Network Speed Dome & PTZ Camera
Web3.0 Operation Manual

Version 1.0.0

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Important

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

Cybersecurity Recommendations

Cybersecurity Recommendations

Mandatory actions to be taken towards cybersecurity

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

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

“Nice to have” recommendations to improve your network security

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

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

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

4. Enable IP Filter:

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

5. Change ONVIF Password:

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

6. Forward Only Ports You Need:

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

7. Disable Auto-Login on SmartPSS:

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

8. Use a Different Username and Password for SmartPSS:

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

9. Limit Features of Guest Accounts:

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

10. UPnP:

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

11. SNMP:

Disable SNMP if you are not using it. If you are using SNMP, you should do so only temporarily, for tracing and testing purposes only.

12. Multicast:

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

13. Check the Log:

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

14. Physically Lock Down the Device:

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

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

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

16. Isolate NVR and IP Camera Network

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

1 Network Config

1.1 Network Connection

There are mainly two connection modes between network speed dome and PC. See Figure 1-1 and Figure 1-2.

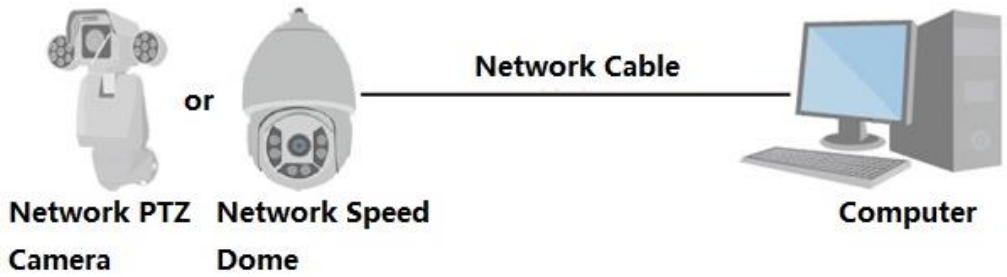


Figure 1-1

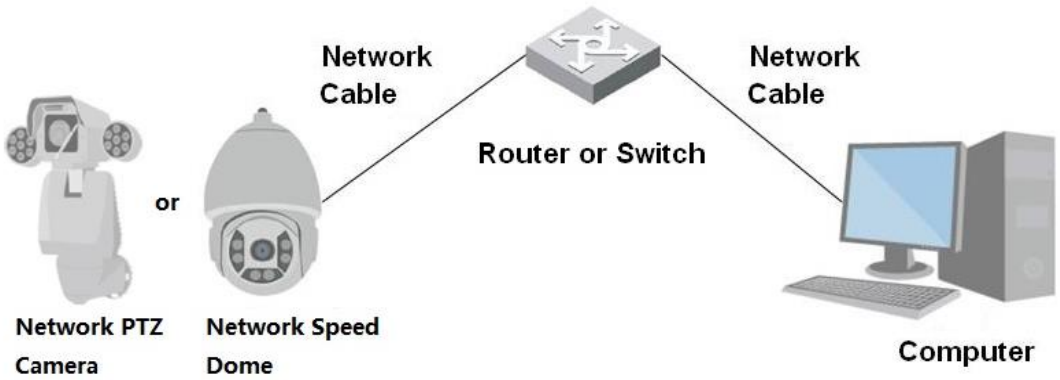


Figure 1-2

Note:

- The models presented in the figure are for reference only.
- In order to describe operation steps more conveniently, both network speed dome and network PTZ camera will be called “Camera” hereinafter.

The IP address of all the intelligent speed domes is 192.168.1.108 by default when they are delivered out of factory; it needs to plan available IP segment reasonably according to practical network environment in order to make intelligent speed domes get access to network smoothly. Users can modify IP address via quick config tool in the disk, please refer to <<Quick Configuration Tool User manual>> for more details.

1.1 Log in WEB Interface

1.1.1 Device Initialization

It needs to implement initialization upon the device if it is used for the first time; the steps are shown as follows:

Step 1

Open IE browser, input IP address of network speed dome in the address bar and press Enter button. The system will display the interface which is shown in Figure 1-3 after it is successfully connected.

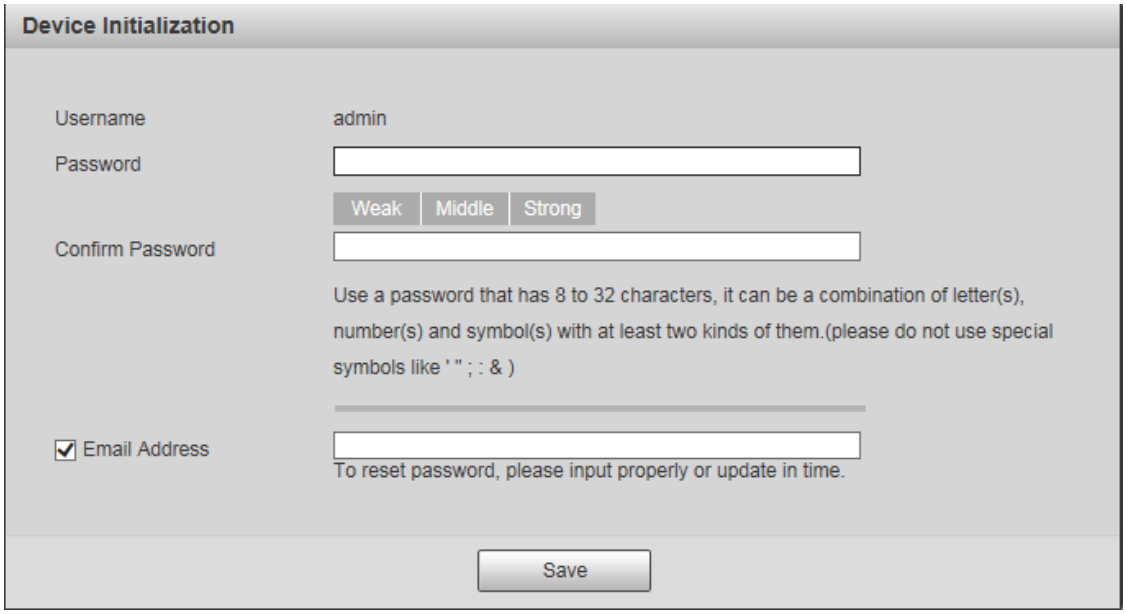


Figure 1-3

Note

Email address function is enabled by default; you can select to disable the function according to the actual requirement.

Step 2

It is to set the password of admin user.

The config interface is shown in Figure 1-4.

Note

The password can be set as 8 to 32 nonblank characters, which can be made up of upper case, lower case, number and special character (except “'”, “"”, “;”, “:” and “&”), and it has to contain at least two types of characters. Make sure the new password is in accordance with the confirm password. Please set the password with high security according to the password intensity prompt.

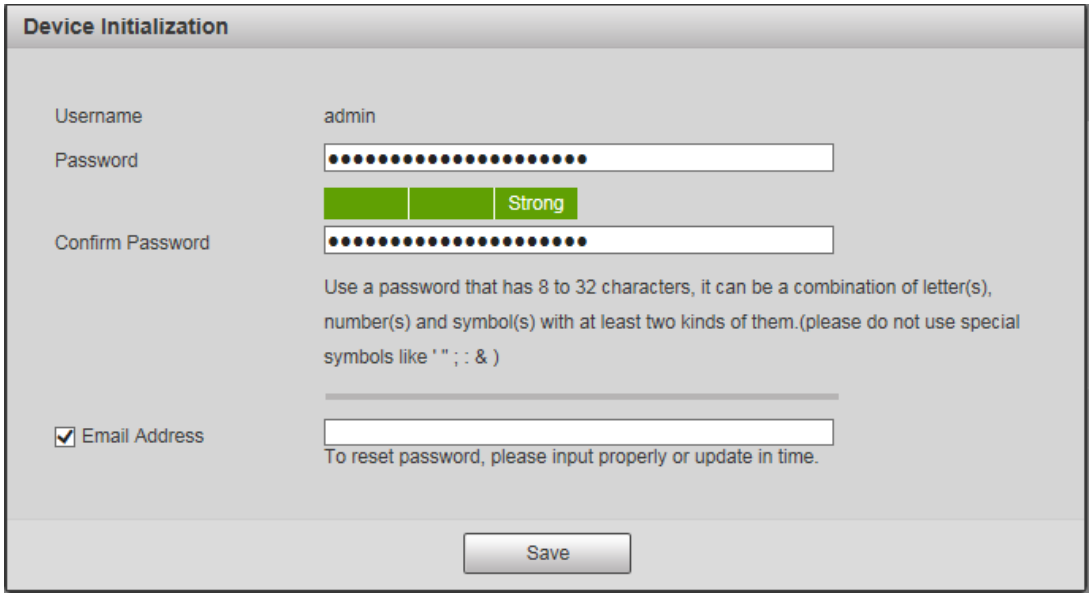


Figure 1-4

Step 3

Set the email address which is used to reset password. The config interface is shown in Figure 1-5.

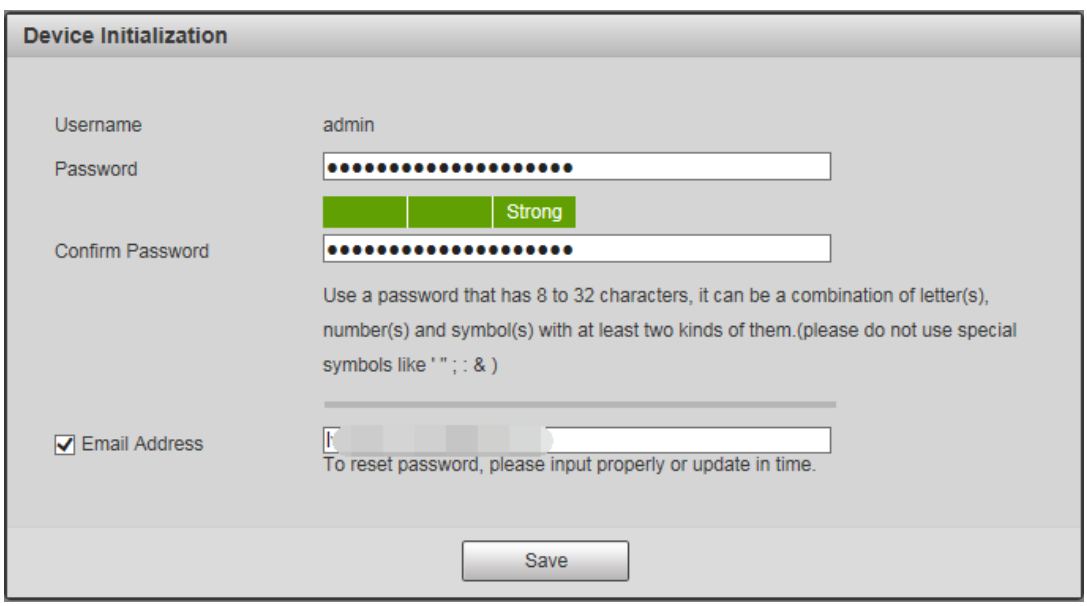


Figure 1-5

Step 4

Click “Save” and the WEB interface is shown in Figure 1-6.

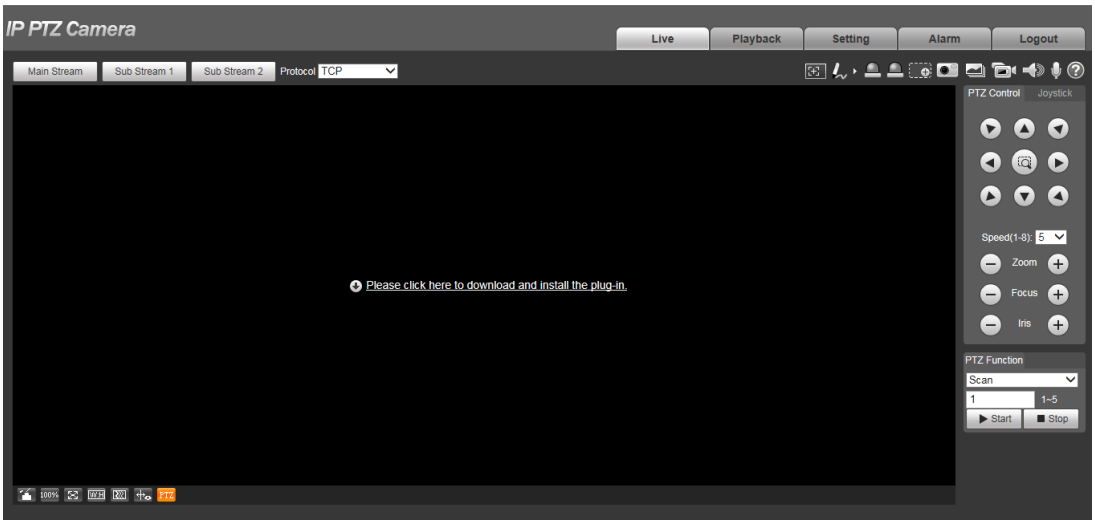


Figure 1-6

Step 5

Install or load plug-in according to the system prompt.

The plug-in installation interface will be closed automatically after plug-in installation is completed, the WEB client will refresh automatically and it will generate the video interface shown in Figure 1-7.

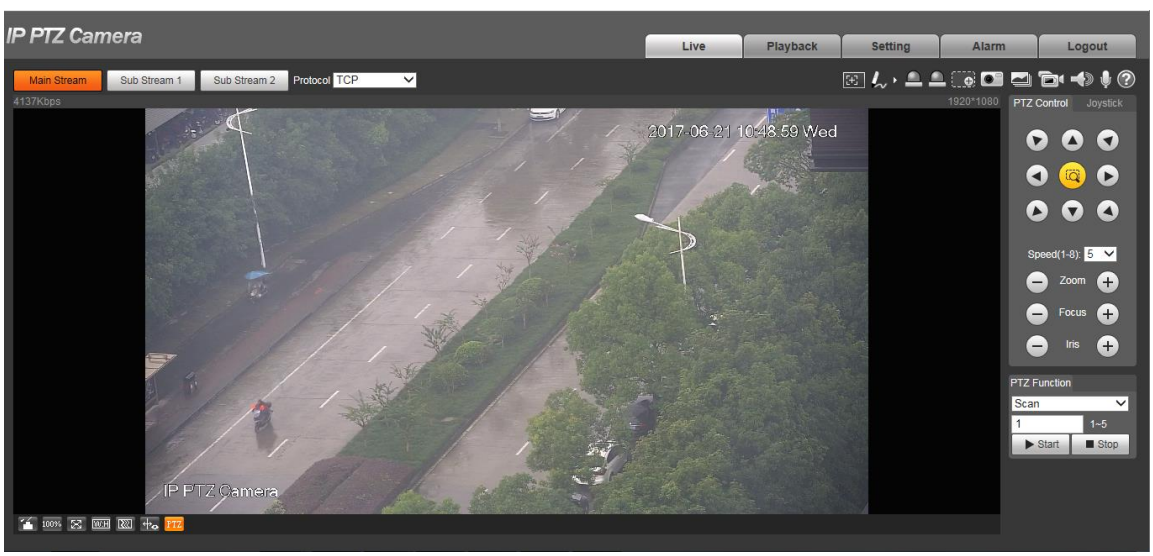


Figure 1-7

Note

The interface above is for references only, please refer to the actual device for more details.

1.1.2 Device Login

Step 1

Open IE browser and input IP address of network speed dome in the address bar, then press "**Enter**". It will display the interface shown in Figure 1-8 after it is successfully connected.



Figure 1-8

Step 2

Please input your username and password, and then click "**Login**" to enter WEB operation interface.

Note

The device will be locked for 5 minutes if it inputs wrong password continuously for 5 times. It can log in device again after lock time is over.

Step 3

It is to install or load plug-in according to system prompt after it logs in successfully. The plug-in installation interface will be closed automatically after plug-in installation is completed, the WEB client will refresh automatically and video will show up in the monitoring image.

1.1.3 Forget Password

Step 1

Click "Forget Password" and the system will display the interface of "Reset Password", which is shown in Figure 1-9.

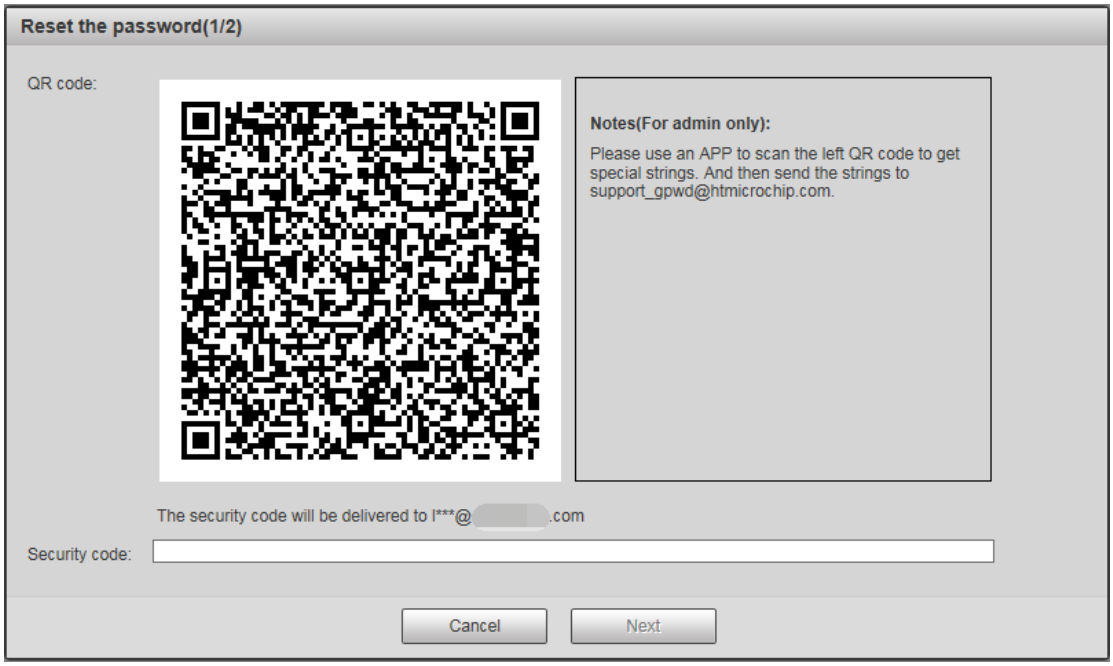


Figure 1-9

Step 2

Please operate according to the instruction described in the interface.

Step 3

Input security code and then click “Next”. The system will display the interface of “Reset Password”, which is shown in Figure 1-10.

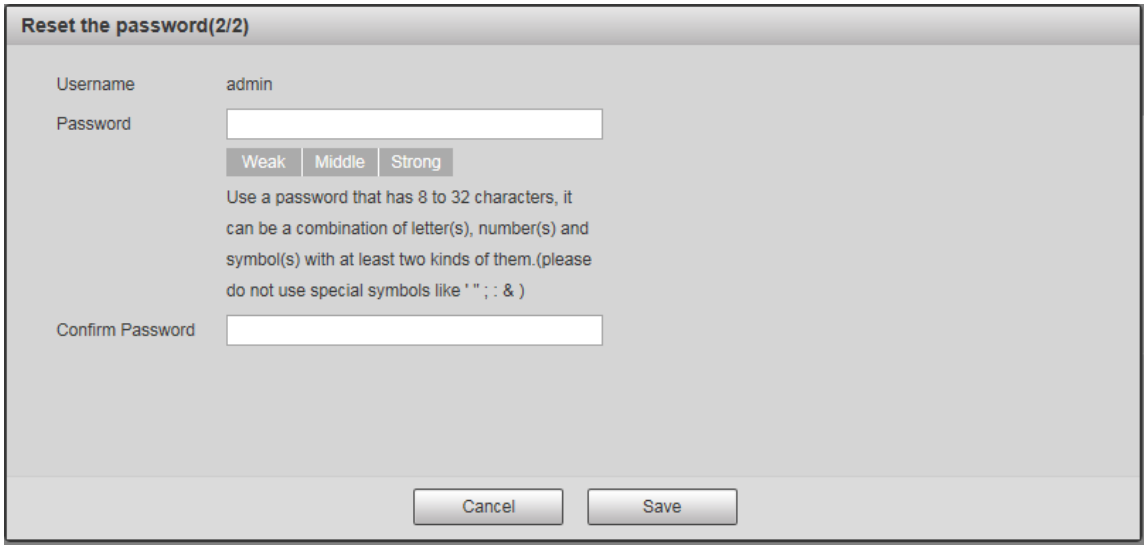


Figure 1-10

Step 4

Set the password of admin user again.

Step 5

Click “Save” to complete setting.

2 Live

Users can implement several operations on the “Live” interface upon the real-time monitoring image, such as live, snapshot, record and etc.; you can also implement simple PTZ operation.

Click “Live” to display “Live” interface which is shown in Figure 2-1.

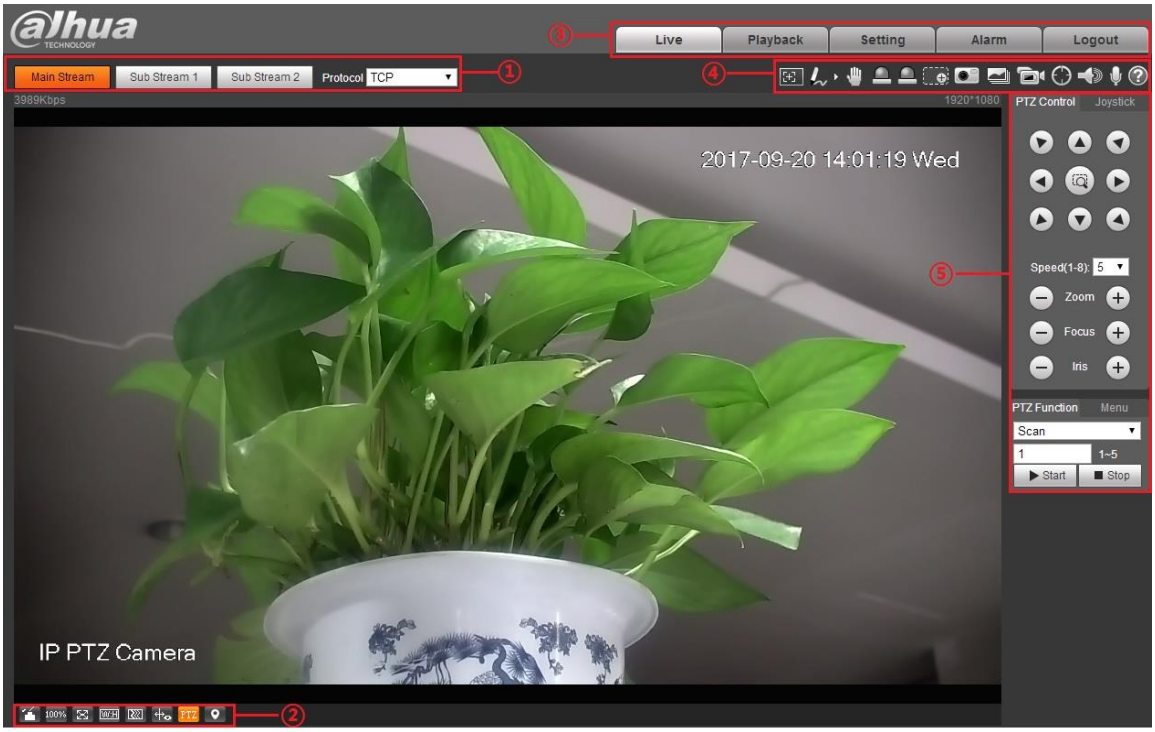


Figure 2-1

SN	Note
①	Encode setting column
②	Video window adjust column
③	System menu column
④	Video window function option column
⑤	PTZ config column

Table 2-1

2.1 Encode Setup

Note

Some models don’t support two sub streams

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

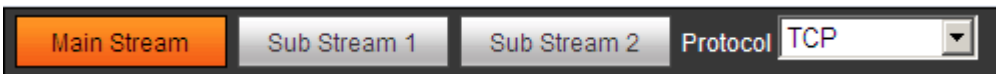


Figure 2-2

Please refer to Table 2-2 for detailed information.

Parameter	Function
Main stream	Streaming media protocol connection, under main stream config, monitor video or not. Generally for storage and monitor.
Sub (Extra) stream 1	Streaming media protocol connection, under sub stream 1 config, monitor video or not. When network bandwidth is insufficient, it substitutes main stream for monitoring.
Sub (Extra) stream 2	Streaming media protocol connection, under sub stream 2 config, monitor video or not. When network bandwidth is insufficient, it substitutes main stream for monitoring.
Protocol	You can select stream media protocol from the dropdown list. There are three options: TCP/UDP/Multicast

Table 2-2

2.2 Video Window Adjustment

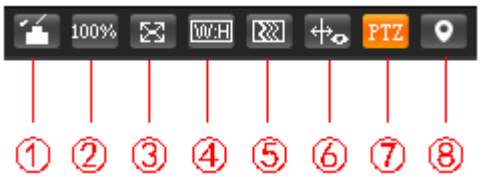


Figure 2-3

Parameter	Note
1. Image Adjustment	Click “Image Adjustment” and it will display image adjustment interface on the right of the live interface, then you can adjust image brightness, contrast and etc.
2. Original Size	Click the button and it will display the actual size of video stream.
3. Full Screen	Click it to go to full-screen mode. Double click the mouse or click the Esc button to exit the full screen.
4. Width and Height Ratio	Click it to adjust image to original ratio or suitable window.
5. Fluency Adjustment	There are three levels of fluency for you to select (real-time, normal, fluent). The default is normal.
6. Rules Info	Click it to enable preview page to display intelligent rules, the default is enabled.
7. PTZ	Click it to enable live page to display PTZ config item.

Parameter	Note
8. Panorama PTZ	Click the button to display panorama window in the live interface, it can realize quick position, call preset, tour and other operations in the window.

Table 2-3

Image Adjustment

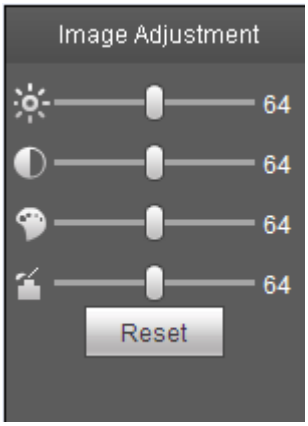


Figure 2-4

Parameter	Note
	It is to adjust monitoring image brightness.
	It is to adjust monitoring image contrast.
	It is to adjust monitoring image hue.
	It is to adjust monitoring image saturation.
	Restore brightness, contrastness, saturation and hue to system default setup.

Table 2-4

Note

The function can only be used to adjust the brightness, contrast, hue and saturation of the monitoring image in WEB client. It needs to go to “Setup > Camera > Conditions” to set the brightness, contrast, hue and saturation of the device.

Panorama PTZ



Figure 2-5

Use left mouse button to draw a box to operate positioning in the window, the live page will display the positioned location and zoom in. Click “Refresh”, and the camera will rotate horizontal 0°～360°, vertical 6°～75°to regain panorama image. Drag the picture ratio bar  to adjust the size of panorama picture.



Figure 2-6

User can use the corresponding preset on the right of the window, please refer to “3.3.2.1 Preset” for more details about preset setting.



Figure 2-7

User can use the corresponding tour on the right of the window, please refer to “3.3.2.2 Tour” for more details about tour setting.

2.3 System Menu

Click each item to enter corresponding interface.



Figure 2-8

2.4 Video Window Function Option

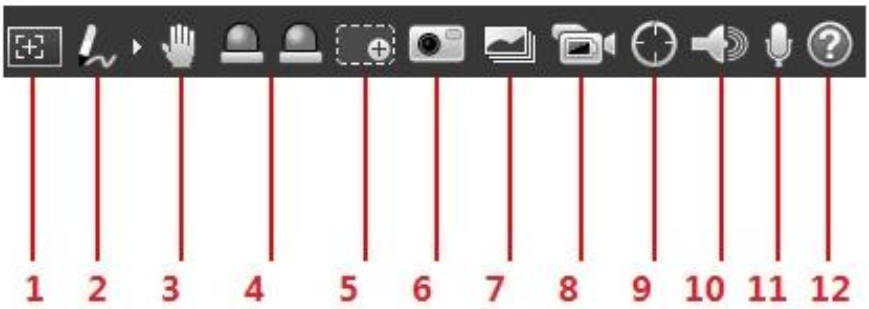


Figure 2-9

Please refer to the following sheet for detailed information.

SN	Parameter	Function
1	Regional focus	Click it and use mouse to select any area in the video image, and it can make the device auto focus in the selected area.
2	Remark	Click it and then select pen color, you can write down the mark information on the preview interface.
3	Gesture Control	Click it and control the PTZ via dragging left mouse button in the preview interface, mouse roller can control zoom rate.
4	Relay out	Click the button to trigger alarm. The light becomes red/gray when there is relay out/cancel.
5	Digital Zoom	● When the video is in the original status, click it you can select any zone to zoom in. In the non-original status, you can drag the zoom-in zone in specified range. Right click mouse to restore previous status. ● Click it; you can use the middle button of the mouse to zoom in/out the video size.

6	Snapshot	Click the button to snapshot, save picture to path in Chapter 3.1.2.5
7	Triple snap	Click it, system can snap at 1f/s. All images are saved to path in Chapter 3.1.2.5.
8	Record	Click it, system can record. All images are saved to path in Chapter 3.1.2.5.
9	Manual track	Click the button and then drag left mouse button to select any area in the video window, the speed dome will make smart tracking to the object in the area. Note: It needs to check “Event >IVS Plan> Rule Config>Smart Track”, otherwise, it will be invalid.
10	Audio output	Turn on or off audio when you are monitoring.
11	Talk	Click it to start or end bidirectional talk.
12	Help	Click it to open help file.

Table 2-5

2.5 PTZ Config

You can control PTZ via PTZ control or virtual joystick; also you can enable the functions of preset, scan and etc. in the PTZ setting area.

PTZ Control

Note

Users have to set PTZ protocol first before using PTZ control, please refer to “Setup > PTZ Settings > Protocol” for more details.

Please refer to Figure 2-10 for the interface of PTZ control, refer to Table 2-6 for more details about parameters.

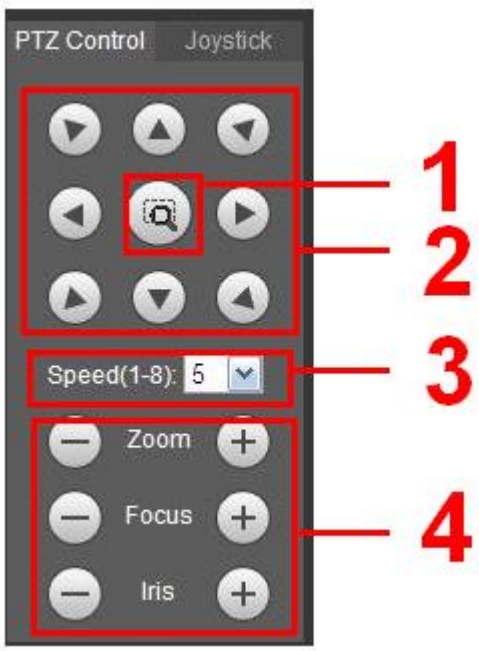


Figure 2-10

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

Table 2-6

Virtual Joystick

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

This function allows you to control the button in then center to simulate the joystick operation. You can use it to control device movement.



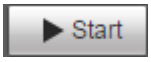
Figure 2-11

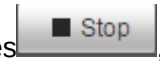
The setting method of speed, zoom, focus and iris is the same as that of the PTZ control.

PTZ Setting

Note

Please refer to “4.3 PTZ Setting” for more details.

The PTZ can support various functions. Click 

to start some certain PTZ function, and at this moment the “Start/Stop” button becomes 

, click the button to stop the PTZ function. The config interface is shown in Figure 2-12; please refer to Table 2-7 for more details about each function.

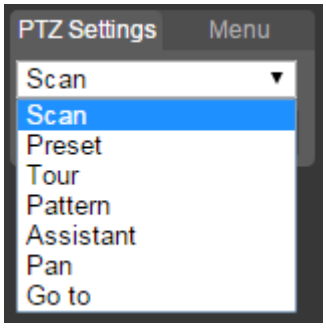


Figure 2-12

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	Select Scan from the dropdown list, click Start button, you can begin scan operation. Default SN is 1.
Preset	Input the preset value and then click View button, the camera turns to the corresponding position of the preset.
Tour	Select Tour from the dropdown list and then click Start button, you can begin tour.
Pattern	You can select Pattern from the dropdown list and then click Start button to begin PTZ movement.
Assistant	Reserve extended function, it can support special requirements. **Note** It is recommended to enable the function with the guidance of professional staff if necessary; otherwise it may cause some unexpected problems.
Pan	Select Pan from the dropdown list and then click “Start” button and it can realize horizontal rotation of the PTZ.
Wiper	Select wiper, click “Open” to enable wiper function; click “Close” to disable wiper function.
Go to	● It is the accurate positioning function. Please input corresponding horizontal angle, vertical angle and zoom speed and then click “Go to” button to go to a specified position. ● One unit of the horizontal angle or vertical angle stands for 0.1 degree.

Table 2-7

Menu

The menu interface is shown in Figure 2-13; please refer to Table 2-8 for more details about parameters.



Figure 2-13

Parameter	Note
Direction button	Up and down buttons are used to select parameters, left and right buttons are used to select parameter value.

Parameter	Note
OK	Click it to confirm.
Open	Open OSD menu.
Close	Click it to close menu.

Table 2-8

Click **Open** to enable menu function, then you can see the OSD menu in the monitoring image, which is shown in Figure 2-14.



Figure 2-14

Here you can set the following items:
Camera: please refer to “4.1.1 Camera Condition”.
PTZ: please refer to “4.3 PTZ setting”.
System: Please refer to “4.6 System”.
Users can modify the location of OSD menu in “4.1.2.3 Video Overlay”.

3 Playback

You can playback the saved video or picture in the “Playback” interface.

Note

It needs to set record, snapshot period, storage method, record control and other parameters in “4.5 Storage Management” before implementing playback operation.

Click “Playback” item, and the system will display “Playback” interface, which is shown in Figure 3-1.

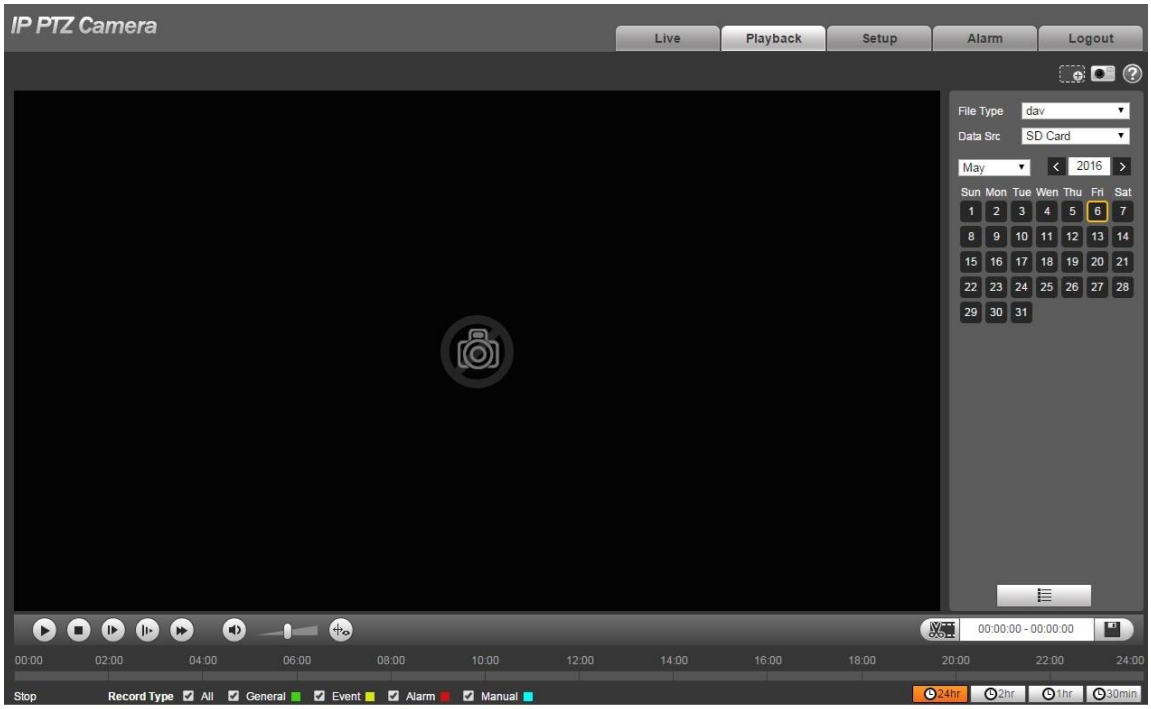


Figure 3-1

3.1 Video Playback

Select file type as “dav” and the system will display the interface which is shown in Figure 3-2. Refer to Table 3-1 for more details about parameters.

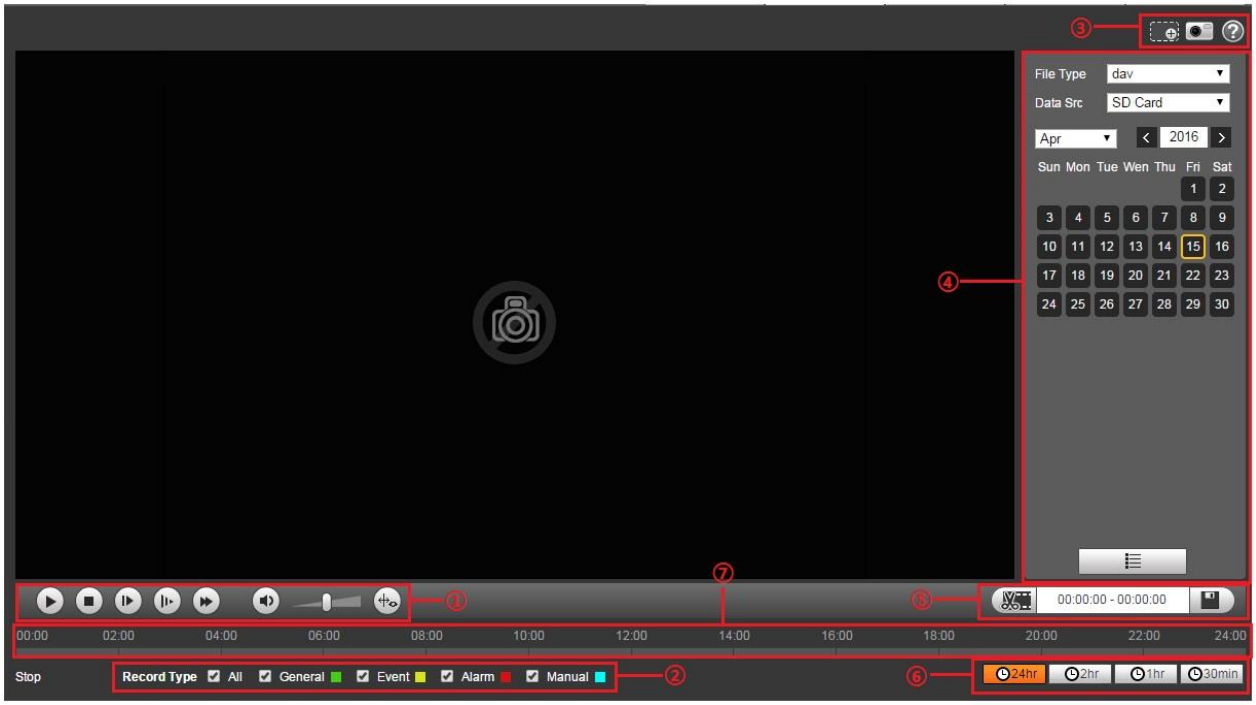


Figure 3-2

SN	Note
1	Play function column
2	Record type column
3	Assistant function column
4	Playback file column
5	Playback clip column
6	Progress bar time format column
7	Progress bar

Table 3-1

3.1.1 Play Function

Play function column is shown in Figure 3-3, refer to Table 3-2 for more details about parameters.



Figure 3-3

Parameter	Function
① Play	When you see this button, it means pausing or not playing record. Click this button and switch to normal play status.
② Stop	Click this button to stop playing video.
③ Next frame	Click this button to go to next frame. **Note** You shall pause playback when you use this function.
④ Slow	Click this button to play slowly.
⑤ Fast	Click this button to play fast.
⑥ Mute	When this button displays, it means audio is silent. Click this button to switch back to normal.
⑦ Volume	Left click mouse to adjust volume.
⑧ Rules info	Click the button to display intelligent rules after enabling playback video.

Table 3-2

3.1.2 Record Type

Check record file type, the only selected file will be displayed in progress bar and file list. See Figure 3-4.



Figure 3-4

3.1.3 Assistant Function

Video playback assistant function is shown in Figure 3-5.

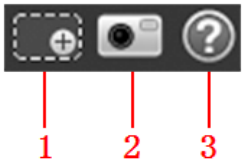


Figure 3-5

Parameter	Function
1. Digital Zoom	• Click it, you can zoom in any area when then playback video is in original status. In non-original status, you can zoom in specified zone, Right click mouse to restore its original size. • Click this button; you can scroll to zoom in/out video.

Parameter	Function
2. Snapshot	Click this button; you can take snapshot over the video under playback status. Snapshot will be saved to path in chapter 4.1.2.5
3. Help	Click it to open help file.

Table 3-3

3.1.4 Playback File

In calendar, the date with blue shading means the current date having video record or snapshot file. See Figure 3-6.

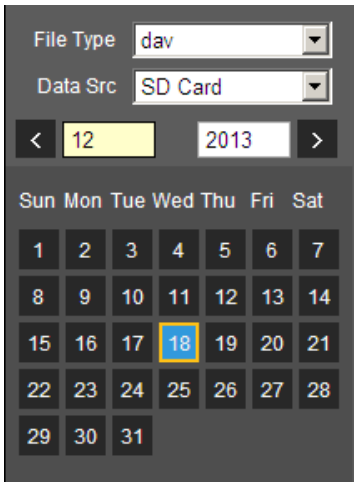


Figure 3-6

Parameter	Function
File Type	● Select “dav” and it means record video playback. ● Select “jpg” and it means picture playback.
Data Source	It is SD card by default.

Table 3-4

The config steps are shown as follows.

Step 1.

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

Step 2.

Click certain time location on the progress bar, playback of the record file starts from this time spot. See Figure 3-7.

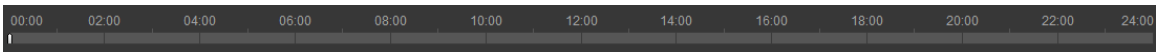


Figure 3-7

Step 3. Click file list , the file of selected date will be displayed in the list.

Step 4. Double click the file in list, playback this file and display file size, start time and end time. See Figure 3-8.

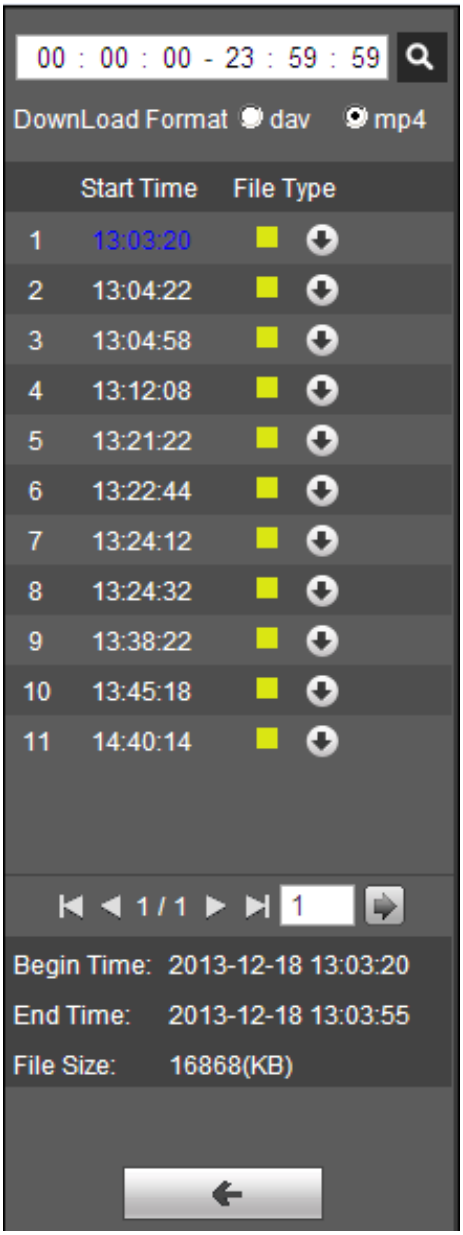


Figure 3-8

Parameter	Function
Search	It means searching all the record files between start time and end time of selected date.

Parameter	Function
Record Download Format	There are two formats: dav, mp4.
Download	● Record type is “dav”, click “Download” button to download file to local. ● Record type is “mp4”, click “Download” button and download file to path in Chapter 3.1.2.5. **Note** System does not support download and playback of MP4 file at the same time.
Back	Click “Back” button to go back to calendar interface, then you can select time again to operate.

Table 3-5

3.1.5 Playback Clip

Note

The record file which is being playbacked will pause automatically when using playback clip function, which means that playback clip and playback can’t be implemented at the same time.

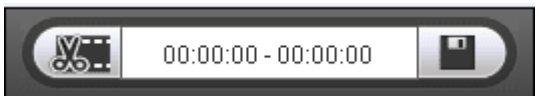


Figure 3-9

Step 1

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

Step 2

Move mouse above the clip icon, and “Select Start Time” will show up in the lower right corner.

Step 3

Click clip icon and complete the setting of start time for playback clip.

Step 4

Click end time of playback clip on time axis, and the time must be within progress bar range.

Step 5

Move mouse above clip icon, and “Select End Time” will show up in the lower right corner.

Step 6

Click clip icon , and complete the setting of end time of playback clip.

Step 7

Click “Save” button to edit file in the path of “Playback Clip” set in the “4.1.2.5 storage path”.

3.1.6 Progress Bar Time Format



Figure 3-10

Parameter	Function
 24 hours	Click it and the progress bar will display in 24-hour mode.
 2 hours	Click it and the progress bar will display 2 hours of the video.
 1 hour	Click it and the progress bar will display 1 hour of the video.
 30 min	Click it and the progress bar will display 30 minutes of the video.

3.2 Picture Playback

Select file type as “jpg” and the system will display the interface shown in Figure 3-11.

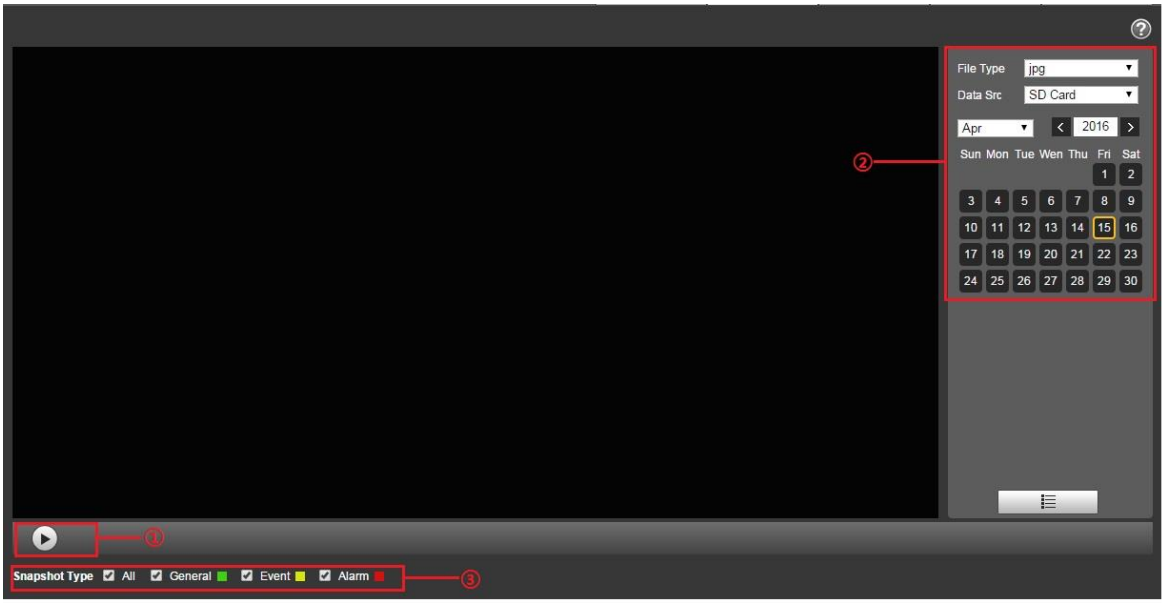


Figure 3-11

SN	Note
1	Play function column
2	Playback file column
3	Snapshot type column

Table 3-6

3.2.1 Play Function

The play button is shown as below. See Figure 3-12.



Figure 3-12

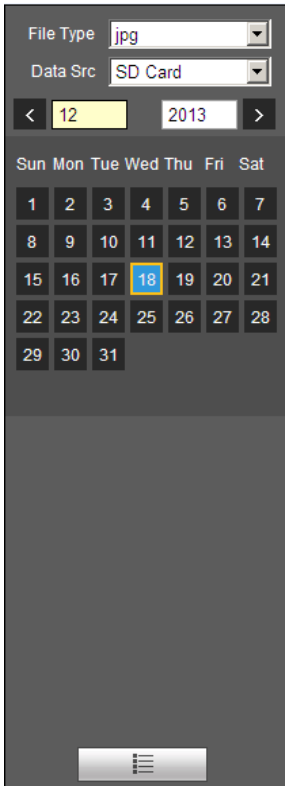
Default icon is , and it means pauseing or not playing picture.

- Click play button to switch to normal play status. Icon becomes .
- Click it to pause and switch it to pause status.

3.2.2 Playback File

Step 1: Click file list , ans the selected snapshot file will be displayed in the list.

Step 2: Double click file in list to playback this snapshot.



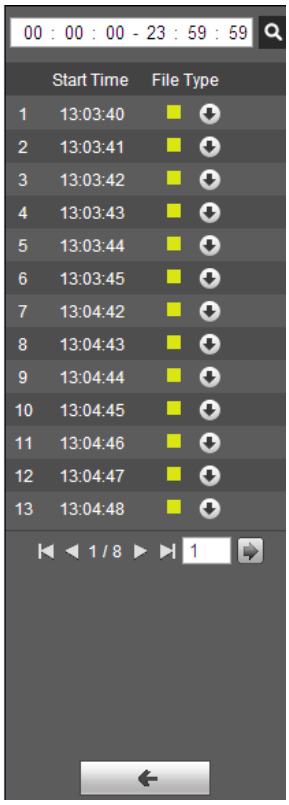


Figure 3-13 Figure 3-14

Please refer to the following sheet for detailed information.

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

Table 3-7

3.2.3 Snapshot Type

It will only display the selected type of file in the list after checking the snapshot type. It can also select the snapshot type to be displayed via the drop-down box above the file list.

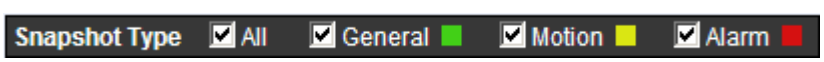


Figure 3-15

4 Setup

You need to set the camera, video and audio conditions of the network intelligent speed dome in order to guarantee normal monitoring of the device.

4.1 Camera

4.1.1 Conditions

4.1.1.1 Picture

Step 1

Select “Setup > Camera > Conditions > Image”. The system displays the interface of “Image” which is shown in Figure 4-1.

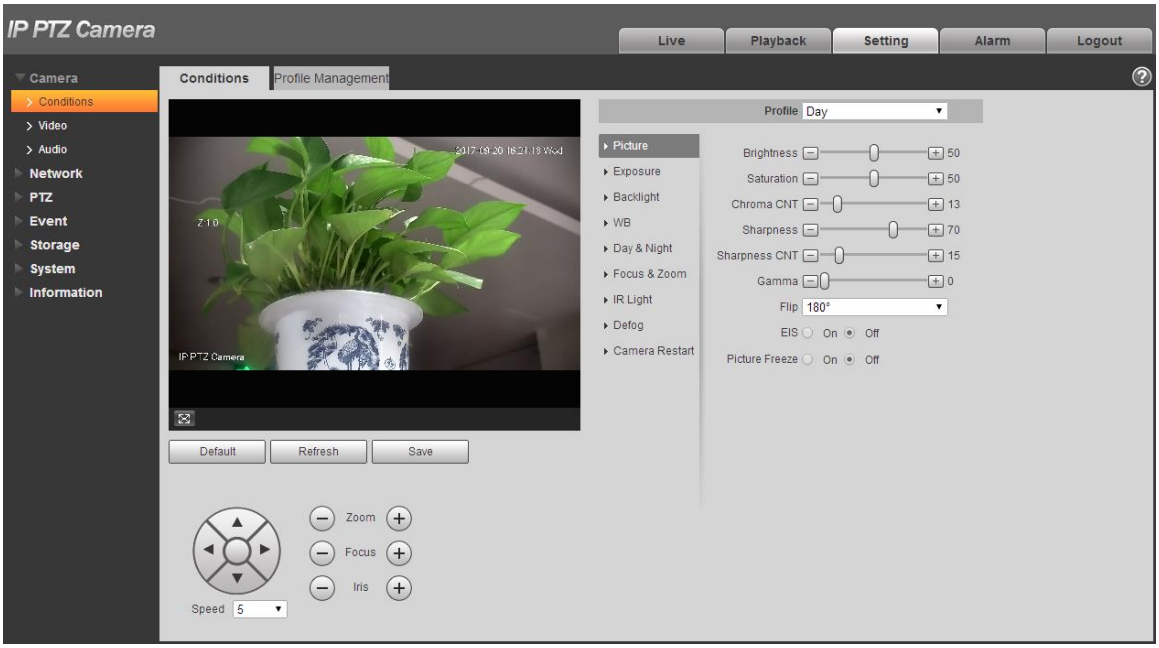


Figure 4-1

Step 2

Configure parameter info according to the actual needs; see Table 4-1 for more details.

Parameter	Note
Style	It is to set the image display style; you can select soft, standard or vivid. It is standard by default. Note: the function is only supported by some models.
Brightness	It is to set the overall brightness of image, the bigger the value is, the brighter the image becomes. The value ranges from 0 to 100.
Contrast	It is to set the image contrast, the bigger the value is, the bigger the image bright contrast becomes. The value range is from 0 to 100.

Parameter	Note
Saturation	It is to set the image color purity, the higher the purity is, the brighter it becomes, the lower the purity is, the darker it becomes. The range is from 0 to 100.
Chroma CNT	It is to set the suppression level upon the image color, the bigger the value is, the more obvious the suppression becomes. The value range is from 0 to 100.
Sharpness	It is to adjust the sharpness level of the image edge. The bigger the value is, more obvious the edge becomes; it is opposite if the value becomes smaller. It is easy for the image to generate noise if the value is set too high. The value range is from 0 to 100.
Sharpness CNT	It is to adjust the sharpness suppression level of the camera, the bigger the value is, the stronger the sharpness suppression becomes. The value range is from 0 to 100.
Gamma	The threshold is mainly used to change image brightness via nonlinear adjustment mode and improve the dynamic display range of the image. The bigger the value is, the brighter the image becomes. The value range is from 0 to 100.
Flip	The function can be used to change the direction of video surveillance image. It can select normal and flip. It is normal by default.
EIS	It can realize EIS function via image difference value comparison algorithm, which can effectively solve the problem of image jittering during use and make HD image even clearer. It is disabled by default.
Picture freeze	After the image is frozen, it directly displays the preset when calling preset.

Table 4-1

Step 3

Click “Save” to make config valid.

4.1.1.2 **Exposure**

Step 1

Select “Setup > Camera > Conditions > Exposure”.

The system displays “Exposure” interface, which is shown from Figure 4-2 to Figure 4-6.

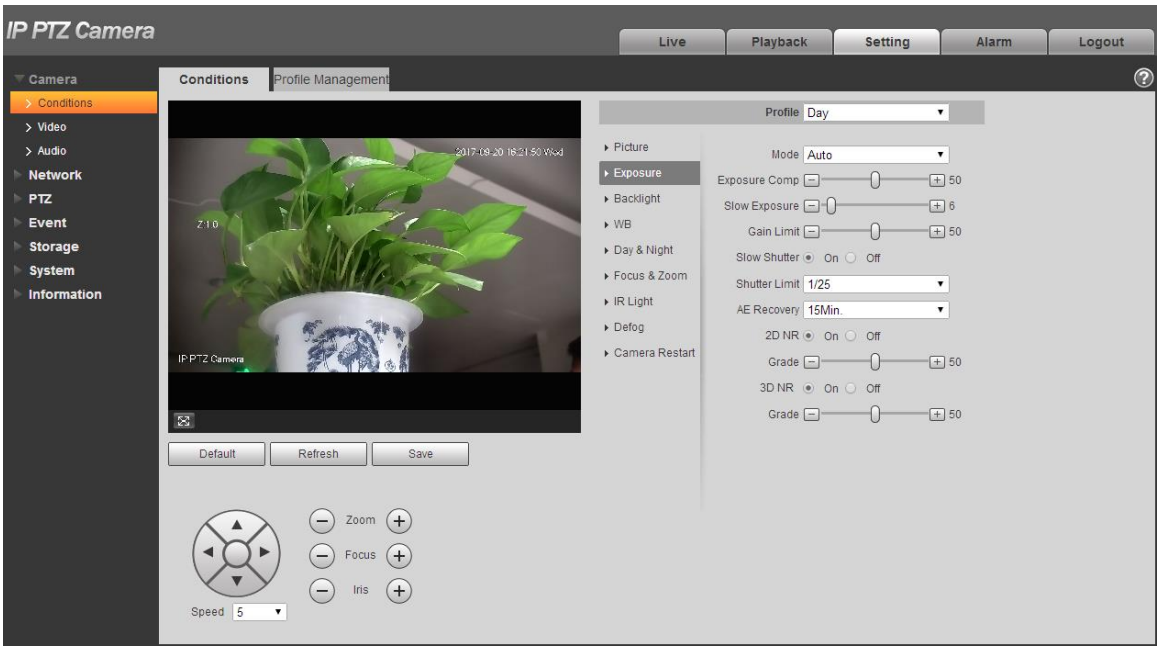


Figure 4-2

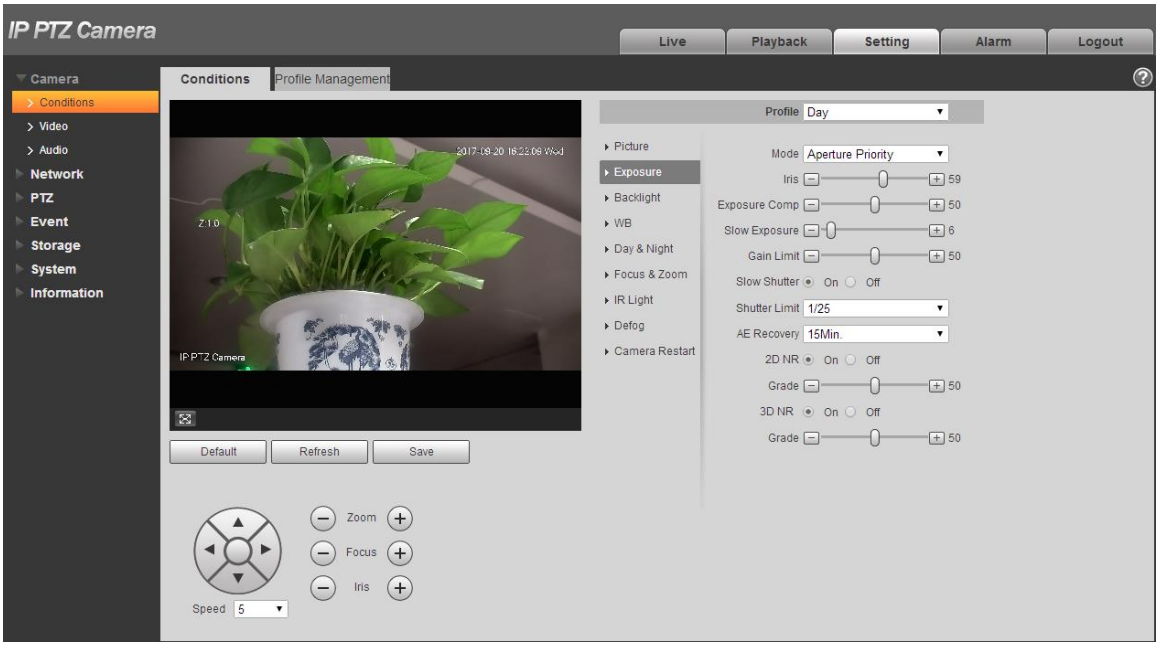


Figure 4-3

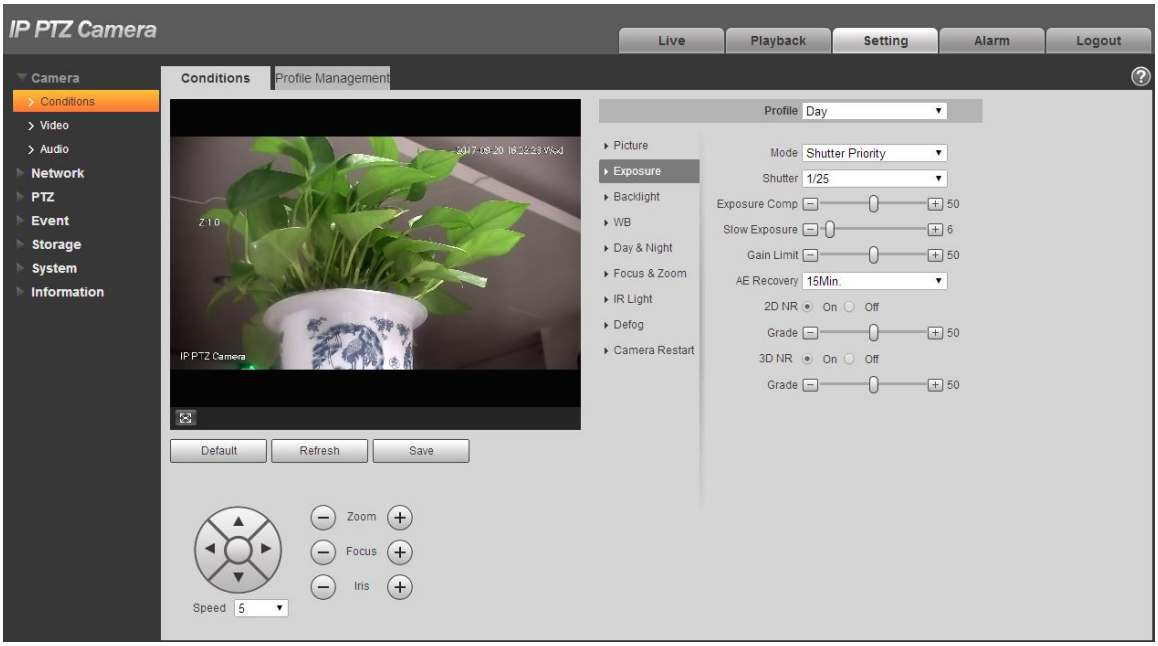


Figure 4-4

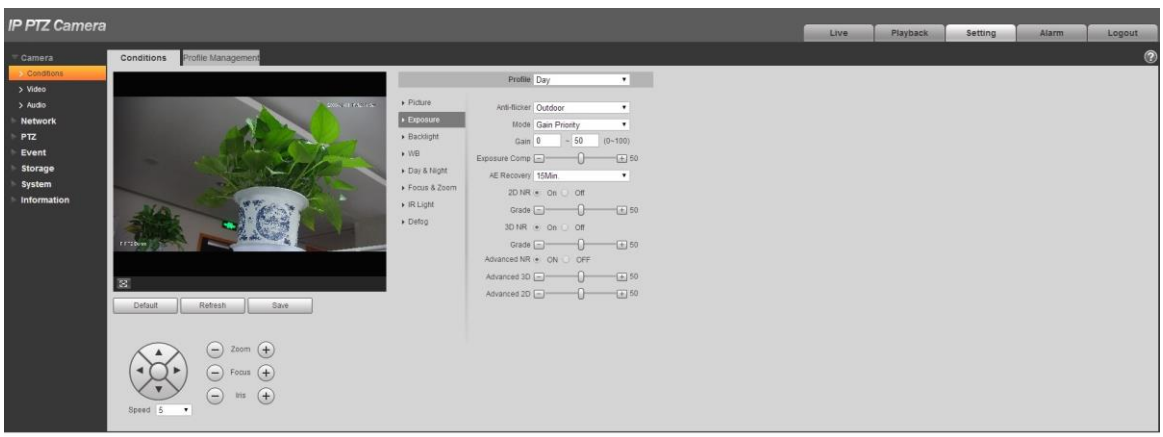


Figure 4-5

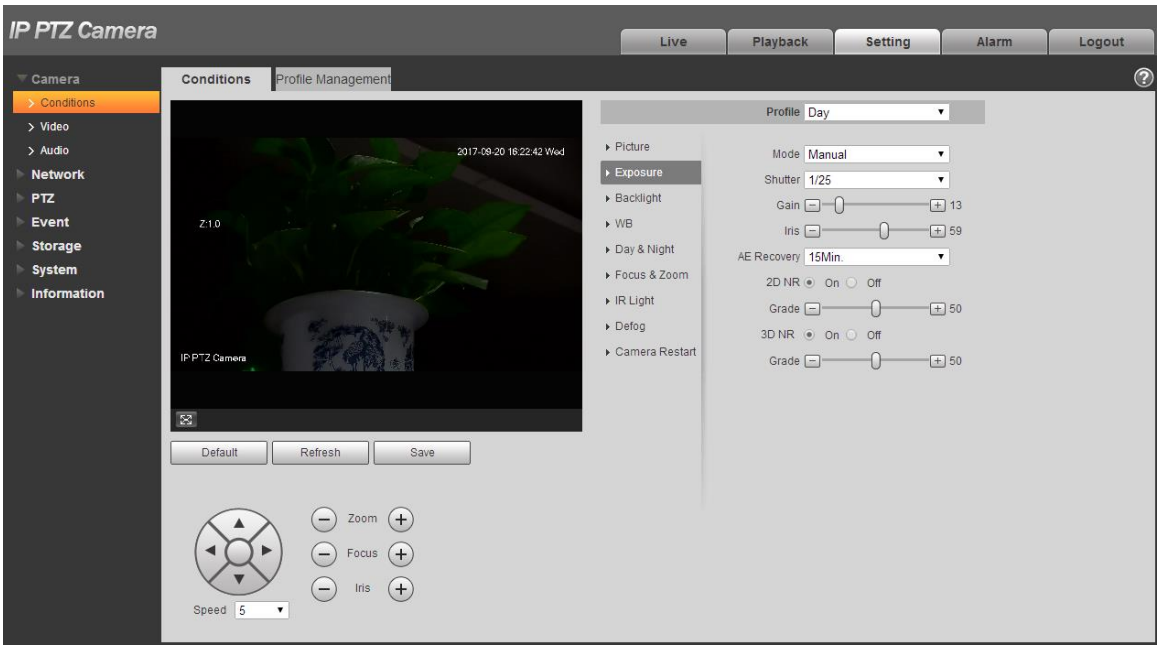


Figure 4-6

Step 2

Configure parameter info according to actual needs; see Table 4-2 for more details.

Parameter	Note
Anti-flicker	It can select 50Hz, 60Hz or outdoor. ● 50Hz: When AC is 50Hz, it can adjust exposure automatically according to scene brightness, make sure there is no cross stripes in the image. ● 60Hz: When AC is 60Hz, it can adjust exposure automatically according to scene brightness, make sure there is no cross stripes in the image.
Mode	It is to set camera exposure mode. It includes: auto/manual/aperture priority/shutter priority/gain priority. The default is auto mode. ● For the auto exposure mode, the image overall brightness will auto adjust according to different scene brightness in the normal exposure range. ● For manual exposure mode, it can manually adjust gain value and shutter value; it supports long exposure. ● For aperture priority mode, fixed aperture is the set value, it can auto realize best brightness according to priority drive exposure time to drive gain mode. ● For shutter priority mode, the image overall brightness can auto adjust according to the adjustment shutter range priority according to different scene brightness in normal exposure range. If the image brightness is still improper and gain has reached upper and lower limit of the range, then it can auto adjust gain value again to make image normal. ● For gain priority mode, it can manually adjust gain value and exposure compensation value.

Parameter	Note
Gain Range	It is to set the gain value of exposure; the range is from 0 to 100.
Shutter	It is to adjust shutter time. The bigger the shutter value is, the darker the image becomes; otherwise it becomes brighter.
Shutter Range	It is to set the camera exposure time, the range is from 0 to 1000, the unit is ms.
Iris	It is to set the camera light quantity. The bigger the iris is, the brighter the image becomes, and otherwise it becomes darker.
Exposure Comp	It is to set the value of exposure compensation; value range is from 0 to 100.
Slow Exposure	It is to set the exposure adjustment speed; the value range is from 0 to 100.
Gain limit	It is to set the gain upper limit of exposure, the value range is from 0 to 100.
Slow Shutter	It can capture image via extending auto exposure time in the low illuminance environment, which can effectively reduce image noise, but it may generate smear for moving objects.
Shutter limit	It is to restrict the min shutter value of the camera.
Auto exposure recovery	After manually adjusting "Iris + or Iris –", it will recover to the exposure mode before adjustment regularly.
2D NR	The threshold is used to suppress noise, the higher the level is, the smaller the noise becomes, and the image appears more blurry then before.
3D NR	The value is used to suppress noise, the higher the level is, the smaller the noise becomes and the image seems more blurry than before.
Grade	It is to set the NR value range, which is from 0 to 100. The bigger the value is, the higher the NR level becomes.
Advanced NR	It can realize noise suppression effect via 3D and 2D video filtering method.
Advanced 3D	It is to set 3D grade, the value range is from 0 to 100.
Advanced 2D	It is to set 2D grade, the value range is from 0 to 100.

Table 4-2

Step 3

Click "OK" to complete config.

4.1.1.3 **Backlight**

Note

It fails to set backlight function when "Defog" is enabled, there will be prompt on the WEB interface.

The function is used to adjust the backlight compensation mode of the monitoring image. The config steps are shown as follows:

Step 1

Select "Setup > Camera > Condition > Backlight" and the system will display the interface of "Backlight", which is shown in Figure 4-7.

Step 2

Set the mode according to the interface.

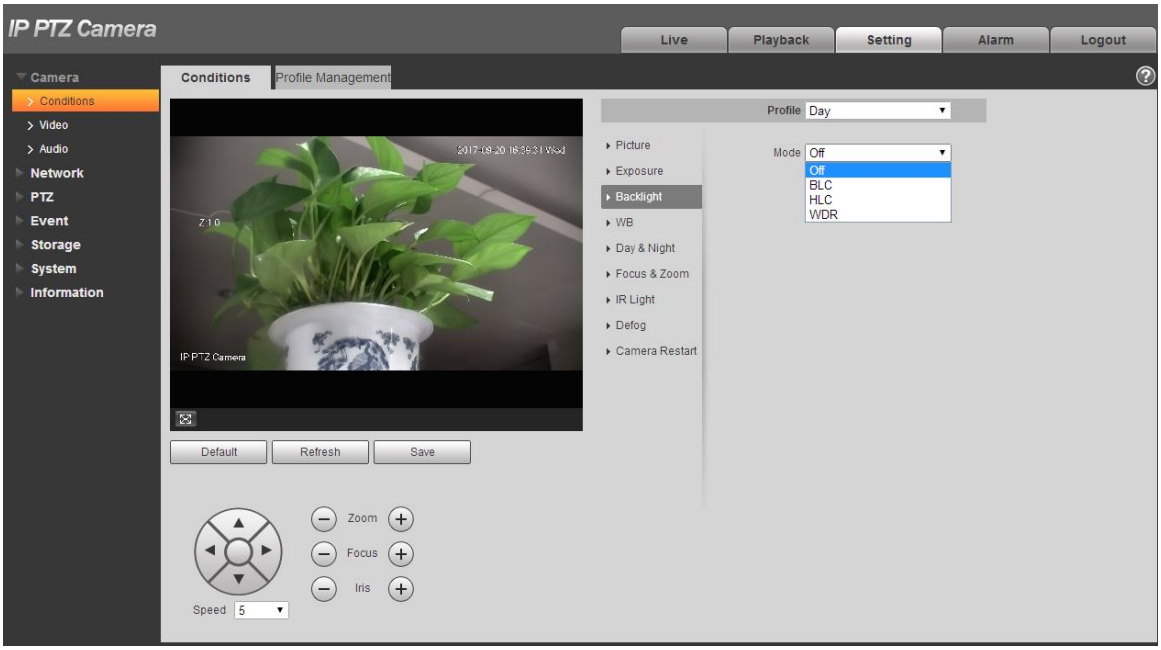


Figure 4-7

Step 3

Select backlight mode which includes BLC, WDR and HLC.

- Backlight compensation: backlight compensation can make the dark part of the main shooting object clear in the backlighting environment.
- WDR: Enable WDR to suppress the over bright area and compensate over dark area, which can make the whole image a quite clear status.
- HLC: HLC is used to weaken the highlight area, which can be applied in the areas such as toll gate, entrance and exit of parking lot, etc. As for extreme light, it can take snapshot upon human face in dark environment and realize quite good effect of license plate details.

Step 4

Click “Save” to complete config.

Note

Other backlight mode config will not be valid when the “Mode” is selected as “Off”.

4.1.1.4 **White Balance**

White balance is used to restore white objects, after setting white balance mode; it can make the white object display white status in different environments.

Step 1

Select “Setup > Camera > Conditions > WB”.

The system displays the interface of “WB”, which is shown in Figure 4-8.

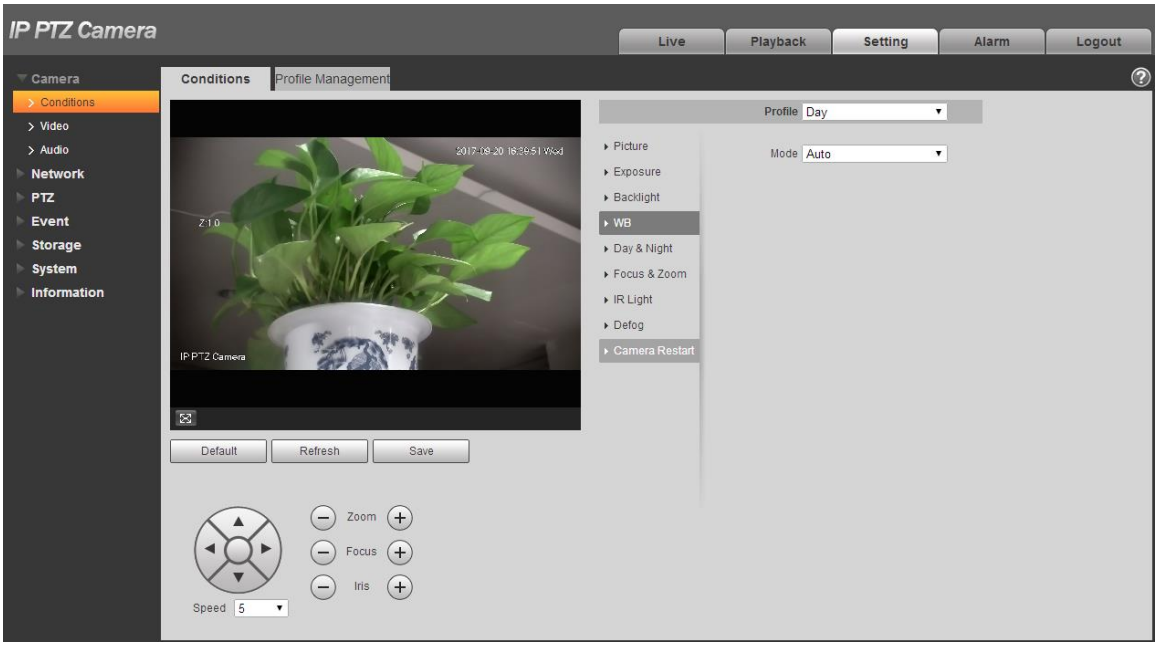


Figure 4-8

Step 2

Select “WB” mode.

As for WB mode, it can select auto, indoor, outdoor, ATW, manual, sodium lamp, natural and street lamp. It is “Auto” by default.

Step 3

Click “Save” to complete config.

4.1.1.5 **Day & Night**

Note

It fails to set defog function after enabling “Day/Night” function, there will be prompt on the WEB interface.

The function can be used to set the conversion between color mode and B/W mode, which can effectively guarantee that it can still monitor clear image even in dark environment for the intelligent speed dome. The config steps are shown as follows.

Step 1

Select “Setup > Camera > Conditions > Day & Night”.

The system displays the interface of “Day & Night” mode, which is shown in Figure 4-9.

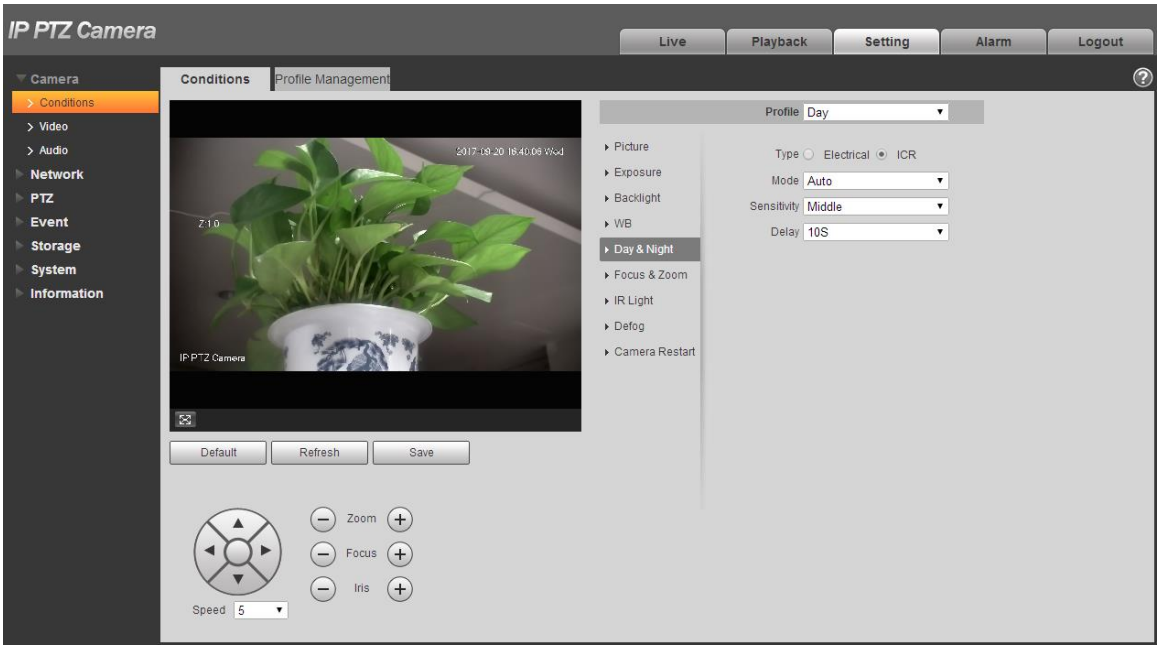


Figure 4-9

Step 2

Configure parameter info according to the actual needs; refer to Table 4-3 for more details.

Parameter	Note
Type	Day/night switch mode can select electrical and ICR, it is ICR by default. • ICR: Mechanical day/night switch uses filter for day & night switch. • Electrical: It uses image processing mode for day & night switch.
Mode	It is to set image color and b/w mode, which is not influenced by the selection of config profile. It is auto mode by default. • Color：The camera will only output color image. • Auto：It can select to output color or black & white image according to the environment adaptation. • Black & White：The camera will only output black & white image.
Sensitivity	It is used to adjust the sensitivity of switch between color and black & white. It can select high, middle and low, it is middle by default. **Note** It can set sensitivity only when day/night mode is auto.
Delay	It is used to adjust the delay value of switch between color and black & white. The value range is 2s～10s. **Note** It can set delay only when the day/night mode is auto.

Table 4-3

Step 3

Click “Save” to complete config.

4.1.1.6 **Zoom & Focus**

Digital zoom means zooming in part of the image, the bigger it zooms in, the more blurry it becomes.

Step 1

Select “Setup > Camera > Conditions > Focus & Zoom”.

The system displays the interface of “Focus & Zoom”, which is shown in Figure 4-10.

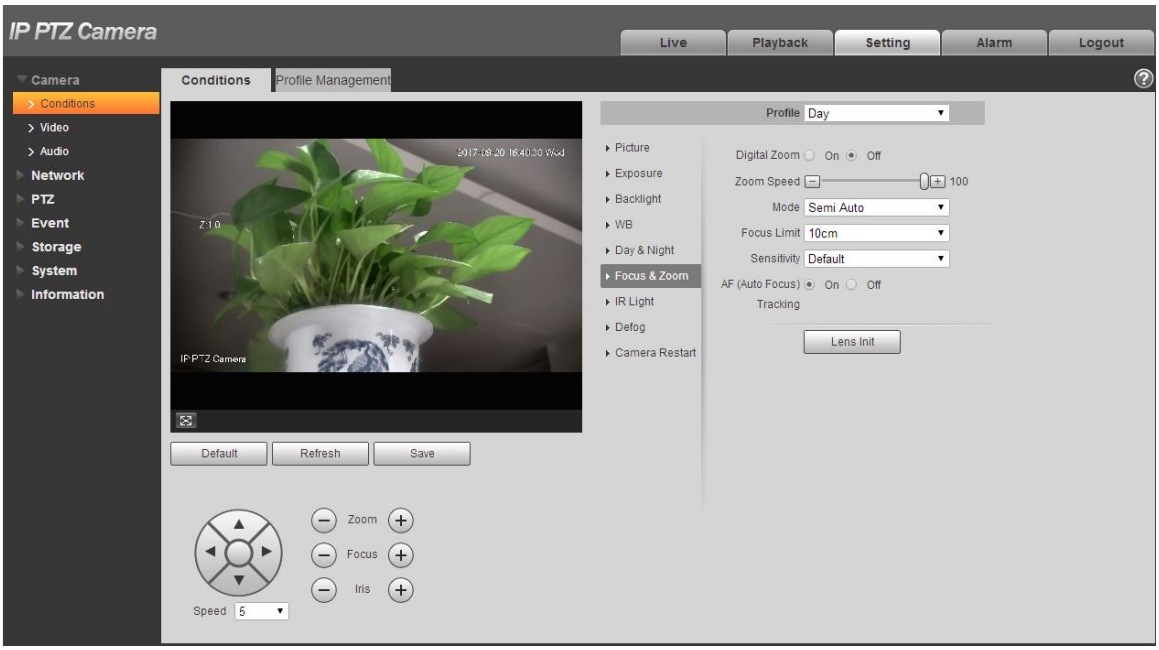


Figure 4-10

Step 2

Configure parameter info according to the actual needs; please refer to Table 4-4.

Parameter	Note
Digital zoom	It is used to set if it is to enable digital zoom function, it is off by default.
Zoom speed	It is to set camera zoom speed, the bigger the value is, the faster the zoom speed becomes.
Mode	It is to control the trigger mode of focus, you can select semi-auto, manual and auto. ● Semi auto: it will actively trigger focus when detecting zoom, ICR switch and etc. ● Auto: It will actively trigger focus when detecting scene change and zoom, ICR switch and etc. ● Manual: The users can adjust focus location by themselves; the device won’t trigger focus actively.

Parameter	Note
Focus limit	It is to set the nearest distance of focus, and focus on the object beyond the distance, the auto option will make it select proper nearest distance automatically according to the different zoom value.
Sensitivity	It is to set the steady ability or anti-interference capability of focus, the lower the value is, the steadier it becomes, the higher the value is, the stronger the anti-interference capability becomes.
AF tracking	The image becomes relatively clear during zoom if the function is enabled. If the function is disabled, then the zoom speed becomes relatively fast during zoom.
Lens initialization	Click the button and it will implement lens initialization automatically, at this moment, it will realize correction of zoom and focus for the camera.

Table 4-4

Step 3

Click “Save” to complete config.

4.1.1.7 **IR Light**

Currently, common compensation lights include IR light, white light and laser light, different models support different types of compensation lights with different config interfaces. Please refer to actual config interface for more details. It is to introduce the config modes of several compensation lights in this chapter.

IR light/White light

Different types of compensation lights use the following conditions:

- When Day/Night mode is switched to “B/W”, the monitoring image becomes black and white, and at this moment the IR light is enabled.
- When Day/Night mode is switched to “Color”, the monitoring image becomes color, and at this moment the white light is enabled.
- When Day/Night mode is switched to “Auto”, the color of monitoring image is switched according to the environmental brightness, the compensation light changes according to the monitoring image; The IR light is enabled in B/W mode, white light is enabled in color mode.

Note

- Some models are equipped with photoresistance. IR/white light will be enabled automatically when the environmental brightness is too low.
- It is to take IR light as an example to introduce the parameters and functions of config interface.

The config steps of IR light/white light are shown as follows:

Step 1

Select “Setup > Camera > Conditions > IR Light”.

The system displays the interface of “IR Light”, which is shown in Figure 4-11.

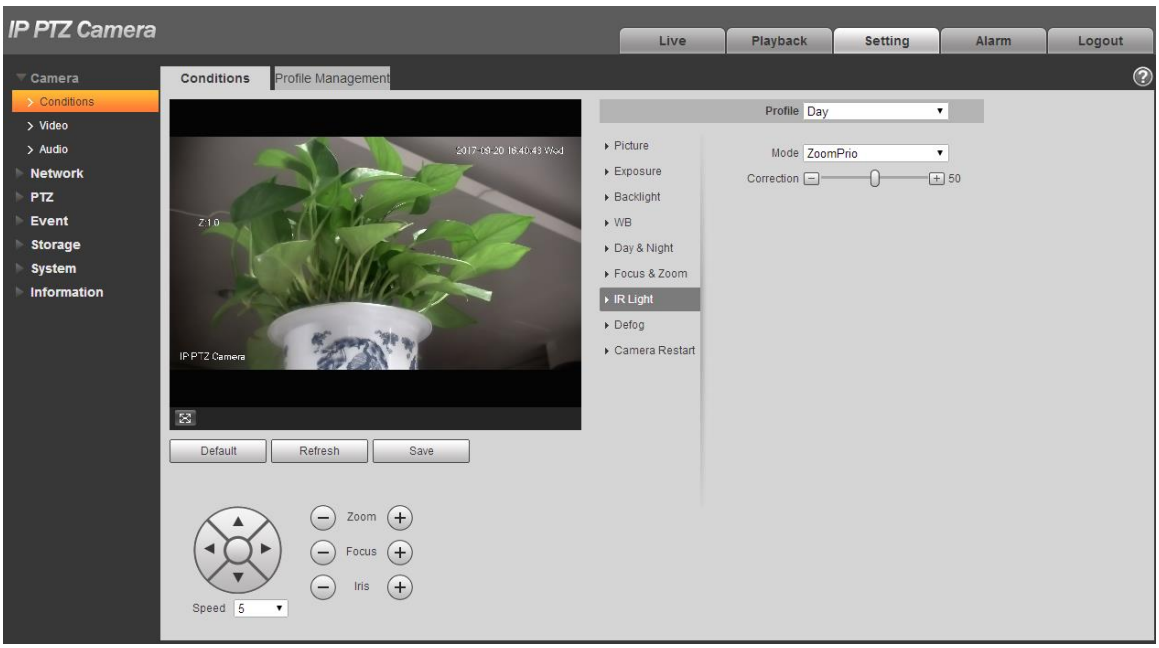


Figure 4-11

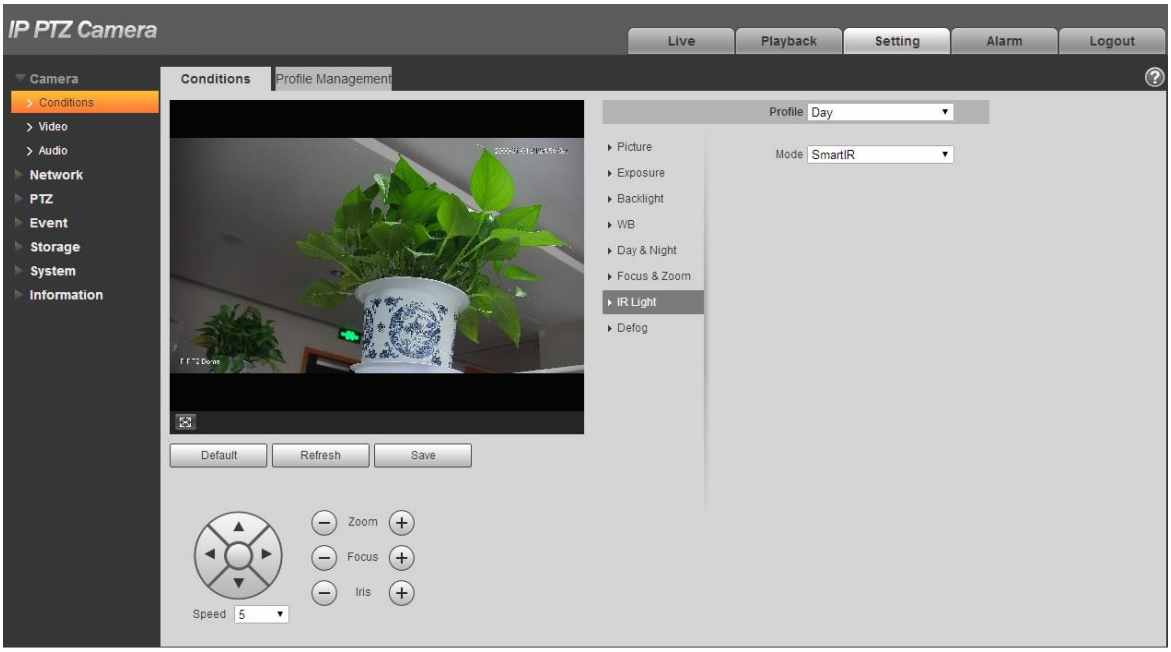


Figure 4-12

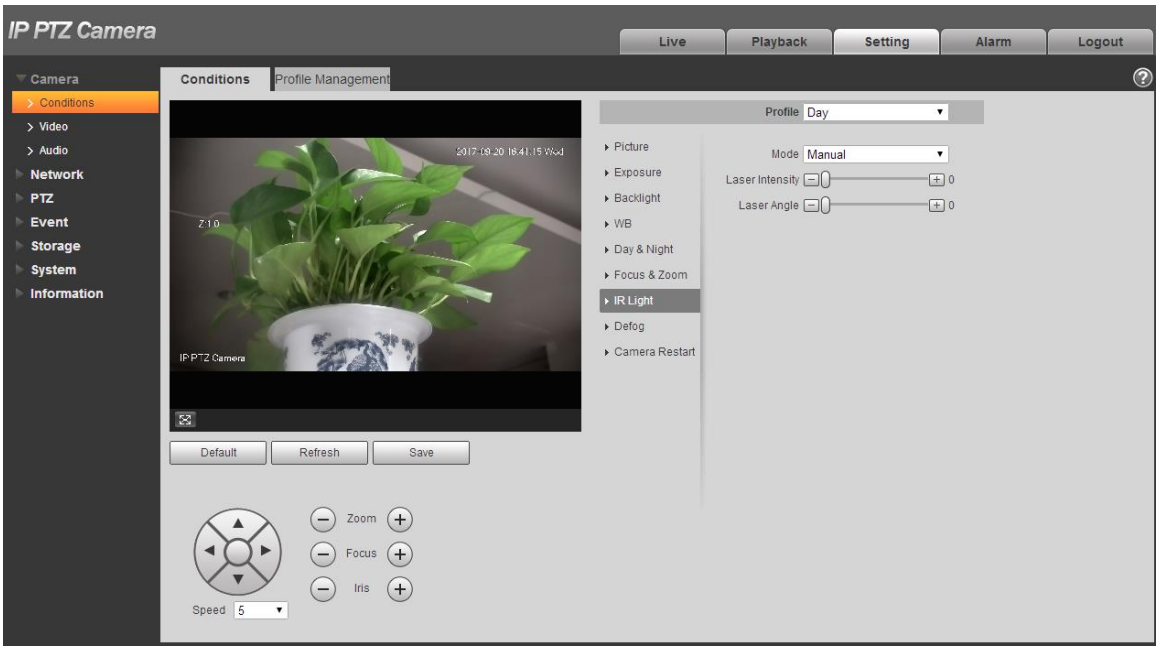


Figure 4-13

Step 2

Configure parameter info according to the actual needs, please refer to Table 4-5 for more details.

Parameter	Note
Mode	It is used to set the mode of IR light, you can select zoom priority, SmartIR, manual and off ● Zoom priority: It can auto adjust the brightness of IR light according to the actual zoom rate. ● SmartIR: The device can control IR light brightness according to the actual zoom rate and overexposure. ● Manual: It is to set the brightness value of IR light manually. ● Off: It is to disable compensation light. **Note** Only IR light supports SmartIR mode.
Light compensation	It is used to compensate the brightness of IR light; the value range is from 0 to 100.
Near light	It is used to set the brightness of near light; the value range is from 0 to 100.
Far light	It is used to set the brightness value of far light; the range is from 0 to 100.

Table 4-5

Step 3

Click “Save” to complete setting.

Laser Light

Laser light makes compensation for the ambient environment when it is used for long-distance monitoring.

The config steps of laser light are shown as follows:

Step 1

Select “Setup > Camera > Conditions > IR Light” and the system will display the interface of “IR Light”, which is shown in Figure 4-14.

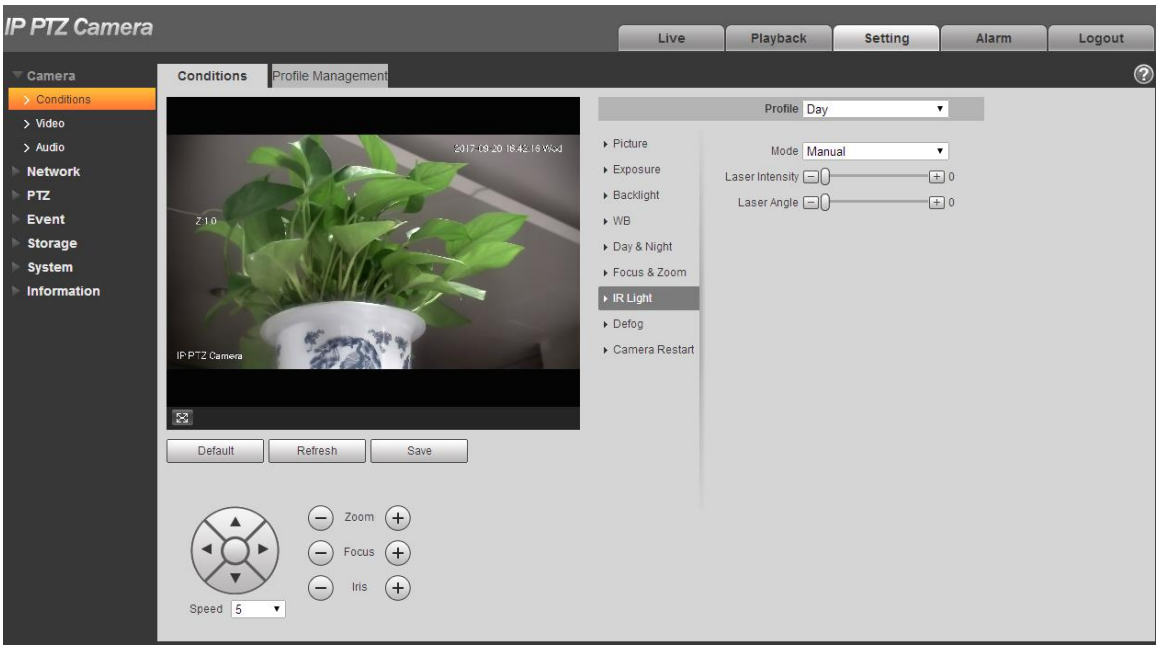


Figure 4-14

Step 2

Configure parameter info according to actual needs; please refer to Table 4-6 for more details.

Parameter	Note
Mode	It is used to set the mode of laser light, it can select Zoomprio or manual, it is “Zoomprio” by default. ● Zoomprio: The camera can auto adjust laser light brightness according to the zoom rate of light. ● Manual: It is manually to set laser light brightness and angle value scattered by light beam.
Laser Intensity	It is to set the intensity of laser light, the value range is from 0 to 100.
Laser Angle	It is to set the angle scattered by light beam, the value range is from 0 to 100.

Table 4-6

Step 3

Click “Save” to complete config.

4.1.1.8 **Defog**

Note

It fails to set defog function after enabling “Backlight” function, there will be prompt on the WEB interface.

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

Step 1

Select “Setup > Camera > Conditions > Defog”.

The system displays the interface of “Defog”, which is shown in Figure 4-15 or Figure 4-16.

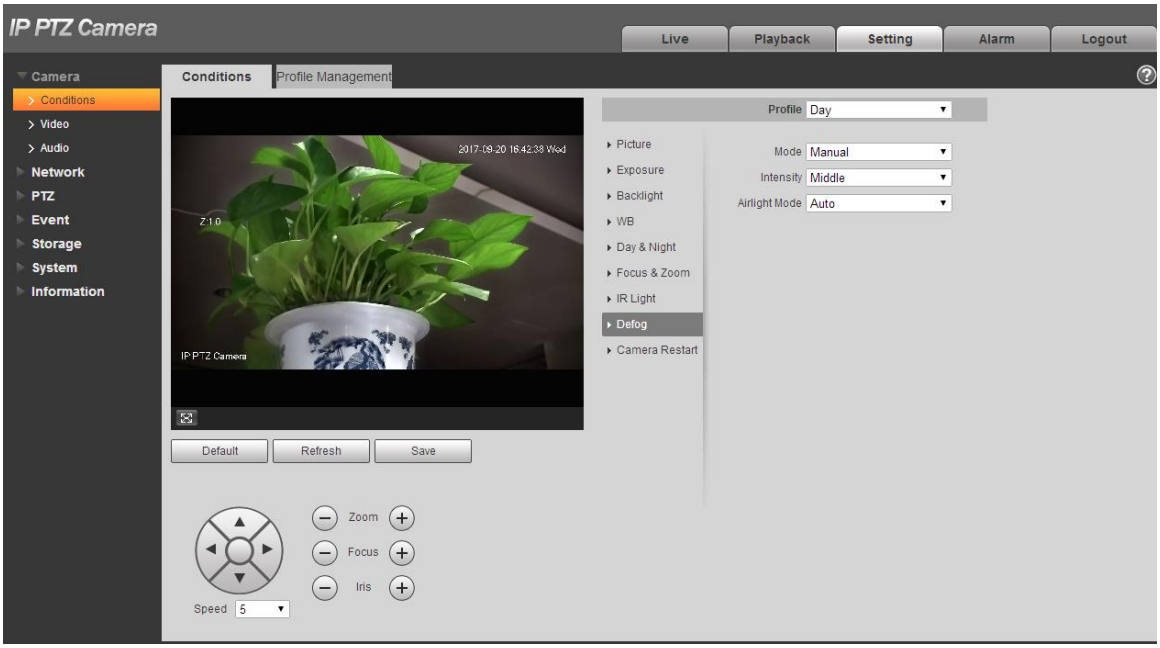


Figure 4-15

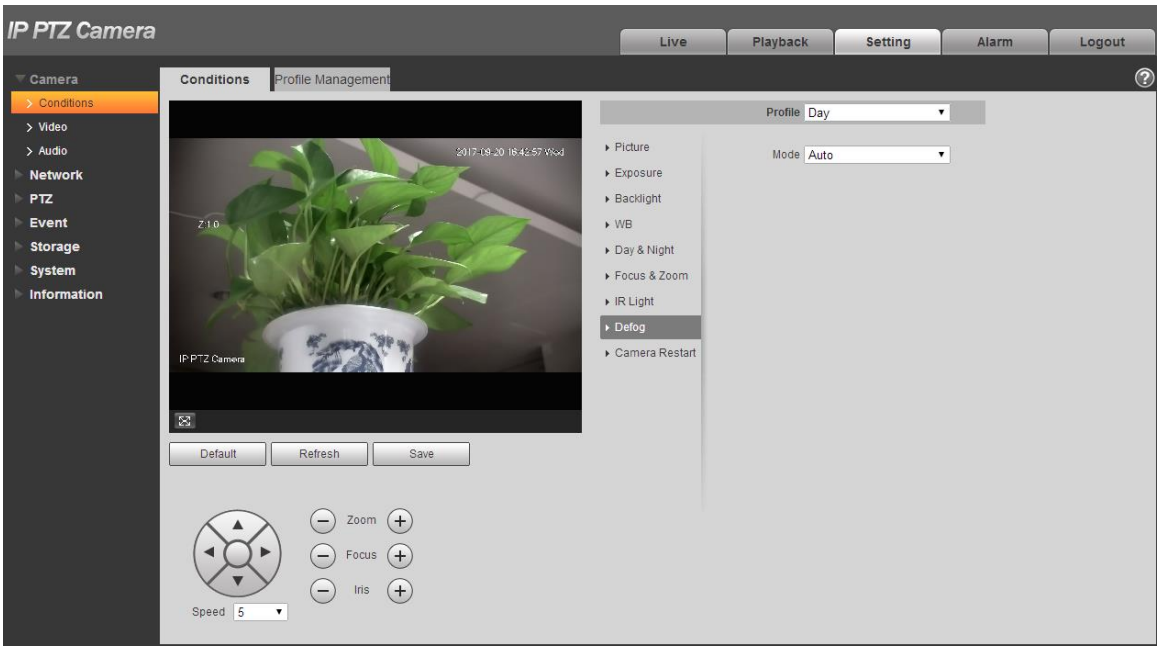


Figure 4-16

Step 2

It is to configure parameter info according to actual needs, please refer to Table 4-7 for more details.

Parameter	Note
Mode	It is used to set the defog mode, it can select auto, manual and off. It is "Off" by default. **Note** ● For the devices which support optical defog. Optical defog and electronic defog realize self-adaptive switch according to algorithm. ● For the devices which support optical defog. Electronic defog is enabled by default in off mode.
Intensity	It is used to set the defog intensity; you can select low, middle or high. It is "high" by default.

Table 4-7

Step 3

Click "Save" to complete config.

4.1.1.9 **Profile Management**

It can select three modes of profile management, such as normal, full time and schedule.

- When it selects "Normal", the video will be monitored according to the normal config of the camera.

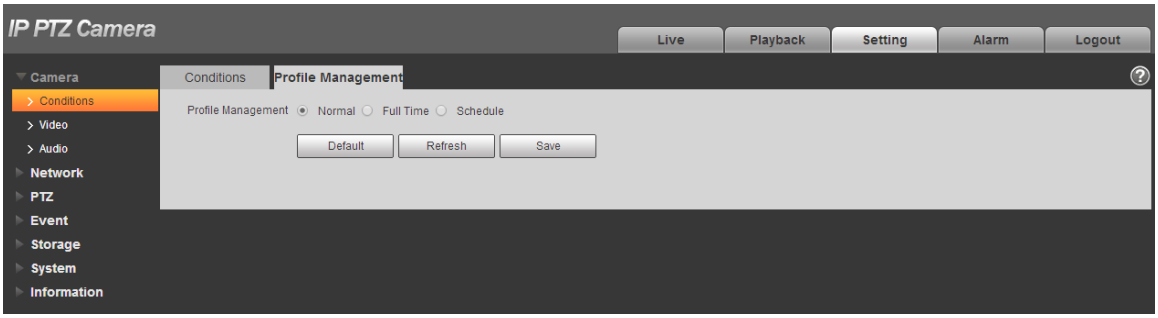


Figure 4-17

- When it selects “Full time”, it can select day or night, which is corresponding to the config file of the camera conditions for day or night.

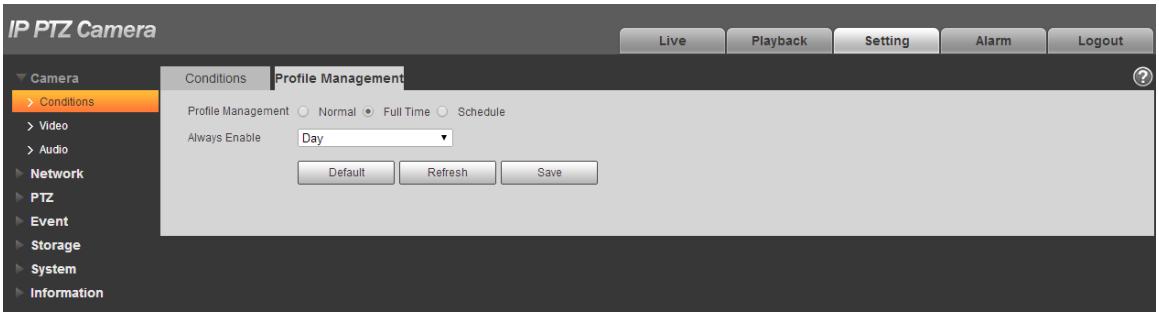


Figure 4-18

- When it selects “Schedule”, you can select one period as day config, the other period as night config. If the config profile management is displayed according to schedule, you can set 0:00～12:00 as day config, and 12:00～24:00 as night config.

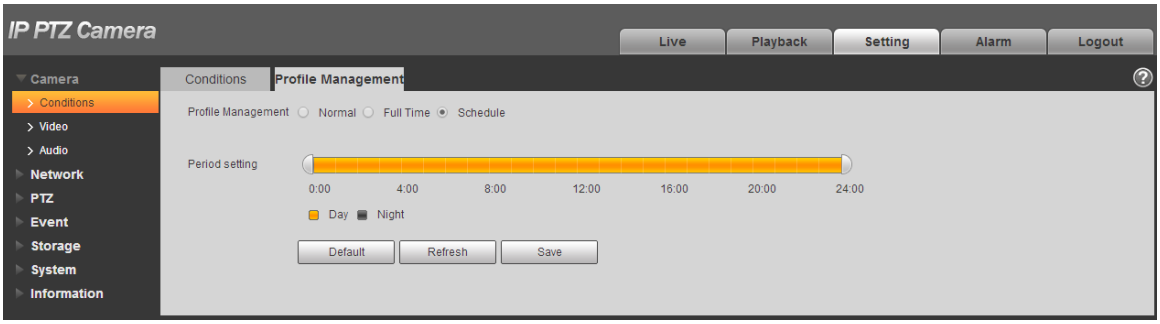


Figure 4-19

4.1.2 Video

It is to set video, snapshot, overlay, ROI and path.

4.1.2.1 Video

It is to set video stream of the monitoring image. The config steps are shown as follows;

Step 1

Select “Setup > Camera > Video > Video”.

The system displays the interface of “Video stream”, which is shown in Figure 4-20.

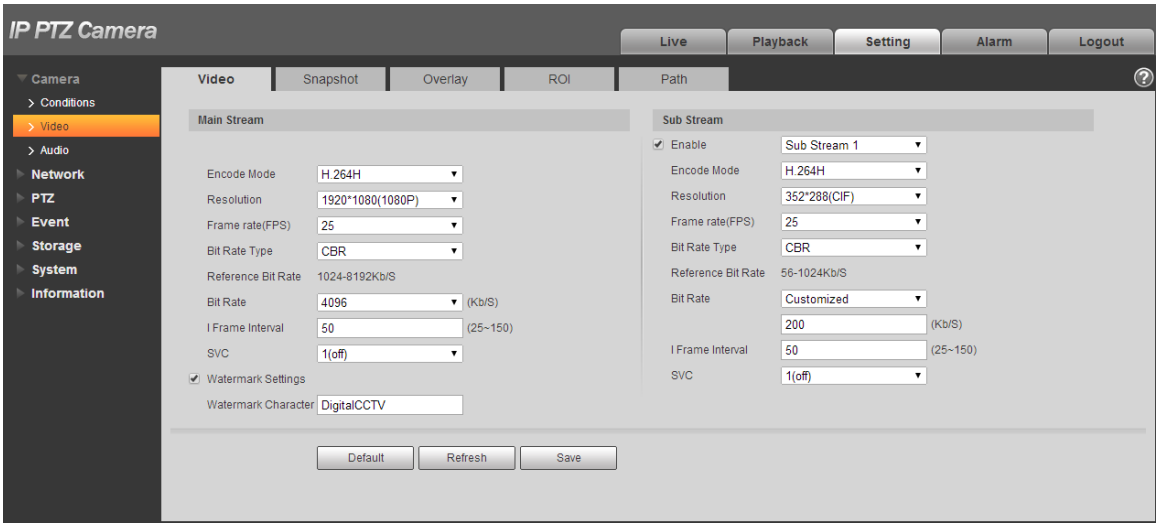


Figure 4-20

Note

- Different device video may have different config interface, please refer to the actual interface for more details.
- Different video streams may be corresponding to different default value, please refer to the actual interface for more details.

Step 2

Configure parameter info according to the actual needs, please refer to Table 4-8 for more details.

Parameter	Function
Sub Stream Enable	Please check the box here to enable extra stream function. This function is enabled by default.

Parameter	Function
Encode mode	There are seven options: H.264, H.264H, H.264B, H.265, MJPEG and MPEG4. ● H.264: Main Profile encode mode. ● H.264H: High Profile encode mode. ● H.264B: Baseline Profile encode mode. ● H.265: Main Profile encode mode. ● MJPEG: In this encode mode, the video needs to enlarge bit stream to guarantee the video definition. You can use the max bit stream value in the recommended bit to get the better video output effect.
Smart Codec	It can set smart codes as on or off.
Resolution	There are multiple resolution types. You can select from the dropdown list. For each resolution, the recommended bit stream value is different.
Frame Rate (FPS)	PAL: 1～25f/s，NTSC: 1～50f/s.. The frame rate may vary due to different resolutions.
Bit Rate Type	There are two options: VBR and CBR. ● Please note, you can set video quality in VBR mode. ● In MJPEG encode mode, only CBR is available.
Reference Bit Rate	Recommend a reasonable bit rate value range according to the resolution and frame rate you have set.
Bit Rate	● In VBR, the bit rate here is the max value. In CBR, the value is fixed. ● Refer to “Reference Bit Rate”, bit rate value can provide best reference range.
I Frame interval	Here you can set the P frame amount between two I frames, the range varies according to the frame rate, the max is 150, it is recommended to set twice as big as the frame rate.
SVC	Frame rate can realize layered coding, it is a scalable encoding mode in time domain, and it is 1 by default, which is not layered. It can set 2, 3, 4 layer coding setting.
Watermark Settings	By calibrating watermark, to see if video is modified. Select Watermark function. Default watermark is Digital CCTV. Watermark character can only be number, letter, _, - within 128 characters.

Table 4-8

Step 3

Click “Save” to complete config.

4.1.2.2 **Snapshot**

It is to set the stream info of snapshot. The config steps are shown as follows:

Step 1

Select “Setup > Camera > Video > Snapshot” and the system will display the interface of “Snapshot”, which is shown in Figure 4-21.



Figure 4-21

Step 2

Configure parameter info according to the actual needs; please refer to Table 4-9 for more details.

Parameter	Function
Snapshot type	It includes General and Event.
Image size	It is the same with the resolution of snapshot (main stream or sub stream).
Quality	It is to set the image quality. There are six levels from 1 to 6.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s or customized.

Table 4-9

Step 3

Click “Save” to make config valid.

4.1.2.3 **Video Overlay**

It is to set the info which is to be overlaid on the monitoring image. The config steps are shown as follows:

Step 1

Select “Setup > Camera > Video > overlay” and the system will display the interface of “Overlay”.

Step 2

It is to configure video overlay info according to actual needs. The config interface is shown from Figure 4-22 to Figure 4-28. Refer to Table 4-10 for more details.

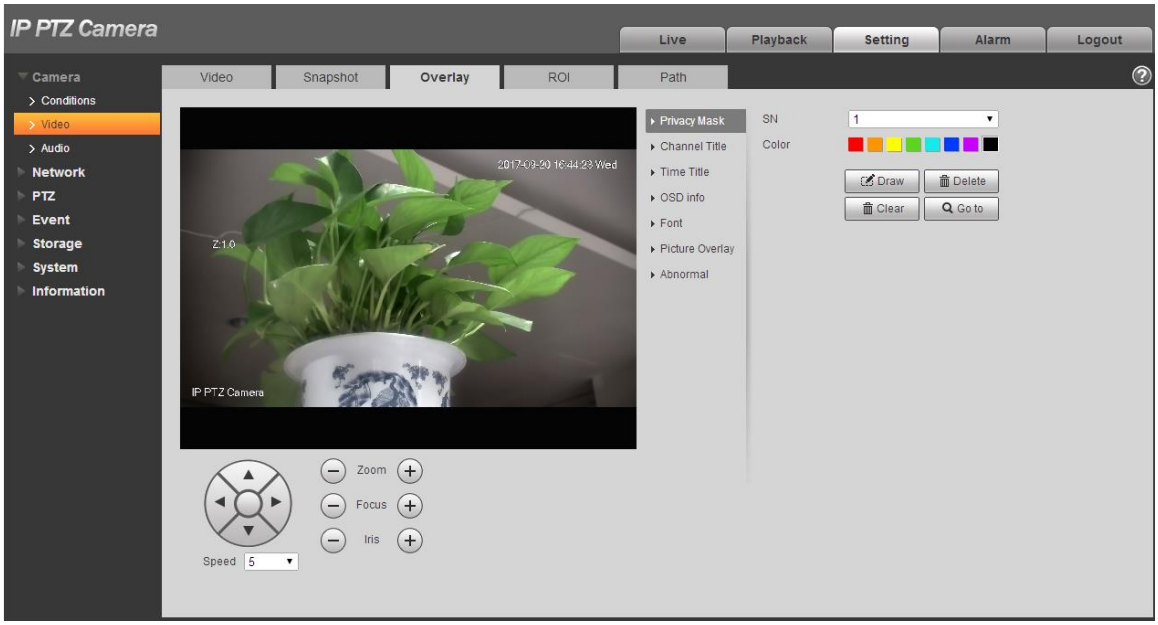


Figure 4-22

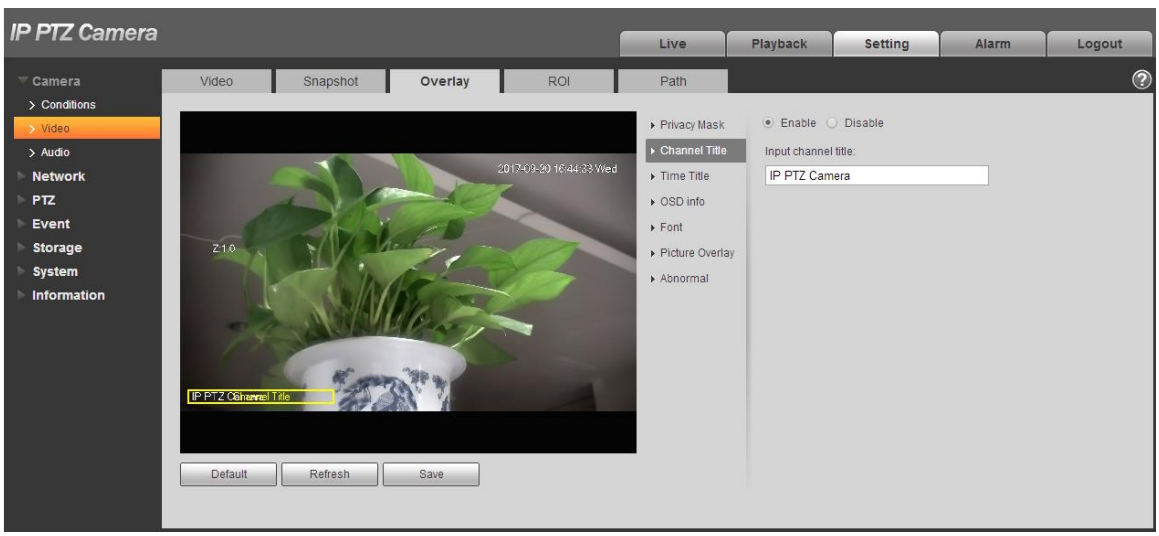


Figure 4-23

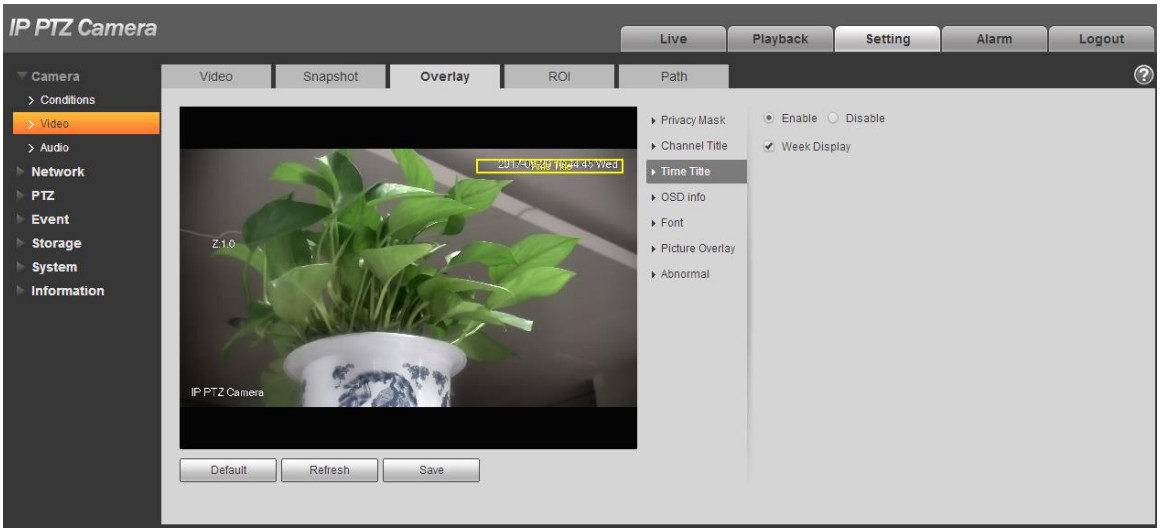


Figure 4-24

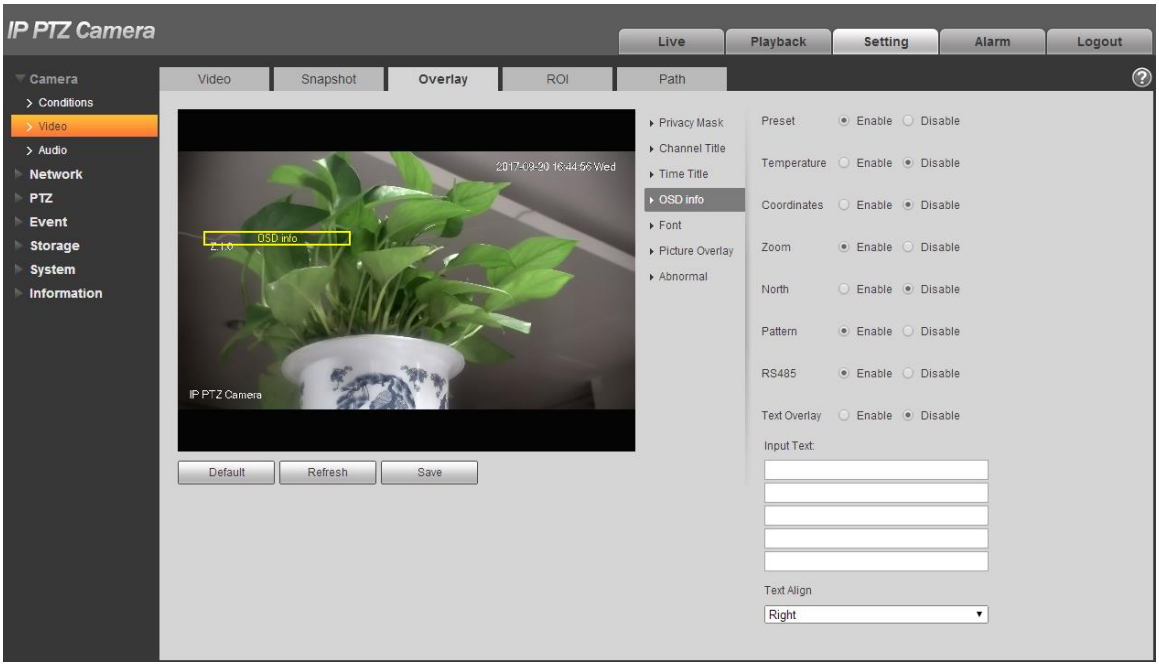


Figure 4-25

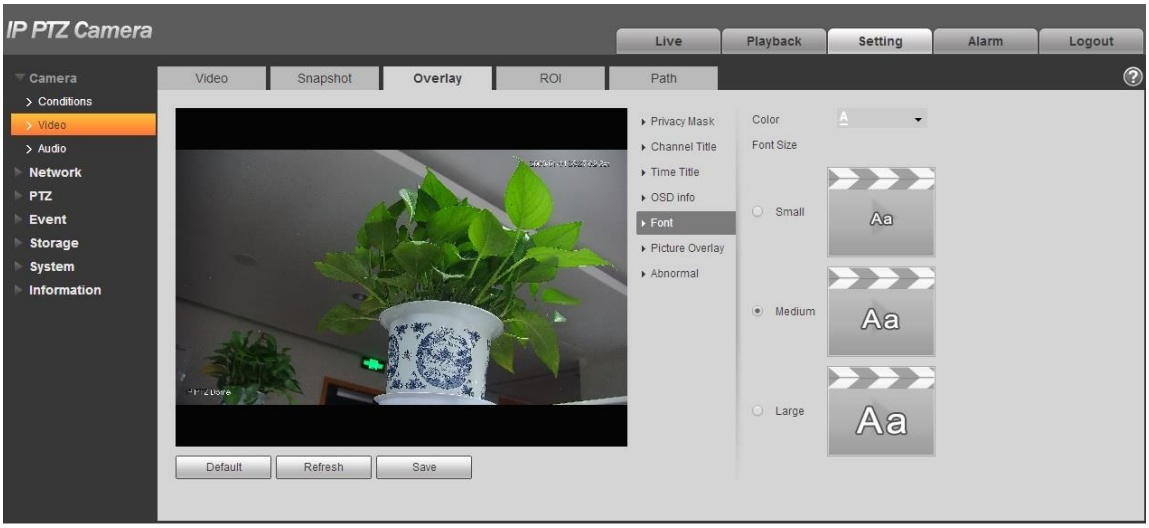


Figure 4-26

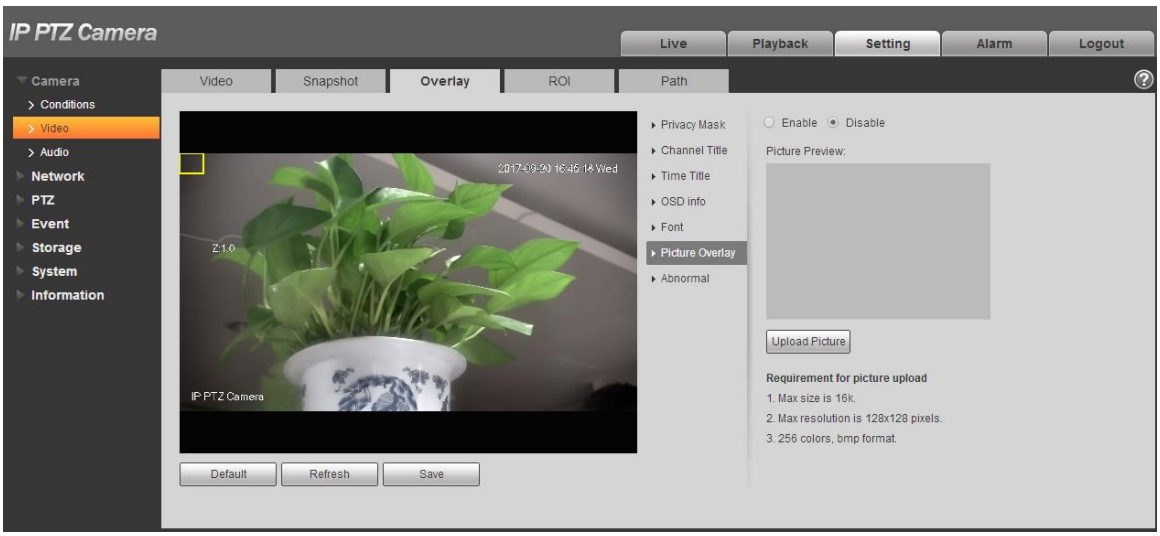


Figure 4-27

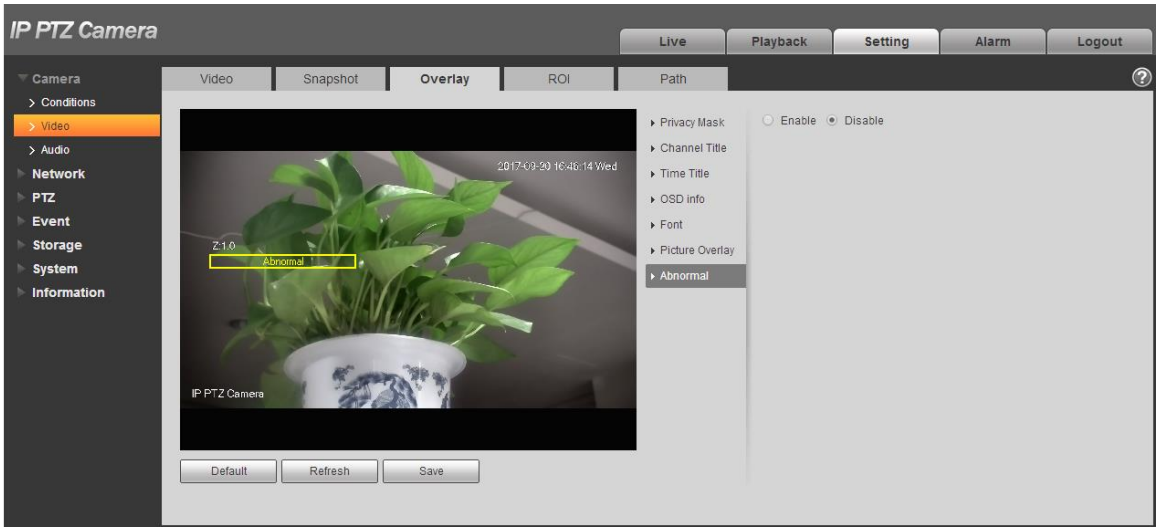


Figure 4-28

Parameter	Function
Privacy mask	● Click “Draw” to draw privacy mask in the image preview area. ● Click “Delete” to delete corresponding privacy mask. ● Click “Clear” to clear all the privacy mask areas. ● Set “Privacy Mask SN”, click “Go to” to check the corresponding privacy mask area of the “Privacy Mask SN”.
Channel Title	● Check “Enable” to display channel title in the video monitoring window; check “Disable” not to display. ● You can use the mouse to drag the channel tile to adjust the position of channel title.
Time Title	● Check “Enable” to display time title in the video monitoring window; check “Disable” not to display. ● You can drag “Time Title” box to adjust the position of time title. ● Check “Display Week” to display week info on the time title.
OSD	● Check the corresponding “Enable” button, and it will display preset, temperature, PTZ coordinates, zoom, north and text overlay in the video monitoring window; check corresponding “Disable “button and it won’t display. ● Click “Set North” to set the current location as north. ● You can adjust preset, temperature, PTZ coordinates, zoom, north and text overlay via dragging “OSD Info” box. Alignment include align left and align right.
Font	● It is set the font of channel title, time title, OSD info, it can set color, size and row height.

Picture Overlay	● You can enable this function to display overlay picture. Click disable to turn it off. ● Click Upload Picture to overlay local picture into monitoring window. You can drag the yellow box to move it. **Note** You cannot enable OSD info and picture overlay at the same time.
Abnormal	It is to set if it will display abnormity in the monitoring picture.

Table 4-10

Step 3

Click “Save” to complete config.

4.1.2.4 **ROI**

Note

Some devices do not support ROI.

You can set the key monitoring area as the ROI and set image quality upon the area. The config steps are shown as follows.

Step 1

Select “Setup > Camera > Video > ROI”.

The system will display the interface of “ROI”, which is shown in Figure 4-29.

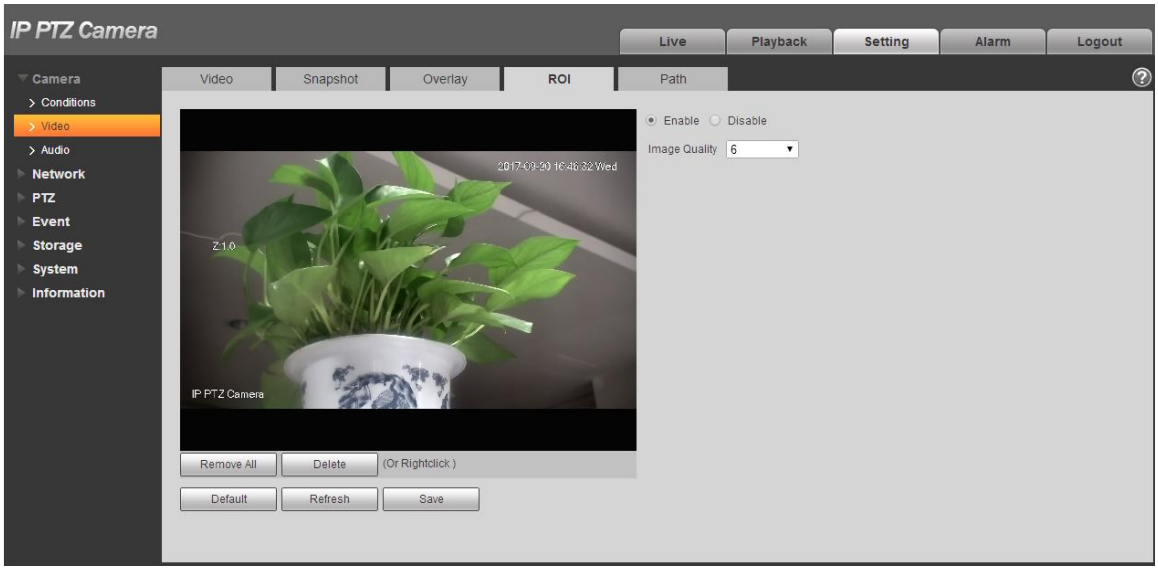


Figure 4-29

Step 2

Select “Enable “to enable ROI function.

Step 3

Press the left mouse button and draw area on the monitoring image. It can set max 4 areas.

- Click “Delete” or press right mouse button to delete corresponding area.
- Click “Remove all” to remove all the areas.

Step 4

Set the image quality of the corresponding ROI.

Step 5

Click “Save” to make config valid.

4.1.2.5 **Path**

The storage path is activated with snapshot and record in the live interface, which can set the storage path of monitoring snapshot and monitoring record respectively.

The storage path is activated with snapshot, download and clip in the playback interface, which can set the storage path of playback snapshot, record download and playback clip respectively.

Step 1

Select “Setup > Camera > Video > Path”.

The system will display the interface of “Storage Path”, which is shown in Figure 4-30.

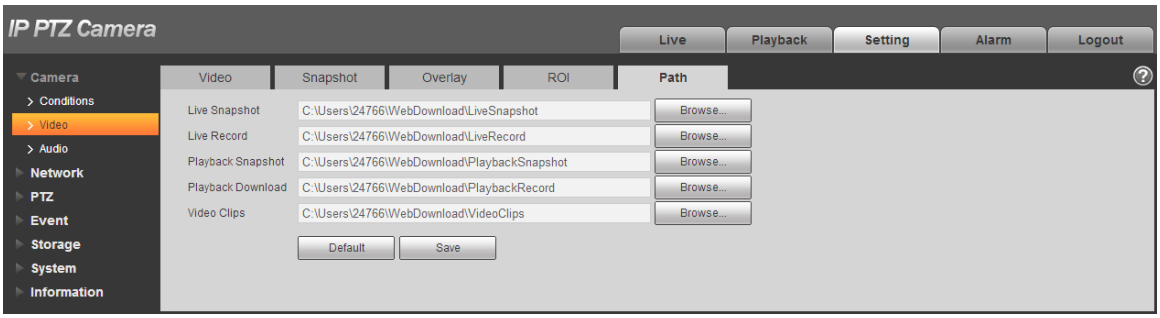


Figure 4-30

Step 2

Set the corresponding storage path.

- The default live snapshot path: C:\Users\admin\WEBDownload\LiveSnapshot.
- The default live record path：C:\Users\admin\WEBDownload\LiveRecord.
- The default playback snapshot path: C:\Users\admin\WEBDownload\PlaybackSnapshot.
- The default playback download path: C:\Users\admin\WEBDownload\PlaybackRecord.
- The default playback clip path: C:\Users\admin\WEBDownload\VideoClips.

Note

Admin is locally logged in PC account.

Step 3

Please click the “Save” button to make config valid.

4.1.3 Audio

Note

Some models don’t support audio function.

It is to set the audio parameters of the device. The config steps are shown as follows:

Step 1

Select “Setup > Camera > Audio”.

The system will display the interface of “Audio”, which is shown in Figure 4-31.

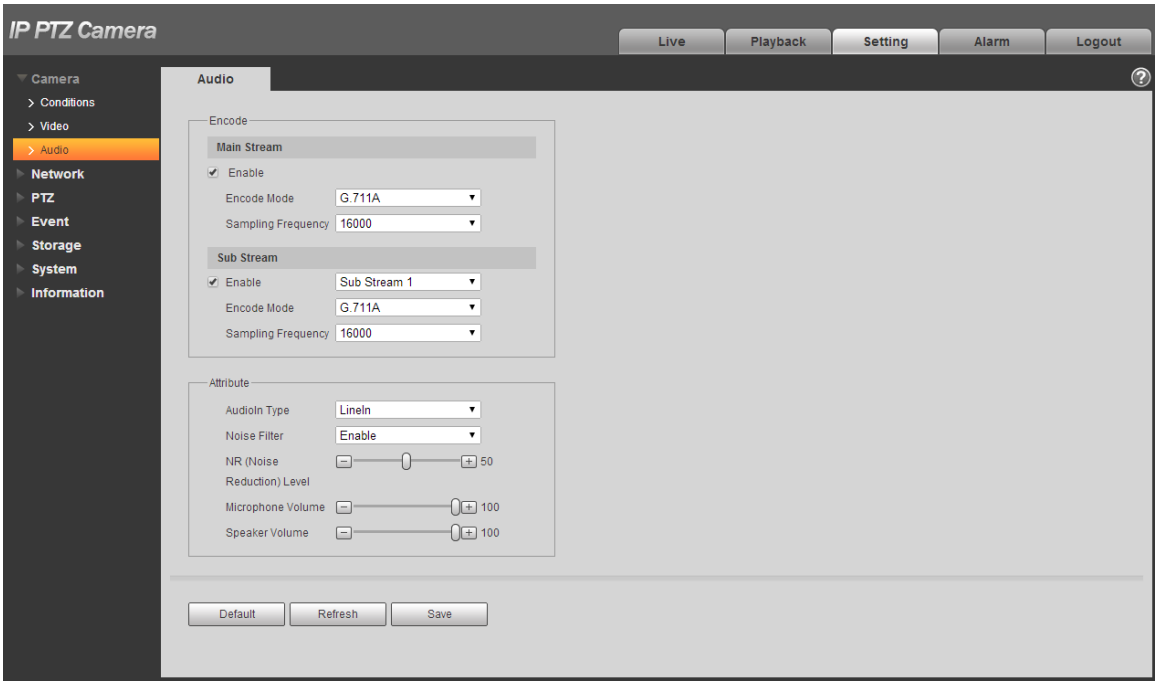


Figure 4-31

Step 2

Please configure info of each parameter according to the actual needs, refer to Table 4-11 for more details.

Parameter	Function
Audio enable	Select the audio channel number which needs to be enabled: the stream is A/V composite stream; otherwise it only contains video only. **Note** Audio can be enabled only when video is enabled.

Encode mode	The encode mode includes G.711A, G.711Mu, G.726 and AAC. The default is G.711A. **Note** The audio encode mode which is set here can make both audio stream and bidirectional talk valid at the same time.
Sampling frequency	It includes 8k, 16k, 32k, 48k and 64k. It is 16K by default.
Audio in type	It is to set audio input type, it is LineIn by default.
Noise filter	It is to set if it is to enable noise filter function, it is enabled by default.
Microphone volume	It is to adjust the volume of the microphone; the value range is from 0 to 100. **Note** The function is only supported by some models.
Speaker volume	It is to adjust the volume of the speaker; the value range is from 0 to 100. **Note** The function is only supported by some models.

Table 4-11

Step 3

Click “Save” to complete config.

4.2 Network

4.2.1 TCP/IP

4.2.1.1 **TCP/IP**

You need to configure the IP address and DNS server of the intelligent speed dome, make sure it can be mutually connected to other devices in the networking.

Note

Please confirm the intelligent speed dome has connected to network correctly before setting network parameters.

- Please distribute IP address of the same network segment if there is no router in the network.
- It needs to set corresponding gateway and subnet mask if there is no router in the network.

Step 1

Select “Setup > Network > TCP/IP”.

The system displays the interface of “TCP/IP”, which is shown in Figure 4-32.

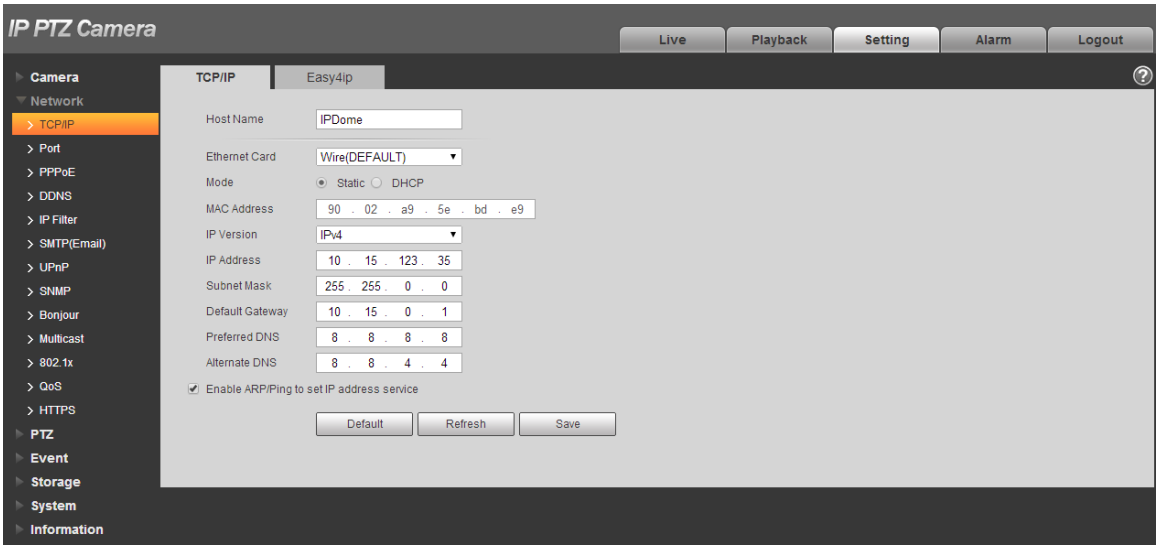


Figure 4-32

Step 2

Configure TCP/IP parameter, refer to Table 4-12.

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

<table>
<tr><td>Subnet mask</td><td colspan="2">It has to set according to the actual situation, the prefix of subnet is number, input from 1 to 255, the prefix of subnet identifies a specific network link, and usually it includes a layering structure.</td></tr>
<tr><td>Default gateway</td><td>Make sure it has to be in the same segment with IP address according to the actual situation.</td><td rowspan="3">Note
It inputs 128 bit for IP address, default gateway, preferred DNS, alternate DNS of IPv6 version, it can’t be null.</td></tr>
<tr><td>Preferred DNS</td><td>DNS server IP address.</td></tr>
<tr><td>Alternate DNS</td><td>Alternate IP address of DNS server.</td></tr>
<tr><td>Enable ARP/Ping to set device IP address service.</td><td colspan="2">Check, you can use ARP/Ping command to modify or set the device IP address if you know the device MAC address.

When it is enabled by default, ping packet can set device IP via specific length within 2 minutes during device reboot, the service is off 2 minutes later, the service will be closed immediately after setting IP successfully. Ping packet can’t set IP if it is not enabled.</td></tr>
</table>

Table 4-12

Step 3

Click “Save” to complete setting.

An example of setting device IP via ARP/Ping

Step 1

Get an unoccupied IP address, and make sure the device and PC are in the same LAN.

Step 2

Get the physical address of the device from the label.

Step 3

Input the following commands in the PC.

System	Command
Windows syntax	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

System	Command
UNIX/Linux/Mac syntax	Arp -s <IP Address> <MAC> Ping -s 480 < IP Address > Example： Arp -s 192.168.0.125 11-40-8c-18-10-11 Ping -s 480 192.168.0.125
Win7 syntax	netsh i i show in netsh -c “i i” add neighbors ldx <IP Address> <MAC> ping -l 480 -t < IP Address > Example： netsh i i show in netsh -c “i i” add neighbors 12 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125

Table 4-13

Step 4

Power off and reboot the device or reboot the device via network.

Step 5

Check the similar info like “Reply from 192.168.0.125…” from the PC command line, then it can set successfully; you can close the command line.

Step 6

Open the browser and then input http://<IP address>. Click the Enter button, you can access now.

4.2.1.2 **Easy 4ip**

Easy 4ip module is mainly used to visit device via serial number, it doesn’t need to set IP address, plug and play, and scan QR code to log in the device.

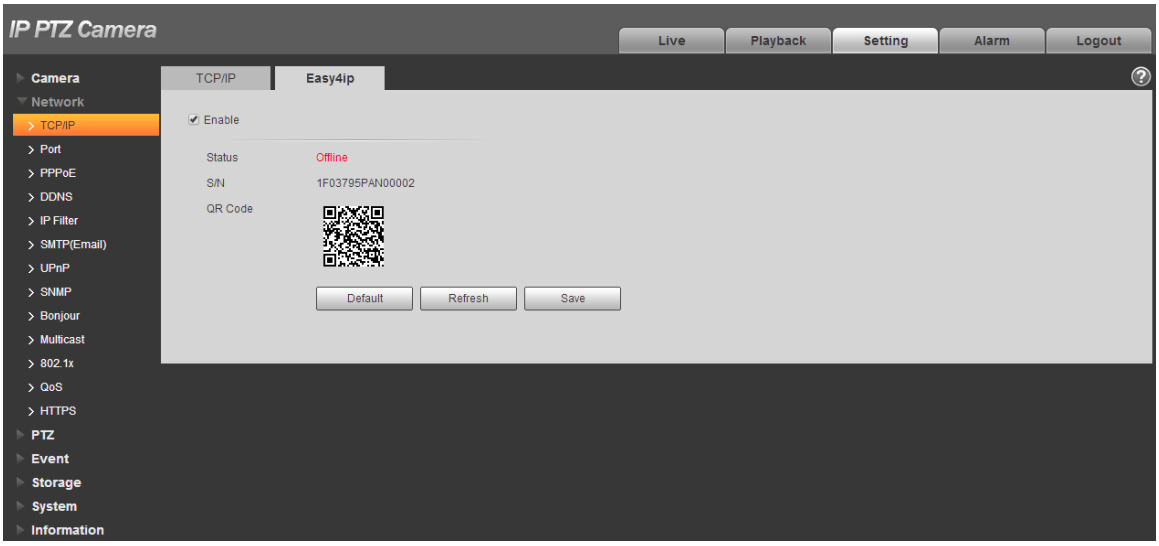


Figure 4-33

4.2.2 Port

4.2.2.1 Port

You can configure the device with max connection port and each port value on this interface.

Step 1

Select “Setup > Network > Port > Port”.

The system will display the interface of “Connection”, which is shown in Figure 4-34.

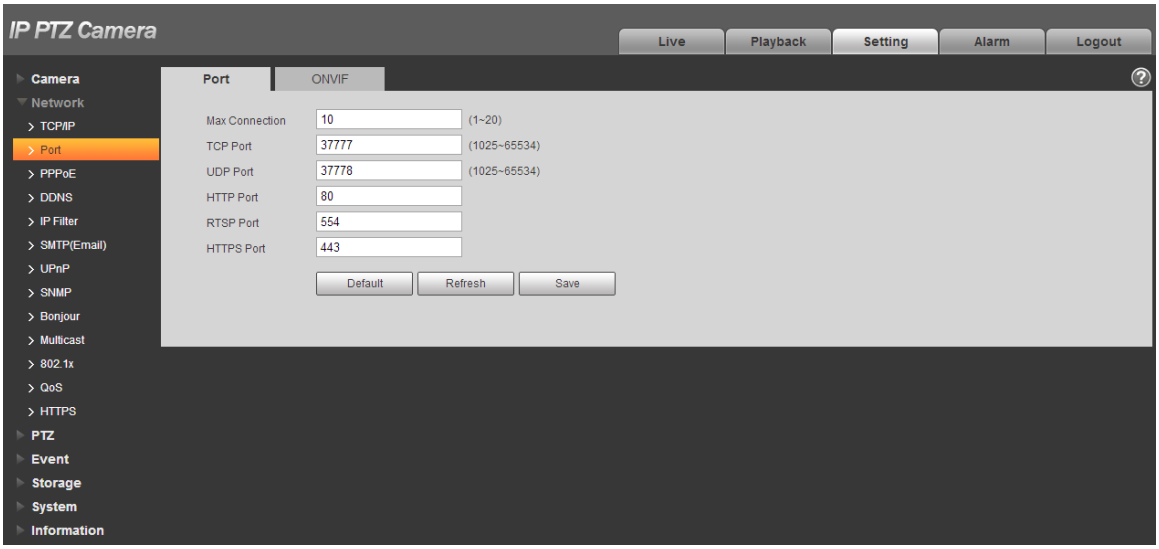


Figure 4-34

Step 2

Configure each port value of the device; refer to Table 4-14 for more details.

Parameter	Function
Max connection	It is the max Web connection for the same device. The value ranges from 1 to 20. Default connection amount is 10.
TCP port	Port range is 1025~65534. The default value is 37777. You can input the actual port number if necessary.
UDP port	Port range is 1025~65534. The default value is 37778. You can input the actual port number if necessary.
HTTP port	Port range is 1025~65524. The default value is 80. You can input the actual port number if necessary.
RTSP port	● The default value is 554. Please leave blank if use default. User uses QuickTime or VLC can play the following formats. BlackBerry can play too. ● Real-time monitoring URL format, please require real-time RTSP media server, require channel no., bit stream type in URL. You may need username and password. ● User uses BlackBerry need to set encode mode to H.264B, resolution to CIF and turn off audio. URL format is: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0 username/password/IP and port. The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value. Follow standard RTP protocol and when encode mode is MJPEG; the max resolution only supports 2040*2040.
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.

Table 4-14

Note

Except “max connection”, it needs to reboot the device to make it valid after modifying other parameter config.

Step 3

Click “Save” to complete setting.

4.2.2.2 **ONVIF**

ONVIF (Open Network Video Interface Forum) describes network video model, port, data type and data switch modes. ONVIF standard targets to create a network video frame protocol that communicates network video products from different manufacturers.

Step 1

Select “Setup > Network > Connection > ONVIF”.

The system will display the interface of “ONVIF”, which is shown in Figure 4-35.

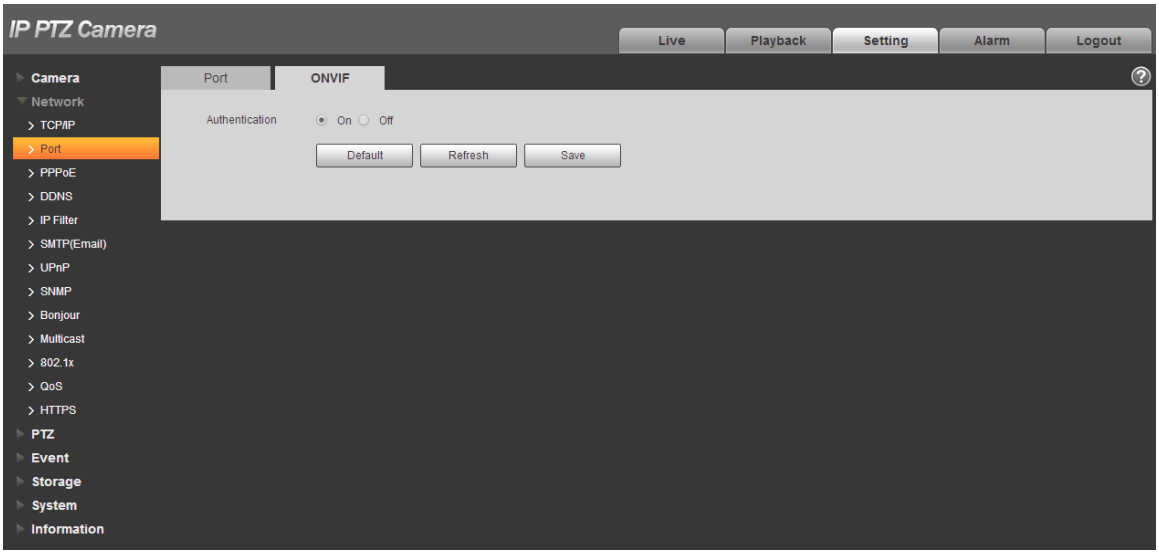


Figure 4-35

Step 2

Set “Authentication” as “Enable”.

Step 3

Click “Save” to complete setting.

4.2.3 PPPoE

It can set up network connection via enabling PPPoE (Point-to-Point Protocol over Ethernet) dial mode; the device will acquire a dynamic IP address of WAN. Please gain the PPPoE username and password provided by ISP (Internet service provider).

Step 1

Select “Setup > Network > PPPoE”.

The system will display the interface of “PPPoE”, which is shown in Figure 4-36.

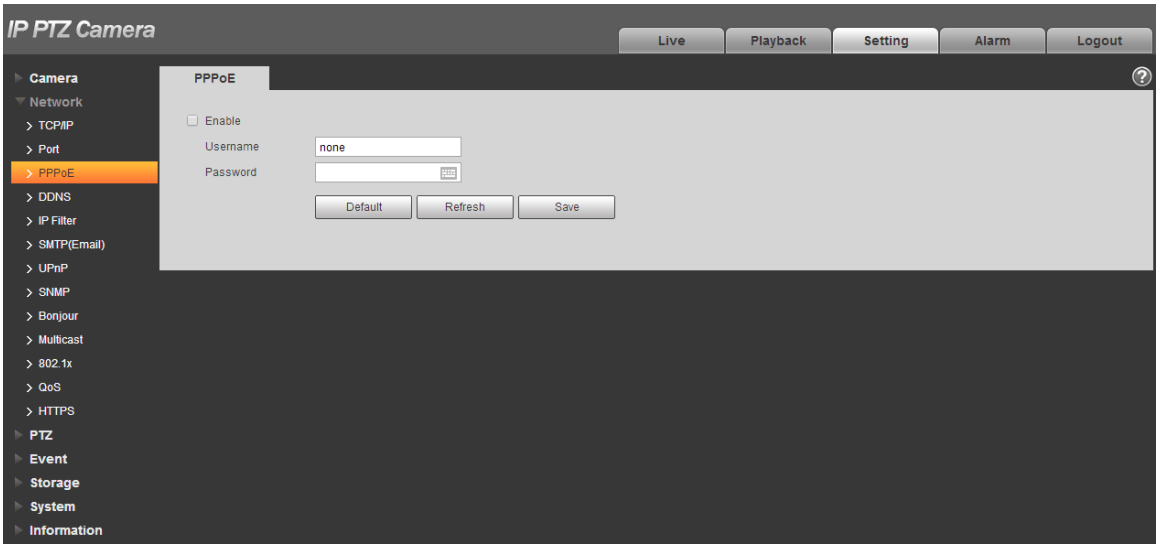


Figure 4-36

Step 2

Check “Enable” and input PPPoE username and password.

Step 3

Click “Save” to complete PPPoE config.

The system will prompt that it has been successfully saved and real-time display the acquired IP address of WAN, which is shown in Figure 4-37, users can visit the device via the IP address.

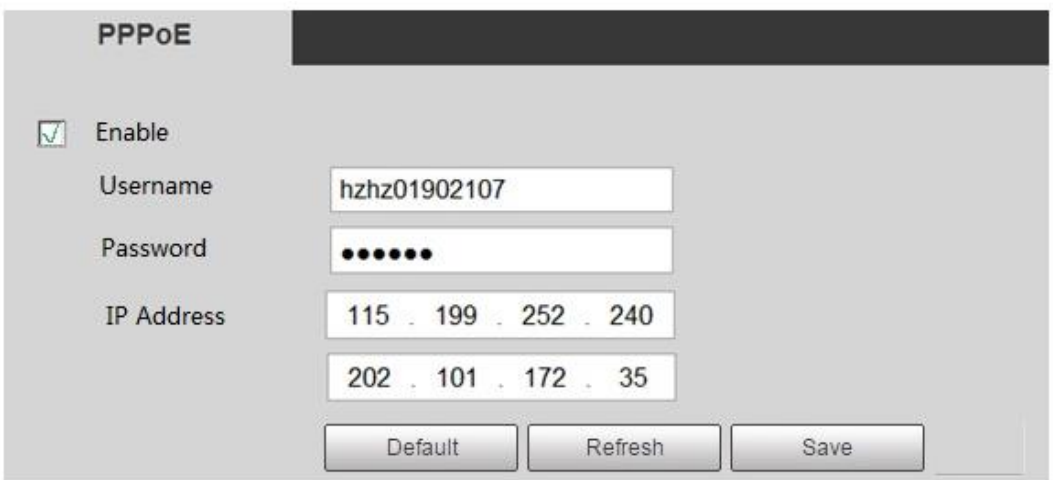


Figure 4-37

4.2.4 DDNS

DDNS (Dynamic Domain Name Server) can be used to update the relationship between domain name on the DNS server and IP address dynamically in the situation where the device IP address changes frequently, which is to guarantee the users to visit device via domain name.

Note

- Please confirm if the device supports the type of DNS before config and log in the website of DDNS service provider to register domain name and other info.
- If DDNS type is Quick DDNS, then it doesn't need to register domain name.
- If DDNS type is other type, then it needs to log in corresponding DDNS website to register username, password, domain name and etc.
- Users can check info of all the connected devices after they successfully registered in DDNS website and logged in.

Step 1

Select "Setup > Network > DDNS".

The system will display the interface of "DDNS", which is shown in Figure 4-38.

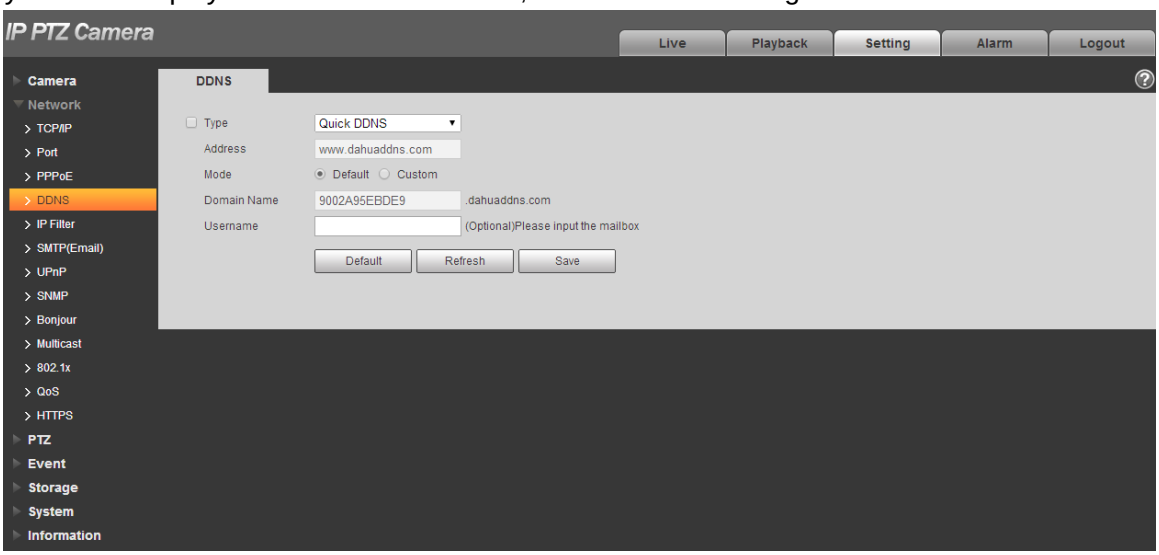


Figure 4-38

Step 2

Check "Server Type" and configure relevant parameter of DDNS according to the actual situation.

- Please refer to the following sheet for configuring DDNS parameter if users select DDNS type as "Quick DDNS".

Parameter	Function
Server Type	The default "Server Address" is "www. Quickddns.com".

Parameter	Function
Server Address	DDNS server IP address. ● CN99DDNS Server address: www.3322.org ● NO-IPDDNS Server address: dynupdate.no-ip.com ● DyndnsDDNS Server address: members.dyndns.org ● QUICK DDNS Server address: www.quickddns.com
Mode	It is auto by default, manual is optional.
Domain Name	It is “MAC address. quickddns.com” by default in both auto and manual mode, users can set prefix by themselves.
Test	It is to test if the domain name is available. The parameter appears only when selecting “Mode” as “Manual”.
Username	The user name you input to log in the server. It is optional.

Table 4-15

1. After filling in the interface, click “Test” to confirm if the domain name can be successfully registered. If it is successful, please continue to 2, if not, please check if the domain name info is correct and clear browser cache.
2. Click “Save”.
3. Input complete domain name in the PC browser and press enter.
   It means successful config if it can display the device WEB interface; it means config failure if it fails to display the interface, please configure again.

- Please refer to the following sheet to configure parameter if it selects other types of DDNS.

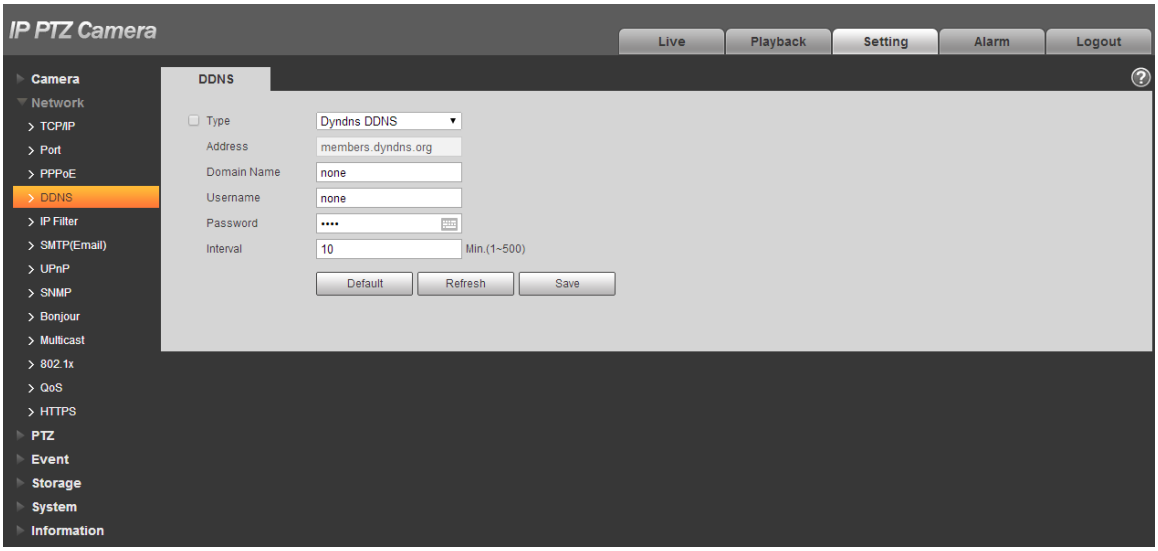


Figure 4-39

Please refer to the following sheet for detailed information.

Parameter	Function
DDNS Type	The names and addresses of DDNS server provider are listed below: ● Dyndns DDNS address is：members.dyndns.org ● NO-IP DDNS address is：dynupdate.no-ip.com ● CN99 DDNS address is：members.3322.org PRIVATE DDNS address is：www.privateddns.com, as for private DDNS server, the port number can be configured according to its actual situation, which can realize device access with the mode of domain name + port number
Server address	
Domain Name	It is the domain name that the users register on the website of DDNS server provider.
Username	Input the username and password which are acquired from DDNS server provider. The users need to register account on the website of DDNS server provider (including username and password)
Password	
Interval	After the designated DDNS is updated and enabled, it will launch the interval of update requirement regularly, the unit is minute.

1. Click “Save” after filling in the interface.
2. Input domain name in the PC browser and press “Enter” button.
   It means successful config if it can display the device WEB interface; it means config failure if it doesn’t display.

4.2.5 IP filter

It can set the users who are allowed to visit the device via IP filter.

- Trusted Sites: It is to add the users' IP/MAC which can log in the device. If the users check the trusted sites, then only the users' IP/MAC which is in the list can log in the device; if trusted sites in not checked, then there is no restriction for the users who visit the device.
- Banned List: It is to add the users' IP/MAC which refuses to log in the device. If the users check the banned list, then except the IP/MAC in the banned list, the other users' IP/MAC can log in the device.
- Users are not allowed to set the device IP/MAC as trusted sites.
- MAC verification can be valid only when the device IP and PC's IP are in the same LAN.

Note

- MAC verification can only be restricted according to the router's MAC when visiting WAN.
- Some models don't support banned list, please refer to the actual product for more details.

Step 1

Select "Setup > Network > IP Filter".

The system will display the interface of "IP Filter", which is shown in Figure 4-40.

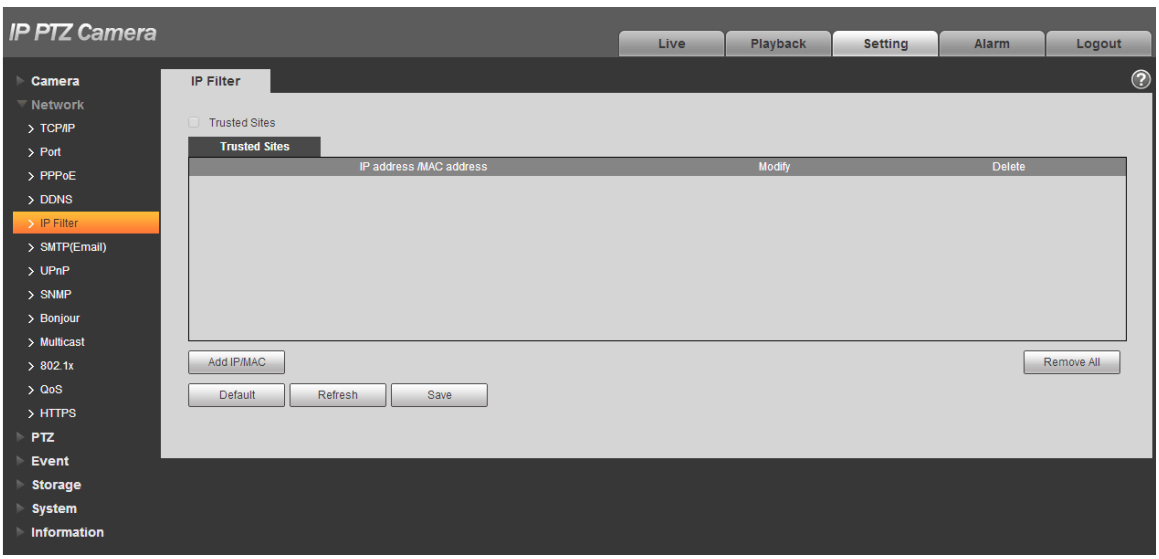


Figure 4-40

Step 2

Check corresponding check box to enable trusted sites and banned list.

- Check "Trusted Sites", click it and add trusted sites.

Step 3

Click "Add IP/MAC", and configure IP address info according to Table 4-16.

Parameter	Note
IP address	Input the IP address of host which is to be added.
IP segment	Input the start address and end address of the segment which is to be added.
IPv4	IP address adopts IPv4 format, such as 172.16.5.10
IPv6	IP address adopts IPv6 format, such as aa:aa:aa:aa:aa:aa:aa:aa.
MAC	Input the MAC address of host which is to be added.

Table 4-16

Step 4

Click “Save” to make config valid.

Use the IP host in the trusted sites to log in device WEB interface, which can realize successful device login.

- Check “Banned List”, click it to add banned list.

1. Complete adding banned list according to the sheet above.

   Note

   Add banned list, but it doesn’t support adding MAC address.

2. Click “Save” to make config valid.

   Use the IP host in the banned list to log in the device WEB interface. The system prompts that it has been added into banned list, and it fails to log in.

4.2.6 SMTP （e-mail)

By setting SMPT, it will send email immediately when alarm, video detection and abnormity happen. When alarm, video detection and abnormity trigger, it can send email to the server of the receiver via SMPT server. The receiver can receive the email when logging in the server.

Step 1

Select “Setup > Network > SMPT”.

The system will display the interface of “SMPT”, which is shown in Figure 4-41.

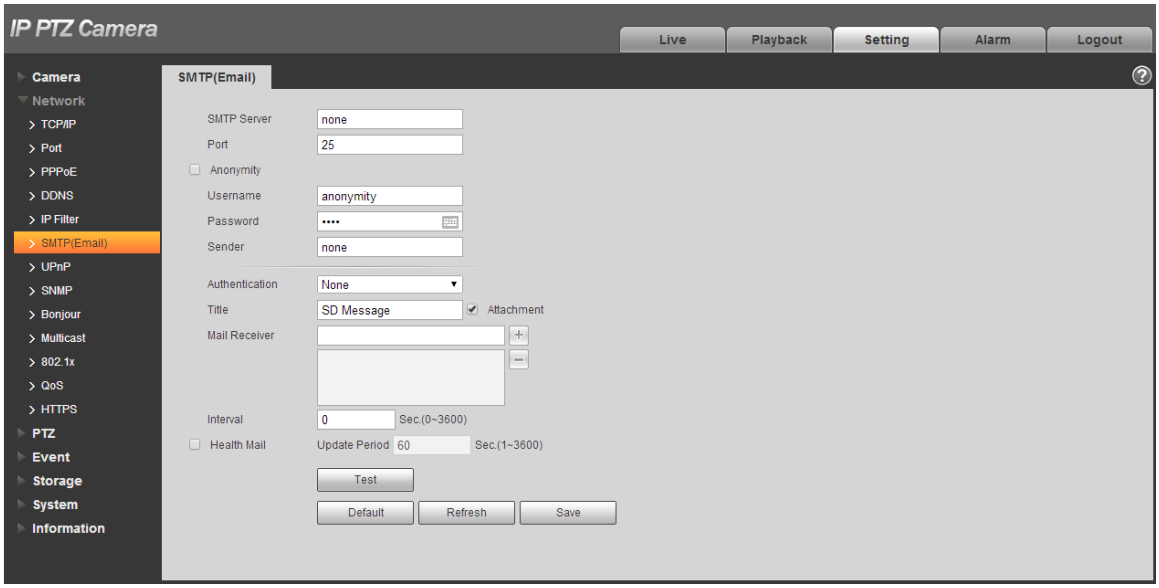


Figure 4-41

Step 2

Configure info of each parameter according to the actual needs.

Parameter	Function
SMTP Server	Conform to SMTP protocol; send the IP address of email server.
Port	Conform to SMTP protocol; send the port number of email server, it is 25 by default.
Anonymity	For the server supports the anonymity function. You can auto login anonymously. You do not need to input the user name, password and the sender information.
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	Email title, and it can be customized.
Attachment	System can send out the email of the snapshot picture once you check the box here.
Mail receiver	Input receiver email address here. Max three addresses.

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

Table 4-17

4.2.7 UPnP

It allows you to establish the mapping relationship between the LAN and the public network.

Here you can also add, modify or remove UPnP item. For UPnP on different routers, you must disable UPnP function.

Enable UPnP, network cameras support UPnP protocol. In Windows Xp or Windows Vista system, if system UPnP is enabled, then the network camera can auto search it in the network neighborhood of Windows.

Please refer to the following steps to install UPnP network service in the Windows system:

Step 1

Open control panel, and select “Add or Remove Programs”.

Step 2

Click the “Add/Remove Windows Components”

Step 3

Select the “Network Services” from the Windows Components Wizard. Click the Details button

Step 4

Check the “Internet Gateway Device Discovery and Control client” and “UPnP User Interface”. Please click OK to begin installation.

The operation steps of UPnP config is shown as follows:

Step 1

Select “Setup > Network > UPnP”.

The system will display the interface of “UPnP”, which is shown in Figure 4-42.

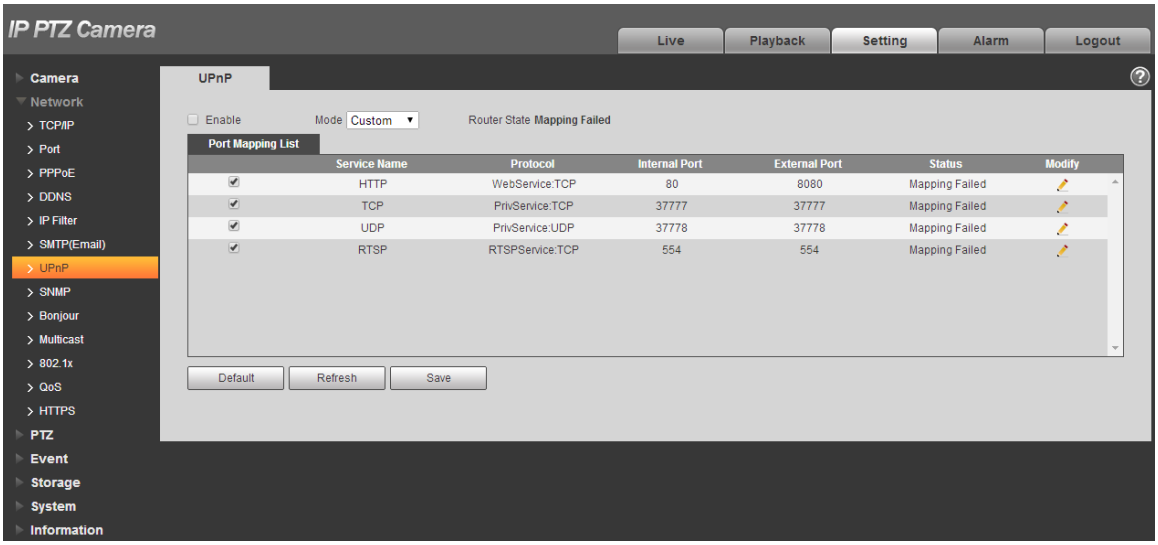


Figure 4-42

Step 2

Check the box and enable UPnP function.

Step 3

Selection mode

There are two mapping modes for UPnP which are auto and manual. As for manual mapping mode, it allows users to modify external port; as for auto mapping mode, it completes port mapping automatically without occupying the port, and users don't need to modify mapping.

Step 4

Click "Save" to make config valid.

4.2.8 SNMP

The SNMP (Simple Network Management Protocol) provides framework of bottom-layer network management for network management system. It can control SNMP function in the network service setting. It can gain the relevant config info after connecting to device via relevant software tool. It needs to satisfy the following conditions if it is to use SNMP function:

- Install SNMP device monitoring and management tool, such as MIB Builder and MG-SOFT MIB Browser.
- Get two MIB documents which are corresponding to the current version from technical personnel.

Step 1

Select "Setup > Network > UPnP".

The system will display the interface of "SNMP", which is shown in Figure 4-43 and Figure 4-44

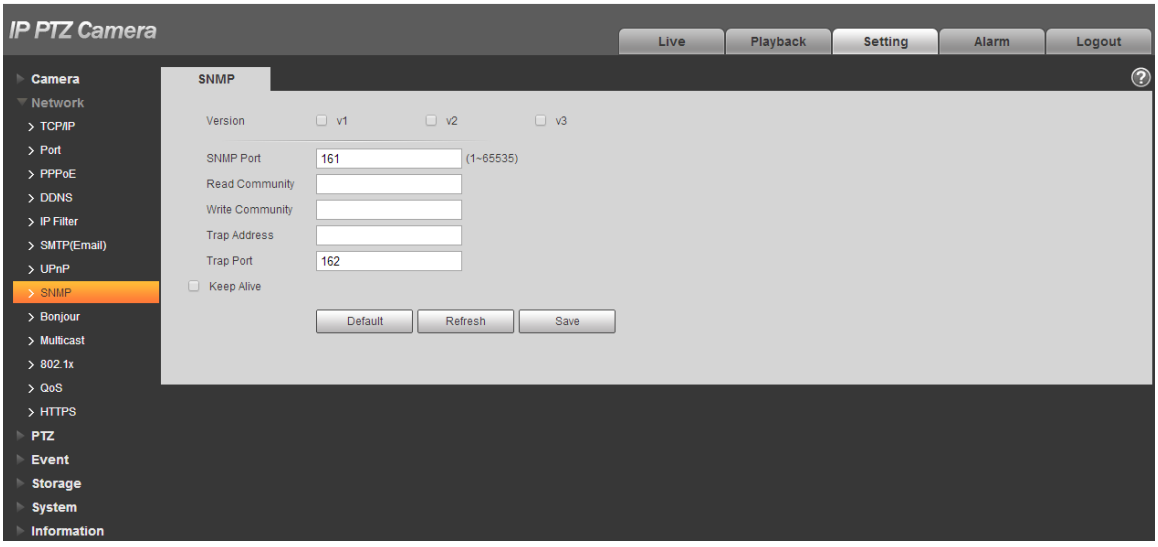


Figure 4-43

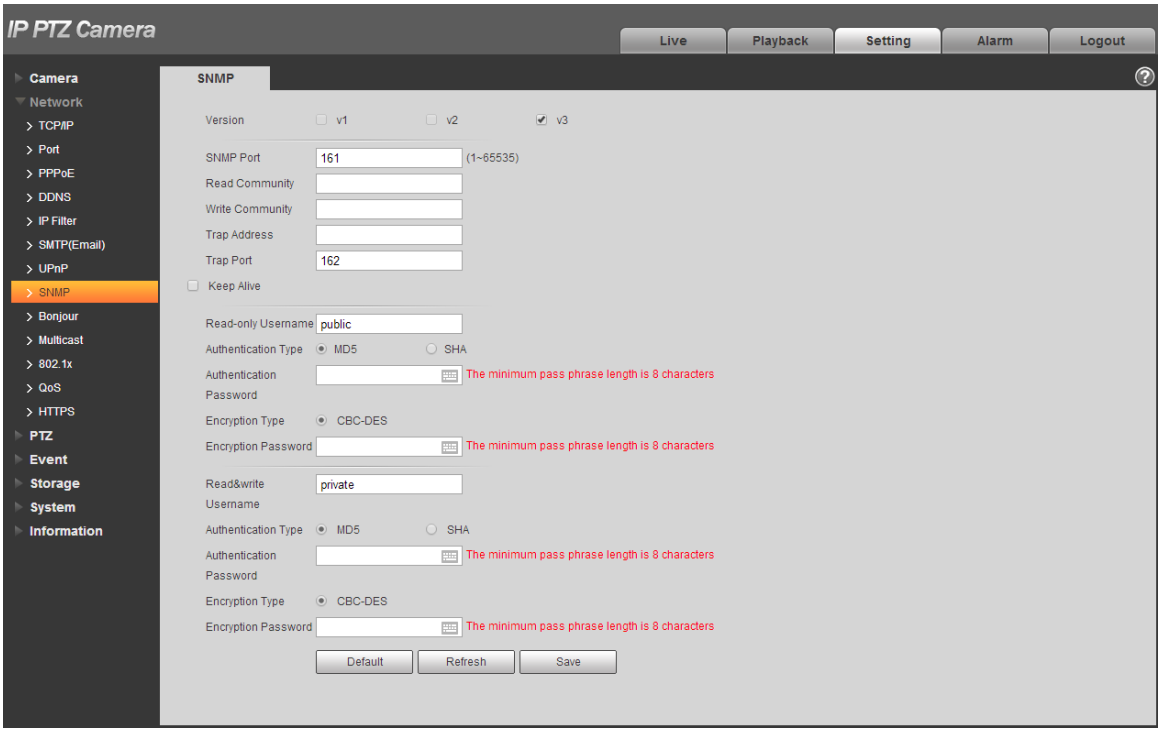


Figure 4-44

Step 2

Configure info of each parameter according to the actual needs.

Parameter	Function
SNMP Version	● Check SNMP v1, device can only process v1 info. ● Check SNMP v2, device can only process v2 info. ● Check SNMP v3, can set username, password and encryption method. Server calibrate corresponding username, password and encryption method too access 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	It is a string, as command between management and proxy, , defining a proxy, and a manager's authentication.
Read community	Read-only access to all SNMP targets, default is public. Note: Only number, letter, _, and – supported.
Write community	Read/write access to all SNMP targets, default is private. Note: Only number, letter, _, and – 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 Port	Port which send Trap message, default is 162, range 1~65535.
Read-only Username	Default is public. Note: Name only can be number, letter and underline.
Read/Write Username	Default is private. Note: Name only can be number, letter and underline.
Authentication	You may select MD5 or SHA, default is MD5.
Authentication Password	Password not less than 8 characters.
Encryption	Default is CBC-DES.
Encryption Password	Password not less than 8 characters.

Table 4-18

Step 3

Click "Save" to make config valid.

4.2.9 Bonjour

Bonjour, known as zero config networking, can auto discover the PC, device and service on the IP network. Bonjour uses the IP protocol with industrial standard to allow the device to discover each other automatically without inputting IP address or configuring DNS server.

After Bonjour function is enabled, the network cameras will be auto detected in the operating system and client which support Bonjour. When the network camera is auto detected by Bonjour, it will display the “Server Name” which is configured by users.

Step 1

Select “Setup > Network > Bonjour”.

The system will display the interface of “Bonjour”, which is shown in Figure 4-45.

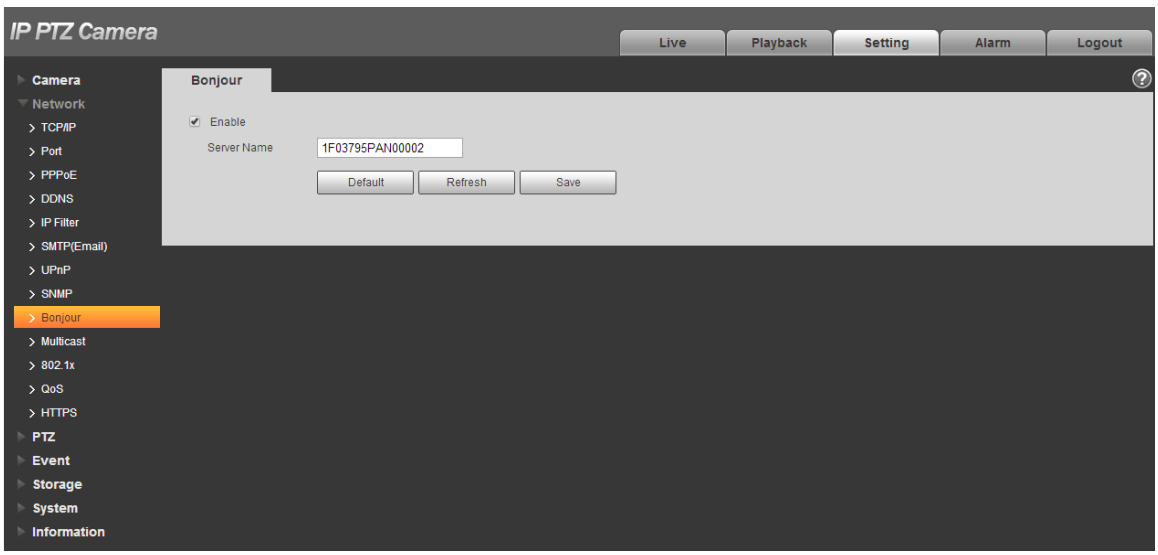


Figure 4-45

Step 2

Check “Enable” to set server name.

Step 3

Click “Save” to make config valid.

In the operating system and client which support Bonjour, it can visit network camera WEN interface via Safari browser, the steps are as follows:

Step 1

Click Safari browser “Display All Bookmarks”.

Step 2

Open “Bonjour”, and it can auto detect the network camera which enables Bonjour function in the LAN.

Step 3

Click it to visit corresponding WEB page.

4.2.10 Multicast

Preview video image via network device visit, it will fail to preview video image if it exceeds the visit upper limit of the device, at this moment you can solve the problem by adopting multicast protocol visit via setting multicast IP to the device.

Step 1

Select “Setup > Network > Multicast”.

The system will display the interface of “Multicast”, which is shown in Figure 4-46.

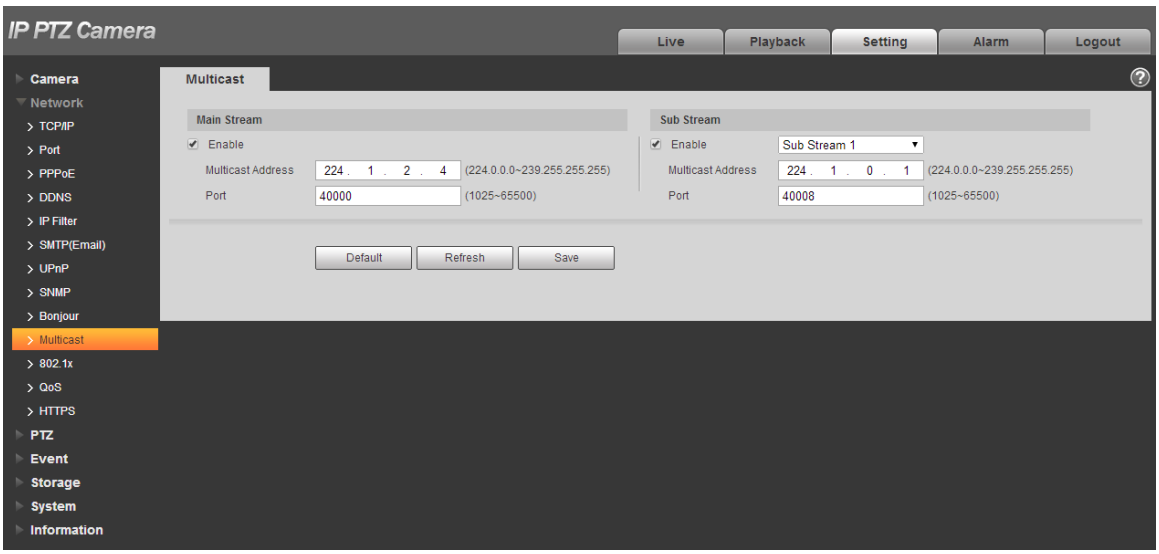


Figure 4-46

Step 2

Check “Enable” to enable multicast.

Step 3

Input multicast address and port.

Step 4

Click “Save” to complete config.

4.2.11 802.1x

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

Step 1

Select “Setup > Network > 802.1x”.

The system will display the interface of “802.1x”, which is shown in Figure 4-47.

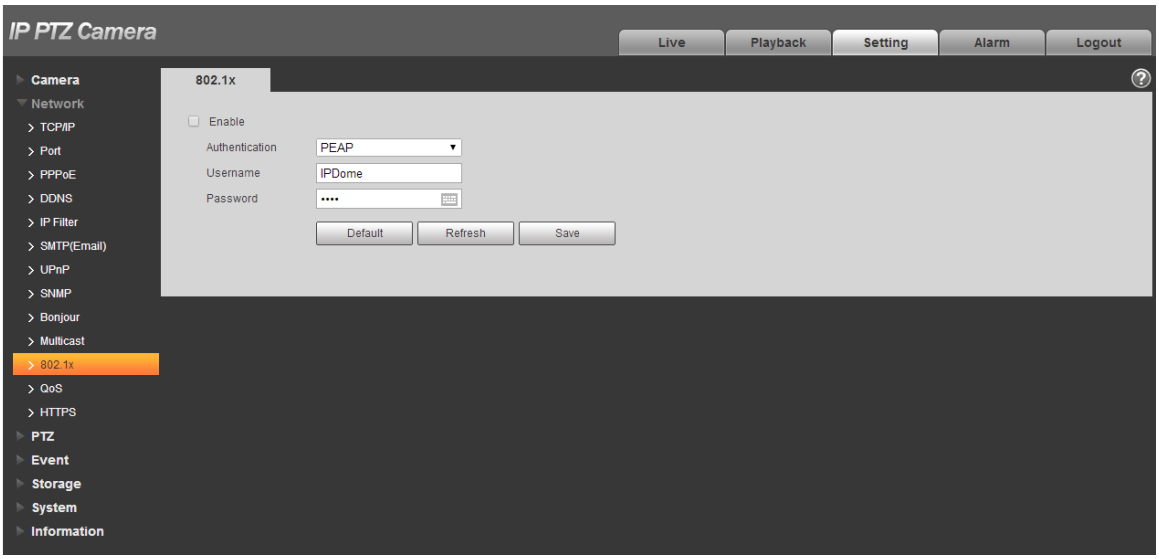


Figure 4-47

Step 2

Check “Enable” to enable 802.1x.

Step 3

Select authentication mode, set username and password.

Please refer to Table 4-19 for detailed information.

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

Table 4-19

Step 4

Click “Save” to complete config.

4.2.12 QoS

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

We can set the DSCP (Differentiated Services Code Point) of the IP to distinguish the data packet so that the router or the hub can provide different services for various data packets. It can select the

different queues according to the priority (64 different priority levels) of the packets and select the bandwidth of the each queue. Level 0 is the lowest, and level 63 is the highest. It can also discard at the different ratio when the broad bandwidth is jam.

Step 1

Select “Setup > Network > QoS”.

The system will display the interface of “QoS”, which is shown in Figure 4-48.

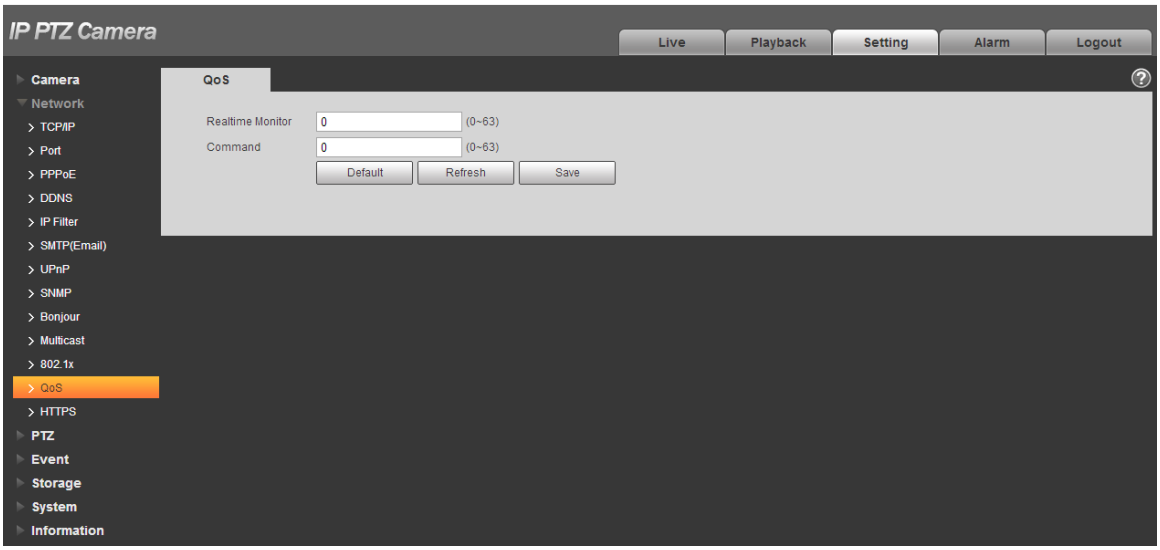


Figure 4-48

Step 2

Set realtime monitor and operation command.

Please refer to the following sheet for detailed information.

Parameter	Function
Realtime monitor	Data packet of network video monitoring, the value ranges from 0 to 63.
Command	Configure or inquire non-monitoring data packet for the device, the value ranges from 0 to 63.

Table 4-20

Step 3

Click “Save” to complete config.

4.2.13 HTTPs

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

4.2.13.1 **Create Custom Certificate and Install**

Step 1

Select “Setup > Network > HTTPs”, and the system will display the interface of HTTPs, which is shown in Figure 4-49.

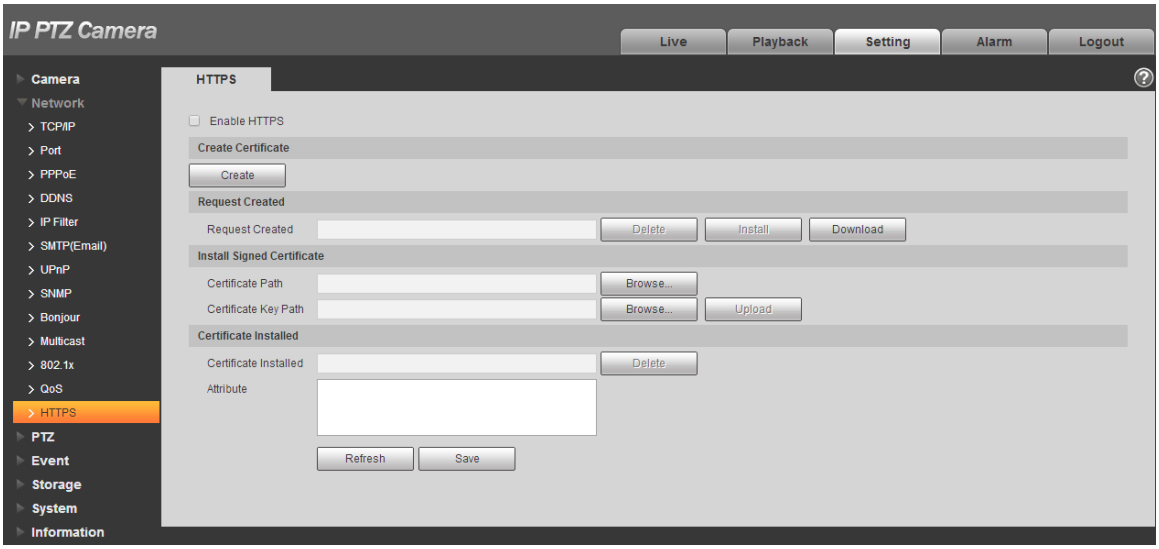


Figure 4-49

Step 2

Create certificate.

1. Click “Create” and it will pop out the dialog box of “HTTPs”, which is shown in Figure 4-50.

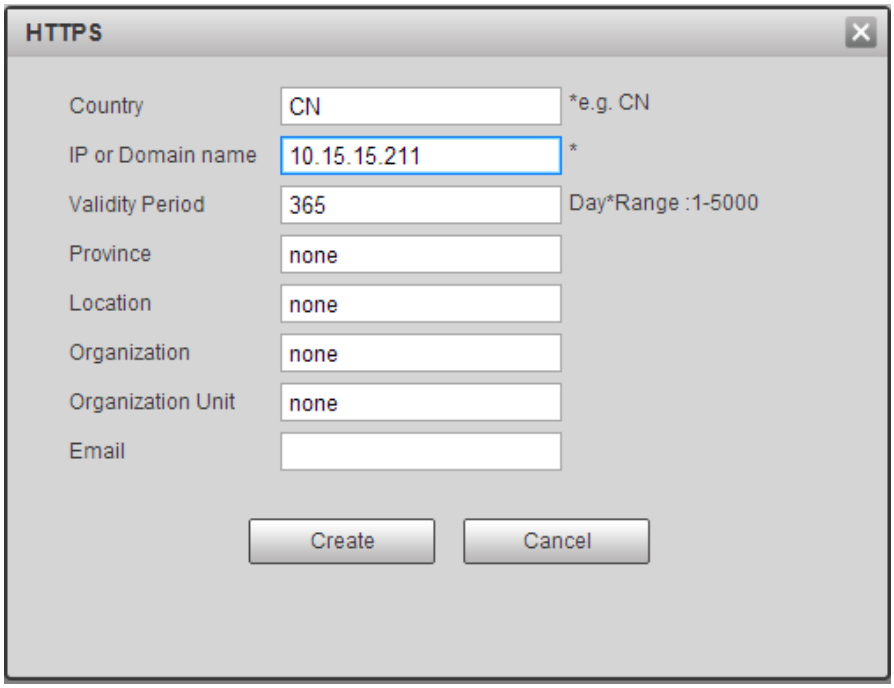


Figure 4-50

2. Set HTTPs parameters; please refer to the following table for more details.

Parameter	Note
Country	Country abbreviation. You can only enter 2 capital letters.
IP/Domain name	Device IP address.
Validity period	The validity period of certificate
Province	The province which uses the certificate.
Location	The location which uses the certificate.
Organization	The organization which uses the certificate
Organization unit	The name of organization unit which uses the certificate.
Email	The personal or unit email which uses the certificate.

Table 4-21

3. Click “Create”. It will display the created request in the area of “Request Created” after it finishes creating.

Step 3

Click “Install”. The system starts to install certificate, it will generate certificate attribute in the area of “Certificate Installed” after installation is completed.

Note

Click the “Delete” button of the “Certificate Installed” area to delete the installed certificate.

Step 4

Click “Download” to save the root certificate.

Step 5

Install root certificate.

1. Double click the RootCert.cer you have downloaded and the system will pop out the dialog box of “Certificate”, which is shown in Figure 4-51.

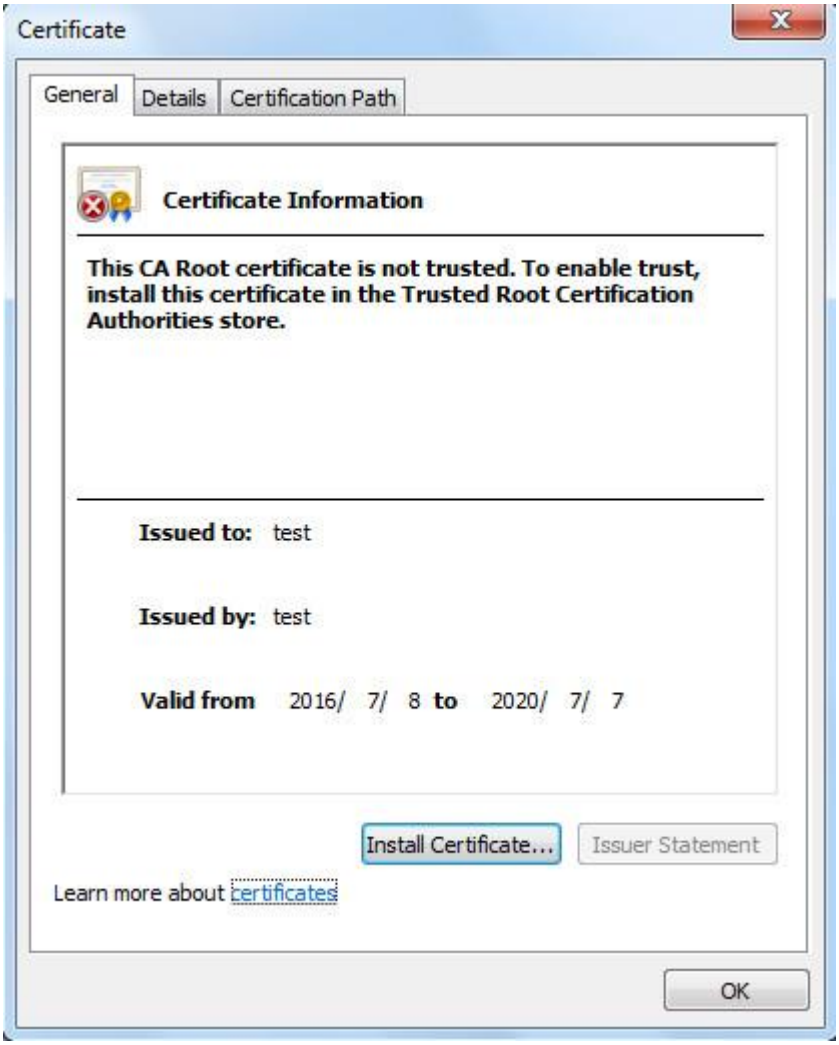


Figure 4-51

2. Click “Install Certificate”. The system will pop out the dialogue box of “Certificate Import Wizard”, which is shown in Figure 4-52.



Figure 4-52

3. Click “Next” and the system will display the interface of certificate store, which is shown in Figure 4-53.

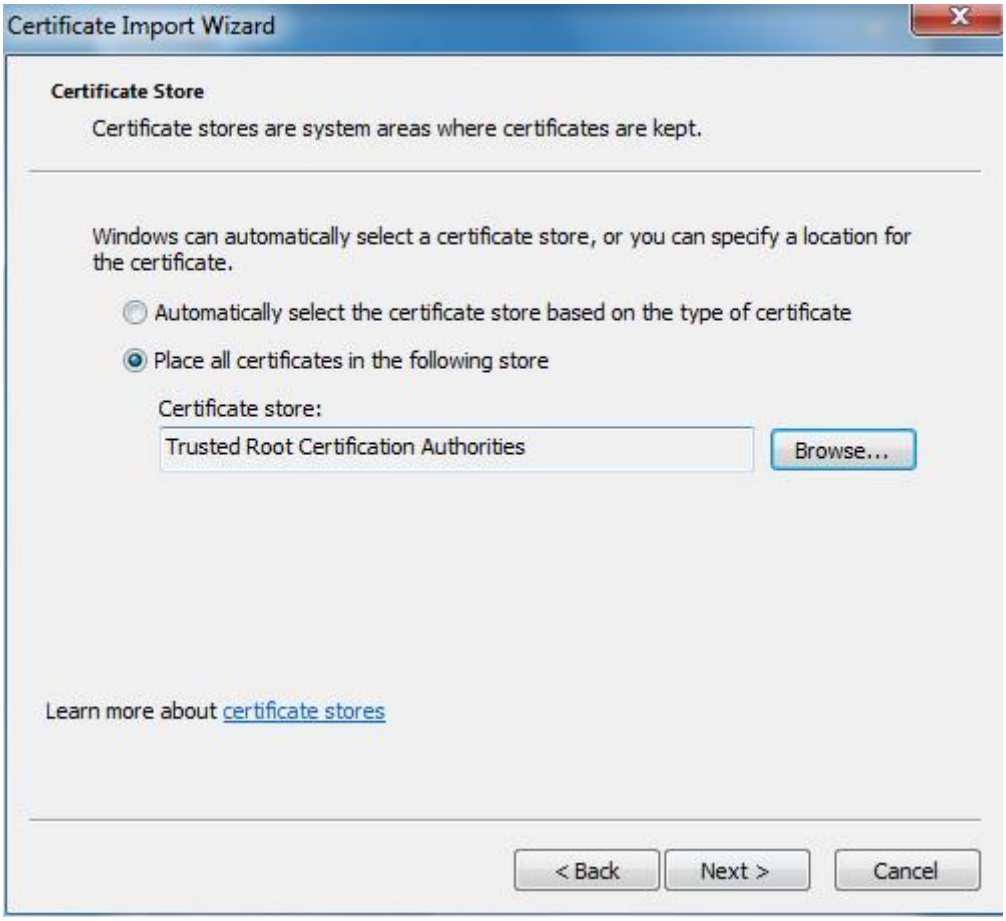


Figure 4-53

4. Select “Place all certificates in the following store”, click “Browse” and set the certificate store as “Trusted Root Certification Authorities”, and click “Next”. The system will display the interface of “Completing the certificate import wizard”, which is shown in Figure 4-54.

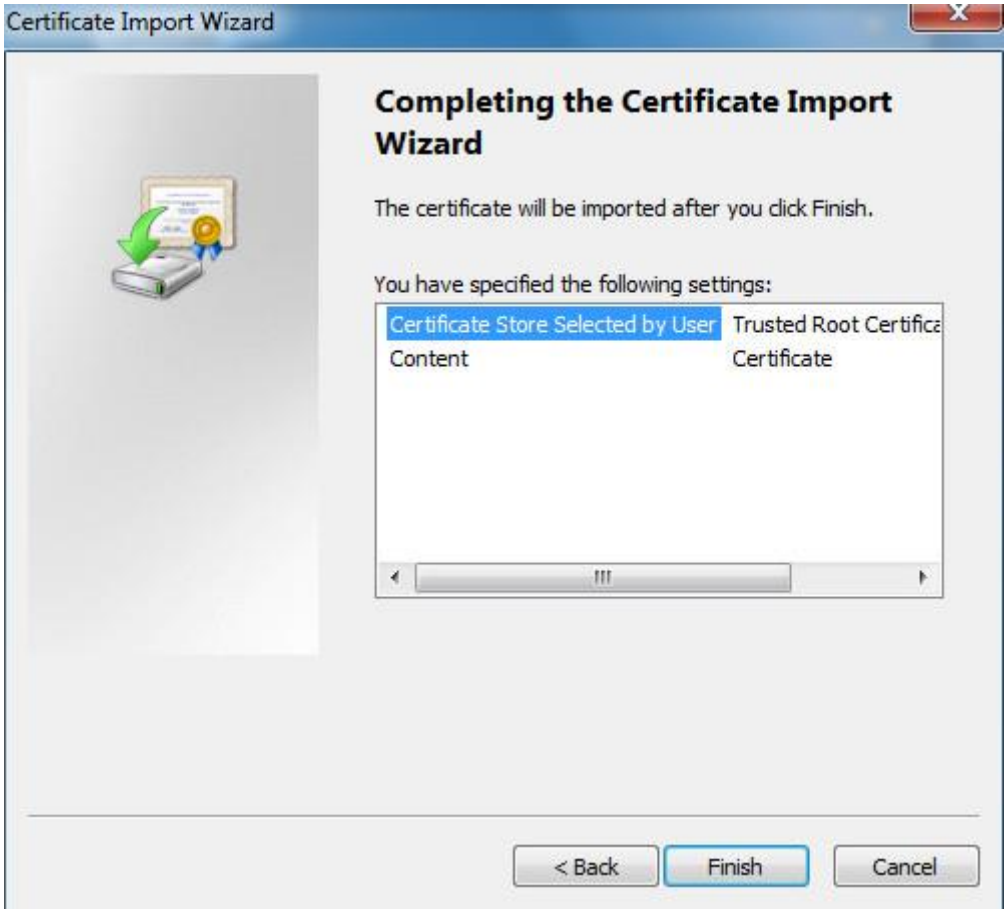


Figure 4-54

5. Click “Finish”. The system will pop out the dialog box of “Security Warning”, click “Yes” and the system will pop out the prompt of “The Import is successful”, click “OK” to complete certificate import.
6. Click “OK” to complete root certificate installation.

Step 6

Click “Save” and the device begins to reboot. Enter https://device IP address in the browser and make access to the device via HTTPs after the device is rebooted.

4.2.13.2 **Install Signed Certificate**

It can import signed certificate and certificate secret key after acquiring signed certificate and certificate secret key from the digital signature organization.

Step 1

Select “Setup > Network > HTTPs”. The system will display the interface of “HTTPs”, which is shown in Figure 4-55.

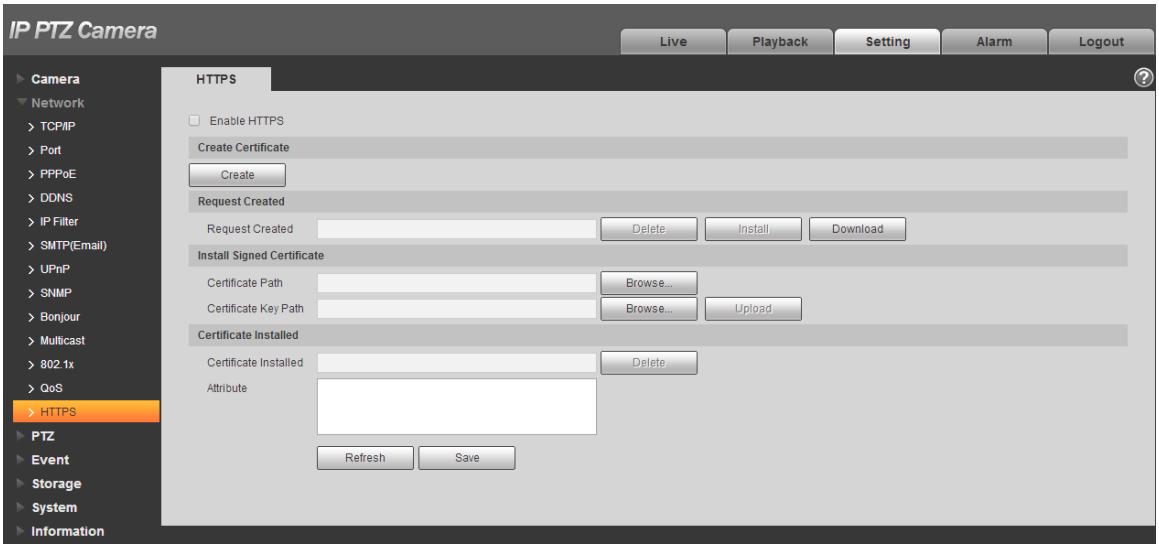


Figure 4-55

Step 2

Click the “Browse” which is corresponding to “Certificate Path”, select the signed certificate; click the “Browse” which is corresponding to “Certificate Key Path”, select the corresponding secret key file of signed certificate.

Step 3

Click “Upload” and the system begins to install certificate, it will generate certificate attribute in the area of installed certificate after installation is completed.

Note

Click “Delete” of the “Installed Certificate” area to delete the installed certificate.

Step 4

Click “Download” to save root certificate.

Step 5

Install root certificate.

1. Double click RootCert.cer which has been downloaded. The system will pop out the dialog box of “certificate”, which is shown in Figure 4-56.

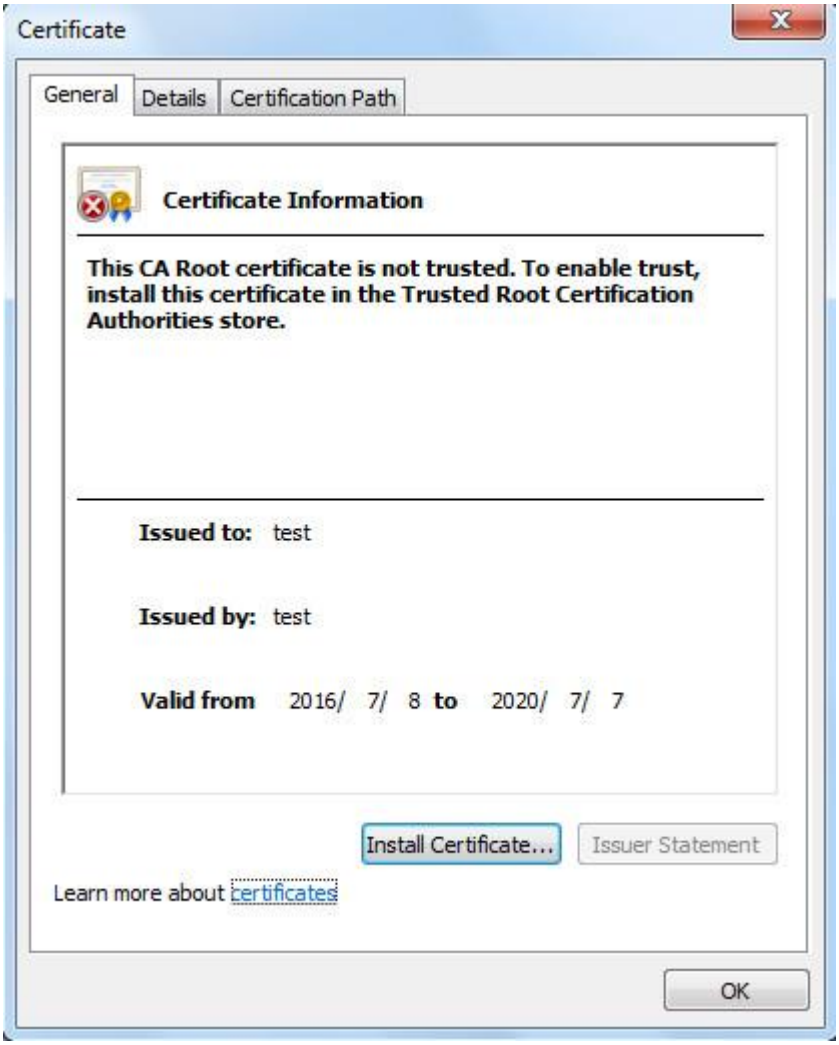


Figure 4-56

2. Click “Install Certificate”. The system will pop out the dialog box of “Certificate Import Wizard”, which is shown in Figure 4-57.



Figure 4-57

3. Click “Next” and the system will display the interface of “Certificate Store”, which is shown in Figure 4-58.

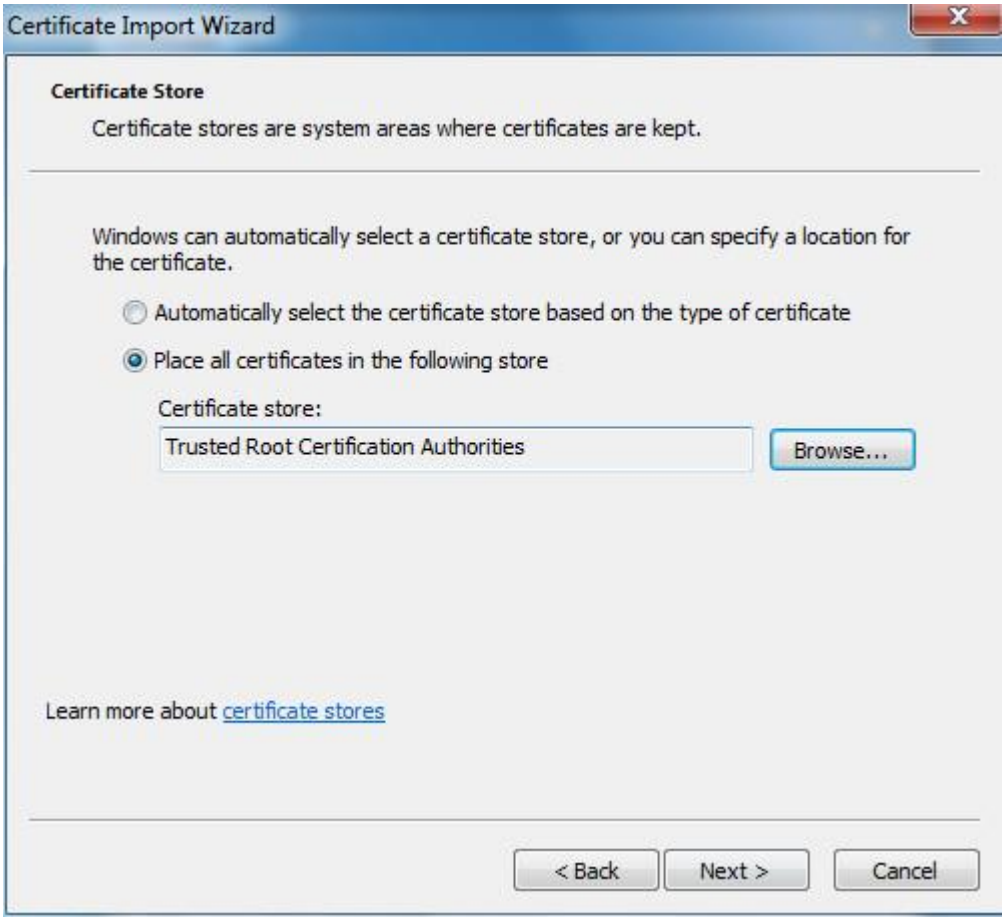


Figure 4-58

4. Select “Place all certificated in the following store”, click “Browse” to set “Certificate Store” as “Trusted Root Certification Authorities”, and click “Next”. The system will display the interface of “Completing the certificate import wizard”, which is shown in Figure 4-59.

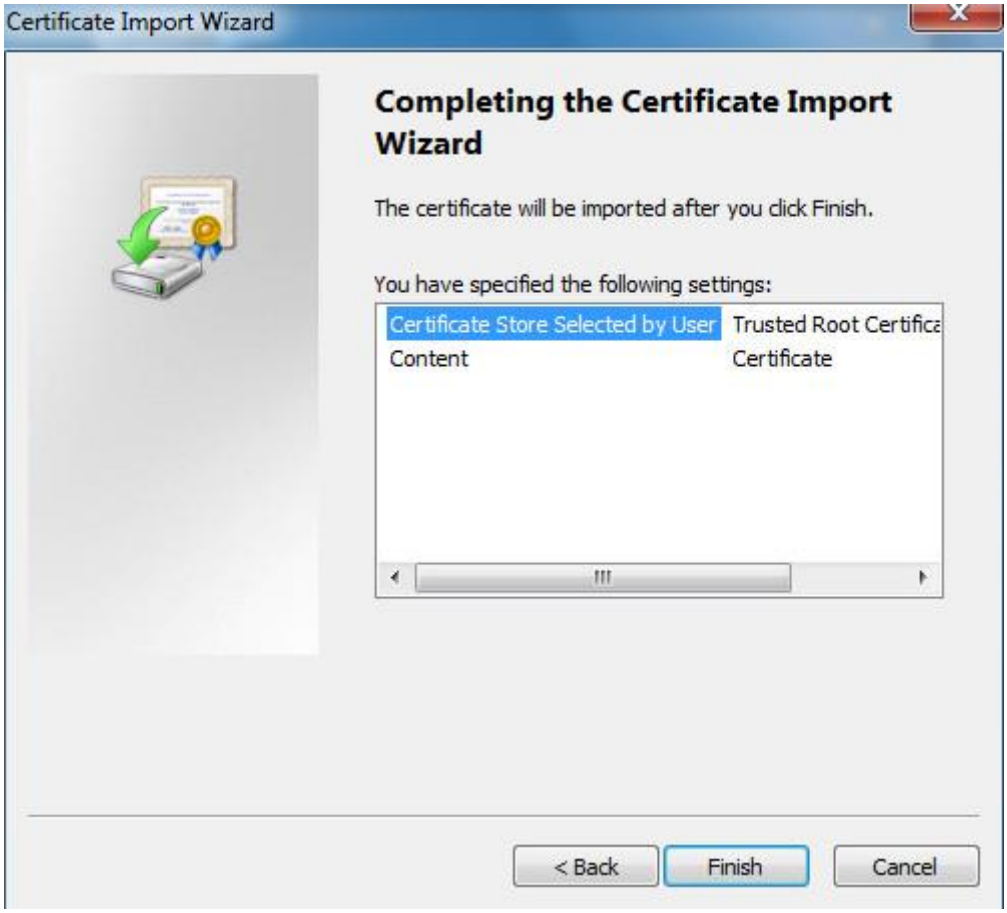


Figure 4-59

5. Click “Finish”, and it will pop out the dialog box of “Security Warning”, click “Yes” and the system will pop out the prompt of “The import was successful”, click “OK” to complete certificate import. Please refer to Figure 4-60 and Figure 4-61 for more details.
6. Click “OK” to complete root certificate installation.

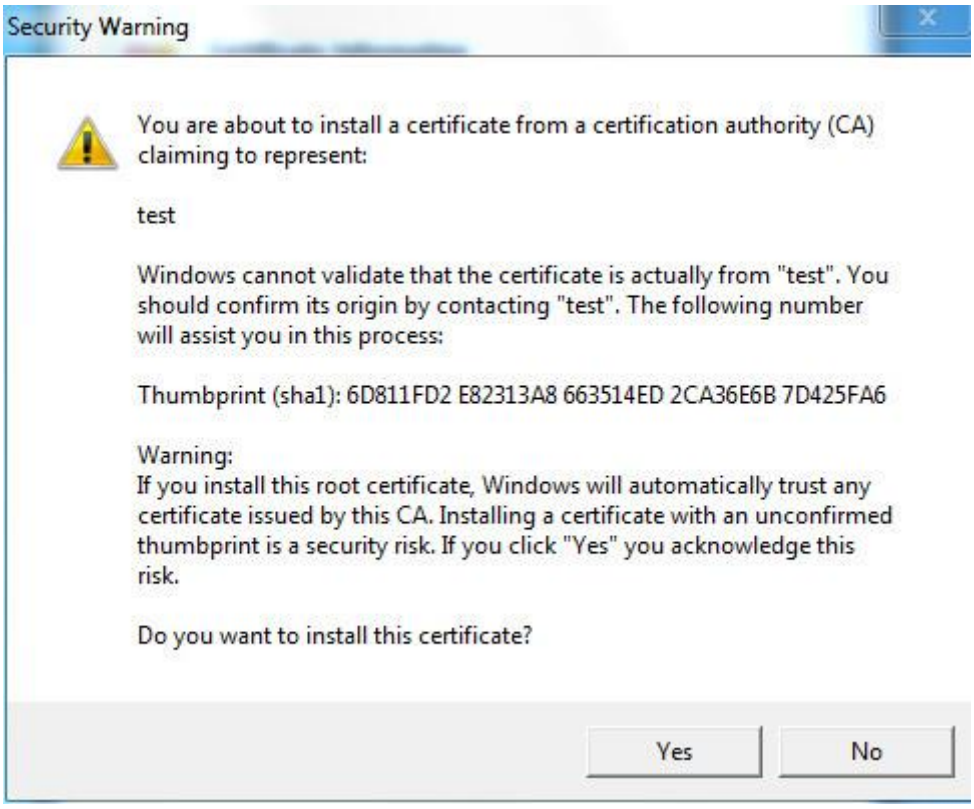


Figure 4-60



Figure 4-61

Step 6

Select “Enable HTTPs”, click “Save”. The device begins to reboot. Enter https://device IP address in the browser and make access to the device via HTTPs protocol after the device is rebooted.

4.3 PTZ Setting

4.3.1 Protocol

4.3.1.1 **Network PTZ**

Step 1

Select “Setup > PTZ Setting > Protocol > Network PTZ”.

The system will display the interface of “Network PTZ”, which is shown in Figure 4-62.

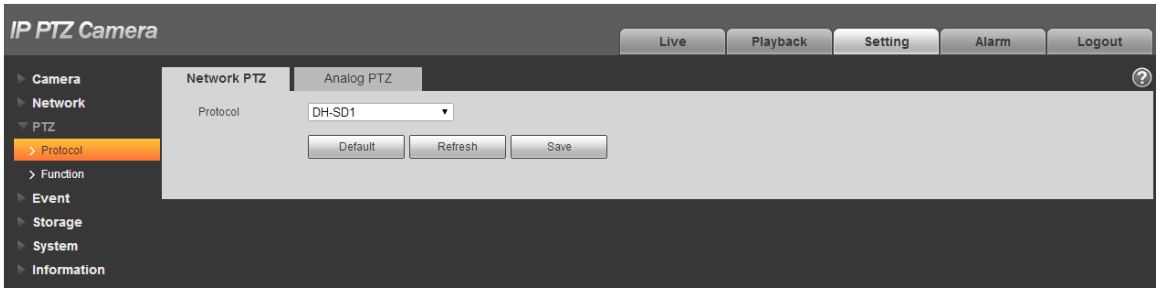


Figure 4-62

Step 2

Set PTZ protocol.

Step 3

Click “Save” to complete config.

4.3.1.2 **Analog PTZ**

Step 1

Select “Setup > PTZ Setting > Protocol > Analog PTZ”.

The system will display the interface of “Analog PTZ”, which is shown in Figure 4-63.



Figure 4-63

Note

Some models don’t support analog PTZ function.

Step 2

Configure info of each parameter according to the actual needs; refer to Table 4-22 for more details.

Parameter	Function
Address	It is to set corresponding device address. Note: Make sure the address is the same as that of the device, otherwise it will fail to control the device.
Baud Rate	It is to select the baud rate used by the device.
Data Bit	It is 8 by default.
Stop Bit	It is 1 by default.
Parity	It is none by default.

Table 4-22

Step 3

Click “Save” to complete config.

4.3.2 Function

4.3.2.1 **Preset**

Preset means the current environment in which the camera is located, users can adjust the PTZ and camera to the environment quickly via calling preset.

Step 1

Select “Setup > PTZ Setting > Function > Preset”.

The system will display the interface of “Preset”, which is shown in Figure 4-64.

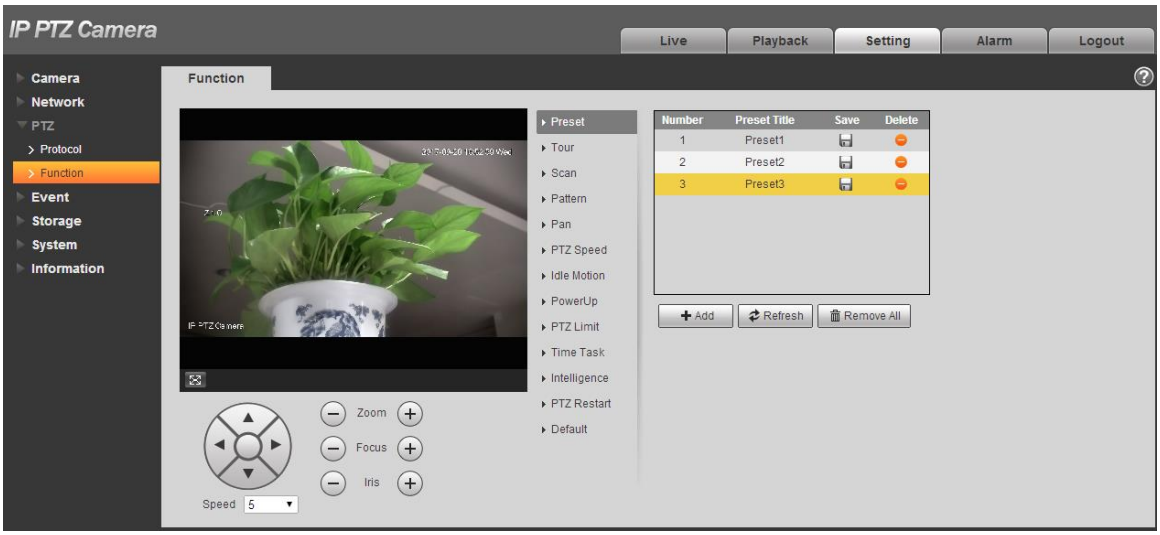


Figure 4-64

Step 2

In the lower left corner of the config interface, click direction button, and to adjust PTZ direction, zoom, focus and iris size, adjust the camera to a proper monitoring location.

Step 3

Click “Add”. It will add the location as preset in the list, and it will be displayed in the preset list.

Step 4

Click to save the preset.

Step 5

Implement relevant operation upon the preset.

- Double click “Preset title” to modify the title to be displayed on the monitoring screen for the preset.
- Click to delete the preset.
- Click “Clear” to remove all the preset.

4.3.2.2 **Tour**

Tour can realize auto movement according to the set preset.

Note

It needs to set several presets in advance.

Step 1

Select “Setup > PTZ Setting > Function > Tour”.

The system will display the interface of “Tour”, which is shown in Figure 4-65.



Figure 4-65

Step 2

Click “Add” which is located on the upper right corner of the interface, and then it will add tour path.

Step 3

Click “Add” which is located on the lower right corner, and then it will add several presets.

Step 4

Implement relevant operation upon the tour.

- Double click “Tour Name” to modify the name of the tour.
- Double click “Duration” to set duration for each preset.

Step 5

Click “Start” to start tour.

Note

The device will stop tour if PTZ is operated during tour.

Step 6

Click “Stop” to stop tour.

4.3.2.3 **Scan**

Scan means the speed dome scanning back and forth within the left and right limit with a certain speed.

Step 1

Select “Setup > PTZ Setting > Function > Scan”.

The system will display the interface of “Scan”, which is shown in Figure 4-66.

Step 2

Click San No.

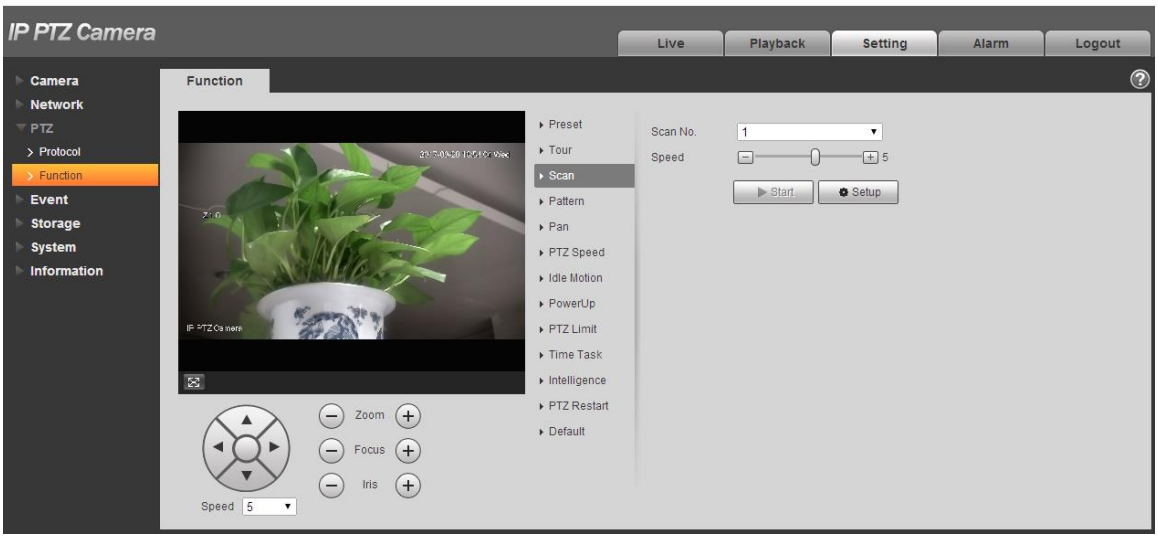


Figure 4-66

Step 3

Drag Speed bar and set scan speed.

Step 4

Click “Setup”, adjust the camera direction to make it reach proper location.

Step 5

Click “Set Left/Right Limit” to set the location as the “Left/Right Limit” of the camera.

Step 6

Click “Start” to start scan.

Step 7

Click “Stop” to stop scan.

4.3.2.4 **Pattern**

Pattern can continuously record the operations implemented upon the device, such as pan, tilt, zoom, call preset and etc. You can directly call the pattern after it is saved completely.

Step 1

Select “Setup > PTZ Setting > Function > Pattern”.

The system will display the interface of “Pattern”, which is shown in Figure 4-67.

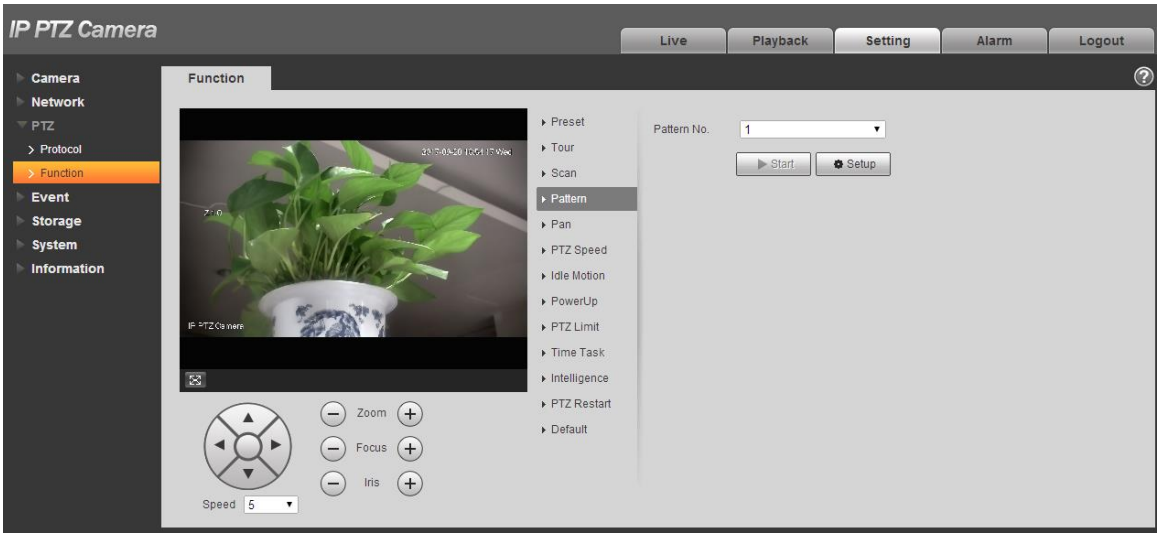


Figure 4-67

Step 2

Select Pattern No.

Step 3

Click “Setup” and click “Start Rec’, operate the PTZ according to the actual needs.

Step 4

Click “Stop Rec” to complete recording.

Step 5

Click “Start” to start pattern.

Step 6

Click “Stop” to stop pattern.

4.3.2.5 **Pan**

Pan means the speed dome rotating continuously 360° horizontally with a certain speed.

Step 1

Select “Setup > PTZ Setting > Function > Pan”.

The system will display the interface of “Pan”, which is shown in Figure 4-68.

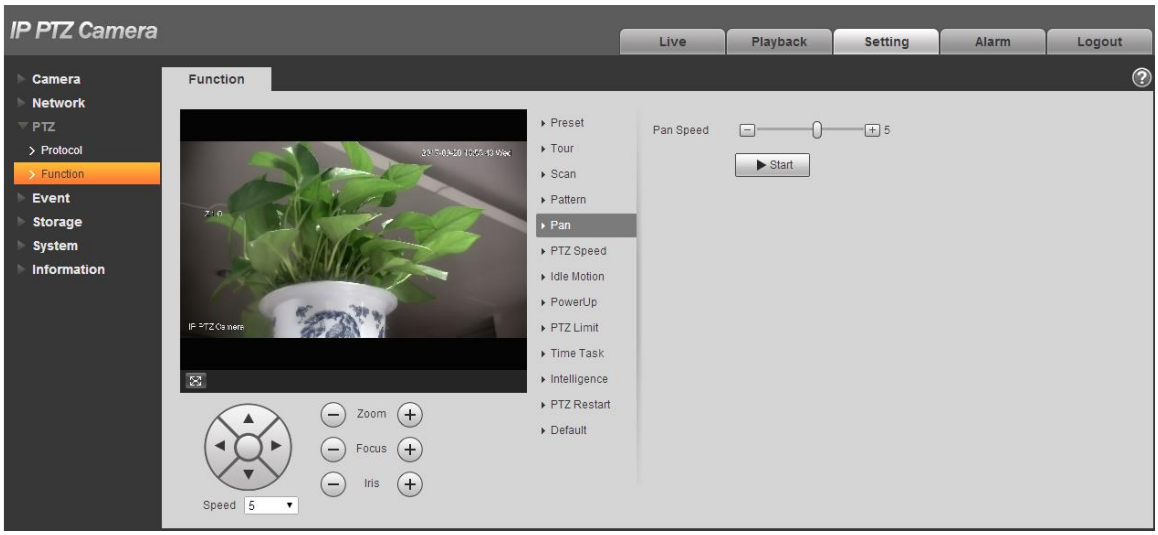


Figure 4-68

Step 2

Drag speed bar and set “Pan Speed”

Step 3

Click “Start” to make the PTZ rotate horizontally with the speed you just set.

Step 4

Click “Stop” to stop pan.

4.3.2.6 **PTZ speed**

PTZ speed means the rotation speed of the device.

Step 1

Select “Setup > PTZ Setting > Function > PTZ Speed”.

The system will display the interface of “PTZ Speed”, which is shown in Figure 4-69.

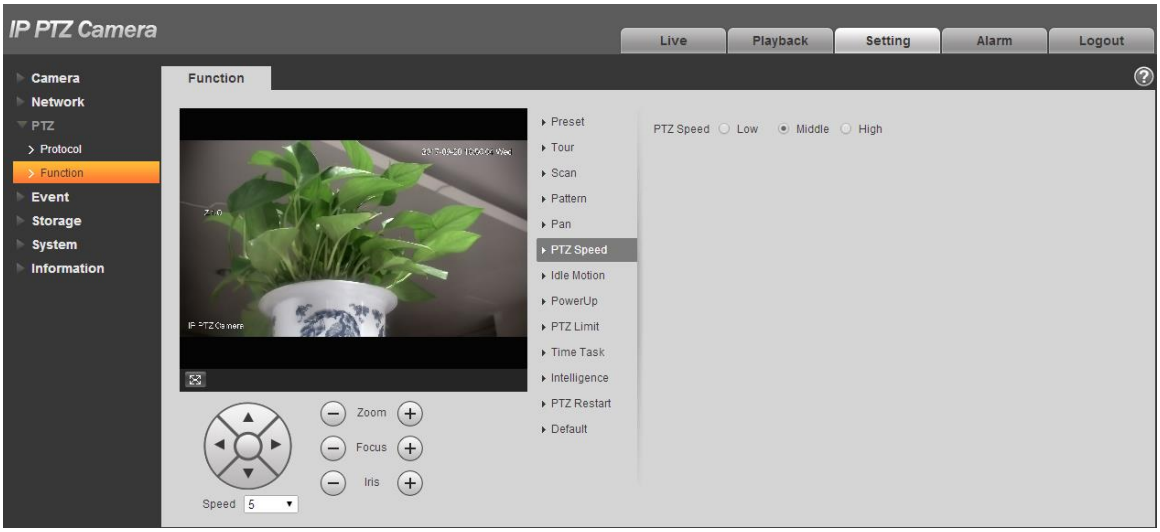


Figure 4-69

Step 2

Select “PTZ speed”, it is “Middle” by default.

The system will make the PTZ rotate with the speed you just set.

4.3.2.7 **Idle Motion**

Idle motion means the device implementing the behavior which is set in advance when it is not receiving any valid command within the set time.

Note

It needs to set preset, tour, scan and pattern in advance.

Step 1

Select “Setup > PTZ Setting > Function > Idle Motion”.

The system will display the interface of “Idle Motion”, which is shown in Figure 4-70.

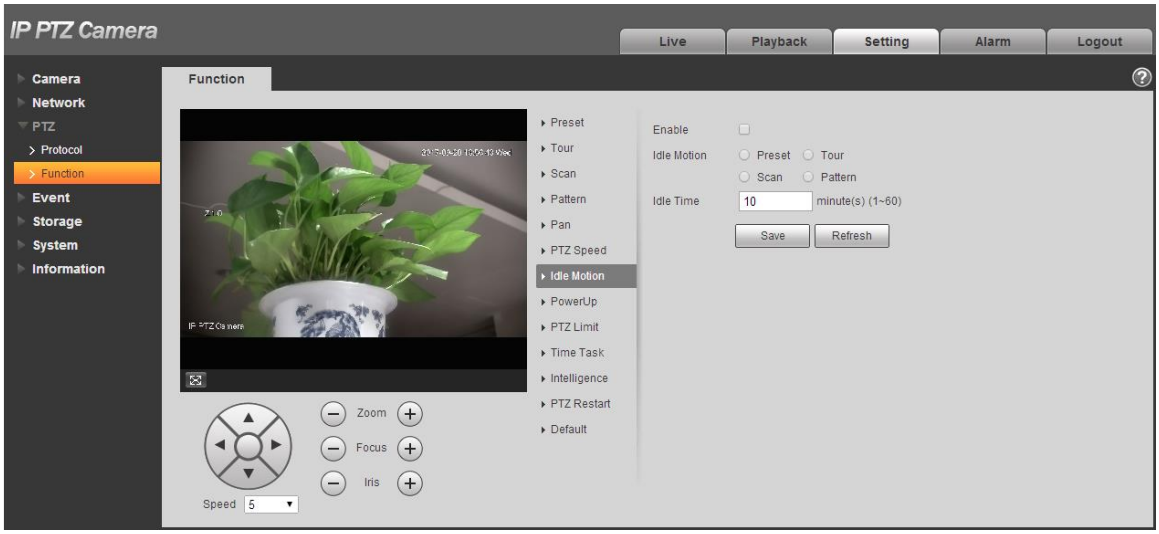


Figure 4-70

Step 2

Select “Enable” to enable idle motion function.

Step 3

Select types of idle motion, which are preset, tour, scan or pattern.

Step 4

Select the number of idle motion.

Step 5

Set the idle time of the selected motion.

Step 6

Click “Save” to complete config.

4.3.2.8 **Power Up**

It means the motion which is auto operated by the device after it is powered up.

Note

It needs to set preset, tour, scan and pattern in advance.

Step 1

Select “Setup > PTZ Setting > Function > Power up”, which is shown in Figure 4-71.

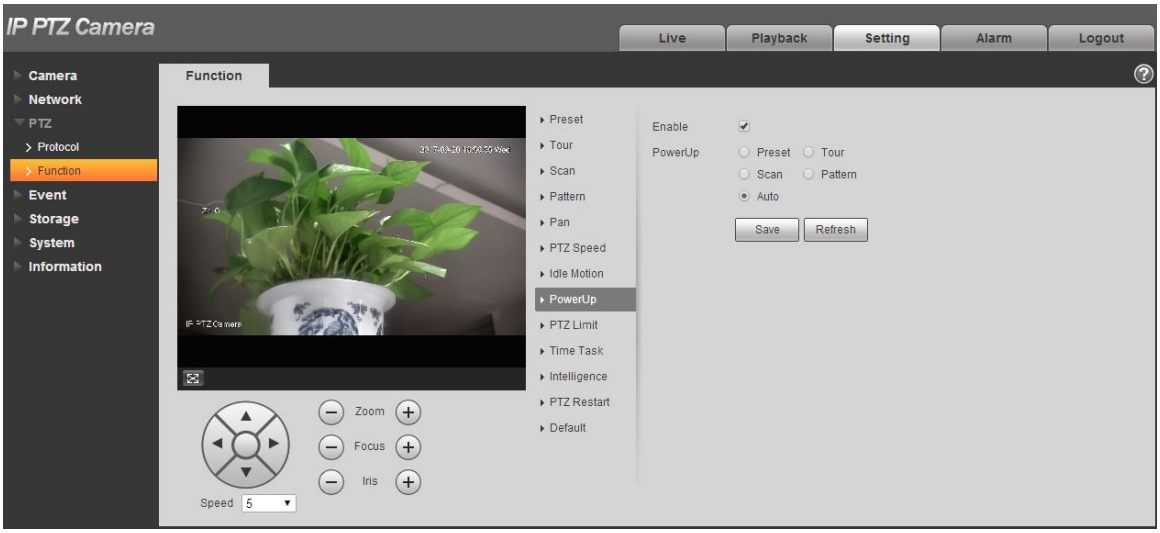


Figure 4-71

Step 2

Select “Enable” to enable PowerUp functions.

Step 3

Select the types of PowerUp; you can select preset, tour, scan, pattern or auto.

Note

The system will implement the last action before the camera’s power is cut off when selecting “Auto”.

Step 4

Select the number of action type.

Step 5

Click “Save” to complete config.

4.3.2.9 **PTZ Limit**

PTZ limit function is used to set the movement area of the device, which makes the device move within area.

Step 1

Select “Setup > PTZ Setting > Function > PTZ Limit”.

The system will display the interface of “PTZ Limit”, which is shown in Figure 4-72.

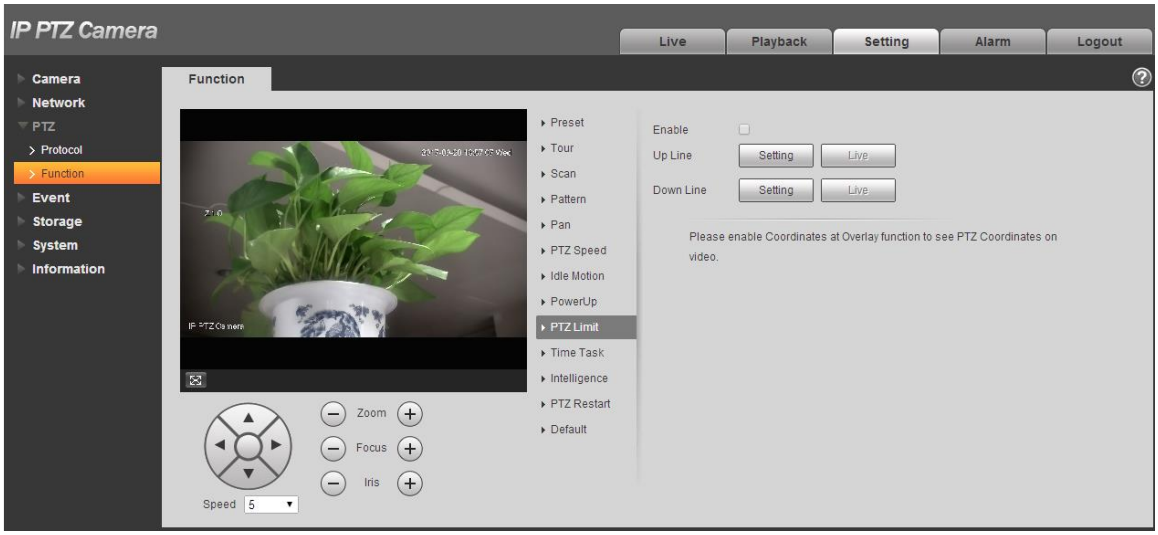


Figure 4-72

Step 2

Select “Enable” to enable PTZ Limit function.

Step 3

Control camera direction; click “Setting” to set up line.

Step 4

Control camera direction; click “Setting” to set down line.

Step 5

Click “Live” to preview the up line and down line which is already set.

4.3.2.10 **Time Task**

Time task is to implement relevant movements within the set period.

Note

It needs to set preset, tour, scan and pattern in advance.

Step 1

Select “Setup > PTZ Setting > Function > Time Task”.

The system will display the interface of “Time Task”, which is shown in Figure 4-73.

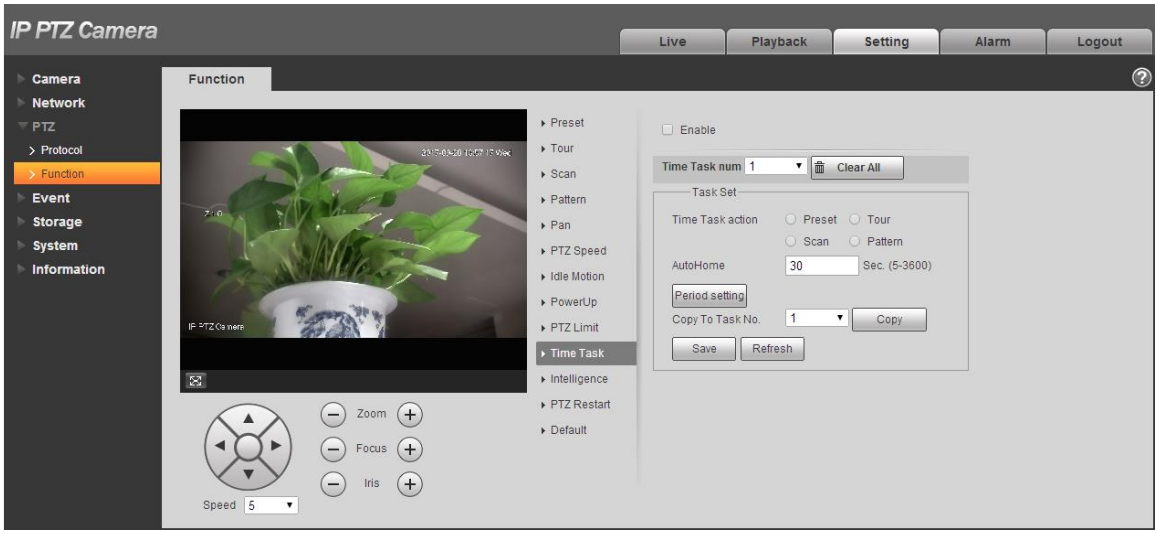


Figure 4-73

Step 2

Select “Enable” to enable the function of time task.

Step 3

It is to set the number of time task.

Note

Click “Clear All” to delete all the time tasks which have been set.

Step 4

Select time take action, you can select preset, tour, scan or pattern.

Step 5

Select action number.

Step 6

Set the time of auto home.

Note

Auto home time means the time it needs to take to auto recover time task when manually calling PTZ and interrupting time task.

Step 7

Click “Period Setting” to set the period of implementing time task.

Step 8

Click “Copy” and select task number, then you can copy it to the task whose number has been selected.

Step 9

Click ‘Save” to complete config.

4.3.2.11 **Intelligence**

It is to set the tracking duration of the camera. The config steps are shown as follows:

Step 1

Select “Setup > PTZ > Function > Intelligence” and the system will display the interface of “Intelligence”, which is shown in Figure 4-74.

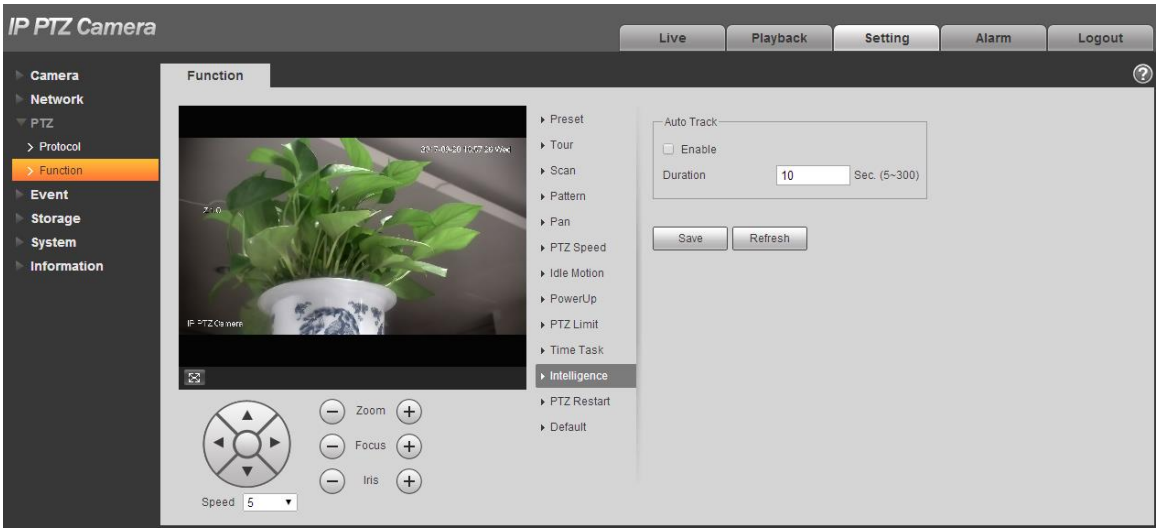


Figure 4-74

Step 2

Select “Enable” to enable auto tracking function.

Step 3

Input the duration of auto tracking.

Step 4

Click “Save” to complete config.

4.3.2.12 **PTZ Restart**

Step 1

Select “Setup > PTZ Setting > Function > PTZ Restart”.

The system will display the interface of “PTZ Restart”, which is shown in Figure 4-75.

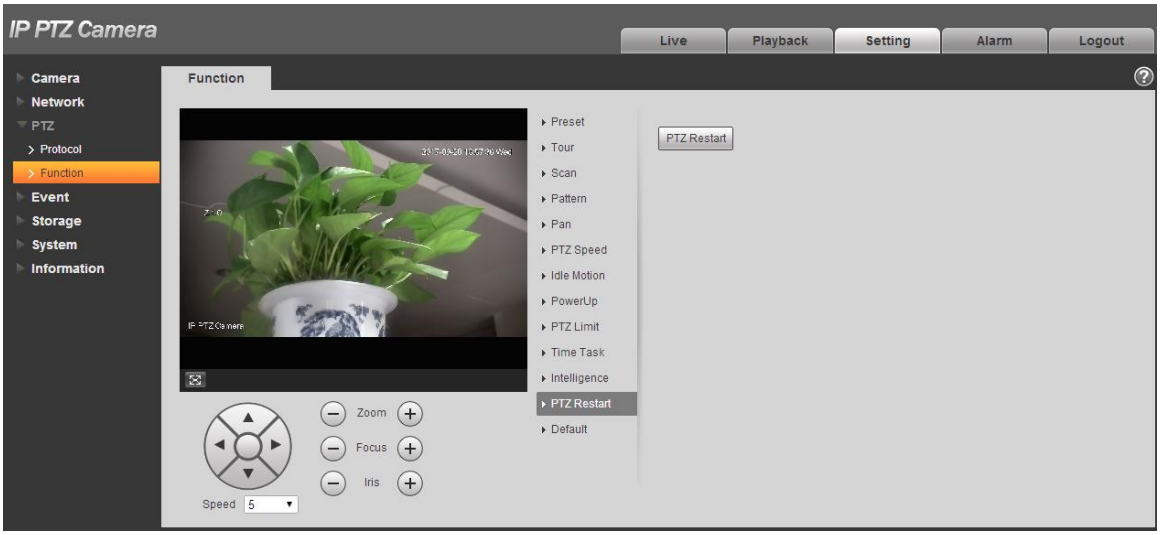


Figure 4-75

Step 2

Click “PTZ Restart” and the system will restart PTZ.

4.3.2.13 **Default**

The function can recover default settings of the PTZ. The config steps are shown as follows:

Note

The function will delete all the PTZ config made by users, please operate after confirmation.

Step 1

Select “Setup > PTZ Setting > Function > Default”.

The system will display the interface of “Default”, which is shown in Figure 4-76.

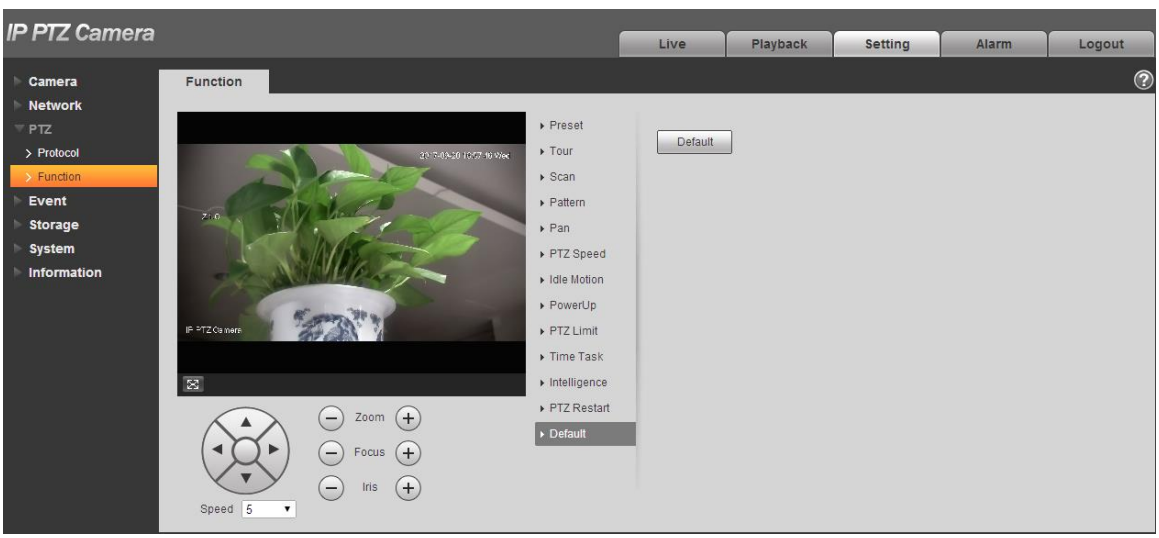


Figure 4-76

Step 2

Click “Default” to recover all the default settings.

4.4 Event

4.4.1 Video Detection

Video detection includes motion detection, video tamper and scene changing. The config steps are shown as follows.

4.4.1.1 **Motion Detection**

Step 1

Select “Setup > Event > Video Detection > Motion Detection”.

The system will display the interface of “Motion Detect”, which is shown in Figure 4-77.

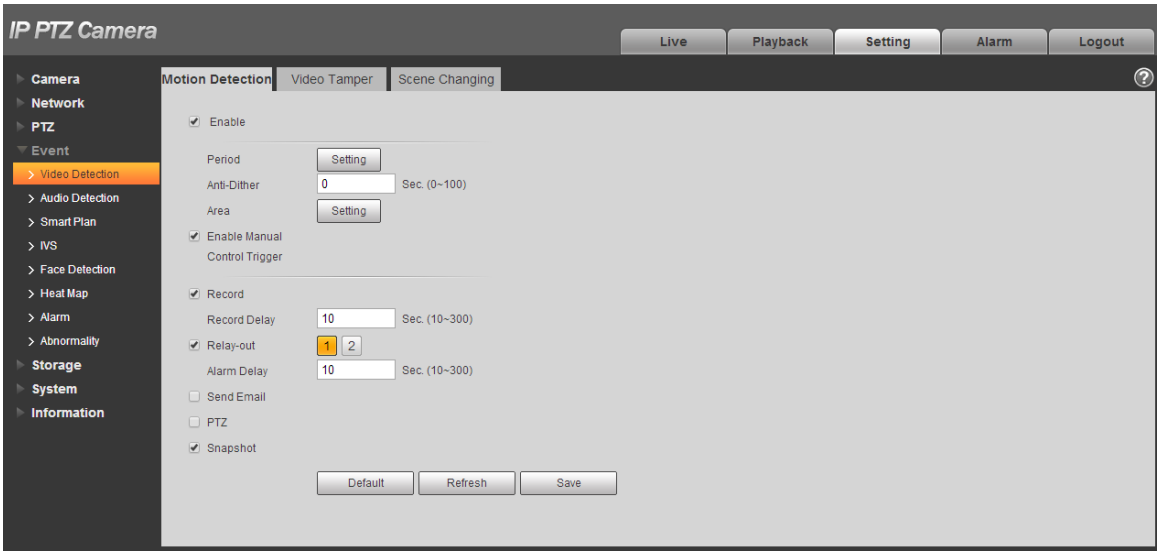


Figure 4-77

Step 2

Click “Enable” and configure info of each parameter according to the actual needs.

- Set working period.

Click “Setup”, and it will display the interface of working period in Figure 4-78.

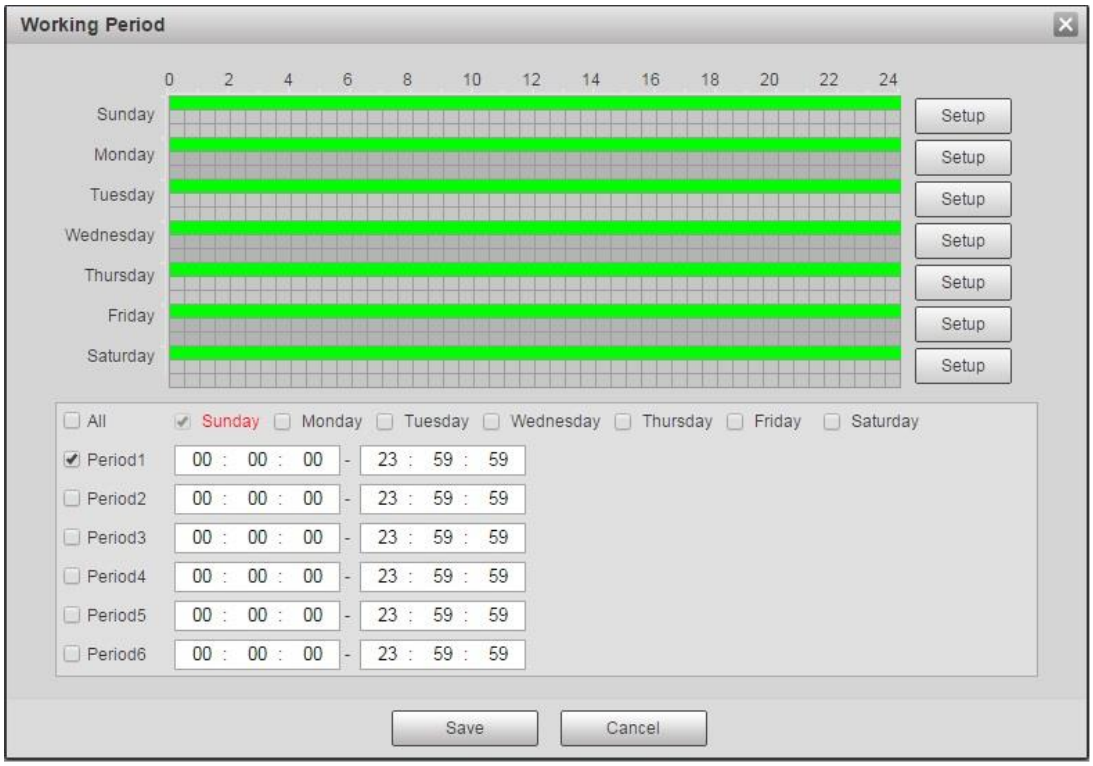


Figure 4-78

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

Note

You can also set working period via pressing left mouse button and dragging it on the setup interface.

- Set area

Click “Setup” and you can set area in the interface shown in Figure 4-79.

Different colors represent different areas. Each area can set different detection zones. Detection zone can be irregular and discontinuous.

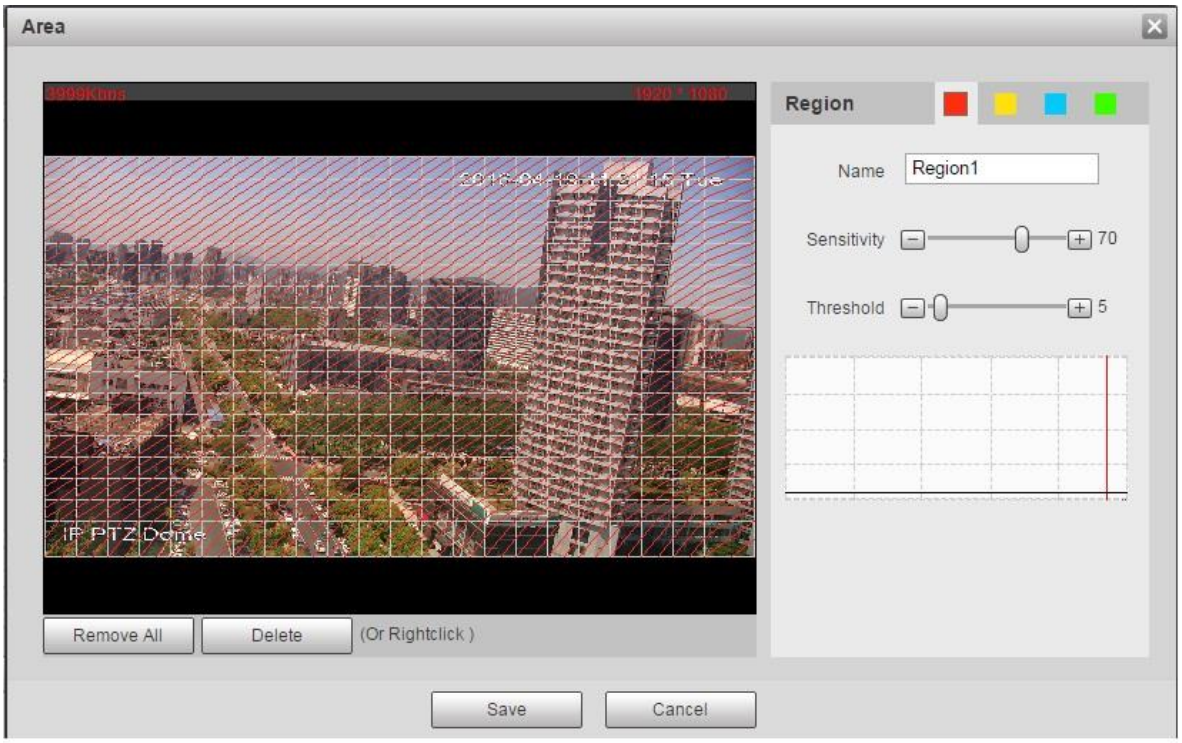


Figure 4-79

Parameter	Function
Name	Default area name includes Region 1, Region 2, Region 3, Region 4 and custom.
Sensitivity	It is sensitivity of brightness as motion detection is more possible to be trigger with high sensitivity. You can set up to four areas. The range is 0~100. The recommenced value is 30~70.
Area threshold	It is to check target object area related to detection area. The lower the area threshold, the easier to trigger motion detection. You can set up to four areas. The range is 0~100. The recommenced value is 1~10.
Waveform	Red means motion detection is triggered. Green means motion detection is not triggered.
Delete all	Clear all areas.
Delete	Delete selected area.

Table 4-23

- Other parameters

Parameter	Function
Anti-dither	System only memorizes one event during the anti-dither period. The unit is second, the value ranges from 0s to 100s.
Manual Control Excluded	Click it and it will generate motion detection event when excluding manual control, which can reduce the false alarm rate of motion detection event.
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Check it to enable alarm activation output port, it can activate corresponding alarm output device when alarm occurs.
Alarm delay	It means alarm delays a period of time to stop after alarm ends, the unit is second, and the value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs. User can set email address in Network>SMTP.
PTZ	● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. ● The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Table 4-24

Step 3

Click “Save” to complete config.

4.4.1.2 **Video Tamper**

Step 1

Select “Setup > Event > Video Detect > Video Tamper”.

The system will display the interface of “Video Tamper”, which is shown in Figure 4-80.

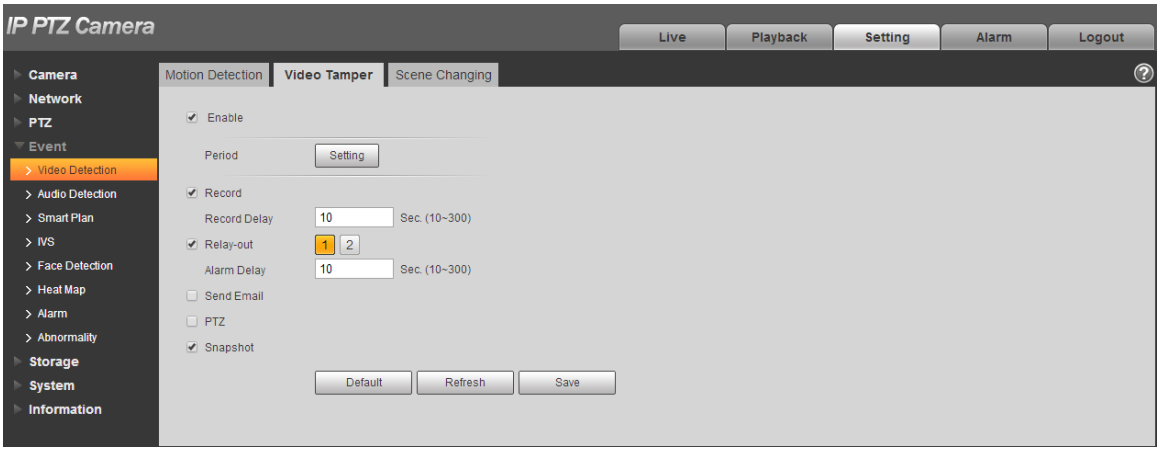


Figure 4-80

Step 2

Click “Enable” and configure info of each parameter according to the actual needs.

Note

Please refer to “4.4.1.1 Motion Detection” for more details about parameter config.

Step 3

Click “Save” to complete config.

4.4.1.3 **Scene Changing**

Step 1

Select “Setup > Event > Video Detection > Scene Changing”. The system will display the interface of “Scene Changing”, which is shown in Figure 4-81.



Figure 4-81

Step 2

Click “Enable” and then configure parameter info according to the actual requirements.

Note

Please refer to “4.4.1.1 Motion Detection” for more details about parameter config.

Step 3

Click “Save” to complete configuration.

4.4.2 Audio Detection

Step 1

Select “Setup > Event > Audio Detection”.

The system will display the interface of “Audio Detection”, which is shown in Figure 4-82.

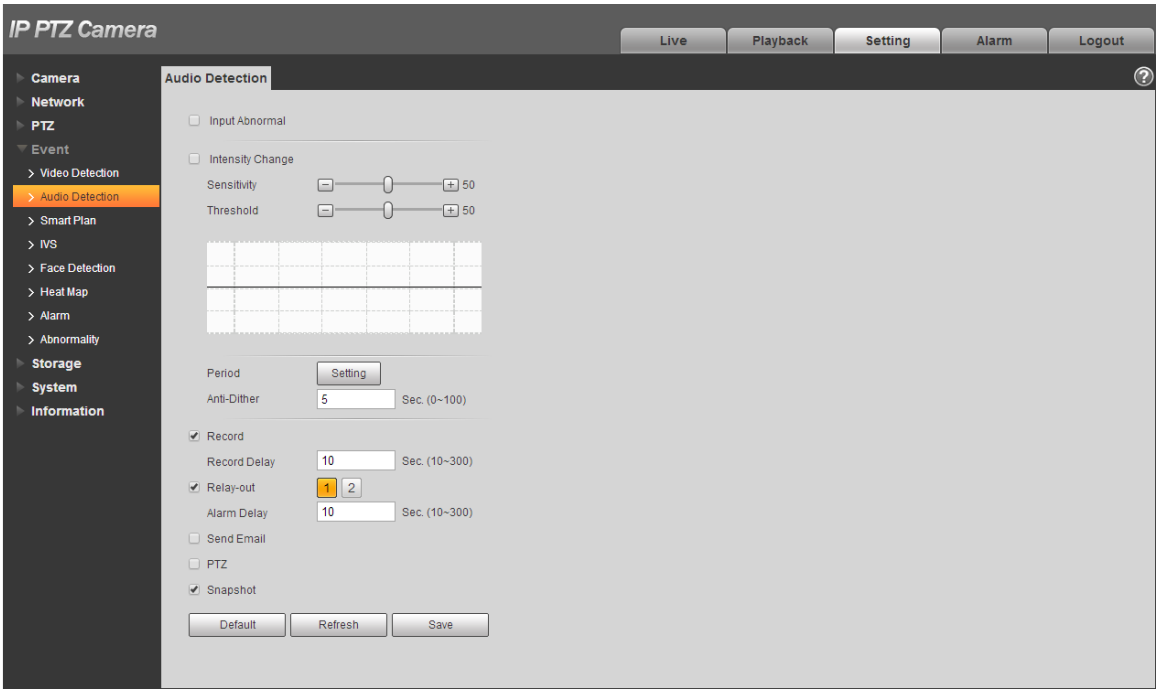


Figure 4-82

Step 2

Configure info of each parameter according to the actual needs; please refer to the following sheet for more details.

Parameter	Function
Enable Input Abnormal	Check “Enable Input Abnormal” and it will activate alarm when detecting audio input abnormal.
Enable Intensity Change	Check “Enable Intensity Change” and it will activate alarm when detecting audio intensity change surpass threshold.

Parameter	Function
Sensitivity	Levels range from1 to100 and adjustable, the smaller the value, it means the input sound volume change surpassing continuous environment volume and it can be judged as audio abnormal, users can adjust according to the actual environment testing.
Threshold	Levels range from 1 to 100 and adjustable, which is used to set filtered environment sound intensity. If the environment noise is bigger, users need to set the value higher. Besides, users can adjust it according to the actual environment testing.

Table 4-25

Note

Please refer to “4.4.1.1Motion Detection” for description of other parameters.

Step 3

Click “Save” to complete config.

4.4.3 Smart Plan

Statistics intelligent functions such as heat map, people counting can’t coexist with the intelligent functions related to preset, it needs users to select first. Each preset can set different intelligent function, the corresponding setting can be valid only when it selects exact intelligent function.

Note

- It needs to set preset in advance, please refer to “4.3.2.1 Preset” for setting method.
- Heat map and preset are added plans, which can’t be enabled at the same time.

Step 1

Select “Setup > Event > Smart Plan”. The system will display the interface of “Smart Plan”, which is shown in Figure 4-83.

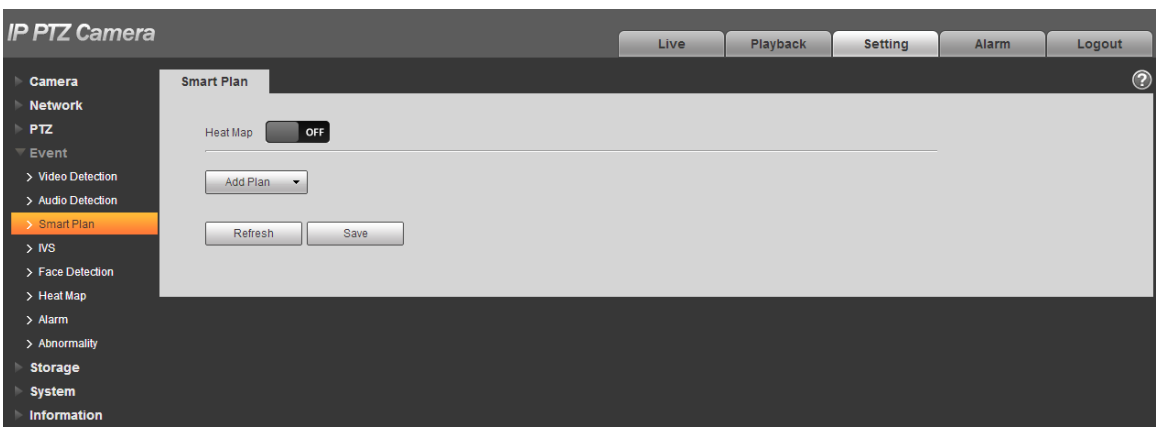


Figure 4-83

Step 2

Enable corresponding intelligent functions according to the requirements.

- Enable heat map or face detection function.

1. Click the sliding block in 

to enable the function switch.
2. Click heat map or face detection function to enable corresponding intelligent functions. The selected intelligent function appears to be bright, click it to cancel the selected intelligent function.

- Enable IVS, face detection function.

1. Select preset in the “Add Plan”. The system will display corresponding plan of the preset.
2. Click IVS, face detection to enable corresponding functions.

Step 3

The selected intelligent function appears to be bright, you can click it to cancel the function.

4.4.4 IVS

Basic requirements for scene selection:

- The total proportion of the target shall not exceed 10% of the image.
- The target size in the image shall not be less than 10 pixel ×10 pixel, the size of abandoned target shall be less than 15 pixel ×15 pixel (CIF image); the width of target shall be less than one third of the image; it is recommended that the target height shall be around 10% of the image.
- The brightness value of target and background shall be no less than 10 gray levels.
- It has to guarantee that the target has to appear at least more than 2 seconds in the view, the movement distance exceeds the width of the target itself and it is no less than 15 pixels (CIF image).
- Try to lower the complexity of the monitoring analysis scene if possible; It is not recommended to use intelligent analysis functions in the scene where the target is very crowded and light changes frequently.
- Try to keep away from glass, ground reflect light, water surface and other areas; try to keep away from branches, shadow and mosquito interference area; try to keep away from backlight scene, avoid direct light.

Note

- It needs to set preset in advance, please refer to “4.3.2.1 Preset” for more details about preset setting.
- Heat map and intelligent function added by preset can’t be enabled at the same time.

4.4.4.1 **IVS**

Step 1

Select “Setup > Event > Intelligent Behavior > Config”.

The system will display the interface of “Rule Config”, which is shown in Figure 4-84

Step 2

Select the preset which needs to be configured with intelligent rules.

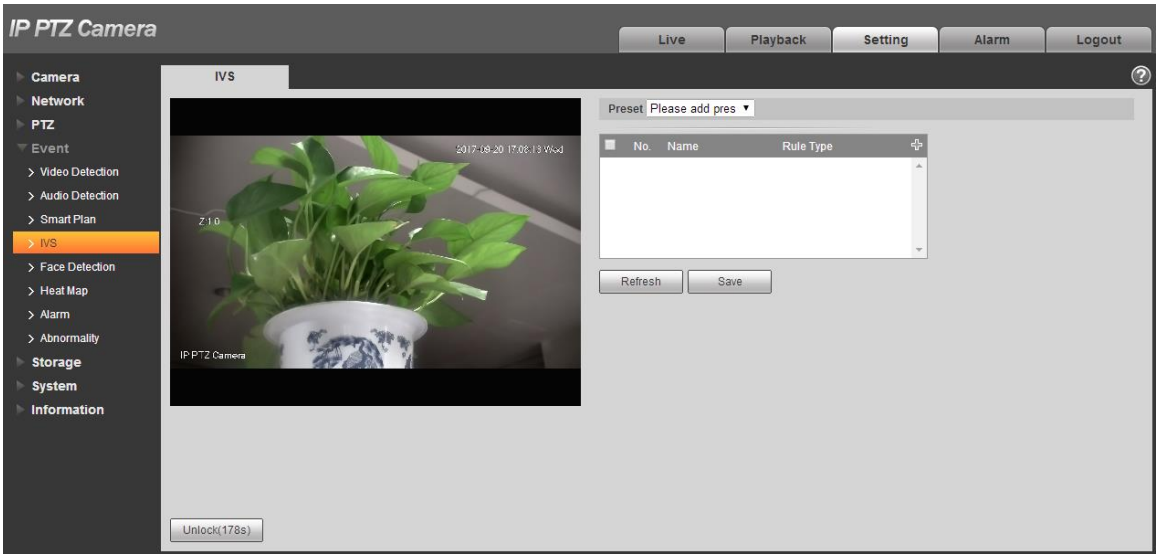


Figure 4-84

Step 3

Click  to add intelligent rules.

Note

- Double click “Rule Type” to modify the type of rules.
- Enter rule config interface, the lock function is enabled automatically, the locking time is 180s, during this period, other control modes are invalid except manual control over the speed dome. You can click “Unlock” to unlock it.

Step 4

Click “Save” to complete config.

4.4.4.1.1 Tripwire

It will trigger alarm when the target crosses the warning line according to the set movement direction. It needs some time and space to confirm the target after it appears, so it needs to leave some space on both sides of the warning line when setting warning line, please don’t set it near the obstacle.

Application scene: it can only be applied to the scene where the target is sparse and it is basically blocked between targets, such as the perimeter protection area without security guard.

The config steps are shown as follows:

Step 1

Select rule type as “Tripwire” and the config interface is shown in Figure 4-85.

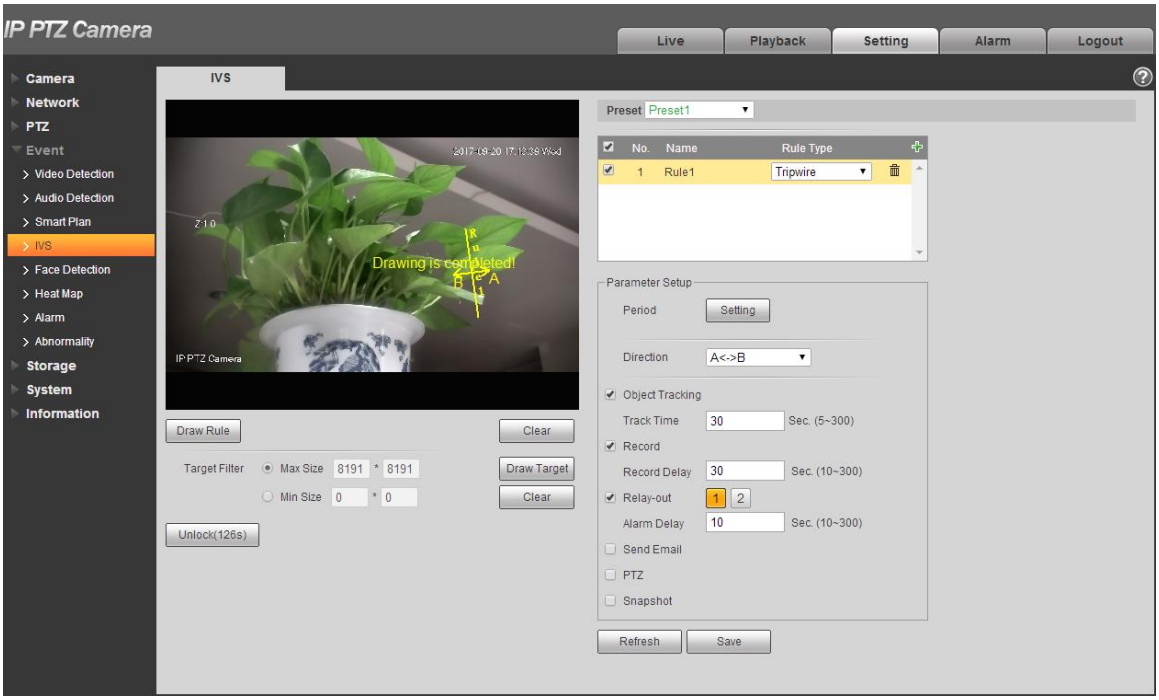


Figure 4-85

Step 2

Click “Draw Rule” and draw rules in the monitoring image.

Note

Click “Clear” on the right of “Draw Rule” to clear all the rules which have been drawn.

Step 3

Configure parameter info according to the actual needs. Please refer to Table 4-26 for more details.

Parameter	Note
Working period	**Note** Set alarm period, it can enable alarm event within the range of set period. Click “Setup” to pop out setting interface of “Working Period”. ● You can input time number value or press the left mouse button, and drag on the setting interface directly. ● There are totally six periods to set every day, click the check box in front of the period, and then the period can be valid. ● Select week number (default is Sunday, if users select the whole week, it means setting can be applied to the whole week; users can also select the check box in front of the day to make separate setting for some days). Click “Save” button after setup is completed, return to rule config setting interface, click “Save” to complete period setting of tripwire.

Parameter	Note
Direction	It is set the direction of tripwire, you can select A→B、B→A、A↔B.
Alarm track	Check it and it will generate alarm track when the target triggers intelligent rules.
Track time	It is to set the time of track time.
Record	Check it and so when alarm occurs, system will auto record. You shall set record period of alarm in “Storage>Schedule” and select auto record in record control interface.
Record delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Check it to enable alarm activation output port, it can activate corresponding alarm output device when alarm occurs.
Alarm delay	It means the alarm delays a period of time to stop after alarm ends, the unit is second, and the value ranges from 10s to 300s.
Send Email	Check it and the system can send out email to inform users when alarm occurs. User can set email address in “Network>SMTP (email)”.
PTZ	Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. The event type includes: preset, tour and pattern.
Snapshot	Check it and the system can realize alarm snapshot automatically when alarm occurs, meanwhile it needs to set snapshot period of alarm in “ Storage>Schedule”.
Target filter	Check some intelligent rule, click “Draw Target”, then you can draw the model of filter target according to the rule in the scene. Click “Clear” to delete all the target filter models which have been drawn.

Table 4-26

Step 4

Click “Save” to complete config.

4.4.4.1.2 Intrusion

Intrusion includes cross area and in area functions.

- Crossing area means that it will trigger alarm when target entering or leaving area.

- In area function means that it will trigger alarm when certain amount of target appear in the designated area within specific time. In area function is only responsible for the statistics of the target quantity in the detection area without considering whether the target is the same or not.
- As for the report interval of the in area function, the system can detect if the same event will occur within the interval after triggering the first alarm, the alarm counter will clear itself if no same event occurs during the period.

As it is similar to the warning line, it also needs to leave some movement space for the target out of the area line if it is to detect enter and leave events

Application scene: It can only be applied to the scene where the target is sparse and it is basically mutually blocked between targets, such as the perimeter protection area without security guard.

The config steps are shown as follows:

Step 1

Select the rule type as ‘‘Intrusion’’ and the config interface is shown in Figure 4-86.

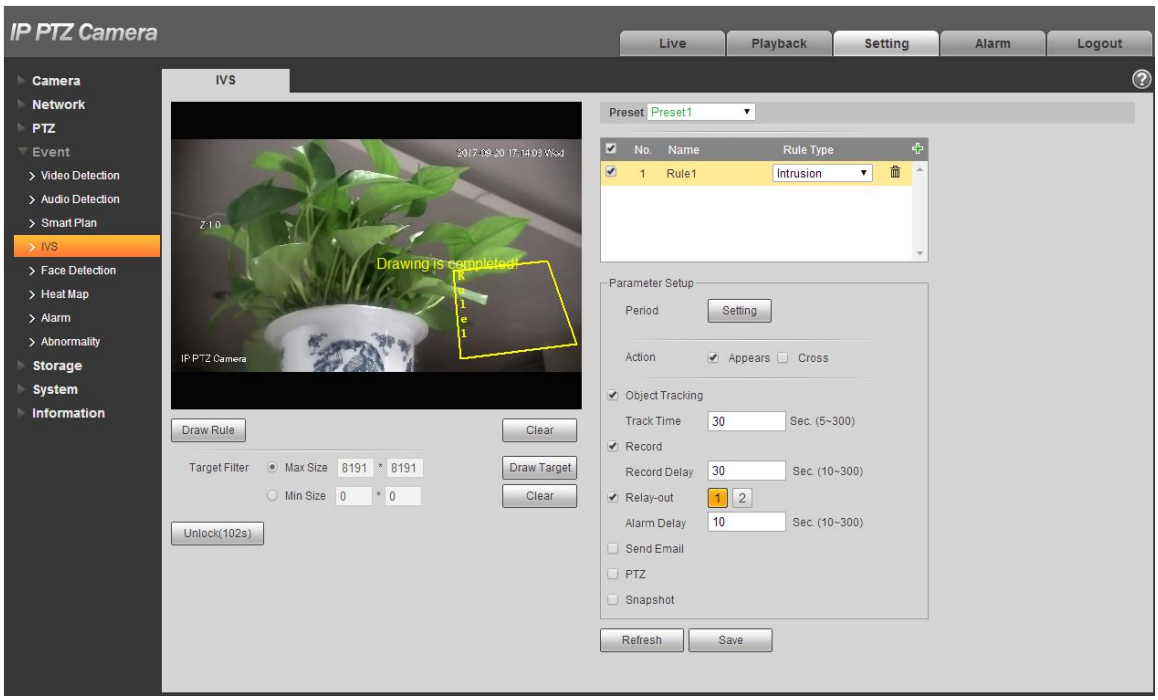


Figure 4-86

Step 2

Click ‘‘Draw Rule’’ to draw rules in the monitoring image.

Note

Click “Clear” on the right of “Draw Rule” to clear all the rules which have been drawn.

Step 3

Configure parameter info according to the actual needs. Please refer to Table 4-27 for more details.

Parameter	Note
Action	It is to set the actions of intrusion, you can select appear and cross.
Direction	It is to set the direction of cross area, you can select enter, leave, enter & leave.

Table 4-27

Please refer to “4.4.4.1.1 Tripwire” for more details about other parameters.

Step 4

Click “Save” to complete config.

4.4.4.1.3 Abandoned Object

It means triggering alarm when the abandoned object exceeds the time set by users in the monitoring scene.

Abandoned and missing object detection can be confusing in a situation where foreground and background is both very complex.

It will trigger alarm when pedestrians or vehicles stay still for a long time, which is considered as abandoned object. In order to filter this kind of alarm, generally the abandoned object is smaller than person and vehicle; therefore it can filter person and vehicle via setting filter size. Besides, it can avoid false alarm of short stay for people via extending alarm time.

Application scene: It can be applied to the scene where the target sparse and there is no obvious and frequent light change. As for the scene with high target density and frequent blocking, alarm leakage will increase; as for the scene with more people to stay, false alarm will increase. As for the detection area, it is required to be simple; it can’t be applied to complicated areas.

The config steps are shown as follows:

Step 1

Select rule type as “Abandoned Object” and the config interface will be shown in Figure 4-87.

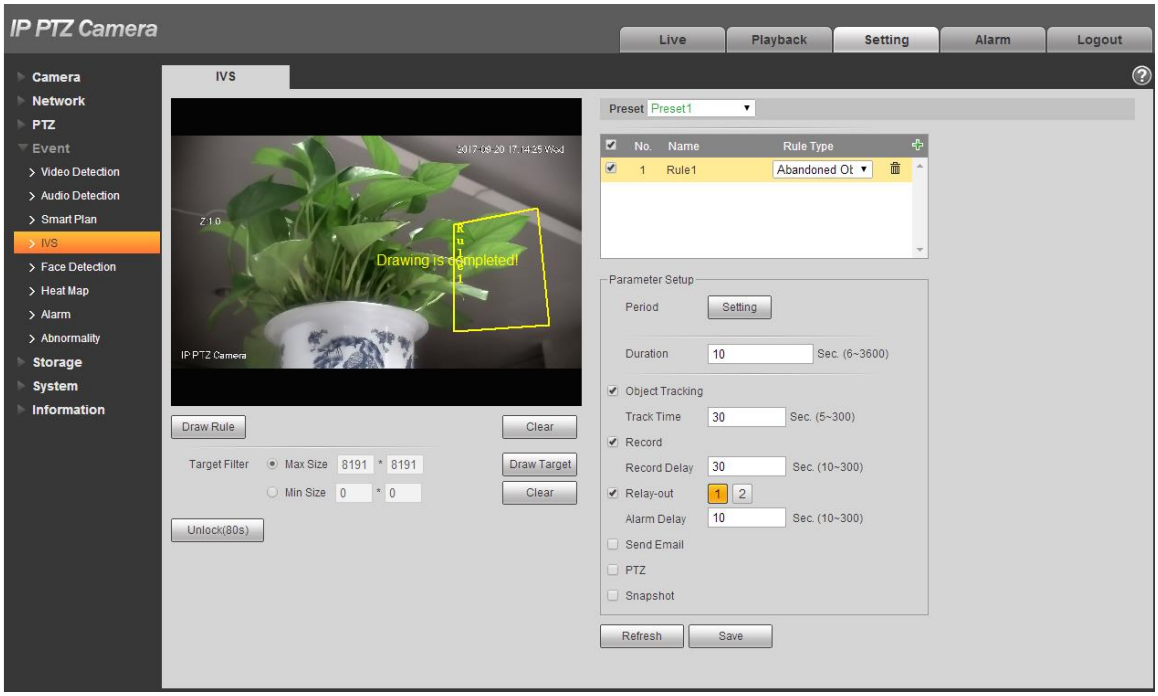


Figure 4-87

Step 2

Click ‘‘Draw Rule’’ to draw rules in the monitoring image.

Note

Click “Clear” on the right of “Draw Rule” to clear all the rules which have been drawn.

Step 3

Configure parameter info according to the actual needs. Please refer to Table 4-28 for more details.

Parameter	Note
Duration	It is to set the shortest time from object abandoned to trigger alarm.

Table 4-28

Please refer to “4.4.4.1.1 Tripwire” for more details about other parameters.

Step 4

Click “Save” to complete config.

4.4.4.1.4 Missing Object

It means it will trigger alarm after the target in the scene is taken and exceeds a certain period of time. The system will make statistics for the still areas in the foreground area, and distinguish whether it is missing object or abandoned object according to the similarity between foreground and background, it will trigger alarm when it exceeds the time set by users.

It may cause mistake when distinguishing abandoned object from missing object when both foreground and background are very complex.

Application scene: It can be applied to the scene where the target sparse and there is no obvious and frequent light change. As for the scene with high target density and frequent blocking, alarm leakage will increase; as for the scene with more people to stay, false alarm will increase. As for the detection area, it is required to be simple; it can't be applied to complicated areas.

The config steps are shown as follows:

Step 1

Select rule type as "Missing Object" and the config interface is shown in Figure 4-88.

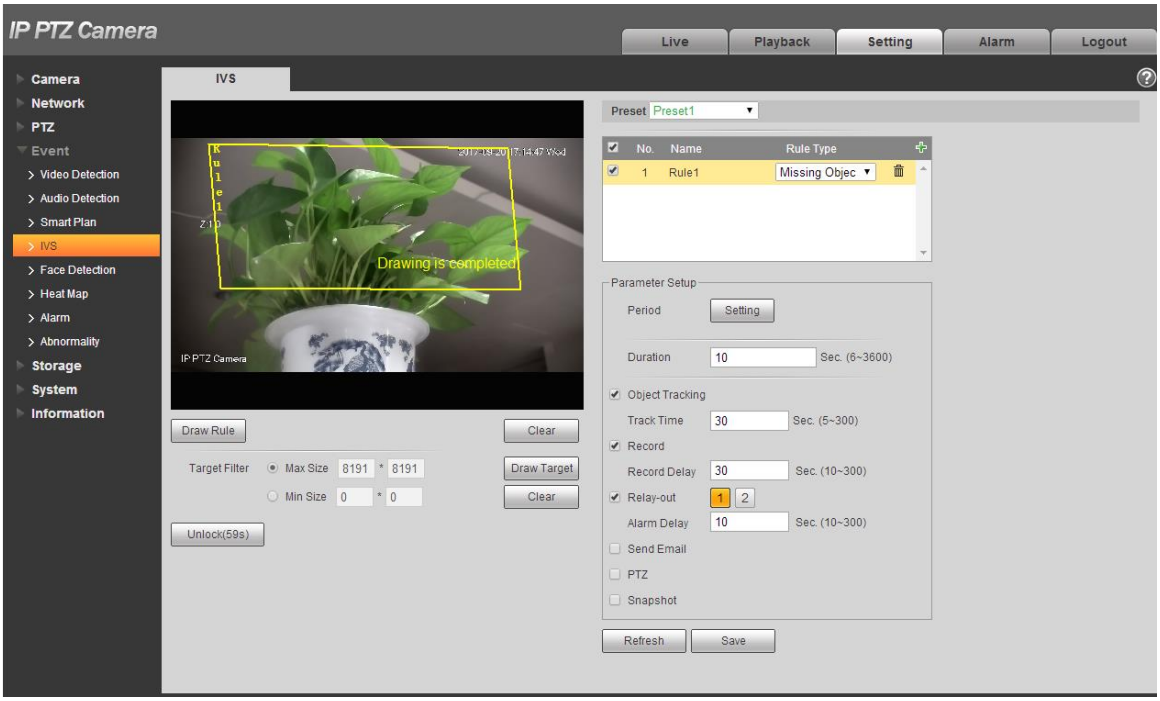


Figure 4-88

Step 2

Click ‘‘Draw Rule’’ to draw rules in the monitoring image.

Note

Click "Clear" on the right of "Draw Rule" to clear all the rules which have been drawn.

Step 3

Configure parameter info according to the actual needs. Please refer to Table 4-29 for more details.

Parameter	Note
Duration	It is to set the shortest time from object disappears to trigger alarm.

Table 4-29

Please refer to “4.4.4.1.1 Tripwire” for more details about other parameters.

Step 4

Click “Save” to complete config.

4.4.5 Face Detection

Note

It needs to add preset and enable the smart function before enabling the function.

You can detect face and make snapshot in complex environment via face detection function.

Step 1

Select “Setup > Event > Face Detect”.

The system will display the interface of “Face Detection”, which will be shown in Figure 4-89.

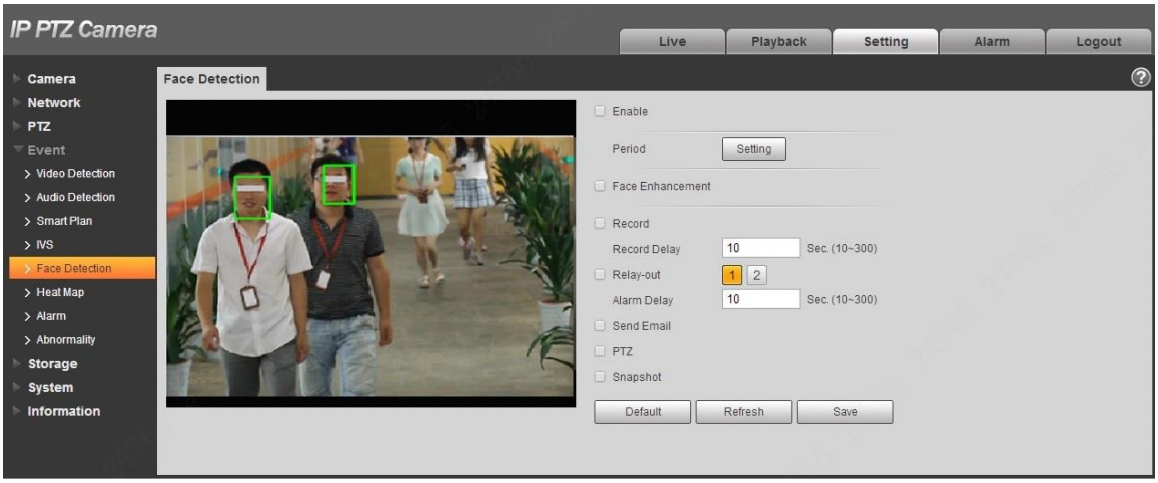


Figure 4-89

Step 2

Select “Enable” to enable face detection.

Step 3

Configure parameter info according to the actual needs. Please refer to “4.4.4.1.1 Tripwire” for more details about other parameters.

Step 4

Click “Save” to complete config.

4.4.6 Heat Map

Note

It needs to add preset and enable the intelligent function before enabling the function.

4.4.6.1 **Heat Map**

It is used to detect the activity level of moving object in the scene within a certain period of time.

Step 1

Select “Setup > Event > Heat Map > Heat Map”.

The system will display the interface of “Heat Map”, which is shown in Figure 4-90.

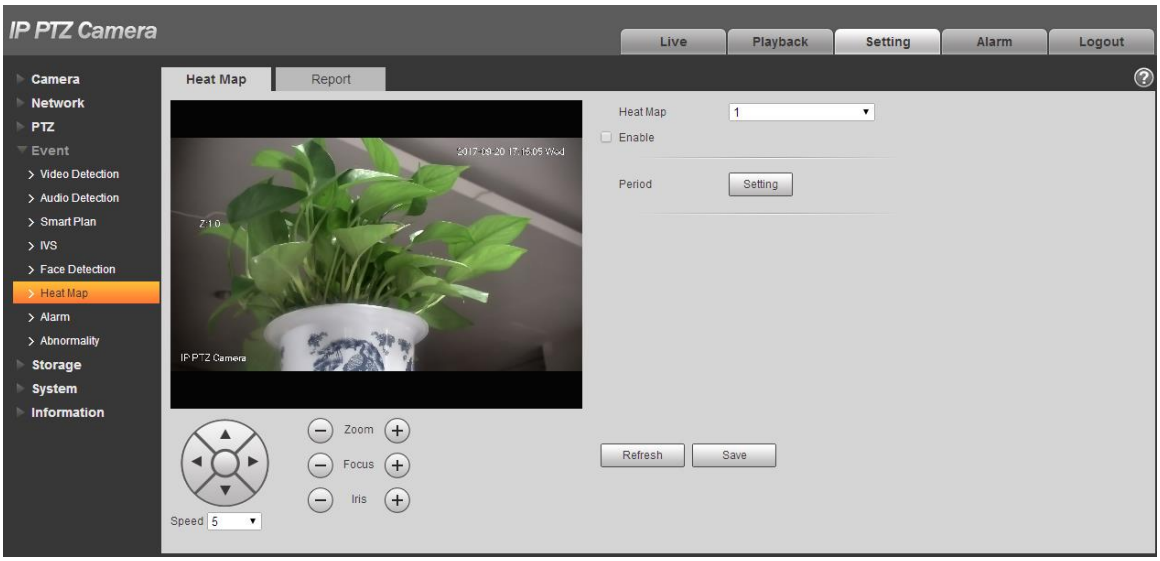


Figure 4-90

Step 2

Select the number of heat map.

Step 3

Select “Enable” to enable the function of heat map.

Step 4

Click “Setting” to set working period, please refer to “4.4.1.1 Motion Detection” for more details.

Step 5

Adjust the camera angle via the direction, zoom, focus and iris buttons which are located below the image. Turn the camera to the heat map scene which needs to be checked.

Step 6

Click “Save” to complete setting.

4.4.6.2 **Report**

It is to check the heat map statistics result of the scene within the selected period.

The config steps are shown as follows:

Step 1

Select “Setup > Event > Heat Map > Report” and the system will display the interface of “Report”.

Step 2

Select the start time and end time of heat map which needs to be searched.

Step 3

Select the number of heat map.

Step 4

It will display the search result on the interface after clicking “Search”, which is shown in Figure 4-91.

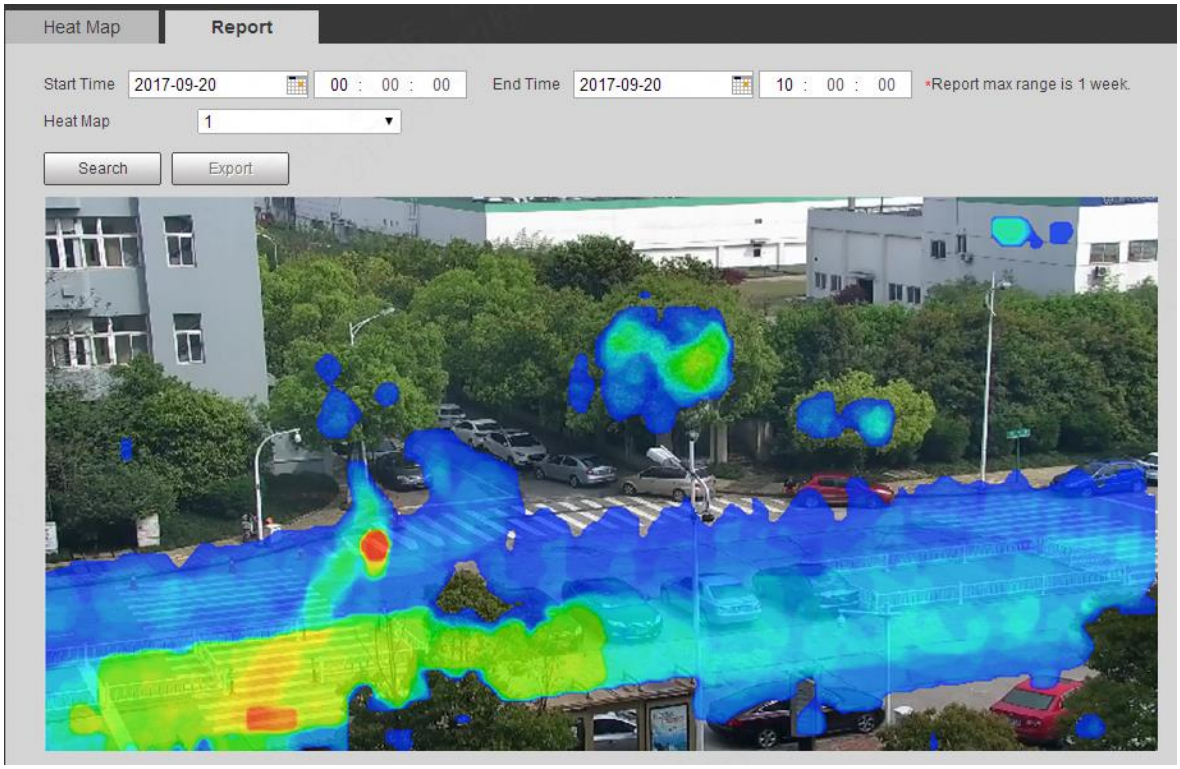


Figure 4-91

4.4.7 Alarm

Step 1

Select “Setup > Event > Alarm”.

The system will display the interface of “Alarm”, which is shown in Figure 4-92.

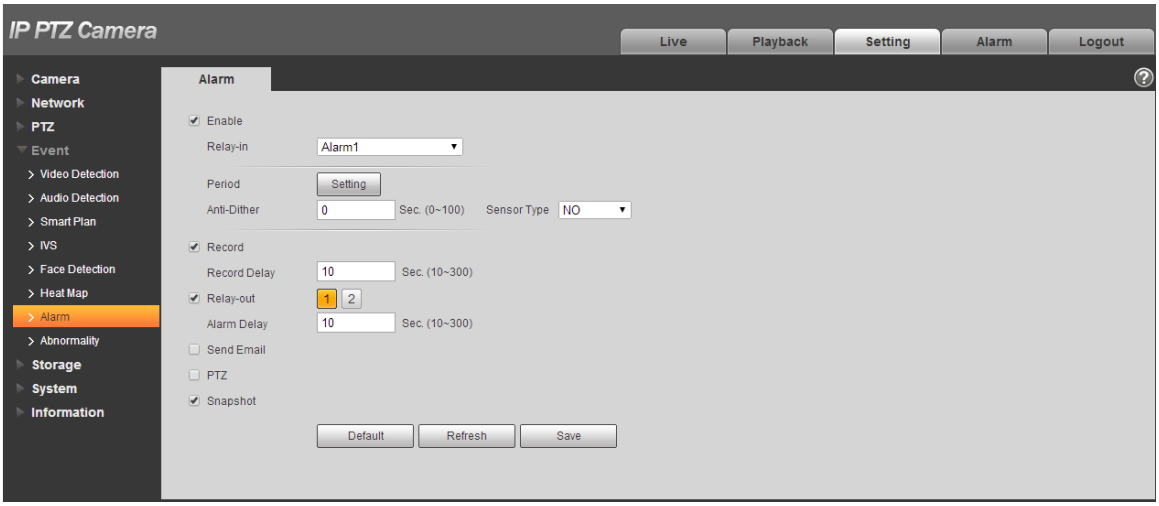


Figure 4-92

Step 2

Configure info of each parameter according to the actual needs; refer to Table 4-30 for more details.

Parameter	Function
Enable	After enabled, relay activation will work.
Relay-in	Select relay-in, it can select 7-channel relay in.
Sensor type	There are two options: NO/NC. Switch from NO to NC means enabling alarm; Switch from NC to NO means disabling alarm.

Table 4-30

Note

Please refer to “4.4.1.1 Motion Detection” for description of other parameters.

Step 3

Click “Save” to complete config.

4.4.8 Abnormity

Abnormality includes six alarm events which are no SD card, capacity warning, SD card error, disconnection, IP conflict and illegal access.

4.4.8.1 SD Card

Step 1

Select “Setup > Event > Abnormity > SD Card”.

The system will display the interface of “SD Card”, which is shown from Figure 4-93 to Figure 4-95.

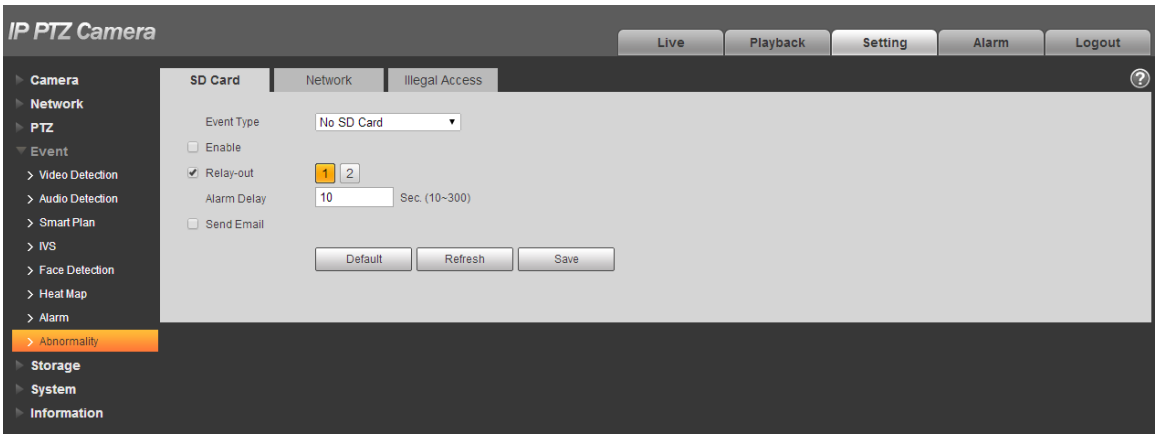


Figure 4-93



Figure 4-94

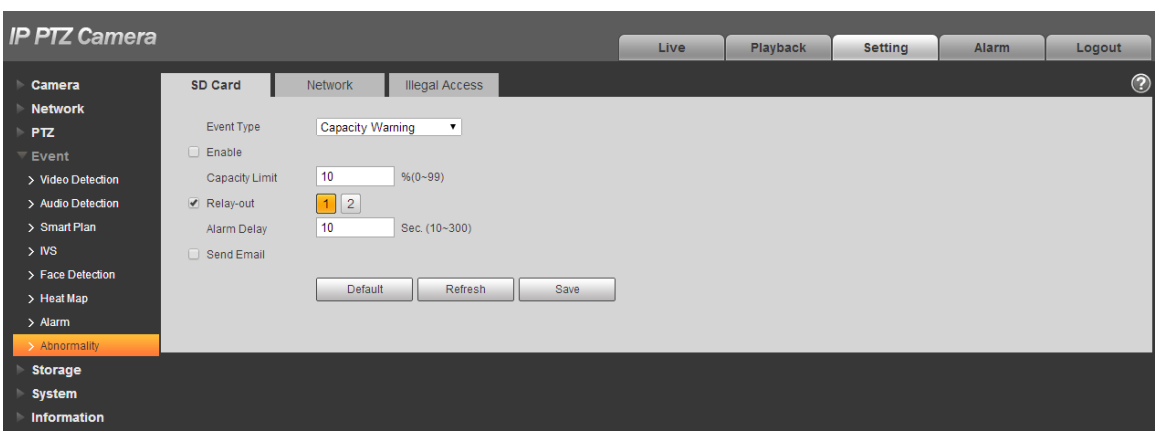


Figure 4-95

Step 2

Configure info of each parameter according to the actual needs; refer to Table 4-31 for more details.

Parameter	Function
Enable	Check to alarm when SD card is abnormal.
SD Card Capacity Lower Limit	User can set SD card capacity percentage which is left. When SD card space left is smaller than this, alarm occurs.

Table 4-31

Note

Please refer to “4.4.1.1 Motion Detection” for description of other parameters.

Step 3

Click “Save” to complete config.

4.4.8.2 **Network**

Step 1

Select “Setup > Event > Abnormity > Network”.

The system will display the interface of “Network”, which is shown in Figure 4-96 and Figure 4-97.

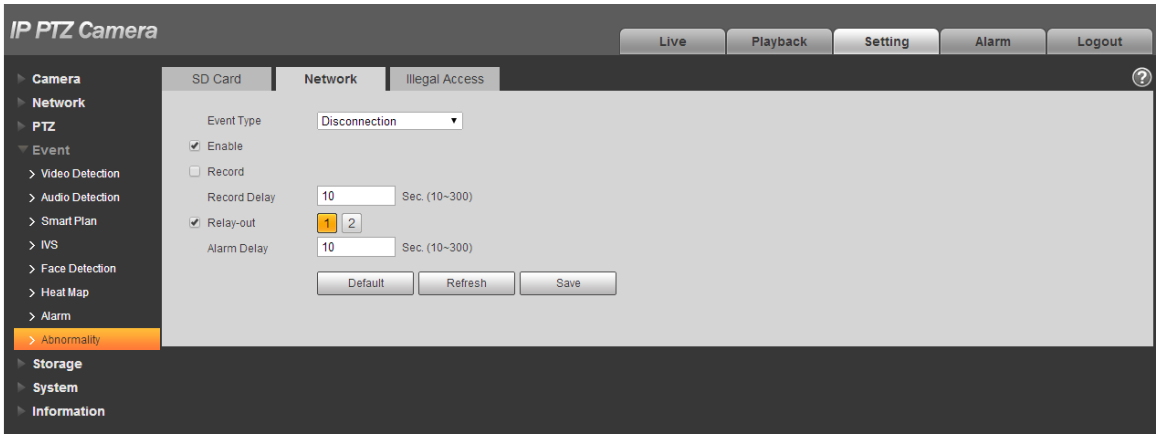


Figure 4-96

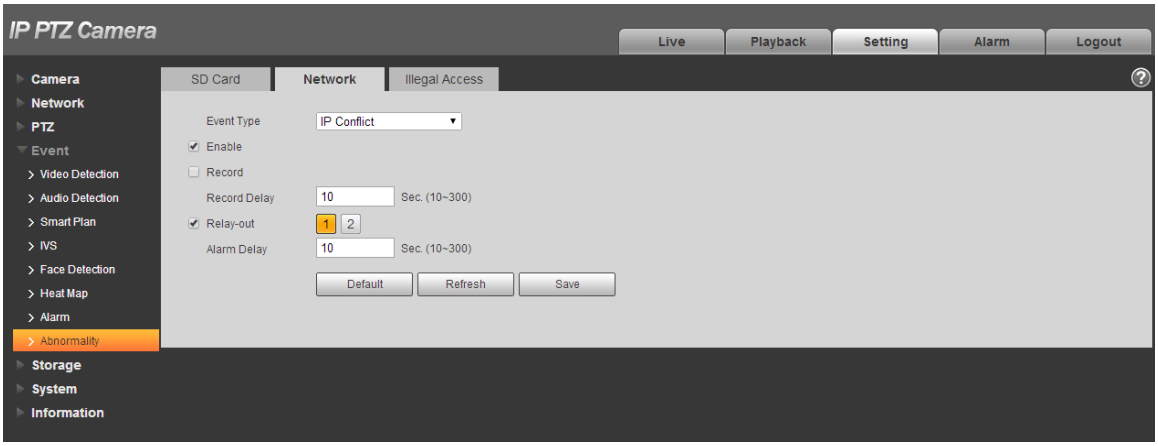


Figure 4-97

Step 2

Configure info of each parameter according to the actual needs; refer to Table 4-32 for more details.

Parameter	Note
Enable	Click it to enable network abnormity alarm.

Table 4-32

Note

Please refer to “4.4.1.1 Motion Detection” for description of other parameters.

Step 3

Click “Save” to complete config.

4.4.8.3 **Illegal Access**

When the login password error reaches a certain number of times, it will generate illegal access alarm.

Step 1

Select “Setup > Event > Abnormity > Illegal Access”.

The system will display the interface of “Illegal Access”, which is shown in Figure 4-98.



Figure 4-98

Step 2

Configure info of each parameter according to the actual needs; refer to Table 4-33 for more details.

Parameter	Note
Enable	Click it to enable illegal access alarm.
Login error	It will trigger alarm of illegal access after entering wrong password for some certain times, and the account will be locked.

Table 4-33

Note

Please refer to “4.4.1.1 Motion Detection” for description of other parameters.

Step 3

Click “Save” to complete config.

4.5 Storage Management

Here you can set schedule, storage mode and record control.

4.5.1 Schedule

Before schedule setup, user must set record mode in record control as auto status.

Note

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

4.5.1.1 **Record**

Step 1

Select “Setup > Storage > Schedule > Record Schedule”.

The system will display the interface of “Record Schedule”, which is shown in Figure 4-99.

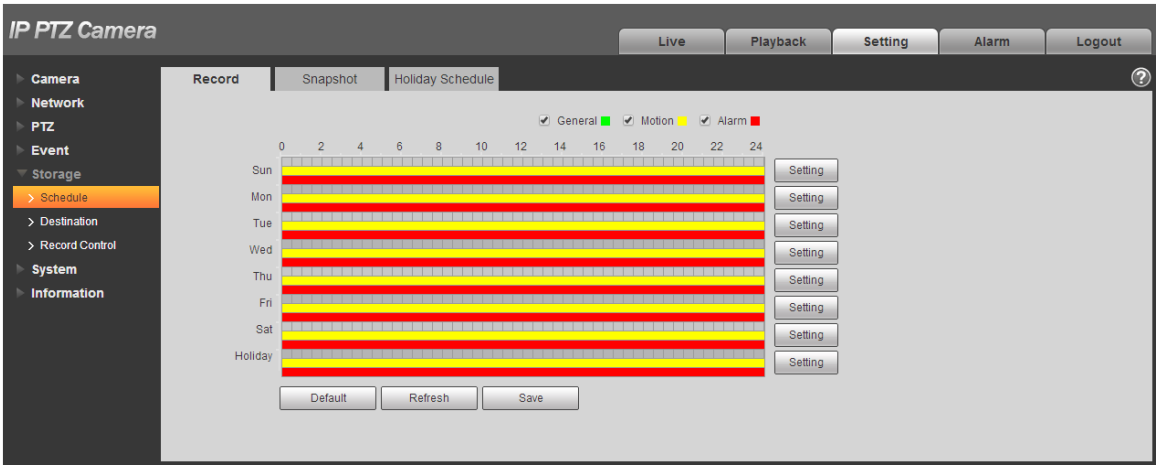


Figure 4-99

Step 2

From Monday to Sunday select record time, click “Setup” on the right. See Figure 4-100 for more details.

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

Note

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

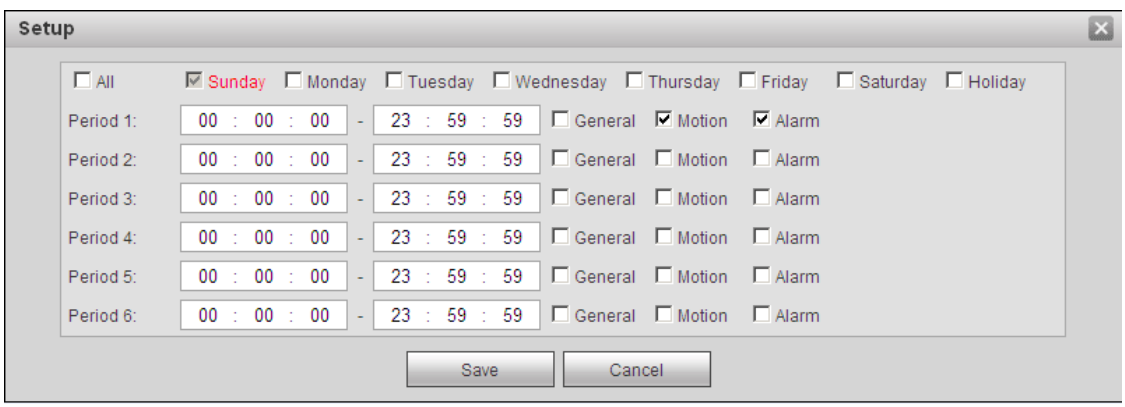


Figure 4-100

Step 3

Click “Save”, return to record schedule interface. See Figure 4-101.

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

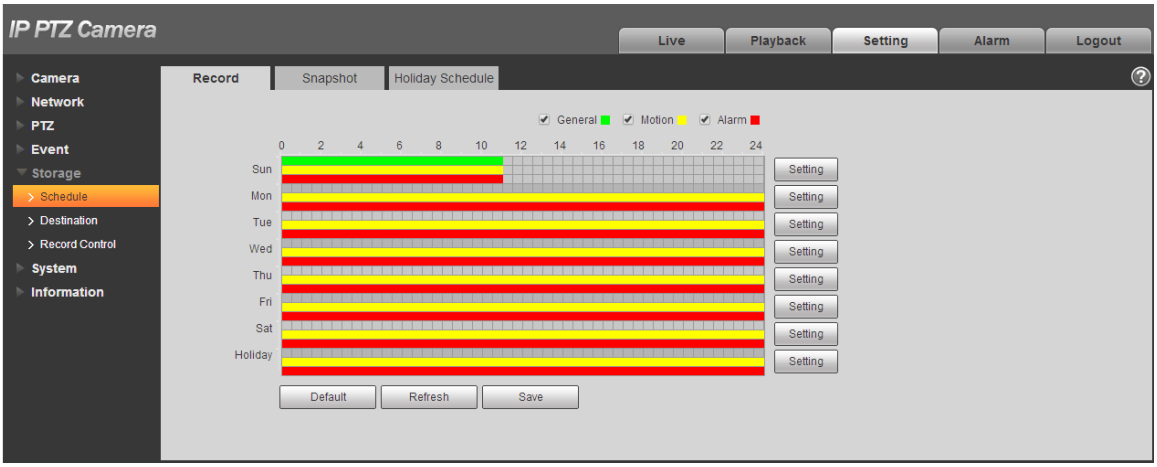


Figure 4-101

Step 4

Click “Save” on the “Record Schedule” interface, the system prompts “Successfully Saved”, and the record schedule is completed.

4.5.1.2 **Snapshot**

Step 1

Select “Setup > Storage > Schedule > Snapshot Schedule”.

The system will display the interface of “Snapshot Schedule”, which is shown in Figure 4-102.

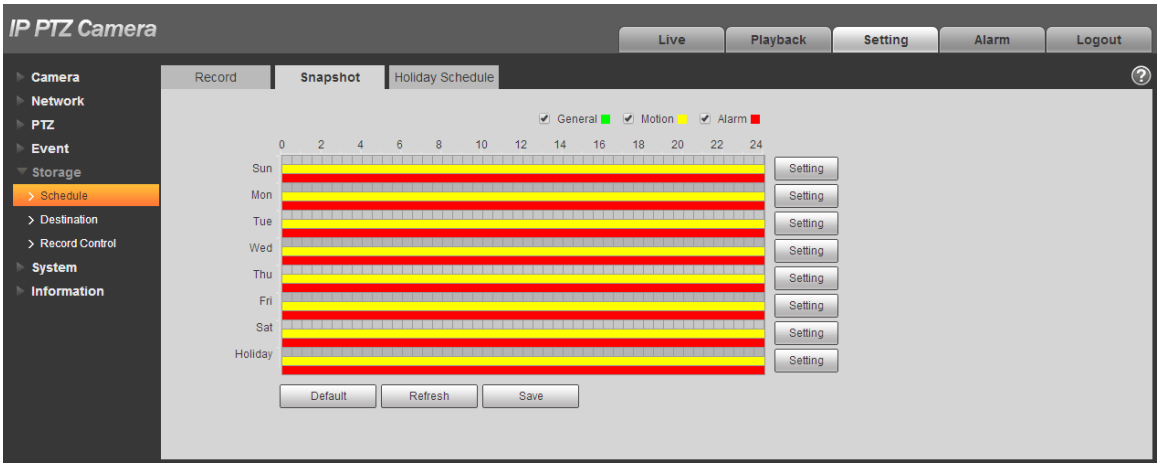


Figure 4-102

Step 2

Set the snapshot period according to step 2 and 3 of “4.5.1.1 Record”.

Step 3

Click “Save” and the system will prompt “Successfully Saved’, then snapshot schedule is completed.

4.5.1.3 **Holiday Schedule**

Holiday schedule can set specific date as holiday.

Step 1

Select “Setup > Storage > Schedule > Holiday Schedule”.

The system will display the interface of “Holiday Schedule”, which is shown in Figure 4-103.

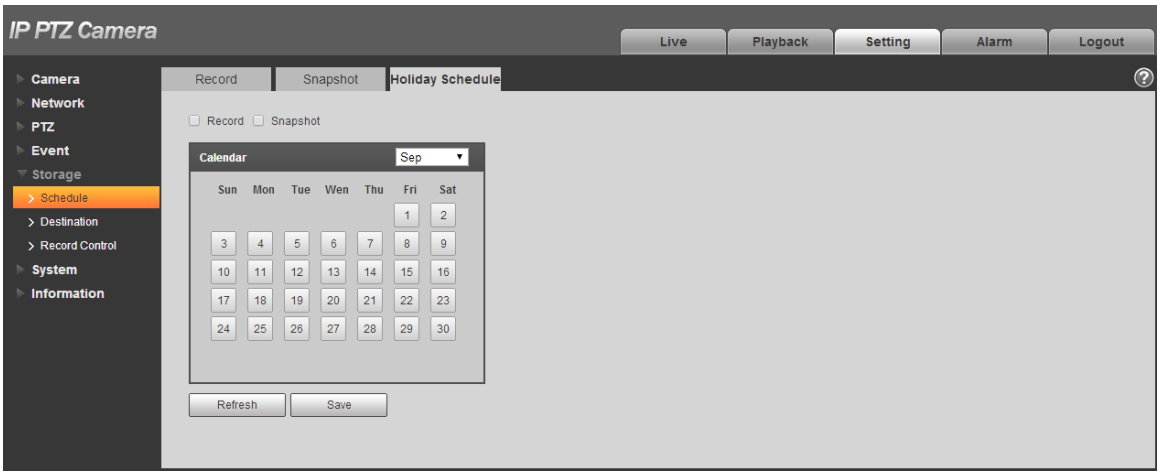


Figure 4-103

Step 2

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

Step 3

Check “Record/Snapshot”, click “Save”. System prompts it is successfully saved.

Step 4

Check “Record Schedule/Snapshot Schedule” interface, click setup next to “Holiday”, and refer to setup of “Monday to Sunday”.

Step 5

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

4.5.2 Destination

4.5.2.1 **Path**

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

Note: Only some devices support NAS storage, please refer to the actual device.

Step 1

Select “Setup > Storage > Destination > Path”.

The system will display the interface of “Path”, which is shown in Figure 4-104.

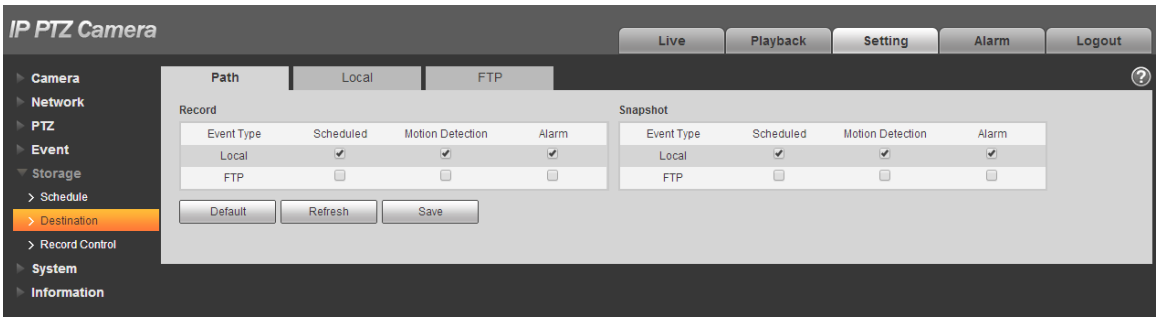


Figure 4-104

Step 2

Configure info of each parameter according to the actual needs; please refer to Table 4-34 for more details.

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

Table 4-34

4.5.2.2 **Local**

Here it can display kinds of information of local SD card in the local storage list. You can also realize several operations such as read-only, read & write, hot swap and format.

Select “Setup > Storage > Destination > Local”, the system will display the interface of “Local” shown in Figure 4-105.

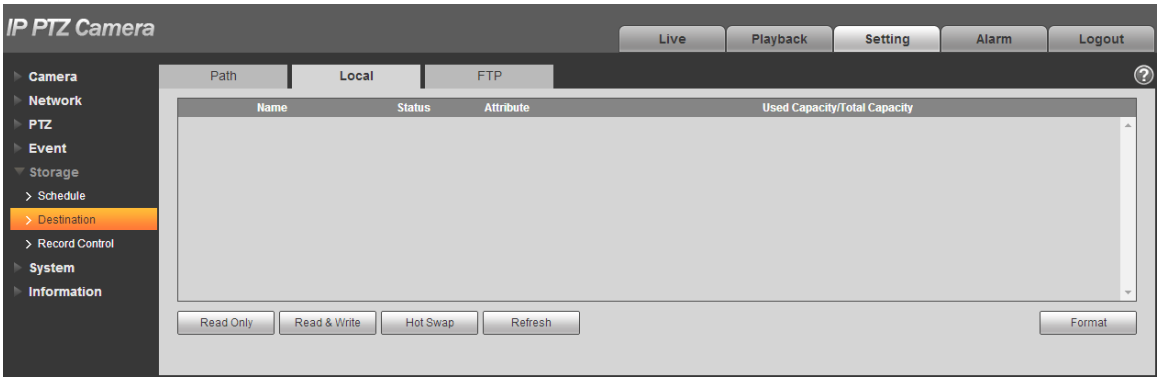


Figure 4-105

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

4.5.2.3 **FTP**

You need to check the box to enable the FTP function. When network disconnect occurred or there is malfunction, emergency storage can save the record/snapshot to the local SD card.

Step 1

Select “Setup > Storage > Destination > FTP”, the system will display the interface of “FTP” shown in Figure 4-106.

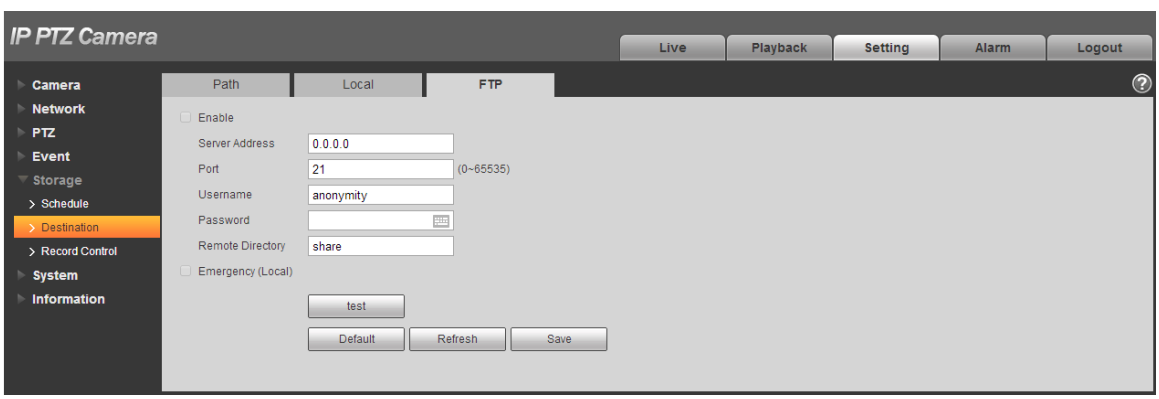


Figure 4-106

Step 2

Configure info of each parameter according to the actual needs; please refer to Table 4-35 for more details.

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

Table 4-35

Step 3

Click “Save” to complete config.

4.5.2.4 NAS

When it selects NAS storage mode, NAS function can be enabled. You can store file to NAS server when selecting NAS storage.

Step 1

Select “Setup > Storage > Destination > NAS”, the system will display the interface of “NAS” shown in Figure 4-107.

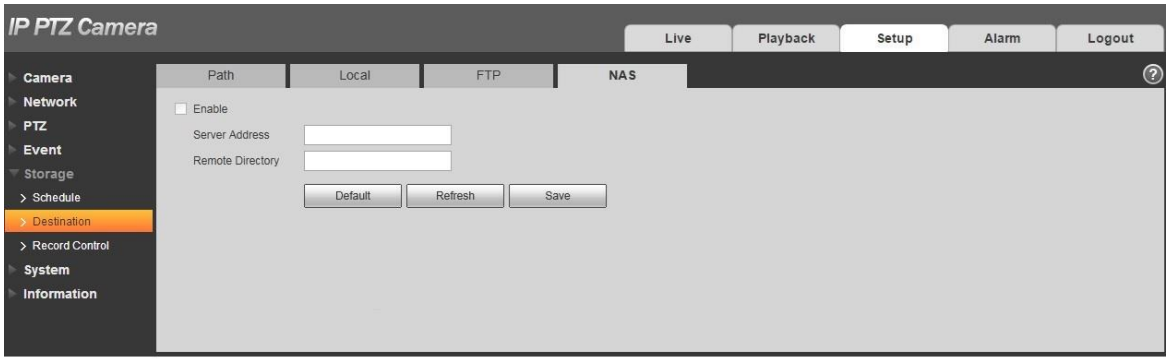


Figure 4-107

Step 2

Configure info of each parameter according to the actual needs; please refer to Table 4-36 for more details.

Parameter	Note
Enable NAS	Click it to enable NAS function.
Server Address	NAS server address.
Remote Directory	Store it to the directory of the NAS server.

Table 4-36

Step 3

Click “Save” to complete config.

4.5.3 Record control

Step 1

Select “Setup > Storage > Record Control”, the system will display the interface of “record Control” shown in Figure 4-108.

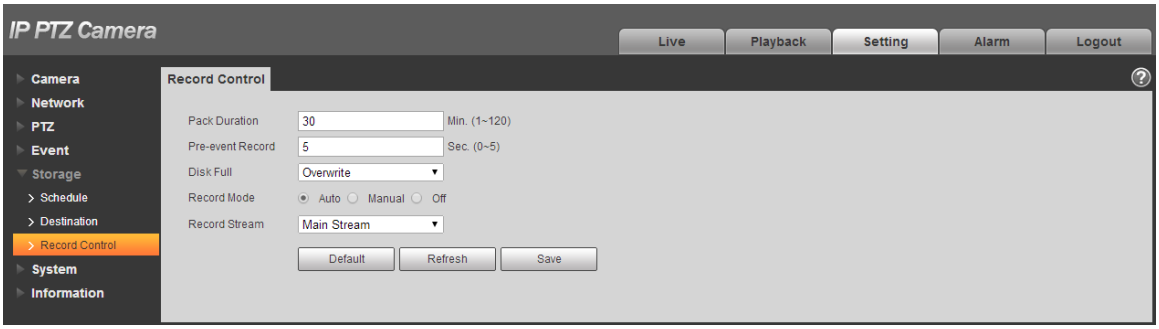


Figure 4-108

Step 2

Configure info of each parameter according to the actual needs; please refer to the following sheet for more details.

Parameter	Function
Pack Duration	It is to set the pack duration of each record file; it is 30 mins by default.
Pre-event Record	It is to set pre-event record time. For example, when it inputs 5, then the system will read the record video of first 5 seconds of the internal storage and record it into the file. **Note** Configure pre-event record time, when alarm record or motion detection record occurs, if there is no record, system will record the preceding n seconds video data into the record file.

Disk Full	There are two options: stop recording or overwrite the previous files when HDD is full. ● Stop: Current working HDD is overwriting or current HDD is full, it will stop record. ● Overwrite: Current working HDD is full; it will overwrite the previous file.
Record mode	There are three modes: Auto/manual/close. It starts recording when selecting manual mode, it records within the range of schedule when selecting auto mode.
Record stream	There are two options: main stream and sub stream.

Table 4-37

Step 3

Click “Save” to complete config.

4.6 System

4.6.1 General

4.6.1.1 General

Step 1

Select “Setup > System > General”, the system will display the interface of “General” shown in Figure 4-109.

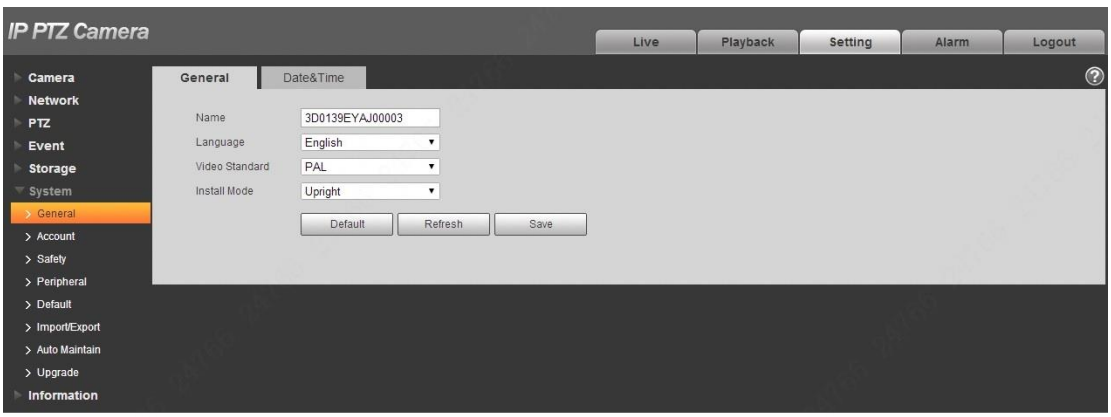


Figure 4-109

Step 2

Configure info of each parameter according to the actual needs; please refer to Table 4-38 for more details.

Parameter	Function
Device Name	It is to set device name. **Note** Different devices may have different names.
Language	You can select the language from the dropdown list.
Video Standard	It is to display the video format of device, such as 50Hz.
TV Output	It can select on or off, the device which only supports TV output can have this function. **Note** It will disable the intelligent functions when it is confirmed to enable TV output. It will disable TV output when it is confirmed to enable intelligent functions. Some models support SDI, HDCVI functions.
Install Mode	It is to set the installation mode of the device, you can select upright or inverted.

Table 4-38

Step 3

Click “Save” to complete config.

4.6.1.2 **Date & Time**

Step 1

Select “Setup > System > General > Date & Time”, the system will display the interface of “Date & Time” shown in Figure 4-110.

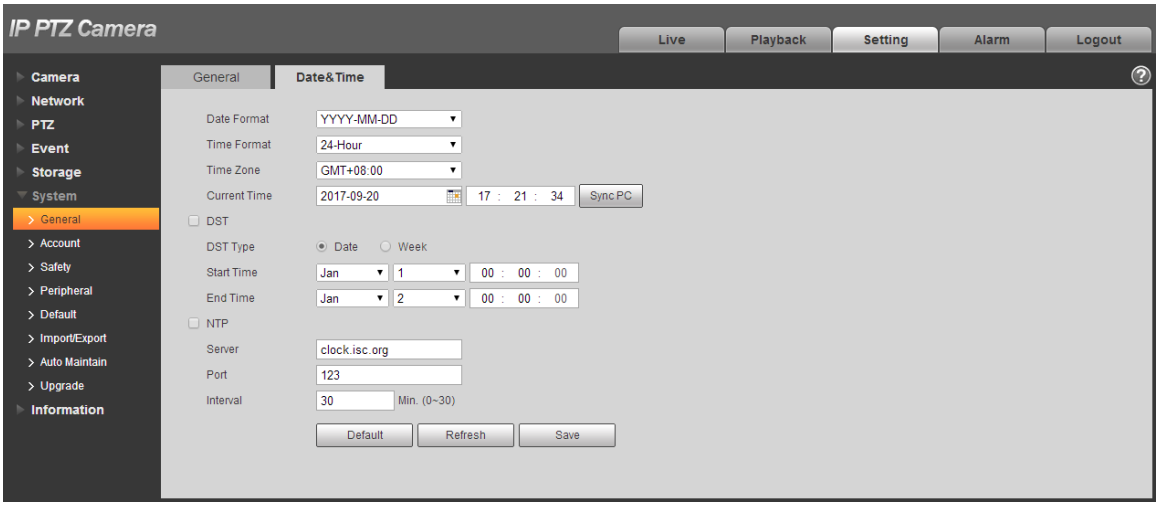


Figure 4-110

Step 2

Configure info of each parameter according to the actual needs; please refer to Table 4-39 for more details.

Parameter	Function
Date format	Here you can select date format from the dropdown list.
Time Format	Here you can select the corresponding time format which needs to be displayed.
Time zone	The time zone of the device.
System time	It is to set system time. It becomes valid after you set.
DST	Here you can set begin time and end time of DST. You can set according to the date format or according to the week format.
NTP	You can check the box to enable network time sync function
NTP server	You can set the address of time serve.
Port	It is to set the port of time server.
Update period	It is to set the sync interval between the device and the time server.

Table 4-39

Step 3

Click “Save” to complete config.

4.6.2 Account

4.6.2.1 **Account**

Only when users have the right of account management then can it realize account management operation.

- For the character in the following user name or the user group name, system max supports 15-digits. The valid string includes: character, number, and underline.
- Password can be 0~32 characters in number and letter only. User can modify other user’s password.
- The user amount is 18 and the group amount is 8 when the device is shipped out of the factory.
- User management adopts group/user modes. The user name and the group name shall be unique. One user shall be included in only one group.
- Currently logged in user cannot change his/her own right.
- There is one default user admin during initialization. Admin belongs to high right user by default when it is out of factory.

4.6.2.1.1 User Name

You can enable anonymity login, add/remove user and modify user name and etc. in “Setup > System > Account > Account > User name. See Figure 4-111.

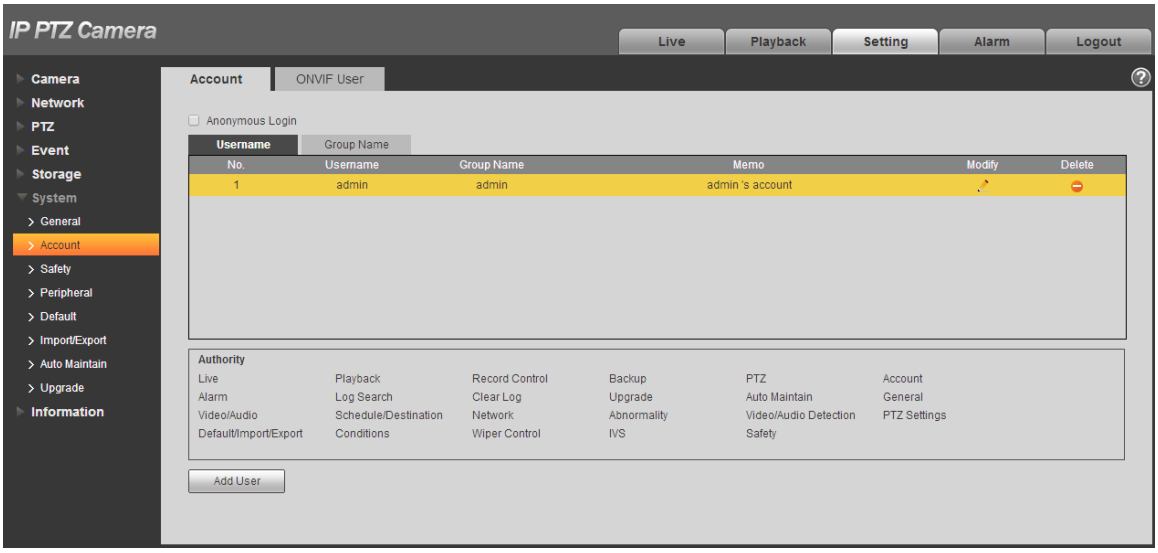


Figure 4-111

Note

The version info and other icons in the live interface except alarm have no right control temporarily.

Anonymous login: Enable “Anonymity Login”, and input IP. No username or password is required, you can log in by anonymity (with limited rights). You can click logout to use other users to log in the device.

Add user

It is to add user in group and set the right control of the user.

The highest right user admin can’t be deleted by default.

Step 1

Click “Add User” and the system will pop out the interface of “Add User”, which is shown in Figure 4-112.



Figure 4-112

Step 2

Enter user name and password, select group and check authority list.

Note

- Once the group is selected, then the user right can only be subset of the group which can’t surpass the right of the group.
- Users are recommended to make it lower than senior users when defining general users in order to make user management convenient.

Step 3

Click “Save”.

Modify user

Step 1

Click the icon which is corresponding to the users which needs to be modified.

The system will pop out the interface of “Modify User” which is shown in Figure 4-113.

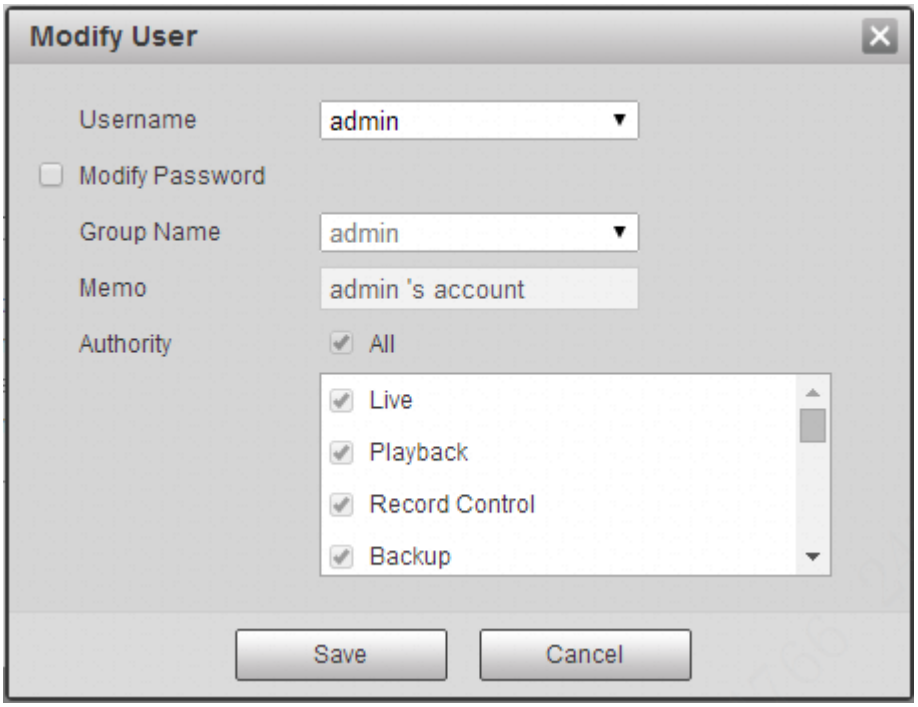


Figure 4-113

Step 2

Modify the user information according to actual needs.

Step 3

Click “Save”.

Modify password

Step 1

Select the check box of “Modify Password”.

Step 2

Input old password, input new password and confirm it.

Step 3

Click “Save”.

Delete User

Click the icon of corresponding user which needs to be deleted, and then you can delete the user.

4.6.2.1.2 Group

You can realize add group, delete group, modify password and other operations in “Setup > System > Account > Group”. You can refer to Figure 4-114 for more details.

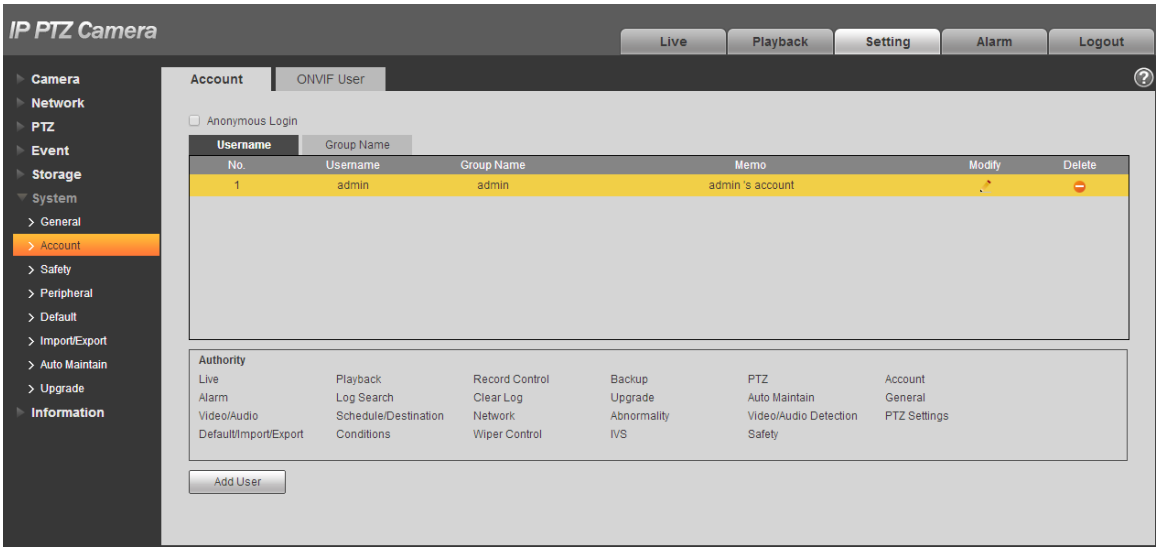


Figure 4-114

Add Group:

Please refer to “4.6.2.1.1 Username” for more details.

Modify Group

Please refer to “4.6.2.1.1 Username” for more details.

Delete Group

Please refer to “4.6.2.1.1 Username” for more details.

4.6.2.2 ONVIF User

Users can add Onvif user on the WEB interface, it can also modify the users which have existed.

Step 1

Select “Setup > System > Account > ONVIF User” and the system will display the interface of “ONVIF User”, which is shown in Figure 4-115.

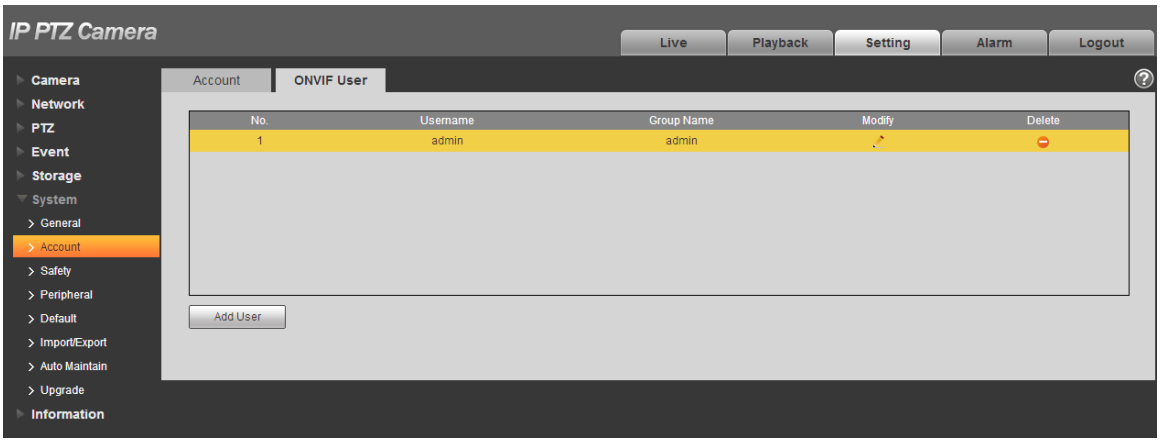


Figure 4-115

Step 2

Click “Add User” and the system will pop out the interface of “Add User”, which is shown in Figure 4-116 .

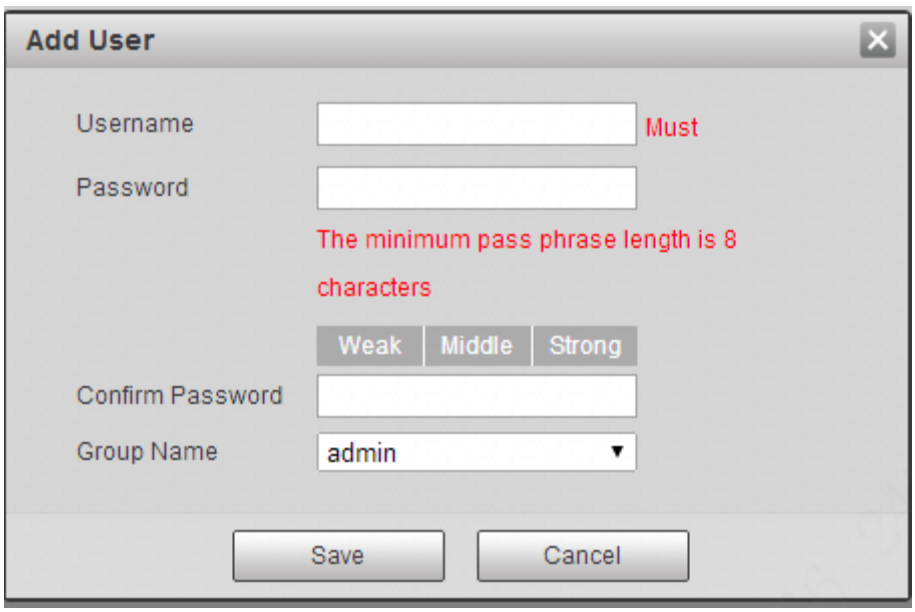


Figure 4-116

Step 3

Set username, password and select group.

Step 4

Click “Save”.

Click  to modify the user’s information.

4.6.3 Safety

4.6.3.1 RSTP Authentication

It can set the authorize mode of media stream.

Step 1

Select “Setup > System > Safety > RSTP Authentication” and the system will display the interface of “RSTP Authentication”, which is shown in Figure 4-117.

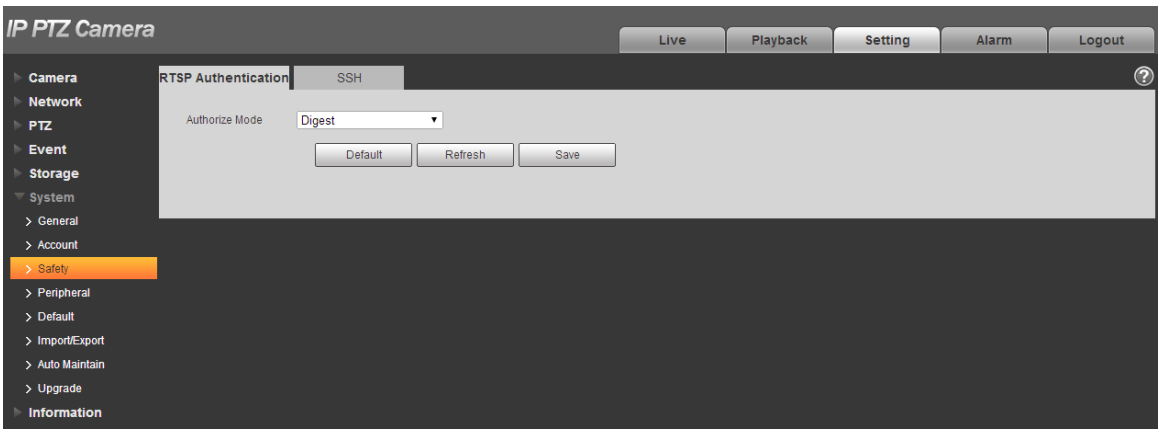


Figure 4-117

Step 2

Select authorize mode. It can select Digest, Basic or None. It is Digest by default.

Note

Click “Default” and the authorize mode will be selected as “Digest” automatically.

4.6.3.2 SSH

It can select to enable SSH service to acquire higher safety.

Step 1

Select “Setup > System > Safety > SSH” and the system will pop out the interface of “SSH”, which is shown in Figure 4-118.

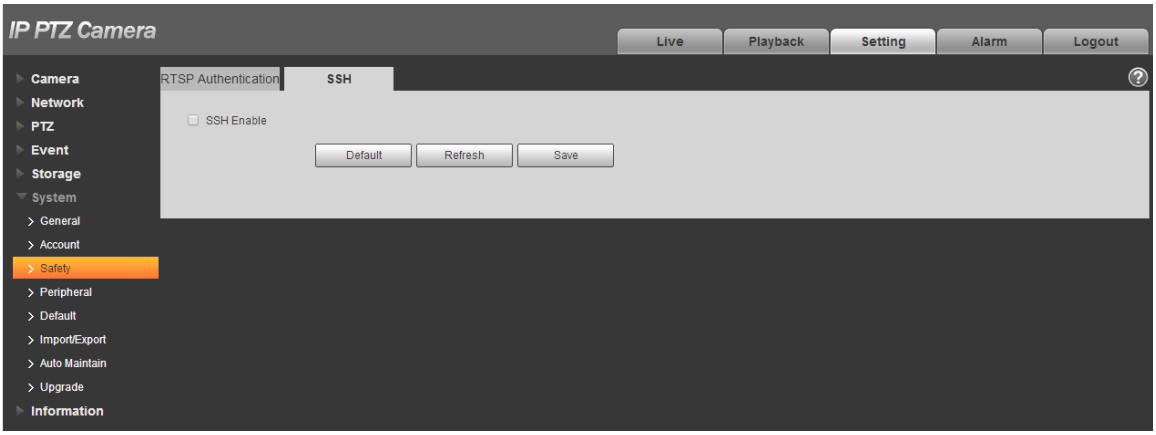


Figure 4-118

Step 2

Select “SSH Enable” to enable SSH service.

Note

Click “Default” to cancel SSH service.

4.6.4 Peripheral

Note

Only some models support peripheral management, please refer to the actual device for more details.

4.6.4.1 **Wiper**

You can make settings for wiper.

Step 1

Select “Setup > System > Peripheral > Wiper”.

The system will display the interface of “Wiper” which is shown in Figure 4-119 and Figure 4-121.



Figure 4-119

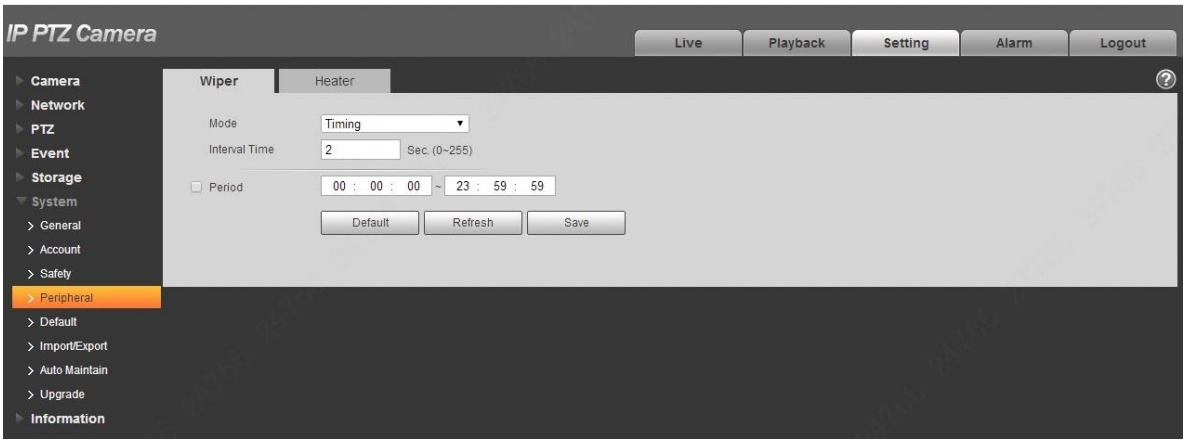


Figure 4-120



Figure 4-121

Step 2

Configure info of each parameter according to the actual needs. Refer to Table 4-40 for more details.

Parameter	Note
Mode	It is to set wiper mode, you can select timing and manual, it is timing by default. ● In timing mode, it needs to set the period of enabling wiper. ● In manual mode, it needs to enable wiper by manual operation. ● In auto mode, it is to enable wiper automatically.
Interval Time	It is the interval from when the wiper stops to when the wiper is enabled.
Period	Click it to set the period when the wiper is enabled in timing mode.
Start, Stop, Once	In manual mode: ● Click “Start”, and the wiper operates regularly according to the interval

	which has been set. ● Click “Stop”, and the wiper stops. ● Click “Once” and the wiper operates once.

Table 4-40

Step 3

Click “Save” to complete config.

4.6.4.2 **Heater**

Go to “Setup > System > Peripheral >Heater” and the config interface is shown in Figure 4-122.

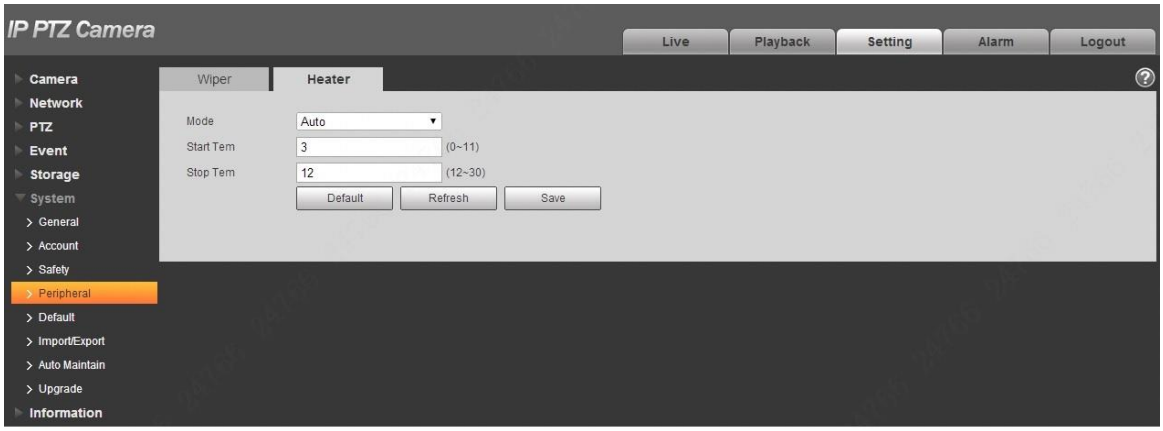


Figure 4-122

4.6.5 Default

Note

Go to “Setup > System > Default” and click “Default” to restore some device settings back to default. The config interface is shown in Figure 4-123.

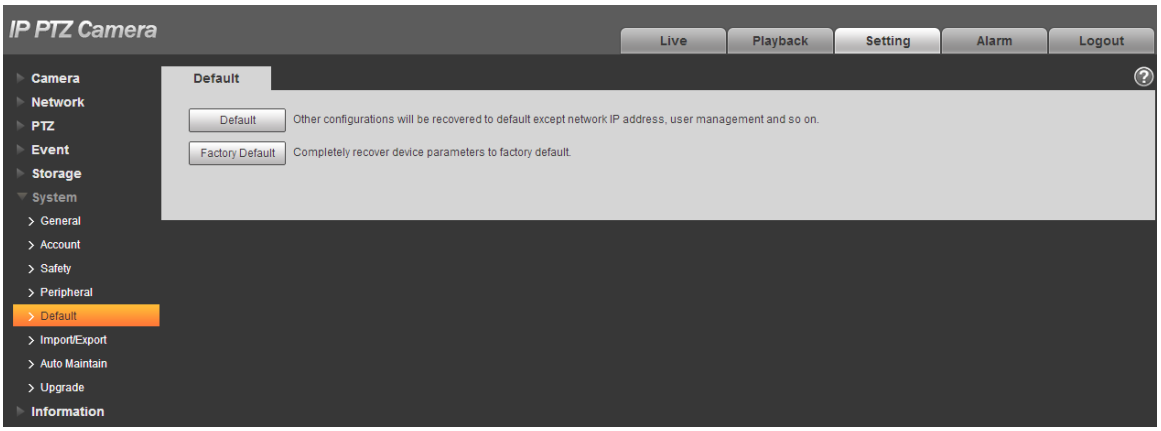


Figure 4-123

You can select default mode according to the actual needs.

- Default: Config (except network IP address, user management info and so on) default.
- Factory default: The function is equivalent to the reset button of the speed dome. It can help to restore all the config info to factory default, the device IP address will be restored to default IP address as well. After clicking “Factory Default”, it needs to input the password of admin user on the interface. It can restore the device after the system judges that the password is correct.

4.6.6 Import/Export

It can realize quick config of several devices via configuring file import and export when the config method of several devices is the same.

Step 1

Select “Setup > System > Import Export” on the WEB end of some device.

The system will display the interface of “Import & Export”, which is shown in Figure 4-124.

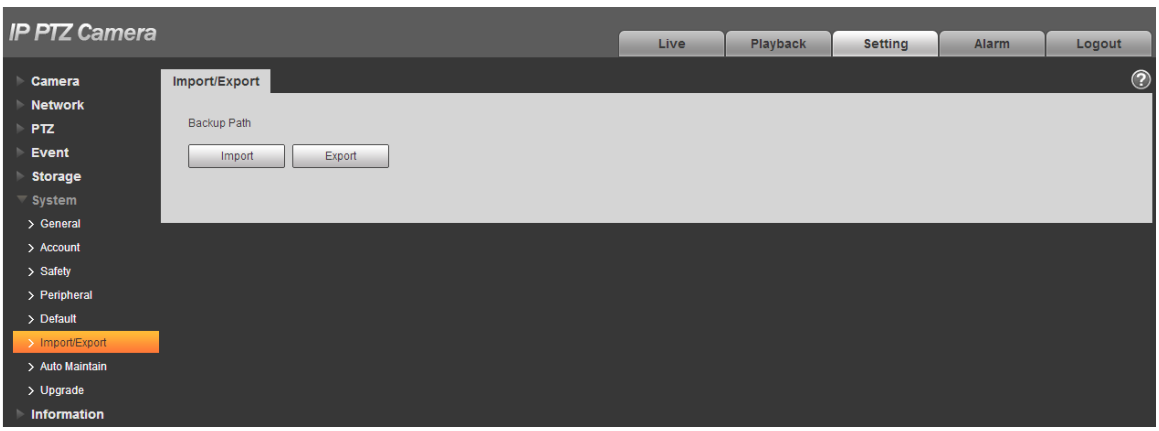


Figure 4-124

Step 2

Click “Export” to export the config file (.backup file) to local.

Step 3

Click “Import” on the “Import & Export” interface of the WEB end of the device to be configured, and import the file into the system. So far the device config is completed.

4.6.7 Auto Maintenance

Users can set auto reboot system or auto delete file, it needs to set period and time for auto reboot system, it is 02:00 every Tuesday by default. It needs to set the period of the file if it needs to auto delete old files, and delete the file within the specific period.

Step 1

Select “Setup > System > Auto Maintenance”.

The system will display the interface of “Auto Maintenance” in Figure 4-125.

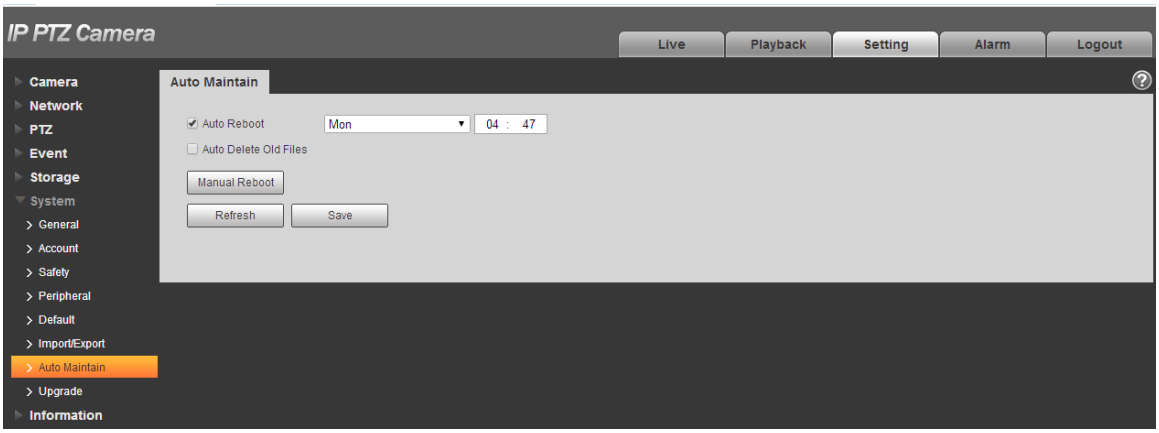


Figure 4-125

Step 2

Configure the info of each parameter according to the actual needs; please refer to Table 4-41 for more details.

Parameter	Function
Auto Reboot	Check it and set auto reboot time.
Auto Delete Old Files	Check it and you can customize period, the range of period is from 1 to 31 days.

Table 4-41

Step 3

Click “Save” to make config valid.

4.6.8 Upgrade

You can realize upgrade operation in “Setup > System > Upgrade”. See Figure 4-126 for more details.

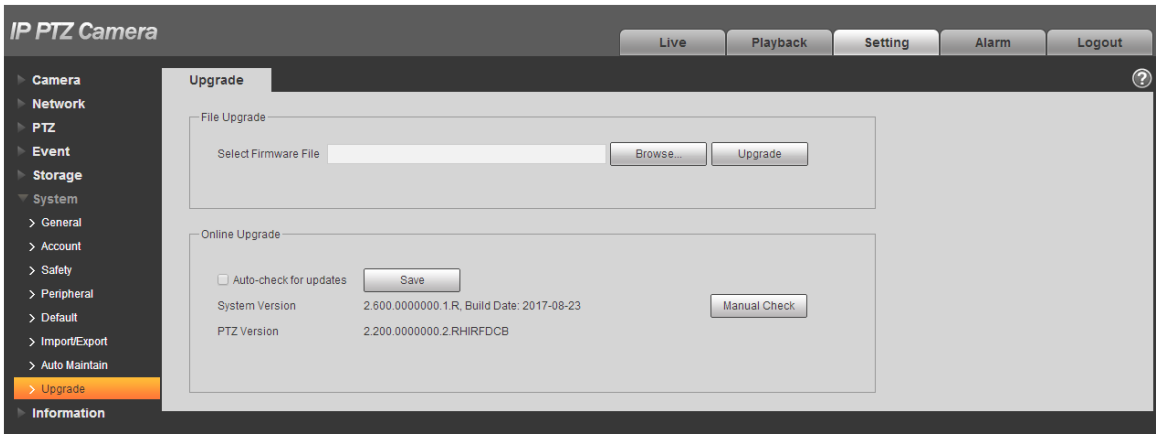


Figure 4-126

Click “Browse” and select upgrade file, click “Upgrade” to realize firmware upgrade. The upgrade file is “*.bin” file.

Note

It needs to reboot the device when upgrading wrong files; otherwise some module functions of the device will be disabled.

4.7 Information

The system supports checking system version, online users, log and etc.

4.7.1 Version

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

Check the version info of the current WEB end in “Setup > System > Version”. See Figure 4-127 for more details.



Figure 4-127

4.7.2 Log

In “Setup > System > Log’, you can check the device operation info implemented by users and some system info, see Figure 4-128 for more details.

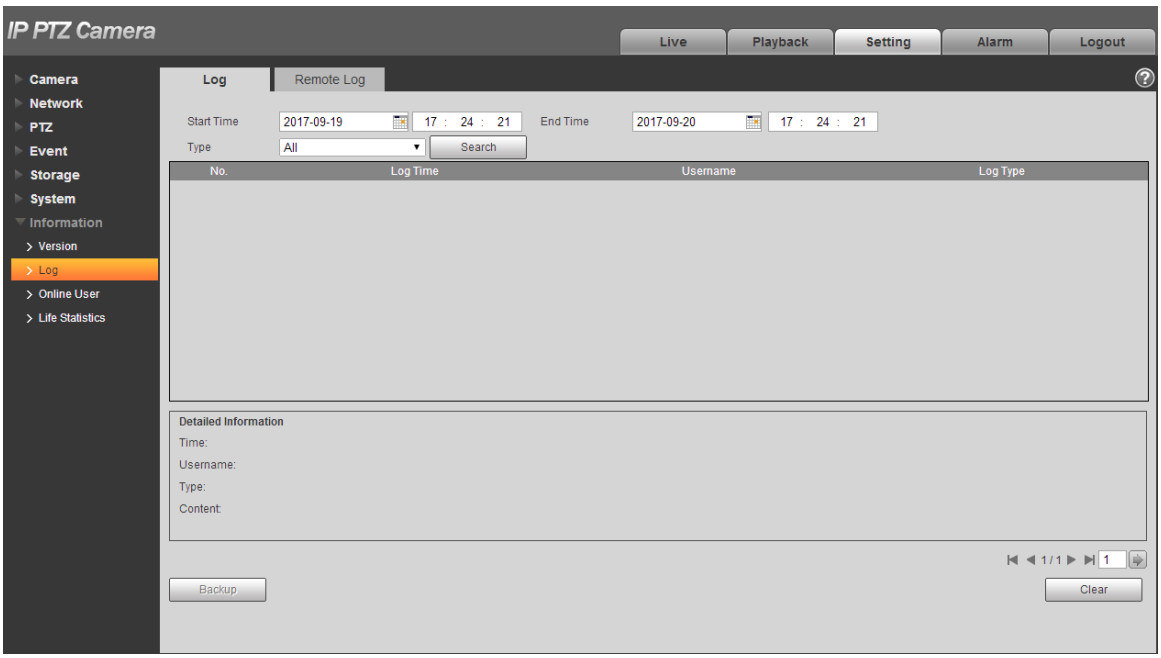


Figure 4-128

Please refer to Table 4-42 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 consists of system operation, config operation, data management, alarm event, record operation, user management and log clear.
Search	First it needs to set start time and end time of the log to be searched, and select log type, click “Search”, it will display search bars dynamically; click “Stop” to pause log search, and it will display the searched bars and period area.
Log information	Click log record and it will display the detailed info of the log.
Clear	It is to clear all the log info on the device, but it fails to support classified clearance of log info.
Backup	You can click this button to backup system log files which is searched to current PC.

Table 4-42

Specific meaning included by different log types:

- System operation: It includes application program enable, abnormal logout, logout, application program reboot, close/reboot device, system reboot, and system upgrade.
- Config operation: It includes save config, delete config file.
- Data operation; It includes setting hardware type, clearing data, hot swap, FTP status, record mode.
- Event operation (it is to record the events such as video detection, IVS, alarm, abnormity and etc.): It includes event start and event end.
- Record operation: It includes file access, file access error, and file inquiry.
- User management (it is to record the user management modification and user login and logout): It includes login, logout, add user, delete user, modify user, add group, delete group, modify group.
- Clear log: It is to clear log.

4.7.3 Online User

You can check the user info on the current WEB in “Setup > System > Online User”, see Figure 4-129 for more details.

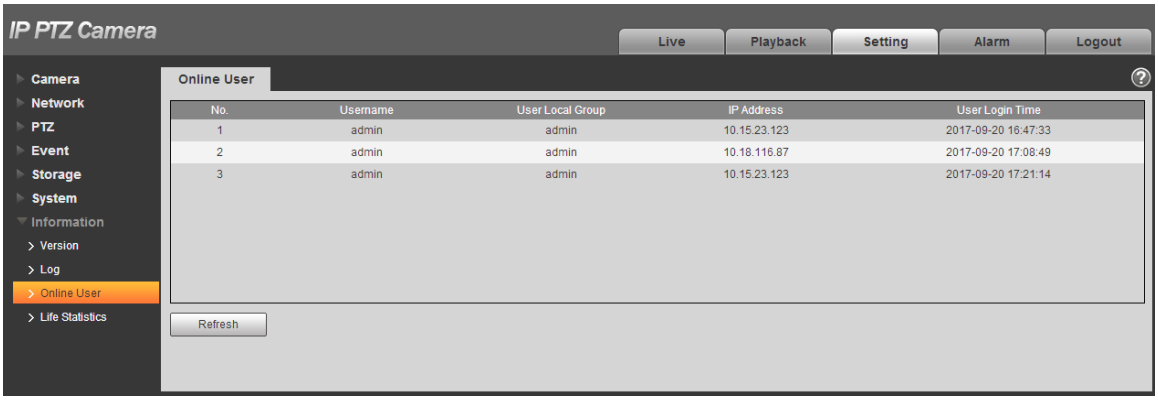


Figure 4-129

4.7.4 Life Statistics

Go to “Setup > Information > Life Statistics” and check running status of the device. The interface is shown in Figure 4-130.

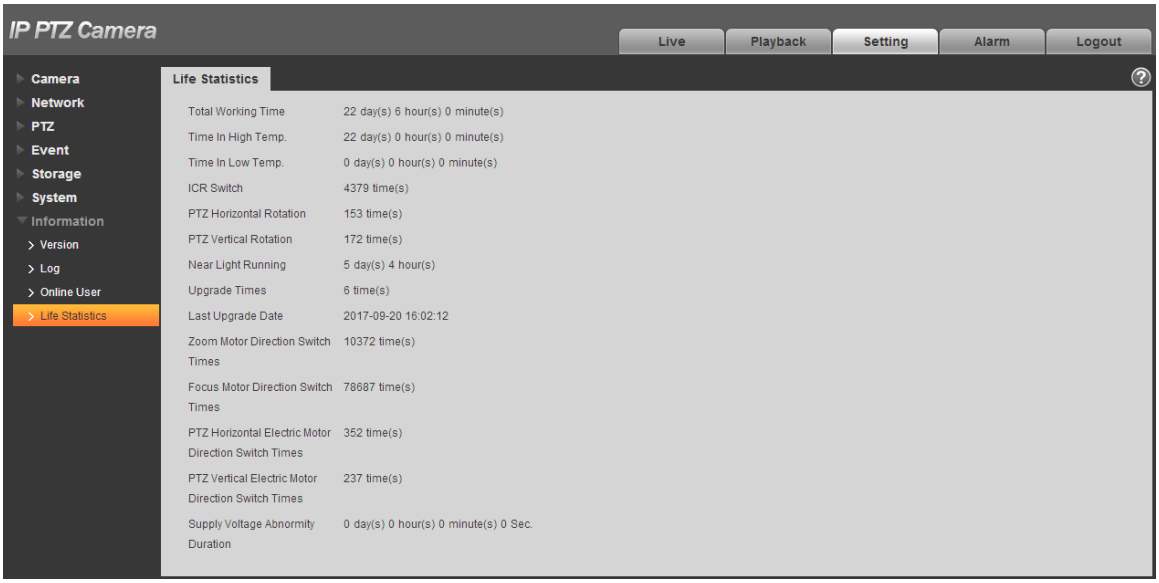

IP PTZ Camera
Live
Playback
Setting
Alarm
Logout
Camera
Network
PTZ
Event
Storage
System
Information
Version
Log
Online User
Life Statistics
Life Statistics
Total Working Time 22 day(s) 6 hour(s) 0 minute(s)
Time In High Temp. 22 day(s) 0 hour(s) 0 minute(s)
Time In Low Temp. 0 day(s) 0 hour(s) 0 minute(s)
ICR Switch 4379 time(s)
PTZ Horizontal Rotation 153 time(s)
PTZ Vertical Rotation 172 time(s)
Near Light Running 5 day(s) 4 hour(s)
Upgrade Times 6 time(s)
Last Upgrade Date 2017-09-20 16:02:12
Zoom Motor Direction Switch Times 10372 time(s)
Focus Motor Direction Switch Times 78687 time(s)
PTZ Horizontal Electric Motor Direction Switch Times 352 time(s)
PTZ Vertical Electric Motor Direction Switch Times 237 time(s)
Supply Voltage Abnormity Duration 0 day(s) 0 hour(s) 0 minute(s) 0 Sec.

Figure 4-130

5 Alarm

The alarm module mainly provides users with alarm events to subscribe; it will record the alarm info in the right column when it triggers the alarm event which has been subscribed by users.

Step 1

Click “Alarm” and the system will display the interface of “Alarm”, which is shown in Figure 5-1.

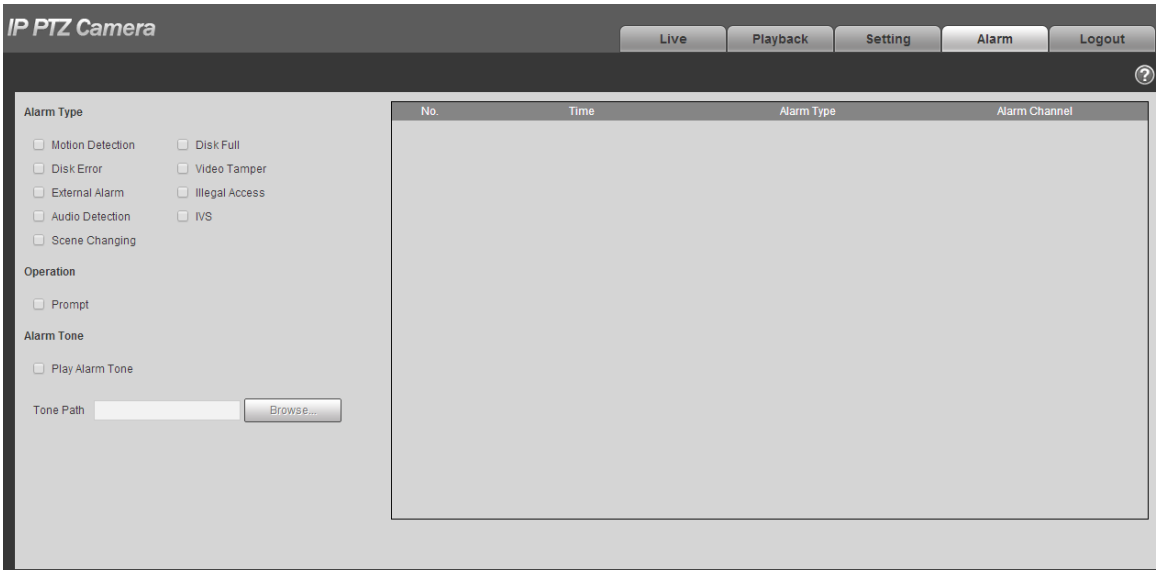


Figure 5-1

Step 2

Configure info of each parameter according to the actual needs; please refer to Table 5-1 for more details.

Type	Parameter	Function
Alarm type	Motion detection	System records alarm when motion detection alarm occurs,
	Disk full	System records alarm when disk is full.
	Disk error	System records an alarm when HDD malfunctions.
	Video tamper	System records alarm when camera is viciously masked.
	External alarm	System records alarm when alarm inputs the device.
	Illegal access	System records alarm when there is unauthorized access.
	Audio detection	System records alarm when audio detection occurs.
	IVS	System records alarm when intelligent config occurs

Type	Parameter	Function
	Scene changing	System records alarm when scene changing is triggered.
Operation	Prompt	When alarm is triggered, there will be an  in main menu of alarm interface and system automatically records alarm info. The icon disappears when user click alarm menu bar. Note: If alarm interface is displayed, when alarm is triggered, there will be no image prompt, but alarm record will be in list on the right.
Alarm Tone	Play Alarm Tone	When alarm occurs, system auto generates alarm audio. The audio supports customized setup.
	Tone Path	Here you can specify alarm sound file.

Table 5-1

6 Log out

Click log out button, system goes back to log in interface. See Figure 6-1.



Figure 6-1

Note

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