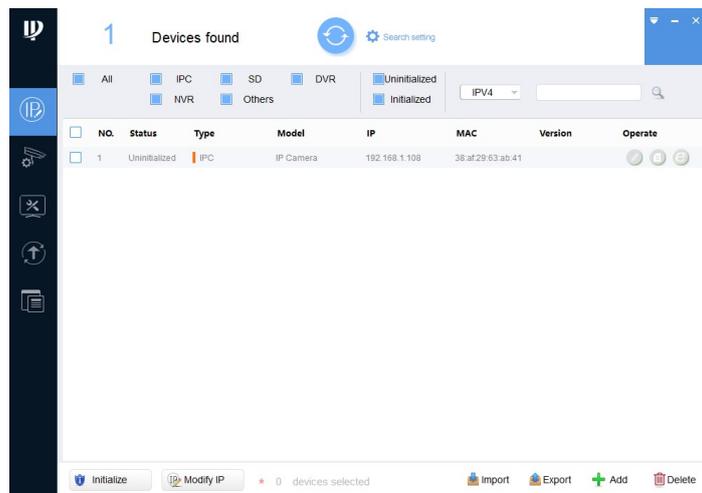
It is essential to implement device initialization when using the camera for the first time. The camera can be initialized via the “config tool” or through a web browser.

**Note:** In order to guarantee device security, please keep the admin login password in a safe place after the device has been initialized, it is recommended to modify the password regularly.

### Config Tool - Initialization

Open the “config tool” on a computer connected to the camera network.

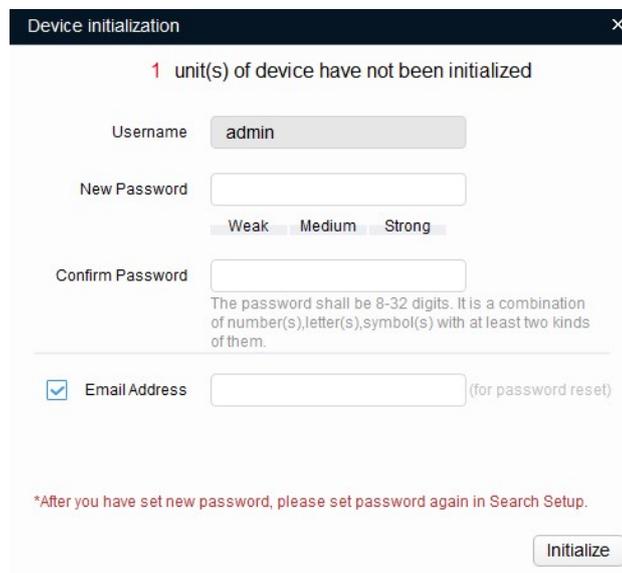
Select  to enter the search interface where you can find and modify IP address, click  to refresh search, the system will display connected devices alongside basic information (default IP, MAC address and firmware version).



Select the devices that need initialization and click Initialize. The system will display the Device Initialization interface, confirmation of devices to be initialized is required.



Set a new admin user password and email, and then click Initialize.



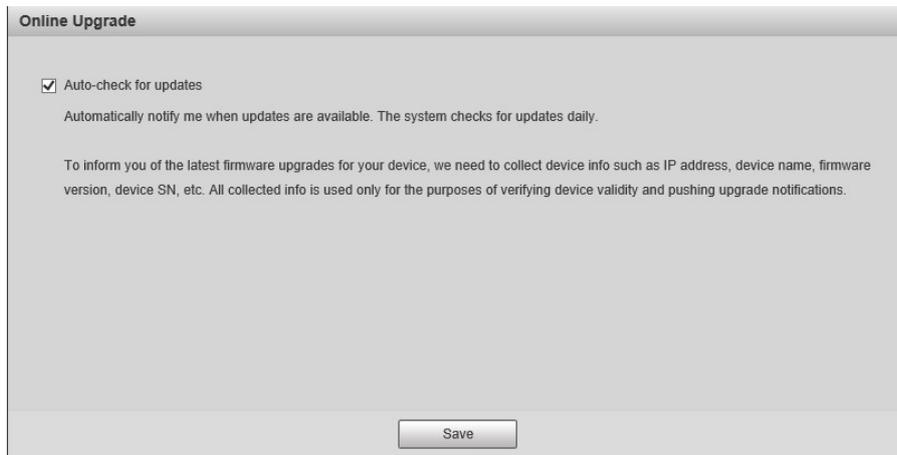
Parameter	Note
User name	The default user name is admin
Password	The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “”, “”, “”, “”, “.”, “&”) . The password shall contain at least two categories. Strong passwords are recommended.
Confirm password	
Email	Input an email address for password reset. If the password is forgotten in the future, you will need to input the security code received via assigned email to reset the admin password.



P2P QR code will be displayed and the option to disable quick remote setup. Select according to installation requirements and click Next.



From the Online Upgrade screen you can select “Auto-check for upgrade” the system will automatically check for firmware updates daily, this options needs to be set according to the installation requirements.



Click Save and device initialization is completed.

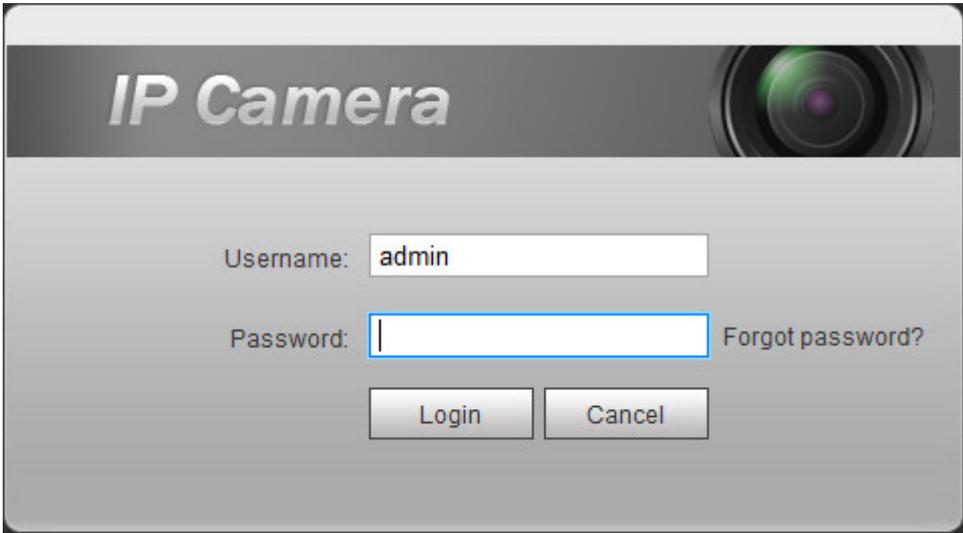
## 2.2 Login and Logout

After the initialization process and the admin password has been set, open a web browser and enter the device IP address to proceed to the login screen.

### 2.2.1 Log in via web Interface

The admin user will have full access to make changes within the device configuration.

Open a web browser, input the cameras IP address into the address bar and then press Enter. The Login interface show below will be displayed once the camera is connected.

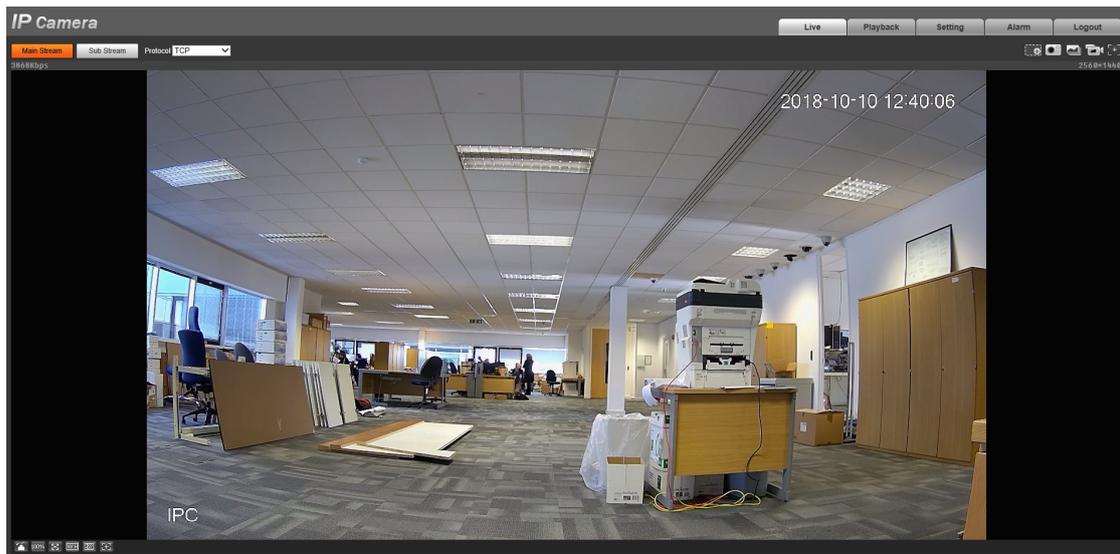


The screenshot shows a web interface for an IP camera. At the top, there is a dark grey header with the text "IP Camera" in a light grey font and a small image of a camera lens on the right. Below the header, the main content area is light grey. It contains two input fields: "Username:" with the text "admin" entered, and "Password:" which is empty. To the right of the password field is a link that says "Forgot password?". Below these fields are two buttons: "Login" and "Cancel".

Username = admin  
Password = as per initialization

Click Login.

Note: You will be prompted to install a plug-in when logging into the system for the first time, please download and install the plug-in according to on screen prompts.



Once the plug-in has been installed, the Live video interface will be displayed.

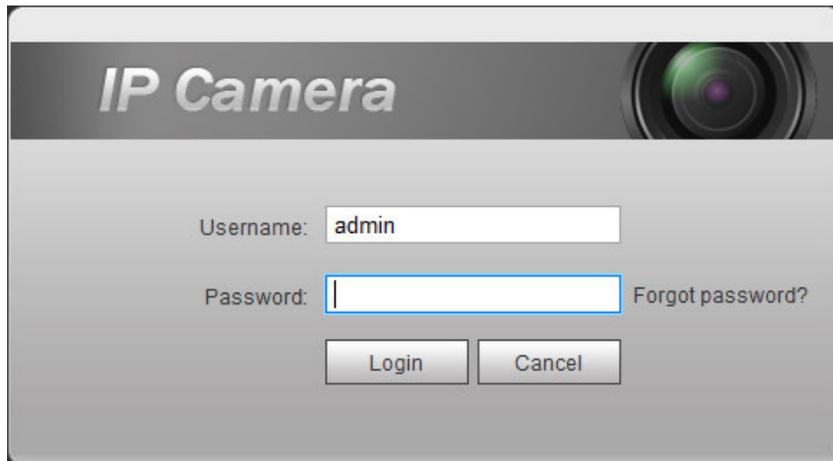
### 2.2.2 Logout

The Logout option is located in the top right corner of the display, selecting Logout will return the user to the web login interface.

### 2.2.3 Reset Password

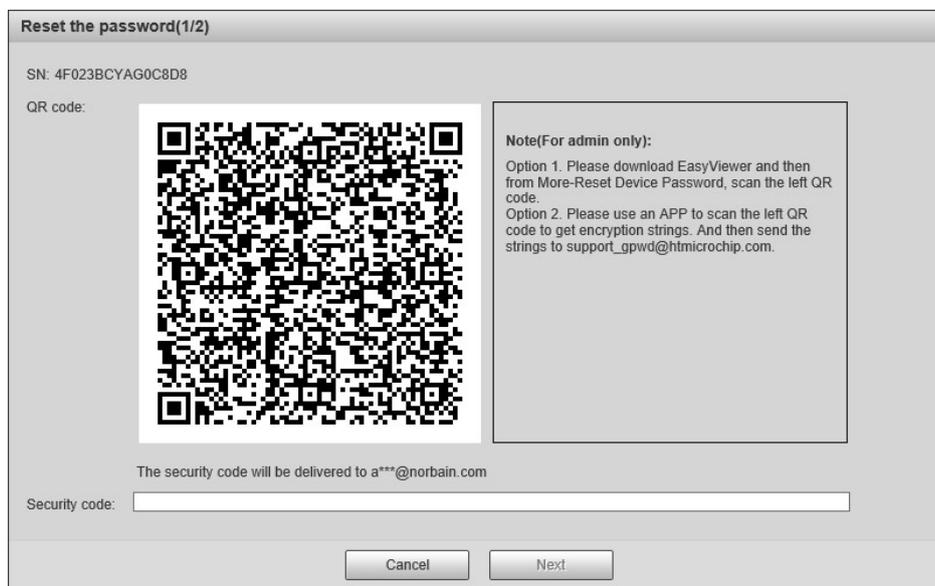
If the admin password has been misplaced this can be reset via the email address setup during initialization.

Open internet explorer browser, input camera IP address in the address bar and click Enter. The system will display the Login interface after it is successfully connected.



Click **Forgot password?**

The system will display the interface of **Reset Password**.



Using the mobile APP scan the QR code following the prompts on the reset password interface. A security code will be sent to the registered email address. Input the security code and click **Next**.

**Caution:**

- The security code will be valid for a 24 hour period.
- Should you fail to input security code correctly more than three times the reset procedure will need to be restarted.



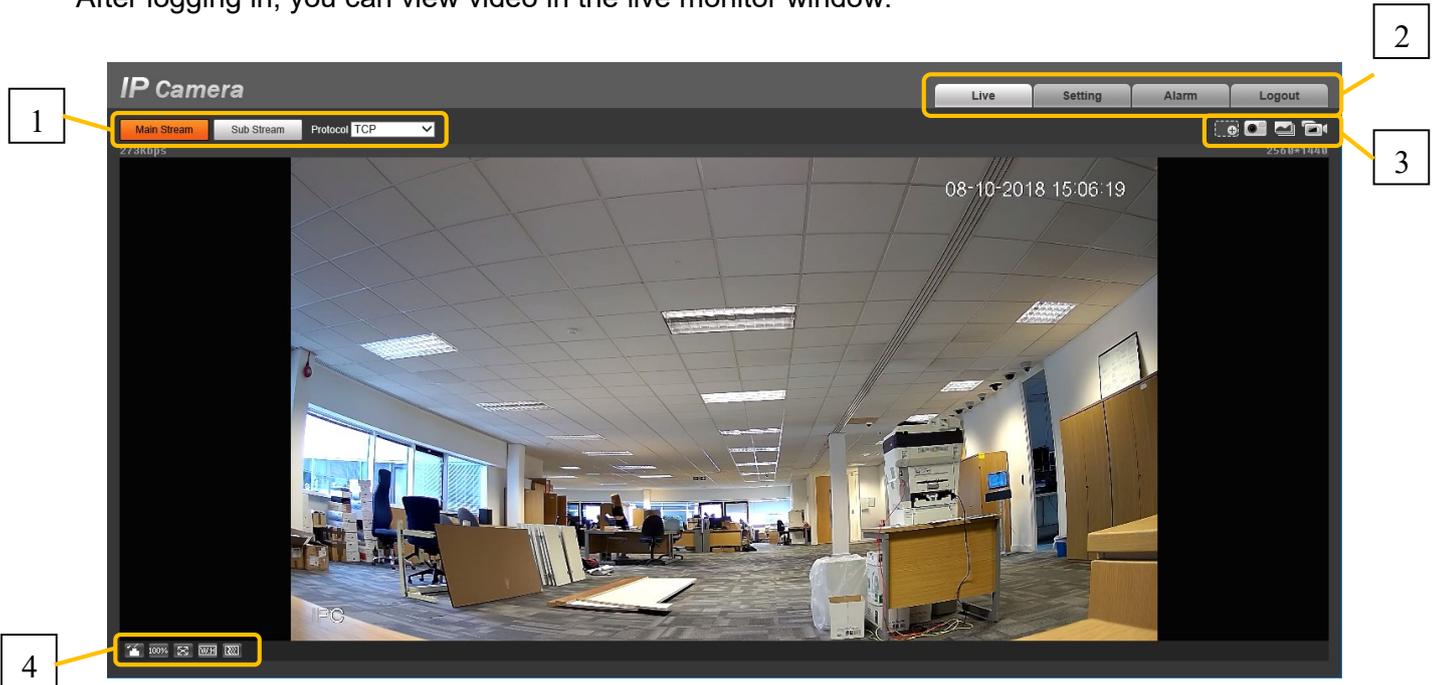
Click Next. The system will display page two of the password reset interface, here a new password can be setup.

Reset Password then Confirm Password and click Save. The system will return to the login interface.

Parameter	Note
User name	The default user name is admin
Password	The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “” , “” “,” “.” “&”) . The password shall contain at least two categories. Strong passwords are recommended.
Confirm password	
Email	Input an email address for password reset. If the password is forgotten in the future, you will need to input the security code received via assigned email to reset the admin password.

### 3 Live

After logging in, you can view video in the live monitor window.



There are four sections:

- Section 1: Encode setup bar
- Section 2: System menu
- Section 3: Window function option bar
- Section 4: Window adjust bar

#### 3.1 Encode setup bar

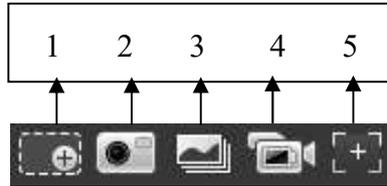


Parameter	Function
Main stream	Click it to select main stream video monitoring and click again to disable it.
Sub Stream 1	Click it to enable Sub Stream video monitoring and click again to disable it. When network bandwidth is insufficient, live view automatically substitutes main stream for sub.
Protocol	You can select stream media protocol from the dropdown list. There are three options: TCP/UDP/Multicast

### 3.2 System menu

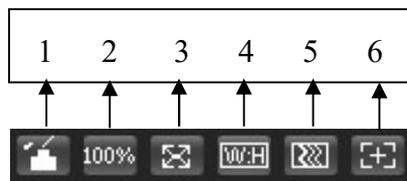


### 3.3 Video window function option bar



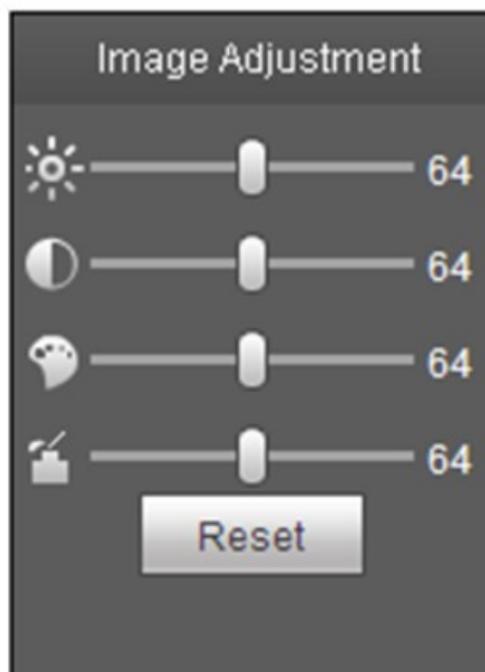
	Parameter	Function
1	Digital Zoom	Enable the digital zoom operation.
2	Snapshot	Capture and save images.
3	Triple snapshot	Capture a triple snapshot (1 frame per second)
4	Record	Enable manual record
5	Easy focus	AF Peak: Displays the video definition during the focus process. AF Max: Is the recommended value for the video definition. The closer AF Peak and AF Max are, the better the camera focus.

### 3.4 Video Window Setup



	Parameter	Function
1	Image Adjustment	Click to display and hide the image adjustment interface.
2	Original Size	Select this option to view the original resolution. It will display at actual size of the video stream
3	Full Screen	Switch to full screen mode. Press “esc” to exit
4	Width / Height	Change / restore aspect ratio.
5	Fluency	There are three levels of fluency for you to select (Realtime, Normal, and Fluency). The default is normal.
6	Zoom and Focus	Zoom focus interface appears on the right side of the preview interface.

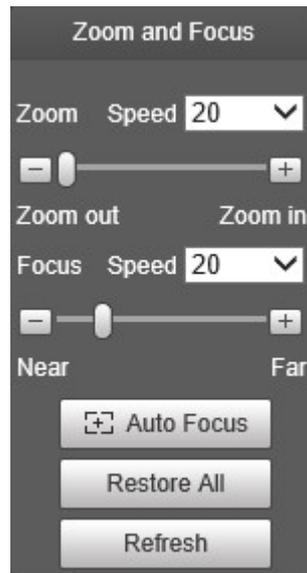
### 3.4.1 Image Adjustment



Parameter		Function	
Video setup		Drag slider to adjust monitor video brightness.	Note: ● All the operations here apply to web setup only.
		Drag slider to adjust monitor video contrast.	
		Drag slider to adjust monitor video hue.	
		Drag slider to adjust monitor video saturation.	
	Reset	Restore the above to default settings.	

### 3.4.2 Zoom and Focus

The zoom and focus interface allows for remote configuration of the lens setup, including auto focus.



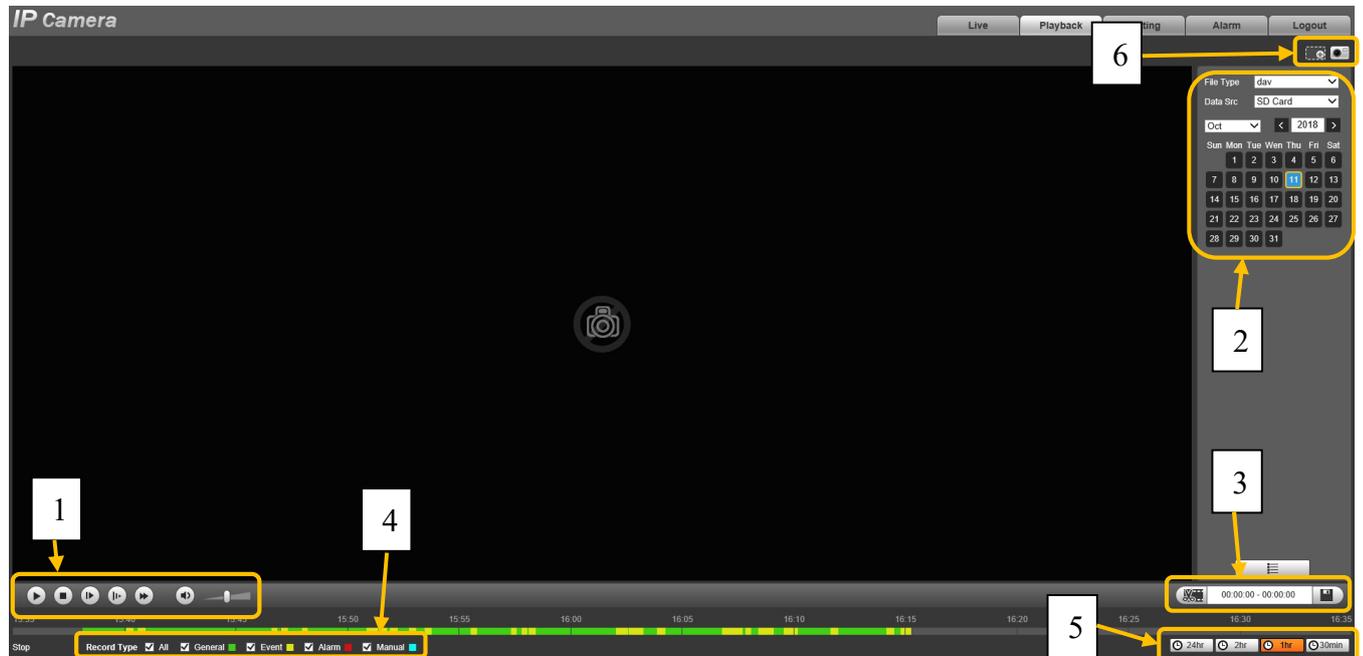
Parameter	Function
Zoom	Adjust the focal length of the lens.
Focus	Adjust the sharpness of the lens.
Auto-focus	Pressing Auto-focus button performs zoom focus calibration.
Reset All	Resets the lens to the default position.
Refresh	Synchronize the slider with the position of the lens and zoom focus.

## 4 Playback (not applicable to all models)

Web client supports video playback and snapshot review.

Note: Before playback, storage management will need to be configured.

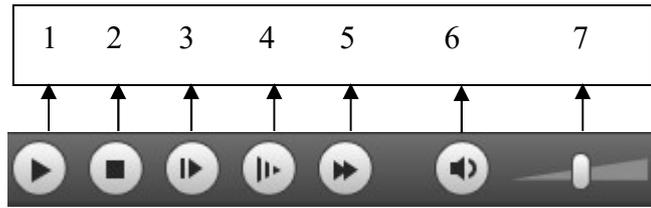
### 4.1 Playback



There are four sections:

- Section 1: Function of play
- Section 2: Playback file
- Section 3: Play time cut
- Section 4: Record type
- Section 5: Progress bar
- Section 6: Assistant function

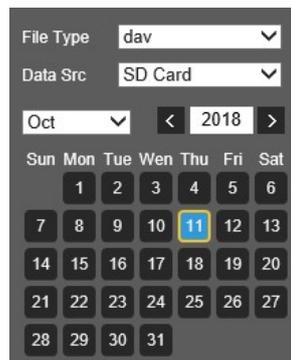
### 4.1.1 Function of Play



Parameter	Function
① Play	Forward play of video clips
② Stop	Stop the video playing.
③ Play-by-frame	When video is paused play-by-frame can be selected.
④ Slow	Reduce play speed.
⑤ Quick	Fast forward / increase play speed.
⑥ Silent	Mute audio.
⑦ Volume	Slide to adjust volume level.

### 4.1.2 Playback File

In the calendar view, blue represents recorded data - video record or snapshot.



Parameter	Function
File Type	<ul style="list-style-type: none"> <li>• Select “dav” for video playback.</li> <li>• Select “jpg” for picture playback.</li> </ul>
Data Source	Default is SD card.

Click on data in blue, time axis displays record file progress bar in colour. While, green represents normal record, yellow represents motion detect record, red represents alarm record, and blue represents manual record.

Click on certain time on progress bar, playback starts from this time.



Click on file list , select date file will be displayed in list.

Double click on file in list, playback this file and display file size, start time and end time.



Parameter	Function
	Select start and end time, click search to go.
Record Format	dav or mp4
	<ul style="list-style-type: none"> <li>● Click to download a file.</li> <li>● The system does not support download and playback at the same time.</li> </ul>
	Click to go back to the calendar interface.

### 4.1.3 Playback Clips

Note:

Playback cut function will automatically pause playing record as playback cut and playback cannot be at the same time.

Click on start time to cut on time axis. This time must be within progress bar range.

Move mouse to cut icon . You will be asked to select start time. Click on cur icon  as finish cutting.

Click on playback cut end time on time axis. This time must be within progress bar range.

Move mouse to cut icon  you will be asked to select end time. Click on cut icon  as finish cutting.

Click on Save button to save file.

### 4.1.4 Record Type

After checking record file type, only selected file will be displayed in progress bar and file list. Users can also select the record type to be displayed via the dropdown box which is above the file list.



#### 4.1.5 Progress Bar



Parameter	Function
 24hr	past 24 hours.
 2hr	past 2 hours.
 1hr	past 1 hour.
 30min	past 30 min.

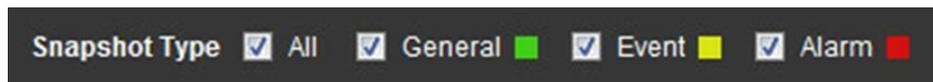
#### 4.1.6 Assistant Function



Parameter	Function
 Digital Zoom	Enable the digital zoom.
 Snapshot	Capture and save still images.

#### 4.1.7 Snapshot Type

By selecting jpeg in the drop-down section, users will able to choose the snapshot type.



## 5 Setup

Web client camera setup.

### 5.1 Camera

The camera settings include; conditions, profile management, zoom and focus.

#### 5.1.1 Conditions

##### 5.1.1.1 Picture

Select Setup > Camera > Conditions > Picture

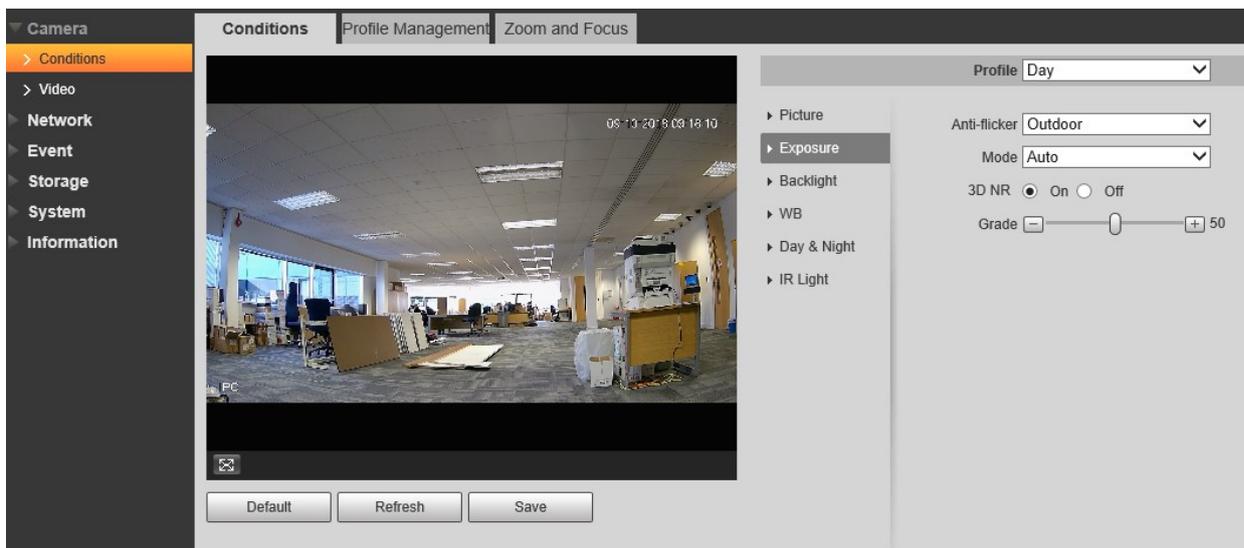


Parameter	Note
Style	Sets the picture style, which includes standard, soft and vivid.
Brightness	Drag slider to adjust brightness.
Contrast	Drag slider to adjust contrast.
Saturation	Use the slider to adjust the colour darkness and lightness. Lowe values mean less colour saturation.
Sharpness	Set the amount of sharpening applied to the image. A sharper image might increase image noise in low light conditions. A lower setting reduces noise, but the image would be less sharp.

Parameter	Note
Gamma	Set to improve the dynamic display range.
Mirror	Enabled to mirror the image.
Flip	<p>Allows the camera image to be flipped.</p> <ul style="list-style-type: none"> <li>• Normal: No change to the display.</li> <li>• Flip mode 1: The monitoring picture is displayed with clockwise rotation 90°</li> <li>• Flip mode 2: The monitoring picture is displayed with anticlockwise rotation 90°</li> <li>• 180°: The monitoring picture is displayed upside down.</li> </ul>

### 5.1.1.2 Exposure

Setup > Camera > Conditions > Exposure

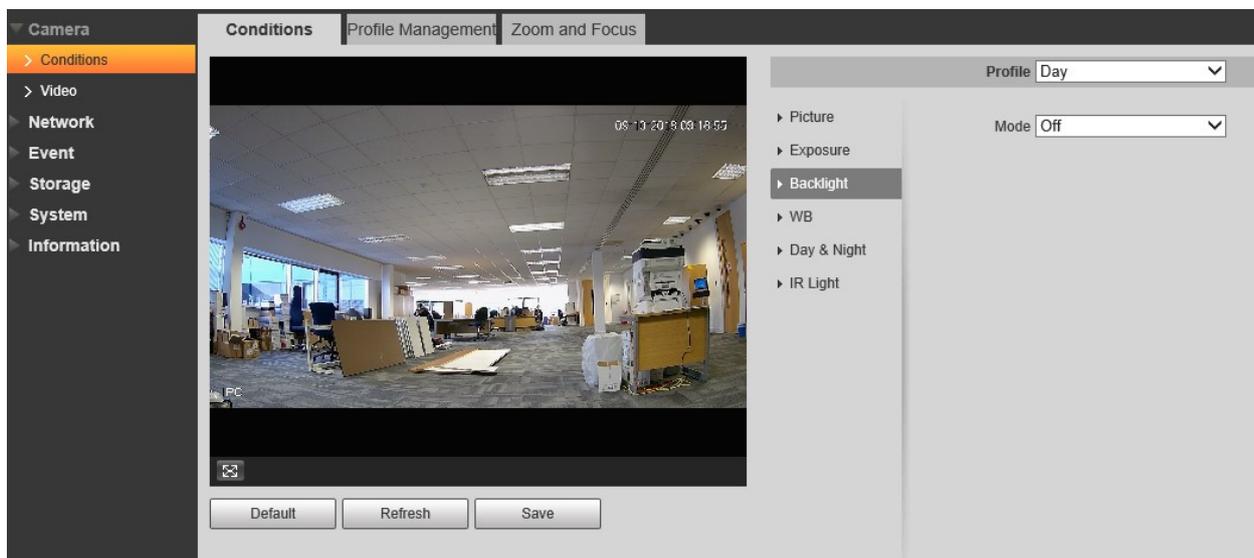


Parameter	Note
Anti-flicker	<ul style="list-style-type: none"> <li>● Outdoor: To be selected when the camera is installed outside.</li> <li>● 50Hz: For when the supplied power is 50Hz.</li> <li>● 60Hz: For when the supplied power is 60Hz.</li> </ul>
Mode	<ul style="list-style-type: none"> <li>● When “Anti-flicker” is set for “Outdoor”, the “exposure mode” can be set as “gain priority” or “shutter priority” mode.</li> <li>● Auto: Will automatically adjust the image brightness according to the environment.</li> <li>● Gain priority: The device can auto adjust according to the gain range. The device will auto adjust shutter value if the image brightness fails to reach the effect and the gain value has reached to upper limit or lower limit, which is to make the image reach the best brightness.</li> <li>● Shutter priority: The device can auto adjust according to the shutter range which is set by priority during normal exposure range according to the different scene brightness. The device will auto adjust shutter value if the image brightness fails to reach the effect and the shutter value has reached to upper limit or lower limit, which is to make the image reach the best brightness.</li> <li>● Manual: It is to manually set gain value and shutter value, adjust the the displayed brightness of the image.</li> </ul>
3D NR	It is to process the image with multiframe (at least two frames), it can realize noise reduction of the image by using the interframe information between the previous and latter frame.
Grade	It can set the parameter when “3D NR” is enabled. The bigger the grade is, the better NR effect it can realize.

### 5.1.1.3 Backlight

Parameter	Note
BLC	Set the mode to enable backlight compensation
HLC	Set the mode to enable highlight compensation mode
WDR	It can suppress the overbright area and compensate darker area by enabling WDR, which can make the overall image clear.

Setup > Camera > Condition > Backlight



- When the “Mode” is set as “Scene Self-adaptation”, the system will auto adjust the image brightness according to the environmental brightness, which is to make the object display clearly in the scene.
- When the “Mode” is set as “BLC”, it can select default mode or customized mode.
  - ◆ When selecting “Default” mode, the system can realize auto exposure according to the environment, which is to make the image in the darkest area clear to be seen.
  - ◆ When selecting “Customized” mode, the system can realize exposure upon the selected area after it set customized area, which is to make the image of the selected area reach appropriate brightness.

- When the “Mode” is set as “WDR”, it will lower the brightness of the area with high brightness and enhance the brightness of the area with low brightness, which is to make the objects in both high brightness and low brightness area display clearly.

Note:

There may be video loss of a few seconds when the camera is switched from non WDR mode to WDR mode.

- When the “Mode” is set as “HLC”, the system will constrain the brightness of the area with high brightness and decrease the size of the halo area, which is to lower the brightness of the whole image.

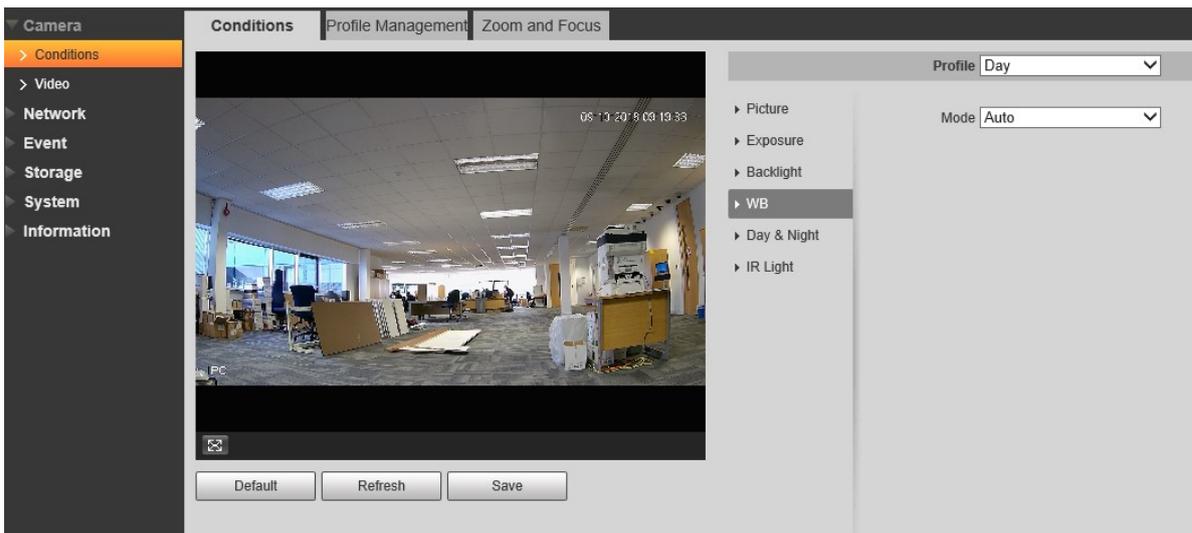
Step 3

Click “Save” to complete the config of the backlight mode.

#### 5.1.1.4 WB

WB is the process of removing unrealistic colour, so that objects which appear white in person are rendered white in the image.

Setup > Camera > Conditions > WB



Select one of five different modes which fits the cameras installation environment.

#### 5.1.1.5 Day & Night

User can setup Day & Night operation mode among Auto, Colour, and B/W.

Setup > Camera > Conditions > Day & Night



Parameter	Note
Mode	<p>It is to set the camera image displayed as color or black &amp; white mode.</p> <p>Note: The setting of “Day/Night Mode” is not affected by the setting of “Profile Management”.</p> <p>It includes the following options:</p> <ul style="list-style-type: none"> <li>● Color: The camera image is displayed as color image.</li> <li>● Auto: The camera can auto select color image or black &amp; white image to be displayed according to the environmental brightness.</li> <li>● Black &amp; white: The camera image is displayed as black &amp; white image.</li> </ul>
Sensitivity	<p>The parameter can be set when the “Day/Night Mode” is “Auto”.</p> <p>It is to set the sensitivity of the switch between image color display and black &amp; white display.</p>
Delay	<p>The parameter can be set when the “Day/Night Mode” is “Auto”.</p> <p>It is to set the switch delay between image color display and white &amp; black display. The smaller the delay is, the faster of the switch becomes between color display and black &amp; white display.</p>

5.1.1.6 IR Light

Setup > Camera > Conditions > IR Light



It is to set IR light mode according to the actual scene.

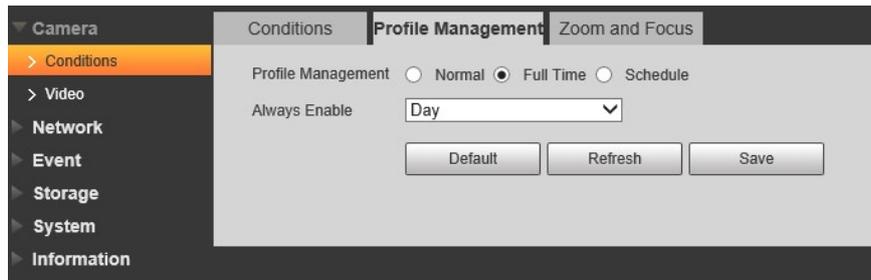
- When the “Mode” is set as “Manual”, it can manually set the brightness of IR light; the system will realize light compensation to the image according to the IR light intensity.
- When the “Mode” is set as “Smart IR”, the system can adjust the light brightness according to the actual scene.
  - ◆ The system will enable near light by priority when the actual scene becomes dark, the system will enable the far light when the near light fails to meet the requirement of scene brightness even if it is adjusted to the brightest.
  - ◆ The system will adjust far light brightness by priority to off and then adjust the brightness of near light when the actual scene becomes bright. The system will always disable far light when the focal length of the lens is adjusted to a certain wide angle, which is to avoid near overexposure. Meanwhile, it can manually set light compensation to slightly adjust the brightness of IR light.
- When the “mode” is set as “Off”, it will not enable the IR light.

Click “Save” and complete the config of IR light.

### 5.1.1.7 Profile Management

Setup > Camera > Conditions > Profile Management

Set profile management.



- When the “Profile Management” is set as “Normal”, the system will monitor according to the normal config.
- When the “Profile Management” is set as “Full Time”, you can select “Always Enable” in “Day” or “Night”, the system will monitor according to the config of “always enable”.
- When the “Profile Management” is set as “Schedule”, you can set some period as day and another period as night, for example, if it sets 0:00~12:00 as day, 12:00~24:00 as night, then the system will monitor by adopting corresponding config in different periods.

Click “Save” to complete the settings of profile management.

Note:

Click “Default” to restore the device to default config; click “Refresh” to check the latest config file of the device.

#### 5.1.1.8 Zoom and Focus

Note: Only motorised vari-focal devices support focus and zoom function.

Setup > Camera > Conditions > Zoom and Focus



Adjust the focal length of the lens.

After it is zoomed, set “Speed” and press “+”, “-“or drag the sliding block directly to adjust.

Adjust the lens definition.

After it is focused, set “Speed” and press “+”, “-“or drag the sliding block directly to adjust.

Note:

- Speed is used to set the length by pressing “+” and “-“.
- After adjusting the focal length of the lens or click “Auto Focus”, the device will auto adjust the image definition, it is not allowed to implement other lens operation during auto focus.
- After several times of zoom and focus, the image fails to be adjusted clear, click “Restore All” to reset the lens to zero and remove the accumulative error of the lens.
- Click “Refresh” and the device will automatically synchronize the hardware to the location of sliding block of lens zoom and focus.

## 5.1.2 Video

Setup > Camera > Video > Video

The screenshot shows a web-based configuration interface for video settings. On the left is a navigation menu with categories: Camera, Conditions, Video (selected), Network, Event, Storage, System, and Information. The main area is divided into two tabs: 'Video' (active) and 'Path'. Under the 'Video' tab, there are two sections: 'Main Stream' and 'Sub Stream'.  
**Main Stream Settings:**  
 - Encode Mode: H.265  
 - Smart Codec: On  
 - Resolution: 2560\*1440(2560x1440)  
 - Frame Rate(FPS): 20  
 - Bit Rate Type: CBR  
 - Reference Bit Rate: 768-6144Kb/S  
 - Bit Rate: 2048 (Kb/S)  
 - Watermark Settings:  Watermark Settings, Watermark Character: DigitalCCTV  
**Sub Stream Settings:**  
 -  Enable  
 - Encode Mode: H.265  
 - Resolution: 704\*480(D1)  
 - Frame Rate(FPS): 20  
 - Bit Rate Type: CBR  
 - Reference Bit Rate: 147-1024Kb/S  
 - Bit Rate: 1024 (Kb/S)  
 - I Frame Interval: 40 (20~150)  
 At the bottom of the configuration area are three buttons: Default, Refresh, and Save.

Set video bit stream, please refer to the following sheet for more details about the parameters.

Parameter	Function
Installation Mode	<p>It will display the parameter when the device is fisheye.</p> <p>There are three installation modes for fisheye which are ceiling, wall mount and ground installation, please select installation mode according to the actual installation scene of the fisheye.</p> <p>The system will begin to switch after switching installation mode, it will prompt successfully saved after it is switched successfully.</p> <p>Note: The device end will output the dewarped video stream after configuring installation and record mode, when the device is accessed to third-party platform, it will directly display the dewarped image on the third-party platform.</p>

Parameter	Function
Record Mode	<p>It will display the parameter when the device is fisheye.</p> <p>The system will begin to switch after record mode is switched, it will prompt saved successfully after it is switched successfully.</p> <p>The record mode will change according to the different installation modes.</p> <ul style="list-style-type: none"> <li>● 1O: the original picture which is not dewarped.</li> <li>● 1P: 360°rectangular panorama.</li> <li>● 2P: The mode can be set when the “Installation Mode” is set as “Ceiling” or “Ground”. It is the 2 related 180°rectangular image, the two subwindows can both form 360°panorama anytime.</li> <li>● 1O+3R: original image + 3 independent sub images, both the sub image and sub boxes in the original image can support zoom and movement.</li> <li>● 1R: Original image + independent sub image, the sub boxes of the original image support zoom and movement.</li> <li>● 4R: original image + 4 independent sub images, both the sub image and sub boxes in the original image support zoom and movement.</li> <li>● 2R: Original image + 2 independent sub images, the sub boxes of the original image can support zoom and movement, the sub image supports up and down movement, which can change the vertical angle of view.</li> </ul> <p>Note: The device end will output dewarped video stream after configuring installation and record mode, when the device is accessed to the third-party platform, it will directly display the dewarped image on the third-party platform.</p>
Sub Stream Enable	<p>Select “Enable” to enable sub stream.</p> <p>The device supports enabling sub stream 1 and sub stream 2 at the same time.</p>
Smart Codec	<p>It can enhance image compression performance and reduce storage space by enabling intelligent encoding.</p> <p>Note: After intelligent encoding is enabled, the device will not support third stream, ROI or intelligent event detection, please refer to the actual interface for more details.</p>

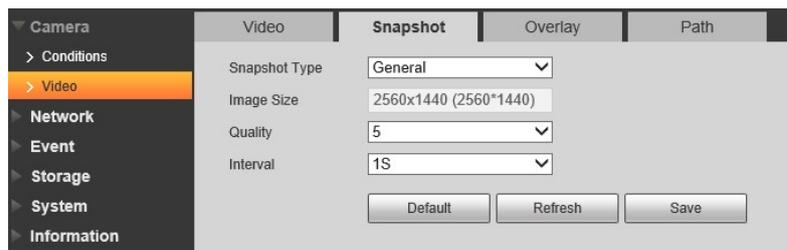
Parameter	Function
Code-Stream Type	ACF means using different fps to record. There are two options: VBR and CBR. Please note you can set video quality in VBR mode. Note: WEB interfaces don't support motion detect and alarm code stream setting.
Encode mode	There are five options: H.264 (main profile standard, H.264H (high profile standard), H.264B (Baseline Profile), H.265 (main profile standard) and MJPEG encode. <ul style="list-style-type: none"> <li>● The H.264, H.264H both are H264 bit stream. H.264 is the Main Profile encode and you need to enable the sub stream function in your camera and set the resolution as CIF. Then you can monitor via the Blackberry cell phone.</li> <li>● The H.265 is the main profile encode mode.</li> <li>● MJPEG: In this encode mode, the video needs to large bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.</li> </ul>
Resolution	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different. Note: When video is under rotating status, you cannot set resolution higher than 1080P (excluding 1080P).
Video Clip	The function is only supported by sub stream 2, please refer to "Video Clip" for more details below the sheet.
Frame Rate (FPS)	PAL: 1~25f/s, 1-50f/s NTSC: 1~30f/s or 1~60f/s. The frame rate may vary due to different resolutions.
Bit Rate Type	There are two options: VBR and CBR. Please note, you can set video quality in VBR mode. Under MJPEG mode, only CBR is available.
Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.

Parameter	Function
Bit Rate	<ul style="list-style-type: none"> <li>● In CBR, the bit rate here is the max value. In dynamic video, system needs to low frame rate or video quality to guarantee the value.</li> <li>● The value is null in VBR mode.</li> <li>● Please refer to recommend bit rate for the detailed information.</li> </ul>
SVC	Frame rate can be encoded by layer. It is a flexible encoding method. By default, it is 1 as 1 layer. You also can set 2/3/4 layers.
I Frame	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50. Recommended value is frame rate *2.
Watermark Settings	Select "Watermark Setting" and enable watermark function. After the watermark function is enabled, you can check if the video is tampered via verifying watermark character.
Watermark Character	It is the character of watermark verification, it is DigitalCCTV by default.

1. Select "Sub Stream 2" in the drop-down box, click "Enable".
2. Enable "Video Clip", click .

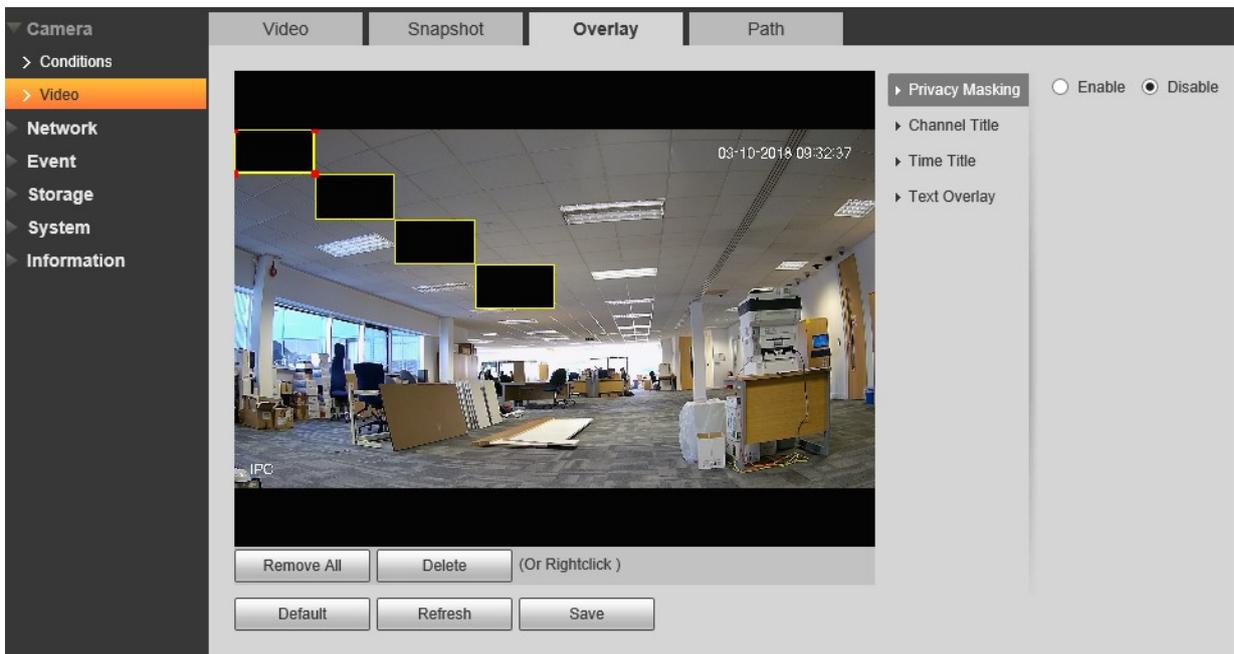
The system will display the interface of "Area".

### 5.1.2.1 Snapshot



Parameter	Function
Snapshot type	There are two modes: general (schedule) and Event (activation).
Image size	It is the same as the resolution of main stream.
Quality	It is to set the image quality. There are six levels.
Interval	It is to set snapshot frequency. Optional 1~7s/picture, customized.

### 5.1.2.2 Video Overlay



Camera

- > Conditions
- > Video
- Network
- Event
- Storage
- System
- Information

Video | Snapshot | **Overlay** | Path



03-10-2018 09:33:26

IPC Channel Title

Privacy Masking  Enable  Disable

Channel Title Input channel title: IPC

Time Title

Text Overlay

Default Refresh Save

Camera

- > Conditions
- > Video
- Network
- Event
- Storage
- System
- Information

Video | Snapshot | **Overlay** | Path



03-10-2018 09:34:14

IPC

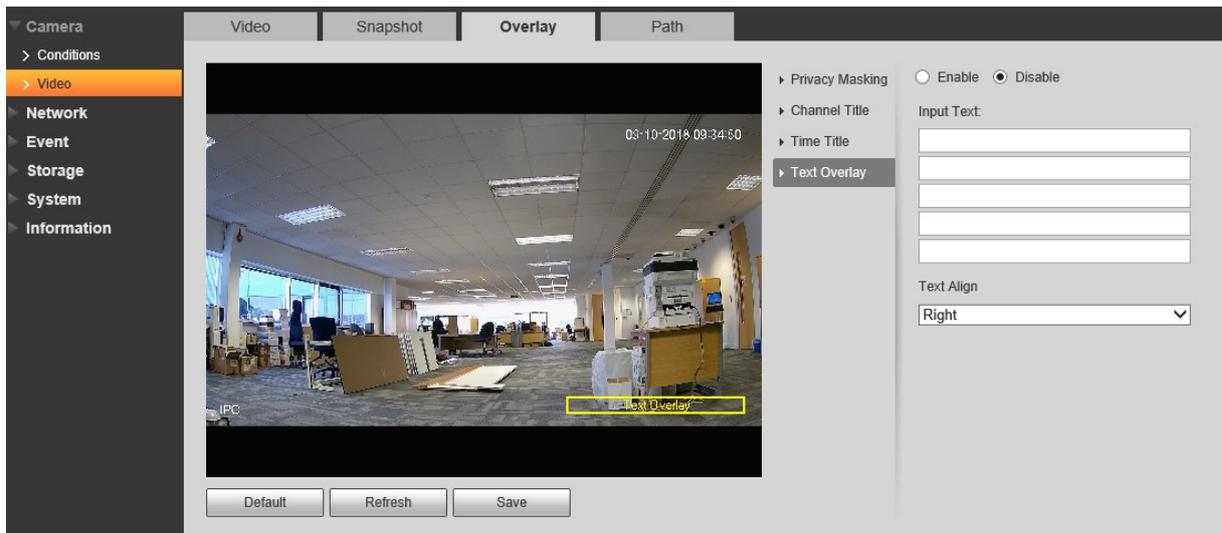
Privacy Masking  Enable  Disable

Channel Title  Week Display

Time Title

Text Overlay

Default Refresh Save



Parameter	Function
Privacy Masking	<ul style="list-style-type: none"> <li>● Here you can privacy mask the specified video in the monitor video.</li> <li>● System max supports 4 privacy mask zones.</li> </ul>
Time Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays time information in video window.</li> <li>● You can use the mouse to drag the time tile position.</li> </ul>
Channel Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays channel information in video window.</li> <li>● You can use the mouse to drag the channel tile position.</li> </ul>
Text Overlay	<ul style="list-style-type: none"> <li>● You can enable this function to overlay text in video window.</li> <li>● You can use the mouse to drag location box to adjust its position. Alignment include align left and align right.</li> </ul>
Picture Overlay	<ul style="list-style-type: none"> <li>● You can enable this function to display overlay picture. Click on disable to turn it off.</li> <li>● Click on Upload Picture to overlay local picture into monitoring window. You can drag the yellow box to move it.</li> </ul> <p>Note: You cannot enable text and picture overlay at the same time.</p>
Counting	<ul style="list-style-type: none"> <li>● Check “Enable” to display the counting statistics data in the video monitoring window; check “Disable” not to display.</li> <li>● There are enter number and leave number for statistics type and left align and right align for OSD info.</li> </ul>

Refresh	<ul style="list-style-type: none"> <li>● Set privacy mask, channel title, time title, location, overlay and save the change. You can click on Refresh to see effect.</li> </ul>
Default	<ul style="list-style-type: none"> <li>● Click it to restore default config.</li> </ul>
Save	<ul style="list-style-type: none"> <li>● Click it to complete video settings.</li> </ul>

### 5.1.2.3 Path

Here you can set snap image saved path and the record storage path.

- The default monitor image path is C:\Users\admin\WebDownload\LiveSnapshot.
- The default monitor record path is C:\Users\admin\WebDownload\LiveRecord.
- The default playback snapshot path is C:\Users\admin\WebDownload\PlaybackSnapshot.

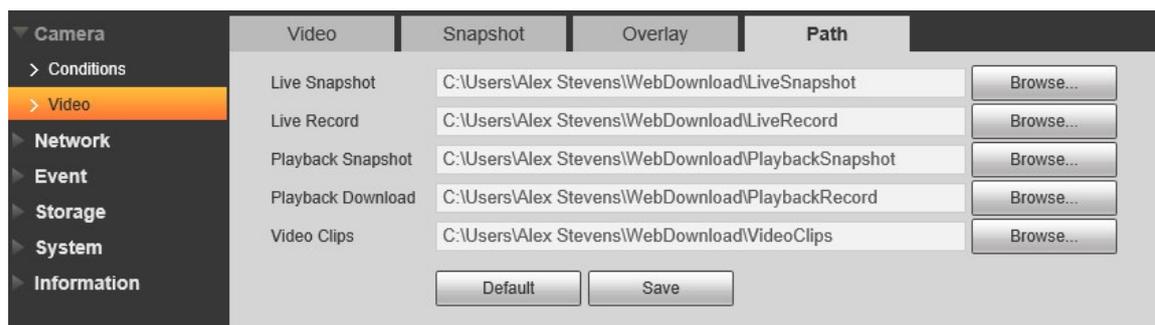
The default playback download path is C:\Users\admin\WebDownload\PlaybackRecord.

The default playback cut path is: C:\Users\admin\WebDownload\VideoClips.

Note:

Admin is locally logged in PC account.

Please click the Save button to save current setup.



## 5.2 Network

### 5.2.1 TCP/IP

The TCP/IP interface supports IPv4 and IPv6. IPv4 supports static IP and DHCP. IPv6 supports static IP only. When users manually modify IP address, WEB will automatically jump to the new IP address.

Parameter	Function
Host Name	It is to set current host device name. It max supports 15 characters.
Ethernet Card	Please select the Ethernet port. Default is wired. Please note you can modify the default Ethernet card if there is more than one card.
Mode	There are two modes: static mode and the DHCP mode. Select DHCP mode, it auto searches IP, and you cannot set IP/subnet mask/gateway. Select static mode, you must manually set IP/subnet mask/gateway.
Mac Address	It is to display hose Mac address.
IP Version	It is to select IP version. IPV4 or IPV6. You can access the IP address of these two versions.

IP Address	Please use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.
Preferred DNS	DNS IP address.
Alternate DNS	Alternate DNS IP address.
Enable ARP/Ping set device IP address service.	<p>You can use ARP/Ping command to modify or set the device IP address if you know the device MAC address.</p> <p>Before the operation, please make sure the network camera and the PC in the same LAN. This function is on by default. You can refer to the steps listed below.</p> <p>Step 1: Get an IP address. Set the network camera and the PC in the same LAN.</p> <p>Step 2: Get the physical address from the label of the network camera.</p> <p>Step 3: Go to the Run interface and then input the following commands.</p> <pre> arp -s &lt;IP Address&gt; &lt;MAC&gt; ping -l 480 -t &lt;IP Address&gt; Such as: arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125 </pre> <p>Step 4: Reboot the device.</p> <p>Step 5: You can see the setup is OK if you can see there are output information such as "Reply from 192.168.0.125 ..."</p> <p>from the command output lines. Now you can close the command line.</p> <p>Step 6: Open the browse and then input http://&lt;IP address&gt;. Click the Enter button, you can access now.</p>

## 5.2.2 PORT

The screenshot shows a web management interface for configuring ports. The sidebar on the left lists various system settings, with 'Port' highlighted under the 'Network' section. The main configuration area contains the following fields:

- Max Connection: 10 (range 1~20)
- TCP Port: 37777 (range 1025~65534)
- UDP Port: 37778 (range 1025~65534)
- HTTP Port: 80
- RTSP Port: 554
- HTTPS Port: 443

At the bottom of the configuration area, there are three buttons: 'Default', 'Refresh', and 'Save'.

Parameter	Function
Max connection	It is the max Web connection for the same device. The value ranges from 1 to 20. Default connection amount is 10.
TCP port	Port range is 1025~65534. The default value is 37777. You can input the actual port number if necessary.
UDP port	Port range is 1025~65534. The default value is 37778. You can input the actual port number if necessary.
HTTP port	Port range is 1025~65524. The default value is 80. You can input the actual port number if necessary.

RTSP port	<ul style="list-style-type: none"> <li>● The default value is 554. Please leave blank if use default. User uses QuickTime or VLC can play the following formats. BlackBerry can play too.</li> <li>● Real-time monitoring URL format, please require real-time RTSP media server, require channel no., bit stream type in URL. You may need username and password.</li> <li>● User uses BlackBerry need to set encode mode to H.264B, resolution to CIF and turn off audio.</li> </ul> <p>URL format is:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=0  Username/password/IP and port.</p> <p>The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value.</p> <p>Follow standard RTP protocol and when encode mode is MJPEG, the max resolution only supports 2040*2040.</p>
HTTPs Port	HTTPs communication port, range is 1025~65534, default is 443.

Note:

- 0~1024, 37780~37880, 1900, 3800, 5000, 5050, 9999, 37776, 39999, 42323 are all special ports. User cannot modify them.
- Avoid using default port value of other ports.

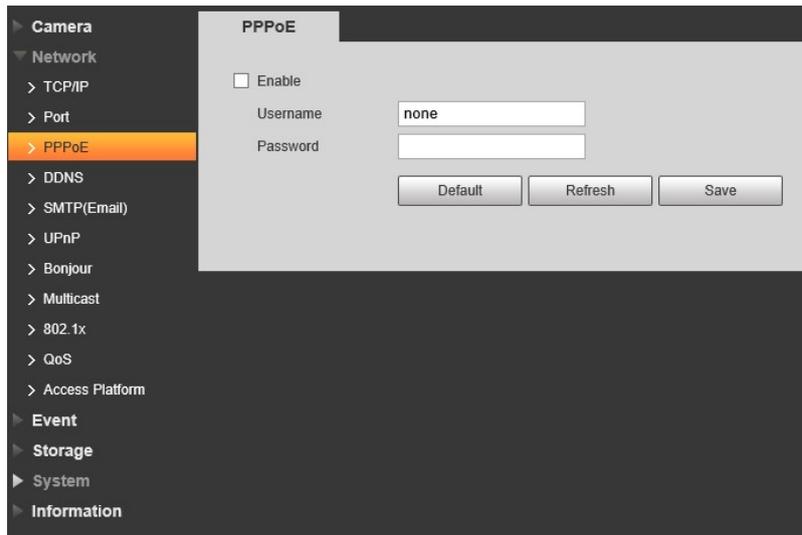
### 5.2.3 PPPoE

Enter the PPPoE username and password which are provided by ISP (Internet Service Provider), and click "Enable". The network camera will automatically establish network connection in the mode of PPPoE after it is enabled, after it is successful, the IP of the "IP Address" will be automatically modified into the dynamic IP address of the acquired WAN.

Note:

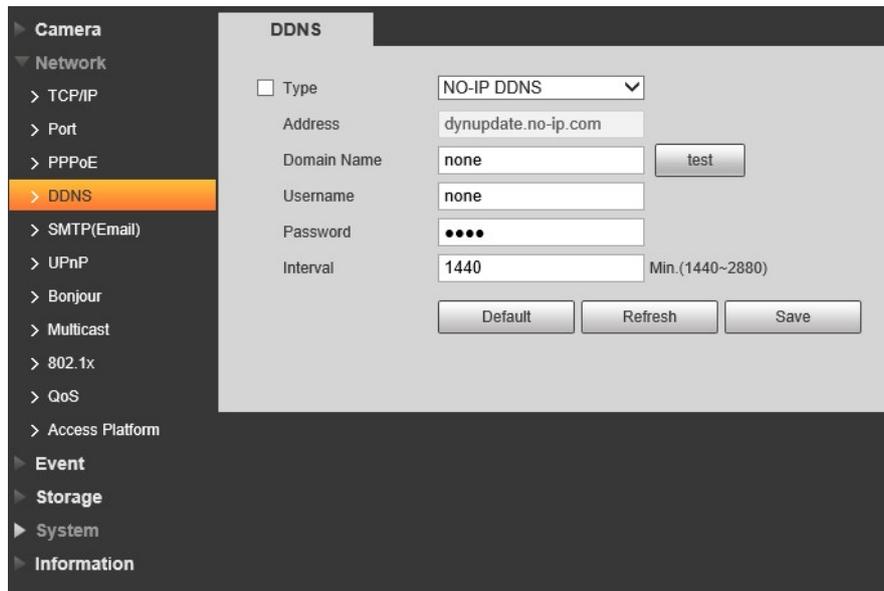
After PPPoE dial-up is successful, it needs to log in the device via the IP which is set before dial-up; in the PPPoE setup interface, it will display the registered IP address, and then it can visit the IP address via client.

Please disable UPnP when clicking PPPoE enable, which is to avoid causing influence to PPPoE dial-up.



## 5.2.4 DDNS

The DDNS is to set to connect the various servers so that you can access the system via the server. Please go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address has changed. When the device connects to WLAN, you should disable UPnP.



Parameter	Function
Server Type	Click it to select DDNS protocol type, which includes: CN99 DDNS, NO-IP DDNS, Dyn dns DDNS, Quick DDNS, the default is Quick DDNS.
Server Address	DDNS server IP address CN99 DDNS Server address: www.3322.org NO-IP DDNS Server address: dynupdate.no-ip.com Dyn dns DDNS Server address: members.dyndns.org Quick DDNS Server address: www.quickddns.com
Mode	Default is auto, it can select manual
Domain Name	Both auto and manual are "MAC address.quickddns.com" by default, it is able to set prefix manually.
Username	The user name you input to log in the server, optional.

Parameter	Function
Server Type	You can select CN99 DDNS protocol
Server Address	Under CN99 DDNS, the default server address is "www. 3322. org".
Domain Name	Self-defined domain name
Username	The user name you input to log in the server.
Password	The password you input to log in the server
Refresh Period	The refresh period of the connection between the device IP and the server, default is 10 minutes.

## 5.2.5 SMTP (e-mail)

The screenshot shows the 'SMTP(Email)' configuration page. On the left is a navigation menu with categories like Camera, Network, Event, Storage, System, and Information. The 'SMTP(Email)' option is selected. The main area contains the following fields and controls:

- SMTP Server: none
- Port: 25
- Anonymity
- Username: anonymity
- Password: masked with dots
- Sender: none
- Authentication: TLS (dropdown)
- Title: IPC Message (with a checked 'Attachment' checkbox)
- Mail Receiver: empty text area with '+' and '-' buttons
- Health Mail
- Update Period: 60 Sec. (1~3600)
- Buttons: Test, Default, Refresh, Save

Parameter	Function
SMTP Server	Input server address and then enable this function.
Port	Default value is 25. You can modify it if necessary.
Anonymity	For the server which supports the anonymity email function, it won't display the information of the sender.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Authentication (Encryption mode)	You can select SSL, TLS or none.
Title (Subject)	Input email subject here.
Attachment	System can send out the email of the snapshot picture once you check the box here.
Mail receiver	Input receiver email address here. Max three addresses.

Parameter	Function
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. Please note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormality event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormality events, which may result in heavy load for the email server.
Health mail enable	Please check the box here to enable this function.
Email test	The system will automatically sent out a email once to test the connection is OK or not .Before the email test, please save the email setup information.

## 5.2.6 UPnP

It allows you to establish the mapping relationship between the LAN and the public network. Here you can also add, modify or remove UPnP item. For UPnP on different routers, you must disable UPnP function.

In the Windows OS, From Start->Control Panel->Add or remove programs. Click the “Add/Remove Windows Components” and then select the “Network Services” from the Windows Components Wizard.

Click the Details button and then check the “Internet Gateway Device Discovery and Control client” and “UPnP User Interface”. Please click OK to begin installation.

Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the network camera can auto detect it via the “My Network Places”.

Under manual mode, you can modify external port. Under auto mode, select idle port for auto port mapping without user modification.

The screenshot displays the UPnP configuration page. At the top, there are options to 'Enable' or 'Disable' the function, a 'Mode' dropdown menu currently set to 'Custom', and a status indicator 'Router State Mapping Failed'. Below this is a 'Start deviceDiscover' checkbox which is checked. The main part of the page is a 'Port Mapping List' table:

Service Name	Protocol	Internal Port	External Port	Status	Modify
HTTP	WebService.TCP	80	8080	Mapping Failed	[Edit]
TCP	PrivService.TCP	37777	37777	Mapping Failed	[Edit]
UDP	PrivService.UDP	37778	37778	Mapping Failed	[Edit]
RTSP	RTSPService.TCP	554	554	Mapping Failed	[Edit]

At the bottom of the table, there are three buttons: 'Default', 'Refresh', and 'Save'.

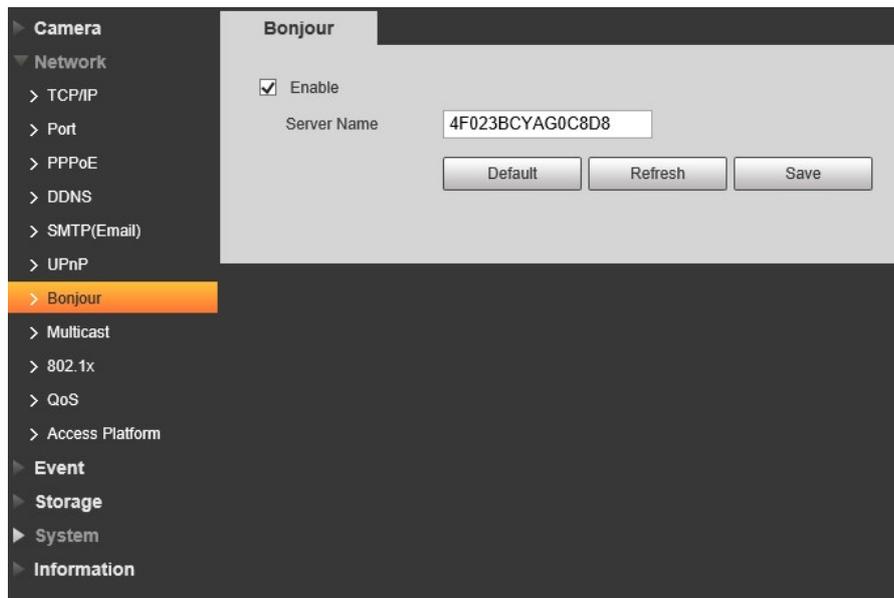
## 5.2.7 Bonjour

The Bonjour interface is shown as below.

Bonjour is based on the multicast DNS service from Apple. The Bonjour device can automatically broadcast its service information and listen to the service information from other device.

You can use the browse of the Bonjour service in the same LAN to search the network camera device and then access if you do not know the network camera information such as IP address.

You can view the server name when the network camera is detected by the Bonjour. Please note the safari browse support this function. Click the “Display All Bookmarks: and open the Bonjour, system can auto detect the network camera of the Bonjour function in the LAN.

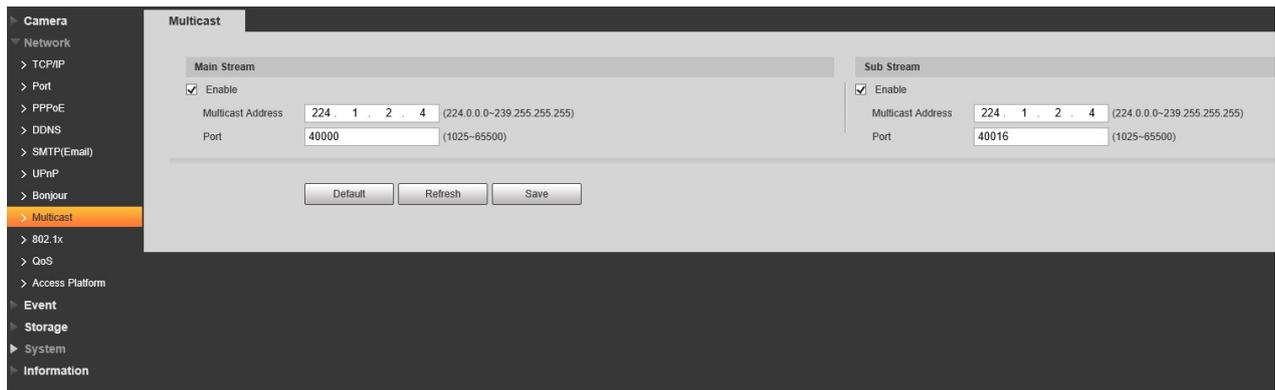


## 5.2.8 Multicast

Multicast is a transmission mode of data packet. When there is multiple-host to receive the same data packet, multiple-cast is the best option to reduce the broad width and the CPU load. The source host can just send out one data to transit. This function also depends on the relationship of the group member and group of the outer.

Note:

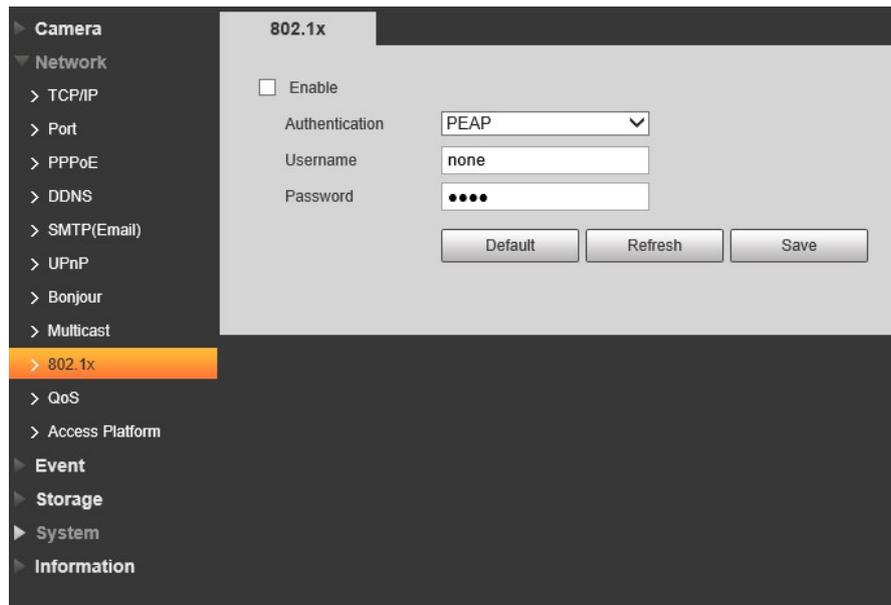
- Open preview, streaming media protocol, select multicast, and monitor via multicast format.
- Here you can set multicast address and port. You also need to go to Live interface to set the protocol as Multicast.



Parameter	Function
Enable	Select to enable multicast function. Main stream and sub stream cannot be used at the same time.
Multicast address	Main/sub stream multicast default address is 224.1.2.4 and its range is 224.0.0.0~239.255.255.255.
Port	Multicast port. Main stream is 40000, sub stream1 is 40016,sub stream2 is 40032 and the range is 1025~65534.

### 5.2.9 802.1x

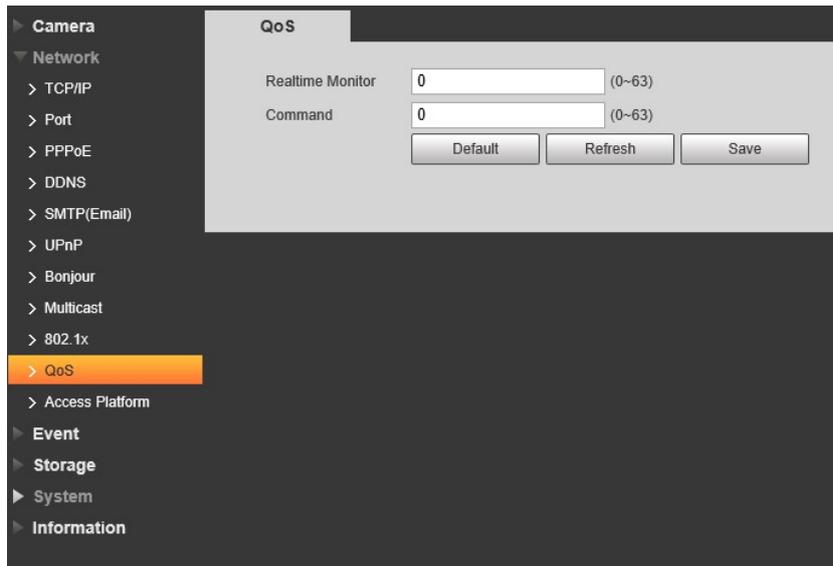
802.1x (port based network access control protocol) supports manual selection of authentication method to control if device connected to LAN can join the LAN. It well supports authentication, charging, safety and management requirement of network.



Parameter	Function
Authentication	PEAP (protected EAP protocol).
Username	It needs the username to login, which is authenticated by the server.
Password	Please input password here.

### 5.2.10 QoS

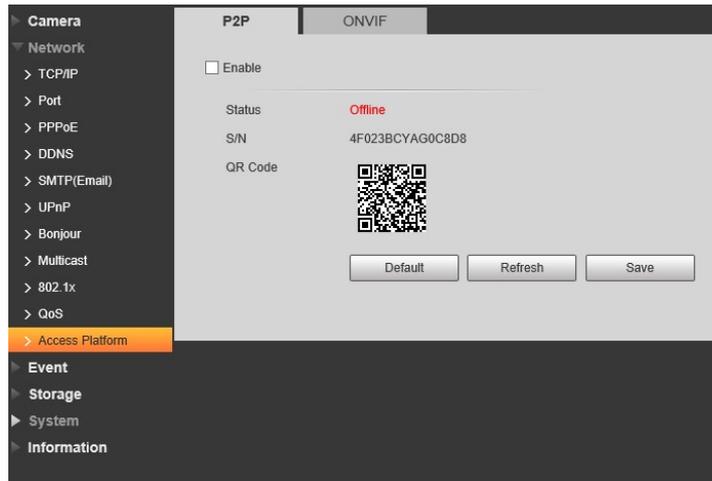
Qos (Quality of Service) is network security mechanism. It is a technology to fix the network delay and jam problem and etc. For the network service, the quality of service includes the transmission bandwidth, delay, the packet loss and etc. We can guarantee the transmission bandwidth, lower the delay, and reduce the loss of the data packet and anti-dither to enhance the quality. We can set the DSCP (Differentiated Services Code Point) of the IP to distinguish the data packet so that the router or the hub can provide different services for various data packets. It can select the different queues according to the priority (64 different priority levels) of the packets and select the bandwidth of the each queue. Level 0 is the lowest, and level 63 is the highest. It can also discard at the different ratio when the broad bandwidth is jam.



Parameter	Function
Real-time monitor	The value ranges from 0 to 63. The router or the switcher can provide different service for various data packets.
Command	The value ranges from 0 to 63. The router or the switcher can provide different service for various data packets.
Enable Wireless QoS	Check it to enable QoS.

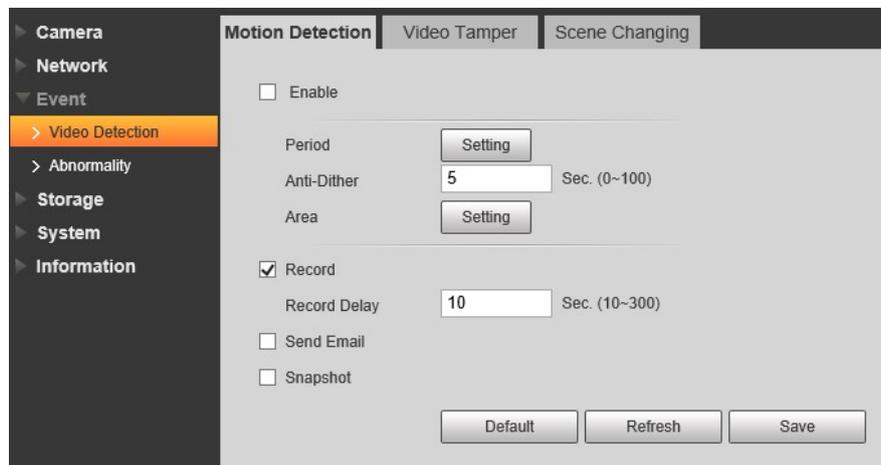
#### 5.2.10.1 P2P

Click “Enable” to connect the device to network, and then you can connect to the device via mobile client of Easy4ip after “Online” is displayed on the interface (connection mode: add device serial number or scan QR code).



### 5.3 Event

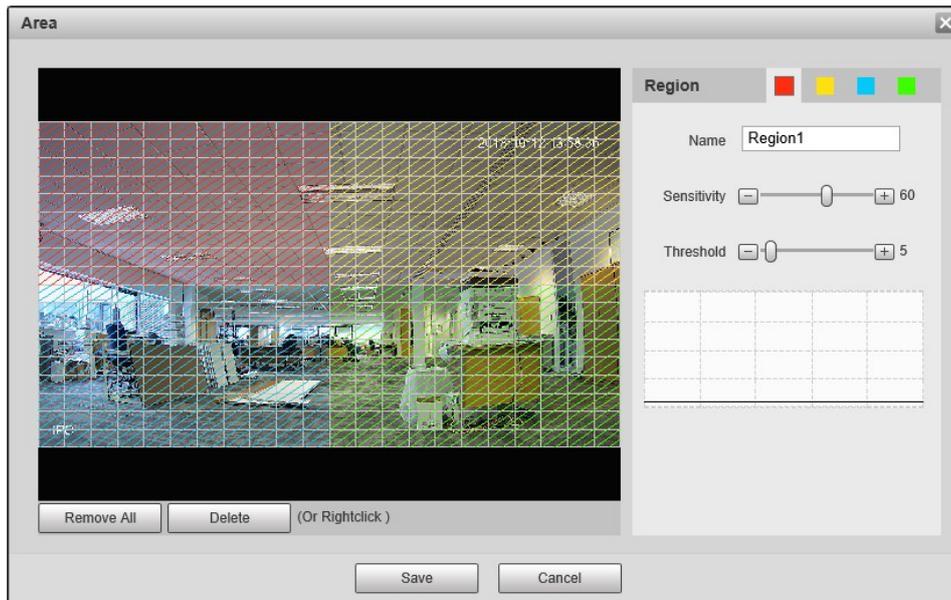
Setup > Event > Video Detection > Motion Detection



Select “Enable” to enable motion detection function.

Set motion detection area.

1. Click “Setup” and the system will pop out the interface of “Setting Area.”



2. Set area name, it is to set valid area of motion detection according to the actual situation, and it can set the value of sensitivity and threshold respectively.

The bigger the sensitivity is, the easier it is to generate motion detection, the smaller the threshold is, the easier it is to generate motion detection; the entire video image is the valid area of motion detection by default.

Note:

- Different colours represent different areas; each area can set different detection area.
  - The red line in the Oscillogram means triggering motion detection; green line means not triggering motion detection.
3. Click "Save" to complete area setting.

It is to set other parameters of motion detection, please refer to the following sheet for more details.

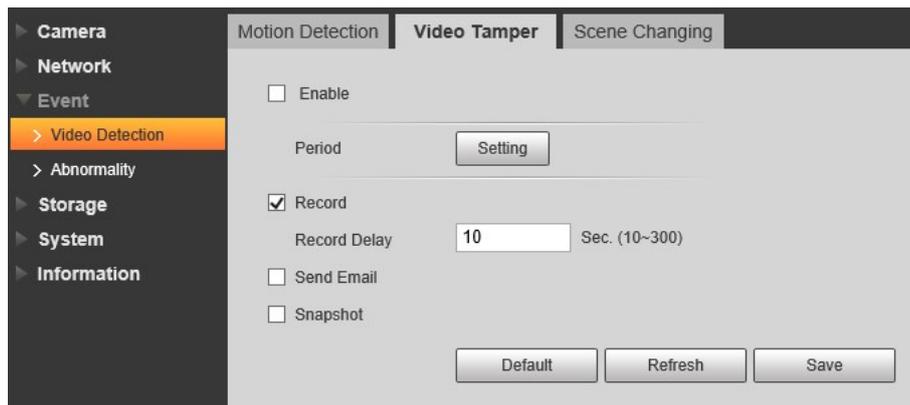
Parameter	Function
Working Period	<p>Note: It is to set the alarm period, it can enable alarm event only during the period range which has been set.</p> <ol style="list-style-type: none"> <li>1. Click "Setup" and the system will pop out the interface of "Working Period".</li> <li>2. It is to set working period according to the following methods: <ul style="list-style-type: none"> <li>● You can input time numerical value or press the left mouse button to drag on the setup interface to set.</li> <li>● There are six periods to be set every day, select the check box in front of the period, and then the period is valid.</li> <li>● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days).</li> </ul> </li> <li>3. Click "Save" to complete the setup of working period.</li> </ol>
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Area	<ol style="list-style-type: none"> <li>1. Click "Setup" and the system will pop out the interface of "Set Area".</li> <li>2. Set the area name, it is to set the valid area of motion detection according to the actual situation, and it can set its sensitivity and threshold respectively. The higher the sensitivity is, the easier it is to trigger motion detect, the smaller the area threshold is, the easier it is to generate motion detect, the whole video image is the valid area of the motion detect by default.</li> </ol> <p>Note: Different colours represent different areas; each area can set different detection areas. The red line in the Oscillogram means triggering motion detect, the green line means not triggering motion detect.</p> <ol style="list-style-type: none"> <li>3. Click "Save" to complete area setup.</li> </ol>
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.

Parameter	Function
Audio linkage	Check it and the system will play alarm audio file when alarm occurs. Users can set the recorded or uploaded audio file in “camera setting > audio > alarm audio”.
Flash linkage	Check it and the flash will be on when alarm occurs, and the flash will be off until the end of alarm after corresponding delay.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Click “Save” to complete the setting of motion detection.

### 5.3.1.1 Video Tampering

Setup > Event > Video Detection > Video Tampering



Set the parameter of video tampering; please refer to the following sheet for more details.

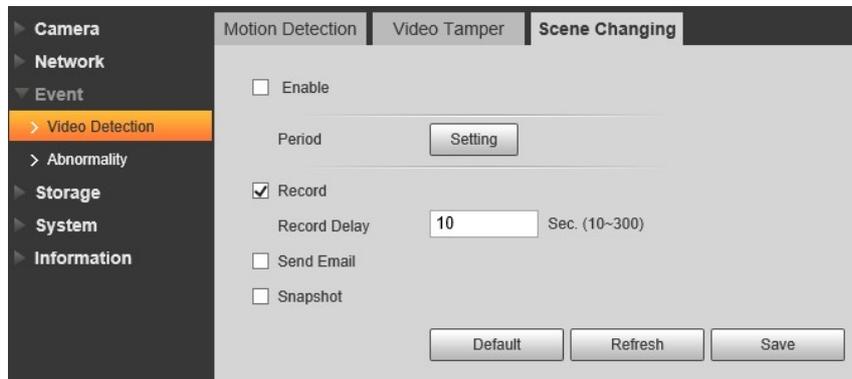
Parameter	Function
Enable video tampering	You need to check the box to enable video mask detection alarm.
Enable defocus detection	You need to check the box to enable defocus detection alarm.

Parameter	Function
Working Period	<p>Note: It is to set the alarm period, it can enable alarm event only during the period range which has been set.</p> <ol style="list-style-type: none"> <li>1. Click "Setup" and the system will pop out the interface of "Working Period".</li> <li>2. It is to set working period according to the following methods: <ul style="list-style-type: none"> <li>● You can input time numerical value or press the left mouse button to drag on the setup interface to set.</li> <li>● There are six periods to be set every day, select the check box in front of the period, and then the period is valid.</li> <li>● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days).</li> </ul> </li> <li>3. Click "Save" to complete the setup of working period.</li> </ol>
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Audio linkage	Check it and the system will play alarm audio file when alarm occurs. Users can set the recorded or uploaded audio file in "camera setting > audio > alarm audio".
Flash linkage	Check it and the flash will be on when alarm occurs, and the flash will be off until the end of alarm after corresponding delay.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Click "Save" to complete the setup of video tampering.

### 5.3.1.2 Scene Changing

Setup > Event > Video Detection > Scene Changing



Check “Enable” to enable the function of scene changing.

It is to set the parameters of scene changing, please refer to the following sheet for more details.

Parameter	Function
Working Period	<p>Note: It is to set the alarm period, it can enable alarm event only during the period range which has been set.</p> <ol style="list-style-type: none"><li>1. Click “Setup” and the system will pop out the interface of “Working Period”.</li><li>2. It is to set working period according to the following methods:<ul style="list-style-type: none"><li>● You can input time numerical value or press the left mouse button to drag on the setup interface to set.</li><li>● There are six periods to be set every day, select the check box in front of the period, and then the period is valid.</li><li>● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days).</li></ul></li><li>3. Click “Save” to complete the setup of working period.</li></ol>
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

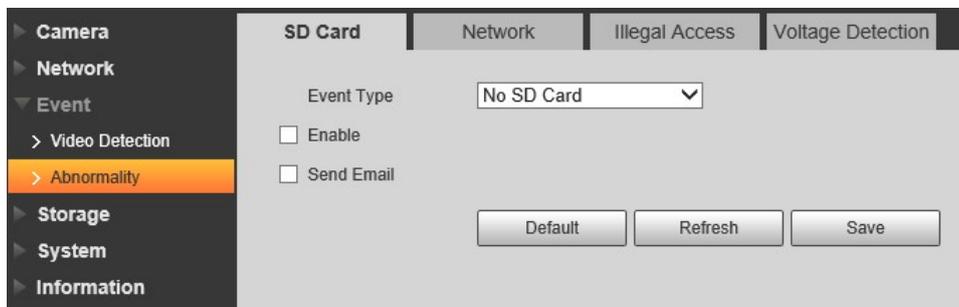
Click “Save” to complete the setup of scene changing.

### 5.3.2 Abnormity

Abnormity includes No SD Card, Capacity Warning, SD Card Error, Disconnection, IP Conflict and Unauthorized Access.

Note:

Only device with SD card function has these three statuses: No SD card, capacity warning, and SD card error. Device without SD card function does not have the above three statuses.



Parameter	Function
Enable	Check to alarm when SD card is abnormal.
Relay-out	Check to enable relay-out alarm.

Parameter	Function
Relay out delay	The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s. Note: No SD card, capacity warning, SD card error, relay-out delay all start from alarm occurs.
Send email	After you enabled this function, the system can send out email to alarm the specified user. This function is invalid when network is offline or IP conflict occurs.
SD Card Capacity Limit	User can set SD card capacity that is left free. When SD card space left is smaller than this limit, alarm occurs.

When device is offline or IP conflicts, the abnormal alarm is similar with case of SD card error.

When login password keep been wrong for a few times, unauthorized access alarm occurs. This operation is similar to SD card error. Allow login error times as when it exceeds this limit, user account will be locked.

## 5.4 Storage Management (only available on selected models)

### 5.4.1 Schedule

Before schedule setup, user must set record mode is auto or manual.

Note:

If record mode in record control is off, then device will not snapshot according to schedule.

#### 5.4.1.1 Record Schedule

Record schedule steps:

Click on Record Schedule.

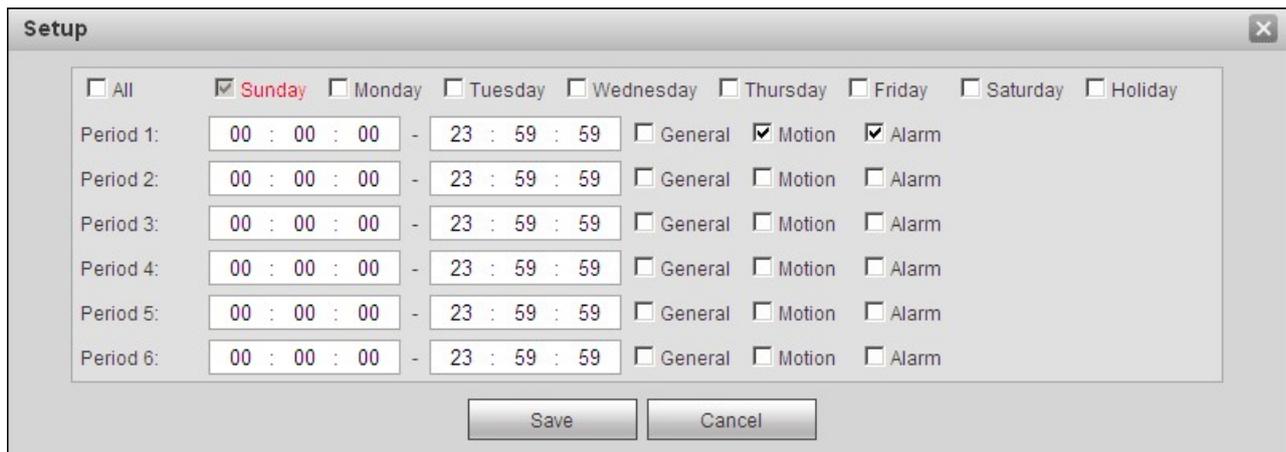


From Monday to Sunday select record time, click on setup on the right.

- Set period according to actual need. There are six periods available each day.
- By checking or unchecking, you can add or delete three types of record schedule: General, Motion, and Alarm.

Note:

Period setup can be done by dragging in record schedule interface while not releasing left mouse.



Click on OK, return to record schedule interface.

- Green color stands for the general record/snapshot.
- Yellow color stands for the motion detect record/snapshot.
- Red color stands for the alarm record/snapshot.

In record schedule interface, click on OK. System prompts it is successfully saved.

#### 5.4.1.2 Snapshot Schedule

Snapshot setup as:

Click on Snapshot Schedule tab.



From Monday to Sunday select snapshot time, click on setup on the right.

- Set snapshot period according to actual need. There are six periods available each day.
- By checking or unchecking, user can add or delete three types of snapshot schedule: General, Motion and Alarm.

Note: Period setup can be done by dragging in snapshot schedule interface while not releasing left mouse.

Day	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6		
<input type="checkbox"/> All	<input type="checkbox"/> Sunday	<input type="checkbox"/> Monday	<input type="checkbox"/> Tuesday	<input type="checkbox"/> Wednesday	<input type="checkbox"/> Thursday	<input type="checkbox"/> Friday	<input type="checkbox"/> Saturday	<input type="checkbox"/> Holiday
Period 1:	00 : 00 : 00	23 : 59 : 59	<input type="checkbox"/> General	<input checked="" type="checkbox"/> Motion	<input checked="" type="checkbox"/> Alarm			
Period 2:	00 : 00 : 00	23 : 59 : 59	<input type="checkbox"/> General	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm			
Period 3:	00 : 00 : 00	23 : 59 : 59	<input type="checkbox"/> General	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm			
Period 4:	00 : 00 : 00	23 : 59 : 59	<input type="checkbox"/> General	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm			
Period 5:	00 : 00 : 00	23 : 59 : 59	<input type="checkbox"/> General	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm			
Period 6:	00 : 00 : 00	23 : 59 : 59	<input type="checkbox"/> General	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm			

Click on OK, return to snapshot schedule interface.

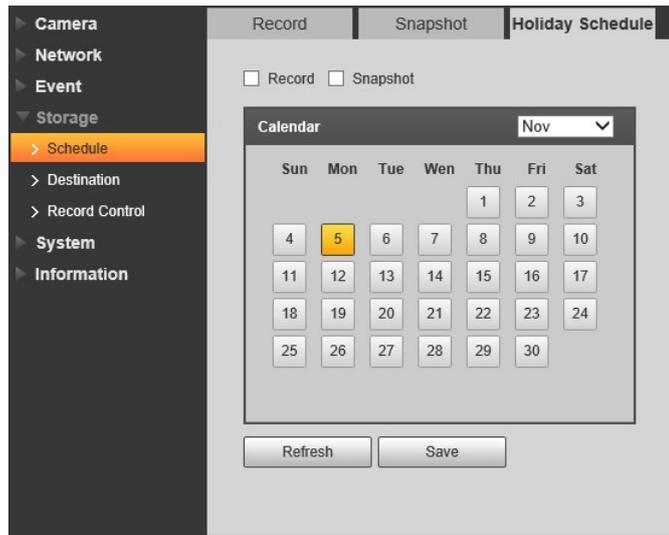
- Green color stands for the general record/snapshot.
- Yellow color stands for the motion detect record/snapshot.
- Red color stands for the alarm record/snapshot.

In snapshot interface, click on OK. System prompts it is successfully saved.

#### 5.4.1.3 Holiday Schedule

Holiday schedule can set specific date as holiday.

Step 1. Click on Holiday Schedule tab,



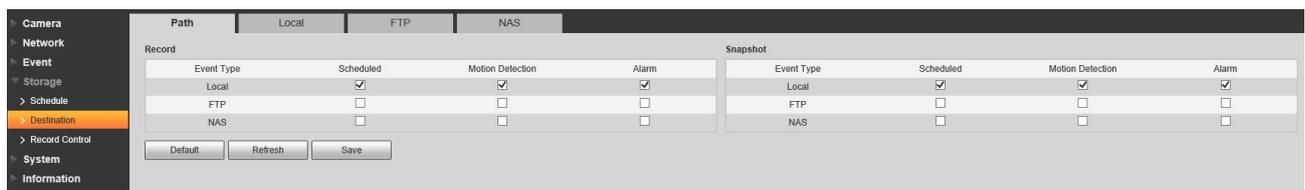
Select date to set as holiday. The selected date will be highlighted in yellow.  
 Check Record/Snapshot, click on Save. System prompts it is successfully saved.  
 Check Record Schedule/Snapshot Schedule interface, click on setup next to Holiday, and refer to setup of Monday to Sunday.  
 Complete setup of holiday, then it records/snapshots according to date in holiday schedule.

## 5.4.2 Destination

### 5.4.2.1 Path

Path can config record and snapshot storage path. There are three options: Local, FTP and NAS. You can only select one mode. System can save according to the event types. It is corresponding to the three modes (general/motion/alarm) in the Schedule interface. Please check the box to enable the save functions.

Note: Only device supports SD card has local.



Parameter	Function
Event Type	It includes: scheduled, motion detect and alarm.
Local	It saved in the SD card.
FTP	It saved in the FTP server.
NAS	It saved in NAS disk.

#### 5.4.2.2 Local

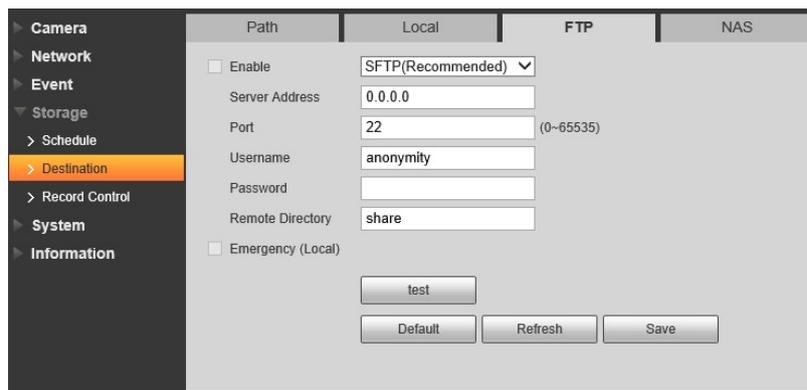
Here you can view local Micro SD card or NAS disk information. You can also operate the read-only, write-only, hot swap and format operation.



#### 5.4.2.3 FTP

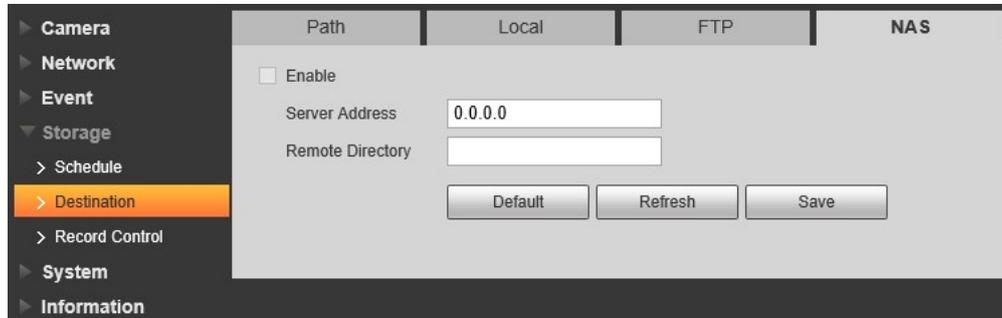
The FTP interface is shown as in

You need to check the box to enable the FTP function. When network disconnect occurred or there is malfunction. Emergency storage can save the record/snapshot picture to the local SD card. Click the test button to check if the FTP server can be connected for test.



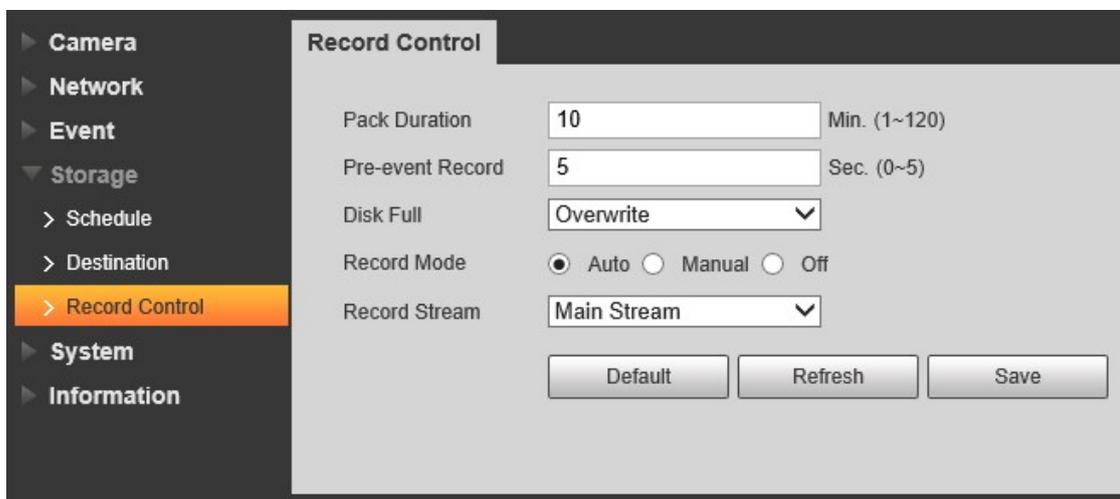
#### 5.4.2.4 NAS

You need to check the box to enable the NAS function. Select NAS storage, fill in NAS server address and corresponding store path, then you can store video file or pictorial information in the NAS server.



Parameter	Function
Server Address	Set the IP address of the server.
Remote Directory	Assign a storage directory, videos and pictures will be stored in the corresponding server directory.

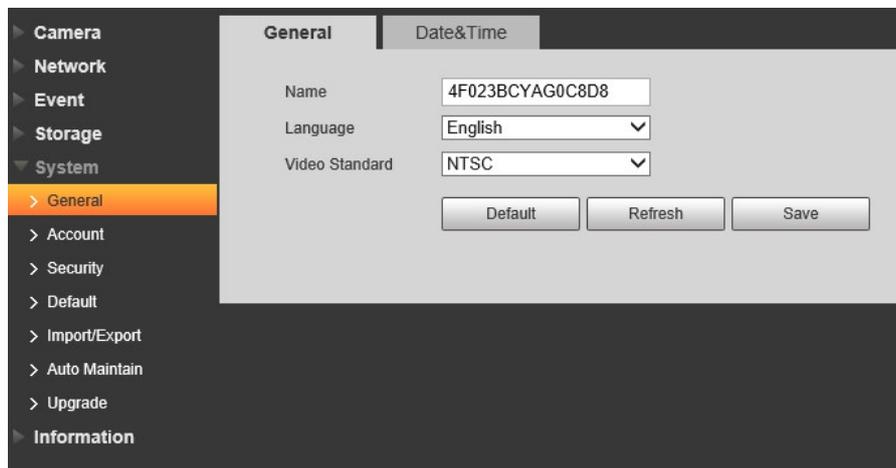
#### 5.4.3 Record control



Parameter	Function
Pack Duration	Here you can select file size within 1min~120min. Default setup is 8 minutes.
Pre-record	Please input pre-record value here. For example, system can record the four seconds video in the buffer. The record begins from the fifth second. Note: Configure pre-record time, when alarm or motion detection occurs, if there is no record, system will record the preceding n seconds record.
Disk Full	There are two options: stop recording or overwrite the previous files when HDD is full. <ul style="list-style-type: none"> <li>● Stop: Current working HDD is overwriting or current HDD is full, it will stop record.</li> <li>● Overwrite: Current working HDD is full; it will overwrite the previous file.</li> </ul>
Record mode	There are three modes: Auto/manual/close.
Record stream	There are two options: main stream and sub stream.

## 5.5 System

### 5.5.1 General



Parameter	Function
Device Name	It is to set device name. Note: Different devices have different names.
Video Standard	This is to display video standard such as PAL.
Language	You can select the language from the dropdown list.
TV Out	You can open or close the function; it can only be supported by the devices with TV Out. <ul style="list-style-type: none"> <li>● Intelligent function will be disabled when TV Out is opened.</li> <li>● It will auto close TV Out when intelligent function is enabled.</li> <li>● Some devices support SDI and HDCVI.</li> </ul>

Parameter	Function
Date format	Here you can select date format from the dropdown list.
Time Format	There are two options: 24-H and 12-H.
Time zone	The time zone of the device.

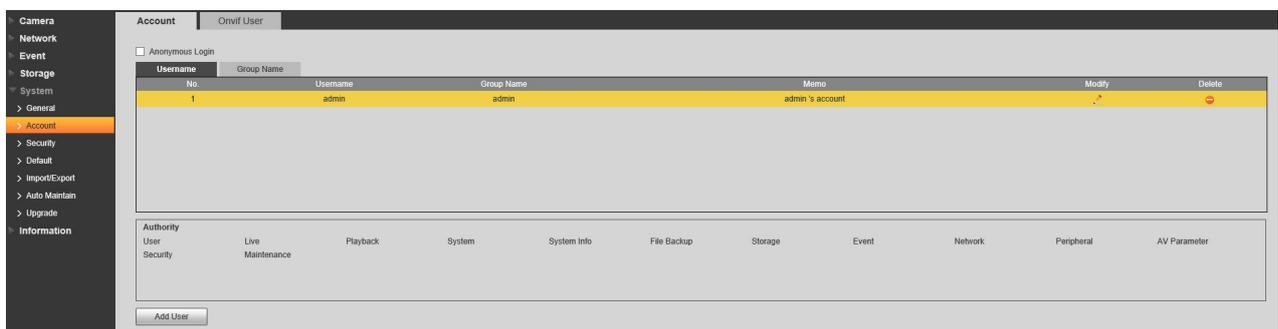
Current Time	It is to set system time. It becomes valid after you set.
Sync PC	You can click this button to save the system time as your PC current time.
DST Enable	Here you can set both begin and end time of daylight saving time. You can set according to the date format or the week format.
Synchronize with NTP	You can check the box to enable NTP function.
NTP server	You can set the time server address.
Port	It is to set the time server port.
Update period	It is to set the sync periods between the device and the time server.

## 5.5.2 Account

- For user name and user group, the max length is 31 characters, which can be made up of digit, letter, underline, hyphen, dot and @.
- Password can be 0~32 characters in number and letter only. User can modify other user's password.
- User and group can be manually added to 18 and 8 respectively.
- User management adopts group/user modes. The user name and the group name shall be unique. One user shall be included in only one group.
- Currently logged in user cannot change his/her own right.

### 5.5.2.1 Username

In this interface you can enable anonymity login, add/remove user and modify user name.



Enable anonymity login: Enable anonymity login, and input IP. No username or password is required, you can log in by anonymity (with limited rights). You can click logout to end your session.

Add user: It is to add a name to group and set the user rights.

Hidden user “default” is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

Here you can input the user name and password and then select one group for current user.

Please note the user rights shall not exceed the group right setup.

For convenient setup, please make sure the general user has the lower rights setup than the admin.

The screenshot shows a dialog box titled "Add User". It contains the following fields and options:

- Username:** A text box containing "test".
- Password:** A text box with masked characters. Below it is a strength indicator with a green bar and the text "Strong".
- Confirm Password:** A text box with masked characters. Below it is a red error message: "Password not Matched".
- Group Name:** A dropdown menu showing "admin".
- Memo:** An empty text box.
- Authority:** A list of checkboxes:
  - All
  - User
  - Live
  - Playback
  - System

At the bottom of the dialog are two buttons: "Save" and "Cancel".

### Modify user

It is to modify the user property, belonging group, password and rights.

### Modify password

It is to modify the user password. You need to input the old password and then input the new password twice to confirm the new setup. Please click the OK button to save.

Please note, the password ranges from 0-digit to 32-digit. It shall include the number and letter only.

For the user who has the account rights, he can modify the password of other users.

**Modify User**

Username: test

Modify Password

Group Name: admin

Memo:

Authority:  All

- User
- Live
- Playback
- System

Save Cancel

### 5.5.2.2 Group

The group management interface can add/remove group, modify group password and etc.

No.	Username	Group Name	Memo	Modify	Delete
1		admin	administrator group		
2		user	user group		

Authority:  Live  Playback

Add group: It is to add group and set its corresponding rights.

Please input the group name and then check the box to select the corresponding rights. It includes: preview, playback, record control, PTZ control and etc.

**Add Group**

Group Name  **Must**

Memo

Authority

- All
- Live
- Playback
- System
- System Info

Save Cancel

### Modify group

Here you can modify group information such as remarks and rights.

**Modify Group**

Group Name  ▼

Memo

Authority

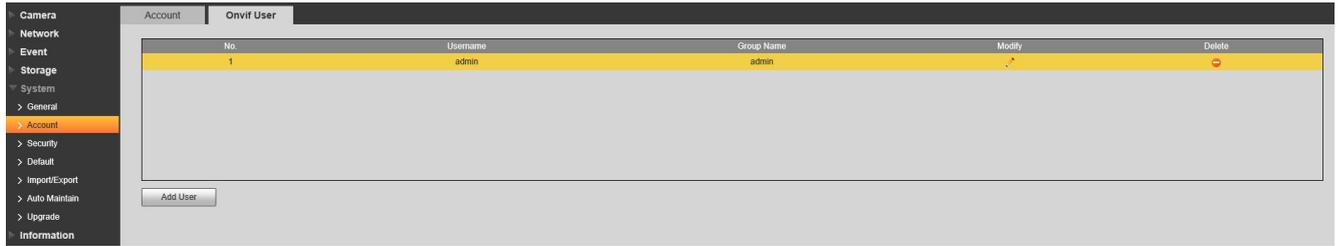
- All
- Live
- Playback
- System
- System Info

Save Cancel

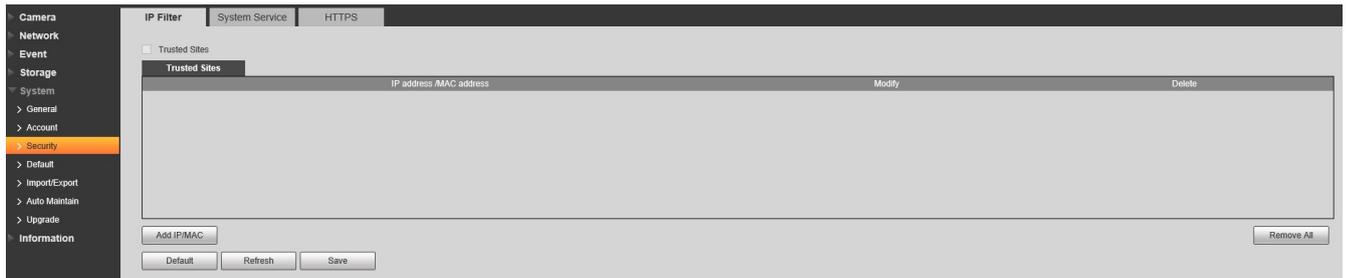
### 5.5.2.3 ONVIF

ONVIF (Open Network Video Interface Forum), this standard describes network video mode, interface, data type and data interaction mode. ONVIF Standard's aim is to achieve a network video frame agreement and makes the network video products (including video front-end, video equipment, etc.) from different manufacturers completely compatible.

ONVIF function is on by default.



### 5.5.3 IP filter



You can enable IP filter function so that some specified IP/MAC user can access the network camera.

You can add IP address or IP segment.

If you do not check the box here, it means there is on access limit.

Here you can add IP address and MAC address. You must add these addresses before enabling the trusted sites.

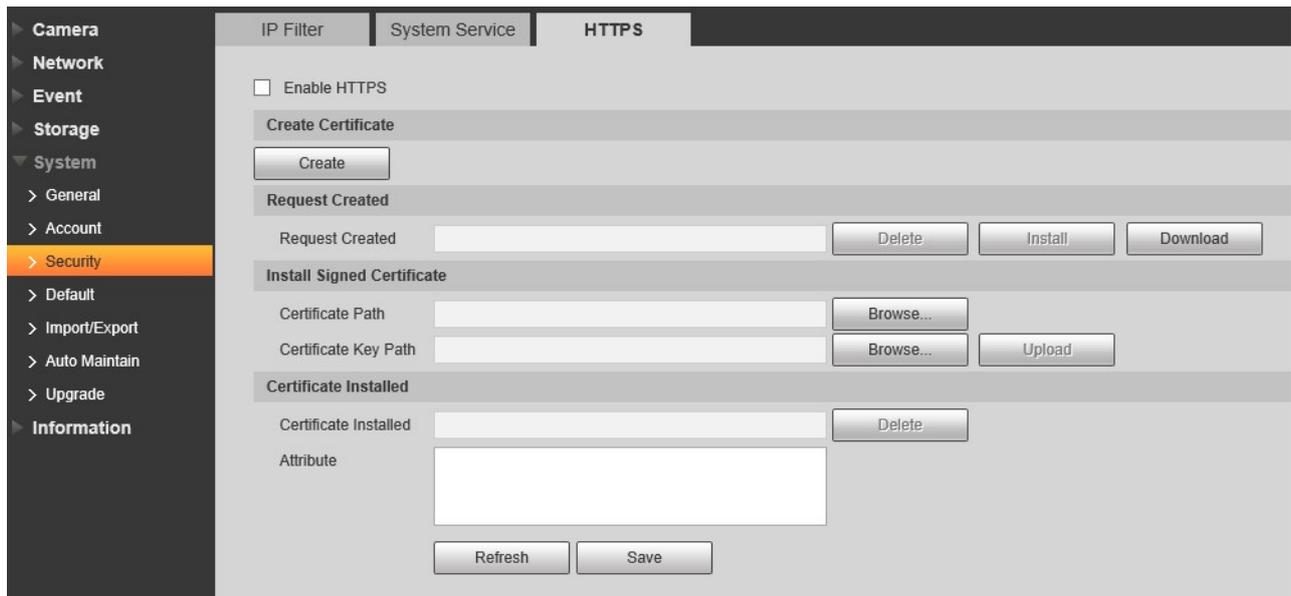
Please note: You must set MAC address in the same network segment.

### 5.5.4 HTTPs

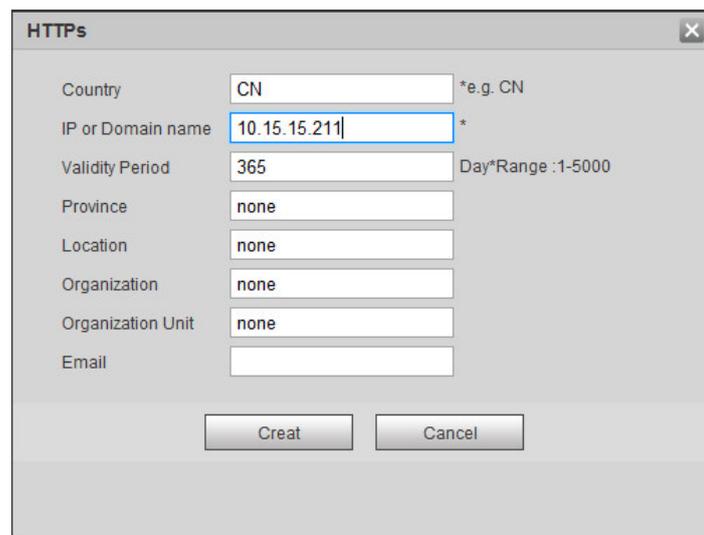
In the HTTPs setting interface, users can make PC log in normally via HTTPs by creating certificate or uploading signed certificate, which is to guarantee the security of communication data and provide safeguard for user information and device security with reliable and stable technical means.

Create certificate or upload the signed certificate.

- Please refer to the following steps if you select “Create Certificate”.
  1. Select “Setup > Network > HTTPs”, and the system will display the interface of HTTPs.



2. Click “Create” and it will pop out the dialog box of “HTTPSs”.



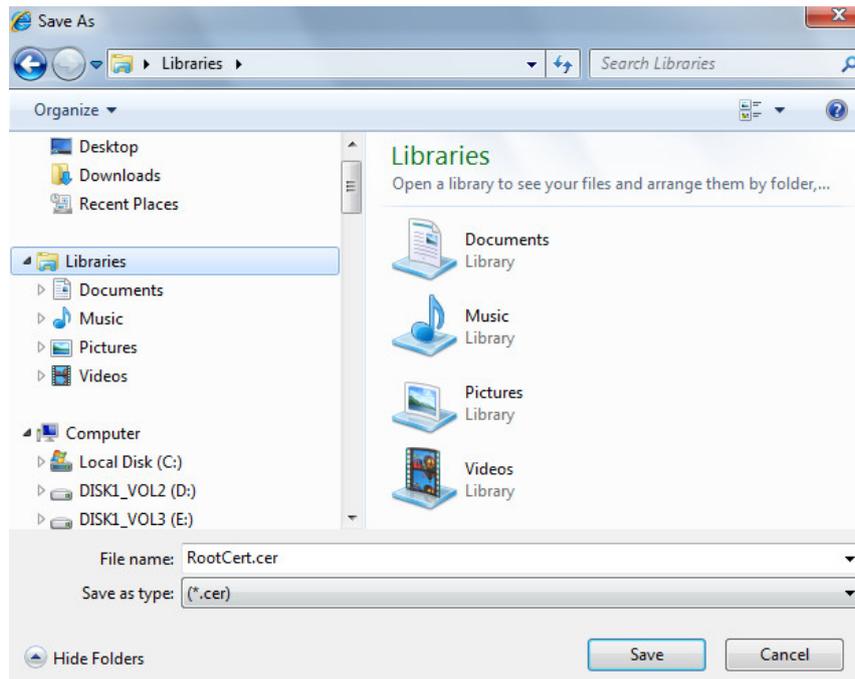
3. Fill in corresponding “Country”, “Province” and some other information, click “Create” after filling in. It will show the prompt of “Create Successfully”, which means the server certificate has been successfully created.

SYSTEM SETTING ON MY VERSION Note:

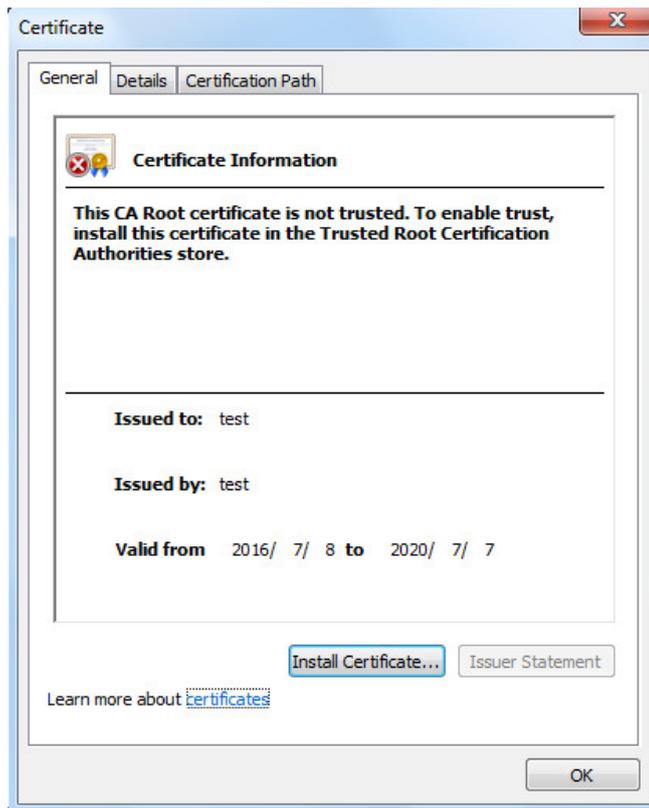
Make sure the “IP or domain name” is the same as that of the device.

4. Click “Install” and it will install the certificate on the device end.

5. Click “Download”. It will pop out the dialog box of “Save as”, save the file into the computer.



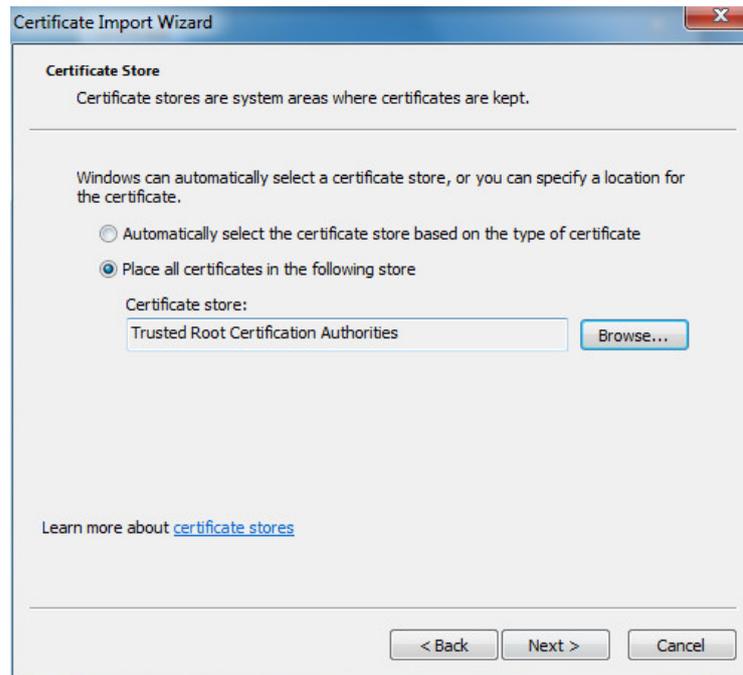
6. Double click the downloaded icon of “RootCert.cer”. The system will display the information interface of “Certificate”.



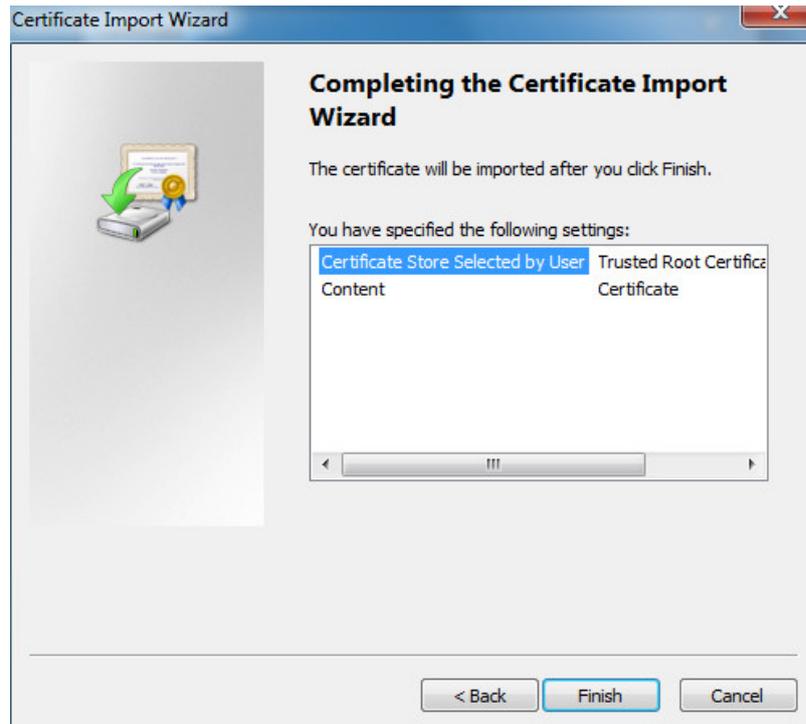
7. Click "Install Certificate" and it will pop out the interface of "Certificate Import Wizard."



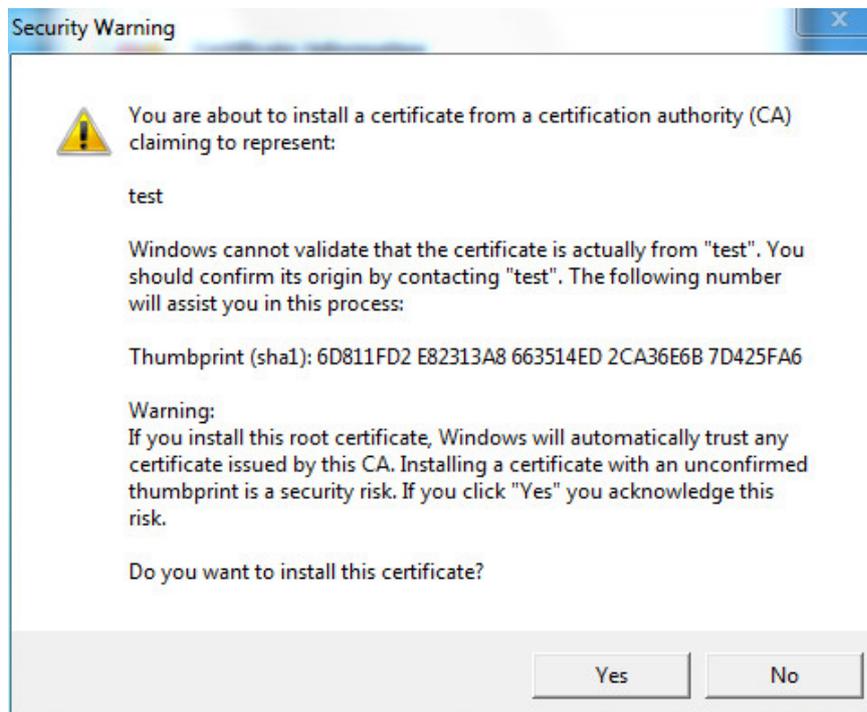
8. Click “Next”. Select “Trusted Root Certification Authorities”.



9. Click “Next”. The system will display the interface of “Completing the Certificate Import Wizard”.



10. Click "Finish", and it will pop out the dialog box of "Security Warning."

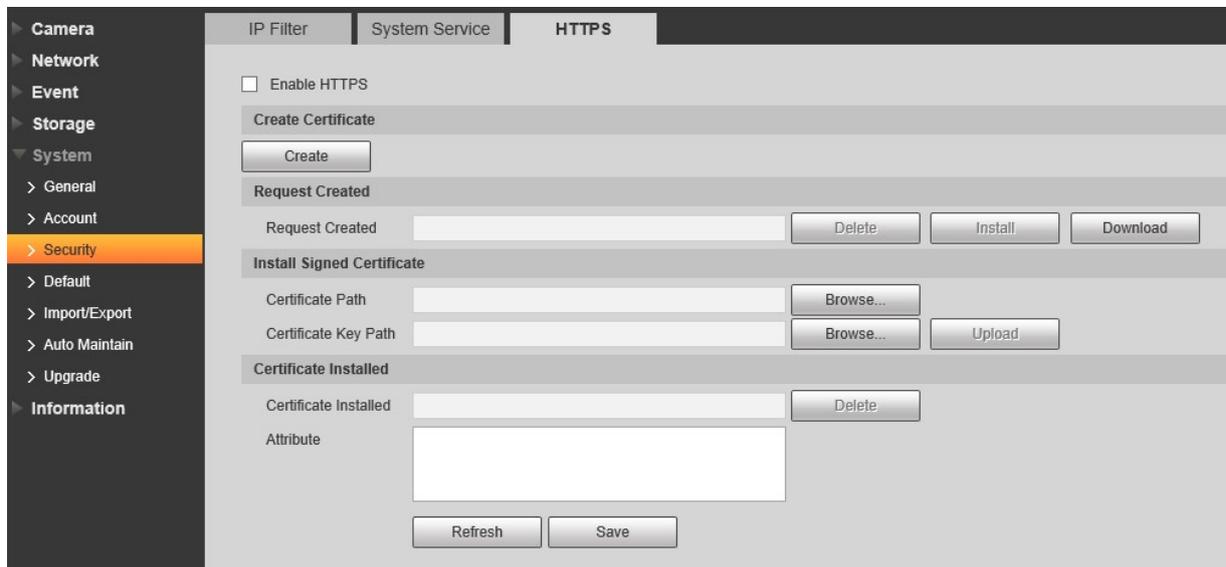


11. Click “Yes”. It will pop out the dialog box of “Import Successful”, click “Ok” to complete downloading certificate.

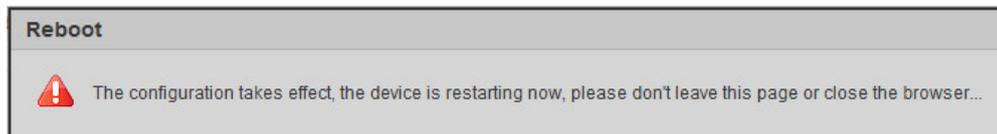


- Please refer to the following steps if you select “Install Signed Certificate”.

Setup > Network > HTTPS



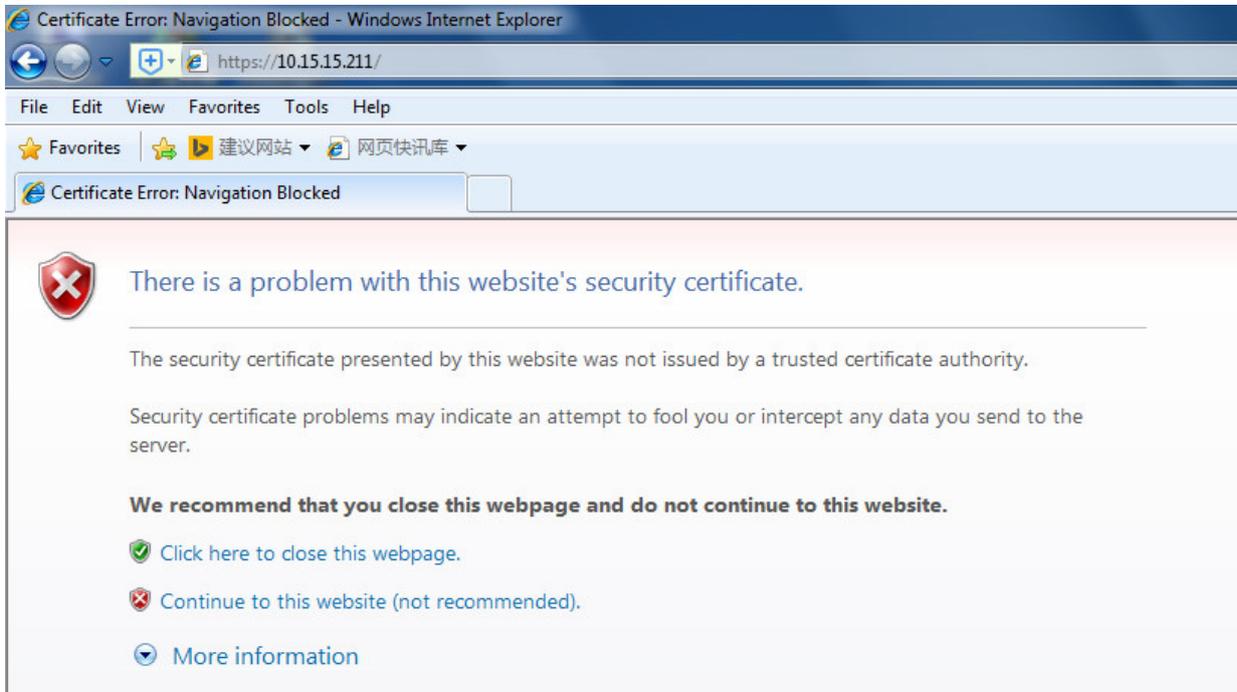
1. Select signed certificate and certificate key path respectively via “Browse”, click “Upload”.
2. Install root certificate, please refer to step 6~11 for more details.
3. Check “Enable HTTPS”, click “Save”. The system will display the dialog box of “Need to reboot the device”, and then the config is valid.



## 4. HTTPS

Use HTTPS to log in.

Enter <https://xx.xx.xx.xx> in the browser, and it will pop out normal login interface; the browser will prompt certificate error if the certificate is not installed.

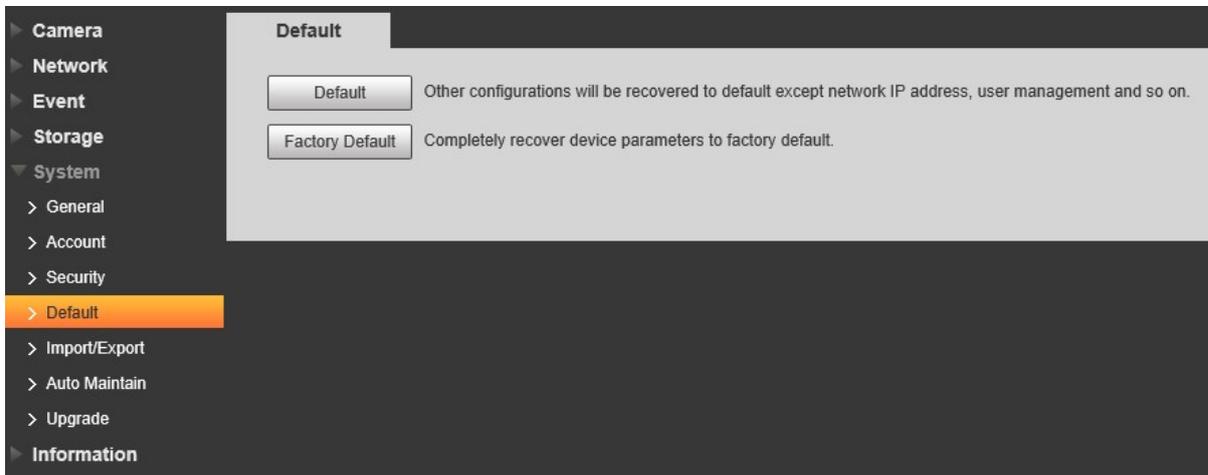


Note:

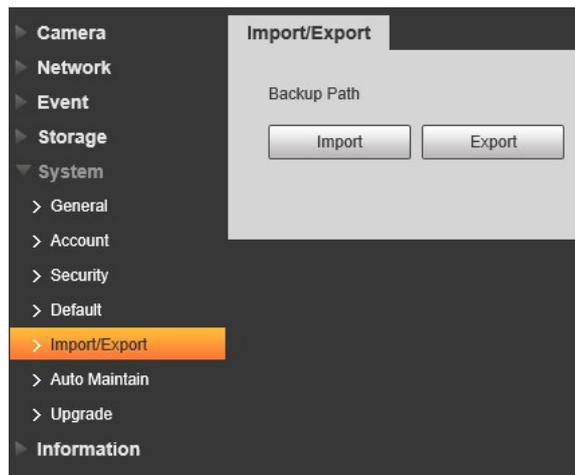
"xx.xx.xx.xx" is corresponding to your IP or domain name.

### 5.5.5 Default

Please note system cannot restore some information such as network IP address, account and so on.



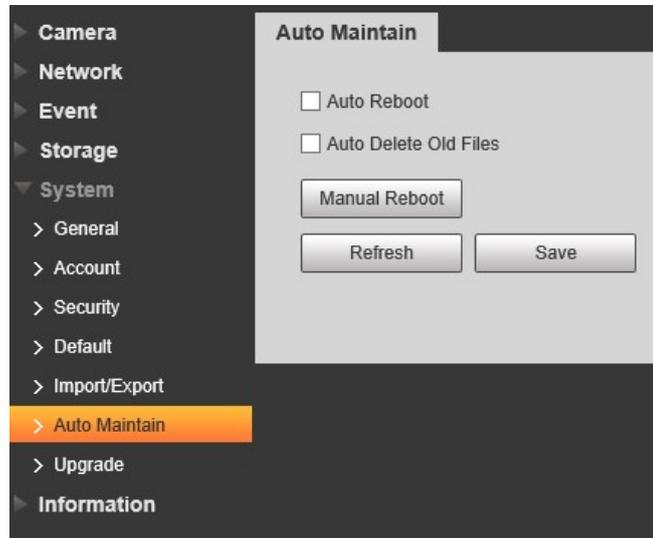
### 5.5.6 Import/Export



Parameter	Function
Import	It is to import the local setup files to the system.
Export	It is to export the corresponding system setup to your local PC.

### 5.5.7 Auto Maintenance

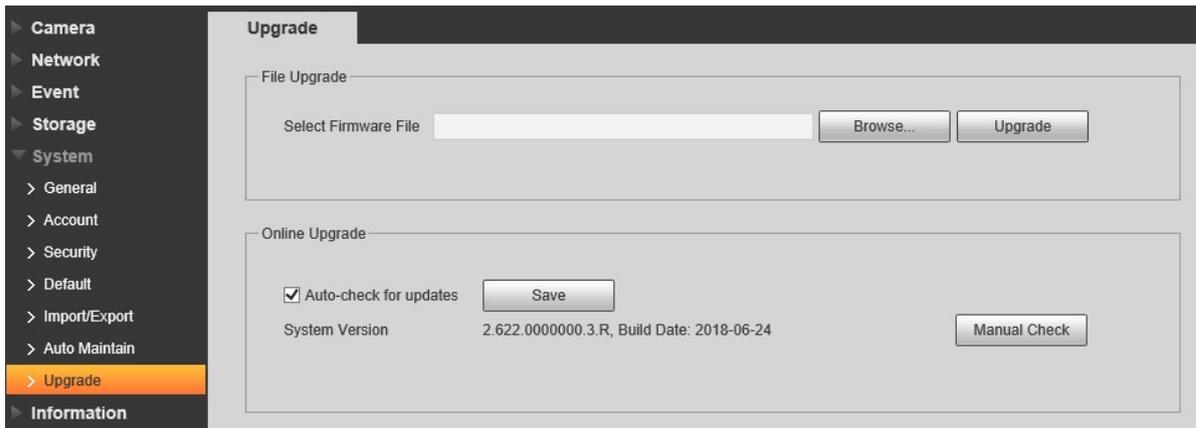
Here you can select auto reboot and auto delete old files interval from the dropdown list. If you want to use the auto delete old files function, you need to set the file period.



Parameter	Function
Auto Reboot	Check it and set auto reboot time.
Auto Delete Old Files	Check it and set period within 1~31 days.

### 5.5.8 Upgrade

Please select the upgrade file (file extension is “.bin”) and then click the update button to begin firmware update. Important Improper upgrade program may result in device malfunction!



## 5.6 Information

### 5.6.1 Version

Here you can view system hardware features, software version, release date and etc. Please note the following information is for reference only.



### 5.6.2 Log



Parameter	Function
Start time	Set the start time of the requested log. (The earliest time is 2000/1/1)
End time	Set the end time of the requested log. (The latest time is 2037/12/31)
Type	Log type.
Search	You can select log type from the drop down list and then click search button to view the list. You can click the stop button to terminate current search operation.
Log information	You can select one item to view the detailed information.
Clear	You can click this button to delete all displayed log files. Please note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

The screenshot displays the 'Remote Log' configuration page. On the left, a navigation menu includes 'Camera', 'Network', 'Event', 'Storage', 'System', 'Information', 'Version', 'Log' (highlighted), and 'Online User'. The main content area has two tabs: 'Log' and 'Remote Log'. The 'Remote Log' tab is active, showing an 'Enable' checkbox, an 'IP Address' field with the value '192.168.0.108', a 'Port' field with '514' and a range '(1~65534)', and a 'Device Number' field with '22' and a range '(0~23)'. At the bottom of the configuration area are three buttons: 'Default', 'Refresh', and 'Save'.

### 5.6.3 Online User

Here you can view current online user, group name, IP address and login time.

- ▶ Camera
- ▶ Network
- ▶ Event
- ▶ Storage
- ▶ System
- ▼ Information
  - > Version
  - > Log
  - > Online User

Online User



No.	Username	User Local Group	IP Address	User Login Time
1	admin	admin	10.34.9.220	2015-03-26 09:45:22
2	admin	admin	10.34.7.148	2015-03-26 09:55:14

Refresh

## 6 Alarm

Please note some models do not support the alarm function.

With this option is available the device alarm type and alarm sound can be setup.



Type	Parameter	Function
Alarm type	Motion detection	System alarms when motion detection alarm occurs,
	Disk full	System alarms when disk is full.
	Disk Error	System records alarm info when disk error happens.
	Video Tampering	System alarms when video is tampering.
	External alarm	Alarm input device sends out alarm.
	Illegal Access	System alarms when there is illegal access.
	Scene Changing	System will record alarm info when triggering scene changing.
Operation	Prompt	When alarm is triggered, there will be s  in main menu of alarm interface and system automatically records alarm info. The icon disappears when user click on alarm menu bar. Note: If alarm interface is displayed, when alarm is triggered, there will be no image prompt, but alarm record will be in list on the right.
Alarm Tone	Play Alarm Tone	Click it and select the path of audio file to be played in the tone path, when the subscribed alarm event triggers, it will play the selected audio file to prompt that there is alarm event which has been triggered.
	Tone Path	You can customize the storage path of the alarm tone.

## 7 Log out

Click log out button, system goes back to log in interface.



### Note

- This manual is for reference only. Slight difference may be found in user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website for more information.