Network Camera
Operating Instructions

Model No   WV-V1170

Table of Contents

Welcome

Thank you for purchasing our network camera!

This operation manual is designed to be a reference tool for your system.

Open the accessory bag to check the items one by one.

Depending on the model used, the screens shown in the explanations may differ to the actual camera screens.

1. Network Connection

These series network camera products support the Web access and management via PC.
Web includes several modules: monitor channel preview, system configuration, alarm and etc.
Follow the steps listed below for network connection.

- Make sure the network camera has connected to the network properly.
- Network camera IP address and PC IP address shall be in the same network segment. If there is router, set the corresponding gateway and subnet mask.
- Use order ping ***.***.***.*** (* network camera address) to check connection is OK or not.

2. Main Interface Introduction

2.1 Log in

Open IE and input network camera address in the address bar.

For example, if your camera IP is 192.168.0.10, then input http:// 192.168.0.10 in IE address bar. See Figure 2-1.
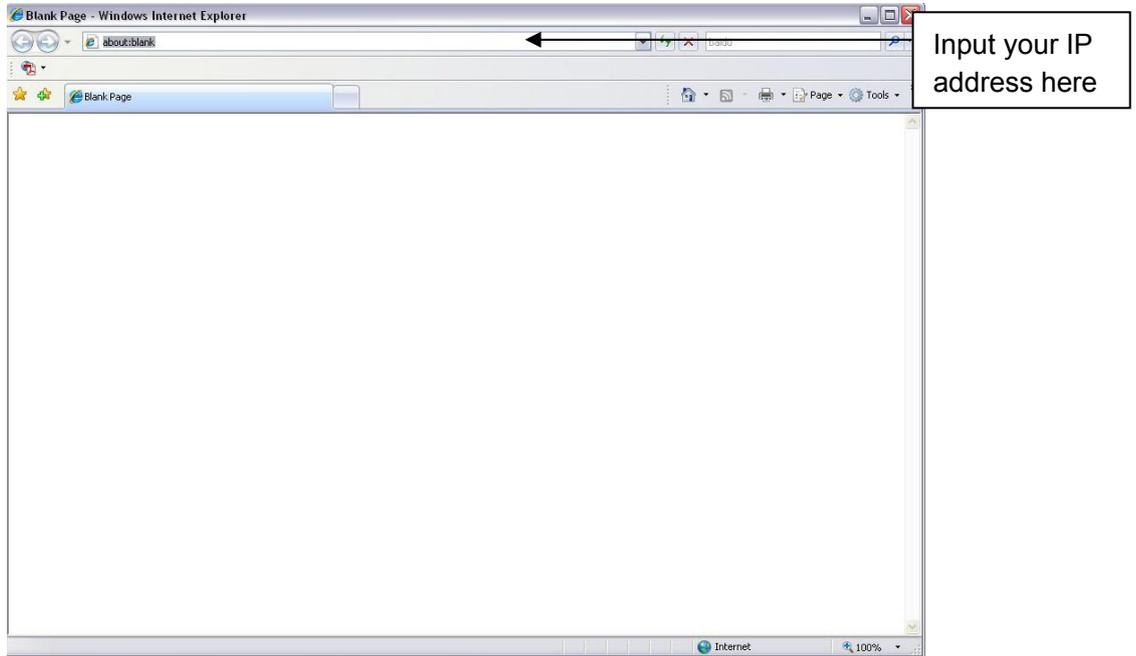
Figure 2-1

The login interface is shown as below. See Figure 2-2.

Input your "User name" and "Password" to have been registered when you access the camera at first.

Note:
- **Refer to "Network Configuration" in Installation Guide manual.**
- **For security reasons, change the password periodically.**
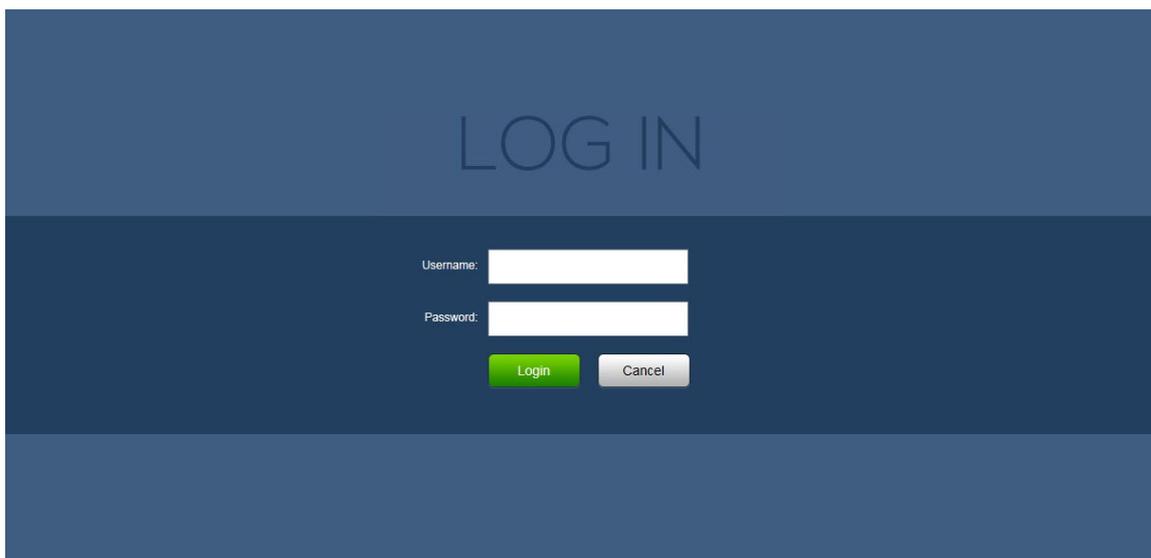
Figure 2-2

If it is your first time to login, you may see the interface window shown as in Figure 2-3
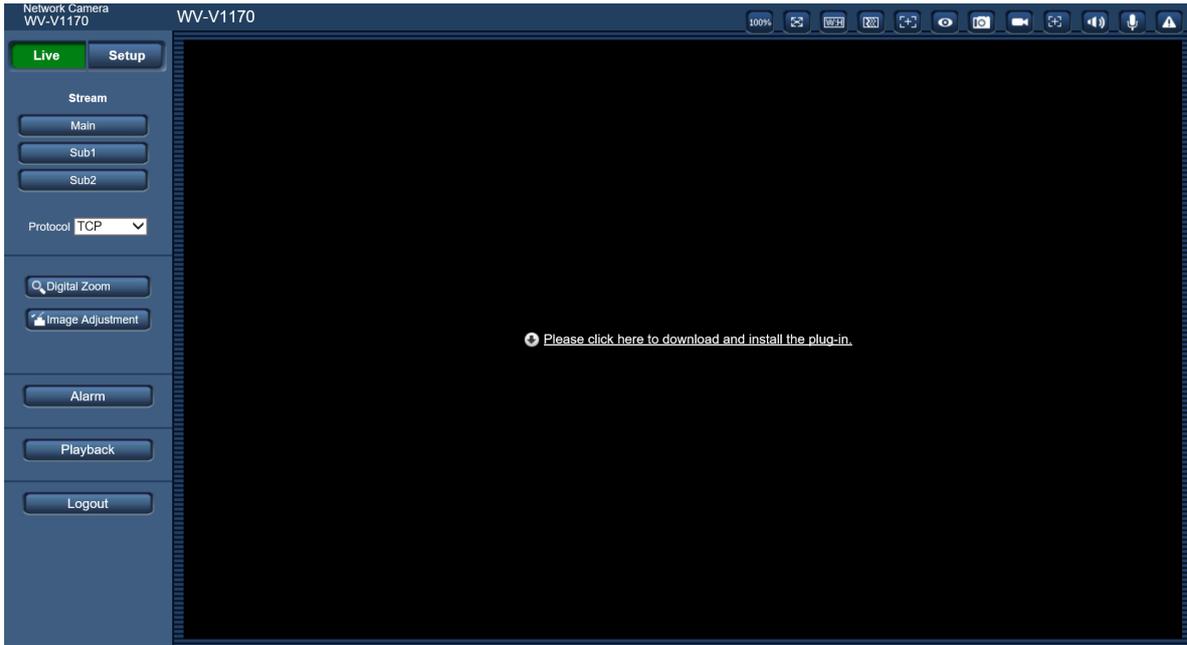
Figure 2-3

Click on "Please click here to download and install the plug-in". The system pops up warning information to ask you whether run or save this plug-in. See Figure 2-4.
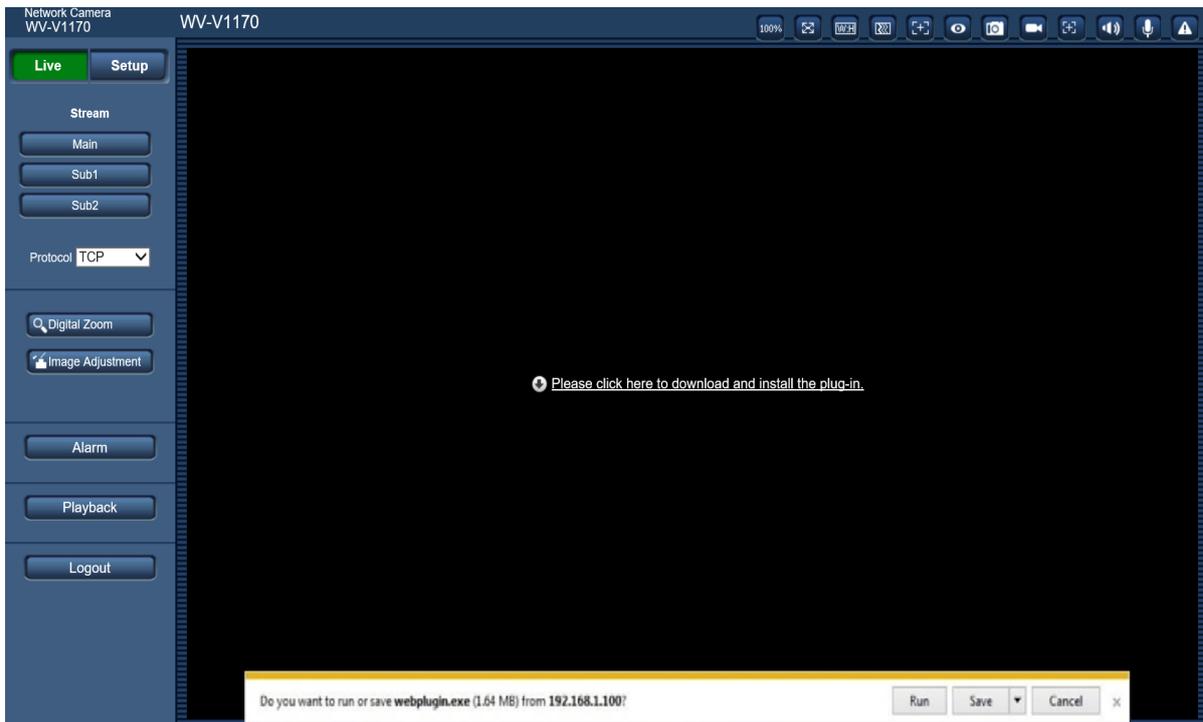
Figure 2-4

You must either run or save the file to local and install it. Follow the following steps. See Figure 2-5.

Note:
• The displayed screens are different by the security settings on the PC.
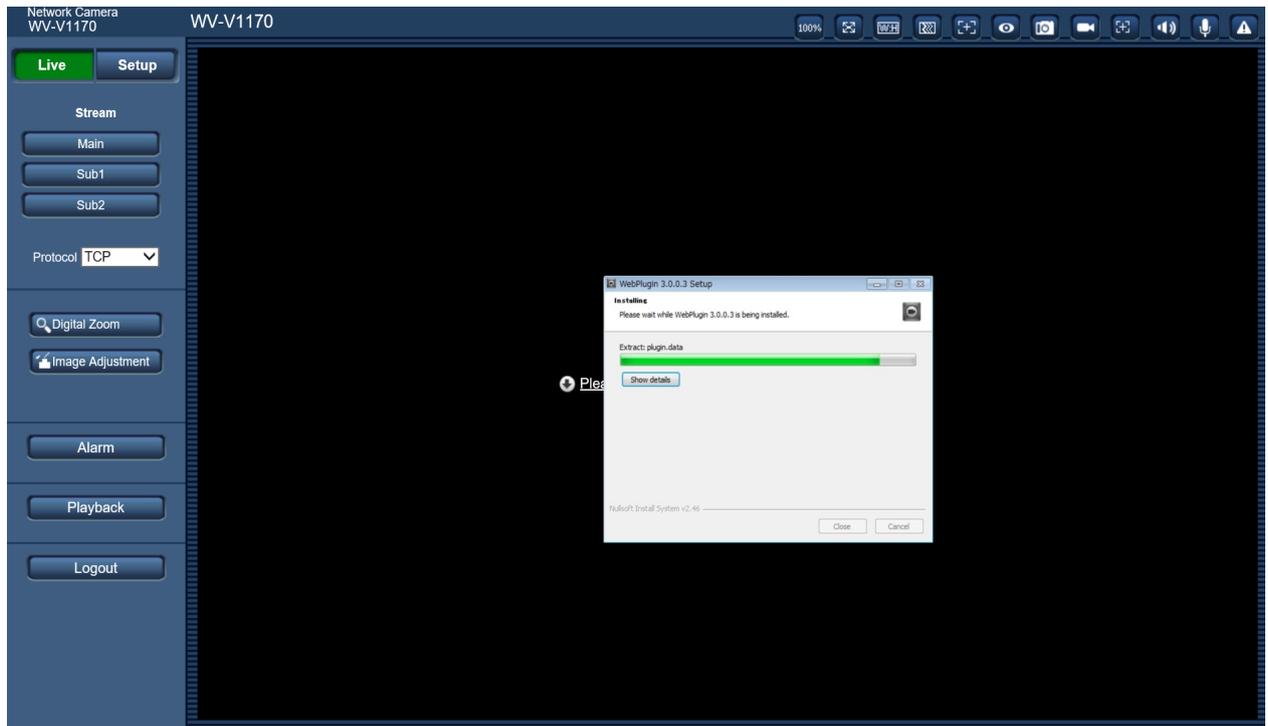
Figure 2-5

When plug-in installation completes, the installation page closes automatically. The web-end will refresh automatically, and then you can view video captured by the camera.
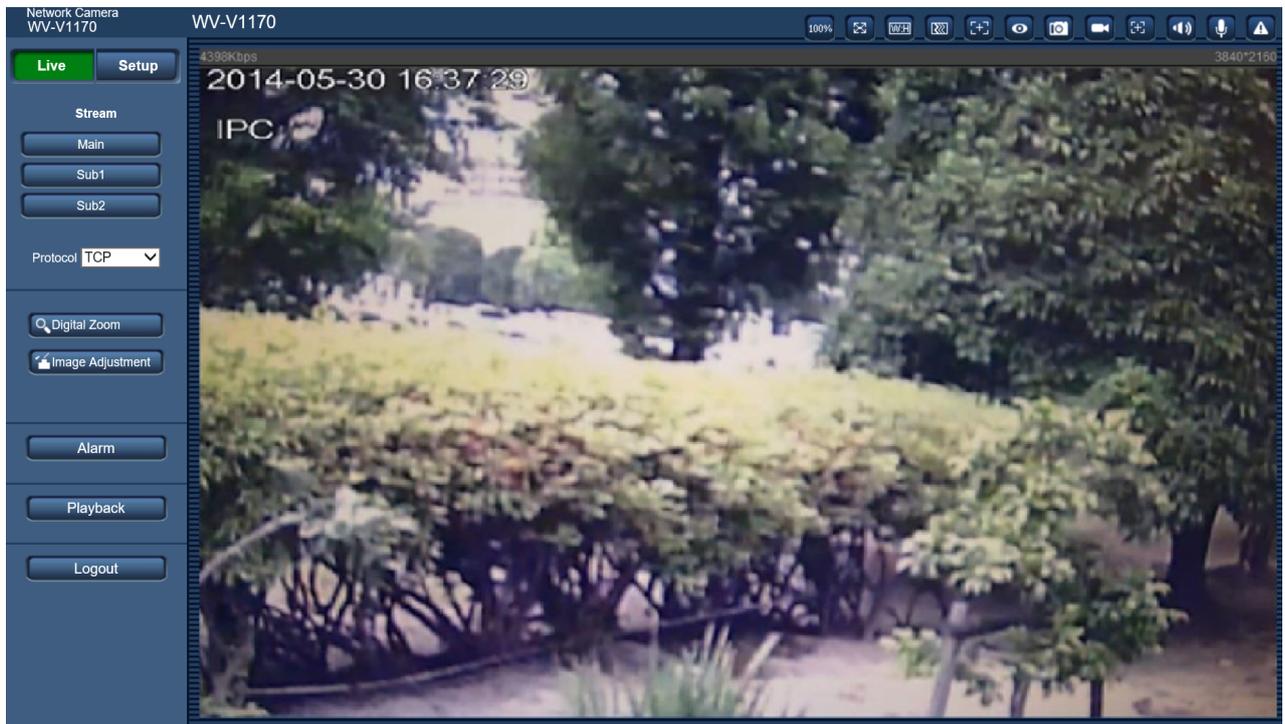
Figure 2-6

2.2 Live Interface

After you logged in, you can see the live monitor window. See Figure 2-7.

Figure 2-7

There are three sections:
- Section 1: Encode setup bar
- Section 2: "System" menu
- Section 3: Window function option bar

2.3 Encode Setup

The encode setup interface is shown as in Figure 2-8.
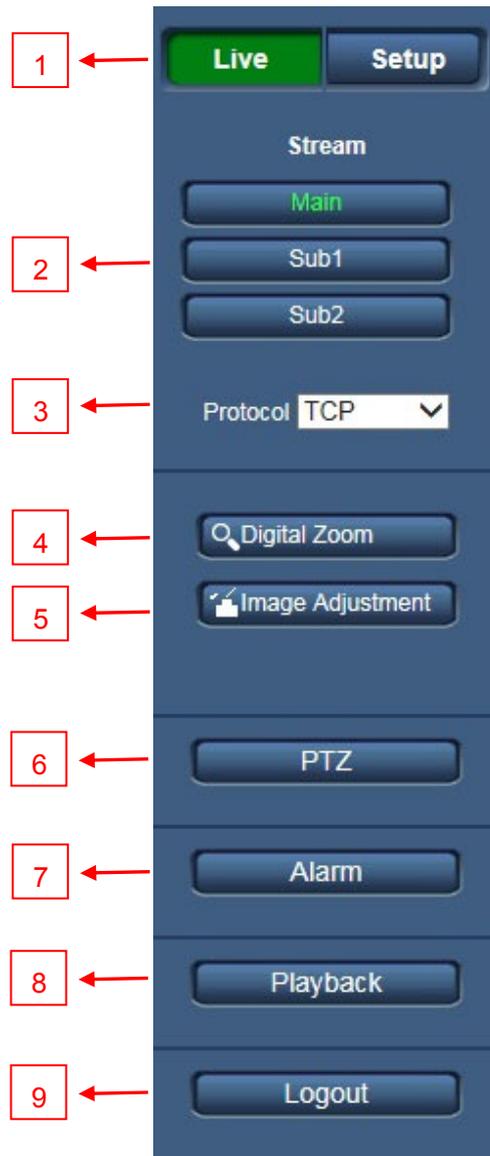
Figure 2-8

Refer to the following sheet for detailed information.

SN	Parameter	Function
1	Menu	You can switch "Live" and "Setup" menu.
2	Stream	You can switch Main, Sub Stream 1 and 2. The compression under distribution is displayed by Stream change.
3	Protocol	You can select stream media protocol from the dropdown list. There are three options: TCP/UDP/Multicast
4	Digital Zoom	• 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.

5	Image Adjustment	You can adjust image quality. See chapter 2.3.1
6	PTZ	You can view direction keys, speed, zoom, focus, iris, preset, tour, pan, scan and pattern. Before PTZ operation, please make sure you have properly set PTZ protocol in PTZ setup. See chapter 3.
7	Alarm	It moves to an alarm setting screen. See chapter 4
8	Playback	It moves to a playback screen. See chapter 5
9	Logout	Click the [Logout] button, system goes back to log in interface.

2.3.1. Image Adjustment

Click the [Image Adjustment] button to open picture setup interface. See Figure 2-9. This interface is displayed under a display of Image Adjustment.
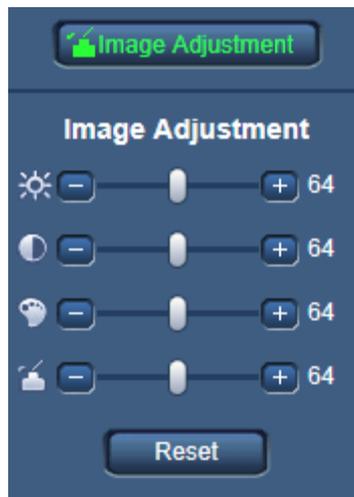
Figure 2-9

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. • Go to [Setup] → [Image/Audio] or [Image] → [Image adjust] to adjust corresponding items.
	◐	It is to adjust monitor video contrast.	
	🎨	It is to adjust monitor video hue.	
	🖌	It is to adjust monitor video saturation.	
	Reset Reset	Restore brightness, contrast saturation and hue to system default setup.	

2.4 System Menu

To display the "System" menu, click the [Setup] button as in Figure 2-10.

.
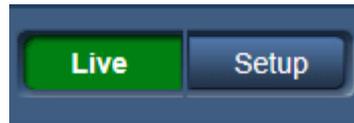
Refer to 7.1 Basic, 7.2 Image/Audio, 7.3 Network, 7.4 Event, 7.5 Storage, 7.6 System, and 7.7 Information for detailed information.

Figure 2-10

2.5 Video Window Function Option

The interface is shown as below. See Figure 2-11.
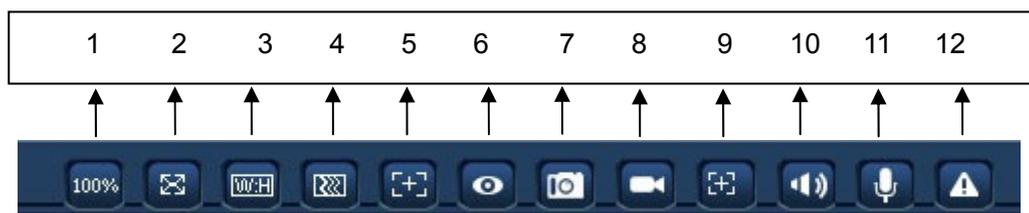
Figure 2-11

Refer to the following sheet for detailed information.

SN	Parameter	Function
1	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.
2	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	Width and Height ratio	Click it to restore original ratio or suitable window.
4	Fluency Adjustment	There are three levels of fluency for you to select. The default is Normal. You may select fluent mode in case connection is slow.

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5	Focus	Click this button and the focus interface appears on encode setup bar, as shown in Figure 2-12 in chapter 2.5.1
6	Display Mode	You can select the display mode to be shown up on the right of the preview interface. See chapter 2.5.2
7	Snapshot	You can snapshot important video by clicking on this button. All images are memorized in system folder: ¥ picture download (default). You can go to [Setup] → [Image/Audio] → [Image] → [Path] to modify the local record save path.
8	Record	For manual record. All records are memorized in [Setup] → [Image/Audio] → [Image] → [Path]. When connected to Panasonic's recorder, record for Sub stream 2 may not work correctly.
9	Easy Focus	Click it, you can see there are two parameters on the preview video：AF Peak and AF Max. AF Peak: It is to display the video definition during the focus process. AF Max: It is the most suitable value for the video definition. The close the AF Peak and AF Max is, the better the focus effect is.
10	Audio output	Turn on or off audio when you are monitoring.
11	Bidirectional talk	Click it to start or end bidirectional talk.
12	Relay-out (Alarm output)	It shows if there is any alarm output, status description is as follows: Green: means there is alarm output. White means alarm is over. Click on the button to force alarm to be on or off.

2.5.1. Focus

Click this button and focus interface appears on the encode setup bar, as shown in Figure 2-12. Refer to the following sheet for detail information to adjust focus configuration.

Note:
• Disable the operation till finishing focus adjustment.

Figure 2-12

Parameter	Function
Focus	Adjust the sharpness length of the lens by clicking or long pressing the [+]/[-] button or moving the slider. Step length (Speed) 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.
Restore All	Reset the lens to zero position to eliminate the accumulative error of lens. Note: Reset when the image adjustment is not clear or operating focus many times.
Refresh	Synchronize the location of drag slider of lens and focus after hardware focusing.

2.5.2. Display Mode

Click the button and display mode interface will show up on the Encode Setup interface .
See Figure 2-13, single click to switch display mode.
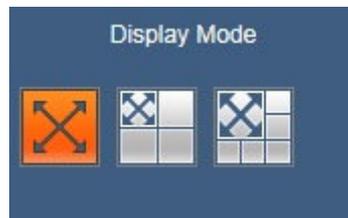
Figure 2-13

Display mode includes three modes which are 1P, 1P+3 and 1P+5.

● 1P: Original picture

● 1P+3: Original picture and three trigger track windows, it can adjust the location and size of

three trigger track windows on the original picture.

● 1P+5: Original picture and five trigger track windows, it can adjust the location and size of five

trigger track windows on the original picture.

3. PTZ Control

PTZ button(Figure 3-0) is available only when the [RS485 operation] in the [PTZ Settings] menu is set to "ON(PTZ)". See ch. 7.6.2. PTZ Settings.
If you click this PTZ button, the screen to control the pan/tilt head will be displayed.

Figure 3-0

Here you can view direction keys, speed, zoom, focus, iris, scan, preset, tour, and pattern. See Figure 3-1.
Note:
• PTZ can be controlled by connecting external devices (Pan/tilt head, etc.) to the RS485 port on the rear of the camera using a RS485 cable. Refer to the operating instructions of the external device to be connected for further information.
• Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to Ch 7.6.2).
• Depending on the external device (the pan/tilt head etc) connected to, some functions may not be available. Refer to the specifications of your external device for more information. Refer to the operating instructions of the external device for further information about its operation.

Parameter	Note
PTZ direction	PTZ supports eight directions: left/right/up/down/upper left/upper right/bottom left/bottom right.
Speed	It controls rotation speed. The longer the step length, the higher the speed. Step length control PTZ, zoom, focus and iris.
Quick Position	Use mouse to draw a box in monitoring video, PTZ will rotate and focus to quickly positioning.
Zoom/focus/iris	Click to increase value and click to decrease value. **Note:** Some cameras don't support iris, please refer to the actual devices for details.

Figure 3-1

Figure 3-2

PTZ setting interface is shown as in Figure 3-3.

Here you can set scan, preset, tour and pattern function.
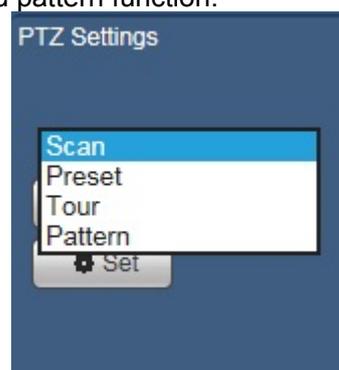
Figure 3-3

3.1 Scan

Scan interface is shown in Figure 3-4.

Figure 3-4

Steps to scan are:

Step 1.   Click on Set button, display icon.

Step 2.   Move via direction key to select left, click on Set Left to set left border of camera

Step 3.   Move via direction key to select right, click on Set Right to set right border of camera.

Step 4.   Complete scan path setup.

3.2 Preset

Preset interface is shown in Figure 3-5.

Figure 3-5

Steps to preset are:

Step 1.   In preset box, input preset value.

Step 2.   Click on Go to, camera rotates to preset position.

Step 3.   Use direction key to rotate camera, and in preset box input preset value.

Step 4.   Click on Add to add a preset. Range of preset relates to PTZ protocol.

3.3 Tour

Tour interface is shown in Figure 3-6.

Figure 3-6

Steps to tour are:

Step 1.   In tour box, input tour path value.

Step 2.   Click on Add. Range of tour relates to PTZ protocol.

Step 3.   In preset box, input preset value.

Step 4.   Click on Add as to add a preset in this tour. If click on Del, it deletes this preset in tour.

Note:

You can add more than one preset here, or delete more than one preset.

3.4 Pattern

Pattern interface is shown in Figure 3-7.

Figure 3-7

Steps to pattern are:

Step 1.   In pattern box input pattern value, click on Add.

Step 2.   Click on Start, to zoom, focus, iris or move.

Step 3.   Click on Stop to finish setup of one pattern.

4. Alarm

Click alarm function, you can see an interface is shown as in Figure 4-1.
Here you can set device alarm type and alarm sound setup.
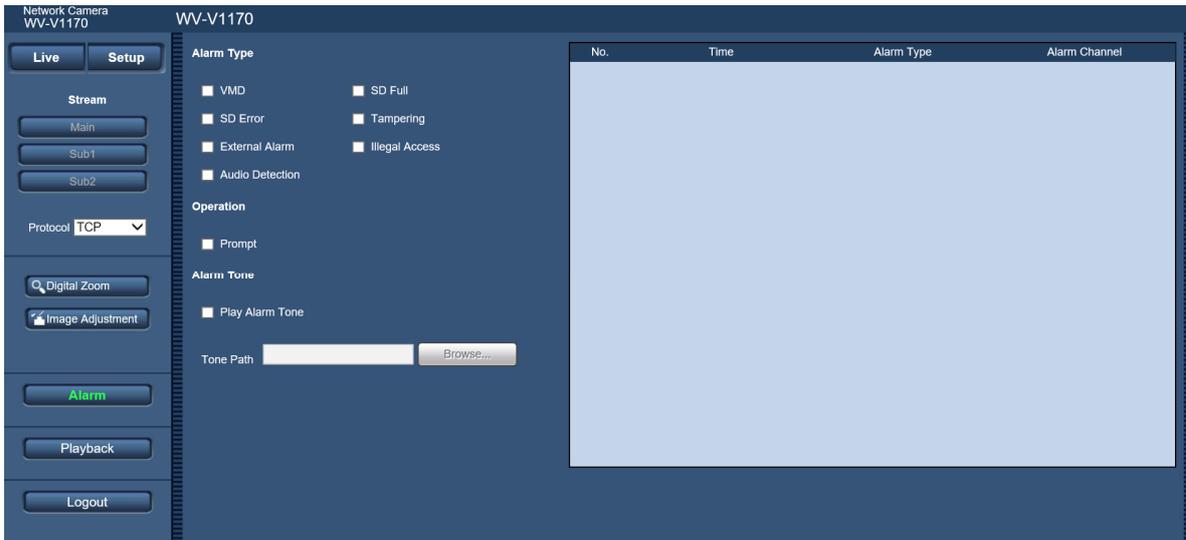
Figure 4-1

Refer to the following sheet for detailed information.

Type	Parameter	Function
Alarm Type	VMD	System alarms when VMD alarm occurs.
	SD Full	System alarms when SD memory card is full.
	SD Error	System records alarm info when SD memory card error happens.
	Tampering	System alarms when tampering alarm occurs.
	External Alarm	System records alarm when alarm inputs the device.
	Illegal Access	System alarms when there is illegal access.
	Audio Detection	System records alarm when audio detection occurs.
Operation	Prompt	When alarm is triggered, there will be displayed ![icon] on the Alarm menu and system automatically records alarm info. The icon disappears when user click on the Alarm menu bar. ![Alarm button] **Note:** If alarm interface is displayed, when alarm is triggered, there will be no image prompt, but alarm record will be in list on the right.
Alarm Tone	Play Alarm Tone	When alarm occurs, system auto generates alarm audio. The audio supports customized setup.
	Tone Path	Here you can specify alarm sound file.

5. Playback

Web client playback supports video playback and picture playback.

Note:
· Before playback, user shall set storage management as in Chapter 7.5.Storage.

5.1 Playback

The playback interface is shown as in Figure 5-1.
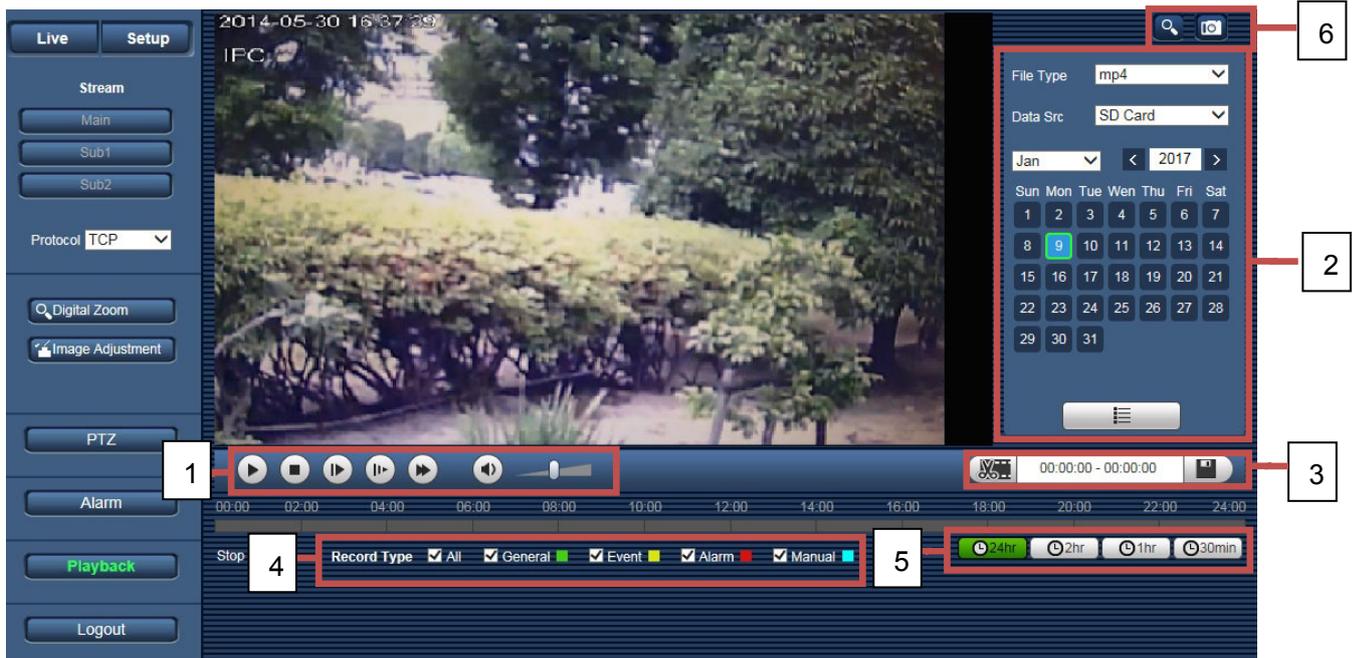
Figure 5-1

There are four sections:
· Section 1: Function of play
· Section 2: Playback file
· Section 3: Playback cut
· Section 4: Record type
· Section 5: Progress bar
· Section 6: Assistant function

5.1.1. Function of Play

The function of play is shown as in Figure 5-2.
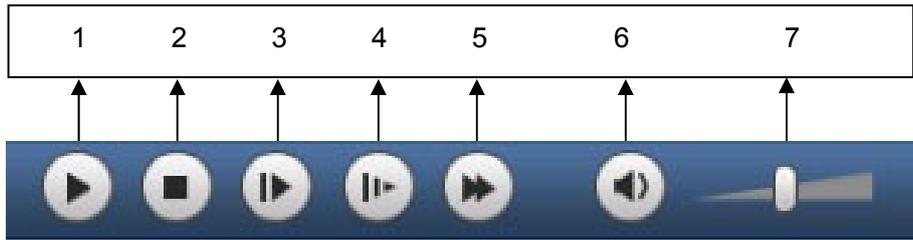
Figure 5-2

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. Next 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. Fast	Click on this button to play quickly.
6. Sound	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.

5.1.2. Playback File

In calendar, blue date represents data currently has video record or snapshot. See Figure 5-3.
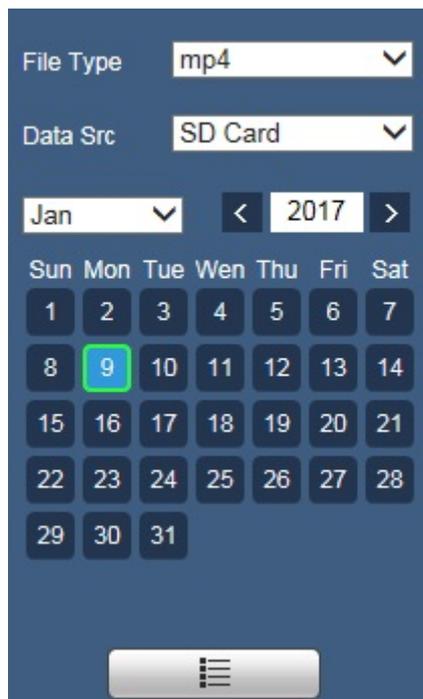
Figure 5-3

Parameter	Function
File Type	• Select "mp4", as video playback. • Select "jpg" as picture playback.
Data Source	Select only SD card.

Step1

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.

Step2

Click on certain time on progress bar, playback starts from this time. See Figure 5-4.

Figure 5-4

Step3

Click on file list ⊞ in Figure 5-3, select date file will be displayed in list.

Step4

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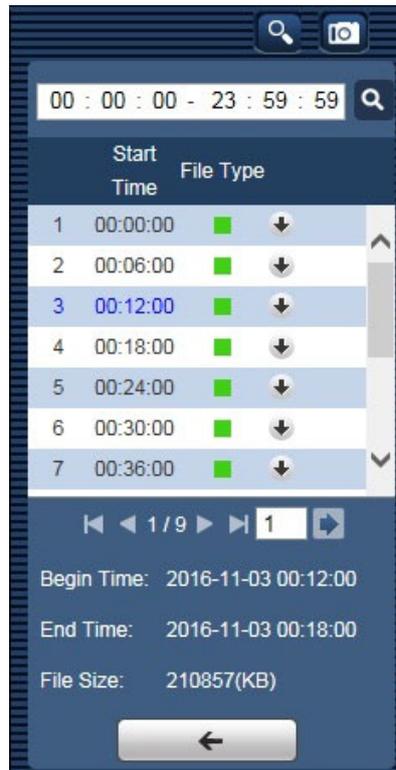
Figure 5-5

Parameter	Function
🔍 Search	It means records within searched start time and end time on the date.

Parameter	Function
⬇ Download	Record type is "mp4", click on the [Download] button and download file to path in Chapter 7.2.1.5.
← Back	Click on the [Back] button to go to calendar interface.

5.1.3. Playback Cut

Note:

· The playback cut function automatically pauses playing records since the playback cut and playback functions cannot be used at the same time.

Step1

Click on the [Start Time] to cut on time axis. This time must be within progress bar range.

Step2

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

Step3

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

Step4

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

Step5

Click on the [Save] button to save file cut to path in Chapter 7.2.1.5. See Figure 5-6.

Figure 5-6

5.1.4. 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 5-7.
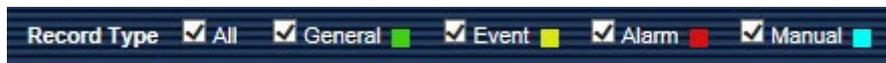
Figure 5-7

5.1.5. Progress Bar

Figure 5-8

Parameter	Function
⏱24hr 24 hours	Click on it, means video in past 24 hours.

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

5.1.6. Assistant Function

Video playback assistant function is shown in Figure 5-9.

Figure 5-9

Parameter	Function
🔍 Zoom in	• 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, click on 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 Chapter 7.2.1.5.

5.2 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

See Figure 5-10.
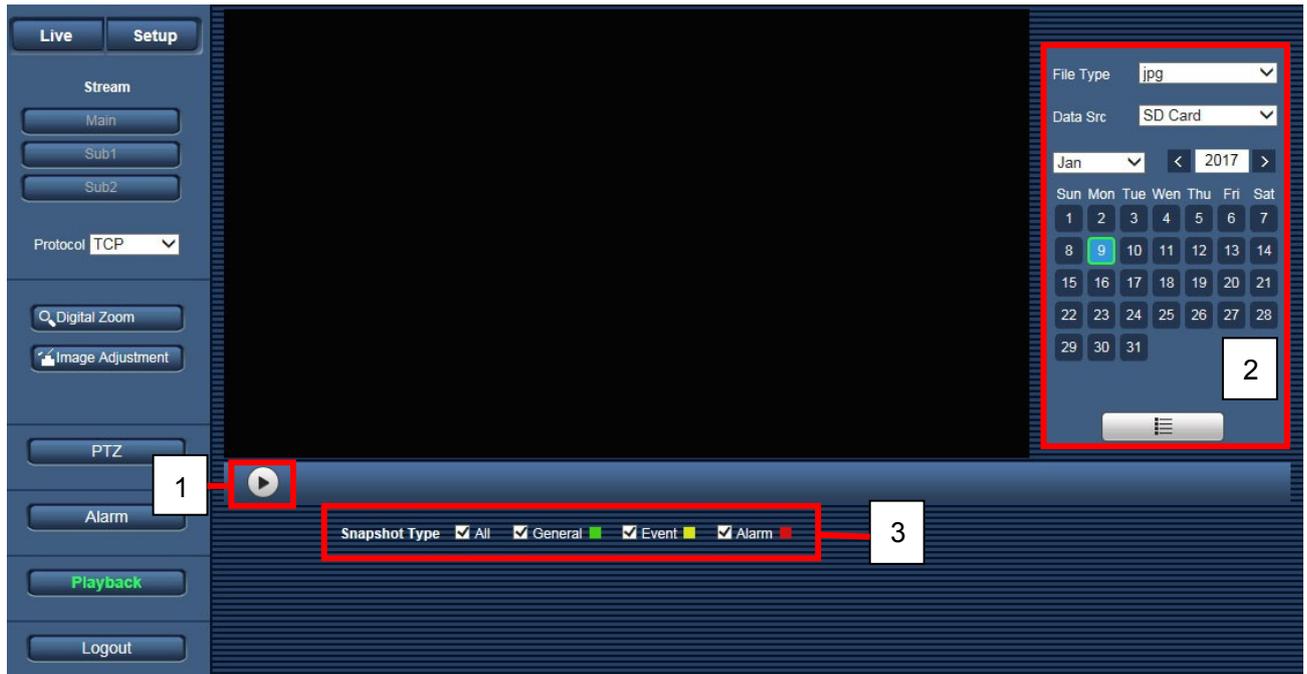
Figure 5-10

5.2.1. Play

Figure 5-11

The play icon indicates that the playback is paused or no picture is played. When the icon is clicked

to resume the playback, the icon will become .

5.2.2. Playback File
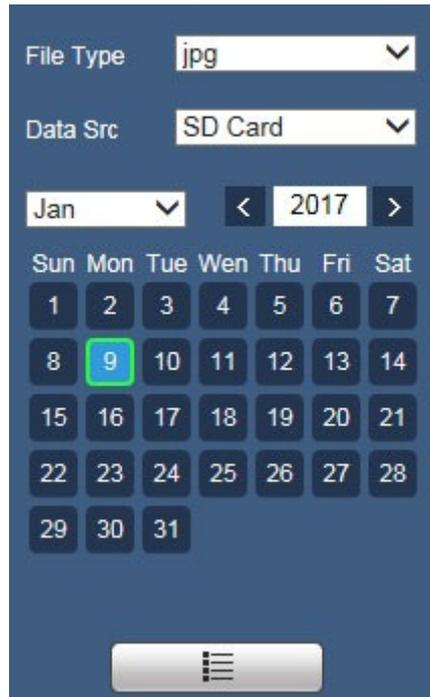
Figure 5-12

Step1

Click on file list [icon], select snapshot file of the date.

Step2

Double click on file in list, to play this snapshot. See Figure 5-13.

Parameter	Function
[icon] Search	It means all snapshot files within the start time and end time of selected date.
[icon] Download	Click on the [Download] button to download snapshot file to local.
[icon] Back	Click on the [Back] button to return to calendar interface and re-select time.
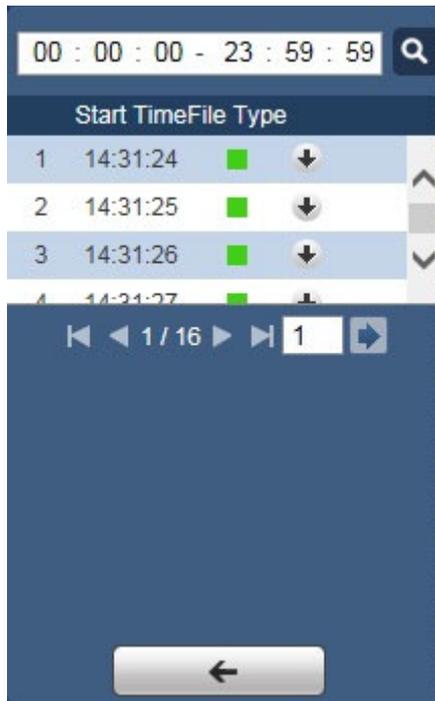
Figure 5-13

5.2.3. Snapshot Type

After checking snapshot file type, in file list only display file of selected type. See Figure 5-14.

Figure 5-14

6. Log out

Click the [Logout] button in Encode setup of "Live" window, the system goes back to the login interface.

See Figure 6-1
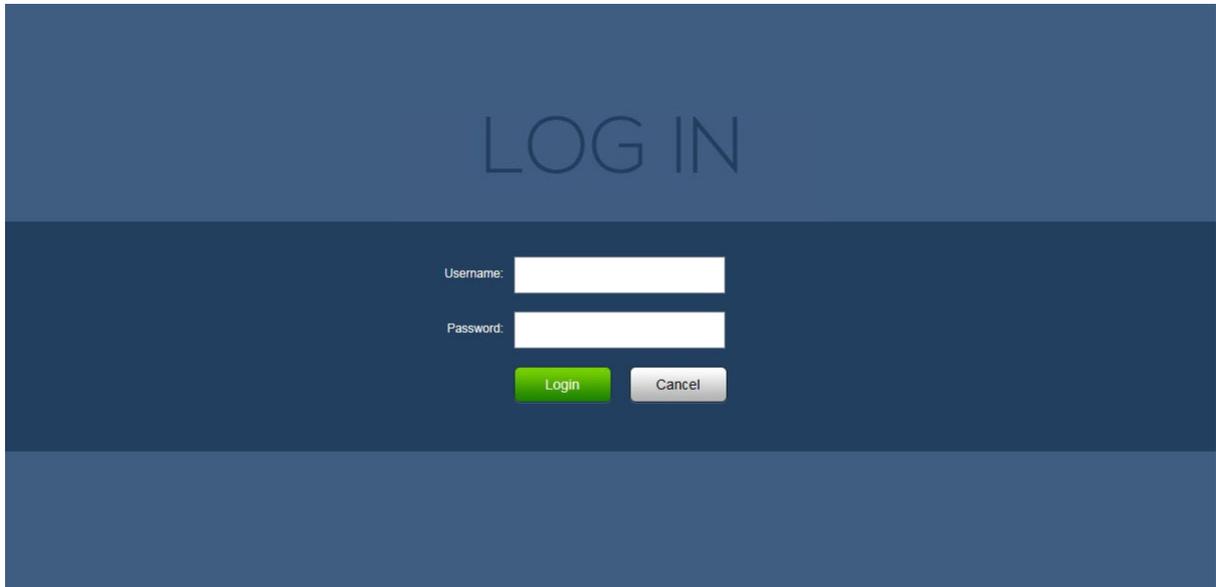
Figure 6-1

7. Setup

7.1 Basic

The [Basic] tab includes the local host setup and the date/time setup.
The date and time interface is shown as in Figure 7-1.

Figure 7-1

Refer to the following sheet for detailed information.

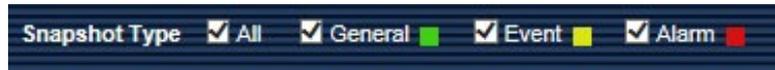| Parameter	Function
Camera title	It is to set device name.
Date/time	Set date and time. Click the [Sync PC] to set PC time to camera.
Time display format	There are two options: 24-H and 12-H.
Date/Time display format	Here you can select date format from the dropdown list.
Time zone	The time zone of the device.
Summer time(daylight saving)	Here you can set the begin time and end time of the daylight saving time. You can set according to the date format or according to the week format.
Start time & date End time & date	You can set "Start time & date" and "End time & date" for Summer time(daylight saving).
Camera title/Time on screen	Link Overlay ("Image/Audio" or [Image] →[Image/Audio] or [Image] →[Overlay])
Language	You can select the language from the dropdown list.
Video Standard	This is to display video standard such as NTSC/PAL. If this is changed, the camera reboots automatically.
TVOut	You can open or close the function, it can only be supported by the devices with TV Out.

NTP Setup	You can check the box to enable NTP function.
NTP Server	You can set the time server address.
NTP Port	It is to set the time server port.
Update period	It is to set the sync periods between the device and the time server.

7.2   Image/Audio

7.2.1.   Image/Audio

7.2.1.1   Image

The video bit stream interface is shown as below. See Figure 7-2.
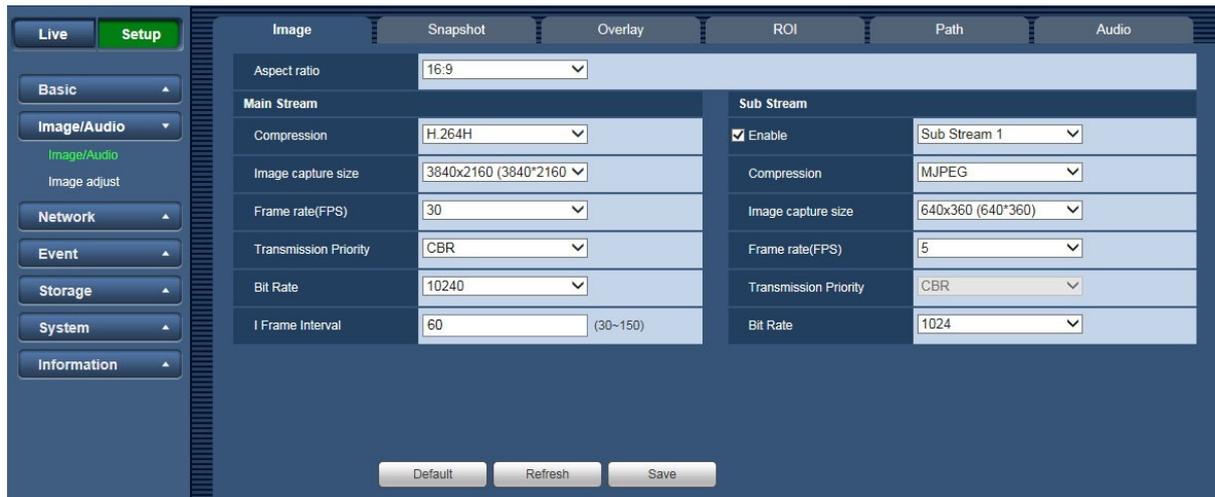
Figure 7-2

Refer to the following sheet for detailed information.

Parameter		Function
Aspect ratio		Select an image aspect ratio from 16:9 and 4:3.
Main Stream	Compression	There are five options: H.264, H.264B, H.264H and H.265 encode. • H.264: Main profile encode mode. • H.264B: base line profile encode mode. • H.264H: High profile encode mode. • H.265: Main profile encode mode.
	Image capture size	There are multiple resolutions. You can select from the dropdown list. • For each resolution, the recommended bit stream value is different.
	Frame rate(FPS)	NTSC: 1-30fps, PAL: 1-25fps The frame rate may vary due to different resolutions. Note: ・When Aspect ratio is set to 4:3 and Image capture size is set to 4000x3000, max frame rate is 20 fps.
	Transmission Priority	There are two options: VBR and CBR. Note that you can set video quality in VBR mode.

	Bit Rate	• In VBR, the bit rate here is the max value. In CBR, it is a fixed value. See reference bit stream for recommended value.
	I Frame Interval	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Recommended value is frame rate.
Sub Stream 1	Compression	There are five options: H.264, H.264B, H.264H, H.265 and MJPEG encode. • H.264: Main profile encode mode. • H.264B: base line profile encode mode. • H.264H: High profile encode mode. • H.265: Main profile encode mode. • MJPEG: In this encode mode, the video needs larger 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.
	Image capture size	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different.
	Frame rate(FPS)	NTSC: 1-30fps., PAL: 1-25fps • The frame rate may vary due to different resolutions.
	Transmission Priority	There are two options: VBR and CBR. Note that you can set video quality in VBR mode. Under MJPEG mode, only CBR is available.
	Bit Rate	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. Refer to recommend bit rate for the detailed information.
	I Frame Interval	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Recommended value is frame rate. (except MJPEG)
Sub Stream 2	Compression	There are four options: H.264, H.264B, H.264H and H.265 encode. • H.264: Main profile encode mode. • H.264B: base line profile encode mode. • H.264H: High profile encode mode. • H.265: Main profile encode mode.
	Image capture size	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different.
	Frame rate(FPS)	NTSC: 1-30fps., PAL: 1-25fps • The frame rate may vary due to different resolutions.
	Transmission Priority	There are two options: VBR and CBR. Note that you can set video quality in VBR mode.

	Bit Rate	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. Refer to recommend bit rate for the detailed information.
	I Frame Interval	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Recommended value is frame rate.

7.2.1.2   Snapshot

The [Snapshot] interface is shown as in Figure 7-3.

Figure 7-3

Refer to the following sheet for detailed information.

Parameter	Function
Snapshot Type	There are two modes: General (schedule) and Event (activation).
Image capture size	It is the same with the resolution of the Main Stream.
Quality	It is to set the image quality. There are six levels.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s. There is "Customized" (1-50000S) mode.

7.2.1.3 Overlay

The [Overlay] interface is shown as in Figure 7-4, Figure 7-5, Figure 7-6, Figure 7-7 and Figure 7-8.
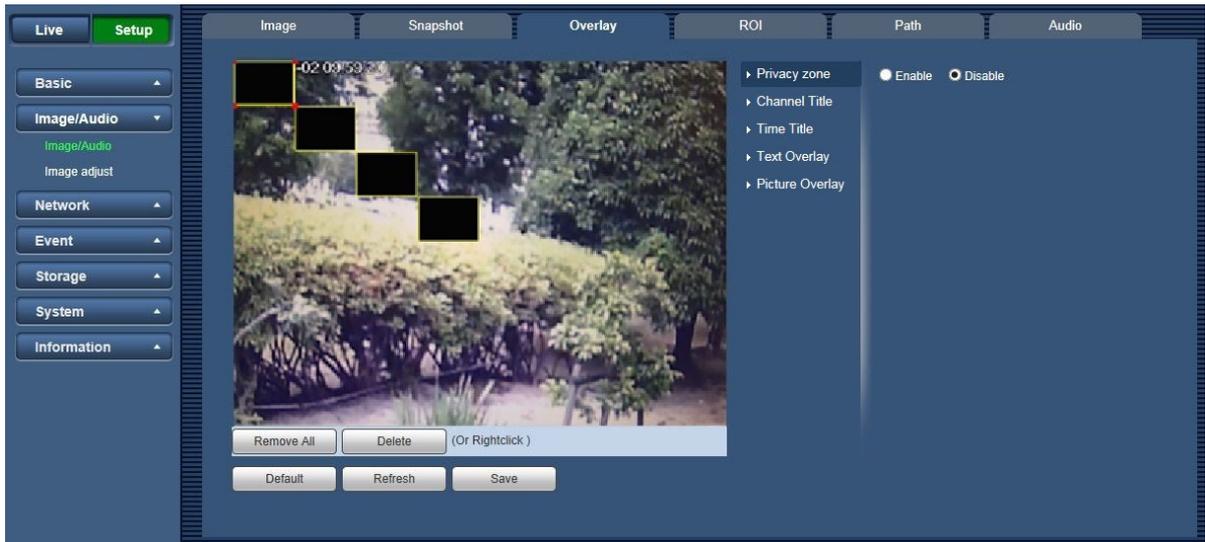
Figure 7-4
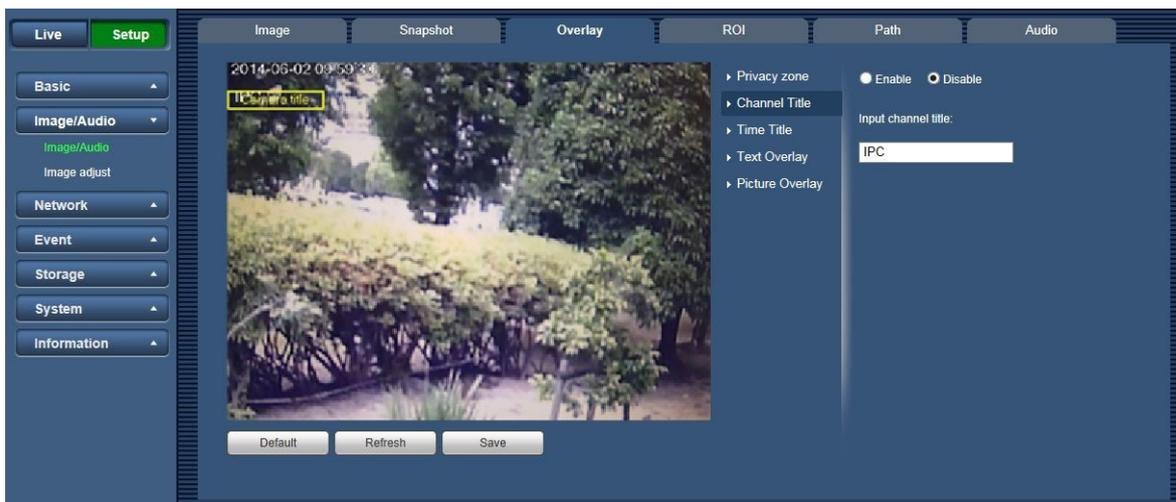
Figure 7-5
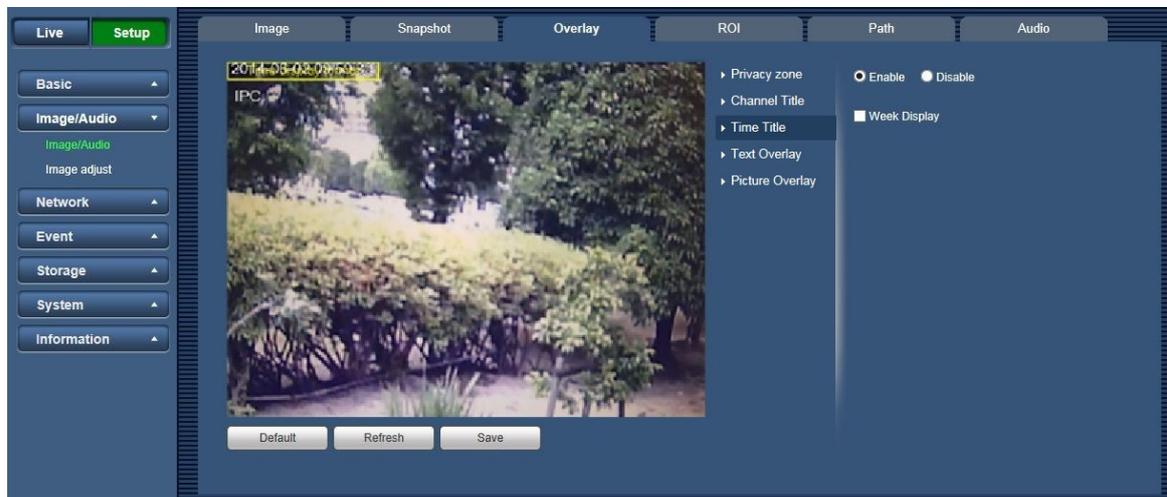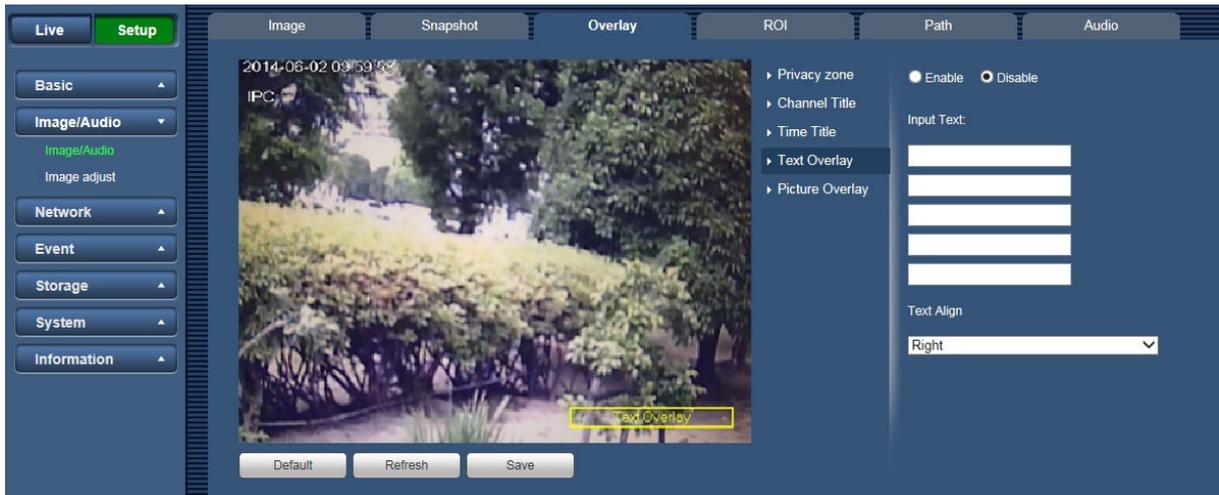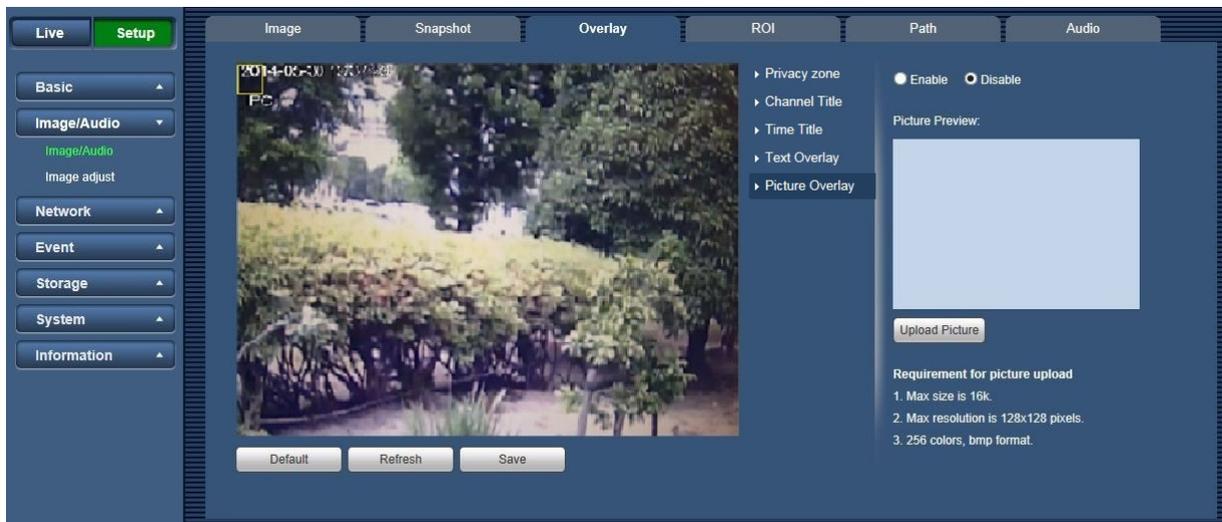
Figure 7-6

Figure 7-7

Figure 7-8

Refer to the following sheet for detailed information.

Parameter	Function
Privacy zone	• Here you can privacy mask the specified video in the monitor video. • System max supports 4 privacy mask zones. See Figure 7-4
Channel Title	• You can enable this function so that system overlays channel information in video window. • You can use the mouse to drag the channel title position. See Figure 7-5
Time Title	• You can enable this function so that system overlays time information in video window. • You can use the mouse to drag the time title position. See Figure 7-6

Text Overlay	• 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. See Figure 7-7
Picture Overlay	• You can enable this function to display overlay picture. Check "Disable" to turn it off. • Click on the [Upload Picture] button to overlay local picture into monitoring window. You can drag the yellow box to move it. See Figure 7-8 **Note:** You cannot enable text and picture overlay at the same time.

7.2.1.4 ROI

The ROI function can change the data size of images before sending them by performing operations such as increasing the resolution of important monitoring areas in the image and reducing the resolution of other areas.
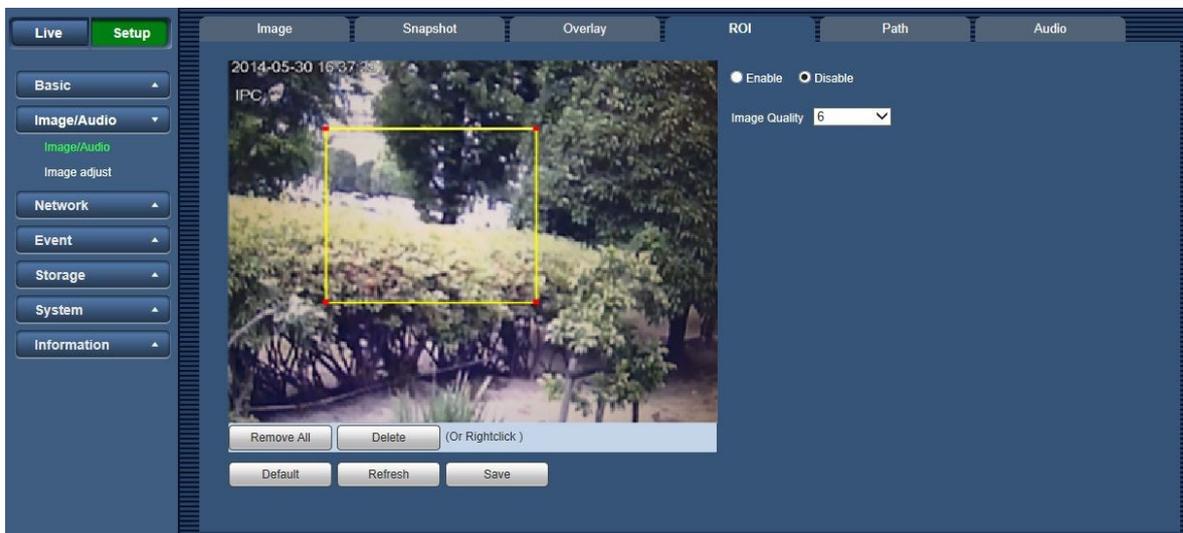
Figure 7-9

Parameters	Note
Enable	Check "Enable", then it will display the ROI in the video monitoring window; Check "Disable", then it won't display.
Image Quality	Set the image quality of ROI, ranging from 1～6 (best), default is 6. Able to set area block, max 4 areas.

7.2.1.5 Path

The storage path interface is shown as in Figure 7-10.

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

• The default monitor image path is C:\Users\Admin\WebDownload\LiveSnapshot.
• The default monitor record path is C:\ Users \Admin\WebDownload\LiveRecord.
• The default playback snapshot path is C:\ Users \Admin\WebDownload\PlaybackSnapshot.*
• The default playback download path is C:\ Users \Admin\WebDownload\PlaybackRecord.*
• The default playback cut path is: C:\ Users \Admin\WebDownload\VideoClips.*

Note:

- Admin is locally logged in PC account.

Click the [Save] button to save current setup.

Figure 7-10

7.2.1.6 Audio

The [Audio] interface is shown as below. See Figure 7-11.

Figure 7-11

Refer to the following sheet for detailed information.

Parameter	Function
Audio enable	Check Enable: the stream is A/V composite stream, otherwise it contains video only. Note: Audio can be enabled only when video is enabled.

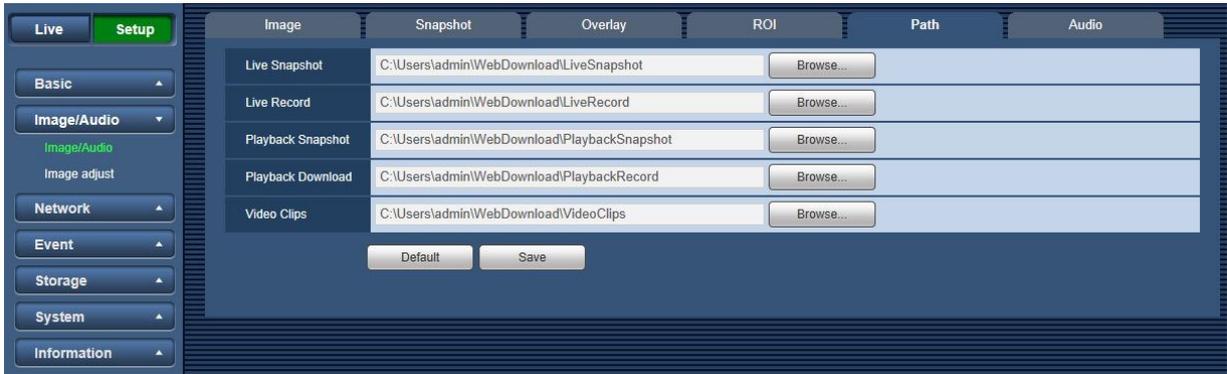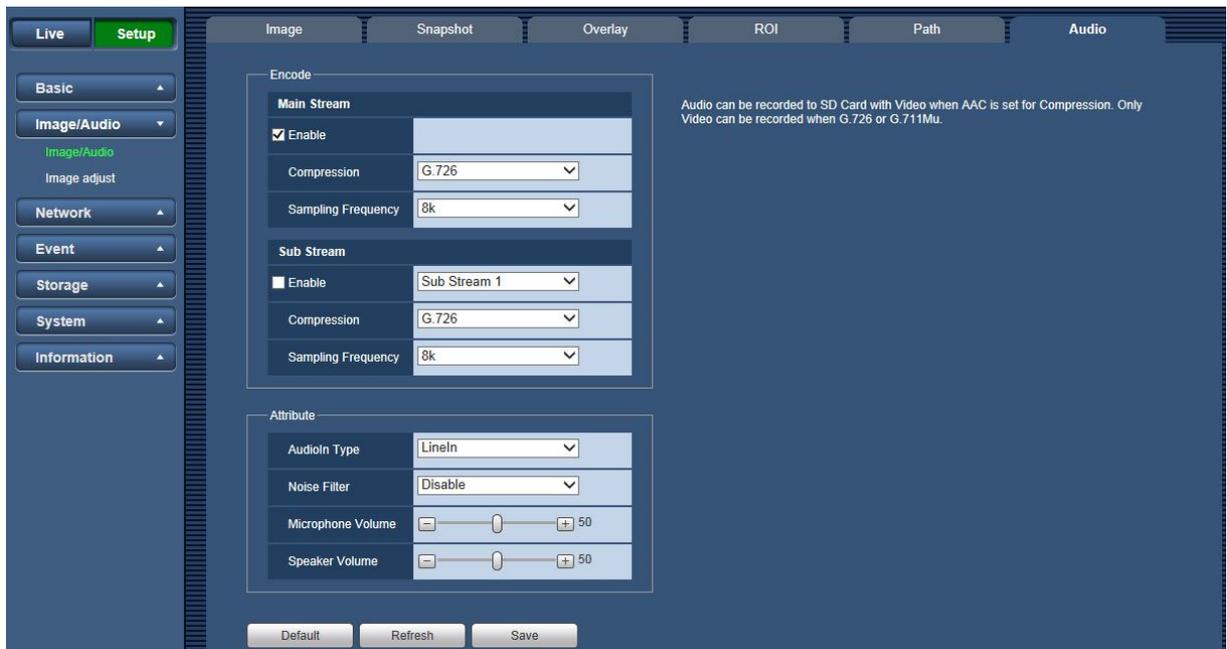| Compression	The compression includes G.711Mu, G.726 and AAC.
	Note:
	• The audio encode mode set here can make both audio stream and bidirectional talk valid at the same time.
	Only AAC is supported for recording audio to SD card.
Sampling frequency	It includes 8k,16k and 32k. It is 8k by default.
	It can be selected only 8k when selecting G.726 and G.711Mu.
Audio in type	It is to set audio input type from LineIn and Mic.
	Device needs to connect external audio input source under LineIn mode,
	and it doesn't need to connect external audio input source under Mic mode.
Noise filter	It is to set to enable noise filter function. It is disabled by default.
Microphone volume	It is to adjust the volume of the microphone; the value range is from 0 to 100.
Speaker volume	It is to adjust the volume of the speaker; the value range is from 0 to 100.

7.2.2. Image adjust

Here you can view device property information. Slight differences may be found due to different network camera series. The setups become valid immediately after you set.

7.2.2.1 Picture
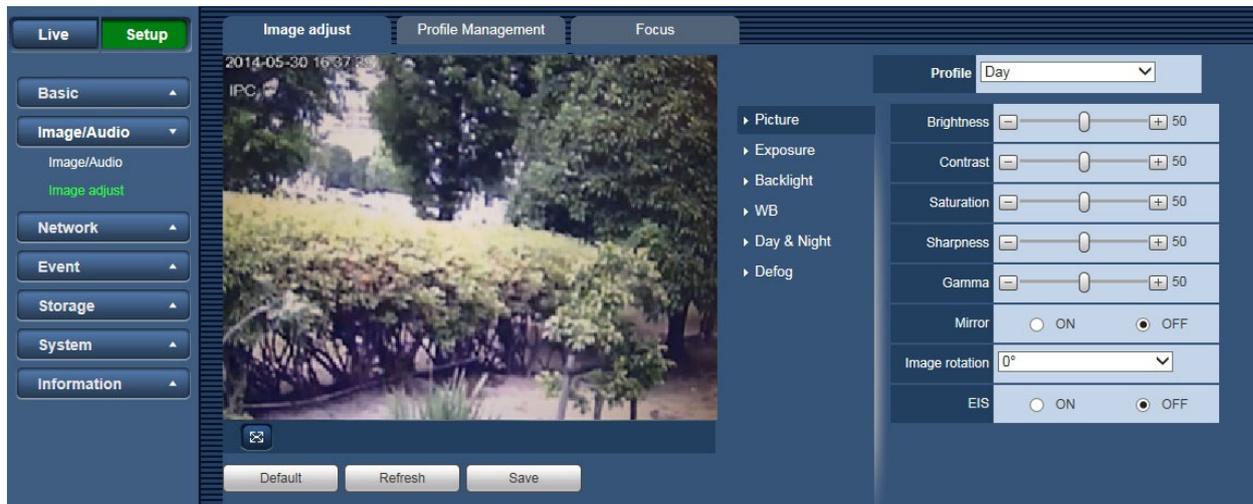
Figure 7-12

Parameter	Function
Profile	You may select "Normal", "Day" or "Night" mode.
Brightness	It is to adjust monitor window bright. You can adjust this value if the video is too dark or too bright. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. Note that the video may become hazy if the value is too high.
	The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.

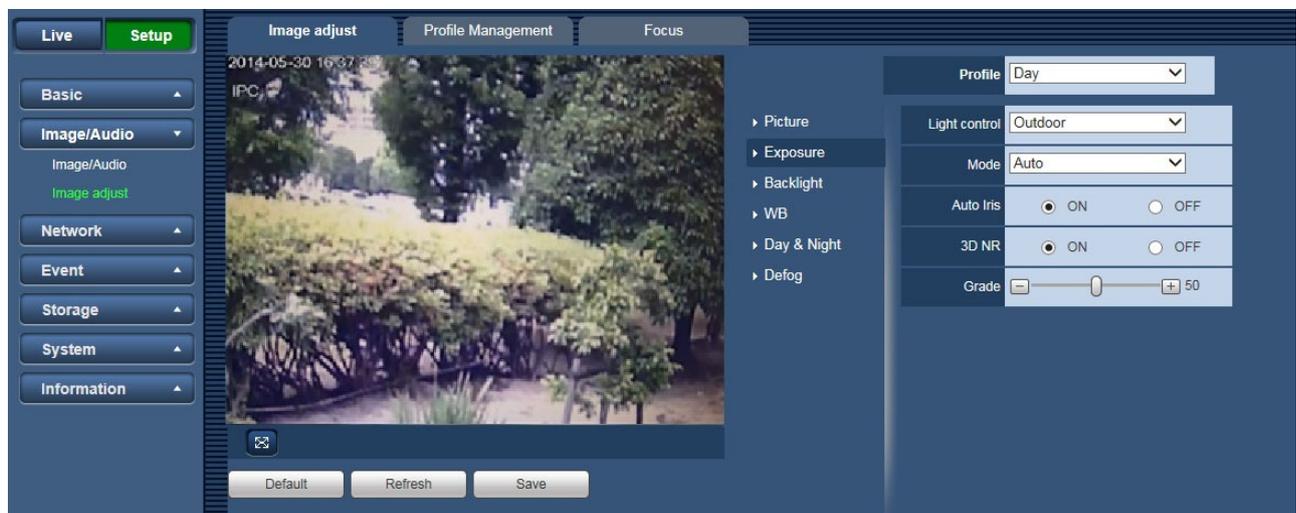| Contrast	It is to adjust monitor window contrast. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Note that the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Saturation	It is to adjust monitor window saturation. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Note that the video may not be attractive if the value is too low. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Sharpness	The value here is to adjust the edge of the video. The larger the value is, the clear the edge is and vice versa. Note that there is noise if the value here is too high. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Gamma	The value here is to adjust the gamma value of the video. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Mirror	It is to switch video left and right limit. This function is disabled by default.
Image rotation	The function can be used to change the direction of video surveillance image. It can select 0,90,180,270 degree. **Note:** 90 and 270 degree : only for 1080P(1920x1080), 1.3M(1280x960), 720P(1280x720), VGA(640x480), 640x360, QVGA(320x240)
EIS (Electronic Image Stabilization)	It can realize electronic anti-flicker function via comparison algorithm of image difference, which can effectively solve the problem of image jittering during application and it can make the image clearer.

7.2.2.2 Exposure

Figure 7-13

Parameter	Function	
Light control	• Outdoor: In this mode, you can switch exposure mode to get the effect under 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 strip. • 60Hz: When the current is 60Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.	
Mode	Auto	The video whole brightness can automatically change within the proper exposure range according to the different environments. The higher the gain max value is, the lower the noise is.
	Gain Priority	Fixed aperture is the set value, it can auto realize best brightness according to priority drive exposure time to drive gain mode.
	Shutter Priority	The image overall brightness can auto adjust according to the adjustment shutter range priority according to different scene brightness in normal exposure range. If the image brightness is still improper and gain has reached upper and lower limit of the range, then it can auto adjust gain value again to make image normal.
	Manual	It is to display manual exposure value.
Auto Iris	It can set the parameter when the camera installs auto iris. • The lens iris can auto adjust the size according to the environment after auto iris is enabled, then the image brightness will change accordingly. • The iris value reaches the max when disabling auto iris, the lens iris will not change according to the environment brightness.	
3D NR	This threshold is mainly for multi-frame (at least 2) image processing. It reduces noise with info between a frame and previous frame. The higher the value, the better NR will be. Default is enabled.	
Grade	NR level ranges from 0 to 100. The recommended value to from 40 to 60. Default value is 50.	

7.2.2.3 Backlight

Figure 7-14

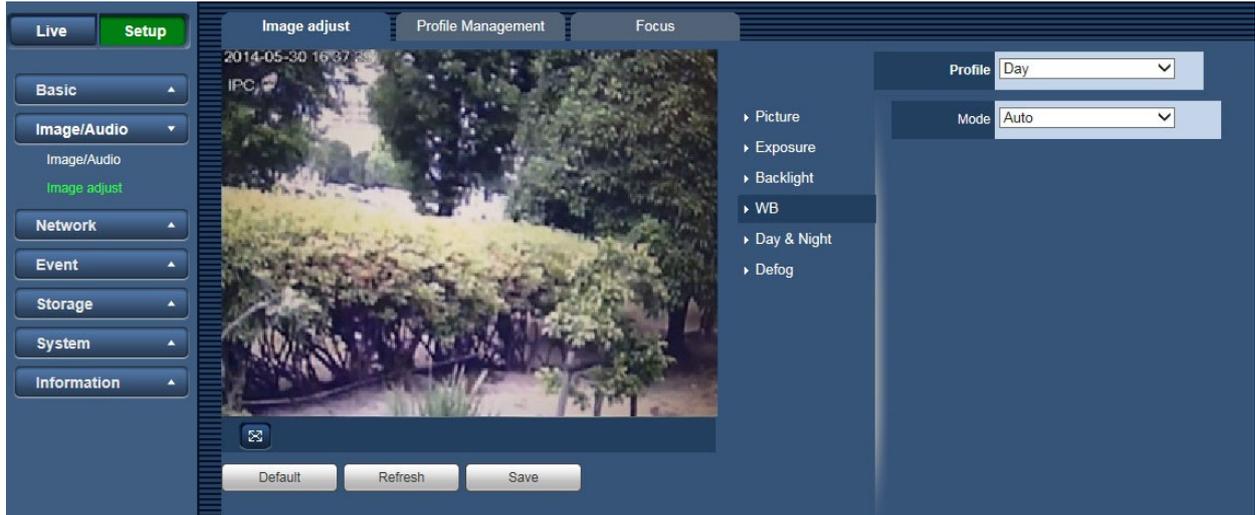| Parameter		Function
Mode	BLC	The device auto exposures according to the environments situation so that the darkest area of the video is cleared
	HLC	After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video. The value ranges from 1 to 100. The default value is 50 when HLC is on. HLC is enabled only when anti-flicker is outdoor and exposure mode is auto.
	WDR	For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time. The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.
	SSA (Scene Self-adaptation)	The system will auto adjust the image brightness according to the environmental brightness, which is to make the object display clearly in the scene.
	OFF	It is to disable the BLC function. Note that this function is disabled by default.

7.2.2.4 White Balance(WB)

Figure 7-15

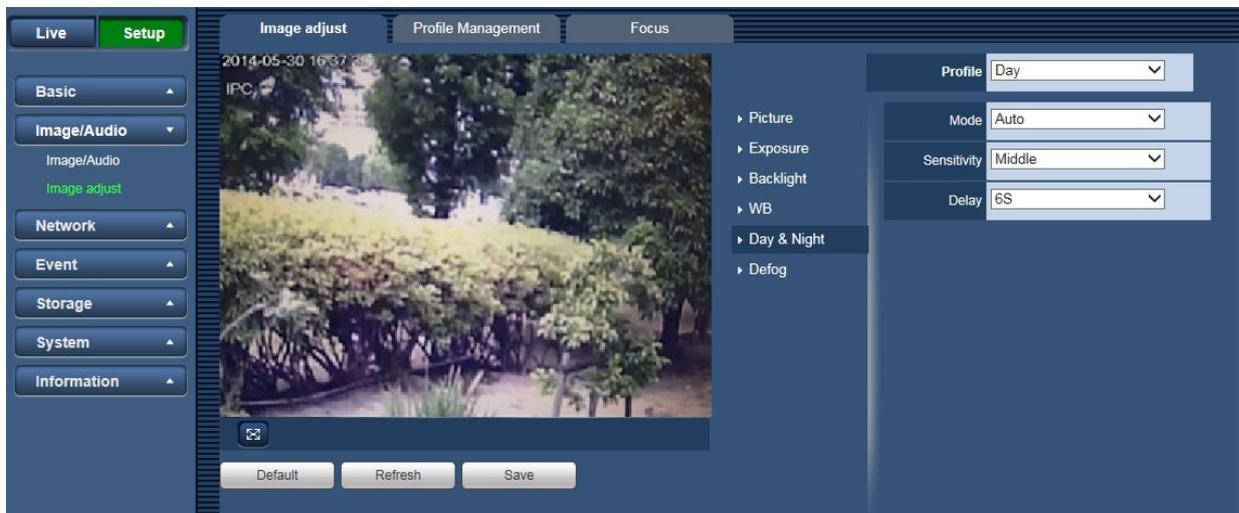| Parameter	Function
White Balance(WB)	It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default. You can select the different scene mode such as auto, natural, street lamp, outdoor, manual and regional custom to adjust the video to the best quality. • "Auto": The auto white balance is on. System can auto compensate the color temperature to make sure the vide color is proper. • "Natural": The threshold of the white balance is in the Natural mode. • "Street Lamp": The threshold of the white balance is in the Street Lamp mode. • "Outdoor": White balance threshold sets to outdoor mode. • "Manual": You can set the gain of the red/blue channel. The value reneges from 0 to 100. • "Regional Custom": You can set the region of White Balance.

7.2.2.5 Day & Night

Figure 7-16

Parameter	Function
Mode	It is to set device color and the B/W mode switch. When config file is general, the default is auto. When config file is day, the default is color. When config file is night, the default is black & white. • "Color": Device outputs the color video. • "Auto": Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.) • "Black & White": The device outputs the black and white video.
Sensitivity	It is to set sensitivity to change to Day mode and to Night mode. You can select "High", "Middle" or "Low". The default is Middle.
Delay	It is to set delay time before change to Day mode and to Night mode.

7.2.2.6 Defog

The image quality may become weak if the camera is in the environment with fog or haze, the image can realize auto correction in the auto mode; it can also select different intensity manually according to the fog concentration, which is to adjust the image definition.
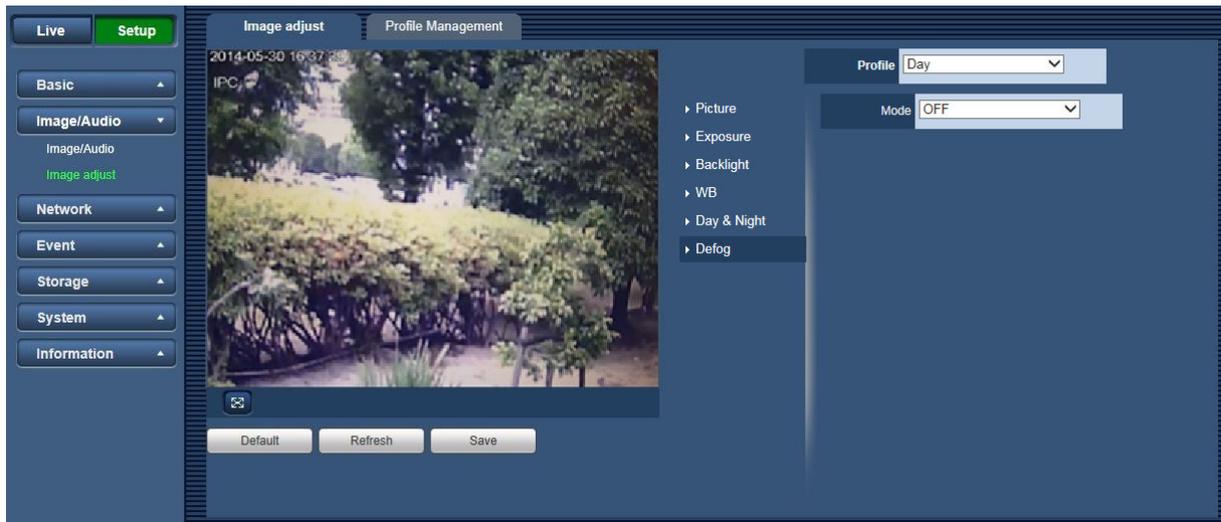
Figure 7-17

Refer to the following sheet for detailed information.

Parameter	Function
Mode	• When the "Mode" is set as "Manual", it is to manually set intensity, the system will adjust the image definition according to the intensity which have been set previously. • When the "Mode" is set as "Auto", the system will auto adjust the image definition according to the actual scene. • When the "Mode" is set as "Off", then the defog function is disabled.

7.2.3. Profile Management

The [Profile Management] interface is shown as in Figure 7-18.
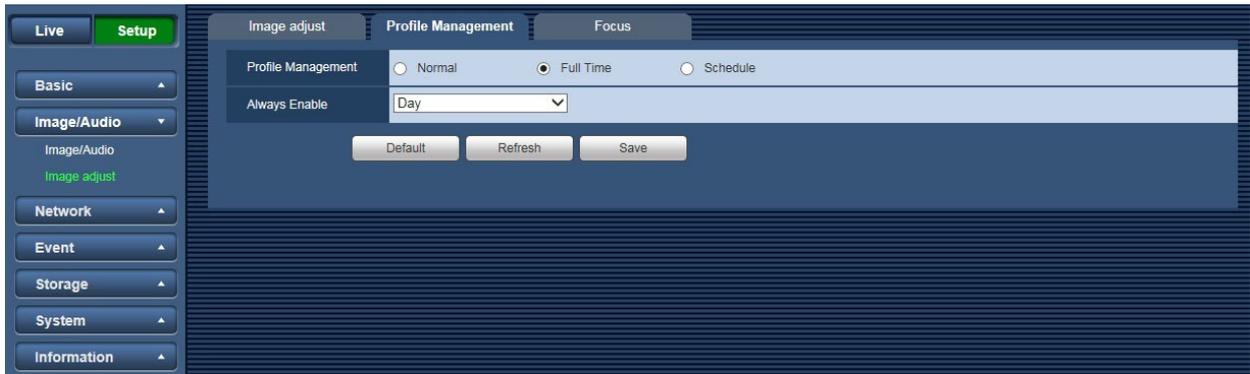
Figure 7-18

The [Profile Management] tab has three modes: "Normal", "Full time" and "Schedule". If you select normal, the video will be configured as normal. If you select "Full time", you must select either "Day" or "Night" of [Always Enable], and the video will be configured accordingly. If you select "Schedule", you can decide detained time interval.

Important
• The setup becomes immediately after you set.

7.2.4. Focus
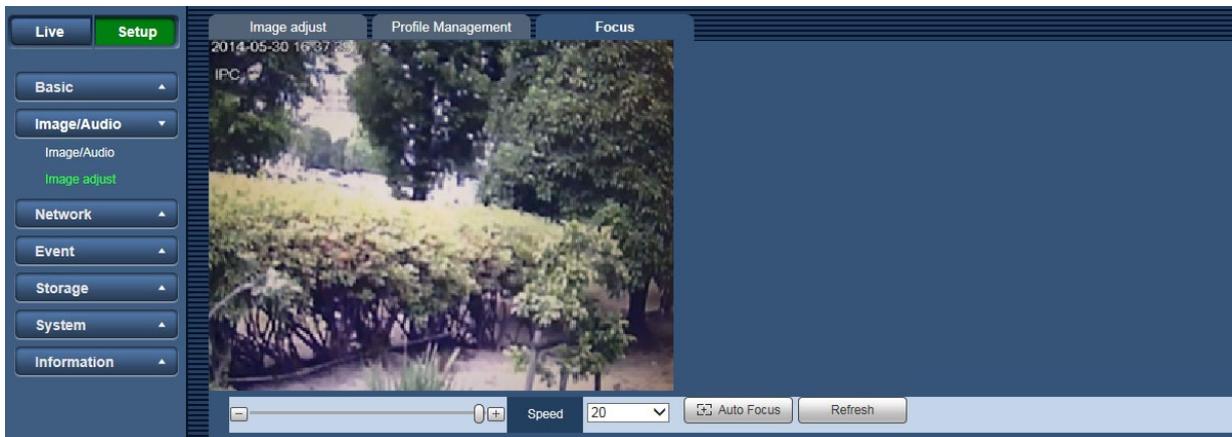
Figure 7-19

Parameter		Function
Focus	NEAR	Press minus key to make the focal plane of the lens move to close shot
	FAR	Press plus key to make the focal lens move to move to long shot
	Speed	Including 1，5，20
Auto Focus		Adjust the focal plane of the lens to make the video image stay the clearest.
Refresh		Acquire the latest status of the focus

7.3 Network

7.3.1. TCP/IP

The [TCP/IP] interface is shown as in Figure 7-20.

Figure 7-20

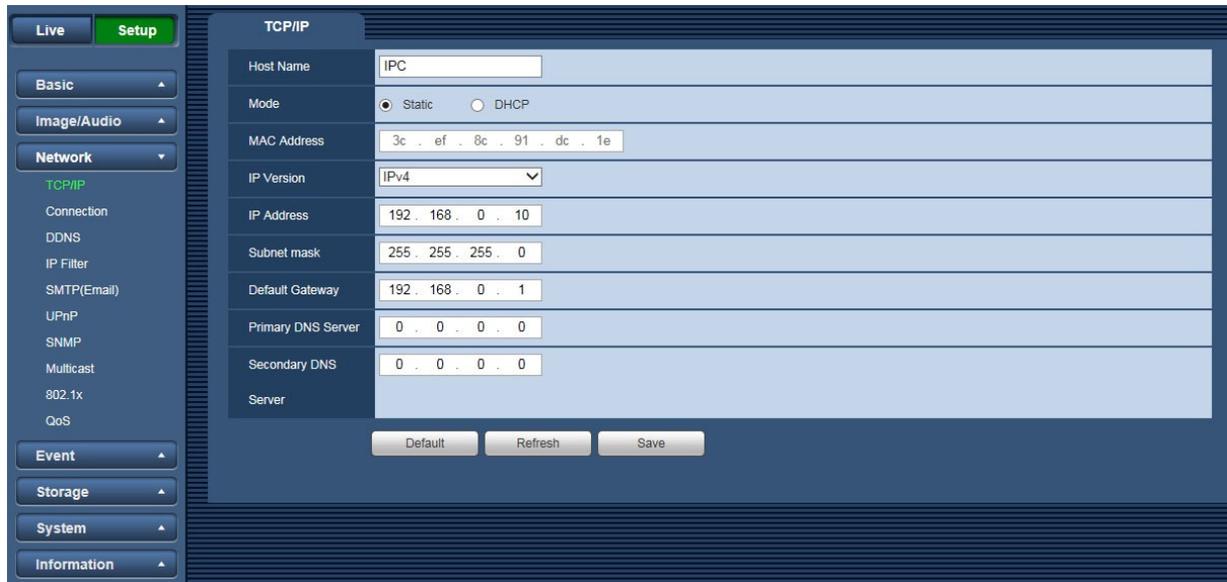Refer to the following sheet for detailed information.

Parameter	Function
Host Name	It is to set current host device name. It max supports 32-digit character.
Mode	There are two modes: Static mode and the DHCP mode. • The IP address/subnet mask/gateway are null when you select the DHCP mode to auto search the IP. • If you select the static mode, you need to set the IP address/subnet mask/gateway manually. • If you select the DHCP mode, you can view the IP address/subnet mask/gateway from the DHCP. • If you switch from the DHCP mode to the static mode, you need to reset the IP parameters.
MAC Address	It is to display host 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	Use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.
Subnet mask	Input subnet mask of the network
Default Gateway	Input default gateway of the network
Primary DNS Sever	DNS IP address.
Secondary DNS Server	Alternate DNS IP address.

7.3.2. Connection

7.3.2.1 Connection

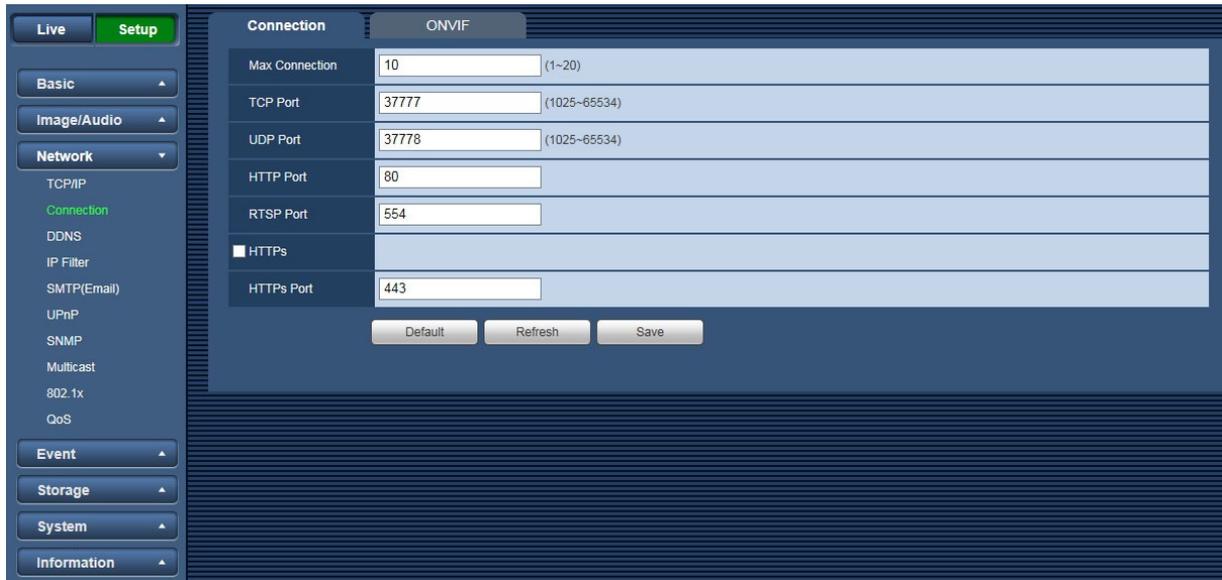The [Connection] interface is shown as in Figure 7-21.

Figure 7-21

Refer to the following sheet for detailed information.

Parameter	Function
Max Connection	It is the max Web connection for the same device. The value ranges from 1 to 20. The max connection amount is 20.
TCP Port	The default value is 37777. You can input the actual port number if necessary.
UDP Port	The default value is 37778. You can input the actual port number if necessary.
HTTP Port	The default value is 80. You can input the actual port number if necessary.
RTSP Port	The default value is 554. RTSP stream query format is: Main stream: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0 Sub stream: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=1 You need to input the following four items manually. 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.
HTTPs	Set to enable HTTPS protocol.
HTTPs Port	The default value is 443. You can input the actual port number if necessary.

7.3.2.2 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 from different manufacturers completely compatible.
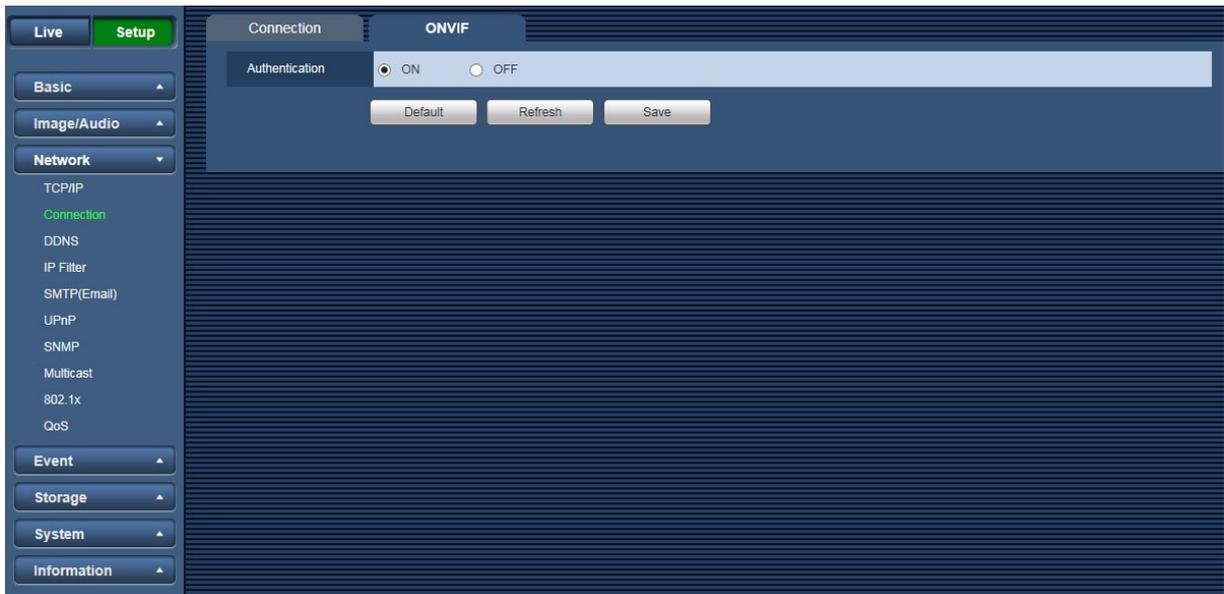
Figure 7-22

7.3.3. DDNS

The [DDNS] interface is shown as in Figure 7-23.

The DDNS is to set to connect the various servers so that you can access the system via the server. 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.

Figure 7-23

Refer to the following sheet for detailed information.

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function.

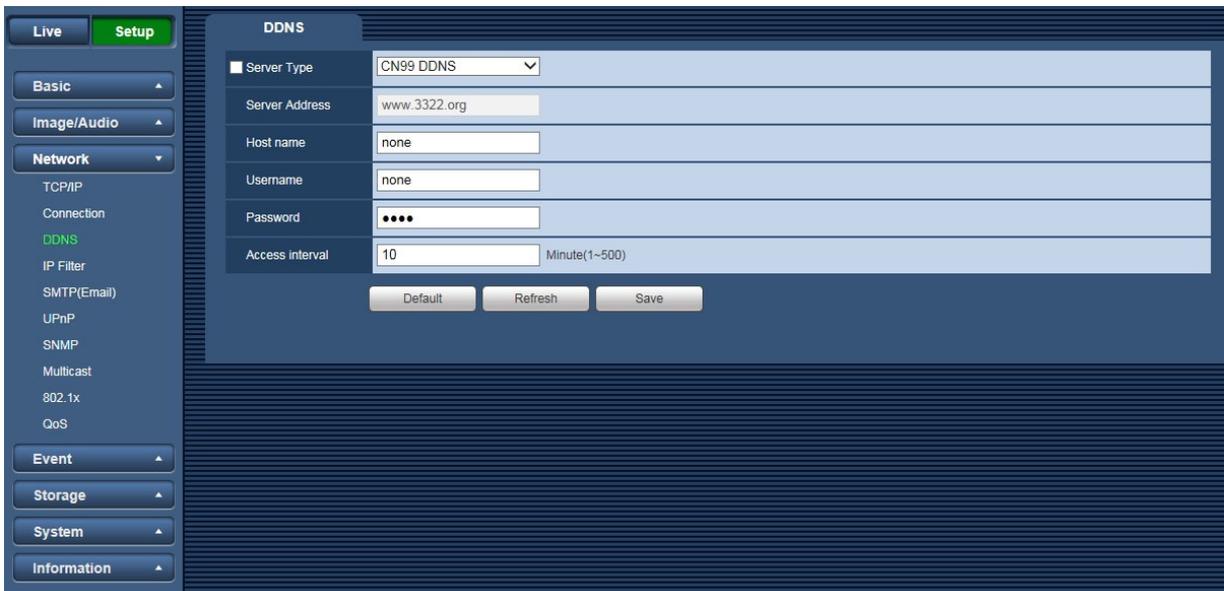| Parameter	Function
Server Address	DDNS server IP address CN99 DDNS Server address: www.3322.org NO-IP DDNS Server address: dynupdate.no-ip.com Dyndns DDNS Server address: members.dyndns.org
Host name	Your self-defined host name.
Username	The user name you input to log in the server.
Password	The password you input to log in the server.
Access interval	• Device sends out alive signal to the server regularly. • You can set interval value between the device and DDNS server here.

7.3.4. IP filter

The [IP Filter] interface is shown as in Figure 7-24.
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 address section.
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.
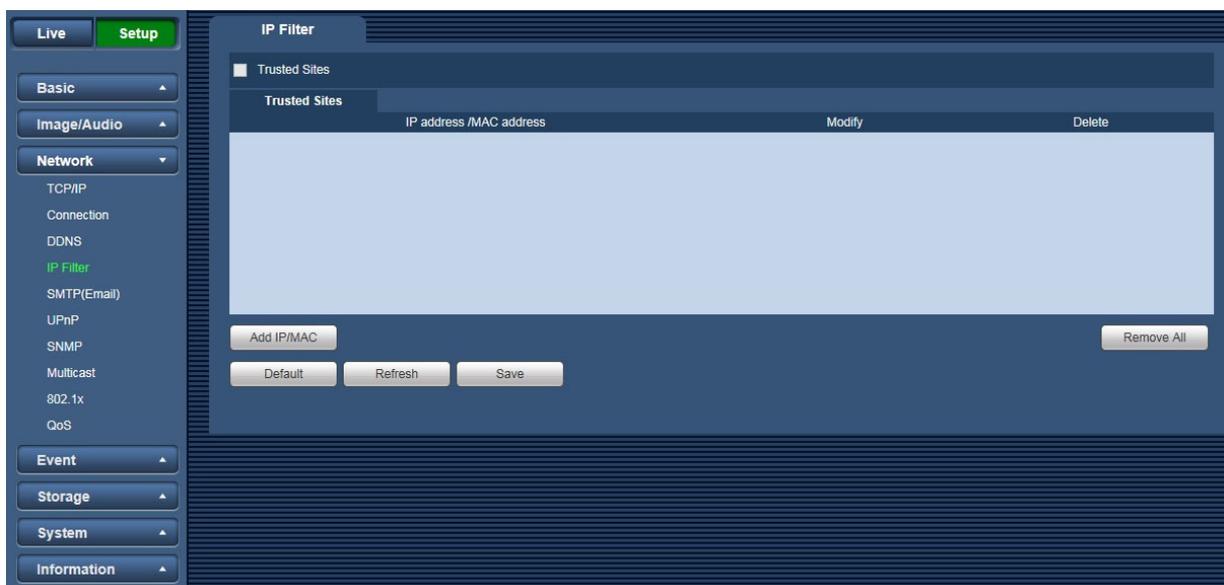Note: You must set MAC address in the same network segment.

Figure 7-24

7.3.5. SMTP (Email)
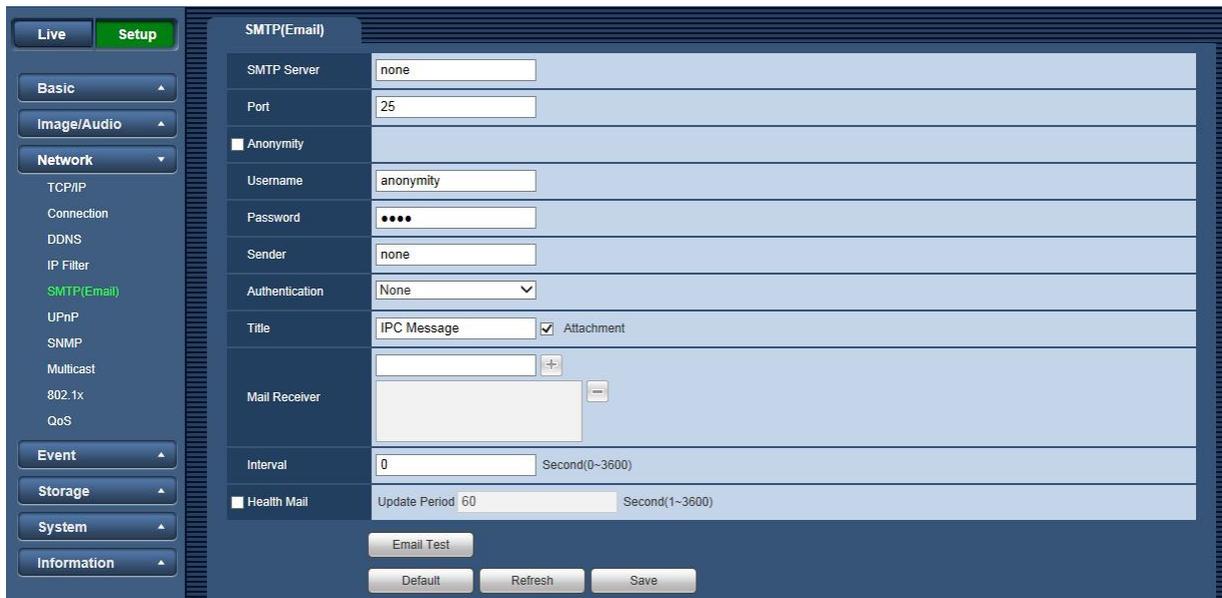
The [SMTP] interface is shown as in Figure 7-25.

Figure 7-25

Refer to the following sheet 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 supports the anonymity function. You can auto login anonymously. You do not need to input the user name, password and the sender information.
Username	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.
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. Note that the system will not send out the email immediately when the alarm occurs. When the alarm, VMD Audio Detection or the abnormity 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 abnormity events, which may result in heavy load for the email server.
Health Mail	Check the box here to enable this function.

Parameter	Function
Update Period (interval)	This function allows the system to send out the test email to check the connection is OK or not. Check the box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here.
Email Test	The system will automatically sent out an email once to test the connection is OK or not. Before the email test, save the email setup information.

7.3.6. 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 7-26.
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". Click the [OK] button 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.
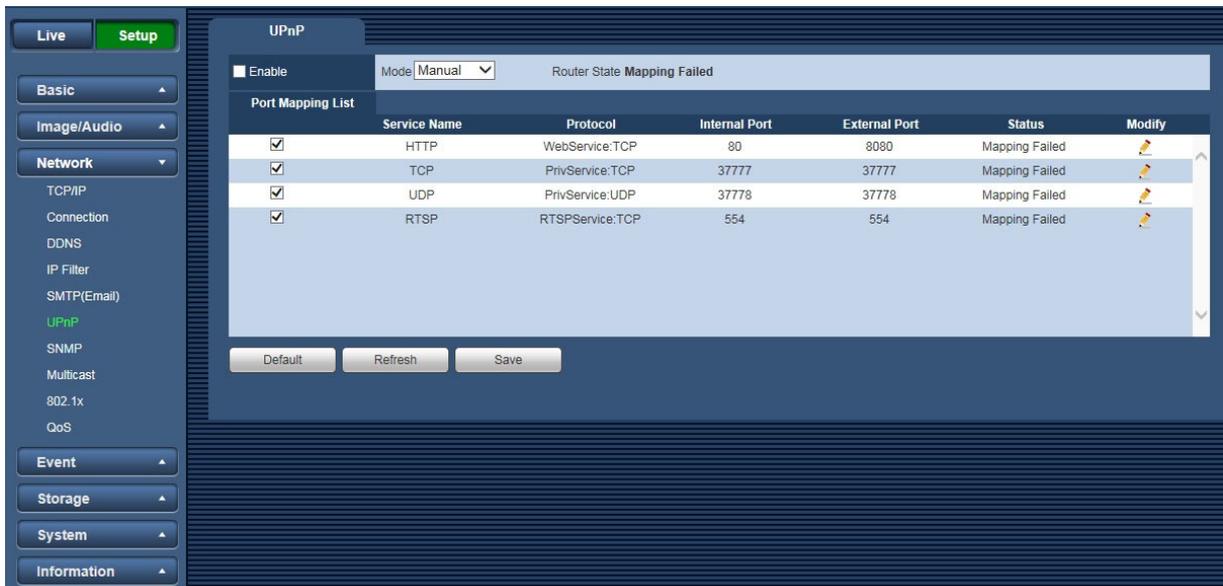

Figure 7-26

7.3.7. SNMP

The [SNMP] interface is shown as in Figure 7-27 and Figure 7-28.
The SNMP allows the communication between the network management work station software and the proxy of the managed device.
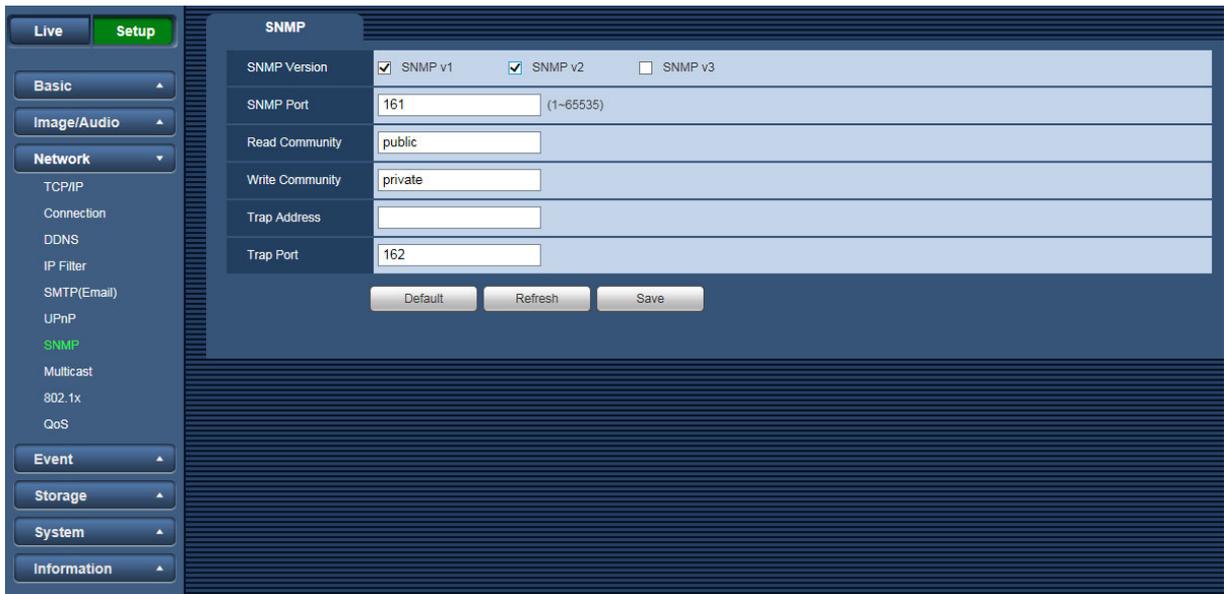
Figure 7-27
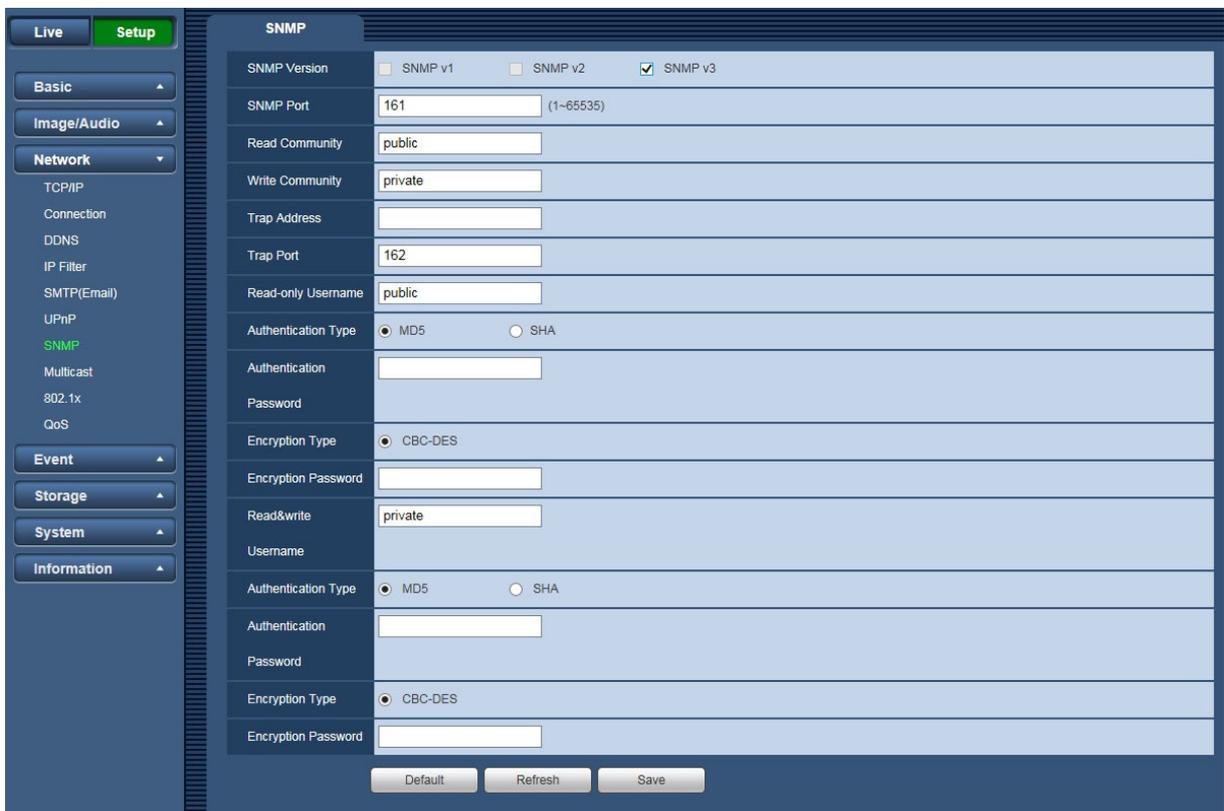
Figure 7-28

Refer to the following sheet for detailed information.

Parameter	Function
SNMP version	• SNMP v1: system only processes the information of v1. • SNMP v2: system only processes the information of v2. • SNMP v3: you can set user name and password. There is account security verification when the server wants to connect to the device. At the same time, the v1 and v2 is null and cannot select.

Parameter	Function
SNMP Port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Make sure the device and the proxy are the same. The read community will read all the objects the SNMP supported in the specified name. The default setup is public.
Write Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Make sure the device and the proxy are the same. The read community will read/write/access all the objects the SNMP supported in the specified name. The default setup is private.
Trap Address	The destination address of the Trap information from the proxy program of the device.
Trap Port	The destination port of the Trap information from the proxy program of the device. It is for the gateway device and the client-end PC in the LAN to exchange the information. It is a non-protocol connection port. It has no effect on the network applications. It is a UDP port not TCP port. The value ranges from 1 to 165535. The default value is 162.
Read-only Username	Only when SNMP version is SNMP v3, you shall config this parameter. The default is public.
Authentication Type	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication Password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption Type	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption Password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Read&write Username	Only when SNMP version is SNMP v3, you shall config this parameter. The default is private.
Authentication Type	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication Password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption Type	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption Password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.

7.3.8. Multicast

The [Multicast] interface is shown as in Figure 7-29.

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.

Here you can set multicast address and port. You also need to go to Live interface to set the protocol as Multicast.
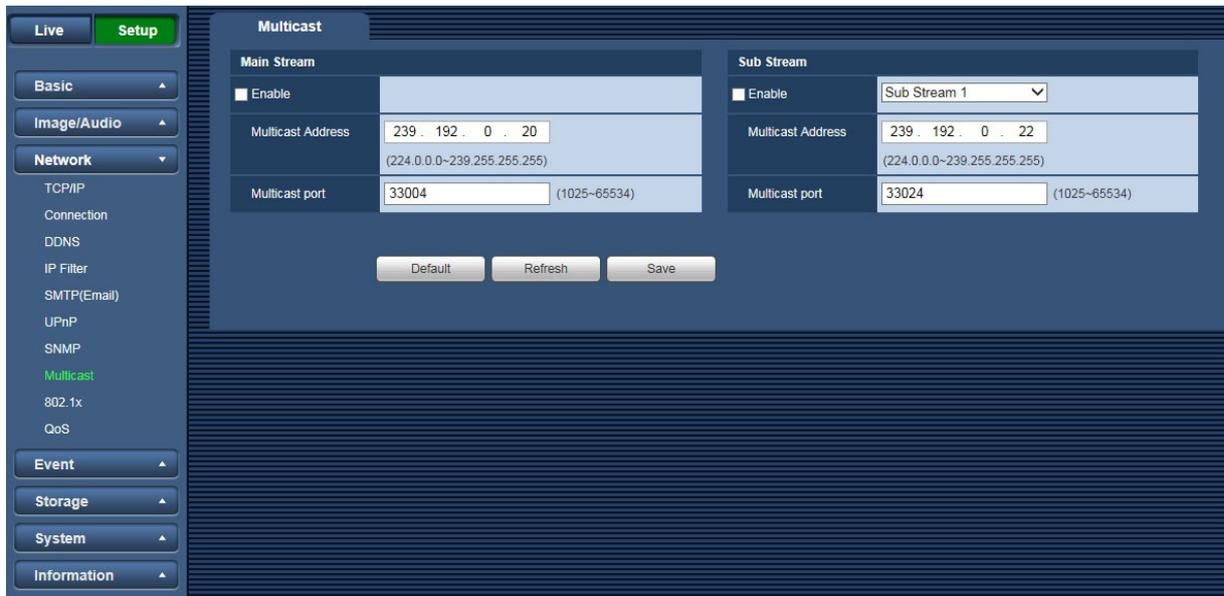

Figure 7-29

Refer to the following sheet for detailed information.

Parameter	Function
Enable	Select to enable multicast function.
Multicast Address	The range of multicast address of Main Stream, Sub Stream1 and Sub Stream2 is 224.0.0.0 -239.255.255.255.
Multicast Port	Multicast port. The range is 1025 - 65534.

7.3.9. 802.1x

IEEE802.1X works standing for local and metropolitan area networks and port based network access control protocol. It supports manual operation of the client to choose means of authenticating by which to control it to access to the Local Area Networks or not. It supports the ability to authenticate, to calculate fee, to ensure security and to maintain requirements. See Figure 7-30.
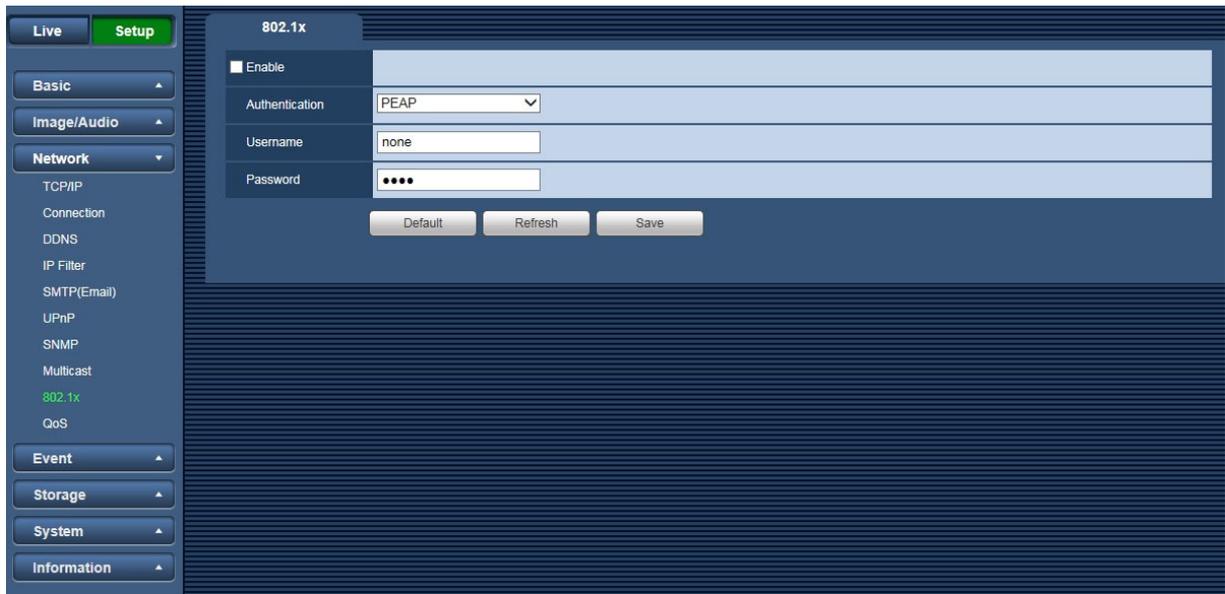
Figure 7-30

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	Input password here.

7.3.10. QoS

The [QoS] interface is shown as below. See Figure 7-31.

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, 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 of the packets and select the bandwidth of the each queue. It can also discard at the different ratio when the broad bandwidth is jam.
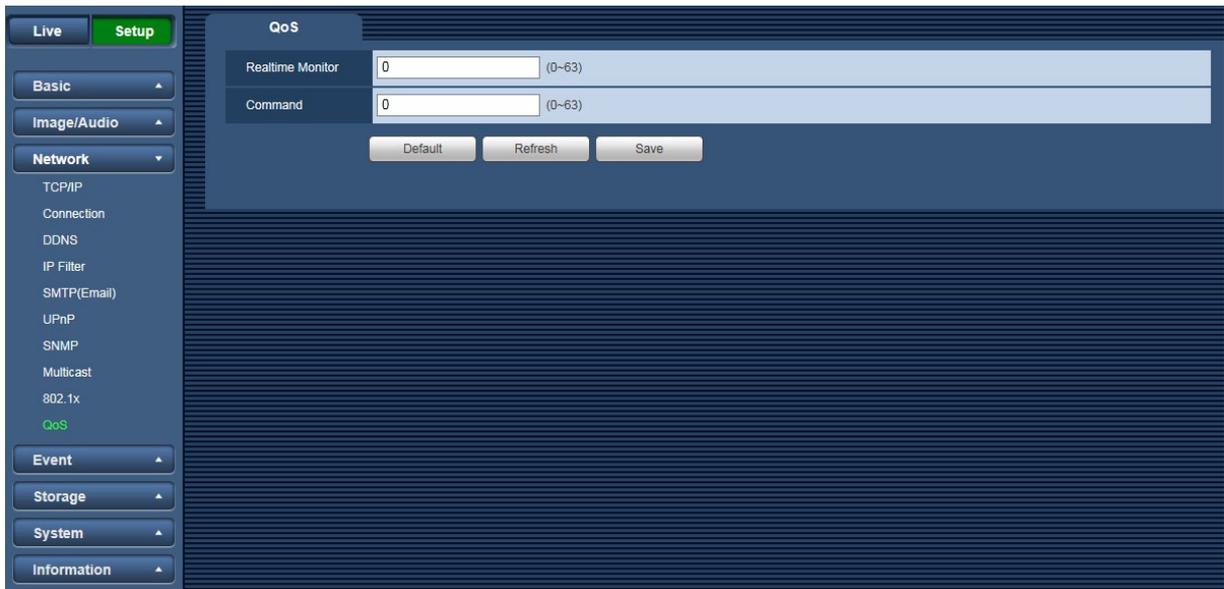
Figure 7-31

Refer to the following sheet for detailed information.

Parameter	Function
Realtime 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.

7.4 Event

7.4.1. Video Detection

7.4.1.1 VMD
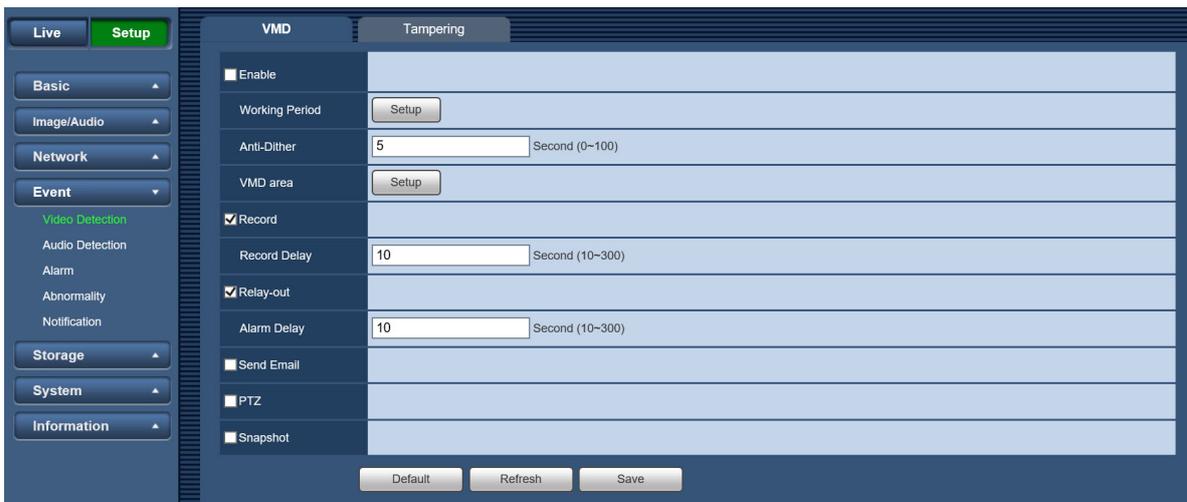
The [VMD] interface is shown as in Figure 7-32.

Figure 7-32

Refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable VMD function.
Working Period	Here you can set arm/disarm period. Click on the [Setup] button to open period setup menu. There are six periods every day for setup and you must check box in front of each period to enable it. Note: Period setup can be done by dragging mouse while not release left mouse.
Anti-Dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
VMD area	Here you can set motion detection region and its sensitivity and area. (The higher the sensitivity is, the easier to trigger motion detect; the smaller the area, the easier to trigger motion detect.) The default covers all regions. You must click on the [Save] button before enabling your setup.
Record	Check it and so when VMD occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup VMD snapshot file.

Set working period.

Click "Setup", and it will display the interface of working period. See Figure 7-33.
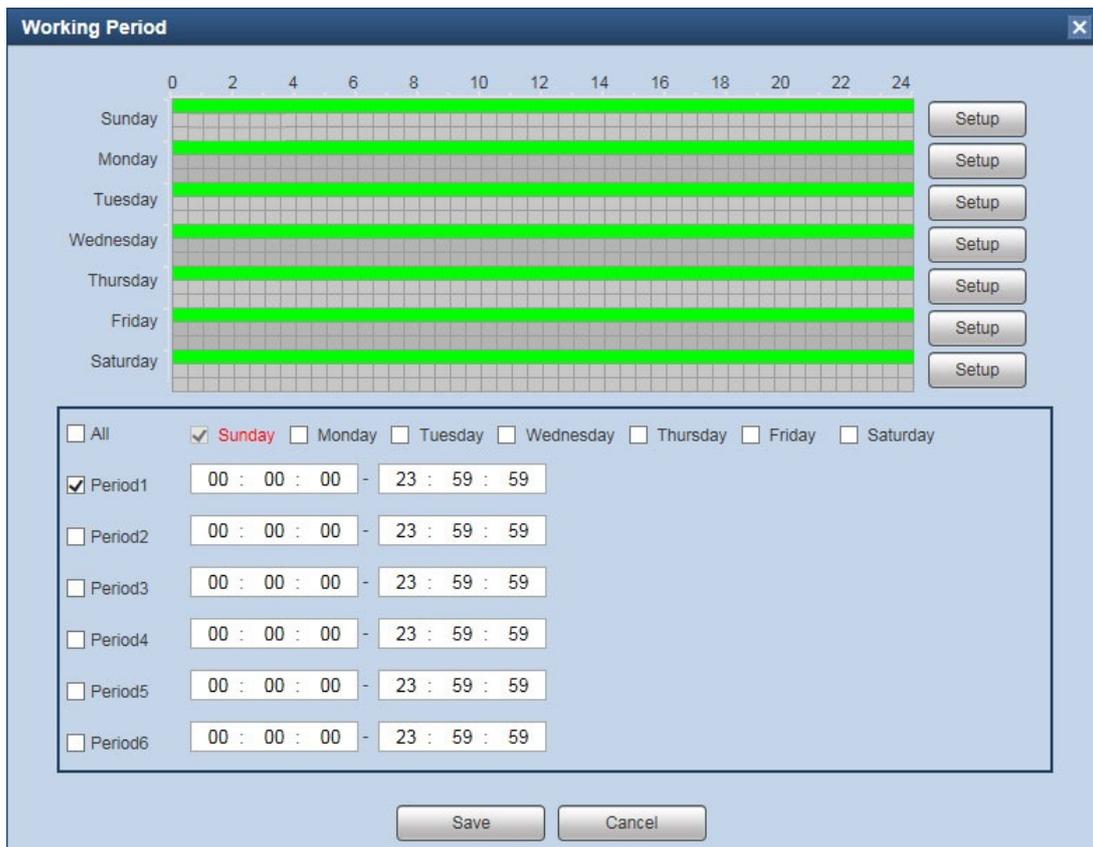
Figure 7-33

- Set alarm period, it can enable alarm event within the range of set period.
- There are totally six periods to set every day, click the check box in front of the period, and then the period can be valid.
- Select week number (default is Sunday, if users select the whole week, it means setting can be applied to the whole week; users can also select the check box in front of the day to make separate setting for some days).
- Click "Save" button after setup, return to motion detect page.

Set area.

Click "Setup" and you can set area in the interface shown in Figure 7-34.
Different colors represent different areas. Each area can set different detection zones. Detection zone can be irregular and discontinuous.
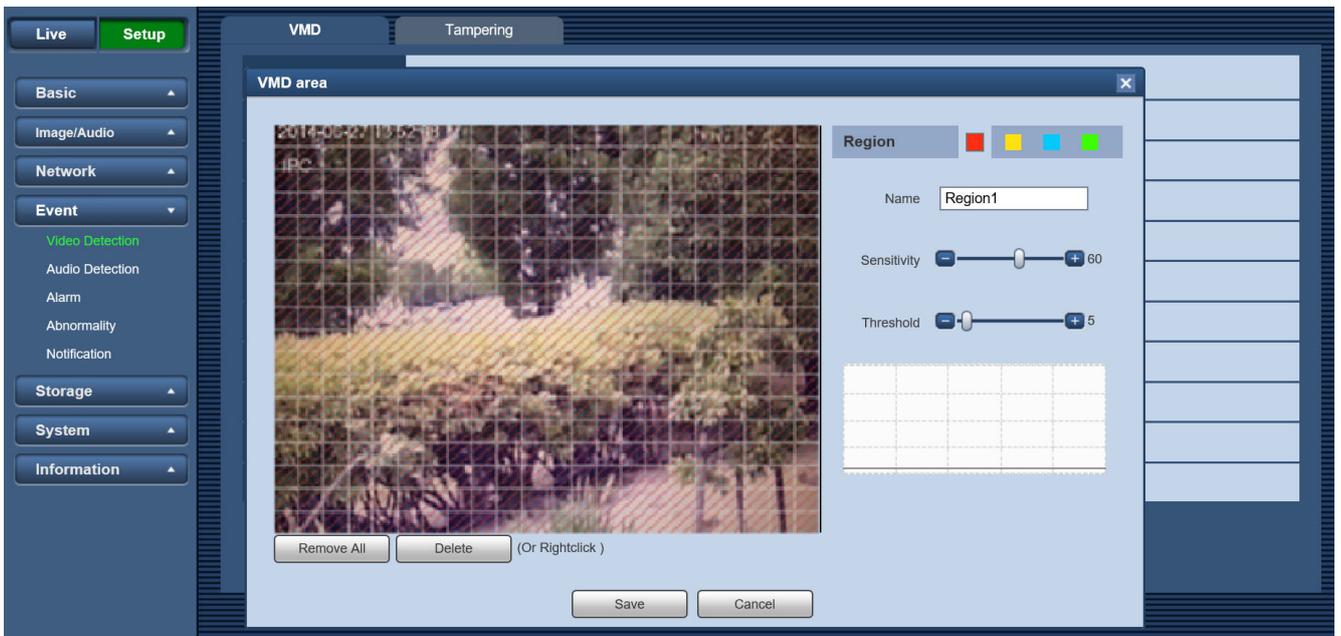
Figure 7-34

Refer to the following sheet for detailed information.

Parameter	Function
Name	Default area name includes "Region1", "Region2", "Region3", "Region4" and custom.
Sensitivity	It is sensitivity of brightness as VMD is more possible to be trigger with high sensitivity. You can set up to four areas. The range is 0 - 100. The recommended value is 30 - 70. The default is 60.
Threshold	It is to check target object area related to detection area. The lower the area threshold, the easier to trigger VMD. You can set up to four areas. The range is 0 - 100. The recommended value is 10 - 50.
Waveform	Red means motion detect is triggered. Green means motion detect is not triggered.
Remove All	Clear all areas.
Delete	Delete selected area.

7.4.1.2 Tampering
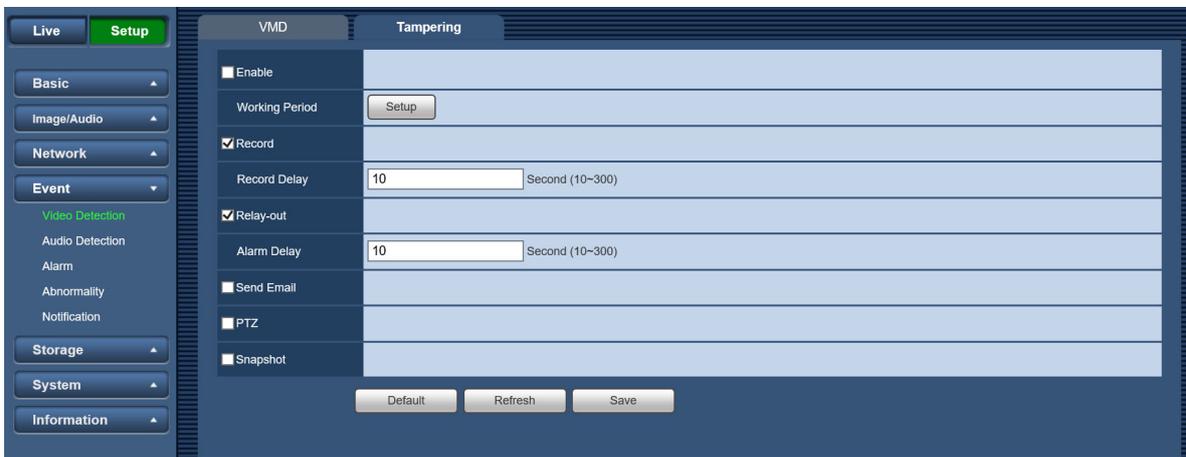The [Tampering] interface is shown as in Figure 7-35 and Figure 7-36.

Figure 7-35

Refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Working Period	• Video masking function becomes activated in the specified periods. • There are six periods in one day. Draw a circle to enable corresponding period. • Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week.
Record	After record is enabled, video masking can activate video.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs.
PTZ	Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. The event type includes: preset, tour and pattern.
Snapshot	After snapshot is enabled and alarm happens, the system will automatically snapshot and alarm.

Set working period.

Click "Setup", and it will display the interface of working period. See Figure 7-36.
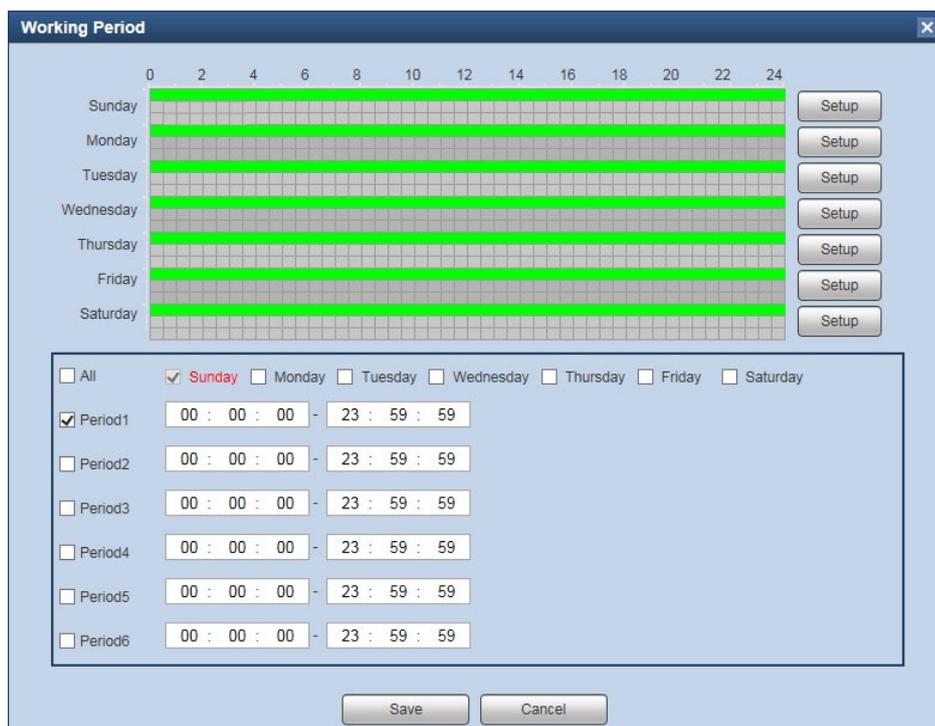Please refer to the explanation of VMD working period.

Figure 7-36

7.4.2. Audio Detection

The system will display the [Audio Detection] interface, which is shown in Figure 7-37.
Configure info of each parameter according to the actual needs. Refer to the following sheet for more details.
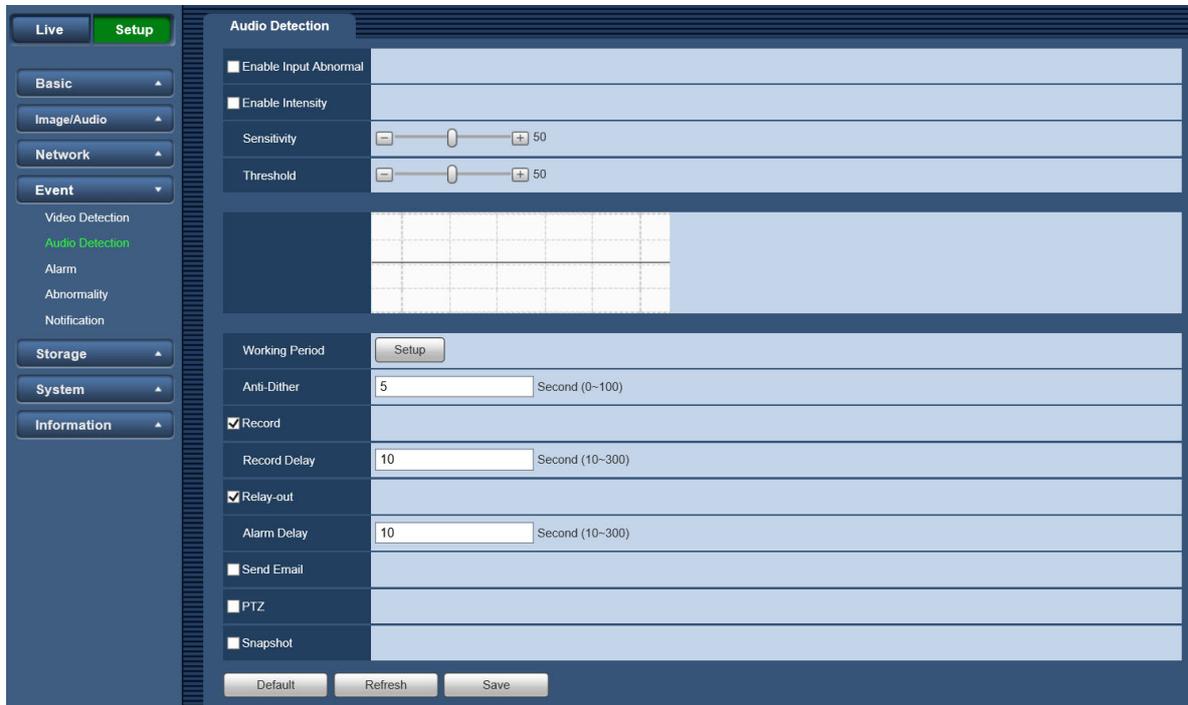

Figure 7-37

Parameter	Note
Enable Input Abnormal	Check "Enable Input Abnormal" and it will activate alarm when detecting audio input abnormal.
Enable Intensity	Check "Enable Intensity" and it will activate alarm when detecting audio intensity change surpass threshold.
Sensitivity	1-100 level adjustable, only when the volume change of input sound surpasses the volume of continuous environment, then it can be judged as audio abnormity when the value is smaller. Users need to adjust according to the actual environmental test.
Threshold	1-100 level adjustable, it can be used to set the intensity of filtered environmental sound. If the environmental noise is louder, then it needs to set the value higher. Users need to adjust according to the actual environmental test.

Note:
- Refer to chapter 7.4.1.1 VMD(Video Detection) for other parameters.

7.4.3. Alarm

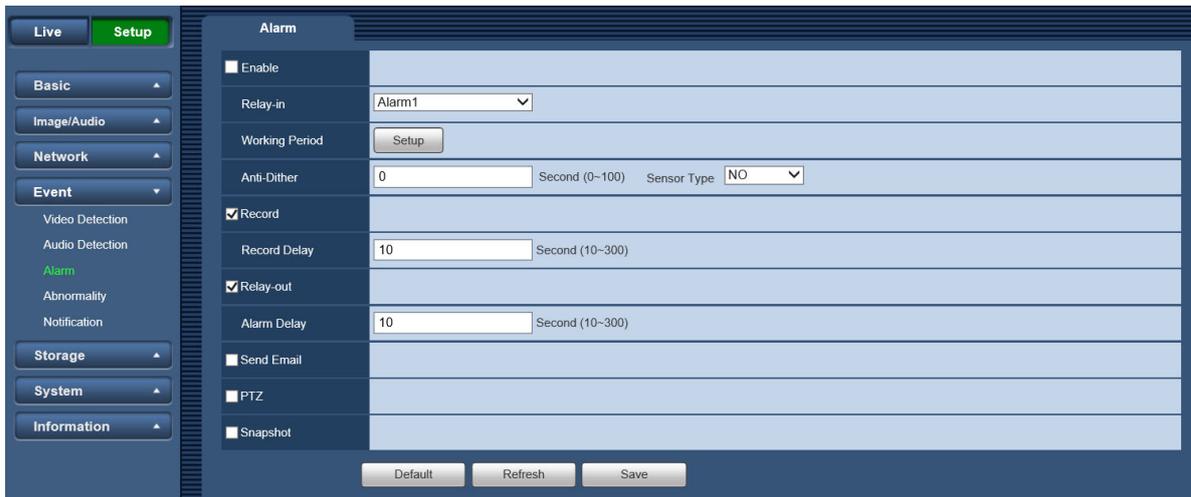The alarm of the [Alarm] interface is shown as in Figure 7-38.

Figure 7-38

Refer to the following sheet for detailed information.

Parameter	Function
Enable	After enabled, relay activation will work.
Relay-in	The default is Alarm 1.
Working period	• This function becomes activated in the specified periods. • There are six periods in one day. Draw a circle to enable corresponding period. • Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. • Click the [OK] button, system goes back to motion detection interface. Click the [Save] button to exit. Note: User can set via dragging mouse while not releasing left mouse.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Sensor type	There are two options: NO/NC. Switch from NO to NC means enabling alarm; Switch from NC to NO means disabling alarm.
Record	System auto activates motion detection channel to record once alarm occurs (working with motion detection function).
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	After this function is enabled, system can send out email to alert you when alarm occurs and ends.
PTZ	Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. The event type includes: preset, tour and pattern.
Snapshot	After you enabled snapshot, the system will automatically snapshot if alarm occurs.

7.4.4. Abnormity

Abnormity includes "No SD Card", "SD Card Error", "Capacity Warning", "Disconnection" and "Illegal Access".
See Figure 7-39 to Figure 7-43.

7.4.4.1 SD Card

Note:
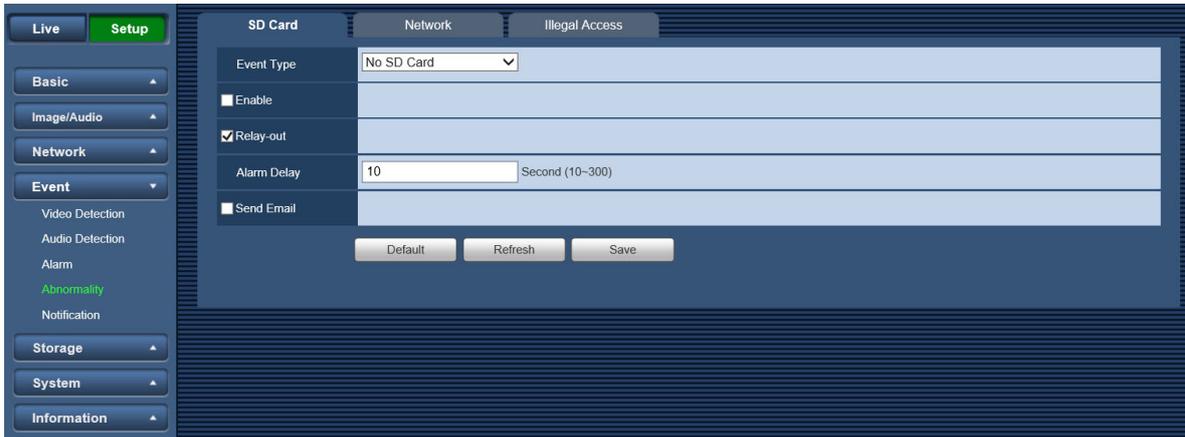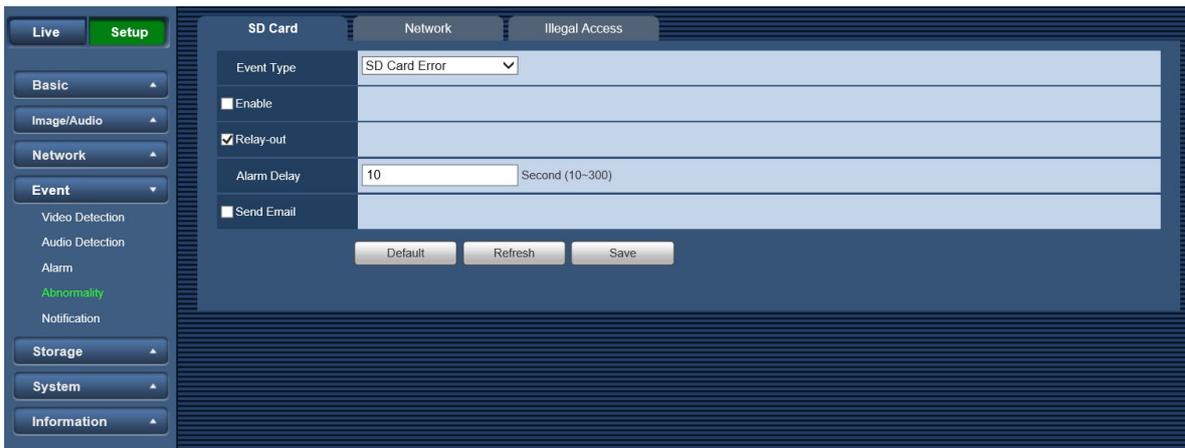• Device without SD card function does not have the above three statuses.
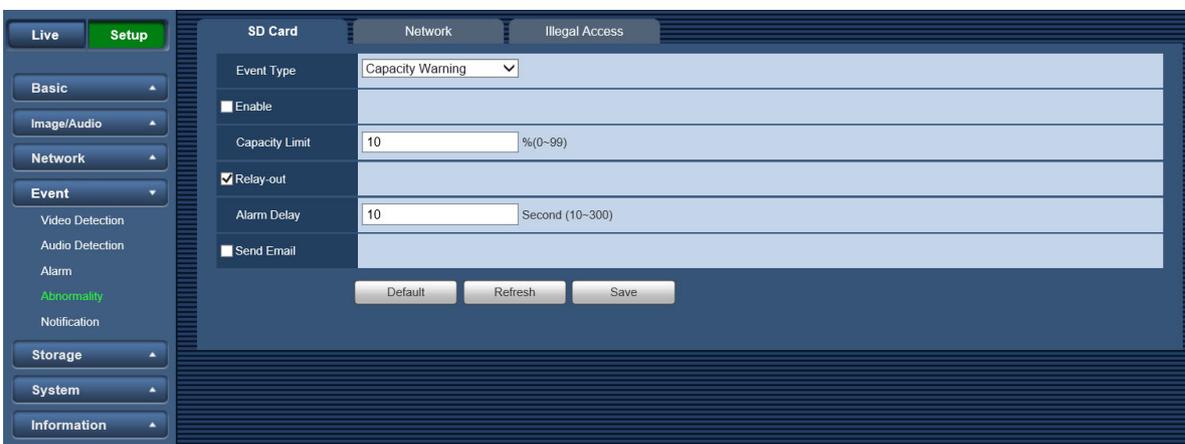

Figure 7-39

Figure 7-40

Figure 7-41

Refer to the following sheet for detailed information.

Parameter	Function
Event Type	It includes: No SD Card, SD Card Error and Capacity Warning
Enable	Check to alarm when SD card is abnormal.
Capacity Limit	User can set SD card capacity that is left free in Capacity Warning. When SD card space left is smaller than this limit, alarm occurs. (Capacity Warning)
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send email	After you enabled this function, the system can send out email to alarm the specified user. This function is invalid when network is offline.

7.4.4.2 Network

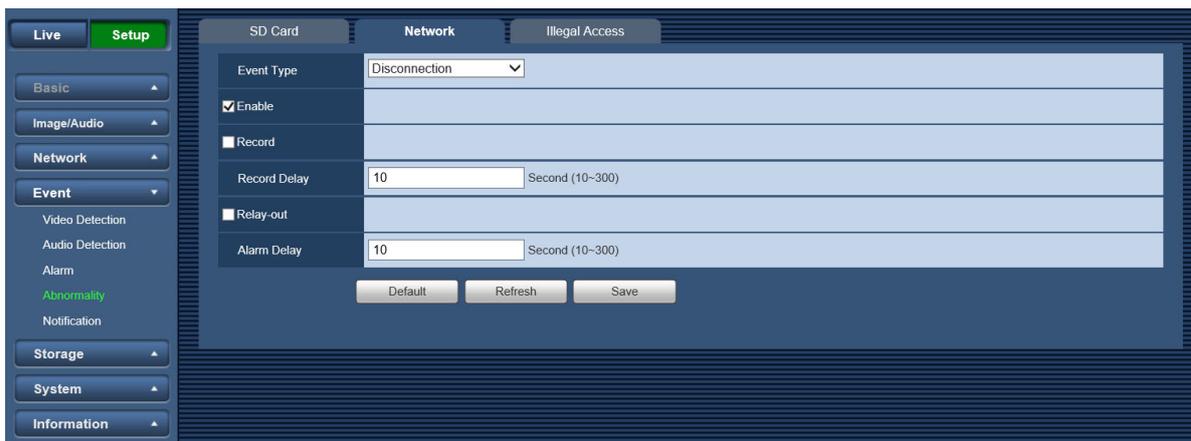When device is Disconnection, the abnormal alarm is similar with case of SD card error.

Figure 7-42

Parameter	Function
Event Type	It includes Disconnection.
Enable	Check to alarm when Disconnection occure.
Record	Check it and when network abnormal alarm occurs, system will auto record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.

7.4.4.3 Illegal Access

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.
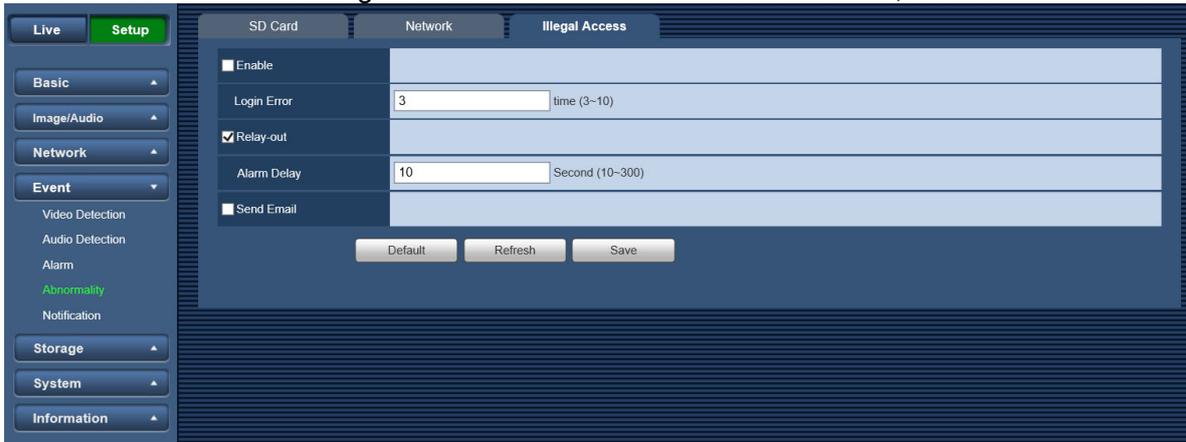

Figure 7-43

Parameter	Function
Enable	Click it to enable illegal access alarm.
Login Error	It will trigger alarm of illegal access after entering wrong password for some certain times, and the account will be locked.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send E-mail	After you enabled this function, the system can send out email to alarm the specified user.

7.4.5. Notification

The settings relating to Panasonic alarm protocol notification can be configured in this section.(Figure 7-43-1)
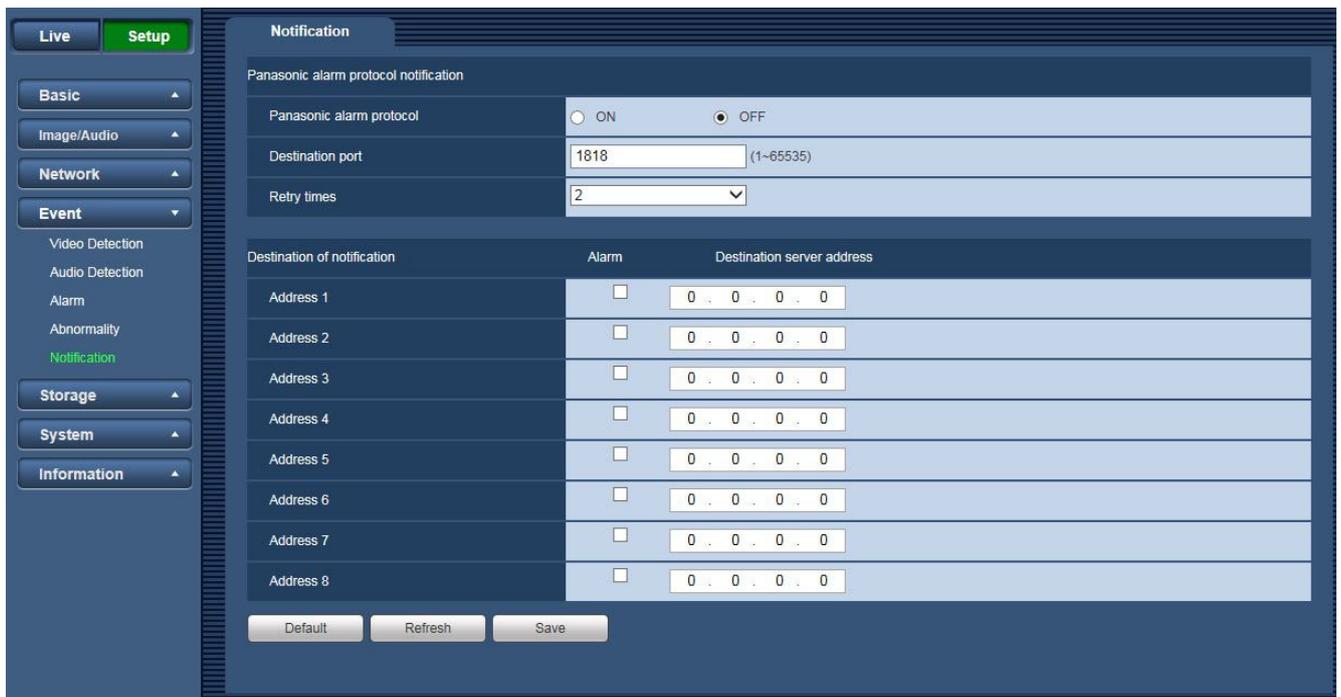
Figure 7-43-1

Panasonic alarm protocol notification
 [Panasonic alarm protocol]
 Select "ON" or "OFF" to determine whether or not to provide notification by Panasonic alarm protocol
 according to the settings for the "Alarm" checkboxes of "Destination of notification" below.
 - When an alarm is detected ("Alarm")
 - Default: OFF

Note
 When "ON" is selected, notification of the alarm occurrence will be provided to the registered destination
  server addresses in order (to IP address 1 first, to IP address 8 last).

 [Destination port]
 Select a destination port for the Panasonic alarm protocol from the following.
 - Available range: 1 - 65535
 - Default: 1818

 [Retry times]
 Select a retry time for the Panasonic alarm protocol.
 - Available range: 0-30
 - Default: 2

Destination of notification
 [Address 1] - [Address 8]
 Enter the destination IP address of the Panasonic alarm protocol from the following. Up to 8 destination
 server addresses can be registered.
 - [Alarm] checkbox: When the checkbox is checked, the Panasonic alarm notification will be provided upon
  an alarm occurrence.

 [Destination server address]: Enter the destination server address.

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7.5   Storage

7.5.1.   Schedule

Before setting up schedule, the user must set the record mode to "Auto" or "Manual".

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

7.5.1.1   Record Schedule

Record schedule steps:

Step1

Click on the [Record Schedule] tab. See Figure 7-44.

Figure 7-44

Step2

Select each record time for "Monday" through "Sunday", and click on the [Setup] button on the right. See Figure 7-45.
*   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 the [Record Schedule] interface while not releasing left mouse.
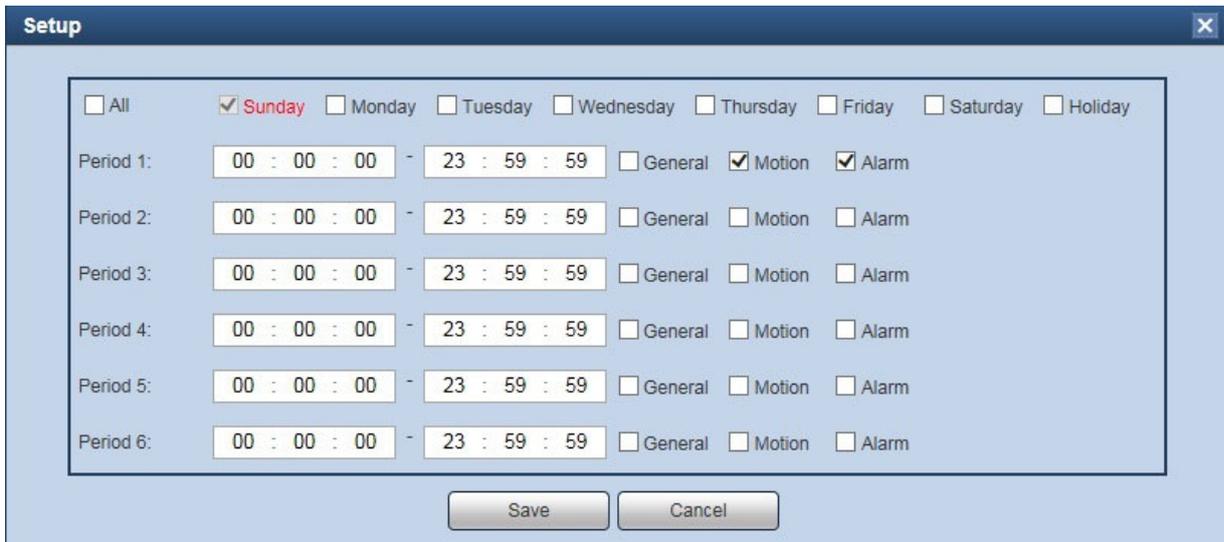
Figure 7-45

Step3

Click on the [Save] button, and return to the [Record Schedule] interface. See Figure 7-46.
- 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 7-46

Step4

In the [Record Schedule] interface, click the [Save] button. System prompts it is successfully saved.

7.5.1.2 Snapshot Schedule

Snapshot setup as:

Step 1

Click on the [Snapshot Schedule] tab. See Figure 7-47.

Figure 7-47

Step2

Select each snapshot time for Monday through Sunday, and click on the [Setup] button on the right. See Figure 7-48.

- 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 the [Snapshot Schedule] interface while not releasing left mouse.
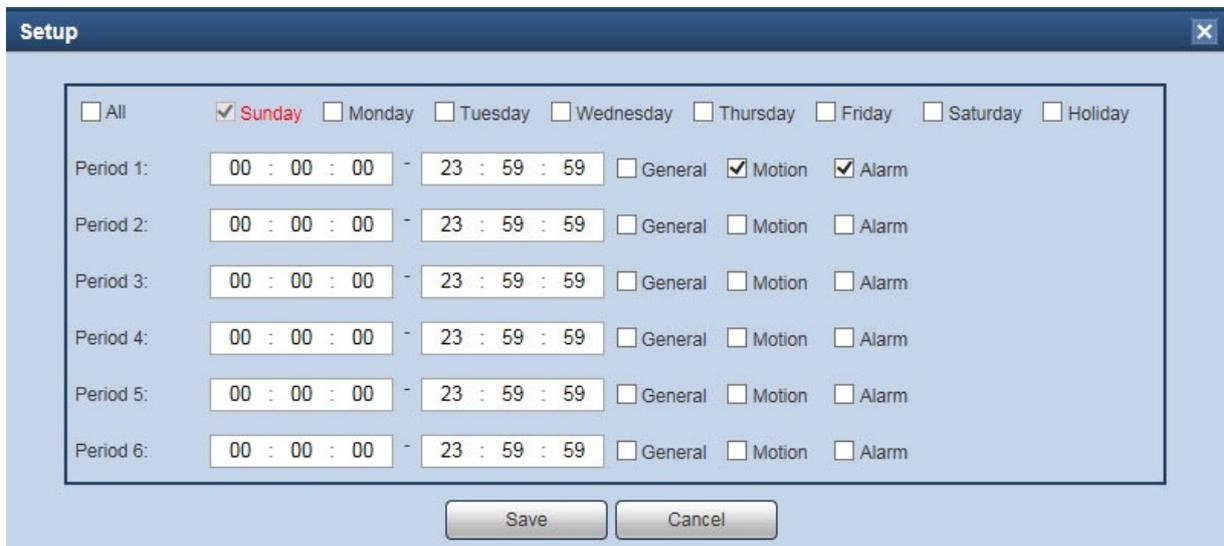

Figure 7-48

Step3

Click on the [Save] button, and return to the [Snapshot Schedule] interface. See Figure 7-49.

- 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 7-49

Step4

In the [Snapshot] interface, click the [Save] button. The system will display a message if it is successfully saved.

7.5.1.3 Holiday Schedule

The [Holiday Schedule] tab can set specific date as holiday.

Step1

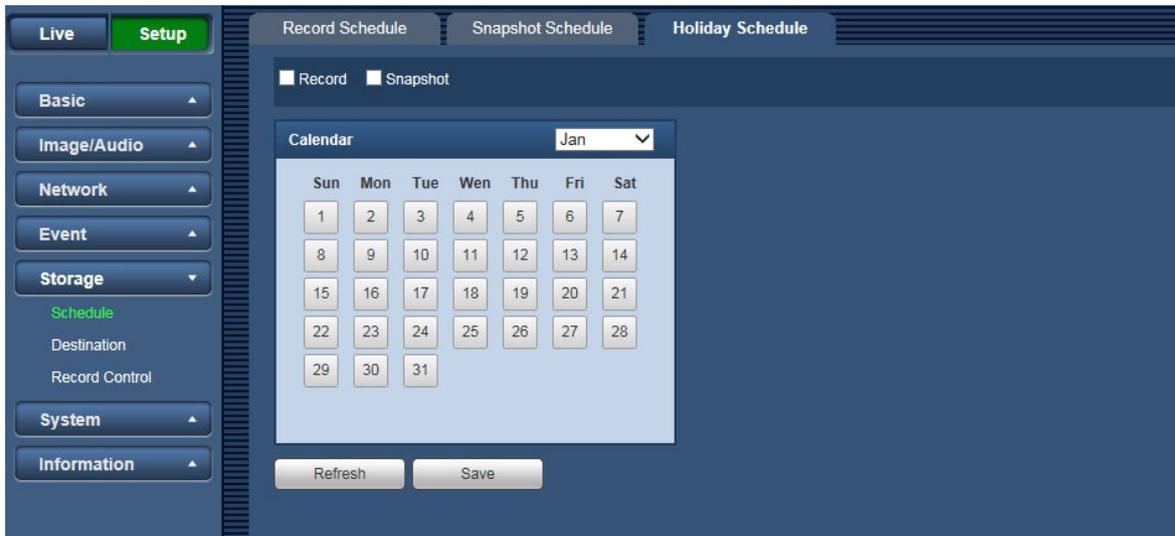Click on the [Holiday Schedule] tab. See Figure 7-50.

Figure 7-50

Step2

Select date to set as holiday. The selected date will be highlighted in green.

Step3

Check "Record" and "Snapshot", and click the [Save] button. System prompts it is successfully saved.

Step4

Check "Record Schedule" or "Snapshot Schedule" interface, click the [Setup] button next to Holiday, refer to setup of "Monday" to "Sunday".

Step5

Complete setup of holiday, then it records/snapshots according to date in holiday schedule.

7.5.2. Destination

7.5.2.1 Path

The [Path] interface is shown as in Figure 7-51.

Path can config record and snapshot storage path. There are three options: Local and FTP. You can only select one mode. System can save according to the event types. It is corresponding to the three modes (General: Scheduled/ Motion Detection /Alarm) in the Schedule interface. Check the box to enable the save functions.
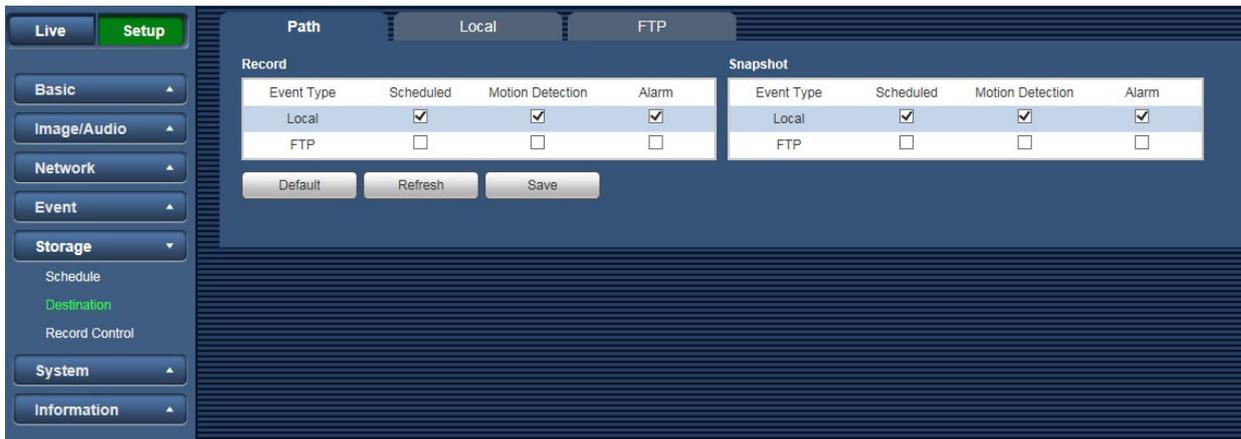
Note:

• Only device supports SD card has local.

Figure 7-51

Refer to the following sheet 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.

7.5.2.2 Local

The [Local] interface is shown as in Figure 7-52.

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

Figure 7-52

• Click "Read only" to set the SD card as read only.

- Click "Read & Write" to set the SD card as read & write.
- Click "Hot Swap" to realize hot swap upon the SD card.
- Click "Format" to realize formatting upon the SD card.

7.5.2.3 FTP

The [FTP] interface is shown as in Figure 7-53.
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.

Figure 7-53

Parameter	Note
Enable	Click it to enable FTP function
Server Address	FTP server address
Port	FTP server port
User name	User name used to log in FTP server.
Password	Password used to log in FTP server.
Remote Directory	Store it to the directory of FTP server.
Emergency (Local)	Click it and it will store to local SD card when FTP storage abnormity occurs.

7.5.3. Record Control

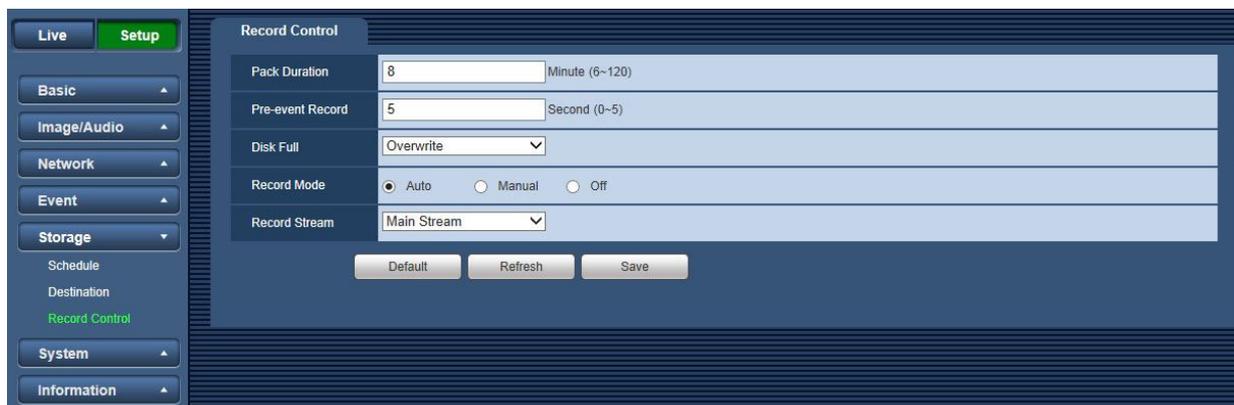The [Record Control] interface is shown as in Figure 7-54.

Figure 7-54

Refer to the following sheet for detailed information.

Parameter	Function
Pack Duration	Here you can select file size. Default setup is 8 minutes. Note: • The limitation of file size is 2GB size.
Pre-event Record	Input pre-event record value here. For example, system can record the four seconds video in the buffer. The record begins from the fifth second. Note: • Configure pre-record time, when alarm or motion detection occurs, if there is no record, system will record the preceding n seconds record.
Disk Full	There are two options: stop recording or overwrite the previous files when SD is full. • [Stop]: Current working SD is overwriting or current SD is full, it will stop record. • [Overwrite]: Current working SD is full; it will overwrite the previous file.
Record Mode	There are three modes: [Auto], [Manual], and [Off]. It starts recording when selecting manual mode, it records within the range of schedule when selecting auto mode.
Record Stream	There are two options: Main Stream and Sub Stream1.

7.6   System

7.6.1. Account (User mng.)

Note:

- For the character in the following user name or the user group name, 1-32 characters.
  The valid string includes: character, number, and underline.
- Password can be 8~32 characters in number and letter only. User can modify other user's password.
- The factory default setup includes two levels: user and admin. You can set the corresponding group and then set the rights for the respective user in the specified groups.
- 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.

7.6.1.1   User Name

In this interface you can enable anonymity login, add/remove user and modify user name. See Figure 7-55.
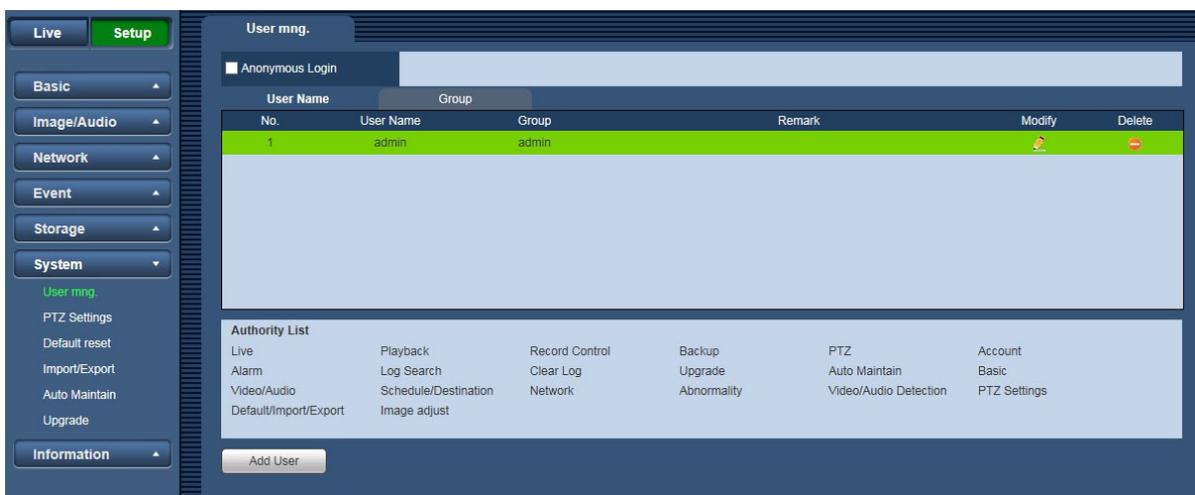

Figure 7-55

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 the [Logout] button to end your session.

Add user: It is to add a name to group and set the user rights. See Figure 7-56.

Here you can input the "User name" and "Password" and then select one group for current user.

Note that 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.
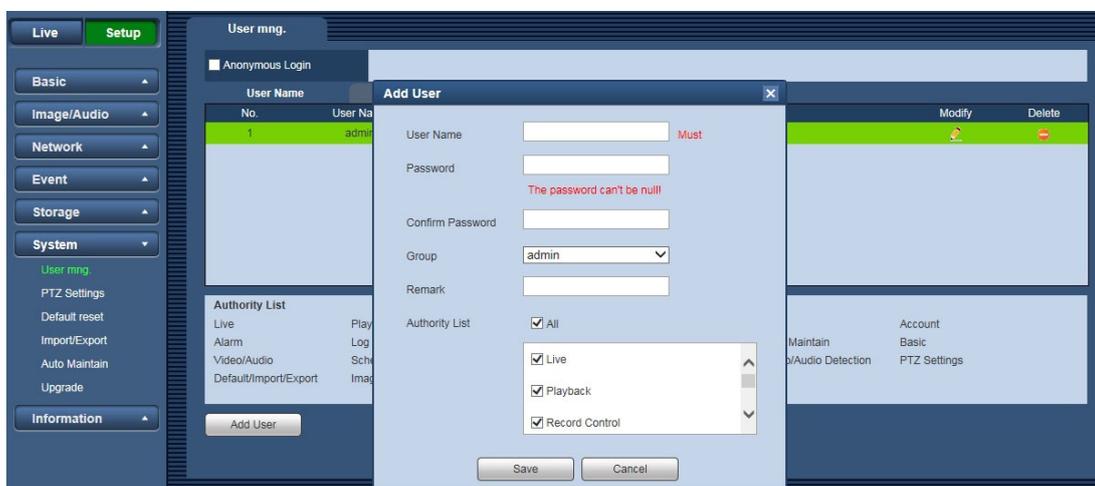

Figure 7-56

Modify user

It is to modify the user property, belonging group, password and rights. See Figure 7-57.

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. Click the [Save] button to save.

Note that the password ranges from 8-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.
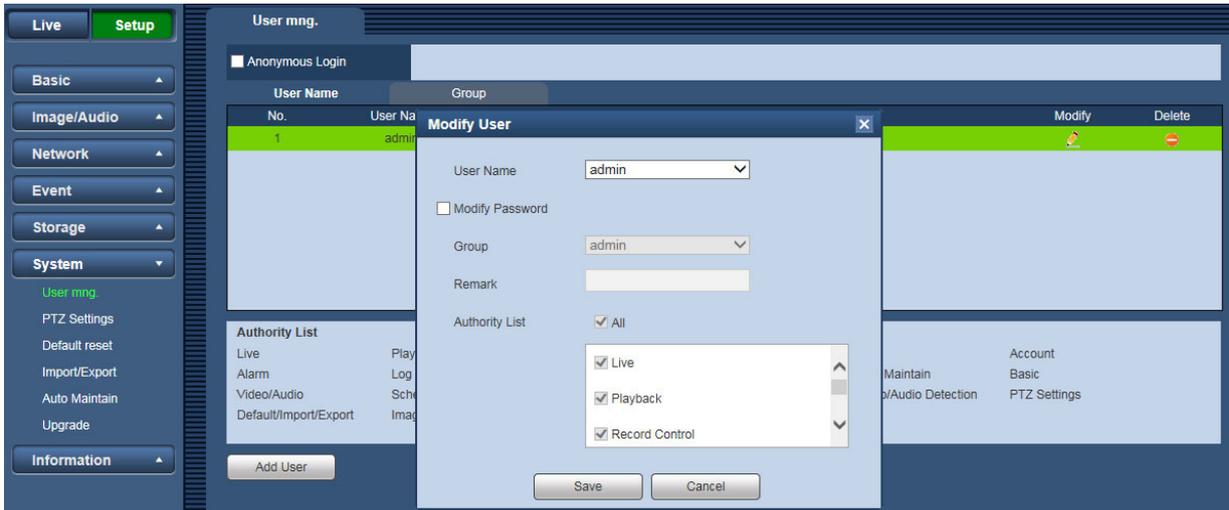

Figure 7-57

7.6.1.2 Group

The group management interface can add/remove group, modify group password and etc.
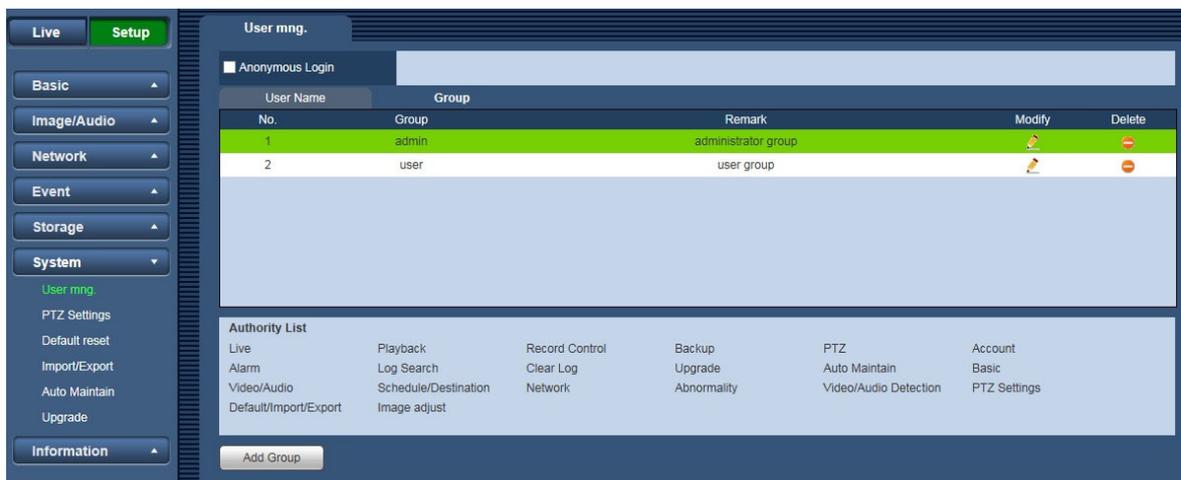The interface is shown as in Figure 7-58.

Figure 7-58

Add Group

It is to add group and set its corresponding rights. Input the group name and then check the box to select the corresponding rights. It includes: "Live", "Playback", "Record control" and etc.
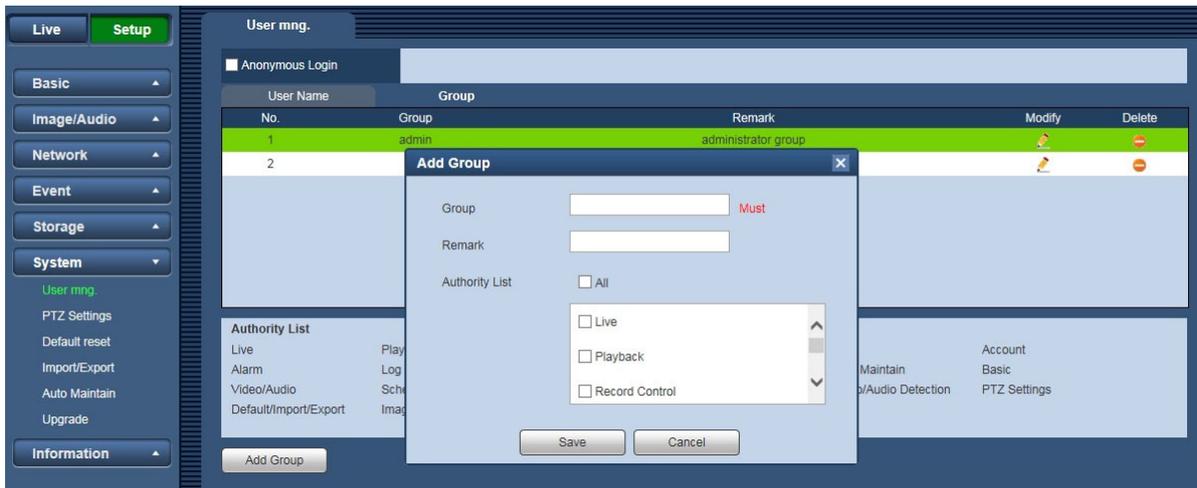
Figure 7-59

Modify group

Click the [Modify group] button. You can see an interface is shown as in Figure 7-60.

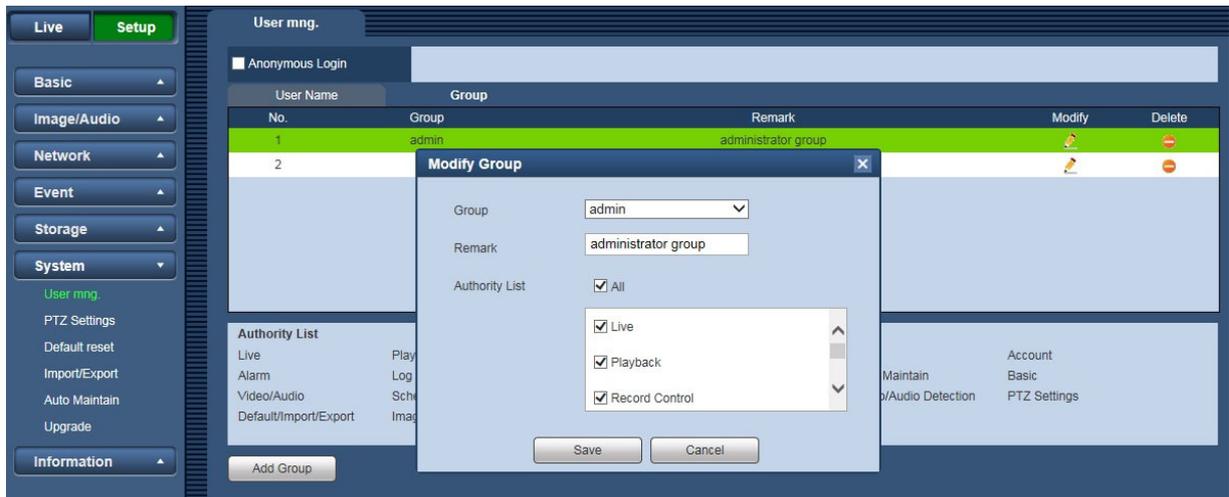Here you can modify group information such as remarks and rights.

Figure 7-60

7.6.2. PTZ Settings

PTZ can be controlled by connecting external devices (Pan/tilt head, etc.) to the RS485 port on the rear of the camera using a RS485 cable. Perform setting after checking the specification of the device to be connected. Refer to the operating instructions of the external device to be connected for further information. The PTZ settings interface is shown as in Figure 7-61.
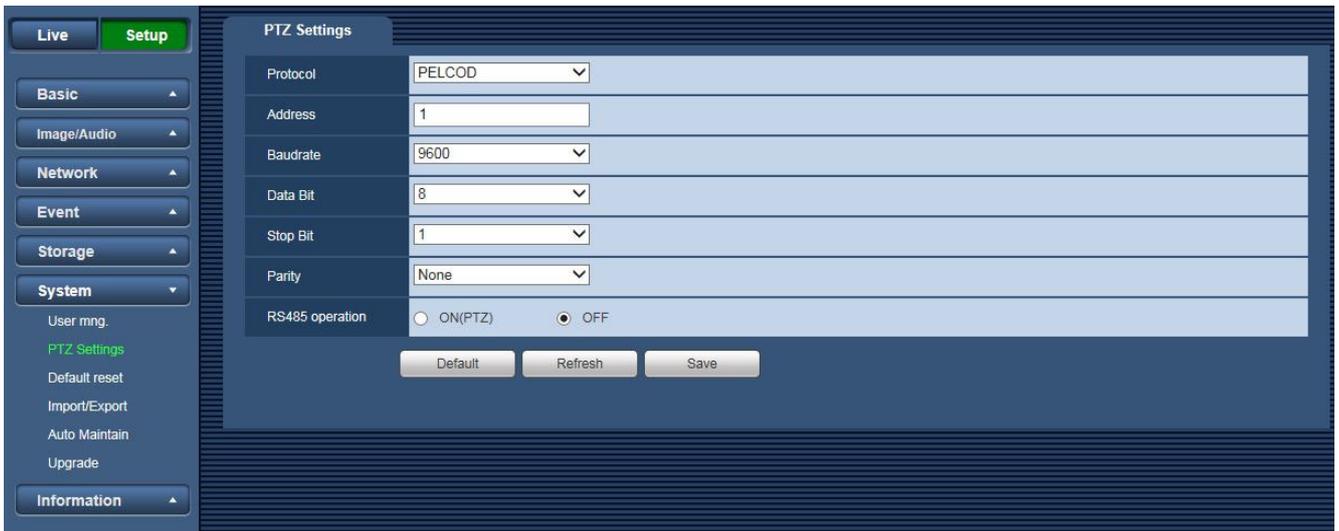
Figure 7-61

Parameter	Function
Protocol	Select the corresponding dome protocol.
Address	Set corresponding device address. Default value is 1. Please note your setup here shall comply with your device address.
Baud Rate	Select the dome baud rate. Default setup is 9600.
Data Bit	Default setup is 8.
Stop bit	Default setup is 1.
Parity	Default setup is none.
RS485 operation	Determine whether or not to display items related to RS485 transmission on the "Live" page. - ON(PTZ): Displays a screen and PTZ button that uses RS485 transmission to control the pan/tilt head. - OFF: Does not display items related to RS485 transmission. Default: OFF

7.6.3. Default reset

The [Default reset] interface is shown as in Figure 7-62.
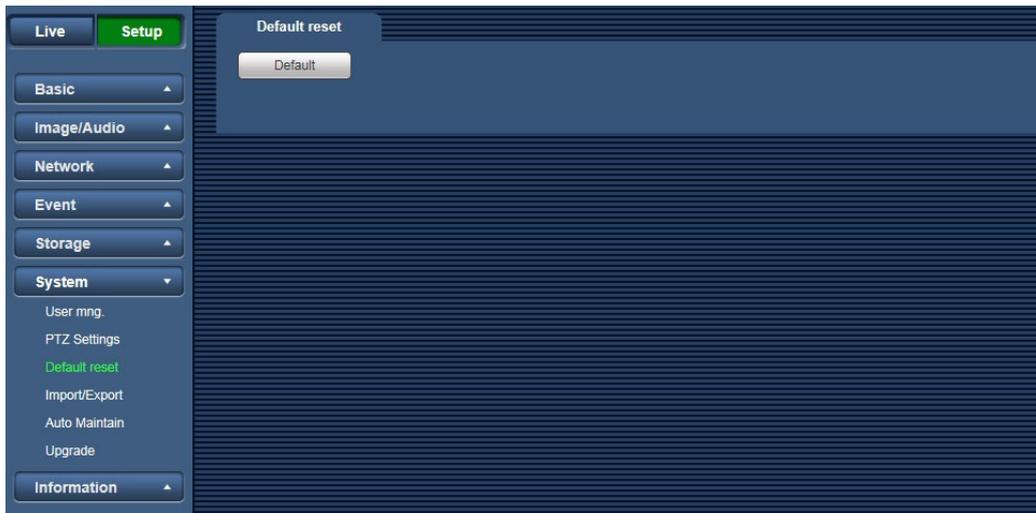Note that the system cannot restore some information such as network IP address and Username/Password.

Figure 7-62

7.6.4. Import/Export

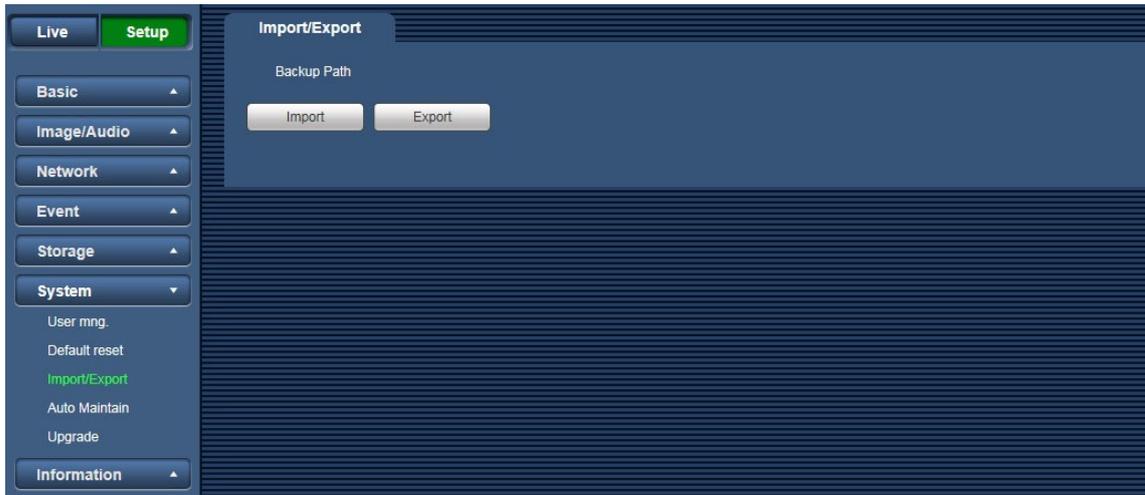The [Import/Export] interface is shown as in Figure 7-63.

Figure 7-63

Refer to the following sheet 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.

7.6.5. Auto Maintain

The [Auto Maintain] interface is shown as in Figure 7-64.
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.
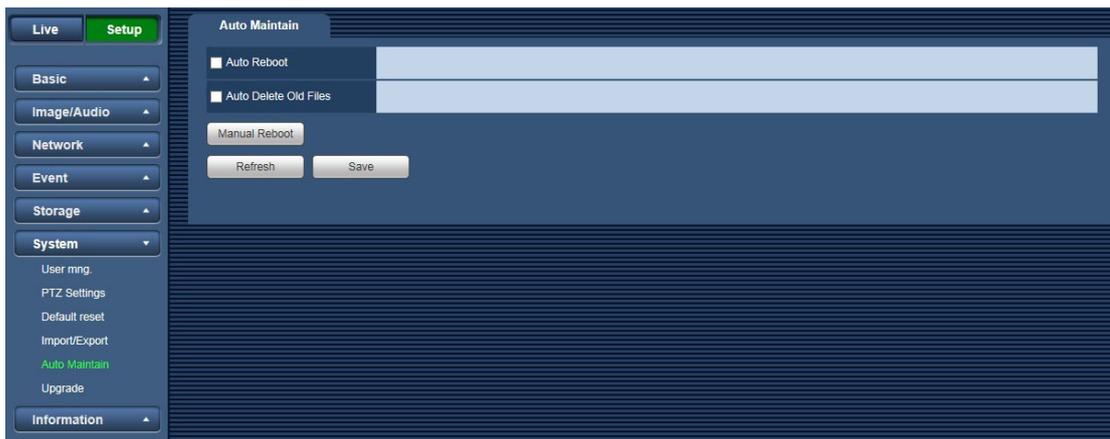

Figure 7-64

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

7.6.6. Upgrade

The [Upgrade] interface is shown as in Figure 7-65.
Select the upgrade file, and then click the [Upgrade] button to begin firmware update.

Important

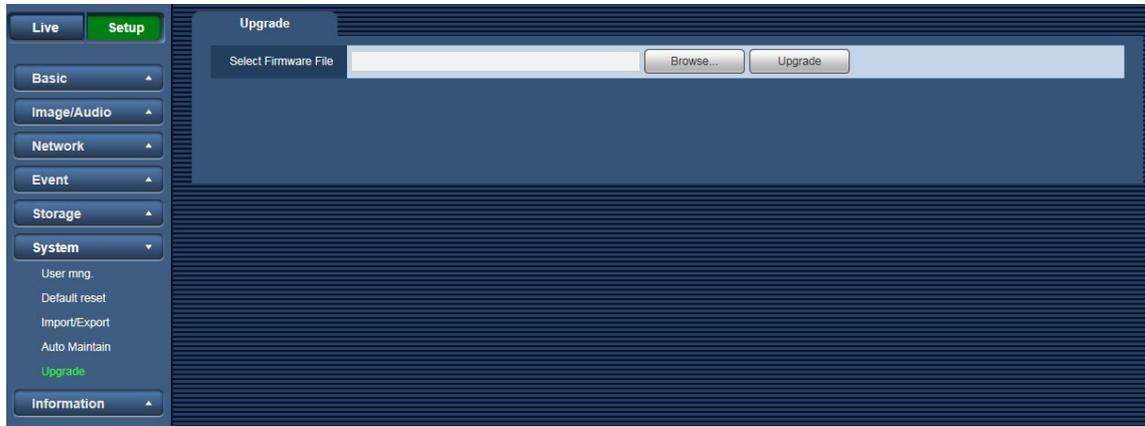• Improper upgrade program may result in device malfunction.

Figure 7-65

7.7 Information

7.7.1. Version

The [Version] interface is shown as in Figure 7-66.
Here you can view Software version, Build Date, WEB version and etc. Note that the following information is for reference only.
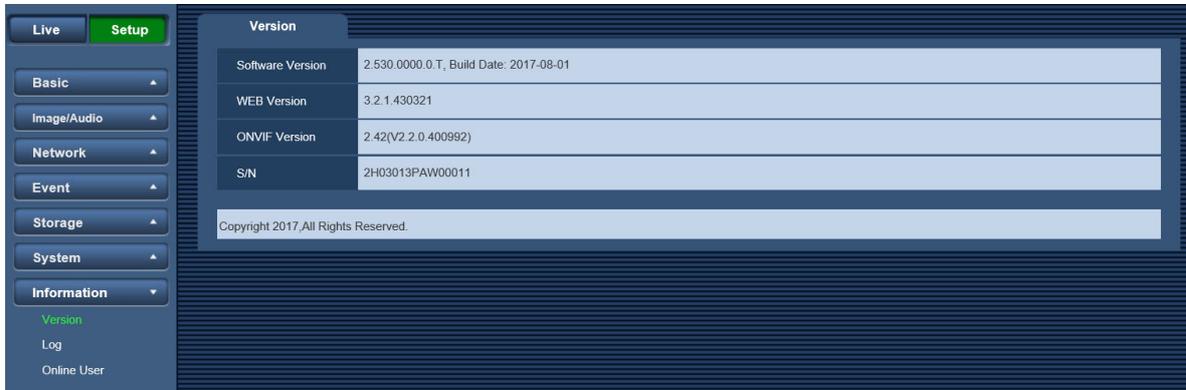

Figure 7-66

7.7.2. Log

Here you can view the system log. See Figure 7-67.
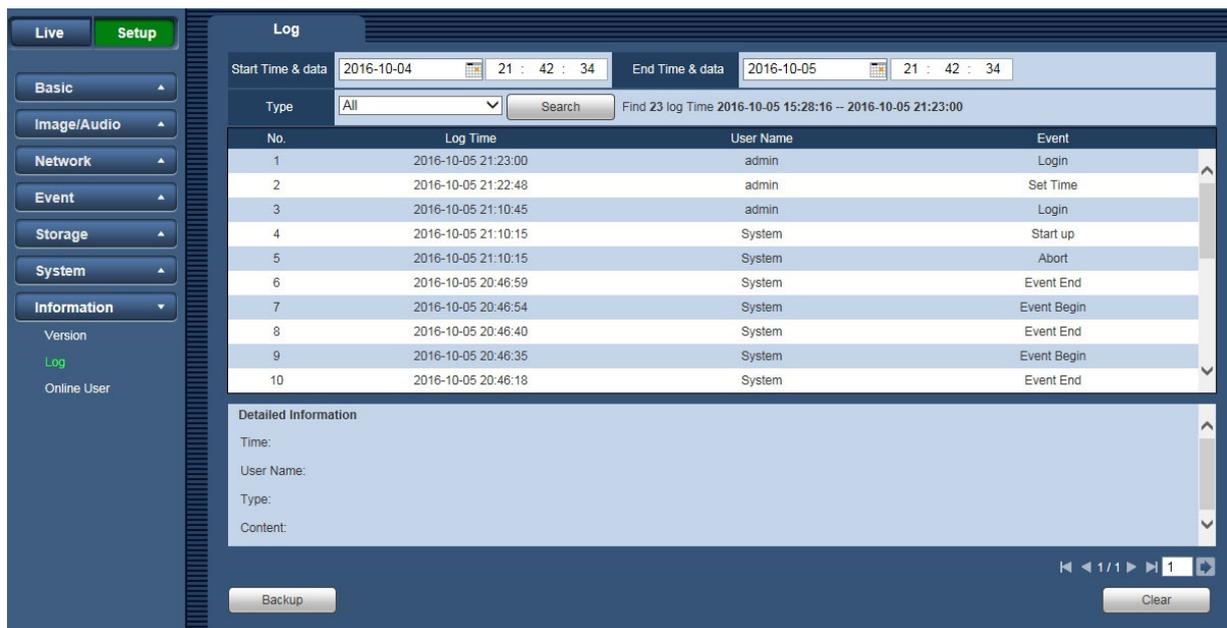
Figure 7-67

Refer to the following sheet for log parameter information.

Parameter	Function
Type	Log types include: all, system operation, setting operation, data operation, event operation, record operation, account management, clear log.
Start Time & date	Set the start time of the requested log.
End Time & date	Set the end time of the requested log.

Parameter	Function
Search	You can select a log type from the drop down list and then click the [Search] button to view the list. You can click the [Stop] button to terminate current search operation.
Detailed Information	You can select one item in the list to view the detailed information.
Clear	You can click this button to delete all displayed log files. Note that the system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

7.7.3. Online User

The [Online User] interface is shown as in Figure 7-68.
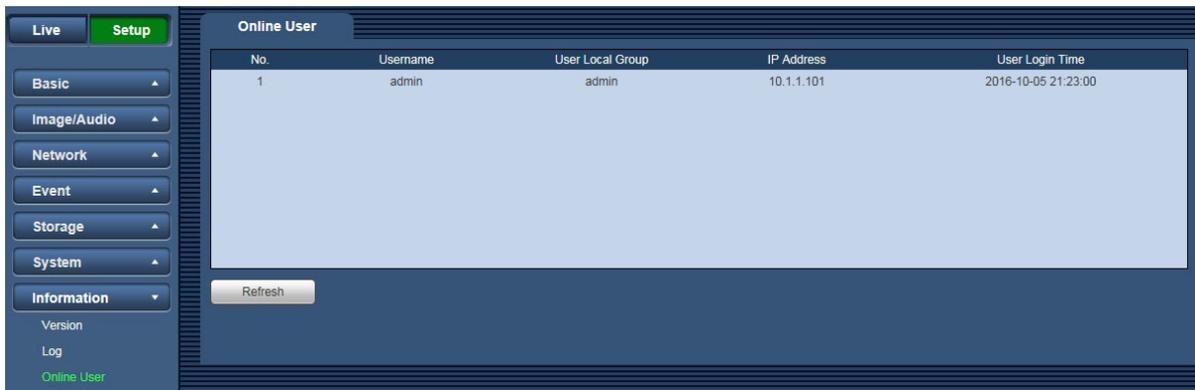Here you can view current online user, group name, IP address and login time.

Figure 7-68

8. Using the CD-ROM

8.1 About the CD launcher

By inserting the provided CD-ROM into the CD-ROM drive of your PC, the CD launcher is automatically started and the license agreement is displayed. Read the agreement and select "I accept the terms in the license agreement", and then click "OK".
The CD launcher window is displayed.

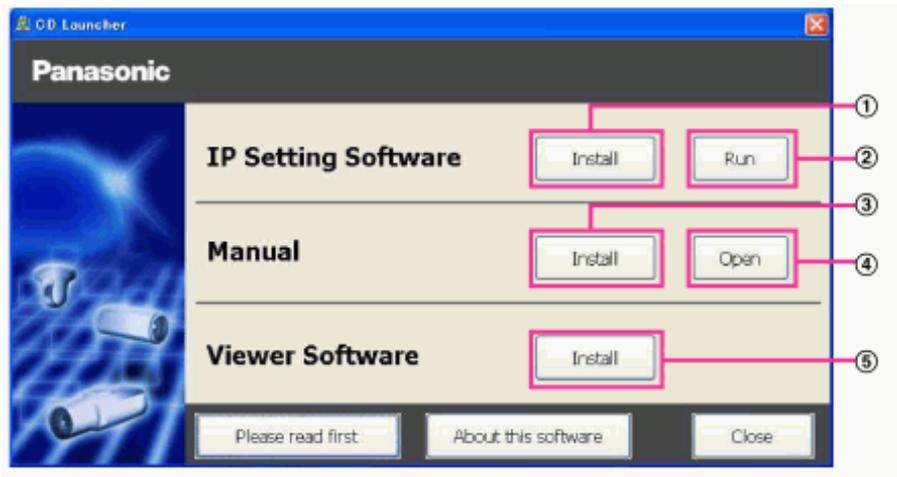• If the launcher window is not displayed, double click the "CDLauncher.exe" file on the CD-ROM.

Figure 8-1

Using the supplied CD-ROM, the following actions can be performed.

No	Parameter	Function
1	Install	The Panasonic "IP Setting Software" can be installed on the PC. (→8.2 Installing Panasonic "IP Setting Software"")
2	Run	Settings related to the camera's network can be set from the Panasonic "IP Setting Software". (→8.5 Configure the network settings of the camera using the Panasonic "IP Setting Software")
3	Install	The manuals can be installed on the PC. (→8.3 Installing the manuals)
4	Open	You can also view the manuals without installing them to the PC by clicking the [Open] button.
5	Install	The Viewer software (Plug-in software) can be installed on the PC. (→8.4 Installing the Viewer software)

8.2   Installing Panasonic "IP Setting Software"

On the CD launcher window, click the [Install] button next to [IP Setting Software] to display the Panasonic "IP Setting Software" installation window. Confirm the following settings before starting the installation.
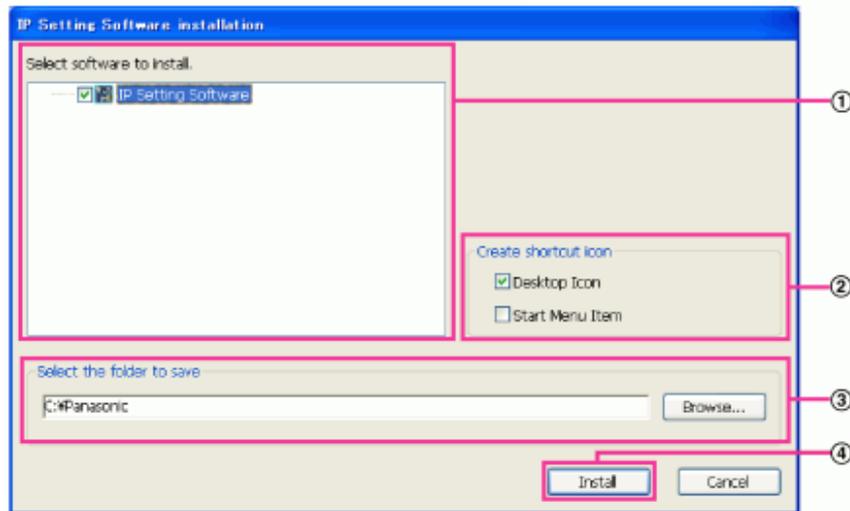

Figure 8-2

Procedure	Contents
1	Select the Panasonic "IP Setting Software" to install.
2	Select where to create the Panasonic IP setting shortcut icon when the Panasonic "IP Setting Software" is installed.
3	Specify which folder on the PC to install the Panasonic "IP Setting Software" to.
4	Click the [Install] button to start the installation.

Note

- To uninstall the Panasonic "IP Setting Software" delete the shortcut icon from where you specified it to be installed (the default is on the desktop) during installation and the [EasyIPConfig] folder from the folder (the default is C:\Panasonic) you specified during installation.

8.3   Installing the manuals

On the CD launcher window, click the [Install] button next to [Manual] to display the Manual installation window. Confirm the following settings before starting the installation.
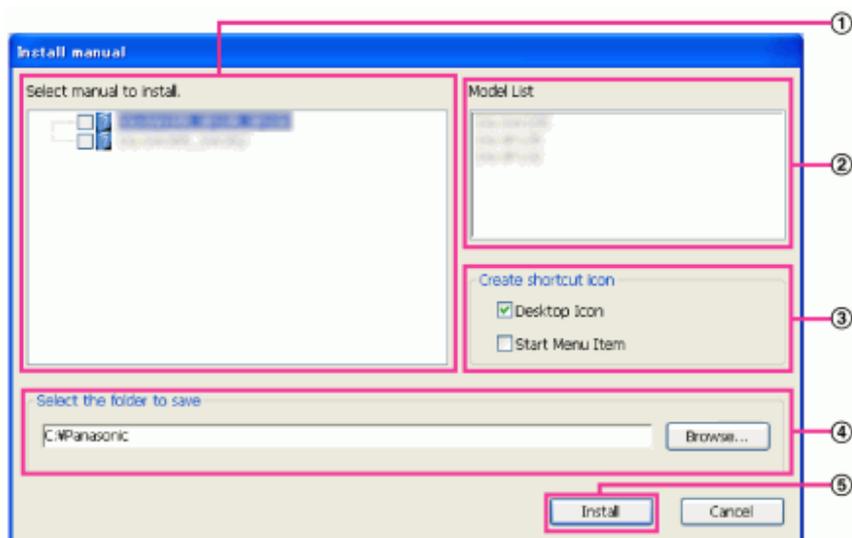
Figure 8-3

Procedure	Contents
1	Select which manuals to install. The camera models that the manuals support are displayed in "Model List".
2	The camera models that are supported by the manuals selected in are displayed here.
3	Select where to create the manuals shortcut icon when the manuals are installed.
4	Specify which folder on the PC to install the manuals to.
5	Click the [Install] button to start the installation.

Note
• To uninstall the manuals delete the shortcut icon from where you specified it to be installed (the default is on the desktop) during installation and the [Manual] folder from the folder (the default is C:\Panasonic) you specified during installation.

8.4   Installing the Viewer software

The Viewer software (Plug-in Software) must be installed on the PC in order to display camera images. On the CD launcher window, click the [Install] button next to [Viewer Software], and follow the instructions displayed on the window to install the software.

Note
• To uninstall the Viewer software, follow the steps below depending on the OS used on your PC. Delete [webrec] folder in [Program Files].

8.5   Configure the network settings of the camera using the Panasonic "IP Setting Software"

It is possible to perform the network settings of the camera using the "IP Setting Software" on the provided CD-ROM. When using multiple cameras, it is necessary to configure the network settings of each camera independently. If the Panasonic "IP Setting Software" does not work, access the "Network" page from the setup menu of the camera in the browser and perform settings separately. (→7.3 Network)

IMPORTANT
• The "Windows Security Alert" window may be displayed when starting the "IP Setting Software". In this

case, disable "User Account Control" from the control panel.
- Panasonic "IP Setting Software" is inoperable in other subnets via the same router.
- Due to security enhancements in "IP Setting Software", "Network Settings" of the camera to be configured cannot be changed when around 20 minutes have passed after turning on the power of the camera. However, settings can be changed after 20 minutes for cameras in the initial set mode.

1. To start the Panasonic "IP Setting Software", click the [Run] button next to [IP Setting Software] from the CD launcher menu window, or double-click on the shortcut icon created after installing the software on the PC.
   - The License Agreement will be displayed. Read the Agreement and choose "I accept the terms in the license agreement", and click [OK].
   - The "IP Setting Software" screen is displayed. If a camera is found, information about it, such as the MAC address and IP address, is displayed.
2. Click the [Access Camera] button after selecting the MAC address/IP address of the camera to be configured.
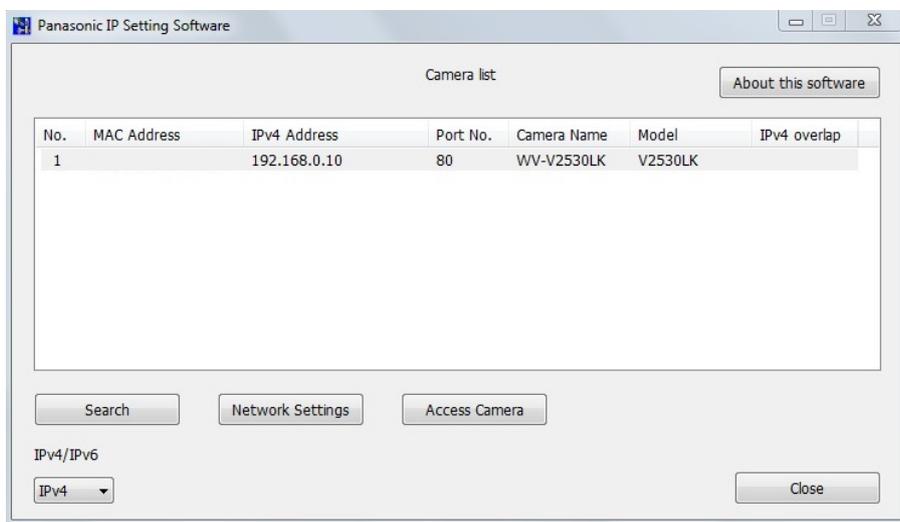

Figure 8-4

Note
- When using a DHCP server and Network settings is DHCP, the IP address assigned to the camera can be displayed by clicking the [Search] button of the "IP Setting Software".
- When duplicate IP addresses are used, the number of the camera with the duplicate address is displayed in overlap.
- The displayed camera information is not automatically updated. Click the [Search] button to update the information.
- It is possible to change the "Camera list" display between IPv4 addresses and IPv6 addresses in accordance with the protocol in use.
- The information displayed can be sorted by clicking the title of each displayed item.
- When the [Network Settings] button is clicked, the "Network Settings" screen is displayed and network settings can be changed. For further information, refer to "Changing Network Settings".

3. When "Please click here to download and install the plug-in" in the "Live" page is displayed, follow the on-screen instructions to install the software.
   - The "Live" page of the camera is displayed.
   - If the viewer software (Plug-in software) cannot be installed or images are not displayed, click the [Install] button next to [Viewer Software] from the CD launcher window to install the software.

Changing Network Settings

When changing settings related to the network settings, such as connection mode, IP address, and subnet mask, click the [Network Settings] button in "IP Setting Software" screen.

The "Network Settings" screen is displayed. Enter each item and then click the [Save] button.

Figure 8-5

Note

- The cameras don't support "Auto(AutoIP)" and "Auto(Advanced)" of Network Settings.
- By unchecking the "Wait for camera restarting." checkbox, multiple cameras can be continuously configured.
- For further information about each setting of the "Network Settings" page, refer to "7.3 Network".

IMPORTANT

- It may take for around 2 minutes to complete to upload the settings to the camera after clicking the [Save] button. The settings may be invalidated when the LAN cable is disconnected before completing the upload. In this case, perform the settings again.
- When using a firewall (including software), allow access to all UDP ports.

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.**