VEHICLE PTZ USER MANUAL

WARNING!

Installation and removal of the unit and its accessories must be carried out by qualified personnel.

You must read all of the Safety Instructions supplied with your equipment before installation and operation.

If the product does not work properly, please contact your dealer. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.

- This installation should be made by a qualified service person and should conform to all the local codes.

- Please make sure that the ceiling can support more than 50(N) Newton gravities if the camera is fixed to the ceiling.

- Make sure the power supply voltage is correct before using the camera.

- Do not drop the camera or subject it to physical shock.

- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.

- Do not aim the camera lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the camera.

- The sensor may be burned out by a laser beam, so when any laser equipment is being used,make sure that the surface of the sensor not be exposed to the laser beam.

- While shipping, the camera should be packed in its original packing.

The **Mobile CCTV PTZ** is designed for Rough Service and Mobile Applications. This tough, Weatherproof PTZ Camera is completely waterproof to IP67 standards and has an internal Heater that will keep this PTZ Camera operating at temperatures down to **-40℃ Below Zero** .

Compatible with **IPC/ONVIF**，**Analog camera**，**AHD, HDSDI.**

This rugged Mobile PTZ Camera has been designed to mount in any orientation on：

- Police enforcement Vehicles

- Emergency vehicle，command Centers

- Telescoping Masts，CCTV Trailer unit

- Patrol Ships & Boats

- Machinery,Special Purpose Trucks & Machines

- Cranes,Construction Equipment .

Key Feature

◆ Aluminum PTZ case with high strength;

◆ Powerful aux IR system, range up to 150 meters;

- infrared or White Light Range，optional.

- High Beam & Low Beam Settings for both Lighting Models

- Model with Infrared Lights will automatically turn on Lamps in low light settings,

- and can be automatically switched from Low to High Beams， depending on Camera Zoom distance

◆ IP index up to IP67, full weather proof;

◆ New design of drive system, PTZ positioning precision up to +/-0.05°;

◆ Image flip for stand / ceiling mount;

◆ **Wide Voltage Range** – perfect for Mobile applications (12-24V DC ）

◆ Dual video output，IPC,Analog video.

◆ Optional wiper；shock absorber，anti-shock;

Parameter

CAMERA	Image Sensor	1/2.8" Progressive Scan CMOS，2MP
	Effective Pixels	1920(H) x 1080(V), 2 Megapixels
	Scanning System	Progressive
	Minimum Illumination	Color: 0.005Lux@F1.6; W/B: 0.0005Lux@F1.6
LENS	Focal Length	Focal Length 4.5mm~135mm
	Max. Aperture	Max. Aperture F1.6 ~ F4.4
	Shutter	Auto/Manual；Shutter timer：1/3s~1/30，000
	Optical Zoom	Optical Zoom 30x
	Focus Control	Focus Control Auto/Manual
PTZ	Pan Range	360°endless
	Pan Speed	0.05°~80°/s
	Tilt Range	-30°~40° (-20°~90°)
	Tilt Speed	0.5°~60°/s
	Number of Preset	255
	Patrol	6 patrols, up to 18 presets per patrol
	Pattern	4 , with the total recording time not less than 10 minutes
	Power loss recovery	Support
Infrared	IR distance	Up to 150m
	IR intensity	Automatically adjusted, depending on the zoom ratio
Video	Compression	H.265/H.264 / MJPEG
	Streaming Capability	3 Streams
	Day/Night	Auto(ICR) / Color / B/W
	Backlight Compensation	BLC / HLC / WDR(120dB)
	White Balance	Auto,ATW,Indoor,Outdoor,Manual
	Gain Control	Auto / Manual
Network	Ethernet	RJ-45 (10/100Base-T)
	Protocol	IPv4/IPv6,HTTP,HTTPS,SSL,TCP/IP, UDP,UPnP,ICMP,IGMP,SNMP,RTSP,RTP, SMTP, NTP,DHCP,DNS,PPPOE,DDNS,FTP, IP Filter,QoS,Bonjour,802.1x
	Interoperability	ONVIF, PSIA, CGI
	Web Viewer	IE10/Google/Firefox/Safari...
	Management Software	Smart PSS, DSS
General	Power	DC12-24V (Wide voltage input)，36W（Max）
	Working temperature	-40 ℃-60℃
	Humidity	90% or less
	Protection level	IP67，TVS 4000V Lightning protection, surge protection, voltage transient protection
	Mount option	Mast mount，vibration damper optional
	Weight	6.5KG
	Dimensions	With Damper：Φ192(mm)×351(mm)；without Damper： Φ192(mm)×315(mm)

Installation

Fixed Mounts :

without Damper

with Damper

315

192

351

192

PTZ   Dimension(:mm)

35

3

4−∅9

∅134

140

180

180
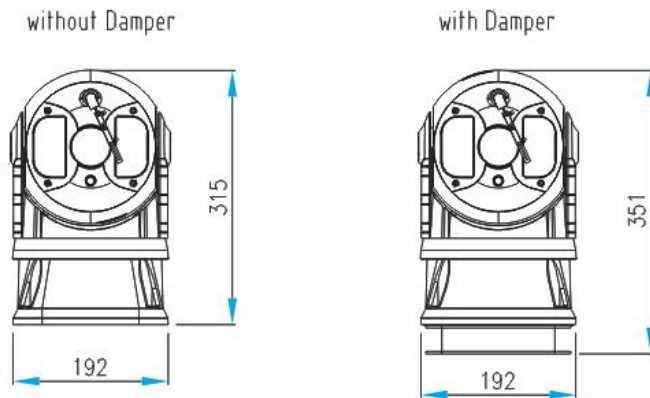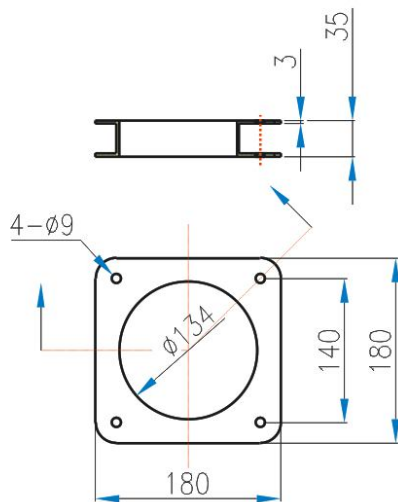
Mounting Plate(:mm)

Installation Overview

Disassembly of the camera is not required for installation. Disassembling the camera can cause permanent damage and will void the warranty.

In most installations, the camera will be connected via a System Cable and a Break-Out Connector Cable. The breakout cable provides the following connections (labels given in parentheses):

➢ BNC for composite video (VIDEO BNC)

➢ RJ45 Ethernet (ETHERNET RJ45)

➢ power with 2 terminal rings (DC 12V, GND)

➢ communication control rings (RS 485+, RS485-)
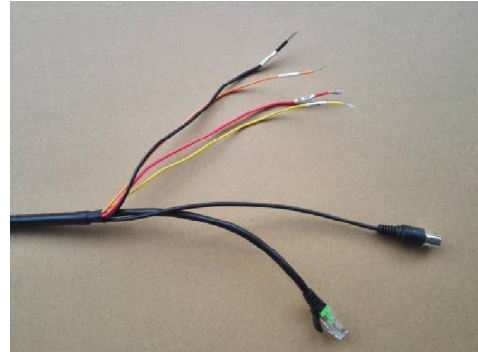
Each breakout end of the cable (away from the camera) must be protected from the weather.

Camera Connections：
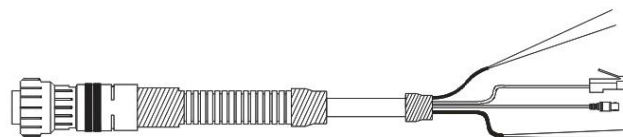
Net Port
BNC
DC12V
Orange ： RS 485 +
Yellow ： RS485 -

12Pin Cable: Pin Definition	
1,2	Power +
3，4	Power -
5	Video -
6	Video +
7，8，9，10	RJ45，1,2，3，6
11	RS485 +
12	RS485-

Note: For Analog/HDSDI case, Net Port inactive;   For HDIP case,BNC&RS485，inactive.

Camera Mounting

General installation information vehicle PTZ is given below:

Firmly secure the camera to a designated frame or structure capable of supporting the camera, using the mounting pattern shown below.

The SOAR970 enclosure can be mounted to a mast mount, pedestal mount.

1. **Take the Mounting plate out of packing and fix it to the target place as per the plate dimensions with Four correct screws.**

2. **Put the camera onto the installation plate. Make sure four installation bolts are in position with the fixing holes on the plate. Fix the PTZ to the mounting place as per with Four correct screws.**
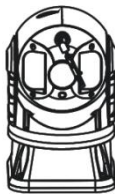
3. **connect the cable with monitor，control device，power source.**

Network Connection

Before accessing a network camera (also known as IP Camera or IPC) from a PC, you need to connect the network camera to the PC directly with a network cable or via a switch or router.

IP Address：192.168.1.108

User name：admin

Password ：admin

Speed Dome Camera Order Table

SORT	ORDER	FUNCTION
Wiper	Call 51	Turn off wiper
	Preset 51	Turn on wiper

IPC Web3.0 Operation Manual

Version 3.5.0

Table of Contents

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

1 Network Connection

This series IPC product support the Web access and management via PC.

Web includes several modules includes monitor channel preview, PTZ control, system configuration, alarm and etc.

Please follow the steps listed below for network connection.

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

2 Main Interface Introduction

2.1 Log in

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

For example, if your camera IP is 192.168.1.108, then please input http:// 192.168.1.108 in IE address bar. See Figure 2-1.
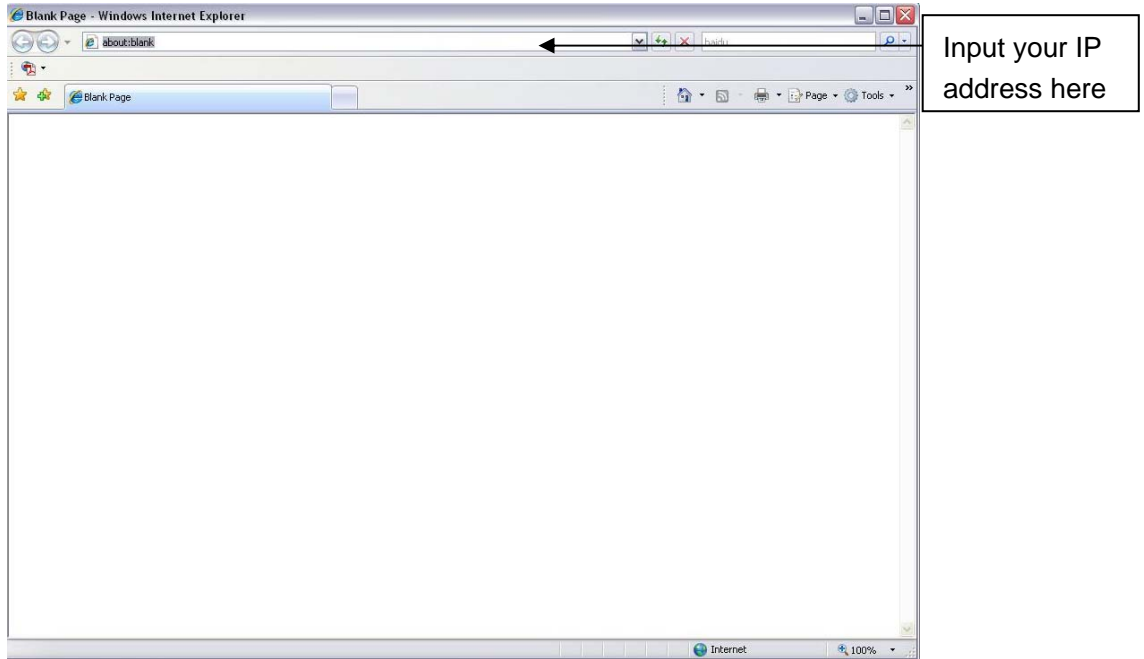

Figure 2-1 IE

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

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.
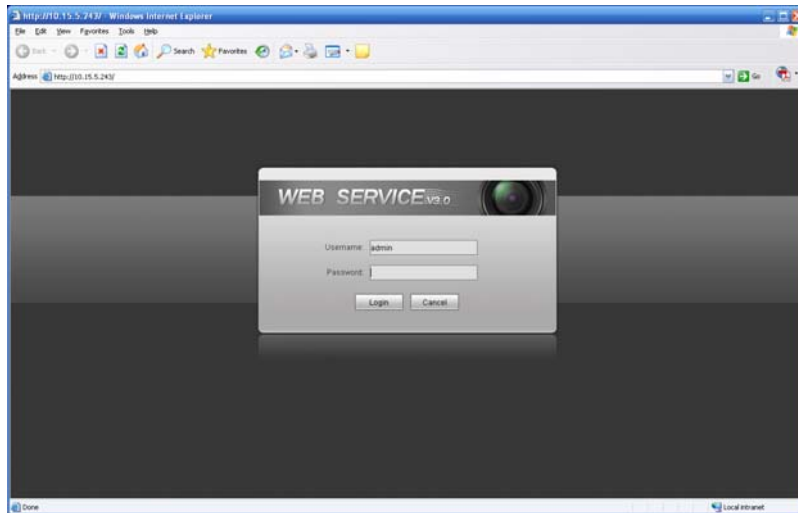
Figure 2-2 Login Interface

If it is your first time to login in, system pops up warning information to ask you whether install control webrec.cab or not. Please click OK button, system can automatically install the control. When system is upgrading, it can overwrite the previous Web too.

If you can't download the ActiveX file, please check whether you have installed the plug-in to disable the control download. Or you can lower the IE security level. See Figure 2-3.
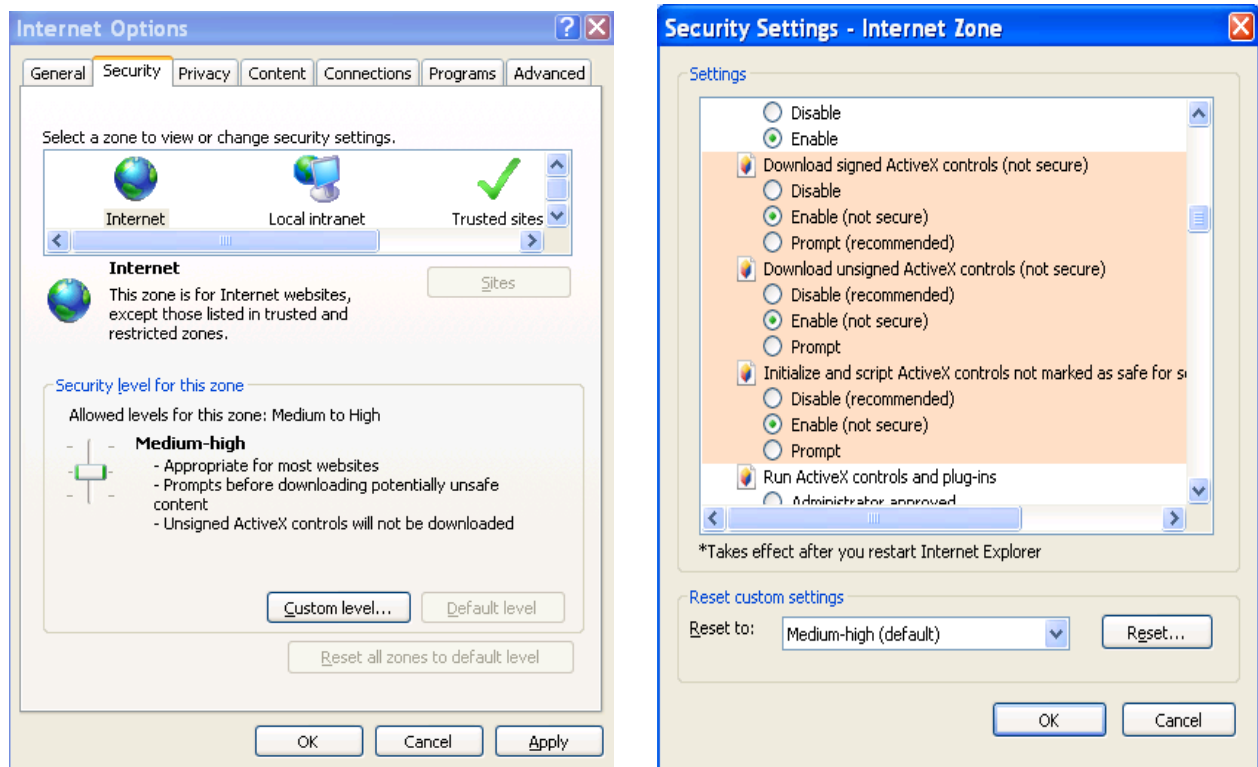

Figure 2-3 Security Settings

2.2 Live Interface

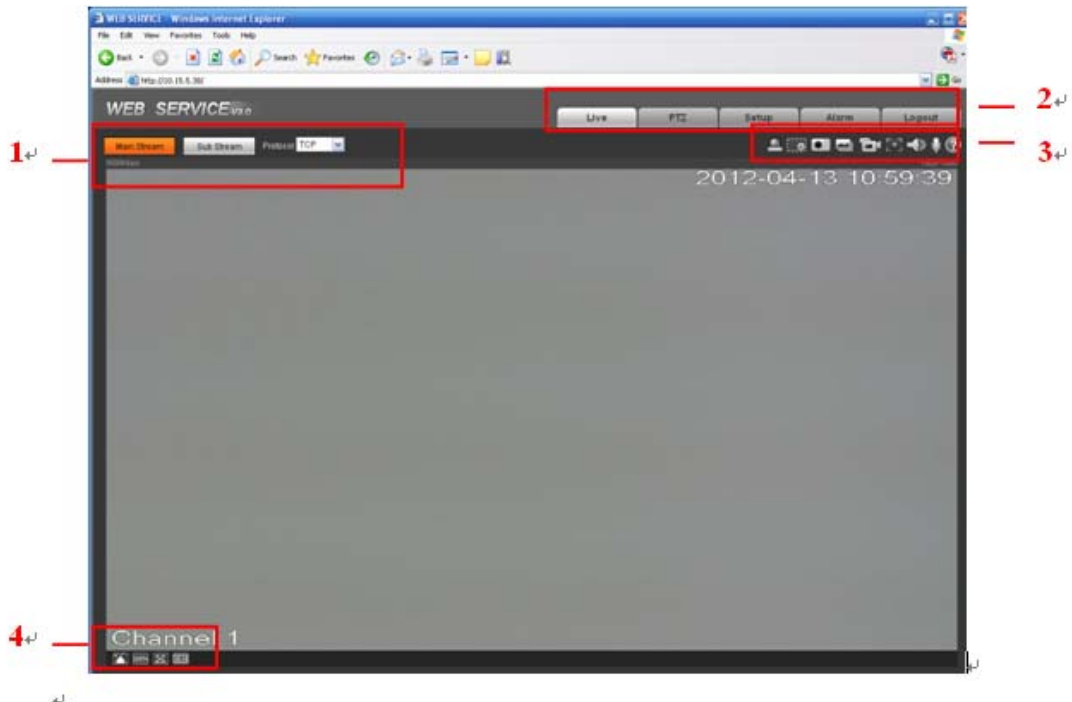After you logged in, you can see the live monitor window. See Figure 2-4

Figure 2-4 Live Interface

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

2.3 Encode Setup

The encode setup interface is shown as in Figure 2-5.

Figure 2-5 Encode setup

Please refer to the following sheet for detailed information.

Parameter	Function
Main stream	In normal network width environment, main stream can record audio/video file and realize network monitor. You can set the main stream resolution if your device supports.

Sub (Extra) stream	If network width is not sufficient, you can use sub stream to realize network monitor.
Protocol	You can select stream media protocol from the dropdown list. There are three options: TCP/UDP/Multicast

2.4 System Menu

System menu is shown as in Figure 2-6.

Please refer to chapter 2.2 Live, chapter 3 PTZ, chapter 4 Setup, chapter 5 Alarm, chapter 6 Log out for detailed information.

Live	PTZ	Setup	Alarm	Logout

Figure 2-6 System Menu

2.5 Video Window Function Option

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

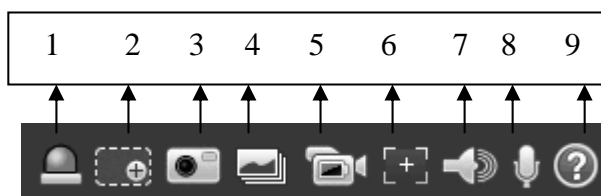| 1	2	3	4	5	6	7	8	9

Figure 2-7 Video Window Function

Please refer to the following sheet for detailed information.

SN	Parameter	Function
1	Alarm output	Click it to generate an alarm output. You can see the icon becomes red. Click it again; you can disable the alarm output.
2	Digital zoom	Click this button and then left drag the mouse in the zone to zoom in. Right click mouse system restores original status.
3	Snapshot	You can snapshoot important video. All images are memorized in system folder: \ picture download (default). You can go to Setup->Camera->Video->Path to modify the local record save path.
4	Triple snap	Click it, system can snap at 1f/s. All images are memorized in system storage folder.
5	Record	When you click local record button, the system begins recording. The recorded file is saved to system folder: \ RecordDownload(default). You can go to Setup->Camera->Video->Path to modify the local record save path.

6	Easy focus	Click it, you can see there are two parameters on the preview video：AF Peak and AF Max.
		AF Peak: It is to display the video definition during the focus process.
		AF Max: It is the most suitable value for the video definition.
		The close the AF Peak and AF Max is, the better the focus effect is.
7	Audio output	Turn on or off audio when you are monitoring.
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.

2.6 Video Window Setup
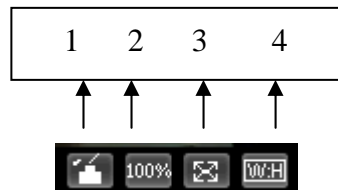
The interface is shown as in Figure 2-8.

Figure 2-8 Video Window Setup

Please refer to the following sheet for detailed information.

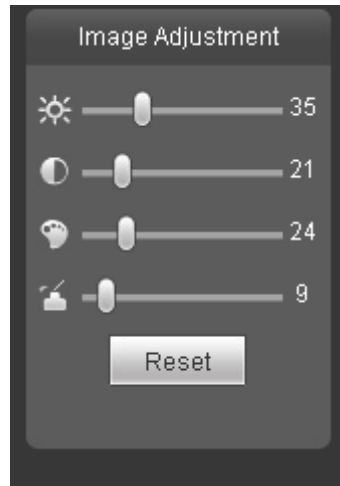| SN	Parameter	Function
1	Image control	Click it to open picture setup interface. See Figure 2-9. This interface is on the top right pane.
2	Original size	Click this button to go to original size. It is to display the actual size of the video stream. It depends on the resolution of the bit stream.
3	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.

The picture setup interface is shown as in Figure 2-9.

Figure 2-9

Please refer to the following sheet for detailed information.

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

3 PTZ Control

Please note only IPC-HFxxxx series product support PTZ function.

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

Here you can view direction keys, speed, zoom, focus, iris, preset, tour, pan, scan, pattern, aux close, and PTZ setup button. See Figure 3-1.

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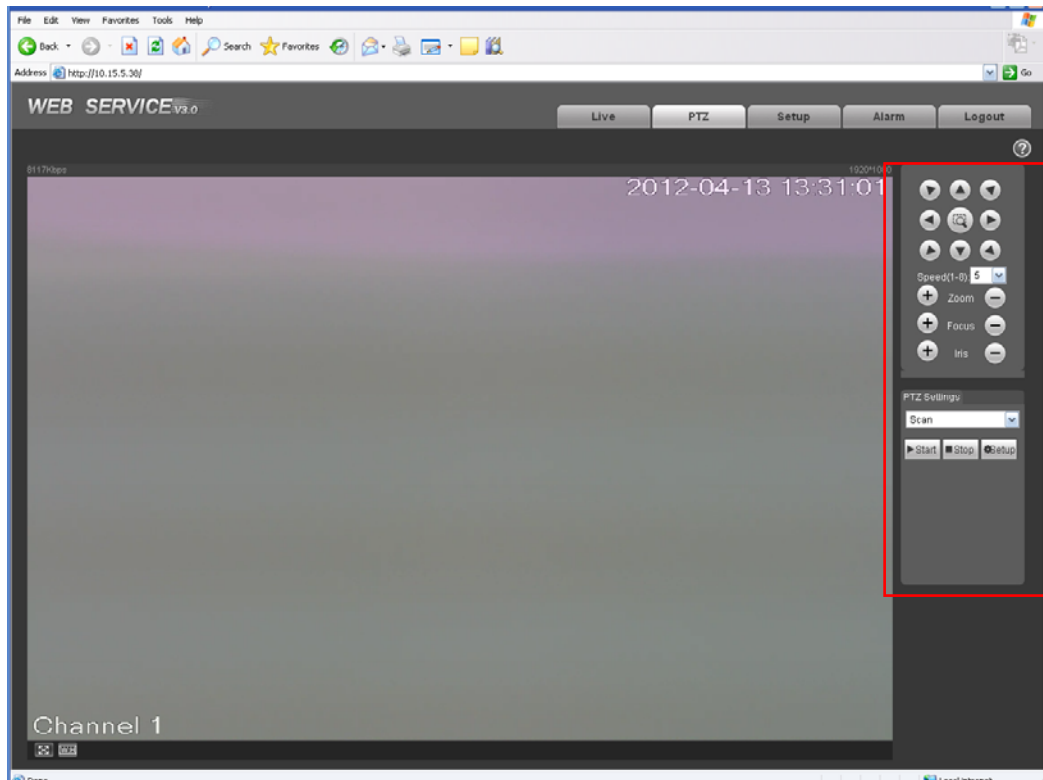- Speed: The step 8 speed is faster than step 1.

Figure 3-1 PTZ Interface

PTZ setting interface is shown as in Figure 3-2.

Here you can set scan, preset, tour, pattern, assistant function and light and wiper.
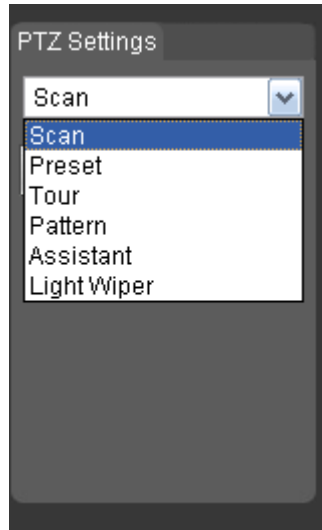
Figure 3-2 PTZ Setup

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	• Click Setup button, you can set scan left and right limit. • Move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit.
Preset	• Input the preset value and then click Preset button, the camera turns to the corresponding position of the preset. • Click the Set preset button, you can set a preset. Use direction keys to move the camera to your desired location and then input preset value. Click add button, you have set one preset. • The preset value ranges from 1 to 255. (It may vary due to different protocols.)
Tour	• Click the Setup button, you can begin set tour. • Input tour value and then click the Set button. The tour value ranges from 1 to 255. (It may vary due to different protocols.) • Input preset value in the column. Click Add preset button, you have added one preset in the tour. **Note:** Repeat the above procedures you can add more presets in one tour. Or you can click delete preset button to remove one preset from the tour.
Pattern	You can input pattern value and then click start button to begin PTZ movement. Please go back to Figure 3-1 to implement camera operation. Then you can click stop button in Figure 3-2. Now you have set one pattern.

Parameter	Function
Assistant	Please input the corresponding aux value here. You can select one option and then click AUX on or AUX off button.
Light and wiper	You can turn on or turn off the light/wiper.

4 Setup

4.1 Camera

4.1.1 Conditions

Here you can view device property information. Slight differences may be found due to different IPC series. The setups become valid immediately after you set. See Figure 4-1.
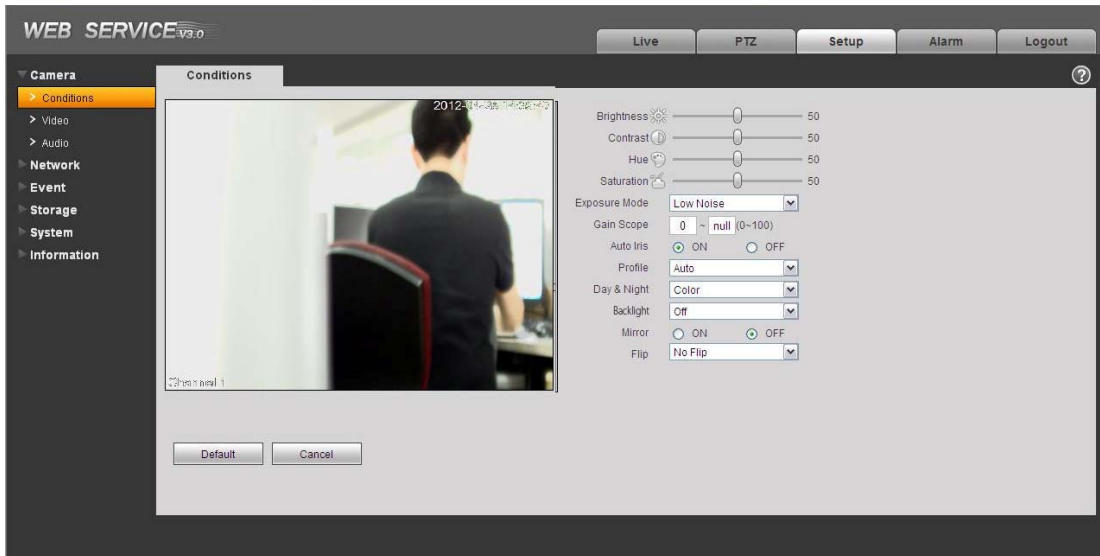
Figure 4-1

Please refer to the following sheet for detailed information.

Parameter	Function
Brightness	It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50.
	The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.

Contrast	It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50.
	The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
Hue	It is to adjust monitor window hue. The value ranges from 0 to 100. The default value is 50.
	The input value will adjust the hue but has no effect on the general brightness of the whole video. Such as turn the red color to the blue color. There is a default value according to the sensitization of the sensor. Usually you do not need to do some major setup. The recommended value ranges from 40 to 60.
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50.
	The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.

Exposure Mode	Auto mode	The video whole brightness can automatically change within the proper exposure range according to the different environments. The higher the gain max value is, the lower the noise is.
	Low noise	The video whole brightness can automatically change within the proper exposure range according to the different environments. The higher the gain max value is, the lower the noise is. For the same environments, the noise of the low noise mode shall be smaller than the noise of the auto mode.

	Low motion blur	The video whole brightness can automatically change within the proper exposure range according to the different environments. The lower the exposure max value is, the week the tail is. For the same environments, the noise of the low motion blur mode shall be smaller than that of the auto mode.
	Anti-flicker	The video whole brightness can automatically change within the proper exposure range according to the different environments. For the same environments, comparing wit the auto mode, the stripes in the video disappear.
	Manual	The manual exposure mode includes: M_1/50（1/60）,M_1/120,M_1/25,M_1/12——M_1/3 and etc. Support long-time exposure.
Gain Adjust	The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the low the noise. But the brightness is also too low in the dark environments. It can enhance the video brightness if the value is high. But the video noise may become too clear.	
Exposure Mode	There are two modes: Auto exposure (AE) and Manual exposure (ME).	
	There are several values for the manual exposure mode. You can select from the dropdown list, It support the long exposure. It supports customized setup too. The device can auto exposure according to the exposure time you set here. The value ranges from 0.1 to 80ms. The exposure time is fixed if the max and min value are the same.	
	Customized value: System can auto exposure according to the value you set here. The value ranges from 0.1 to 80ms.	
Auto Iris	Before the setup, please make sure you have installed the auto iris.	
	You can check the box before ON to enable this function. The auto iris may change if the light becomes different.	
	When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control.	
	This function is on by default.	

Scene Mode	It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default.	
	You can select the different scene mode such as auto, sunny, cloudy, home, office, night, disable and etc to adjust the video to the best quality.	
	● Disabled: The white balance function is off. The video will be output at the original color.	
	● Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the vide color is proper.	
	● Sunny: The threshold of the white balance is in the sunny mode.	
	● Night: The threshold of the white balance is in the night mode.	
	● Customized: You can set the gain of the red/blue channel. The value reneges from 0 to 100.	
Day&Night	It is to set device color and the B/W mode switch. The default setup is on.	
	● Color: Device outputs the color video.	
	● Auto: Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.)	
	● B/W: The device outputs the black and white video.	
	● Switch by periods: You can se the day/night mode switch time. For example, you can set the sunrise time as 06:00:00 and the sunset time as 18:00:00. The video in the specified period will be color while the video in the rest period will be black and white.	
Backlight Mode	BLC	The device auto exposures according to the environments situation so that the darkest area of the video is cleared
	WDR	For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time.
	HLC	After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.

	Off	It is to disable the BLC function. Please note this function is disabled by default.
Flip		It is to switch video up and bottom limit. This function is disabled by default. The video resolution shall be 720P or below if you want to flip 90°.
Mirror		It is to switch video left and right limit. This function is disabled by default.

Important

- The setup becomes immediately after you set.
- IPC-3110 series product does not support the low noise mode, low motion blur, defend flicker mode, digital WDR, HLC, flip, mirror and etc functions.

4.1.2   Video

4.1.2.1 Video bit stream

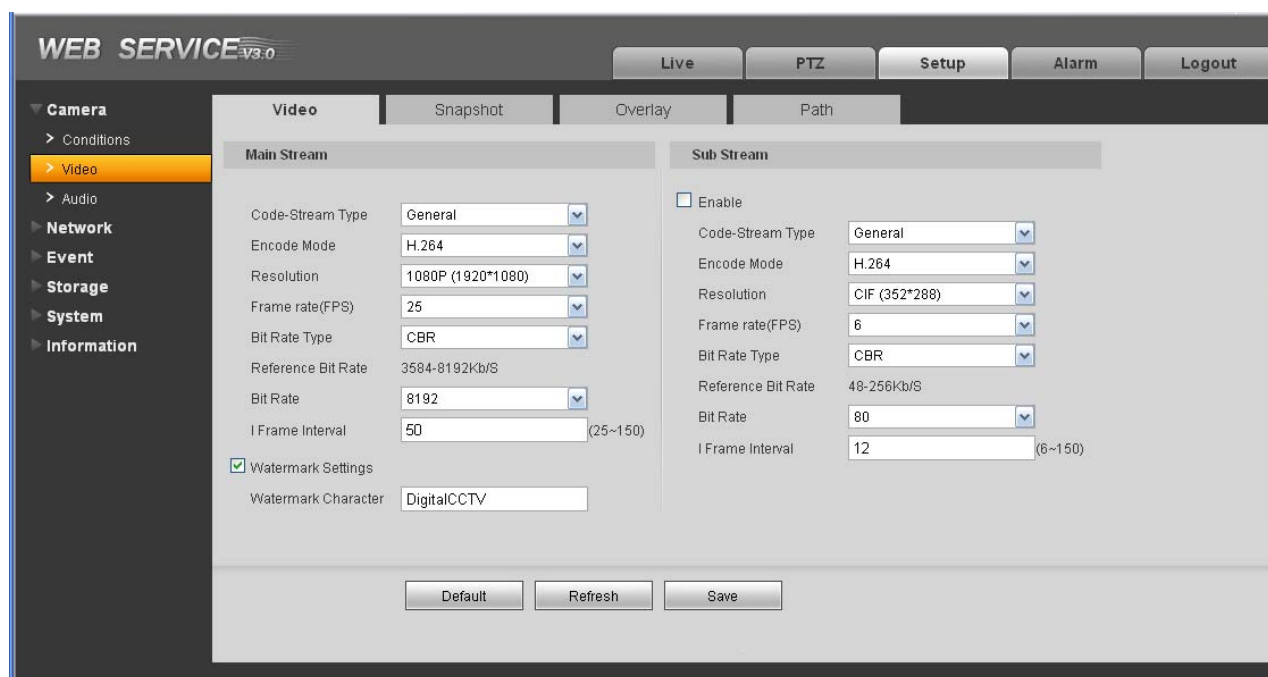The video bit stream interface is shown as below. See Figure 4-2.

Figure 4-2

Please refer to the following sheet for detailed information.

Parameter		Function
Main stream	Bit stream type	It includes general stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events. System supports active control frame function (ACF). It allows you to record in different frame rates. For example, you can use high frame rate to record important events, record scheduled event in lower frame rate and it allows you to set different frame rates for motion detection record and alarm record.
	Encode mode	There are three options: H.264(main profile standard, H.264B(baseline standard）encode and MJPG encode. ● H.264 ：Main Profile encode mode. ● H.264B ：Baseline Profile encode mode ● MJPEG ：In this encode mode, the video needs larger bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.
	Resolution	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different. **Important** You can not set a resolution higher than 720P (not including 720P) when the flip function is in process.
	Frame Rate	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 video quality in VBR mode.
	Reference Bit Stream	Reference bit rate value according to the resolution and frame rate you have set.
	Bit Rate	● In VBR, the bit rate here is the max value. In CBR, it is a fixed value. ● See reference bit stream for recommended value.
	I Frame	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.

Parameter		Function
	Watermark	This function allows you to verify the video is tampered or not. Here you can select watermark bit stream, watermark mode and watermark character. Default character is DigitalCCTV. The max length is 85-digit. The character can only include number, character and underline.
Sub stream	Enable	Please check the box here to enable extra stream function. This function is enabled by default.
	Bit stream type	General bit stream.
	Encode mode	There are three options: H.264(main profile standard, H.264B(baseline standard）encode and MJPG encode. ● The H.264 and H.264B both are H264 bit stream. H.264 is the Main Profile encode and the H.264B is the Baseline Profile encode mode. H.264B is for Blackberry cell phone to realize 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. ● MJPEG: In this encode mode, the video needs to large bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.
	Resolution	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different.
	Frame Rate	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 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 max value. In dynamic video, system needs to low frame rate or video quality to guarantee the value. • The value is null in VBR mode. • Please refer to recommend bit rate for the detailed information.

Parameter		Function
	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.

4.1.2.2 Snapshot

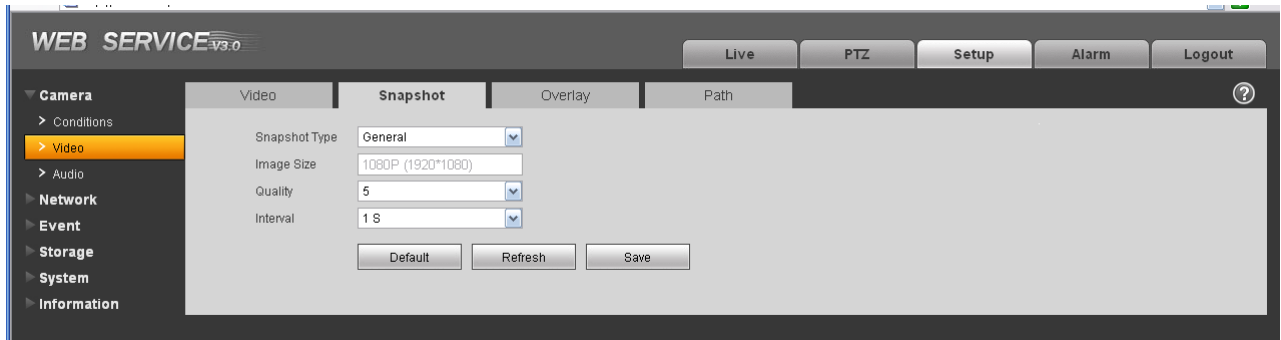The snapshot interface is shown as in Figure 4-3.

Figure 4-3

Please refer to the following sheet for detailed information.

Parameter	Function
Snapshot type	There are two modes: general (schedule) and Event (activation).
Image size	It is the same with the resolution of the main stream.
Quality	It is to set the image quality. There are six levels.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s.

4.1.2.3 Video Overlay
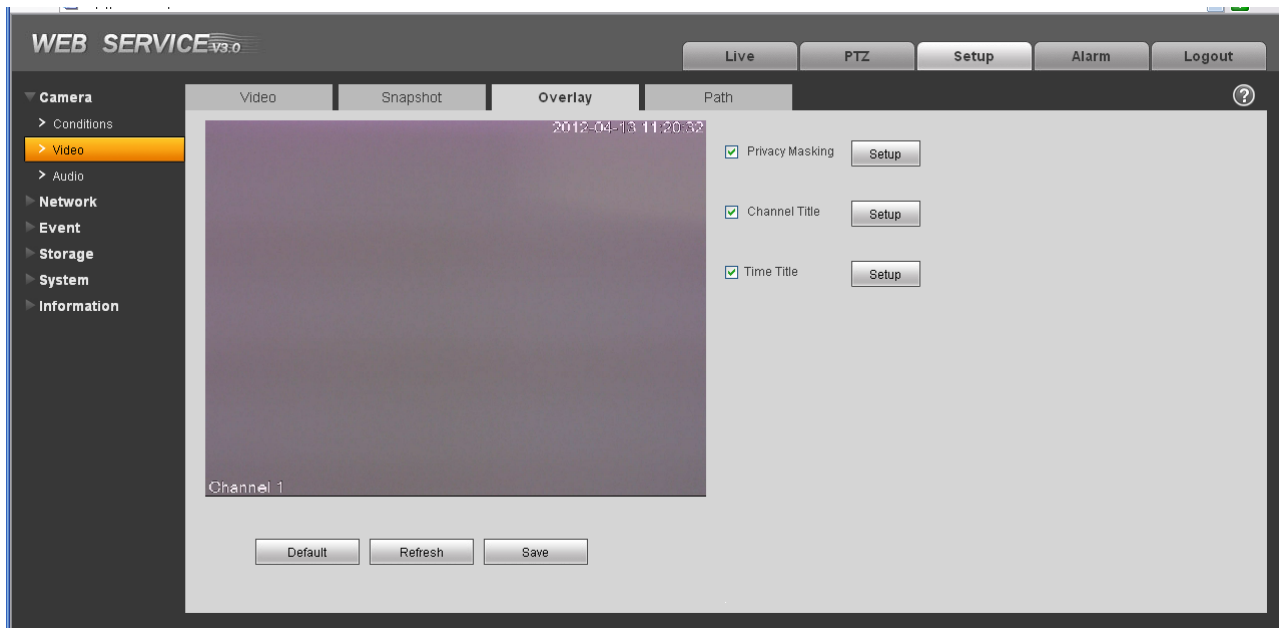
The video overlay interface is shown as in Figure 4-4.

Figure 4-4

Please refer to the following sheet for detailed information.

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

4.1.2.4 Path

The storage path interface is shown as in Figure 4-5.

Here you can set snap image saved path (in the preview interface) and the record storage path

(in the preview interface).The default setup is C:\PictureDownload.

Please click the Save button to save current setup.

Figure 4-5

4.1.3 Audio

Please note IPC-HDB3xxxC series product does not support audio function.

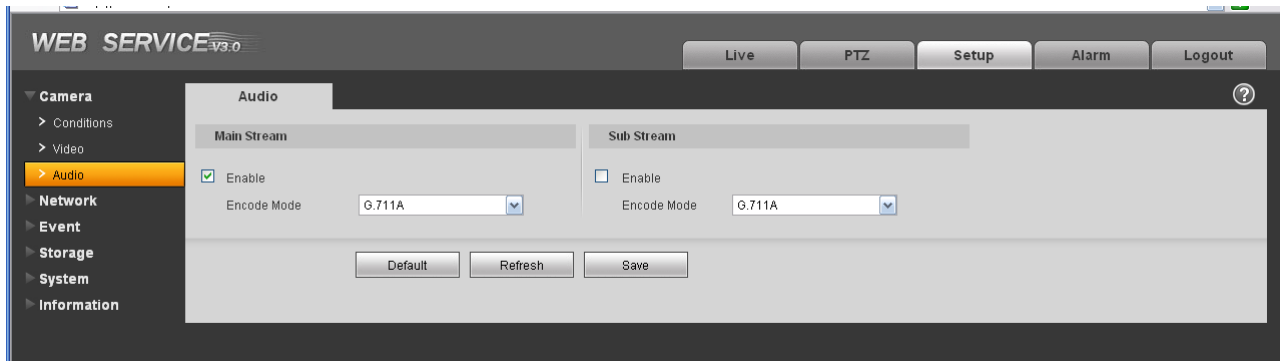The audio interface is shown as below. See Figure 4-6.

Figure 4-6

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. Sub (Extra) stream: Recorded file only contains video by default. You need to check the audio box here to enable audio function.
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.

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4.2 Network

4.2.1 TCP/IP

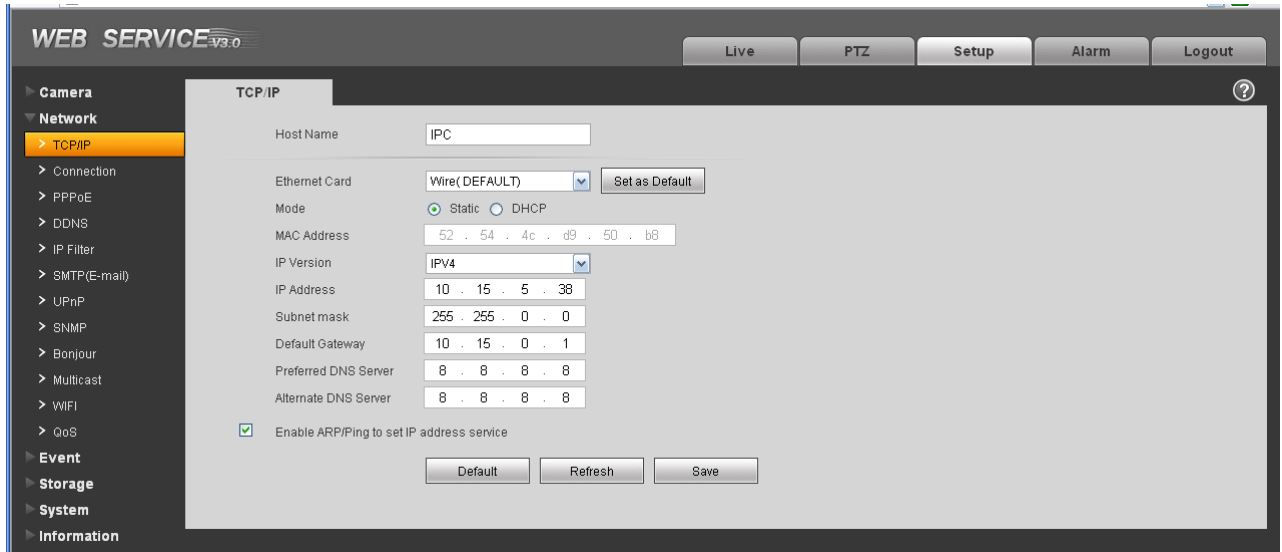The TCP/IP interface is shown as in Figure 4-7.

Figure 4-7

Please refer to the following sheet for detailed information.

Parameter	Function
Host Name	It is to set current host device name. It max supports 32-digit character.
Ethernet Card	Please select the Ethernet port. It is for the wire LAN by default. Please note for the -W series product, it has the wireless network card, and you can modify the default Ethernet port setup. Please note the device needs to reboot to activate the new setup once you modify the default setup.

Mode	There are two modes: static mode and the DHCP mode. ● The IP/submask/gateway are null when you select the DHCP mode to auto search the IP. ● If you select the static mode, you need to set the IP/submask/gateway manually. ● If you select the DHCP mode, you can view the IP/submask/gateway from the DHCP. ● If you switch from the DHCP mode to the static mode, you need to reset the IP parameters. ● Besides, IP/submask/gateway and DHCP are read-only when the PPPoE dial is OK.
Mac Address	It is to display hose Mac address.
IP Version	It is to select IP version. IPV4 or IPV6. You can access the IP address of these two version.
IP Address	Please use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.
Preferred DNS	DNS IP address.
Alternate DNS	Alternate DNS IP address.

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 IPC 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 IPC and the PC in the same LAN.
	Step 2: Get the physical address from the label of the IPC.
	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 addres>. Click the Enter button, you can access now.

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4.2.2 Connection

The connection interface is shown as in Figure 4-8.

Figure 4-8

Please refer to the following sheet for detailed information.

Parameter	Function
Max connection	It is the max Web connection for the same device. The value ranges from 1 to 20. The max connection amount is 20.
TCP port	The default value is 37777. You can input the actual port number if necessary.
UDP port	The default value is 37778. You can input the actual port number if necessary.
HTTP port	The default value is 80. You can input the actual port number if necessary.

RTSP port	The default value is 554. Rtsp stream query format is:
	Main stream: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0
	Sub stream: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=1
	You need to input the following four items manually.
	Username/password/IP and port.
	The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value.
	You do not need to input the user name and password if you do not need to the verification. Such as:
	rtsp://ip:port/cam/realmonitor?channel=1&subtype=0
HTTPs Enable	Usually the default value is 443.

Important

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

4.2.3 PPPoE

The PPPoE interface is shown as in Figure 4-9.

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.

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

Figure 4-9

4.2.4 DDNS

The DDNS interface is shown as in Figure 4-10.

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

Please go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address has changes.
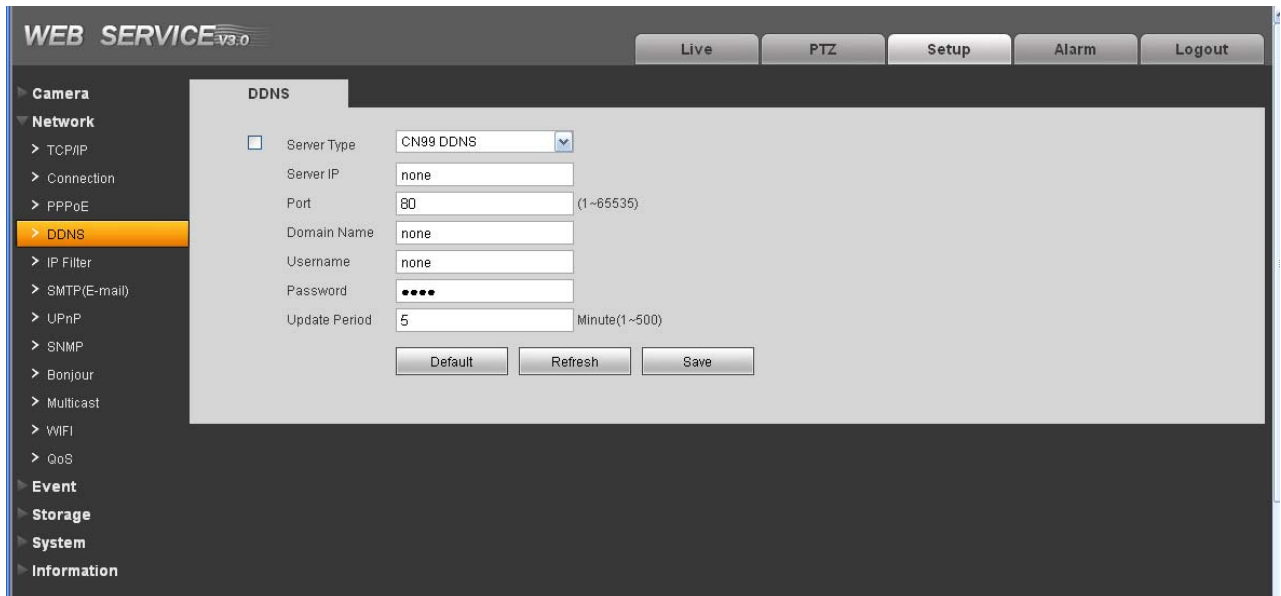

Figure 4-10

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. The private DDNS protocol means you use your self-defined private protocol to realize DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.
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 sends out alive signal to the server regularly. • You can set interval value between the device and DDNS server here.

4.2.5 IP filter

The IP filter interface is shown as in Figure 4-11.

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

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 4-11

4.2.6 SMTP （e-mail）
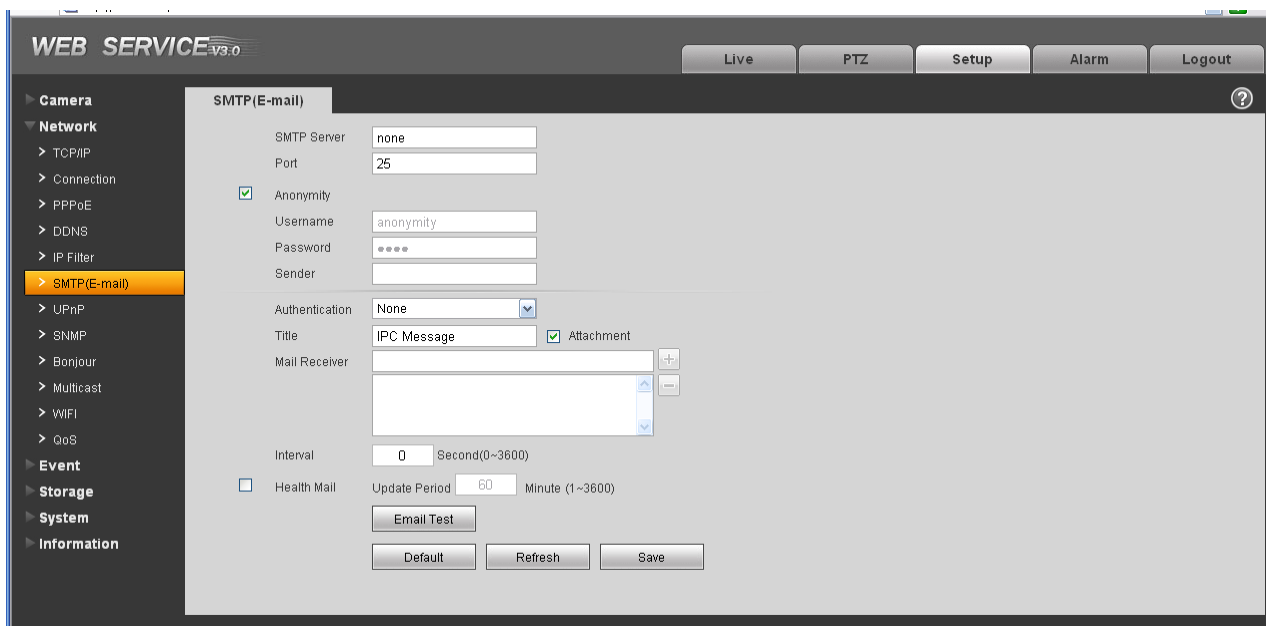
The SMTP interface is shown as in Figure 4-12.

Figure 4-12

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.
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.

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

4.2.7 UPnP

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

Here you can also add, modify or remove UPnP item. See Figure 4-13.

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 IPC can auto detect it via the "My Network Places"
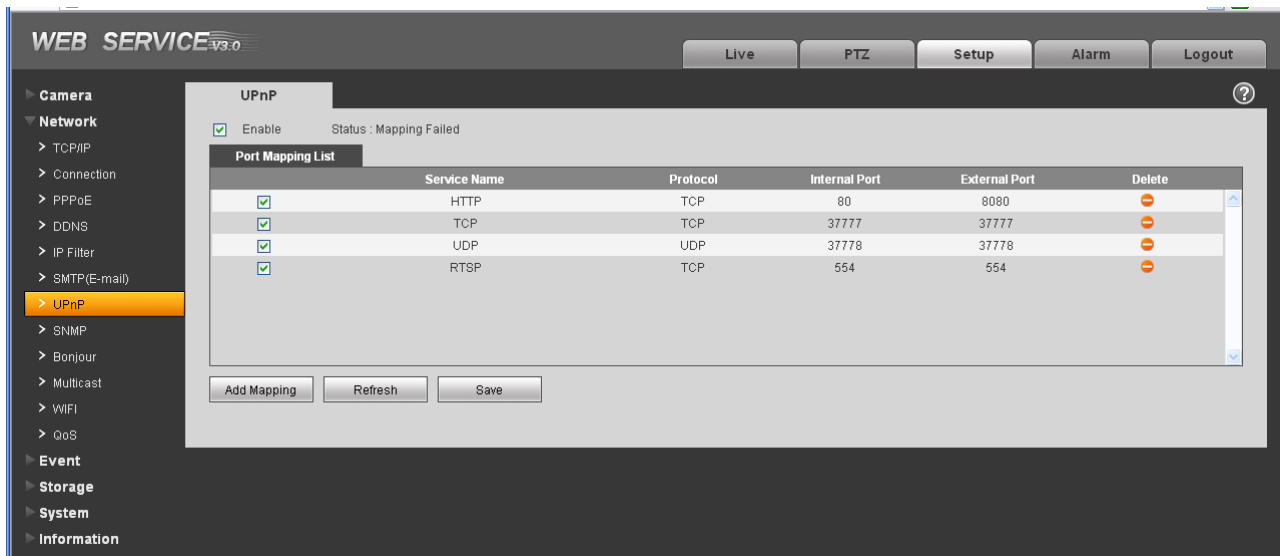
Figure 4-13

4.2.8 SNMP

The SNMP interface is shown as in Figure 4-14.

The SNMP allows the 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 4-14

Please refer to the following sheet for detailed information.

Parameter	Function
SNMP V1	System only processes the information of V1.
SNMP V2	System only processes the information of V2.
SNMP Port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. 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	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. 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 write.
Trap address	The destination address of the Trap information from the proxy program of the device.
Trap port	The destination port of the Trap information from the proxy program of the device. It is for the gateway device and the client-end PC in the LAN to exchange the information. It is a non-protocol connection port. It has no effect on the network applications. It is a UDP port not TCP port. The value ranges from 1 to 165535. The default value is 162.

4.2.9 Bonjour

The Bonjour interface is shown as below. See Figure 4-15.

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

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

You can view the server name when the IPC 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 IPC of the Bonjour function in the LAN.
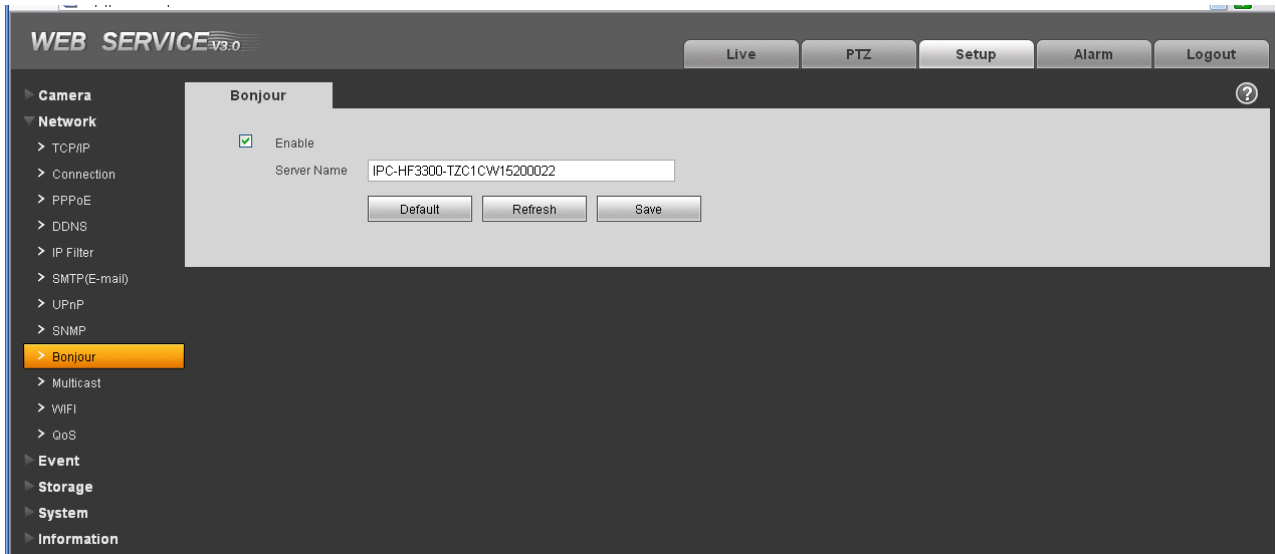
Figure 4-15

4.2.10 Multicast

The multicast interface is shown as in Figure 4-16.

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

Here you can set multicast address and port. You also need to go to Live interface to set the protocol as Multicast.
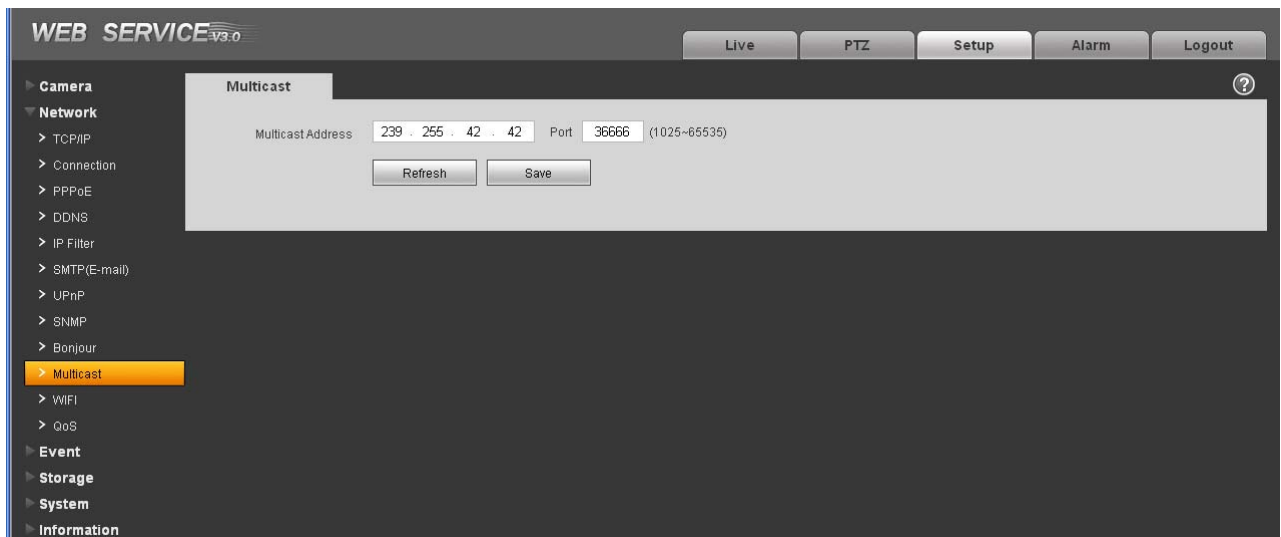
Figure 4-16

4.2.11 WIFI

Please note this function is for the device of WIFI module.

The WIFI interface is shown as in Figure 4-17.
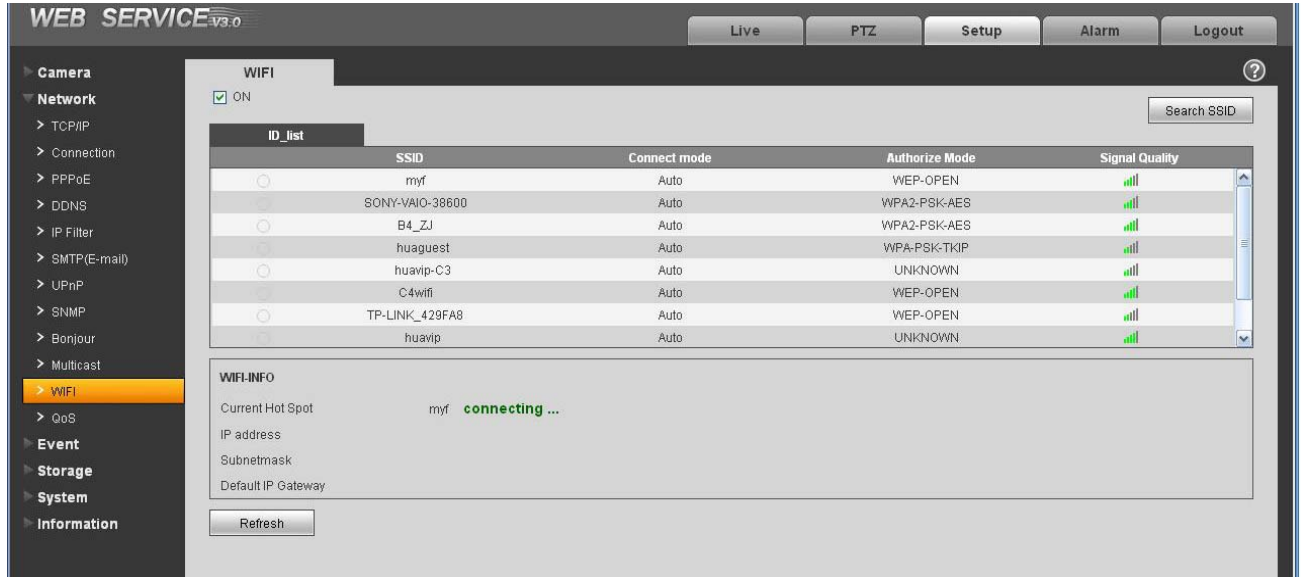
Figure 4-17

Please check the box to enable WIFI function and then click the Search SSID button. Now you can view all the wireless network information in the following list. Double click a name to connect to it. See Figure 4-18.
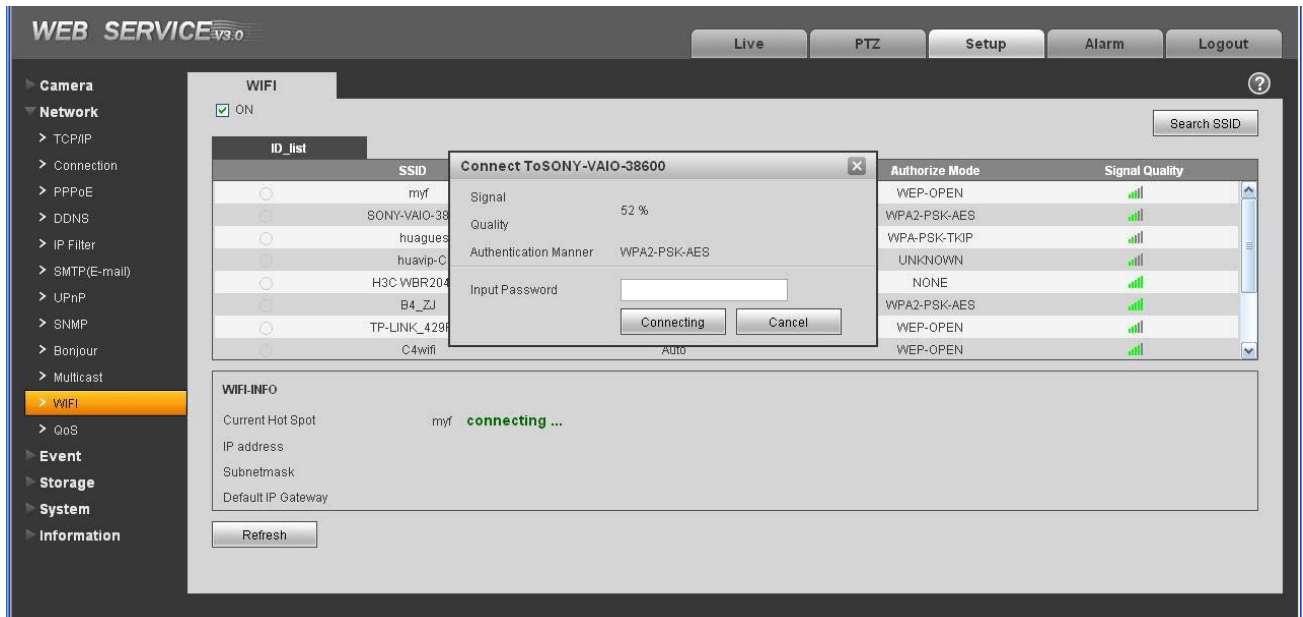
Figure 4-18

4.2.12 Qos

The QoS interface is shown as below. See Figure 4-19.

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

We can set the DSCP (Differentiated Services Code Point) of the IP to distinguish the data packet so that the router or the hub can provide different services for various data packets. It can select the different queues according to the priority of the packets and select the bandwidth of the each queue. It can also discard at the different ratio when the broad bandwidth is jam.

Figure 4-19

Please refer to the following sheet for detailed information.

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

4.3 Event

4.3.1 Video detect

4.3.1.1 Motion Detect

The motion detect interface is shown as in Figure 4-20.
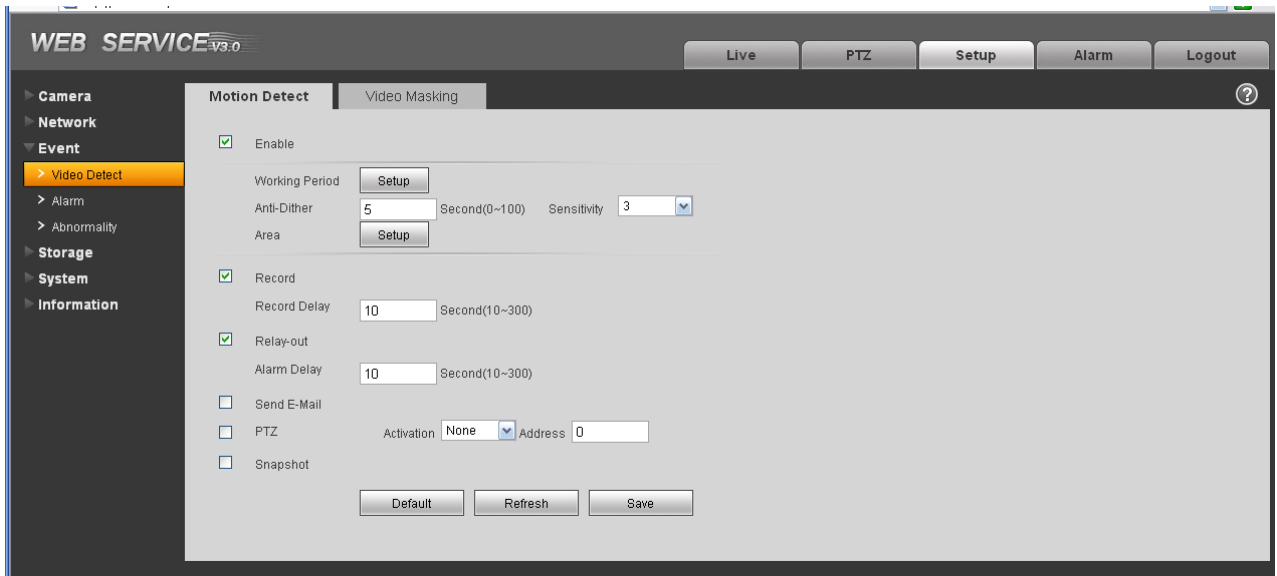
Figure 4-20
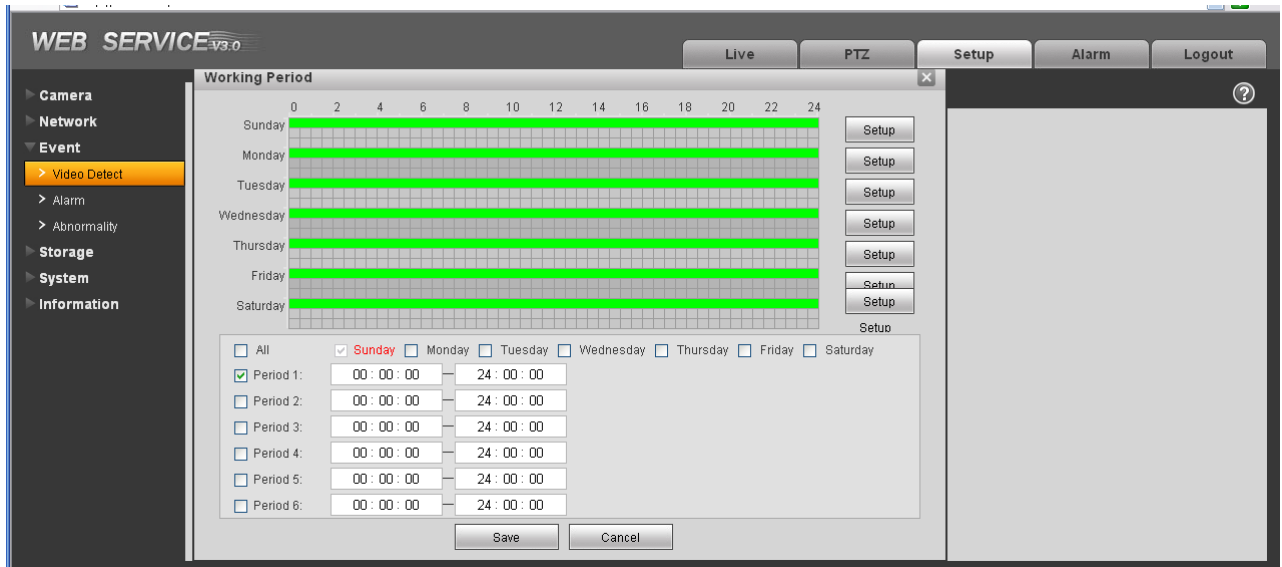
Figure 4-21
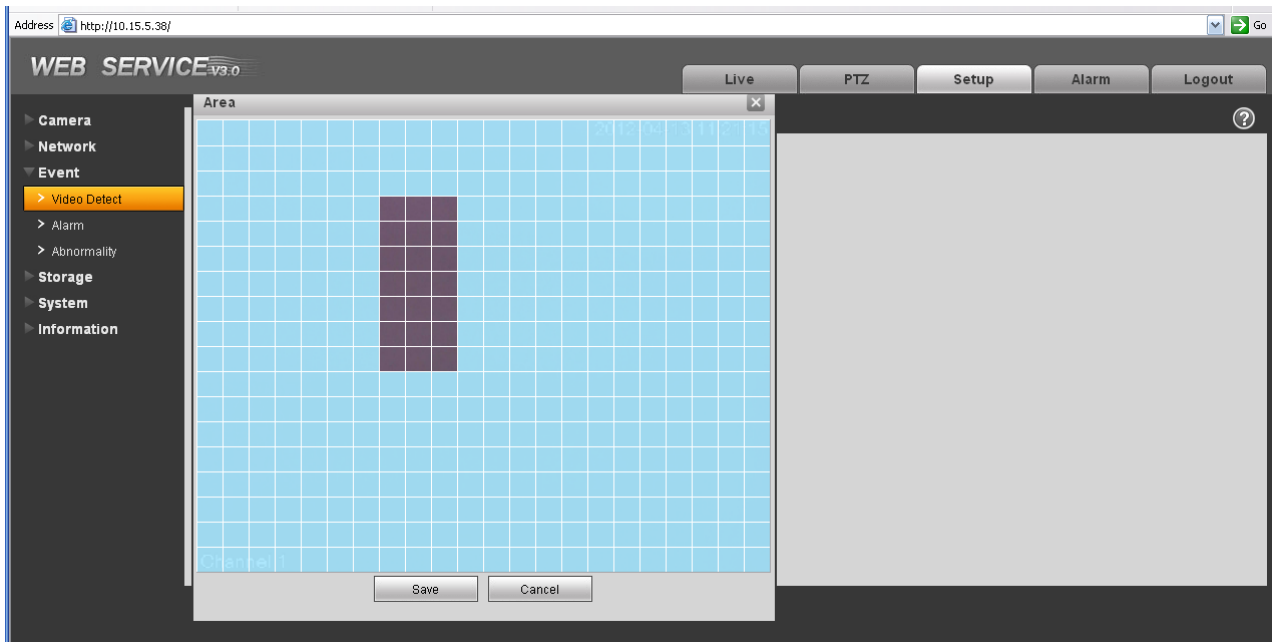
Figure 4-22

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable motion detection function.
Sensitivity	There are six levels. The sixth level has the highest sensitivity.
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 motion detection zone. The interface is shown as in Figure 4-22. There are PAL 22X18/NTSC 22X15 zones. Right click mouse you can go to full-screen display mode. 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 4-21. • 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.

Parameter	Function
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
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 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 PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. • The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup motion detection snapshot file.

4.3.1.2 Video Masking

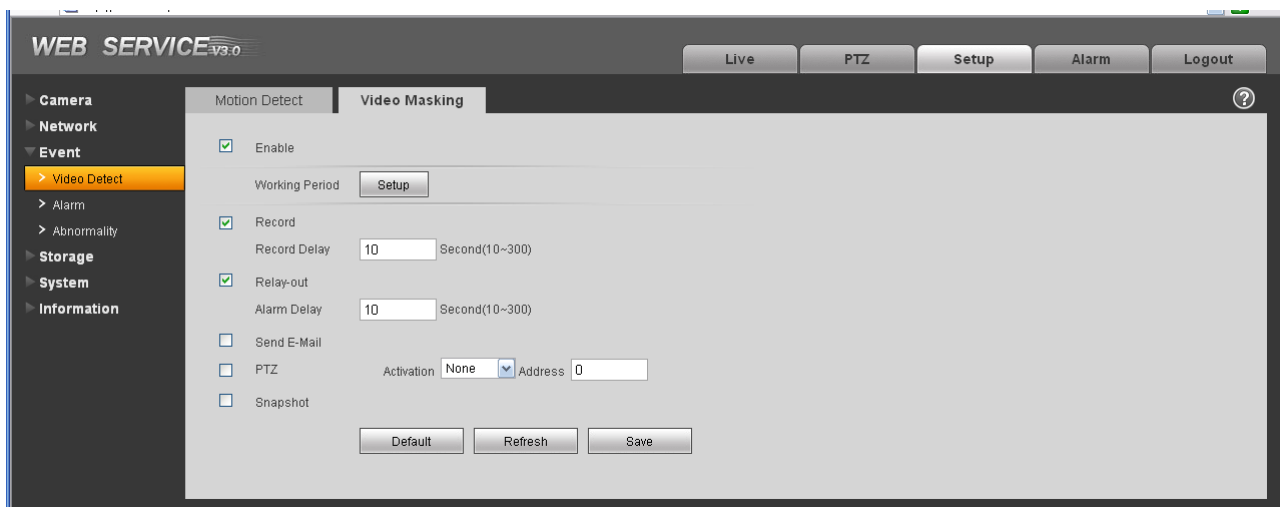The video masking interface is shown as in Figure 4-23.
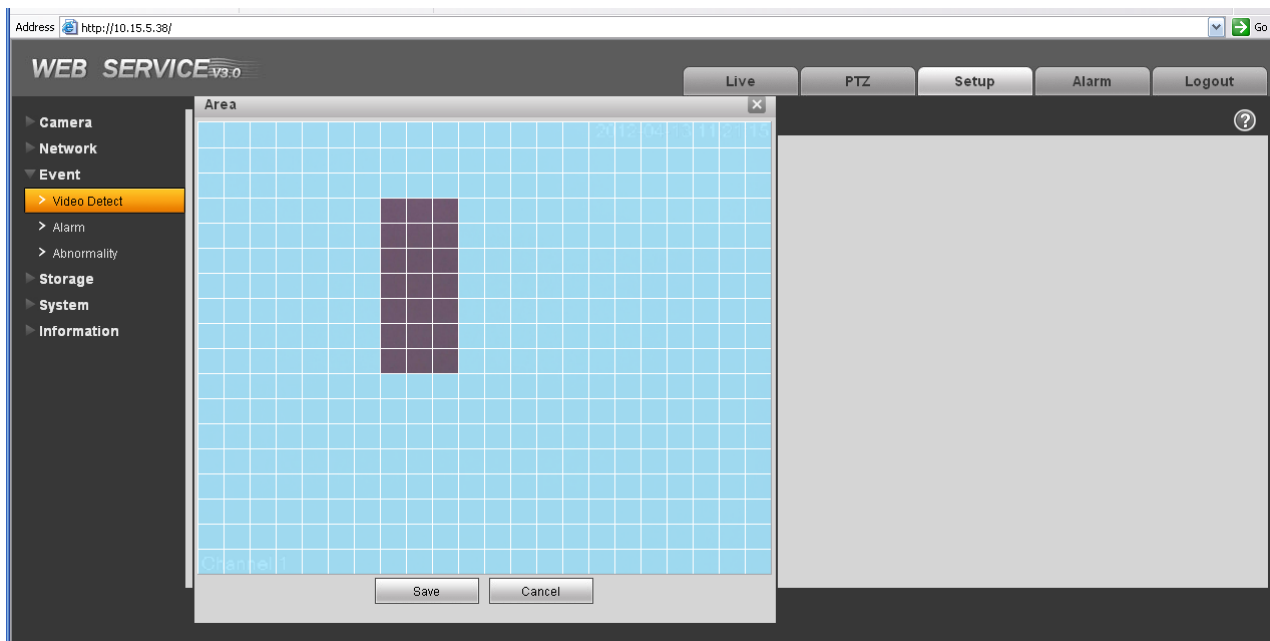

Figure 4-23

Figure 4-24

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Sensitivity	There are six levels. The sixth level has the highest sensitivity.
Area	• There are six levels. The sixth level has the highest sensitivity. • Region: you can click this button to set Video masking zone. The interface is shown as in Figure 4-24. There are PAL 22X18/NTSC 22X15 zones. Right click mouse you can go to full-screen display mode. Do remember clicking OK button to save your Video masking zone setup.
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 memorizes one event during the anti-dither period. The value ranges from 0s to 100s.

Parameter	Function
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
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 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.
Email	If you enabled this function, System can send out email to alert you when alarm occurs.
PTZ	● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. ● The event type includes: preset, tour and pattern.
Capture	You need to input capture channel number so that system can backup motion detection snapshot file.

4.3.2 Alarm
Please note IPC-HDB3xxxC series product does not support this function.

4.3.2.1 Alarm activation
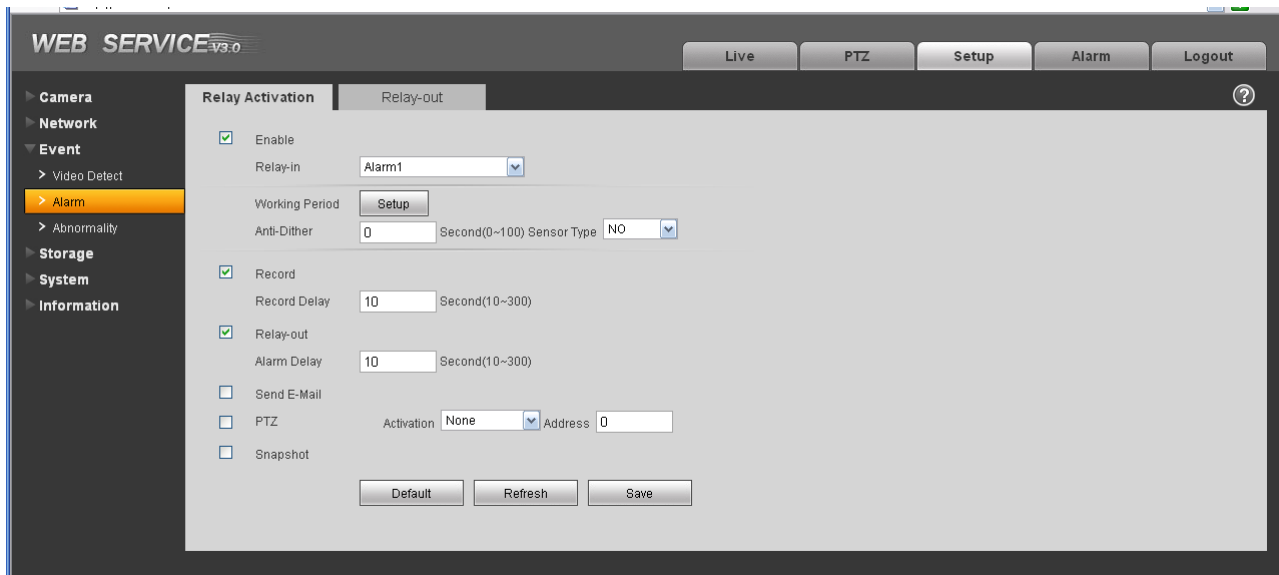
The alarm activation interface is shown as in Figure 4-25.

Figure 4-25

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 memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Sensor type	There are two options: NO/NC.
Relay out	• There is 1-channel alarm output. • Corresponding to motion detection alarm output port. • Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
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 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 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.

4.3.2.2 Relay output
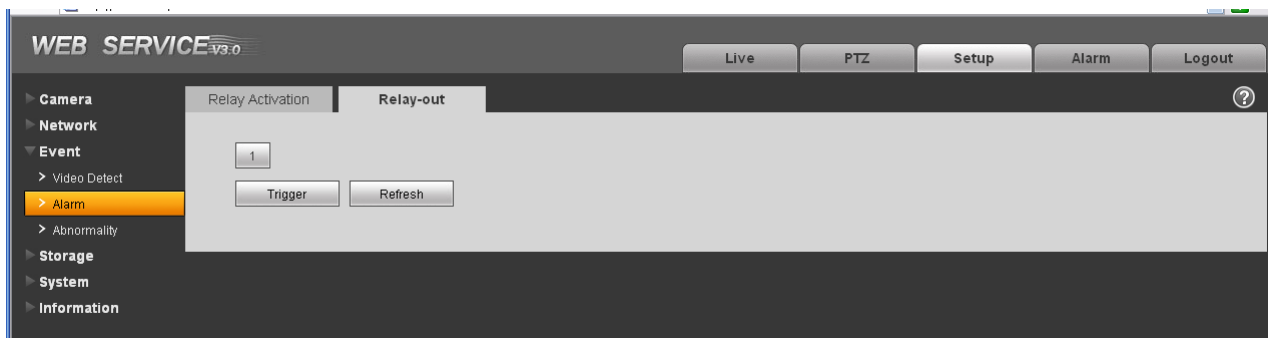The relay output interface is shown as in Figure 4-26.

Figure 4-26

Please refer to the following sheet for detailed information.

Parameter	Function
Alarm output	There is only one output channel. Please click the button 1. If you want to enable the alarm activation output function, please press the corresponding button and then trigger.
Refresh	Search alarm output status.

4.3.3 Abnormity

It includes five statuses: No SD card, capacity warning, SD card error, and disconnection and IP conflict.

There are two interfaces for you reference. See Figure 4-27 through Figure 4-31.

Figure 4-27
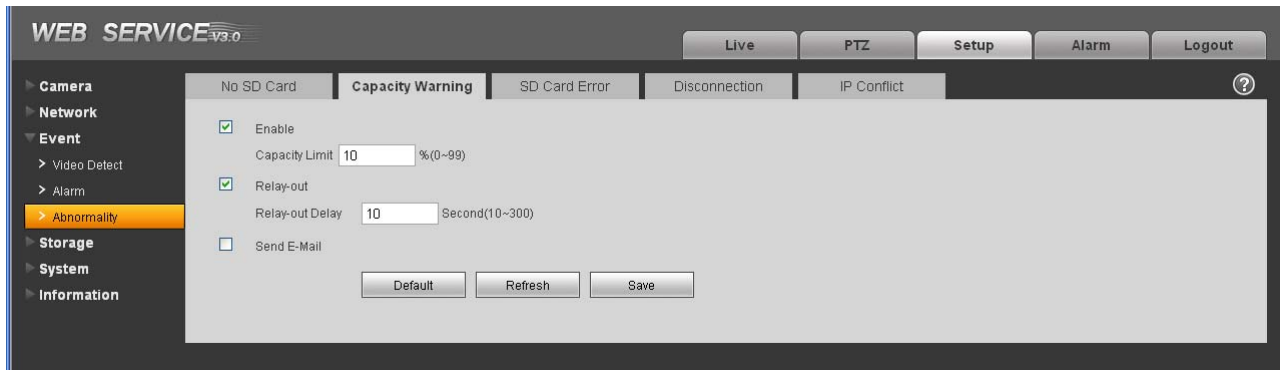
Figure 4-28
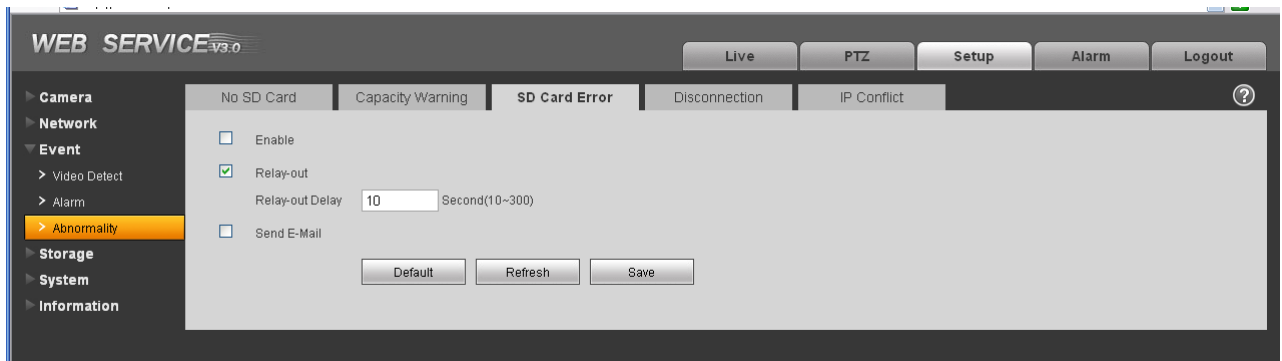
Figure 4-29

Figure 4-30

Figure 4-31

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	• The abnormal events include: no disk, no space, disk error, net error, offline, IP conflict. • Threshold: You can set the minimum percentage value here. The device can alarm when capacity is not sufficient. • You need to draw a circle to enable this function.
Record	System auto activates channel to record once alarm occurs (For offline type only. See Figure 4-31.). 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.
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. This function is invalid when network is offline or IP conflict occurs.

4.4 Storage

4.4.1 Record schedule and snapshot schedule

In these two interfaces, you can add or remove the schedule record/snapshot setup. See Figure 4-32. 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.

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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..
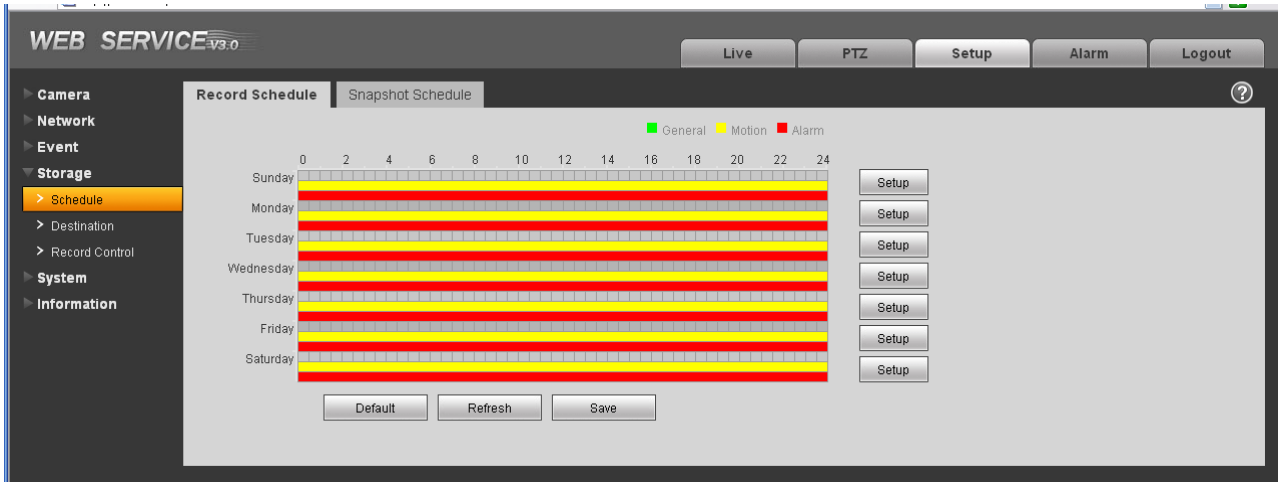● Red color stands for the alarm record/snapshot.

Figure 4-32

4.4.2 Destination

The destination interface is shown as in Figure 4-33.

It is to set the storage mode of the IPC record file or snapshot pictures. There are two options: local/FTP. You can only select one mode. System can save according to the event types. It is corresponding to the three modes (general/motion/alarm)in the Schedule interface. Please check the box to enable the save functions.
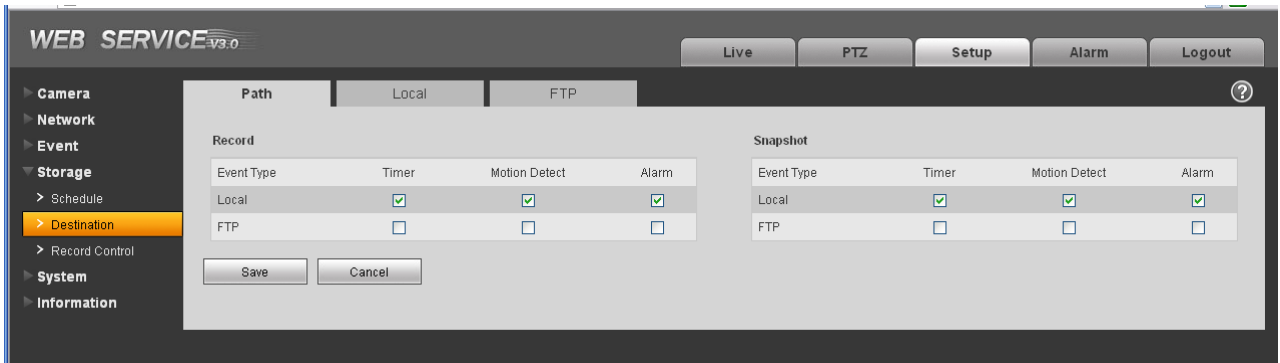
Figure 4-33

Please refer to the following sheet for detailed information.

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

The local interface is shown as in Figure 4-34. Here you can view local SD card or disk information. You can also operate the read-only, write-only, hot swap and format operation.
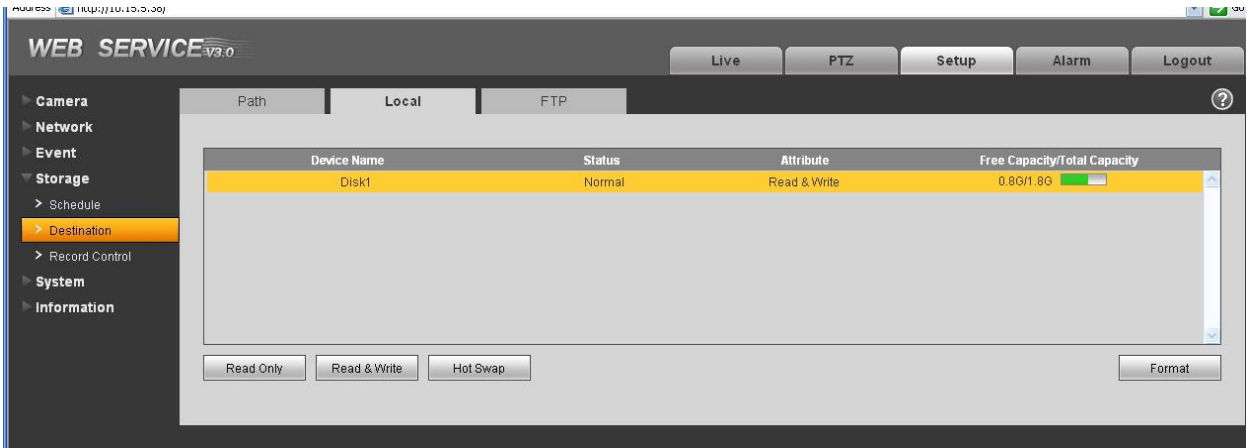

Figure 4-34

The FTP interface is shown as in Figure 4-35. 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 4-35

4.4.3 Record control
The record control interface is shown as in Figure 4-36.
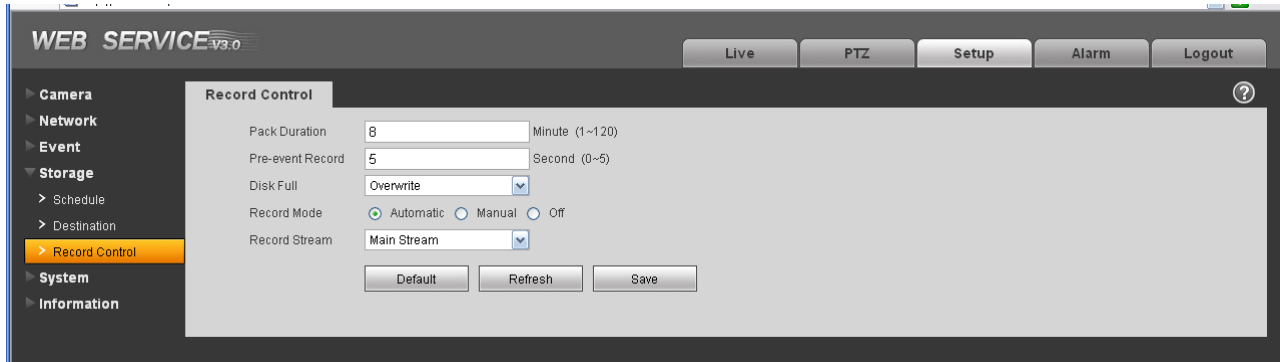
Figure 4-36

Please refer to the following sheet for detailed information.

Parameter	Function
Pack Duration	Here you can select file size. Default setup is 8 minutes.
Pre-record	Please input pre-record value here. For example, system can record the four seconds video in the buffer. The record begins from the fifth second.
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 stream	There are two options: main stream and sub stream.

4.5 System

4.5.1 General
The general interface includes the local host setup and the date/time setup.

4.5.1.1 Local host

The local host interface is shown as in Figure 4-37.

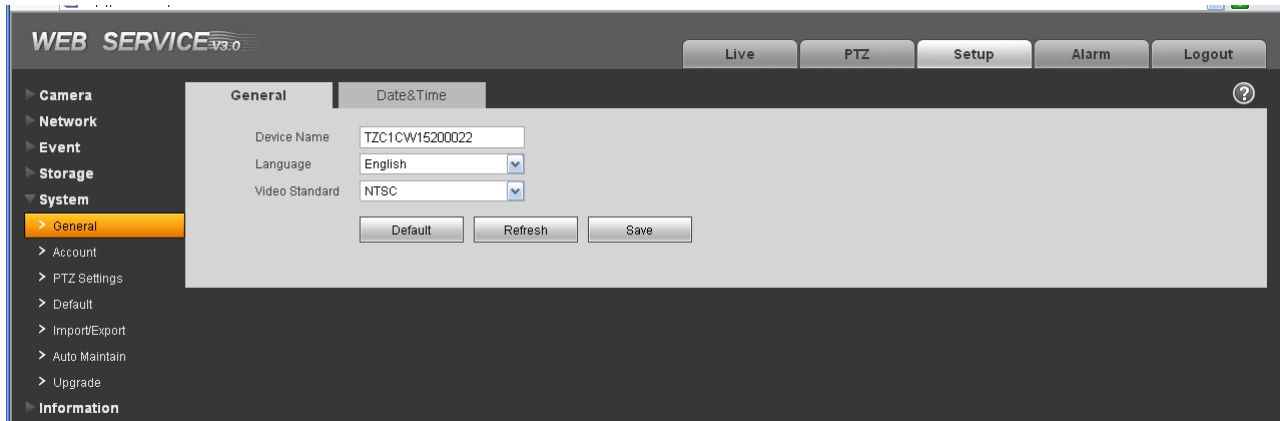Figure 4-37

Please refer to the following sheet for detailed information.

Parameter	Function
Device No	It is to set device name.
Video Standard	This is to display video standard such as PAL.
Language	You can select the language from the dropdown list. **Please note the device needs to reboot to get the modification activated.**

4.5.1.2 Date and time
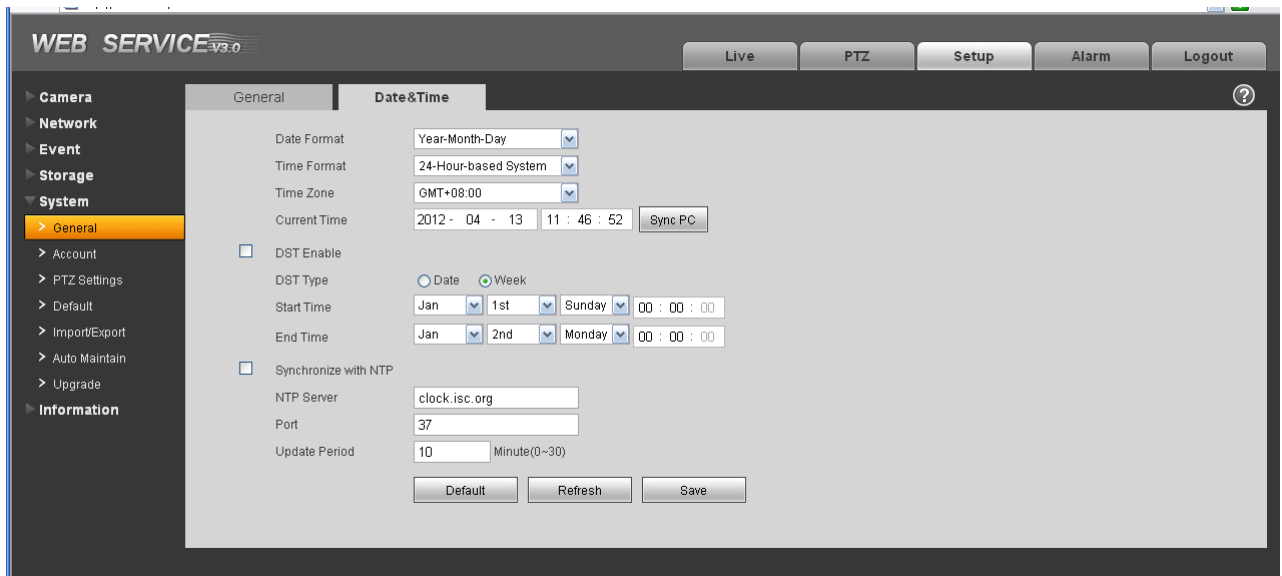
The date and time interface is shown as in Figure 4-38

Figure 4-38

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	It is to set 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 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	It is to set the time server port.
Update period	It is to set the sync periods between the device and the time server.

4.5.2 Account

Note:
- For the character in the following user name or the user group name, system max supports 6-digits. The space in the front or at the end of the string is null. The valid string includes: character, number, and underline.
- The user amount is 20 and the group amount is 8 when the device is shipped out of the factory. The factory default setup includes two levels: user and admin. You can set the corresponding group and then set the rights for the respective user in the specified groups.
- User management adopts group/user modes. The user name and the group name shall be unique. One user shall be included in only one group.

4.5.2.1 User name

In this interface you can add/remove user and modify user name. See Figure 4-39.
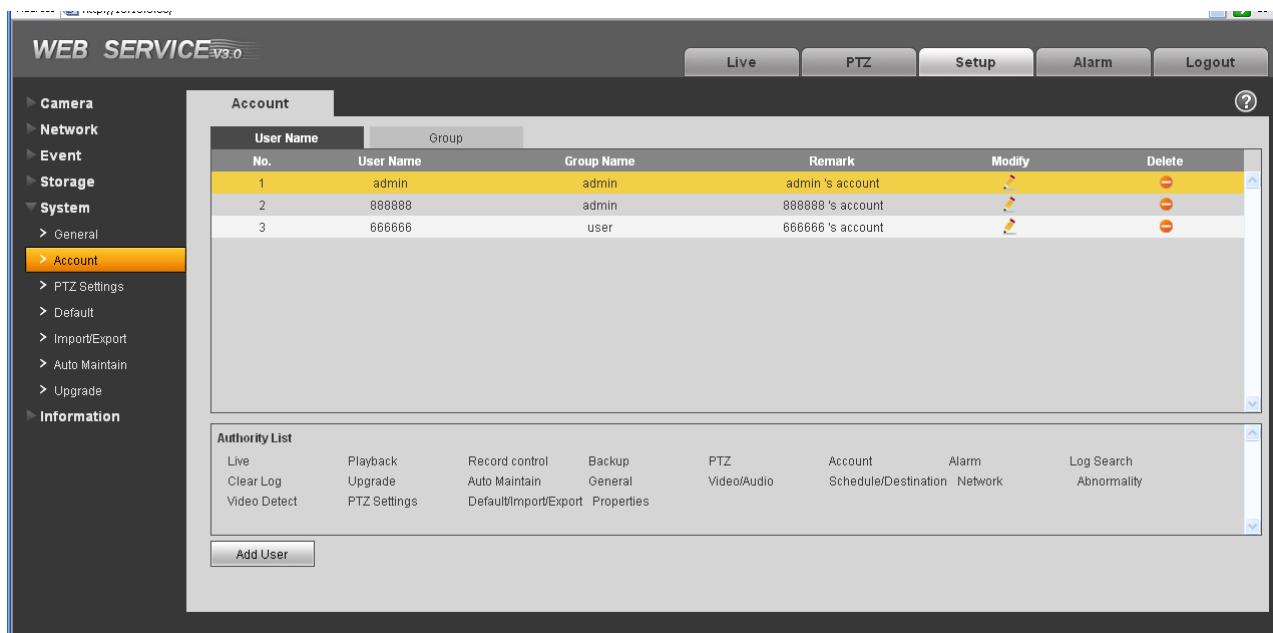
Figure 4-39

Add user: It is to add a name to group and set the user rights. See Figure 4-40.

There are four default users: admin/888888/666666 and hidden user "default". Except user 6666, other users have administrator right. The user 666666 can only have the monitor rights,.

Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

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

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

For convenient setup, please make sure the general user has the lower rights setup than the admin.
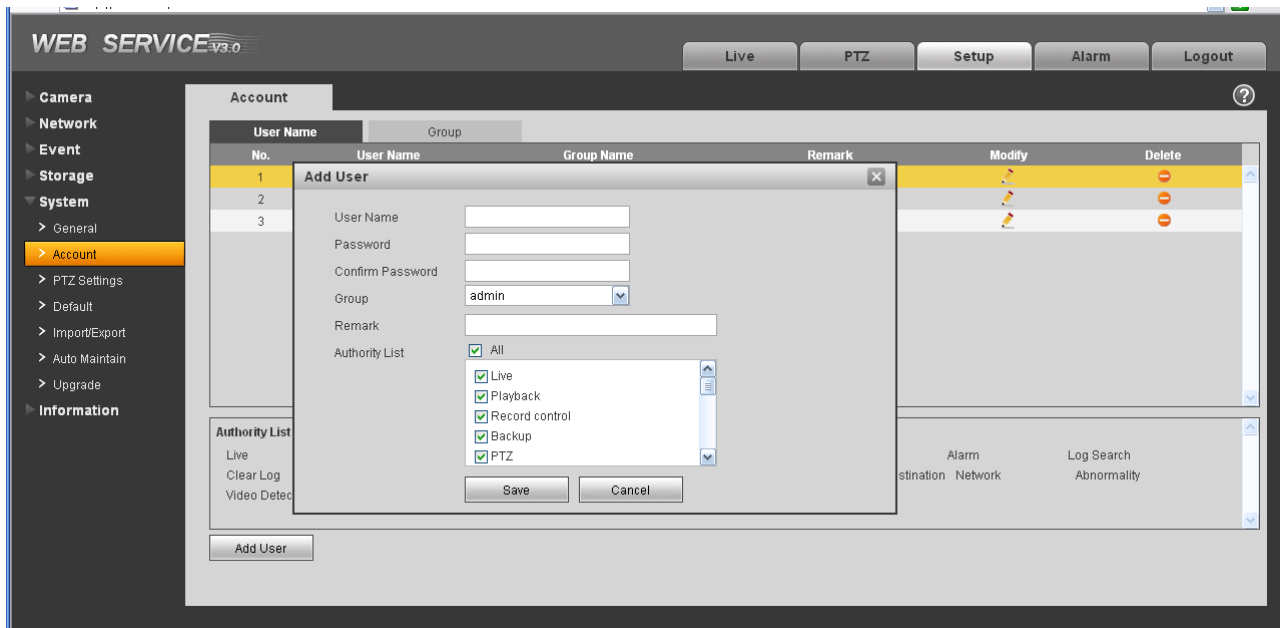
Figure 4-40

Modify user

It is to modify the user property, belonging group, password and rights. See Figure 4-41.

Modify password

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

Please note, the password ranges from 1-digit to 6-digit. It shall include the number only. For the user of the account rights, he can modify the password of other users.
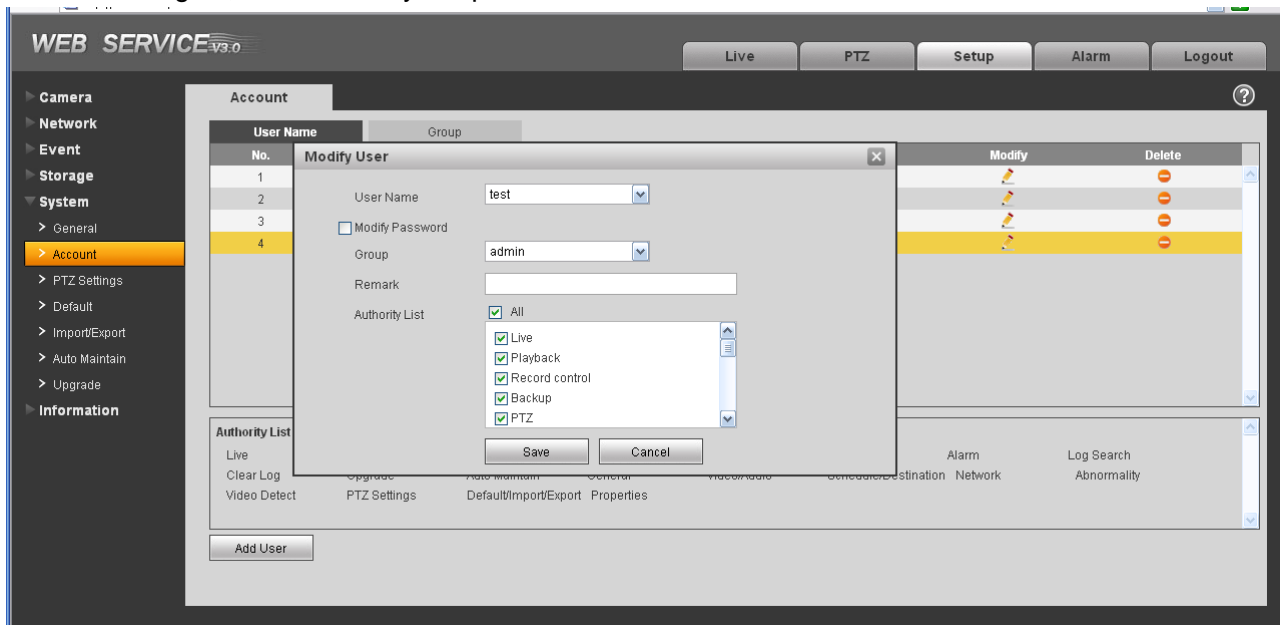
Figure 4-41

4.5.2.2 Group

The group management interface can add/remove group, modify group password and etc.
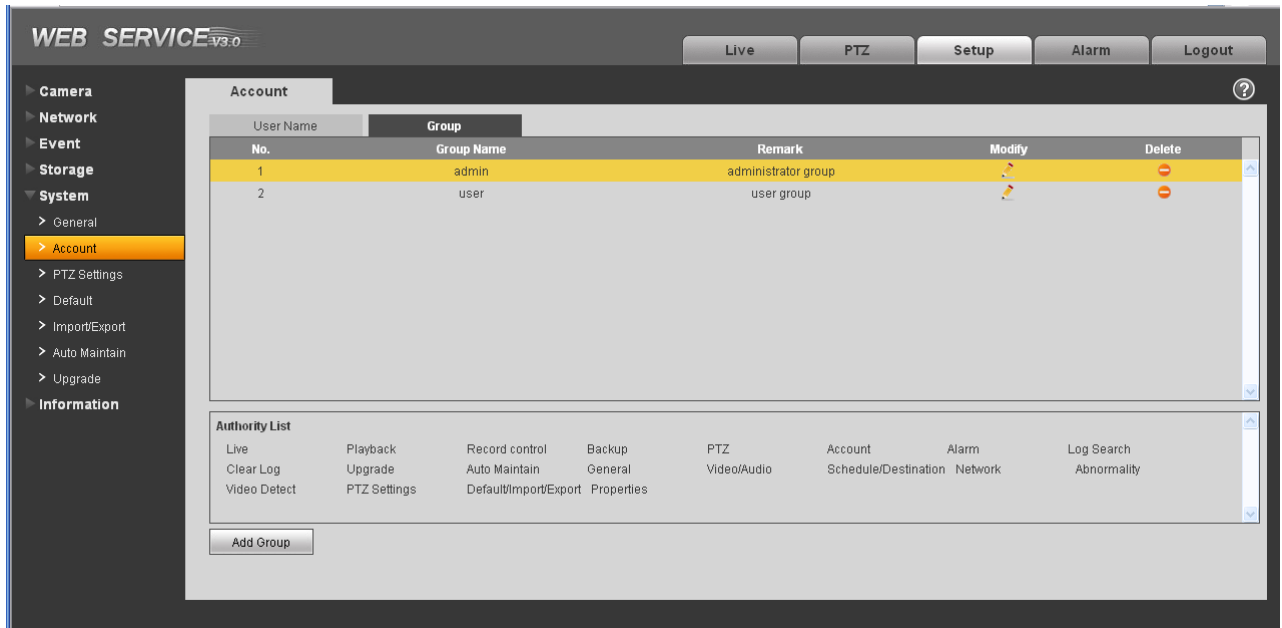
The interface is shown as in Figure 4-42.

Figure 4-42

Add group: It is to add group and set its corresponding rights. See Figure 4-44.

Please input the group name and then check the box to select the corresponding rights. It includes: shutdown/reboot device, live view, record control, PTZ control and etc.
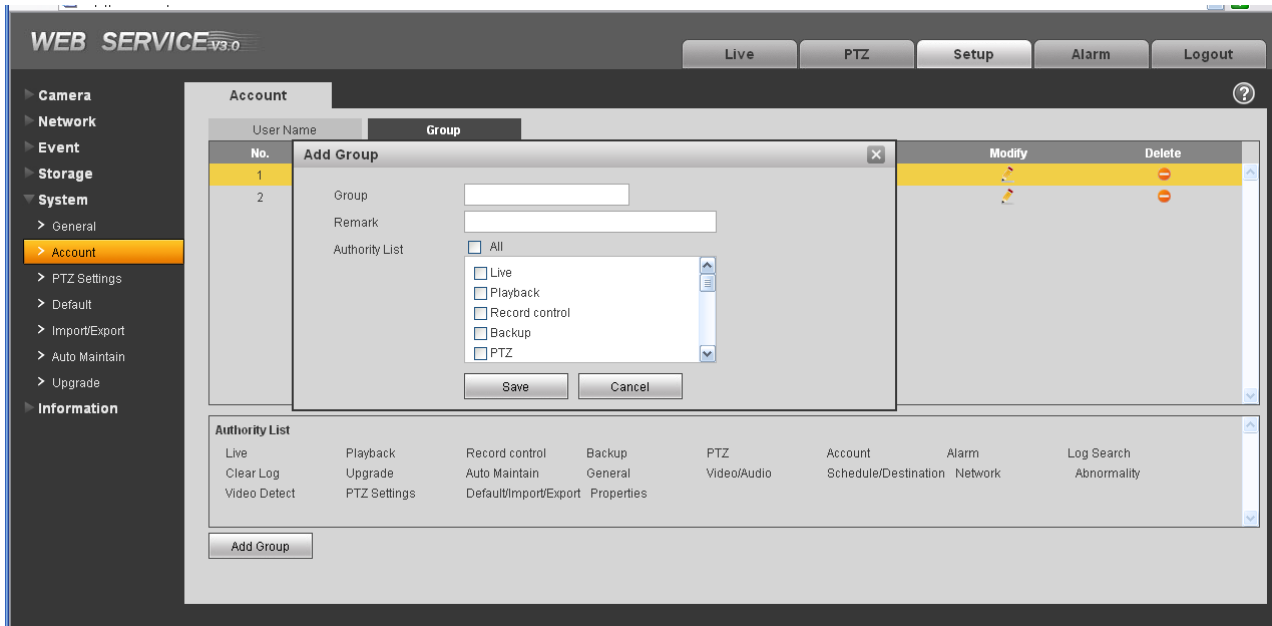
Figure 4-43

Modify group

Click the modify group button, you can see an interface is shown as in Figure 4-44.

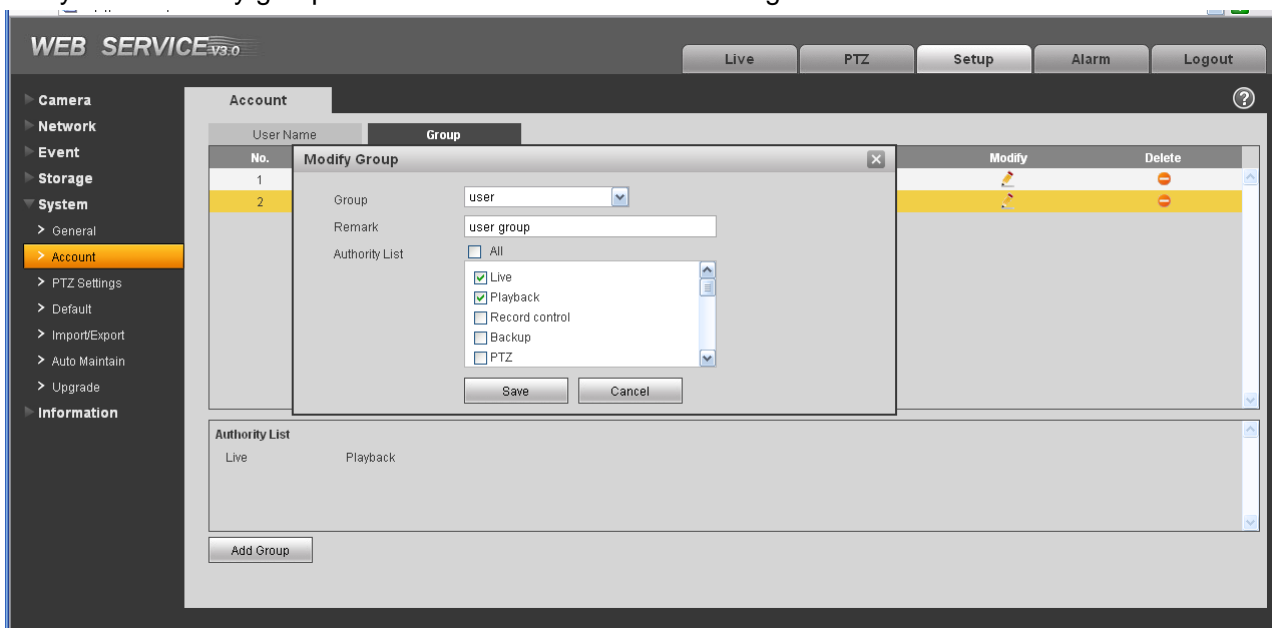Here you can modify group information such as remarks and rights.

Figure 4-44

4.5.3 PTZ

Please note only IPC-HFxxxx series product support this function.

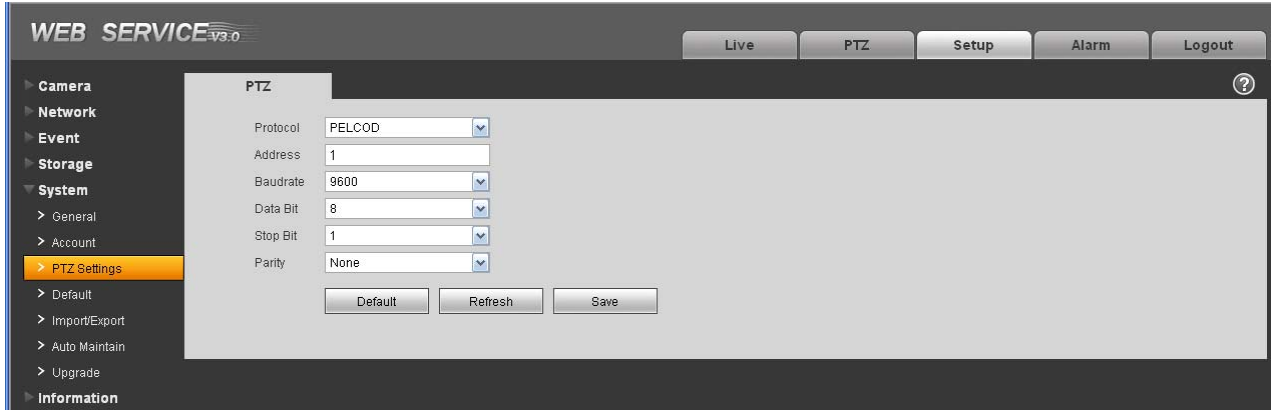The PTZ interface is shown as in Figure 4-45.

Figure 4-45

Please refer to the following sheet for detailed information.

Parameter	Function
Protocol	Select the corresponding dome protocol.
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you can not control the speed dome.
Baud Rate	Select the dome baud rate. Default setup is 9600.
Data Bit	Default setup is 8. Please set according to the speed dome dial switch setup.
Stop bit	Default setup is 1. Please set according to the speed dome dial switch setup.
Parity	Default setup is none. Please set according to the speed dome dial switch setup.

4.5.4 Default

The default setup interface is shown as in Figure 4-46.

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

Figure 4-46

4.5.5 Import/Export

The interface is shown as in Figure 4-47.

Figure 4-47

Please refer to the following sheet for detailed information.

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

4.5.6 Auto maintenance

The auto maintenance interface is shown as in Figure 4-48.

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

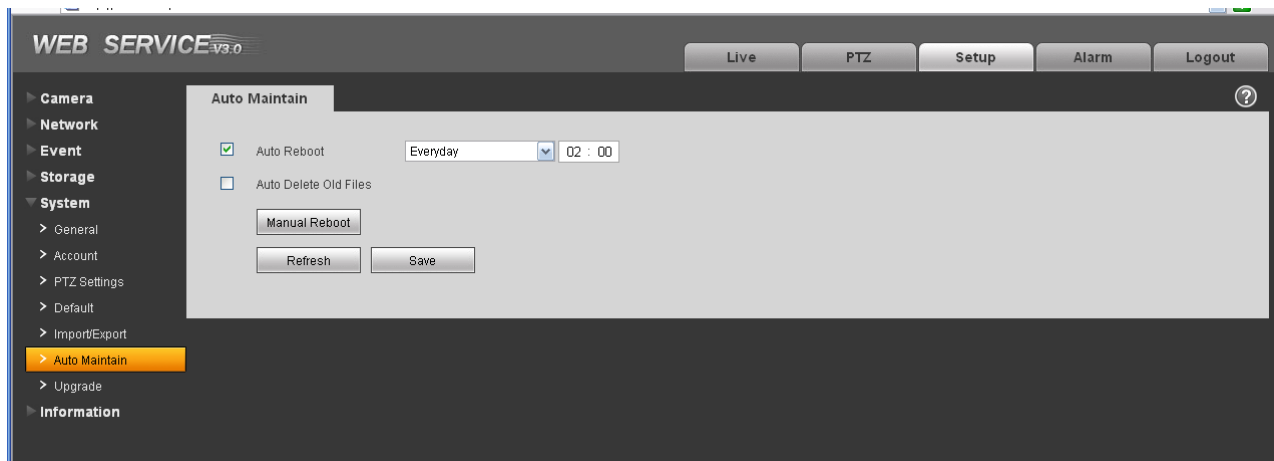If you want to use the auto delete old files function, you need to set the file period.

Figure 4-48

4.5.7 Upgrade

The upgrade interface is shown as in Figure 4-49.

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

Important

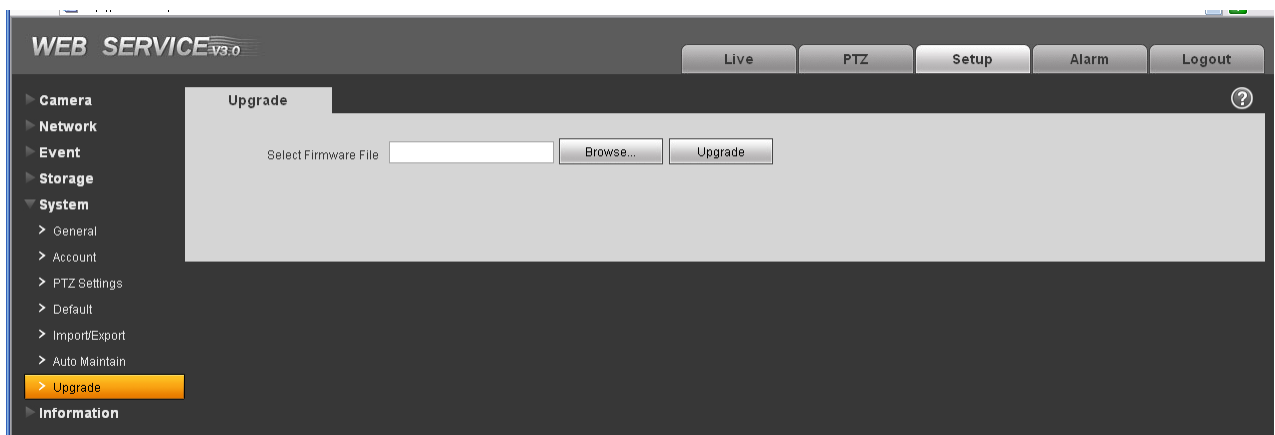**Improper upgrade program may result in device malfunction!**

Figure 4-49

4.6 Information

4.6.1 Version

The version interface is shown as in Figure 4-50.

Here you can view system hardware features, software version, release date and etc. Please note the following information is for reference only.
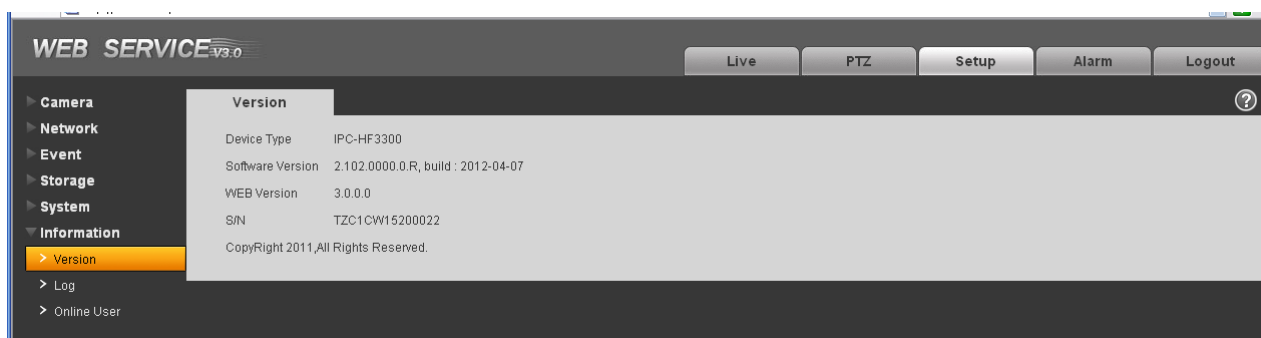
Figure 4-50

4.6.2 Log
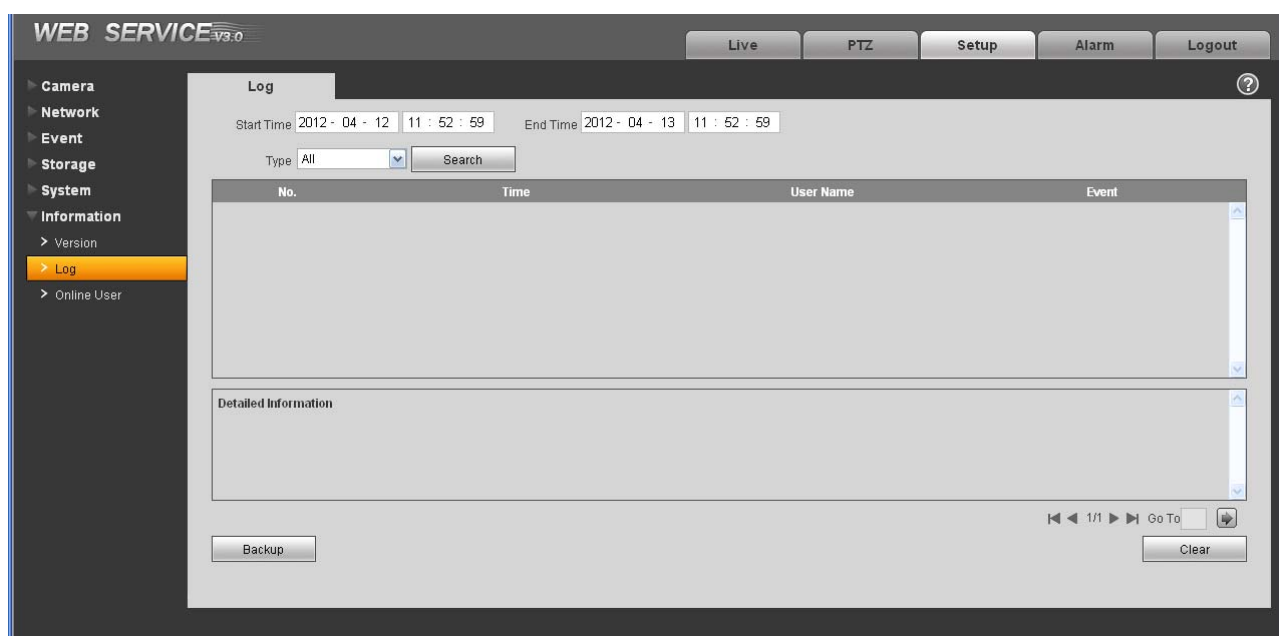
Here you can view system log. See Figure 4-51.

Figure 4-51

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, user management, log clear.
Start time	Set the start time of the requested log.

Parameter	Function
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. Please note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

4.6.3 Online User

The online user interface is shown as in Figure 4-52.

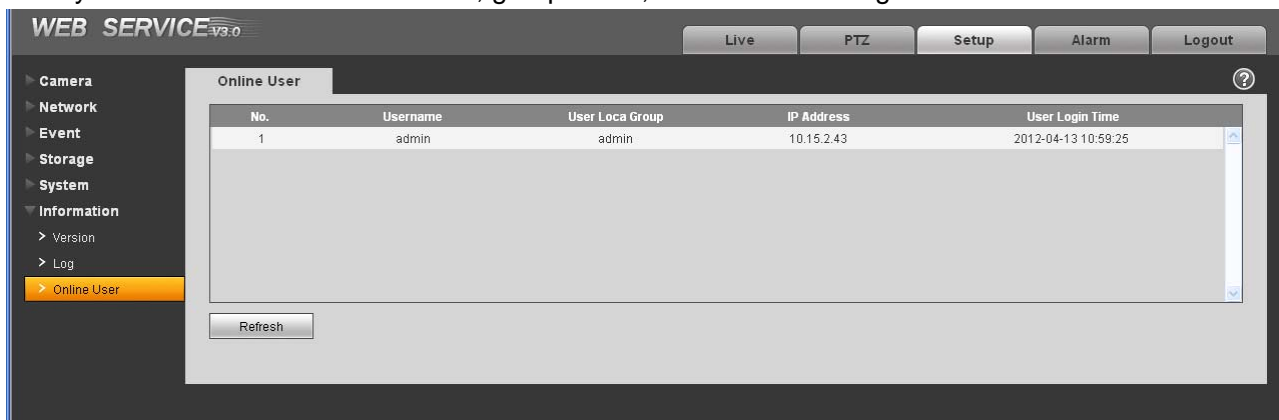Here you can view current online user, group name, IP address and login time.

Figure 4-52

5 Alarm

Please note IPC-HDB3xxxC series product does not support this function.

Click alarm function, you can see an interface is shown as in Figure 5-1.

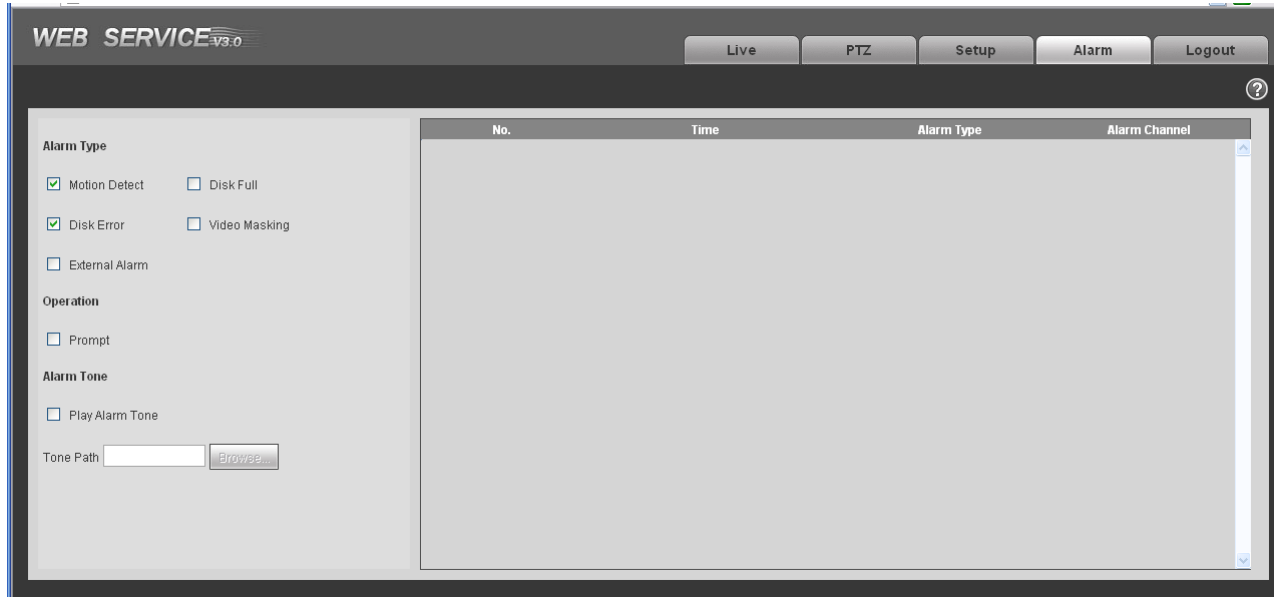Here you can set device alarm type and alarm sound setup.

Figure 5-1 Alarm

Please refer to the following sheet for detailed information.

Type	Parameter	Function
Alarm type	Motion detection	System alarms when motion detection alarm occurs,
	Disk full	System alarms when disk is full.
	HDD malfunction	System generates an alarm when HDD is malfunction.
	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.

6 Log out

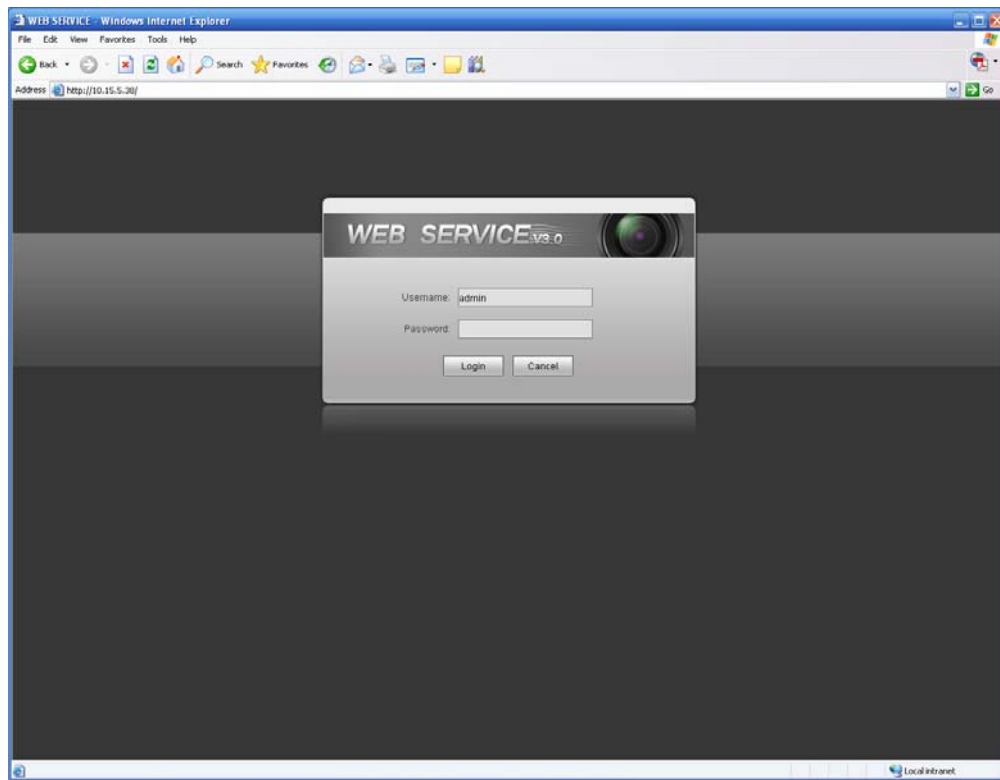Click log out button, system goes back to log in interface. See Figure 6-1.

Figure 6-1 Logout

Note:

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