ADT®
Network Camera
Web Service Operation
User Guide

Typographic Conventions

This document uses the following typographic conventions to help you locate and identify information:

Italic text Identifies new terms, emphasis, book titles and text to enter on the keyboard

Bold text Identifies button names and other items that you can click or touch in the graphical user interface or press on a computer keyboard

Note: Notes provide extra information about a topic that is good to know but not essential to the process.

Tip: A useful hint for proper use of the product or software.

IMPORTANT: Identifies significant information that warrants more than ordinary consideration but not essential to system security.

CAUTION: Cautions draw your attention to actions that could compromise the security of your system or result in the loss of data.

DH-IPC-WEB-UG-01 (08/15)

Table of Contents

1 Network Configuration

1.1 Network Connection

The network cameras and the PC are generally connected in two possible ways, as demonstrated in Figure 1-1 and Figure 1-2.

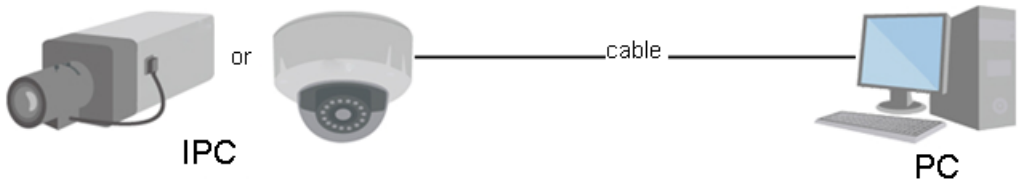

Figure 1-1

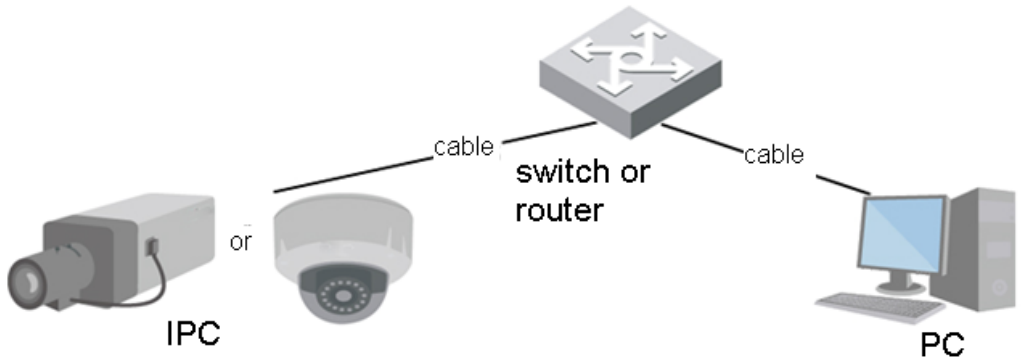

Figure 1-2

Before you access network camera via the Internet, you will need to have its IP address. You can use the Quick Configuration Tool to search for the IP of the network camera. Please refer to the Quick Configuration Tool manual.

1.2 Log in

The WEB plug-in installs when you use WEB client for the first time, as described below.

Open a web browser and enter the network camera address in the address bar. (The factory default IP address is 192.168.1.108).

After successful connection, enter your user name and password in the login interface. The default factory Username is **admin** and Password is **admin**.

Figure 1-3

For your first login, the system will display the Modify Password prompt box. You must modify and then save your new password.

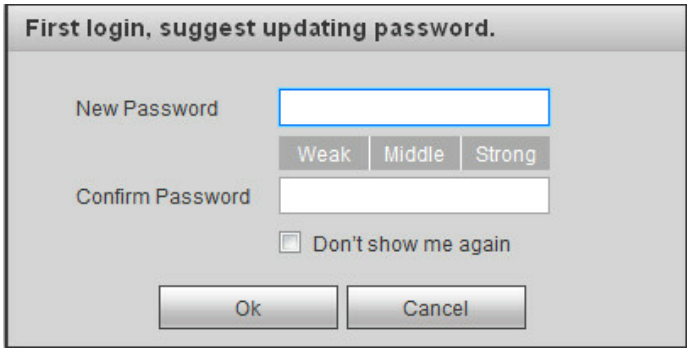

Figure 1-4

After successful login, the main user interface opens.

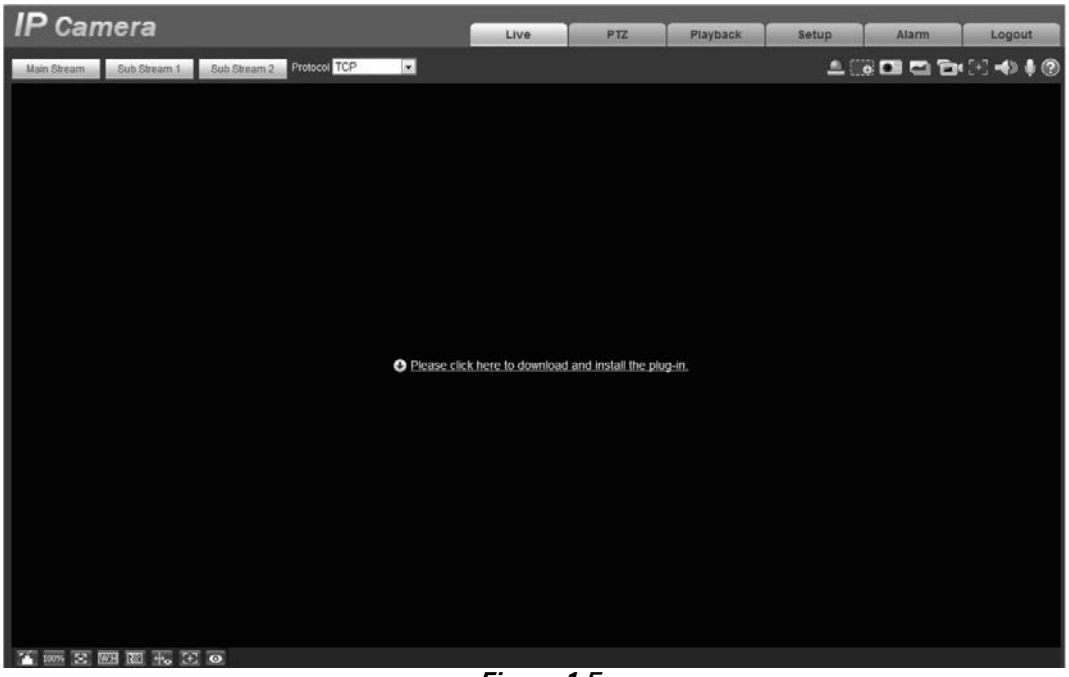

Figure 1-5

Click “Please click here to download and install the plug-in”. The system displays a pop-up warning to ask you whether to run or save this plug-in.

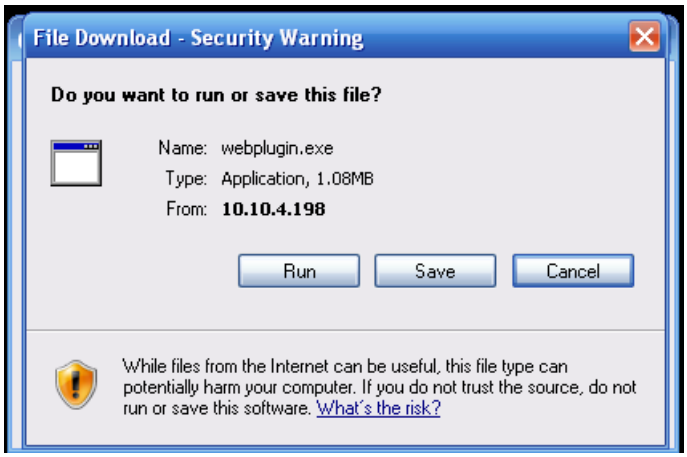

Figure 1-6

You must either run or save the file to local and install it.

When you install, the following dialog appears.

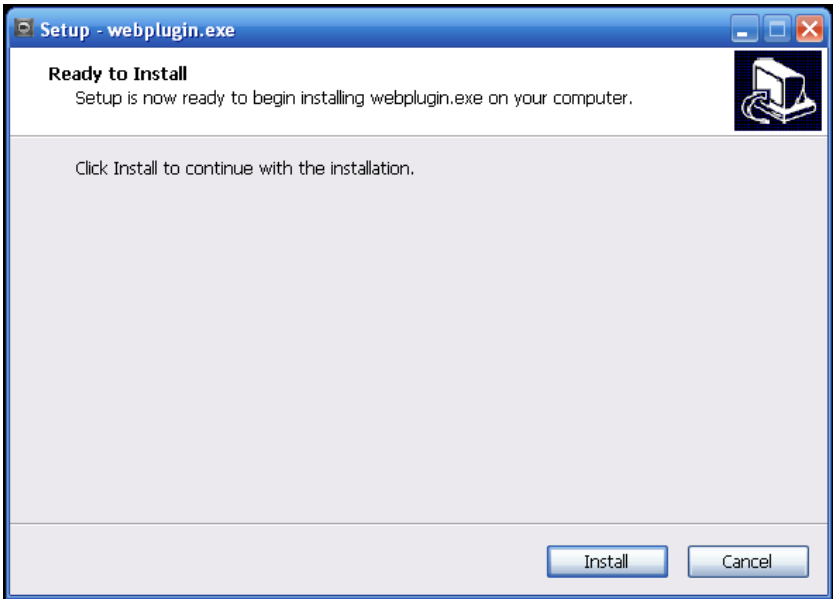

Figure 1-7

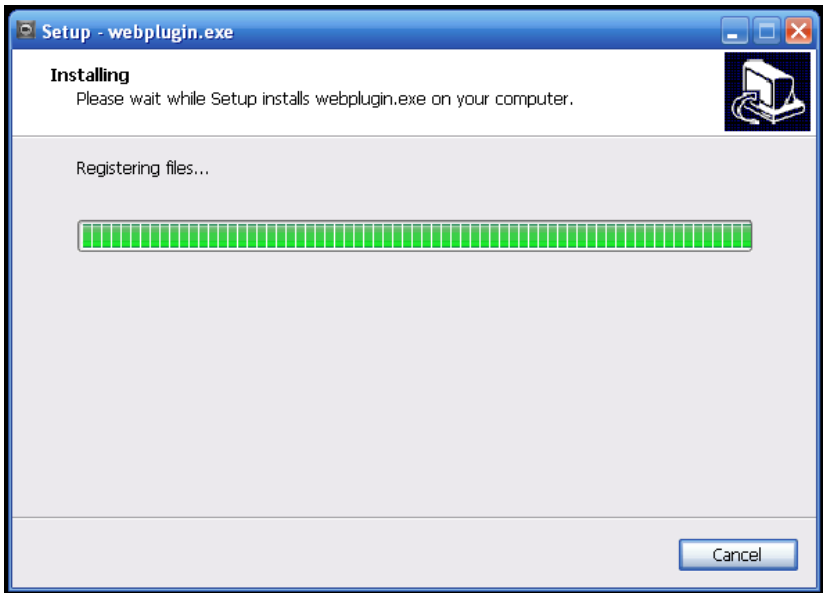

Figure 1-8

When the plug-in installation completes, the installation page closes automatically.

You can now view video captured by the camera.

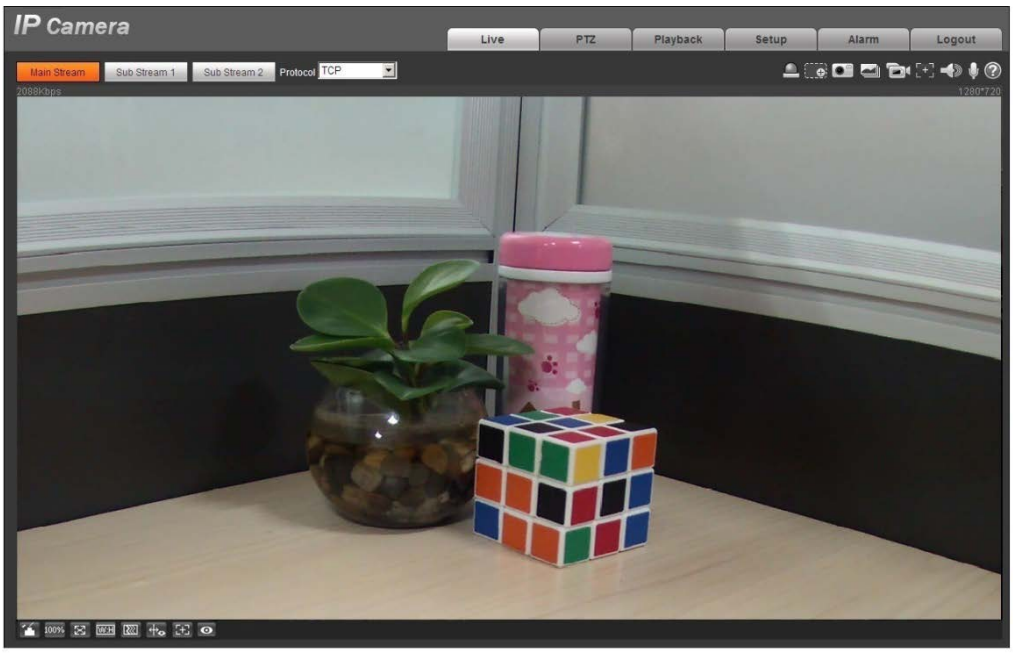

Figure 1-9

2 Live Video

After you log in, the live monitor window appears.

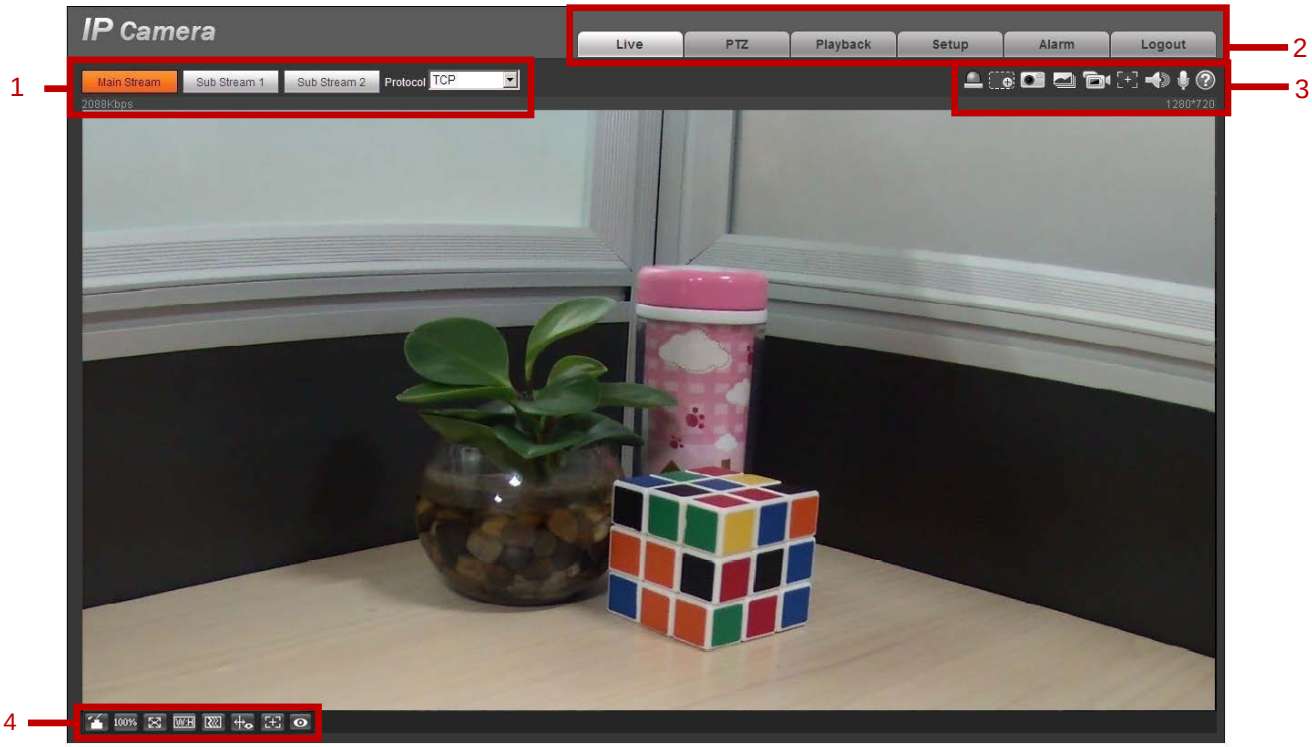

Figure 2-1

There are four sections:

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

2.1 Encode Setup

Note: *Some series cameras don't support triple code stream.*

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

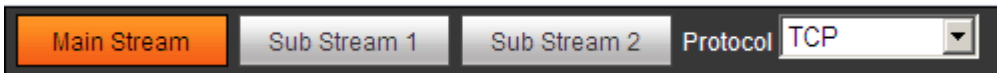

Figure 2-2

Please refer to the following table for detailed information.

Parameter	Function
Main stream	Streaming media protocol connection, under the main stream config. Use whether monitoring video or not. Generally used for storage and monitoring.
Sub (Extra) stream 1	Streaming media protocol connection, under the sub stream 1 config. Use whether monitoring video or not. When network bandwidth is insufficient, main stream is substituted for monitoring.
Sub (Extra) stream 2	Streaming media protocol connection, under the sub stream 2 config. Use whether monitoring video or not. When network bandwidth is insufficient, main stream is substituted for monitoring.
Protocol	Select stream media protocol from the dropdown list. There are three options: TCP, UDP and Multicast.

2.2 System Menu

The System menu is shown in Figure 2-3.

Please refer to Chapter 2 Live, Chapter 3 PTZ, Chapter 4 Playback, Chapter 5 Setup, Chapter 6 Alarm and Chapter 7 Logout for detailed information.

Figure 2-3

2.3 Video Window Function Option

The window function interface is shown below.

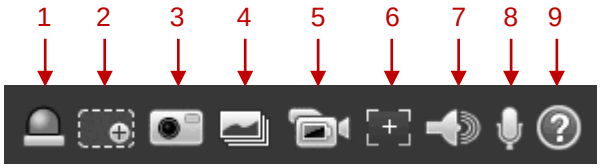

Figure 2-4

Please refer to the following table for detailed information.

No.	Parameter	Function
1	Alarm output	Displays the alarm output status, as follows: • Red: means there is an alarm. • Gray: means the alarm is over. Click the button to force the alarm on / off.
2	Zoom in	• When the video is in its original state, click this to select any zone to zoom in. When not in original state, drag to the zoom-in the specified range. Right mouse-click to restore the previous state. • Use the middle mouse button to zoom in/zoom out.
3	Snapshot	Click this button to take a snapshot picture.
4	Triple snap	Click this button for the system to take snapshots at 1f/s.
5	Record	Click this button for the system to start recording.
6	Easy focus	Click this button for the system to open two parameters on the preview video： AF Peak and AF Max. AF Peak displays the video definition during the focus process. AF Max is the most suitable value for the video definition. The closer the AF Peak and AF Max values are, the better the focus effect.
7	Audio output	Toggle audio on or off when you are monitoring.
8	Bidirectional talk	Click to toggle bidirectional talk to start or end.
9	Help	Click to open the help file.

2.4 Video Window Setup

The interface is shown in Figure 2-5.

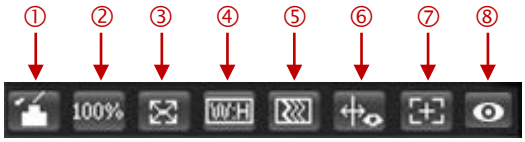

Figure 2-5

① Image Adjustment

The following interface is for image adjustment.

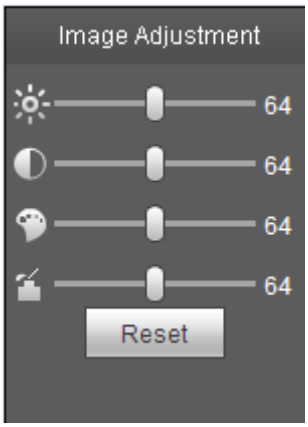

Figure 2-6

Click this button to display/hide image control interface on the top right pane.

Please refer to the following table for detailed information.

Parameter		Function	
Video Setup		Adjusts monitor video brightness	***Note:*** All operations here apply to Web Service Operation only. Please navigate to *Setup* > *Camera* > *Conditions* to adjust corresponding items.
		Adjusts monitor video contrast	
		Adjusts monitor video hue	
		Adjusts monitor video saturation.	
	Reset	Restores brightness, contrast saturation and hue to the system default setup.	

② Original Size

Click this button to return to the original size of the video stream, depending on the resolution of the bit stream.

③ Full Screen

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

④ Width and Height Ratio

Click to restore the original window ratio.

⑤ Fluency Adjustment

There are three levels of fluency for you to select: Real-time, Normal (default) and Fluent.

⑥ Rules Info

Click for the preview image to display intelligent rules; it is enabled by default.

⑦ Focus Zoom

Click this button for the focus zooming interface to appear on the right of preview interface, as shown in Figure 2-7. Left mouse-click to adjust the focus zooming configuration.

Note: This button only appears in product series that support motorized zoom, synchronous focus and back focus.

⑧ Fisheye

Click this button for the installation mode and display mode interface to appear on the right of the preview interface, as in Figure 2-8. Single mouse-click to toggle installation and display modes; this is enabled by default.

Note: This feature is only supported by fisheye devices.

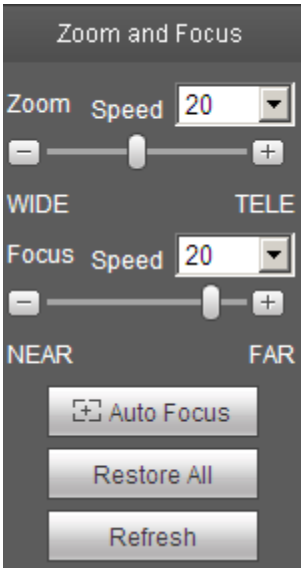

Figure 2-7

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

In-ceiling Mount **Wall Mount** **Ground Mount**

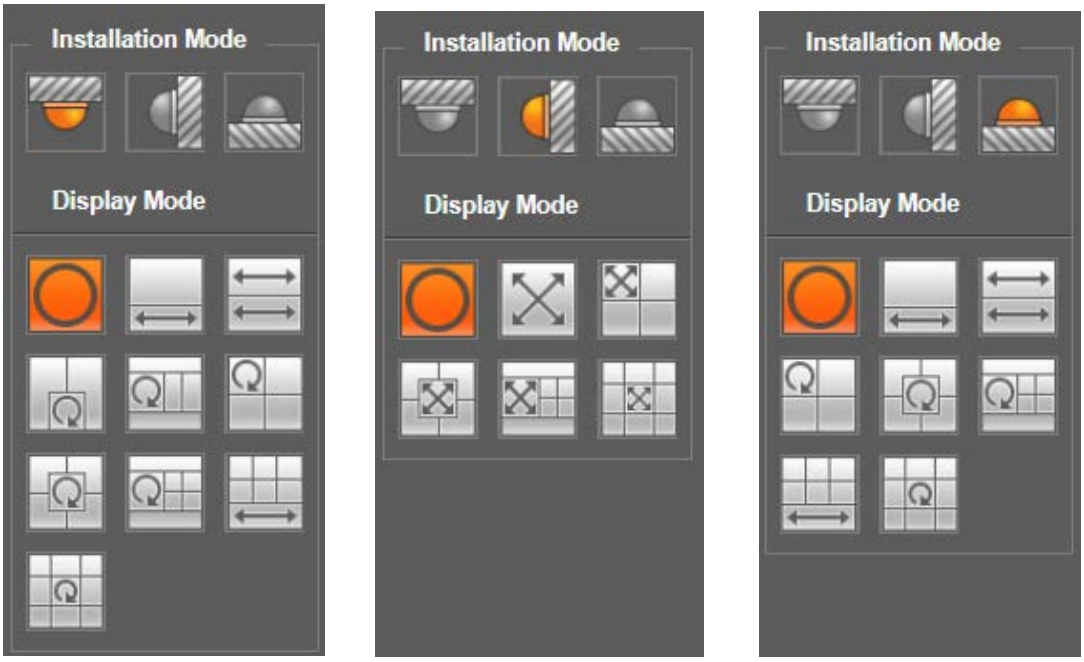

Figure 2-8

Parameter	Note	
Installation Mode	Three modes which are ceiling mount, wall mount and ground mount.	
Display Mode	This represents the display mode of the current image (default supports original image mode), the display modes may be different according to different installation modes, as follows: **Ceiling:** 1P+1, 2P, 1+2, 1+3, 1+4, 1P+6, 1+8. **Wall:** 1P, 1P+3, 1P+4, 1P+8. **Ground:** 1P+1, 2P, 1+3, 1+4, 1P+6, 1+8. ***Note: The original image mode displays by default when switching installation modes.***	
In-ceiling/Wall/Ground	 Original image	Restores the original image without de-warping
In-ceiling/Ground	 1P+1	360°expanded rectangular panorama and independent sub images. The sub-image and the sub-box in the expanded rectangular panorama supports zoom and movement. The expanded rectangular panorama also supports left and right starting point movement.
	 2P	Two related 180° expanded rectangular pictures. Two sub-windows form 360° panorama anytime, which is also called “dual panorama”. Two expanded rectangular pictures both support left and right movement starting points, which are also linked by each other.

Parameter	Note	
In-ceiling/Ground (cont.)	 1+2	Original image + 2 independent sub images. Both the sub-image and the sub-box in the original image support zoom and movement. The original image also supports changing starting point by rotation (no such display mode for ground installation).
	 1+3	Original image + 2 independent sub images. Both the sub-image and the sub-box in the original image support zoom and movement. The original image also supports changing starting point by rotation.
	 1+4	Original image + 4 independent sub images. Both the sub-image and the sub-box in the original image support zoom and movement. The original image also supports changing starting point by rotation.
	 1P+6	360°expanded rectangular panorama + 6 independent sub images. Both the sub-image and the sub-box in the expanded rectangular panorama support zoom and movement. The expanded rectangular panorama also supports left and right starting point movement.
	 1+8	Original image + 8 independent sub images. Both the sub-image and the sub-box in the original image support zoom and movement. The original image also supports changing starting point by rotation.
Wall	 1P	From left to right 180° expanded rectangular panorama, which supports up and down movement and changes vertical angle of view.
	 1P+3	180° expanded rectangular panorama+3 independent sub images. Both the sub-images and the sub box in the expanded rectangular panorama support zoom and movement. Expanded rectangular panorama supports up and down movement and changes vertical angle of view.
	 1P+4	180° expanded rectangular panorama+4 independent sub-images. Both the sub-images and the sub box in the expanded rectangular panorama support zoom and movement. Expanded rectangular panorama supports up and down movement and changes vertical angle of view.
	 1P+8	180° expanded rectangular panorama+8 independent sub-images. Both the sub images and the sub box in the expanded rectangular panorama support zoom and movement. Expanded rectangular panorama supports up and down movement and changes vertical angle of view.

3 PTZ Control

Here you can view direction keys, speed, zoom, focus, iris, preset, tour, pan, scan, pattern, aux on, off and PTZ setup button.

Note: Before PTZ operation, please make sure you have properly set the PTZ protocol. (Refer to section **5.5.3 PTZ**).

Currently only the DH-IPC-HFWxxxx series products can support the PTZ function.

Parameter	Note
PTZ Direction	PTZ supports eight directions: left/right/up/down/upper left/upper right/bottom left/bottom right.
Speed	This controls rotation speed. The longer the step length, the higher the speed. Step length controls PTZ, Zoom, Focus and Iris.
 Quick Position	Use the mouse to draw a box in monitoring video. The PTZ rotates and focuses to that positioning.

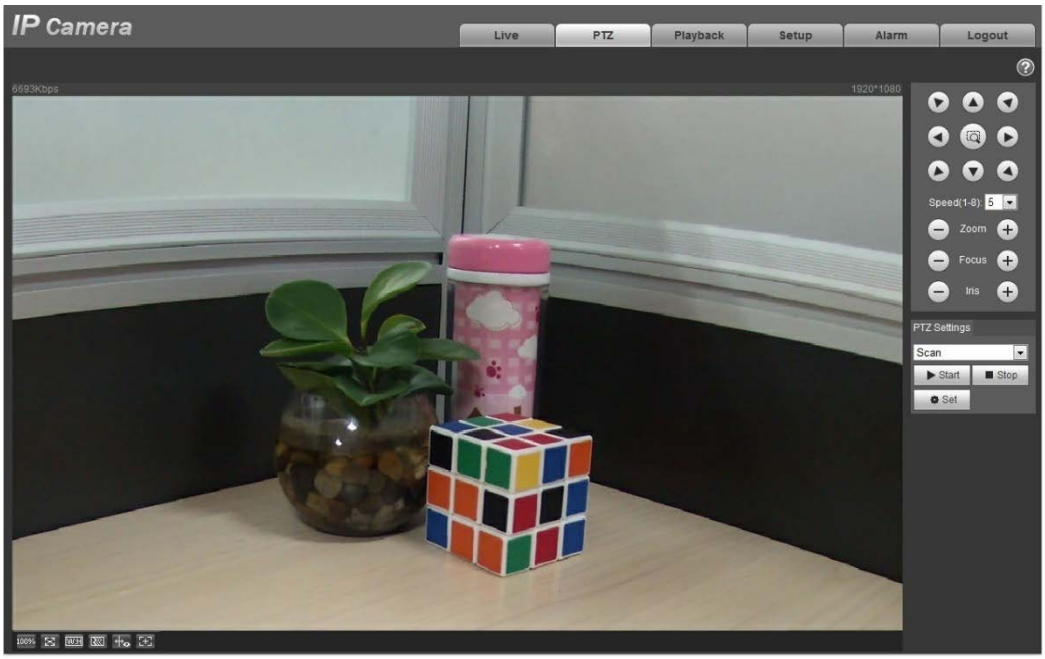

Figure 3-1

Figure 3-2

PTZ setting interface enables you to set Scan, Preset, Tour, Pattern, Assistant and Light Wiper functions.

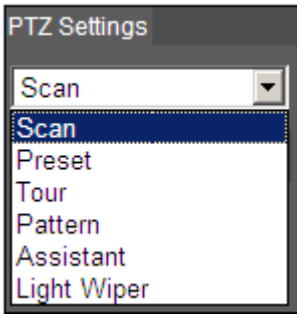

Figure 3-3

3.1 Scan

The Scan interface is shown below.

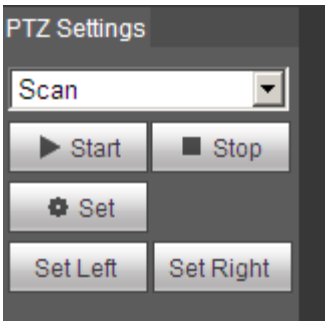

Figure 3-4

To set up Scan:

Step 1. Click the **Set button**; the  icons appear.

Step 2. Use the direction keys to move and select the left border. Click the **Set Left** button to set the left border.

Step 3. Use the direction keys to move and select the right border. Click the **Set Right** button to set the right border.

Step 4. Complete the scan path setup.

3.2 Preset

The Preset interface is shown below.

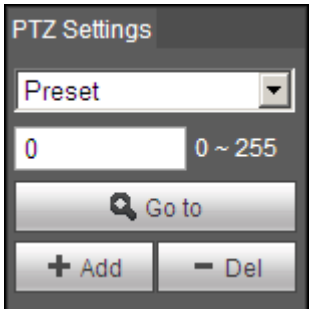

Figure 3-5

To set up Preset:

Step 1. In preset box, input the Preset value.

Step 2. Click the **Go to** button. The camera rotates to the Preset position.

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

Step 4. Click the **Add** button to add the preset. The range of preset values relates to PTZ protocol.

3.3 Tour

The Tour interface is shown below.

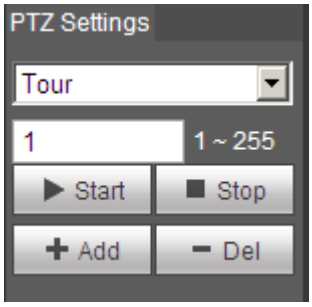

Figure 3-6

To set up Tour:

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

Step 2. Click the **Add** button. The range of the tour relates to the PTZ protocol.

Step 3. In preset box, input the preset value.

Step 4. Click the **Add** button to add a preset for this tour. Click **Del** to delete this preset in the tour.

Note: You can add or delete more than one preset.

3.4 Pattern

The Pattern interface is shown below.

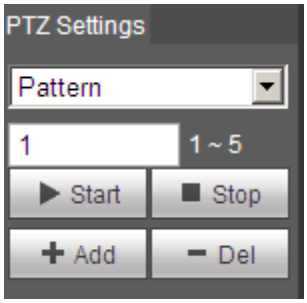

Figure 3-7

To set up Pattern:

Step 1. Input a pattern value in the pattern box, and then click the **Add** button.

Step 2. Click the **Start** button.

Step 3. Move, zoom, focus, set the iris, etc. or other actions you want included in the pattern.

Step 4. Click **Stop** to finish the setup of this pattern.

3.5 Assistant

The Assistant interface is shown below.

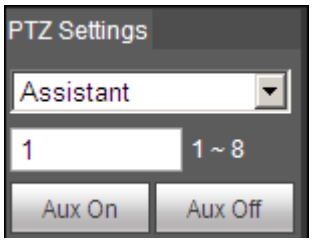

Figure 3-8

To set up Assistant:

Step 1. Input the Assistant value in the Assistant box.

Step 2. Click the **Aux On** button to turn on the function.

Step 3. Click the **Aux Off** button to turn off the function.

3.6 Light Wiper

The Light Wiper interface is shown below.

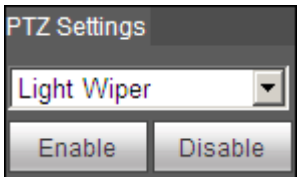

Figure 3-9

To set up Light Wiper:

Step 1. Click the **Enable** button to enable the light wiper function.

Step 2. Click the **Disable** button to disable the light wiper function.

4 Playback

The Web Service playback supports video playback and picture playback.

Note: Before using playback, you must set storage management as described in section **5.4 Storage Management**.

4.1 Playback

The playback interface is shown below.

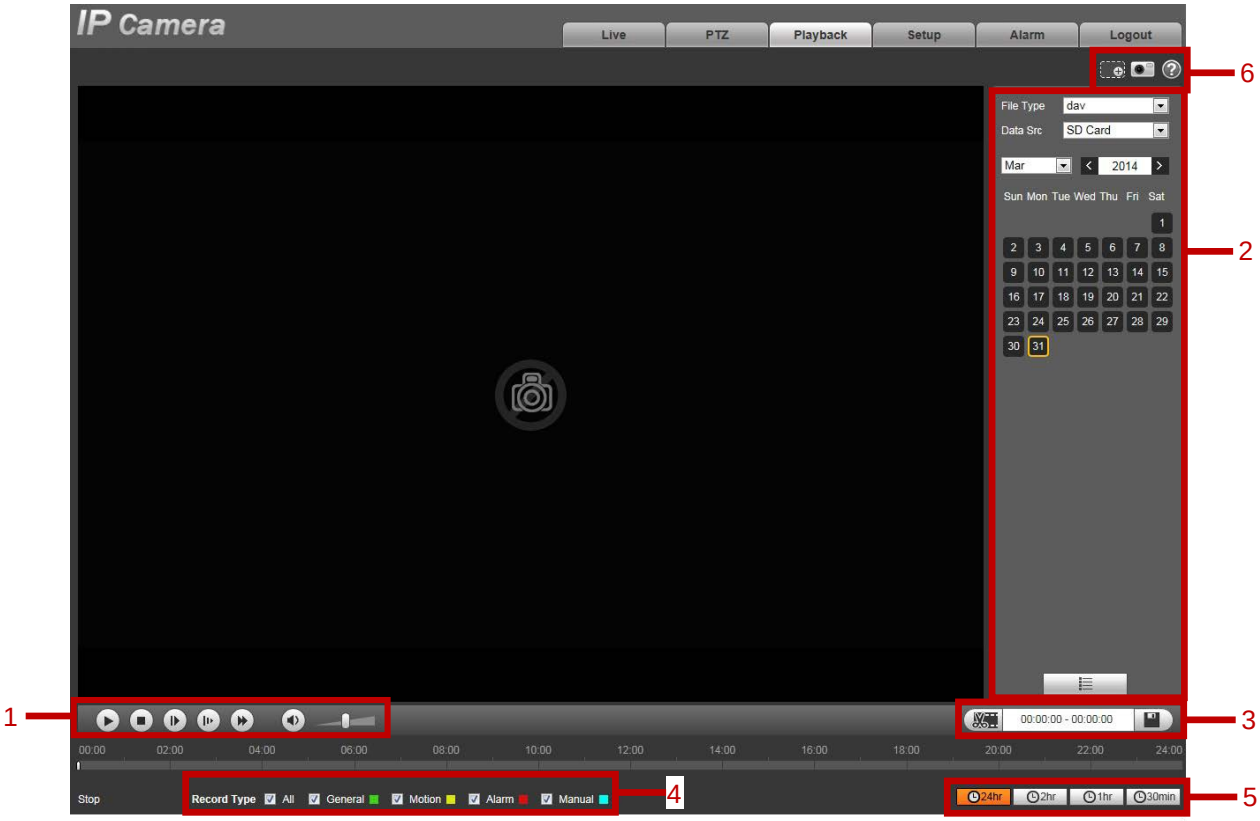

Figure 4-1

There are four sections, each described in the ensuing sections:

- Section 1: Playback functions
- Section 2: Playback file
- Section 3: Play time cut
- Section 4: Recording type
- Section 5: Progress bar
- Section 6: Assistant function

4.1.1 Playback Functions

The Playback function interface is shown below.

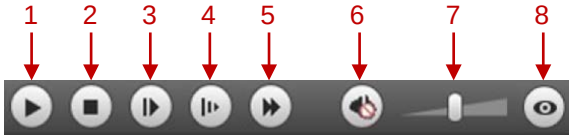

Figure 4-2

Item	Parameter	Function
1	Play	Click to play.
2	Stop	Click to stop playing.
3	Play by frame	Click to advance to the next frame.
4	Slow	Click to play slowly.
5	Fast	Click to play more quickly.
6	Mute	Click to toggle mute on or off.
7	Volume	Slide to adjust the volume.
8	Fisheye	Click this button to enable a fisheye device to adjust the display mode.

4.1.2 Playback File

In the calendar, the blue date represents data that currently has video recording(s) or snapshot(s).

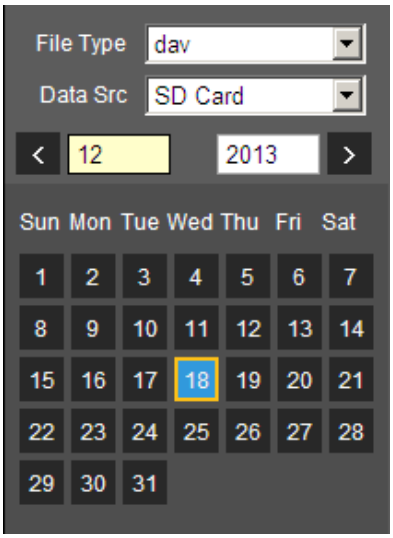

Figure 4-3

Parameter	Function
File Type	• Select **dav** for video playback • Select **jpg** for picture playback
Data Source	The default is SD card.

To playback a file:

Step 1. Click on the data in blue. The time axis displays the recording file on the progress bar in color: Green = normal recording; Yellow = Motion Detect recording; Red = Alarm Recording, and Blue = Manual recording.

Step 2. Click on the desired time of day on the progress bar. Playback starts from this time.

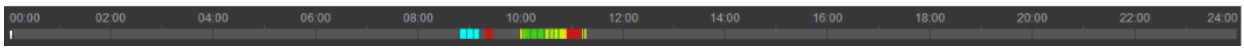

Figure 4-4

Step 3. Click the **File List** button . The files for the selected date are displayed in list.

Step 4. Double click on the desired file in the list. The selected file is played, displaying the file size, start time and end time.

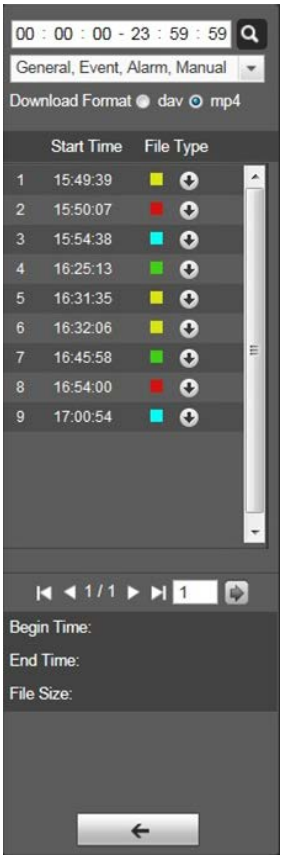

Figure 4-5

Parameter	Function
Search	Locate records within the start time and end time on this date.
Record Download Format	Select between two formats: **dav** and **mp4**.
Download	Click to download the file. ***Note:*** The system does not support download and playback of MP4 files.
Back	Click the **Back** button to return to the Calendar interface.

4.1.3 Playback Cut

Note: Playback cut function will automatically pause playing of a recording as playback cut and playback cannot occur at the same time.

To use Playback Cut:

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

Step 2. Click the **Cut** icon  . You are asked to select a start time. Click the **Cut** icon  again to finish cutting.

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

Step 4. Click the **Cut** icon  . You are asked to select the end time. Click the **Cut** icon  to finish cutting.

Step 5. Click the **Save** button to save the Cut file.

Figure 4-6

4.1.4 Recording Type

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

Figure 4-7

4.1.5 Progress Bar

Figure 4-8

Parameter	Function
 24 hours	Click to playback video in past 24 hours.
 2 hours	Click to playback video in past 2 hours.
 1 hour	Click to playback video in past 1 hour.
 30 min	Click to playback video in past 30 min.

4.1.6 Assistant Function

The Video playback assistant function is shown below.

Figure 4-9

Parameter	Function
 Zoom in	• Click to zoom in on an area. Click again to restore to the original size. • Click and scroll to zoom in.
 Snapshot	Click to create a snapshot during video playback.

4.2 Picture Playback

The Web Service picture playback interface has the following three functions:

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

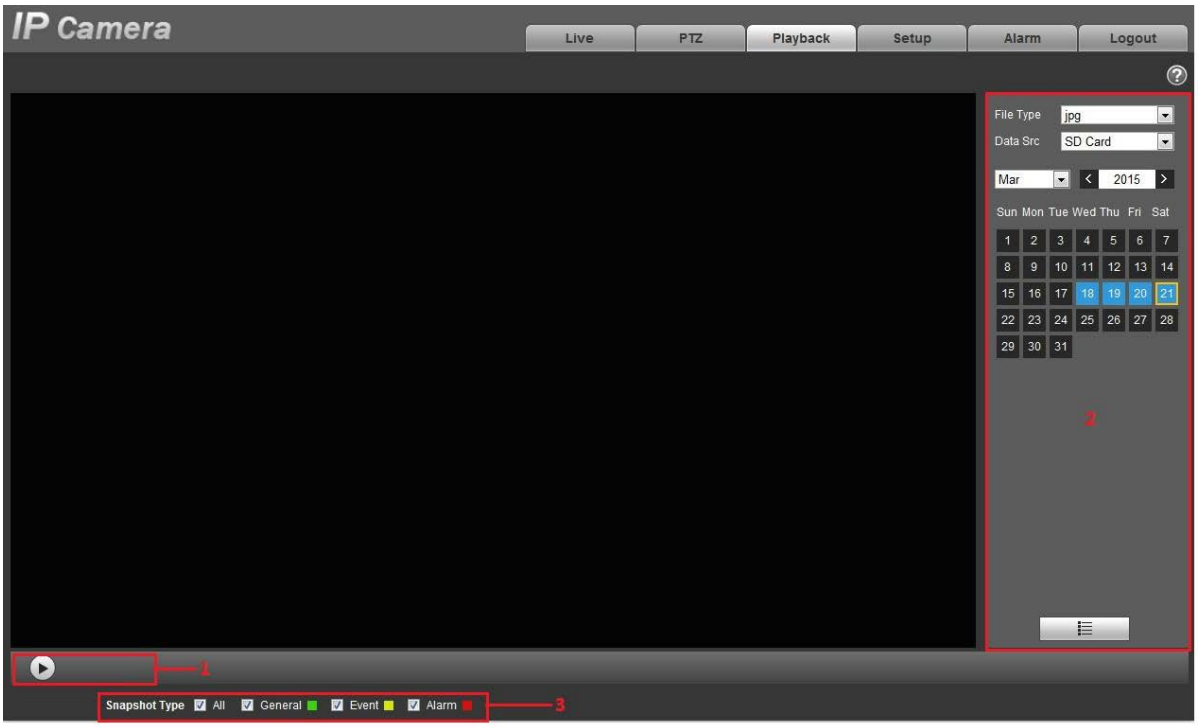

Figure 4-10

4.2.1 Play

When the icon appears as  , click it to play. The icon changes to  . Now click on it to pause.

4.2.2 Playback File

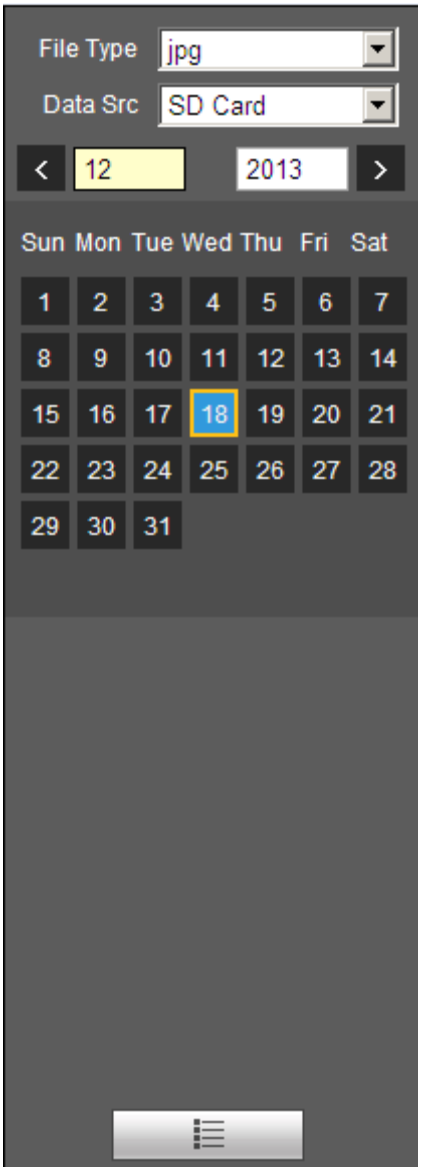

Figure 4-11

To Playback a file:

Step 1. Click the **File List** , and then select the snapshot file for the desired date.

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

Parameter	Function
Search	Search all snapshot files within the start time and end time of selected date.
Download	Click to download the snapshot file.
Back	Click to return to the Calendar interface.

Figure 4-12

4.2.3 Snapshot Type

After checking the snapshot file type in file list, only the file of the selected type is displayed. You can also select the snapshot type to be displayed via the dropdown box above the file list.

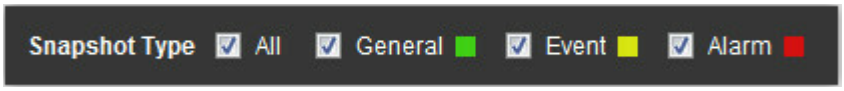

Figure 4-13

5 Setup

The Web Service setup screen supports Camera, Network, Time, Storage, System and System views.

5.1 Camera

5.1.1 Conditions

Here you can view device property information. Slight differences may be found due between the different network camera series. The setup becomes valid immediately after you set it.

Note: Only motorized zoom lens devices have zoom and focus functions.

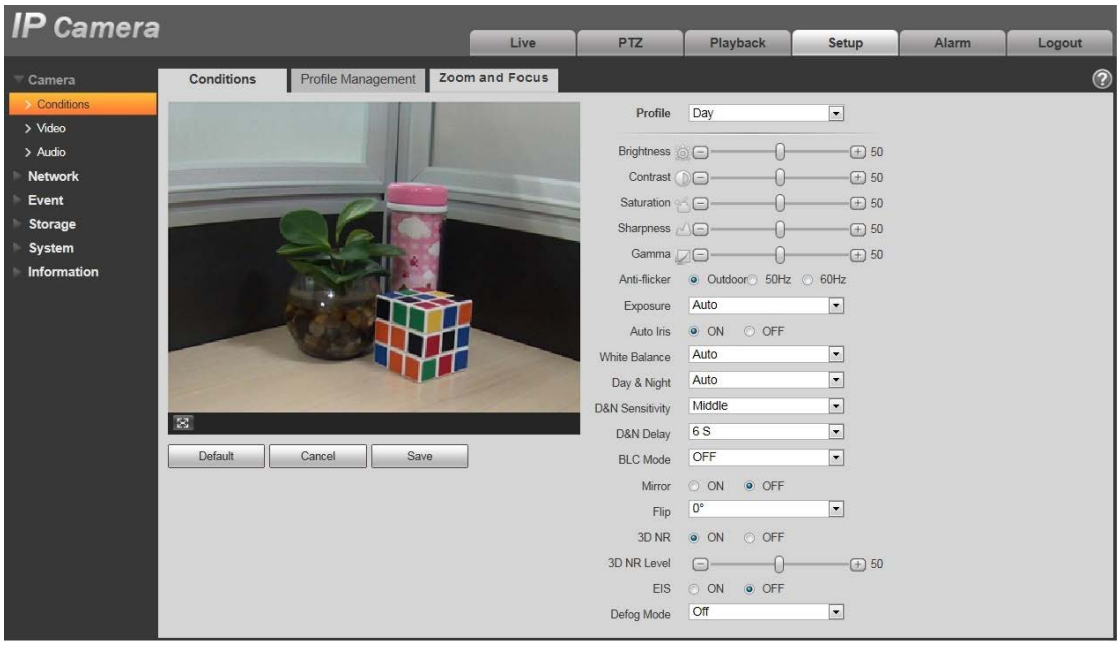

Figure 5-1

Please refer to the following table for detailed information.

Parameter	Function
Profile	Select Normal, Day or Night mode. Then set and view the config and its effect.
Brightness	This adjusts monitor window brightness. You can adjust this value if the video is too dark or too bright. The larger the number, the brighter the video. ***Note:*** The video may become hazy if this value is set too high. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.

Parameter	Function
Contrast	This adjusts monitor window contrast. The larger the number, the greater the contrast. ***Note:*** The video may become hazy if this value is too low. If this value is too high, the dark section may lack brightness while the bright section may appear over-exposed. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Saturation	This adjusts monitor window saturation. The larger the number, the stronger the color. This value has no effect on the general brightness of the whole video, however. ***Note:*** The video color may become too strong if the value is too high. For the gray part of the video, distortion may occur if the white balance is not accurate. The video may appear correct 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	This adjusts the edge of the video. The larger the value, the clearer the edge and vice versa. ***Note:*** Noise appears if this value is too high. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Gamma	This threshold value mainly changes the image brightness using a nonlinear method and improves dynamic display range. The higher this value, the brighter image will be and vice versa. The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.
Anti-flicker	• **Outdoor:** In this mode, you can switch exposure mode to get the effect under the corresponding exposure mode. • **50Hz:** When the current is 50Hz, the system can auto adjust the exposure according to the environment brightness. • **60Hz:** When the current is 60Hz, the system can auto adjust the exposure according to the environment brightness.

Parameter	Function
Exposure	***Note:*** Exposure mode is available only when Anti-flicker is set to **Outdoor**. • Auto: o Video brightness can automatically change within the proper exposure range with differing environments. The higher the gain max value, the lower the noise. • Low Noise: o Video brightness can automatically change within the proper exposure range with differing environments. The higher the gain max value, the lower the noise. o For the same environments, the amount of noise in Low Noise mode is smaller than the noise in Auto mode. • Low Motion Blur o Video brightness can automatically change within the proper exposure range with differing environments. The lower the exposure max value, the weaker the tail. o For the same environments, the noise in Low Motion Blur mode is smaller than that in Auto mode. • Manual o This displays the manual exposure value.
Auto Iris	***Note:*** Before setup, make sure you have installed the auto iris. Check the **ON** box to enable this function. The auto iris may change if the light becomes different. When disabled, the iris is set to max. The system does not add the auto iris function in the exposure control. This function is on by default.
White Balance	This to set the white balance mode, which affects the general hue of the video. This function is on by default. You can select different scene modes such as Auto, Sunny, Cloudy, Home, Office, Night, Disable, etc. 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. • **Sunny:** The threshold of the white balance is in the sunny mode. • **Night:** The threshold of the white balance is in the night mode. • **Customized:** You can set the gain of the red/blue channel. The value reneges from 0 to 100. • **Outdoor:** White balance threshold sets to outdoor mode.

Parameter	Function
Day & Night	This sets the device day/night mode switch independently from the config file. The default is auto mode. • **Color:** Select to output color video. • **Auto:** Select to automatically output color or B/W video according to the general brightness of the video or whether there is IR light. • **B/W:** Select to output black and white video. • **Sensor Input:** Select for an external connection to IR light to control the day/night mode. ***Note:*** Only some non-IR devices support sensor input function.
Sensitivity	This adjusts the sensitivity of the switch from color to black & white. Select low, medium or high level. The default is medium. **Note:** Available only when day/night is set to Auto.
Delay	This adjusts the delay time of the switch from color to black & white. The range is 2 to 10; the default is 6. **Note:** Available only when day/night is set to Auto.
BLC Mode	BLC Mode is used to set the backlight. **SSA** For backlight scenes, SSA automatically lowers the brightness of excessively-bright areas and increases the brightness of low brightness areas. This feature helps make it easier to see what is in the picture. **BLC** Default BLC: Sets automatic exposure according to the scene. Custom: Selects the exposure in a particular area. The objective is to set the appropriate brightness in the selected area. **WDR** This function lowers overly-bright sections and brightens low-brightness areas, so that you can view these two sections clearly at the same time. The value ranges from 1 to 100. Default is 50. ***Note:*** When you switch the camera from no-WDR mode to WDR mode, the system may lose several seconds of recorded video. **HLC** Select to lower the brightness of the brightest sections, according to the HLC control level. This can reduce the halo area and lower the brightness of the video as a whole. The value ranges from 0 to 100. The default value is 50 when HLC is on. **Off** This disables the BLC function. This function is disabled by default.

Parameter	Function
3D NR	This threshold is mainly for multi-frame (at least 2) image processing. It reduces noise with info between a frame and the previous frame. The higher the value, the better NR. Default is enabled. NR level ranges from 0 to 100. The recommended value to from 40 to 60. The default value is 50.
EIS	This enables the electronic anti-jitter function by using an algorithm that compares the image difference. This function helps the problem of image dithering during use and makes the picture much clearer. The default value is Off.
Defog Mode	This feature improves image quality when the device is exposed to foggy or hazy environments. Select auto de-warp or else different manual intensity settings, according to the fog density. The default value is Off.
Mirror	This feature switches the video left and right limits. This is disabled by default.
Full-screen Test	Click the  button on the video window to begin a full-screen test.
Default	Click to return the device to default setup values.
Cancel	Select to cancel the current operation and restore the previously saved operation.
OK	Save the selected configuration.

5.1.2 Profile Management

Profile management has three modes: Normal, Full Time and Schedule. If you select Normal, the video will be configured as normal.

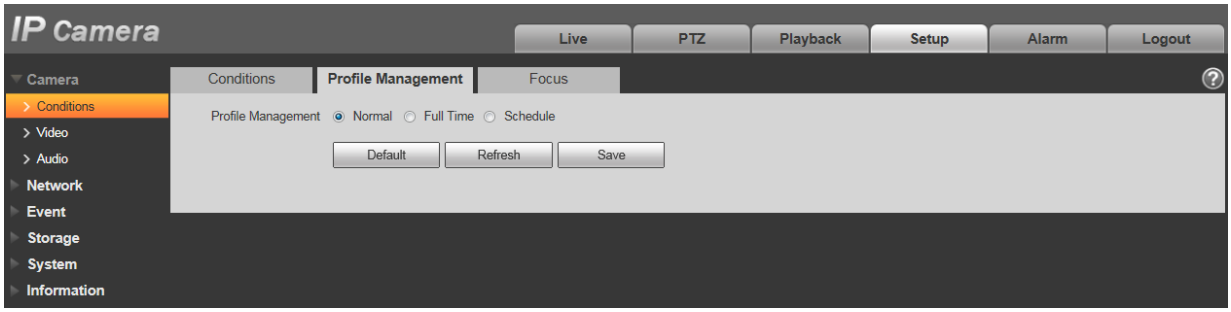

Figure 5-2

If you select Full Time, you must select either Day or Night, and the video will be configured accordingly.

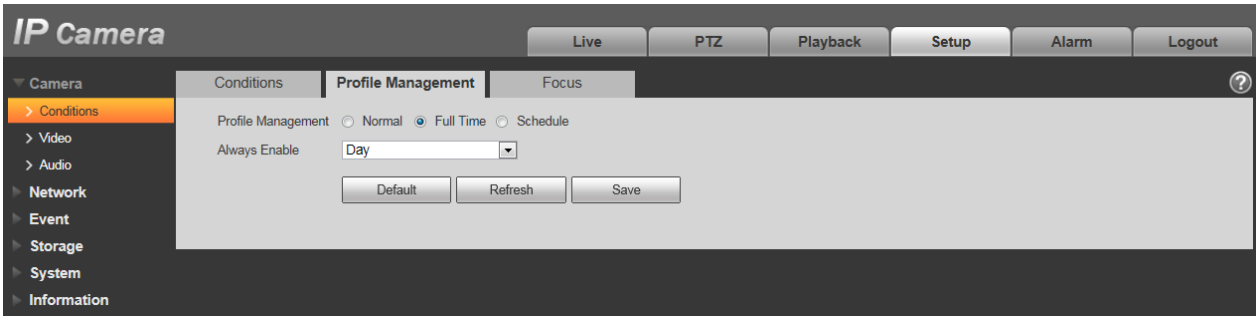

Figure 5-3

If you select Schedule, you can decide the detained day time interval and night time interval. Select between 0:00 to 12:00 for Day, and 12:00 to 24:00 for Night.

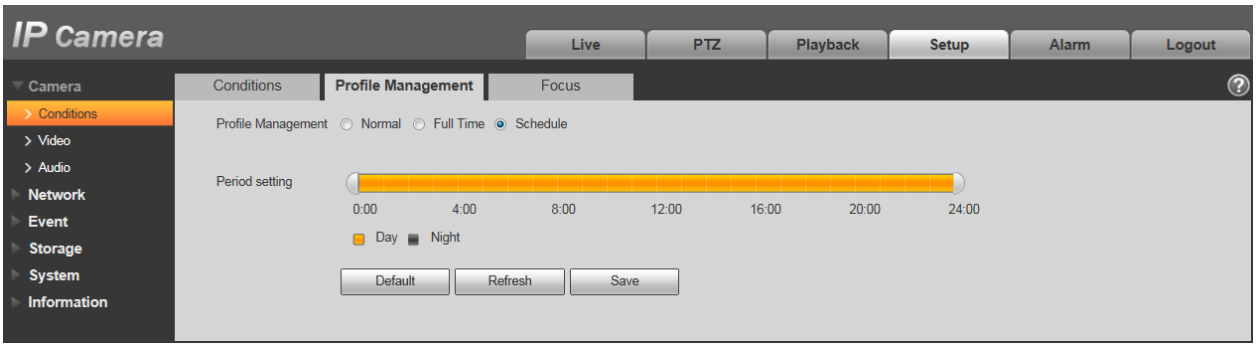

Figure 5-4

Important

- The setup is effective immediately after you click **OK**.
- You can see the WDR option only if your camera supports the WDR function. The system does not support long-time exposure or low noise mode.

5.1.3 Zoom and Focus

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

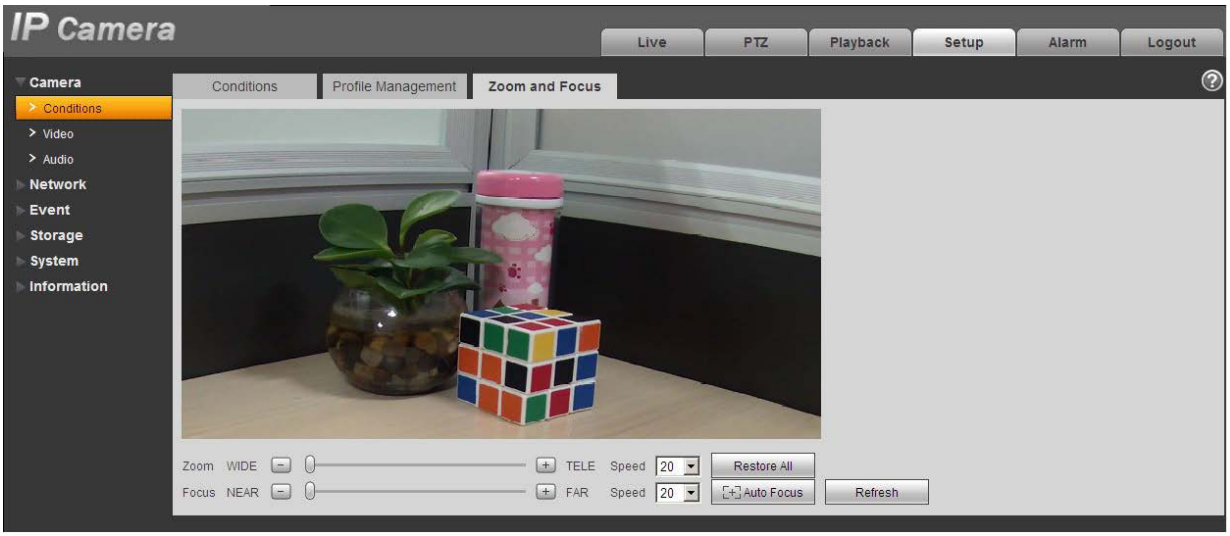

Figure 5-5

Parameter	Function
Zoom	Adjust the focal length of the lens by clicking or long pressing "**+**" or "**–**". Quickly adjust the length of one step by single-clicking. Note: After adjusting zoom, the device will focus automatically.
Focus	Adjust the lens definition by clicking or long pressing "**+**" or "**–**". Quickly adjust the length of one step by single-clicking.
Auto Focus	Click to adjust the image definition automatically.
Reset	Reset the lens to the 0 position, which can be used to remove the accumulative error for the lens. ***Note:*** Reset when adjusting an unclear image or using zoom and focus many times.
Refresh	After a hardware zoom, synchronize the position of the lens and the dragging block of zoom and focus.

5.1.3.1 Video Bit Stream

The video bit stream interface is shown as below.

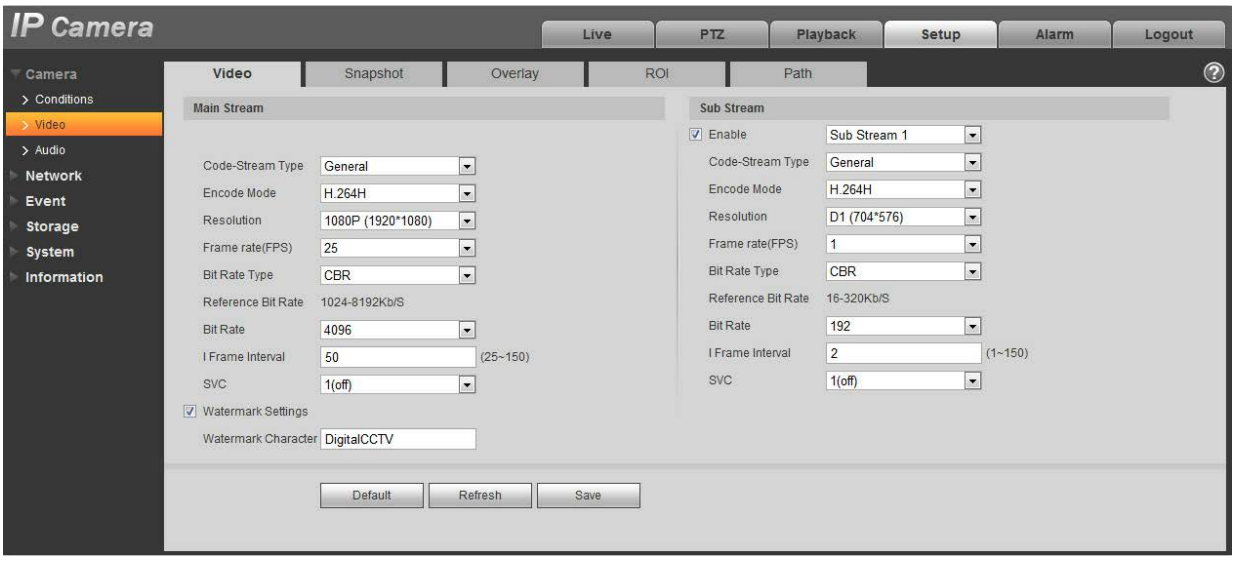

Figure 5-6

Please refer to the following table for detailed information.

Parameter	Function
Sub Stream Enable	Check the box to enable the extra stream function. It is enabled by default.
Code-Stream Type	Use a different fps to record. There are two options: VBR and CBR. ***Note:*** • You can set video quality in VBR mode. • WEB interfaces don't support motion detect and alarm code stream setting.
Encode mode	There are five options: H.264 (main profile standard, H.264H (high profile standard), H.264B (Baseline Profile), H.265 (main profile standard) and MJPG encode. • The H.264, H.264H both are H264 bit stream. H.264 is the Main Profile encoding and you must enable the sub stream function in your camera and set the resolution as CIF. Then you can monitor via a Blackberry cell phone. • The H.265 is the main profile encoding mode. • In the MJPEG encode mode, the video must use a large bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.

Parameter	Function
Resolution	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different. ***Note:*** When video is in a rotating state, you cannot set the resolution higher than 1080p.
Frame Rate (FPS)	PAL: 1~25f/s， 1-50f/s NTSC: 1~30f/s or 1~60f/s. The frame rate may vary due to different resolutions.
Bit Rate Type	There are two options: VBR and CBR. Set video quality in VBR mode. Under MJPEG mode, only CBR is available.
Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.
Bit Rate	• In CBR, the bit rate is the max value. In dynamic video, the system needs to lower the frame rate or video quality to guarantee the value. • The value is invalid in VBR mode. • Please refer to recommend bit rate for detailed information.
SVC	Frame rate can be encoded by layer, which is a flexible encoding method. By default, 1 is set as 1 layer. You also can set 2/3/4 layers.
I Frame	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50. Recommended value is frame rate x 2.
Watermark Settings	Default watermark is **Digital CCTV**. Watermark characters can only be numbers, letters and the underscore character. The watermark cannot exceed 128 characters.

5.1.3.2 Snapshot

The snapshot interface is shown below.

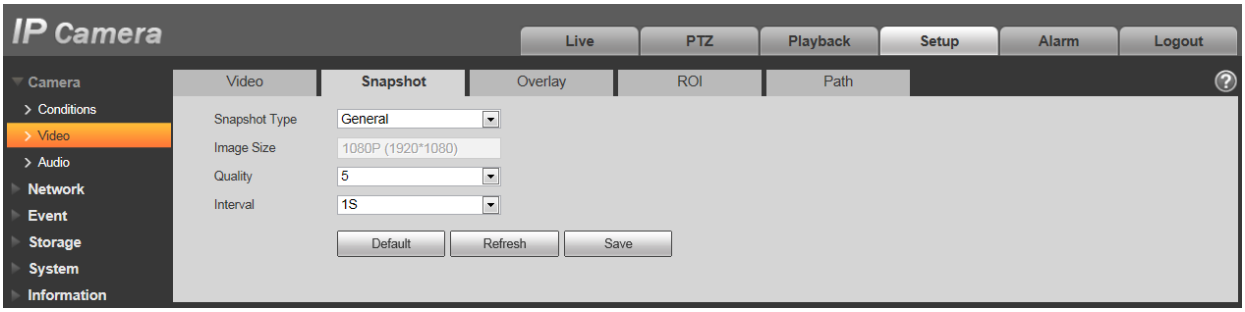

Figure 5-7

Please refer to the following table for detailed information.

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

5.1.3.3 Video Overlay

The video overlay interface is shown below.

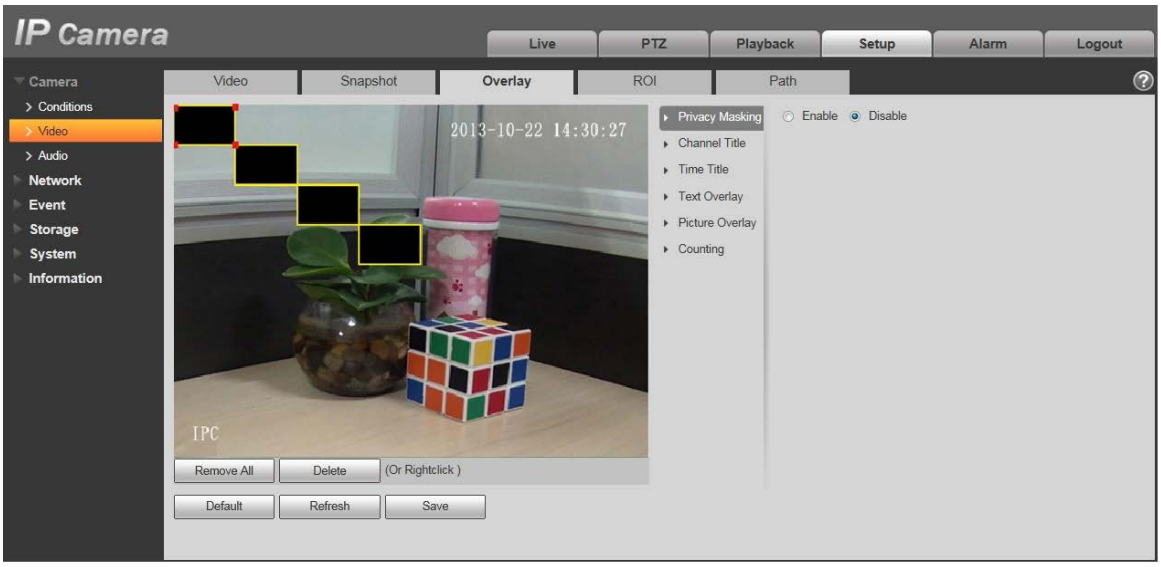

Figure 5-8

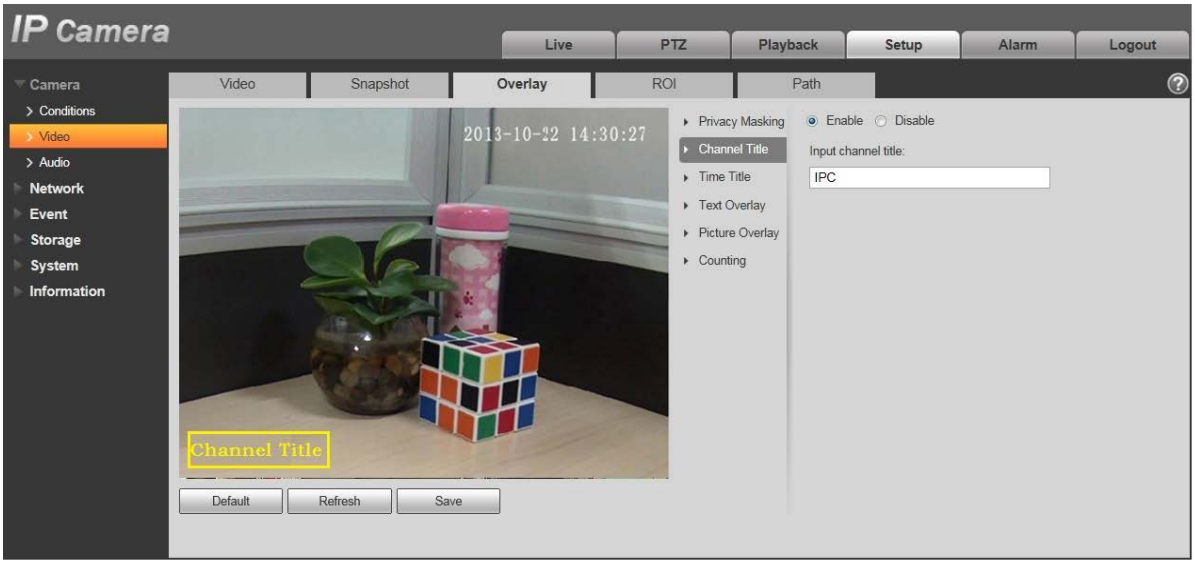

Figure 5-9

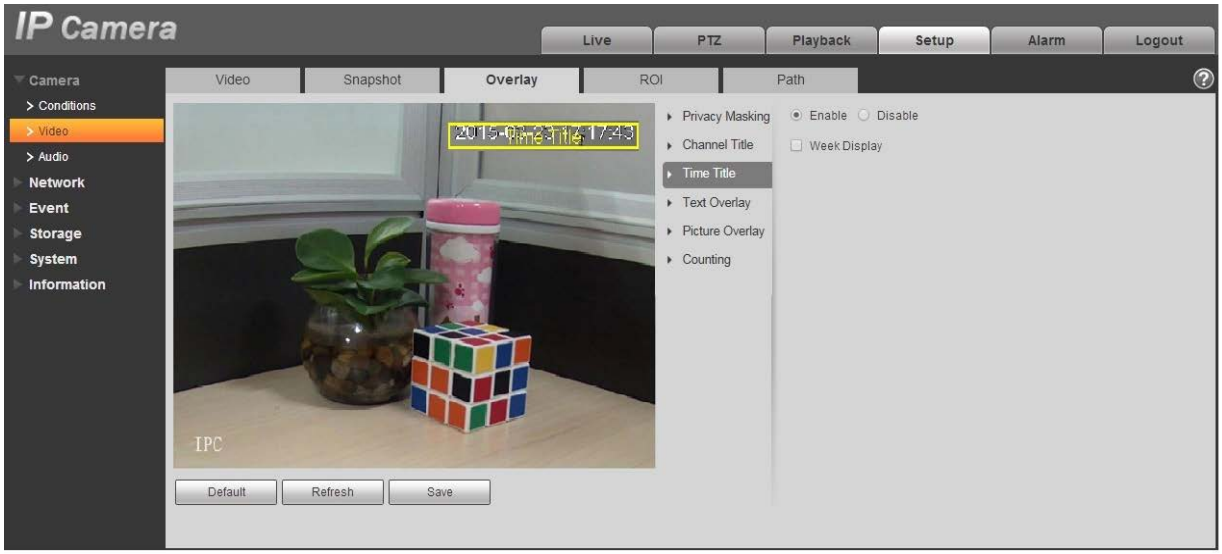

Figure 5-10

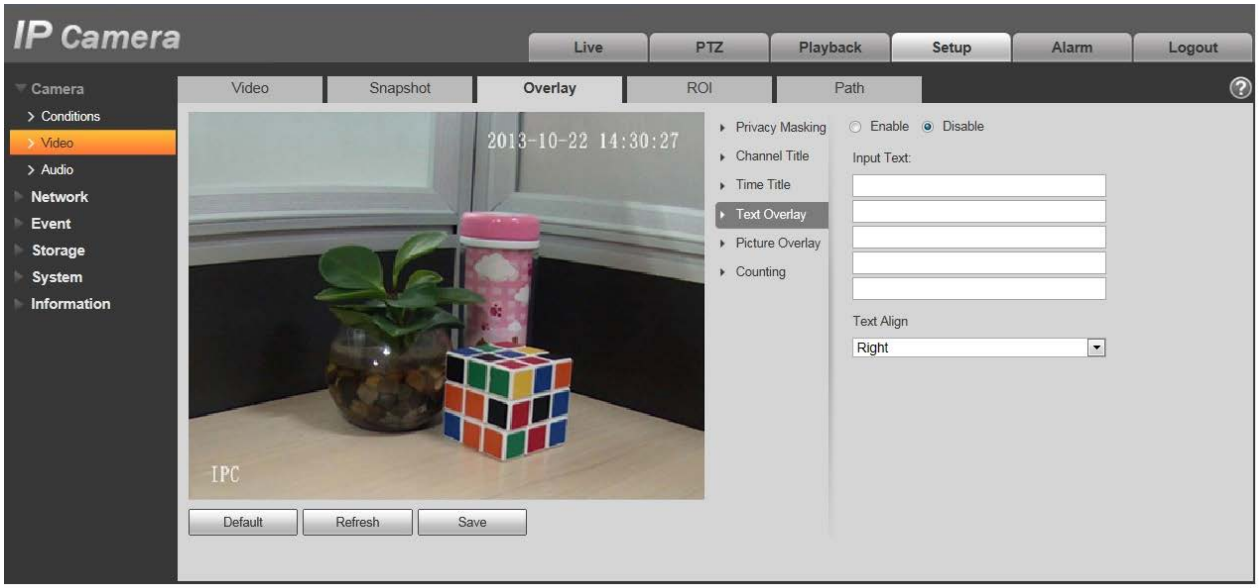

Figure 5-11

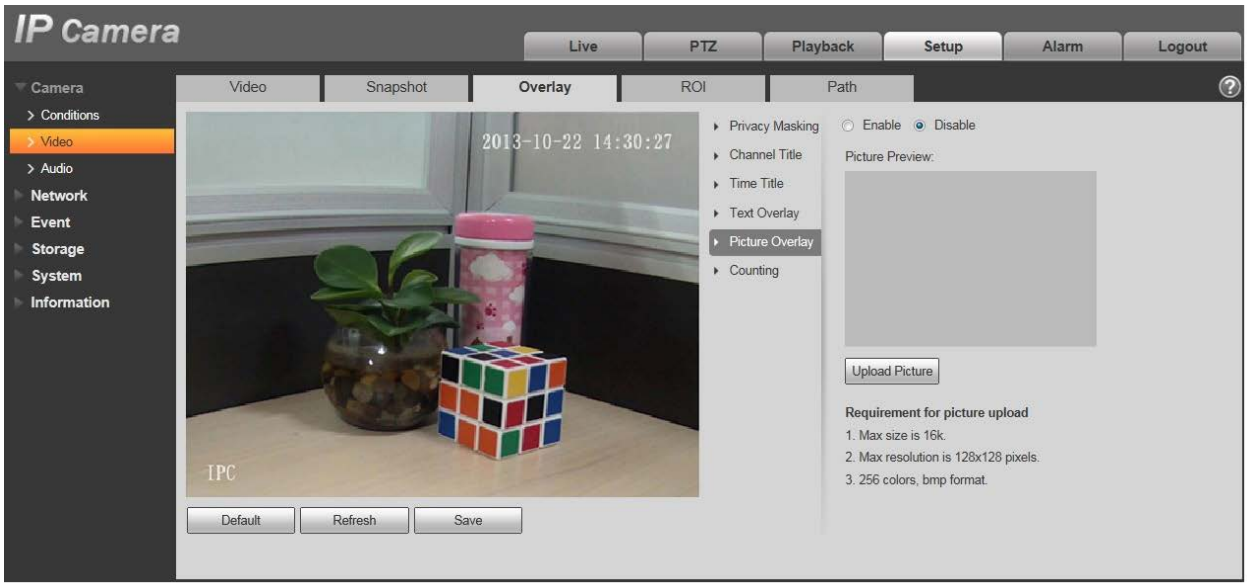

Figure 5-12

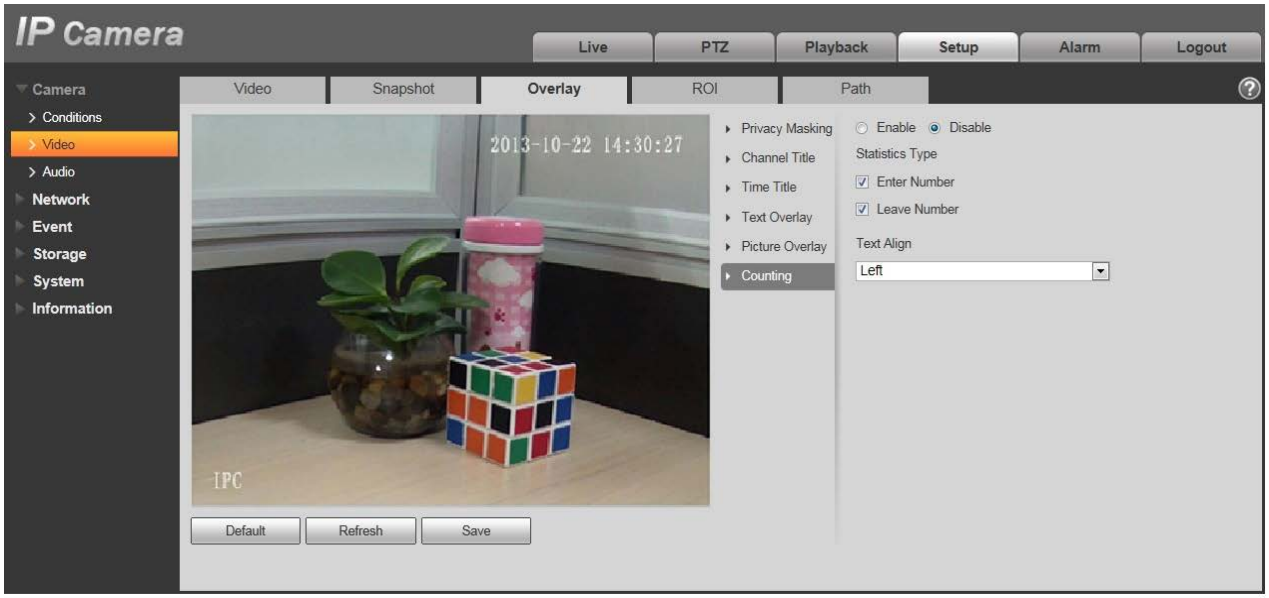

Figure 5-13

Please refer to the following table for detailed information.

Parameter	Function
Privacy mask	• Sets a privacy mask on the monitor for the specified video. • The system supports a maximum of 4 privacy mask zones.
Time Title	• Enable this function so that the system overlays time information in the video window. • Use the mouse to drag the time tile position.
Channel Title	• Enable this function so that system overlays channel information on the video window. • Use the mouse to drag the channel tile position.
Location	• Enable this function to overlay location information on the video window. • Click the **Setup** button to set location information. Use the mouse to drag location box to adjust its position. Alignment includes align left and align right.
Overlay	• Enable this function to display overlay picture. Click **Disable** to turn it off. • Click **Upload Picture** to overlay a local picture onto the monitor window. Drag the yellow box to move it. ***Note:*** You cannot enable location and overlay at the same time.
Counting	• Check **Enable** to display the counting statistics data in the video monitoring window; check **Disable** not to display. • Statistics typed include Enter Number and Leave Number. OSD Info includes left align and right align.
Refresh	• After setting privacy mask, channel title, time title, location, overlay and saving the change, click **Refresh** to view the effect.

5.1.3.4 ROI

Note: Some series cameras don't support the ROI setup function.

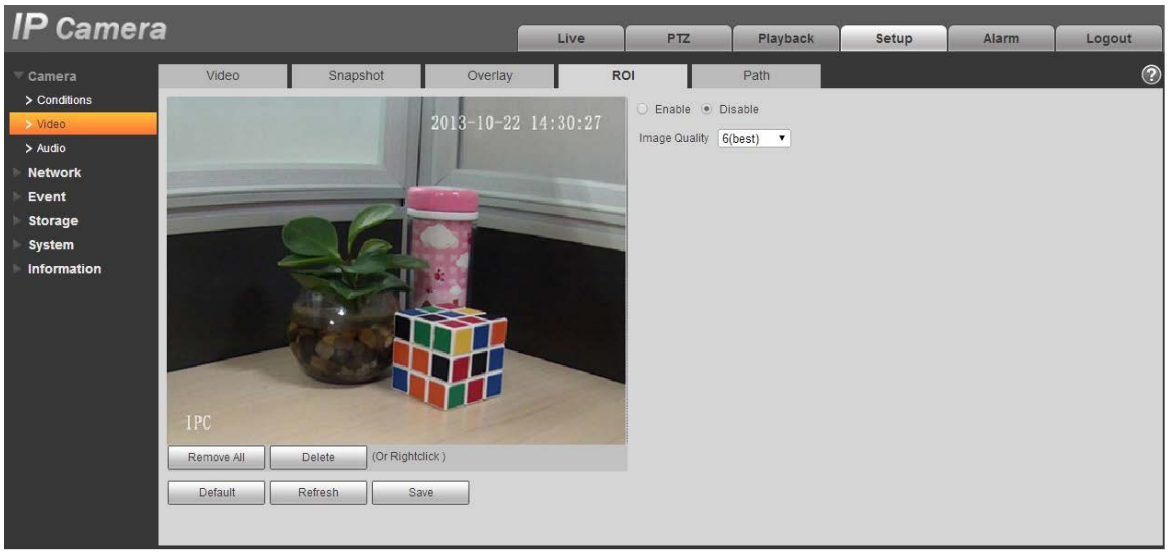

Figure 5-14

Figure 5-15

Parameters	Note
Enable	Check **Enable**, to display the ROI in the video monitoring window.
Image Quality	Set the image quality of ROI, ranging from 1~6; the default is 6. Set the area block; max 4 areas Note: For fisheye devices, this ranges from 1~6 (best); the default is 6 (best).

5.1.3.5 Path

The storage path interface is shown below.

Here you can set snapshot image saved path and the recording storage path.

Click the **Save** button to save current setup.

The following are the default path locations:

Image: *C:\Documents and Settings\Admin\WebDownload\Snapsho*t.

Monitor Record: *C:\Documents and Settings\Admin\WebDownload\LiveRecord*.

Playback Snapshot: *C:\Documents and Settings\Admin\WebDownload\PlaybackSnapsho*t.

Playback Download: *C:\Documents and Settings\Admin\WebDownload\PlaybackRecord*.

Playback Cut: *C:\Documents and Settings\Admin\WebDownload\VideoClip*s.

Note: Admin is locally logged in the PC account.

Figure 5-16

Audio

Note: Some series devices do not support audio function.

5.1.3.6 Audio

The audio interface is shown below.

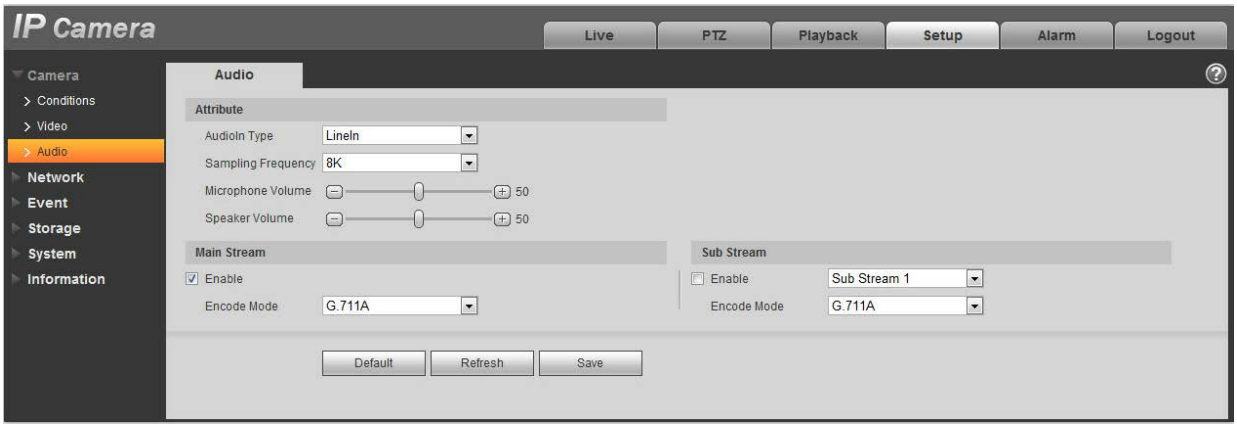

Figure 5-17

Please refer to the following table for detailed information.

Parameter	Function
Audio In Type	Two modes to select: LineIn or Mic. The device must connect the external audio input source under LineIn mode. It does not need to connect to the external audio input source under Mic mode.
Sampling Frequency	Sampling Frequency supports two modes: 8K and 16K. The default is 8K.
Microphone Volume	Adjusts the microphone volume from 0 ~100. ***Note:*** Not supported by all devices.
Speaker Volume	Adjusts the speaker volume from 0~100. ***Note:*** Not supported by all devices.
Audio enable	Check **Enable** for the stream to be an A/V composite stream. If not enabled, it contains video only. Audio is available only when this function is enabled.
Encode mode	The encode mode of the main stream and extra stream include G.711A, G.711Mu and ACC. The default mode is G.711A. The setup is for both audio encoding mode and bidirectional talk encode.

5.1.3.7 Alarm Audio

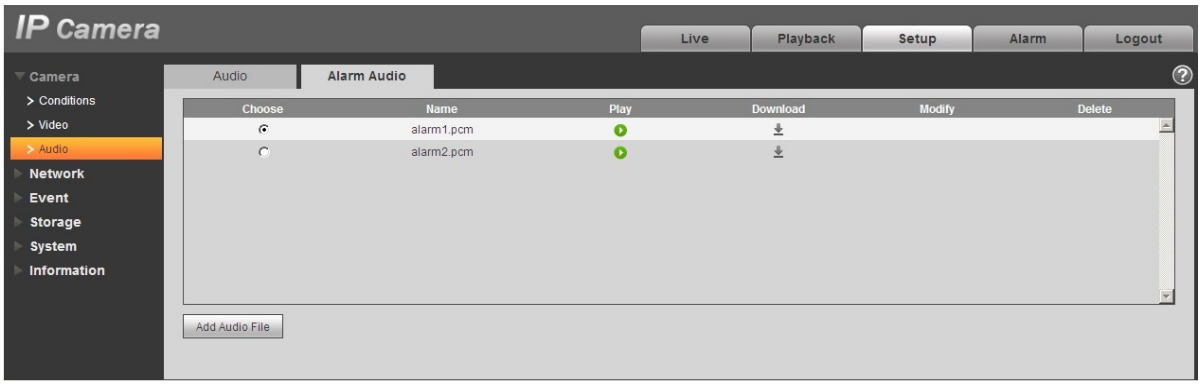

Figure 5-18

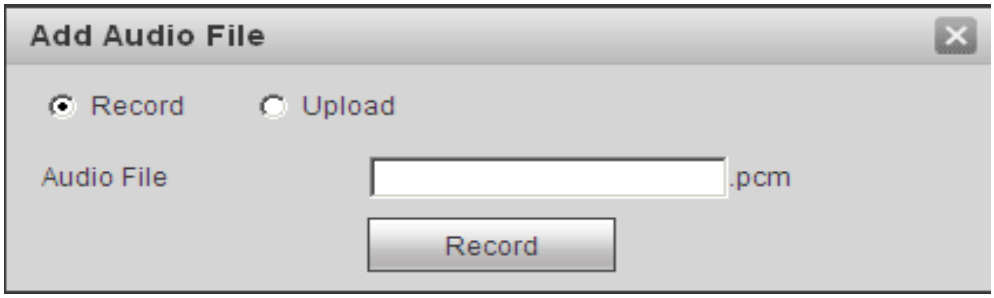

Figure 5-19

Audio management currently supports the PCM format for record. Select an audio file for the audio alarm linkage.

The method for downloading the web alarm playback audio file to local is as follows:

Step 1. Use the left mouse button to click the hollow circle in the Choice column on the left. It displays as alarm audio has been selected.

Step 2. Use the right mouse button to click , and then select **Save Target As** to download.

5.2 Network

5.2.1 TCP/IP

The TCP/IP interface is shown below. It supports IPv4 and IPv6. IPv4 supports static IP and DHCP. IPv6 supports static IP only. When you manually modify the IP address, the Web Service automatically jumps to the new IP address.

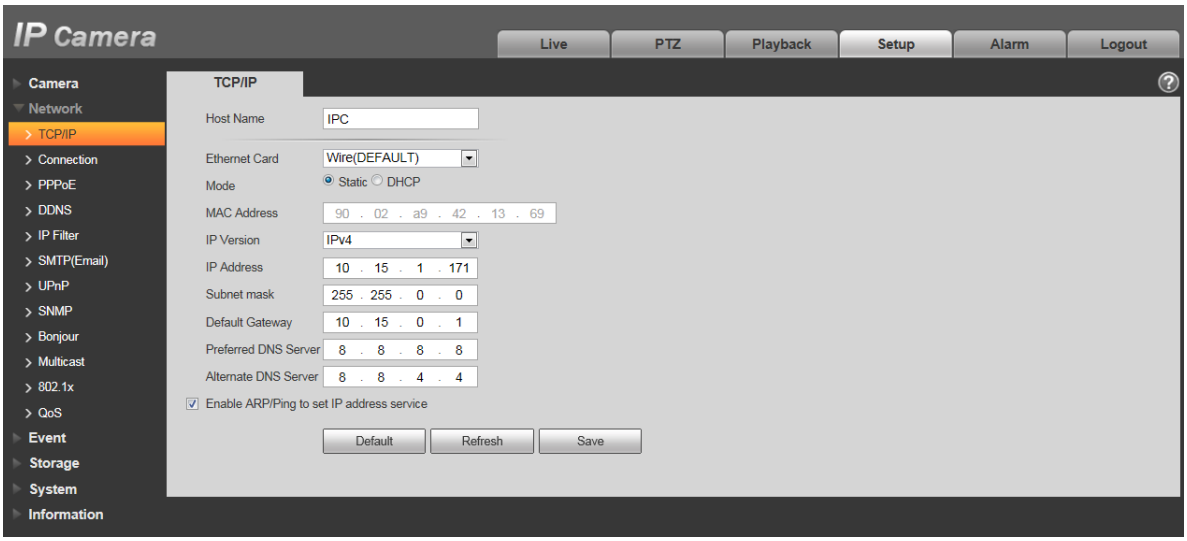

Figure 5-20

Please refer to the following table for detailed information.

Parameter	Function
Host Name	This sets the current host device name. It supports a max of15 characters.
Ethernet Card	Select the Ethernet port. Default is wired. ***Note:*** • You can modify the default Ethernet card if there is more than one card. • The device must reboot to activate the new setup.
Mode	There are two modes: static mode and the DHCP mode. DHCP mode auto searches the IP; you cannot set IP/subnet mask/gateway. With static mode, you must manually set the IP/subnet mask/gateway.
MAC Address	Displays the MAC address.
IP Version	This selects the IP version: IPV4 or IPV6. You can access the IP address of these two versions.
IP Address	Use the keyboard to modify the IP address and set the corresponding subnet mask and default gateway.

Parameter	Function
Preferred DNS	DNS IP address.
Alternate DNS	Alternate DNS IP address.
Enable ARP/Ping set device IP address service.	Use the ARP/Ping command to modify or set the device IP address if you know the device MAC address. Before the operation, make sure the network camera and the PC are on the same LAN. This function is on by default. Refer to the following steps. **Step 1:** Get an IP address. Set the network camera and the PC on the same LAN. **Step 2:** Get the physical address from the label of the network camera. **Step 3:** Run the following from the command prompt: *arp –s <IP Address> <MAC>* *ping –l 480 –t <IP Address>* Example：*arp -s 192.168.0.125 11-40-8c-18-10-11* *ping -l 480 -t 192.168.0.125* **Step 4:** Reboot the device. **Step 5**: The setup is successful if you can see an output such as "Reply from 192.168.0.125 ..." from the command output lines. Close the command prompt. **Step 6:** Open a browser window and input *http://<IP address>*. Click the **Enter** button. You can now access.

5.2.2 Connection

The connection interface is shown below.

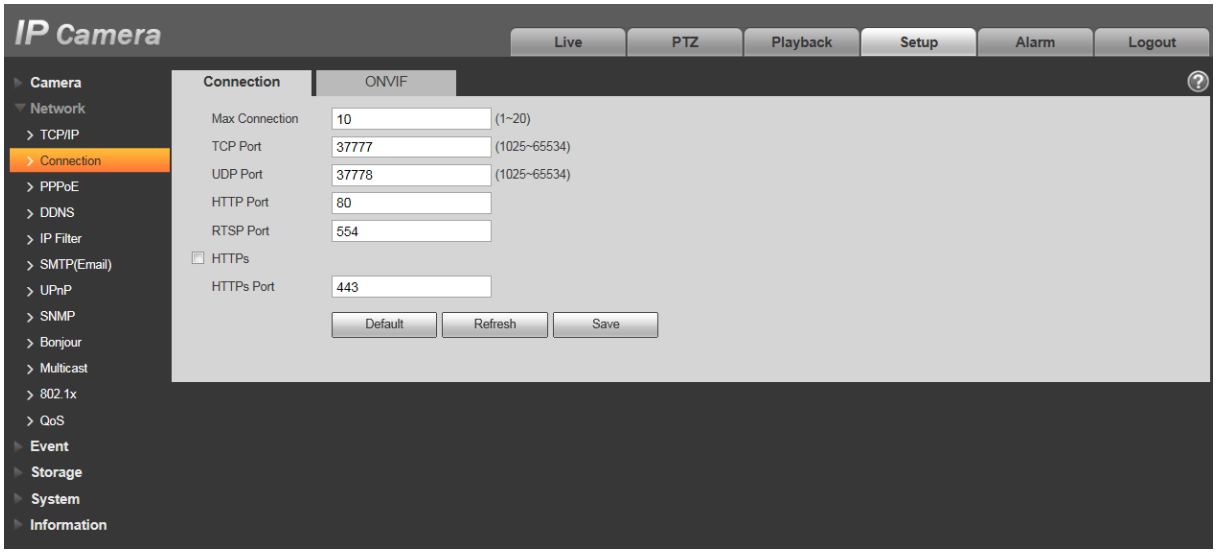

Figure 5-21

Please refer to the following table for detailed information.

Parameter	Function
Max connection	This is the max number of web connections for the same device. The value ranges from 1 to 20. The default is 10.
TCP port	The port range is 1025~65534. The default value is 37777. You can input the actual port number if necessary.
UDP port	Port range is 1025~65534. The default value is 37778. You can input the actual port number if necessary.
HTTP port	Port range is 1025~65524. The default value is 80. You can input the actual port number if necessary.
RTSP port	• The default value is 554. Leave blank if using the default. If using QuickTime or VLC, you can play the following formats. BlackBerry can play too. • The real-time monitoring URL format requires real-time RTSP media server, channel no., bit stream type in URL. You may need a username and password. • If using BlackBerry, you must set encode mode to H.264B, resolution to CIF and turn off the audio. URL format is: *rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0* username/password/IP and port. The IP is the device IP and the port default value is 554. Leave it blank if it is the default value. Follow the standard RTP protocol and when encode mode is MJPEG. The max resolution only supports 2040x2040.

Parameter	Function
HTTPs Enable	Check HTTPs Enable, login as https://ip:port. Protect data. Default port is https://ip . It is disabled by default.
HTTPs Port	HTTPs communication port, range is 1025~65534, default is 443.

Note:

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

5.2.2.1 ONVIF

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

ONVIF function default is disabled.

Figure 5-22

5.2.3 PPPoE

The PPPoE interface is shown below.

Input the PPPoE user name and password and enable the PPPoE function. Save the current setup and then reboot the device to activate the setup.

After the reboot, the device connects to the internet via PPPoE. You can get the IP address in the WAN from the IP address column.

When PPPoE is on, disable UPnP to avoid influence on dial-up. When you enable PPPoE, disable UPnP.

You must go to the IP address item to view the current device information; you can access the client-end via this address.

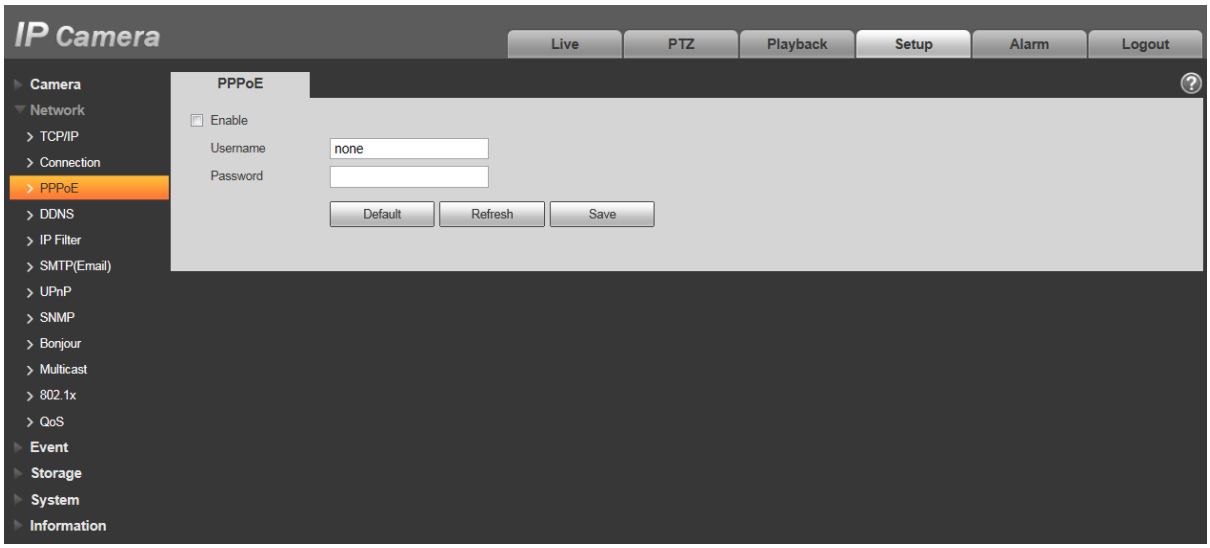

Figure 5-23

5.2.4 DDNS

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

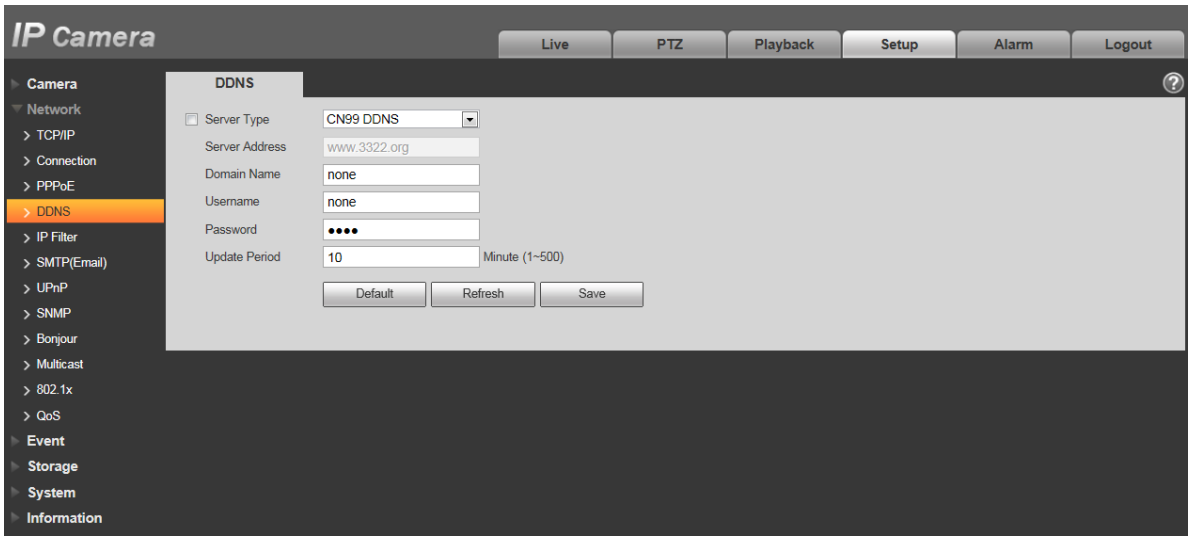

Figure 5-24

Please refer to the following table for detailed information.

Parameter	Function
Server Type	Select the DDNS protocol from the dropdown list: CN99 DDNS, NO-IP DDNS, Dyndns DDNS, QUICK DDNS. The QUICK DDNS function is according to the customized private protocol.
Server Address	CN99 DDNS Server address: www.3322.org NO-IP DDNS Server address: dynupdate.no-ip.com Dyndns DDNS Server address: members.dyndns.org QUICK DDNS Server address: www.quickddns.com
Domain Name	Customized domain name by users
Username	The user name you input to log into the server
Password	The password you input to log into the server
Refresh Period	The refresh period of the connection between the device IP and the server; default is 10 minutes

The QUICK DDNS interface is shown below.

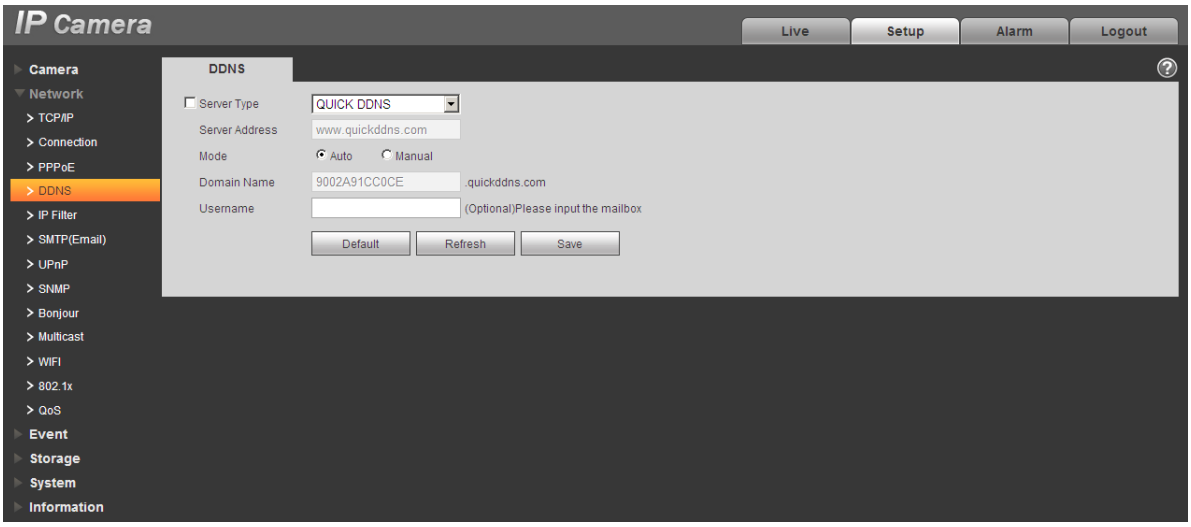

Figure 5-25

Parameter	Function
Server Type	Select QUICK DDNS protocol
Server Address	For QUICK DDNS the default server address is *www.quickddns.com*
Mode	Default is auto; manual is optional
Domain Name	The default is *MAC address.quickddns.com* for both auto and manual; for manual you can set the prefix.
Test	This tests whether the domain name can be used. The parameter exists only when selecting **Manual** for the Mode.
Username	The user name you input to log in the server (optional).

5.2.5 IP Filter

The IP filter interface is shown below. Enable the IP Filter function so that specified IP/MAC users can access the network camera.

You can add the IP address or IP address section. If you do not check the box here, there is only limited access.

Here you can add the 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.

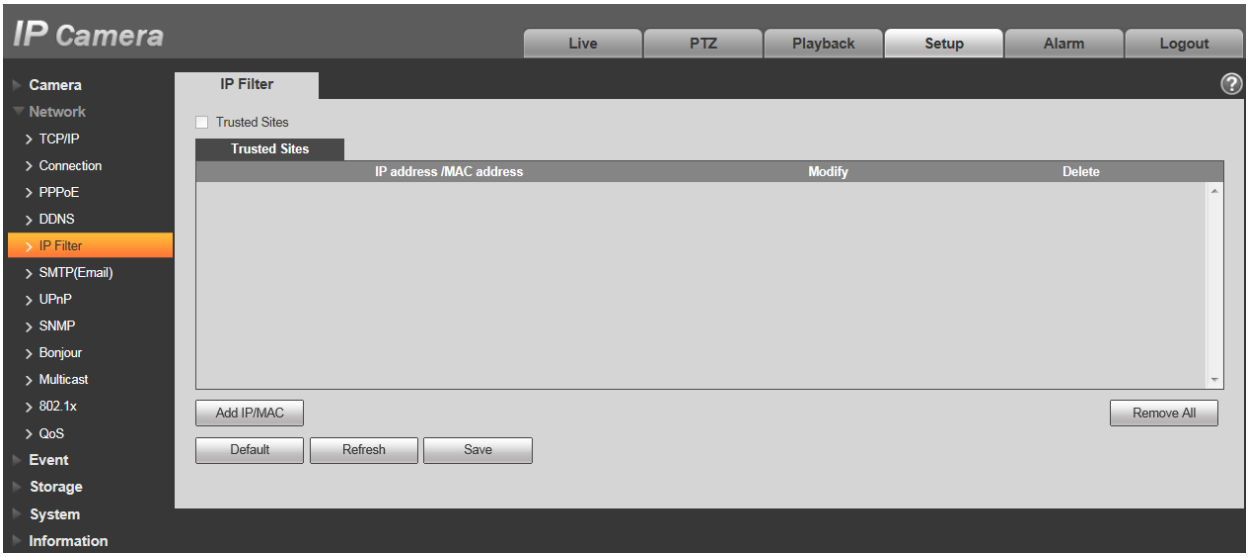

Figure 5-26

5.2.6 SMTP (Email)

The SMTP interface is shown below.

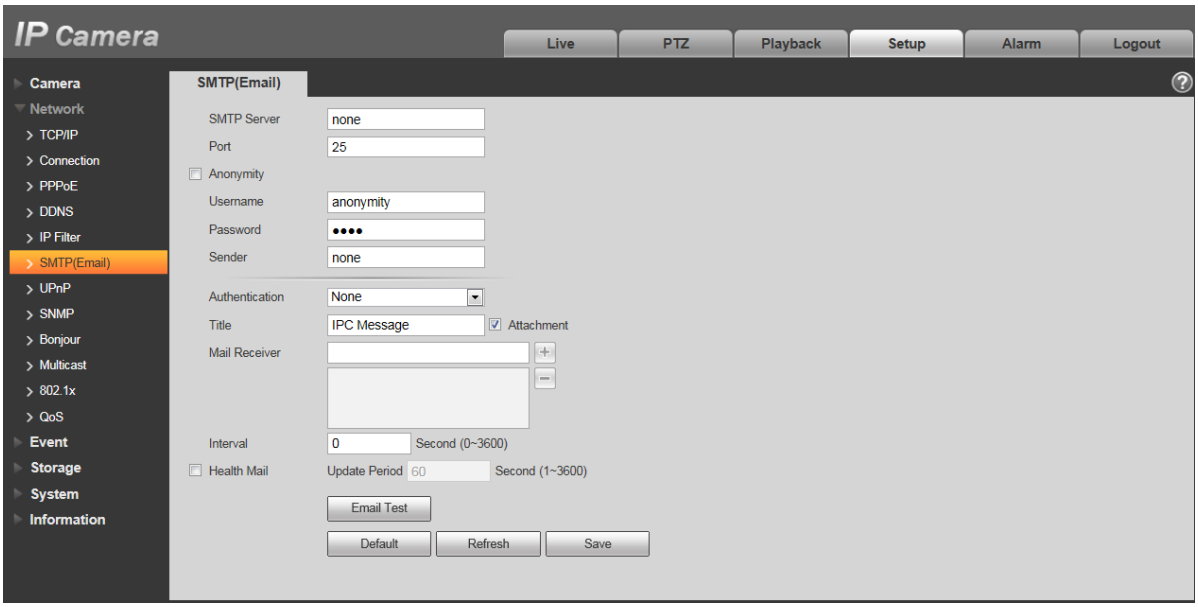

Figure 5-27

Please refer to the following table for detailed information.

Parameter	Function
SMTP Server	Input the server address and then enable this function.
Port	Default value is 25; you can modify if necessary.
Anonymity	For servers that support the anonymity function, this function allows you to auto login anonymously. You do not need to input the user name, password and the sender information.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Authentication (Encryption mode)	You can select SSL, TLS or none.
Title (Subject)	Input email subject here.
Attachment	Check the box for the system to send out an email of a snapshot picture.
Mail receiver	Input the receiver email address here; Max of three addresses.

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

5.2.7 UPnP

UPnP 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 the UPnP function.

Select *Start* > *Control Panel* > *Add or Remove Programs*. Click **Add/Remove Windows Components** and then select **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 **OK** to begin installation.

Enable UPnP from the Web. If your UPnP is enabled in Windows, the network camera can automatically detect it via "My Network Places".

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

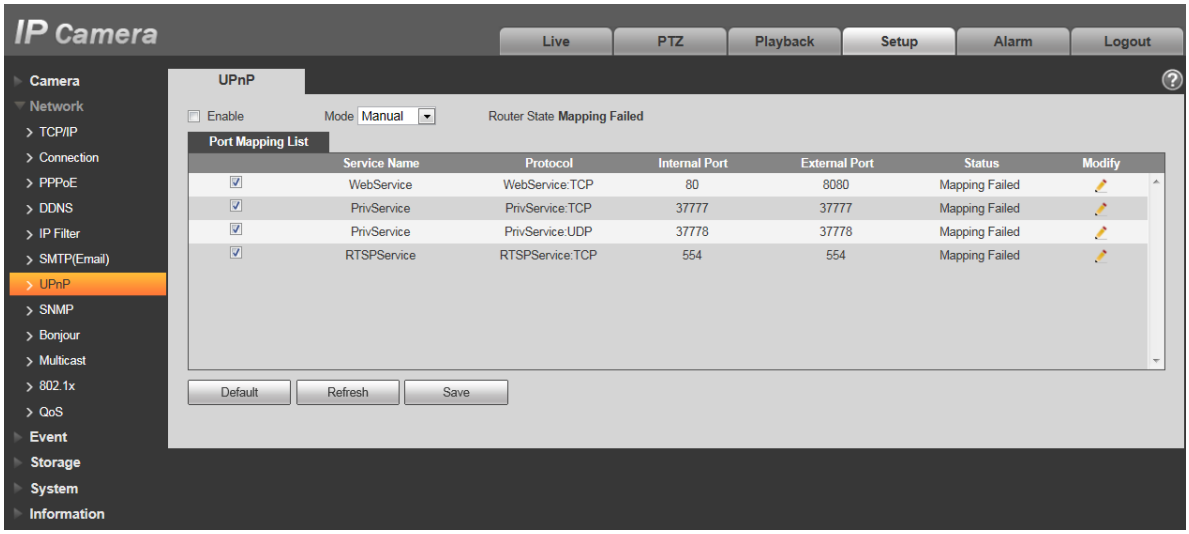

Figure 5-28

5.2.8 SNMP

SNMP allows the communication between the network management work station software and the proxy of the managed device. Install software such as MG MibBrowser 8.0c software or establish the SNMP service before you use this function. You must reboot the device to activate the new setup.

Figure 5-29

Please refer to the following table for detailed information.

Parameter	Function
SNMP Version	• If you check SNMP v1, the device only processes v1 info. • If you check SNMP v2, the device only processes v2 info. • If you check SNMP v3, you can set the username, password and encryption method. The server calibrates the corresponding username, password and encryption method to access the device and v1/v2 are unavailable.
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.
Community	This is a string, such as a command between management and proxy, defining a proxy, and manager's authentication.
Read community	Read-only access to all SNMP targets; default is public. ***Note:*** Only numbers, letters, underscore, and — are supported.
Write community	Read/write access to all SNMP targets; default is private. ***Note:*** Only numbers, letters, underscore, and — are supported.
Trap address	The destination address of the Trap information from the proxy program of the device.
Trap	SNMP trap is a proxy message sent to admin as important event notice or status change.
Trap Address	Address where to send Trap message.
Trap Port	Port which send Trap message, default is 162, range 1~ 65535.

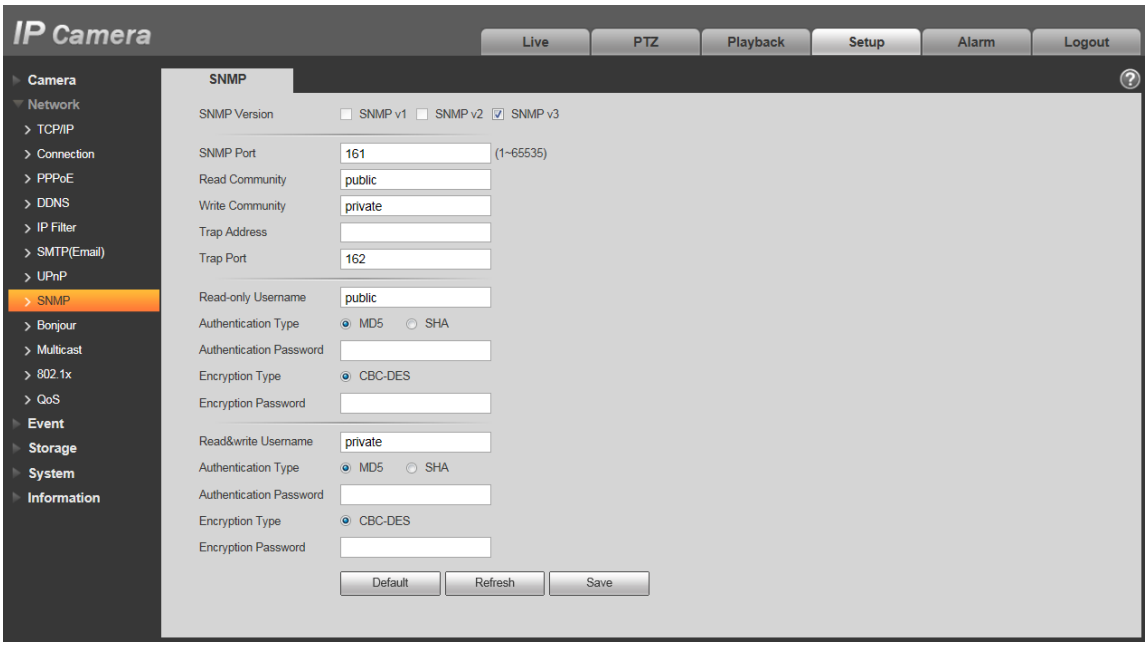

Figure 5-30

Check that the SNMP v3 version and SNMP port, read community, write community, Trap address, Trap port are same with SNMP v1 and SNMP v2 versions. Only when SNMP version is SNMP v3, do you need to configure parameters in the following table.

Parameter	Function
SNMP Version	SNMP v3
Read-only Username	Default is public. ***Note:*** Name only can be a number, letter or the underscore character.
Read/Write Username	Default is private. ***Note:*** Name only can be a number, letter or the underscore character.
Authentication	Select MD5 or SHA; default is MD5
Authentication Password	Password cannot be less than 8 characters long.
Encryption	Default is CBC-DES.
Encryption Password	Password cannot be less than 8 characters long.

5.2.9 Bonjour

The Bonjour interface is shown below.

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

You can use the browser of the Bonjour service in the same LAN to search for network cameras and then access if you do not know the network camera's information, such as its IP address.

You can view the server name when the network camera is detected by Bonjour. Note that Safari browser supports this function. Click **Display All Bookmarks** and open Bonjour. The system can automatically detect the network camera of the Bonjour function on the LAN.

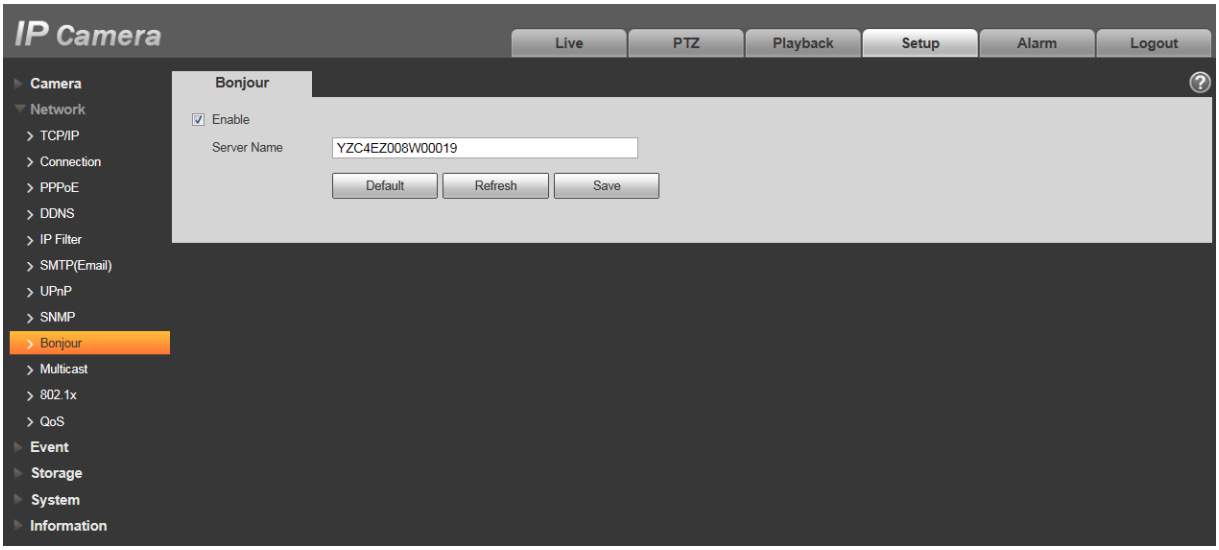

Figure 5-31

5.2.10 Multicast

The multicast interface is shown as in Figure 5-34.

Multicast is a transmission mode of data packet. When there are multiple hosts to receive the same data packet, multicast is the best option to reduce the bandwidth and the CPU load. The source host can just transmit one set of data. This function also depends on the relationship of the group members.

Note:

- You can open preview, streaming media protocol, select multicast, and monitor via the multicast format.
- This interface is for setting the multicast address and port. You must also go to the Live interface to set the protocol as Multicast.

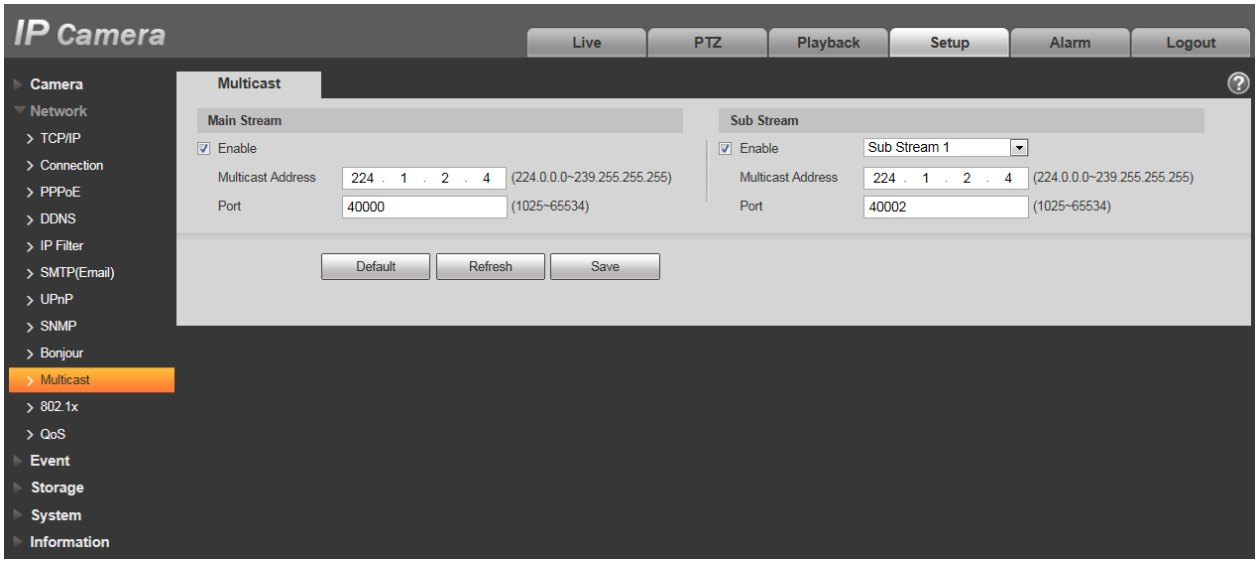

Figure 5-32

Please refer to the following table for detailed information.

Parameter	Function
Enable	Select to enable the multicast function. Main stream and sub stream cannot be used at the same time.
Multicast address	Main/sub stream multicast default address is 224.1.2.4 and its range is 224.0.0.0~239.255.255.255.
Port	Multicast port. Main stream is 40000, sub stream is 40002 and the range is 1025~65534.

3G

This function is not supported by ADT.

5.2.11 WIFI

Only cube cameras support the WPS function.

5.2.11.1 WIFI

The WIFI work information column displays the name, status, IP information of the Current Hot Spot. Refresh the WIFI work information after reconnecting to ensure the real-time display of the work status. It can often take some time to connect WIFI Hot Spot, which depends on the network signal strength.

Figure 5-33

The WIFI setting method is as follows:

Step 1. Click the **Enable** checkbox to enable the WIFI function.

Step 2. Click **Wireless Network ID Search** to display the wireless network hot spots of the current network camera environment in the list.

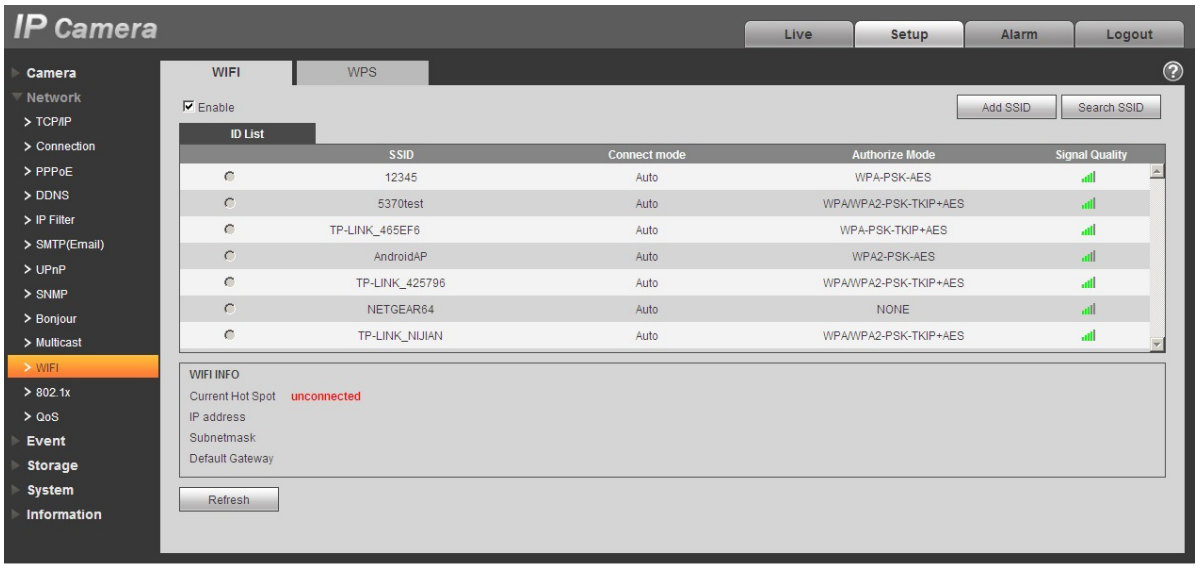

Figure 5-34

Step 3. Click **Add a Wireless Network ID** when need to add a wireless network manually. The following interface appears. Enter the network ID in the dialog box.

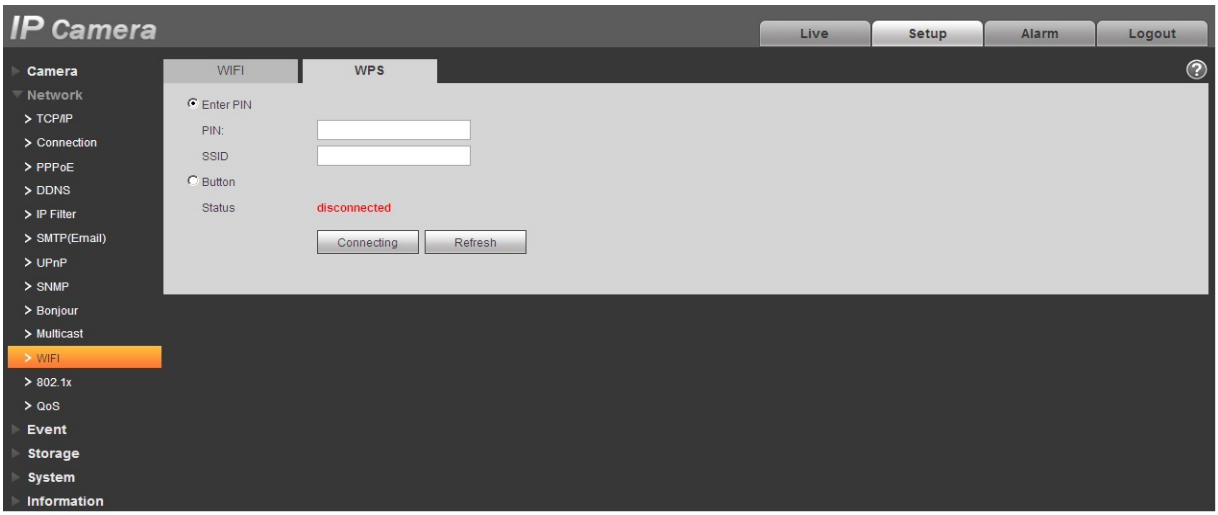

Figure 5-35

Step 4. Click **Wireless Network ID Search**. If you can search the wireless network hot spot, then the network ID is available.

Step 5. Double-click an item to display the signal intensity and authentication of the hot spot.

- Enter the password if necessary.
- When entering the password, keep the choice of the password index number the same as the router.
- Click **Connect** if it is unnecessary to enter the password.

5.2.11.2 WPS

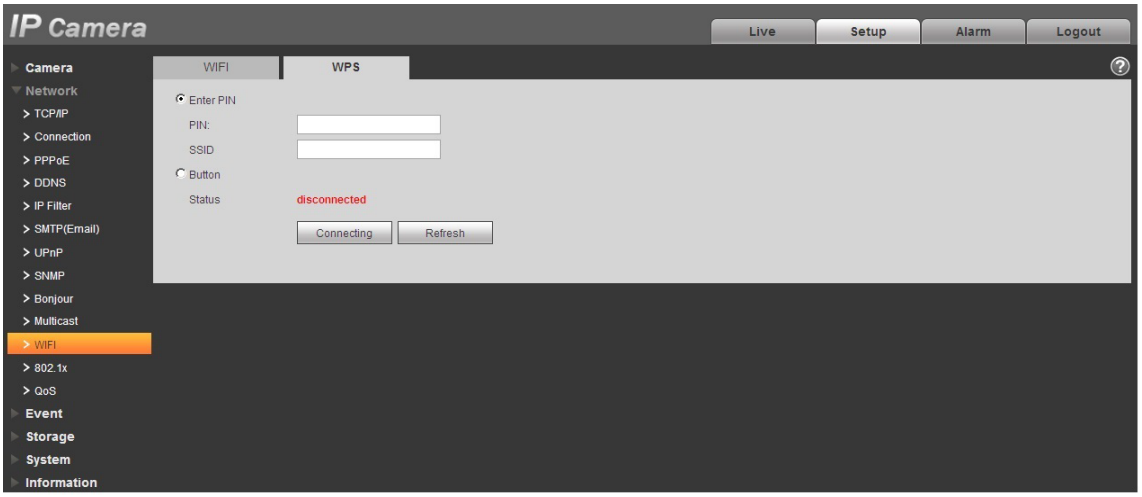

Figure 5-36

PIN Number and SSID are both acquired from the router. Refresh to ensure the real-time display of the WIFI work information.

5.2.12 802.1x

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

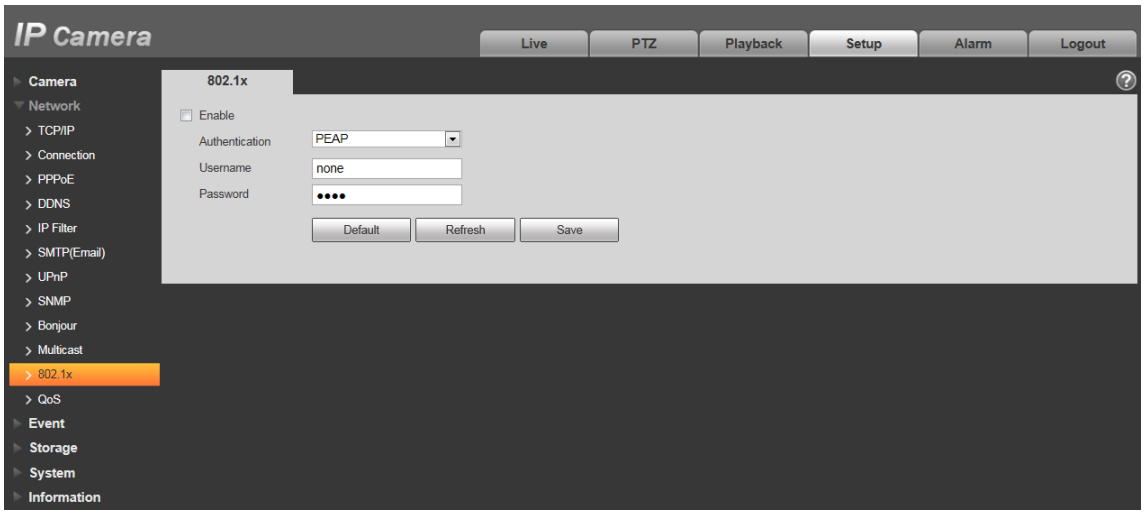

Figure 5-37

Please refer to the following table for detailed information.

Parameter	Function
Authentication	PEAP (protected EAP protocol).
Username	Requires a username to login, which is authenticated by the server.
Password	Input your password here.

5.2.13 QoS

The QoS interface is shown below.

QoS (Quality of Service) is network security mechanism. It is a technology to fix the network delay and jam problems. For the Web Service, the quality of service includes the transmission bandwidth, delay, and packet loss. It can guarantee the transmission bandwidth, lower the delay, reduce the loss of the data packet and perform anti-dither to enhance the quality.

Set the DSCP (Differentiated Services Code Point) of the IP to distinguish the data packets so that the router or the hub can provide different services for various data packets. It can select different queues according to the priority (64 different priority levels) of the packets and select the bandwidth of each queue. Level 0 is the lowest, and level 63 is the highest. It can also discard when the bandwidth is jammed.

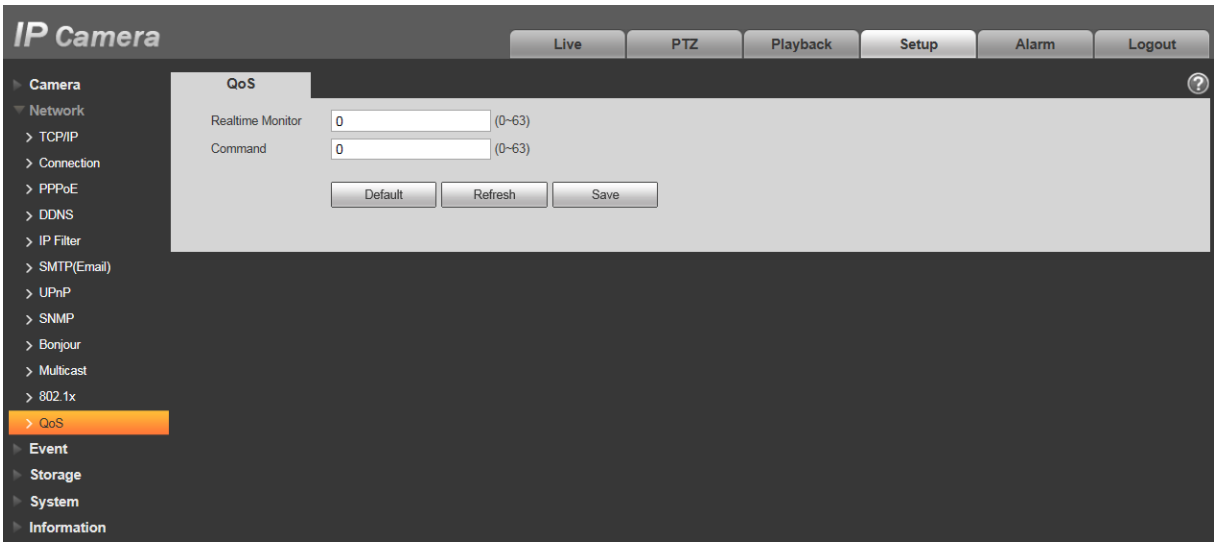

Figure 5-38

Please refer to the following table for detailed information.

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

5.3 Event

5.3.1 Video Detect

The Video Detect interface is shown below.

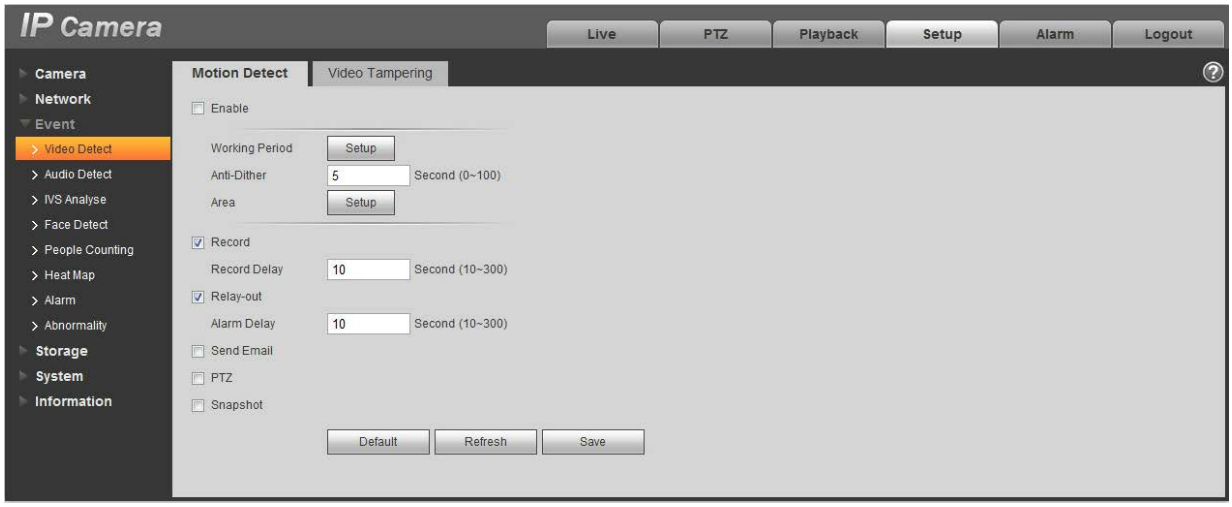

Figure 5-39

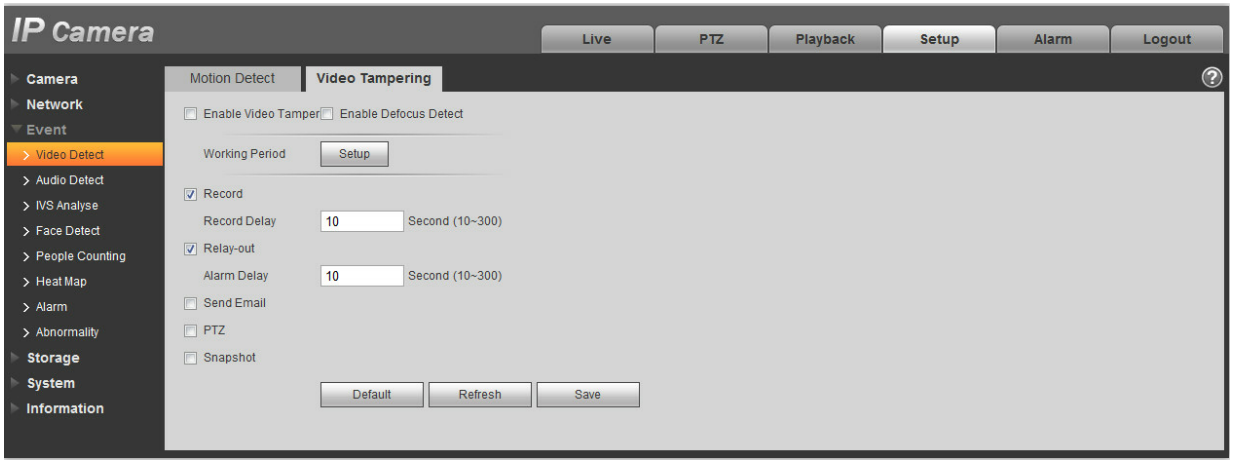

Figure 5-40

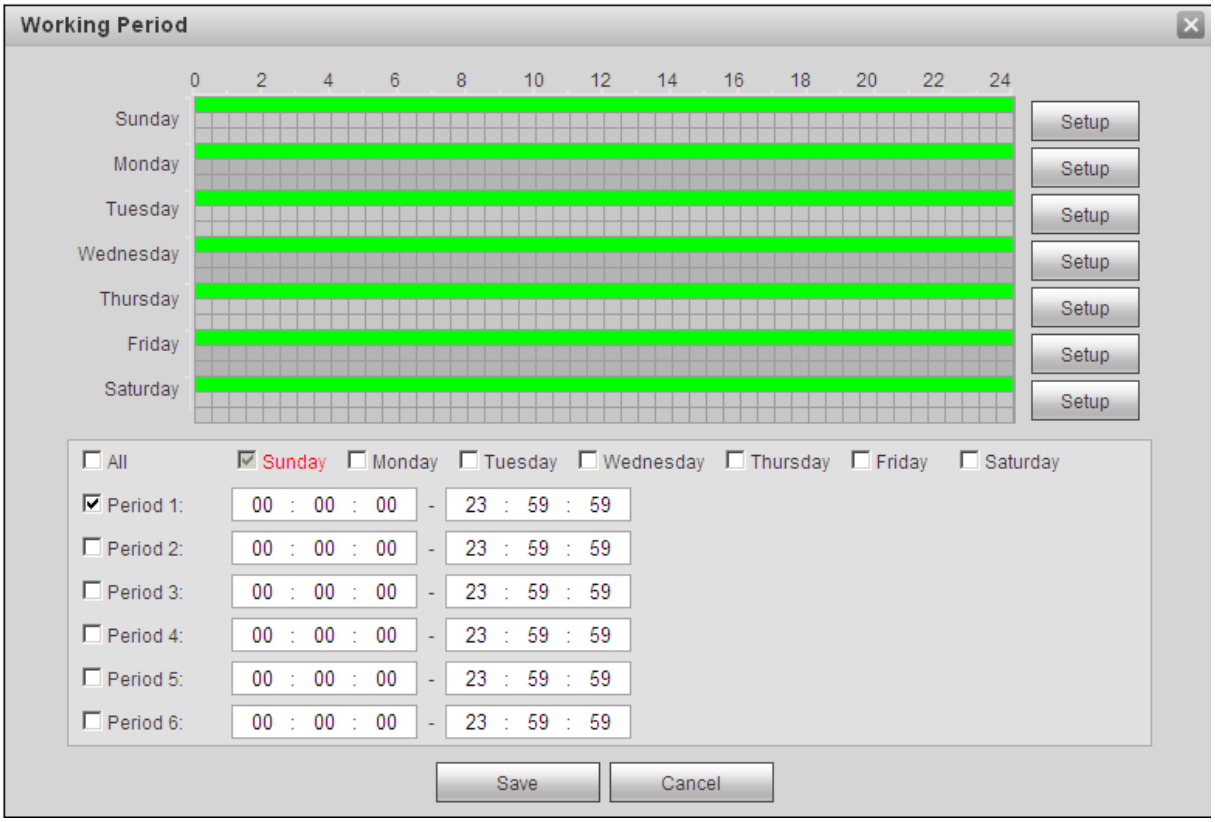

Figure 5-41

Please refer to the following table for detailed information.

Parameter	Function
Enable	Check the box to enable the motion detection function.
Enable video mask detection	Check the box to enable the video mask detection alarm.
Enable defocus detection	Check the box to enable defocus detection alarm.
Working Period	Set the arm/disarm period. Click the **Setup** button to open the period setup menu. You can set up to six periods for each day for setup; place a check in the box for each period to enable it.
Anti-dither	The system only remembers one event during the anti-dither period. The value ranges from 0s to 100s.
Area	Here you can set the motion detection region and its sensitivity. (The higher the sensitivity, the easier it is to trigger a motion detection event; similarly the smaller the area, the easier it is to trigger a motion detection event.) The default covers all regions. Click **Save** to enable the setup.
Record	If checked, when an alarm occurs, the system will auto record. Set the recording period in *Storage* > *Schedule* and select auto record in the record control interface.

Parameter	Function
Record Delay	Set the system to delay the recording for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Relay out	Enables the alarm activation function. You must select the alarm output port so that the system can activate the corresponding alarm device when the alarm occurs.
Alarm Delay	Sets the system to delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If enabled, the system sends out an email alert when an alarm occurs and ends. You can set email address in *Network* > *SMTP*.
Audio linkage	Enable for the system to play an audio file when an alarm occurs. You can select a recording or upload an audio file in *Camera Setting* > *Audio* > *Alarm Audio*.
Flash linkage	If enabled, the flash is on when an alarm occurs; the flash will be off until the end of alarm after any corresponding delay.
PTZ	This sets PTZ movement when an alarm occurs. The event type includes: preset, tour and pattern. For example: initiate preset x when there is an alarm.
Snapshot	Check the box for the system to backup a motion detection snapshot file. Set the snapshot period in *Storage* > *Schedule*.

See Area screen below.

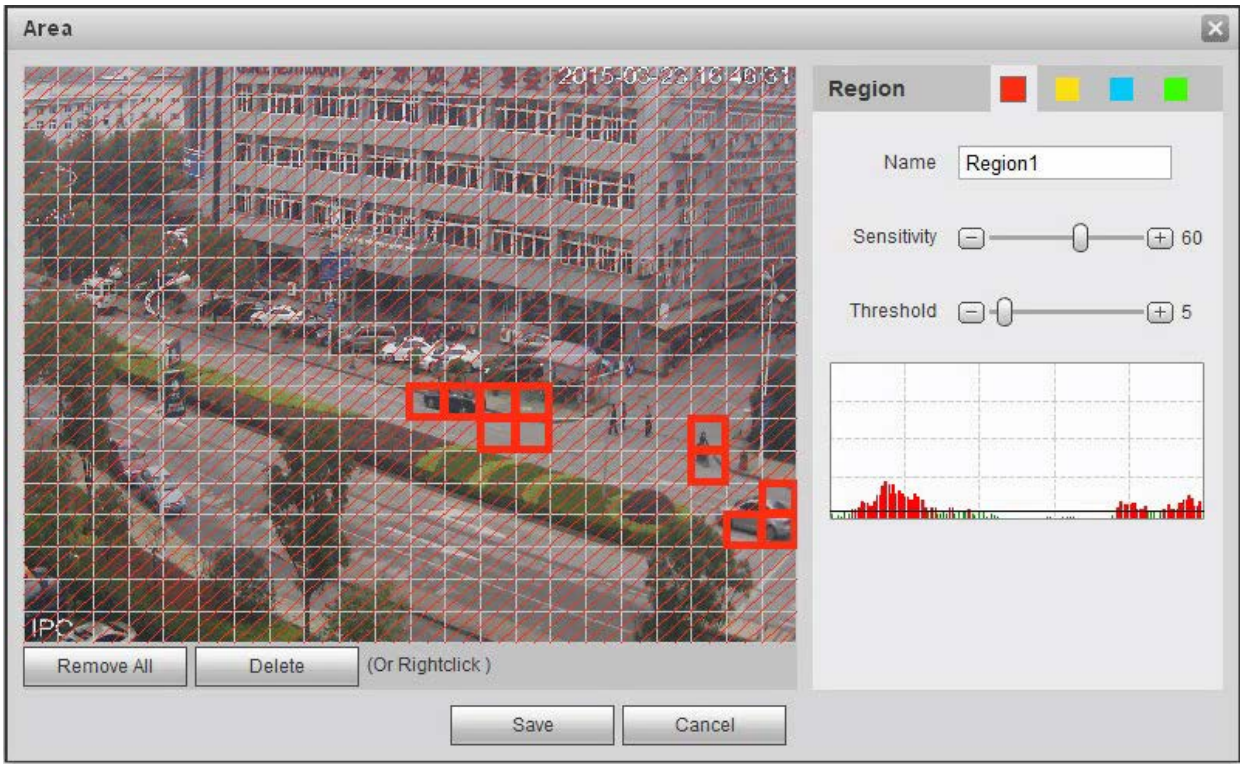

Figure 5-42

Different colors represent different areas. Each area can set different detection zones. Detection zone can be irregular and discontinuous. Refer to the following table for detailed information.

Parameter	Function
Name	Default area names includes Region1, Region2, Region3, Region4 and custom.
Sensitivity	You can set up different sensitivities. The higher the sensitivity, the easier it is to trigger a motion detection event. The range is 0~100. The recommenced value is 30~70.
Area threshold	This checks the relationship between an object and its area. The lower the area threshold, the easier it is to trigger a motion detection event. You can set up different thresholds for each area. The range is 0~100. The recommenced value is 0~10.
Waveform	Red means motion detection is triggered. Green means motion detect is not triggered.
Delete all	Clear all the detection areas with color.
Delete	Delete the selected area.

5.3.2 Audio Detect

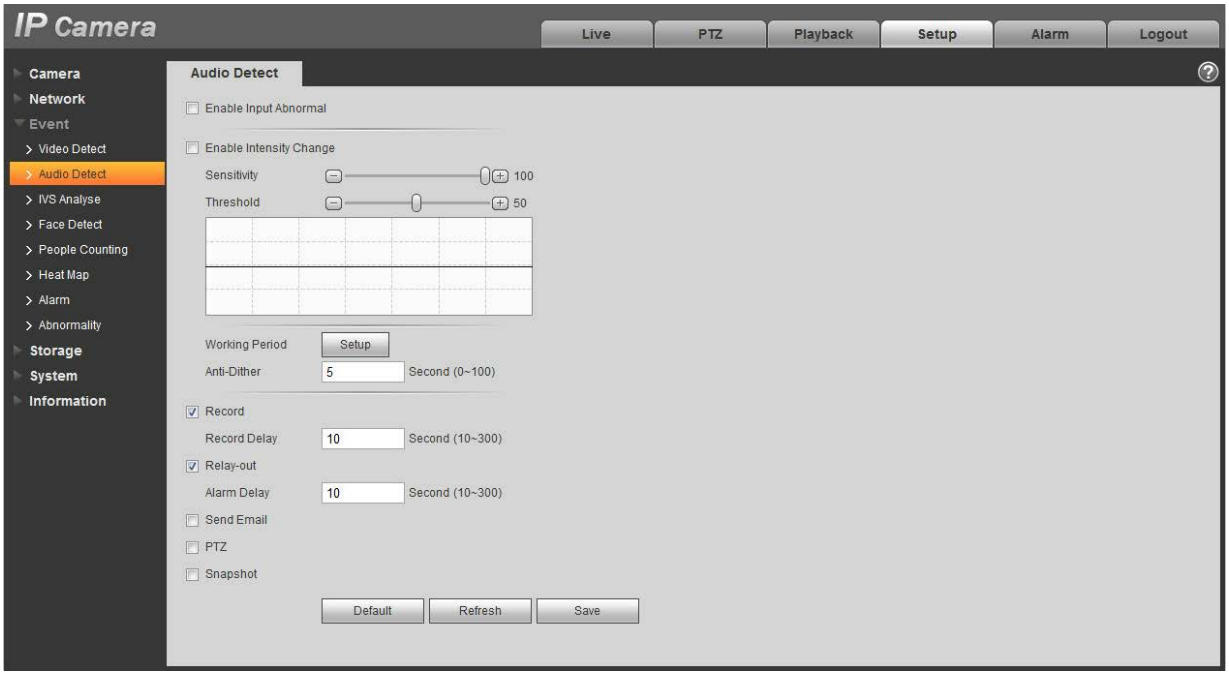

Figure 5-43

Refer to the following table for detailed information.

Parameter	Note
Sensitivity	1~100 level adjustable. Only when the volume of the input sound surpasses the volume of continuous environment will it can be judged as an audio abnormity when the value is smaller. Adjust according to the actual environmental test.
Threshold	1~100 level adjustable. Used to set the intensity of the filtered environmental sound. If environmental noise is louder, set this value higher. Adjust according to the actual environmental test.

5.3.3 IVS Analyse

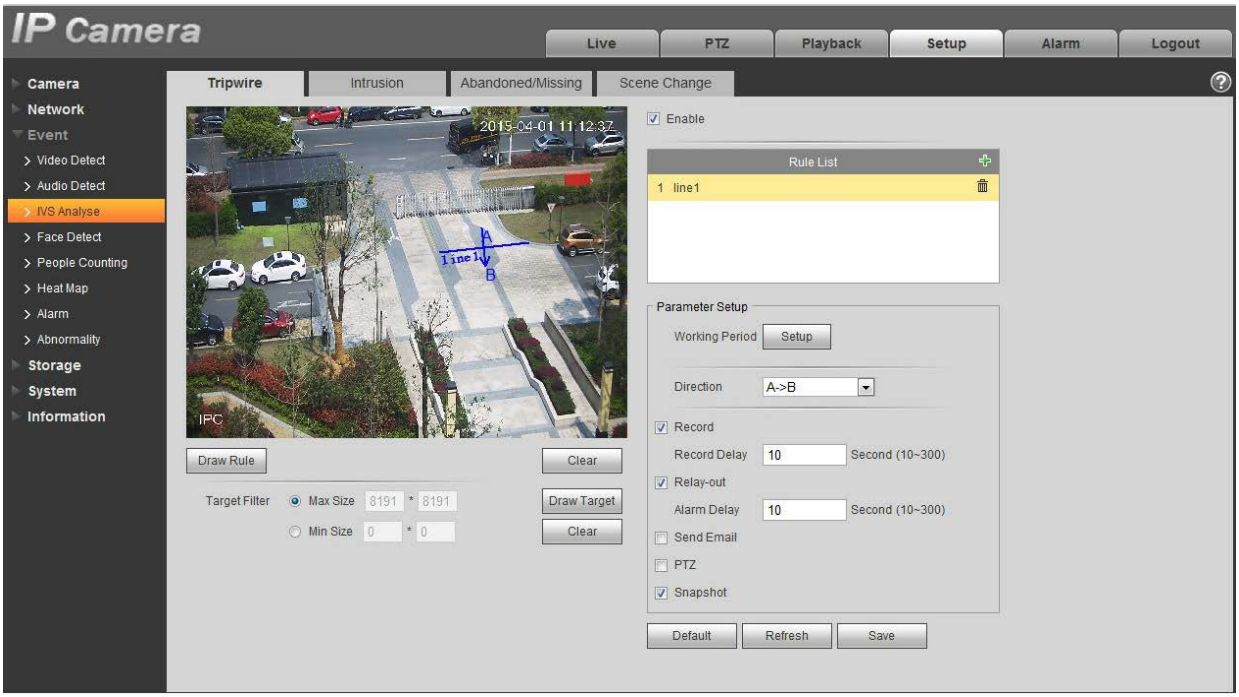

Figure 5-44

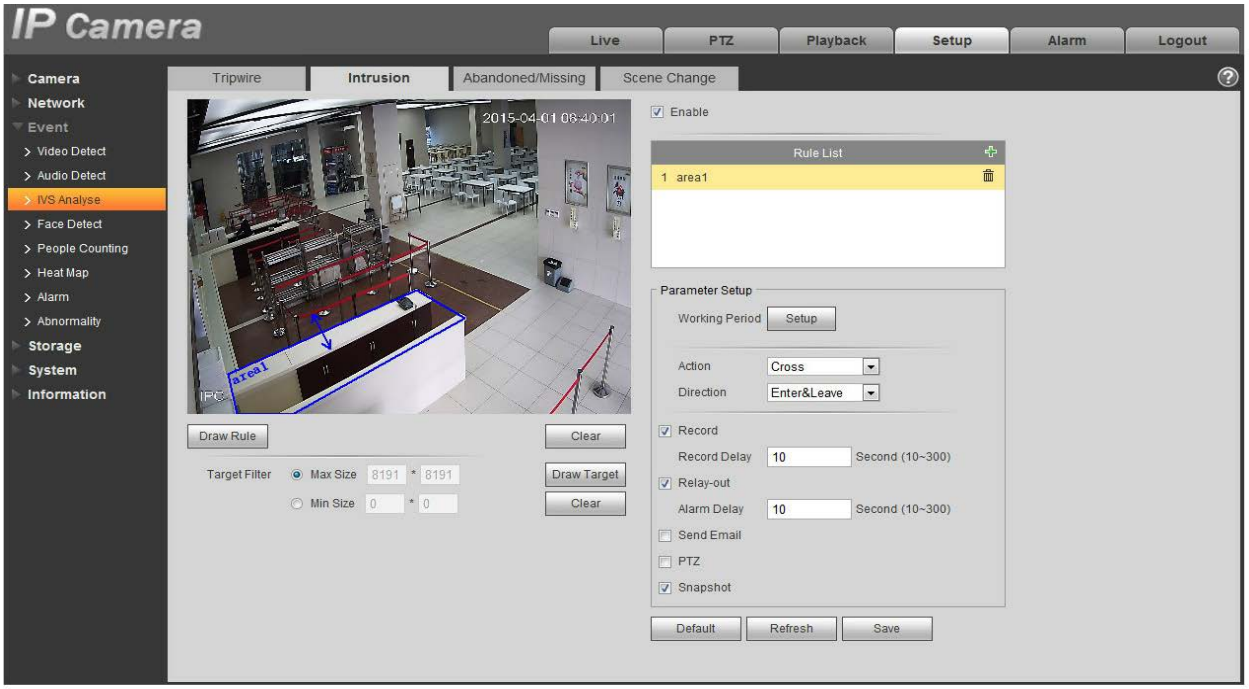

Figure 5-45

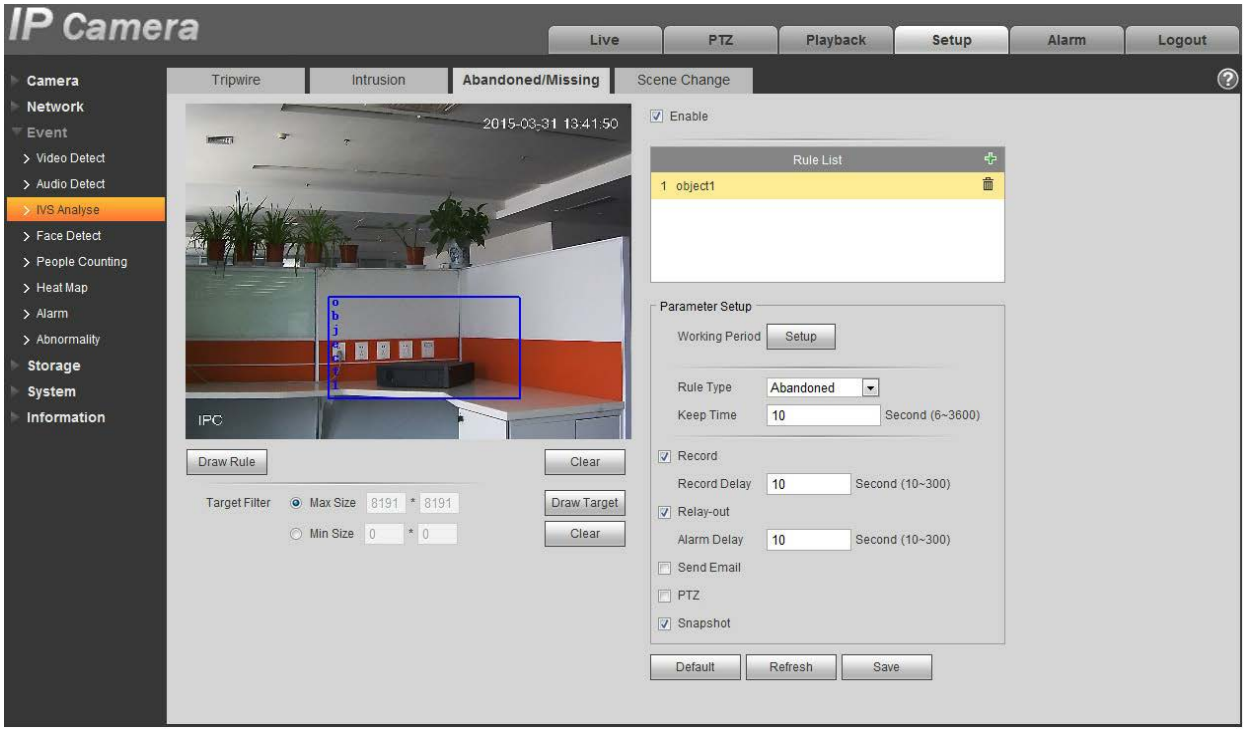

Figure 5-46

Figure 5-47

Parameter	Note
Tripwire	Detects whether an object crosses the set warning line in the video, and then triggers an alarm according to that assessment.
Intrusion	Detects whether an object intrudes the set forbidden zone, and then triggers an alarm according to that assessment.
Abandoned/Missing	Detects whether an object is missing from the set forbidden zone in the video, and then triggers an alarm according to that assessment.

Parameter	Note
Scene Change	Detects whether a change has occurred to the video scene, and then triggers an alarm according to that assessment.
Enable	Check to enable the corresponding IVS function.
Action	Only supported by Intrusion. There are two options for action: cross, appear.
Direction	For Tripwire, it is to set the direction of warning line. Select A→B, B→A, and A↔B. In Intrusion, "Cross" sets the direction of cross. Select enter and leave.
Rule Type	Only supported by Abandoned/Missing. Select the missing object.
Draw Rule	Check **Enable**. Then click **Draw** and draw the rule with corresponding function in the monitor image. Click **Clear** to delete the rule that was drawn.
Min Keep Time	For **Enter the Area** in the "Detect Action List", set the min time between the time that the target box appears in the area and when the alarm is triggered.
Target Filter	Check **Enable**. Then click **Draw** and draw the size model of the filter target for the rule in the scene. Click **Clear** to delete all the target filter models that have been drawn.

Face Detect

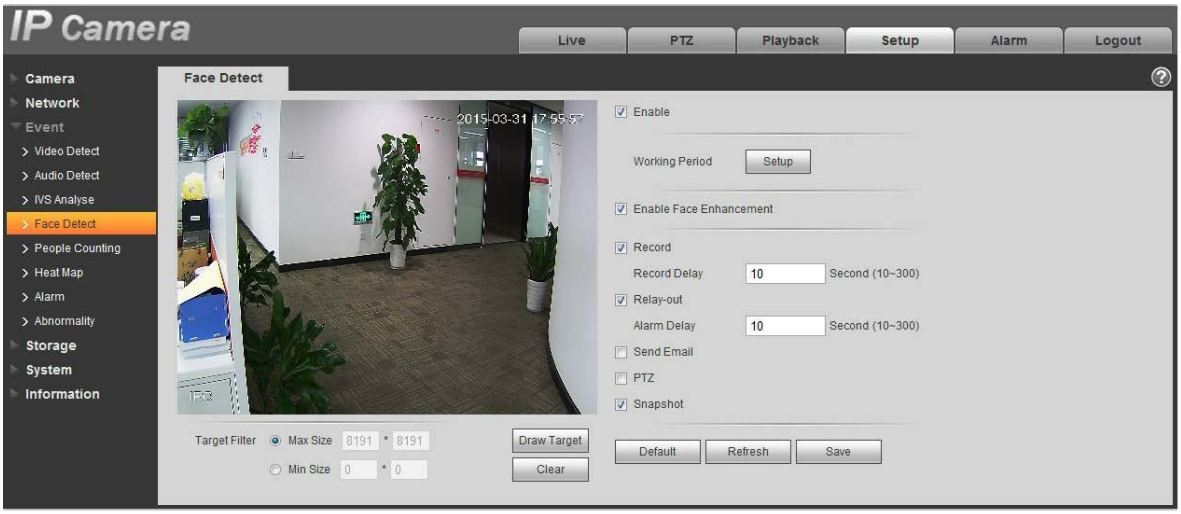

Figure 5-48

Parameter	Note
Enable	Check to trigger an alarm when a face is detected.
Enable Face Enhancement	Check to enable the face enhancement effect.

5.3.4 People Counting

5.3.4.1 Entrance / Exit

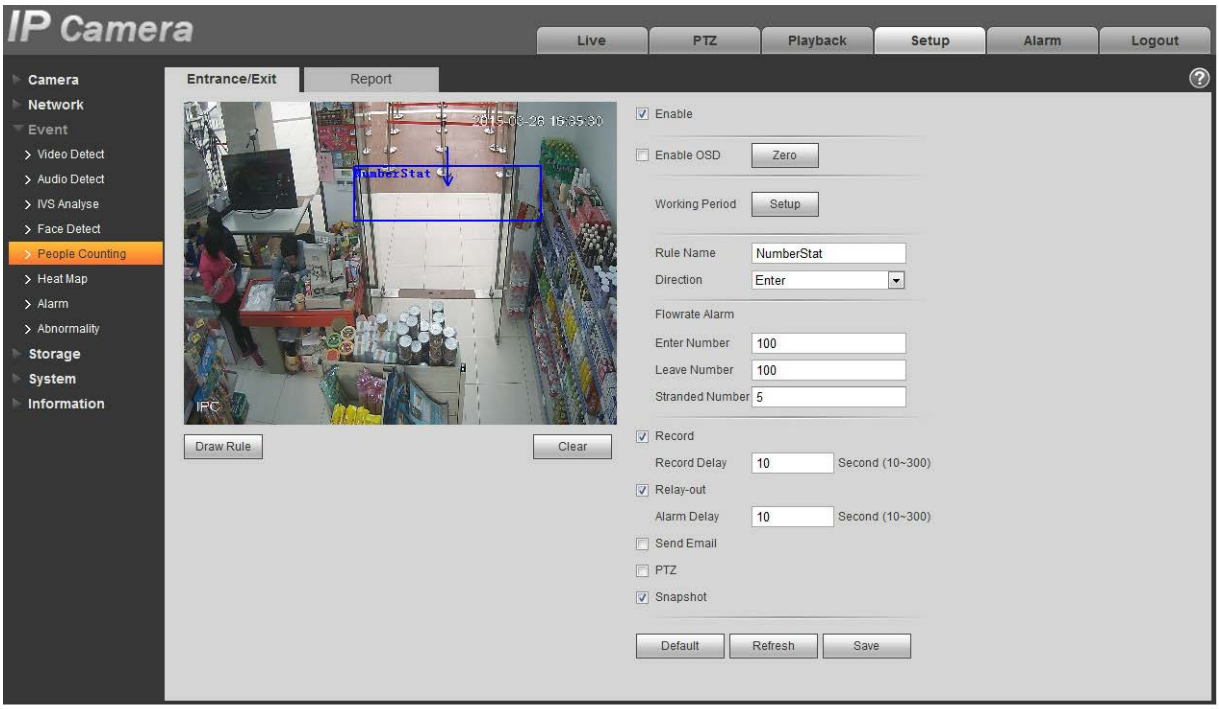

Figure 5-49

Parameter	Note
Enable	Check to draw the rule box for Flowrate statistics.
Enable OSD Overlay	Check to display Enter Number and Leave Number in the monitoring image. Note: The OSD location can be set in section 5.1.3.3 Video Overlay.
Direction	Select enter and leave.
Flowrate Alarm	An alarm is triggered when the enter number, leave number and stranded number exceed the limited amount.

5.3.4.2 Report

Determines which flow statistics appear in the report.

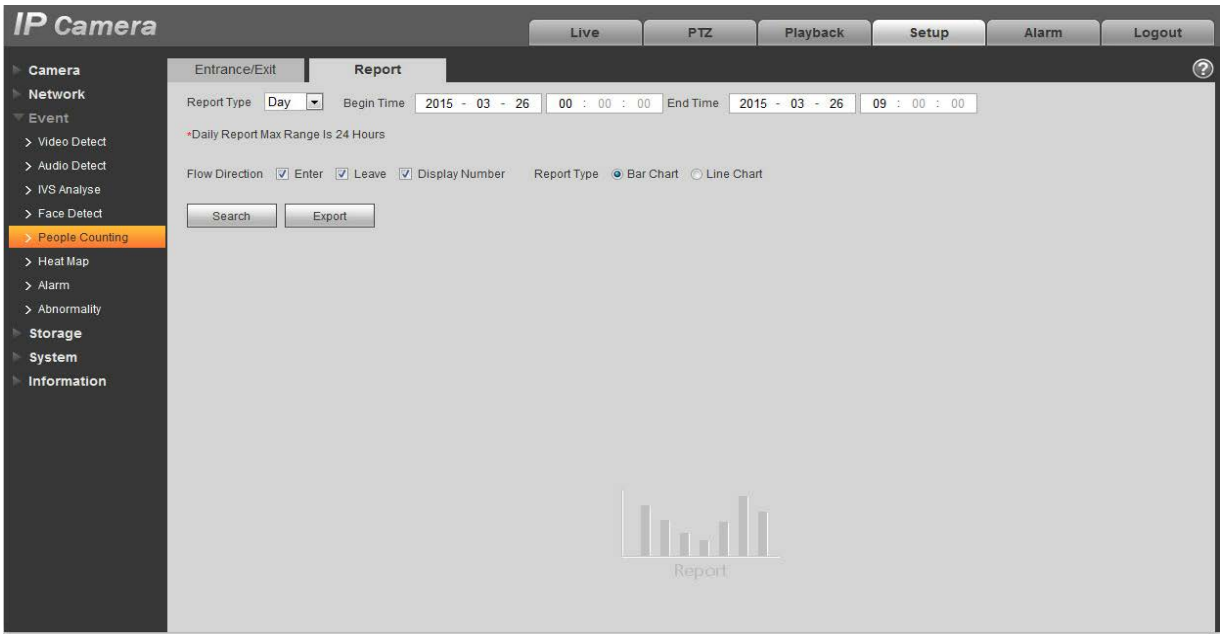

Figure 5-50

Parameter	Note
Report Type	Select day report, month report and year report. Select bar chart or line chart to display the report.
Time	Set the begin /end time within the range of the statistics time.
Flow Direction	Select enter, leave and display number. Checked items are displayed in the report.
Search	Search flow statistics data according to the settings selected.
Export	Export the saved report.

5.3.5 Heat Map

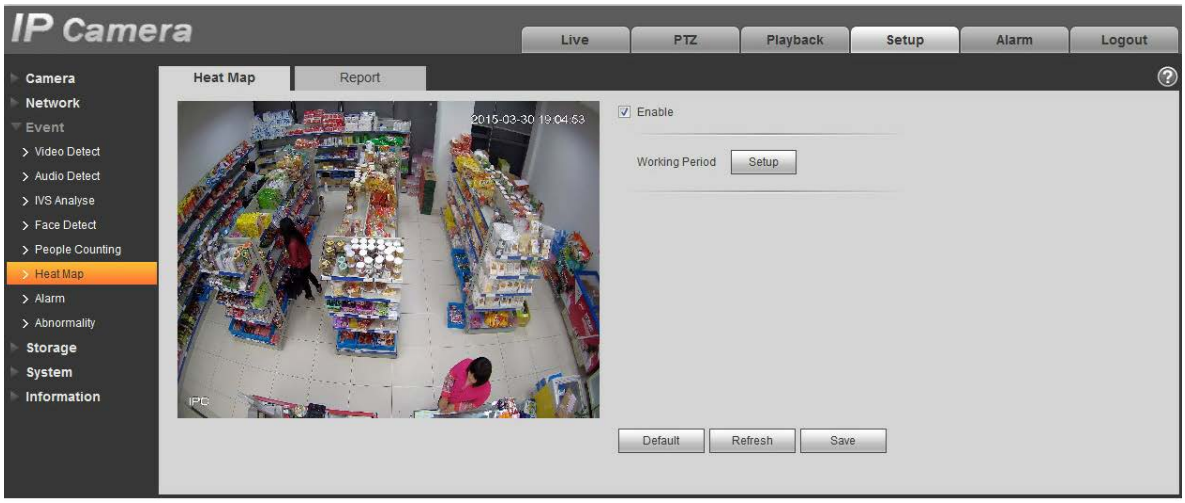

Figure 5-51

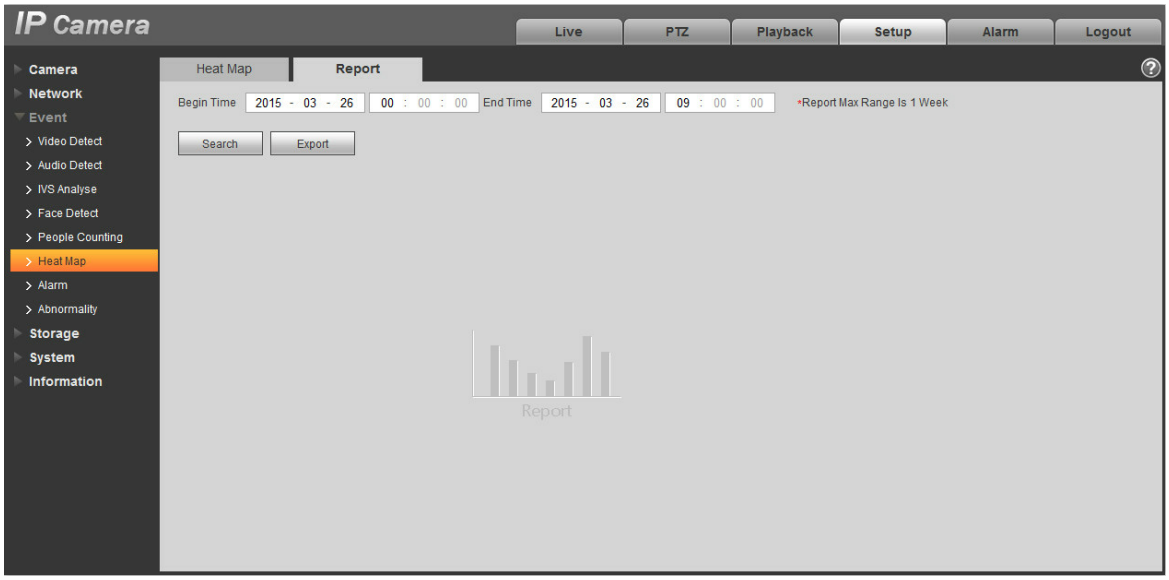

Figure 5-52

Blue indicates the minimum heat value; red indicates the maximum heat value. Original heat map data will be removed if mirror or angle of view changes.

5.3.6 Alarm

Please note that some series products do not support this function.

5.3.6.1 PIR Alarm

The alarm activation interface PIR alarm is shown below.

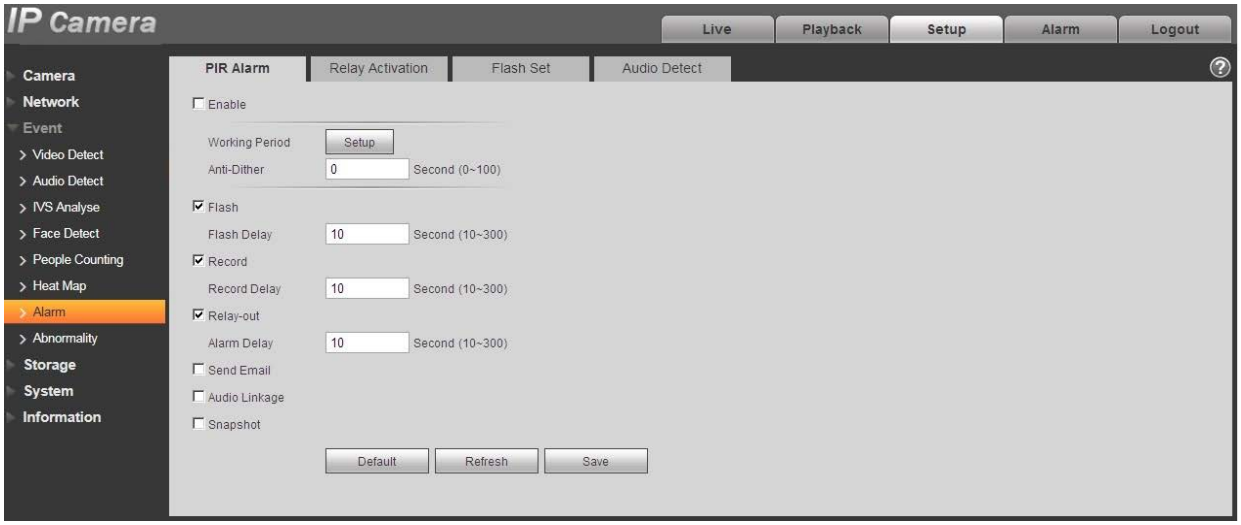

Figure 5-53

Please refer to the following table for detailed information.

Parameter	Function
Enable	Check to enable the PIR alarm. Enable for relay activation to work.
Working Period	• This function is activated in the specified periods. • There are six periods in one day. Draw a circle to enable the corresponding period. • Select the date. If you do not select a date, the current setup applies to today only. Select the All Week column to apply to the whole week. • Click the **OK** button. The system returns to the motion detection interface. Click the **Save** button to exit.
Anti-dither	System only remembers one event during the anti-dither period. The value ranges from 0s to 100s.
Flash	After enabling, the system will automatically turn on the flash when an alarm occurs.
Flash Delay	Set the time delay before the flash will be turned off when the alarm linkage is over. The time is calculated in seconds and ranges from 10s~300s.
Record	System automatically activates the motion detection channel to record once an alarm occurs (works with the motion detection function).

Parameter	Function
Record Delay	The system can delay the record for specified time after the alarm has ended. The value ranges from 10s to 300s.
Relay out	Enable the alarm activation function. You must select an alarm output port so that the system can activate the corresponding alarm device when the alarm occurs.
Alarm delay	The system delays the alarm output for the specified time after the alarm has ended. The value ranges from 10s to 300s.
Send Email	After this function is enabled, the system sends out an email alert when the alarm occurs and ends.
Audio Linkage	Check for the system to play an alarm audio file when an alarm occurs. Set the recorded audio file in *Camera Setting* > *Audio* > *Alarm Audio*.
Snapshot	After you have enabled snapshot, the system will automatically create a snapshot when an alarm occurs.

5.3.6.2 Relay Activation

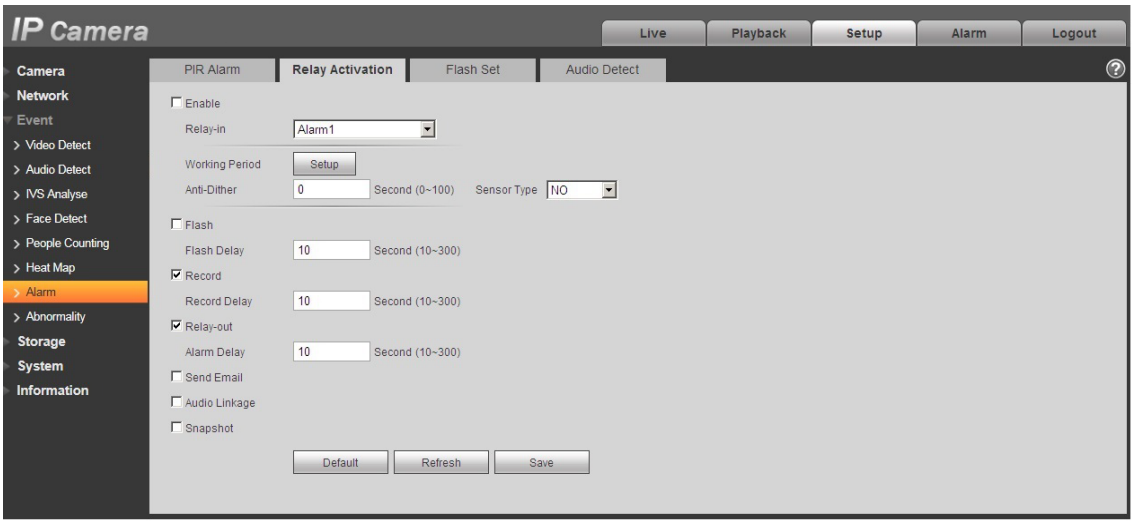

Figure 5-54

Parameter	Function
Enable	Check to enable the alarm linkage.
Relay-in	The default is alarm 1; some products can choose alarm 2.
Sensor Type	Select the type of sensor: normally open (NO) and normally closed (NC). Switch from normally open to normally closed to open the alarm. Switch from normally closed to normally open to end the alarm.
PTZ	Check to set PTZ movement when an alarm occurs.The event type includes: preset, tour and pattern and so on. For example: initiate preset x when there is an alarm.

5.3.6.3 Flash Set

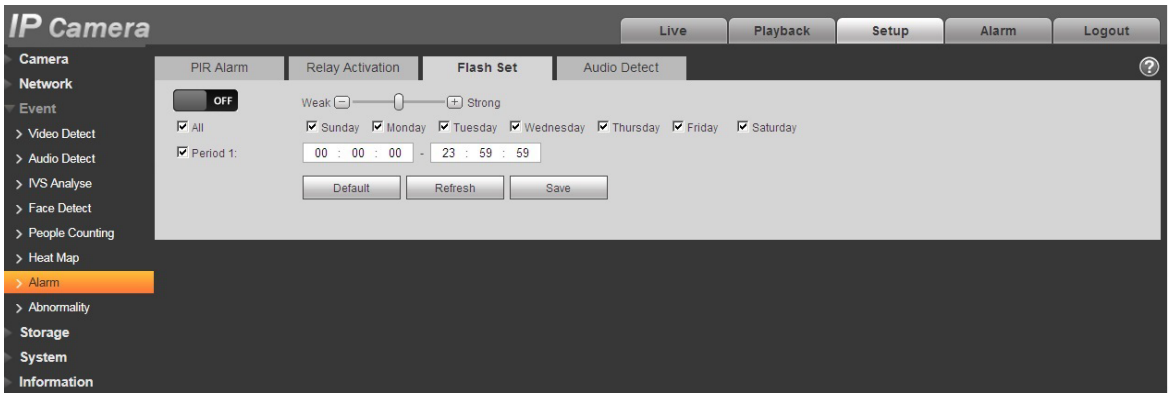

Figure 5-55

Parameter	Function
ON/OFF	ON indicates that the flash is on; OFF means the at the flash is off.
Weak-strong bar	Drag the slider to adjust flash brightness.
All	Check to enable the flash for everyday.
Period	Set the time of day that the flash is on.

5.3.6.4 Audio Detection

Note: Audio detection is not available when **Talk** is enabled on the preview interface.

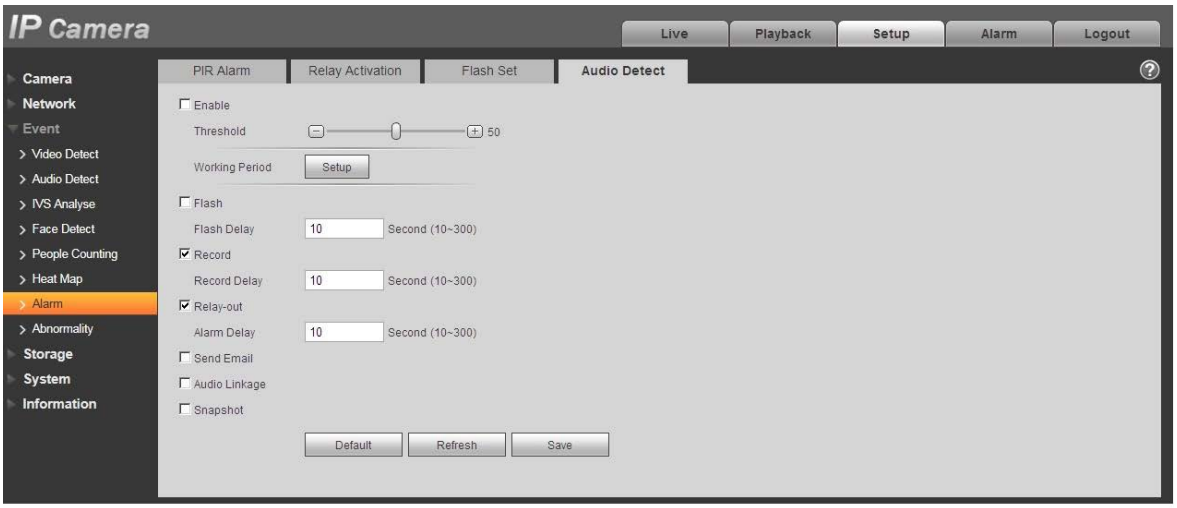

Figure 5-56

Parameter	Function
Enable	Check to enable audio detection.
Threshold	When the volume exceeds the set threshold, the system sets up a series of linkage and triggers an alarm.

5.3.7 Abnormity

Abnormity includes No SD Card, Capacity Warning, SD Card Error, Disconnection, IP Conflict and Unauthorized Access. Only devices with the SD card function displays: No SD Card, Capacity Warning, and SD Card Error.

Figure 5-57

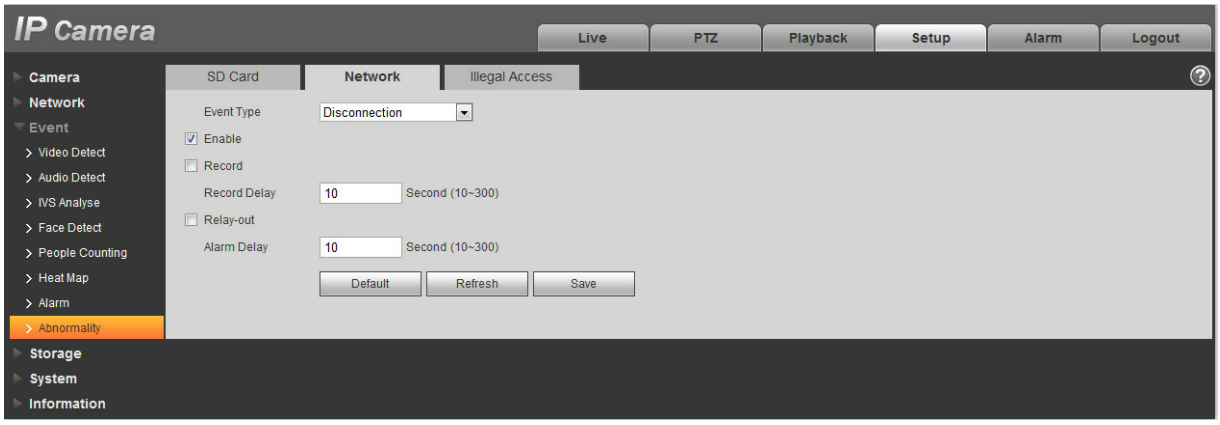

Figure 5-58

Figure 5-59

Illegal Access. When the login password has been entered incorrectly several times, an 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.

Please refer to the following table for detailed information.

Parameter	Function
Enable	Check to alarm when the SD card is abnormal.
Relay-out	Check to enable the relay-out alarm.
Relay out Delay	The alarm output delay sfor the specified time after the alarm stops. This value ranges from 10s to 300s. ***Note:*** No SD Card, Capacity Warning, SD Card Error and Relay-out Delay all start from when the alarm occurs.
Send Email	After enabling this function, the system sends out an email alert to the specified user. This function is invalid when network is offline or an IP conflict occurs.
SD Card Capacity Limit	Set the minimum remaining free space on the SD card. When the SD card remianing free space is smaller than this limit, an alarm occurs.

When the device is offline or has IP conflicts, the abnormal alarm is similar to that of the SD Card Error.

5.4 Storage Management

5.4.1 Schedule

Before setting up schedule, set recording mode to auto or manual. If the recording mode is off, the device will not take snapshots according to the schedule.

5.4.1.1 Record Schedule

Record schedule steps are as follows:

Step 1. Click the Record Schedule tab.

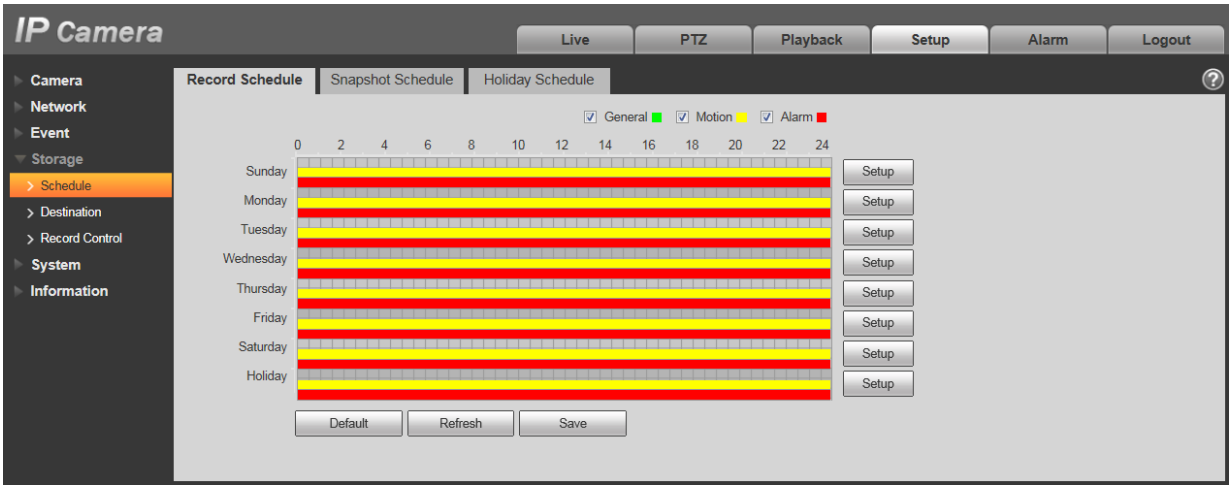

Figure 5-60

Step 2. From Monday to Sunday select the record time, and then click **Setup** on the right.

- Set the period as needed. 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.

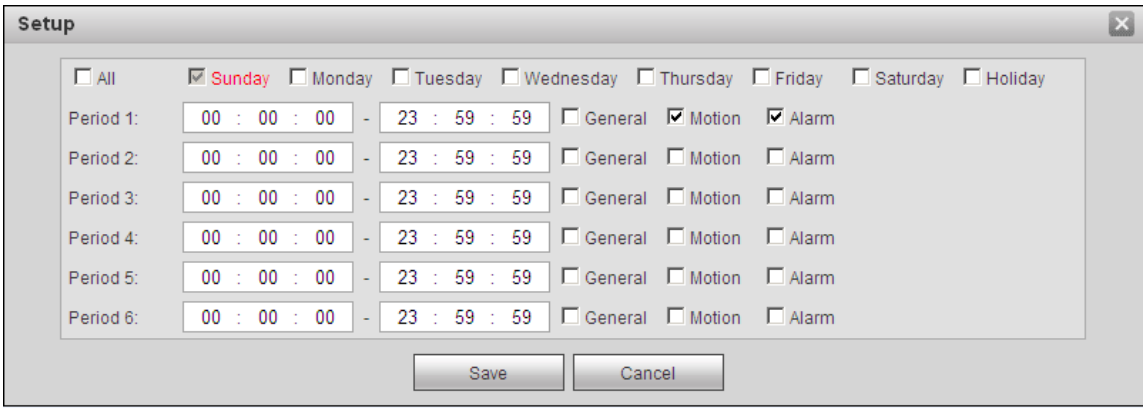

Figure 5-61

Step 3. Click **OK**, return to record schedule interface.

- Green represents general recordings/snapshots.
- Yellow represents motion detect recordings/snapshots.
- Red represents alarm recordings/snapshots.

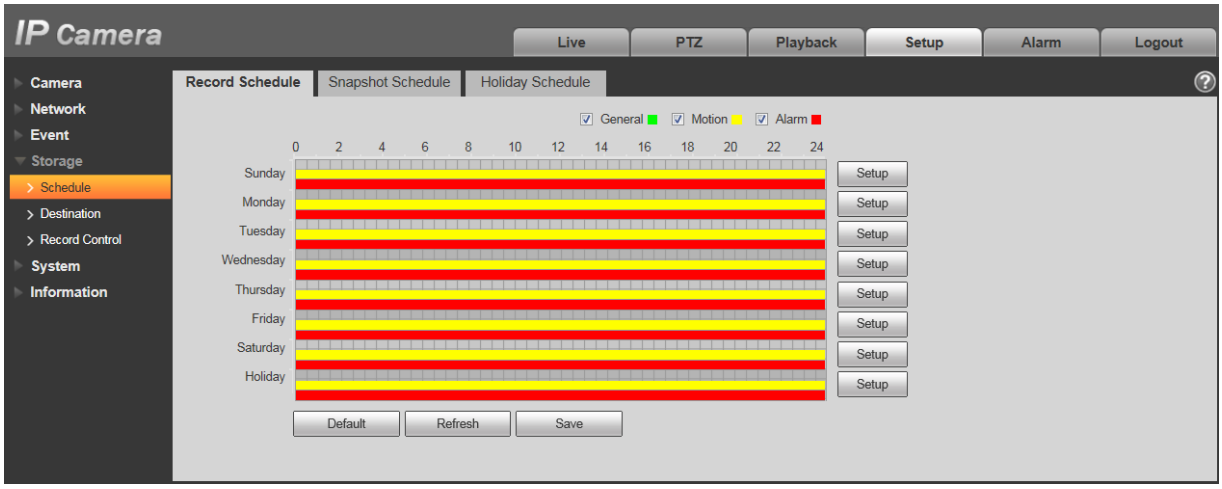

Figure 5-62

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

5.4.1.2 Snapshot Schedule

Set up Snapshot Schedule as follows:

Step 1. Click on the Snapshot Schedule tab.

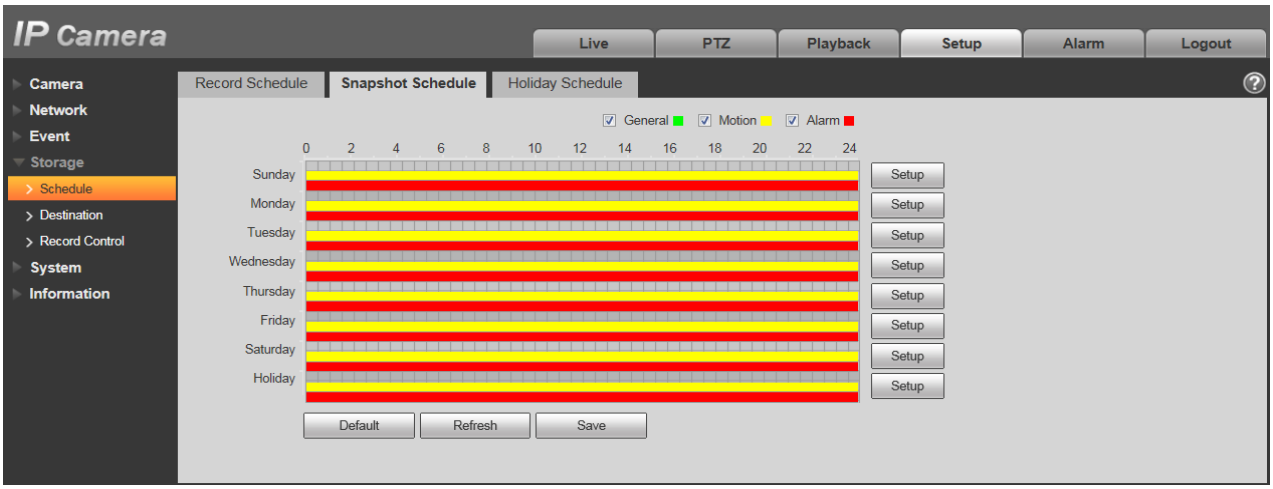

Figure 5-63

Step 2. From Monday to Sunday select snapshot time, click **Setup** on the right.

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

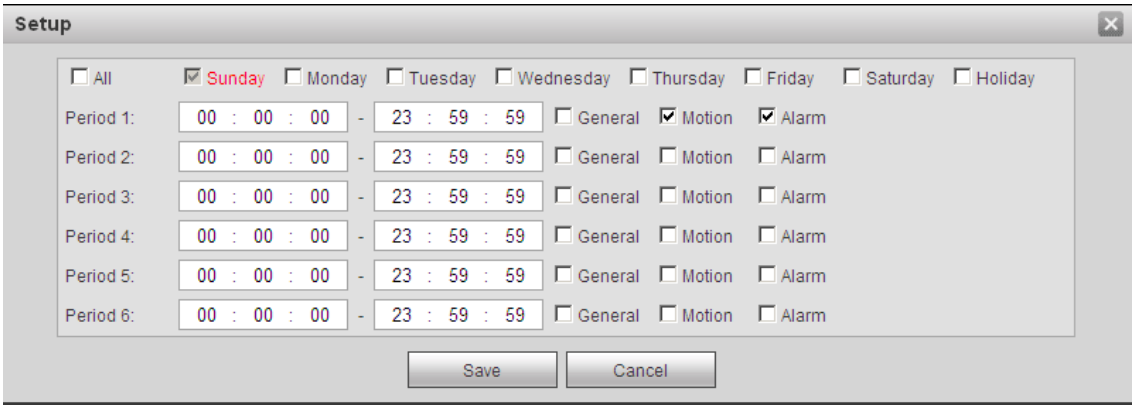

Figure 5-64

Step 3. Click **OK** to return to the snapshot schedule interface.

- Green represents general recordings/snapshots.
- Yellow represents motion detect recordings/snapshots.
- Red represents alarm recordings/snapshots.

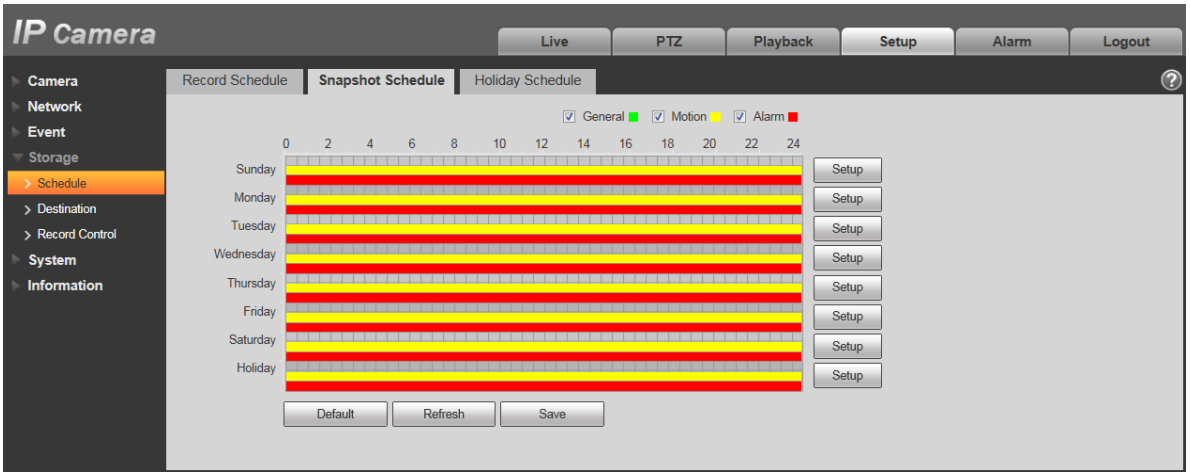

Figure 5-65

Step 4. In the snapshot interface, click **OK**. The system prompts that it is successfully saved.

5.4.1.3 Holiday Schedule

The Holiday Schedule sets specific dates as holidays.

Step 1. Select the Holiday Schedule tab.

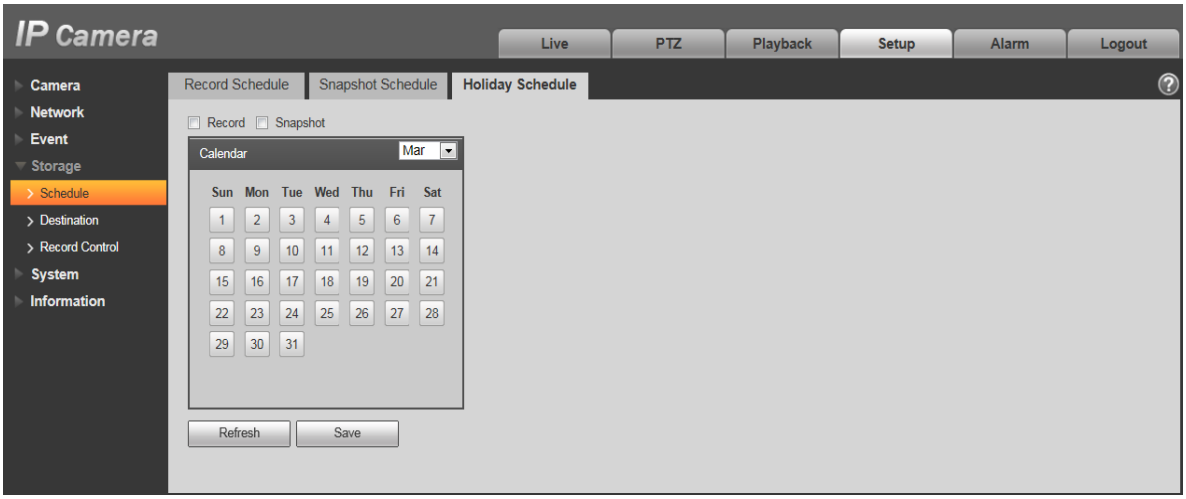

Figure 5-66

Step 2. Select the date to set as a holiday. The selected date is highlighted in yellow.

Step 3. Check Record/Snapshot and click **Save**. The system prompts that it successfully saved.

Step 4. Check the Record Schedule/Snapshot Schedule interface. Click **Setup** next to Holiday and setup Monday to Sunday.

Step 5. Complete the Holiday setup. The recordings/snapshots are scheduled according to the dates in the holiday schedule.

5.4.2 Destination

5.4.2.1 Path

The Path tab configures the recording and snapshot storage path. There are three options: Local, FTP and NAS. You can only select one mode. The system saves according to the event types, corresponding to the three modes (general/motion/alarm) in the Schedule interface. Check the box to enable the save functions. Only devices that support SD cards display the Local tab.

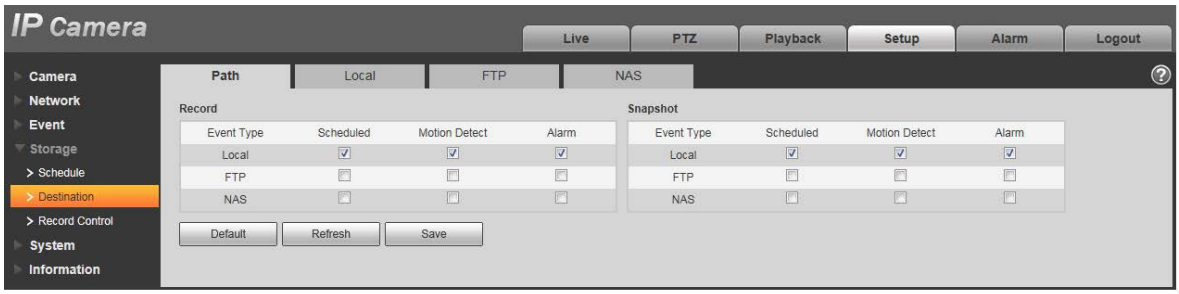

Figure 5-67

Please refer to the following table for detailed information.

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

5.4.2.2 Local

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

Figure 5-68

5.4.2.3 FTP

Check the box to enable the FTP function. This feature creates emergency storage to save the record/snapshot picture to a local SD card when a network disconnection occurs or there is a malfunction.

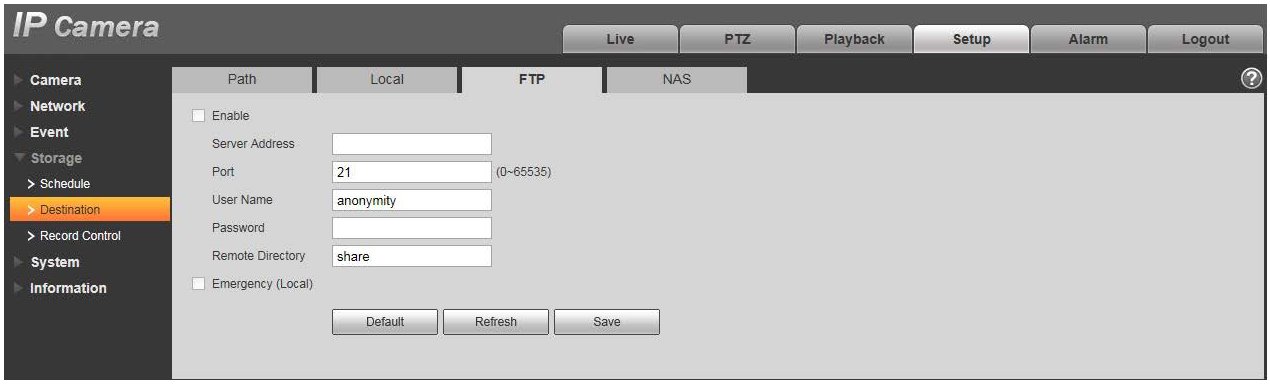

Figure 5-69

5.4.2.4 NAS

Check the box to enable the NAS function. Select NAS storage, fill in NAS server address and corresponding store path. Then store the video file or pictorial information in the NAS server.

Select NAS storage to the same file as the NAS disk.

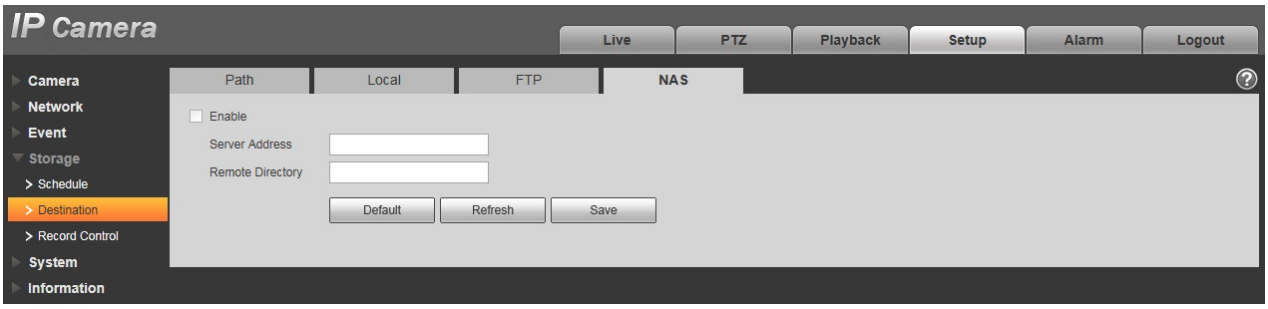

Figure 5-70

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

5.4.3 Record Control

The Record Control interface is shown below.

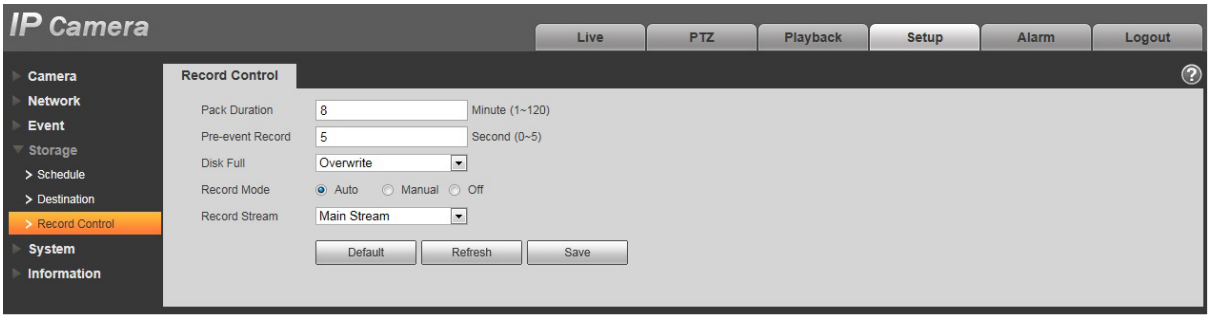

Figure 5-71

Please refer to the following table for detailed information.

Parameter	Function
Pack Duration	Select file size between 1min~120min. Default setup is 8 minutes.
Pre-record	Input the pre-record value. For example, the system can record four seconds of video in the buffer. The record begins from the fifth second. Configure the pre-record time, when alarm or motion detection occurs. If there is no recording, the system will record the preceding **n** seconds.
Disk Full	There are two options: stop recording or overwrite the previous files when the HDD is full. • Stop: If the current working HDD is overwriting or the current HDD is full, it will stop recording. • Overwrite: If the current working HDD is full; it will overwrite the previous file.
Record mode	There are three modes: Auto/Manual/Close.
Record stream	There are two options: Main Stream and Sub Stream.

5.5 System

5.5.1 General

The General interface is shown below.

Figure 5-72

Please refer to the following table for detailed information.

Parameter	Function
Device Name	Set the device name. Different devices should have different names.
Video Standard	Displays the video standard, such as PAL.
Language	Select the language from the dropdown list.

The date and time interface is shown below.

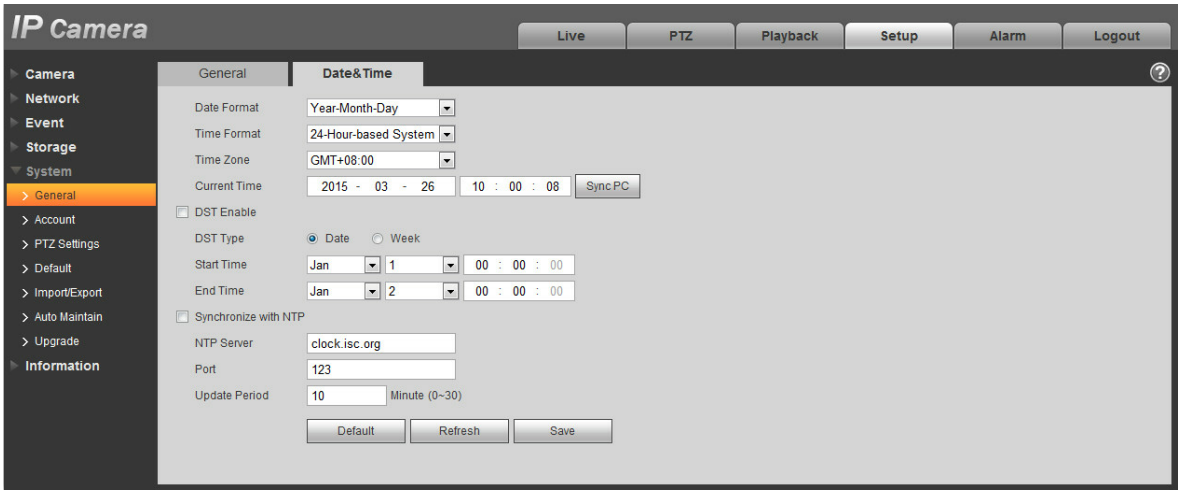

Figure 5-73

Please refer to the following table for detailed information.

Parameter	Function
Date format	Select the date format from the dropdown list.
Time Format	There are two options: 24-H and 12-H.
Time zone	The time zone of the device.
System time	Set the system time. It becomes valid after you set it.
Sync PC	Click to save the system time as your PC current time.
DST	Set the day/night save time begin time and end time. You can set according to the date format or according to the week format.
NTP	Check the box to enable the NTP function.
NTP server	Set the time server address.
Port	Set the time server port.
Update period	Set the sync periods between the device and the time server.

5.5.2 Account

- The system supports a maximum of 15 characters for the user name or the user group name. Valid strings include: alpha characters, number, and the underscore character.
- Passwords can be 0~32 characters using number and letters only. Users can modify other users' password.
- The system supports 18 user accounts and 8 groups account. The factory default setup includes two levels: *user* and *admin*. You can set up the group and then set the rights for the corresponding user in the specified groups.
- User management adopts group/user modes. The user name and the group name must be unique. Each user can be included in only one group.
- A currently-logged-in user cannot change his/her own rights.

5.5.2.1 User Name

In this interface you can enable Anonymous Login, Add/Remove User and Modify User Name.

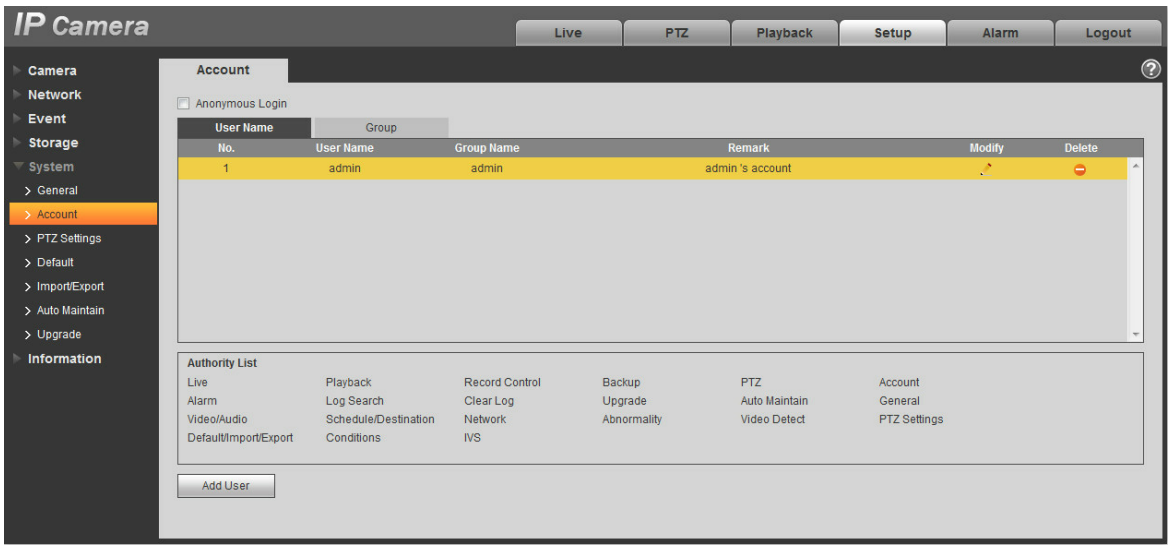

Figure 5-74

Anonymous Login

Enable anonymous login, and input the IP. No username or password is required; you can log in anonymously (with limited rights). Click **Logout** to end your session.

Add User

Use to add a name to group and set the user rights. Hidden user "default" is for system internal use only and cannot be deleted. When there is no login user, hidden user "default" automatically logs in. You can set some rights such as monitor for this user so that you can view some channels without logging in.

Here you can input the user name and password and then select one group for current user. Note that the user rights cannot exceed the group rights setup. For convenient setup, make sure that the general user has a lower rights setup than the admin.

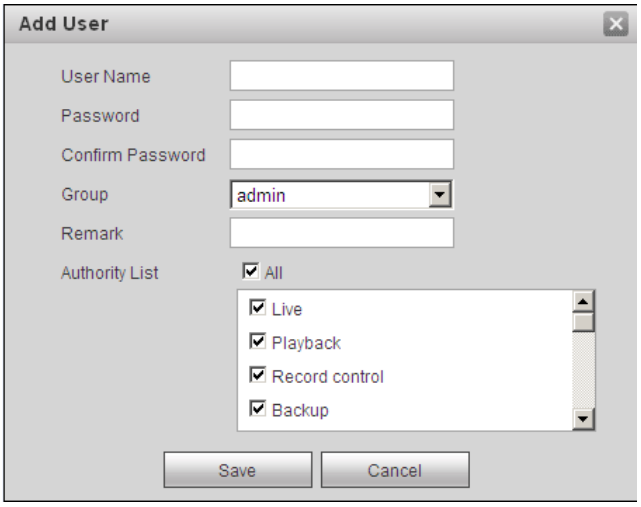

Figure 5-75

Modify User

Use this to modify the user property, group, password and rights.

Modify Password

Use this to modify the user password. You must input the old password and then input the new password twice to confirm the new setup. Click the **OK** button to save.

The password ranges from 0 to 32 digits and can include numbers and letters only. Users who have the account rights can modify the password of other users.

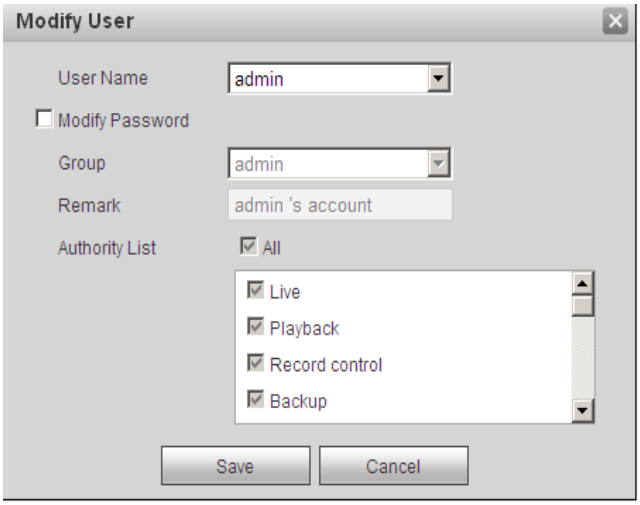

Figure 5-76

5.5.2.2 Group

The group management interface can add/remove the group, modify group passwords, etc.

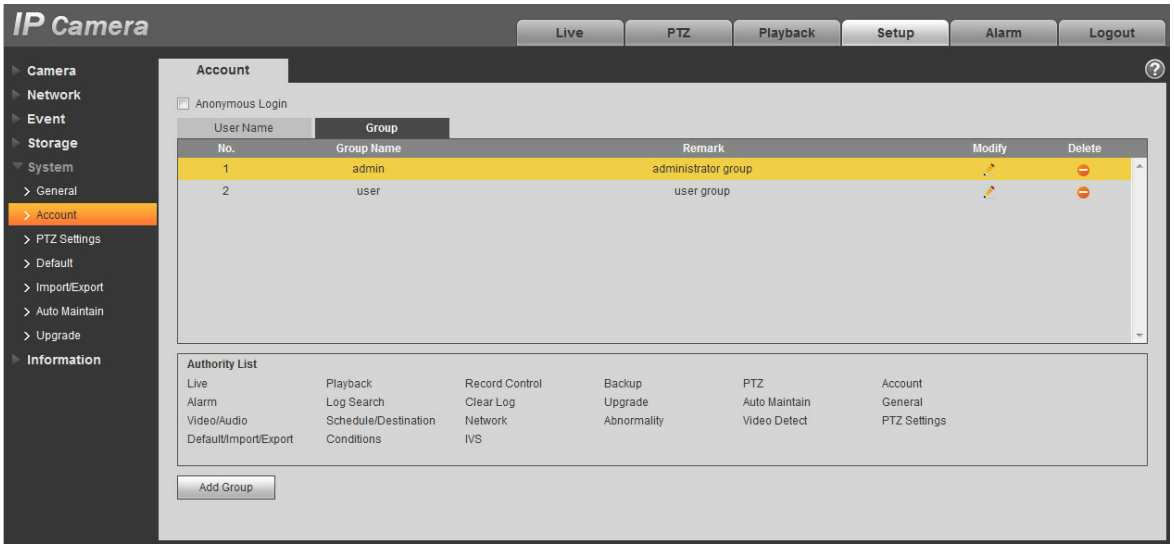

Figure 5-77

Add Group

Use this to add groups and set the corresponding rights. Input the group name and then check the box to select the corresponding rights. This includes: preview, playback, record control, PTZ control, etc.

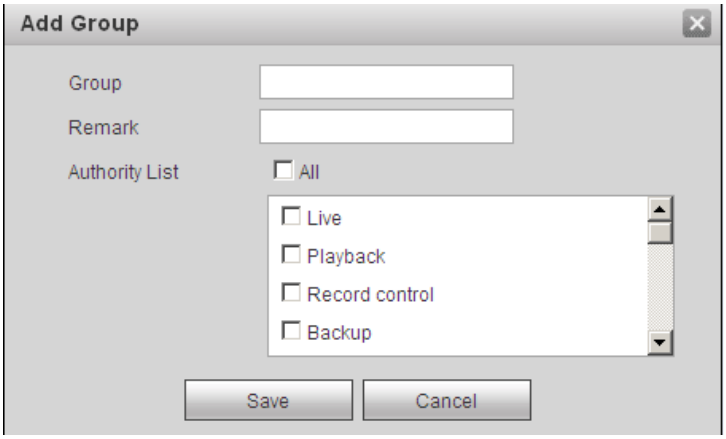

Figure 5-78

Modify Group

Click the **Modify Group** button. The following interface appears, in which you can modify group information such as remarks and rights.

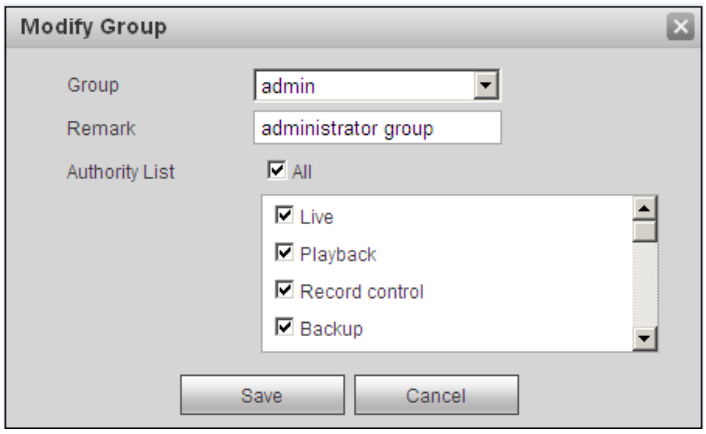

Figure 5-79

5.5.3 PTZ

The PTZ interface is shown below. Note only some series products support this function.

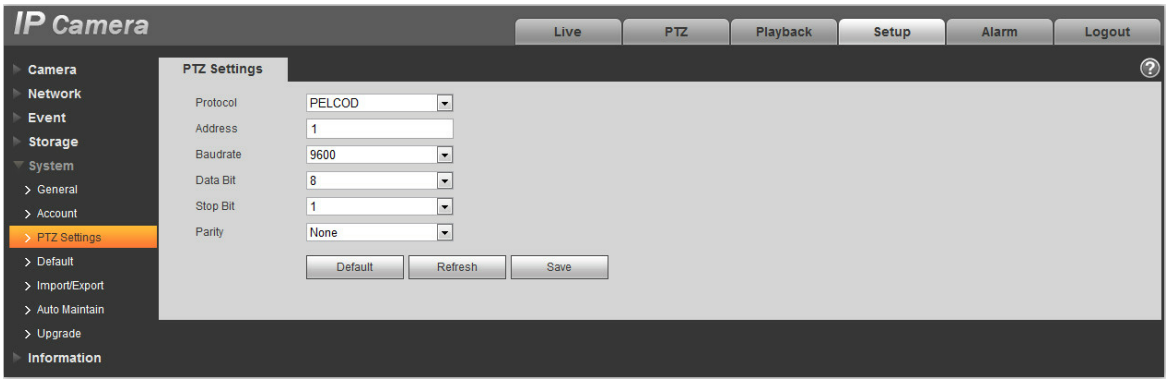

Figure 5-80

Please refer to the following table for detailed information.

Parameter	Function
Protocol	Select the corresponding dome protocol.
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you cannot control the speed dome.
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.

5.5.4 Default

The default setup interface is shown below. Note that the system cannot restore certain information such as the network IP address.

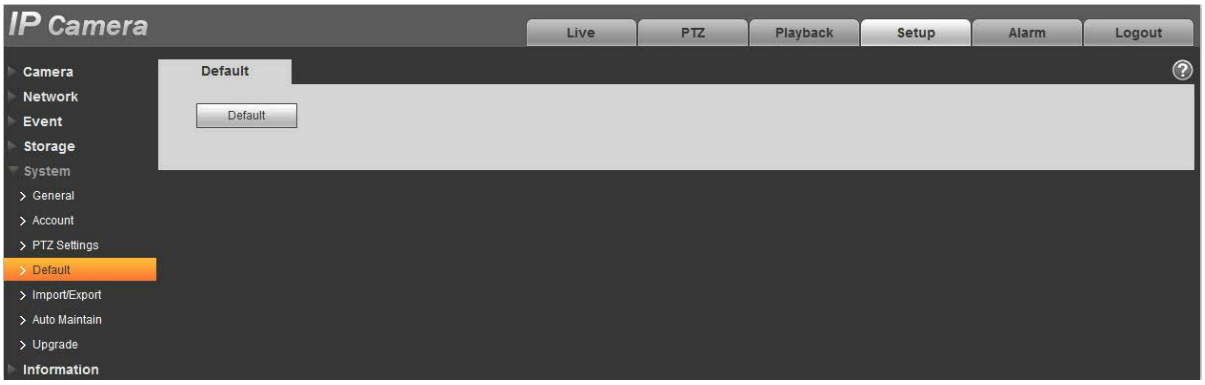

Figure 5-81

5.5.5 Import/Export

The interface is shown below.

Figure 5-82

Please refer to the following table for detailed information.

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

5.5.6 Remote Control

Note: Only supported by certain devices.

Figure 5-83

Parameter	Function
Learn	Bind the remote control or wireless alarm with the equipment.
Clear	Unbind the remote control with the equipment.
Arm/Disarm	Start arm after the time you choose, disarm comes into effect immediately. Note: With disarm status, all the following alarms won't trigger: motion detect alarm, masking alarm, local alarm, PIR alarm, wireless alarm.

5.5.7 Auto Maintenance

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

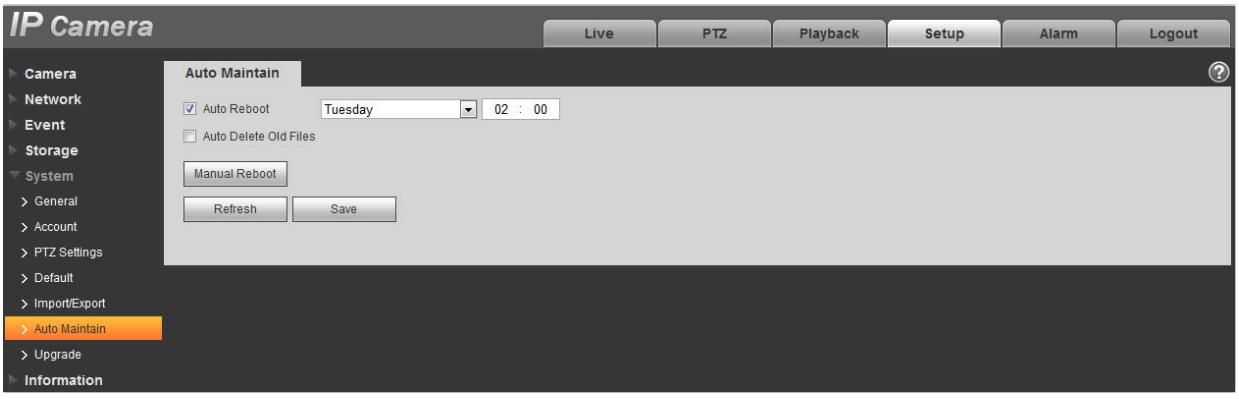

Figure 5-84

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

5.5.8 Upgrade

The upgrade interface is shown below. Select the upgrade file (file extension is **.bin**) and then click the **Update** button to begin the firmware update.

IMPORTANT: Using an improper upgrade program may result in device malfunction.

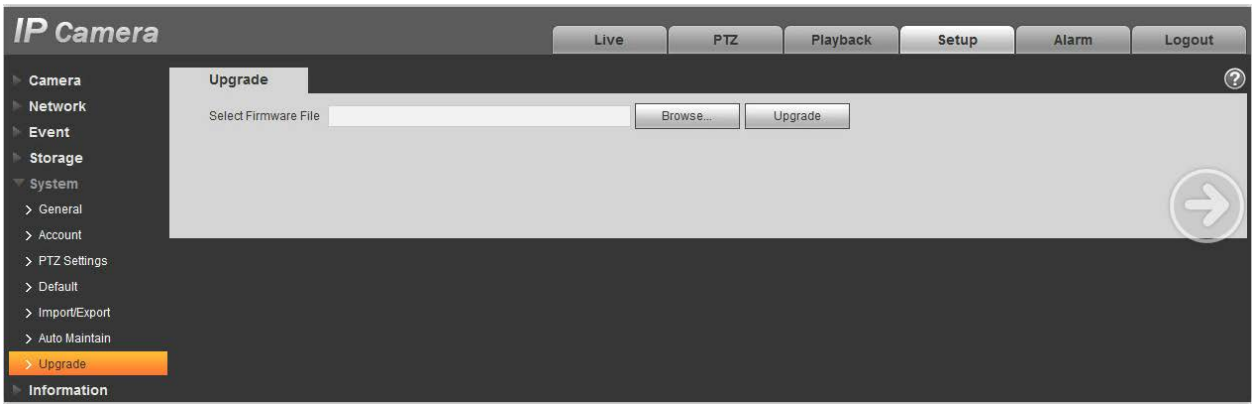

Figure 5-85

5.6 Information

5.6.1 Version

The version interface enables you to you can view system hardware features, software version, release date, etc.

Note: The following information is for reference only.

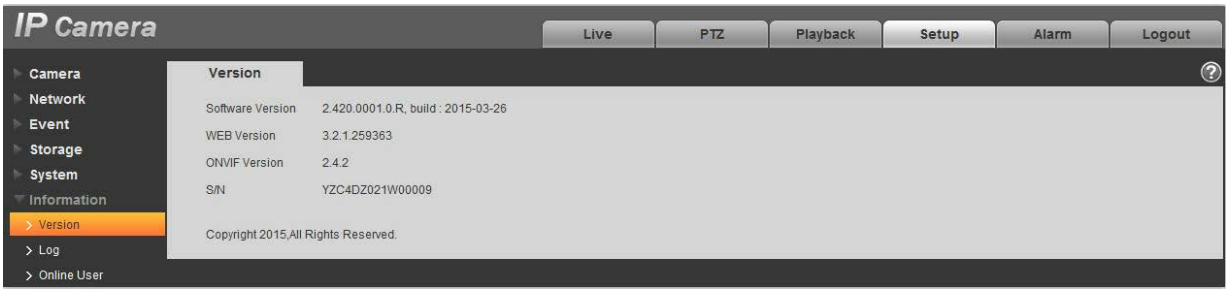

Figure 5-86

5.6.2 Log

Here you can view the system log.

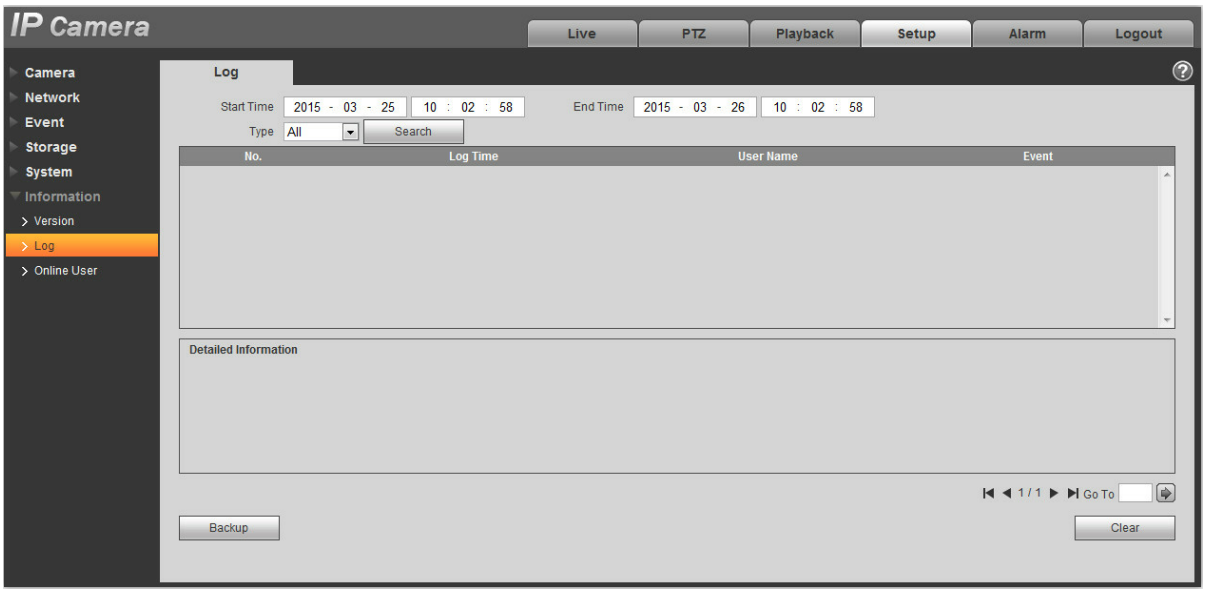

Figure 5-87

Please refer to the following table for log parameter information.

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

5.6.3 Online User

The online user interface is shown below. Here you can view the current online user, group name, IP address and login time.

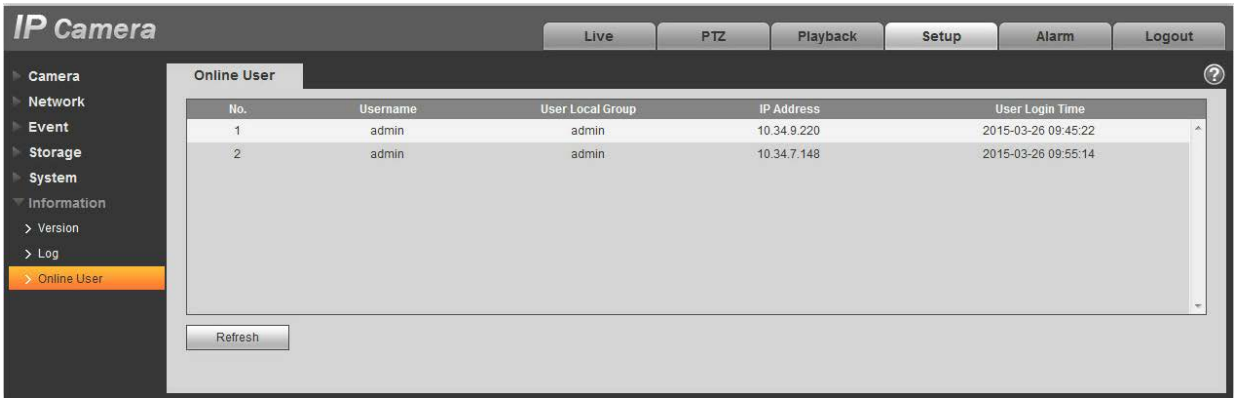

Figure 5-88

6 Alarm

Click the Alarm tab. The following interface appears. Here you can set device alarm type and alarm sound setup. Note that some series products do not support this function.

Figure 6-1

Please refer to the following table for detailed information.

Type	Parameter	Function
Alarm type	Motion Detection	The system alarms when the motion detection alarm occurs.
	Disk Full	The system alarms when the disk is full.
	Disk Error	The system records alarm info when disk error occurs.
	Video Tampering	The system alarms when video tampering occurs.
	External Alarm	The Alarm input device sends out an alarm.
	Illegal Access	The system alarms when illegal access occurs.
	Audio Detect	The system alarms when audio detection occurs.
	IVS	The system alarms when an IVS event is triggered.

Type	Parameter	Function
Operation	Prompt	When an alarm is triggered, the  icon appears in the main menu of the alarm interface. The system automatically records the alarm info. The icon disappears when you click the Alarm menu bar. ***Note:*** If the alarm interface is displayed when the alarm is triggered, there will be no image prompt. Instead the alarm record will be in the list on the right.
Alarm audio	Audio	When an alarm occurs, the system automatically generates alarm audio. This audio supports customized setup.
	Path	Specify alarm sound file.

7 Logout

Click the **Logout** button. The system returns to the log in interface.

Figure 7-1

Note:

- This manual is for reference only. Slight differences may be found in the 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.

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