

EZ-IP Network Camera Web3.0 Operation Manual

Version 1.0.0

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Important

The following functions are for reference only. Some series products may not support all the functions listed below.

Cybersecurity Recommendations

1. Change Passwords and Use Strong Passwords

The number one reason systems get “hacked” is due to having weak or default passwords. It is recommended to change default passwords immediately and choose a strong password whenever possible. A strong password should be made up of at least 8 characters and a combination of special characters, numbers, and upper and lower case letters.

2. Update Firmware

As is standard procedure in the tech-industry, we recommend keeping NVR, DVR, and IP camera firmware up-to-date to ensure the system is current with the latest security patches and fixes.

“Nice to have” recommendations to improve your network security

1. Change Passwords Regularly

Regularly change the credentials to your devices to help ensure that only authorized users are able to access the system.

2. Change Default HTTP and TCP Ports:

- Change default HTTP and TCP ports for systems. These are the two ports used to communicate and to view video feeds remotely.
- These ports can be changed to any set of numbers between 1025-65535. Avoiding the default ports reduces the risk of outsiders being able to guess which ports you are using.

3. Enable HTTPS/SSL:

Set up an SSL Certificate to enable HTTPS. This will encrypt all communication between your devices and recorder.

4. Enable IP Filter:

Enabling your IP filter will prevent everyone, except those with specified IP addresses, from accessing the system.

5. Change ONVIF Password:

On older IP Camera firmware, the ONVIF password does not change when you change the system's credentials. You will need to either update the camera's firmware to the latest revision or manually change the ONVIF password.

6. Forward Only Ports You Need:

- Only forward the HTTP and TCP ports that you need to use. Do not forward a huge range of numbers to the device. Do not DMZ the device's IP address.
- You do not need to forward any ports for individual cameras if they are all connected to a recorder on site; just the NVR is needed.

7. Disable Auto-Login on SmartPSS:

Those using SmartPSS to view their system and on a computer that is used by multiple people should disable auto-login. This adds a layer of security to prevent users without the appropriate credentials from accessing the system.

8. Use a Different Username and Password for SmartPSS:

In the event that your social media, bank, email, etc. account is compromised, you would not want someone collecting those passwords and trying them out on your video surveillance system. Using a different username and password for your security system will make it more difficult for someone to guess their way into your system.

9. Limit Features of Guest Accounts:

If your system is set up for multiple users, ensure that each user only has rights to features and functions they need to use to perform their job.

10. UPnP:

- UPnP will automatically try to forward ports in your router or modem. Normally this would be a good thing. However, if your system automatically forwards the ports and you leave the credentials defaulted, you may end up with unwanted visitors.
- If you manually forwarded the HTTP and TCP ports in your router/modem, this feature should be turned off regardless. Disabling UPnP is recommended when the function is not used in real applications.

11. Multicast:

Multicast is used to share video streams between two recorders. Currently there are no known issues involving Multicast, but if you are not using this feature, deactivation can enhance your network security.

12. Check the Log:

If you suspect that someone has gained unauthorized access to your system, you can check the system log. The system log will show you which IP addresses were used to login to your system and what was accessed.

13. Physically Lock Down the Device:

Ideally, you want to prevent any unauthorized physical access to your system. The best way to achieve this is to install the recorder in a lockbox, locking server rack, or in a room that is behind a lock and key.

14. Connect IP Cameras to the PoE Ports on the Back of an NVR:

Cameras connected to the PoE ports on the back of an NVR are isolated from the outside world and cannot be accessed directly.

15. Isolate NVR and IP Camera Network

The network your NVR and IP camera resides on should not be the same network as your public computer network. This will prevent any visitors or unwanted guests from getting access to the same network the security system needs in order to function properly.

Electrical safety

- All installation and operation should conform to your local electrical safety codes.
- The power source shall conform to the requirement of the Safety Extra Low Voltage (SELV) standard, and supply power with voltage rated by DC 12 V or AC 24 V according to the Limited power Source requirement of IEC60950-1. Please note that the power supply requirement is subject to the device label.
- Make sure the power supply is correct before operating the device.
- A readily accessible disconnect device shall be incorporated in the building installation wiring
- Prevent the power cable from being trampled or pressed, especially the plug, power socket and the junction extruded from the device.
- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

Environment

- Do not aim the device at strong light to focus, such as lamp light and sun light, otherwise it might cause over brightness or light marks, which are not the device malfunction, and affect the longevity of Charge Coupled Device (CCD) or Complementary Metal-Oxide Semiconductor (CMOS).
- Do not place the device in a damp or dusty environment, extremely hot or cold temperatures, or the locations with strong electromagnetic radiation or unstable lighting.

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- Keep the camera away from water or other liquid to avoid damages to the internal components.
- Keep the indoor device away from rain or damp to avoid fire or lightning.
- Keep sound ventilation to avoid heat accumulation.
- Transport, use and store the device within the range of allowed humidity and temperature.
- Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.
- Pack the device with standard factory packaging or the equivalent material when transporting the device.

1 Product Overview

The common networking mode for IPC is to connect IPC to PC via switch or router. The common network mode is shown in Figure 1-1.

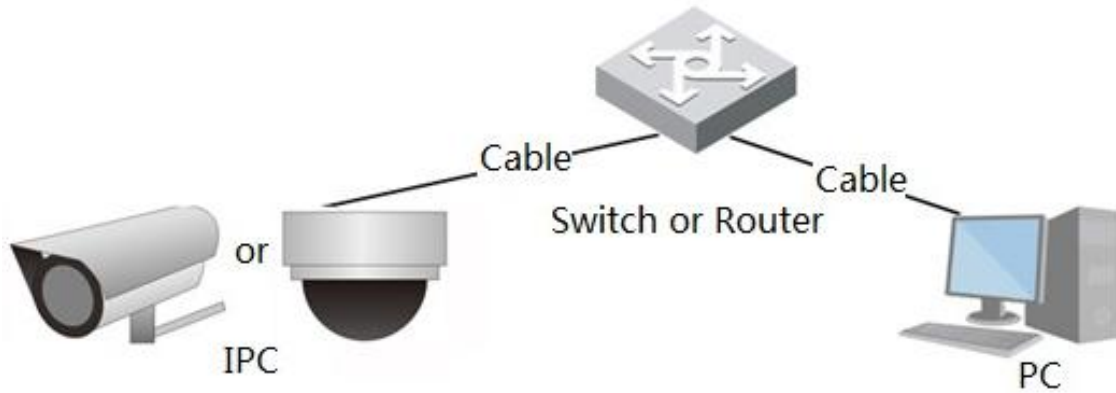


Figure 1-1

Before you have access to network camera via the Internet, you need to acquire its IP address. Users can search IP address of network camera via *Quick Config Tool*.

2 Initial Config

In this chapter it is to introduce the device initial config operation, which includes device initialization, login device, log out WEB interface and password reset.

2.1 Device Initialization

It needs to implement device initialization when you use the device for the first time. Here it is to take WEB operation as an example to introduce device initialization. You can also initialize device via *Quick Config Tool*, NVR and platform etc.

Note

In order to guarantee device safety, please keep admin login password properly after device initialization, and modify the password regularly.

Step 1

Open IE browser, input camera IP address in the address bar and click **Enter**.

The system will display the interface of *Device Initialization* after it is connected successfully, which is shown in Figure 2-1.

Note

The default IP address is 192.168.1.108.

The screenshot shows a web interface titled "Device Initialization". It contains the following elements:

- Username:** A text input field containing "admin".
- Password:** A text input field. To its right, a red message reads "The minimum pass phrase length is 8 characters". Below the field are three buttons: "Weak", "Middle", and "Strong".
- Confirm Password:** A text input field.
- Instructions:** Below the confirm password field, text reads: "Use a password that has 8 to 32 characters, it can be a combination of letter(s), number(s) and symbol(s) with at least two kinds of them.(please do not use special symbols like '":;&)".
- Email Address:** A checkbox labeled "Email Address" is checked. Below it is a text input field. A note below the field says: "To reset password, please input properly or update in time."
- Save Button:** A "Save" button is located at the bottom center of the form.

Figure 2-1

Step 2

It is to set admin login password, please refer to Table 2-1 for more details.

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. Usually we recommend the strong password.
Confirm password	
Email	Input an email address for reset password purpose. In case you forgot password in the future, input the security code you got on the assigned email to reset the password of admin.

Table 2-1

Step 3

Click **Save**.

The system will display the interface of *DMSS*, which is shown in Figure 2-2.

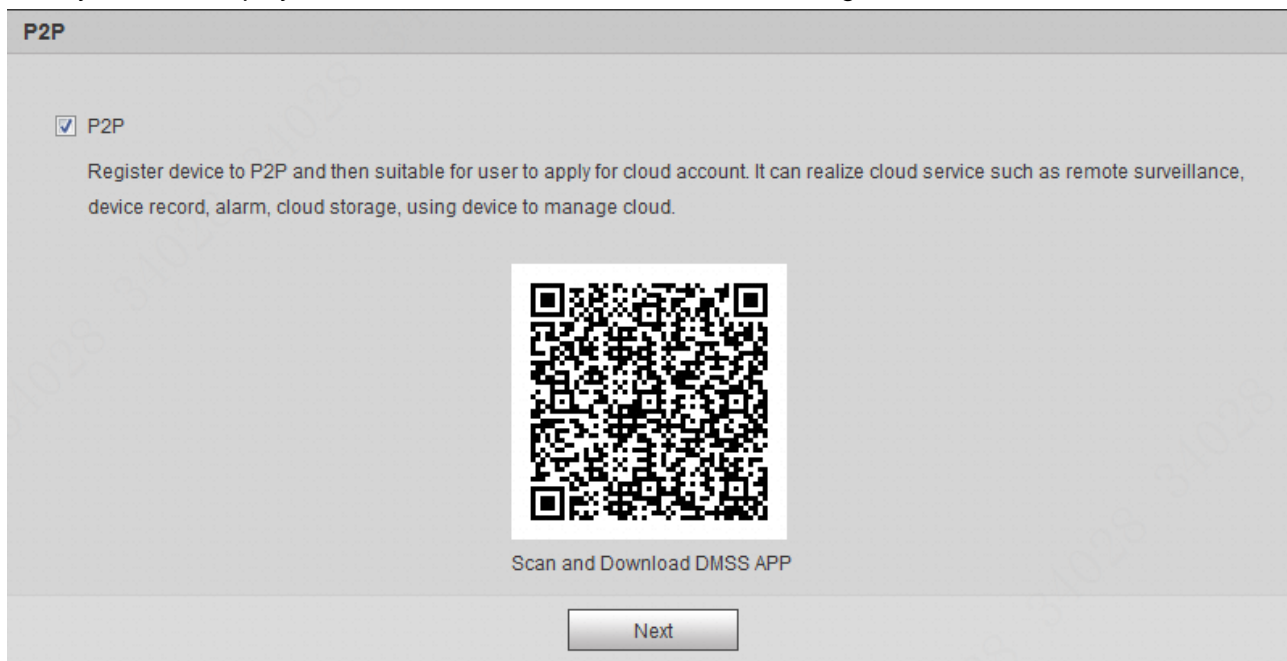


Figure 2-2

Step 4

Select DMSS according to actual needs and realize DMSS registration for device, click **next**. The system will display the interface of Online Upgrade, which is shown in Figure 2-3.

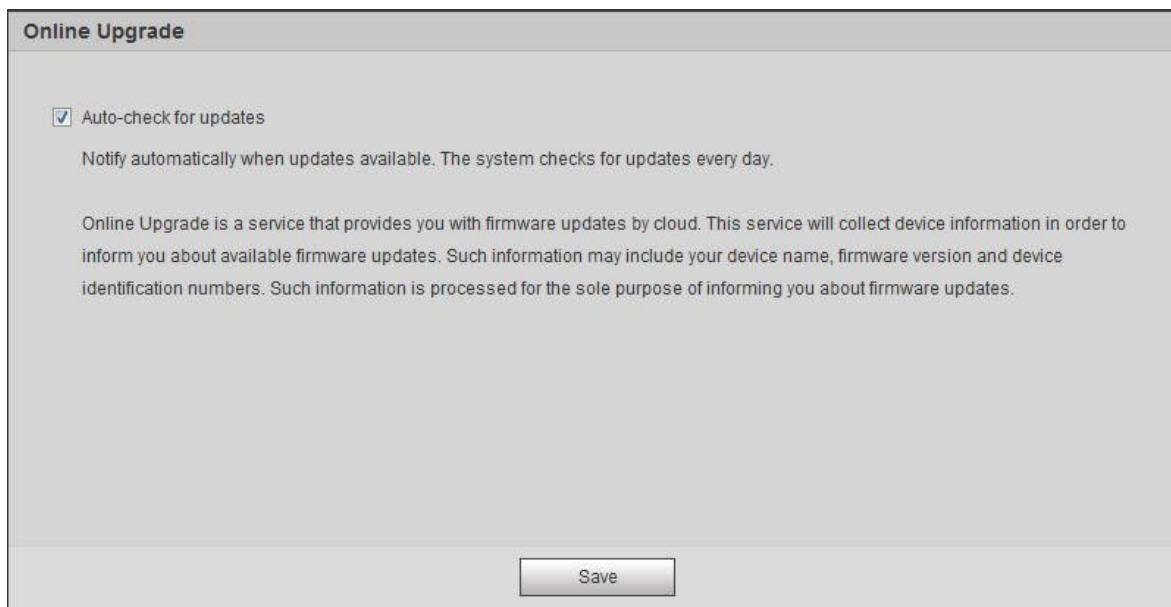


Figure 2-3

Step 5

It is to set upgrade method according to the actual requirements.

Select *Auto-check for upgrade* and the system will check once daily automatically when there is system upgrade prompt.

Note

After login, you can make setting in 'Setup > System > Upgrade > Online Upgrade'.

Step 6

Click **Save** and device initialization is completed.

2.2 Login and Logout

Here it is to introduce device login and WEB interface logout via browser, it is to take IE Explorer 8 as an example to make introduction.

2.2.1 Log in WEB Interface

Users can make operations such as live, playback and config upon the device after logging in device WEB interface via browser.

Note

- It can log in WEB interface after device initialization is completed.
- It will prompt to install plug-in when logging in the system for the first time, please download and install plug-in according to prompt.

Step 1

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Open IE browser, input camera IP address in the address bar and click **Enter** button.

The system will display the Login interface after it is successfully connected, which is shown in Figure 2-4.

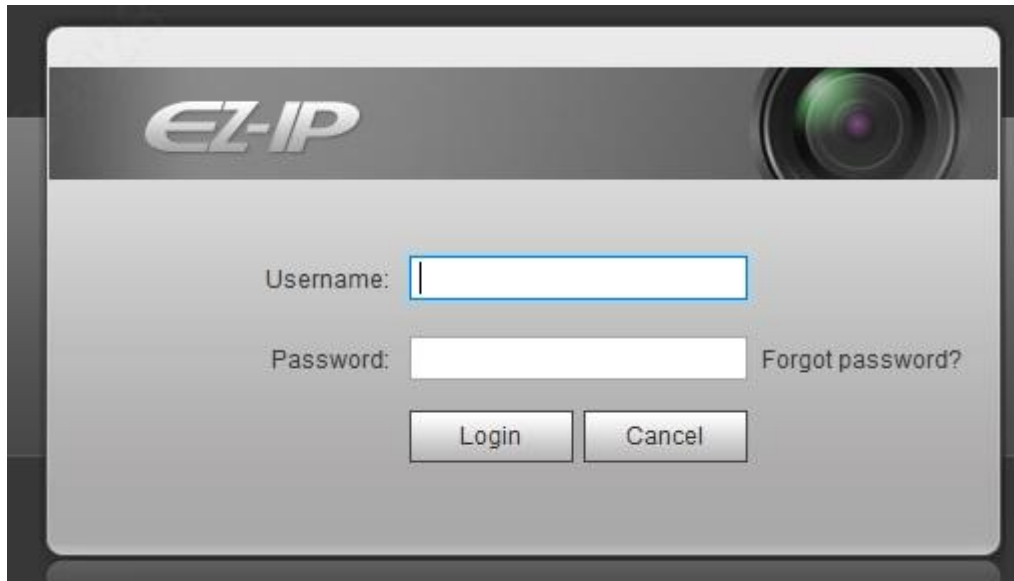


Figure 2-4

Step 2

Input the password of admin user.

Step 3

Click **Login**.

It will display the **Live** interface after it logged in successfully, which is shown in Figure 2-5.

Note

Different devices have different functions with different interface display; please refer to the actual interface for more details.



Figure 2-5

2.2.2 Logout

Click **Logout** and return to WEB login interface. After logging in the device WEB, the system will hibernate automatically if it fails to operate the device for a period of time. It can recover to normal working status quickly after entering password.

2.3 Reset Password

Users can reset password via reserved email when you forget the password of admin user.

Step 1

Open IE browser, input camera IP address in the address bar and click **Enter** button.

The system will display the Login interface after it is successfully connected, which is shown in Figure 2-6.

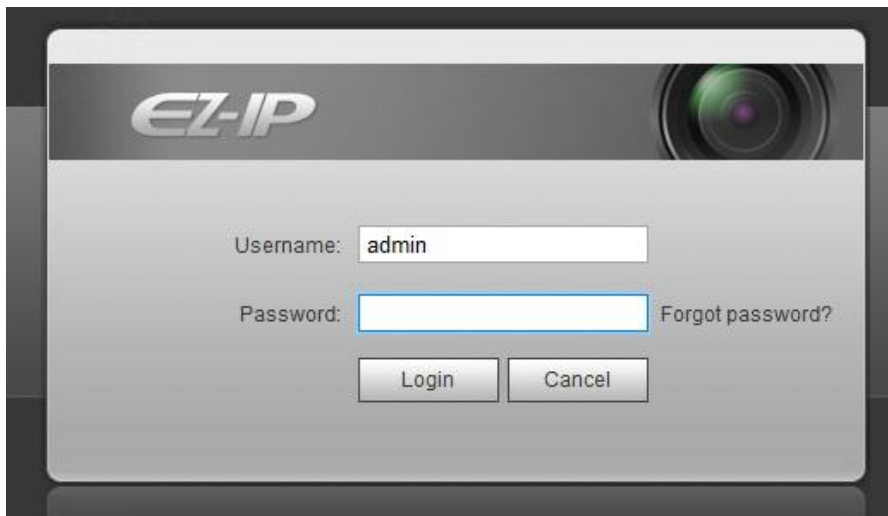


Figure 2-6

Step 2

Click *Forgot password?*

The system will display the interface of *Reset Password*, which is shown in Figure 2-7.

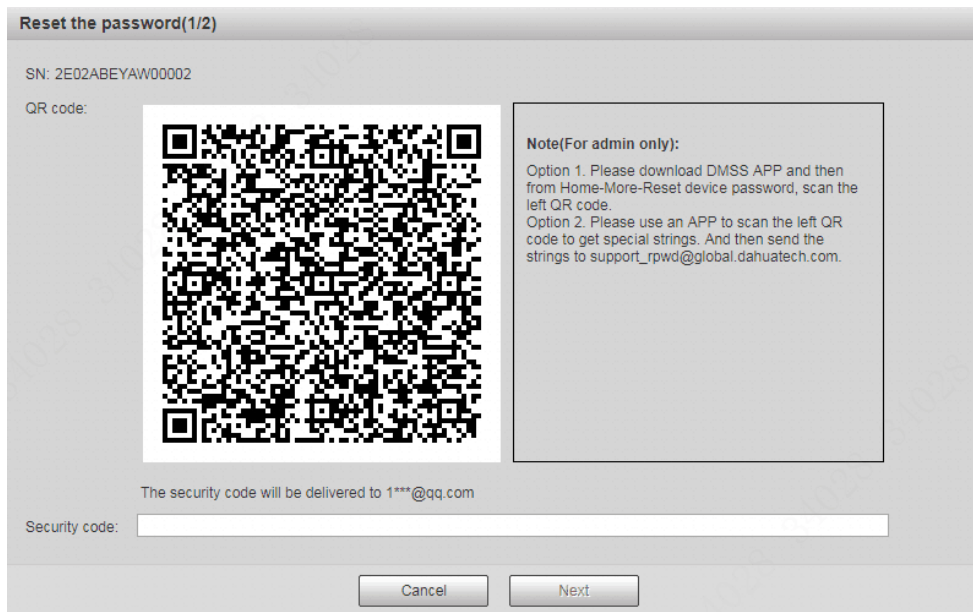


Figure 2-7

Step 3

Reset login password.

Scan the QR code according to the interface prompt and acquire security code, then input the security code which is received via your reserved email.

Caution

- Please use the security code to reset the password within 24 hours after you received the security code via your reserved email. Otherwise the security code will be invalid.
- If you fail to use security code for twice continuously, then the system will prompt that it fails to acquire security code for the third time. It needs hardware to restore device default setting and acquire security code again or wait for 24 hours and acquire it again if it needs to use the device normally.

Step 4

Click **next**.

The system will display the interface where you can set the new password, which is shown in Figure 2-8.

The screenshot shows a web interface titled "Reset the password(2/2)". It contains a form with the following elements: a "Username" field with the value "admin"; a "Password" field; a "Confirm Password" field; and three radio buttons labeled "Weak", "Middle", and "Strong". Below the password field, there is a text block that reads: "Use a password that has 8 to 32 characters, it can be a combination of letter(s), number(s) and symbol(s) with at least two kinds of them. (please do not use special symbols like ' ; : &)". At the bottom of the form, there are two buttons: "Cancel" and "Save".

Figure 2-8

Step 5

Reset *Password* and *Confirm 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. Usually we recommend the strong password.

Step 6

Click **Save** and complete password reset.

The system will display the *Login* interface.

3 Live

After you logged in, you can see the live monitor window. See Figure 3-1.



Figure 3-1

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

The encode setup interface is shown as in Figure 3-2.

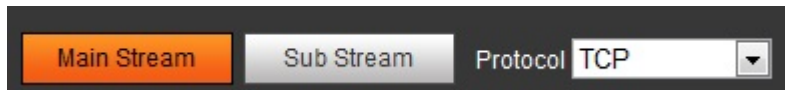


Figure 3-2

Please refer to Table 3-1 for detailed information.

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

Table 3-1

3.2 System Menu

System menu is shown as in Figure 3-3.

Please refer to chapter 3 Live, chapter 4 Playback, chapter 5 Setting, chapter 6 Alarm, chapter 7 Log out for detailed information.

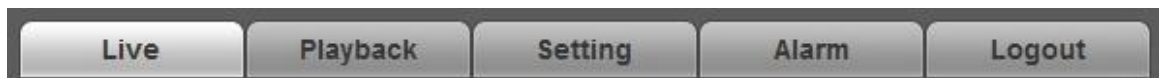


Figure 3-3

3.3 Video Window Function Option

The interface is shown as below. See Figure 3-4.

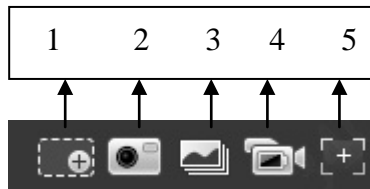


Figure 3-4

Please refer to Table 3-2 for detailed information.

SN	Parameter	Function
1	Digital Zoom	<ul style="list-style-type: none"> When the video is in the original status, click it you can select any zone to zoom in. In the non-original status, you can drag the zoom-in zone in specified range. Right click mouse to restore previous status. Click it; you can use the middle button of the mouse to zoom in/out the video size.
2	Snapshot	Click on the button to snapshot, save picture to path in Ch. 5.1.2.5.
3	Triple snapshot	Click it to take snapshot upon the video at the frequency of one picture per second. All images are saved to path in Ch 5.1.2.5.
4	Record	Click it to record the video. All videos are saved to path in Chapter 5.1.2.5.
5	Easy focus	<p>Click it, you can see there are two parameters on the preview video: AF Peak and AF Max.</p> <p>AF Peak: It is to display the video definition during the focus process.</p> <p>AF Max: It is the most suitable value for the video definition.</p> <p>The close the AF Peak and AF Max is, the better the focus effect is.</p>

Table 3-2

3.4 Video Window Setup

The interface is shown as in Figure 3-5.



Figure 3-5

3.4.1 Image Adjustment

See Figure 3-6 for image adjustment.

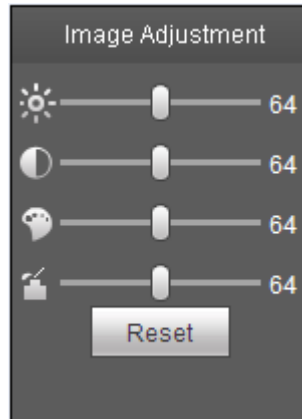


Figure 3-6

Click this button to display/hide image control interface. Click it to open picture setup interface. This interface is on the top right pane.

Please refer to the following sheet for detailed information.





Parameter		Function	
Video setup		It is to adjust monitor video brightness.	Note: ● All the operations here apply to WEB end only. ● Please go to Setup->Camera->Conditions to adjust corresponding items.
		It is to adjust monitor video contrastness.	
		It is to adjust monitor video hue.	
		It is to adjust monitor video saturation.	
	Reset	Restore brightness, contrastness saturation and hue to system default setup.	

Table 3-3

3.4.2 Original Size

Click this button to go to original size. It is to display the actual size of the video stream. It depends on the resolution of the bit stream.

3.4.3 Full Screen

Click it to go to full-screen mode. Double click the mouse or click the Esc button to exit the full screen.

3.4.4 Width and Height Ratio

Click it to restore original ratio or suitable window.

3.4.5 Fluency Adjustment

There are three levels of fluency for you to select (Realtime, Normal, and Fluency). The default is normal.

3.4.6 Zoom and Focus

Click this button and the focus zooming interface appears on the right of preview interface, as shown in Figure 3-7, click left mouse button to adjust focus zooming configuration.

Note

- The product series which support motorized zoom, synchronous focus and back focus have this button.
- Auto-focus after zoom and focus adjustment.

Note

It is only supported by some models.

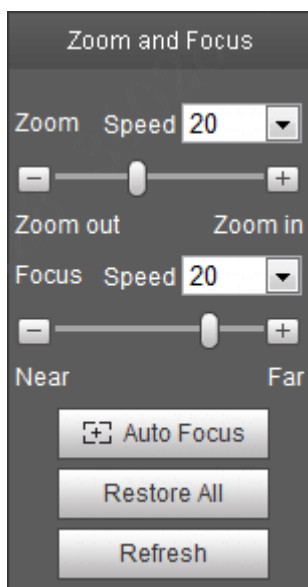


Figure 3-7

Parameter	Function
Zoom	Adjust the focal length of the lens by clicking or long pressing “+”“-”buttons. The speed is used to adjust the length of one step during single click.

Parameter	Function
Focus	Adjust the sharpness of the lens by clicking or long pressing“+”、“-” buttons. Step length is used to adjust the length of one step with one click.
Auto-focus	Click to adjust the image definition automatically. Note: Other lens operations are not allowed during the process of auto-focus.
Reset All	Reset the lens to zero position to eliminate the accumulative error of lens. Note: Please reset when the image adjustment is not clear or operating zoom focus many times.
Refresh	Synchronize the location of drag slider of lens and zoom focus after hardware zoom focusing.

Table 3-4

4 Playback

Web client playback supports video playback and picture playback.

Note:

Before playback, user shall set storage management as in Ch. 5.4.

4.1 Playback

The playback interface is shown as in Figure 4-1.

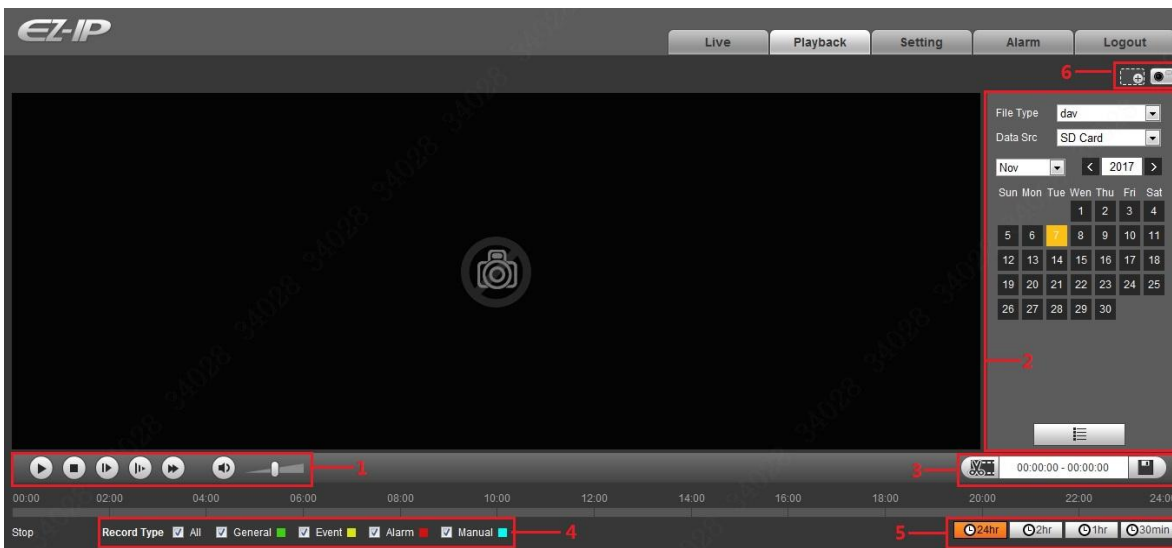


Figure 4-1

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

The function of play is shown as in Figure 4-2.



Figure 4-2

Parameter	Function
① Play	When you see this button, it means pause or not played record. Click on this button, switch to normal play status.
② Stop	Click this button to stop playing.
③ Play by frame	Click on this button to go to next frame. Note You shall pause record when you use this function.
④ Slow	Click on this button to play slowly.
⑤ Quick	Click on this button to play quickly.
⑥ Silent	When this button displays, it means audio is silent. Click on this button to switch back to normal.
⑦ Volume	Click on left mouse to adjust volume.

Table 4-1

4.1.2 Playback File

In calendar, blue date represents data currently has video record or snapshot. See Figure 4-3.

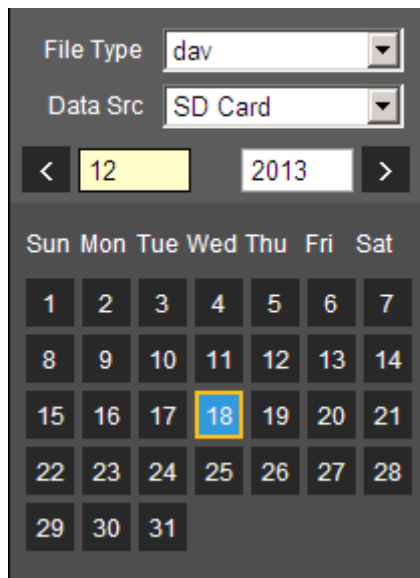


Figure 4-3

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

Table 4-2

Step 1. Click on data in blue, time axis displays record file progress bar in color. While, green represents normal record, yellow represents motion detect record, red represents alarm record, and blue represents manual record.

Step 2. Click on certain time on progress bar, playback starts from this time. See Figure 4-4.

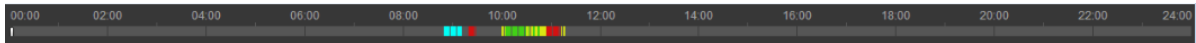



Figure 4-4

Step 3. Click on file list , select date file will be displayed in list.

Step 4. Double click on file in list, playback this file and display file size, start time and end time. See Figure 4-5.

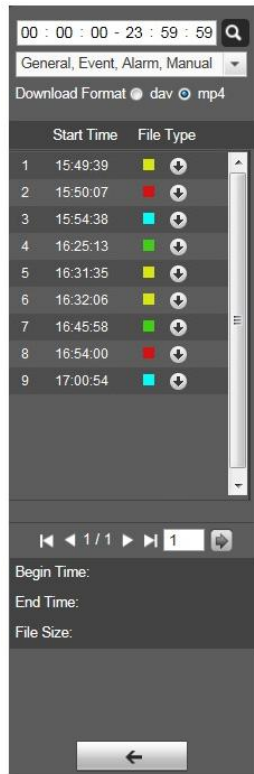


Figure 4-5




Parameter	Function
 Search	It means records within searched start time and end time on the date.
Record Format	There are two formats: dav, mp4.
 Download	<ul style="list-style-type: none"> ● Click the download button and download file to path in Ch. 5.1.2.5. ● System does not support download and playback at the same time.
 Back	Click on back button to go to calendar interface.



Table 4-3

4.1.3 Playback Cut



Note

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

Step 1. Click on start time to cut on time axis. This time must be within progress bar range.

Step 2. Move mouse to cut icon . You will be ask to select start time. Click on cur icon  as finish cutting.

Step 3. Click on playback cut end time on time axis. This time must be within progress bar range.

Step 4. Move mouse to cut icon  you will be asked to select end time. Click on cut icon  as finish cutting.

Step 5. Click on Save button to save file cut to path in Ch 5.1.2.5. See Figure 4-6.

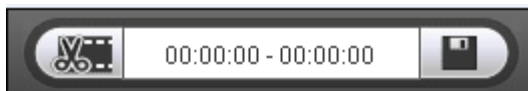


Figure 4-6

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. See Figure 4-7.



Figure 4-7

4.1.5 Progress Bar



Figure 4-8


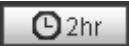

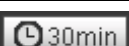
Parameter	Function
 24 hours	Click on it, means video in past 24 hours.
 2 hours	Click on it, means video in past 2 hours.
 1 hour	Click on it, means video in past 1 hour.
 30 min	Click on it, means video in past 30 min.

Table 4-4

4.1.6 Assistant Function

Video playback assistant function is shown in Figure 4-9.



Figure 4-9



Parameter	Function
 Digital Zoom	<ul style="list-style-type: none"> Click on it, video in playback status if is in original size, user can zoom in any area, If it is not in its original size, right click mouse to restore its original size. Click on this button, you can scroll to zoom in.
 Snapshot	Click on this button, you can snapshot video under playback status. Snapshot will be saved to path in Ch. 5.1.2.5.

Table 4-5

4.2 Picture Playback

Web client picture playback interface has the following three functions:

Parameter	Function
1	Play function bar
2	Playback file bar
3	Snapshot type bar

Table 4-6

See Figure 4-10.

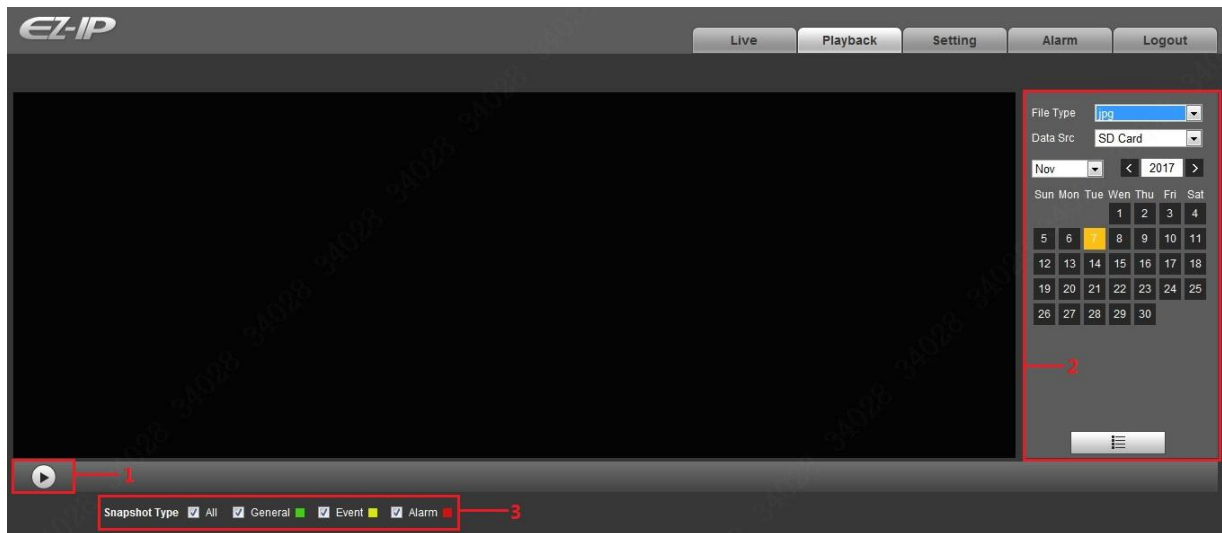




Figure 4-10

4.2.1 Play



Figure 4-11

Default icon is  and it means pause or not played picture. Click on play button to switch to normal play status. Icon become . Click on it to pause.

4.2.2 Playback File

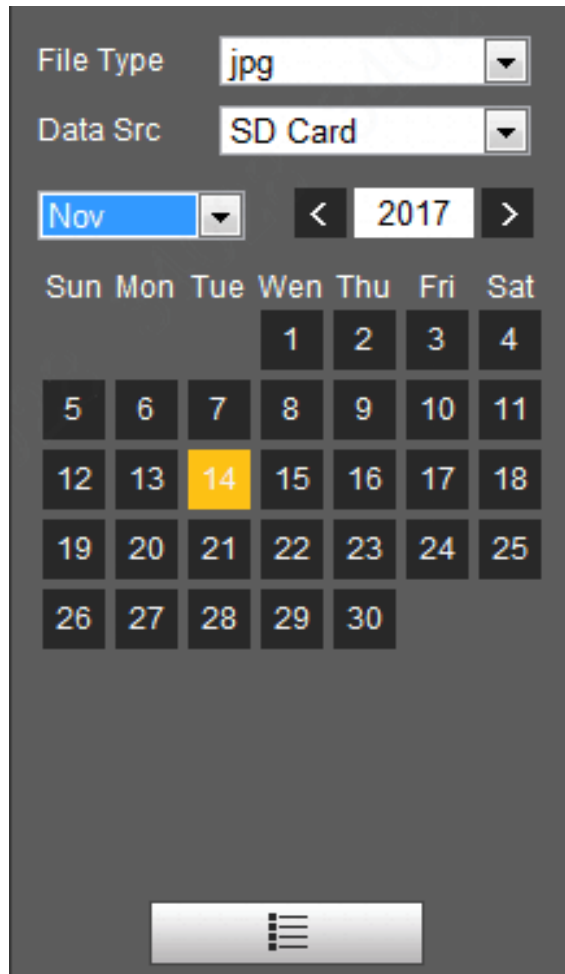



Figure 4-12

Step 1. Click on file list , select snapshot file of the date.

Step 2. Double click on file in list, to play this snapshot.




Parameter	Function
 Search	It means all snapshot files within the start time and end time of selected date.
 Download	Click the download button to open snapshot file or directly download to local according to the browser types.
 Back	Click on back button to return to calendar interface and re-select time.

Table 4-7

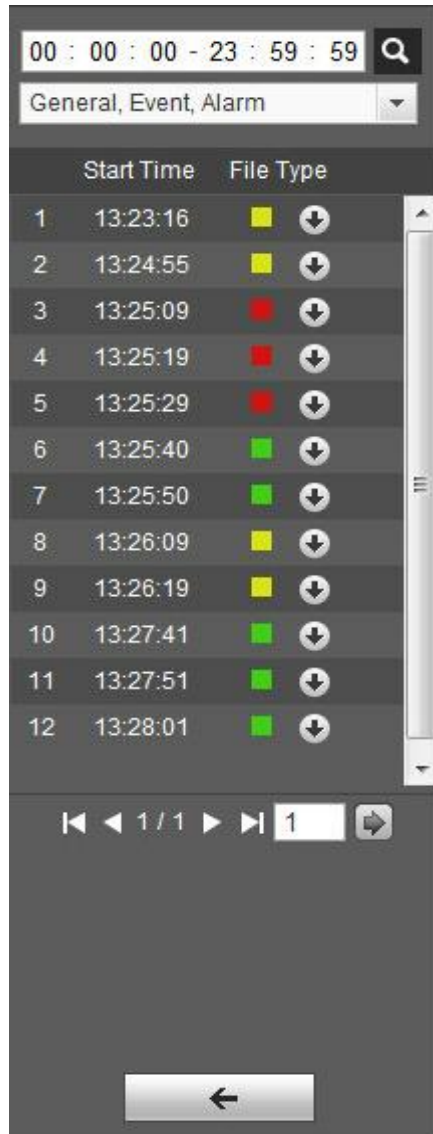


Figure 4-13

4.2.3 Snapshot Type

After checking snapshot file type, in file list only display file of selected type. Users can also select the snapshot type to be displayed via the dropdown box above the file list. See Figure 4-14.

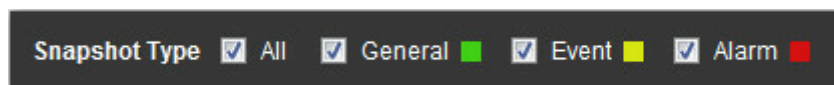


Figure 4-14

5 Setting

Web client setup support camera, network, time, storage, system and system info view.

5.1 Camera

The camera setting includes conditions, profile management, zoom and focus.

5.1.1 Conditions

Note:

The camera parameter may be different according to different models, please refer to the actual product for more details.

5.1.1.1 Picture

Note

The device which supports true WDR fails to support long exposure when true WDR is enabled.

Step 1

Select “Setting > Camera > Conditions > Picture” and the system will display the “Picture” image which is shown in Figure 5-1.

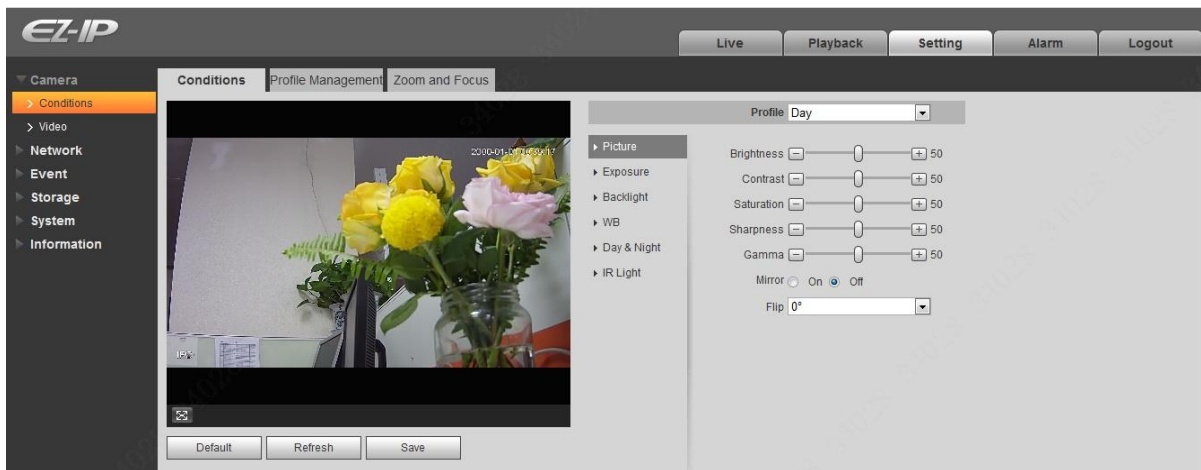


Figure 5-1

Step 2

Set picture parameters; please refer to the following sheet for more details about parameter setting.

Parameter	Note
Brightness	It is to adjust the image overall brightness via linear adjustment mode. The larger the number is, the brighter the picture is, and on the contrary it is opposite. The picture get blurry easily when the value is set too big.

Parameter	Note
Contrast	It is to adjust the picture contrast. The bigger the value is, the bigger the bright contrast becomes, and on the contrary it is smaller. The dark area becomes darker and the bright area becomes overexposed easily when the value is set too big. The picture becomes blurry when the value is set too small.
Saturation	It is to adjust the color darkness and lightness. The color becomes darker when the value is bigger; on the contrary it becomes lighter. The value causes no influence to the overall brightness of the image.
Sharpness	It is to adjust the sharpness level of the picture edge. The bigger the sharpness value is, the more obvious the image edge becomes, the image is likely to generate noise more easily when the value is set too big.
Gamma	It is to change image brightness and improve the dynamic display range of the image via nonlinear adjustment mode. The bigger the value is, the brighter the picture becomes, and on the contrary it is opposite.
Mirror	After mirror is enabled, the monitoring image will be displayed invertedly.
Flip	<p>It is to change the display direction of the monitoring image.</p> <p>It includes following options:</p> <ul style="list-style-type: none"> ● Normal: The monitoring picture is normally displayed. ● Flip mode 1: The monitoring picture is displayed with clockwise rotation 90° ● Flip mode 2: The monitoring picture is displayed with anticlockwise rotation 90° ● 180°: The monitoring picture is displayed upside down. <p>Note:</p> <p>Please set the video resolution as 1080P or lower when applying flip mode for some devices.</p>

Table 5-1

Step 3

Click “Save” and complete the image parameter config of the camera.

5.1.1.2 Exposure

Step 1

Select “Setup > Camera > Conditions > Exposure”. The system will display the “Exposure” interface which is shown in Figure 5-2.

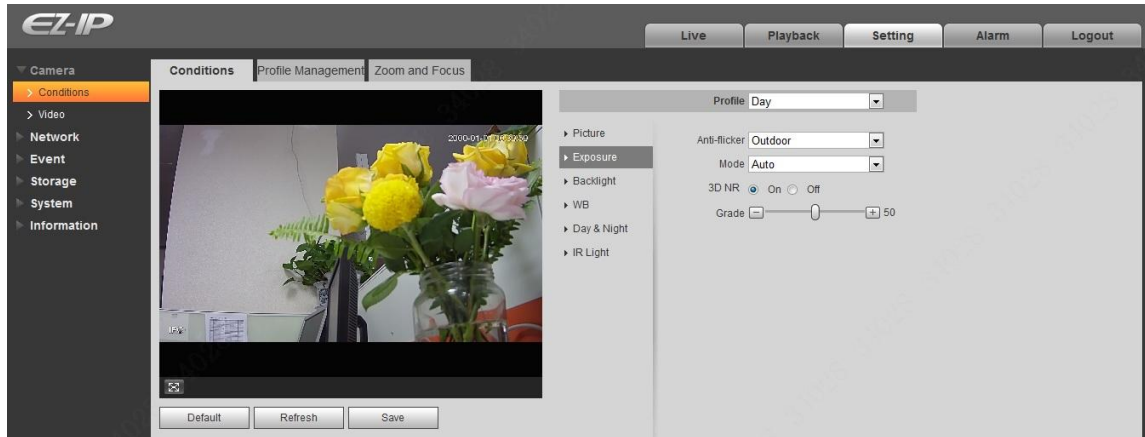


Figure 5-2

Step 2

It is to set the exposure parameter, please refer to the following sheet for more details.

Parameter	Note
Anti-flicker	<ul style="list-style-type: none"> ● Outdoor: You can switch to exposure mode when it is in outdoor mode, it can realize the result in the corresponding exposure mode. ● 50Hz: When the current is 50Hz, system can auto adjust the exposure according to the environment brightness in case there is any stripe. ● 60Hz: When the current is 60Hz, system can auto adjust the exposure according to the environment brightness in case there is any stripe.
Mode	<p>It is the camera exposure mode.</p> <p>Note:</p> <ul style="list-style-type: none"> ● When “Anti-flicker” is “Outdoor”, the “exposure mode” can be set as “gain priority” or “shutter priority” mode. ● Different devices have different exposure modes; please refer to the actual interface. <p>It includes the following options:</p> <ul style="list-style-type: none"> ● Auto: It can auto adjust the image brightness according to the environment. ● Gain priority: The device can auto adjust according to the gain 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 gain value has reached to upper limit or lower limit, which is to make the image reach the best brightness.

Parameter	Note
	<ul style="list-style-type: none"> ● 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. ● Iris priority: Iris value is fixed, the device can auto adjust the shutter value if the image brightness fails to reach effect and the shutter value has reached the upper limit or lower limit, the device can auto adjust the gain value to make the image reach the best brightness. ● Manual: It is to manually set gain value and shutter value, adjust the the displayed brightness of the image.
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.

Table 5-2

Step 3

Click “Save” to complete the parameter config of camera exposure.

5.1.1.3 Backlight

Backlight mode can be divided into BLC, HLS and WDR.

BLC: it can avoid cucoloris phenomenon of the darker area in the backlight environment.

HLC: It is to weaken the high light, which can be applied in the areas such as toll gate, entrance and exit of the parking lot and etc. As for extreme light, it can snapshot the human face in the dark environment and it can realize better effect for the details of the plate number.

WDR: It can suppress the overbright area and compensate darker area by enabling WDR, which can make the overall image clear.

Step 1

Select “Setup > Camera > Condition > Backlight”, the system will display the interface of “Backlight” which is shown in Figure 5-3.

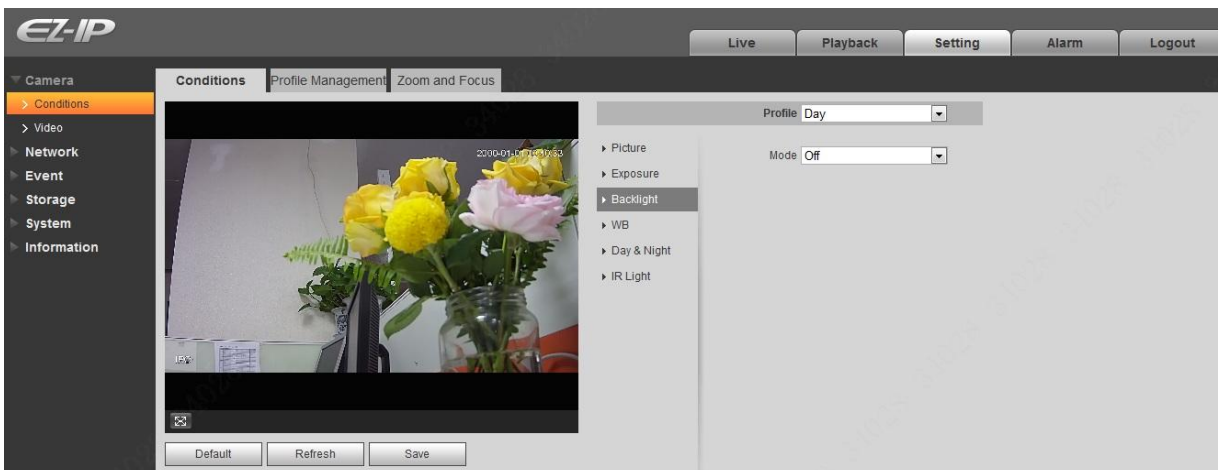


Figure 5-3

Step 2

Set the backlight parameter.

- 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 “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.
- 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.

Step 3

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

5.1.1.4 WB

WB is used to restore the white object in the scene by the camera, after WB mode is set, it can make the white object look white in different environments.

Step 1

Select “Setup > Camera > Conditions > WB”, the system will display the interface of “WB”, which is shown in Figure 5-4.

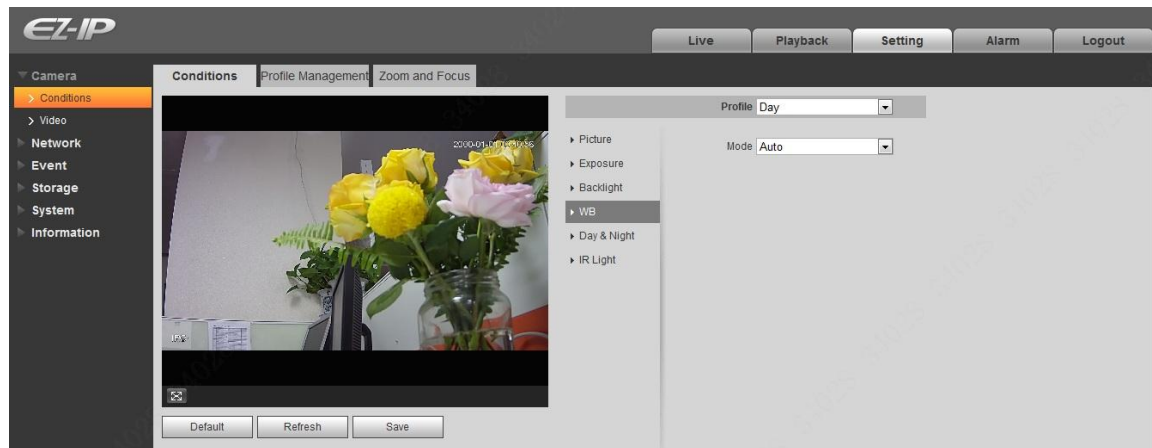


Figure 5-4

Step 2

Set WB mode.

- When the “Mode” is set as “Auto”, the system can auto compensate white balance upon different color temperatures, which is to make the image color normal.
- When the “Mode” is set as “Natural”, the system can auto compensate white balance to the scene without artificial light, which is to make the image color normal.
- When the “Mode” is set as “Street Lamp”, the system can auto compensate white balance to the outdoor scene at night, which is to make the image color normal.
- When the “Mode” is set as “Outdoor”, the system can auto compensate white balance to the most outdoor scenes with natural light and artificial light, which is to make the image color normal.
- When the “Mode” is set as “Manual”, it can manually set the value of red gain and blue gain; the system can compensate the different color temperatures in the environment according to the settings.
- When the “Mode” is set as “Regional Custom”, it is to set customized area, the system can compensate white balance to different color temperature of the images in the area, which is to make the image color normal.

Step 3

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

5.1.1.5 Day & Night

It is to set the switch between color mode and black & white mode.

Step 1

Select “Setup > Camera > Conditions > Day & Night” and the system will display the interface of “Day & Night”, which is shown in Figure 5-5.

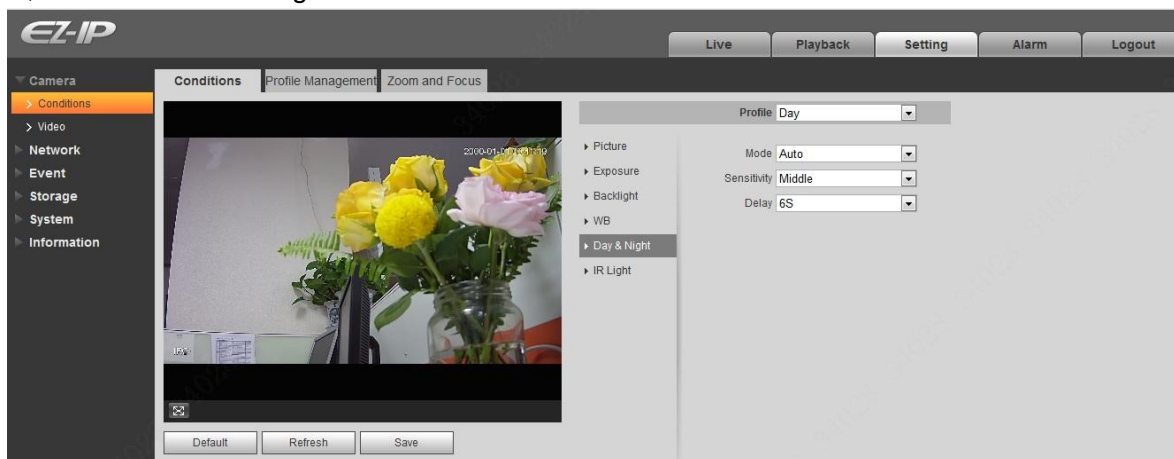


Figure 5-5

Step 2

Set day & night parameter; please refer to the following sheet for more details.

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

Table 5-3

Step 3

Click “Save” to complete the config of day/night mode.

5.1.1.6 IR Light

You can directly set the mode of IR light if the device is equipped with IR light.

Step 1

Select “Setup > Camera > Conditions > IR Light” and the system will display the interface of “IR Light” which is shown in Figure 5-6.

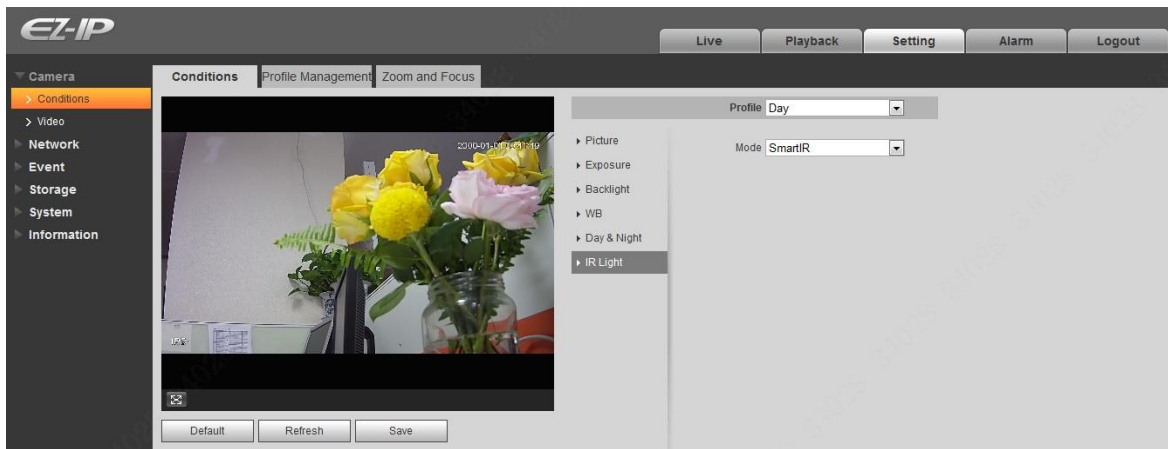


Figure 5-6

Step 2

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.
- When the “mode” is set as “Off”, it will not enable the IR light.

Step 3

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

5.1.1.7 Profile Management

Step 1

Select “Setup > Camera > Conditions > Profile Management” and the system will display the interface of “Profile Management”.

Step 2

Set profile management.

- When the “Profile Management” is set as “Normal”, the system will monitor according to the normal config.

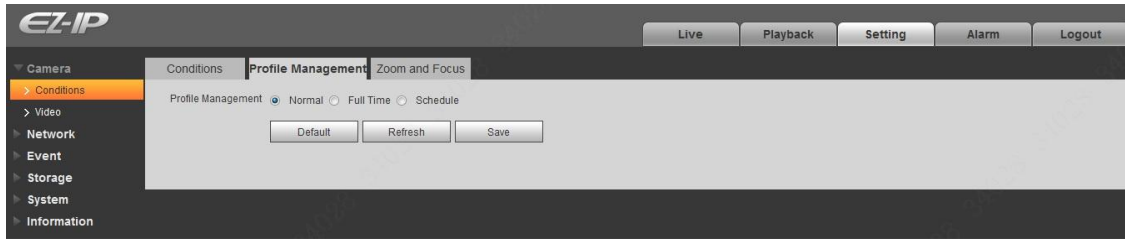


Figure 5-7

- 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”.

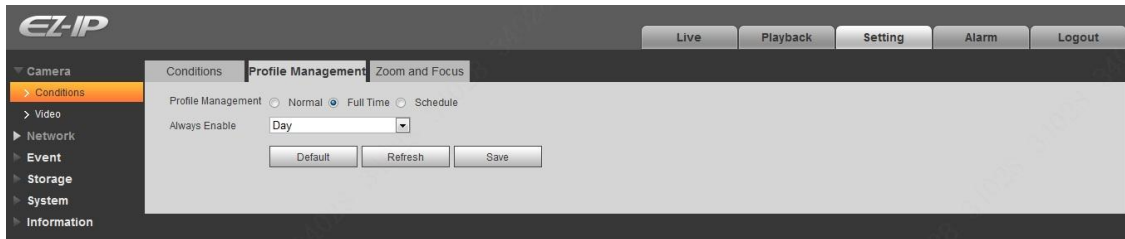


Figure 5-8

- 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.

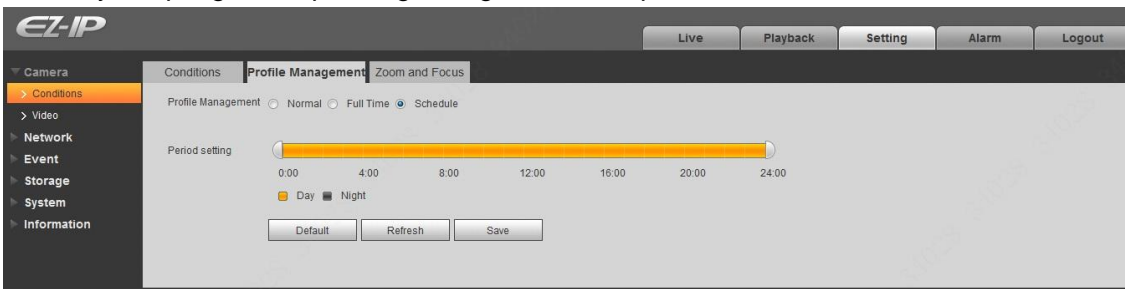


Figure 5-9

Step 3

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 motorized vari-focal devices support focus and zoom function.

Step 1

Select “Setup > Camera > Conditions > Zoom and Focus” and the system will display the interface of “Zoom and Focus” which is shown in Figure 5-10.

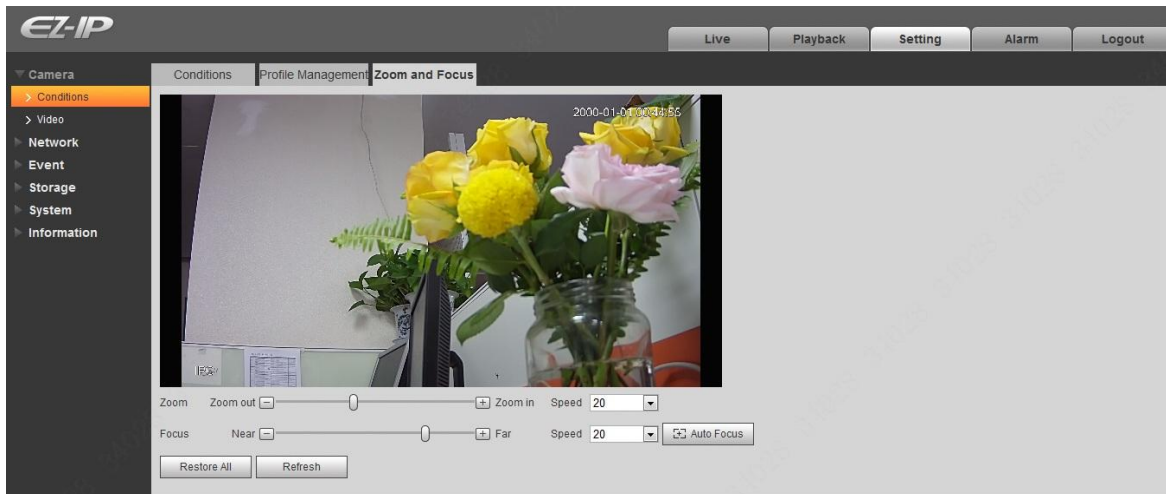


Figure 5-10

Step 2

Adjust the focal length of the lens.

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

Step 3

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

5.1.2.1 Video

Step 1

Select “Setup > Camera > Video > Video” and the system will display the interface of “Video” which is shown in Figure 5-11.

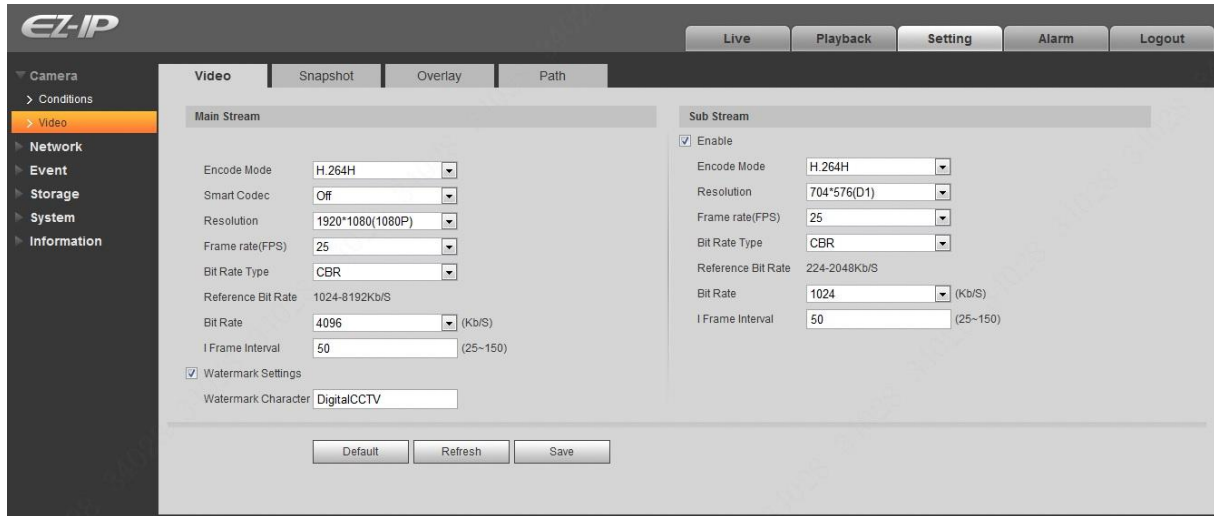


Figure 5-11

Step 2

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

Parameter	Function
Sub Stream Enable	Select “Enable” to enable sub stream. The device supports enabling sub stream 1 and sub stream 2 at the same time.
Smart Codec	It can enhance image compression performance and reduce storage space by enabling intelligent encoding. 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.
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"> ● 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. ● The H.265 is the main profile encode mode. ● 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.

Parameter	Function
Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p> <p>Note: When video is under rotating status, you cannot set resolution higher than 1080P (excluding 1080P).</p>
Frame Rate (FPS)	<p>PAL: 1~25f/s, 1-50f/s NTSC: 1~30f/s or 1~60f/s.</p> <p>The frame rate may vary due to different resolutions.</p>
Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p> <p>Under MJPEG mode, only CBR is available.</p>
Reference Bit Rate	<p>Recommended bit rate value according to the resolution and frame rate you have set.</p>
Bit Rate	<ul style="list-style-type: none"> ● 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. ● The value is null in VBR mode. ● Please refer to recommend bit rate for the detailed information.
I Frame Interval	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>
Watermark Settings	<p>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.</p>
Watermark Character	<p>It is the character of watermark verification; it is Digital CCTV by default.</p>

Table 5-4

5.1.2.2 Snapshot

The snapshot interface is shown as in Figure 5-12.

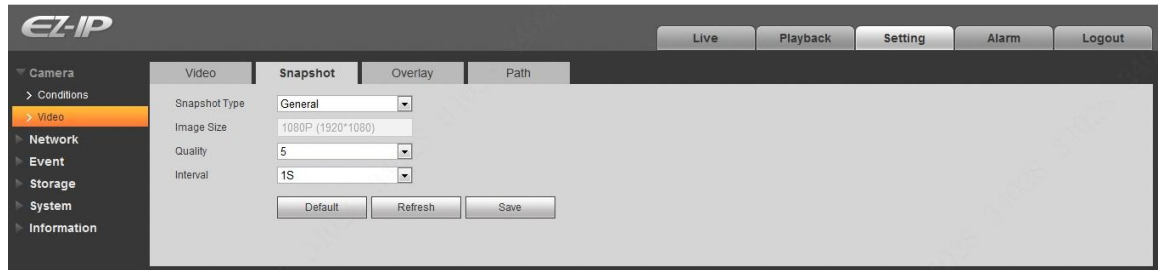


Figure 5-12

Please refer to the following sheet for detailed information.

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.

Table 5-5

5.1.2.3 Overlay

The overlay interface is shown from Figure 5-13 to Figure 5-16.

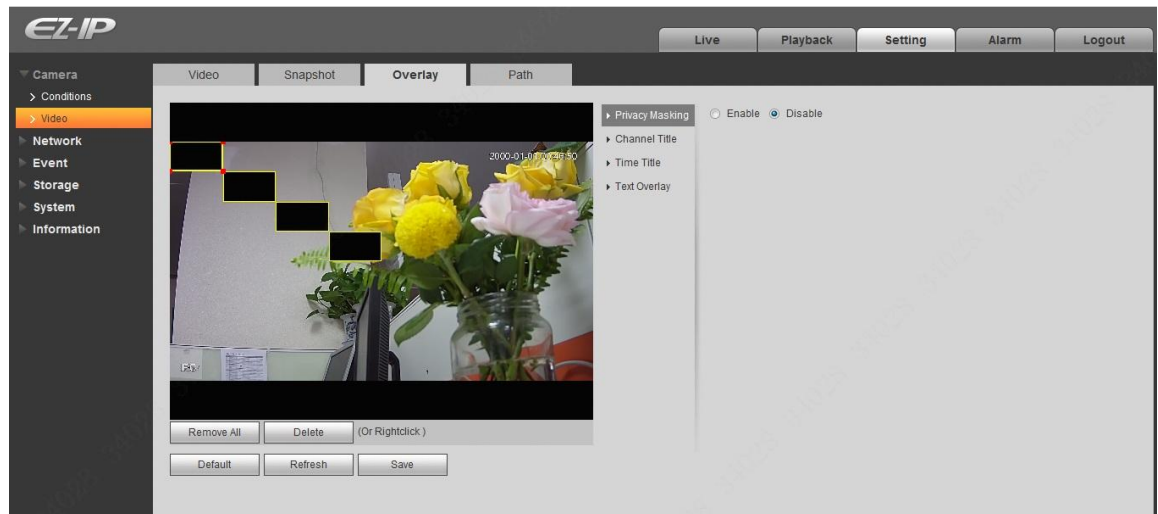


Figure 5-13

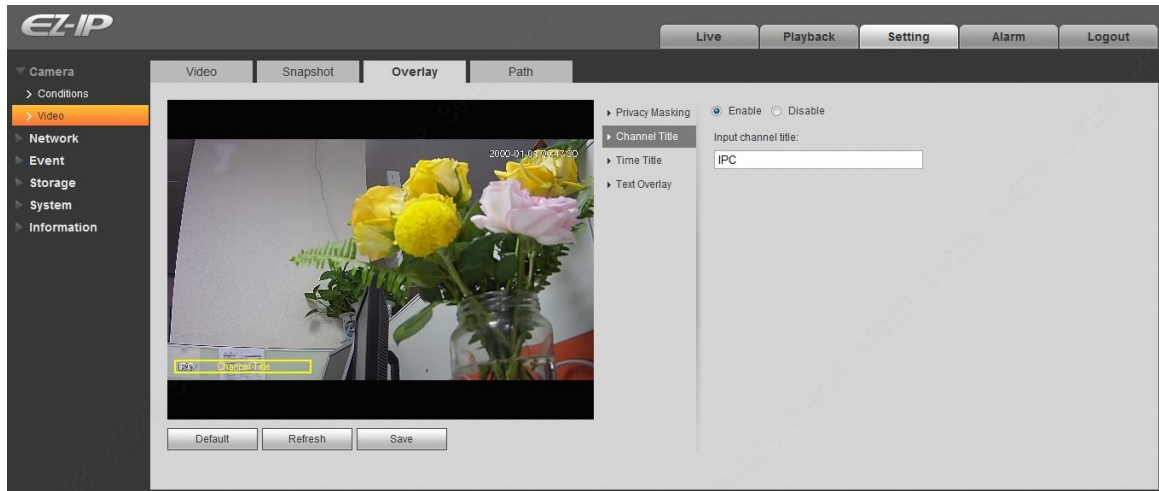


Figure 5-14

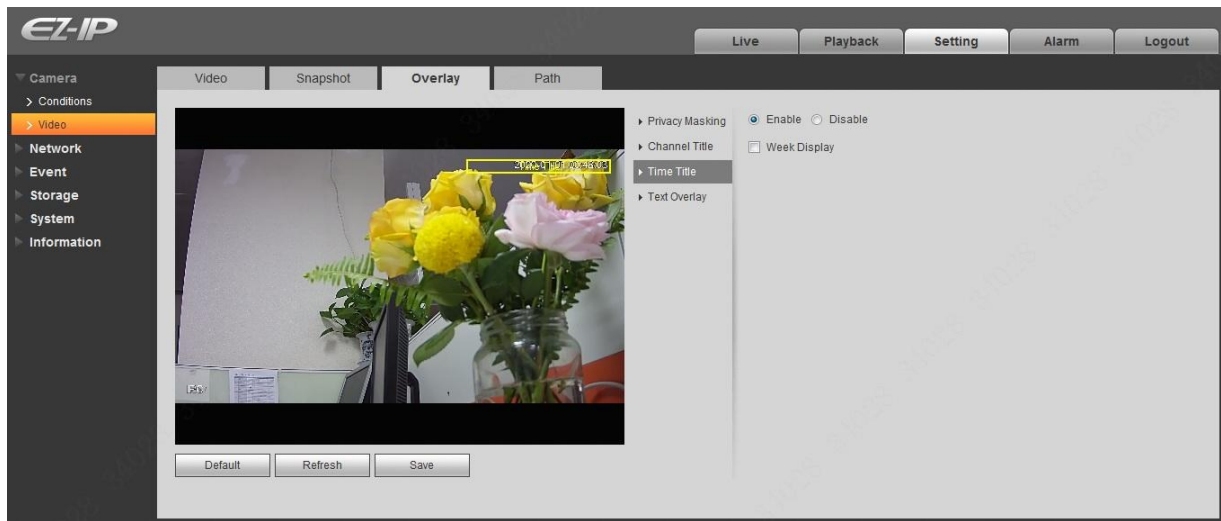


Figure 5-15

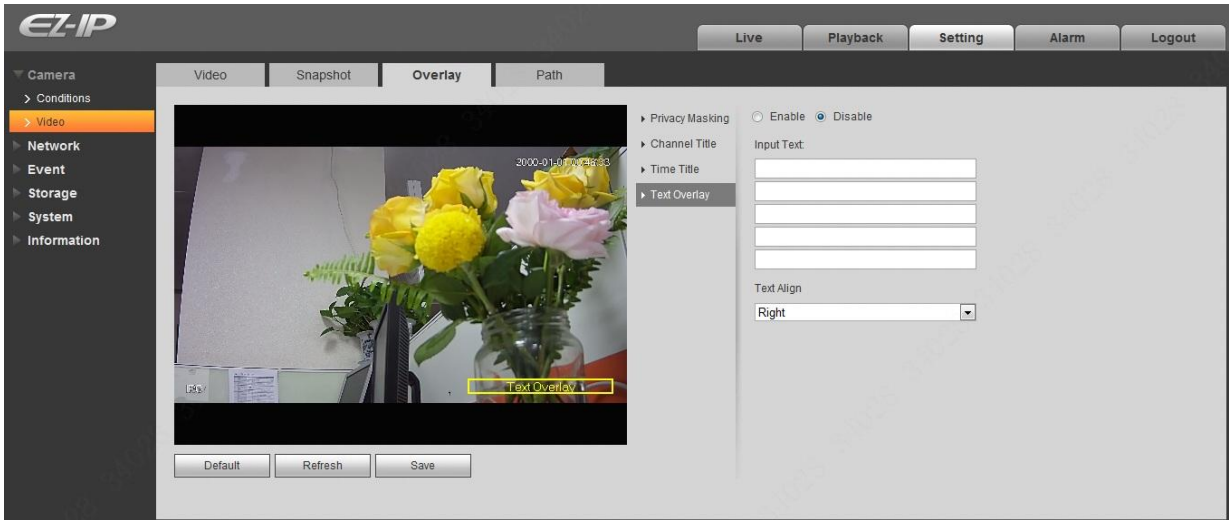


Figure 5-16

Please refer to Table 5-6 for detailed information.

Parameter	Function
Privacy Masking	<ul style="list-style-type: none"> ● Here you can privacy mask the specified video in the monitor video. ● System max supports 4 privacy mask zones.
Channel Title	<ul style="list-style-type: none"> ● You can enable this function so that system overlays channel information in video window. ● You can use the mouse to drag the channel tile position.
Time Title	<ul style="list-style-type: none"> ● You can enable this function so that system overlays time information in video window. ● You can use the mouse to drag the time tile position.
Text Overlay	<ul style="list-style-type: none"> ● You can enable this function to overlay text in video window. ● You can use the mouse to drag location box to adjust its position. Alignment include align left and align right.
Refresh	<ul style="list-style-type: none"> ● Set privacy mask, channel title, time title, location, overlay and save the change. You can click on Refresh to see effect.
Default	<ul style="list-style-type: none"> ● Click it to restore default config.
Save	<ul style="list-style-type: none"> ● Click it to complete video settings.

Table 5-6

5.1.2.4 Path

The storage path interface is shown as in Figure 5-17.

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

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- 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.



Figure 5-17

5.2 Network

5.2.1 TCP/IP

5.2.1.1 TCP/IP

The TCP/IP interface is shown as in Figure 5-18. It 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.

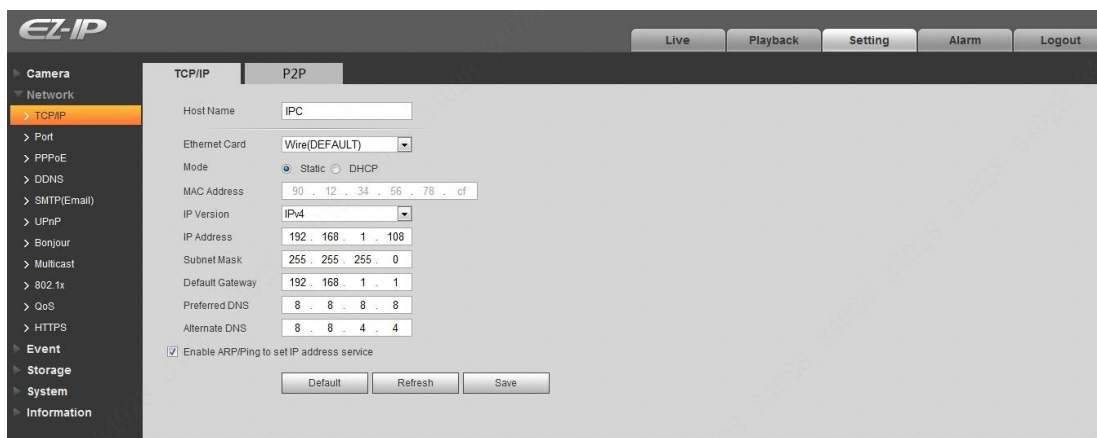


Figure 5-18

Please refer to Table 5-7 for detailed information.

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.

<p>Enable ARP/Ping to set device IP address service.</p>	<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.</p> <p>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 style="margin-left: 40px;">arp -s <IP Address> <MAC> ping -l 480 -t <IP Address> 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 ...” from the command output lines. Now you can close the command line.</p> <p>Step 6: Open the browse and then input http://<IP address>. Click the Enter button, you can access now.</p>
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Table 5-7

5.2.1.2 P2P

Click “Enable” to connect the device to network, and then you can connect to the device via mobile client of P2P after “Online” is displayed on the interface (connection mode: add device serial number or scan QR code). See Figure 5-19.



Figure 5-19

5.2.2 Port

5.2.2.1 Port

The port interface is shown as in Figure 5-20.



Figure 5-20

Please refer to Table 5-8 for detailed information.

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"> ● 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. ● 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. ● User uses BlackBerry need to set encode mode to H.264B, resolution to CIF and turn off audio. <p>URL format is: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0</p> <p>Username/password/IP and port. The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value. 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.

Table 5-8

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.

5.2.2.2 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.

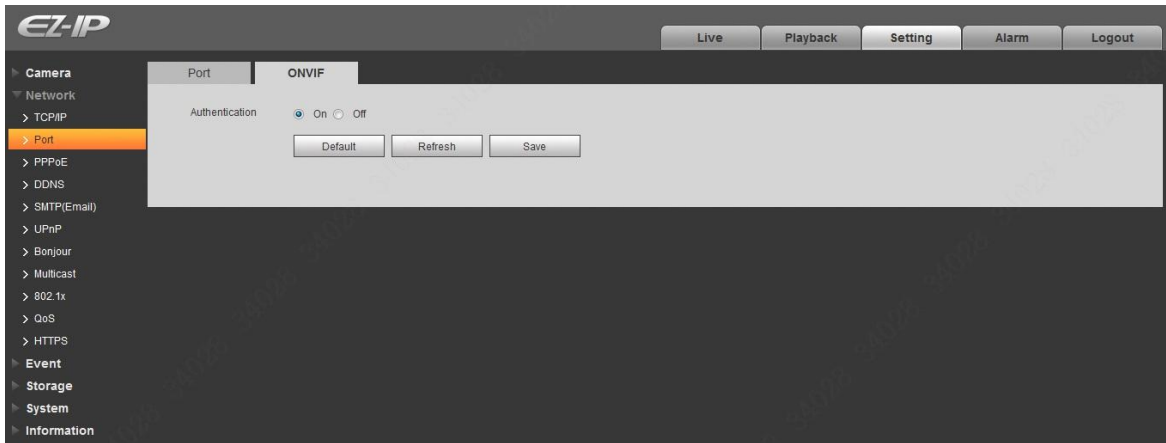


Figure 5-21

5.2.3 PPPoE

The PPPoE interface is shown as in Figure 5-22.

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.



Figure 5-22

5.2.4 DDNS

The DDNS interface is shown as in Figure 5-23.

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.

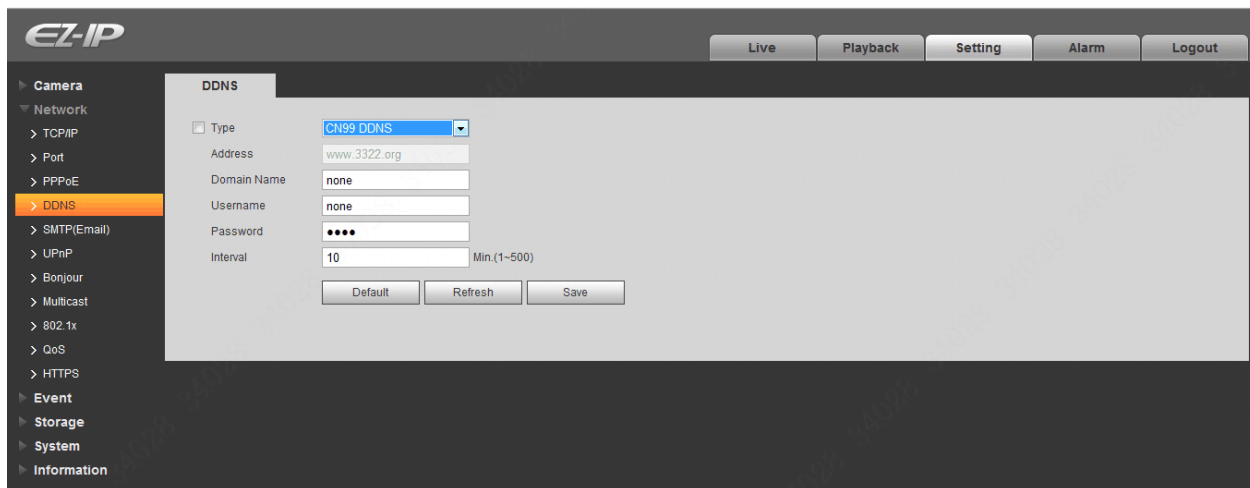


Figure 5-23

Please refer to Table 5-9 for detailed information.

Parameter	Function
Server Type	Click it to select DDNS protocol type, which includes: CN99 DDNS, NO-IP DDNS, DynDNS DDNS, the default is CN99 DDNS.
Server Address	DDNS server IP address CN99 DDNS Server address: www.3322.org NO-IP DDNS Server address: dynupdate.no-ip.com DynDNS DDNS
Mode	Default is auto, it can select manual
Domain Name	Both auto and manual are “none” by default, it is able to set prefix manually.
Username	The user name you input to log in the server, optional.

Table 5-9

The CN99 DDNS interface is shown as in Figure 5-24.

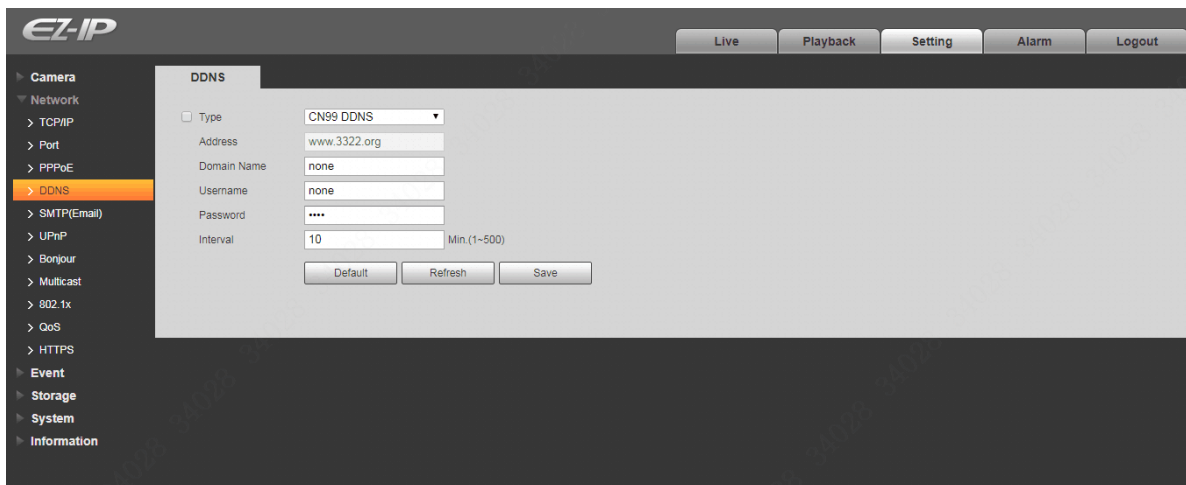


Figure 5-24

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.

Table 5-10

5.2.5 SMTP (Email)

The SMTP interface is shown as in Figure 5-25.

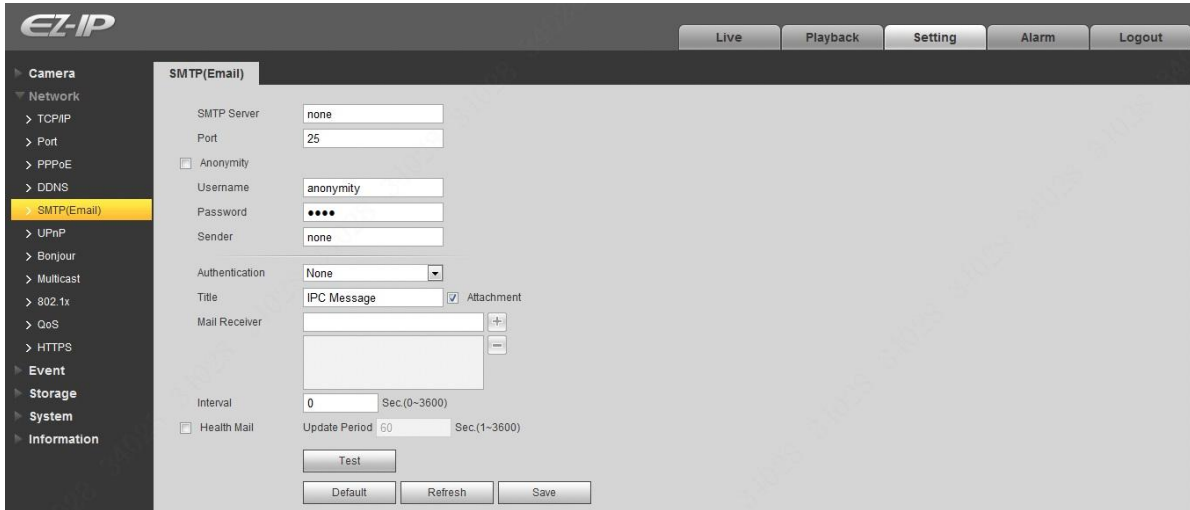


Figure 5-25

Please refer to Table 5-11 for detailed information.

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	Please check the box here to enable this function.
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.

Table 5-11

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. See Figure 5-26.

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.

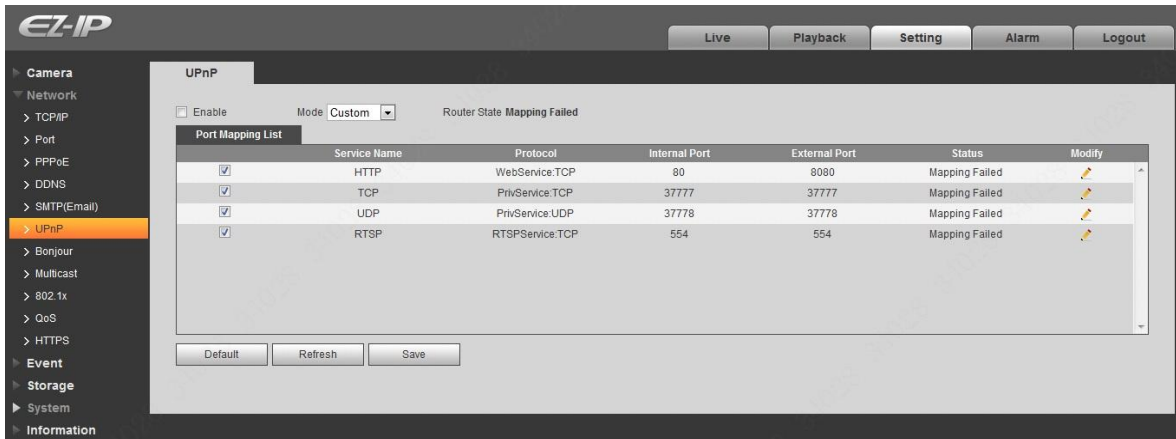


Figure 5-26

5.2.7 Bonjour

The Bonjour interface is shown as below. See Figure 5-27.

Bonjour is based on the multicast DNS service from the 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.

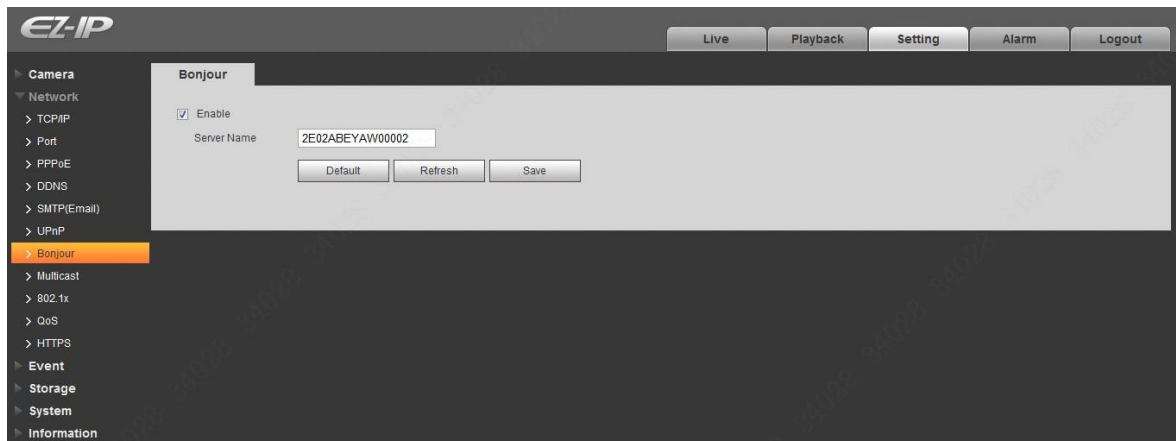


Figure 5-27

5.2.8 Multicast

The multicast interface is shown as in Figure 5-28.

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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.

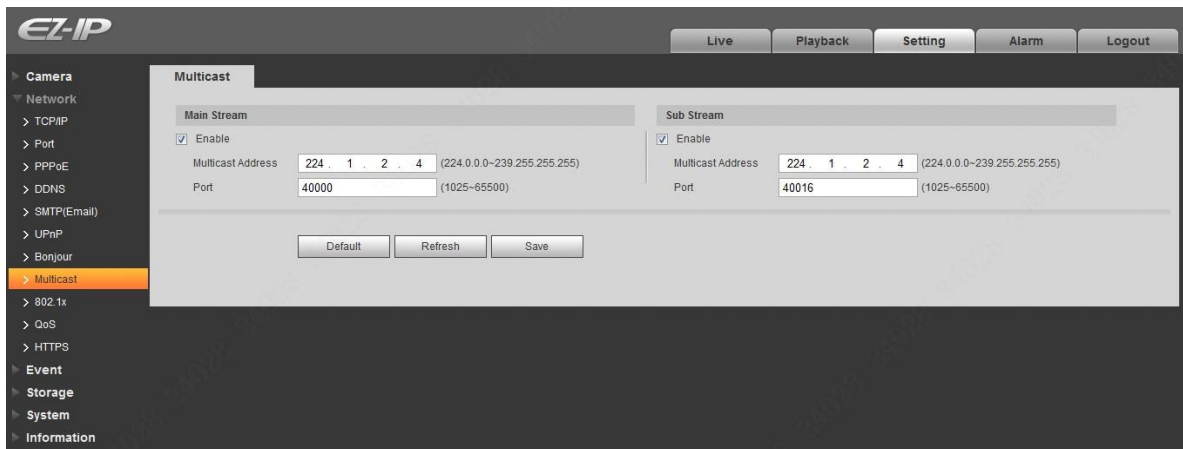


Figure 5-28

Please refer to the following sheet for detailed information.

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.

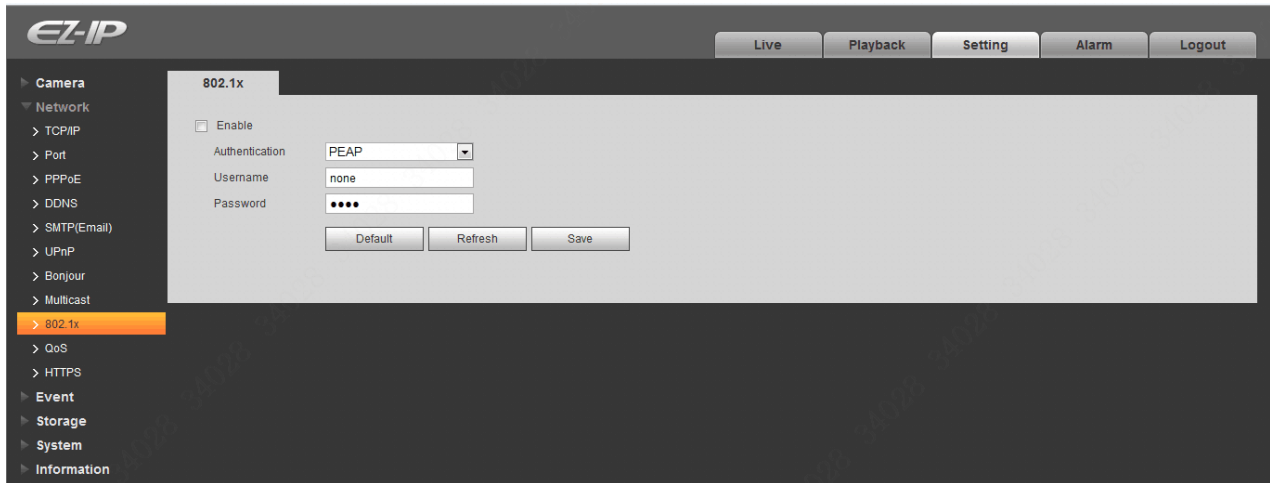


Figure 5-29

Please refer to the following sheet for detailed information.

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

The QoS interface is shown as below. See Figure 5-30.

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.



Figure 5-30

Please refer to Table 5-12 for detailed information.

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.

Table 5-12

5.2.11 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.

Step 1

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, which is shown in Figure 5-31.

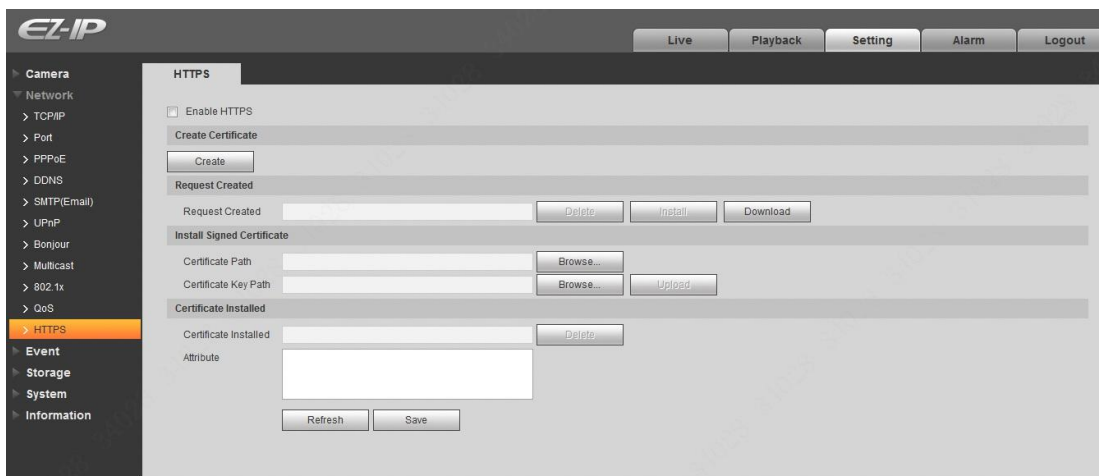


Figure 5-31

- Click “Create” and it will pop out the dialog box of “HTTPs”, which is shown in Figure 5-32.

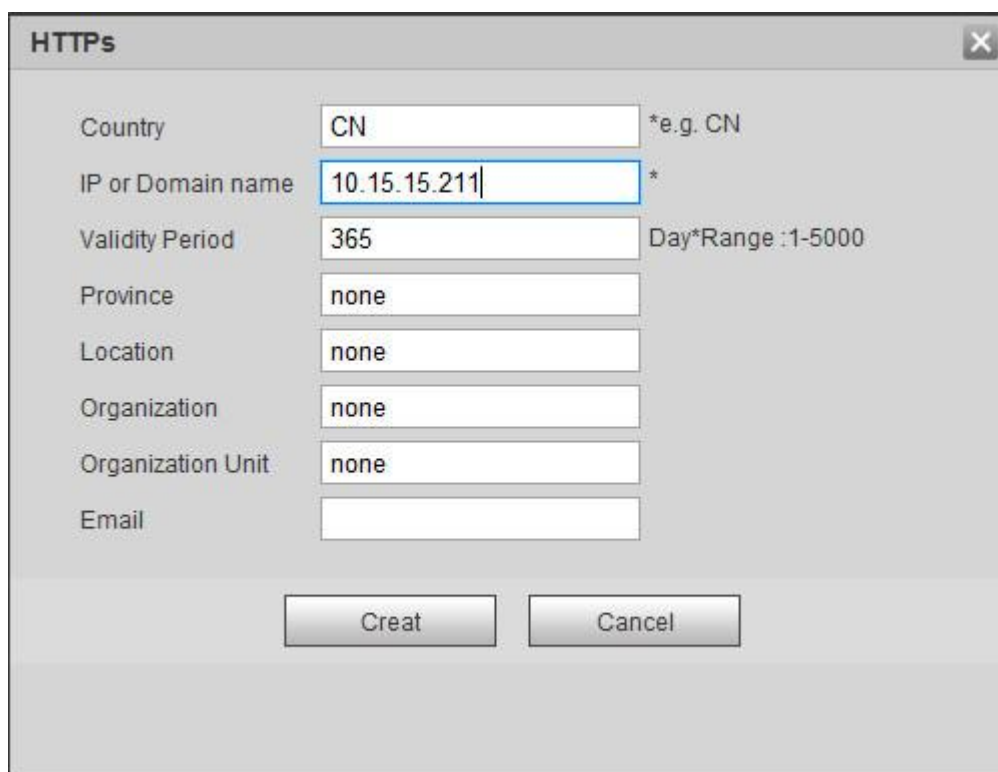


Figure 5-32

- 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.

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, which is shown in Figure 5-33.

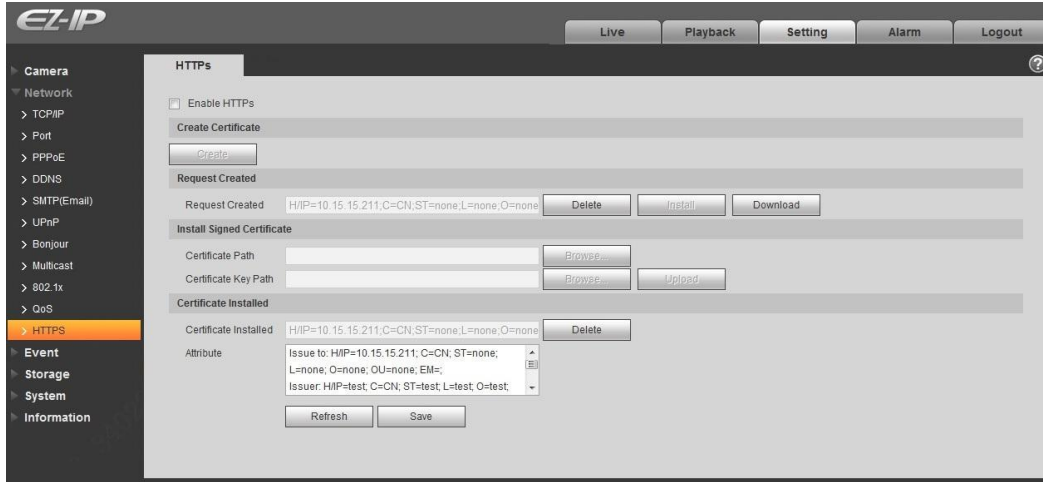


Figure 5-33

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

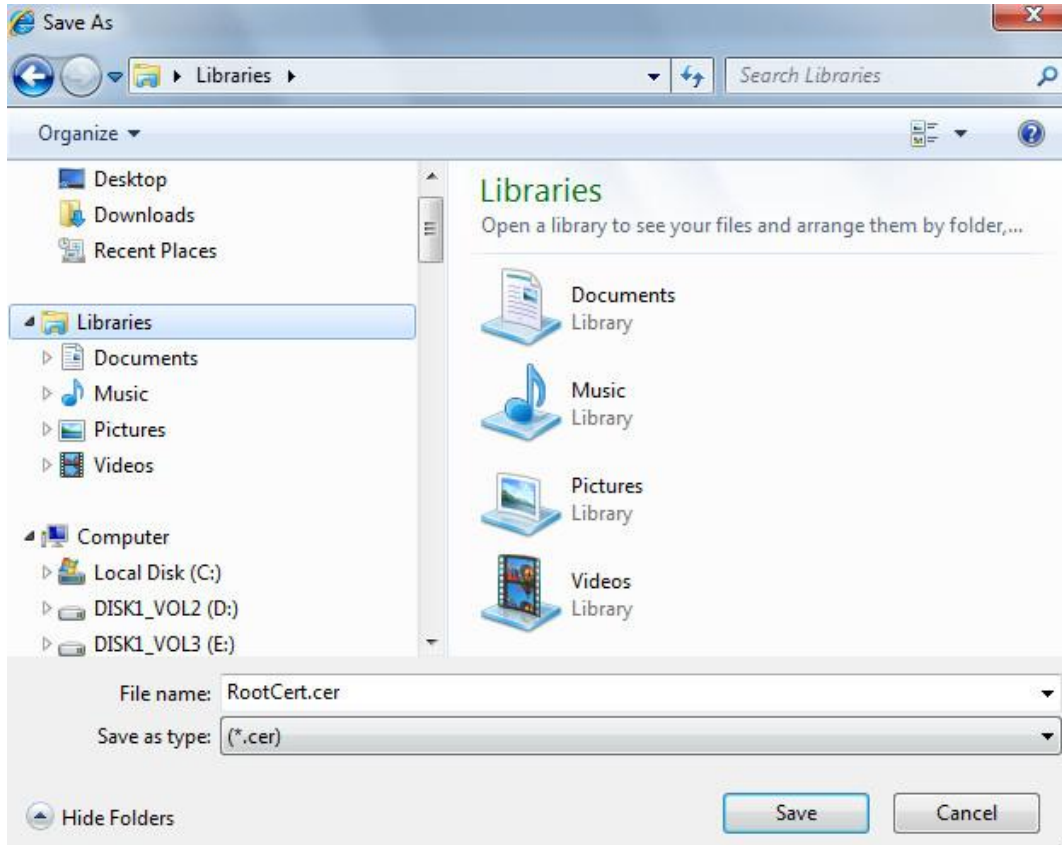


Figure 5-34

6. Double click the downloaded icon of “RootCert.cer”. The system will display the information interface of “Certificate”, which is shown in Figure 5-35.

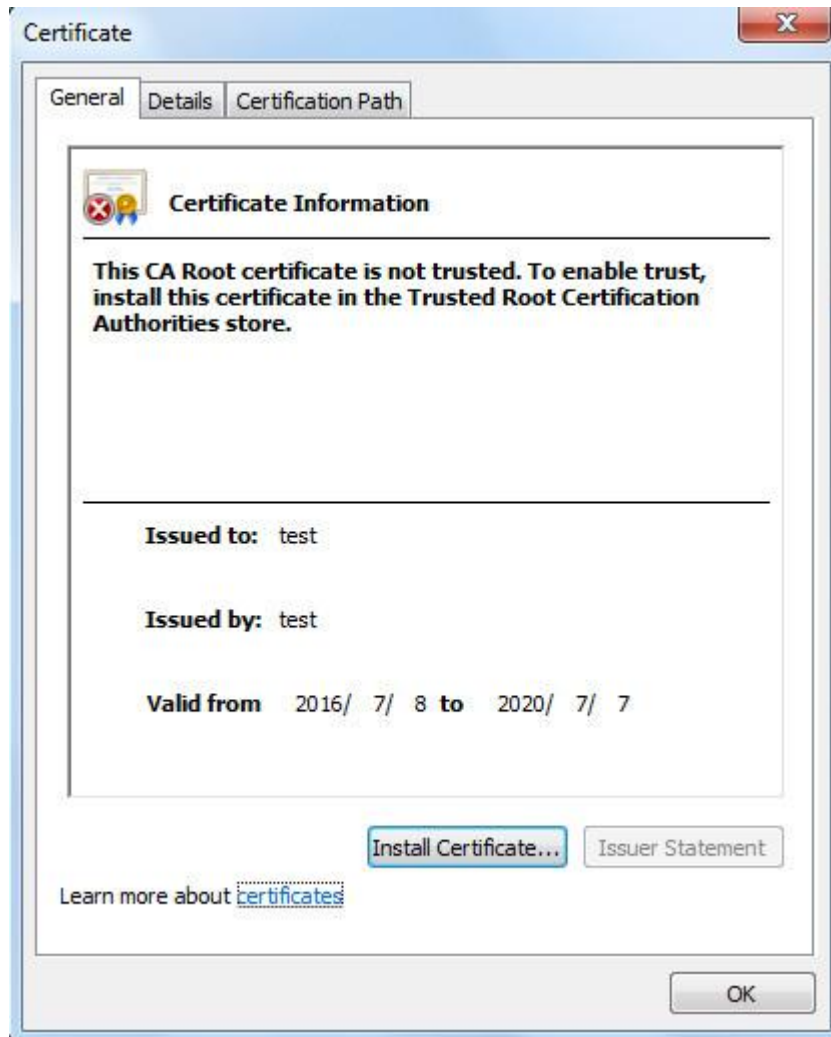


Figure 5-35

7. Click "Install Certificate" and it will pop out the interface of "Certificate Import Wizard", which is shown in Figure 5-36.



Figure 5-36

8. Click "Next". Select "Trusted Root Certification Authorities", which is shown in Figure 5-37.

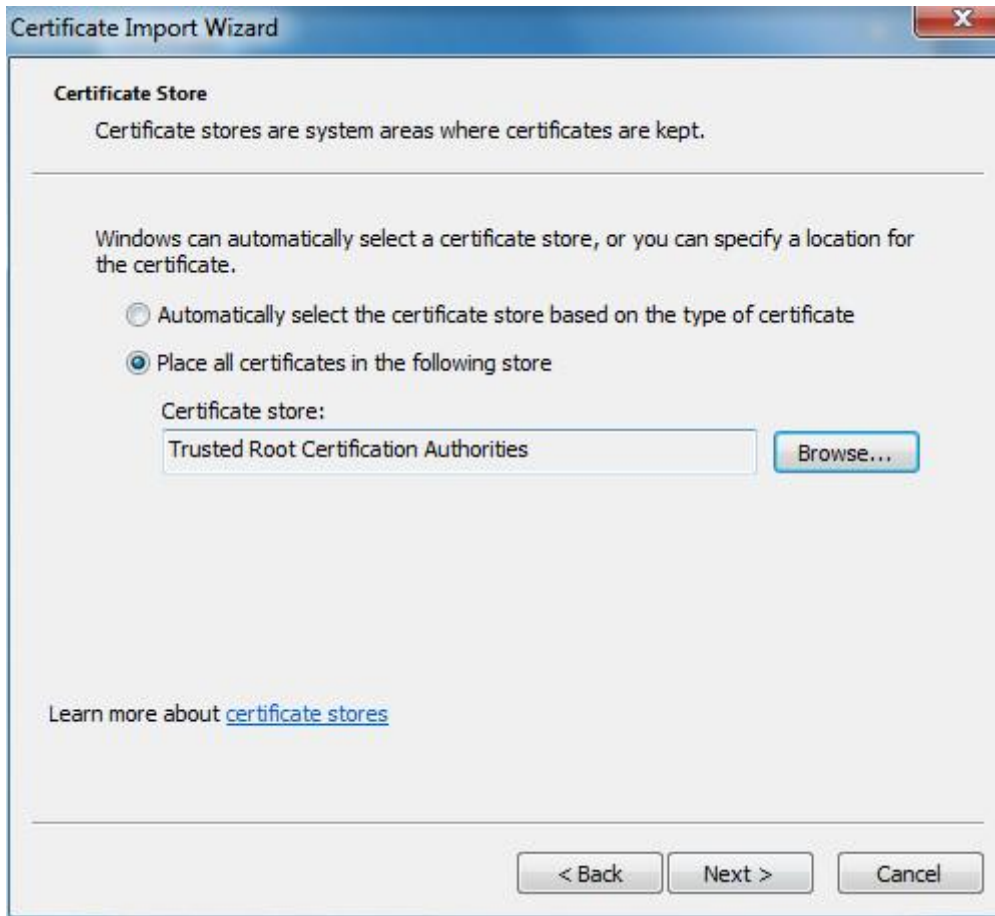


Figure 5-37

9. Click “Next”. The system will display the interface of “Completing the Certificate Import Wizard”, which is shown in Figure 5-38.

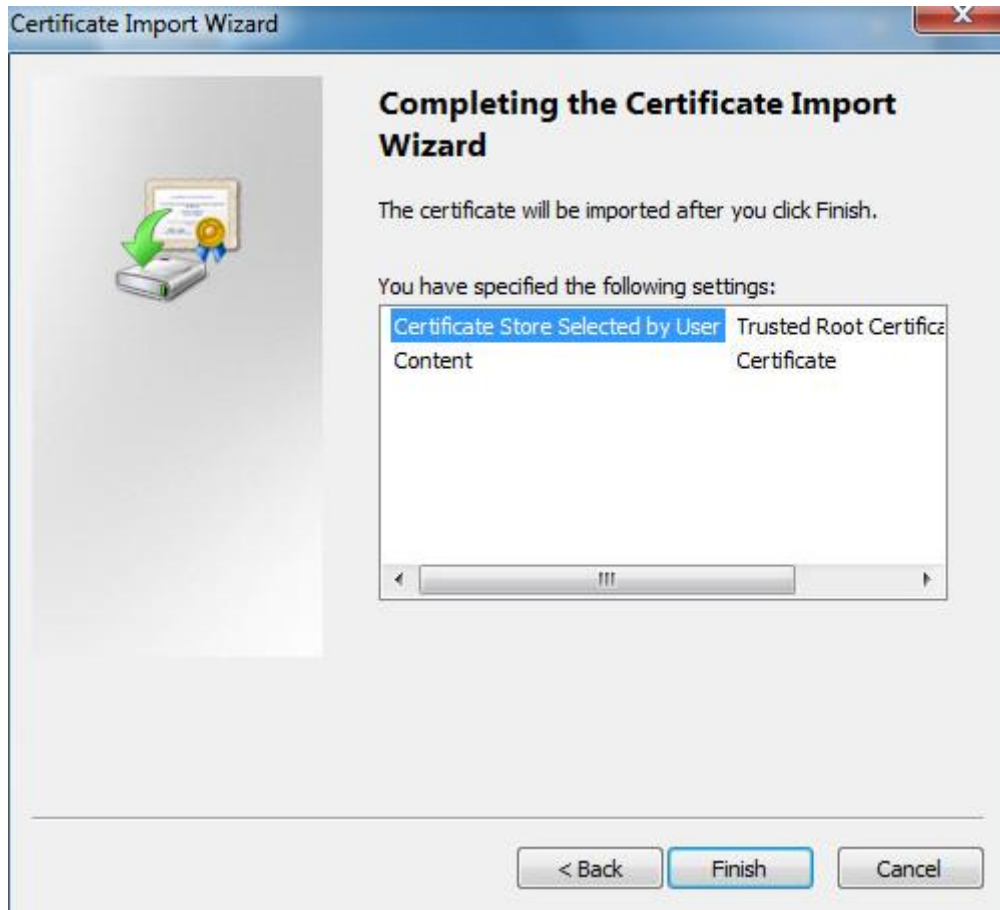


Figure 5-38

10. Click “Finish”, and it will pop out the dialog box of “Security Warning”, which is shown in Figure 5-39.

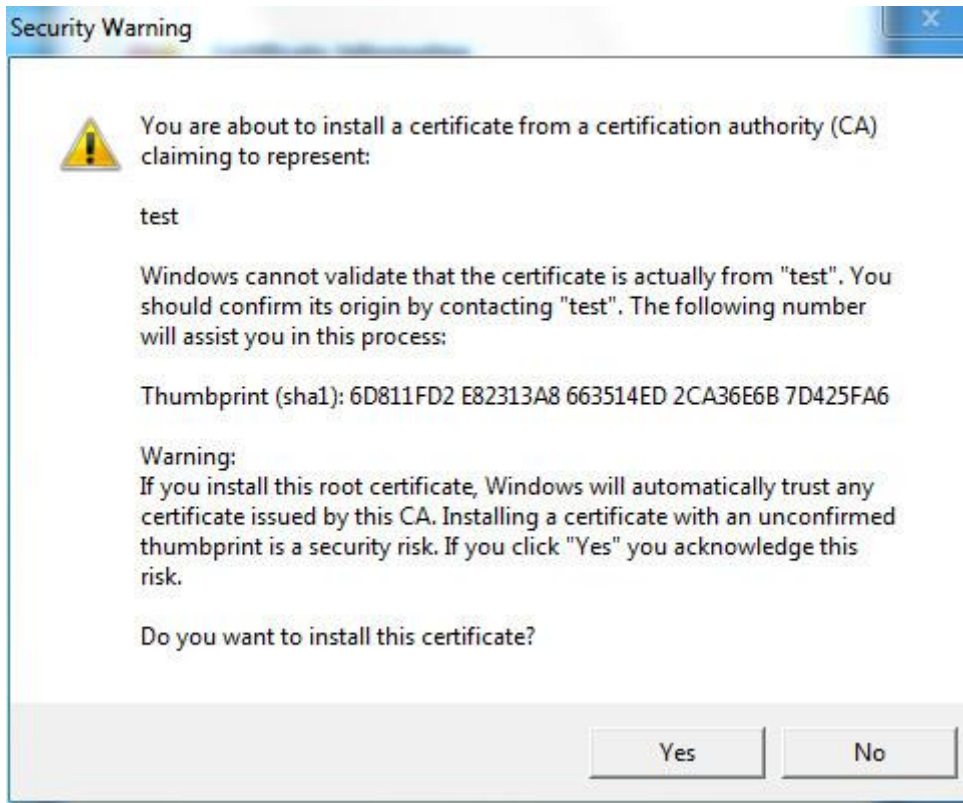


Figure 5-39

11. Click "Yes". It will pop out the dialog box of "Import Successful", click "Ok" to complete downloading certificate, which is shown in Figure 5-40.



Figure 5-40

- Please refer to the following steps if you select "Install Signed Certificate".
1. Select "Setup > Network > HTTPs". The system will display the interface of HTTPs, which is shown in Figure 5-41.

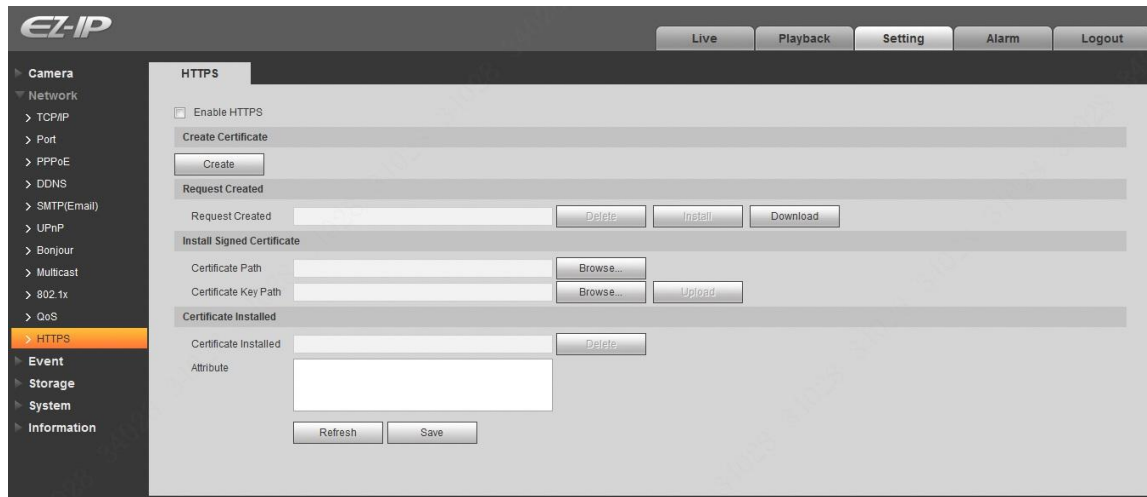


Figure 5-41

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

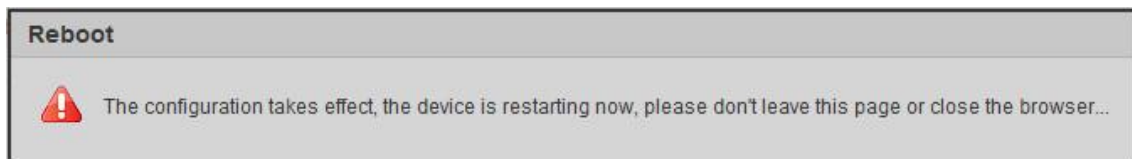


Figure 5-42

5. Use 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, which is shown in Figure 5-43.

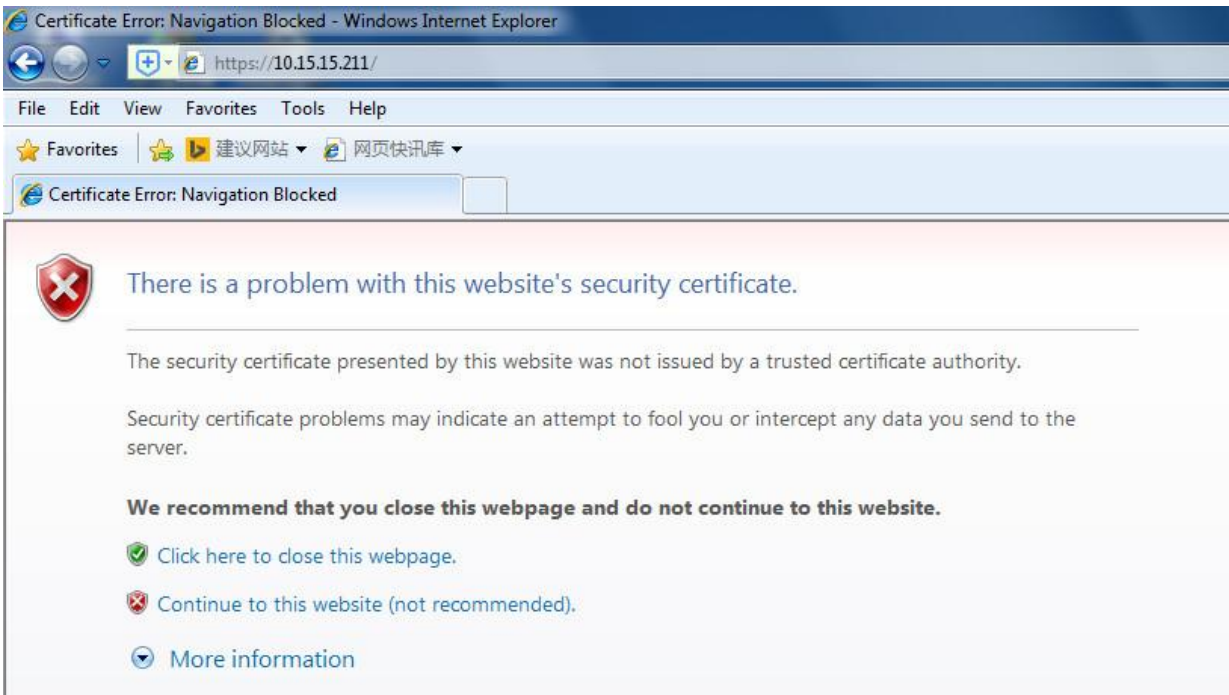


Figure 5-43

Note:

“xx.xx.xx.xx” is corresponding to your IP or domain name.

5.3 Event

5.3.1 Video Detection

5.3.1.1 Motion Detection

Step 1

Select “Setup > Event > Video Detection > Motion Detection” and the system will display the interface of “Motion Detection” which is shown in Figure 5-44.



Figure 5-44

Step 2

Select “Enable” to enable motion detection function.

Step 3

Set motion detection area.

1. Click “Setup” and the system will pop out the interface of “Setting Area”, which is shown in Figure 5-45

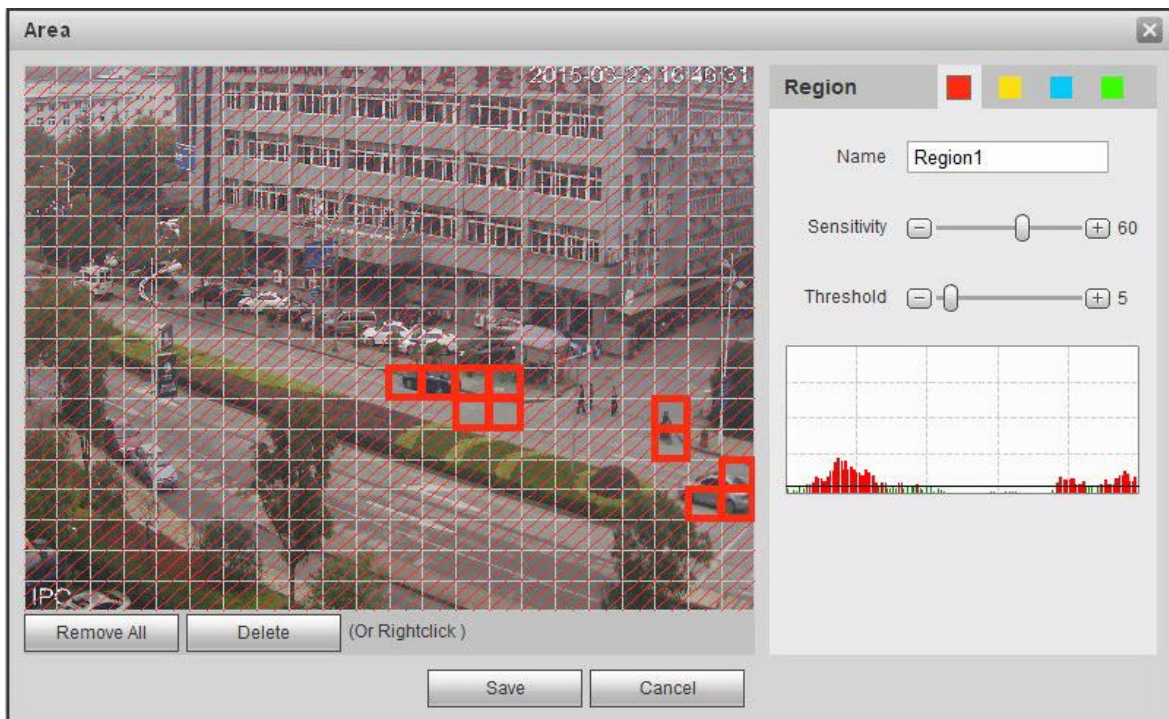


Figure 5-45

- 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 colors 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.
- Click “Save” to complete area setting.

Step 4

It is to set other parameters of motion detection, please refer to Table 5-13 for more details.

Parameter	Function
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"> Click “Setup” and the system will pop out the interface of “Working Period”. It is to set working period according to the following methods: <ul style="list-style-type: none"> You can input time numerical value or press the left mouse button to drag on the setup interface to set. There are six periods to be set every day, select the check box in front of the period, and then the period is valid. 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). Click “Save” to complete the setup of working period.
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"> Click “Setup” and the system will pop out the interface of “Set Area”. 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. <p>Note: Different colors 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"> Click “Save” to complete area setup.

Parameter	Function
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.
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.
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.

Table 5-13

Step 5

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

5.3.1.2 Video Tampering

Step 1

Select “Setup > Event > Video Detection > Video Tampering” and the system will display the interface of “Video Tampering” which is shown in Figure 5-46.

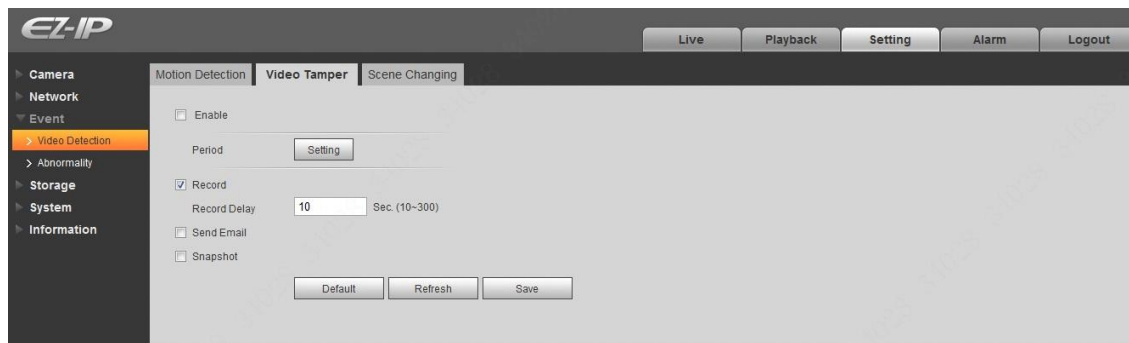


Figure 5-46

Step 2

Set the parameter of video tampering; please refer to Table 5-14 for more details.

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

Parameter	Function
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"> 1. Click "Setup" and the system will pop out the interface of "Working Period". 2. It is to set working period according to the following methods: <ul style="list-style-type: none"> ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● 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). 3. Click "Save" to complete the setup of working period.
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.
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.
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.

Table 5-14

Step 3

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

5.3.1.3 Scene Changing

Step 1

Select "Setup > Event > Video Detection > Scene Changing" and the system will display the interface of "Scene Changing" which is shown in Figure 5-47.

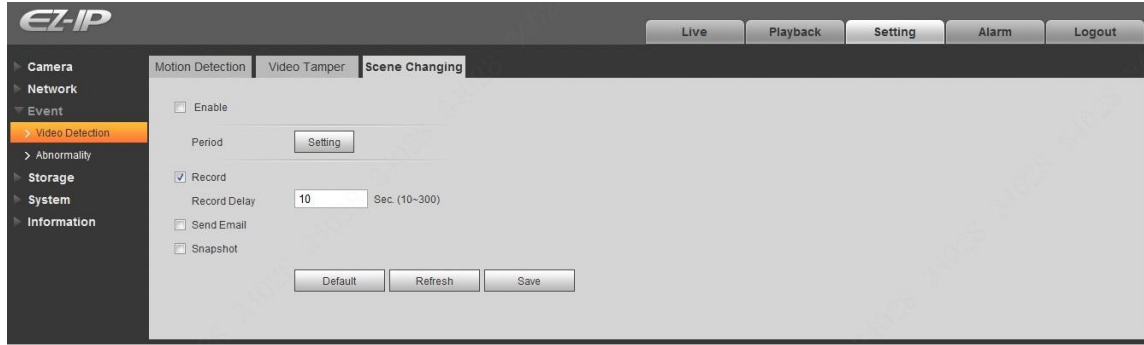


Figure 5-47

Step 2

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

Step 3

It is to set the parameters of scene changing, please refer to Table 5-15 for more details.

Parameter	Function
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"> Click “Setup” and the system will pop out the interface of “Working Period”. It is to set working period according to the following methods: <ul style="list-style-type: none"> You can input time numerical value or press the left mouse button to drag on the setup interface to set. There are six periods to be set every day, select the check box in front of the period, and then the period is valid. 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). Click “Save” to complete the setup of working period.
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.
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.
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.

Table 5-15

Step 4

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. See Figure 5-48 to Figure 5-50.

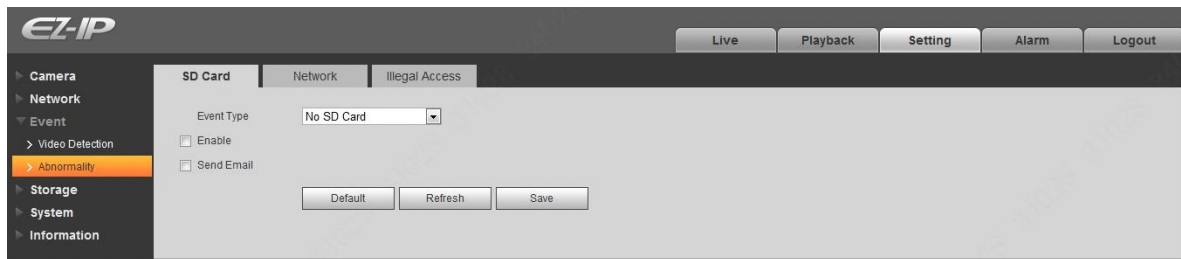


Figure 5-48

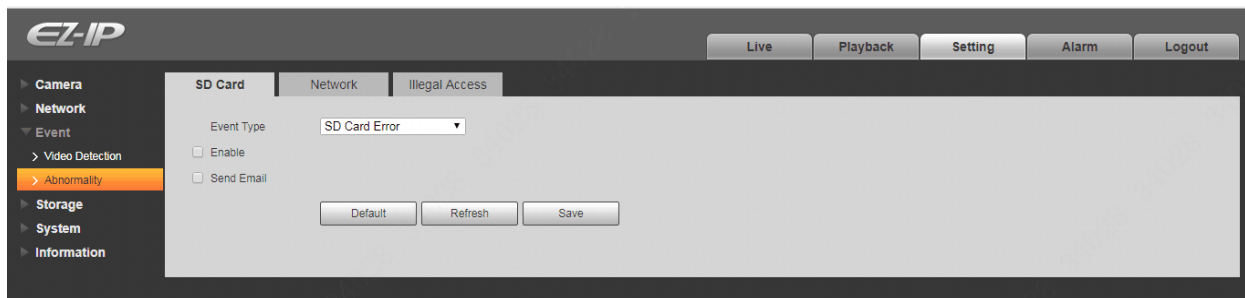


Figure 5-49

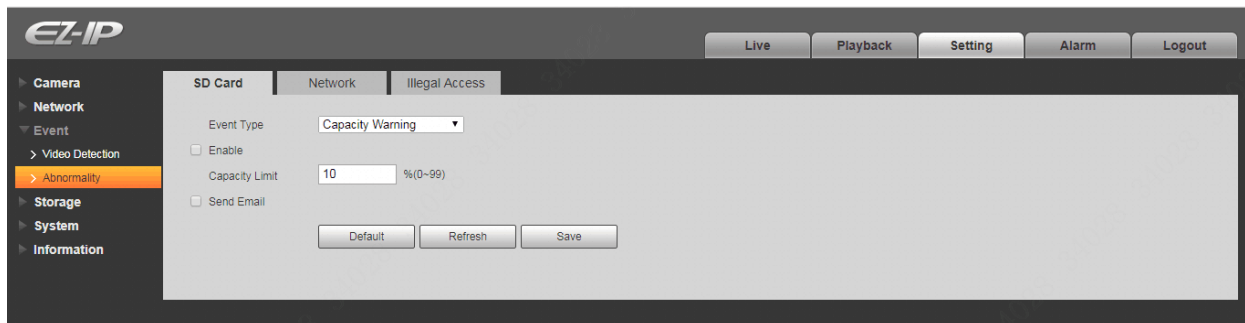


Figure 5-50

Please refer to Table 5-16 for detailed information.

Parameter	Function
Enable	Check to alarm when SD card is abnormal.
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.

Table 5-16

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



Figure 5-51

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.

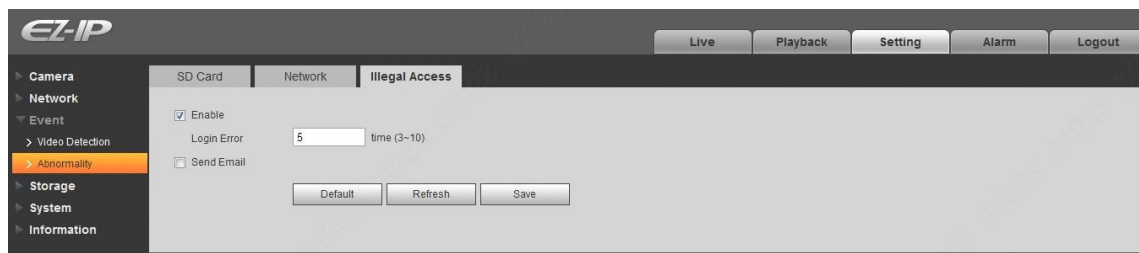


Figure 5-52

5.4 Storage Management

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 take snapshot according to schedule.

5.4.1.1 Record Schedule

Record schedule steps:

Step 1. Click on Record Schedule, see Figure 5-53.



Figure 5-53

Step 2. From Monday to Sunday select record time, click on setup on the right, see Figure 5-54.

- 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.

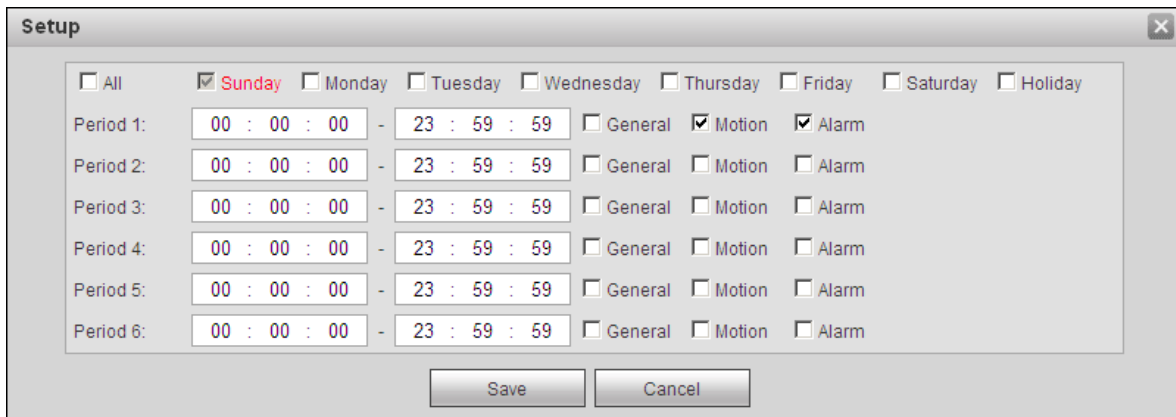


Figure 5-54

Step 3. Click on OK, return to record schedule interface. See Figure 5-55.

- 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.



Figure 5-55

Step 4. In record schedule interface, click on OK. System prompts it is successfully saved.

5.4.1.2 Snapshot Schedule

Snapshot setup as:

Step 1. Click on Snapshot Schedule tab, see Figure 5-56.



Figure 5-56

Step 2. From Monday to Sunday select snapshot time, click on setup on the right. See Figure 5-57.

- 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.

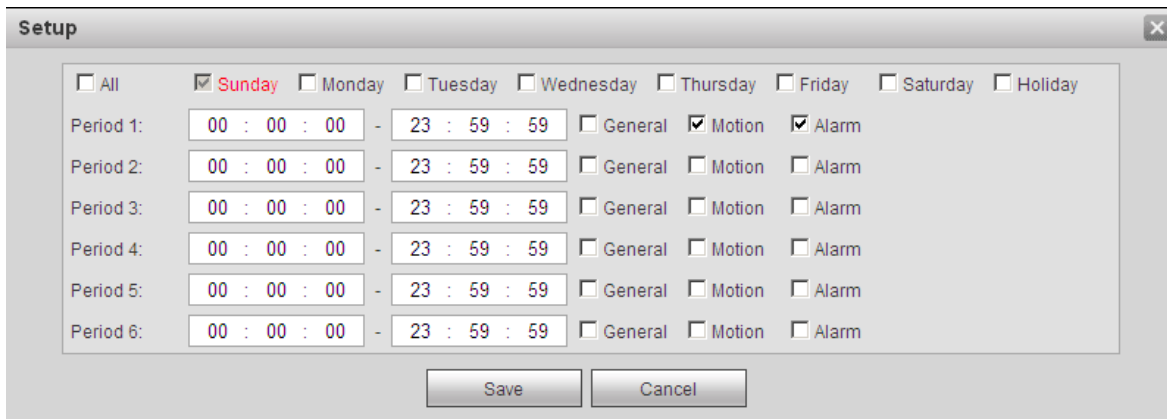


Figure 5-57

Step 3. Click on OK, return to snapshot schedule interface. See Figure 5-58.

- 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.



Figure 5-58

Step 5. 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, see Figure 5-59.



Figure 5-59

- Step 2. Select date to set as holiday. The selected date will be highlighted in yellow.
- Step 3. Check Record/Snapshot, click on Save. System prompts it is successfully saved.
- Step 4. Check Record Schedule/Snapshot Schedule interface, click on setup next to Holiday, and refer to setup of Monday to Sunday.
- Step 5. Complete setup of holiday, then it records/snapshots according to date in holiday schedule.

5.4.2 Destination

5.4.2.1 Path

The destination interface is shown as in Figure 5-60.

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.

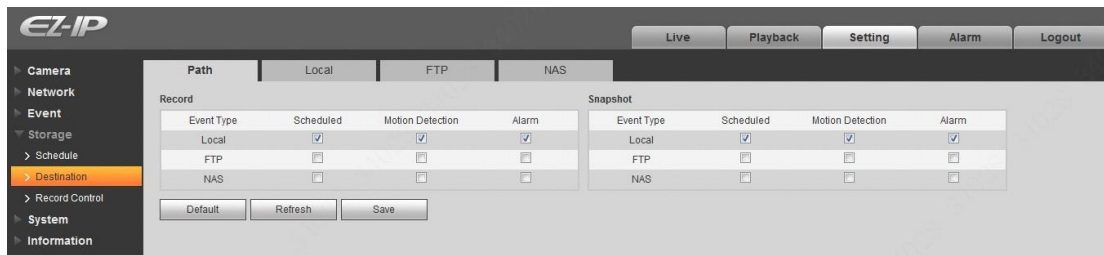


Figure 5-60

Please refer to Table 5-17 for detailed information.

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.

Table 5-17

5.4.2.2 Local

The local interface is shown as in Figure 5-61.

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.

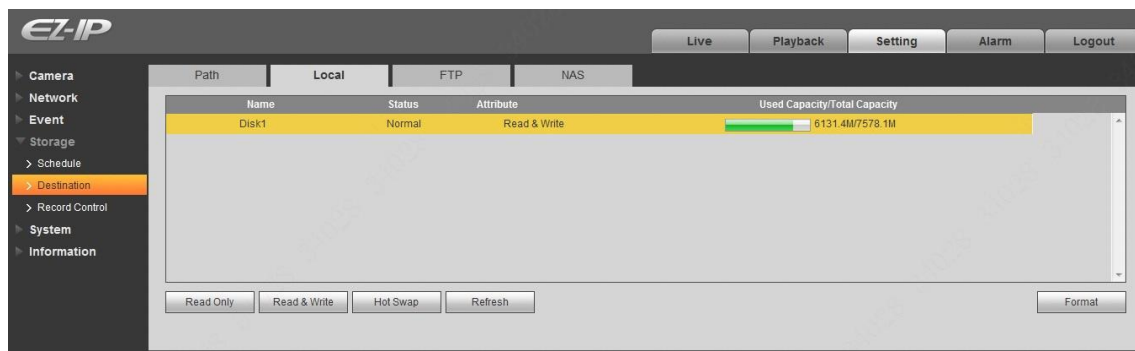


Figure 5-61

5.4.2.3 FTP

The FTP interface is shown as in Figure 5-62.

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.

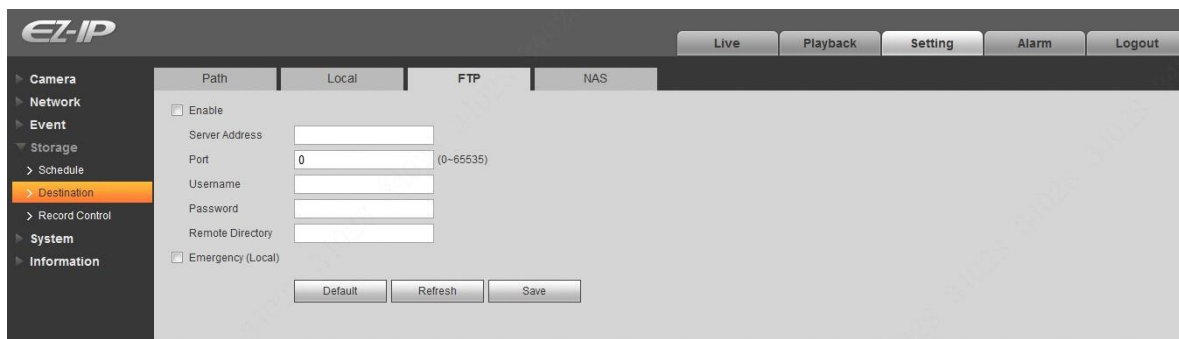


Figure 5-62

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. See Figure 5-63.

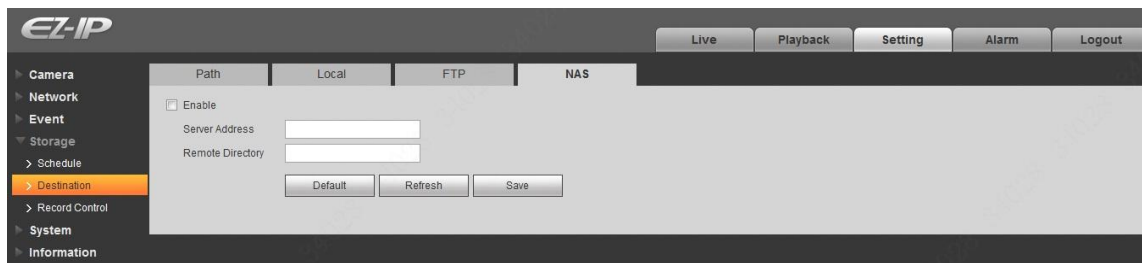


Figure 5-63

Parameter	Function
Server Address	Set IP address of NAS server.
Remote Directory	Set storage directory, videos and pictures can be stored in to corresponding server directory.

Table 5-18

5.4.3 Record control

The record control interface is shown as in Figure 5-64.



Figure 5-64

Please refer to Table 5-19 for detailed information.

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

Table 5-19

5.5 System

5.5.1 General

The General interface is shown as in Figure 5-65.



Figure 5-65

Please refer to Table 5-20 for detailed information.

Parameter	Function
Name	It is to set device name. Note: Different devices have different names.
Language	You can select the language from the dropdown list.
Video Standard	This is to display video standard such as PAL.

Table 5-20

The date and time interface is shown as in Figure 5-66.

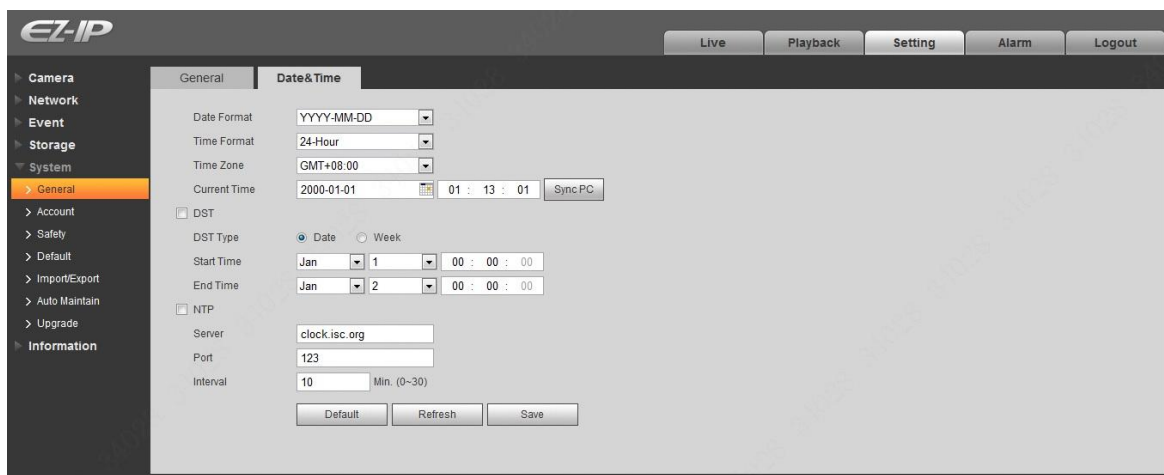


Figure 5-66

Please refer to Table 5-21 for detailed information.

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.
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.
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.
Interval	It is to set the sync periods between the device and the time server.

Table 5-21

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. See Figure 5-67.

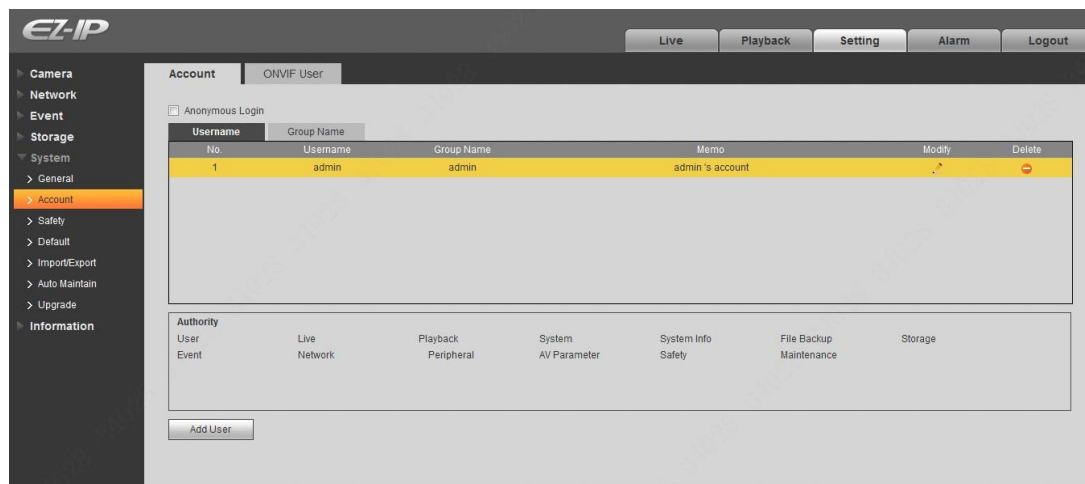


Figure 5-67

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. See Figure 5-68.

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 the 'Add User' dialog box. It includes the following elements:

- Username:** A text input field with a red 'Must' label to its right.
- Password:** A text input field with a red note below it: 'The minimum pass phrase length is 8 characters'. Below the note are three buttons: 'Weak', 'Middle', and 'Strong'.
- Confirm Password:** A text input field.
- Group Name:** A dropdown menu currently showing 'admin'.
- Memo:** A text input field.
- Authority:** A checked checkbox for 'All' and a list of permissions: 'User', 'Live', 'Playback', and 'System', each with a checked checkbox.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

Figure 5-68

Modify user

It is to modify the user property, belonging group, password and rights. See Figure 5-69.

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.

Figure 5-69

5.5.2.2 Group

The group management interface can add/remove group, modify group password and etc. The interface is shown as in Figure 5-70.

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

Authority	User	Live	Playback	System	System Info	File Backup	Storage
User							
Event		Network	Peripheral	AV Parameter	Safety	Maintenance	

Figure 5-70

Add group: It is to add group and set its corresponding rights. See Figure 5-71.

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

The 'Add Group' dialog box features a title bar with a close button. It contains three main input areas: 'Group Name' with a text box and a red 'Must' label; 'Memo' with a text box; and 'Authority' with a radio button for 'All' and a scrollable list of checkboxes for 'File Backup', 'Storage', 'Event', and 'Network'. At the bottom, there are 'Save' and 'Cancel' buttons.

Figure 5-71

Modify group

Click the modify group button, you can see an interface is shown as in Figure 5-72. Here you can modify group information such as remarks and rights.

The 'Modify Group' dialog box has a title bar with a close button. It displays 'Group Name' as a dropdown menu with 'user' selected, 'Memo' as a text box containing 'user group', and 'Authority' with a radio button for 'All' and a scrollable list of checkboxes for 'Live', 'Playback', 'System', and 'System Info'. The 'Live' and 'Playback' checkboxes are checked. At the bottom, there are 'Save' and 'Cancel' buttons.

Figure 5-72

Note

Please refer to 5.5.2.1 Account User Name for how to set ONVIF user.

Refer to Figure 5-73 for the interface of ONVIF User.

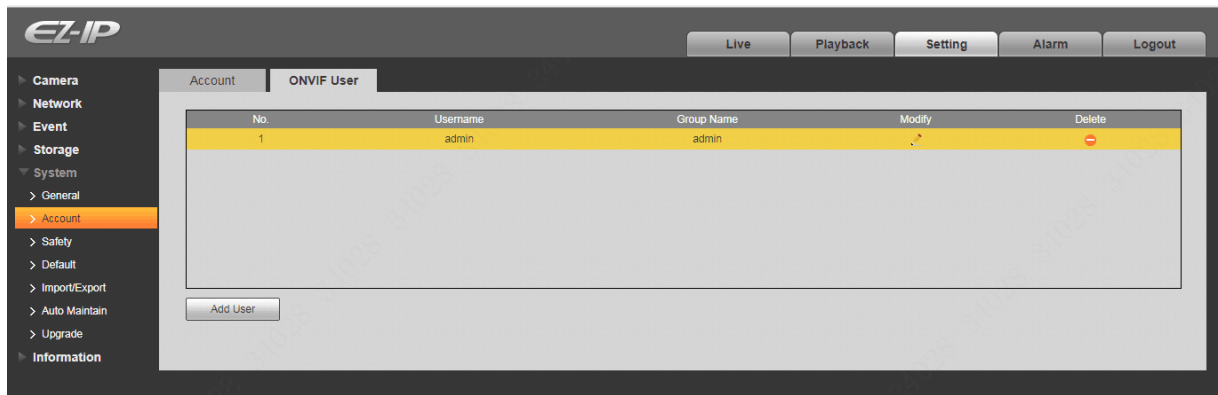


Figure 5-73

Please refer to Figure 5-74 and Figure 5-75 for how to add and modify user respectively.

Add User

Username **Must**

Password

The minimum pass phrase length is 8 characters

Confirm Password

Group Name

Figure 5-74

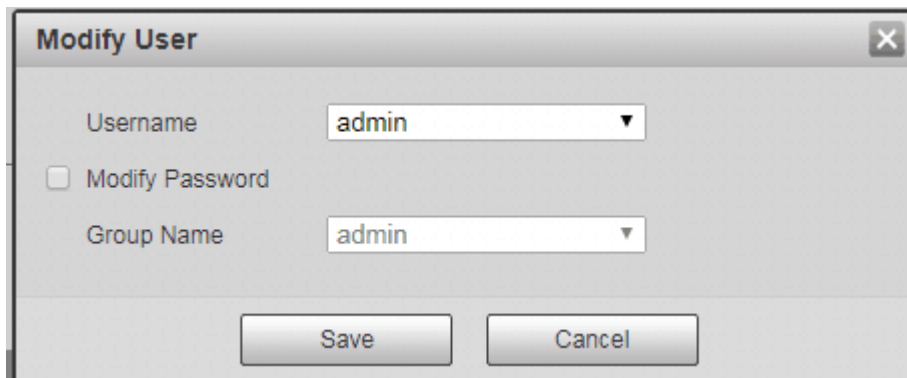


Figure 5-75

5.5.3 Safety

5.5.3.1 IP Filter

The IP filter interface is shown as in Figure 5-76.

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.

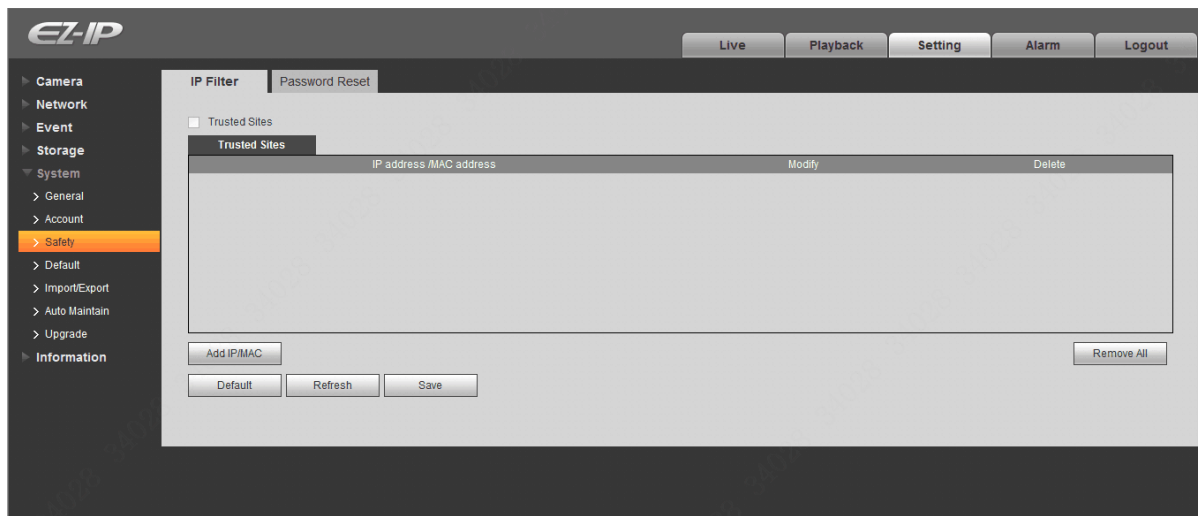


Figure 5-76

5.5.3.2 Password Reset

The function of password reset becomes valid after it is enabled.

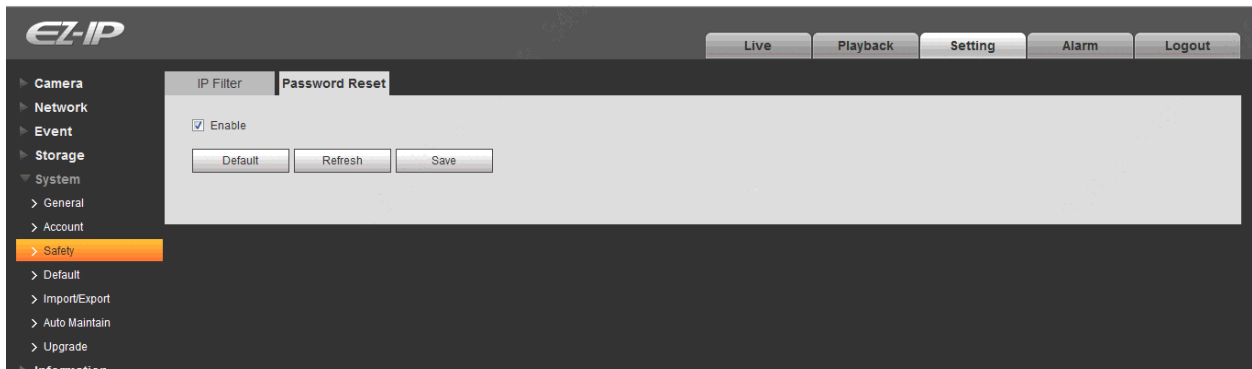


Figure 5-77

5.5.4 Default

The default setup interface is shown as in Figure 5-78.

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

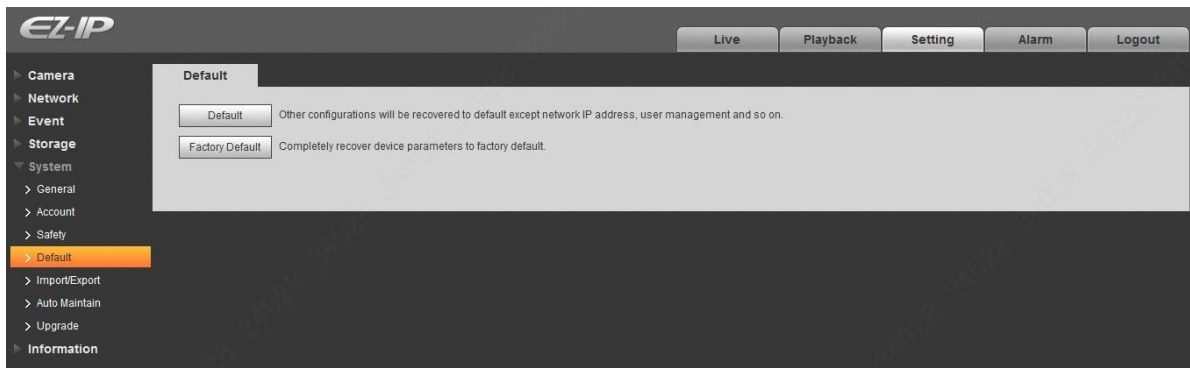


Figure 5-78

5.5.5 Import/Export

The interface is shown as in Figure 5-79.

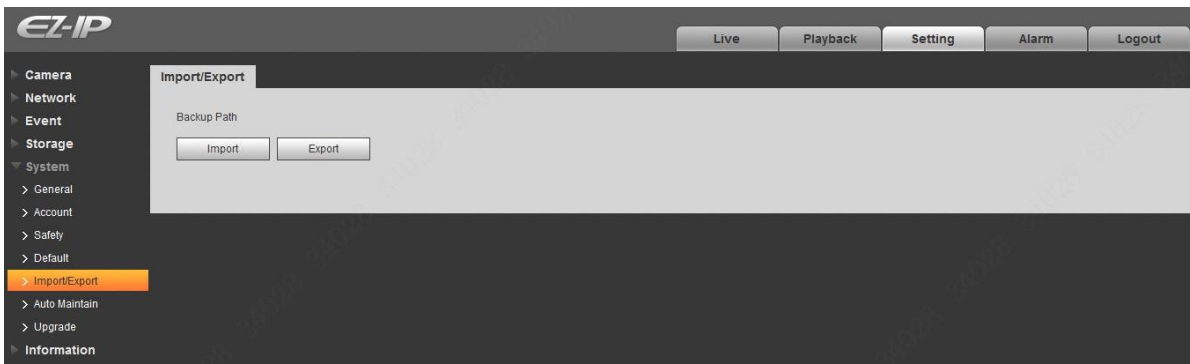


Figure 5-79

Please refer to Table 5-22 for detailed information.

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.

Table 5-22

5.5.6 Auto Maintenance

The auto maintenance interface is shown as in Figure 5-80.

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.

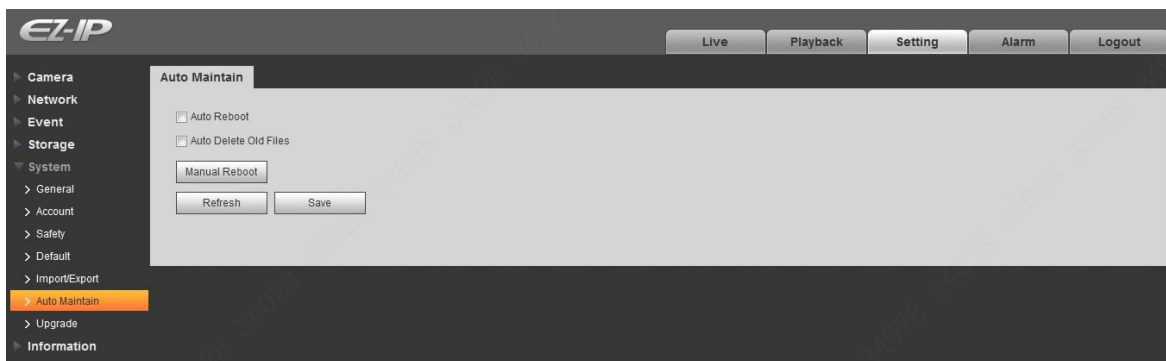


Figure 5-80

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

Table 5-23

5.5.7 Upgrade

The upgrade interface is shown as in Figure 5-81.

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!

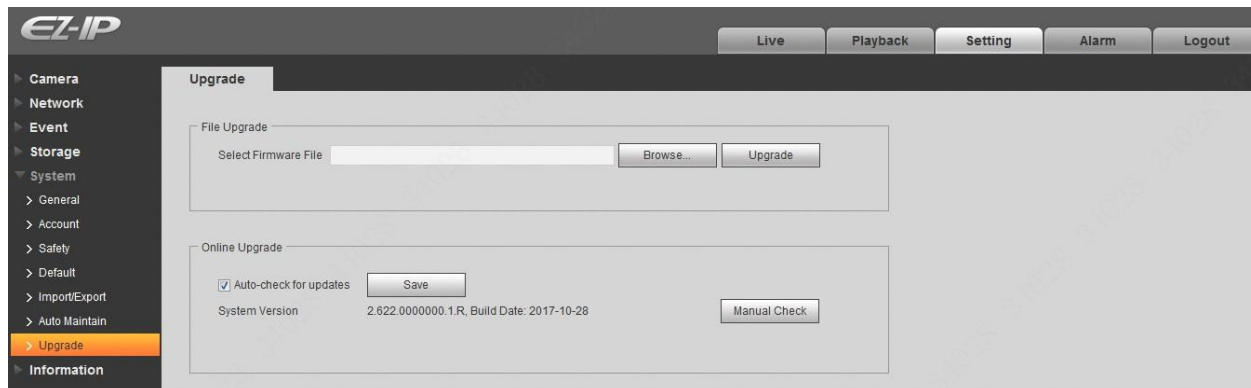


Figure 5-81

5.6 Information

5.6.1 Version

The version interface is shown as in Figure 5-82.

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

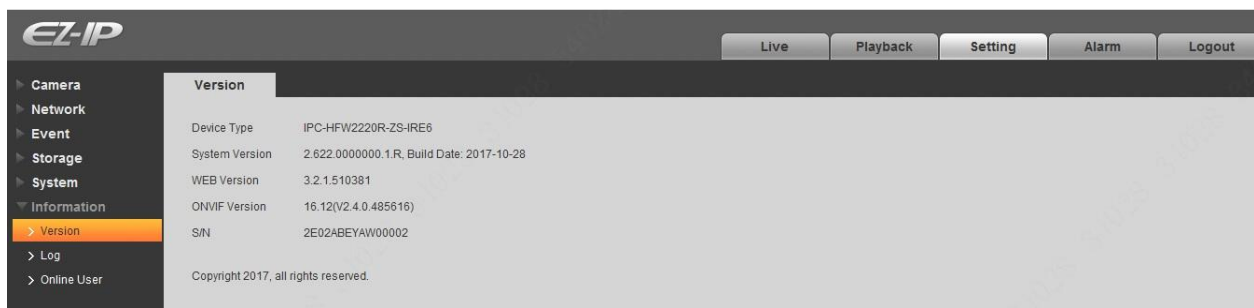


Figure 5-82

5.6.2 Log

Here you can view system log. See Figure 5-83.

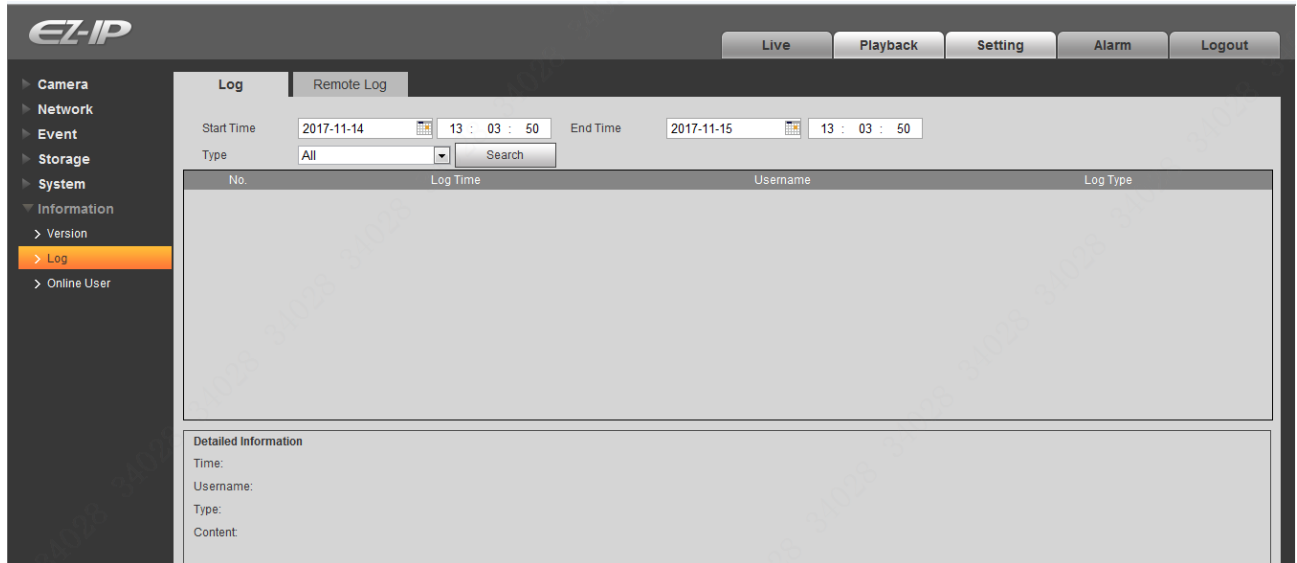


Figure 5-83

Please refer to Table 5-24 for log parameter information.

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.

Table 5-24

5.6.2.1 Remote Log

Note

Select **Remote Log** and you can set the server address, port and device number, then you can enable remote log.

Please refer to Figure 5-84 for more details.

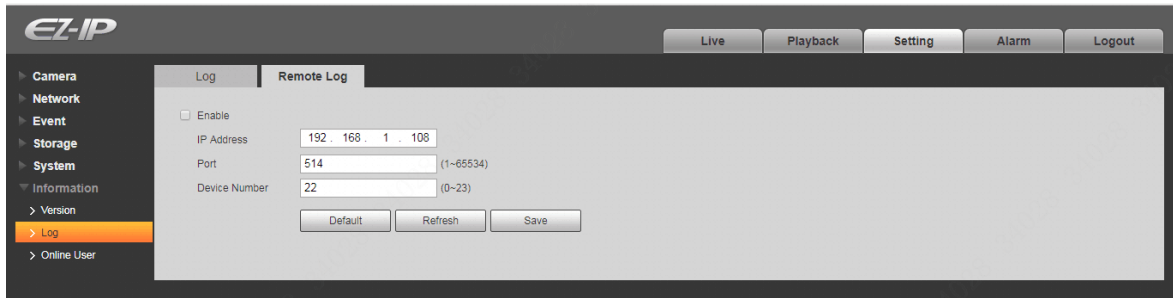


Figure 5-84

5.6.3 Online User

The online user interface is shown as in Figure 5-85.

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

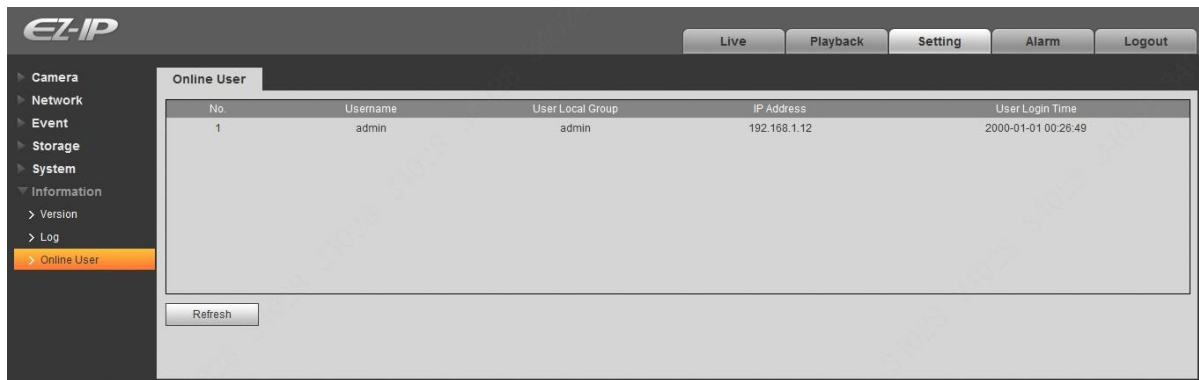


Figure 5-85

6 Alarm

Please note some series product does not support this function.

Click alarm function, you can see an interface is shown as in Figure 6-1

Here you can set device alarm type and alarm sound setup.

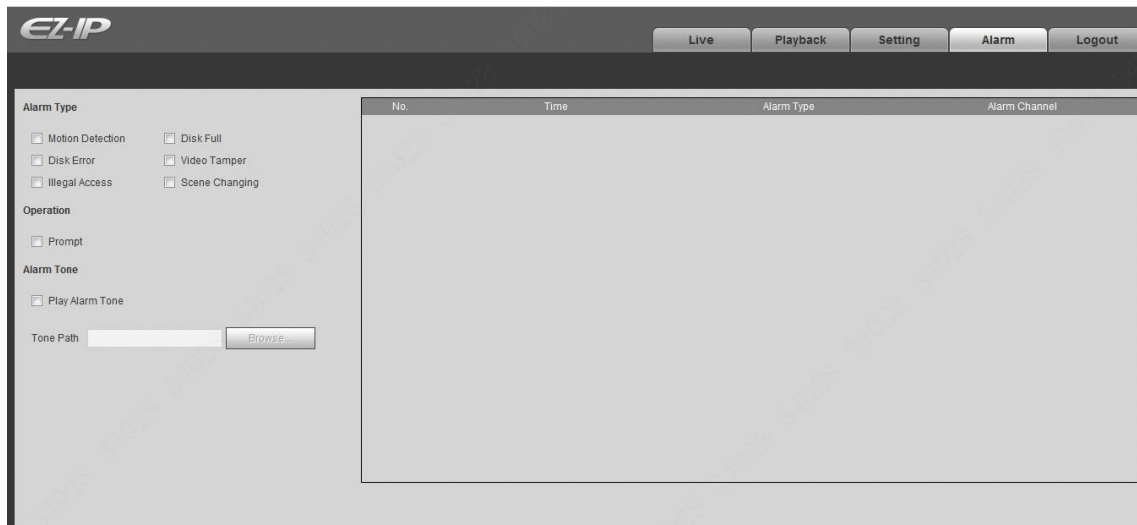


Figure 6-1

Please refer to Table 6-1 for more information.

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.
	Illegal Access	System alarms when there is illegal access.
	Scene Changing	System will record alarm info when triggering scene changing.


Type	Parameter	Function
Operation	Prompt	<p>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.</p> <p>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.</p>
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.

Table 6-1

7 Log out

Click log out button, system goes back to log in interface. See Figure 7-1.

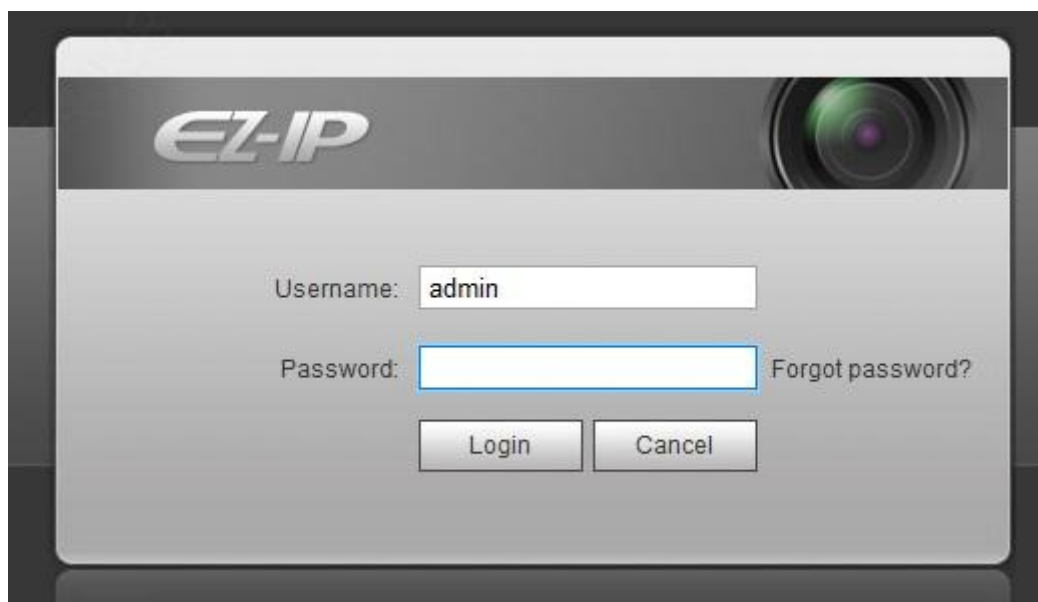


Figure 7-1

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.



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