IPPTZ-12-EXT
IPPTZ-12-INT
IPPTZ-12-REC

2MP Mini Network PTZ IP Cameras

User's Manual

V1.0 11 / 2013

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Welcome

Thank you for purchasing the **IPPTZ-12-EXT / INT / REC 2 megapixel mini PTZ network IP camera**.

This user's manual is designed to be a reference tool for the installation and operation of your system.

Here you can find information about the corresponding IP camera's features and functions, as well as a detailed installation method.

Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1．Electrical safety

- All installation and operation here should conform to your local electrical safety codes.
- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.
- We are not liable for any problems caused by unauthorized modification or attempted repair.

2．Transportation Security

- No heavy stress, violent vibration or contact with water is allowed during transportation, storage and installation.
- Please use the original packing material (or the material of the same quality) when you ship it back to the manufacturer.

3．Installation

- Do not apply power to the product before completing installation.
- Do not put object(s) on the product.

4．Environment

- This product should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances etc.
- Please keep it away from environments that contain electromagnetic radiation or objects that produce it.
- Please keep sound ventilation around the device at all times.
- Do not allow the water and other liquid to penetrate into the device if casing has been compromised. This series product complies with the IP66 standard specified in the Degrees of Protection Provided by Enclosure.
- Please make sure the CCD (CMOS) component is away from the radiation of the laser beam device. Otherwise it may result in CCD (CMOS) optical component damage.

5. Daily Maintenance

- Current series product has no power button. Please unplug all corresponding power cables before your begin installation or daily maintenance work.
- Please keep the dustproof cap back to protect the CCD or CMOS part if the device does not work for a long time.
- Do not touch CCD (CMOS) component. You can use the blower to clean the dust on the surface of the device. You can use the dry cloth with some alcohol or mild detergent to clear if necessary.
- Do not use volatility solvent such as the benzene or thinner, or detergent with strong abradability. It may result in lens damage or it may adversely affect the device performance.

- If there is too much dust, please use the water to dilute the mild detergent first and then use it to clean the device. Finally use the dry cloth to clean the device.

6. About Accessories

Always use all the accessories recommended by manufacturer.

Before installation, please open the package and check that all the components are included in the package. Contact your local retailer ASAP if something is missing in your package.

1 TECHNICAL SPECIFICATIONS

Model	IPPTZ-12-EXT	IPPTZ-12-INT	IPPTZ-12-REC
Camera			
Image Sensor	1/3" Exmor CMOS		
Effective Pixels	1944(H) x 1092(V), 2 Megapixels		
Horizontal Resolution	>1000TVL		
Scanning System	Progressive		
Electronic Shutter	1/3s ~1/30,000s		
Min. Illumination	Color: 0.05 Lux/F1.6, B/W: 0.005Lux/F1.6		
S/N Ratio	More than 55dB		
Video Output	BNC(1.0Vp-p/75Ω), PAL / NTSC		
Camera Features			
Day/Night	Auto(ICR) / Color / B/W		
Backlight	BLC / HLC / DWDR (Drillital WDR)		
White Balance	Auto, ATW, Indoor, Outdoor, Manual		
Gain Control	Auto / Manual		
Noise Reduction	2D / 3D		
Privacy Masking	Up to 24 areas		
Drillital Zoom	16x		
Lens			
Focal Length	5.1 mm~61.2mm (12x Optical zoom)		
Max Aperture	F1.2~ F2.1		
Focus Control	Auto / Manual		
Angle of View	51.3° ~ 4.64°		
Close Focus	100mm~1000mm		
PTZ			
Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: -2° ~ 90°, auto flip 180°		
Manual Control	Pan: 0.1° ~ 300°/s; Tilt: 0.1° ~120°/s		
Preset Speed	Pan: 300°/s; Tilt:200°/s		
Preset	80(DH-SD) , 255(Pelco-P/D)		
PTZ Mode	5 Pattern, 8 Tour, 5 Auto Scan, Auto Pan		
Speed Setup	Human-oriented focal length/ speed adaptation		
Power up Action	Auto restore to previous PTZ and lens status after power failure		
Idle Motion	Activate Preset/Pan/Scan/Tour/Pattern if there is no command in the specified period		
Time Task	Auto activation of Preset/Pan/Scan/Tour/Pattern by preset-time		
Protocol	DH-SD, Pelco-P/D (Auto recognition)		
Video			
Compression	H.264 / MJPEG		
Resolution	1080P(1920×1080)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)		

Frame Rate	Main	1080P/D1 (1 ~ 25/30fps) /720P(1~50/60fps)		
	Sub	D1/CIF(1 ~ 25/30fps)		
Bit Rate		H.264: 448K ~ 8192Kbps, MJPEG: 56K ~ 20480Kbps		
Audio				
Compression		G.711a / G.711u (32kbps) / PCM (128kbps)		
Interface		1/1 channel In/Out		
Network				
Ethernet		RJ-45 (10/100Base-T)		
Protocol		IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP,		
ONVIF		ONVIF Profile S		
Max. User Access		20 users		
Smart Phone		iPhone, iPad, Android, Windows Phone		
Auxiliary Interface				
Memory Slot		Micro SD, Max 64GB		
RS485		N/A		
Alarm		2/1 channel In/Out		
General				
Power Supply		AC24V/1.5A (±10%), POE+(802.3at)		
Power Consumption		12W, 22W(Heater on)	12W	
Working Environment		-40ºC ~ 60ºC / Less than 90% RH	-10ºC ~ 60ºC / Less than 90% RH	
Ingress Protection		IP66		N/A
Vandal Resistance		IK10 (optional)		
Dimensions		Φ186mm×234mm	Φ170mm×155mm	Φ198mm×158mm
Weight		2.3Kg	1.8Kg	2.3Kg

2 SETUP BEFORE INSTALLATION

2.1 Check Accessories

Before camera installation, please check the accessories one by one according to the packing list. Please make sure all the components listed are included.

2.2 Open Device

Remove the package and then take out the device. Open the transparent cover and take out the packing material EPE around the IP PTZ drive. Please remove the 'Paster' from the pedestal (see Figure 2-1).

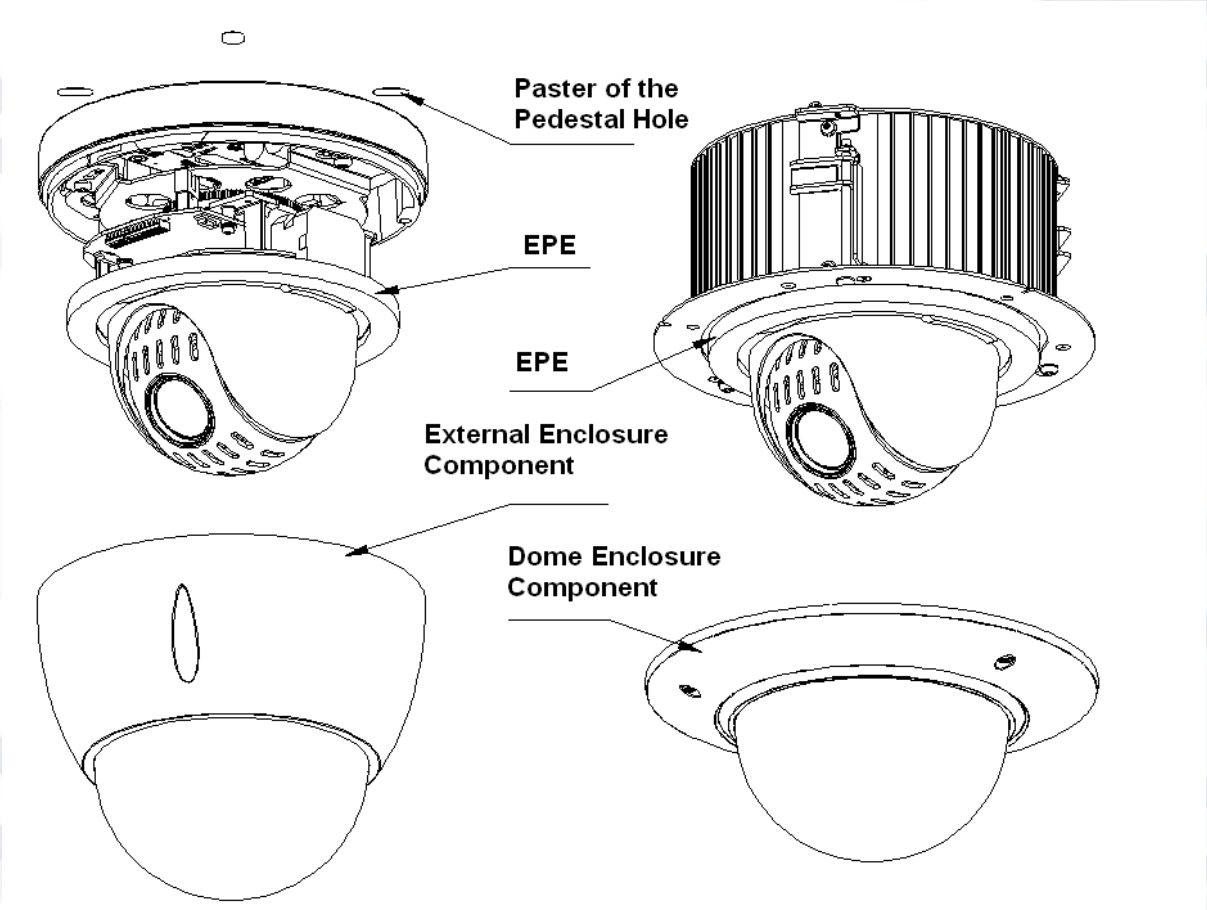


Figure 2-1

2.3 Initial Setup

The default setup is:

- Address: 1
- Baud rate: 9600
- Parity: None
- 120Ω resistance: OFF

3 CEILING MOUNT

3.1 Installation Components

The ceiling mount installation for the **IPPTZ-12-INT** camera component is shown in Figure 3-1.

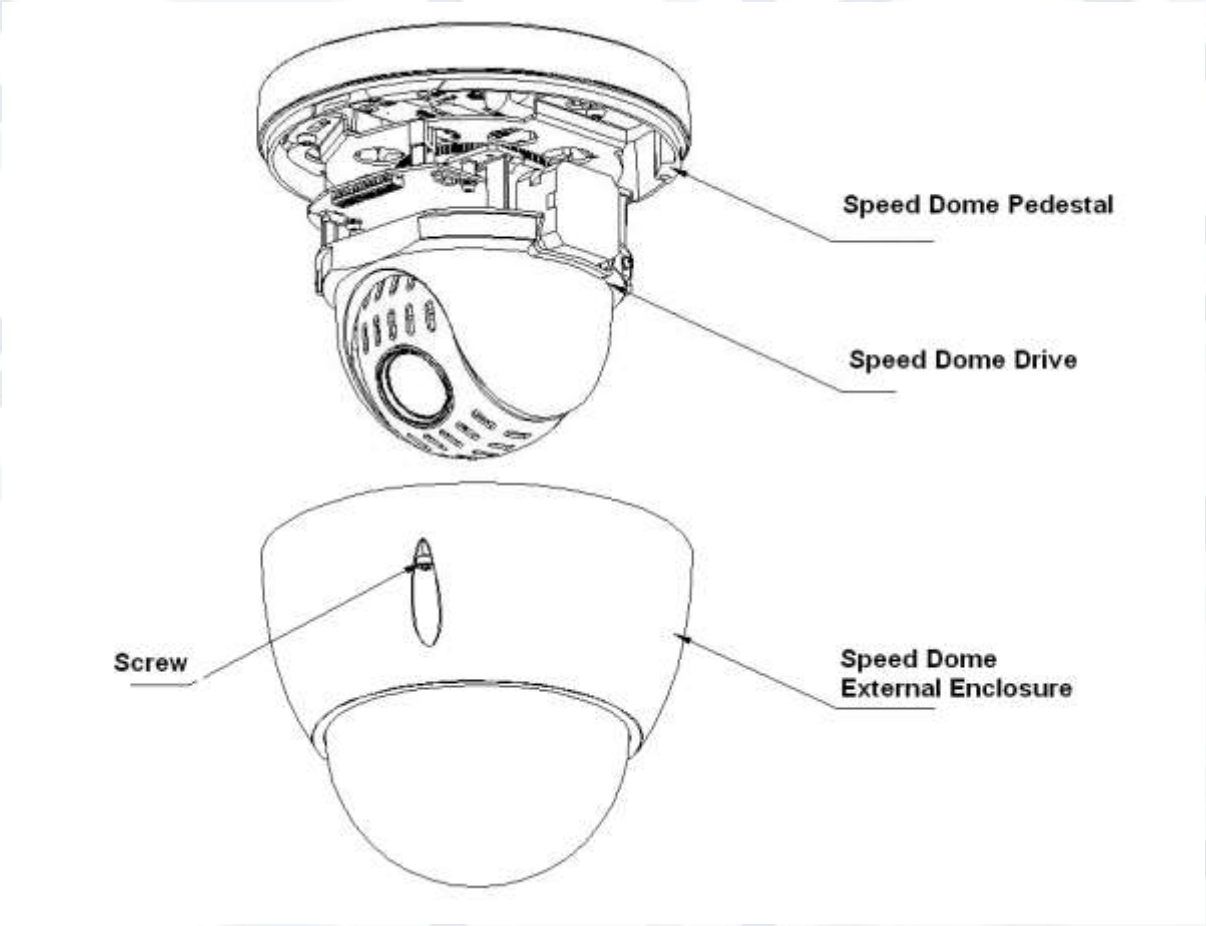


Figure 3-1

3.2 Ceiling Mount Installation Steps

3.2.1 Installation Environments

The ceiling mount IP PTZ can be installed on to a hard construction wall within indoor environments. Before the installation, please make sure:

- The wall is thick enough to install the expansion bolt.
- The ceiling can at least sustain 8x the weight of the IP PTZ, bracket and the accessories.

3.2.2 Installation Steps

1. The ceiling installation has two cable exits options: one is to pull the cable through the side cable exit of the IP PTZ without drilling holes into the ceiling. The other is to drill holes in the ceiling and pull the cable through the holes.
2. Confirm installation position and cable exit options. Use the ceiling installation position map to drill holes into the ceiling and then put the four plastic expansion bolts firmly.

3. In Figure 3-2, pull the cable through the hole according to your cable exit option you have selected. Then use four screws (working with the insulated sleeve) to secure the ceiling mount IP PTZ pedestal onto the ceiling. Turn the screws into the plastic expansion bolts.

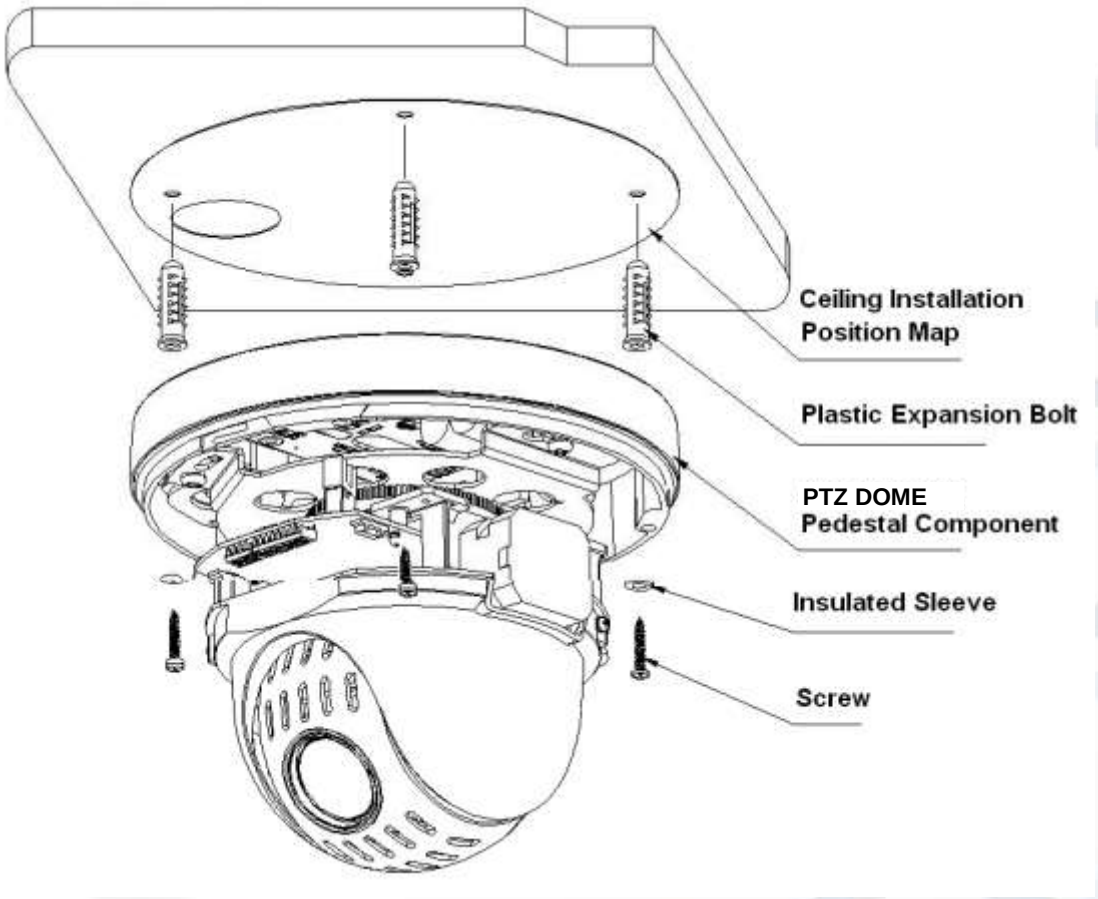


Figure 3-2

4. In Figure 3-3, line up the arrow symbol on the IP PTZ external enclosure to the bar symbol of the pedestal. Use three screws (provided) to secure the external enclosure onto the pedestal and fix firmly.

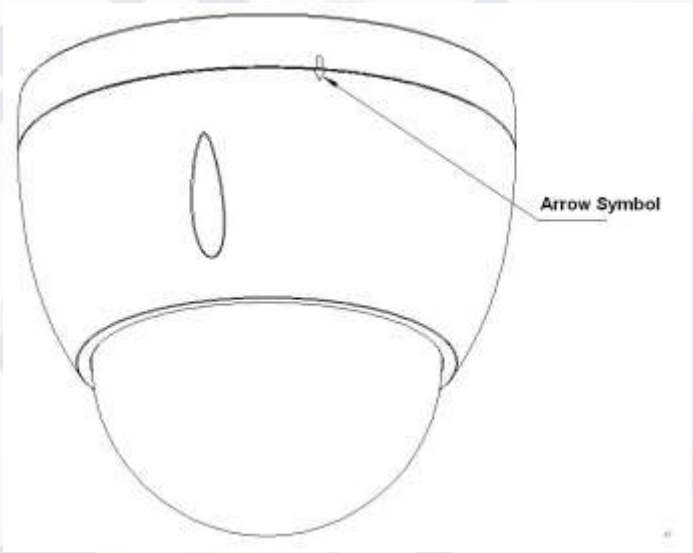


Figure 3-3

4 WALL MOUNT BRACKET INSTALLATION

4.1 Component Installation

The outdoor IP PTZ **IPPTZ-12-EXT** wall mount bracket is shown in Figure 4-1.

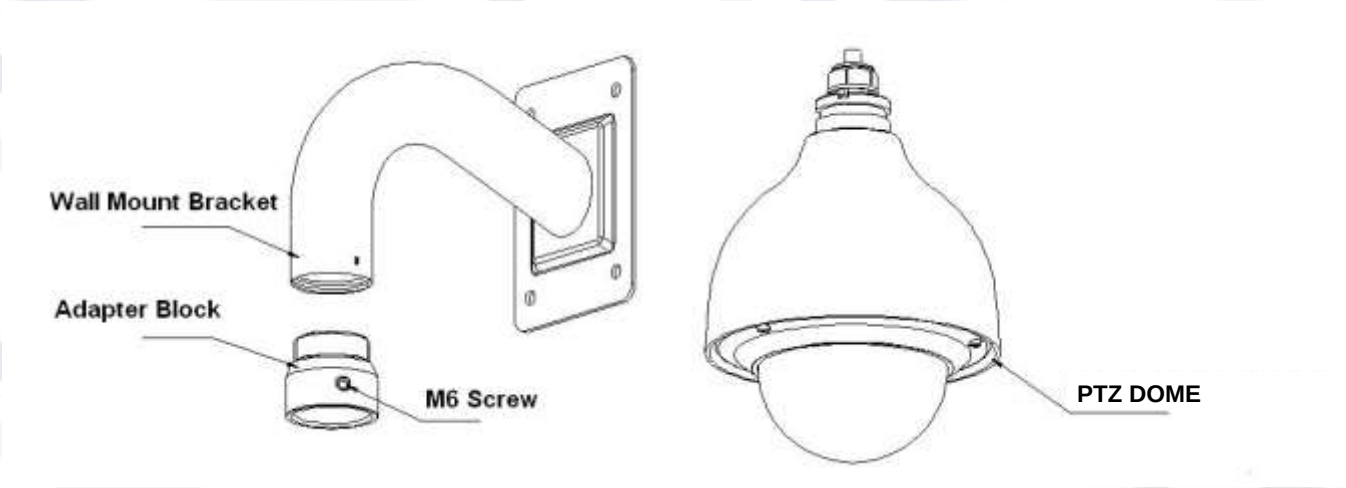


Figure 4-1

4.2 Wall Mount Installation Steps

4.2.1 Installation Environments

The wall mount IP PTZ can be installed onto a hard construction wall in either indoor or outdoor environments.

Before the installation, please make sure:

- The wall is thick enough to install the expansion bolt.
- The ceiling can at least sustain 8x the weight of the IP PTZ, bracket and the accessories.

4.2.2 Installation Steps

1. Drill a hole 50mm in diameter for cable to exit into the installation wall.
2. In Figure 4-2, connect the adapter block to the internal thread of the wall mount bracket, until it reaches the end, and then fix the set screw. Pull the intelligent IP PTZ's composite cable through the adapter block and pull it out the other end of the wall mount bracket. Line up the hook at the top of the external enclosure to the hole in the inside of the adapter block and then push it to the end. Next secure the three screws of the adapter block firmly. **Please note this step is very important. Please make sure the screws are firmly set into place, otherwise there will be a risk that the IP PTZ may fall from the wall bracket and cause injury to person(s).**

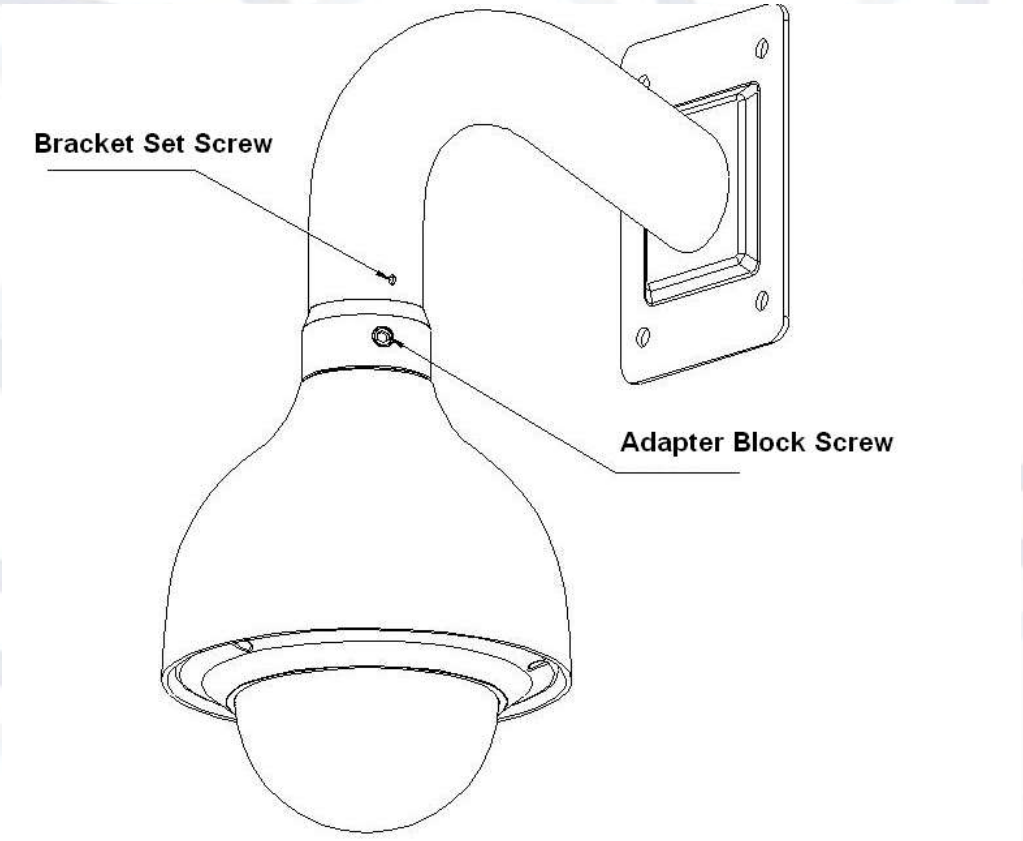


Figure 4-2

3. Drill holes in the wall according to the installation holes at the bottom of the wall mount bracket. Please make sure the cable exit of the bracket is facing the round hole in the wall. Insert expansion bolts (not provided) to the holes you have just drilled. Connect the composition cable and then pull it through the hole in the wall. Use four hex screws and flat washer to secure the bracket to the wall with the expansion bolts. See Figure 4-3.

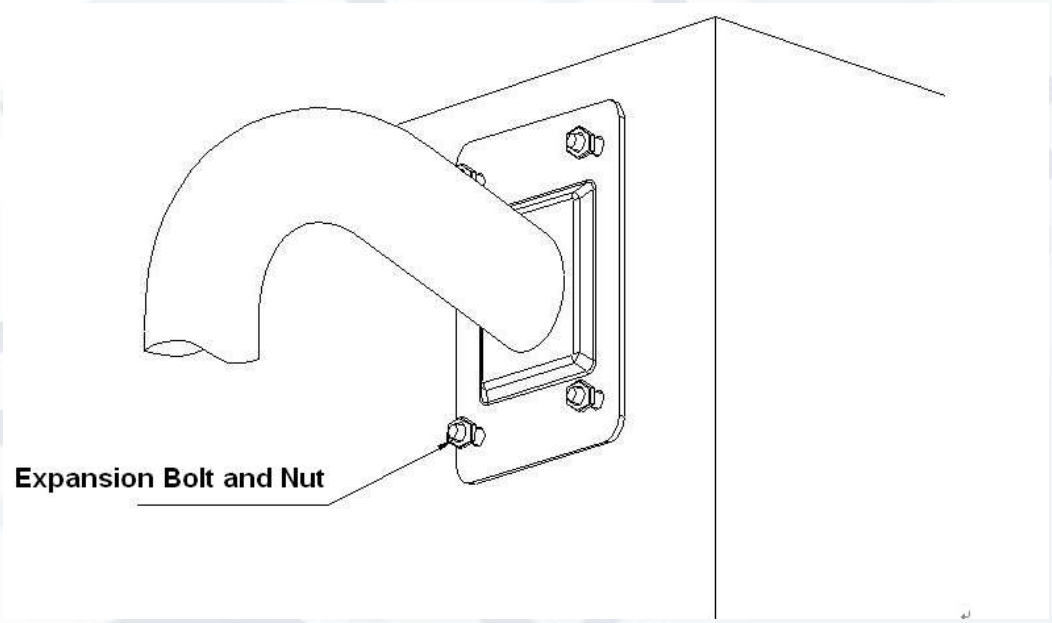


Figure 4-3

Now the installation is complete. See Figure 4-4.

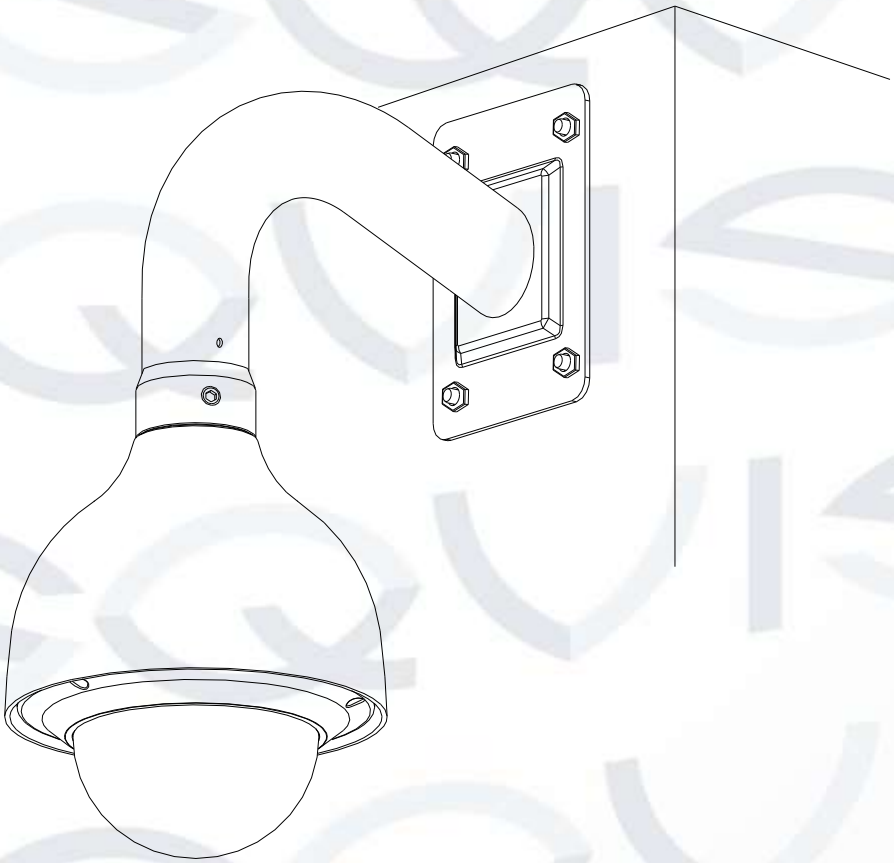


Figure 4-4

5 IN-CEILING MOUNT BRACKET INSTALLATION

5.1 Component Installation

The in-ceiling bracket and IP PTZ **IPPTZ-12-REC** body is shown below. See Figure 5-1.

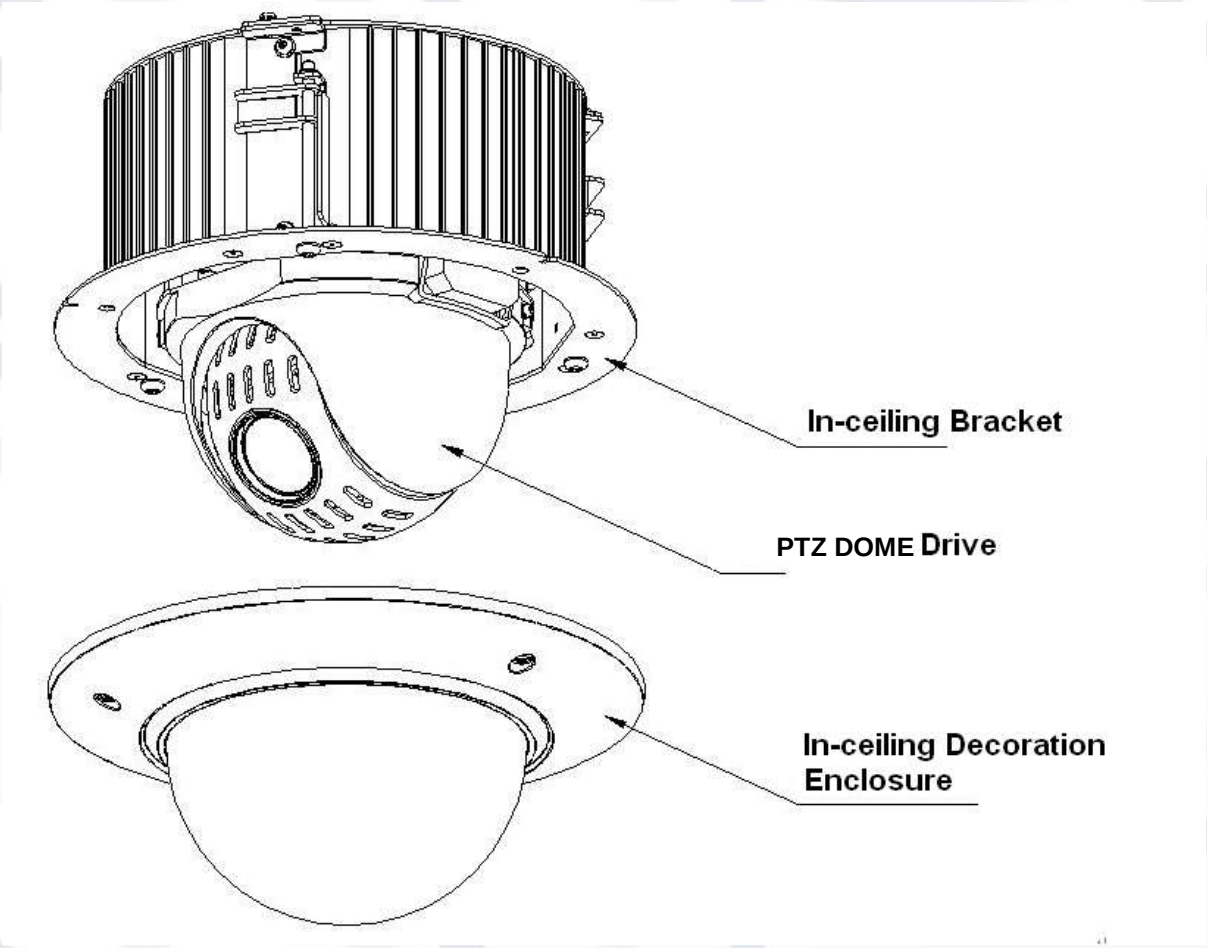


Figure 5-1

5.2 Installation

5.2.1 Installation Requirements

The in-ceiling mount IP PTZ can be installed onto a hard construction wall within indoor environments. Before the installation, please make sure:

- The ceiling thickness ranges from 10-40mm.
- The ceiling can at least sustain 8x the weight of the IP PTZ, bracket and the accessories.

5.2.2 Installation Steps

Please confirm installation position and paste the in-ceiling installation position map before drilling holes. See Figure 5-2.

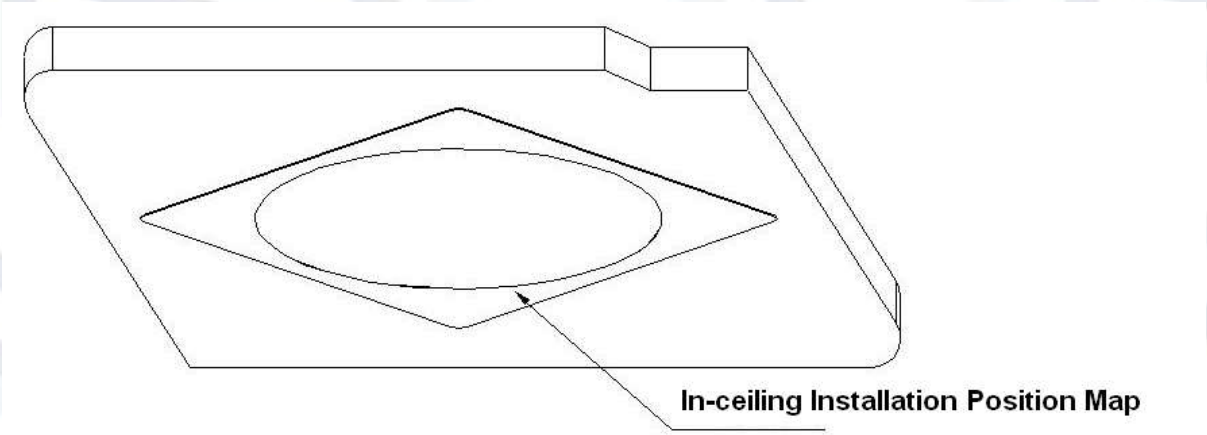


Figure 5-2

Connect the composition cable and then put the cable to the hole you just drilled. Push the in-ceiling bracket and dome body to the hole you just drilled. Turn the fastening screw to secure the hanging board. See Figure 5-3.

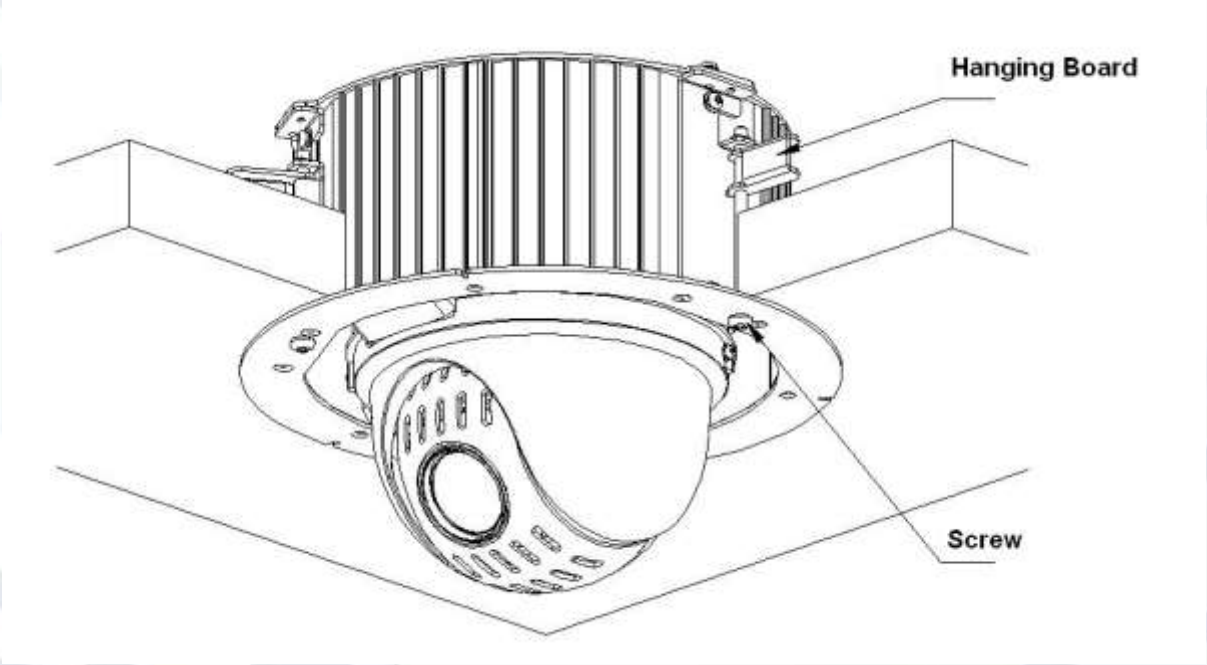


Figure 5-3

In Figure 5-4, use three screws to secure the in-ceiling decoration enclosure component to the in-ceiling bracket components and fix them firmly into place. See Figure 5-5.

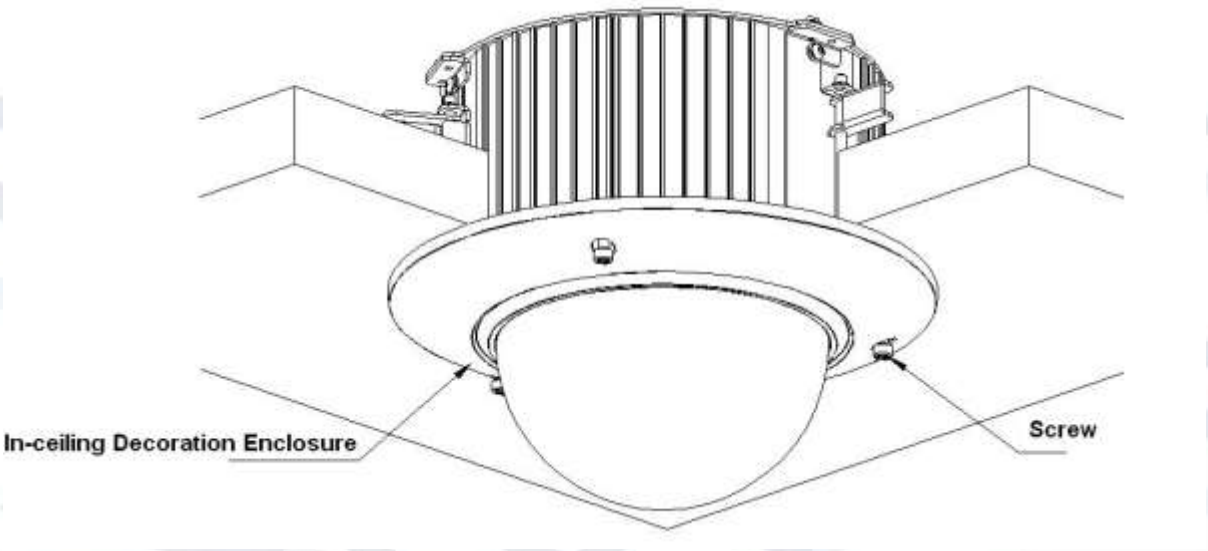


Figure 5-4

After the installation, the interface is shown in Figure 5-5.

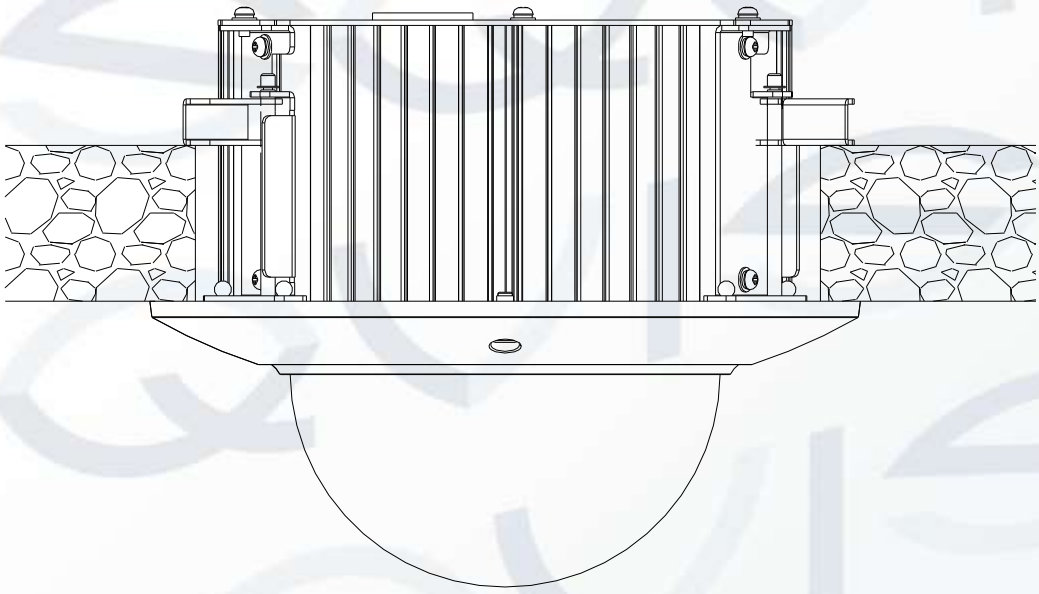


Figure 5-5

6 WEB OPERATION

6.1 NETWORK CONNECTION

6.1.1 Preparation

This series of IP PTZ product supports the remote Web access and management via your PC. Web includes several modules: monitor channel preview, PTZ control, system configuration, alarm etc.

Please follow the steps listed below for network connection.

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

6.1.2 Log in

Open Internet Explorer and input the IP PTZ's address into the address bar.

- For example, if your device IP is 192.168.1.108, then please input http:// 192.168.1.108 in to the IE address bar. See Figure 6-1.

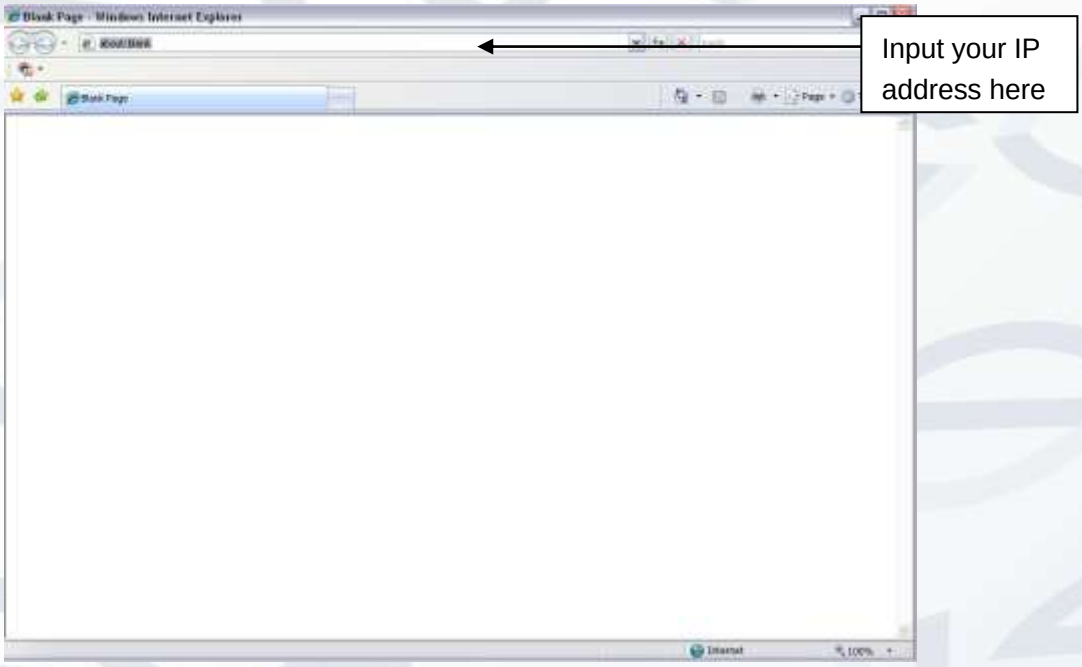


Figure 6-1

- The login interface is shown below. See Figure 6-2.
- Please input your user name and password.
- Default factory name is **admin** and password is **admin**.

Note: For security reasons, please modify your password after you first login.

Figure 6-2

If logging in for the first time the Web access manager will ask if you would like to install the control '**webrec.cab**' or not. Please click the OK button and the system can automatically install the control. When system is upgrading, it can overwrite the previous Web access file too.

If you can't download the ActiveX file, please check whether you have installed the plug-in and disable the control download. If you still can't download it try lowering the IE security level. See Figure 6-3.

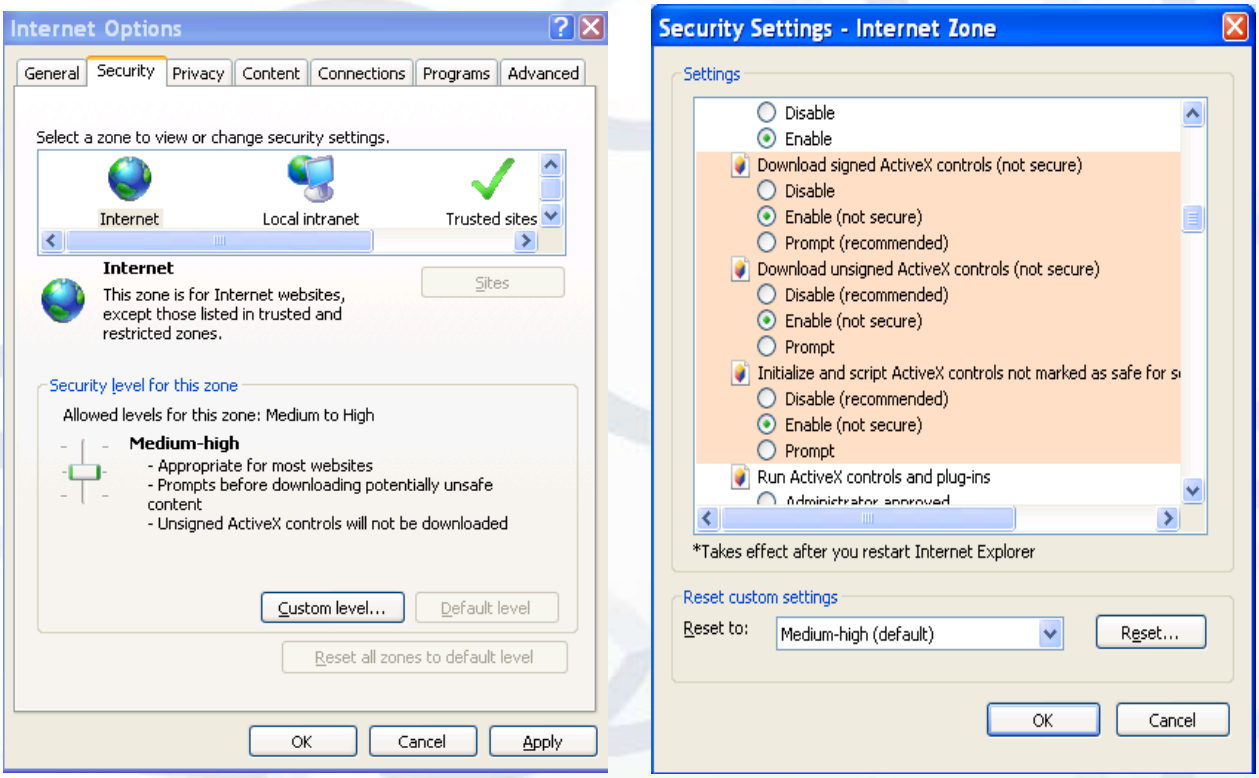


Figure 6-3

6.1.3 Live Interface

After you have logged in, you will be able to see the live monitor window. Now you can operate the IP PTZ via the WEB. See Figure 6-4.

Figure 6-4

There are six sections pointed out above:

- Section 1: Encode setup bar
- Section 2: Window adjust bar
- Section 3: System menu bar
- Section 4: Window function option bar
- Section 5: PTZ control
- Section 6: PTZ function

6.1.4 Encode Setup

The encode setup interface is shown in Figure 6-5.

Figure 6-5

Please refer to the following sheet for detailed information:

Parameter	Function
Main stream	In normal network width environment, main stream can record video file and connect to the network monitor.
Sub (Extra) stream	If the network width is not sufficient, you can use sub stream to connect to the network monitor. This is to reduce network bandwidth usage.
Protocol	You can select video monitor protocol from the dropdown list. There are three options: TCP/UDP/Multicast.

6.1.5 Video Window Setup

The interface is shown in Figure 6-6.

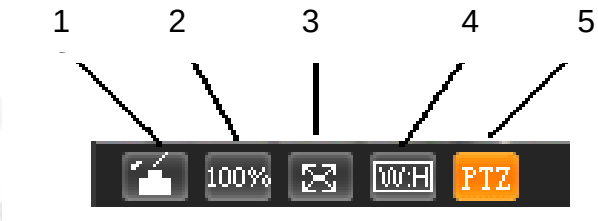


Figure 6-6

Please refer to the following sheet for detailed information:

SN	Parameter	Function
1	Image control	Click it to open picture setup interface. See Figure 6-7. This interface is on the top right pane.
2	Original size	Click this button to go to original size. This is to display the actual size of the video. It depends on the resolution of the video.
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 restore original ratio or suitable window.
5	Open/close PTZ interface	Left click it to display or hide the PTZ control interface.

The picture setup interface is shown in Figure 6-7:

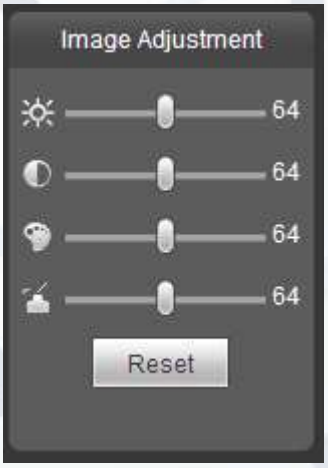


Figure 6-7

Please refer to the following sheet for detailed information:

Parameter		Function	
Video setup		Brightness setup icon. This is to adjust monitor video brightness.	Note: ● All the operations here apply to WEB end only. ● Please go to Setup->Camera->Conditions to adjust brightness, contrast, hue and saturation setup.
		Contrast setup icon. This is to adjust monitor video contrast ness.	
		Saturation setup icon. This is to adjust monitor video saturation.	
		Hue setup icon. This is to adjust monitor video hue.	
	Reset	Restore brightness, contrast, saturation and hue to system default setup.	

-  --- Original size button. This is to display video actual size. It depends on the video resolution.
-  --- Full-screen button. Double click or click Esc button to exit full-screen mode.
-  --- Width and height rate. Adjust to original size or suitable for the window.
-  --- Fluency setup. It has three modes: real-time/general/fluency.
-  ---Open/close PTZ interface. Left click mouse to display or hide PTZ control interface.

6.1.6 System Menu

System menu is shown in Figure 6-8.

Figure 6-8

6.1.7 Video Window Function Option

The interface is shown below. See Figure 6-9.

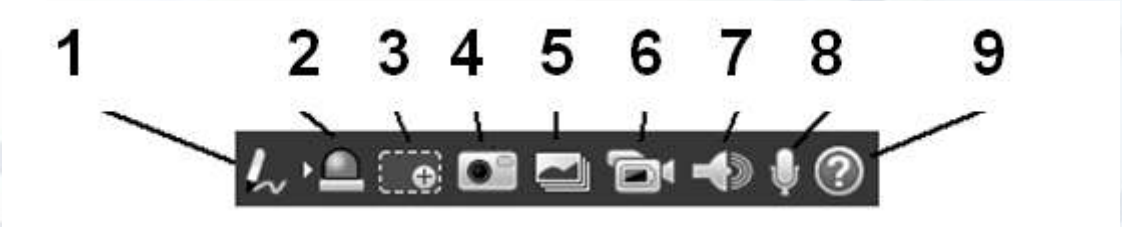


Figure 6-9

Please refer to the following sheet for detailed information:

SN	Parameter	Function
1	Remark	Click it and then select pen color, you can write down the mark information on the preview interface.
2	Alarm output	Click it to generate an alarm output and the button becomes red. Click it again to stop alarm output. There is only one alarm output icon since this series product supports one relay output. **Please note the alarm output interface may vary due to different series products.**
3	Drillital zoom	When video is in the original status, click this button you can select any zone to zoom in. After zoom in, you can drag the zoom in area in the specified area. Right click mouse system restores original status. You can use the wheel to zoom out the video.
4	Snapshot	You can snapshoot important video. You can go to Setup->Camera->Video->Path to modify the local record save path.
5	Triple snap	Click it, system can snap at 1f/s for three times. All images are memorized in system storage folder.
6	Record	When you click local record button, the system begins recording. You can go to Setup->Camera->Video->Path to modify the local record save path.
7	Audio output	Turn on or off audio when you are monitoring. You can go to Setup->Camera->Audio to set.
8	Bidirectional talk	Click it to begin audio talk. You can go to Setup->Camera->Audio to set bidirectional talk mode.
9	Help	Click it to open help file.

6.1.8 PTZ Control

Before PTZ operation, please make sure you have properly set the PTZ protocol. (Please go to Setup->System->PTZ to set.).

Here you can view direction keys, speed, zoom, focus, iris button. See Figure 6-10.

- **PTZ direction**: PTZ supports eight directions: left/right/up/down/upper left/upper right/bottom left/bottom right/ fast positioning.
- **Speed**: The step 8 speed is faster than step 1.

Figure 6-10

6.1.9 PTZ Setup/Menu

The PTZ setup/Menu interface is shown in Figure 6-11.

Figure 6-11

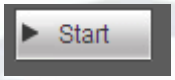
Click PTZ set button, the interface is shown in Figure 6-12.Here you can select scan, preset, tour pattern, assistant function etc.

Figure 6-12

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	Reserved assistant function.
Goto	This is the accurate positioning function. Please input corresponding horizontal angle, tilt angle, and IP PTZ zoom speed and then click Goto button to go to a specified position. One unit of the horizontal angle or tile angle stands for 0.1 degree.
Pan	Select Pan from the dropdown list and then click Start button, you can rotate the PTZ full 360 degrees movement. Click Stop button to stop current operation.

For detailed setup information, please go to Setup->PTZ-Function.

Click 

button to begin a PTZ operation. Now you can see it becomes Stop button. Click it again to stop current PTZ operation.

6.2 Playback

6.2.1 Playback Interface

The playback interface is shown in Figure 6-133

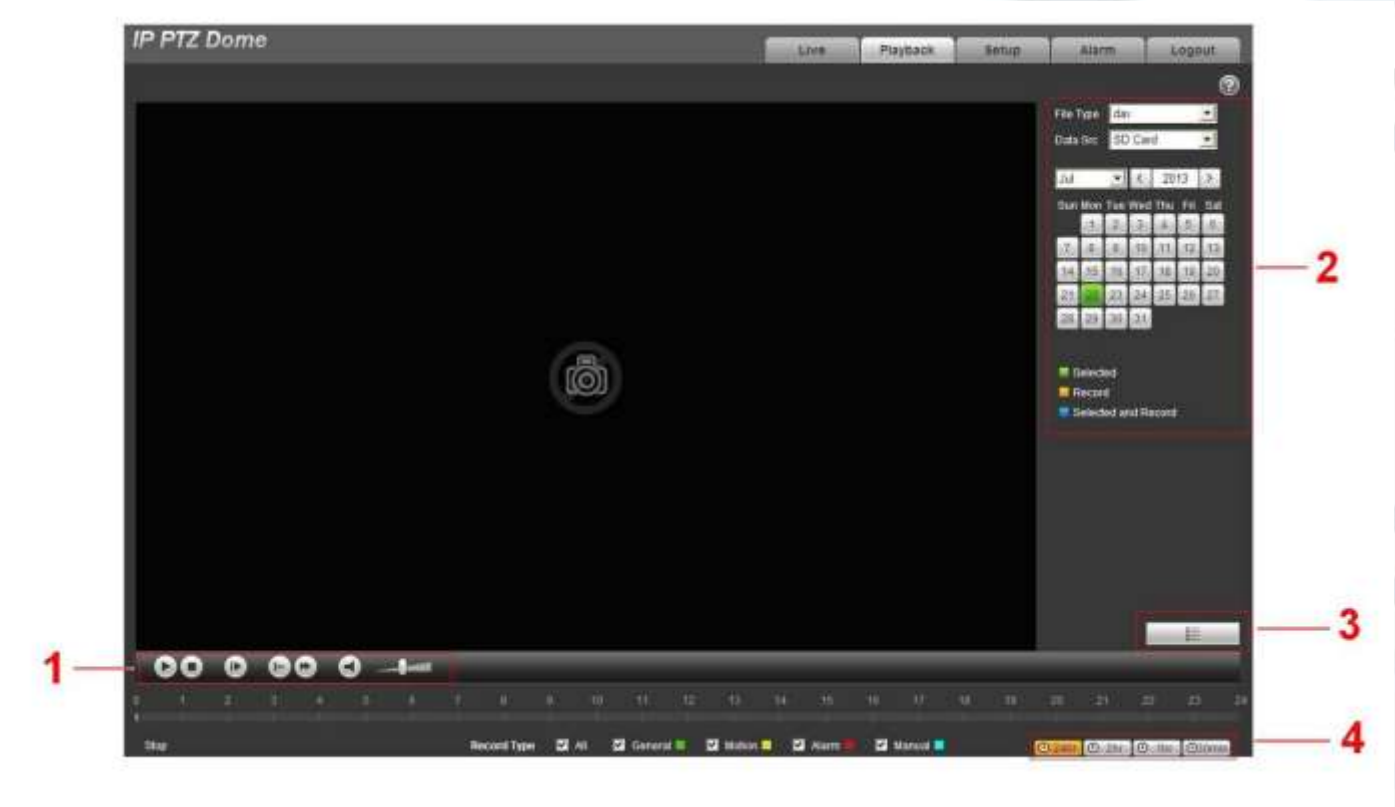


Figure 6-133

You can refer to the following sheet for detailed information:

SN	Name
1	Playback control button
2	Date
3	File list
4	Time process format

6.3 Playback Control Button

Playback control button is shown below. See Figure 6-14.

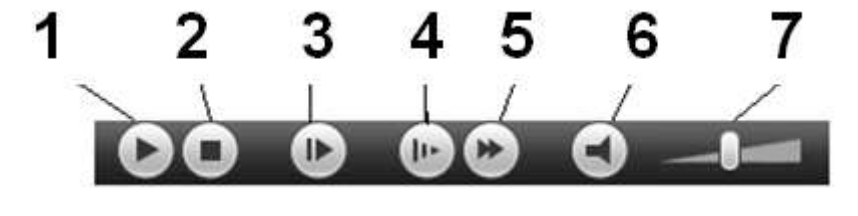


Figure 6-14

You can refer to the following sheet for detailed information:

SN	Name	Function
1	Play	To start or resume playback.
2	Stop	Stop current playback.
3	Frame by frame	Play next frame. Please pause playback first if you want to use frame by frame playback function.
4	Slow play	Slow playback.
5	Fast play	Fast playback.
6	Mute	Click it to mute. Click it again to restore audio function.
7	Volume	Set record volume level.

6.4 Date

The colors here have different meanings:

- **Green**: Current selected data.
- **Yellow**: Current date has record file.
- **Blue**: Current data has record file and it has been selected.

You can check the corresponding file record here to view the file record you are interested.

6.5 File List

Click  , and you can go to file list interface. See Figure 6-15. Double click a record file to begin playback, at the same time, you can view file size, file start time and file end time.

The different colors here has different meansings.

- Green: Normal record.
- Yellow: Motion detect record.
- Red: Alarm record.
- Blue: Manual record.

Figure 6-15

You can refer to the following sheet for detailed information:

Icon	Name	Function
	Search	This is to search record from the start time of you selected date to the previous 24 hours.
	Stop	Click it to download selected file(s) to local PC.
	Back	Click it to go back to calendar interface to select date again.

6.6 Process bar format

You can refer to the following sheet for detailed information:

Icon	Function
⊕ 24hr	Process bar is in 24H mode.
⊕ 2hr	This is to display the record files of previous two hours.
⊕ 1hr	This is to display the record files of previous one hour.
⊕30min	This is to display the record files of previous 30 minutes.

6.7 Setup

6.7.1 Camera

6.7.1.1 Conditions

Here you can set camera property. Adjust video parameter to get best preview effect. See Figure 6-16.

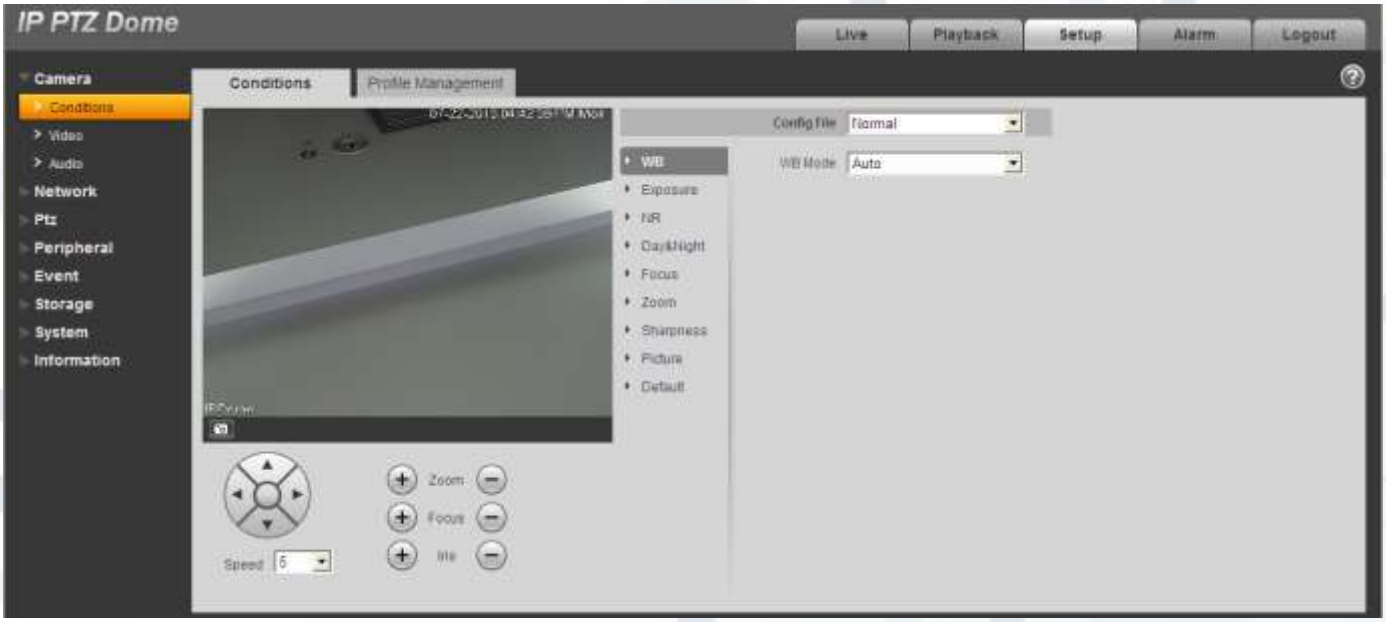


Figure 6-146

Please refer to the following sheet for detailed information:

Parameter	Function
Config File	Here you can set the camera setup mode. It includes: normal/day/night.
White Balance	This is to set the camera white balance. It includes: auto/manual/ATW/outdoor/indoor/outdoor auto/sodium light auto/sodium light.
Exposure	This is to set the camera exposure mode. It includes: auto/manual/aperture has the priority/shutter has the priority.
NR	This is to set the camera denoise mode. It: is 2D/3D noise reduction.
Day/Night	This is to set the camera day/night switch mode. The type includes: electronic/mechanical. It includes four modes: auto/B&W/Color/Photo-sensor.
Focus	This is to set the camera focus mode. It includes: auto/manual/semi auto.
Zoom	This is to set the zoom/camera zoom rate. You need to check the box here to enable the zoom function.
Sharpness	This is to set the camera lens sharpness, and sharpness control level.
Picture	This is to set the camera video. It includes: style/hue/brightness/saturation/ chroma control/gamma/picture flip/picture freeze.
Default	This is to restore factory default setup.

6.7.1.2 White Balance

White balance interface is shown below. See Figure 6-17:

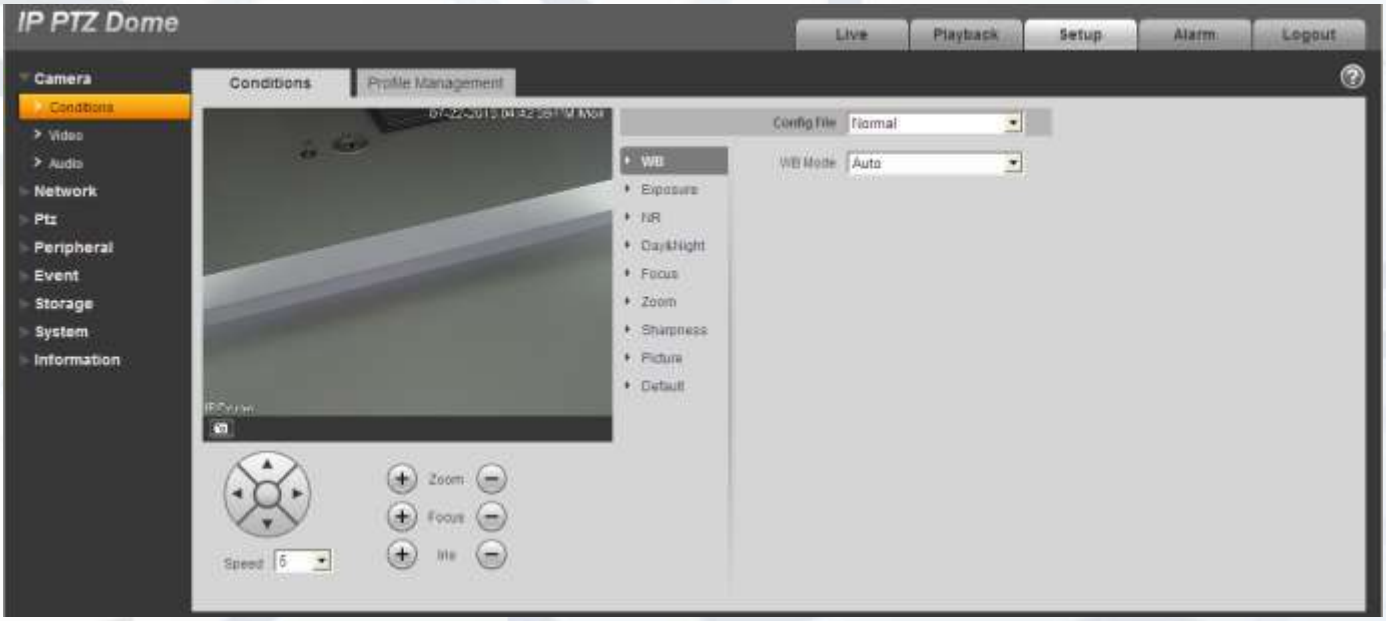


Figure 6-17

Please refer to the following sheet for detailed information:

Parameter	Function
WB mode	● This is to set the camera white balance. It includes: auto/manual/ATW/outdoor/indoor/outdoor auto/sodium light auto/sodium light. ● For manual mode, you can input red gain and blue gain value.

6.7.1.3 Exposure

Exposure interface is shown below. See Figure 6-18:

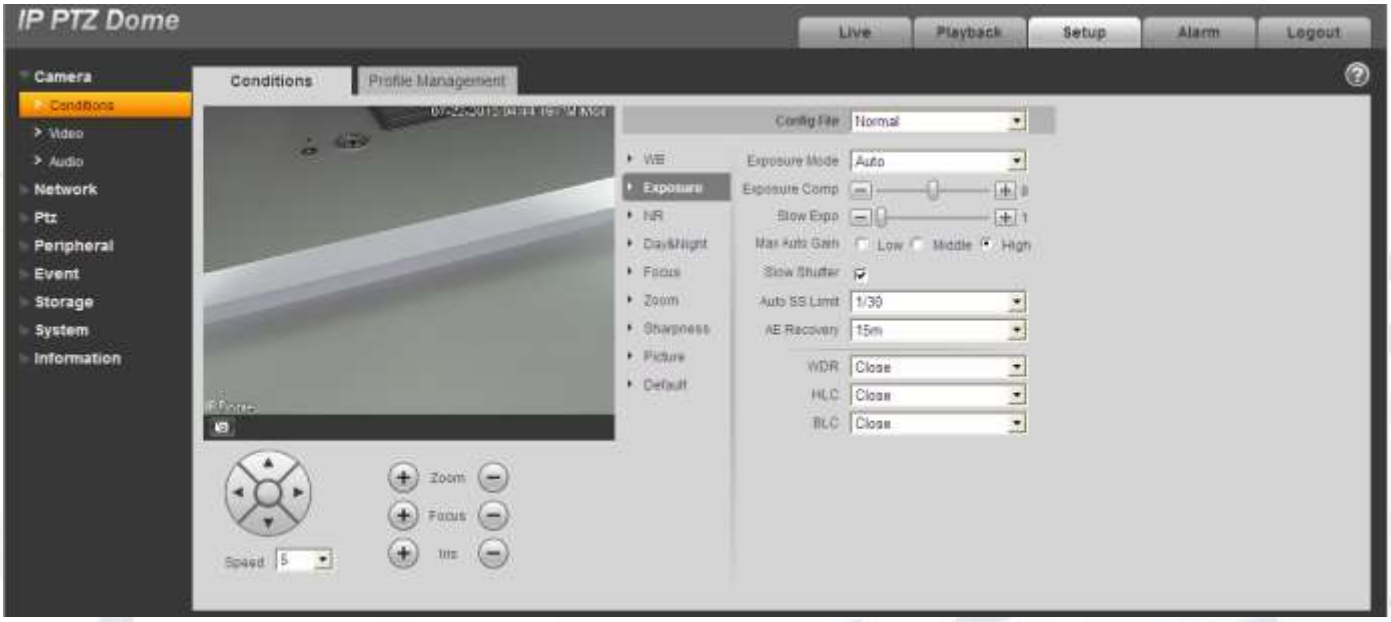


Figure 6-18

Please refer to the following sheet for detailed information:

Parameter	Function
Exposure mode	● This is to set the camera exposure mode. It includes: auto/manual/aperture has the priority/shutter has the priority. The default setup is auto. ● For the auto exposure mode, the gain, shutter and iris are in auto mode. ● For manual exposure mode, the gain, shutter and aperture is in manual mode. ● When the aperture has the higher priority, the aperture is in the manual mode and the gain and shutter is in auto mode. ● When the shutter has the priority, the shutter is in manual mode, gain and aperture is in auto mode.
Exposure compensation	This can adjust the video whole brightness via setting exposure object brightness so that it can suit for different environments.
Gain level	This is to set the video brightness under the low illumination environments.

Shutter	This is to set the camera exposure time.
Iris	This is to set the camera iris.
Slow exposure	If the light changes greatly, you can use the slow exposure to get image so that the camera can get stable video.
Max Auto gain	This is to set the camera max gain.
Slow shutter	In lower illumination environment, you can lower the cameras auto exposure time to capture the image and enhance the definition. For the moving object, a trail may appear. Please note This is valid in auto mode.
Auto Slow Shutter Min value	This is to set the camera min shutter value.
AE resume	Manually adjust Iris + or Iris -, system can auto resume previous exposure mode.
WDR Mode	For the environments of strong contrast effect, it can auto adjust image contrast so that you can see the dark and bright section at the same time. **The BLC and HLC function cannot be valid at the same time. Once one function is valid, the other one becomes null automatically.**
HLC	When there is strong light source in the environment, system can auto adjust video brightness to remove the over exposure effect.
BLC	For the environments of strong contrast effect, such as under the backlight environment, system can auto adjust image contrast to get clear object.

6.7.1.4 NR (Noise Reduction)

The noise reduction interface is shown in Figure 6-19:

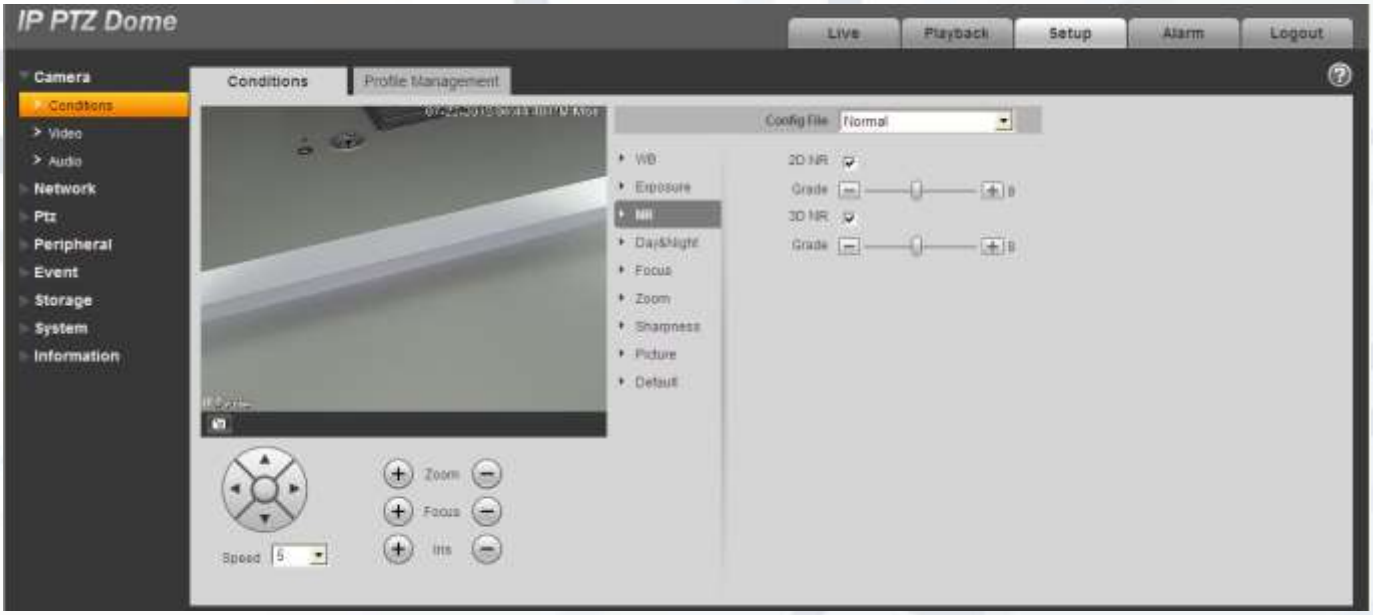


Figure 6-19

Please refer to the following sheet for detailed information:

Parameter	Function
2D NR	This is to control noise. The higher the level is; the lower the noise is. Compared with the previous one, the picture may become a little bit blurry.
3D NR	This is to control image noise. The higher the level is; the lower the noise is. Compared with the previous one, there may appear some smear phenomenon.

6.7.1.5 Day/Night

The day/night mode is shown in Figure 6-20.

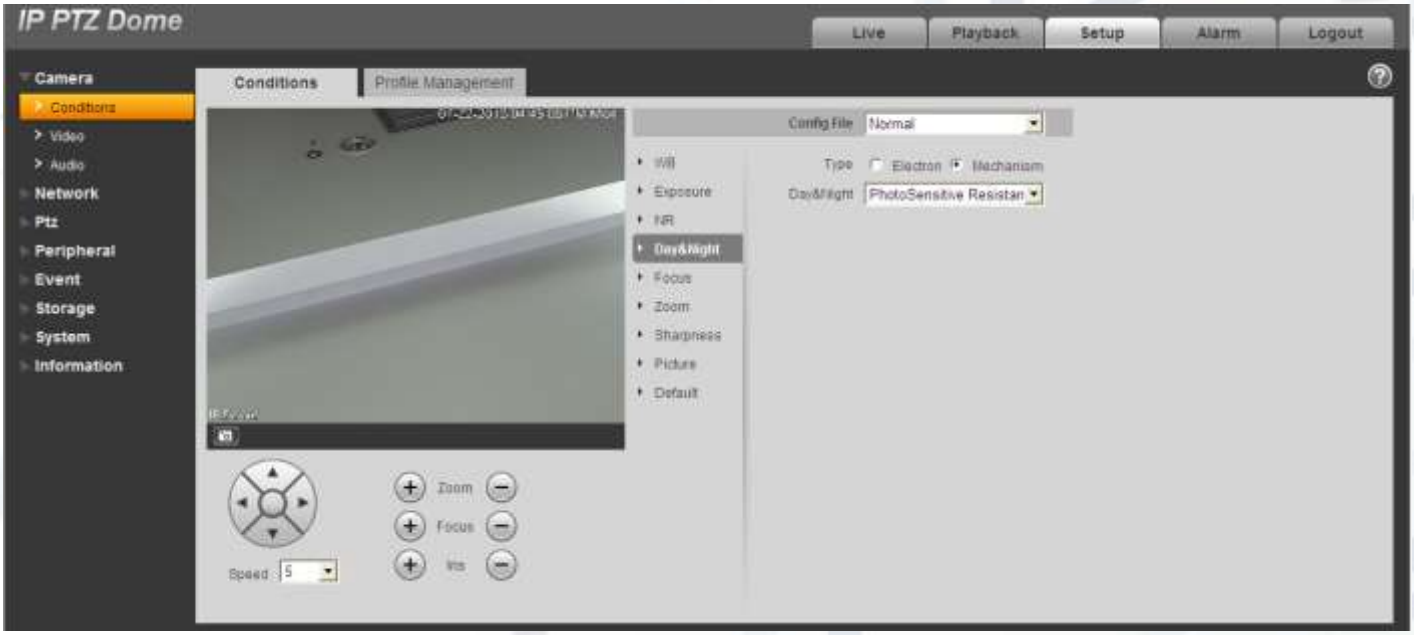


Figure 6-20

Please refer to the following sheet for detailed information:

Parameter	Function
Day/night	This is to set the camera day/night mode. The type includes: electronic/mechanical. The mode includes: B&W/color/auto/photosensor.
Sensitivity	This is to camera day/night switch sensitivity.

6.7.1.6 Focus

The focus interface is shown in Figure 6-21;

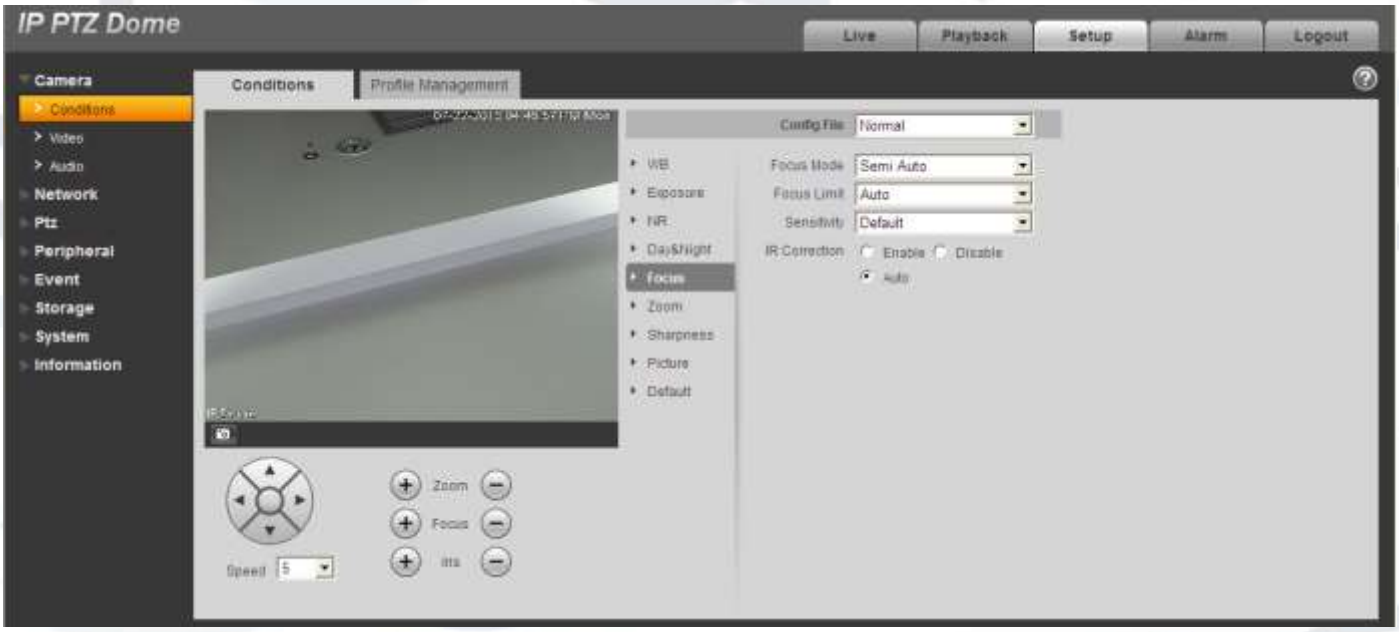


Figure 6-21

Please refer to the following sheet for detailed information:

Parameter	Function
Focus mode	This is to set the camera focus mode. It includes: auto/manual/semi auto.
Focus limit	This is to camera focus distance in case the focus distance is too small and the focus goes to the enclosure. At the same time, you can change focus distance to adjust focus speed.
Sensitivity	This is to set the camera focus sensitivity. The higher the value is, the easier this is to activate focus. The lower the value is, the difficult this is to activate focus.
IR Correction	This is to set the IR light focus correction function to enhance focus effect and remove the IR light effect on the focus.

6.7.1.7 Zoom

Zoom interface is shown in Figure 6-22.

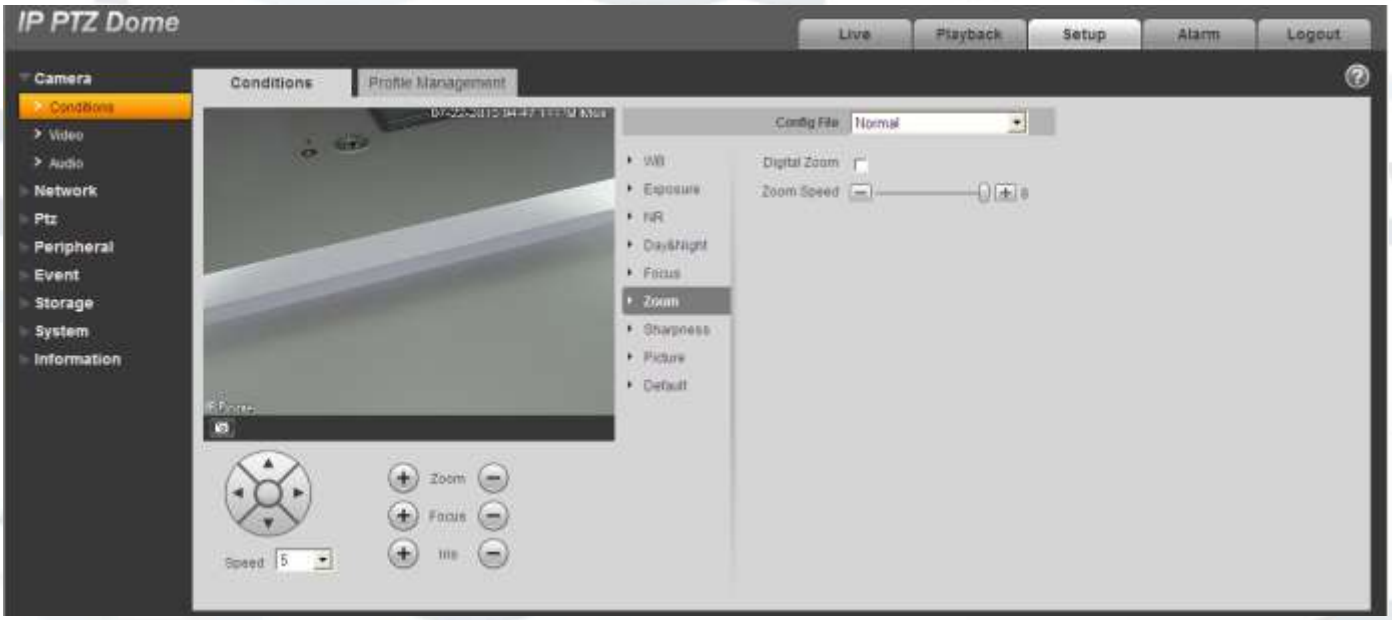


Figure 6-22

Please refer to the following sheet for detailed information:

Parameter	Function
Zoom speed	This is to set the camera zoom speed. The bigger the value is, the faster the speed is.
'Drillital' zoom	Check the box here to enable drillital zoom function.

6.7.1.8 Sharpness

Sharpness interface is shown in Figure 6-23

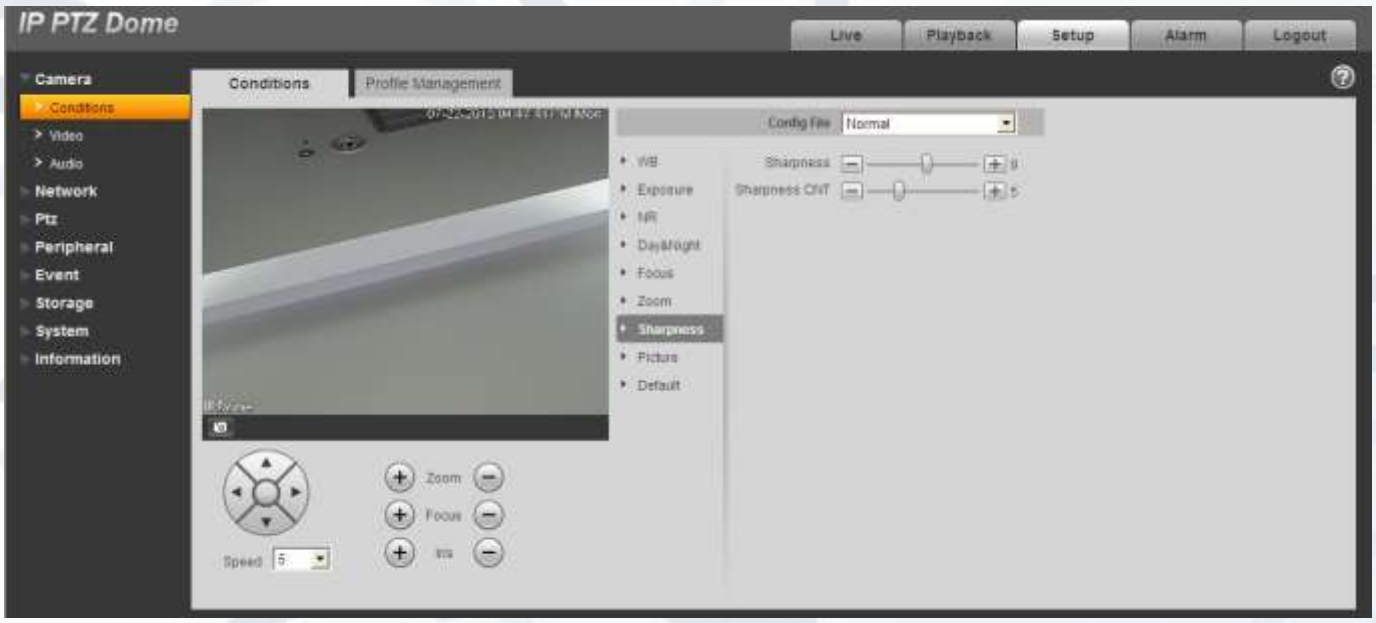


Figure 6-23

Please refer to the following sheet for detailed information:

Parameter	Function
Sharpness	This is to set the camera sharpness. The higher the sharpness, the clearer the image is. The object edge becomes clearer too.
Sharpness control level	This is to set the camera control level. The higher the value is, the stronger the control level is.

6.7.1.9 Picture

Picture interface is shown in Figure 6-24:

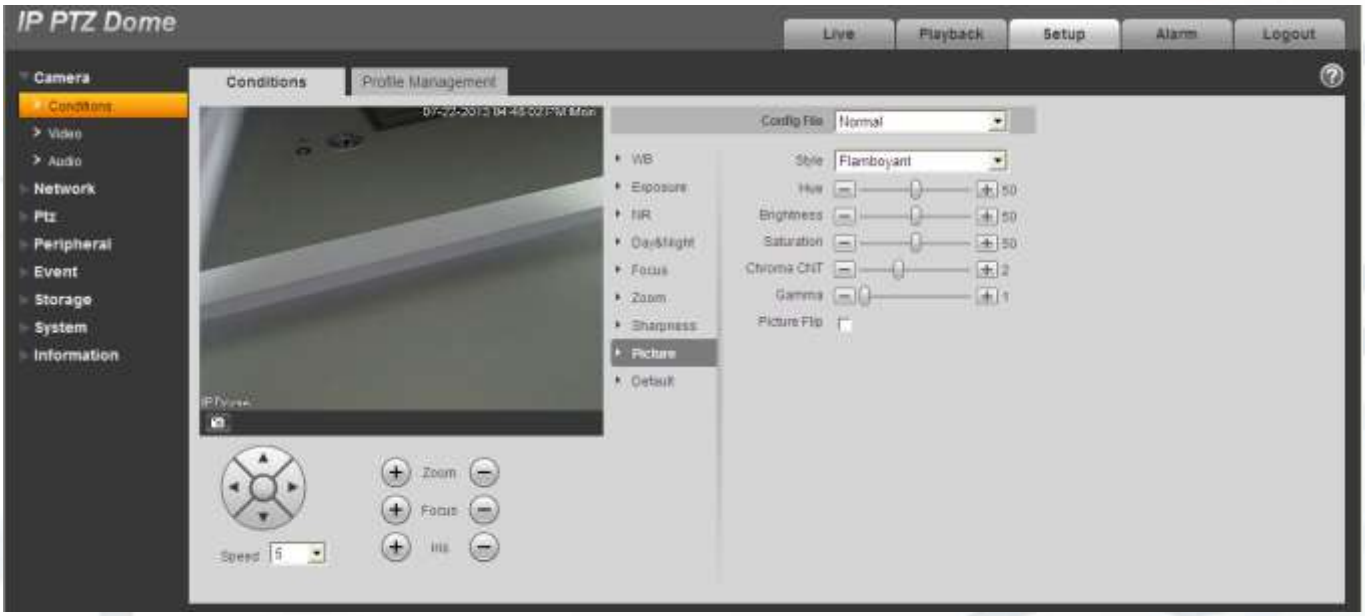


Figure 6-24

Please refer to the following sheet for detailed information:

Parameter	Function
Style	This is to set the video style. It includes：Standard/soft/ flamboyant.
Hue	This is to set the picture hue.
Saturation	This is to set the color purity. The higher the purity is, the more color the video is. The lower the purity is, the dark the video is.
Chroma control	This is to set the video color control level. The higher the value is, the higher the control level is .
Gamma	This is to set the image gamma value.
Brightness	This is to set the video brightness. The higher is value is, the bright the video is.
Picture Flip	This is to set the video display mode. This is to turn camera.

6.7.1.10 Default

Default interface is shown in Figure 6-25:

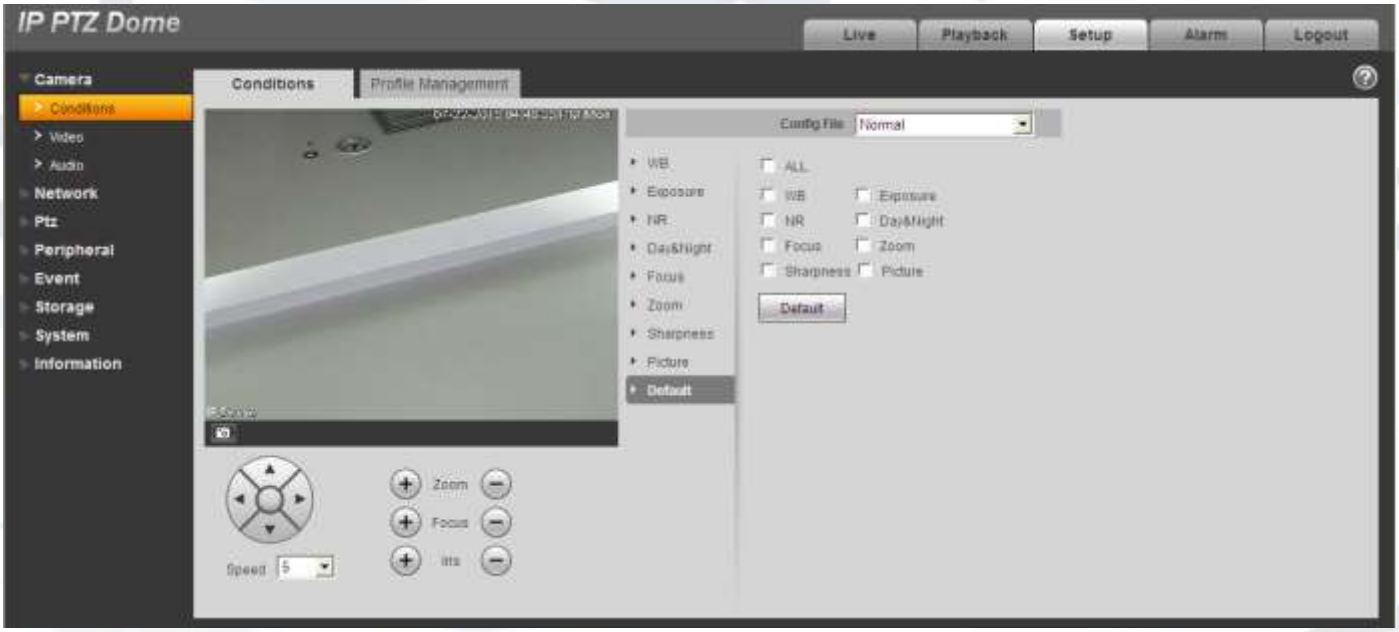


Figure 6-25

Please refer to the following sheet for detailed information:

Parameter	Function
Default	This is to restore camera parameter to factory default setup.

6.7.1.11 Profile Management

Profile management interface is shown in Figure 6-26.

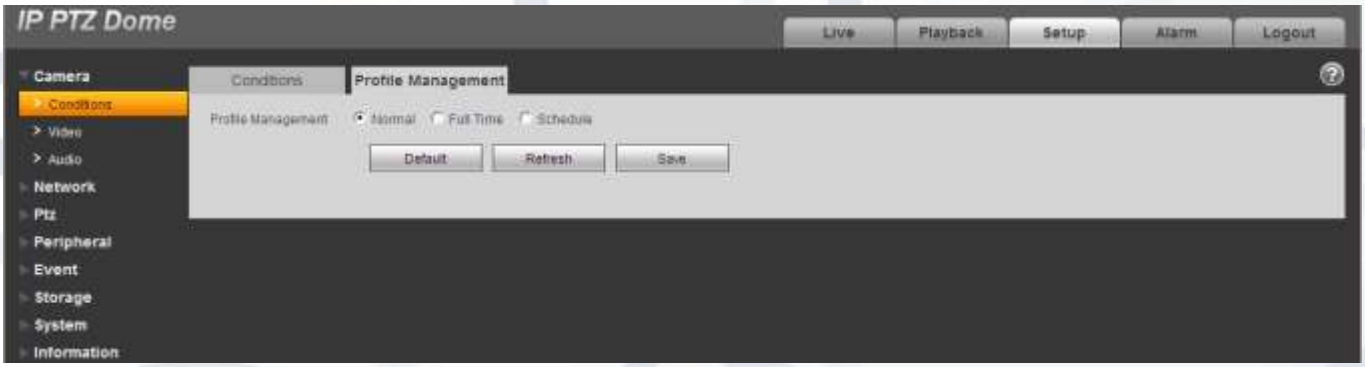


Figure 6-26

Please refer to the following sheet for detailed information:

Parameter	Function
Profile Management	There are three modes: normal/full-time/schedule. The default setup is normal.
Normal	This is to adopt the general parameter on the profile file.
Full-time	This is to adopt day or night general parameter on the profile file all the time.
Schedule	This is to adopt the day or night parameter on the profile file by time you set here.

6.7.2 Video

6.7.2.1 Video bit stream

The video bit stream interface is shown below. See Figure 6-27

Figure 6-27

Please refer to the following sheet for detailed information:

Parameter		Function
Main stream	Bit stream type	This includes general stream, motion stream and alarm stream. You can select different encode frame rates for different recorded events. The frame rates of the motion detect and alarm is customized.
	Encode mode	There are four options: H.264, H.264H, and MJPEG encode mode. ● H.264 : Main Profile encode mode. ● H.264H: High Profile encode mode. ● MJPEG: In this encode mode, the video needs general large bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.
	Resolution	There are multiple resolutions. 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: 1～30f/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 the video quality in VBR mode. In MJPEG mode, the bit stream control mode can only be CBR.
	Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.
	Bit Rate	● In CBR, the bit rate here is the average value. Usually This is within a range of ±10%. In dynamic video, system needs to lower the frame rate or video quality to guarantee the value. ● In VBR mode, the bit rate here is the max value。 It can be lower than the setup value when the scene is simple.
	I Frame	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50. Recommended value is frame rate *2. **IMPORTANT: I frame interval setup is null if This is the MJPEG encode mode.**
	Watermark	This function allows you to verify the video is tampered or not. The max length is 128-drillit. The character can only include number, character, underline and hyphen.
Sub	Enable	Please check the box here to enable extra stream function. This function is enabled by default.

Parameter		Function
stream	Bit stream type	General bit stream.
	Encode mode	There are four options: H.264, H.264B, H.264H, and MJPEG encode mode. ● H.264 : Main Profile encode mode. ● H.264B: Baseline Profile encode mode. H.264B is mainly for Blackberry cell phone to connect to the monitor. You need to enable the sub stream function in your camera and set the resolution as CIF. Then you can monitor via the Blackberry cell phone. ● H.264H: High Profile encode mode. ● MJPEG: In this encode mode, the video needs general large bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.
	Resolution	There are multiple resolutions. 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: 1～30f/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 the video quality in VBR mode.
	Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.
	Bit Rate	● In CBR, the bit rate here is the average value. usually This is within a range of ±10%. In dynamic video, system needs to lower frame rate or video quality to guarantee the value. ● In VBR mode, the bit rate here is the max value。 It can be lower than the setup value when the scene is simple.
	I Frame	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50. Recommended value is frame rate *2. **IMPORTANT: I frame interval setup is null if This is the MJPEG encode mode.**

6.7.2.2 Snapshot

The snapshot interface is shown in Figure 6-28:

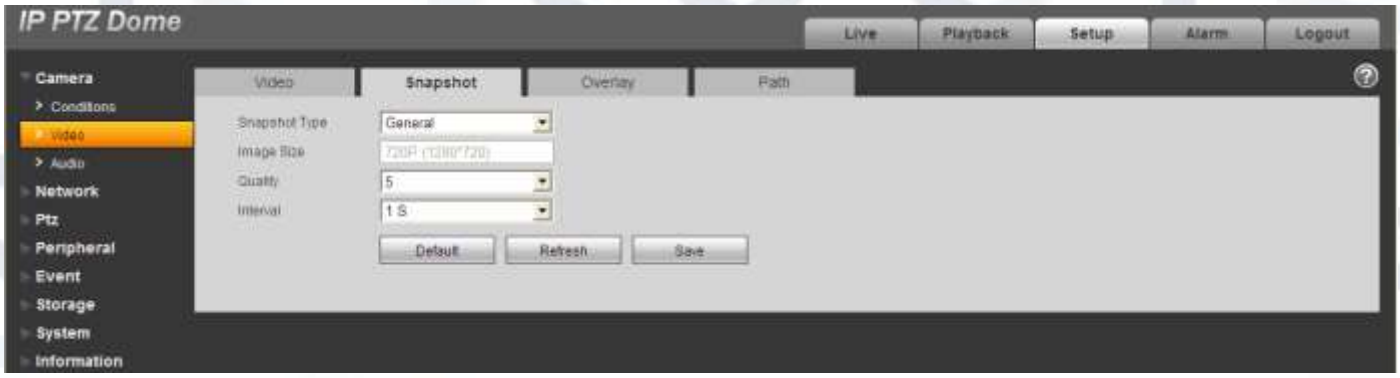


Figure 6-28

Please refer to the following sheet for detailed information:

Parameter	Function
Snapshot type	There are two modes: general (schedule) and Event (activation). General (schedule) snapshot is to snap in the specified period. Event (Activation) snapshot Is to snap when the motion detect, camera masking, local alarm event occurrence. If you want to use this function, please make sure: ● The event occurred during the specified period. ● Motion detect, video masking, local alarm and corresponding snap function are all enable.
Image size	It has relationship with the resolution of the main stream.
Quality	This is to set the image quality. There are six levels.
Interval	This is to set the snapshot frequency. The value ranges from 1s to 7s.

6.7.2.3 Video Overlay

The video overlay interface is shown in Figure 6-29.

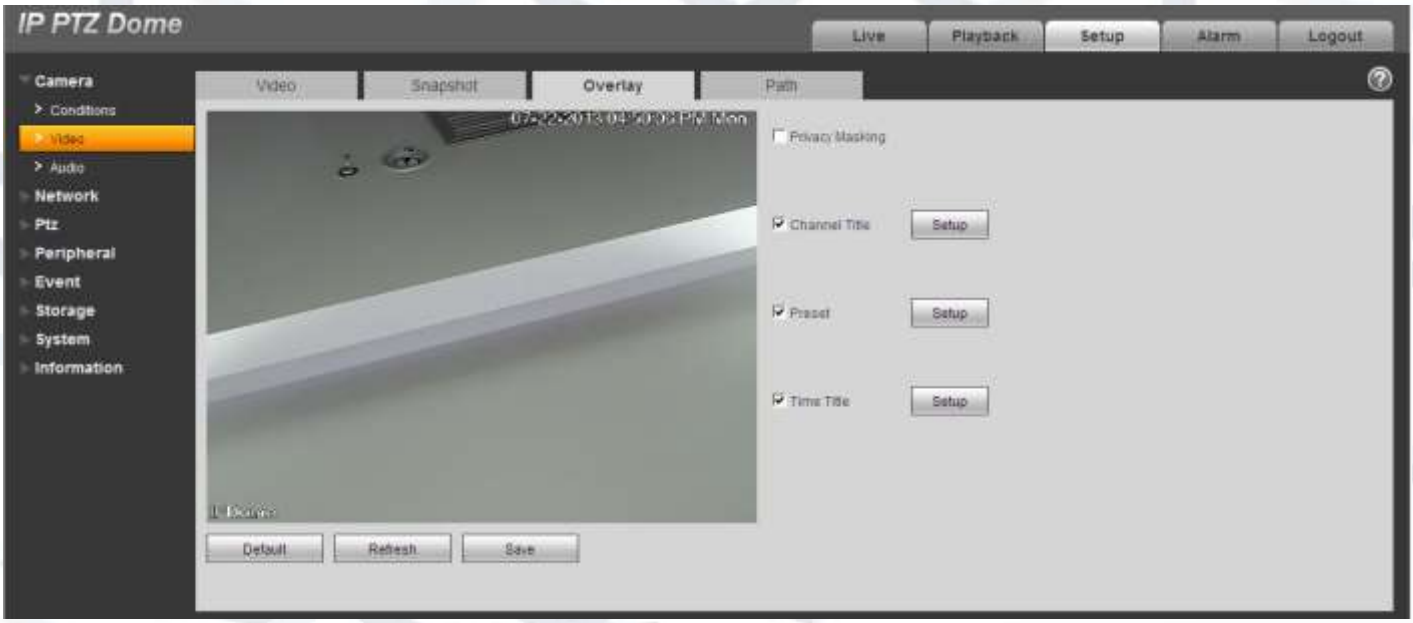


Figure 6-29

Please refer to the following sheet for detailed information:

Parameter	Function
Privacy mask	• Here you can set a privacy mask to the specified video in the monitor video. • Click Setup button, you can set the privacy mask region. System max supports 4 privacy mask zones.
Time Title	• You can enable this function so that system overlays time information in video window. • There is no time title if you do not enable this function here. • Click Setup button, you can set the time title display region. You can use the mouse to drag the time tile position.
Channel Title	• You can enable this function so that system overlays channel information in video window. • There is no channel title if you do not enable this function here. • Click Setup button, you can set the channel title display region. You can use the mouse to drag the channel tile position.
Preset Title	• You can enable this function so that system overlays preset information in video window. • There is no preset title if you do not enable this function here. • Click Setup button, you can set the preset title display region. You can use the mouse to drag the preset tile position.
Refresh	After you successfully set the privacy mask zone, channel title, time title, you can click Refresh button to video the effect.

6.7.2.4 Path

The storage path interface is shown in Figure 6-30.

Here you can set the snap image saved path (in the preview interface) and the record storage path (in the preview interface).The snap picture default setup is C:\PictureDownload and record file default setup is C:\RecordDownload.

Please click the Save button to save current setup:

Figure 6-30

6.7.3 Audio

The audio interface is shown below. See Figure 6-31.

IMPORTANT: Please make sure you have enabled the video function; otherwise you cannot enable the audio function.

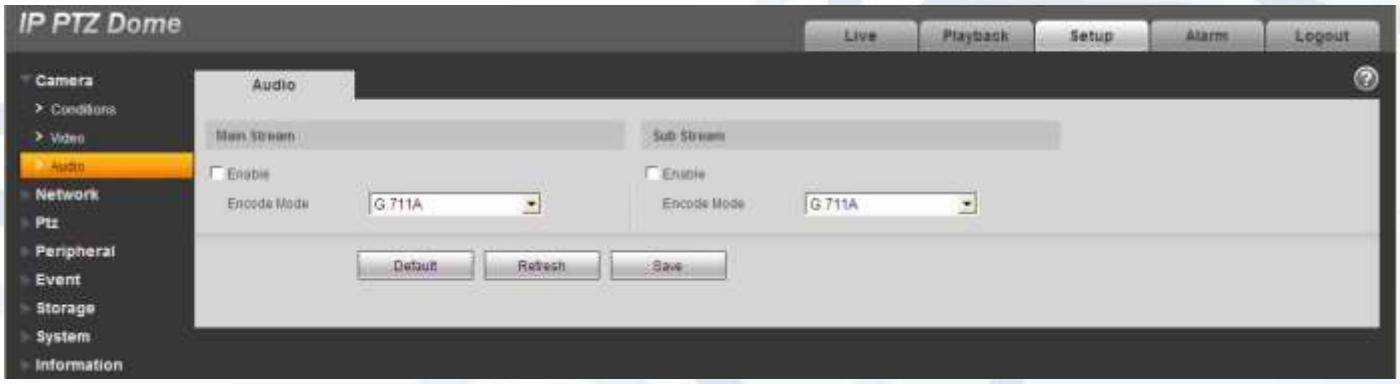


Figure 6-31

Please refer to the following sheet for detailed information:

Parameter	Function
Audio enable	● Main stream: Recorded file only contains video by default. You need to check the audio box here to enable audio function so that the main stream the network transmitted is audio/video composite stream. ● Sub (Extra) stream: Recorded file only contains video by default. You need to check the audio box here to enable audio function so that the extra stream the network transmitted is audio/video composite stream.
Encode mode	The encode mode of the main stream and extra stream include PCM, G.711A and G.711Mu. The setup here is for audio encode mode and the bidirectional talk encode both.

6.8 Network

6.8.1 TCP/IP

The TCP/IP interface is shown in Figure 6-32.

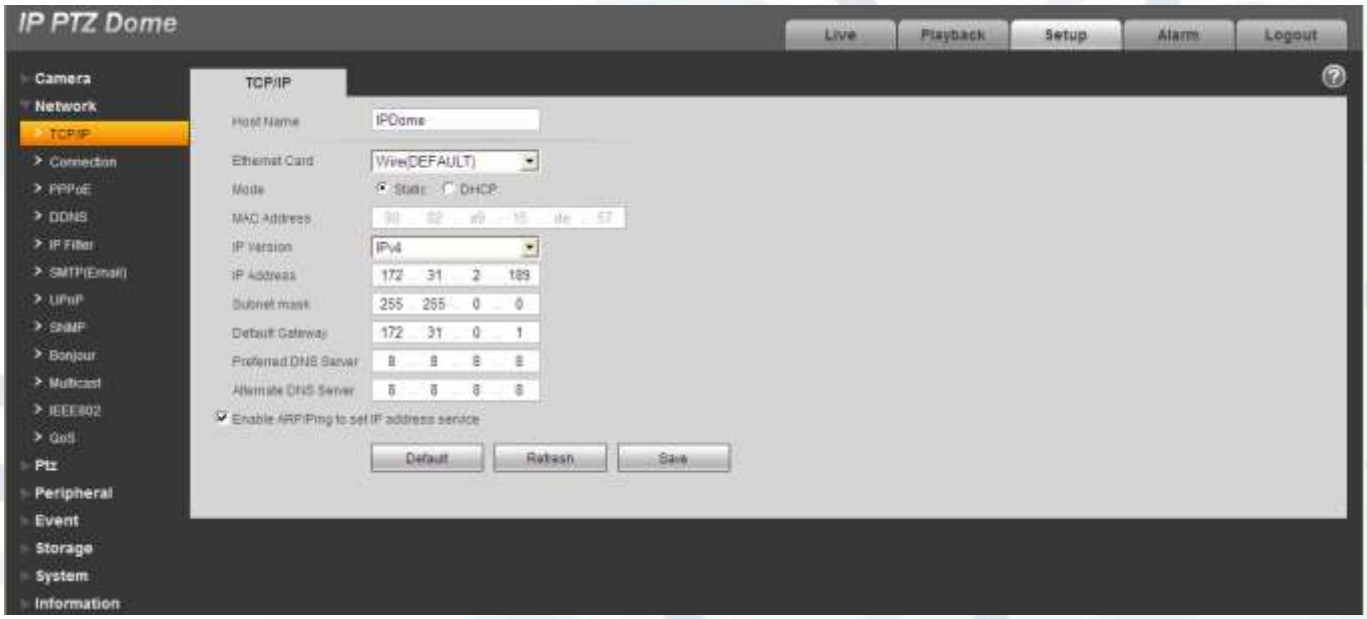


Figure 6-32

Please refer to the following sheet for detailed information:

Parameter	Function
Host Name	This is to set the current host device name.
Ethernet Card	Please select the Ethernet port if the device has several network cards.
Mode	There are two modes: static mode and the DHCP mode. ● The IP/subnet mask/gateway is null when you select the DHCP mode to auto search the IP. ● If you select the static mode, you need to set the IP/subnet mask/gateway manually. ● Besides, IP/subnet mask/gateway and DHCP are read-only when the PPPoE dial is OK.
Mac Address	This is to display host Mac address. This is read-only.
IP Version	This is to select IP version. IPv4 or IPv6. You can access the IP address of these two versions. ● **Please note system needs to check the validity of all IPv6 addresses. The IP address and the default gatewa shall be in the same IP section. That is to say, the specified length of the subnet prefix shall have the same string.** ● **When PPPoE function is enabled, the IP/subnet mask/default gateway is read-only. You cannot set or restore default setup.**
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.
Default Gateway	It shall not be left blank.
Preferred DNS	DNS IP address. This is the similar DNS of the IPv4. It shall not be left in blank.
Alternate DNS	Alternate DNS IP address. It shall not be left blank.

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

6.8.2 Connection

The connection interface is shown in Figure 6-33.

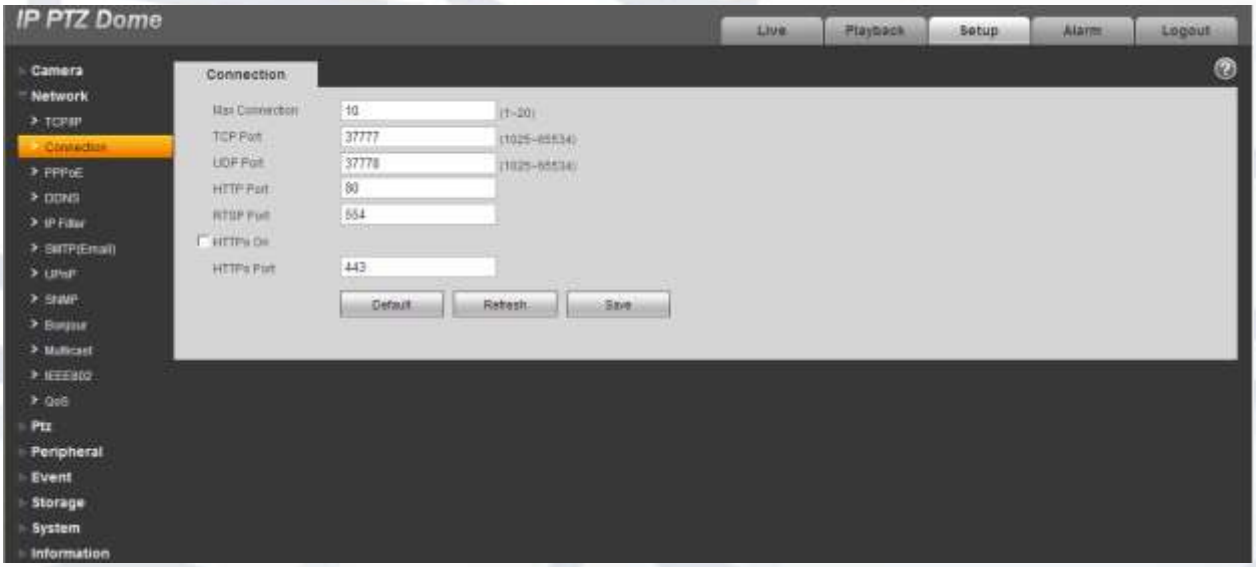


Figure 6-33

Please refer to the following sheet for detailed information:

Parameter	Function
Max connection	This is the max Web connection for the same device. The value ranges from 1 to 20. The default setup is 10.

TCP port	The value ranges from 1025 to 65535. The default value is 37777. You can input the actual port number if necessary.
UDP port	The value ranges from 1025 to 65535. The default value is 37778. You can input the actual port number if necessary.
HTTP port	The value ranges from 1025 to 65535. The default value is 80. You can input the actual port number if necessary.
RTSP port	● Usually, the default value is 554. You do not need to input again if you are using the default value. When you are using QuickTime (Apple browser) or VLC play real-time video, you can use the following format to play. The Blackberry also supports this function. ● Real-time monitor bit stream URL format. Please specify the channel number, bit stream type in the URL if you are requesting real-time monitor bit stream RTSP stream media service. You still need to provide user name or password if it has verification information. ● The URL format is shown below: **rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0** You need to input the following items manually: **Username/password/IP/port/subtype.** The IP is device IP and the port default value is 554. You can leave it in blank if This is the default value. The channel number begins with 1. **subtype：bit stream type，main stream is 0（subtype=0）and extra stream is 1（subtype=1）.** You do not need to input the user name and password if you do not need the verification. Such as: Main stream：**rtsp://ip:port/cam/realmonitor?channel=1&subtype=0**
HTTPS Enable	This is to enable HTTPs communication service control. If you enable this function, you can use https://ip:port to login the device. In data encryption protection mode, you can use https://ip to login if you are using the default port.
HTTPS Port	The HTTPs communication port value ranges from 1025 to 65535.

Important

The value 0 to 1024 (excluding the default value of HTTP/RTSP/HTTPs), 1900, 3800, 5000, 5050, 9999, 37776, 37780-37880 and 39999 are the special ports value and they are not open for user to set.

6.8.3 PPPoE

The PPPoE interface is shown in Figure 6-34.

Input the PPPoE user name and password you get from the IPS (internet service provider) and enable PPPoE function. Please save current setup and then reboot the device to get the setup activated.

Device connects to the internet via PPPoE after reboot. You can get the IP address in the WAN from the IP address column.

PPPoE is set to connect to the internet. You can get an account from your IPS (Internet service provider), you can set here to dial to the interface. You can see the registered IP address in the interface if your setup is right.

Please note, you need to go to the IP address item to view the device current device information. You can access the client-end via this address.

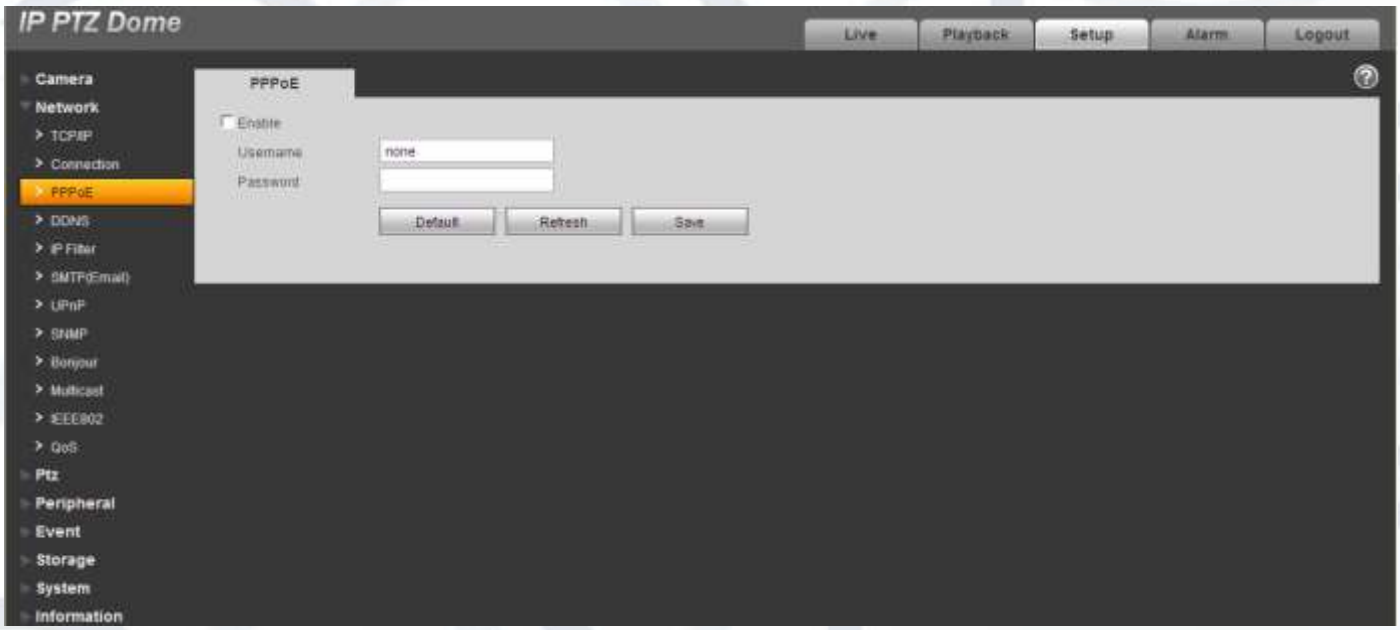


Figure 6-34

6.8.4 DDNS

The DDNS interface is shown in Figure 6-35.

The DDNS is to set and connect the various servers so that you can access the system via the server. Please go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address changes.

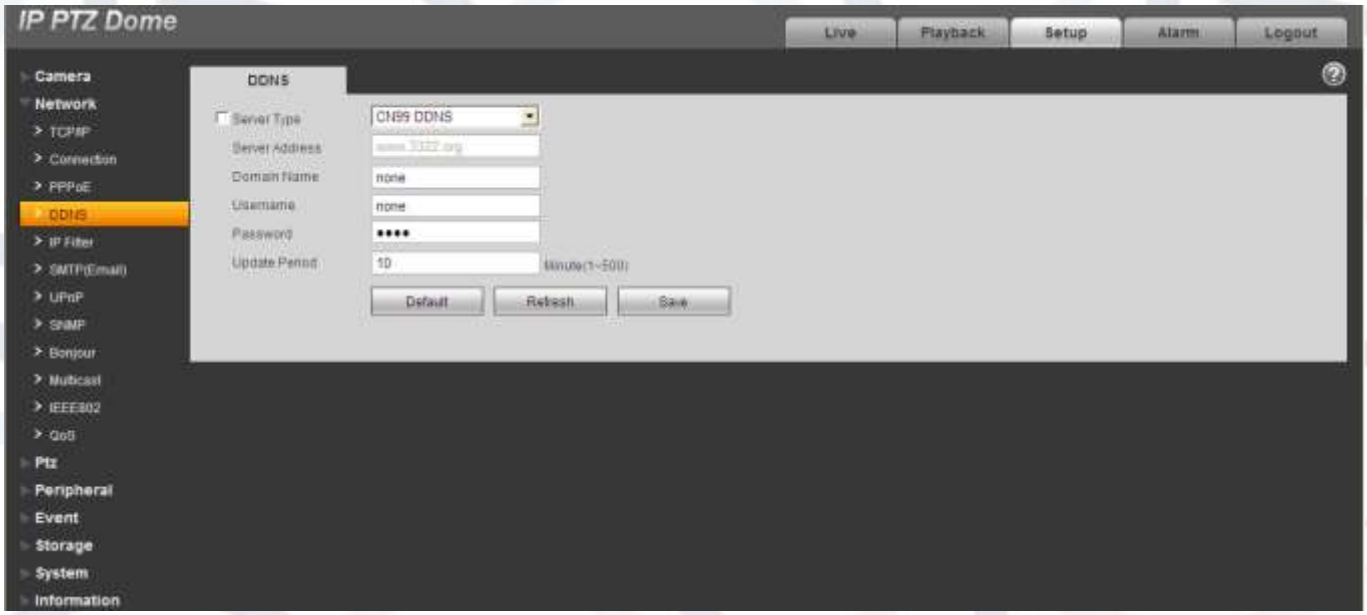


Figure 6-35

Please refer to the following sheet for detailed information:

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function.
Server IP	DDNS server IP address
Domain Name	Your self-defined domain name.
User	The user name you input to log in the server.
Password	The password you input to log in the server.
Update period	• Device IP and service connection refresh period. • The default setup is 10 minutes.

6.8.5 IP filter

The IP filter interface is shown in Figure 6-36.

You can enable IP filter function so that some specified IP user can access the IP PTZ.

You can add IP address or IP address section.

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

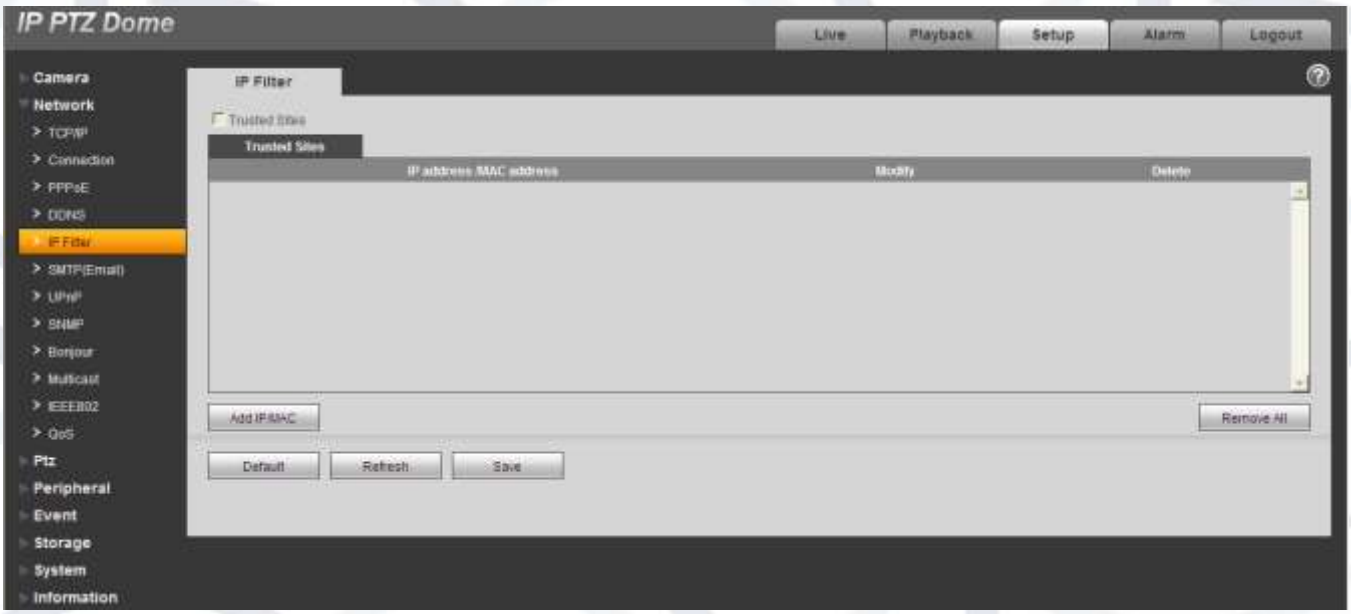


Figure 6-36

6.8.6 SMTP （e-mail）

The SMTP interface is shown in Figure 5-37:

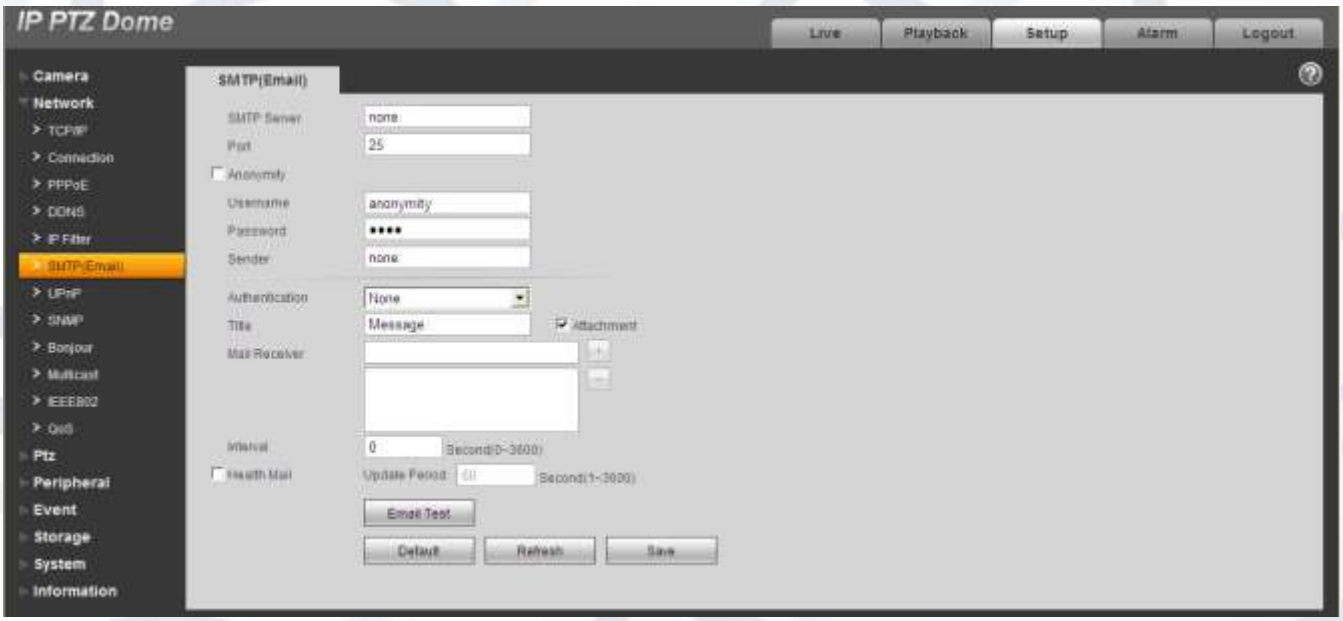


Figure 6-37

Please refer to the following sheet for detailed information:

Parameter	Function
SMTP Server	Input server address and then enable this function.
Port	Default value is 25. You can modify it if necessary.

Parameter	Function
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 or none.
Title (Subject)	Input email subject here.
Attachment	System can send out the email of the snapshot picture once you check the box here.
Mail receiver	Input receiver email address here. Max three addresses.
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. 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.
Update period (interval)	This function allows the system to send out the test email to check the connection is OK or not. Please check the box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here.
Email test	The system will automatically sent out an email once to test the connection is OK or not .Before the email test, please save the email setup information.

6.8.7 UPnP

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

Here you can also add, modify or remove UPnP item.

There are two modes: manual/auto.

- **Manual mode**: Select an item in the list, you can modify and delete. Click Add mapping button, you can add a new one. See Figure 6-38.
- **Auto mode**: The mapping is fixed and cannot be added/deleted/modified. See Figure 6-39.

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

Click the Details button and then check the “Internet Gateway Device Discovery and Control client” and “UPnP User Interface”. Please click OK to begin installation.
Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the IP PTZ can auto detect it via the “My Network Places”

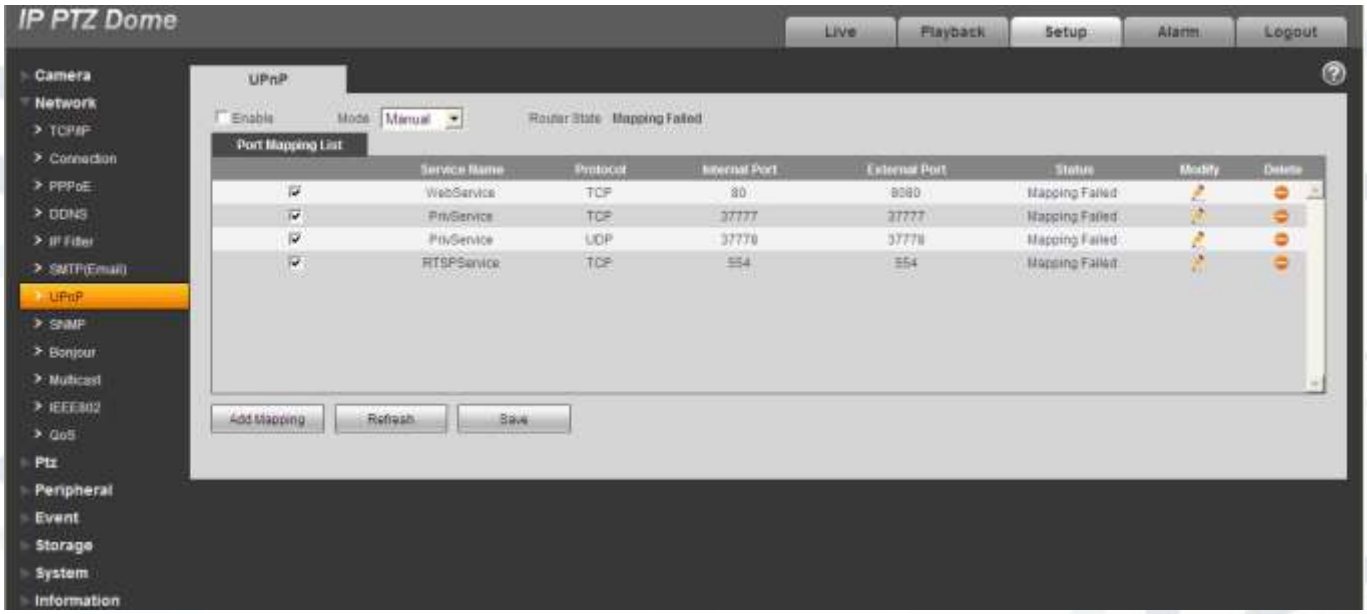


Figure 6-38

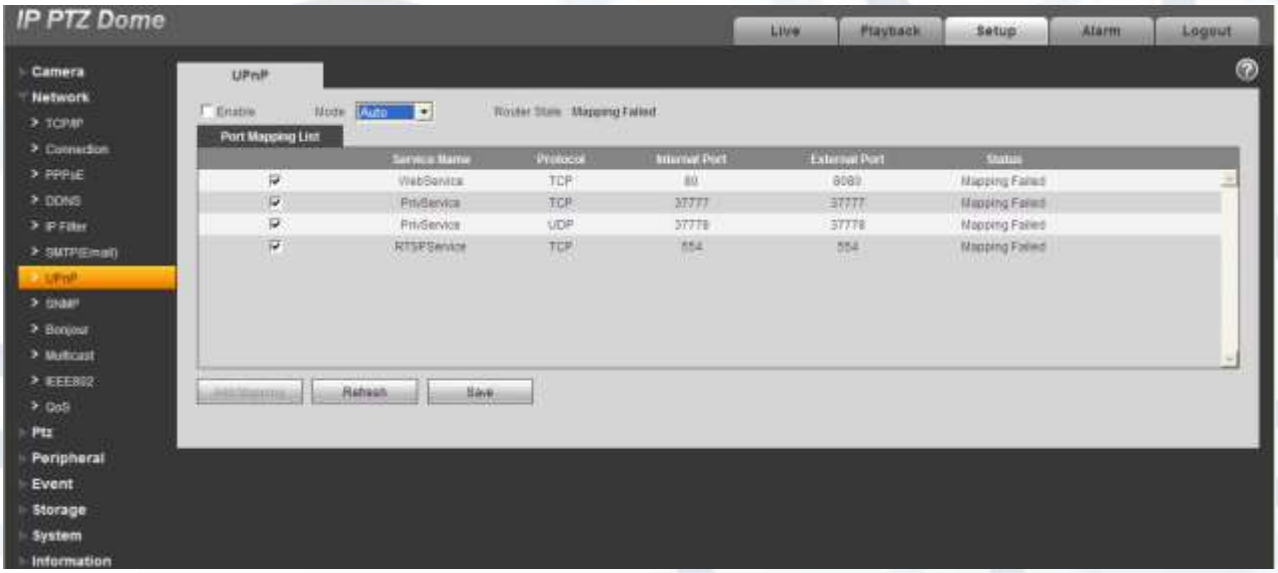


Figure 6-39

6.8.8 SNMP

The SNMP interface is shown in Figure 6-40.

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

Figure 6-40

Please refer to the following sheet for detailed information:

Parameter	Function
SNMP Port	The listening port of the proxy program of the device. This is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read Community	This is a string. This is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Please make sure the device and the proxy are the same. The read community will read all the objects the SNMP supported in the specified name. The default setup is public.
Write Community	This is a string. This is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Please make sure the device and the proxy are the same. The read community will read/write/access all the objects the SNMP supported in the specified name. The default setup is private.
Trap address	The destination address of the Trap information from the proxy program of the device.
Trap port	The destination port of the Trap information from the proxy program of the device. This is for the gateway device and the client-end PC in the LAN to exchange the information. This is a non-protocol connection port. It has no effect on the network applications. This is a UDP port not TCP port. The value ranges from 1 to 165535. The default value is 162.

Parameter	Function
SNMP version	● Check SNMP v1, system only processes the information of V1. ● Check SNMP v2, system only processes the information of V2. ● Check SNMP v3, you can set the account and password. You need to set the corresponding account and password for security verification when the server wants to access the device. At the same time, the V1 and V2 option is null.

6.8.9 Bonjour

The Bonjour interface is shown below. See Figure 6-41.

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

You can use the browser on the Bonjour service in the same LAN to search the IP PTZ device and then access if you do not know the IP PTZ information such as IP address.

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

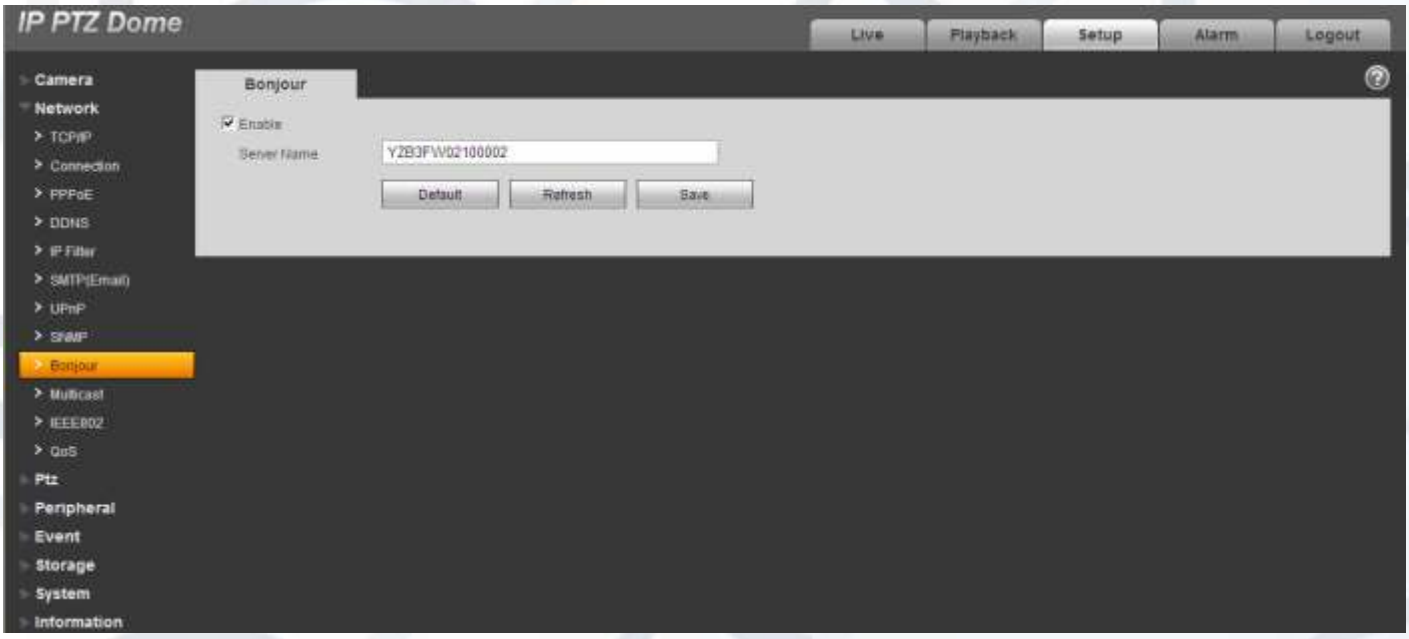


Figure 6-41

6.8.10 Multicast

The multicast interface is shown in Figure 6-42.

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

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

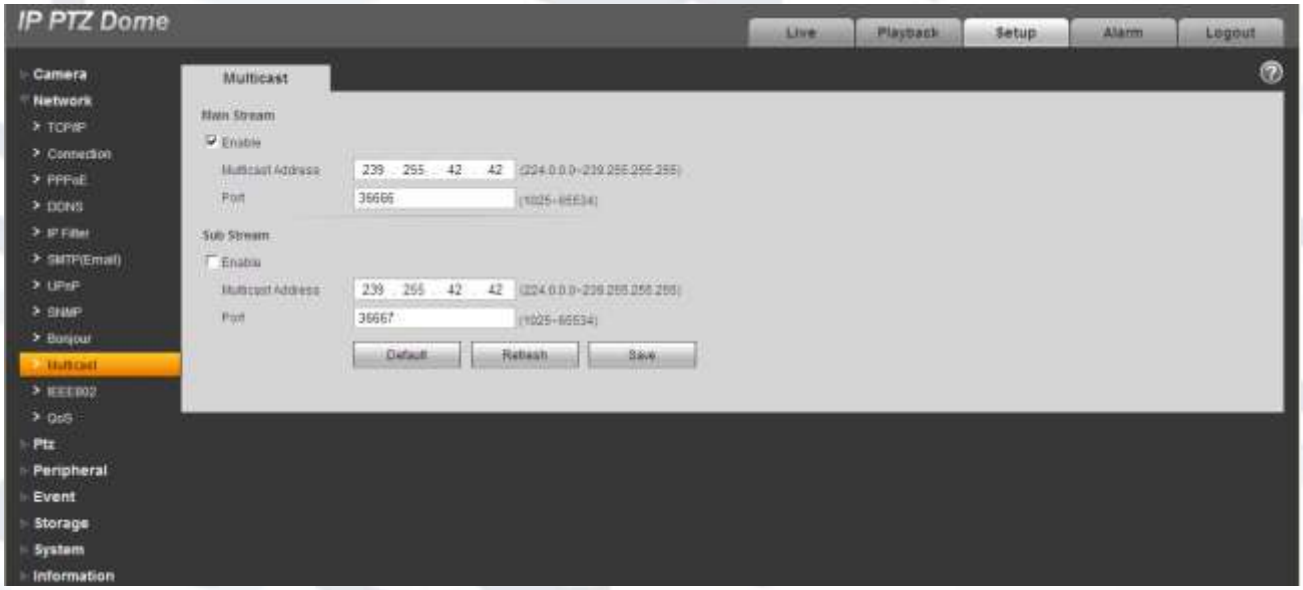


Figure 6-42

6.8.11 IEEE802

IEEE802.1X works standing for local and metropolitan area networks and port based network access control protocol. It supports manual operation of the client to choose means of authenticating by which to control it to access to the Local Area Networks or not. It supports the ability to authenticate, to calculate fee, to ensure security and to maintain requirements. See Figure 6-43.

Figure 6-43

Please refer to the following sheet for detailed information:

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

6.8.12 Qos

The QoS interface is shown below. See Figure 6-44.

Qos (Quality of Service) is network security mechanism. This is a technology to fix the network delay and jam problem etc. For the network service, the quality of service includes the transmission bandwidth, delay, the packet loss 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 of the packets and select the bandwidth of the each queue. It can also discard at the different ratio when the broad bandwidth is jam.

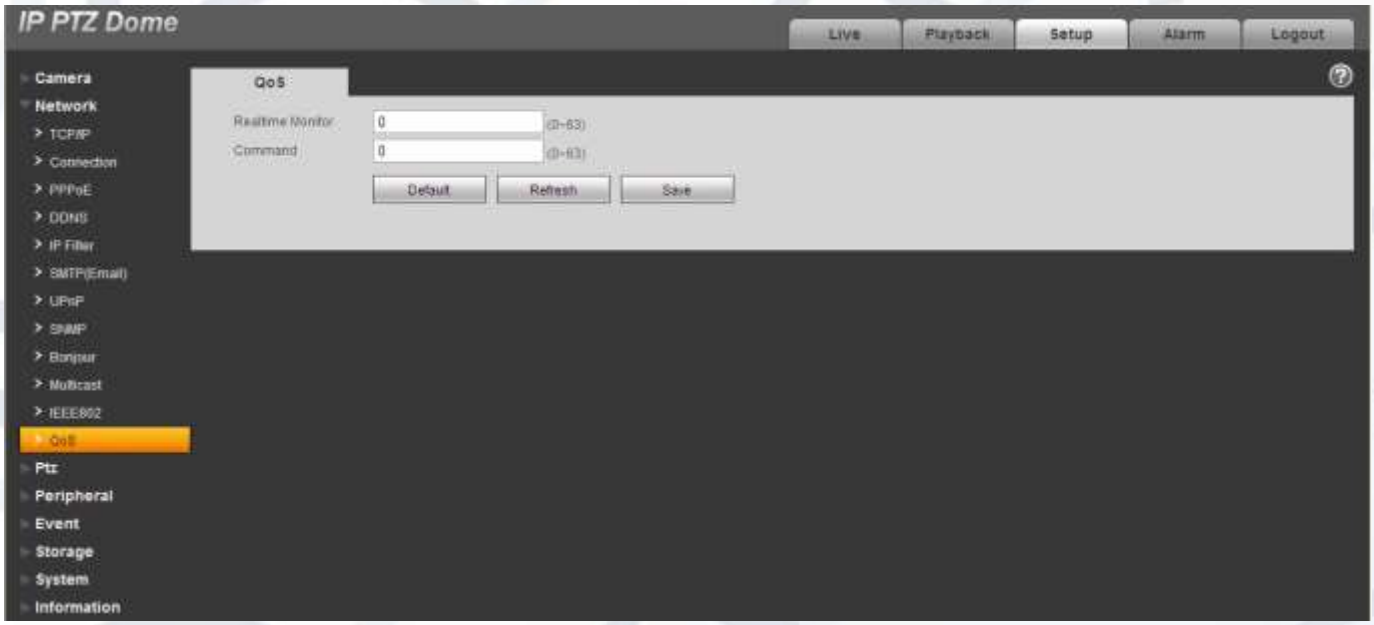


Figure 6-44

Please refer to the following sheet for detailed information:

Parameter	Function
Real-time monitor	The data packet of the network video monitor.
Command	The non-monitor packet such as device setup and search.

6.9 PTZ

6.9.1 Protocol

6.9.1.1 Network PTZ Setup

Network PTZ setup interface is shown in Figure 6-45.

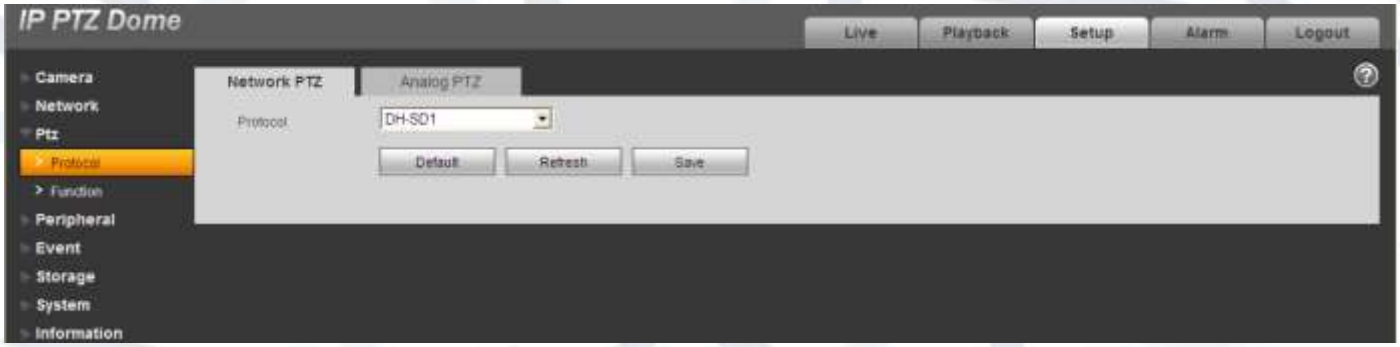


Figure 6-45

Please refer to the following sheet for detailed information:

Parameter	Function
Protocol	You can select from the dropdown list such as DH-SD1/none.

6.9.1.2 Analog PTZ

The analog PTZ is shown in Figure 6-46.

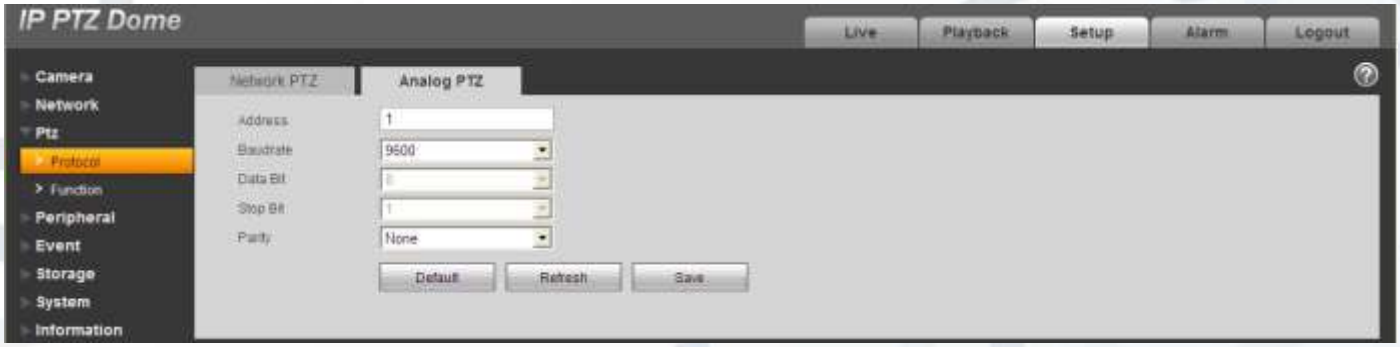


Figure 6-46

Please refer to the following sheet for detailed information:

Parameter	Function
Address	This is to set the corresponding IP PTZ address. The default setup is 0.
Baud rate	This is to set the baud rate of the camera. The default setup is 38400.
Data bit	The default setup is 8.

Parameter	Function
Stop bit	The default setup is 1.
Parity	You can set protocol parity mode. The default setup is none.

6.9.2 Function

In this part, you can operate the PTZ of the camera and control PTZ movement:

Parameter	Function
Preset	Set camera preset.
Tour	Set camera tour. Max 8 tours.
Scan	Set camera scan.
Pattern	Set camera pattern.
Pan	Set camera rotation speed.
Privacy mask	Set camera privacy mask zone.
PTZ speed	Set PTZ movement speed.
Idle motion	Set camera idle operation.
Power up	Set camera operation when system boots up.
PTZ restart	Restart camera PTZ.
Default	Restore camera PTZ default setup.

6.9.2.1 Preset

Preset interface is shown in Figure 6-47.

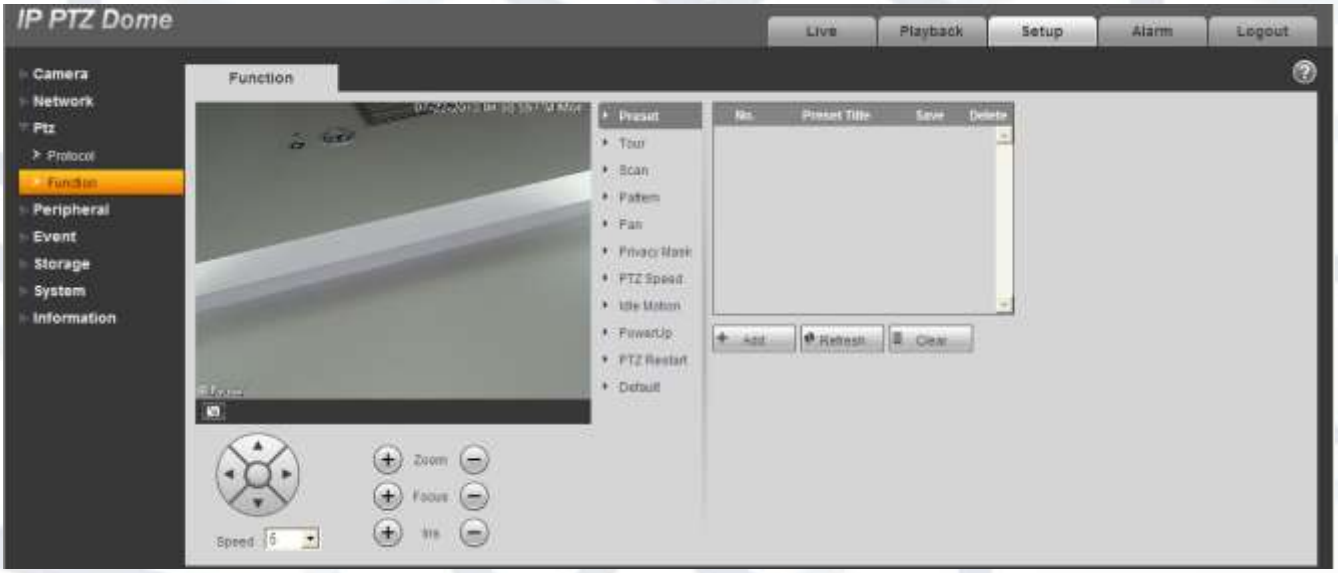


Figure 6-47

Please refer to the following sheet for detailed information:

Parameter	Function
Preset No.	Set preset No. It becomes valid after you set.
Preset title	Set preset name. You can input self-defined preset name here.
Delete	Delete corresponding preset.
Save	Save current preset setup.
Add	Click it to add a new preset.
Clear	Clear all presets setup.

6.9.2.2 Tour

Tour interface is shown below. See Figure 6-48.

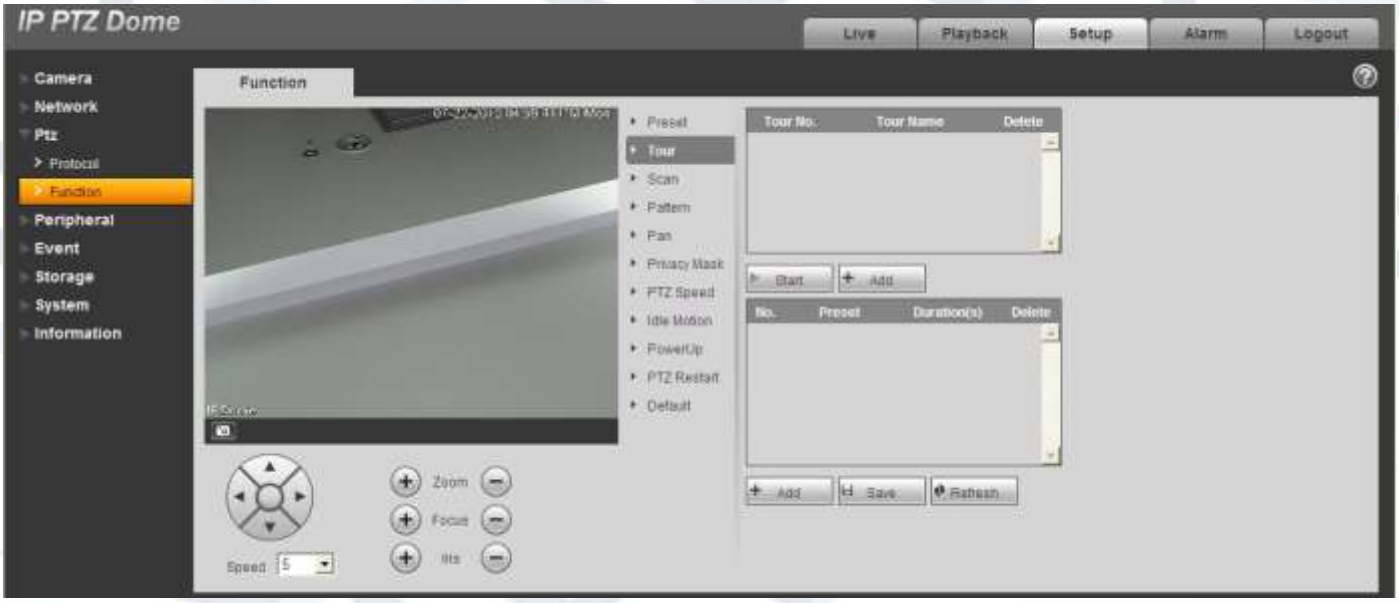


Figure 6-48

Please refer to the following sheet for detailed information:

Parameter	Function
Tour No.	System auto allocates.
Tour title	Set tour name. You can input self-defined tour name here.
Start	Begin tour. **Please note this function is null if you have not set a tour.**
Add	Click it to add a new tour.
Preset	Click Add button, you can add a new tour. The default preset value is 1. Double click tour No, you can see a dropdown list for you to select. **Please set presets before you use tour function.**
Duration (Interval)	This is to set the staying time of the tour.
Save	Click it to save current setup.
Refresh	Refresh current interface.

6.9.2.3 Scan

Scan interface is shown below. See Figure 6-49.

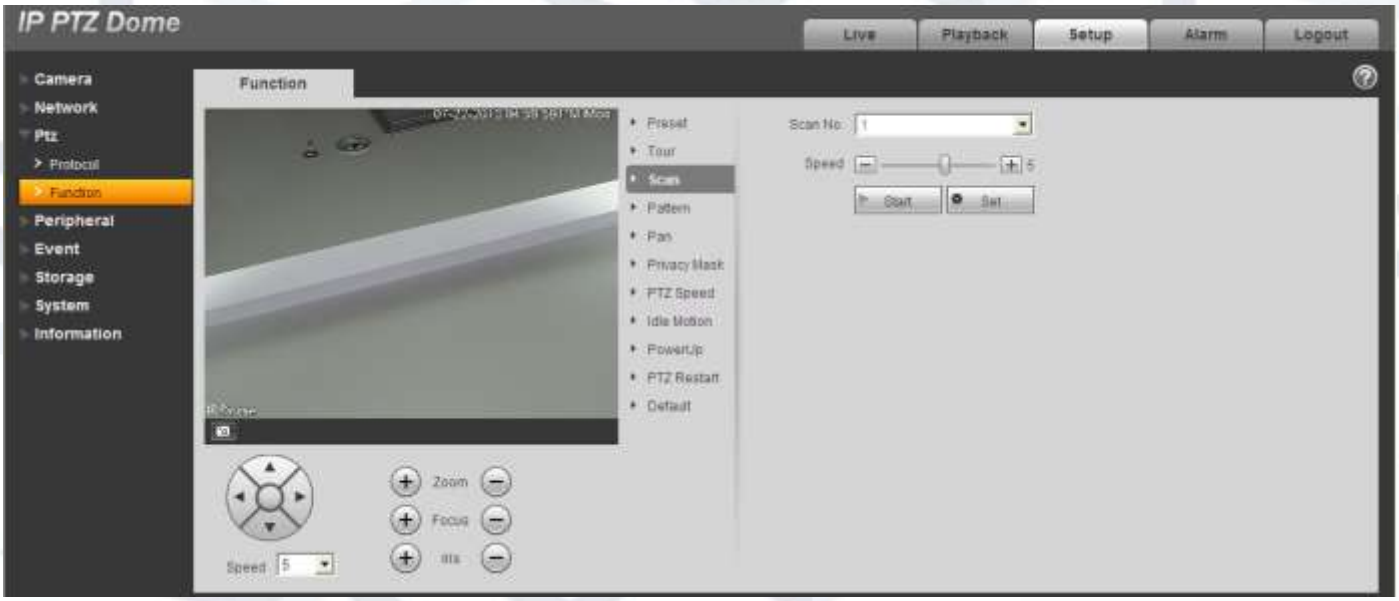


Figure 6-49

Please refer to the following sheet for detailed information:

Parameter	Function
Scan No.	System auto allocates.
Speed	Set scan speed here. **You can not set speed when camera is running scan.**
Start	Begin scan. **Please note this function is null if you have not set a scan.**
Set	Click set button, you can set the left limit and right limit.
Left limit	Set camera left limit.
Right limit	Set camera right limit.

6.9.2.4 Pattern

Pattern interface is shown below. See Figure 6-50.

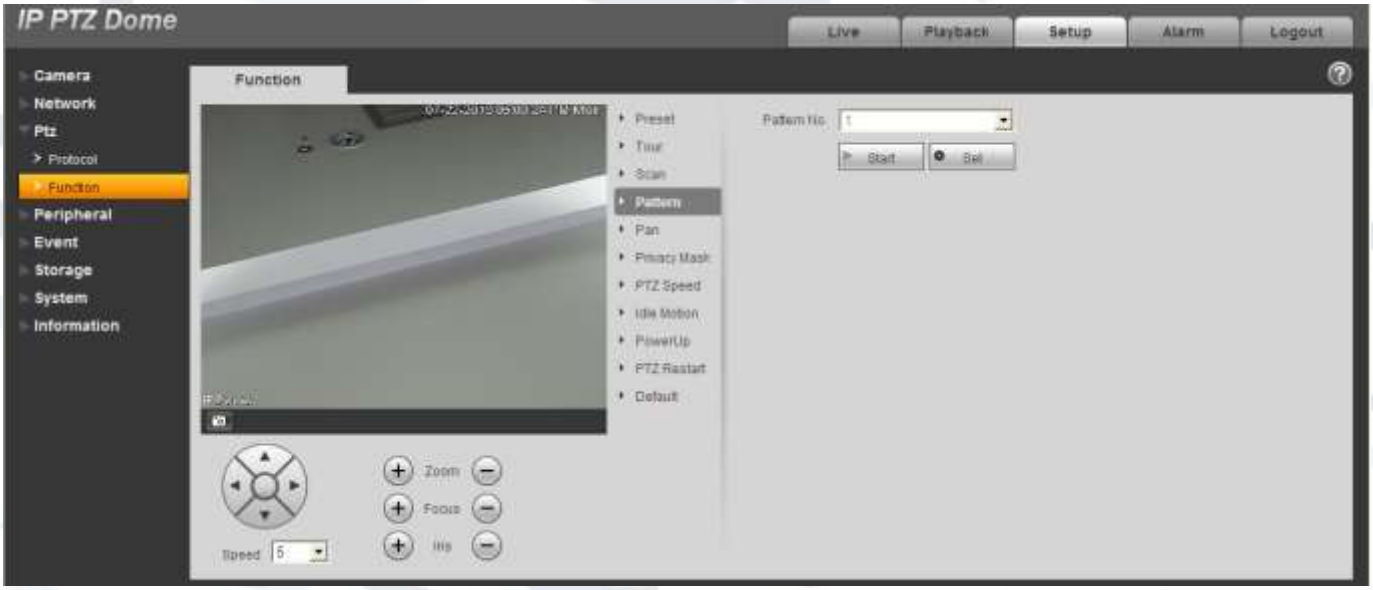


Figure 6-50

Please refer to the following sheet for detailed information:

Parameter	Function
Pattern No.	System auto allocates.
Start	Begin pattern. **Please note this function is null if you have not set a pattern.**
Set	Click it you can see start/stop record buttons.
Start record	Click it to begin recording pattern setup.
Stop record	Click it to stop recording pattern setup.

6.9.2.5 Pan

Pan interface is shown below. See Figure 6-51.

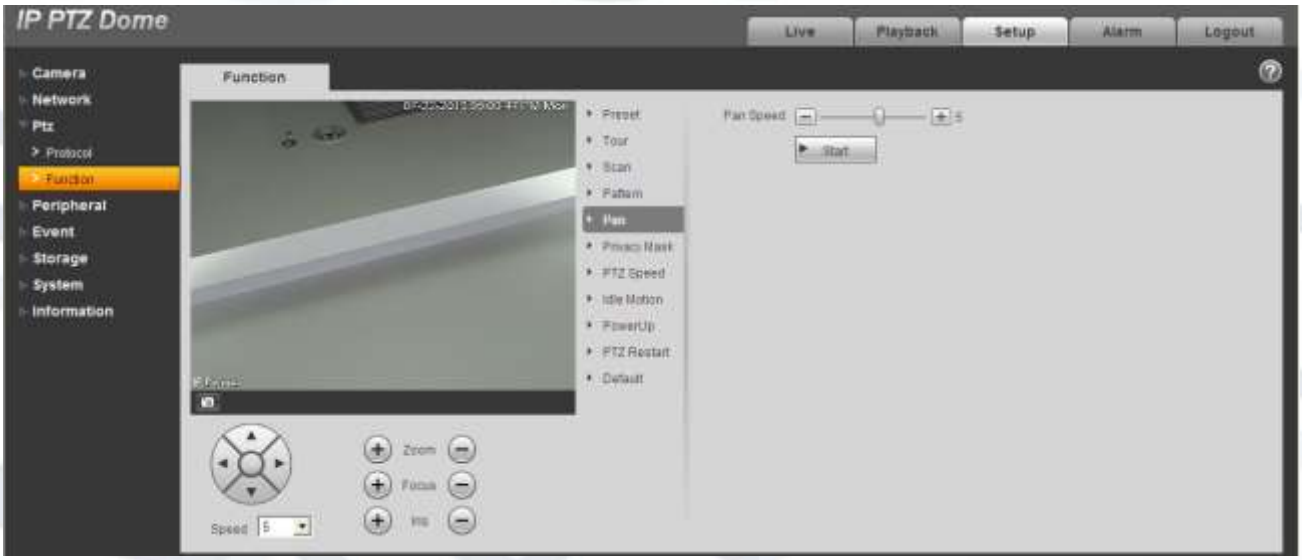


Figure 6-51

Please refer to the following sheet for detailed information:

Parameter	Function
Rotation speed	This is to set camera rotation speed.
Start	Check it to start rotation movement.

6.9.2.6 Privacy Mask

Privacy mask interface is shown below. See Figure 6-52.

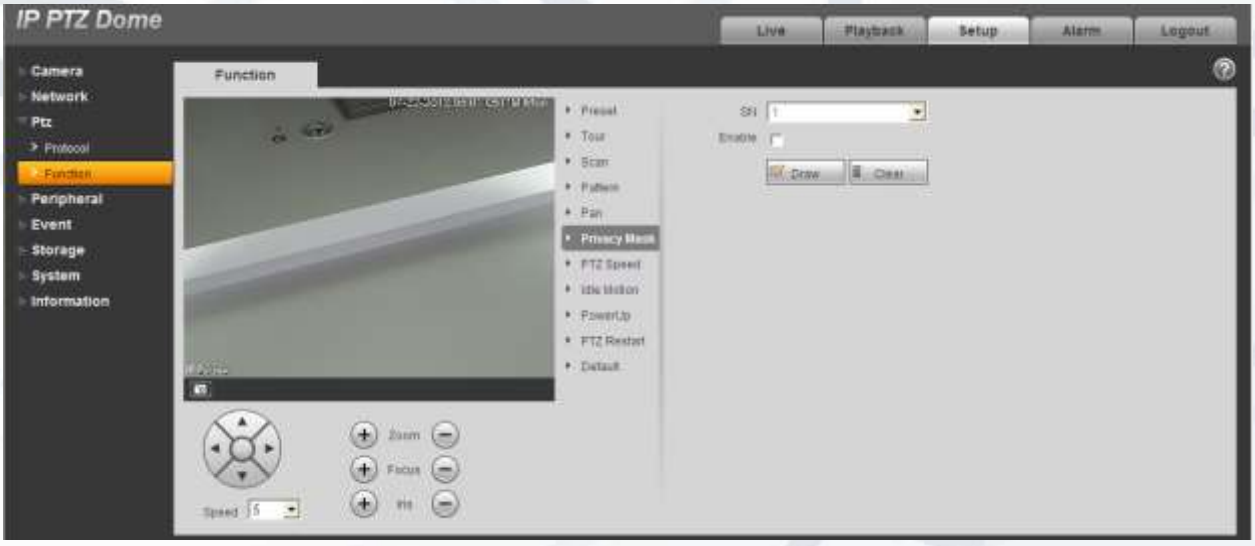


Figure 6-52

Please refer to the following sheet for detailed information:

Parameter	Function
Privacy mask zone	Here you can set camera PTZ speed.
Enable	Check the box here to enable privacy mask function.
Draw	Click it to draw a privacy mask zone on the preview window.
Clear	Click it to clear all privacy mask zone(s) on the preview window.

6.9.2.7 PTZ speed

PTZ speed interface is shown below. See Figure 6-53.

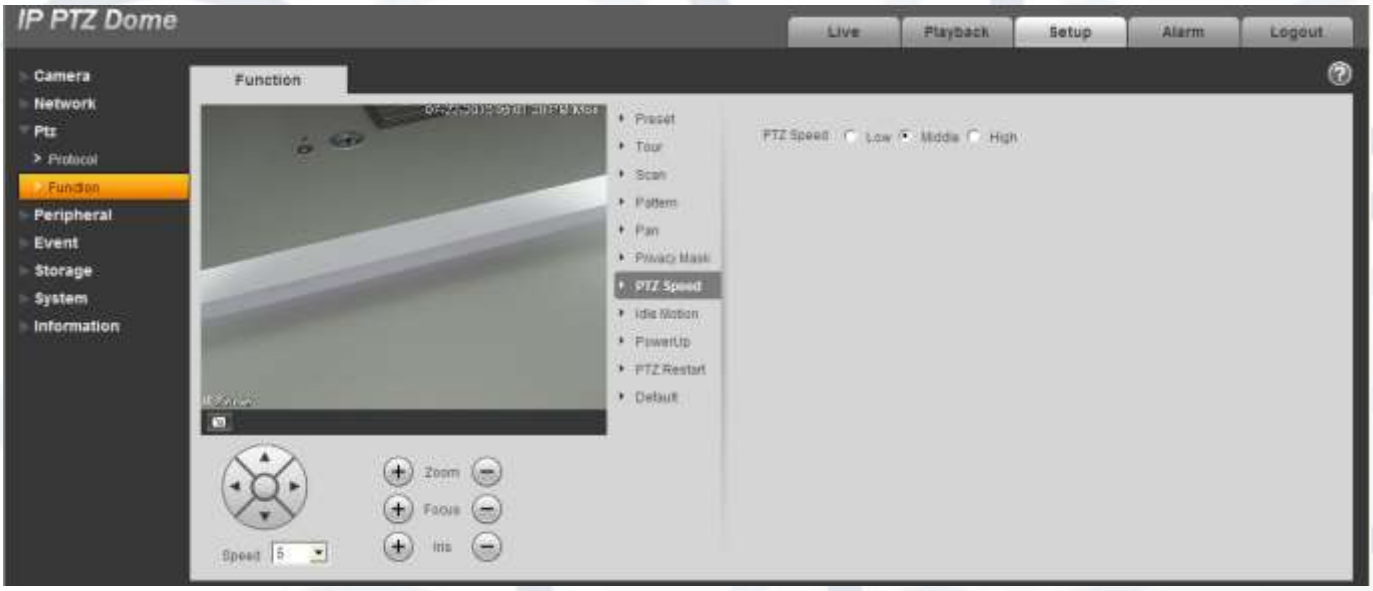


Figure 6-53

Please refer to the following sheet for detailed information:

Parameter	Function
PTZ speed	Here you can set the camera PTZ speed.

6.9.2.8 Idle Motion

Idle motion interface is shown below. See Figure 6-54.

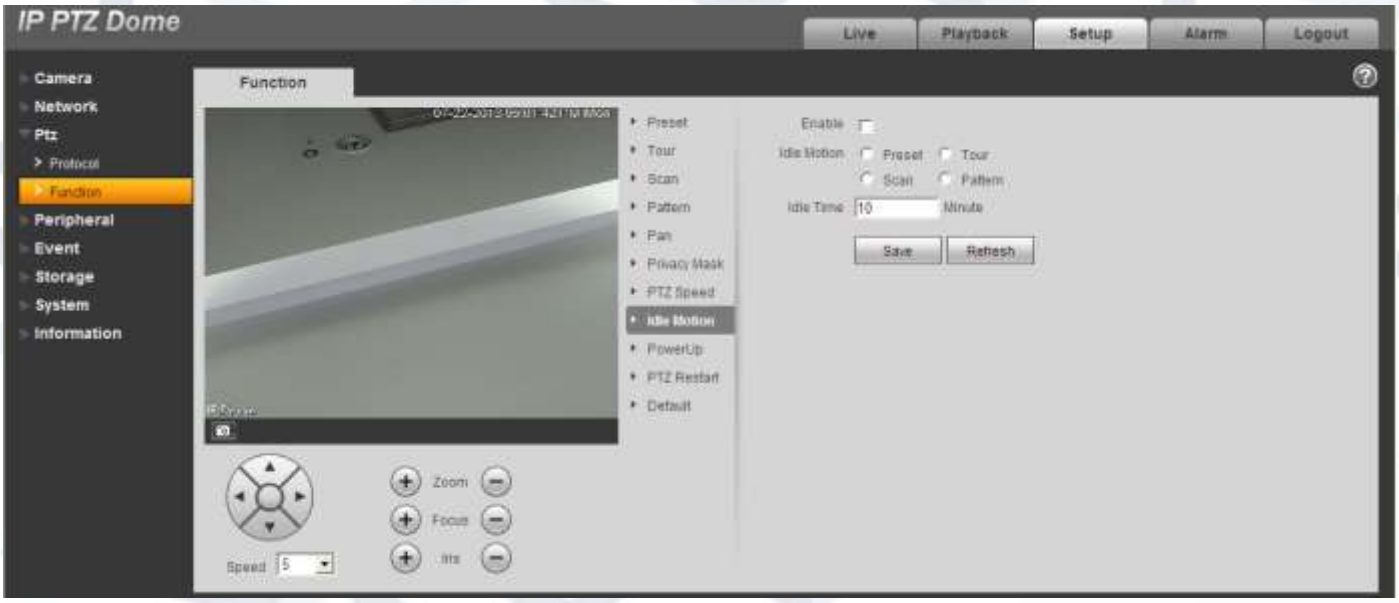


Figure 6-54

Please refer to the following sheet for detailed information:

Parameter	Function
Enable	Check the box here to enable idle motion function.
Idle Motion	Here you can set the preset, scan, pattern, tour. **Please note you need to set the corresponding operation first if you want to use this function.**
Idle time	Set idle time.

6.9.2.9 Power up

Power up interface is shown below. See Figure 6-55.

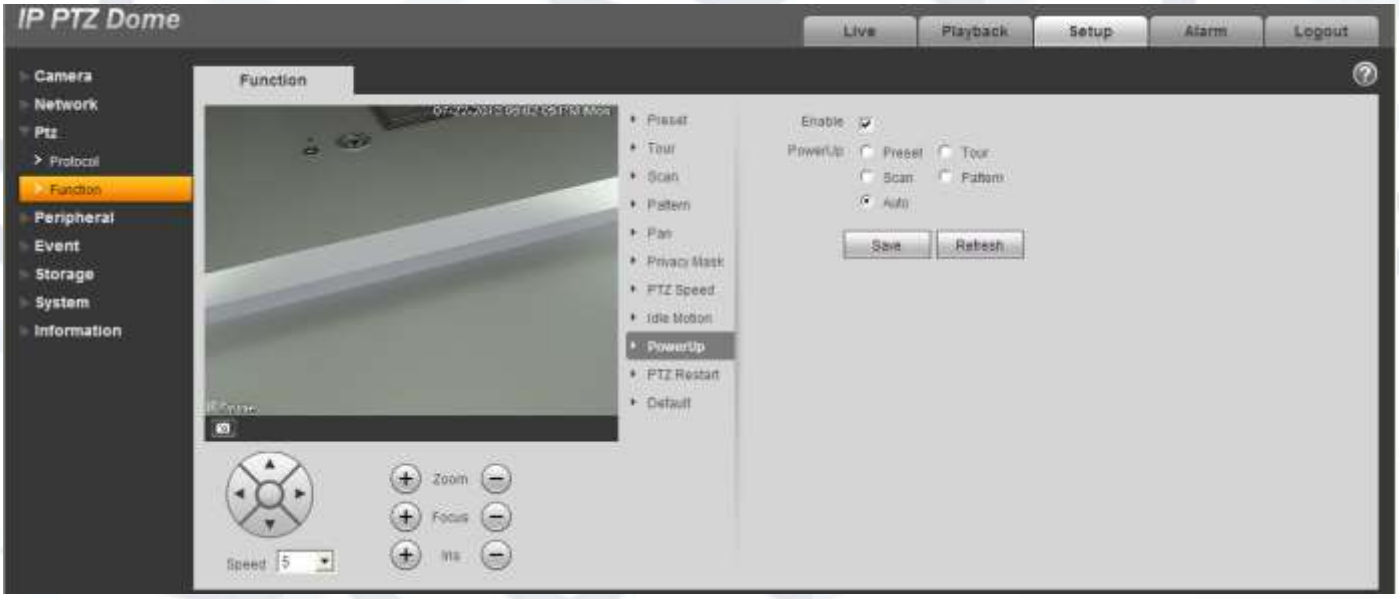


Figure 6-55

Please refer to the following sheet for detailed information:

Parameter	Function
Enable	Check the box here to enable power up function.
Power up	Here you can set the preset, scan, pattern, tour and auto. **Please note you need to set the corresponding function first if you want to use it.**

6.9.2.10 PTZ Restart

PTZ restart interface is shown below. See Figure 6-56.

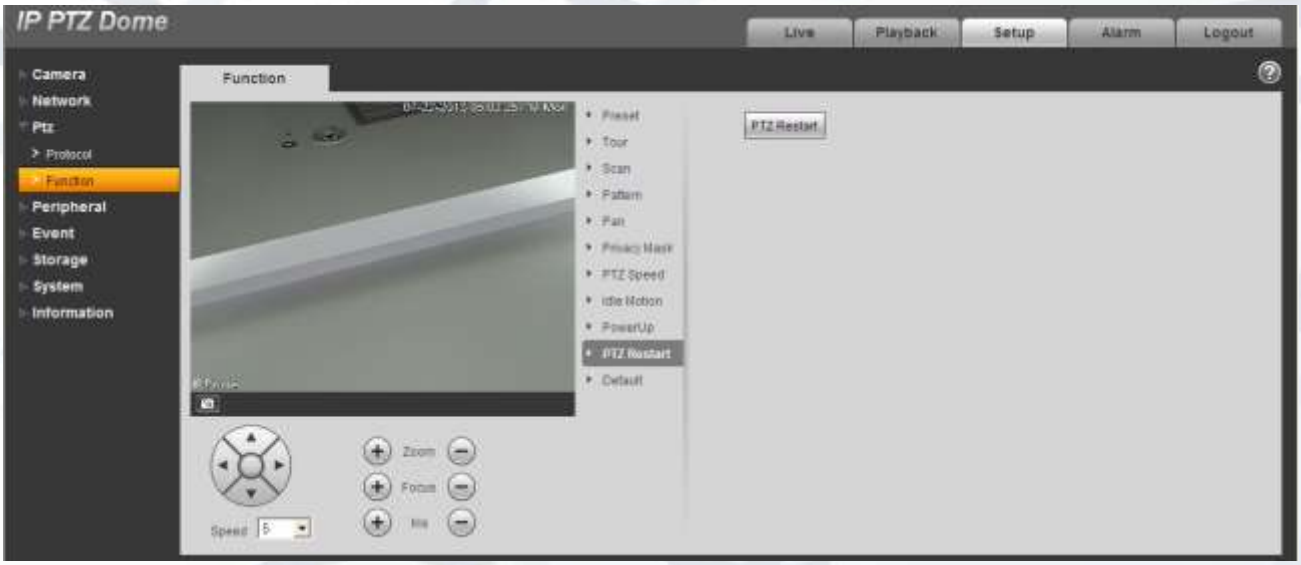


Figure 6-56

Please refer to the following sheet for detailed information:

Parameter	Function
PTZ restart	This is to reboot PTZ.

6.9.2.11 Default

Default interface is shown below. See Figure 6-57.

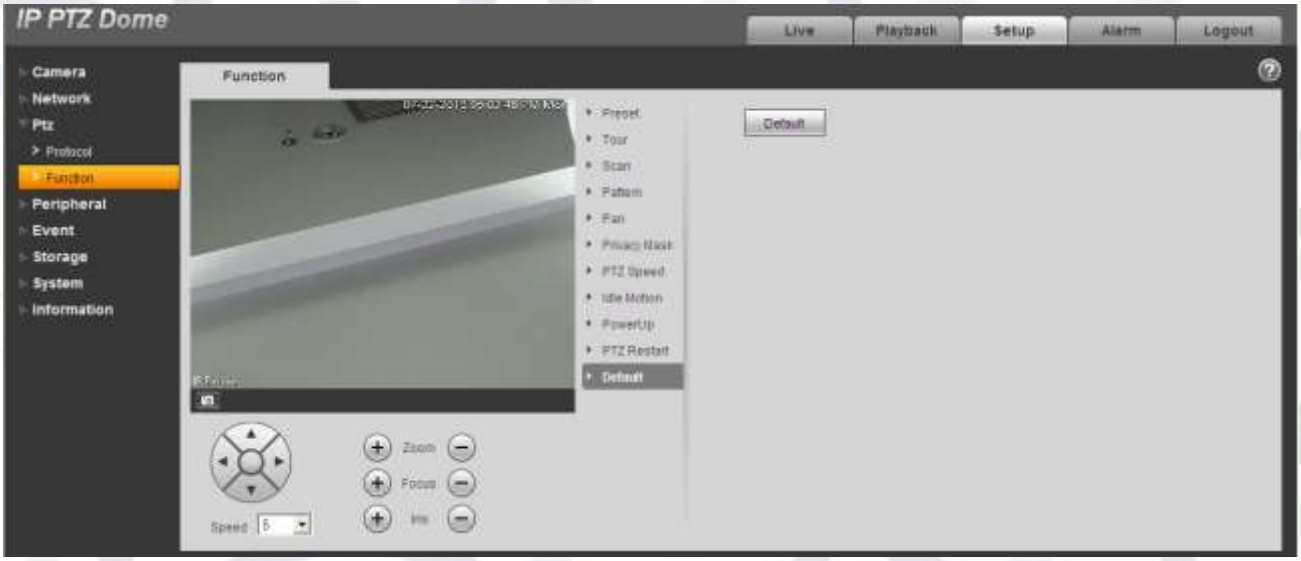


Figure 6-57

Please refer to the following sheet for detailed information:

Parameter	Function
Default	Restore PTZ factory default setup.

6.10 Light

6.10.1 IR Light

The IR light has two interface: zoom has the priority (Figure 6-58)/manual has the priority(Figure 6-59).

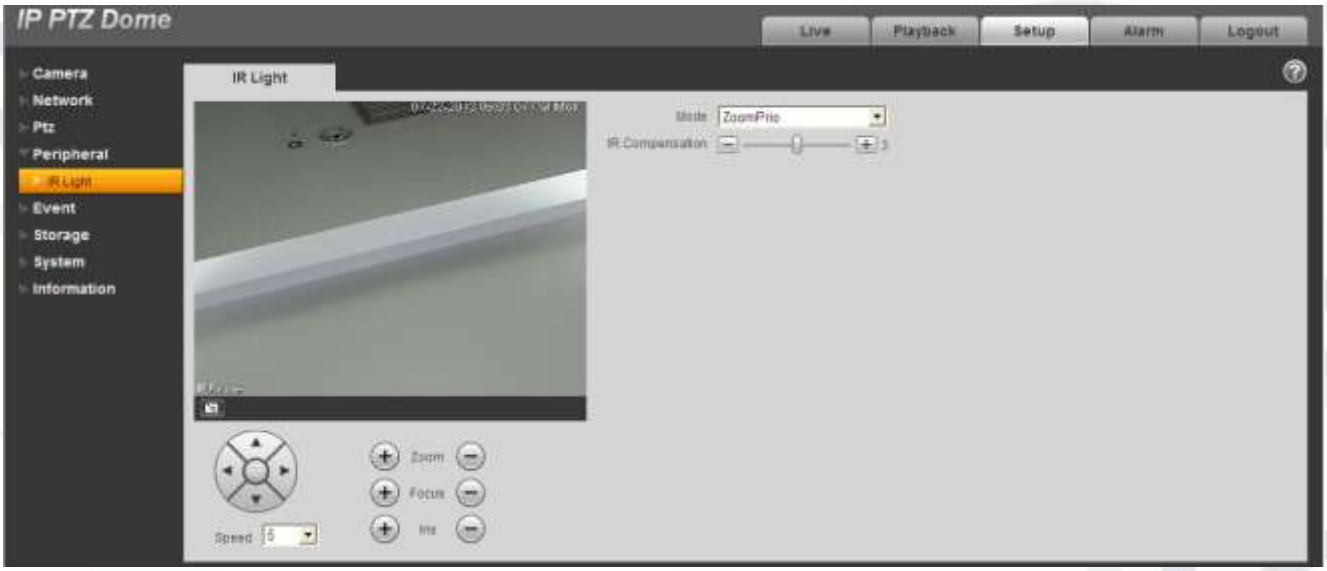


Figure 6-58

Figure 6-59

Please refer to the following sheet for detailed information:

Parameter	Function
Zoom has the priority	Enable IR light when the zoom has the priority. The IR light near light value/far light value can automatically adjust according to the zoom speed.
Manual has the priority	You can set the IR light near/far value under manual mode.

6.11 Event

6.11.1 Video detect

6.11.1.1 Motion Detect

The motion detect interface is shown in Figure 6-60.

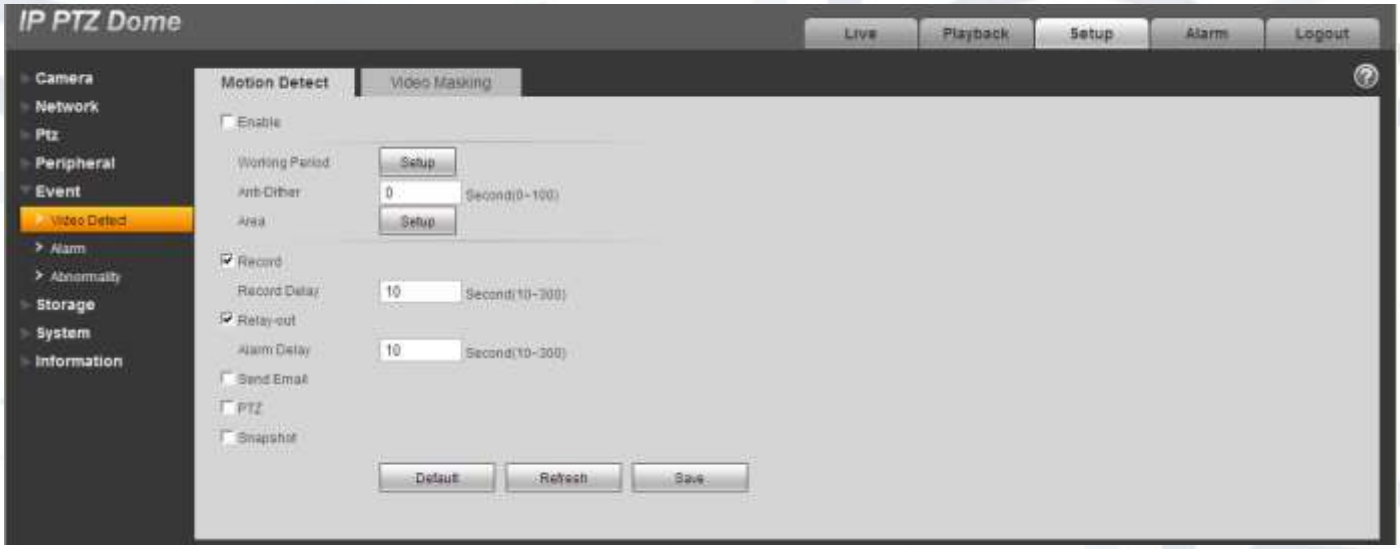


Figure 6-60

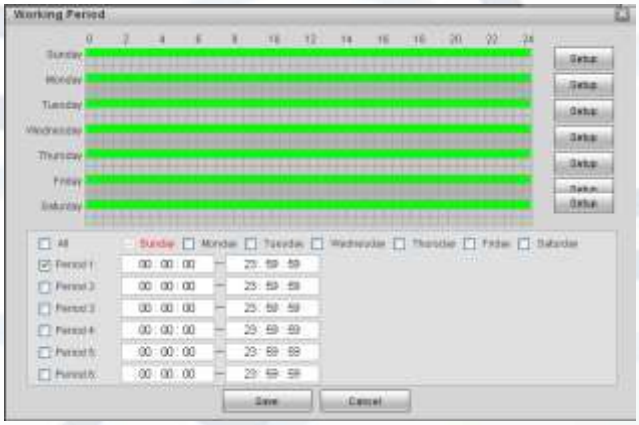


Figure 6-61

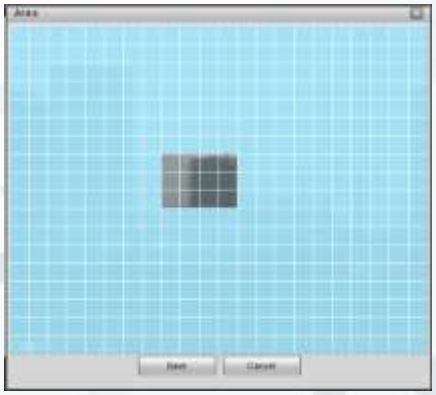


Figure 6-62

Please refer to the following sheet for detailed information:

Parameter	Function
Enable	You need to check the box to enable motion detection function.
Region	• There are six levels. The sixth level has the highest sensitivity. • Region: If you select motion detection type, you can click this button to set the motion detection zone. The light blue zones are the valid motion detect area. All areas are the valid motion detect zone by default. You can use mouse to set the invalid area. • Do remember clicking OK button to save your motion detection zone setup.
Working Period	• Motion detection function becomes activated in the specified periods. See Figure 6-61. • There are six periods in one day. Please draw a circle to enable corresponding period. • Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. • Click OK button, system goes back to motion detection interface; please click save button to exit.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Record channel	System auto activates motion detection channel to record once motion detect alarm occurs (working with motion detection function). Please note you need to go to Storage-> Schedule to set the motion detect record period and go to Storage->Record control to set the current channel as auto record.
Record Delay	System can delay the record for specified time after motion detect alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs. **Please note the relay output number here is for reference only. The alarm output number may vary due to different series products.**
Alarm Delay	System can delay the alarm output for specified time after motion detect alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	• Here you can set the 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	This is snapshot activation function.

6.11.1.2 Video Masking

The video masking interface is shown in Figure 6-63.

Figure 6-63

Please refer to the following sheet for detailed information:

Parameter	Function
Enable	You need to check the box to enable video masking function.
Working Period	• Video masking function becomes activated in the specified periods. • There are six periods in one day. Please draw a circle to enable corresponding period. • Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. • Click OK button, system goes back to motion detection interface; please click save button to exit.
Anti-dither	System only memorises one event during the anti-dither period. The value ranges from 0s to 100s.
Record channel	System auto activates motion detection channel to record once video masking alarm occurs (working with motion detection function). Please note you need to go to Storage-> Schedule to set the motion detect record period and go to Storage->Record control to set the current channel as auto record.
Record Delay	System can delay the record for specified time after video masking alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs. **Please note the relay output number here is for reference only. The alarm output number may vary due to different series products.**
Alarm Delay	System can delay the alarm output for specified time after motion detect alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs.

Parameter	Function
PTZ	• Here you can set the PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. • The event type includes: preset, tour and pattern etc.
Snapshot	This is snapshot activation function.

6.11.2 Alarm

The alarm activation interface is shown in Figure 6-64.

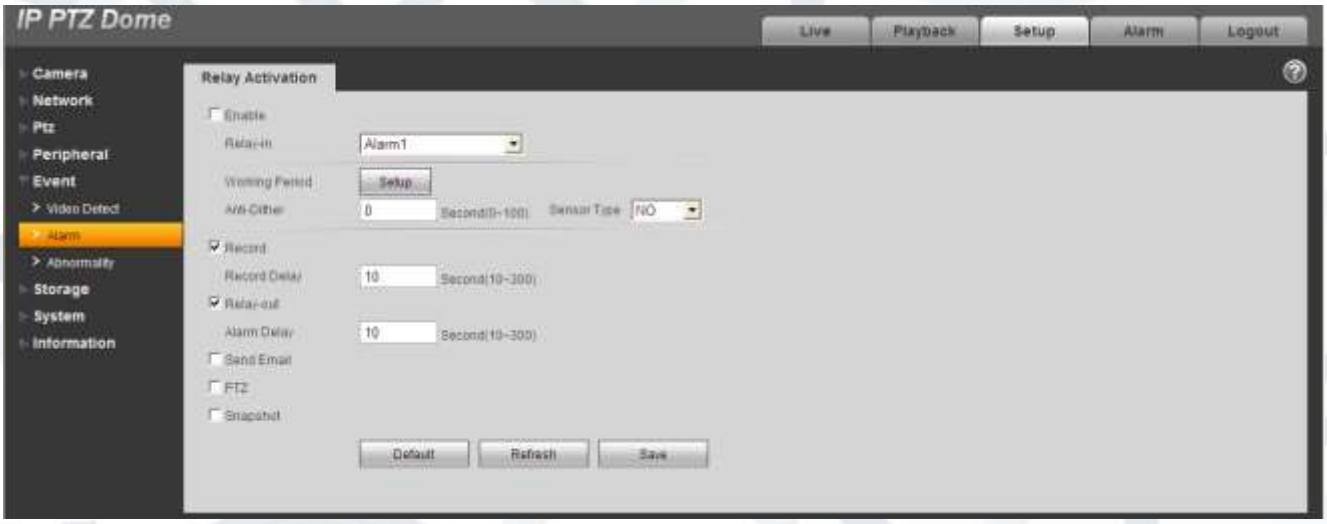


Figure 6-64

Please refer to the following sheet for detailed information:

Parameter	Function
Enable	You need to check the box to enable this function.
Working Period	• This function becomes activated in the specified periods. • There are six periods in one day. Please draw a circle to enable corresponding period. • Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. • Click OK button, system goes back to motion detection interface; please click save button to exit.
Anti-dither	System only memorises one event during the anti-dither period. The value ranges from 0s to 100s.
Sensor type	There are two options: NO/NC. From NO to NC, system enables alarm. From NC to NO, system disables alarm.
Relay out	• Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs. • **Please note the relay output number here is for reference only. The alarm output number may vary due to different series products.**
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Record Channel	System auto activates motion detection channel to record once alarm occurs (working with motion detection function). Please note you need to go to Storage-> Schedule to set the current channel as general record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	• Here you can set the 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 input capture channel number so that system can backup motion detection snapshot file.

6.11.3 Abnormality

This includes five statuses: No SD card, capacity warning, SD card error, and disconnection and IP conflict. See Figure through Figure 6-65.

Figure 6-65

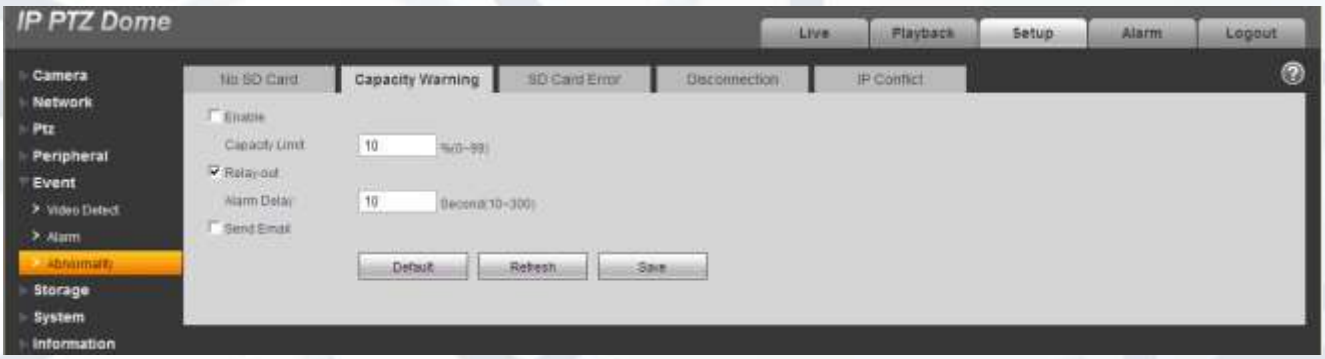


Figure 6-66

Figure 6-67

Figure 6-68

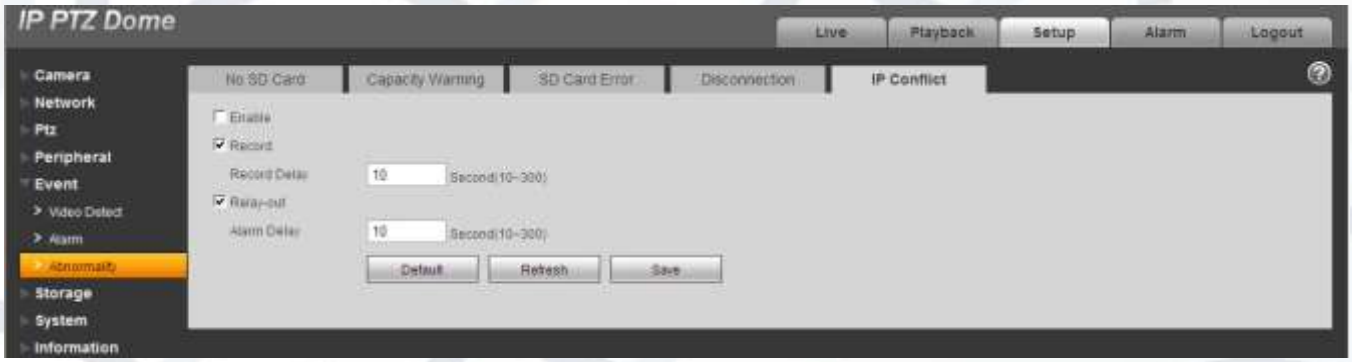


Figure 6-69

Please refer to the following sheet for detailed information:

Parameter	Function
Event Type	• The abnormal events include: no SD card, no space, SD card error, disconnection, IP conflict. • You need to draw a circle to enable this function.
Record	System auto activates channel to record once an alarm occurs (For disconnection type only. See Figure .). You need to check the box to enable this function.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Relay Out	The corresponding alarm output channel when alarm occurs. You need to check the box to enable this function.
Relay out Delay	The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s.
Send email	If you enable this function, system can send out email to alarm the specified user.

6.12 Storage

6.12.1 Record schedule and snapshot schedule/Holiday

In these two interfaces, you can add or remove the schedule record/snapshot setup. See Figure 6-70.There are three record modes: general (auto), motion detect and alarm. There are six periods in one day. Please make sure you have enabled the corresponding record mode in the Setup->Storage->Conditions.

You can view the current time period setup from the color bar.

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

In the holiday schedule interface, you can set the special dates as holiday. Once you enable record/snapshot function here, system can record/snapshot according to your setup on the holiday schedule interface.

Figure 6-70

6.12.2 Destination

The destination interface is shown in Figure 6-71.

This is to set the storage mode of the IP PTZ record file or snapshot pictures. There are three options: path/local storage/FTP. You can only select one mode. System can save according to the event types. This is corresponding to the three modes (general/motion/alarm) in the Schedule interface. Please check the box to enable the save functions.

Figure 6-71

Please refer to the following sheet for detailed information:

Parameter	Function
Event Type	It includes: general, motion detect and alarm.
Local	This is to save in the SD card.
FTP	This is to save in the FTP server.

The local interface is shown in Figure 6-72. Here you can view local SD card information. You can also operate the read-only, write-only, hot swap and format operation.

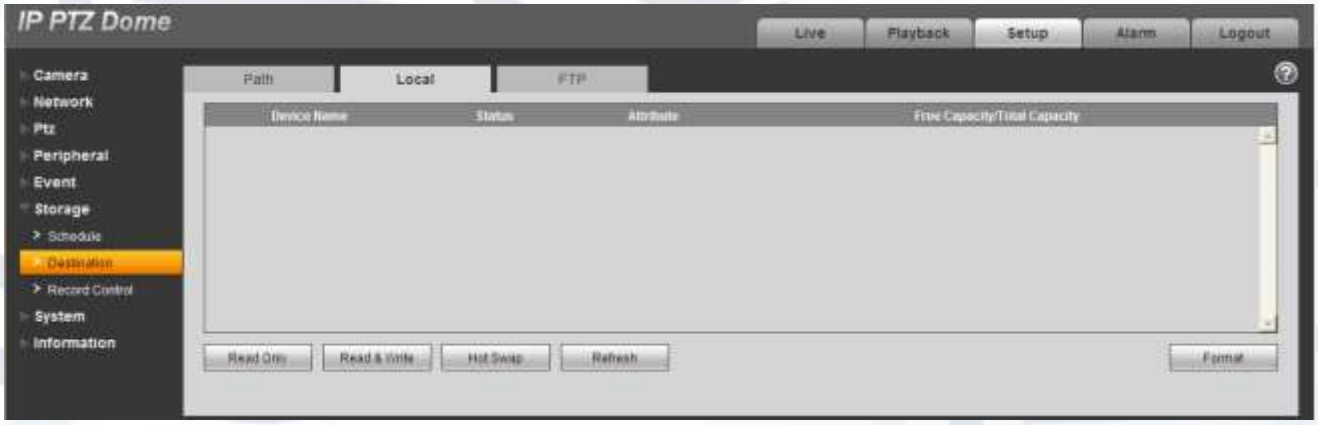


Figure 6-72

The FTP interface is shown in Figure 6-73. You need to check the box to enable the FTP function. When network disconnect occurred or there is malfunction. Emergency storage can save the record/snapshot picture to the local SD card.

Figure 6-73

6.12.3 Record control

The record control interface is shown in Figure 6-74.

Figure 6-74

Please refer to the following sheet for detailed information:

Parameter	Function
Pack Duration	Here you can select file size. Default setup is 60 minutes.
Pre-record	Please input pre-record value here. For example, you can input 4 here so that system can read the previous four seconds video before the alarm occurrence from the buffer and record the 4 seconds video in the file. Please note, if there is no record when alarm record or motion detect record occurred, system can record the N seconds' video before the event occurrence in the 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.
Record Bit Stream	You can select main stream or extra stream.

6.13 System

6.13.1 General

The general interface includes the general setup and the date/time setup.

6.13.1.1 General

The general interface is shown in Figure 6-75.

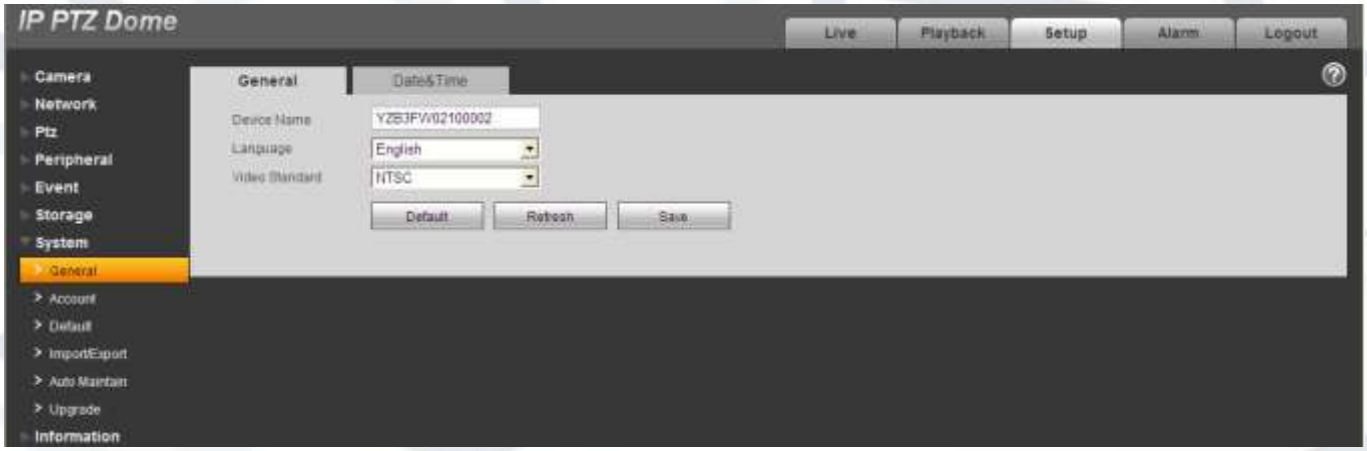


Figure 6-75

Please refer to the following sheet for detailed information:

Parameter	Function
Device Name	This is to set the device name.
Video Standard	This is to display video standard.
Language	You can select the language from the dropdown list. The browser can refresh automatically and change the language accordingly.

6.13.1.2 Date and time

The date and time interface is shown in Figure 6-76

Figure 6-76

Please refer to the following sheet for detailed information:

Parameter	Function
Date format	Here you can select date format from the dropdown list.
Time Format	There are two options: 24-H and 12-H.
Time zone	The time zone of the device.
System time	This is to set the system time. It becomes valid after you set.
Sync PC	You can click this button to save the system time as your PC current time.
DST	Here you can set the day night save time begin time and end time. You can set according to the date format or according to the week format.
NTP	You can check the box to enable NTP function.
NTP server	You can set the time server address.
Port	This is to set the time server port.
Update period	This is to set the sync periods between the device and the time server. The update function is null if the value is 0. **System only synchronizes once when the setup is 0.**

6.13.2 Account

Note:

- For the character in the following user name or the user group name, system supports a maximum of 15-drillits. The space in the front or at the end of the string is null. The valid string includes: character, number, and underline.
- The max user amount is 20 and the max group amount is 8. You can add or delete user group.
- The factory default setup includes two levels: user and admin. .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.

6.13.2.1 User name

In this interface you can login anonymously, add/remove user and modify user name. See Figure 6-77.

Check the box to login anonymously, you can input IP address on the browser, system goes to Live interface directly.

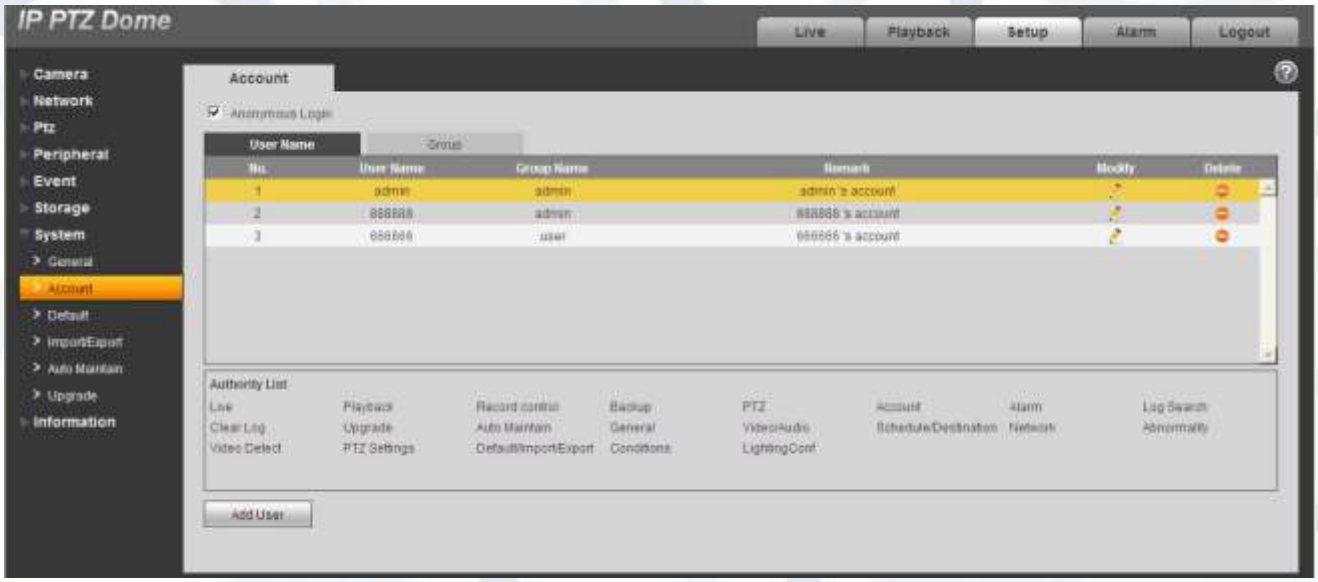


Figure 6-77

Add user: This is to add a name to group and set the user rights. See Figure 6-78.

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

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

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

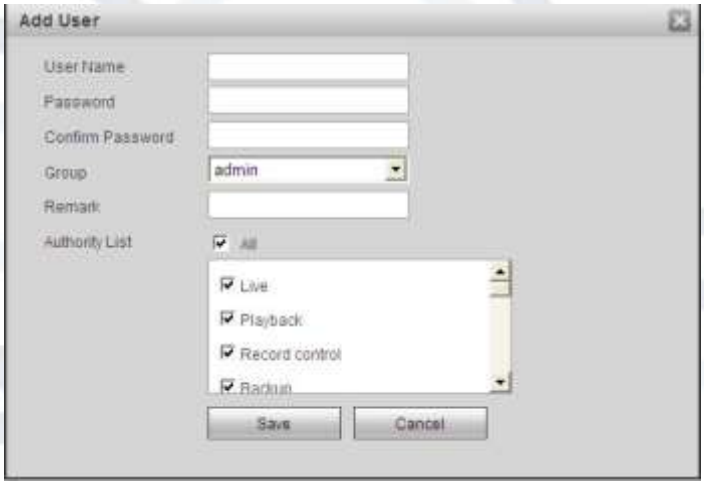


Figure 6-78

Modify user

This is to modify the user property, belonging group, password and rights. See Figure 6-79.

Modify password

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

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

Figure 6-79

6.13.2.2 Group

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

The interface is shown in Figure 6-80.

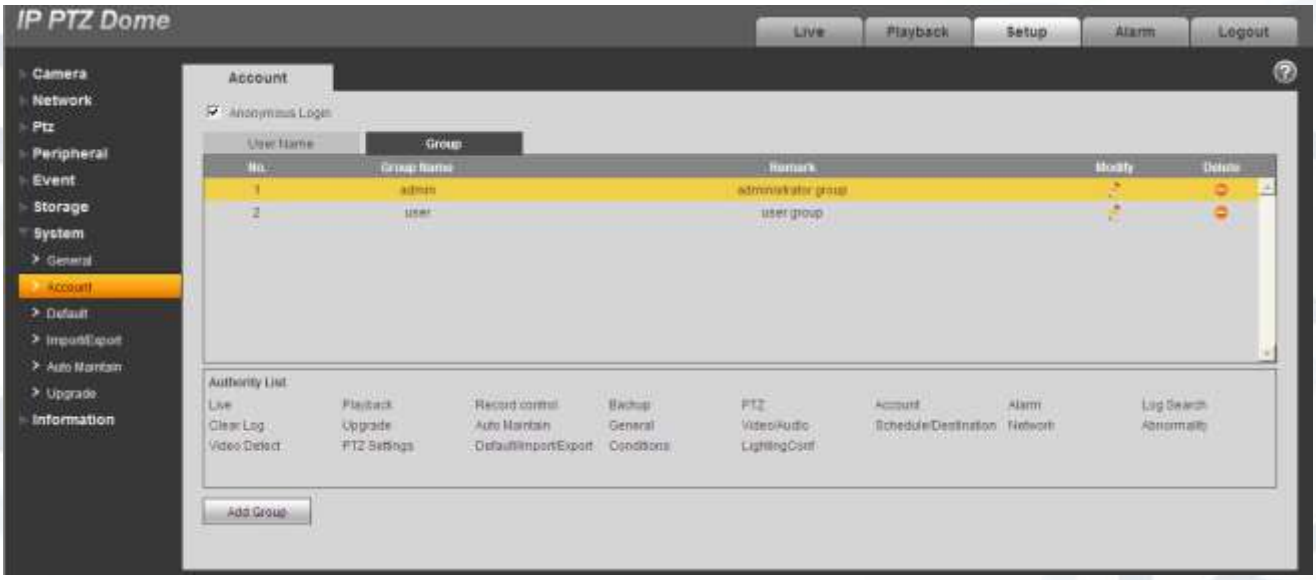


Figure 6-80

Add group: This is to add group and set its corresponding rights. See Figure 6-81.

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

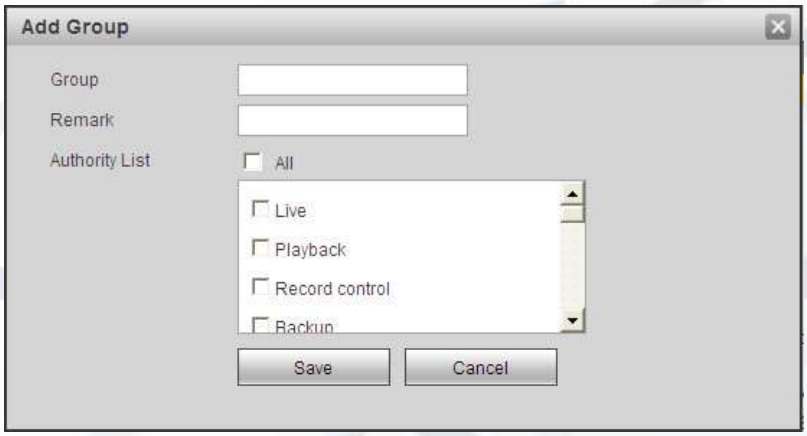


Figure 6-81

Modify group

Click the modify group button, you can see an interface is shown in Figure 6-82.

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

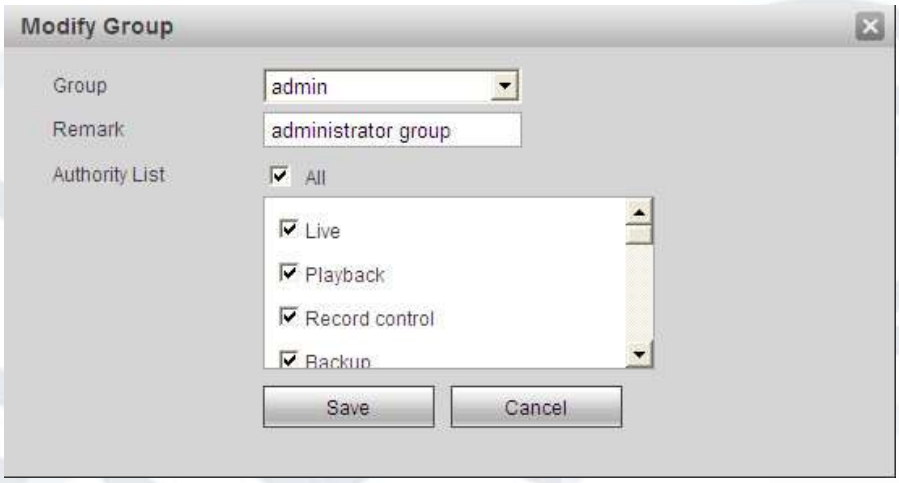


Figure 6-82

6.13.3 Default

The default setup interface is shown in Figure 6-83.

Please note system cannot restore some information such as network IP address.

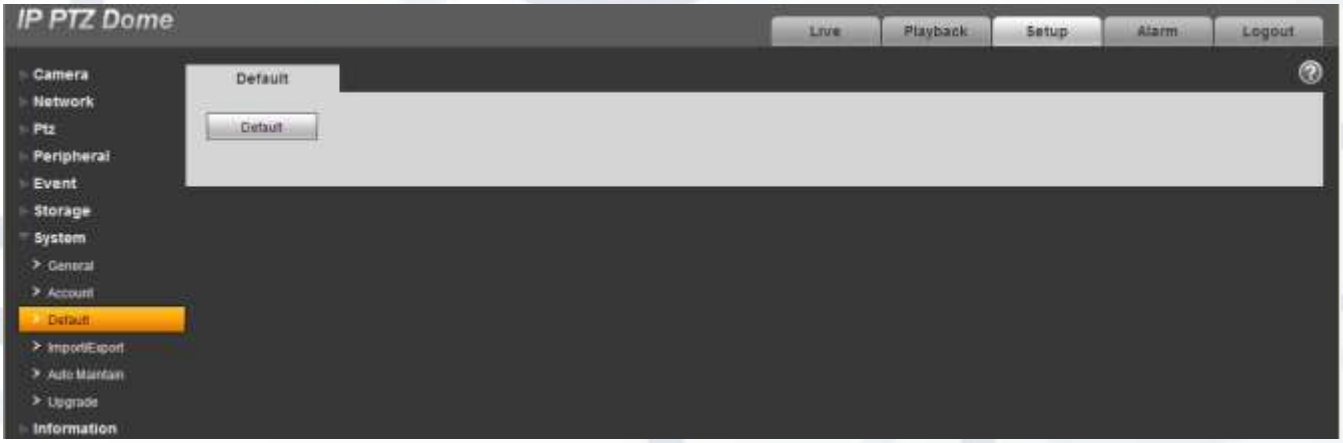


Figure 6-83

6.13.4 Import/Export

The interface is shown in Figure 6-84.

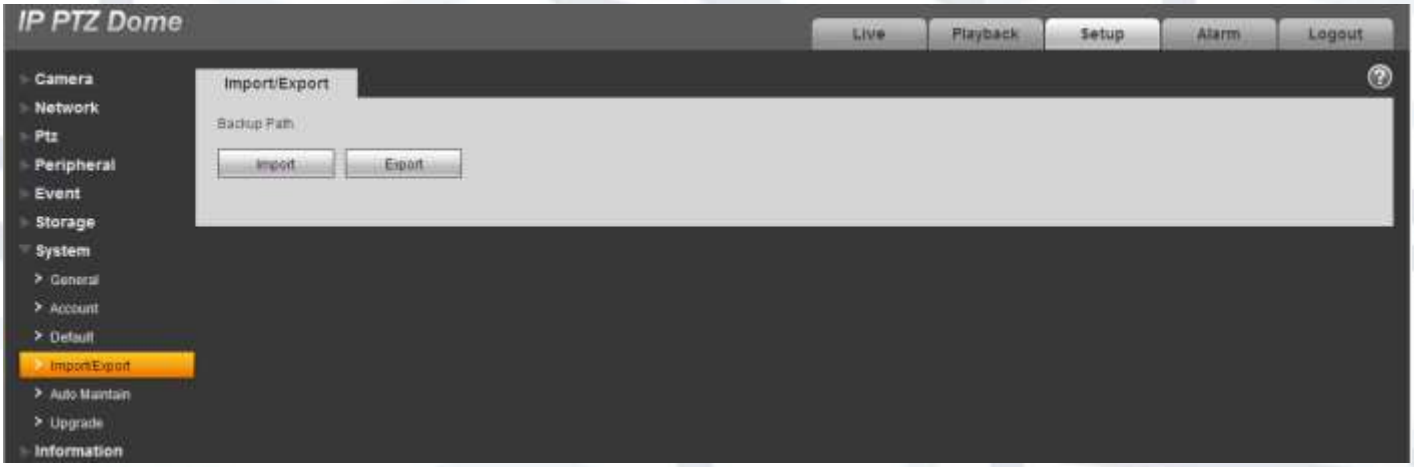


Figure 6-84

Please refer to the following sheet for detailed information:

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

6.13.5 Auto maintenance

The auto maintenance interface is shown in Figure 6-85.

Here you can select auto reboot and auto delete old files interval from the dropdown list.

If you want to use the auto delete old files function, you need to set the file period.

Figure 6-85

6.13.6 Firmware update

The firmware interface is shown in Figure 6-86.

Please select the upgrade file and then click the update button to begin firmware update.

IMPORTANT:

- **Do not turn off the device power; disconnect the device, reboot or shutdown the device during the update period.**
- **Please reboot the device if you update the improper program, otherwise some function module of the device may become null!**

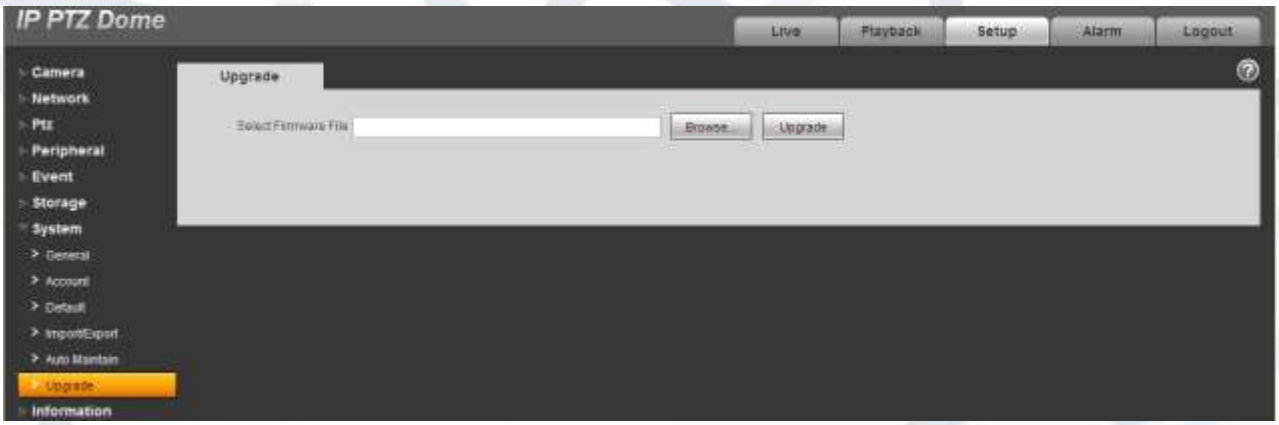


Figure 6-86

6.14 Information

6.14.1 Version

The version interface is shown in Figure 6-87.

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

Figure 6-87

6.14.2 Log

6.14.2.1 System Log

Here you can view system log. See Figure 6-88.

Figure 6-88

Please refer to the following sheet for log parameter information:

Parameter	Function
Type	Log types include: system operation, configuration operation, data operation, event operation, record operation, and user management, log clear.
Start time	Set the start time of the requested log.
End time	Set the end time of the requested log.
Search	You can select log type from the drop down list and then click search button to view the list. You can click the stop button to terminate current search operation.
Detailed information	You can select one item to view the detailed information.
Clear	You can click this button to delete all displayed log files.
Backup	You can click this button to backup log files to current PC.

6.14.2.2 Remote Log

Here you can view remote log interface. See Figure 6-89.

Figure 6-89

Please refer to the following sheet for log parameter information:

Parameter	Function
Enable	Check the box here to enable remote log function.
IP address	Input server IP address.
Port	Input server port. The value ranges from 1～65534.

6.14.3 Online User

The online user interface is shown in Figure 6-90.

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

Figure 6-90

7 Alarm

Click alarm function, you will see an interface is shown in Figure 7-1.

Here you can set the device alarm type and alarm sound setup. When the specified alarm occurred (you have subscribed), system can record the corresponding alarm information on the right pane of the alarm list.

Figure 7-1

Please refer to the following sheet for detailed information:

Type	Parameter	Function
Alarm type	Motion detect	System alarms when motion detection alarm occurs,
	Disk full	System alarms when disk is full.
	HDD malfunction	System generates an alarm when HDD malfunctions.
	Camera masking	System alarms when camera is viciously masking.
	External alarm	Alarm input device sends out alarm.
Operation	Prompt	System automatically pops up alarm dialogue box.
Alarm audio	Audio	When alarm occurs, system auto generates alarm audio. The audio supports customized setup.
	Path	Here you can specify alarm sound file.

8 Log out

Click log out button, system goes back to log in interface. See Figure 8-1.

You need to input user name and password to login again.

Figure 8-1

9 APPENDIX 1: RS485 BUS INFORMATION

9.1 RS485 Bus Main Feature

RS485 is semi duplex communication cable of impedance 120Ω. Its max load amount is 32 effective loads (including main control device and devices to be charged).

9.2 RS485 Bus Transmission Distance

When we take 0.56mm (24AWG) twisted-pair as communication cable, the max transmission distances (theoretically) are listed below (according to different baud rates).

Baud Rate	Max Distance
2400 BPS	1800M
4800 BPS	1200M
9600 BPS	800M

In the following situations, the max transmission distance shall become shorter accordingly:

- The communication cable is a little bit thin;
- The surrounding environment has strong electromagnetic interference;
- There are too much devices connected to the RS485 bus;

And vice versa, the max transmission distance shall become longer.

9.3 The Problem in Practical Use

In practical usage, we usually adopt star type connection. The terminal resistance shall connect to the furthest two devices (Such as device 1# and device 15# in Figure 9-1). But this connection way does not conform to RS485 Bus standard. When the distances between devices are too long, the signal reflection occurs and anti-jamming decreases, thus the signal reliability becomes very low. You can see IP PTZ is not under control or IP PTZ is running automatically and cannot stop.

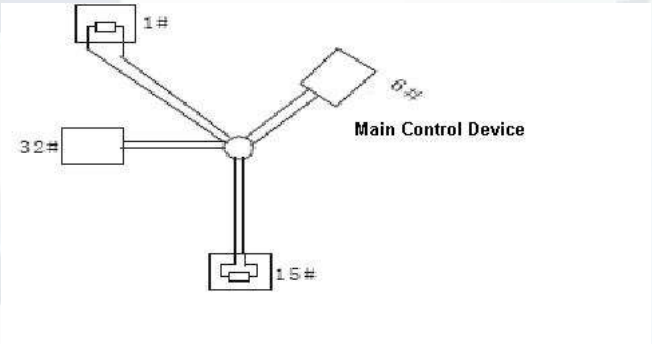


Figure 9-1

In this situation, we recommend RS485 distributor. This device can turn star type connection into the connection that conforms to RS485 bus industry standard, which can avoid the above mentioned problems and enhance communication reliability. See Figure 9-2.

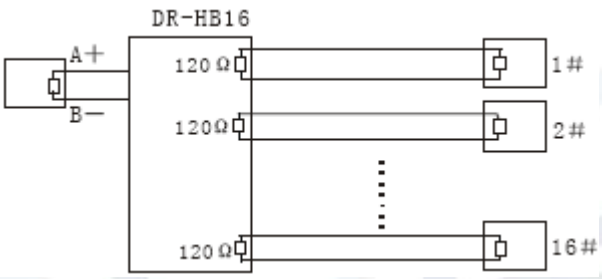


Figure 9-2

9.4 RS485 Bus FAQ

Phenomenon	Possible Reasons	Solution
IP PTZ can run self-diagnosis but I cannot control it.	● Host address(baud rate) and IP PTZ address(baud rate) do not match; ● Positive and negative end of RS485 Bus are misconnected; ● Connection cable is loose; ● RS485 Bus connection are cut off;	● Modify host or IP PTZ setup ; ● Switch RS485 positive end and negative end; ● Fix connection cable firmly; ● Replace RS485 Bus.
I can control the IP PTZ but is not smooth	● RS485 Bus connection are not good; ● One RS485 bus is off; ● The distance between host and IP PTZ is too far; ● Parallel connected too much IP PTZs.	● Connect RS 485 Bus again; ● Replace RS485 Bus; ● Add terminal matching resistance; ● Add RS485 distributor.

10 APPENDIX 2: THE 24V AC WIRE GAUGE AND TRANSMISSION DISTANCE RELATIONSHIP SHEET

This is the recommended transmission distance when the cable diameter is fixed and the 24V AC power consumption is below 10%. For the AC device, the max permission voltage power consumption is 10%. For example, when a device of rated power 20W installed from the transformer 141 inches (42m), then the min cable diameter is 0.8000mm.

For this series product, you can refer to the following information:

- **Ceiling and in-ceiling series product, please select the wire for the 20W transmission power.**
- **For outdoor intelligent IP PTZ, please select the wire for the 30W transmission power.**

Feet(m) mm / W	0.8000	1.000	1.250	2.000
10	283 (86)	451 (137)	716 (218)	1811 (551)
20	141 (42)	225 (68)	358 (109)	905 (275)
30	94 (28)	150 (45)	238 (72)	603 (183)
40	70 (21)	112 (34)	179 (54)	452 (137)
50	56 (17)	90 (27)	143 (43)	362 (110)
60	47 (14)	75 (22)	119 (36)	301 (91)
70	40 (12)	64 (19)	102 (31)	258 (78)
80	35 (10)	56 (17)	89 (27)	226 (68)
90	31 (9)	50 (15)	79 (24)	201 (61)
100	28 (8)	45 (13)	71 (21)	181 (55)
110	25 (7)	41 (12)	65 (19)	164 (49)
120	23 (7)	37 (11)	59 (17)	150 (45)
130	21 (6)	34 (10)	55 (16)	139 (42)
140	20 (6)	32 (9)	51 (15)	129 (39)
150	18 (5)	30 (9)	47 (14)	120 (36)
160	17 (5)	28 (8)	44 (13)	113 (34)
170	16 (4)	26 (7)	42 (12)	106 (32)
180	15 (4)	25 (7)	39 (11)	100 (30)
190	14 (4)	23 (7)	37 (11)	95 (28)
200	14 (4)	22 （6)	35 (10)	90 (27)

11 APPENDIX 3: 12V AC WIRE GAUGE AND TRANSMISSION DISTANCE RELATIONSHIP SHEET

The recommended max transmission distance is under the following environments: The wire diameter is fixed and the DC 12V power voltage loss rate is below 10%. For the device of DC power supplying, the max allowed voltage loss rate is 10%.

Feet (m) / mm / W	0.8000	1.000	1.250	2.000
10	62 (18)	96 (29)	151(45)	387 (116)
12	51 (15)	80 (24)	126 (37)	323 (96)
15	41 (12)	64(19)	100 (30)	258 (77)
20	31 (9)	48 (14)	75 (22)	193 (58)
30	20 (6)	32 (9)	50 (15)	129 (38)
40	15 (4)	24 (7)	37 (11)	96 (29)
50	12 (3)	19 (5)	30 (9)	77 (23)

Note: All the wires listed in the above sheet are copper wire. (Copper wire resistance $\rho = 0.0175\Omega * mm^2/m$)

12 APPENDIX 4: WIRE GAUGE REFERENCE SHEET

Metric bare wire diameter （mm）	AWG	SWG	Bare wire cross section （mm^2）
0.050	43	47	0.00196
0.060	42	46	0.00283
0.070	41	45	0.00385
0.080	40	44	0.00503
0.090	39	43	0.00636
0.100	38	42	0.00785
0.110	37	41	0.00950
0.130	36	39	0.01327
0.140	35		0.01539
0.160	34	37	0.02011
0.180	33		0.02545
0.200	32	35	0.03142
0.230	31		0.04115
0.250	30	33	0.04909
0.290	29	31	0.06605
0.330	28	30	0.08553
0.350	27	29	0.09621
0.400	26	28	0.1257
0.450	25		0.1602
0.560	24	24	0.2463
0.600	23	23	0.2827
0.710	22	22	0.3958
0.750	21		0.4417
0.800	20	21	0.5027
0.900	19	20	0.6362
1.000	18	19	0.7854
1.250	16	18	1.2266
1.500	15		1.7663
2.000	12	14	3.1420
2.500			4.9080
3.000			7.0683

Note

- **This manual is for reference only. Slight difference may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**

For more information about our DVRs and available cameras & accessories, please visit our website:

www.adata.co.uk

Alternatively scan this QR code with your smart phone to be directed instantly to our website: