

**HD IR Waterproof Fixed Network Camera**  
**(With Integrated Bracket)**  
**User's Manual**

## **Welcome**

Thank you for purchasing our network camera!

This user's manual is designed to be a reference tool for your system.

Please read the following safeguard and warnings carefully before you use this series product!

Please keep this user's manual well for future reference!

# Important Safeguards and Warnings

## 1 . Electrical safety

All installation and operation here should conform to your local electrical safety codes.

The power shall conform to the requirement in the SELV (Safety Extra Low Voltage) and the Limited power source is rated 12V DC or 24V AC in the IEC60950-1. (Refer to general introduction) **Please note: Do not connect two power supplying sources to the device at the same time; it may result in device damage!**

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

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

## 3 . Installation

Do not apply power to the camera before completing installation.

Please install the proper power cut-off device during the installation connection.

Always follow the instruction guide the manufacturer recommended.

## 4 . Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or attempted repair.

## 5 . Environment

This series network camera should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

Please keep it away from the electromagnetic radiation object and environment.

Please make sure the CCD (CMOS) component is out of the radiation of the laser beam device.

Otherwise it may result in CCD (CMOS) optical component damage.

Please keep the sound ventilation.

Do not allow the water and other liquid falling into the camera.

Thunder-proof device is recommended to be adopted to better prevent thunder.

The grounding studs of the product are recommended to be grounded to further enhance the reliability of the camera.

## 6. Daily Maintenance

Please shut down the device and then unplug the power cable before you begin daily maintenance work.

Do not touch the CCD (CMOS) optic component. You can use the blower to clean the dust on the lens surface.

Always use the dry soft cloth to clean the device. 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.

Please put the dustproof cap to protect the CCD (CMOS) component when you do not use the camera. Dome enclosure is the optical component, do not touch the enclosure when you are installing the device or clean the enclosure when you are doing maintenance work. Please use professional optical clean method to clean the enclosure. Improper enclosure clean method (such as use cloth) may result in poor IR effect of camera with IR function.

## 7. Accessories

Be sure to use all the accessories recommended by manufacturer.

Before installation, please open the package and check all the components are included.

Contact your local retailer ASAP if something is broken in your package.

Accessory Name	Amount
Network Camera Unit	1
Quick Start Guide	1
Installation Accessories Bag	1
12V to 24V Conversion Cable (For AC 24V series product only)	1
CD	1

# Table of Contents

1	General Introduction .....	1
1.1	Overview .....	1
1.2	Features .....	1
1.3	Specifications .....	2
1.3.1	Performance .....	2
1.3.2	Factory Default Setup .....	4
2	Structure .....	11
2.1	Multiple-function Combination Cable.....	11
2.2	Framework and Dimension .....	12
2.3	Bidirectional talk .....	13
2.3.1	Device-end to PC-end.....	13
2.3.2	PC-end to the Device-end.....	13
2.4	Alarm Setup .....	14
3	Installation .....	16
3.1	Device Installation .....	16
3.2	Micro SD Card Installation .....	17
3.3	Lens Adjustment .....	19
3.4	Bracket Adjustment .....	19
3.5	OSD Buttons (For Motorized Zoom Lens Series Product Only) .....	21
4	Quick Configuration Tool .....	23
4.1	Overview .....	23

4.2	Operation .....	23
5	Web Operation .....	25
5.1	Network Connection.....	25
5.2	Login and Main Interface.....	25
6	FAQ .....	28
7	Appendix Toxic or Hazardous Materials or Elements .....	29

# 1 General Introduction

## 1.1 Overview

This series network camera integrates the traditional camera and network video technology. It adopts audio and video data collection, transmission together. It can connect to the network directly without any auxiliary device.

This series network camera product uses standard H.264 video compression technology and G.711a audio compression technology, which maximally guarantee the audio and video quality.

It supports the IR night vision function. In the night environments, the device can use the IR light to highlight the object which is suitable for the surveillance function in the low illumination environments. The built-in protection enclosure and waterproof design conforms to the IP 66 level. It has the sound waterproof function suitable for use in the outdoor environments.

It supports real-time monitor and listening at the same time. It supports analog video output and dual-way bidirectional talk.

It can be used alone or used in a network area. When it is used lonely, you can connect it to the network and then use a network client-end. Due to its multiple functions and various uses, this series network camera is widely used in many environments such office, bank, road monitor and etc.

## 1.2 Features

<b>User Management</b>	<ul style="list-style-type: none"><li>● Different user rights for each group, one user belongs to one group.</li><li>● The user right shall not exceed the group right.</li></ul>
<b>Storage Function</b>	<ul style="list-style-type: none"><li>● Support central server backup function in accordance with your configuration and setup in alarm or schedule setting</li><li>● Support record via Web and the recorded file are storage in the client-end PC.</li><li>● Support built-in Micro SD card.</li><li>● Do not support local Micro SD card hot swap storage function. Support short-time storage when encounter disconnection.</li><li>● Support network storage function such as FTP.</li></ul>
<b>Alarm Function</b>	<ul style="list-style-type: none"><li>● Real-time respond to external on-off alarm input, and video detect as user pre-defined activation setup and generate corresponding message in screen and audio prompt(allow user to pre-record audio file)</li><li>● Real-time video detect: motion detect, camera masking.</li></ul>
<b>Network Monitor</b>	<ul style="list-style-type: none"><li>● Network camera supports one-channel audio/video data transmit to network terminal and then decode. Delay is within 270ms (network bandwidth support needed)</li><li>● Max supports 20 connections.</li><li>● Adopt the following audio and video transmission protocol: HTTP, TCP, UDP, MULTICAST, RTP/RTCP, RTSP and etc.</li><li>● Support web access.</li></ul>
<b>Network Management</b>	<ul style="list-style-type: none"><li>● Realize network camera configuration and management via Ethernet.</li><li>● Support device management via web or client-end.</li></ul>
<b>Power</b>	<ul style="list-style-type: none"><li>● External power adapter DC12V/AC 24V. You can select according to your actual environments. Please note system can not support these two types of power supplying at the same time.</li></ul>
<b>Assistant Function</b>	<ul style="list-style-type: none"><li>● Log function</li><li>● Support system resource information and running status real-time display.</li></ul>

	<ul style="list-style-type: none"> <li>● Day/Night mode auto switch.</li> <li>● Built-in IR light. Support IR night vision.</li> <li>● Support picture parameter setup such as electronic shutter and gain setup.</li> <li>● Backlight compensation: screen auto split to realize backlight compensation to adjust the bright.</li> <li>● Support video watermark function to avoid vicious video modification.</li> <li>● The enclosure conforms to the IP 66 protection. Has the waterproof function.</li> </ul>
--	--

## 1.3 Specifications

### 1.3.1 Performance

Please refer to the following sheet for network camera performance specification.

Model		HFW3300C	HFW3200C	HFW3100C	HFW3101C
Parameter					
System	Main Processor	TI Davinci high performance DSP			
	OS	Embedded LINUX			
	System Resources	Support real-time network, local record, and remote operation at the same time.			
	User Interface	Remote operation interface such as WEB, DSS, PSS			
	System Status	Micro SD card status, bit stream statistics, log, and software version.			
Video Parameter	Image Sensor	1/2.8-inch CMOS	1/2.9-inch CMOS	1/3.0-inch CMOS	
	Pixel	2080(H)*1553(V )	1920(H)*1080(V)		
	Day/Night Mode	Support day/night mode switch and IR-CUT at the same time. (The lens has built-in IR-CUT mechanical component.).			
	Auto Aperture	Enable			
	Gain Control	Fixed/Auto			
	White Balance	Manual/Auto			
	BLC	Off/BLC/WDR (1-100 adjustable)/HLC(anti-flicker is outdoor and is valid only when exposure mode is auto with range 1-100)			
	Exposure Mode	Manual/Auto PAL: It ranges from 1/3 to 1/10000 NTSC: It ranges from 1/4 to 1/10000			
	Video Compression Standard	H.264/ H.264H/H.264B/MJPEG			
	Video Frame Rate	PAL: Main stream (3M@15fps,1080P@25fps,SXGA@25fps,1.3M@25fps,720P@25fps,D1@25fps) Extra stream (D1@25fps, CIF@25fps)	PAL: Main stream (1080P@25fps, SXGA@25fps,1.3M@25fps,720P@25fps,D1@25fps) Extra stream (D1@25fps,CIF@25fps)	PAL: Main stream (1.3M@25fps, 720P@25fps, D1@25fps) Extra stream (D1@25fps, CIF@25fps)	
		NTSC: Main stream (3M@15fps ,1080P@30fps, SXGA@30fps, 1.3M@30fps,	NTSC: Main stream (1080P@30fps, SXGA@30fps, 1.3M@30fps, 720P@30fps,	NTSC: Main stream: (1.3M@30fps, 720P@30fps, 704*480@30fps) Extra stream (704*480@30fps,352*240@30fps)	



		720P@30fps, 704*480@30fps ) Extra stream (704*480@30fps, 352*240@30fps)	704*480@30fps ) Extra stream (704*480@30fps, 352*240@30fps)	
	<b>Video Bit Rate</b>	H.264: 56Kbps-8192Kbps. H.264H 16Kbps-8192Kbps H.264B 56Kbps-8192Kbps MJPEG is adjustable and bit rate is adjustable. Support customized setup.		
	<b>Video Flip</b>	Support mirror. Support flip function.		
	<b>Snapshot</b>	Max 1f/s snapshot. File extension name is JPEG.		
	<b>Privacy Mask</b>	Supports max 4 privacy mask zones		
	<b>Video Setup</b>	Support parameter setup such as bright, contrast.		
	<b>Video Information</b>	Channel title, time title, motion detect, camera masking.		
	<b>Lens</b>	Manual zoom 3.3-12 mm@F1.4		
	<b>Lens Interface</b>	Φ14 interface. Lens is the default accessories		
<b>Audio</b>	<b>Audio Input</b>	1-channel. RCA		
	<b>Audio Output</b>	1-channel. RCA		
	<b>Bidirectional Talk Input</b>	Reuse the first audio input channel		
	<b>Audio Bit Rate</b>	16kbps 16BIT		
	<b>Audio Compression Standard</b>	G.711A/G.711Mu/PCM		
<b>Video</b>	<b>Motion Detect</b>	396 (18*22) detection zones; sensitivity level ranges from 0 to 100; area threshold ranges from 0 to 100. Activation event: video storage, image snapshot, log, email function and etc.		
<b>Alarm Input</b>		2-channel input, 1-channel output		
<b>Record and Backup</b>	<b>Record Priority</b>	Manual>External alarm >Video detect>Schedule		
	<b>Local Storage</b>	Support Micro SD card storage		
	<b>Storage Management</b>	Support display local storage status		
<b>Network</b>	<b>Wire Network</b>	1-channel wire Ethernet port, 10/100 Base-T Ethernet		
	<b>Network Protocol</b>	Standard HTTP, TCP/IP, ARP, IGMP, ICMP, RTSP, RTP,UDP, RTCP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, UPNP, NTP, Bonjour, SNMP.		
	<b>Remote Operation</b>	Monitor, system setup, file download, log information, maintenance , upgrade and etc.		
<b>AUX Interface</b>	<b>Video Output</b>	1-channel analog video output, BNC port.		
	<b>Restore Default Setup</b>	Reset button		
	<b>Power</b>	Support AC24V/DC12V power. (Can not support these two modes at the same time.)		
<b>General Parameter</b>	<b>Power Consumption</b>	8W MAX (10W MAX when ICR switch)		
	<b>Working</b>	-10℃~+60℃		

	Temperature	
	Working Humidify	10%~90%
	Dimensions(mm)	φ104*306.7
	Weight	1250g(Excluding box)
	Installation	Bracket is included in the accessories bag.
	IR Distance	20~30m
	Protection Level	IP66

### 1.3.2 Factory Default Setup

Please refer to the following sheet for factory default setup information.

Setup		Item		Default Setup				
				HFW3300C	HFW3200C	HFW3100C	HFW3101C	
Camera	Conditions	Config File		Normal				
		Brightness		50				
		Contrast		50				
		Saturation		50				
		Sharpness		50				
		Anti-flicker		Outdoor				
		Exposure Mode		Auto				
		Scene Mode		Auto				
		Day/night Mode		Auto				
		BLC		Off				
		Mirror		Off				
		Flip		Off				
		Profile Management		Normal				
		Video	Video bit stream	Main Stream	Bit stream type	General		
	Encode mode				H.264			
	Resolution				1080P(1920*1080)		1.3M（1280*960）	
	Frame Rate(FPS)				PAL:25 NTSC:30			
	Bit Rate Type				CBR			
	Recommen ded Bit				3584-8192 Kb/S		1536-8192Kb/s	
	Bit Rate				8192		6144	
	I Frame				50			
	Watermark				Enable			
	Watermark character				DigitalCCTV			
	Sub Stream			Enable	Enable			
		Bit stream		General				

Setup		Item		Default Setup				
				HFW3300C	HFW3200C	HFW3100C	HFW3101C	
				type				
				Encode mode	H.264			
				Resolution	PAL:CIF(352*288) NTSC:CIF(352*240)			
				Frame Rate(FPS)	PAL:25 NTSC:30			
				Bit Rate Type	CBR			
				Recommen ded Bit	192-1024Kb/S			
				Bit Rate	512			
				I Frame	50			
		Snapshot	Snapshot Type	General				
			Image Size	1080P(1920*1080)		720P(1280*720)		
			Quality	Better				
			Bit Rate	Main stream				
			Interval	1s				
		Video Overlay	Privacy Mask	Disable				
			Channel Title	Enable				
			Time Title	Enable				
		Path	Snapshot Path	C:\PictureDownload				
			Record Path	C:\RecordDownload				
	Audio	Main Stream	Enable	Enable				
			Encode Mode	G.711A				
		Sub Stream	Enable	Disable				
			Encode Mode	G.711A				
Network	TCP/IP	Host Name	IPC					
		Ethernet Card	Wire(Default)					
		Mode	Static					
		Mac Address	Device MAC address when it is shipped out of the factory					
		IP Version	IPV4					
		IP Address	192.168.1.108					
		Subnet Mask	255.255.255.0					
		Default	192.168.1.1					

Setup	Item		Default Setup			
			HFW3300C	HFW3200C	HFW3100C	HFW3101C
		Gateway				
		Preferred DNS	8.8.8.8			
		Alternate DNS	8.8.8.8			
		Enable ARP/Ping set device IP address service	Enable			
	Connection	Max Connection	10			
		TCP Port	37777			
		UDP Port	37778			
		HTTP Port	80			
		RTSP Port	554			
		HTTPs On	Disable			
		HTTPs Port	443			
	PPPoE	Enable	Disable			
		Username	none			
		Password	N/A			
	DDNS	Server Type	Disable, CN99 DDNS			
		Server Address	www.3322.org			
		Domain Name	none			
		Username	none			
		Password	****			
		Update Period	10 minutes			
	IP Filter	Trusted sites	Disable			
	SMTP(Email)	SMTP Server	none			
		Port	25			
		Anonymity	Disable			
		User Name	anonymity			
		Password	****			
		Sender	none			
		Authenticati	N/A			

Setup	Item		Default Setup			
			HFW3300C	HFW3200C	HFW3100C	HFW3101C
		on (Encryption mode)				
		Title (Subject)	IPC Message			
		Attachment	Enable			
		Mail Receiver	N/A			
		Interval	0 Second			
		Email Test	Disable, interval=60 seconds			
	UPnP	Enable UPnP	Disable			
	SNMP	SNMP Port	161			
		Read Community	public			
		Write Community	private			
		Trap Address	N/A			
		Trap Port	162			
		SNMP v1	Disable			
		SNMP v2	Disable			
		SNMP v3	Disable			
	Bonjour	Enable	Enable			
		Server Name	“SN”. It depends on the device.			
	Multicast	Main Stream	Enable	Enable		
			Multicast Address	239.255.42.42		
			Port	36666		
		Extra Stream	Enable	Disable		
			Multicast Address	239.255.42.42		
			Port	36667		
	IEEE802			Enable	Disable	
				Authentication	PEAP	
				Username	None	
				Password	****	
	QoS			Real-time Monitor	0	
				Command	0	

Setup	Item			Default Setup			
				HFW3300C	HFW3200C	HFW3100C	HFW3101C
Event	Video detect	Motion Detect	Enable	Disable			
			Anti-dither	5 seconds			
			Sensitivity	3			
			Record Channel	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Alarm Delay	10 seconds			
			Send Email	Disable			
			Snapshot	Disable			
		Video Masking	Enable	Disable			
			Record Channel	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Record Delay	10 seconds			
			Send Email	Disable			
			Snapshot	Disable			
	Alarm	Alarm Activation	Enable	Disable			
			Relay in	Alarm 1			
			Anti-dither	0 seconds			
			Sensor Type	NO			
			Record Channel	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Alarm Delay	10 seconds			
			Send Email	Disable			
			Snapshot	Disable			
	Abnormity	No SD Card	Enable	Disable			
			Relay out	Enable			
			Relay out Delay	10 seconds			
			Send email	Disable			
		Capacity Warning	Enable	Disable			
			Capacity Limit	10%			
			Relay out	Enable			

Setup	Item			Default Setup			
				HFW3300C	HFW3200C	HFW3100C	HFW3101C
			Relay out Delay	10 seconds			
			Send Email	Disable			
		SD Card Error	Enable	Disable			
			Relay out	Enable			
			Relay out Delay	10 seconds			
			Send email	Disable			
		Disconnection	Enable	Disable			
			Record	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Relay out Delay	10 seconds			
		IP Conflict	Enable	Disable			
			Record	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Relay out Delay	10 seconds			
Storage	Schedule	Holiday Schedule	Record	Disable			
			Snapshot	Disable			
	Storage	FTP	Enable FTP	Disable			
			Server Address	N/A			
			Port	21			
			Username	anonymity			
			Password	N/A			
			Remote path	share			
			Emergency (Local)	Disable			
	Record Control		Pack Duration	8 minutes			
			Pre-record	5 seconds			
			Disk Full	Overwrite			
			Record Mode	Auto			
System	General	Local Host	Device No	Device factory SN			
			Language	English			

Setup	Item			Default Setup			
				HFW3300C	HFW3200C	HFW3100C	HFW3101C
	Date time  and	Video Standard	PAL				
		Date Format	Y-M-D				
		Time Format	24H				
		Time Zone	GMT+08:00				
		System Time	Sync				
		DST	Disable				
		DST Type	Date				
		Start Time	00:00:00 of Jan.1 <sup>st</sup>				
		End Time	00:00:00 of Jan.2 <sup>nd</sup>				
		NTP	Disable				
		NTP Server	clock.isc.org				
		Port	123				
		Update Period	10 minutes				
	Account		Anonymous Login	Disable			
	Auto Maintenance		Auto Reboot	Enable, Tuesday 02:00			
			Auto Delete Old Files	Disable			



## 2 Structure

### 2.1 Multiple-function Combination Cable

You can refer to the following figure for multiple-function combination cable information. See Figure 2-1.

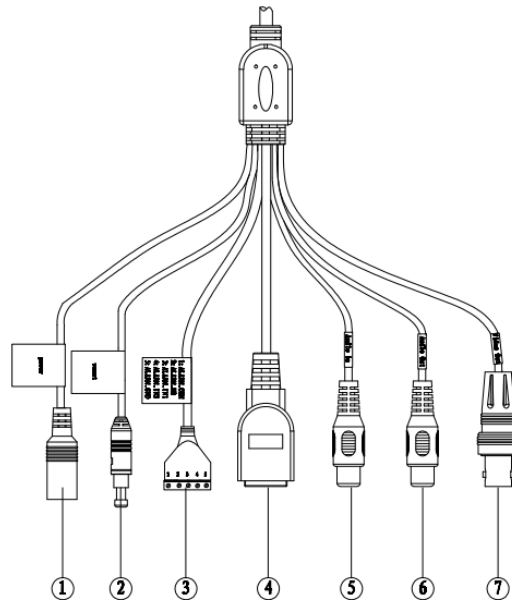


Figure 2-1 Multiple-function combination cable

Please refer to the following sheet for detailed information.

SN	Port Name	Function	Connection	Note
1	DC 12V/AC 24V	Power input port	/	Power port. Input DC 12V/AC 24V (Please use the provided conversion cable)
2	Reset	Reset port	/	Hardware reset function. Press it for 3 to 5 seconds; system hardware can restore default setup.
3	I/O	I/O port	/	Connect to I/O port.
4	LAN	Network port	Ethernet port	Connect to standard Ethernet cable.
5	AUDIO IN	Audio input port	RCA	Input audio signal. It can receive the analog audio signal from the pickup.
6	AUDIO OUT	Audio output port	RCA	Output audio signal to the devices such as the sound box.
7	VIDEO OUT	Video output port	BNC	Output analog video signal. It can connect to the TV monitor to view the video.

Please refer to the follow sheet for detailed I/O port information.

Port Name	SN	Name	Note
I/O Port	1	ALARM_COM	Alarm output public port.
	2	ALARM_NO	Alarm output port. It is to output the alarm signal to the alarm device. NO: normal open alarm output port. It works with the ALARM_COM port.
	3	ALARM_IN1	Alarm input port 1. It is to receive the on-off signal from the external alarm source.
	4	ALARM_IN2	Alarm input port 2. It is to receive the on-off signal from the external alarm source.
	5	GND	Ground port

## 2.2 Framework and Dimension

**Please note all frame and dimension illustrations provided in this chapter are for reference only, and actual product may vary.**

Please refer to Figure 2-2 or Figure 2-3 for dimension information according to the actual product. The unit is mm. Please also see Figure 2-4.

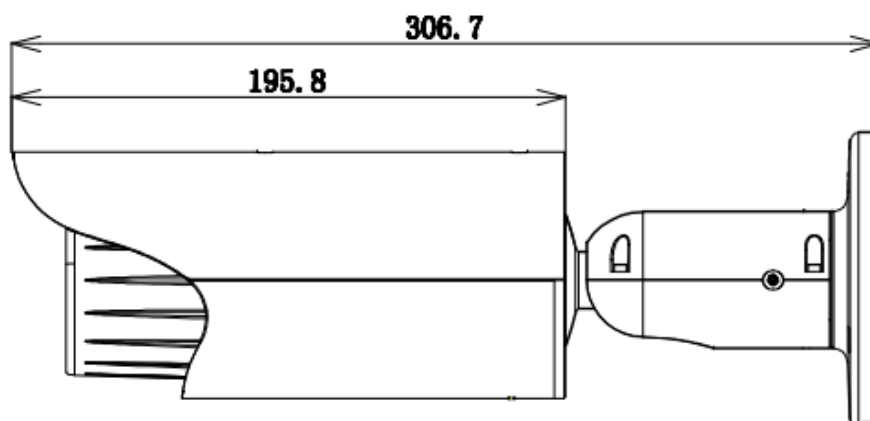


Figure 2-2 Dimension illustration 1

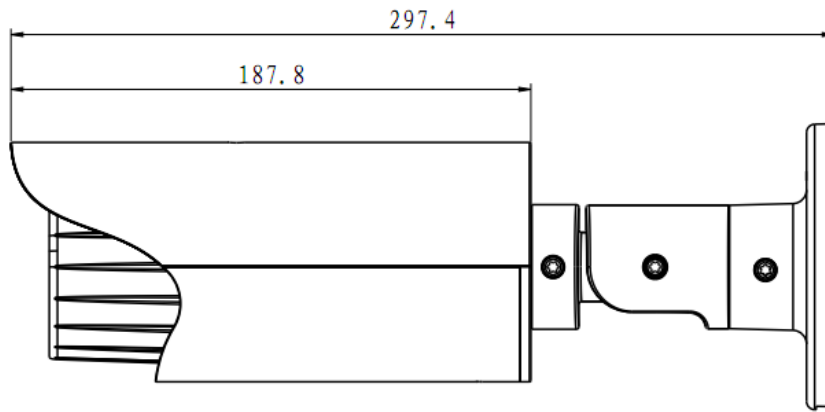


Figure 2-3 Dimension illustration 2

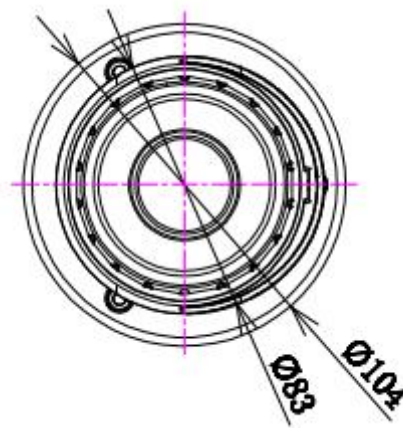


Figure 2-4 Dimension illustration 3

## 2.3 Bidirectional talk

### 2.3.1 Device-end to PC-end

#### Device Connection

Please connect the speaker or the MIC to the audio input port of the device. Then connect the earphone to the audio output port of the PC.

Login the Web and then click the Audio button to enable the bidirectional talk function.

You can see the button becomes orange after you enabled the audio talk function.

Click Audio button again to stop the bidirectional talk function.

#### Listening Operation

At the device end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the pc-end.

### 2.3.2 PC-end to the Device-end

#### Device Connection

Connect the speaker or the MIC to the audio input port of the PC and then connect the earphone to the audio output port of the device.

Login the Web and then click the Audio button to enable the bidirectional talk function. You can see the button becomes orange after you enabled the audio talk function. Click Audio button again to stop the bidirectional talk function.

**Please note the listening operation is null during the bidirectional talk process.**

### Listening Operation

At the PC-end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the device-end.

## 2.4 Alarm Setup

The alarm interface is shown as in Figure 2-5. Please follow the steps listed below for local alarm input and output connection.

- 1) Connect the alarm input device to the alarm input port (No.3 pin or No.4 pin) of the I/O cable.
- 2) Connect the alarm output device to the alarm output port (No.2 pin) and alarm output public port (No.1 pin). The alarm output port supports NO (normal open) alarm device only.
- 3) Open the Web, go to the Figure 2-5. Please set the alarm input 01 port for the first channel of the I/O cable (No.3 pin). The alarm input 02 is for the 2<sup>nd</sup> channel of I/O cable (No.4 pin). Then you can select the corresponding type (NO/NC.)
- 4) Set the WEB alarm output. The alarm output 01 is for the alarm output port of the device. It is the No.2 pin of the I/O cable.

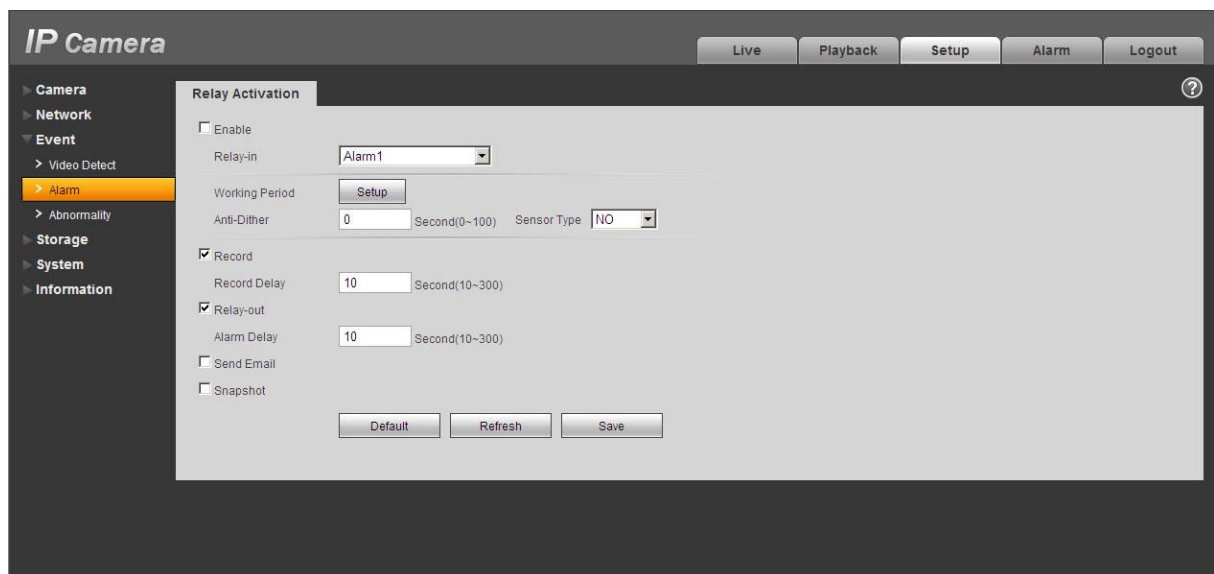


Figure 2-5 Alarm

Please refer to the following figure for alarm input information. See Figure 2-6.

Alarm input: When the input signal is idle or grounded, the device can collect the different statuses of the alarm input port. When the input signal is connected to the 5V or is idle, the device collects the logic "1". When the input signal is grounded, the device collects the logic "0".

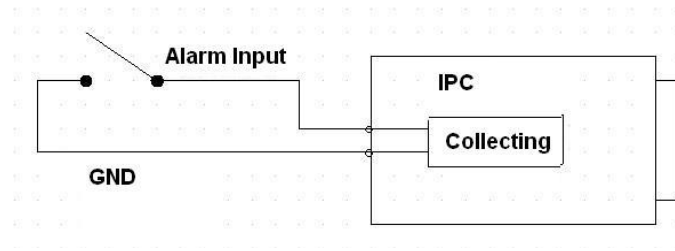


Figure 2-6 Alarm input

Please refer to the following figure for alarm output information. See Figure 2-7.

Port ALARM\_COM and Port ALARM\_NO composes an on-off button to provide the alarm output.

If the type is NO, this button is normal open. The button becomes on when there is an alarm output.

If the type is NC, this button is normal off. The button becomes off when there is an alarm output.

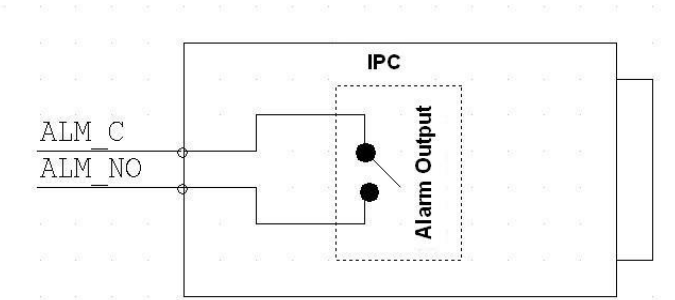


Figure 2-7 Alarm output

## 3 Installation

Please note all frame and dimension illustrations provided in this chapter are for reference only, and actual product may vary.

### 3.1 Device Installation

Please refer to Figure 3-1 or Figure 3-2 for installation information according to the actual product.

Please follow the steps listed below to install the device.

- Please draw the installation holes in the installation surface and then mark three expansion bolts holes in the surface. Insert three bolts in the hole and secure firmly.
- Please line up the installation holes of the bottom of the pendant mount bracket to the installation holes in the surface. Then insert the three bolts to the holes of the bottom of the bracket. Finally fasten the device on the installation surface.

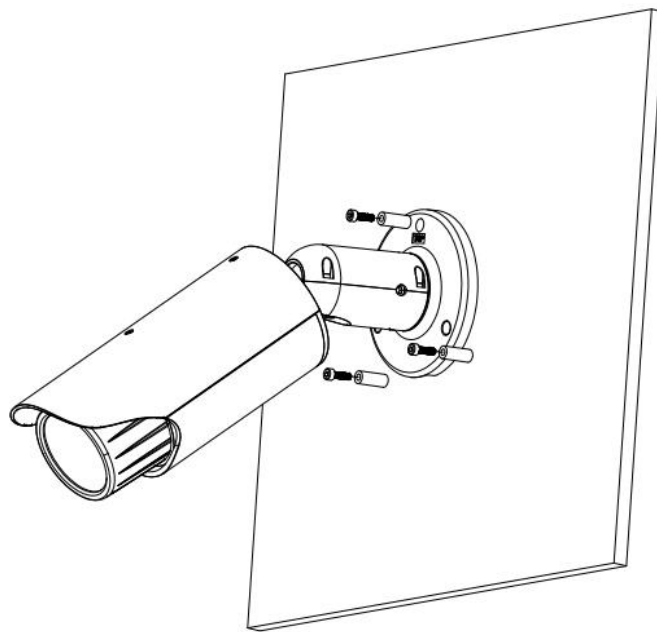


Figure 3-1 Device installation 1

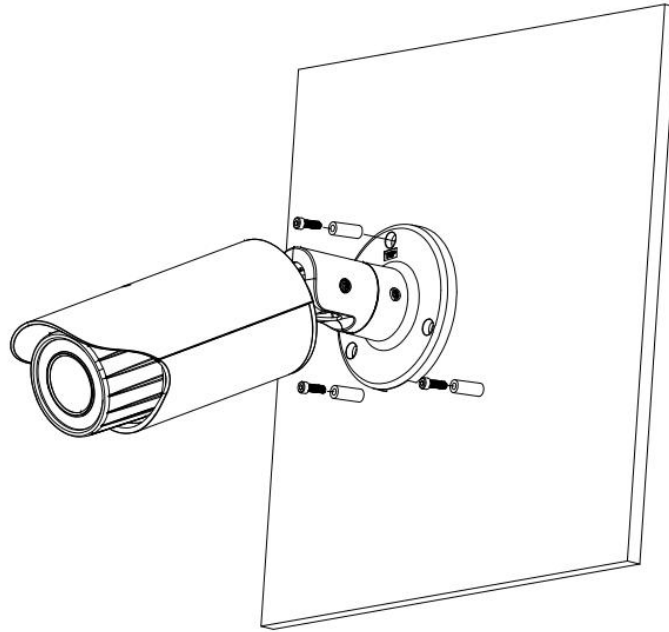


Figure 3-2 Device installation 2

### 3.2 Micro SD Card Installation

Use the inner hex wrench from the installation accessories bag to remove the four inner hex screws from the rear cover. Please refer to Figure 3-3 or Figure 3-4 to find the Micro SD card slot position according to the actual product. Insert the Micro SD card and then fix the four screws of the rear cover.

**Important**

- Please make sure the cable connection between the power board and the main board is firm. Otherwise, it may result in device malfunction.
- The rear cover of the device adopts the waterproof design. Please secure four screws firmly after you complete the Micro SD card installation.

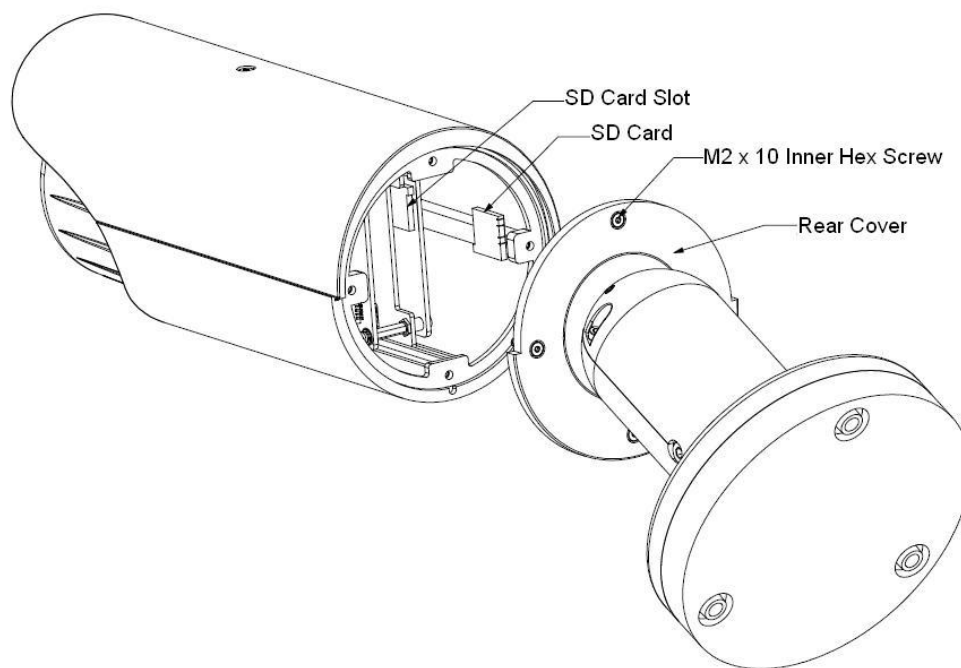


Figure 3-3 Micro SD card installation 1

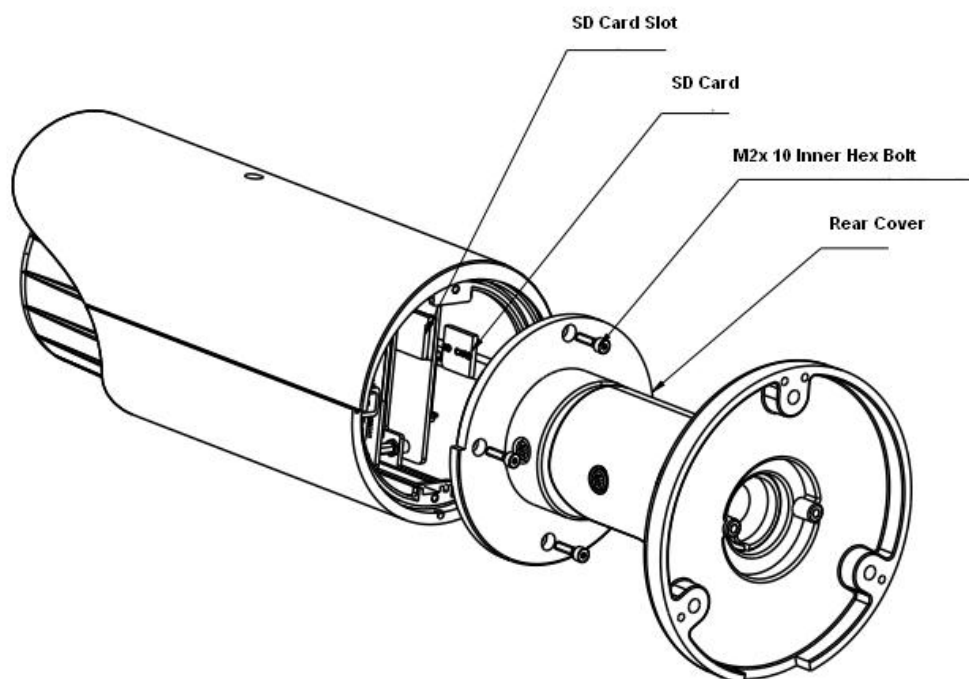


Figure 3-4 Micro SD card installation 2



### 3.3 Lens Adjustment

Turn counter clockwise to remove the lens cover, now you can see the iris front and rear control rod. The front control rod is to focus and the rear control rod is to zoom. See Figure 3-5. Please turn clockwise to fix the lens cover back firmly.

#### Important

- Please remove the sunshield first and remove the lens cover if you can not unfasten the lens cover.
- The lens cover has the waterproof function. Please make sure it is secure after you complete the lens adjustment.
- The motorized zoom lens series product has the default motorized zoom lens. You do not need to adjust manually.

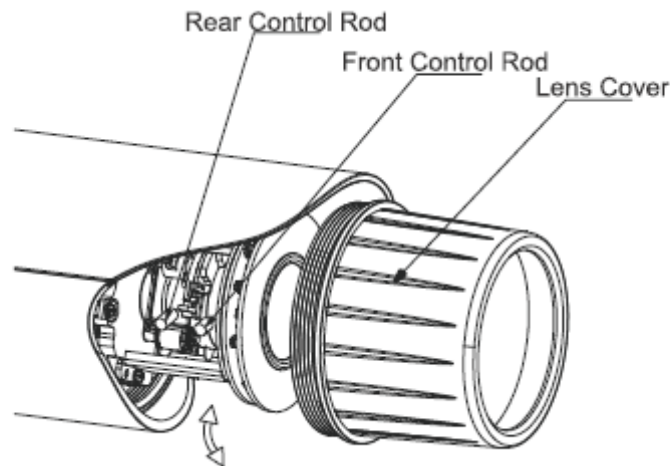


Figure 3-5 Lens adjustment

### 3.4 Bracket Adjustment

You can use an inner hex screw to control the bracket. Please use the inner hex wrench from the installation accessories bag to unfasten the screw. Please refer to Figure 3-6 or Figure 3-7 according to the actual product. The horizontal angle of the rear cover can rotate 360°, the tilt angle can rotate 90° and the chassis can rotate 360°.

Please use the inner hex wrench to firmly secure the inner hex screw after you complete the setup.

#### Important

- Please make sure the M4 inner hex screw or M4 inner hex flat tight screws are firm, otherwise it may result in chassis vibration and the camera cannot fix to a specified angle.

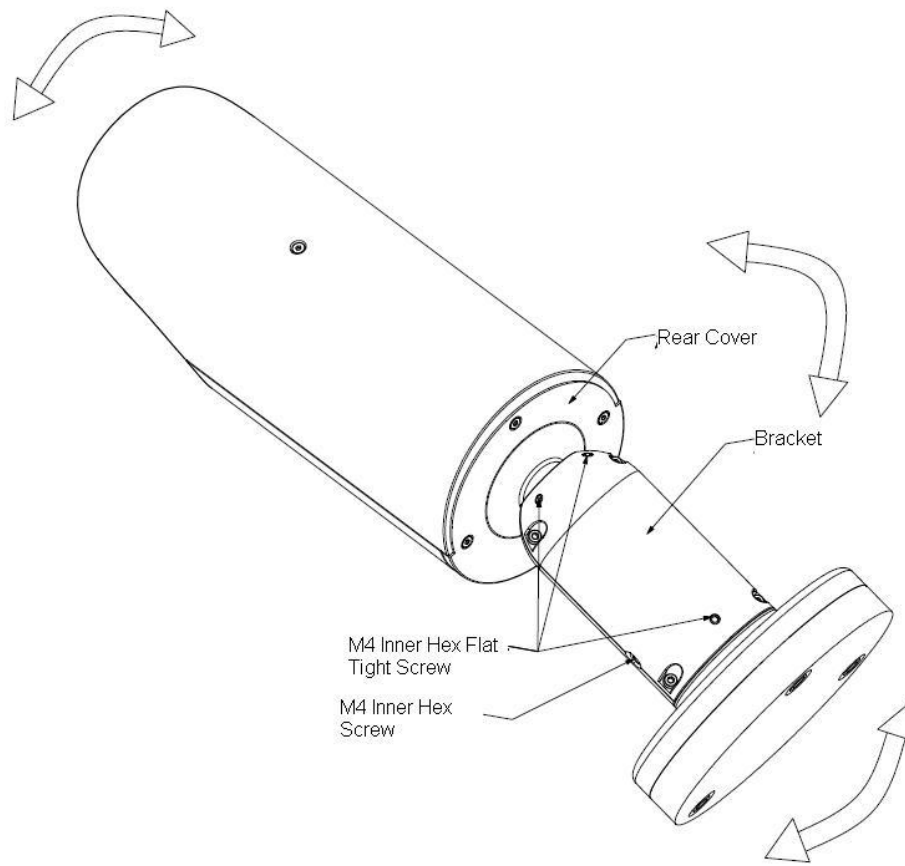


Figure 3-6 Bracket adjustment 1

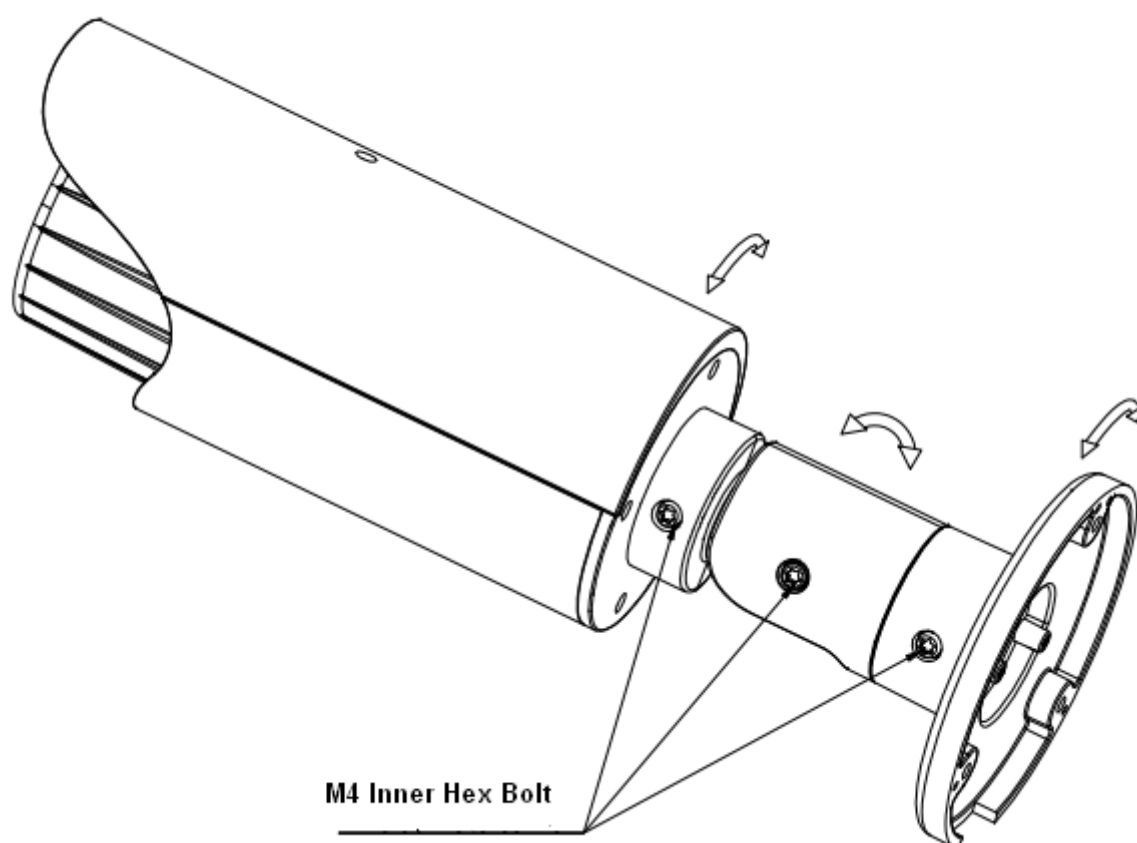


Figure 3-7 Bracket adjustment 2

### 3.5 OSD Buttons

Please refer to the following contents for detailed information. See Figure 3-8 and Figure 3-9.

- Top button: Focus zoom in
- Bottom button: Focus zoom out.
- Left button: Far.
- Right button: Near.
- Middle button: Auto focus. It is to get clear video.

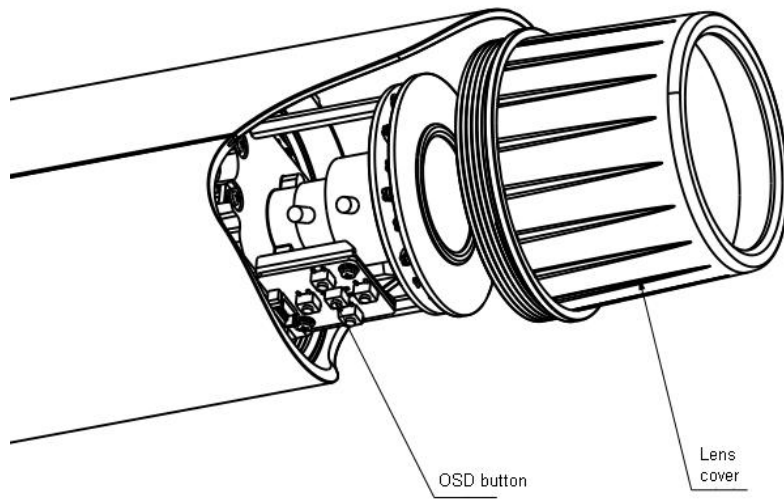


Figure 3-8 OSD button 1

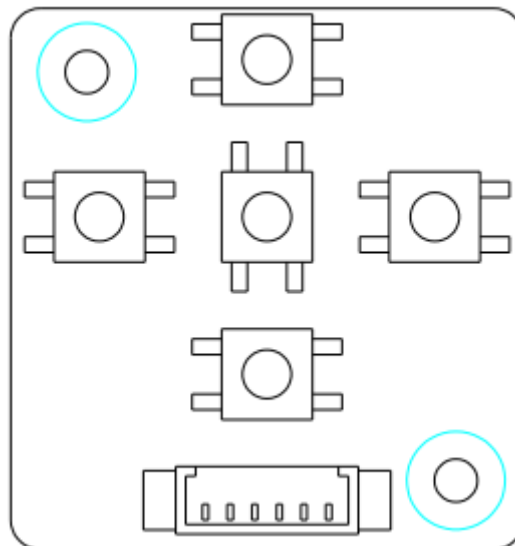


Figure 3-9 OSD button 2

## 4 Quick Configuration Tool

## 4.1 Overview

Quick configuration tool can search current IP address, modify IP address. At the same time, you can use it to upgrade the device.

Please note the tool only applies to the IP addresses in the same segment.

## 4.2 Operation

Double click the “ConfigTools.exe” icon, you can see an interface is shown as in Figure 4-1.

In the device list interface, you can view device IP address, port number, subnet mask, default gateway, MAC address and etc.

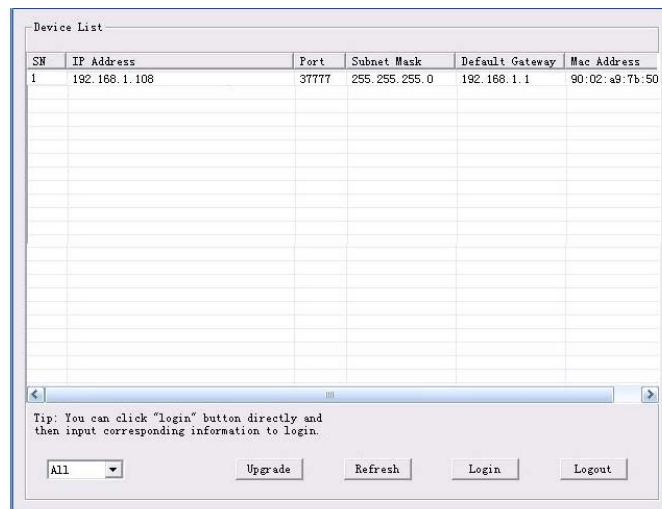


Figure 4-1 Search interface

Select one IP address and then right click mouse, you can see an interface is shown as in Figure 4-2.

Select the “Open Device Web” item; you can go to the corresponding web login interface.

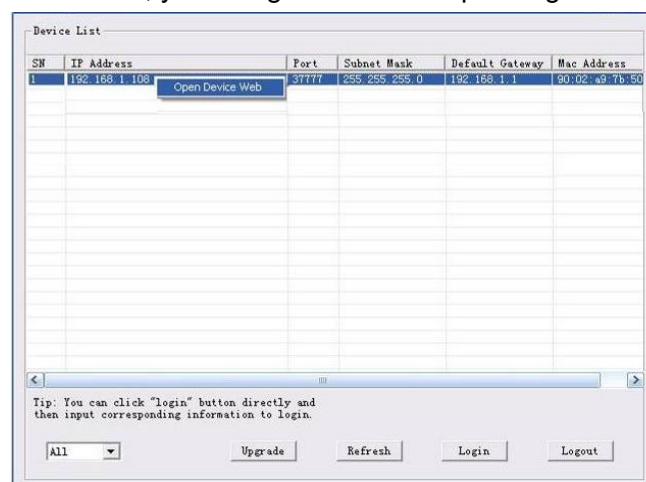


Figure 4-2 Search interface 2

If you want to modify the device IP address without logging in the device web interface, you can go to the configuration tool main interface to set.

In the configuration tool search interface (Figure 4-1), please select a device IP address and then double click it to open the login interface. Or you can select an IP address and then click the Login button to go to the login interface. See Figure 4-3.

In Figure 4-3, you can view device IP address, user name, password and port. Please modify the corresponding information to login.

Please note the port information here shall be identical with the port value you set in TCP port in Web Network interface. Otherwise, you cannot login the device.

If you are using device background upgrade port 3800 to login, other setups are all invalid.

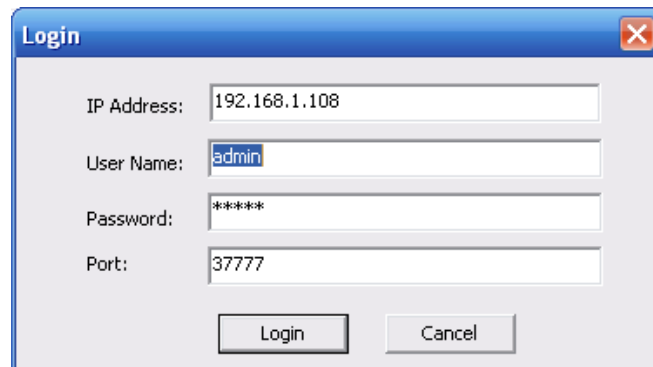
A Windows-style dialog box titled "Login" with a close button in the top right corner. It contains four text input fields: "IP Address:" with the value "192.168.1.108", "User Name:" with the value "admin", "Password:" with the value "\*\*\*\*\*", and "Port:" with the value "37777". At the bottom, there are two buttons: "Login" and "Cancel".

Figure 4-3 Login prompt

After you logged in, the configuration tool main interface is shown as below. See Figure 4-4.

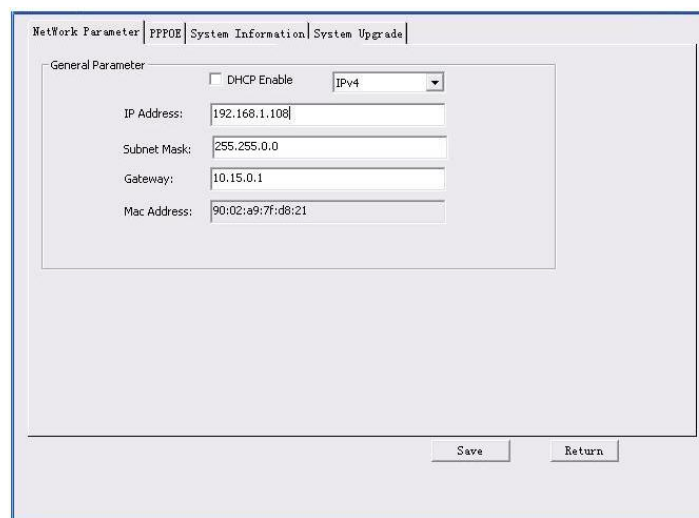
A screenshot of the main configuration tool interface. At the top, there are four tabs: "Network Parameter", "PPPOE", "System Information", and "System Upgrade". The "Network Parameter" tab is selected. Below the tabs, there is a "General Parameter" section. It includes a checkbox for "DHCP Enable" which is unchecked, and a dropdown menu for "IPv4" which is set to "IPv4". Below these are five text input fields: "IP Address:" with "192.168.1.108", "Subnet Mask:" with "255.255.0.0", "Gateway:" with "10.15.0.1", and "Mac Address:" with "90:02:a9:7f:d8:21". At the bottom right of the interface, there are two buttons: "Save" and "Return".

Figure 4-4 Main interface

**For detailed information and operation instruction of the quick configuration tool, please refer to the *Quick Configuration Tool User's Manual* included in the resources CD.**

## 5 Web Operation

This series network camera products support the Web access and management via PC. Web includes several modules: Monitor channel preview, system configuration, alarm and etc.

### 5.1 Network Connection

Please follow the steps listed below for network connection.

- Make sure the network camera has connected to the network properly.
- Please set the IP address, subnet mask and gateway of the PC and the network camera respectively. Network camera default IP address is 192.168.1.108. Subnet mask is 255.255.255.0. Gateway is 192.168.1.1
- Use order ping `***.***.***.***(* network camera address)` to check connection is OK or not.

### 5.2 Login and Main Interface

Open IE and input network camera address in the address bar. See Figure 5- 1.

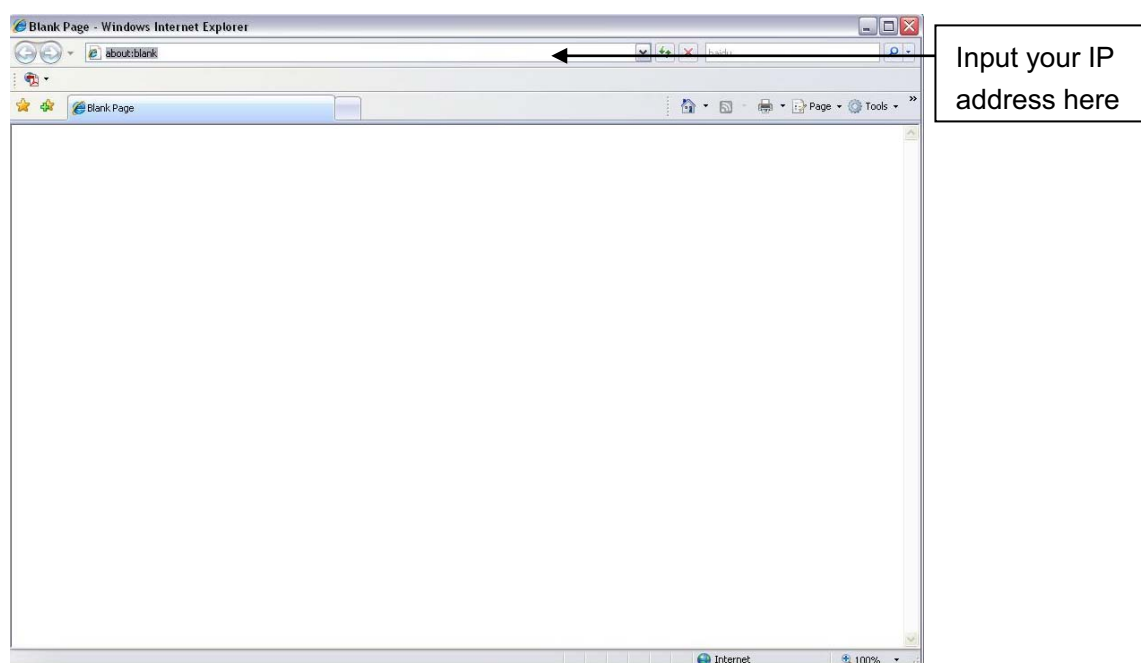


Figure 5- 1 IP address

The login interface is shown as below. See Figure 5- 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 5- 2 Web login

If it is your first time to log in, system pops up warning information to ask you whether install web plug-in or not after you logged in for one minute. For detailed plug-in installation, please refer to the Web Operation Manual included in the resource CD.

After you logged in, you can see the main window. See Figure 5- 3.

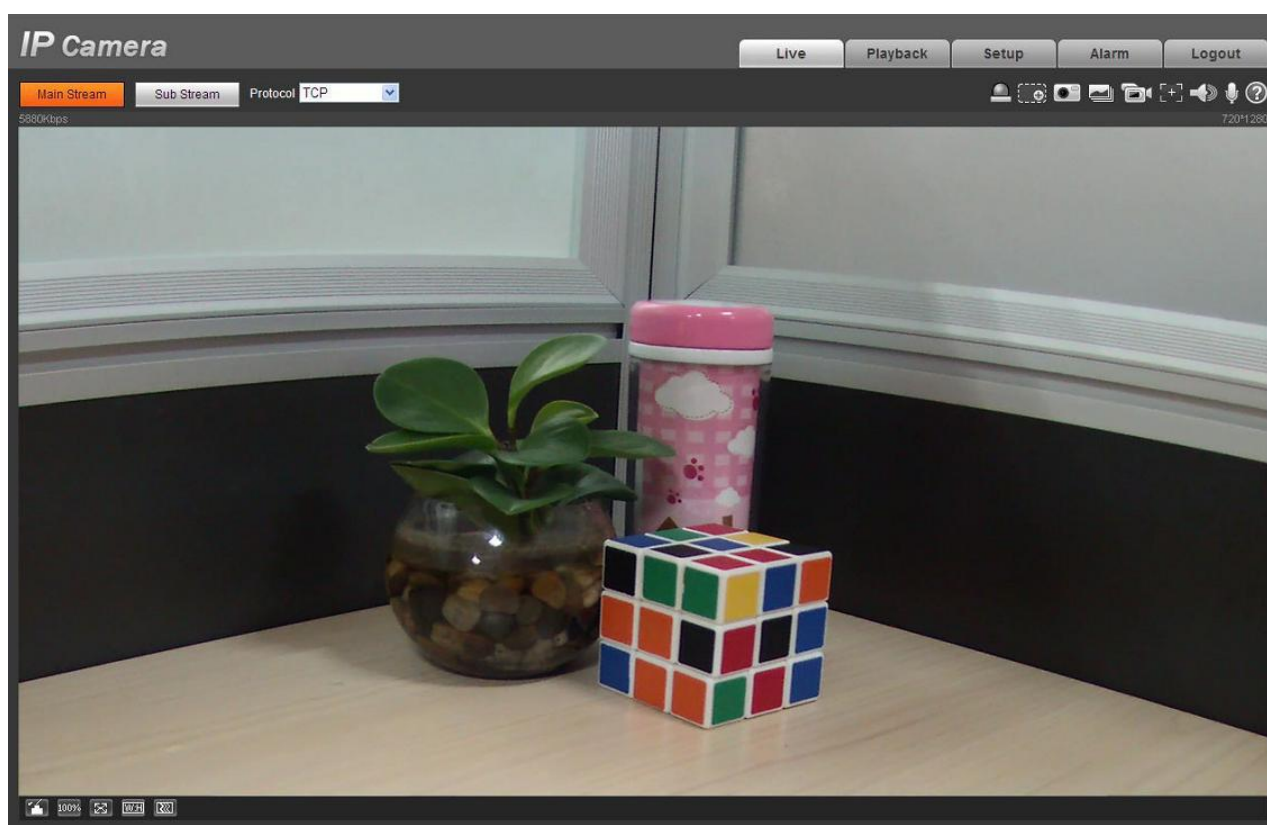


Figure 5- 3 Web monitoring window



Please refer to the Web Operation Manual included in the resource CD for detailed operation instruction.

## 6 FAQ

Bug	
I can not boot up the device.	Please click RESET button for at least five seconds to restore factory default setup.
Micro SD card write times	Do not set the Micro SD card as the storage media to storage the schedule record file. It may damage the Micro SD card duration.
I can not use the disk as the storage media.	When disk information is shown as hibernation or capacity is 0, please format it first (Via Web).
I can not upgrade the device via network.	When network upgrade operation failed, you can use port 3800 to continue upgrade.
Recommended Micro SD card brand	Kingston 4GB, Kingston 1GB, Kingston 16GB, Transcend 16GB, SanDisk 1G, SanDisk 4G Usually we recommend the 4GB (or higher) high speed card in case the slow speed results in data loss.
Audio function	Please use active device for the audio monitor input, otherwise there is no audio in the client-end.
To guarantee setup update	After you modified the important setup, please reboot the device via the software to make sure the setup has been updated to the storage medium.
Power adapter	The general power adapter can work ranging from 0℃ to 40 ℃.The device may result in unstable power supply when the temperature exceeds the working temperature. Please replace an industry-level power adapter if you are using in the harsh environments.
I can not fix the bracket firmly.	Please use the S3 inner hex wrench to secure the rear bracket firmly. Please use your hands to test the camera is firm or not after the installation.

## 7 Appendix Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Circuit Board Component	○	○	○	○	○	○
Case	○	○	○	○	○	○
Wire and Cable	○	○	○	○	○	○
Packing Components	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

### Note

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

**THC20IP**

**BROWSER  
MANUAL**

# **Network Camera Web3.0 Operation Manual**

**Version 4.0.0**

## Table of Contents

1	Network Connection .....	1
2	Main Interface Introduction .....	2
2.1	Log in .....	2
2.2	Live Interface .....	6
2.3	Encode Setup .....	6
2.4	System Menu .....	7
2.5	Video Window Function Option .....	7
2.6	Video Window Setup .....	8
2.6.1	Image control .....	8
2.6.2	Hide Image Control .....	9
2.6.3	Original size .....	9
2.6.4	Full screen .....	9
2.6.5	Width and height ratio .....	9
2.6.6	Fluency Adjustment .....	10
3	PTZ Control .....	11
4	Playback .....	14
4.1	Playback Interface .....	14
4.2	Function of Play .....	14
4.3	Date .....	15
4.4	File List .....	15
4.5	Progress Bar .....	17
5	Setup .....	18
5.1	Camera .....	18
5.1.1	Conditions .....	18
5.1.2	Video .....	22
5.1.3	Audio .....	28
5.2	Network .....	28
5.2.1	TCP/IP .....	28
5.2.2	Connection .....	30
5.2.3	PPPoE .....	32
5.2.4	DDNS .....	32
5.2.5	IP filter .....	34
5.2.6	SMTP (e-mail) .....	35
5.2.7	UPnP .....	37
5.2.8	SNMP .....	38
5.2.9	Bonjour .....	40
5.2.10	Multicast .....	41

5.2.11	WIFI .....	42
5.2.12	IEEE802 .....	44
5.2.13	QoS .....	45
5.2.14	3G.....	46
5.2.14.1	Dial-up .....	47
5.2.14.2	Mobile Phone .....	48
5.3	Event.....	49
5.3.1	Video detect.....	49
5.3.2	Alarm .....	54
5.3.3	Abnormity .....	55
5.4	Storage .....	58
5.4.1	Record Schedule and Snapshot Schedule .....	58
5.4.2	Destination.....	59
5.4.3	Record control .....	60
5.5	System.....	61
5.5.1	General.....	61
5.5.2	Account.....	63
5.5.3	PTZ.....	67
5.5.4	Default .....	68
5.5.5	Import/Export .....	69
5.5.6	Auto Maintenance.....	69
5.5.7	Upgrade .....	70
5.6	Information.....	70
5.6.1	Version .....	70
5.6.2	Log.....	71
5.6.3	Online User.....	72
6	Alarm.....	73
7	Log out .....	74

**Important**

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



# 1 Network Connection

These series network camera products support the Web access and management via PC.

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

Please follow the steps listed below for network connection.

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

## 2 Main Interface Introduction

### 2.1 Log in

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

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

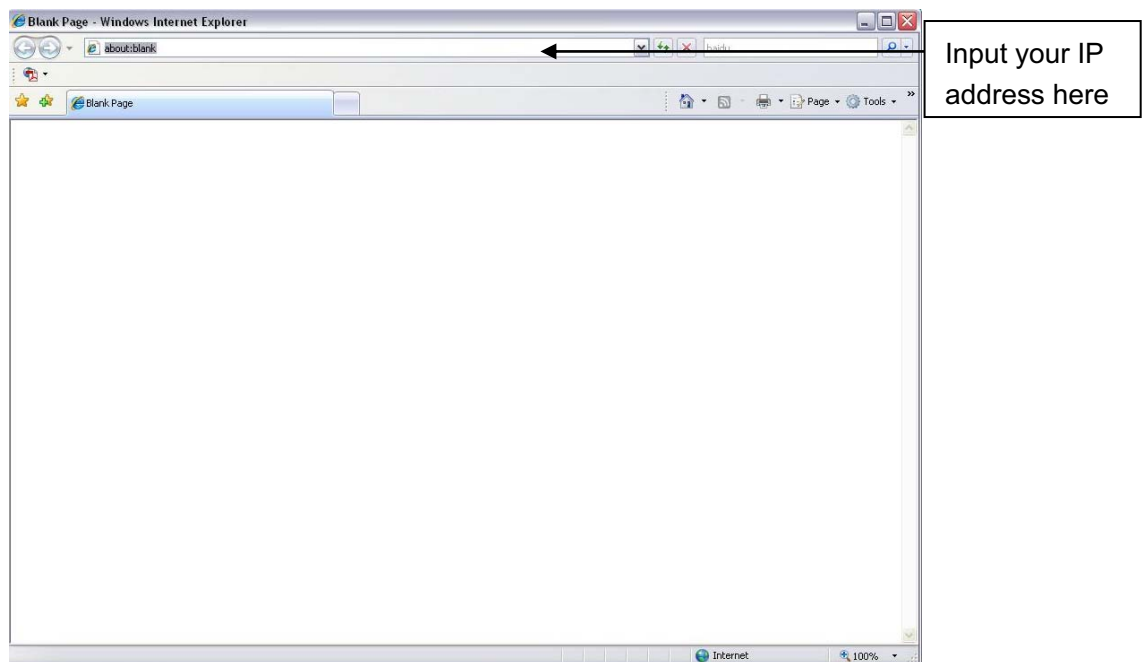


Figure 2-1

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

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

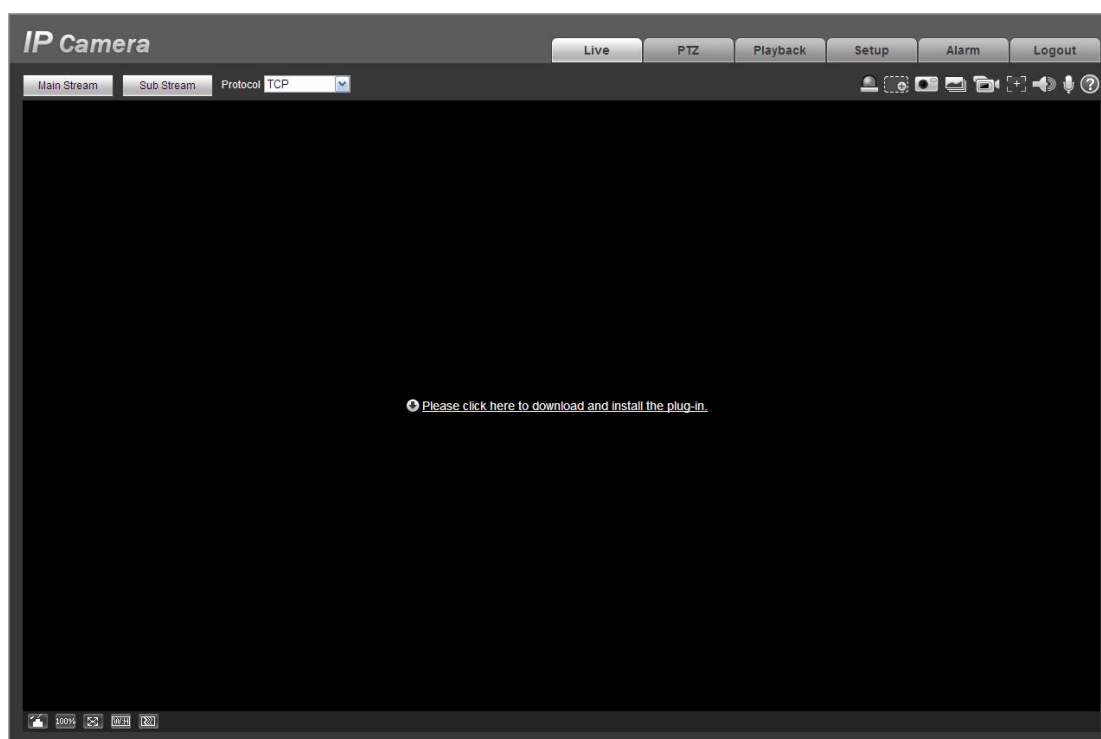


Figure 2-3

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

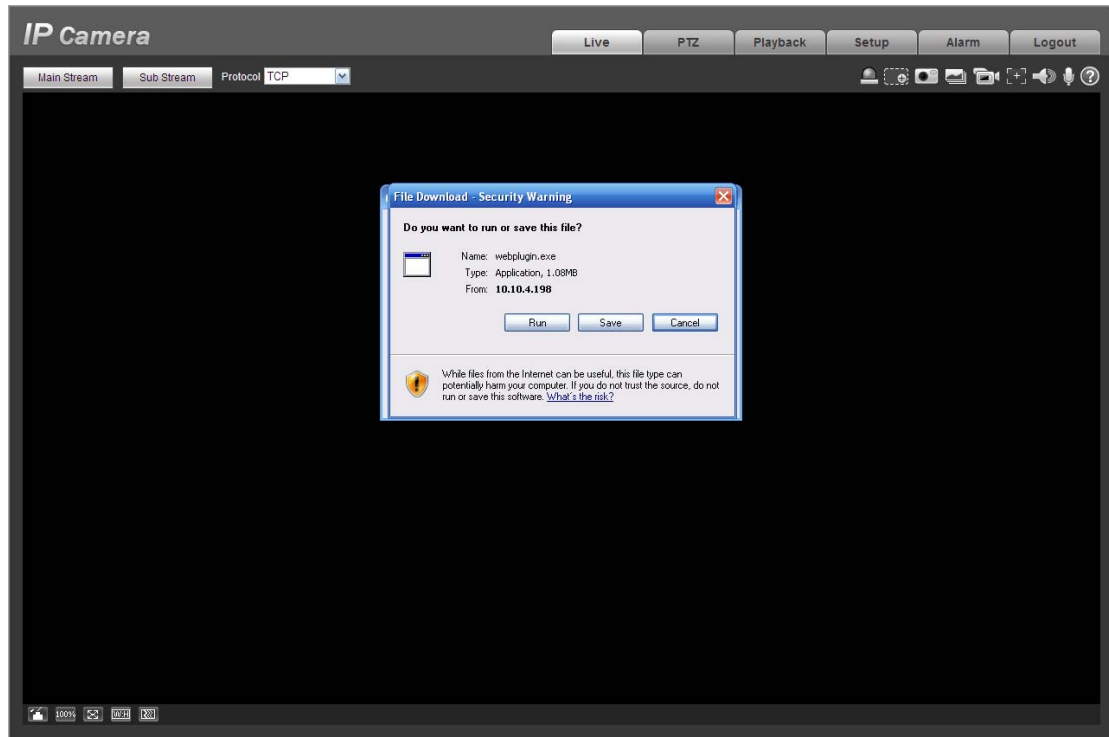


Figure 2-4

You must either run or save the file to local and install it. Follow the following steps. See Figure 2-5 and Figure 2-6.

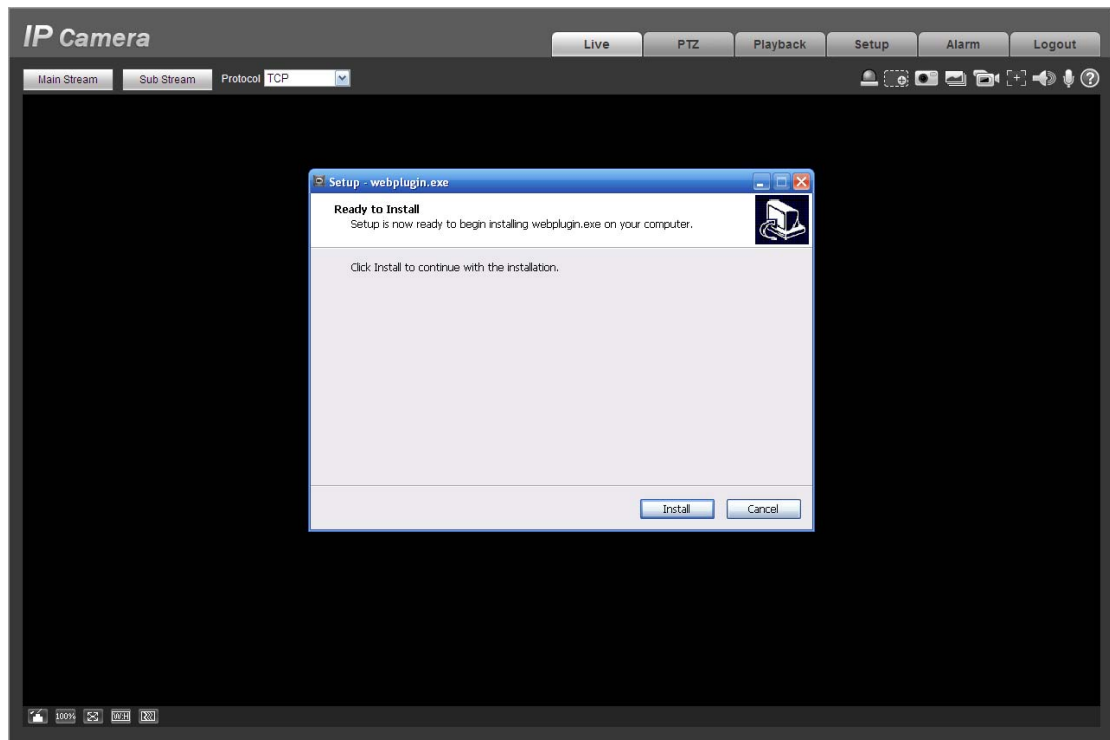


Figure 2-5

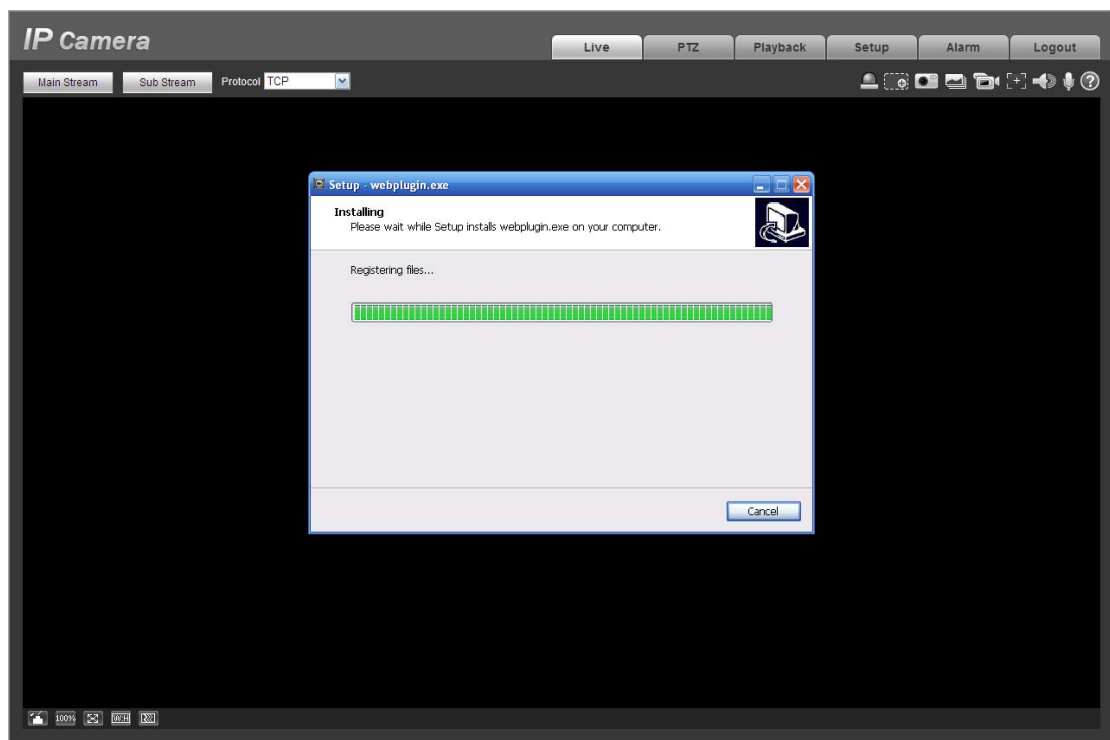


Figure 2-6

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

## 2.2 Live Interface

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

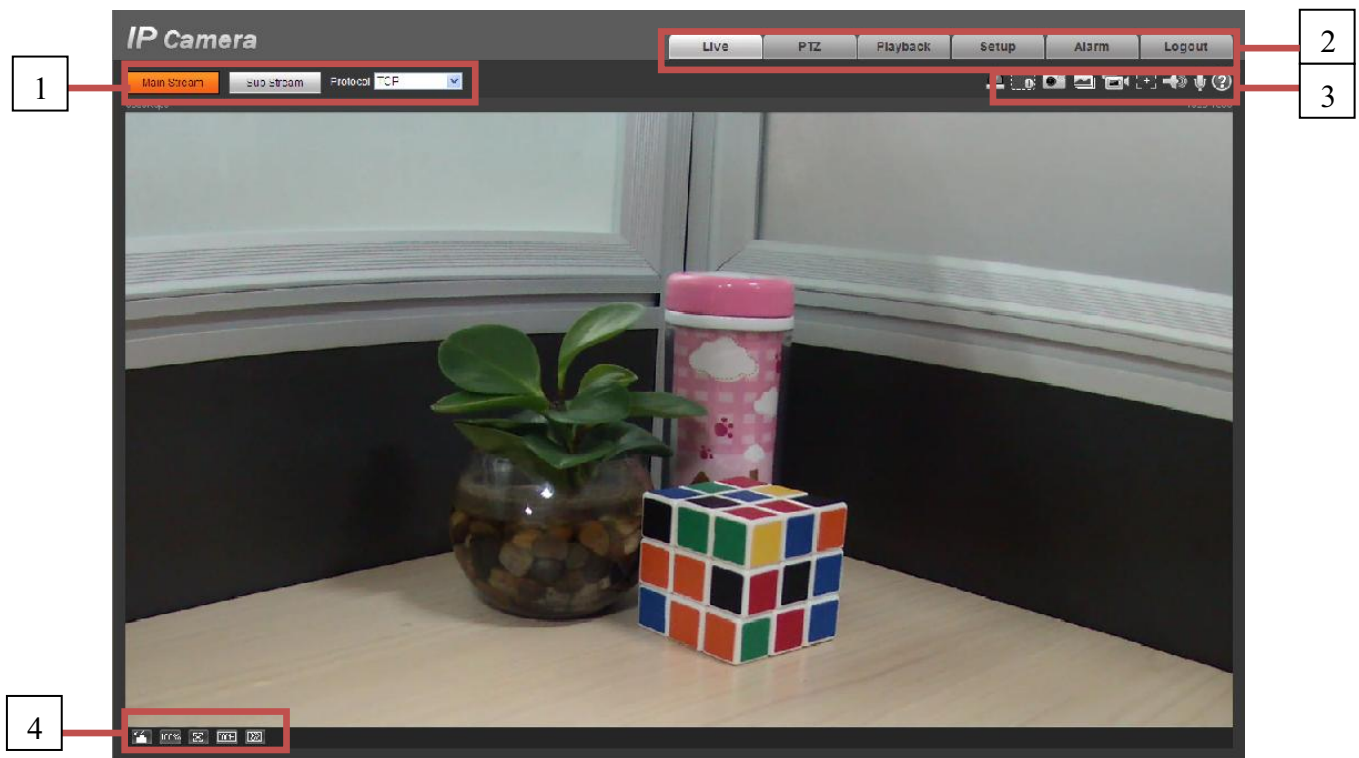


Figure 2-7

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 2-8.



Figure 2-8

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 2-9.

Please refer to chapter 2.2 Live, chapter 3 PTZ, chapter 4 Playback, chapter 5 Setup, chapter 6 Alarm, chapter 7 Log out for detailed information.



Figure 2-9

## 2.5 Video Window Function Option

The interface is shown as below. See Figure 2-10

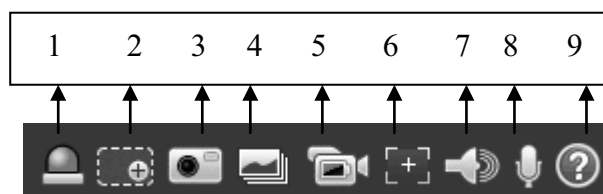


Figure 2-10

Please refer to the following sheet for detailed information.

SN	Parameter	Function
1	Alarm on/off	To control alarm output as: <ul style="list-style-type: none"> <li>● Red: means alarm output.</li> <li>● Grey: means alarm ends.</li> </ul>
2	Digital zoom	<ul style="list-style-type: none"> <li>● When the video is in the original status, click it you can select any zone to zoom in. In the non-original status, you can drag the zoom-in zone in specified range. Right click mouse to restore previous status.</li> <li>● Click it; you can use the middle button of the mouse to zoom in/out the video size.</li> </ul>

3	Snapshot	You can snapshot important video by clicking on this button. All images are memorized in system folder: \ picture download (default). You can go to Setup->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	For manual record. All records are memorized in Setup->Camera->Video->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 2-11.

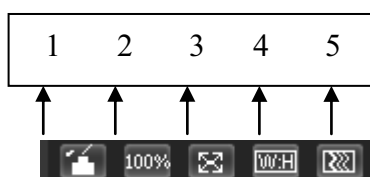


Figure 2-11

### 2.6.1 Image control

Click it to open picture setup interface. See Figure 2-12. This interface is on the top right pane.



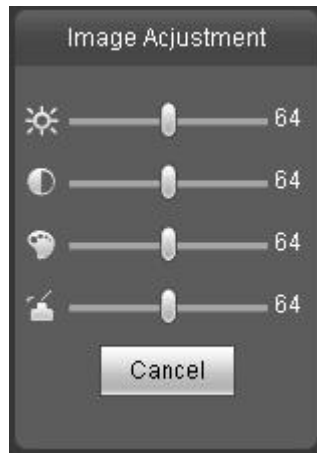






Figure 2-12

Please refer to the following sheet for detailed information.

Parameter		Function	
Video setup		It is to adjust monitor video brightness.	Note: <ul style="list-style-type: none"> <li>● All the operations here apply to WEB end only.</li> <li>● Please go to Setup-&gt;Camera-&gt;Conditions to adjust corresponding items.</li> </ul>
		It is to adjust monitor video contrastness.	
		It is to adjust monitor video hue.	
		It is to adjust monitor video saturation.	
	Reset	Restore brightness, contrastness saturation and hue to system default setup.	

### 2.6.2 Hide Image Control

Click this button to display/hide image control interface.

### 2.6.3 Original size

Click this button to go to original size. It is to display the actual size of the video stream. It depends on the resolution of the bit stream.

### 2.6.4 Full screen

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

### 2.6.5 Width and height ratio

Click it to restore original ratio or suitable window.

### **2.6.6 Fluency Adjustment**

There are three levels of fluency for you to select. The default is real-time with minimum delay. You may select fluent mode in case connection is slow.

### 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: It controls rotation speed. The step 8 speed is faster than step 1. Default value is 5.

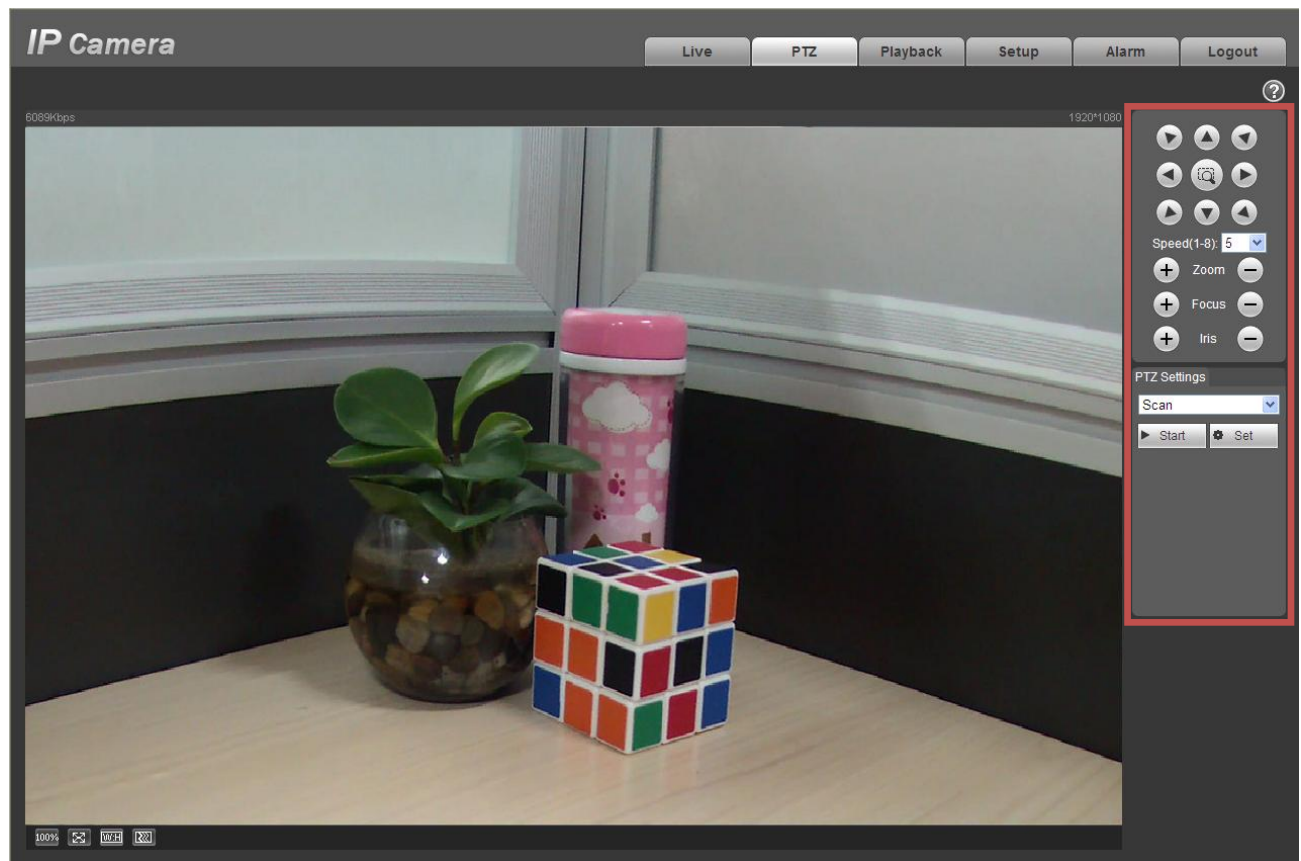


Figure 3-1

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

Here you can set scan, preset, tour, pattern, assistant function and light and wiper.

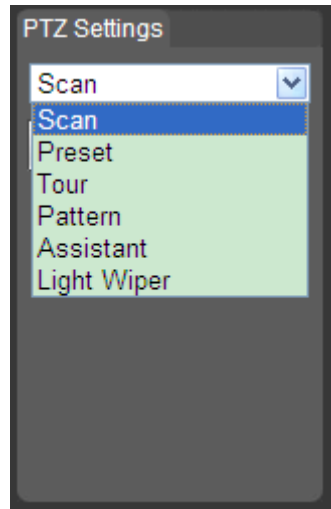


Figure 3-2

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	<ul style="list-style-type: none"> <li>● Click Setup button, you can set scan left and right limit.</li> <li>● 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.</li> </ul>
Preset	<ul style="list-style-type: none"> <li>● Input the preset value and then click Preset button, the camera turns to the corresponding position of the preset.</li> <li>● 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.</li> <li>● The preset value ranges from 1 to 255. (It may vary due to different protocols.)</li> </ul>
Tour	<ul style="list-style-type: none"> <li>● Click the Setup button, you can begin set tour.</li> <li>● Input tour value and then click the Set button. The tour value ranges from 1 to 255. (It may vary due to different protocols.)</li> <li>● Input preset value in the column. Click Add preset button, you have added one preset in the tour.</li> </ul> <p><b>Note:</b> 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.</p>
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 Playback

### 4.1 Playback Interface

The playback interface is shown as in Figure 4- 1.

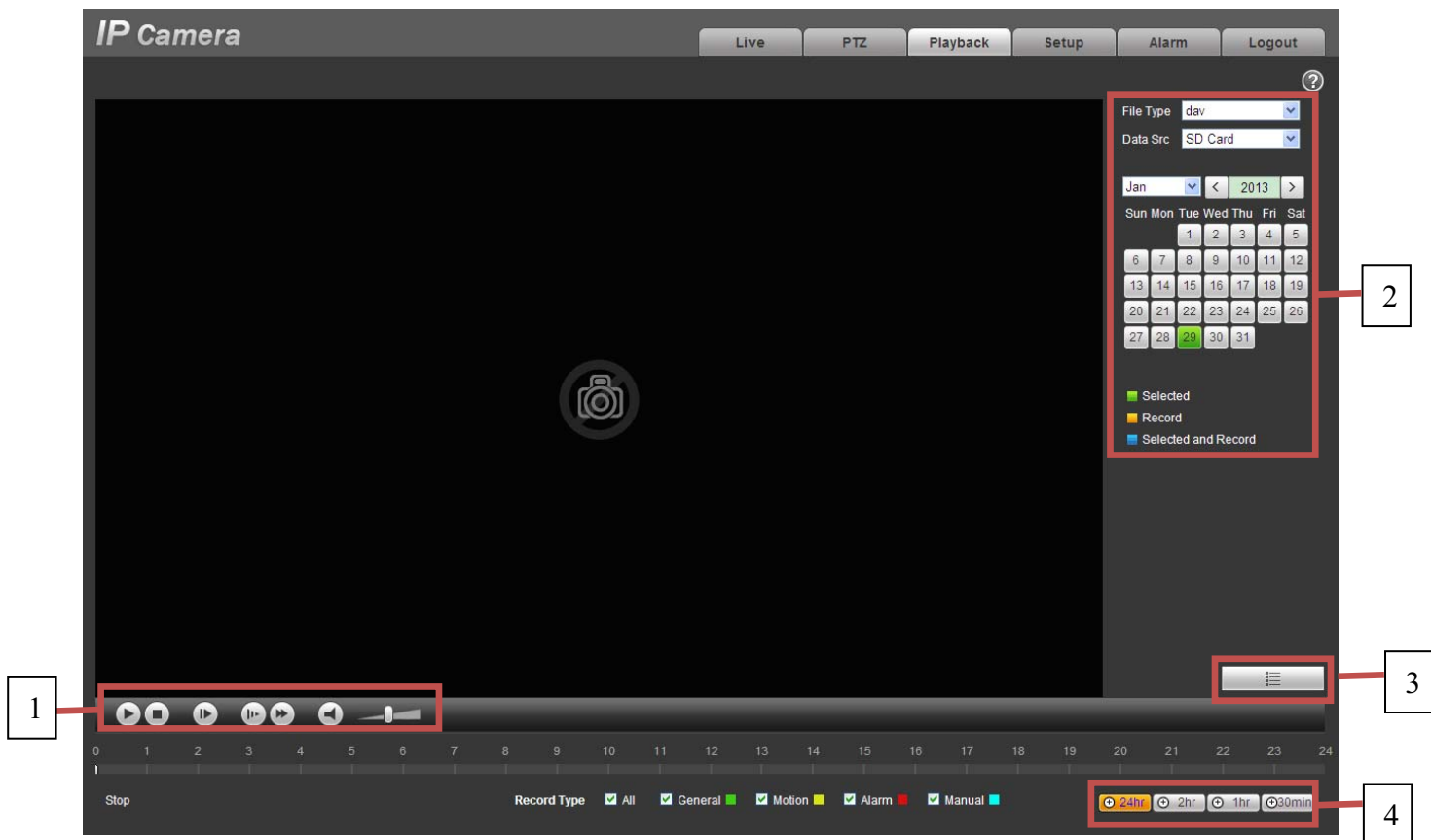


Figure 4- 1

There are four sections:

- Section 1: Function of play
- Section 2: Date
- Section 3: File list
- Section 4: Progress bar

### 4.2 Function of Play

The function of play is shown as in Figure 4- 2.



Figure 4- 2

1. Play: Play or pause video.
2. Stop: Stop video.
3. Play by frame: Skip to next frame.
4. Slow play: Slow down the video.
5. Quick play: Speed up the video.
6. Silent: Switch off/on sound.
7. Volume: Adjust volume of the video.

**Note: You must pause video before skipping to next frame.**

### 4.3 Date

There are various colors in calendar:

- Green: means currently selected date.
- Yellow: means current date has record file.
- Blue: means current date has record file which is/are selected.


Only file types selected will be displayed in progress bar and list.

### 4.4 File List

The file list is shown as in Figure 4- 3.



Figure 4- 3

Click on  to enter file list. Double click on record file in the list and this file will be played. You can view file size, start and end time.

Record type has four categories:

- Green means general record.
- Yellow means motion detection record.
- Red means alarm record.
- Blue means manual record.



Search: You can search record files within selected time interval.



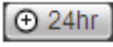
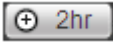
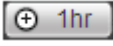
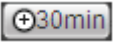


Download: Click on this button, you can download file to PC.



Back: Click on this button, you will go back to calendar page.

## 4.5 Progress Bar

-  means video in past 24 hours.
-  means video in past 2 hours.
-  means video in past 1 hour.
-  means video in past 30 min.

## 5 Setup

### 5.1 Camera

#### 5.1.1 Conditions

Here you can view device property information. Slight differences may be found due to different network camera series. The setups become valid immediately after you set. See Figure 5-1.

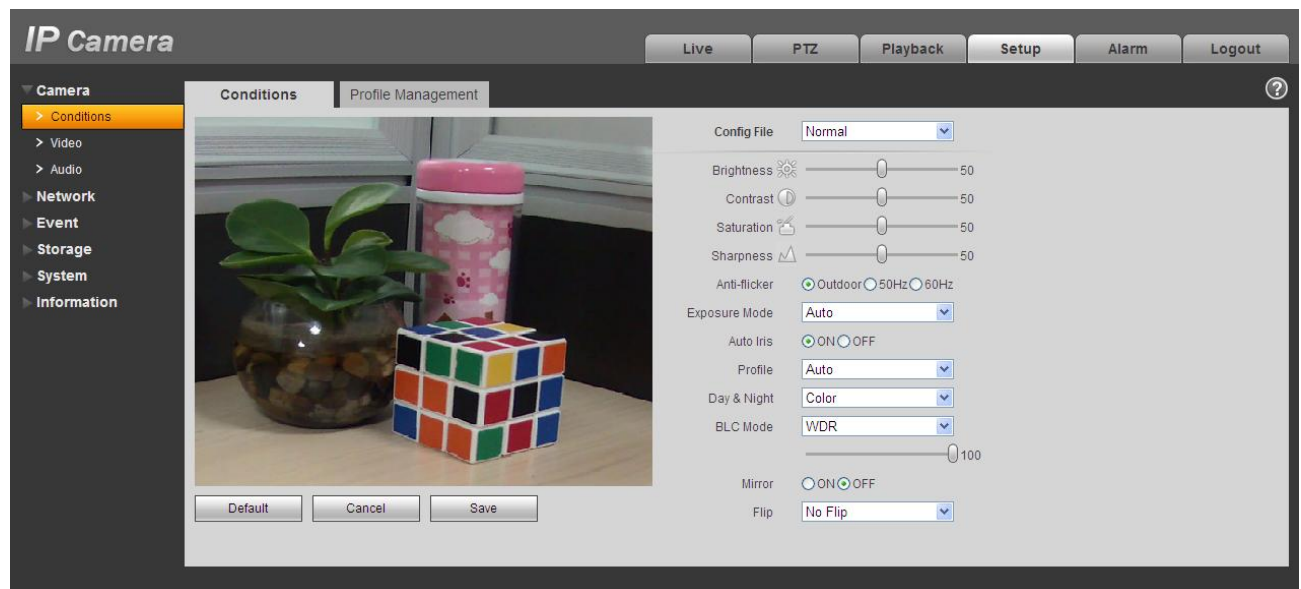



Figure 5-1

Please refer to the following sheet for detailed information.

Parameter	Function
Config File	You may select general, day and night mode.
Brightness	<p>It is to adjust monitor window bright. You can adjust this value if the video is too dark or too bright. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. Please note the video may become hazy if the value is too high.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.</p>

Contrast	<p>It is to adjust monitor window contrast. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. 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 .</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.</p>	
Saturation	<p>It is to adjust monitor window saturation. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60.</p> <p>The default value is 50.</p>	
Sharpness	<p>The value here is to adjust the edge of the video. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60.</p> <p>The default value is 50.</p>	
Anti-flicker	<ul style="list-style-type: none"> <li>● Outdoor: In this mode, you can switch exposure mode to get the effect under the corresponding exposure mode.</li> <li>● 50Hz: When the current is 50Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.</li> <li>● 60Hz: When the current is 60Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.</li> </ul>	
Exposure Mode	Auto	<p>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.</p>

	Low noise	<ul style="list-style-type: none"> <li>● 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.</li> <li>● For the same environments, the noise of the low noise mode shall be smaller than the noise of the auto mode.</li> </ul>
	Low motion blur	<ul style="list-style-type: none"> <li>● 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 weaker the blur is.</li> <li>● For the same environments, the noise of the low motion blur mode shall be smaller than that of the auto mode.</li> </ul>
	Manual	It is to display manual exposure value.
Auto Iris	<p>Before the setup, please make sure you have installed the auto iris.</p> <p>You can check the box before ON to enable this function. The auto iris may change if the light becomes different.</p> <p>When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control.</p> <p>This function is on by default.</p>	
Scene Mode	<p>It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default.</p> <p>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.</p> <ul style="list-style-type: none"> <li>● Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the video color is proper.</li> <li>● Sunny: The threshold of the white balance is in the sunny mode.</li> <li>● Night: The threshold of the white balance is in the night mode.</li> <li>● Customized: You can set the gain of the red/blue channel. The value ranges from 0 to 100.</li> </ul>	

Day&Night	<p>It is to set device color and the B/W mode switch. When config file is general, the default is auto. When config file is day, the default is color. When config file is night, the default is black &amp; white.</p> <ul style="list-style-type: none"> <li>● Color: Device outputs the color video.</li> <li>● 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.)</li> <li>● B/W: The device outputs the black and white video.</li> </ul>	
Backlight Mode	BLC	The device auto exposures according to the environments situation so that the darkest area of the video is cleared
	WDR	<p>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.</p> <p>The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.</p>
	HLC	<p>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.</p> <p>The value ranges from 0 to 100. The default value is 50 when HLC is on.</p> <p>HLC is enabled only when anti-flicker is outdoor and exposure mode is auto.</p>
	Off	It is to disable the BLC function. Please note this function is disabled by default.
Full-screen test	Click the  button on the video window, you can begin full-screen test.	
Flip	<p>It is to switch video up and bottom limit.</p> <p>This function is disabled by default.</p> <p>The video resolution shall be 720P or below if you want to flip 90°.</p>	
Mirror	<p>It is to switch video left and right limit.</p> <p>This function is disabled by default.</p>	

Cancel	It is to cancel the operation in current interface and restore previously saved operation.
Default	It is to set device default setup.

The profile management interface is shown as in Figure 5-2.

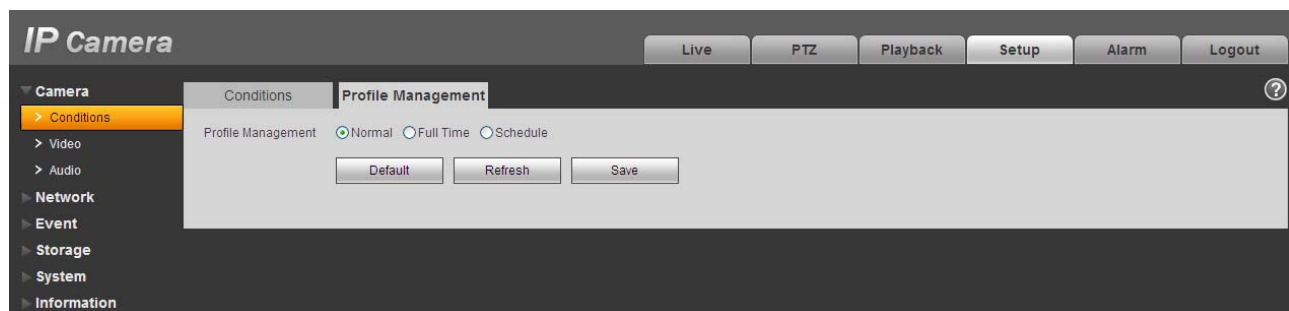


Figure 5-2

Profile management has three modes: general, full time and schedule. If you select general, the video will be configured as general. If you select full time, you must select either day or night, and the video will be configured accordingly. If you select schedule, you can decide detained time interval.

### Important

- The setup becomes immediately after you set.
- 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.
- You can see WDR option only if your camera supports WDR function. System does not support long-time exposure or low noise mode.

## 5.1.2 Video

### 5.1.2.1 Video bit stream

The video bit stream interface is shown as below. See Figure 5-3.

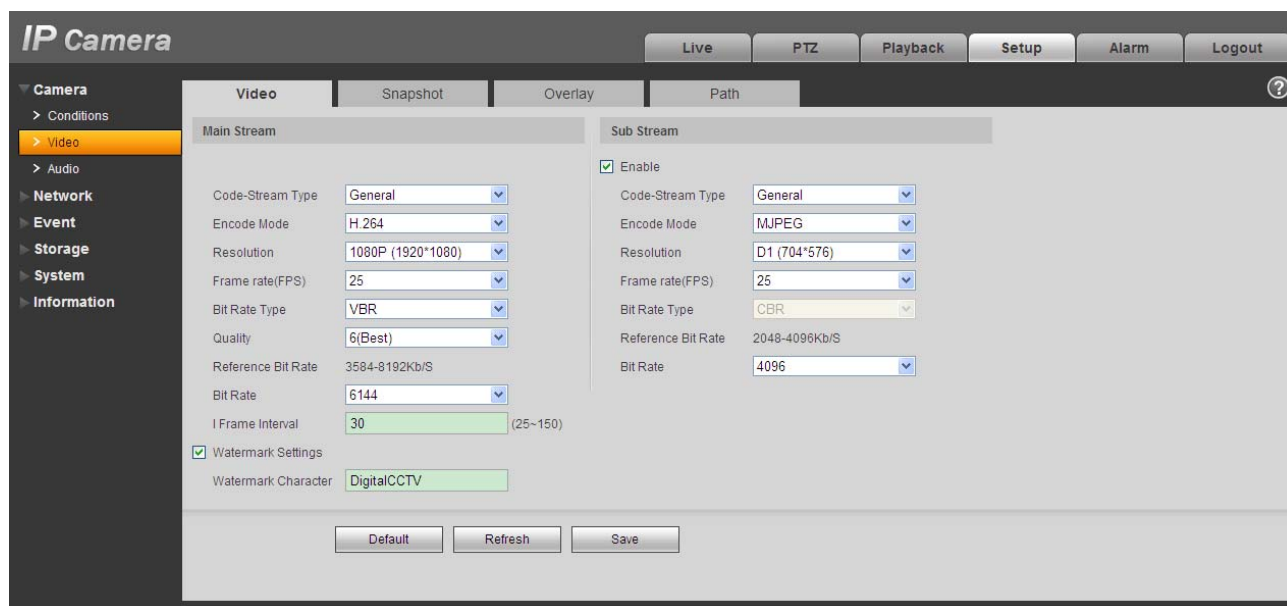


Figure 5-3

Please refer to the following sheet for detailed information.

Parameter		Function
Main stream	Bit stream type	<p>It includes general stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events.</p> <p>System supports active control frame function (ACF). It allows you to record in different frame rates.</p> <p>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.</p>
	Encode mode	<p>There are three options: H.264 (main profile standard), H.264H (high profile standard), H.264B (baseline standard)encode and MJPG encode.</p> <ul style="list-style-type: none"> <li>● H.264 : Main Profile encode mode.</li> <li>● H.264H : High Profile encode mode.</li> <li>● H.264B : Baseline Profile encode mode</li> <li>● 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.</li> </ul>

Parameter		Function
	Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p> <p><b>Important</b></p> <p>You can not set a resolution higher than 720P (not including 720P) when the flip function is in process.</p>
	Frame Rate	<p>PAL: 1~25f/s, NTSC: 1~30f/s..</p> <p>The frame rate may vary due to different resolutions.</p>
	Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p>
	Reference Bit Stream	Reference bit rate value according to the resolution and frame rate you have set.
	Bit Rate	<ul style="list-style-type: none"> <li>● In VBR, the bit rate here is the max value. In CBR, it is a fixed value.</li> <li>● See reference bit stream for recommended value.</li> </ul>
	I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>
	Watermark	<p>This function allows you to verify the video is tampered or not.</p> <p>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.</p>
Sub stream	Enable	<p>Please check the box here to enable extra stream function.</p> <p>This function is enabled by default.</p>
	Bit stream type	General bit stream.



Parameter		Function
	Encode mode	<p>There are three options: H.264(main profile standard, H.264H (high profile standard), H.264B(baseline standard)encode and MJPG encode.</p> <ul style="list-style-type: none"> <li>● The H.264, H.264H 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.</li> <li>● 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.</li> </ul>
	Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p>
	Frame Rate	<p>PAL: 1~25f/s, NTSC: 1~30f/s..</p> <p>The frame rate may vary due to different resolutions.</p>
	Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p>
	Recommended Bit	<p>Recommended bit rate value according to the resolution and frame rate you have set.</p>
	Bit Rate	<ul style="list-style-type: none"> <li>● 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.</li> <li>● The value is null in VBR mode.</li> <li>● Please refer to recommend bit rate for the detailed information.</li> </ul>
	I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>

#### 5.1.2.2 Snapshot

The snapshot interface is shown as in Figure 5-4.

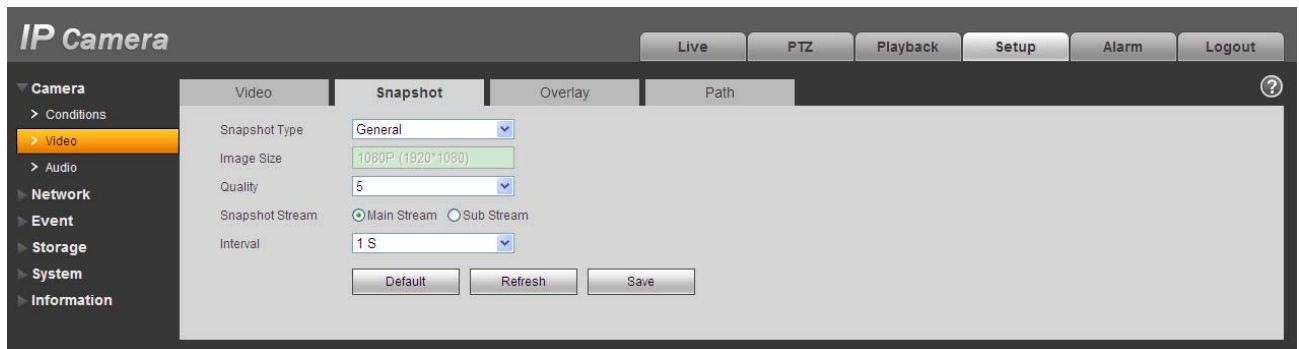


Figure 5-4

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.
Snapshot bit stream	It is to set snapshot bit rate as main or sub.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s.

#### 5.1.2.3 Video Overlay

The video overlay interface is shown as in Figure 5-5.

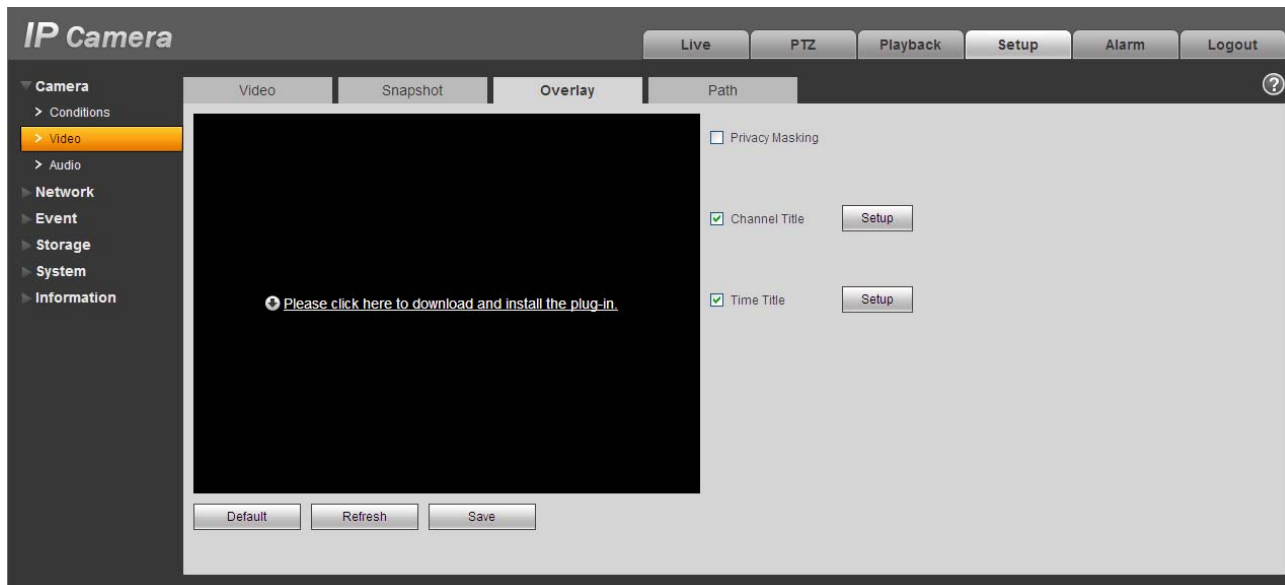




Figure 5-5

Please refer to the following sheet for detailed information.

Parameter	Function
Privacy mask	<ul style="list-style-type: none"> <li>● Here you can privacy mask the specified video in the monitor video.</li> <li>● System max supports 4 privacy mask zones.</li> </ul>
Time Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays time information in video window.</li> <li>● You can use the mouse to drag the time tile position.</li> </ul>
Channel Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays channel information in video window.</li> <li>● You can use the mouse to drag the channel tile position.</li> </ul>

#### 5.1.2.4 Path

The storage path interface is shown as in Figure 5-6.

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 and C:\RecordDownload. Please click the Save button to save current setup.

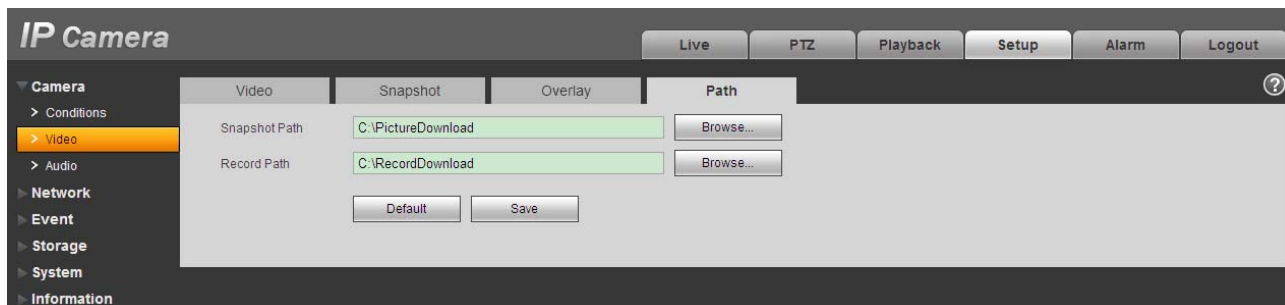


Figure 5-6

### 5.1.3 Audio

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

The audio interface is shown as below. See Figure 5-7.

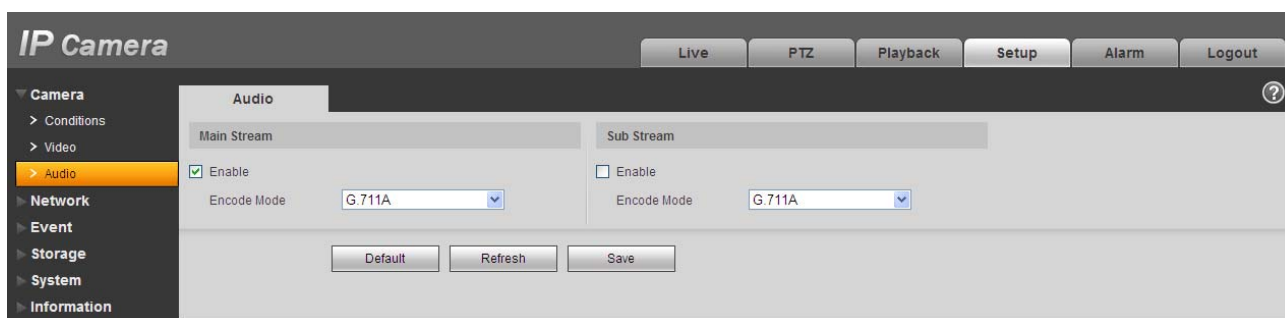


Figure 5-7

Please refer to the following sheet for detailed information.

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

## 5.2 Network

### 5.2.1 TCP/IP

The TCP/IP interface is shown as in Figure 5-8.

Figure 5-8

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	<p>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.</p> <p>Please note the device needs to reboot to activate the new setup once you modify the default setup.</p>
Mode	<p>There are two modes: static mode and the DHCP mode.</p> <ul style="list-style-type: none"> <li>● The IP/submask/gateway are null when you select the DHCP mode to auto search the IP.</li> <li>● If you select the static mode, you need to set the IP/submask/gateway manually.</li> <li>● If you select the DHCP mode, you can view the IP/submask/gateway from the DHCP.</li> <li>● If you switch from the DHCP mode to the static mode, you need to reset the IP parameters.</li> <li>● Besides, IP/submask/gateway and DHCP are read-only when the PPPoE dial is OK.</li> </ul>

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.	<p>You can use ARP/Ping command to modify or set the device IP address if you know the device MAC address.</p> <p>Before the operation, please make sure the network camera and the PC in the same LAN. This function is on by default.</p> <p>You can refer to the steps listed below.</p> <p><b>Step 1:</b> Get an IP address. Set the network camera and the PC in the same LAN.</p> <p><b>Step 2:</b> Get the physical address from the label of the network camera.</p> <p><b>Step 3:</b> Go to the Run interface and then input the following commands.</p> <pre>arp -s &lt;IP Address&gt; &lt;MAC&gt; ping -l 480 -t &lt;IP Address&gt;</pre> <p>Such as: arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125</p> <p><b>Step 4:</b> Reboot the device.</p> <p><b>Step 5:</b> 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.</p> <p><b>Step 6:</b> Open the browse and then input http://&lt;IP address&gt;. Click the Enter button, you can access now.</p>

### 5.2.2 Connection

The connection interface is shown as in Figure 5-9.

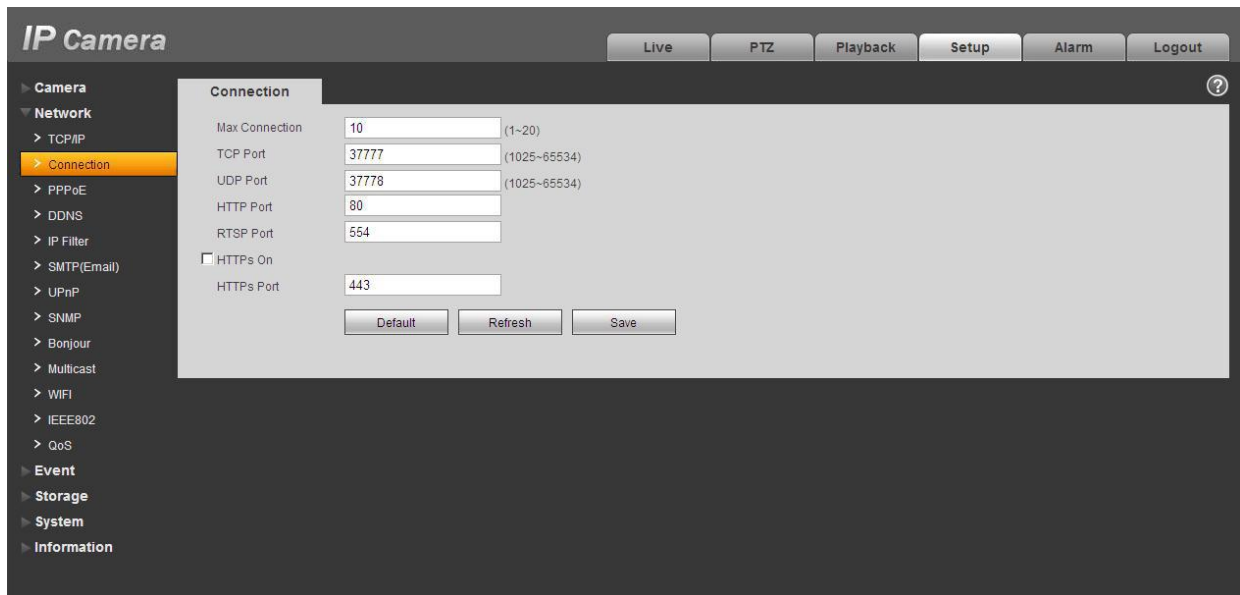


Figure 5-9

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	<p>The default value is 554. Rtsp stream query format is:</p> <p>Main stream:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=0</p> <p>Sub stream:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=1</p> <p>You need to input the following four items manually.  username/password/IP and port.</p> <p>The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value.</p> <p>Follow standard RTP protocol and when encode mode is MJPEG, the max resolution only supports 2040*2040.</p>

HTTPs Enable	The default value is 443.
-----------------	---------------------------

### 5.2.3 PPPoE

The PPPoE interface is shown as in Figure 5-10.

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

**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.**

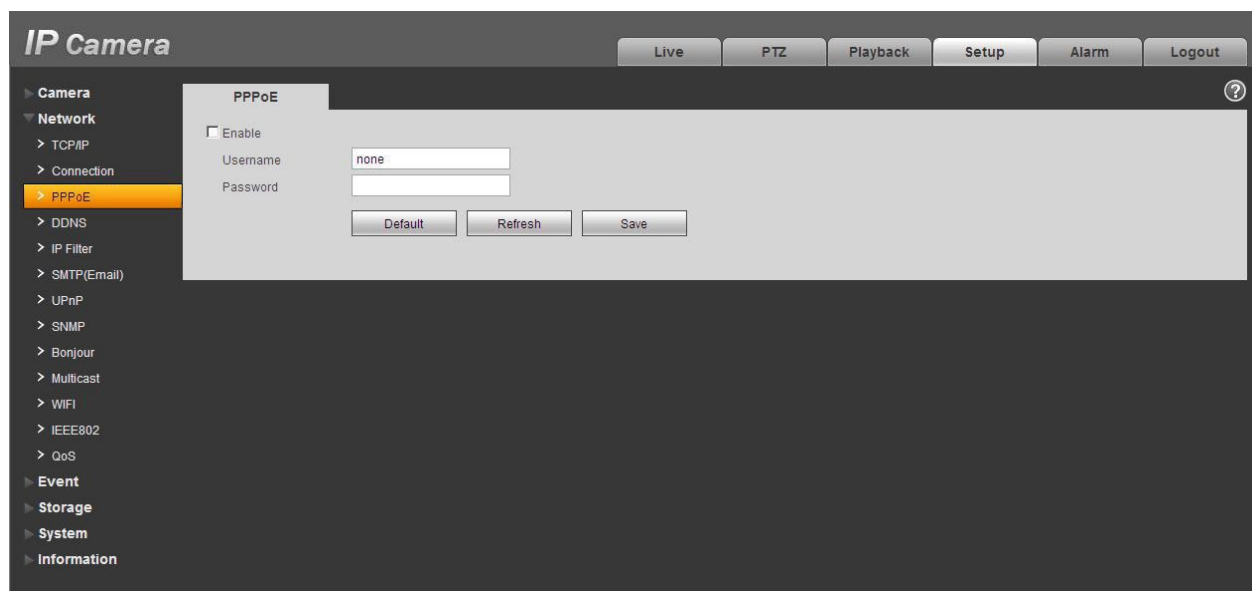


Figure 5-10

### 5.2.4 DDNS

The DDNS interface is shown as in Figure 5-11.

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 changed. When the device connects to WLAN, you should disable UPnP.



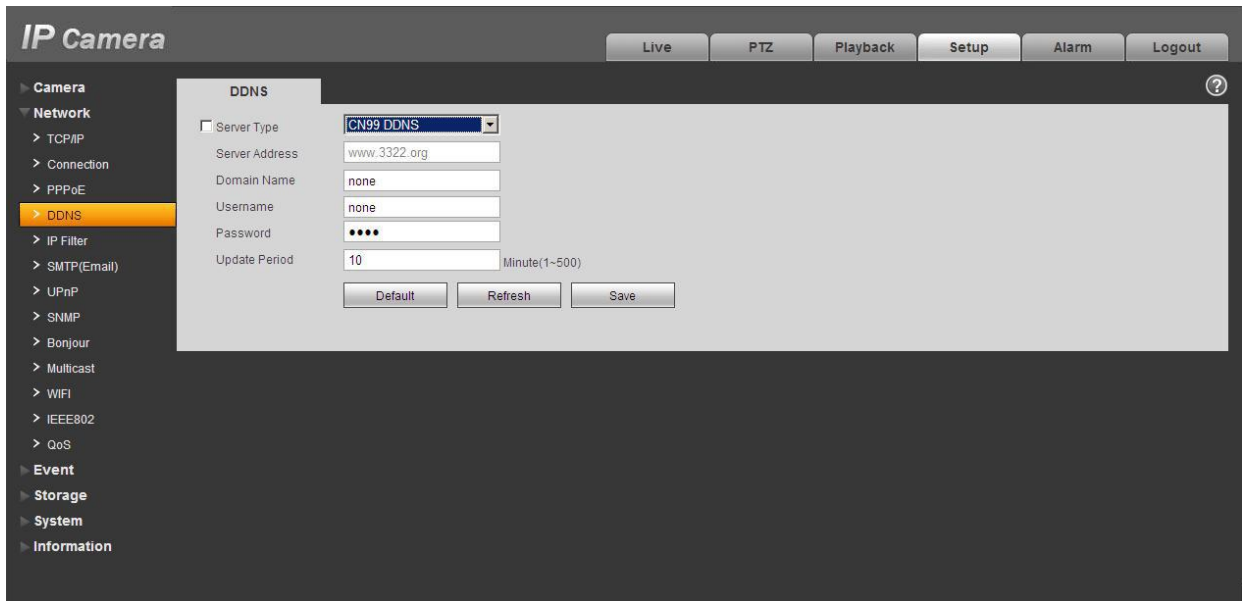


Figure 5-11

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 QUICK DDNS protocol means you use your self-defined private protocol to realize DDNS function.
Server Address	DDNS server IP address
Domain Name	Your self-defined domain name.
Username	The user name you input to log in the server.
Password	The password you input to log in the server.
Update period	<ul style="list-style-type: none"> <li>● Device sends out alive signal to the server regularly.</li> <li>● You can set interval value between the device and DDNS server here.</li> </ul>

The DDNS interface is shown as in Figure 5-12.

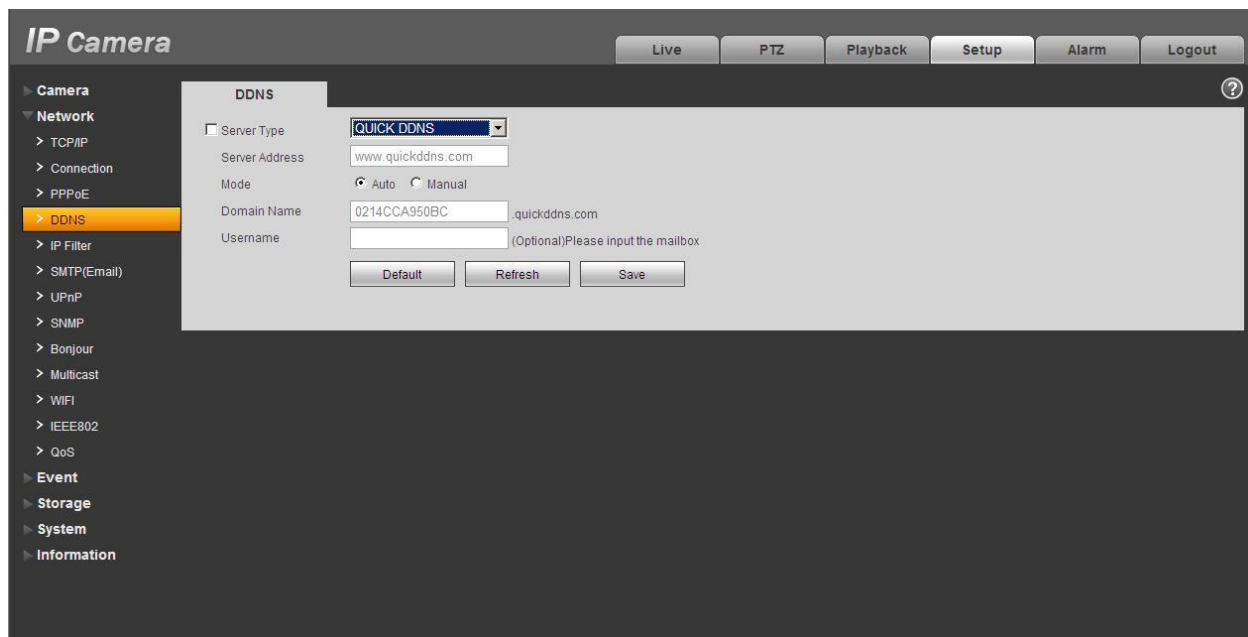


Figure 5-12

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function. The QUICK DDNS means you use your self-defined private protocol to realize DDNS function.
Server Address	DDNS server IP address. Under QUICK DDNS the default server address is www.quickddns.com
Mode	The default is auto, and you can select manual.
Domain Name	Auto and self-defined domain names are both MAC address.quickddns.com. You can self-define prefix.
Test	It is to test domain name. It is available only under manual mode.
Username	The user name you input to log in the server. Optional.

### 5.2.5 IP filter

The IP filter interface is shown as in Figure 5-13.

You can enable IP filter function so that some specified IP/MAC user can access the network camera. You can add IP address or IP address section.

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

Here you can add IP address and MAC address. You must add these address before enabling the trusted sites.

Please note: You must set MAC address in the same network segment.

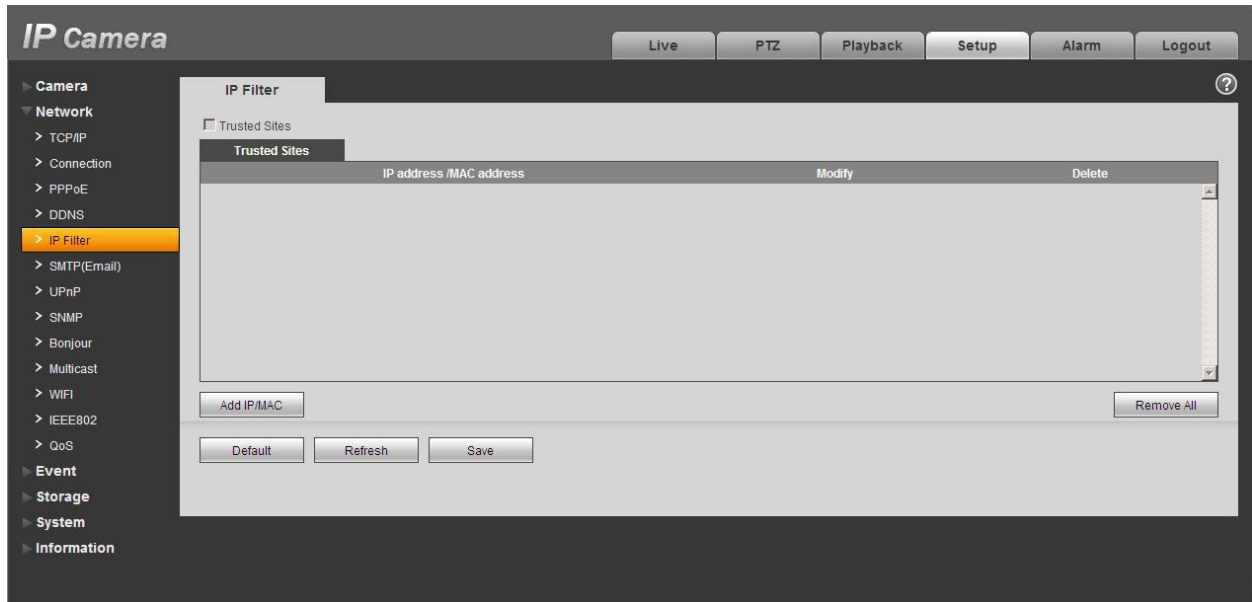


Figure 5-13

### 5.2.6 SMTP (e-mail)

The SMTP interface is shown as in Figure 5-14.

The screenshot shows the 'IP Camera' web interface. The top navigation bar includes 'Live', 'PTZ', 'Playback', 'Setup', 'Alarm', and 'Logout'. The left sidebar menu is expanded to 'SMTP (Email)'. The main configuration area for 'SMTP (Email)' includes the following fields and options:

- SMTP Server:** none
- Port:** 25
- Anonymity:** ☐ (unchecked)
- Username:** anonymity
- Password:** masked with dots
- Sender:** none
- Authentication:** None (dropdown menu)
- Title:** IPC Message
- Attachment:** ☒ (checked)
- Mail Receiver:** (empty text box with add/remove buttons)
- Interval:** 0 (text box) Second(0~3600)
- Health Mail:** ☐ (unchecked)
- Update Period:** 60 (text box) Second(1~3600)
- Buttons:** Email Test, Default, Refresh, Save

Figure 5-14

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 abnormality 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 abnormality 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.

### 5.2.7 UPnP

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

Here you can also add, modify or remove UPnP item. For UPnP on different routers, you must disable UPnP function. See Figure 5-15.

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 network camera can auto detect it via the "My Network Places"

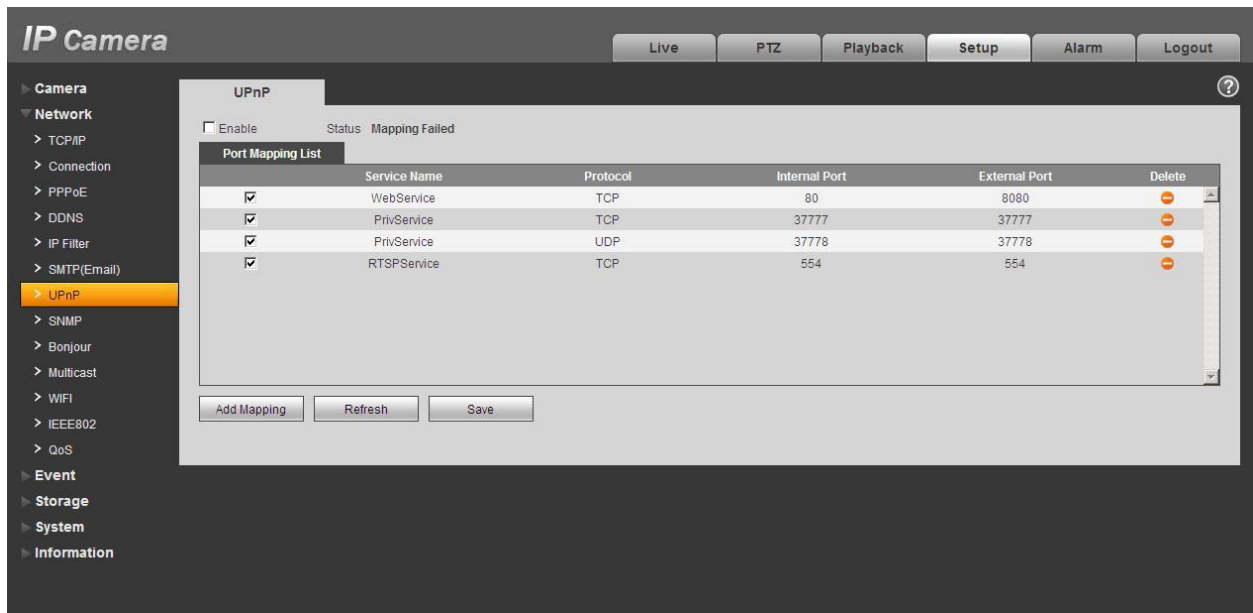


Figure 5-15

### 5.2.8 SNMP

The SNMP interface is shown as in Figure 5-16.

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.

The screenshot shows the 'SNMP' configuration page in the IP Camera web interface. The left sidebar has a tree view with categories: Camera, Network (expanded), Connection, PPPoE, DDNS, IP Filter, SMTP(Email), UPnP, **SNMP** (selected), Bonjour, Multicast, WIFI, IEEE802, QoS, Event, Storage, System, and Information. The main content area is titled 'SNMP' and contains the following fields:

- SNMP Port: 161 (range 1~65535)
- Read Community: public
- Write Community: private
- Trap Address: (empty)
- Trap Port: 162 (range 1~65535)
- SNMP Version: ☐ SNMP v1, ☐ SNMP v2, ☒ SNMP v3
- Read-only Username: public \*
- Authentication Type: MD5 (dropdown)
- Authentication Password: (empty)
- Encryption Type: CBC-DES (dropdown)
- Encryption Password: (empty)
- Read&write Username: private \*
- Authentication Type: MD5 (dropdown)
- Authentication Password: (empty)
- Encryption Type: CBC-DES (dropdown)
- Encryption Password: (empty)

At the bottom of the form are three buttons: Default, Refresh, and Save.

Figure 5-16

Please refer to the following sheet for detailed information.

Parameter	Function
SNMP port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. 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.

Parameter	Function
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.
SNMP version	<ul style="list-style-type: none"> <li>● SNMP V1: system only processes the information of V1.</li> <li>● SNMP V2: system only processes the information of V2.</li> <li>● SNMP V3: you can set user name and password. There is account security verification when the server wants to connect to the device. At the same time, the v1 and V2 is null and cannot select.</li> </ul>
Username read-only	Only when SNMP version is SNMP v3, you shall config this parameter. The default is public.
Authentication	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Username read/write	Only when SNMP version is SNMP v3, you shall config this parameter. The default is private.
Authentication	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.

### 5.2.9 Bonjour

The Bonjour interface is shown as below. See Figure 5-17.

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 network camera device and then access if you do not know the network camera information such as IP address.

You can view the server name when the network camera 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 network camera of the Bonjour function in the LAN.

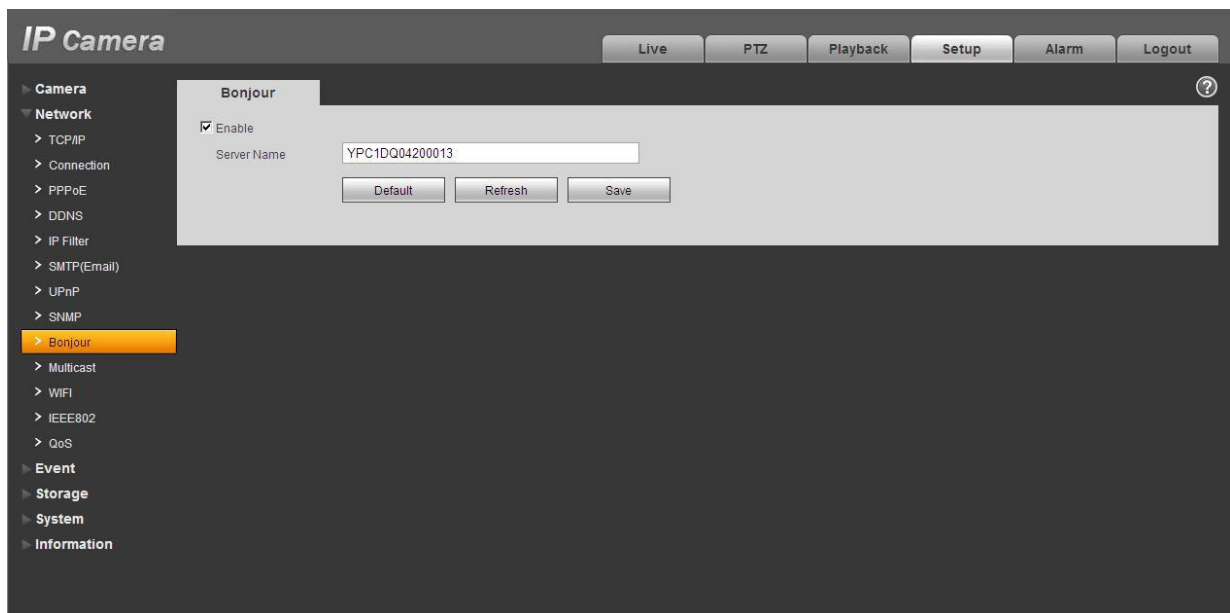


Figure 5-17

### 5.2.10 Multicast

The multicast interface is shown as in Figure 5-18.

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.

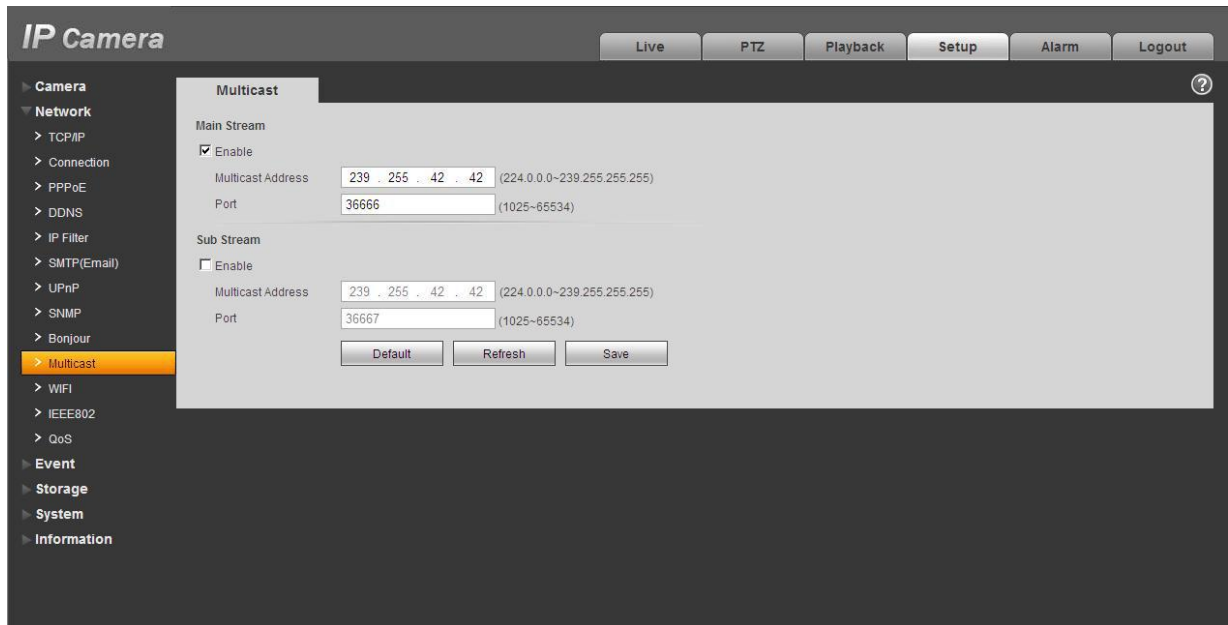


Figure 5-18

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Select to enable multicast function. Main stream and sub stream cannot be used at the same time.
Multicast address	Main/sub stream multicast address is 239.255.42.42 and its range is 224.0.0.0~239.255.255.255.
Port	Multicast port. Main stream is 36666, sub stream is 36667 and the range is 1025~65534.

### 5.2.11 WIFI

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

The WIFI interface is shown as in Figure 5-19.

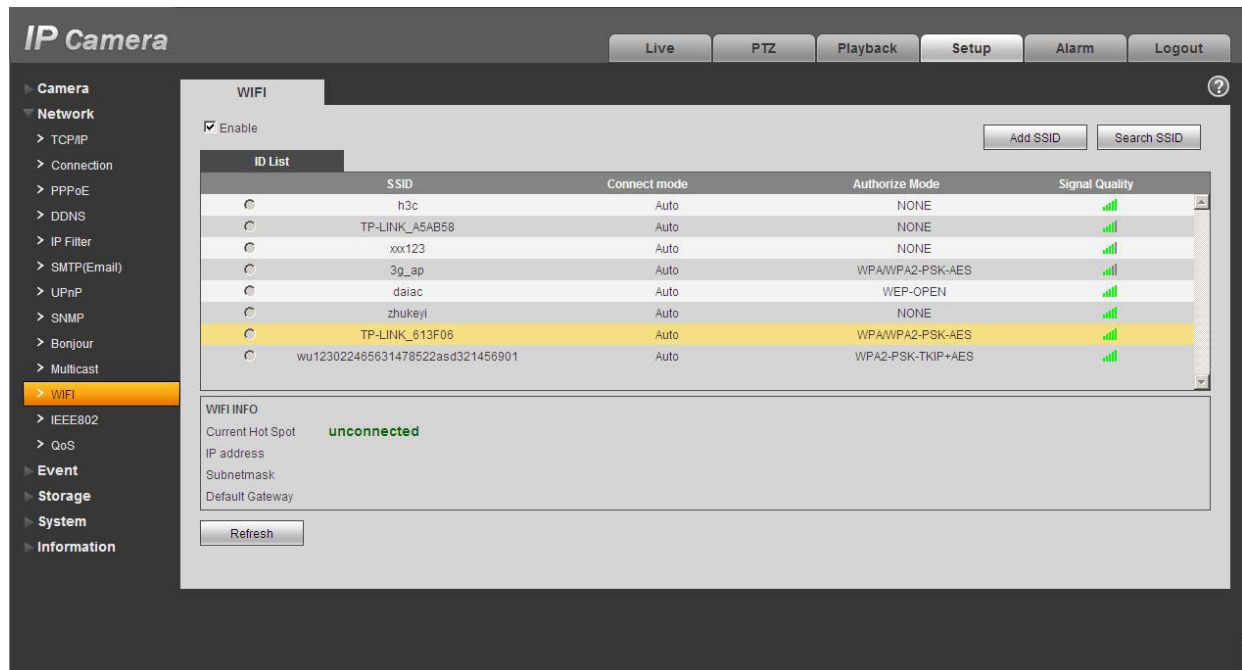


Figure 5-19

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. Click on add wireless ID, and add designated ID in dialog box. Please make sure that you can find the just added ID in list, otherwise you cannot use this ID. See Figure 5-20.

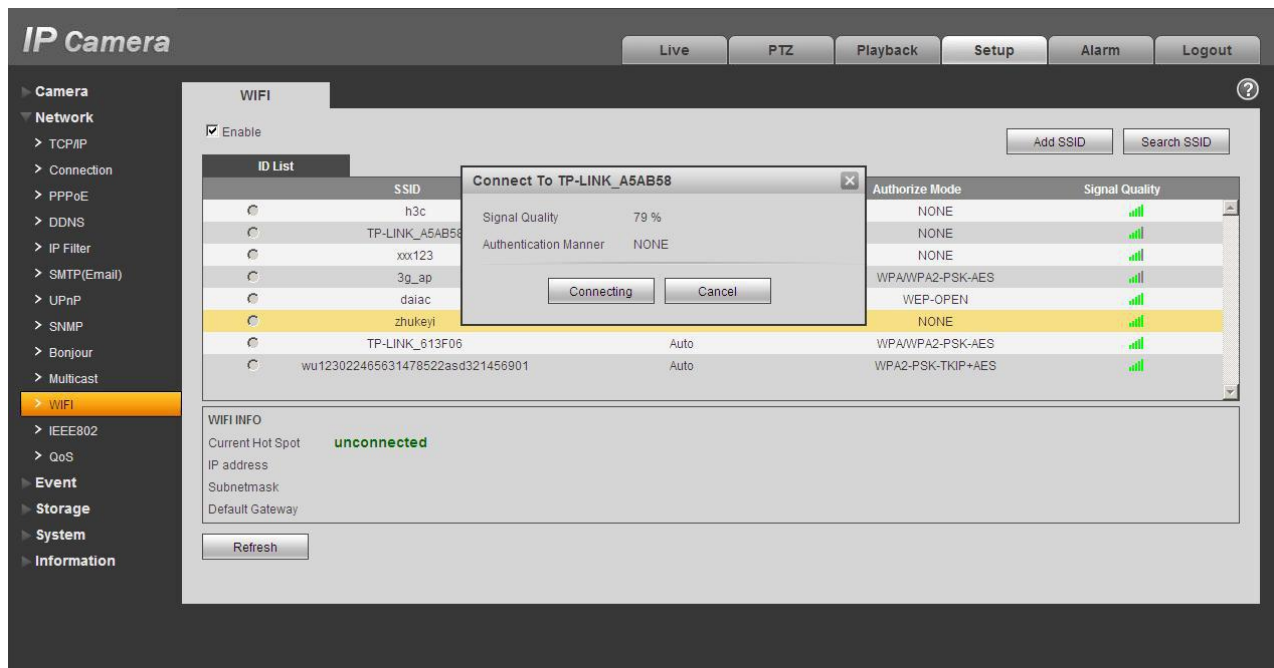


Figure 5-20

## 5.2.12 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 5-21.

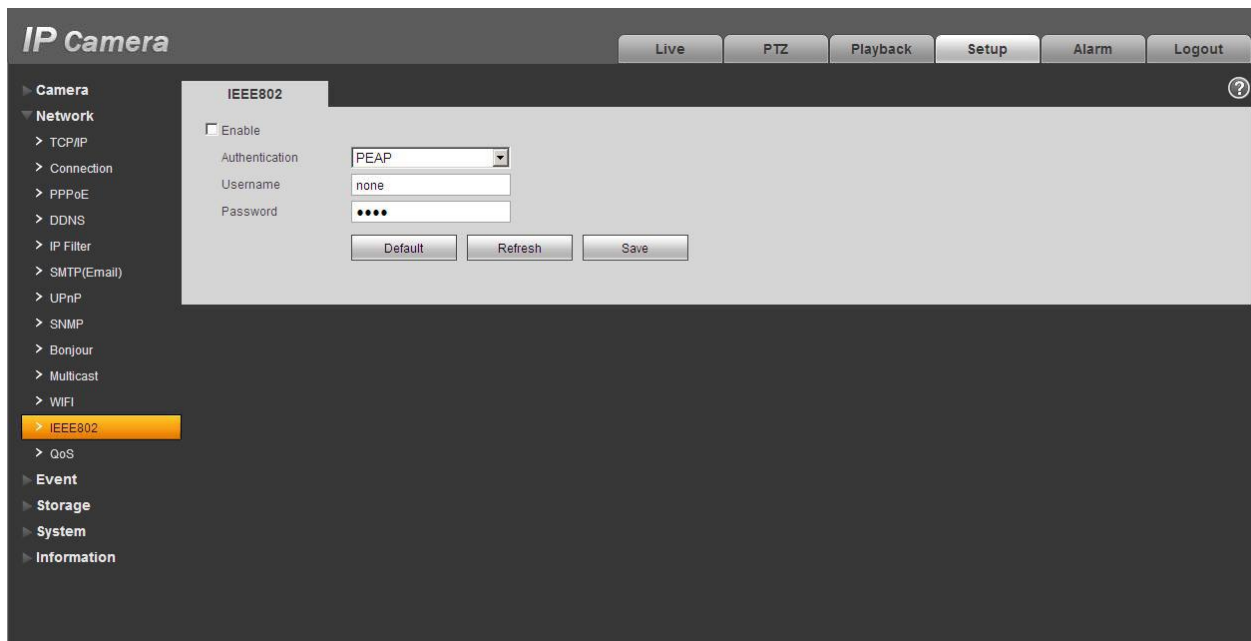


Figure 5-21

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.

### 5.2.13 QoS

The QoS interface is shown as below. See Figure 5-22.

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.

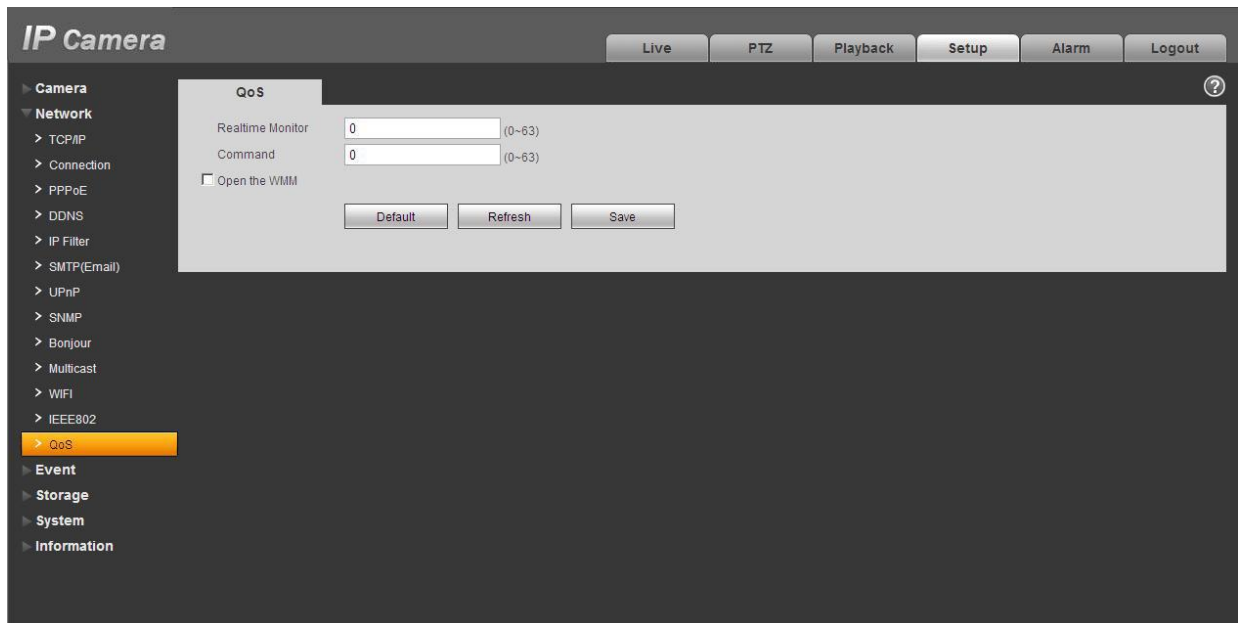


Figure 5-22

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.
Enable wireless QoS	Check it to enable QoS.

### 5.2.14 3G

**Note:** This function is only for series with 3G module.

The 3G interface is shown as in Figure 5-23.

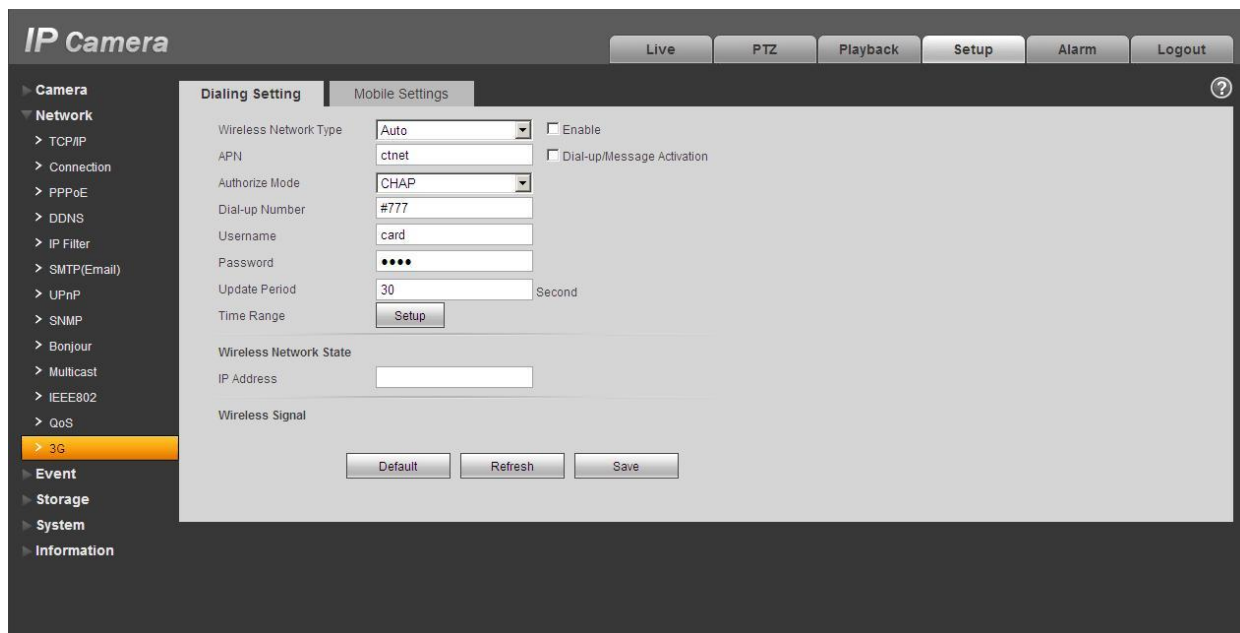


Figure 5-23

#### 5.2.14.1 Dial-up

The dial-up interface is shown as in Figure 5-24.

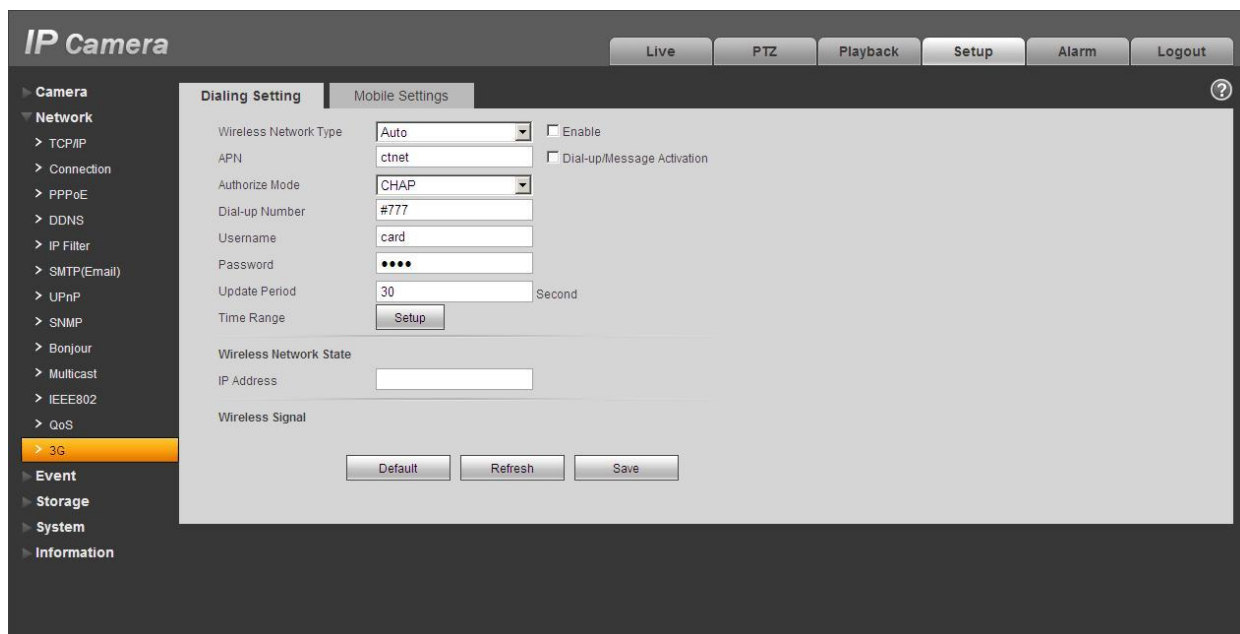


Figure 5-24

Please refer to the following sheet for detailed information.

Parameter	Function
Wireless connection type	The default is auto and it supports dial-up, sms and incoming call.
Enable	Check to enable 3G module.
Authentication	This function depends on your local 3G provider.
Dial-up	This function depends on your local 3G provider.
Username	This function depends on your local 3G provider.
Password	This function depends on your local 3G provider.
Auto period	It is period for device to receive 3G signal every 30s other than scheduled period. The default is 30s.
Interval	You can set dial-up interval. You also can dial if you enable dial-up/sms. The dial-up/sms and dial-up interval is related.
IP address	It displays received IP when 3G dial-up succeeds.

#### 5.2.14.2 Mobile Phone

The mobile phone interface is shown as in Figure 5-25.

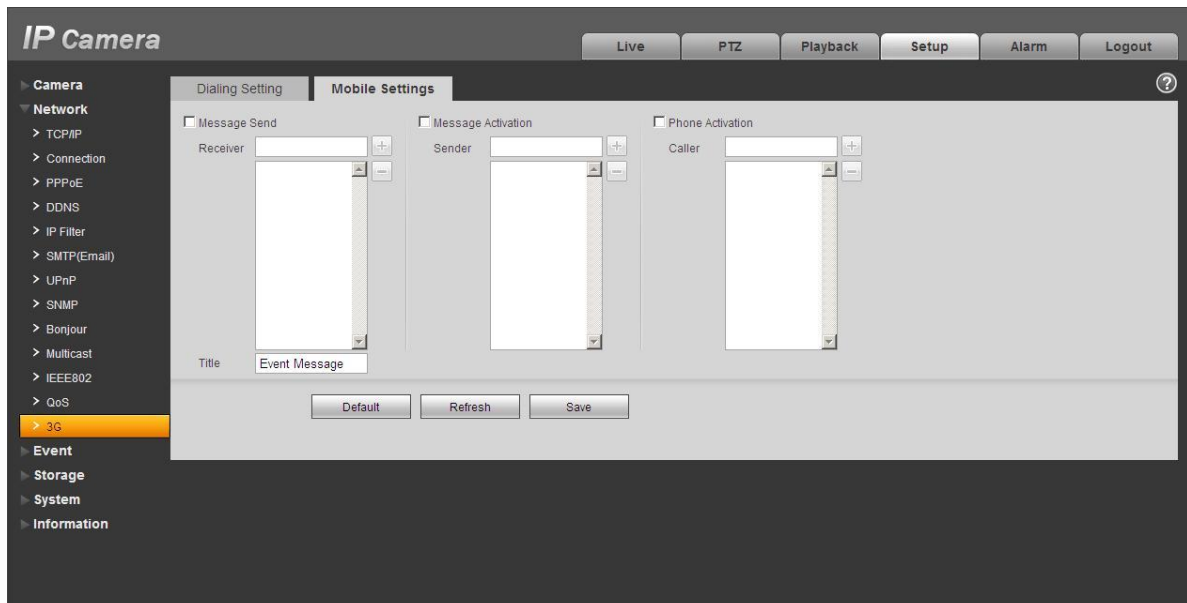




Figure 5-25

Please refer to the following sheet for detailed information.

Parameter	Function
SMS sending	In event management, check corresponding sms, so when there is event, a sms will be sent to mobile phone in corresponding receiving list. To use this function, you shall check sms enable in event management interface.
SMS enable	Mobile phone numbers in the list can enable/disable dial-up function and reboot device by sending sms to SIM card in the device.
Tel Activation	Mobile phone numbers in the list can call the SIM card in the device to enable/disable dial-up function.

## 5.3 Event

### 5.3.1 Video detect

#### 5.3.1.1 Motion Detect

The motion detect interface is shown as in Figure 5-26.

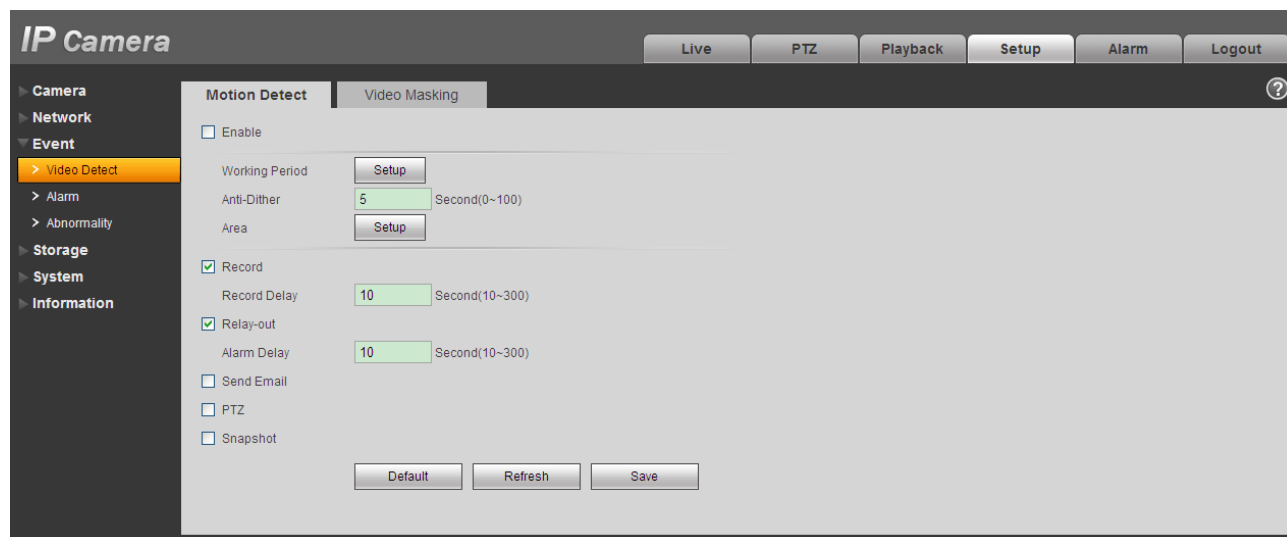


Figure 5-26

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable motion detection function.
Working Period	Here you can set arm/disarm period. Click on set button to open period setup menu.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Area	Here you can set motion detection region and its sensitivity and area. The default covers all regions. You must click on save before enabling your setup.
Record	When record is enabled, you can trigger motion detection to activate record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Parameter	Function
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	You need to check the box here so that system can backup motion detection snapshot file.

See Figure 5-27.

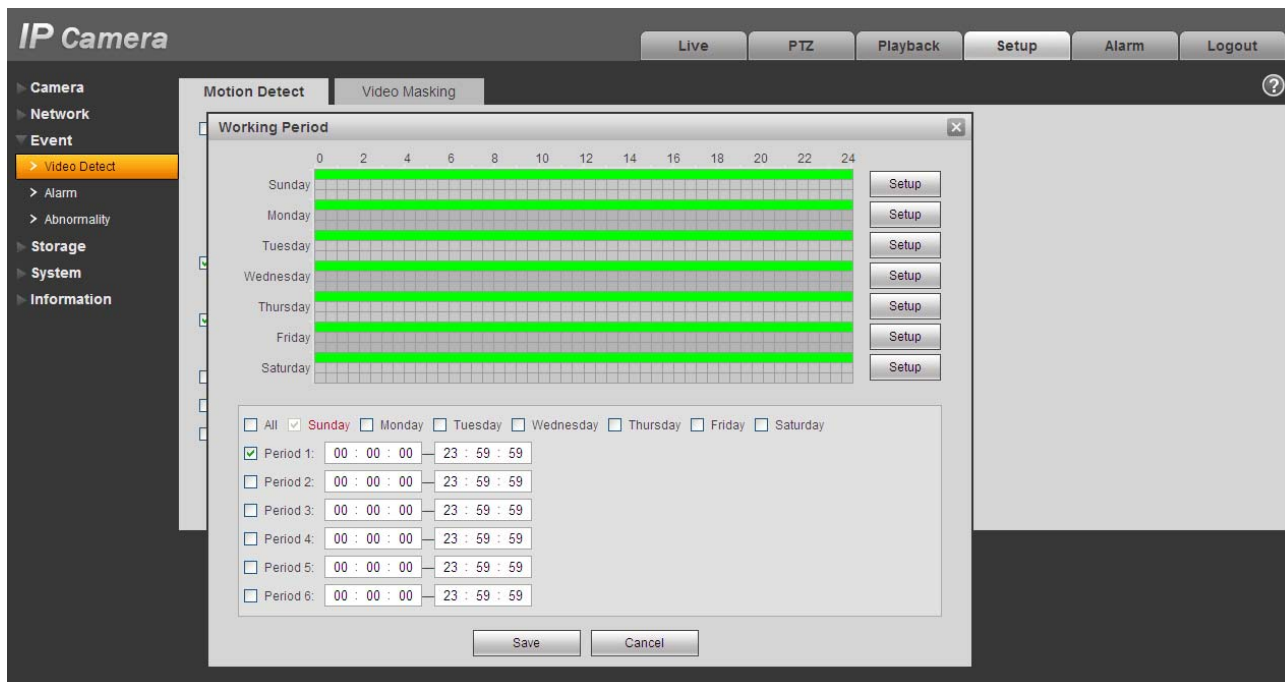


Figure 5-27

See Figure 5-28.

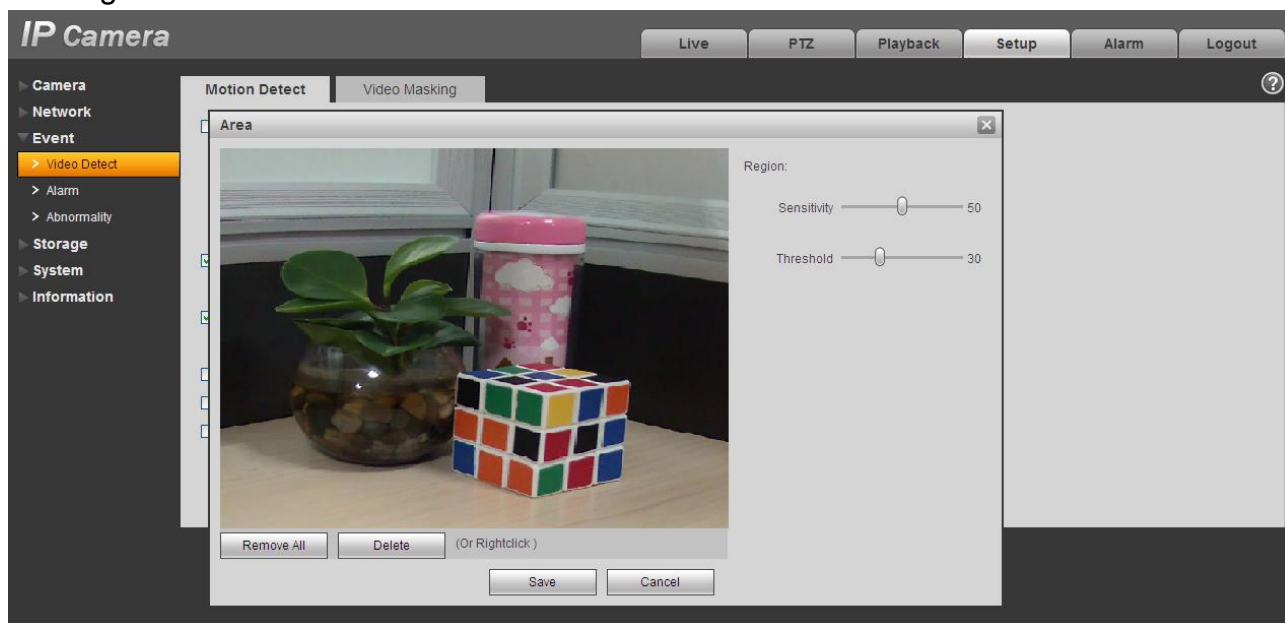


Figure 5-28

Please refer to the following sheet for detailed information.

Parameter	Function
Sensitivity	It is sensitivity of brightness as motion detection is more possible to be trigger with high sensitivity. You can set up to four areas. The range is 0~100. The recommenced value is 30~70. The default is 50.
Area threshold	It is to check target object area related to detection area. The lower the area threshold, the easier to trigger motion detection. You can set up to four areas. The range is 0~100. The recommenced value is 10~50.
Remove all	Clear all areas.
Delete	Delete selected area.

### 5.3.1.2 Video Masking

The video masking interface is shown as in Figure 5-29 and Figure 5-30.

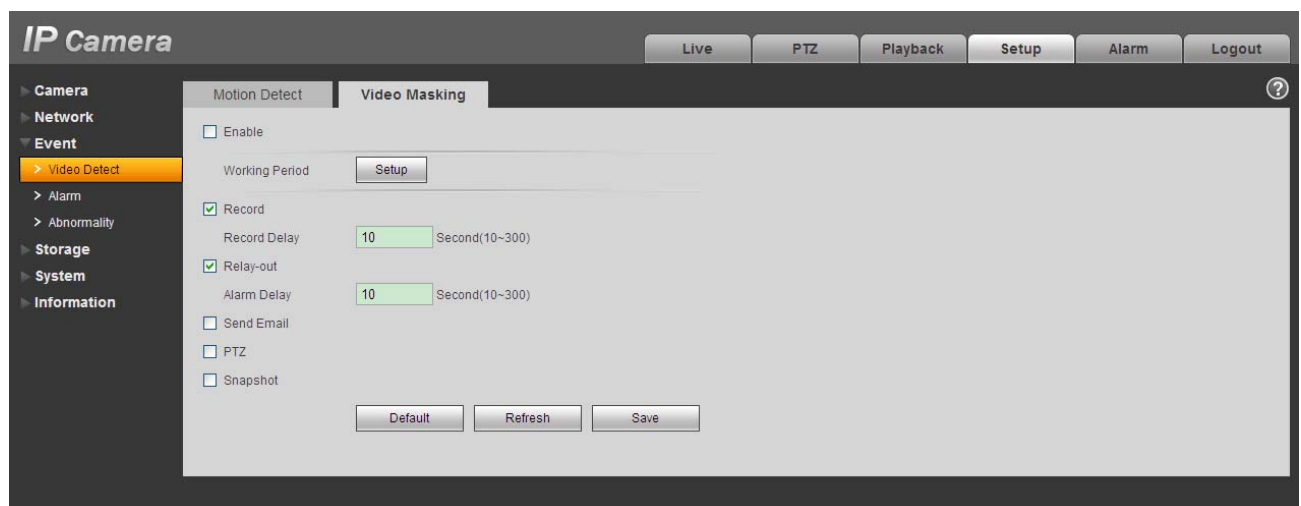


Figure 5-29

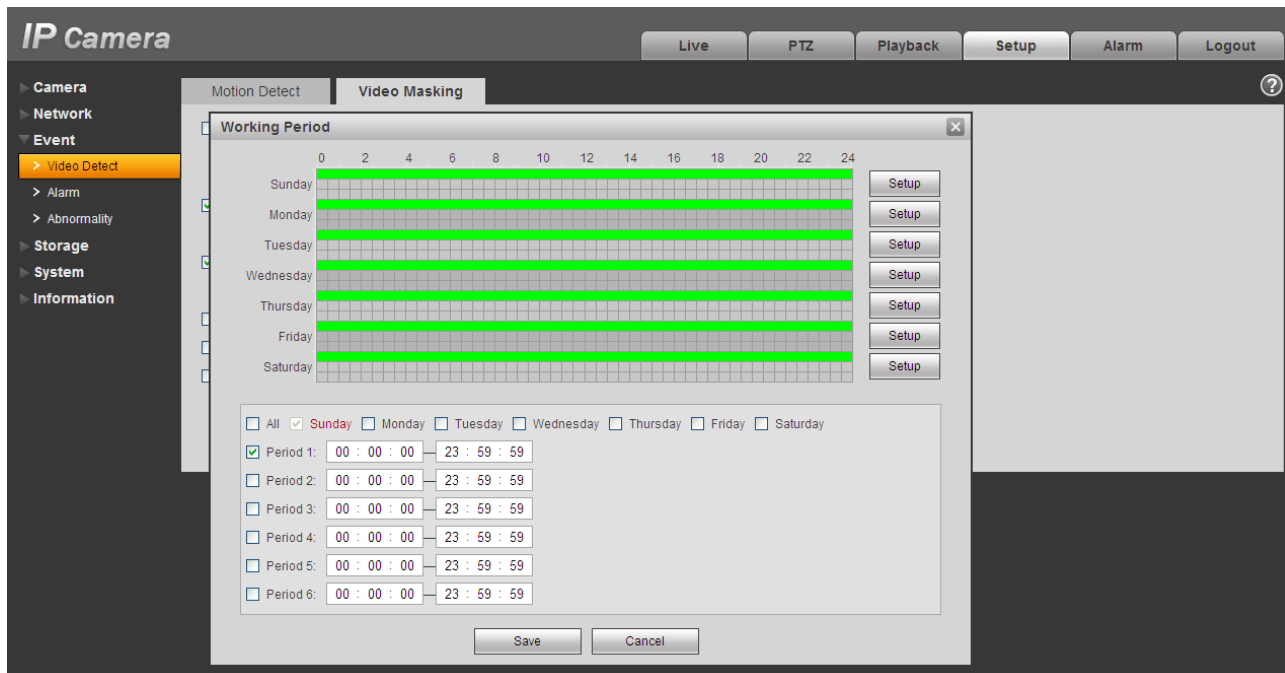


Figure 5-30

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Working period	<ul style="list-style-type: none"> <li>Video masking function becomes activated in the specified periods.</li> <li>There are six periods in one day. Please draw a circle to enable corresponding period.</li> <li>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.</li> <li>Click OK button, system goes back to motion detection interface, please click save button to exit.</li> </ul>
Record	After record is enabled, video masking can activate video.
Record delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs.
PTZ	<ul style="list-style-type: none"> <li>Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	After snapshot is enabled and alarm happens, the system will automatically snapshot and alarm.

### 5.3.2 Alarm

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

#### 5.3.2.1 Alarm activation

The alarm activation interface is shown as in Figure 5-31.

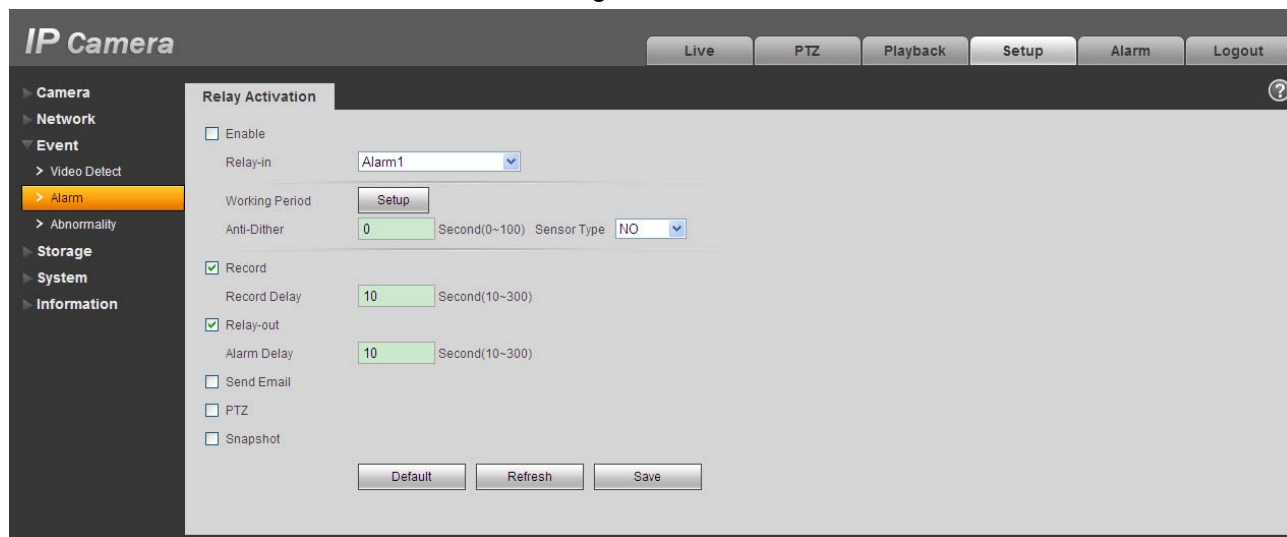


Figure 5-31

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Alarm input	The default is alarm 1 and for some devices may be alarm 2.

Parameter	Function
Working period	<ul style="list-style-type: none"> <li>● This function becomes activated in the specified periods.</li> <li>● There are six periods in one day. Please draw a circle to enable corresponding period.</li> <li>● 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.</li> <li>● Click OK button, system goes back to motion detection interface; please click save button to exit.</li> </ul>
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.
Record	System auto activates motion detection channel to record once alarm occurs (working with motion detection function).
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	<ul style="list-style-type: none"> <li>● There is 1-channel alarm output.</li> <li>● Corresponding to motion detection alarm output port.</li> <li>● Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.</li> </ul>
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	After you enabled snapshot, the system will automatically snapshot if alarm occurs.

### 5.3.3 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 5-32 through Figure 5-36.

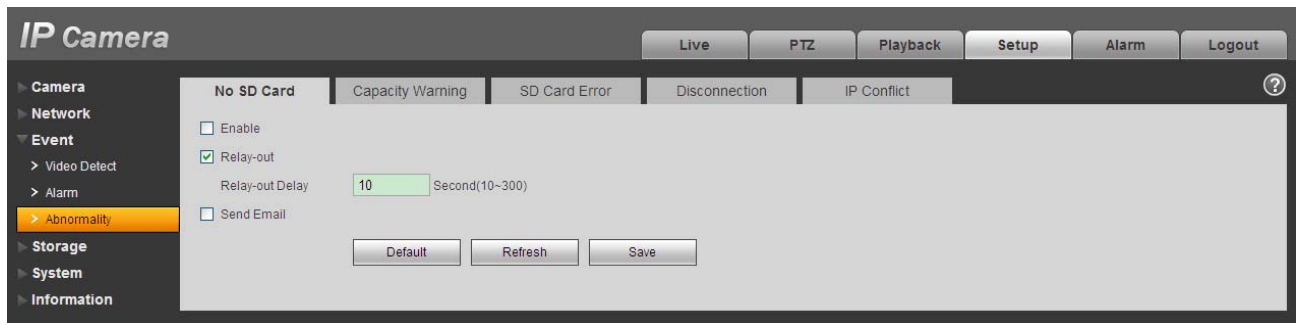


Figure 5-32

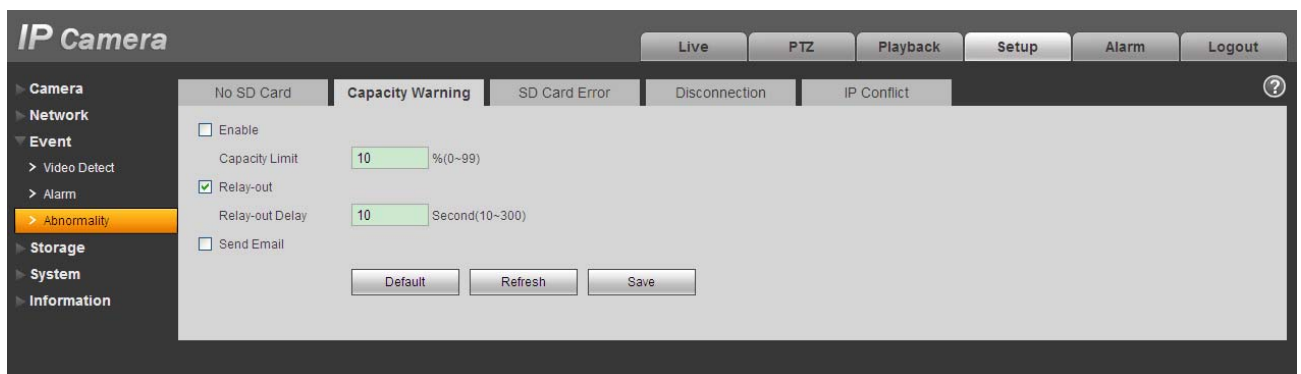


Figure 5-33

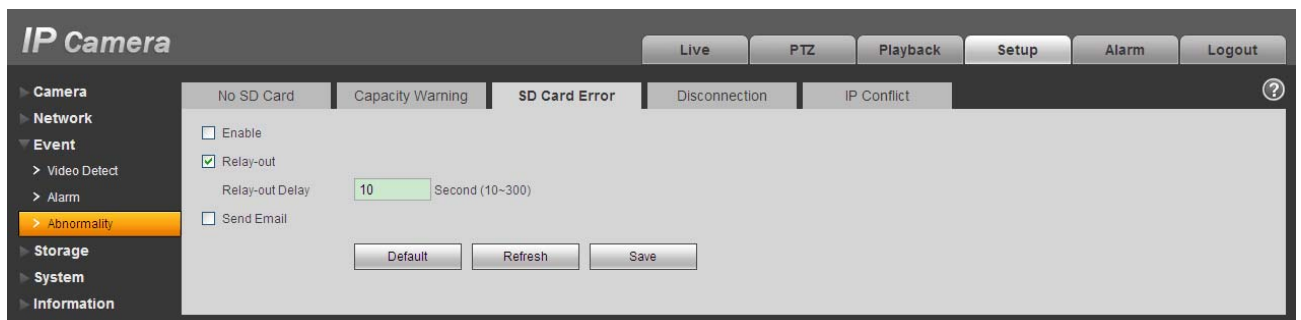


Figure 5-34



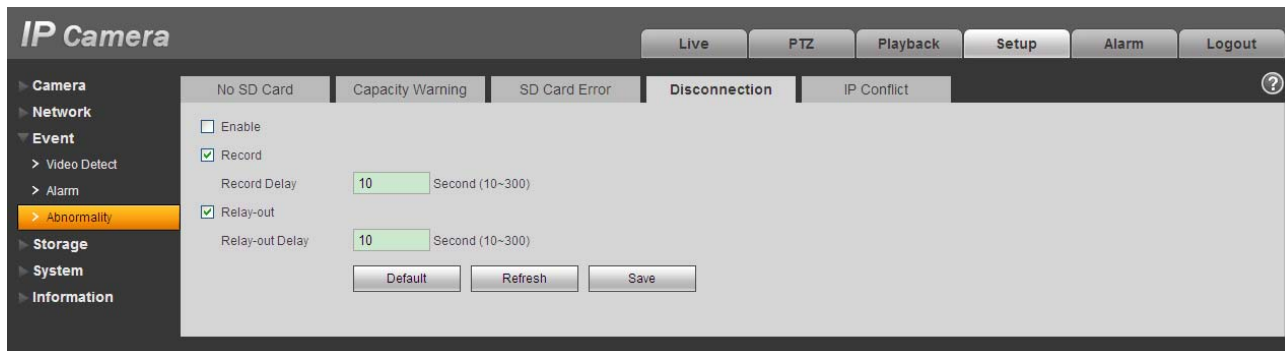


Figure 5-35

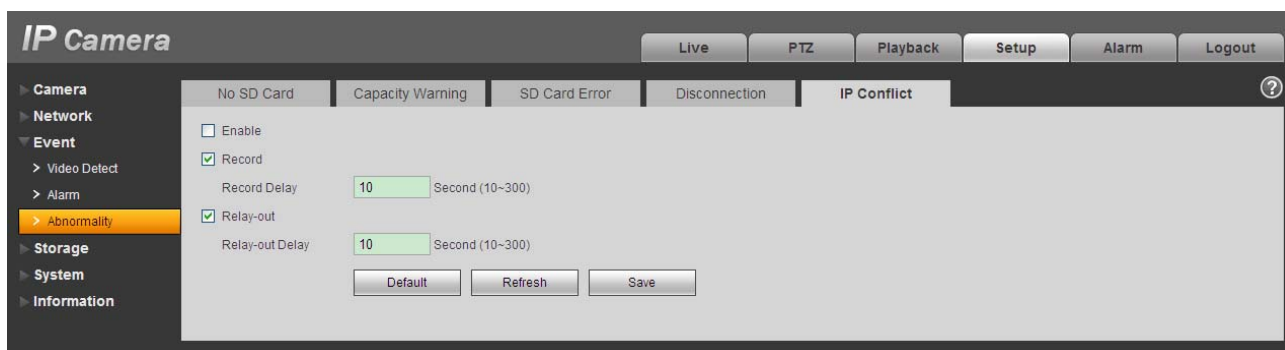


Figure 5-36

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	<ul style="list-style-type: none"> <li>The abnormal events include: no disk, no space, disk error, net error, offline, IP conflict.</li> <li>Threshold: You can set the minimum percentage value here. The device can alarm when capacity is not sufficient.</li> <li>You need to draw a circle to enable this function.</li> </ul>
Record	<p>System auto activates channel to record once alarm occurs (For offline type only. See Figure 5-36. ).</p> <p>You need to check the box to enable this function.</p>
Record delay	<p>System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.</p>
Relay Out	<p>The corresponding alarm output channel when alarm occurs. You need to check the box to enable this function.</p>
Relay out delay	<p>The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s.</p>

Parameter	Function
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.

## 5.4 Storage

### 5.4.1 Record Schedule and Snapshot Schedule

In these two interfaces, you can add or remove the schedule record/snapshot setup. See Figure 5-37 and Figure 5-38.

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.

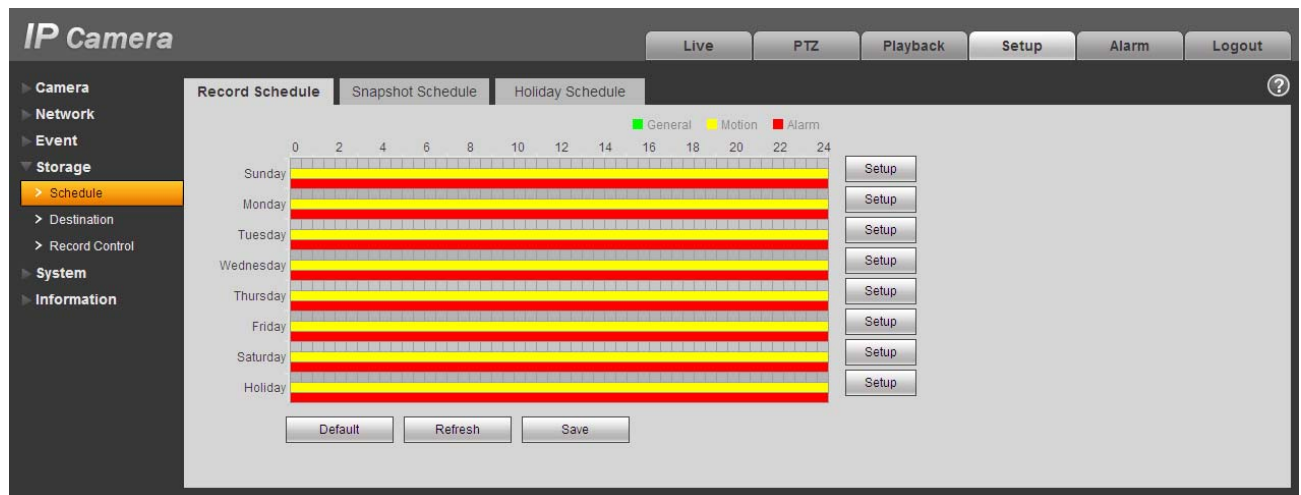


Figure 5-37

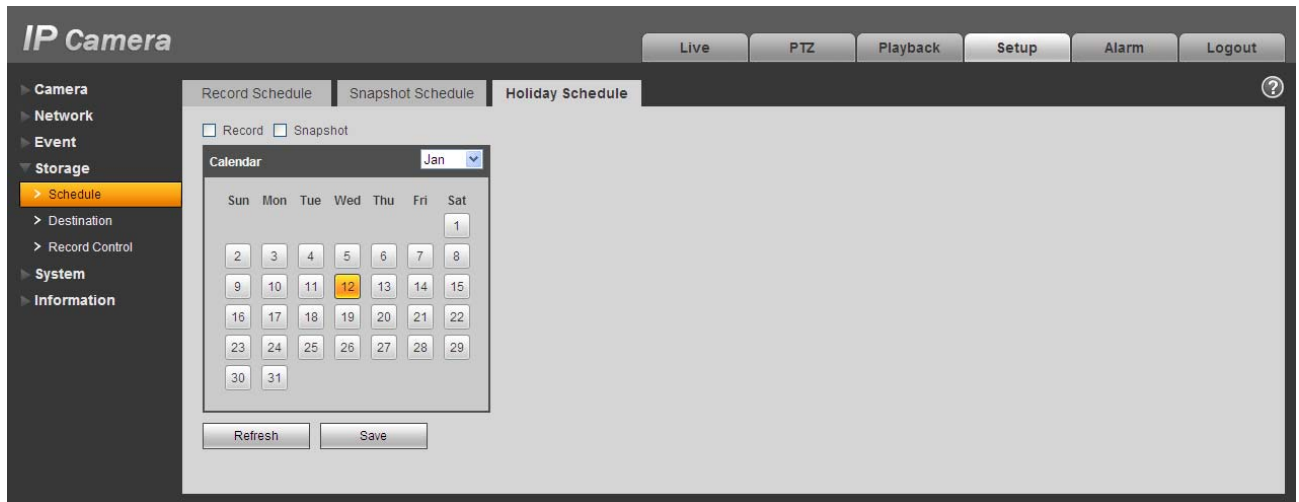


Figure 5-38

You can set specified dates as holiday. When snapshot of holiday is enabled, the selected dates will be snapshot/recorded according to holiday setup.

### 5.4.2 Destination

The destination interface is shown as in Figure 5-39.

It is to set the storage mode of the network camera 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.

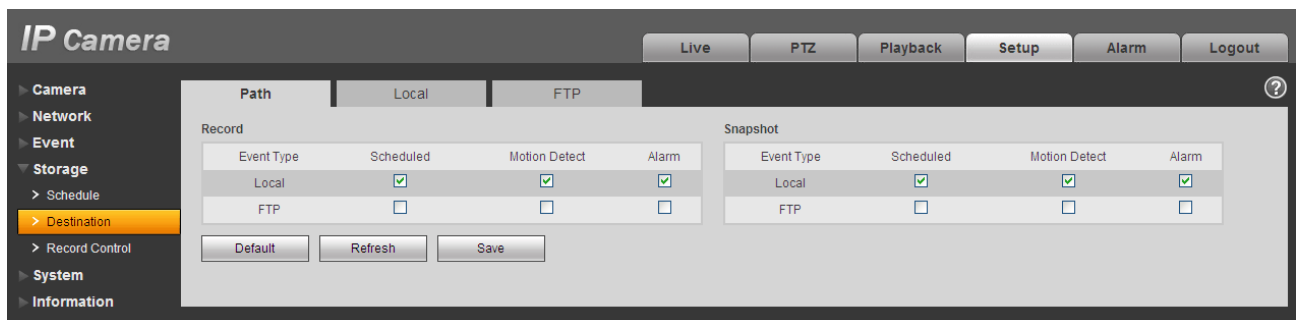


Figure 5-39

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	It includes: general, motion detect and alarm.

Parameter	Function
Local	It saved in the Micro SD card.
FTP	It saved in the FTP server.

The local interface is shown as in Figure 5-40. Here you can view local Micro SD card or disk information. You can also operate the read-only, write-only, hot swap and format operation.

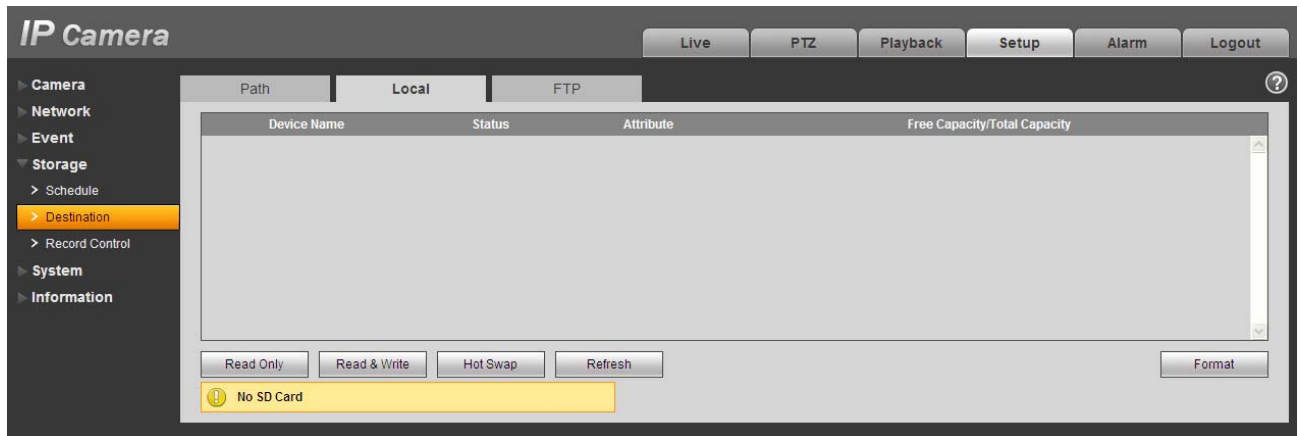


Figure 5-40

The FTP interface is shown as in Figure 5-41. 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 Micro SD card.



Figure 5-41

### 5.4.3 Record control

The record control interface is shown as in Figure 5-42.

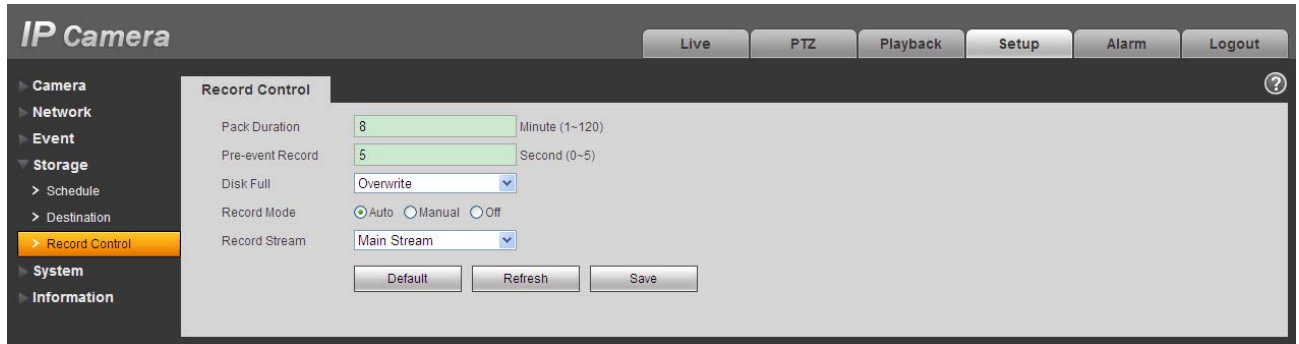


Figure 5-42

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. <ul style="list-style-type: none"> <li>● Stop: Current working HDD is overwriting or current HDD is full, it will stop record.</li> <li>● Overwrite: Current working HDD is full; it will overwrite the previous file.</li> </ul>
Record mode	There are three modes: Auto/manual/close.
Record stream	There are two options: main stream and sub stream.

## 5.5 System

### 5.5.1 General

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

#### 5.5.1.1 Local host

The local host interface is shown as in Figure 5-43.

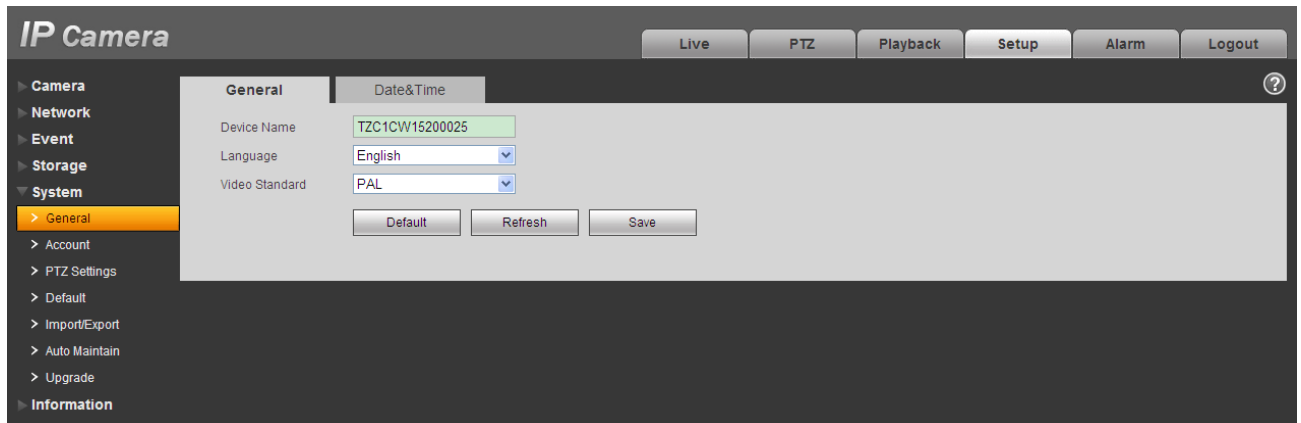


Figure 5-43

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.

#### 5.5.1.2 Date and time

The date and time interface is shown as in Figure 5-44.

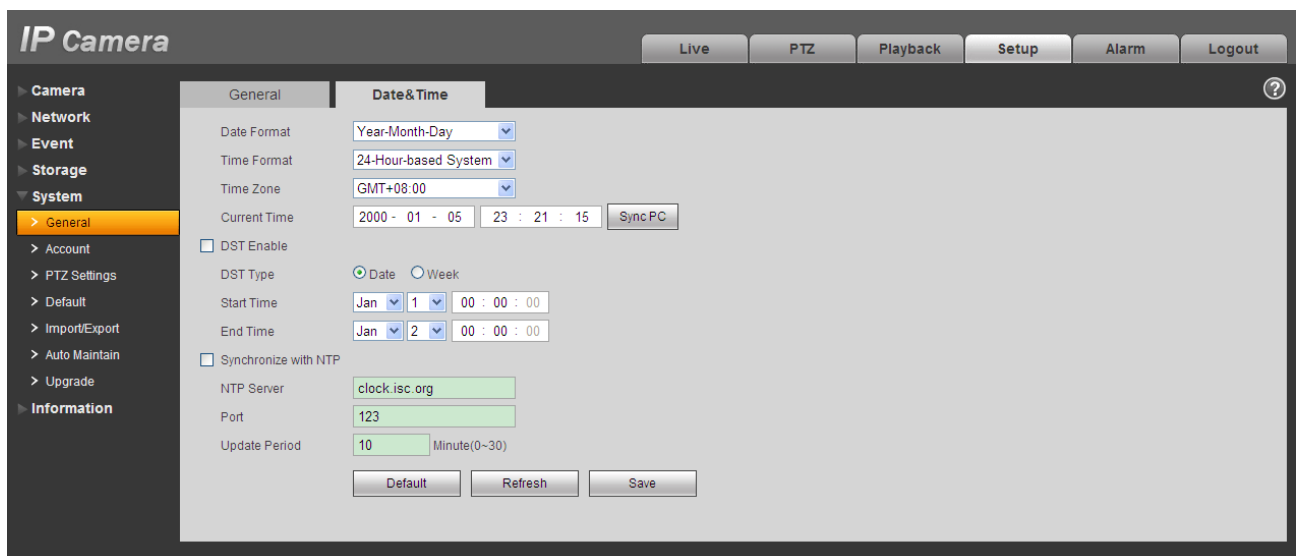


Figure 5-44

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.

## 5.5.2 Account

### Note:

- For the character in the following user name or the user group name, system max supports 15-digits. The valid string includes: character, number, and underline.
- The user amount is 18 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.

### 5.5.2.1 User name

In this interface you can enable anonymity login, add/remove user and modify user name. See Figure 5-45.

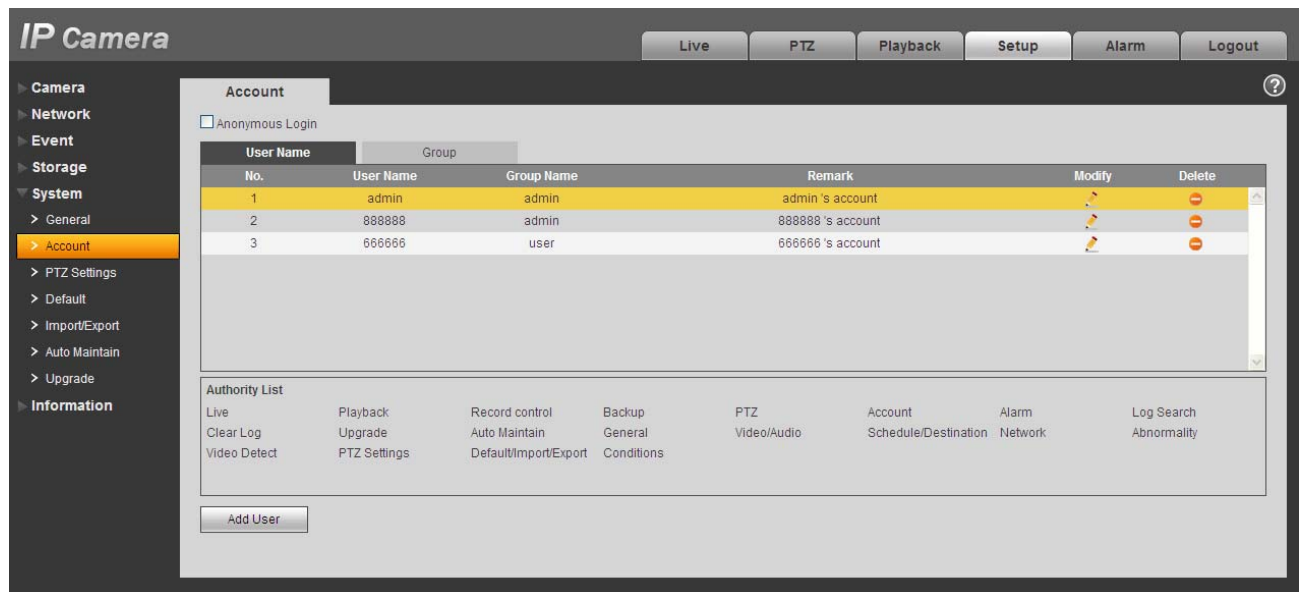


Figure 5-45

**Enable anonymity login:** Enable anonymity login, and input IP. No username or password is required, you can log in by anonymity (with limited rights). You can click logout to end your session.

**Add user:** It is to add a name to group and set the user rights. See Figure 5-46.

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 cannot 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.



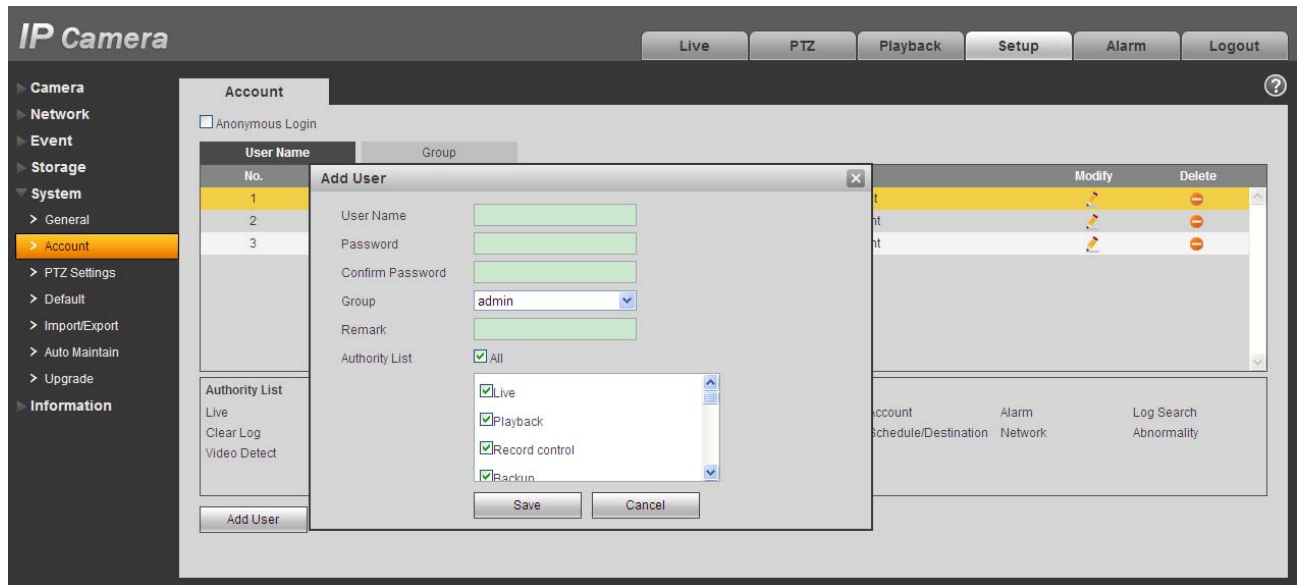


Figure 5-46

### Modify user

It is to modify the user property, belonging group, password and rights. See Figure 5-47.

### 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 0-digit to 32-digit. It shall include the number and letter only. For the user who has the account rights, he can modify the password of other users.

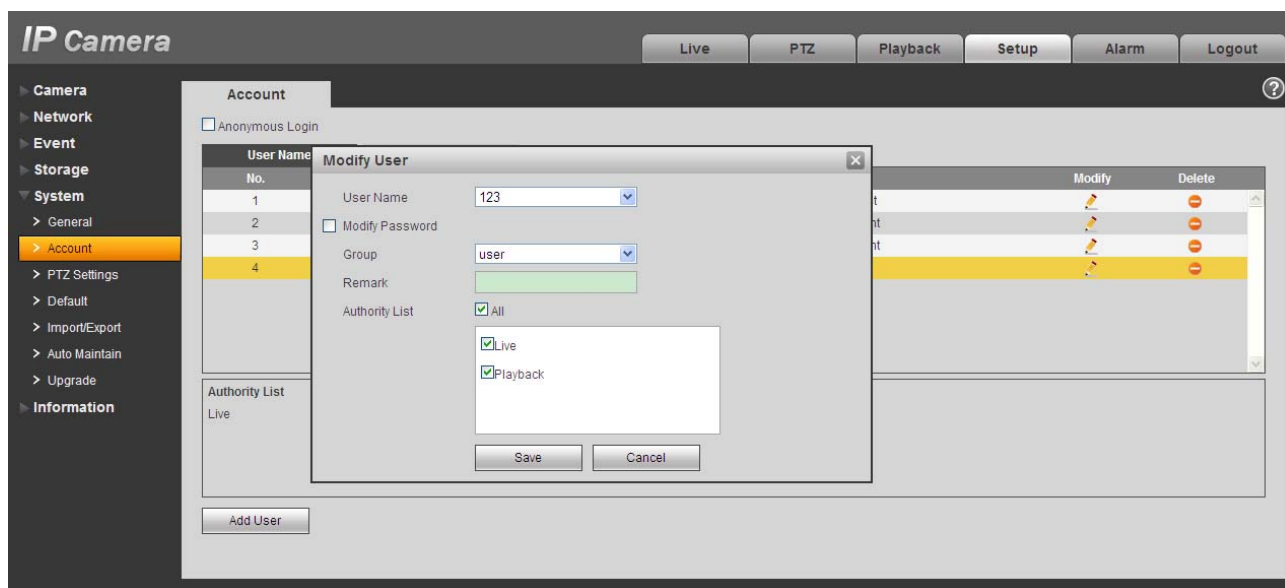


Figure 5-47

### 5.5.2.2 Group

The group management interface can add/remove group, modify group password and etc. The interface is shown as in Figure 5-48.

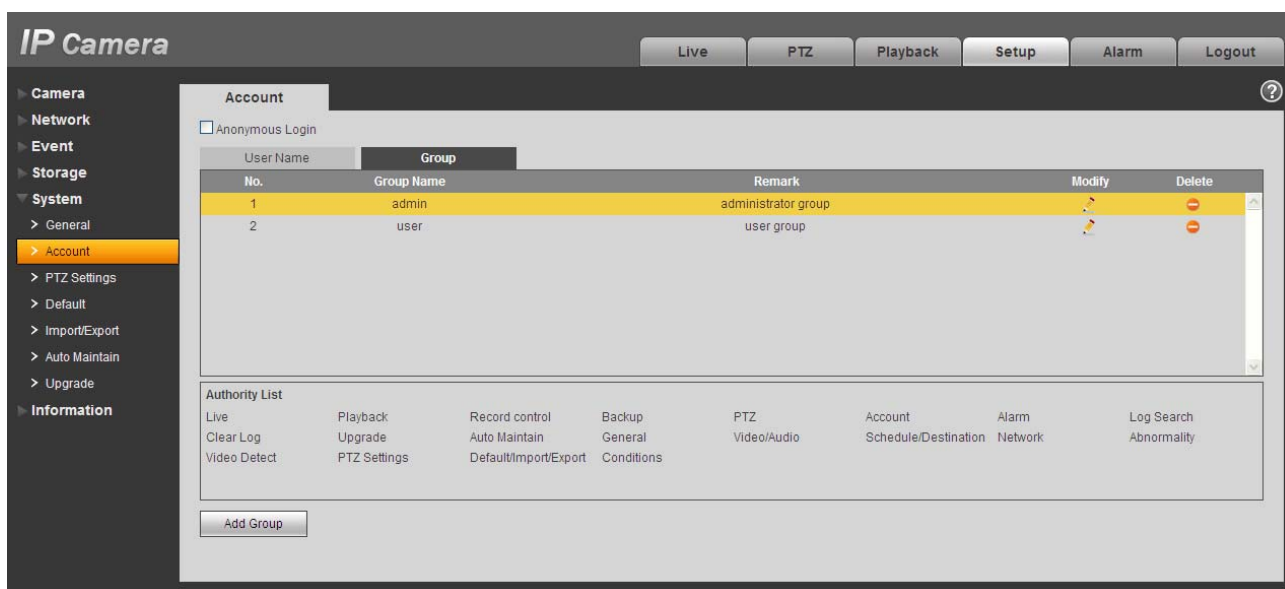


Figure 5-48

**Add group:** It is to add group and set its corresponding rights. See Figure 5-49.

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

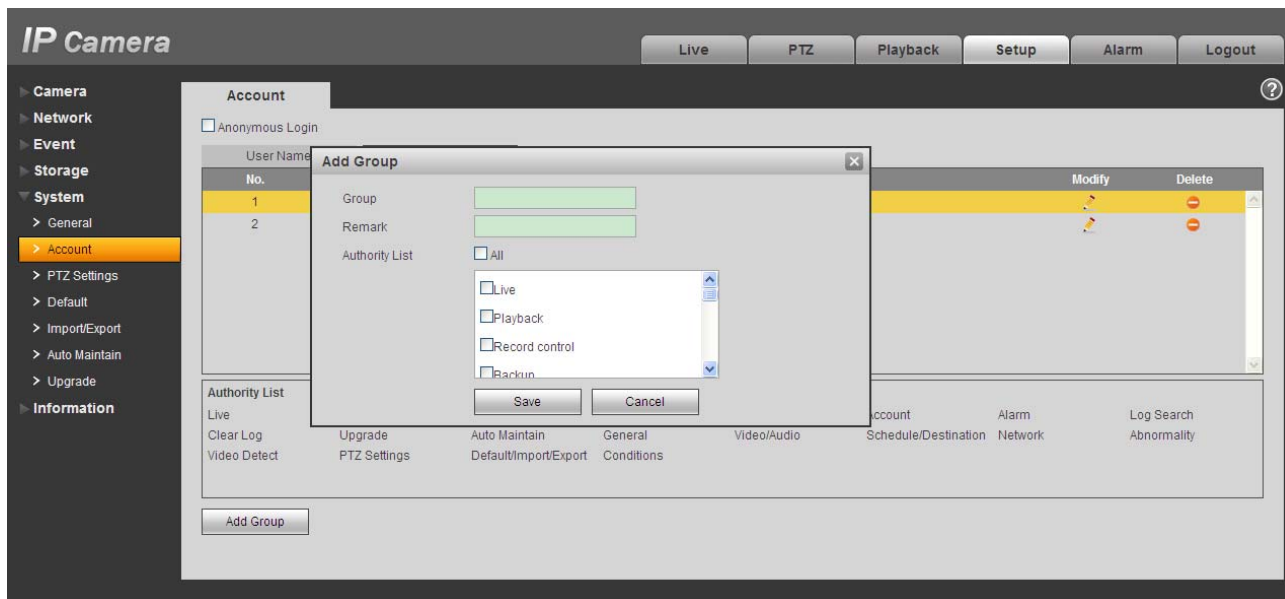


Figure 5-49

### Modify group

Click the modify group button, you can see an interface is shown as in Figure 5-50. Here you can modify group information such as remarks and rights.

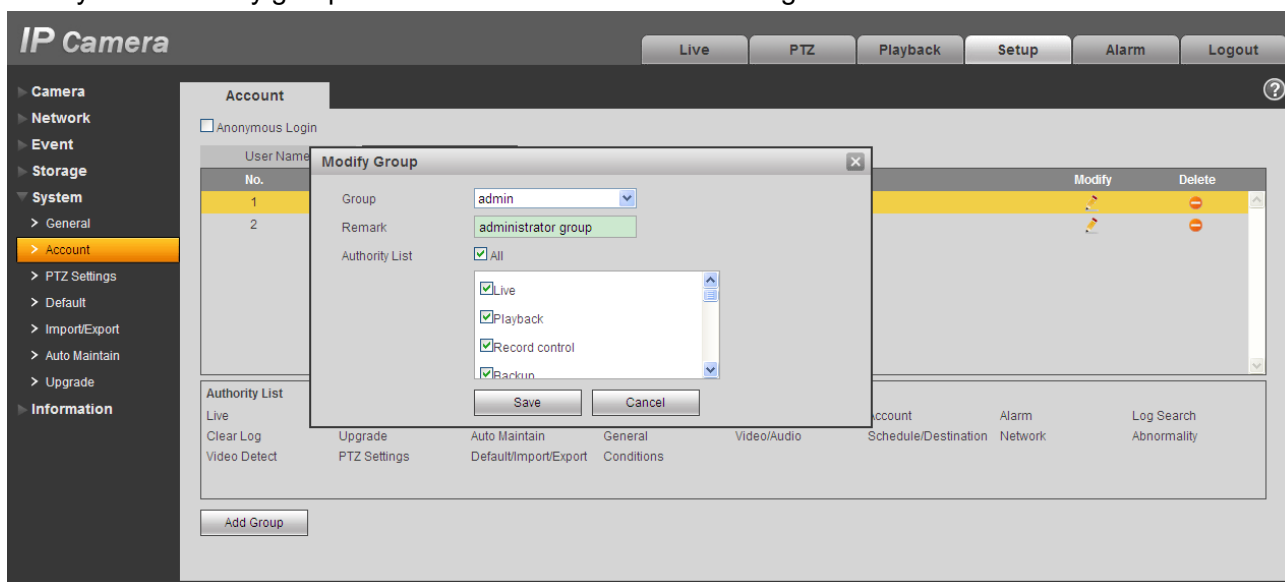


Figure 5-50

### 5.5.3 PTZ

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

The PTZ interface is shown as in Figure 5-51.

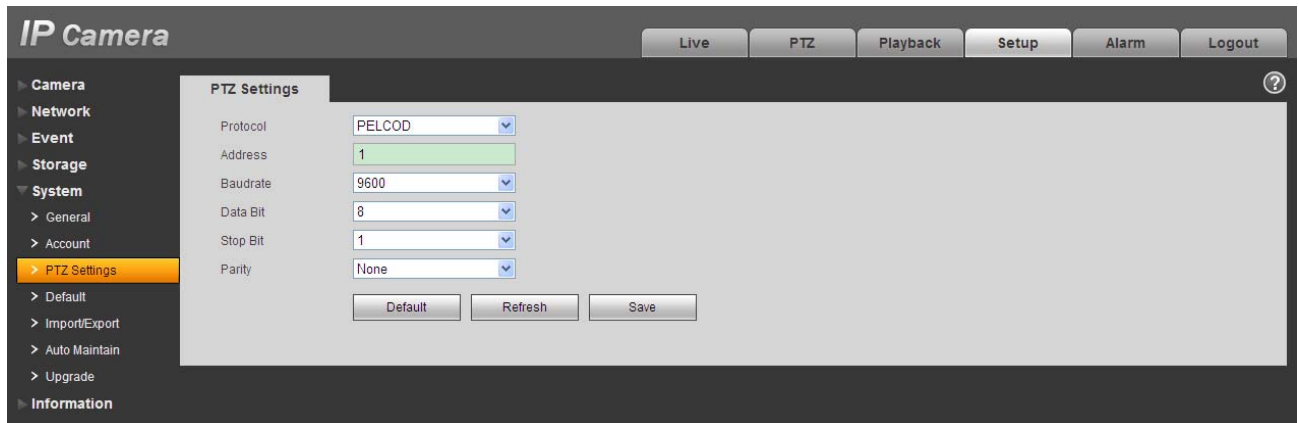


Figure 5-51

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.

#### 5.5.4 Default

The default setup interface is shown as in Figure 5-52.

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



Figure 5-52

### 5.5.5 Import/Export

The interface is shown as in Figure 5-53.



Figure 5-53

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.

### 5.5.6 Auto Maintenance

The auto maintenance interface is shown as in Figure 5-54.

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

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

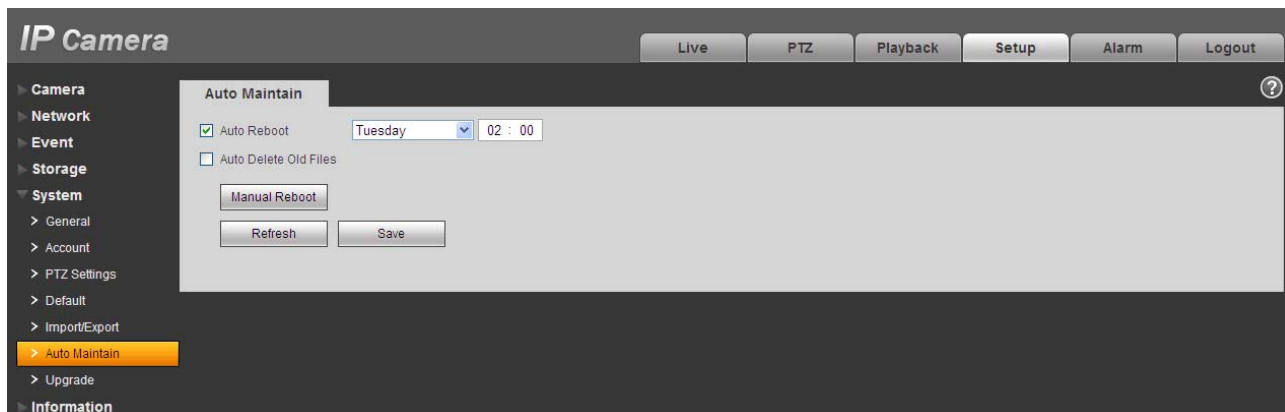


Figure 5-54

## 5.5.7 Upgrade

The upgrade interface is shown as in Figure 5-55.

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

### **Important**

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

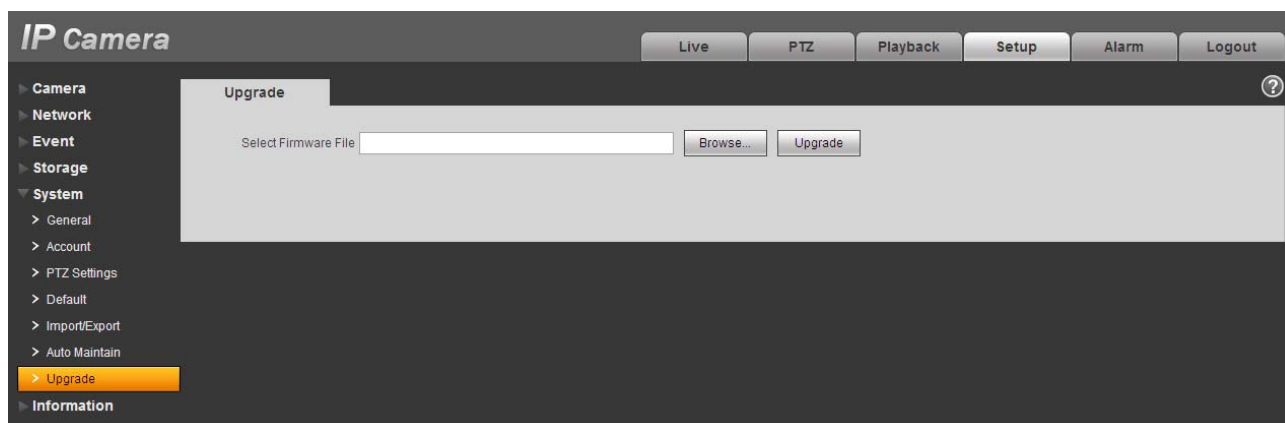


Figure 5-55

## 5.6 Information

### 5.6.1 Version

The version interface is shown as in Figure 5-56.

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

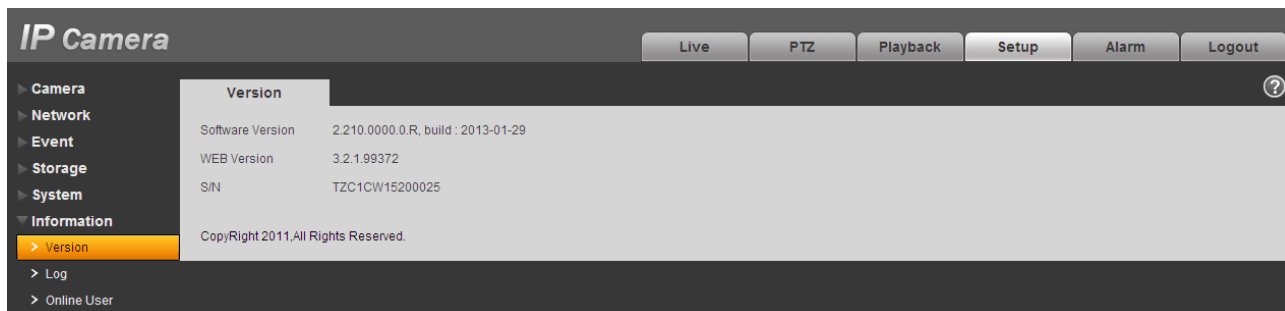


Figure 5-56

## 5.6.2 Log

Here you can view system log. See Figure 5-57.

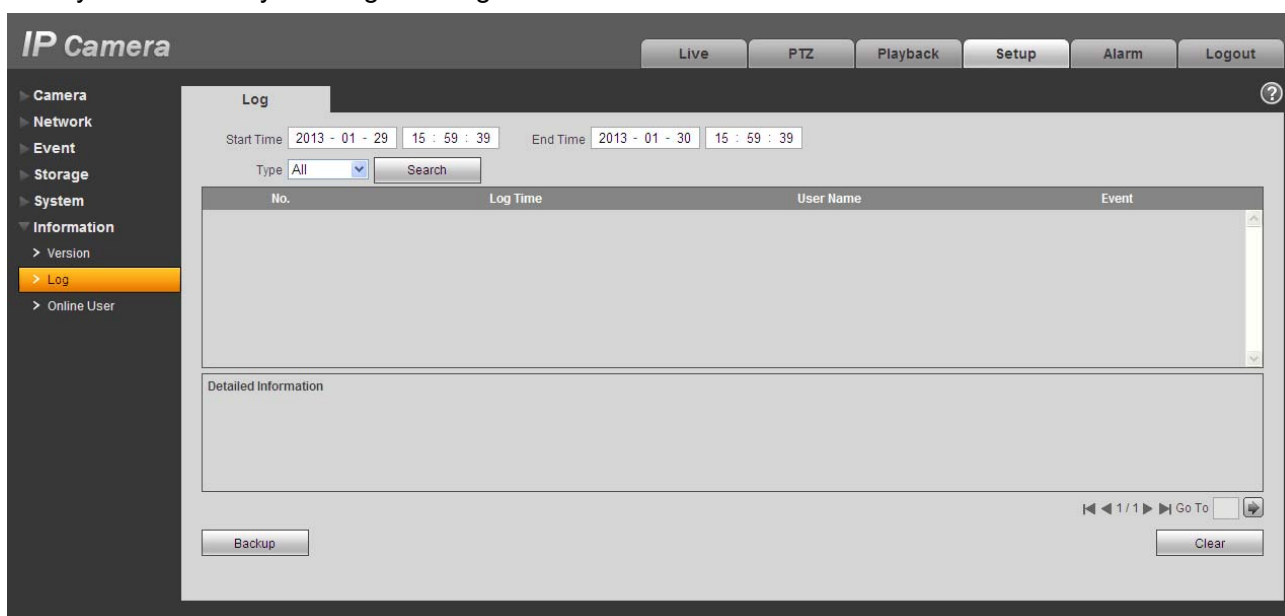


Figure 5-57

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.
End time	Set the end time of the requested log.

Parameter	Function
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.
Log 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.

### 5.6.3 Online User

The online user interface is shown as in Figure 5-58.

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

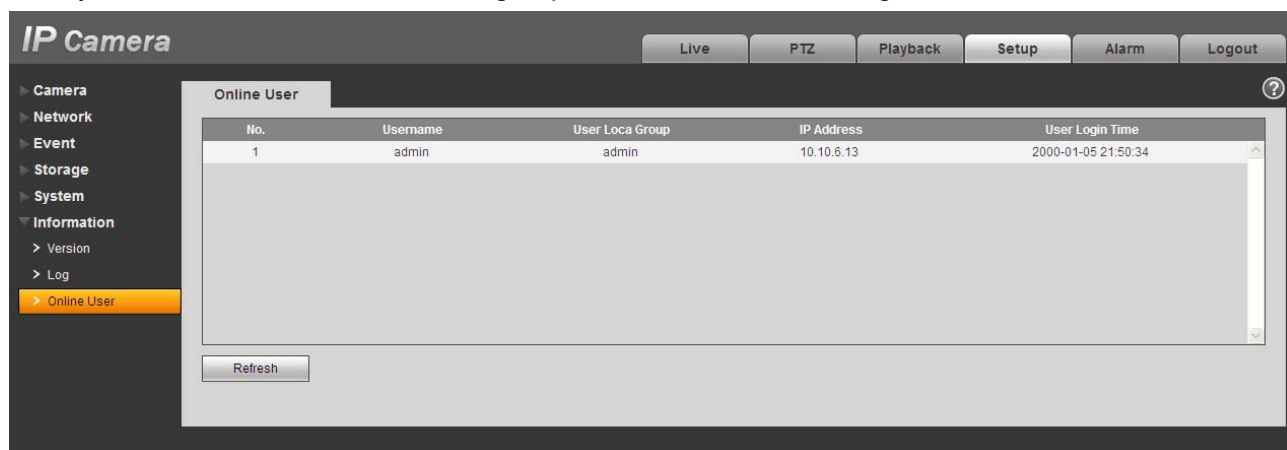


Figure 5-58



## 6 Alarm

Please note some series product does not support this function.

Click alarm function, you can see an interface is shown as in Figure 6-1.

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

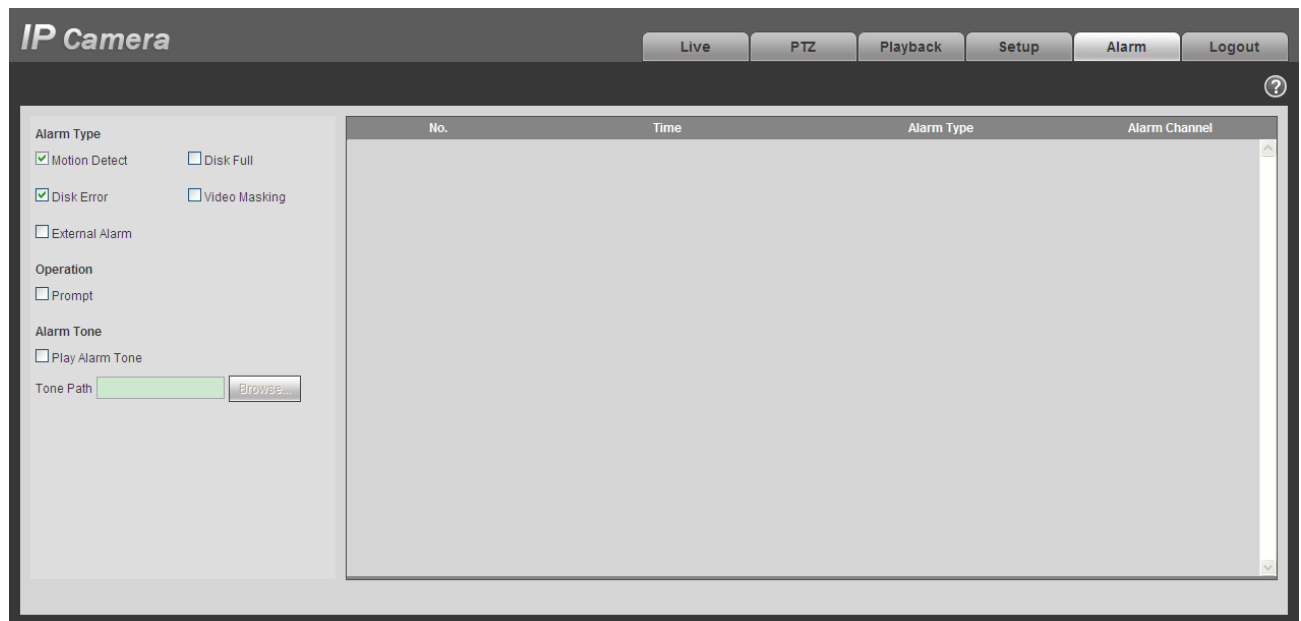


Figure 6-1

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.

## 7 Log out

Click log out button, system goes back to log in interface. See Figure 7-1.



Figure 7-1

**Note:**

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

# **HD IR Waterproof Fixed Network Camera**

**(With Integrated Bracket)**

**User's Manual**

## **Welcome**

Thank you for purchasing our network camera!

This user's manual is designed to be a reference tool for your system.

Please read the following safeguard and warnings carefully before you use this series product!

Please keep this user's manual well for future reference!

# Important Safeguards and Warnings

## 1 . Electrical safety

All installation and operation here should conform to your local electrical safety codes.

The power shall conform to the requirement in the SELV (Safety Extra Low Voltage) and the Limited power source is rated 12V DC or 24V AC in the IEC60950-1. (Refer to general introduction) **Please note: Do not connect two power supplying sources to the device at the same time; it may result in device damage!**

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

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

## 3 . Installation

Do not apply power to the camera before completing installation.

Please install the proper power cut-off device during the installation connection.

Always follow the instruction guide the manufacturer recommended.

## 4 . Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or attempted repair.

## 5 . Environment

This series network camera should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

Please keep it away from the electromagnetic radiation object and environment.

Please make sure the CCD (CMOS) component is out of the radiation of the laser beam device.

Otherwise it may result in CCD (CMOS) optical component damage.

Please keep the sound ventilation.

Do not allow the water and other liquid falling into the camera.

Thunder-proof device is recommended to be adopted to better prevent thunder.

The grounding studs of the product are recommended to be grounded to further enhance the reliability of the camera.

## 6. Daily Maintenance

Please shut down the device and then unplug the power cable before you begin daily maintenance work.

Do not touch the CCD (CMOS) optic component. You can use the blower to clean the dust on the lens surface.

Always use the dry soft cloth to clean the device. 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.

Please put the dustproof cap to protect the CCD (CMOS) component when you do not use the camera. Dome enclosure is the optical component, do not touch the enclosure when you are installing the device or clean the enclosure when you are doing maintenance work. Please use professional optical clean method to clean the enclosure. Improper enclosure clean method (such as use cloth) may result in poor IR effect of camera with IR function.

## 7. Accessories

Be sure to use all the accessories recommended by manufacturer.

Before installation, please open the package and check all the components are included.

Contact your local retailer ASAP if something is broken in your package.

Accessory Name	Amount
Network Camera Unit	1
Quick Start Guide	1
Installation Accessories Bag	1
12V to 24V Conversion Cable (For AC 24V series product only)	1
CD	1

# Table of Contents

1	General Introduction .....	1
1.1	Overview .....	1
1.2	Features .....	1
1.3	Specifications .....	2
1.3.1	Performance .....	2
1.3.2	Factory Default Setup .....	4
2	Structure .....	11
2.1	Multiple-function Combination Cable.....	11
2.2	Framework and Dimension .....	12
2.3	Bidirectional talk .....	13
2.3.1	Device-end to PC-end.....	13
2.3.2	PC-end to the Device-end.....	13
2.4	Alarm Setup .....	14
3	Installation .....	16
3.1	Device Installation .....	16
3.2	Micro SD Card Installation .....	17
3.3	Lens Adjustment .....	19
3.4	Bracket Adjustment .....	19
3.5	OSD Buttons (For Motorized Zoom Lens Series Product Only) .....	21
4	Quick Configuration Tool .....	23
4.1	Overview .....	23

4.2	Operation .....	23
5	Web Operation .....	25
5.1	Network Connection.....	25
5.2	Login and Main Interface.....	25
6	FAQ .....	28
7	Appendix Toxic or Hazardous Materials or Elements .....	29



# 1 General Introduction

## 1.1 Overview

This series network camera integrates the traditional camera and network video technology. It adopts audio and video data collection, transmission together. It can connect to the network directly without any auxiliary device.

This series network camera product uses standard H.264 video compression technology and G.711a audio compression technology, which maximally guarantee the audio and video quality.

It supports the IR night vision function. In the night environments, the device can use the IR light to highlight the object which is suitable for the surveillance function in the low illumination environments. The built-in protection enclosure and waterproof design conforms to the IP 66 level. It has the sound waterproof function suitable for use in the outdoor environments.

It supports real-time monitor and listening at the same time. It supports analog video output and dual-way bidirectional talk.

It can be used alone or used in a network area. When it is used lonely, you can connect it to the network and then use a network client-end. Due to its multiple functions and various uses, this series network camera is widely used in many environments such office, bank, road monitor and etc.

## 1.2 Features

<b>User Management</b>	<ul style="list-style-type: none"><li>● Different user rights for each group, one user belongs to one group.</li><li>● The user right shall not exceed the group right.</li></ul>
<b>Storage Function</b>	<ul style="list-style-type: none"><li>● Support central server backup function in accordance with your configuration and setup in alarm or schedule setting</li><li>● Support record via Web and the recorded file are storage in the client-end PC.</li><li>● Support built-in Micro SD card.</li><li>● Do not support local Micro SD card hot swap storage function. Support short-time storage when encounter disconnection.</li><li>● Support network storage function such as FTP.</li></ul>
<b>Alarm Function</b>	<ul style="list-style-type: none"><li>● Real-time respond to external on-off alarm input, and video detect as user pre-defined activation setup and generate corresponding message in screen and audio prompt(allow user to pre-record audio file)</li><li>● Real-time video detect: motion detect, camera masking.</li></ul>
<b>Network Monitor</b>	<ul style="list-style-type: none"><li>● Network camera supports one-channel audio/video data transmit to network terminal and then decode. Delay is within 270ms (network bandwidth support needed)</li><li>● Max supports 20 connections.</li><li>● Adopt the following audio and video transmission protocol: HTTP, TCP, UDP, MULTICAST, RTP/RTCP, RTSP and etc.</li><li>● Support web access.</li></ul>
<b>Network Management</b>	<ul style="list-style-type: none"><li>● Realize network camera configuration and management via Ethernet.</li><li>● Support device management via web or client-end.</li></ul>
<b>Power</b>	<ul style="list-style-type: none"><li>● External power adapter DC12V/AC 24V. You can select according to your actual environments. Please note system can not support these two types of power supplying at the same time.</li></ul>
<b>Assistant Function</b>	<ul style="list-style-type: none"><li>● Log function</li><li>● Support system resource information and running status real-time display.</li></ul>

	<ul style="list-style-type: none"> <li>● Day/Night mode auto switch.</li> <li>● Built-in IR light. Support IR night vision.</li> <li>● Support picture parameter setup such as electronic shutter and gain setup.</li> <li>● Backlight compensation: screen auto split to realize backlight compensation to adjust the bright.</li> <li>● Support video watermark function to avoid vicious video modification.</li> <li>● The enclosure conforms to the IP 66 protection. Has the waterproof function.</li> </ul>
--	--

## 1.3 Specifications

### 1.3.1 Performance

Please refer to the following sheet for network camera performance specification.

Model		HFW3300C	HFW3200C	HFW3100C	HFW3101C
Parameter					
System	Main Processor	TI Davinci high performance DSP			
	OS	Embedded LINUX			
	System Resources	Support real-time network, local record, and remote operation at the same time.			
	User Interface	Remote operation interface such as WEB, DSS, PSS			
	System Status	Micro SD card status, bit stream statistics, log, and software version.			
Video Parameter	Image Sensor	1/2.8-inch CMOS	1/2.9-inch CMOS	1/3.0-inch CMOS	
	Pixel	2080(H)*1553(V )	1920(H)*1080(V)		
	Day/Night Mode	Support day/night mode switch and IR-CUT at the same time. (The lens has built-in IR-CUT mechanical component.).			
	Auto Aperture	Enable			
	Gain Control	Fixed/Auto			
	White Balance	Manual/Auto			
	BLC	Off/BLC/WDR (1-100 adjustable)/HLC(anti-flicker is outdoor and is valid only when exposure mode is auto with range 1-100)			
	Exposure Mode	Manual/Auto PAL: It ranges from 1/3 to 1/10000 NTSC: It ranges from 1/4 to 1/10000			
	Video Compression Standard	H.264/ H.264H/H.264B/MJPEG			
	Video Frame Rate	PAL: Main stream (3M@15fps,1080P@25fps,SXGA@25fps,1.3M@25fps,720P@25fps,D1@25fps) Extra stream (D1@25fps, CIF@25fps)	PAL: Main stream (1080P@25fps, SXGA@25fps,1.3M@25fps,720P@25fps,D1@25fps) Extra stream (D1@25fps,CIF@25fps)	PAL: Main stream (1.3M@25fps, 720P@25fps, D1@25fps) Extra stream (D1@25fps, CIF@25fps)	
		NTSC: Main stream (3M@15fps ,1080P@30fps, SXGA@30fps, 1.3M@30fps,	NTSC: Main stream (1080P@30fps, SXGA@30fps, 1.3M@30fps, 720P@30fps,	NTSC: Main stream: (1.3M@30fps, 720P@30fps, 704*480@30fps) Extra stream (704*480@30fps,352*240@30fps)	

		720P@30fps, 704*480@30fps ) Extra stream (704*480@30fps, 352*240@30fps)	704*480@30fps ) Extra stream (704*480@30fps, 352*240@30fps)	
	<b>Video Bit Rate</b>	H.264: 56Kbps-8192Kbps. H.264H 16Kbps-8192Kbps H.264B 56Kbps-8192Kbps MJPEG is adjustable and bit rate is adjustable. Support customized setup.		
	<b>Video Flip</b>	Support mirror. Support flip function.		
	<b>Snapshot</b>	Max 1f/s snapshot. File extension name is JPEG.		
	<b>Privacy Mask</b>	Supports max 4 privacy mask zones		
	<b>Video Setup</b>	Support parameter setup such as bright, contrast.		
	<b>Video Information</b>	Channel title, time title, motion detect, camera masking.		
	<b>Lens</b>	Manual zoom 3.3-12 mm@F1.4		
	<b>Lens Interface</b>	Φ14 interface. Lens is the default accessories		
<b>Audio</b>	<b>Audio Input</b>	1-channel. RCA		
	<b>Audio Output</b>	1-channel. RCA		
	<b>Bidirectional Talk Input</b>	Reuse the first audio input channel		
	<b>Audio Bit Rate</b>	16kbps 16BIT		
	<b>Audio Compression Standard</b>	G.711A/G.711Mu/PCM		
<b>Video</b>	<b>Motion Detect</b>	396 (18*22) detection zones; sensitivity level ranges from 0 to 100; area threshold ranges from 0 to 100. Activation event: video storage, image snapshot, log, email function and etc.		
<b>Alarm Input</b>		2-channel input, 1-channel output		
<b>Record and Backup</b>	<b>Record Priority</b>	Manual>External alarm >Video detect>Schedule		
	<b>Local Storage</b>	Support Micro SD card storage		
	<b>Storage Management</b>	Support display local storage status		
<b>Network</b>	<b>Wire Network</b>	1-channel wire Ethernet port, 10/100 Base-T Ethernet		
	<b>Network Protocol</b>	Standard HTTP, TCP/IP, ARP, IGMP, ICMP, RTSP, RTP,UDP, RTCP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, UPNP, NTP, Bonjour, SNMP.		
	<b>Remote Operation</b>	Monitor, system setup, file download, log information, maintenance , upgrade and etc.		
<b>AUX Interface</b>	<b>Video Output</b>	1-channel analog video output, BNC port.		
	<b>Restore Default Setup</b>	Reset button		
	<b>Power</b>	Support AC24V/DC12V power. (Can not support these two modes at the same time.)		
<b>General Parameter</b>	<b>Power Consumption</b>	8W MAX (10W MAX when ICR switch)		
	<b>Working</b>	-10℃~+60℃		

	<b>Temperature</b>	
	<b>Working Humidify</b>	10%~90%
	<b>Dimensions(mm)</b>	φ104*306.7
	<b>Weight</b>	1250g(Excluding box)
	<b>Installation</b>	Bracket is included in the accessories bag.
	<b>IR Distance</b>	20~30m
	<b>Protection Level</b>	IP66

### 1.3.2 Factory Default Setup

Please refer to the following sheet for factory default setup information.

Setup		Item		Default Setup				
				HFW3300C	HFW3200C	HFW3100C	HFW3101C	
Camera	Conditions	Config File		Normal				
		Brightness		50				
		Contrast		50				
		Saturation		50				
		Sharpness		50				
		Anti-flicker		Outdoor				
		Exposure Mode		Auto				
		Scene Mode		Auto				
		Day/night Mode		Auto				
		BLC		Off				
		Mirror		Off				
		Flip		Off				
		Profile Management		Normal				
		Video	Video bit stream	Main Stream	Bit stream type	General		
	Encode mode				H.264			
	Resolution				1080P(1920*1080)		1.3M（1280*960）	
	Frame Rate(FPS)				PAL:25 NTSC:30			
	Bit Rate Type				CBR			
	Recommen ded Bit				3584-8192 Kb/S		1536-8192Kb/s	
	Bit Rate				8192		6144	
	I Frame				50			
	Watermark				Enable			
	Watermark character				DigitalCCTV			
	Sub Stream			Enable	Enable			
		Bit stream		General				

Setup		Item		Default Setup				
				HFW3300C	HFW3200C	HFW3100C	HFW3101C	
				type				
				Encode mode	H.264			
				Resolution	PAL:CIF(352*288) NTSC:CIF(352*240)			
				Frame Rate(FPS)	PAL:25 NTSC:30			
				Bit Rate Type	CBR			
				Recommen ded Bit	192-1024Kb/S			
				Bit Rate	512			
				I Frame	50			
		Snapshot	Snapshot Type	General				
			Image Size	1080P(1920*1080)		720P(1280*720)		
			Quality	Better				
			Bit Rate	Main stream				
			Interval	1s				
		Video Overlay	Privacy Mask	Disable				
			Channel Title	Enable				
			Time Title	Enable				
		Path	Snapshot Path	C:\PictureDownload				
			Record Path	C:\RecordDownload				
	Audio	Main Stream	Enable	Enable				
			Encode Mode	G.711A				
		Sub Stream	Enable	Disable				
			Encode Mode	G.711A				
Network	TCP/IP	Host Name	IPC					
		Ethernet Card	Wire(Default)					
		Mode	Static					
		Mac Address	Device MAC address when it is shipped out of the factory					
		IP Version	IPV4					
		IP Address	192.168.1.108					
		Subnet Mask	255.255.255.0					
		Default	192.168.1.1					

Setup	Item		Default Setup			
			HFW3300C	HFW3200C	HFW3100C	HFW3101C
		Gateway				
		Preferred DNS	8.8.8.8			
		Alternate DNS	8.8.8.8			
		Enable ARP/Ping set device IP address service	Enable			
	Connection	Max Connection	10			
		TCP Port	37777			
		UDP Port	37778			
		HTTP Port	80			
		RTSP Port	554			
		HTTPs On	Disable			
		HTTPs Port	443			
	PPPoE	Enable	Disable			
		Username	none			
		Password	N/A			
	DDNS	Server Type	Disable, CN99 DDNS			
		Server Address	www.3322.org			
		Domain Name	none			
		Username	none			
		Password	****			
		Update Period	10 minutes			
	IP Filter	Trusted sites	Disable			
	SMTP(Email)	SMTP Server	none			
		Port	25			
		Anonymity	Disable			
		User Name	anonymity			
		Password	****			
		Sender	none			
		Authenticati	N/A			

Setup	Item		Default Setup				
			HFW3300C	HFW3200C	HFW3100C	HFW3101C	
		on (Encryption mode)					
		Title (Subject)	IPC Message				
		Attachment	Enable				
		Mail Receiver	N/A				
		Interval	0 Second				
		Email Test	Disable, interval=60 seconds				
	UPnP	Enable UPnP	Disable				
	SNMP	SNMP Port	161				
		Read Community	public				
		Write Community	private				
		Trap Address	N/A				
		Trap Port	162				
		SNMP v1	Disable				
		SNMP v2	Disable				
		SNMP v3	Disable				
	Bonjour	Enable	Enable				
		Server Name	“SN”. It depends on the device.				
	Multicast	Main Stream	Enable	Enable			
			Multicast Address	239.255.42.42			
			Port	36666			
		Extra Stream	Enable	Disable			
			Multicast Address	239.255.42.42			
			Port	36667			
	IEEE802	Enable	Disable				
		Authentication	PEAP				
		Username	None				
		Password	****				
	QoS	Real-time Monitor	0				
		Command	0				

Setup	Item			Default Setup			
				HFW3300C	HFW3200C	HFW3100C	HFW3101C
Event	Video detect	Motion Detect	Enable	Disable			
			Anti-dither	5 seconds			
			Sensitivity	3			
			Record Channel	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Alarm Delay	10 seconds			
			Send Email	Disable			
			Snapshot	Disable			
		Video Masking	Enable	Disable			
			Record Channel	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Record Delay	10 seconds			
			Send Email	Disable			
			Snapshot	Disable			
	Alarm	Alarm Activation	Enable	Disable			
			Relay in	Alarm 1			
			Anti-dither	0 seconds			
			Sensor Type	NO			
			Record Channel	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Alarm Delay	10 seconds			
			Send Email	Disable			
			Snapshot	Disable			
	Abnormity	No SD Card	Enable	Disable			
			Relay out	Enable			
			Relay out Delay	10 seconds			
			Send email	Disable			
		Capacity Warning	Enable	Disable			
			Capacity Limit	10%			
			Relay out	Enable			



Setup	Item			Default Setup			
				HFW3300C	HFW3200C	HFW3100C	HFW3101C
			Relay out Delay	10 seconds			
			Send Email	Disable			
		SD Card Error	Enable	Disable			
			Relay out	Enable			
			Relay out Delay	10 seconds			
			Send email	Disable			
		Disconnection	Enable	Disable			
			Record	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Relay out Delay	10 seconds			
		IP Conflict	Enable	Disable			
			Record	Enable			
			Record Delay	10 seconds			
			Relay out	Enable			
			Relay out Delay	10 seconds			
Storage	Schedule	Holiday Schedule	Record	Disable			
			Snapshot	Disable			
	Storage	FTP	Enable FTP	Disable			
			Server Address	N/A			
			Port	21			
			Username	anonymity			
			Password	N/A			
			Remote path	share			
			Emergency (Local)	Disable			
		Record Control	Pack Duration	8 minutes			
			Pre-record	5 seconds			
			Disk Full	Overwrite			
			Record Mode	Auto			
System	General	Local Host	Device No	Device factory SN			
			Language	English			

Setup	Item			Default Setup			
				HFW3300C	HFW3200C	HFW3100C	HFW3101C
	Date time  and	Video Standard	PAL				
		Date Format	Y-M-D				
		Time Format	24H				
		Time Zone	GMT+08:00				
		System Time	Sync				
		DST	Disable				
		DST Type	Date				
		Start Time	00:00:00 of Jan.1 <sup>st</sup>				
		End Time	00:00:00 of Jan.2 <sup>nd</sup>				
		NTP	Disable				
		NTP Server	clock.isc.org				
		Port	123				
		Update Period	10 minutes				
	Account		Anonymous Login	Disable			
	Auto Maintenance		Auto Reboot	Enable, Tuesday 02:00			
			Auto Delete Old Files	Disable			

## 2 Structure

### 2.1 Multiple-function Combination Cable

You can refer to the following figure for multiple-function combination cable information. See Figure 2-1.

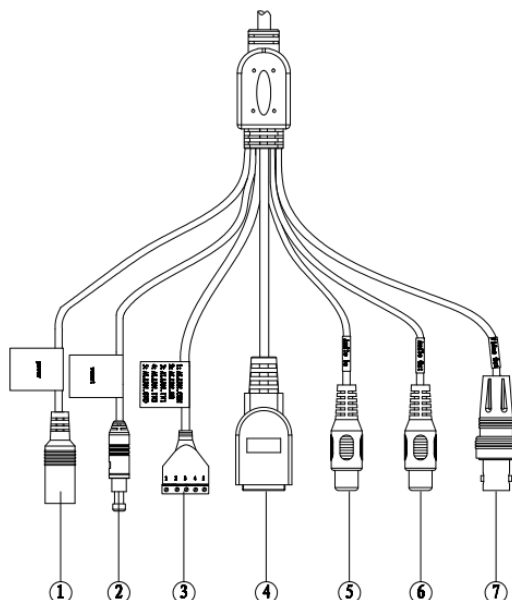


Figure 2-1 Multiple-function combination cable

Please refer to the following sheet for detailed information.

SN	Port Name	Function	Connection	Note
1	DC 12V/AC 24V	Power input port	/	Power port. Input DC 12V/AC 24V (Please use the provided conversion cable)
2	Reset	Reset port	/	Hardware reset function. Press it for 3 to 5 seconds; system hardware can restore default setup.
3	I/O	I/O port	/	Connect to I/O port.
4	LAN	Network port	Ethernet port	Connect to standard Ethernet cable.
5	AUDIO IN	Audio input port	RCA	Input audio signal. It can receive the analog audio signal from the pickup.
6	AUDIO OUT	Audio output port	RCA	Output audio signal to the devices such as the sound box.
7	VIDEO OUT	Video output port	BNC	Output analog video signal. It can connect to the TV monitor to view the video.

Please refer to the follow sheet for detailed I/O port information.

Port Name	SN	Name	Note
I/O Port	1	ALARM_COM	Alarm output public port.
	2	ALARM_NO	Alarm output port. It is to output the alarm signal to the alarm device. NO: normal open alarm output port. It works with the ALARM_COM port.
	3	ALARM_IN1	Alarm input port 1. It is to receive the on-off signal from the external alarm source.
	4	ALARM_IN2	Alarm input port 2. It is to receive the on-off signal from the external alarm source.
	5	GND	Ground port

## 2.2 Framework and Dimension

**Please note all frame and dimension illustrations provided in this chapter are for reference only, and actual product may vary.**

Please refer to Figure 2-2 or Figure 2-3 for dimension information according to the actual product. The unit is mm. Please also see Figure 2-4.

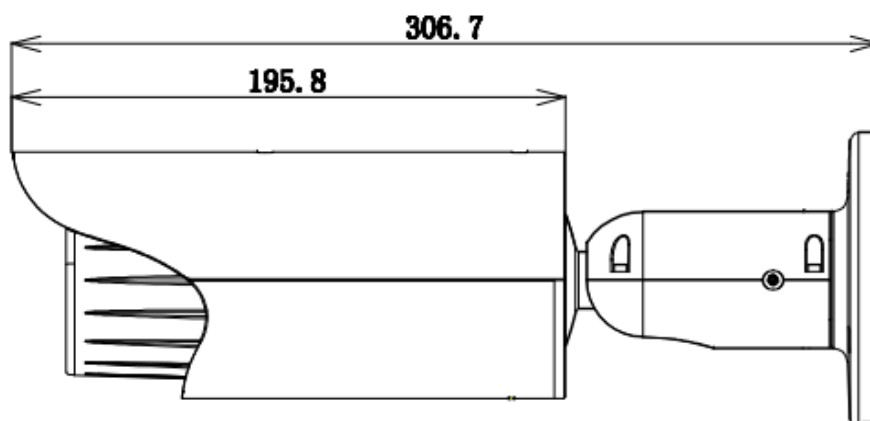


Figure 2-2 Dimension illustration 1

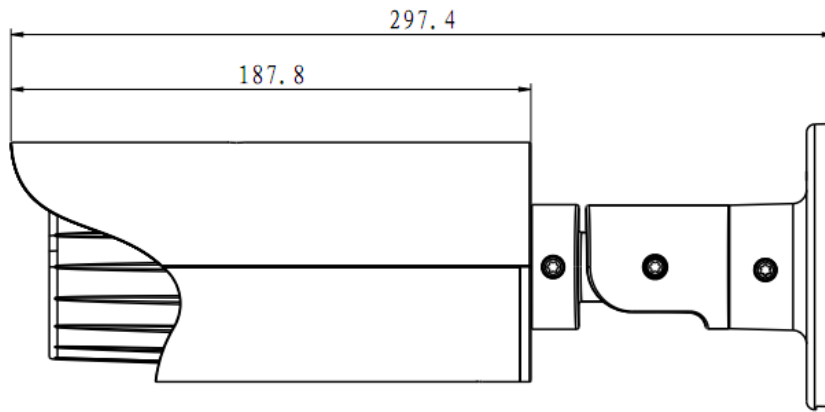


Figure 2-3 Dimension illustration 2

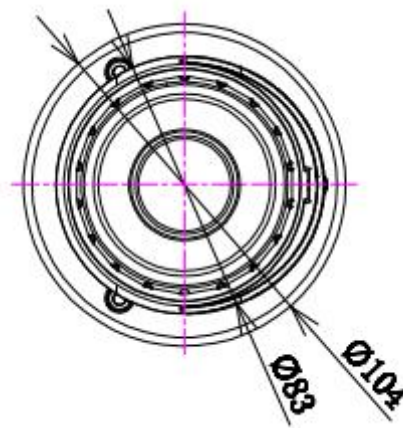


Figure 2-4 Dimension illustration 3

## 2.3 Bidirectional talk

### 2.3.1 Device-end to PC-end

#### Device Connection

Please connect the speaker or the MIC to the audio input port of the device. Then connect the earphone to the audio output port of the PC.

Login the Web and then click the Audio button to enable the bidirectional talk function.

You can see the button becomes orange after you enabled the audio talk function.

Click Audio button again to stop the bidirectional talk function.

#### Listening Operation

At the device end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the pc-end.

### 2.3.2 PC-end to the Device-end

#### Device Connection

Connect the speaker or the MIC to the audio input port of the PC and then connect the earphone to the audio output port of the device.

Login the Web and then click the Audio button to enable the bidirectional talk function. You can see the button becomes orange after you enabled the audio talk function. Click Audio button again to stop the bidirectional talk function.

**Please note the listening operation is null during the bidirectional talk process.**

### Listening Operation

At the PC-end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the device-end.

## 2.4 Alarm Setup

The alarm interface is shown as in Figure 2-5. Please follow the steps listed below for local alarm input and output connection.

- 1) Connect the alarm input device to the alarm input port (No.3 pin or No.4 pin) of the I/O cable.
- 2) Connect the alarm output device to the alarm output port (No.2 pin) and alarm output public port (No.1 pin). The alarm output port supports NO (normal open) alarm device only.
- 3) Open the Web, go to the Figure 2-5. Please set the alarm input 01 port for the first channel of the I/O cable (No.3 pin). The alarm input 02 is for the 2<sup>nd</sup> channel of I/O cable (No.4 pin). Then you can select the corresponding type (NO/NC.)
- 4) Set the WEB alarm output. The alarm output 01 is for the alarm output port of the device. It is the No.2 pin of the I/O cable.

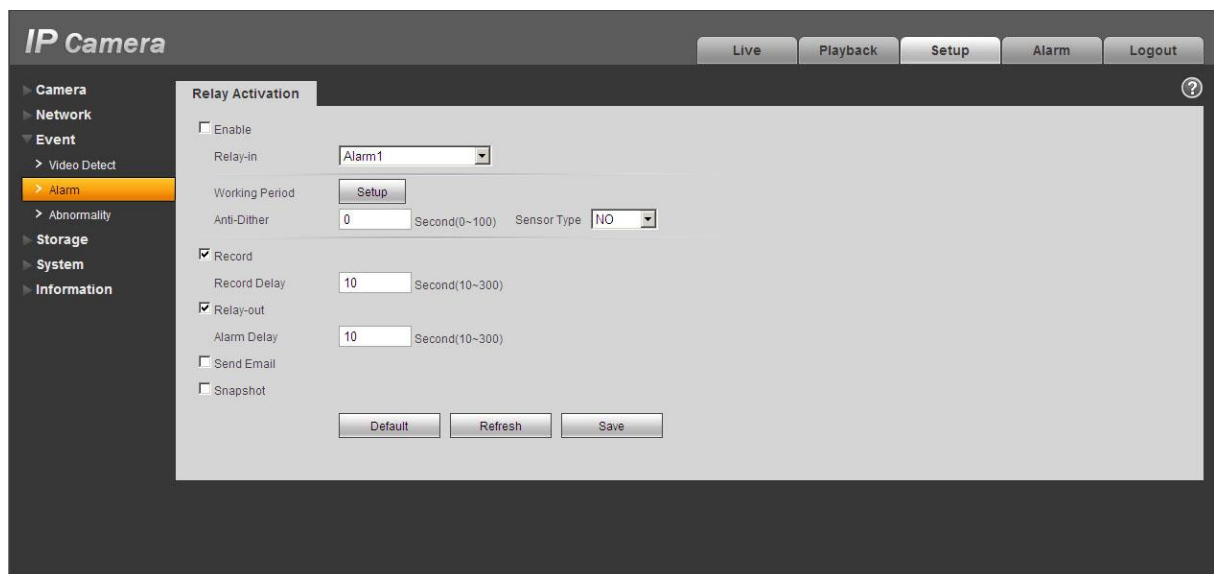


Figure 2-5 Alarm

Please refer to the following figure for alarm input information. See Figure 2-6.

Alarm input: When the input signal is idle or grounded, the device can collect the different statuses of the alarm input port. When the input signal is connected to the 5V or is idle, the device collects the logic “1”. When the input signal is grounded, the device collects the logic “0”.

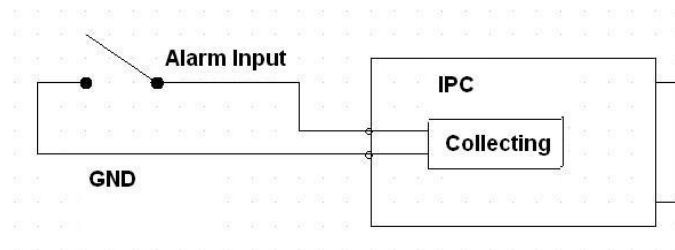


Figure 2-6 Alarm input

Please refer to the following figure for alarm output information. See Figure 2-7.

Port ALARM\_COM and Port ALARM\_NO composes an on-off button to provide the alarm output.

If the type is NO, this button is normal open. The button becomes on when there is an alarm output.

If the type is NC, this button is normal off. The button becomes off when there is an alarm output.

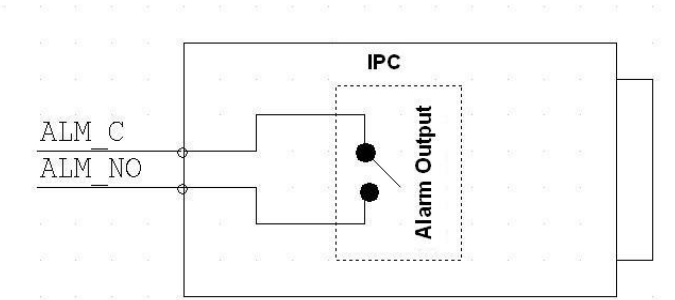


Figure 2-7 Alarm output

## 3 Installation

Please note all frame and dimension illustrations provided in this chapter are for reference only, and actual product may vary.

### 3.1 Device Installation

Please refer to Figure 3-1 or Figure 3-2 for installation information according to the actual product.

Please follow the steps listed below to install the device.

- Please draw the installation holes in the installation surface and then mark three expansion bolts holes in the surface. Insert three bolts in the hole and secure firmly.
- Please line up the installation holes of the bottom of the pendant mount bracket to the installation holes in the surface. Then insert the three bolts to the holes of the bottom of the bracket. Finally fasten the device on the installation surface.

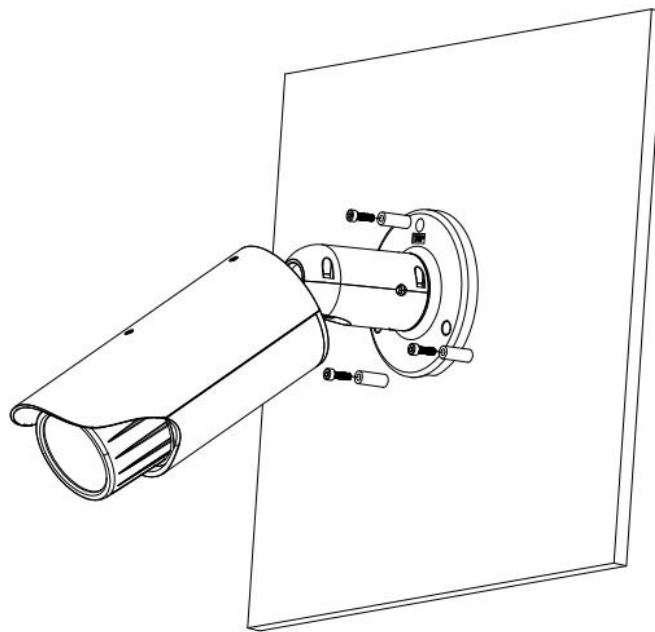


Figure 3-1 Device installation 1



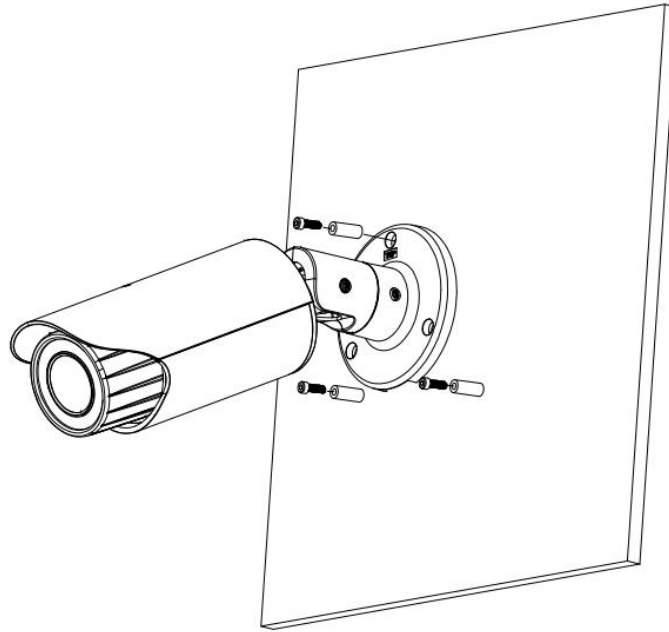


Figure 3-2 Device installation 2

### 3.2 Micro SD Card Installation

Use the inner hex wrench from the installation accessories bag to remove the four inner hex screws from the rear cover. Please refer to Figure 3-3 or Figure 3-4 to find the Micro SD card slot position according to the actual product. Insert the Micro SD card and then fix the four screws of the rear cover.

#### **Important**

- Please make sure the cable connection between the power board and the main board is firm. Otherwise, it may result in device malfunction.
- The rear cover of the device adopts the waterproof design. Please secure four screws firmly after you complete the Micro SD card installation.

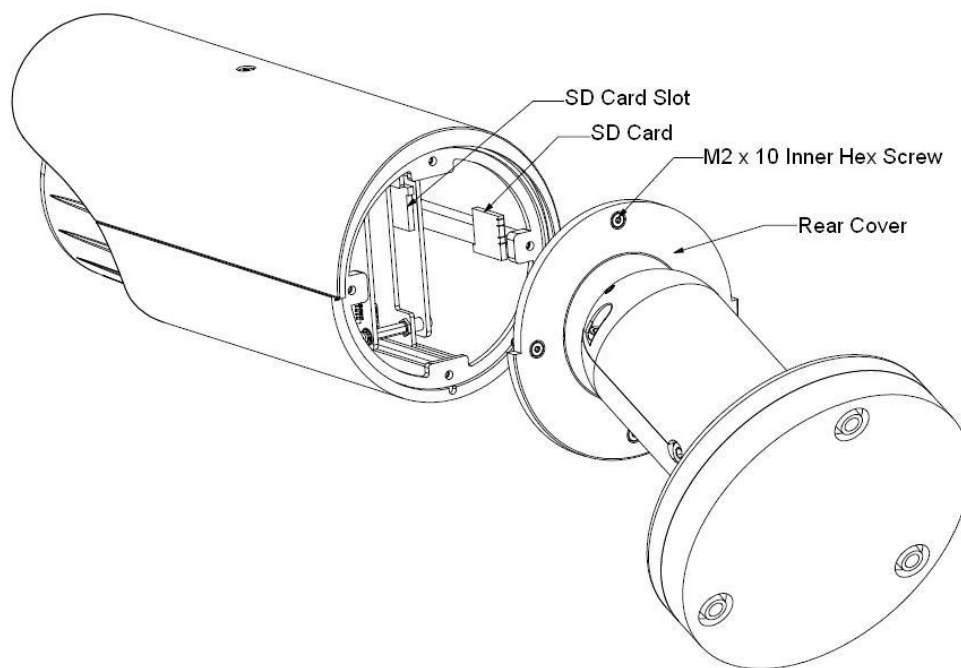


Figure 3-3 Micro SD card installation 1

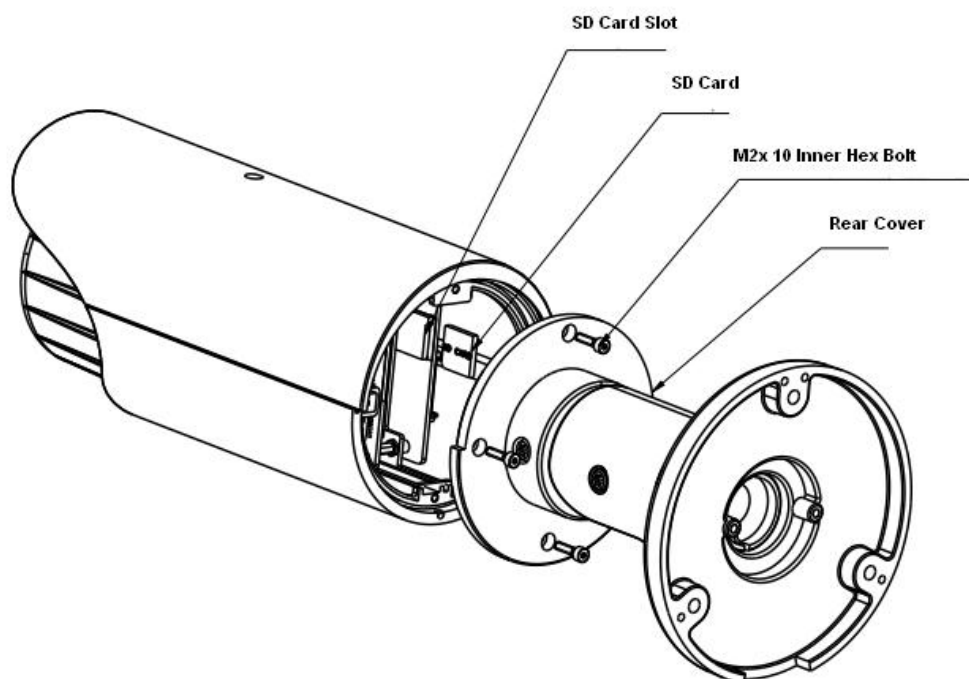


Figure 3-4 Micro SD card installation 2

### 3.3 Lens Adjustment

Turn counter clockwise to remove the lens cover, now you can see the iris front and rear control rod. The front control rod is to focus and the rear control rod is to zoom. See Figure 3-5. Please turn clockwise to fix the lens cover back firmly.

#### Important

- Please remove the sunshield first and remove the lens cover if you can not unfasten the lens cover.
- The lens cover has the waterproof function. Please make sure it is secure after you complete the lens adjustment.
- The motorized zoom lens series product has the default motorized zoom lens. You do not need to adjust manually.

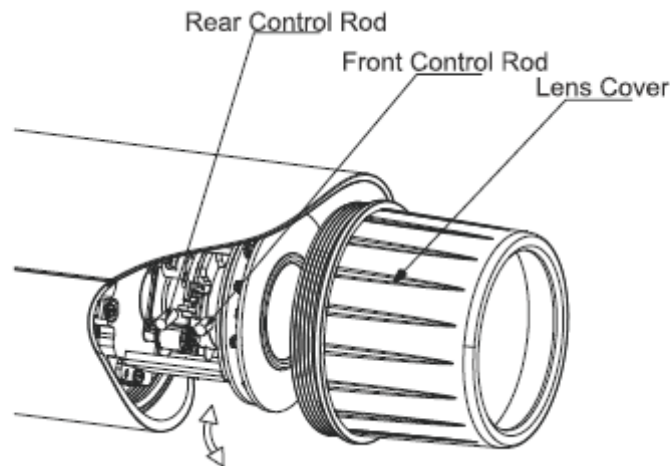


Figure 3-5 Lens adjustment

### 3.4 Bracket Adjustment

You can use an inner hex screw to control the bracket. Please use the inner hex wrench from the installation accessories bag to unfasten the screw. Please refer to Figure 3-6 or Figure 3-7 according to the actual product. The horizontal angle of the rear cover can rotate 360°, the tilt angle can rotate 90° and the chassis can rotate 360°.

Please use the inner hex wrench to firmly secure the inner hex screw after you complete the setup.

#### Important

- Please make sure the M4 inner hex screw or M4 inner hex flat tight screws are firm, otherwise it may result in chassis vibration and the camera cannot fix to a specified angle.

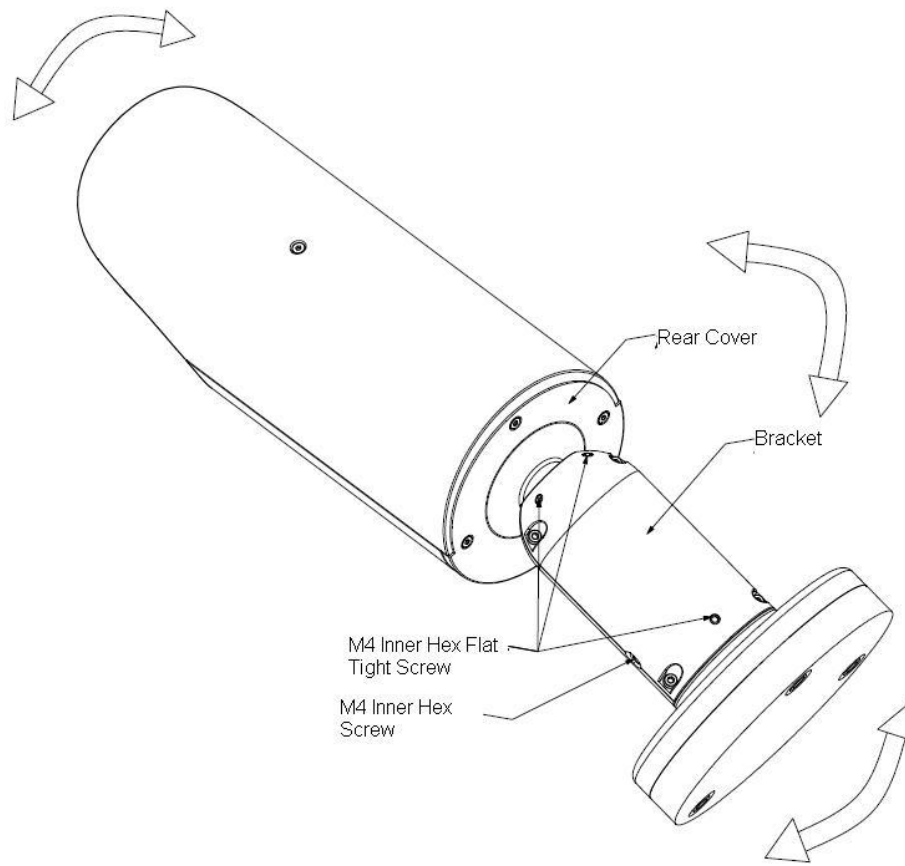


Figure 3-6 Bracket adjustment 1

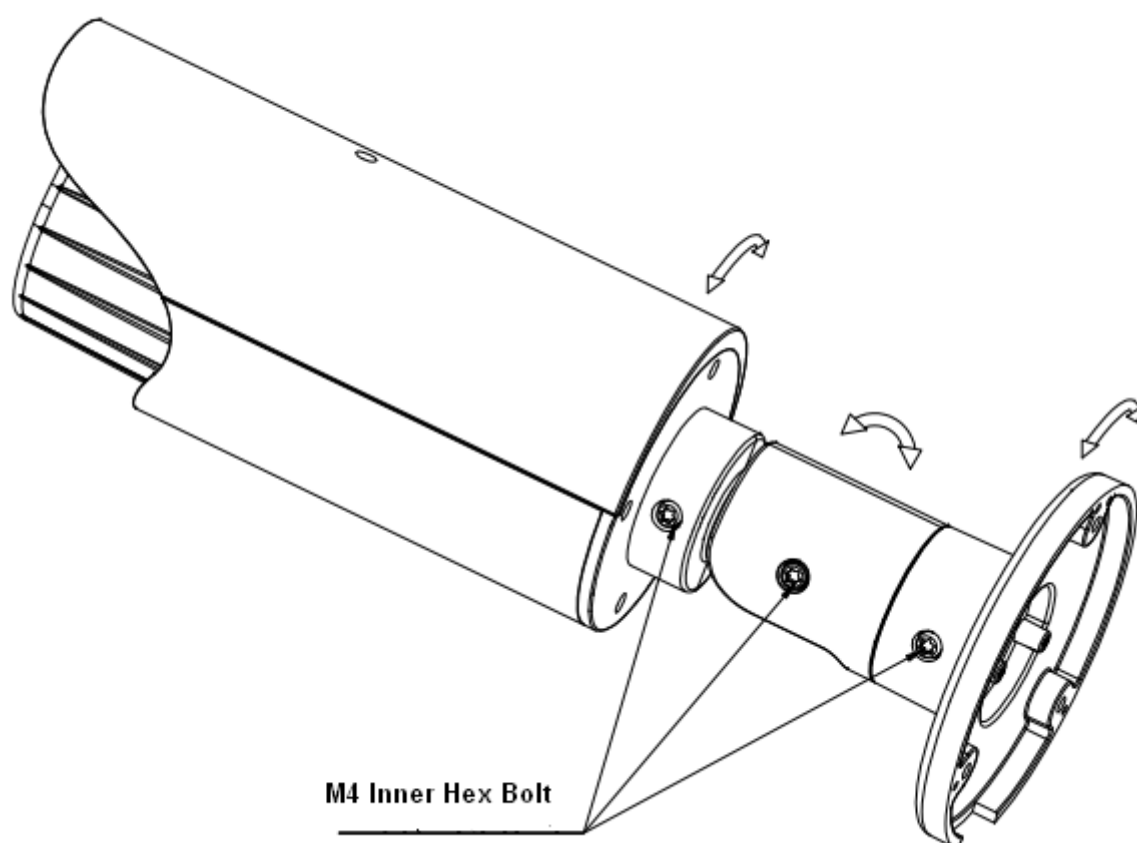


Figure 3-7 Bracket adjustment 2

### 3.5 OSD Buttons

Please refer to the following contents for detailed information. See Figure 3-8 and Figure 3-9.

- Top button: Focus zoom in
- Bottom button: Focus zoom out.
- Left button: Far.
- Right button: Near.
- Middle button: Auto focus. It is to get clear video.

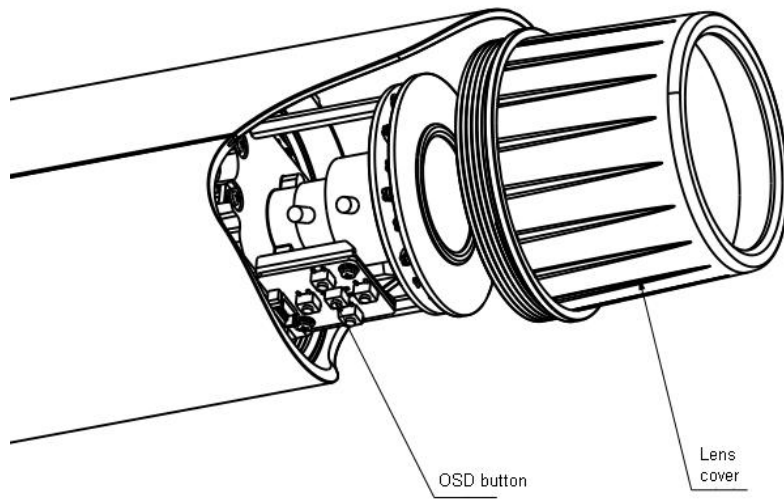


Figure 3-8 OSD button 1

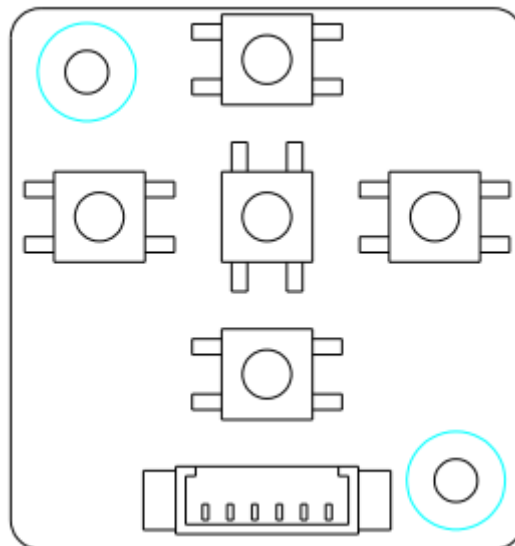


Figure 3-9 OSD button 2

## 4 Quick Configuration Tool

## 4.1 Overview

Quick configuration tool can search current IP address, modify IP address. At the same time, you can use it to upgrade the device.

Please note the tool only applies to the IP addresses in the same segment.

## 4.2 Operation

Double click the “ConfigTools.exe” icon, you can see an interface is shown as in Figure 4-1.

In the device list interface, you can view device IP address, port number, subnet mask, default gateway, MAC address and etc.

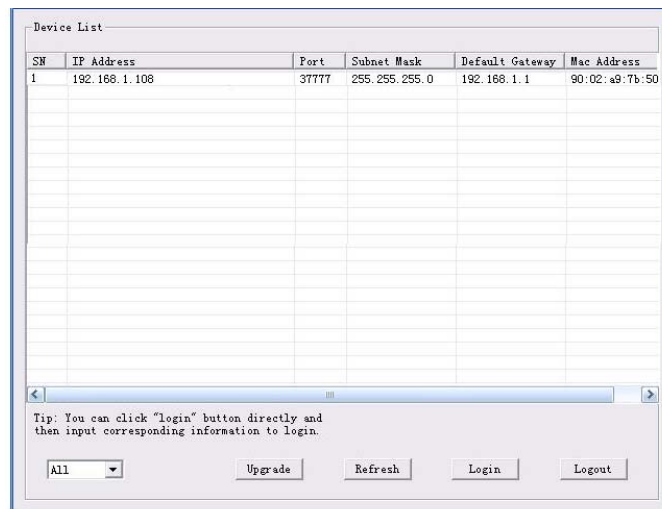


Figure 4-1 Search interface

Select one IP address and then right click mouse, you can see an interface is shown as in Figure 4-2.

Select the “Open Device Web” item; you can go to the corresponding web login interface.

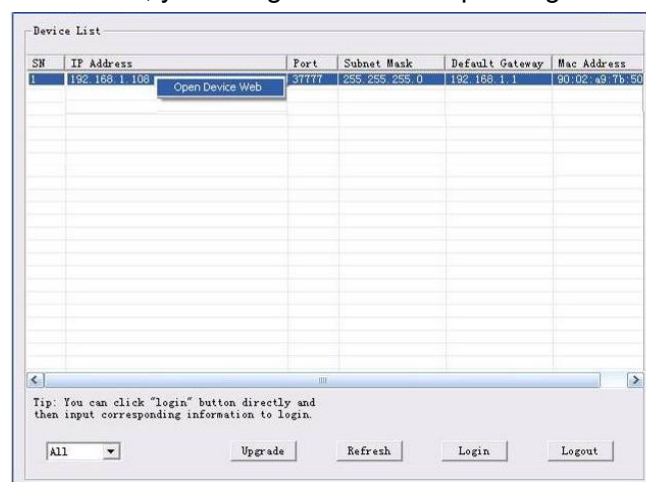


Figure 4-2 Search interface 2

If you want to modify the device IP address without logging in the device web interface, you can go to the configuration tool main interface to set.

In the configuration tool search interface (Figure 4-1), please select a device IP address and then double click it to open the login interface. Or you can select an IP address and then click the Login button to go to the login interface. See Figure 4-3.

In Figure 4-3, you can view device IP address, user name, password and port. Please modify the corresponding information to login.

Please note the port information here shall be identical with the port value you set in TCP port in Web Network interface. Otherwise, you cannot login the device.

If you are using device background upgrade port 3800 to login, other setups are all invalid.

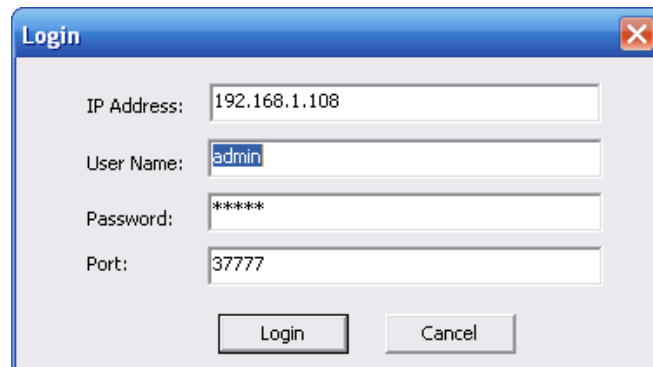
A Windows-style dialog box titled "Login" with a close button in the top right corner. It contains four text input fields: "IP Address:" with the value "192.168.1.108", "User Name:" with the value "admin", "Password:" with the value "\*\*\*\*\*", and "Port:" with the value "37777". At the bottom, there are two buttons: "Login" and "Cancel".

Figure 4-3 Login prompt

After you logged in, the configuration tool main interface is shown as below. See Figure 4-4.

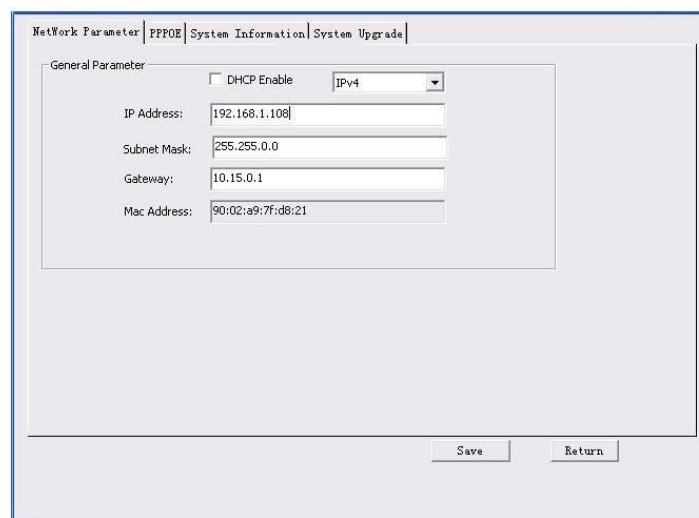
A screenshot of the main configuration tool interface. At the top, there are four tabs: "Network Parameter", "PPPOE", "System Information", and "System Upgrade". The "Network Parameter" tab is selected. Below the tabs, there is a section titled "General Parameter". It contains a checkbox for "DHCP Enable" which is unchecked, and a dropdown menu for "IPv4" which is set to "IPv4". Below these are five text input fields: "IP Address:" with the value "192.168.1.108", "Subnet Mask:" with the value "255.255.0.0", "Gateway:" with the value "10.15.0.1", and "Mac Address:" with the value "90:02:a9:7f:d8:21". At the bottom right of the interface, there are two buttons: "Save" and "Return".

Figure 4-4 Main interface

**For detailed information and operation instruction of the quick configuration tool, please refer to the *Quick Configuration Tool User's Manual* included in the resources CD.**



## 5 Web Operation

This series network camera products support the Web access and management via PC. Web includes several modules: Monitor channel preview, system configuration, alarm and etc.

### 5.1 Network Connection

Please follow the steps listed below for network connection.

- Make sure the network camera has connected to the network properly.
- Please set the IP address, subnet mask and gateway of the PC and the network camera respectively. Network camera default IP address is 192.168.1.108. Subnet mask is 255.255.255.0. Gateway is 192.168.1.1
- Use order ping `***.***.***.***(* network camera address)` to check connection is OK or not.

### 5.2 Login and Main Interface

Open IE and input network camera address in the address bar. See Figure 5- 1.

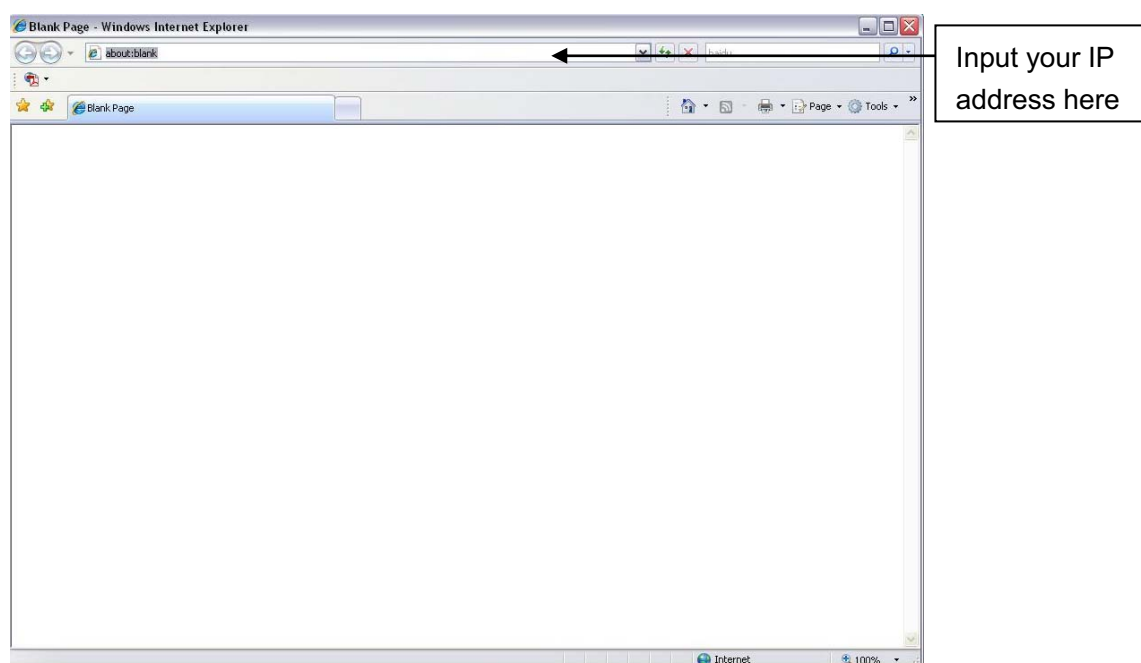


Figure 5- 1 IP address

The login interface is shown as below. See Figure 5- 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 5- 2 Web login

If it is your first time to log in, system pops up warning information to ask you whether install web plug-in or not after you logged in for one minute. For detailed plug-in installation, please refer to the Web Operation Manual included in the resource CD.

After you logged in, you can see the main window. See Figure 5- 3.

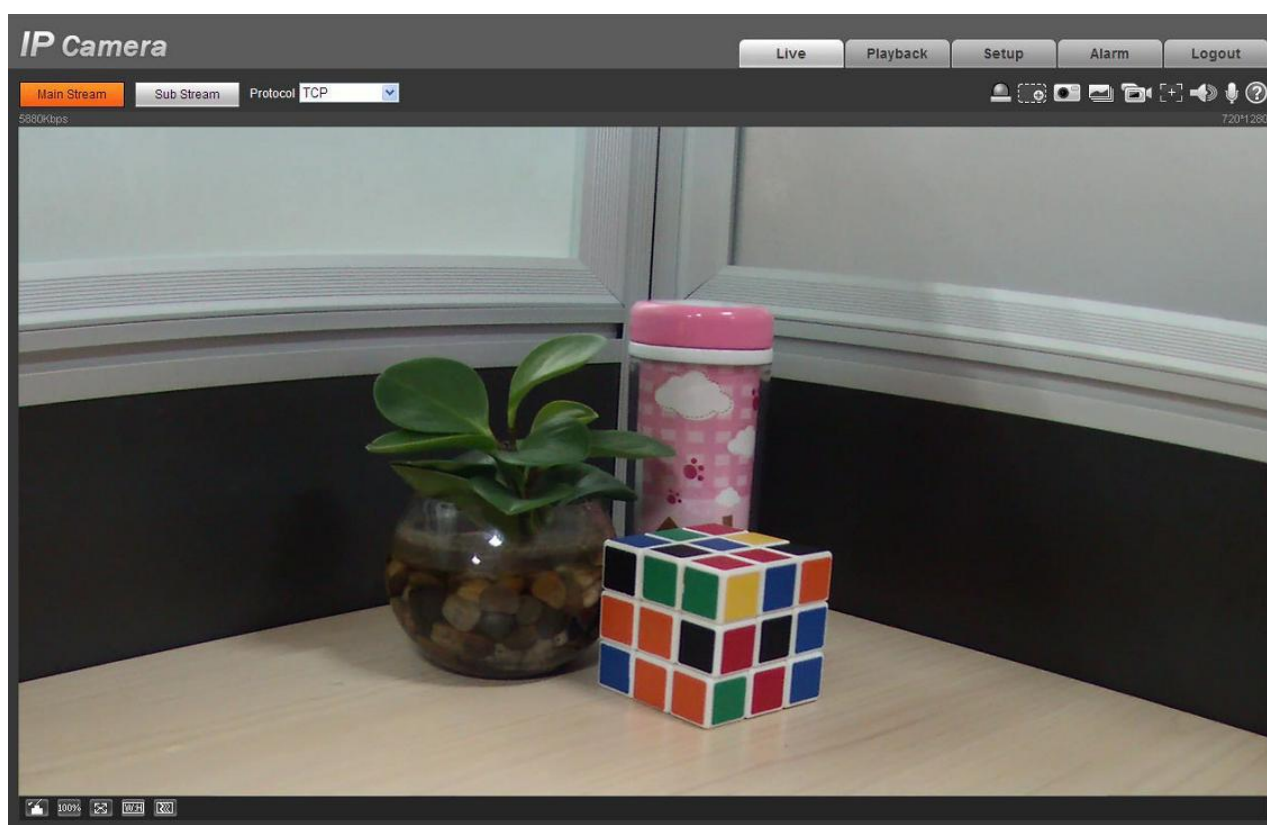


Figure 5- 3 Web monitoring window

Please refer to the Web Operation Manual included in the resource CD for detailed operation instruction.

## 6 FAQ

Bug	
I can not boot up the device.	Please click RESET button for at least five seconds to restore factory default setup.
Micro SD card write times	Do not set the Micro SD card as the storage media to storage the schedule record file. It may damage the Micro SD card duration.
I can not use the disk as the storage media.	When disk information is shown as hibernation or capacity is 0, please format it first (Via Web).
I can not upgrade the device via network.	When network upgrade operation failed, you can use port 3800 to continue upgrade.
Recommended Micro SD card brand	Kingston 4GB, Kingston 1GB, Kingston 16GB, Transcend 16GB, SanDisk 1G, SanDisk 4G Usually we recommend the 4GB (or higher) high speed card in case the slow speed results in data loss.
Audio function	Please use active device for the audio monitor input, otherwise there is no audio in the client-end.
To guarantee setup update	After you modified the important setup, please reboot the device via the software to make sure the setup has been updated to the storage medium.
Power adapter	The general power adapter can work ranging from 0℃ to 40 ℃.The device may result in unstable power supply when the temperature exceeds the working temperature. Please replace an industry-level power adapter if you are using in the harsh environments.
I can not fix the bracket firmly.	Please use the S3 inner hex wrench to secure the rear bracket firmly. Please use your hands to test the camera is firm or not after the installation.

## 7 Appendix Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Circuit Board Component	○	○	○	○	○	○
Case	○	○	○	○	○	○
Wire and Cable	○	○	○	○	○	○
Packing Components	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

### Note

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

**THC20IP**

**BROWSER  
MANUAL**

# **Network Camera Web3.0 Operation Manual**

**Version 4.0.0**

## Table of Contents

1	Network Connection .....	1
2	Main Interface Introduction .....	2
2.1	Log in .....	2
2.2	Live Interface .....	6
2.3	Encode Setup .....	6
2.4	System Menu .....	7
2.5	Video Window Function Option .....	7
2.6	Video Window Setup .....	8
2.6.1	Image control .....	8
2.6.2	Hide Image Control .....	9
2.6.3	Original size .....	9
2.6.4	Full screen .....	9
2.6.5	Width and height ratio .....	9
2.6.6	Fluency Adjustment .....	10
3	PTZ Control .....	11
4	Playback .....	14
4.1	Playback Interface .....	14
4.2	Function of Play .....	14
4.3	Date .....	15
4.4	File List .....	15
4.5	Progress Bar .....	17
5	Setup .....	18
5.1	Camera .....	18
5.1.1	Conditions .....	18
5.1.2	Video .....	22
5.1.3	Audio .....	28
5.2	Network .....	28
5.2.1	TCP/IP .....	28
5.2.2	Connection .....	30
5.2.3	PPPoE .....	32
5.2.4	DDNS .....	32
5.2.5	IP filter .....	34
5.2.6	SMTP (e-mail) .....	35
5.2.7	UPnP .....	37
5.2.8	SNMP .....	38
5.2.9	Bonjour .....	40
5.2.10	Multicast .....	41



5.2.11	WIFI .....	42
5.2.12	IEEE802 .....	44
5.2.13	QoS .....	45
5.2.14	3G.....	46
5.2.14.1	Dial-up .....	47
5.2.14.2	Mobile Phone .....	48
5.3	Event.....	49
5.3.1	Video detect.....	49
5.3.2	Alarm .....	54
5.3.3	Abnormity .....	55
5.4	Storage .....	58
5.4.1	Record Schedule and Snapshot Schedule .....	58
5.4.2	Destination.....	59
5.4.3	Record control .....	60
5.5	System.....	61
5.5.1	General.....	61
5.5.2	Account.....	63
5.5.3	PTZ.....	67
5.5.4	Default .....	68
5.5.5	Import/Export .....	69
5.5.6	Auto Maintenance.....	69
5.5.7	Upgrade .....	70
5.6	Information.....	70
5.6.1	Version .....	70
5.6.2	Log.....	71
5.6.3	Online User.....	72
6	Alarm.....	73
7	Log out .....	74

**Important**

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

# 1 Network Connection

These series network camera products support the Web access and management via PC.

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

Please follow the steps listed below for network connection.

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

## 2 Main Interface Introduction

### 2.1 Log in

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

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

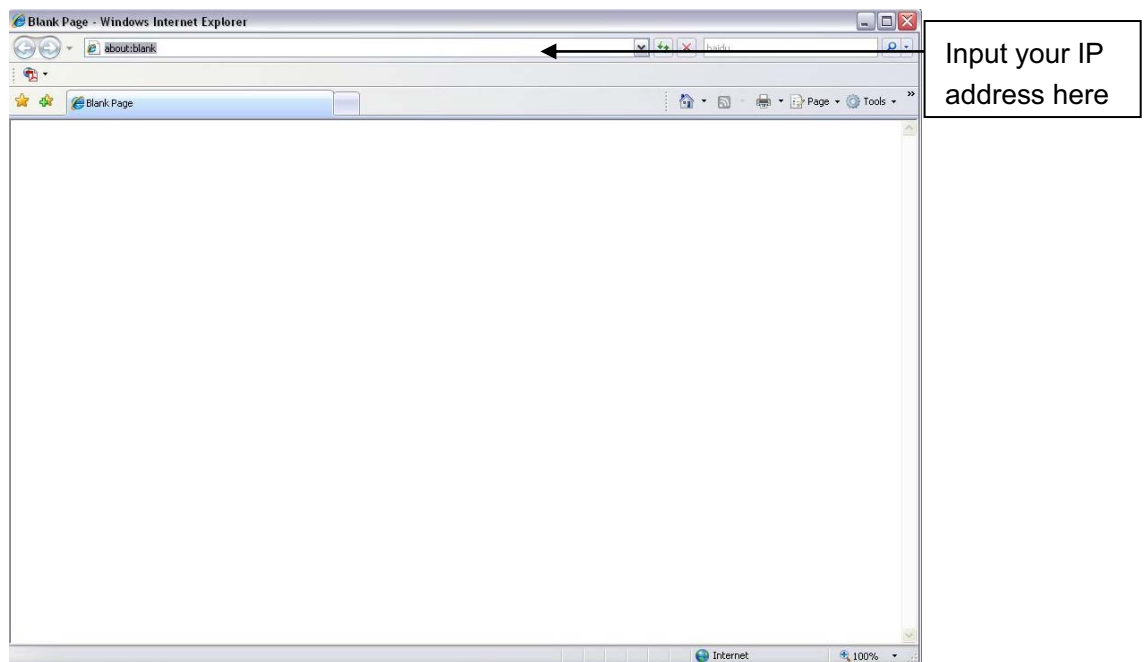


Figure 2-1

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

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

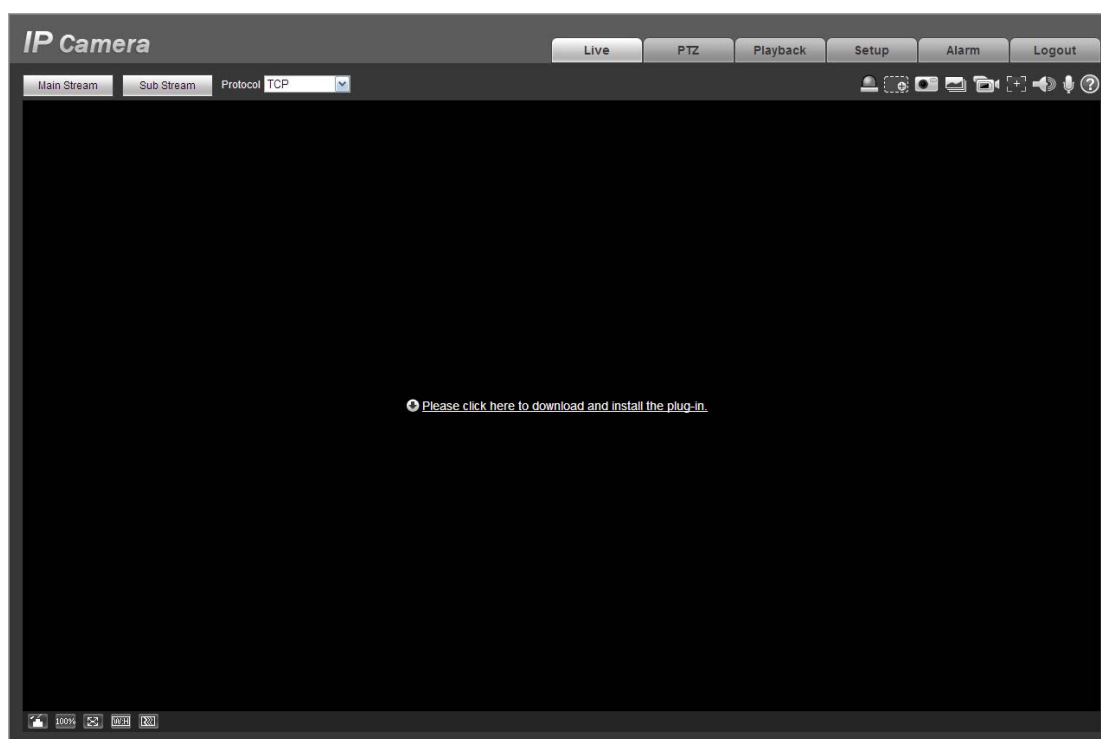


Figure 2-3

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

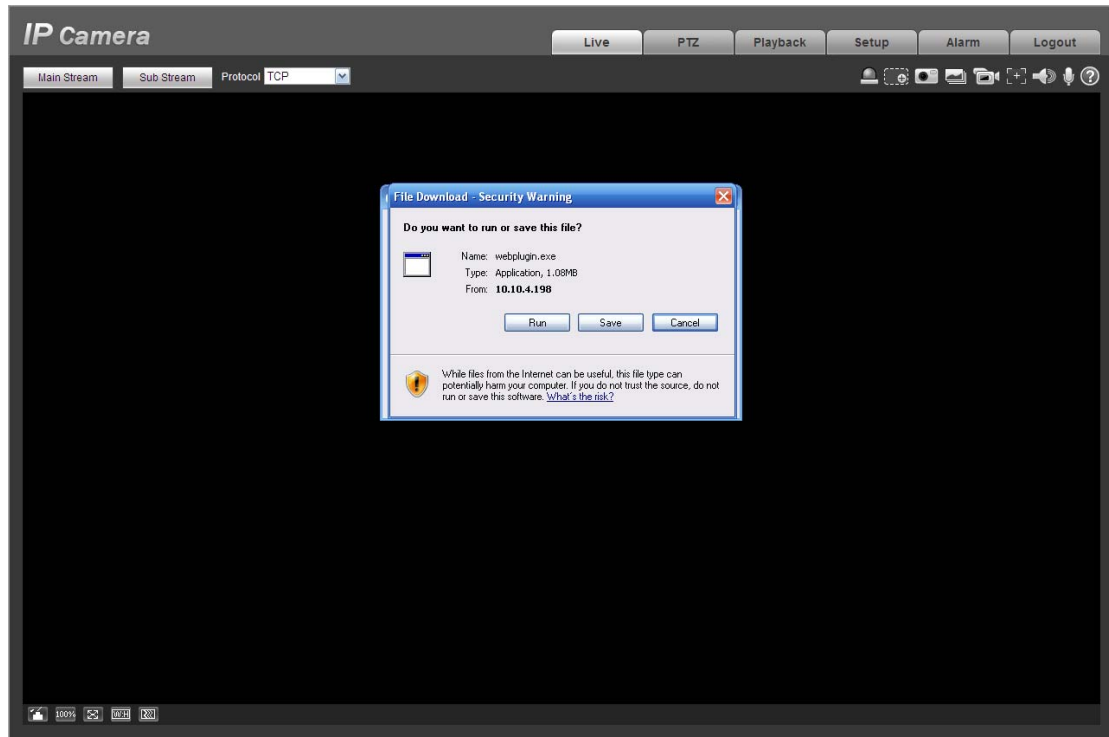


Figure 2-4

You must either run or save the file to local and install it. Follow the following steps. See Figure 2-5 and Figure 2-6.

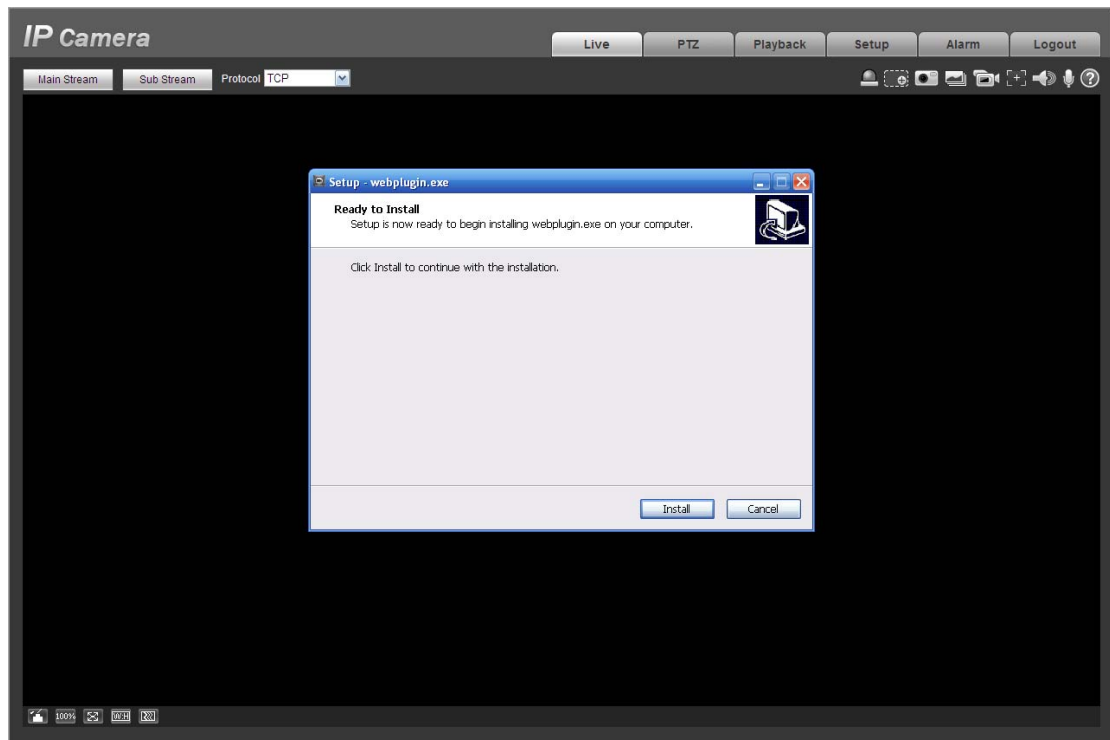


Figure 2-5

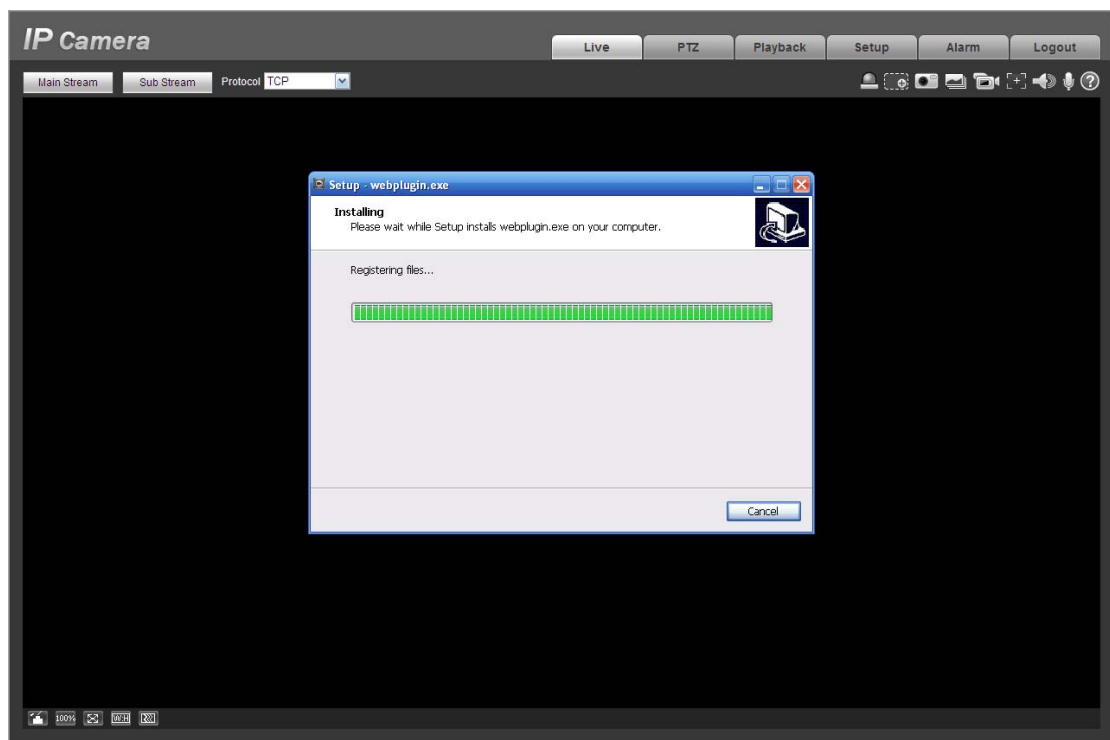


Figure 2-6

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

## 2.2 Live Interface

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

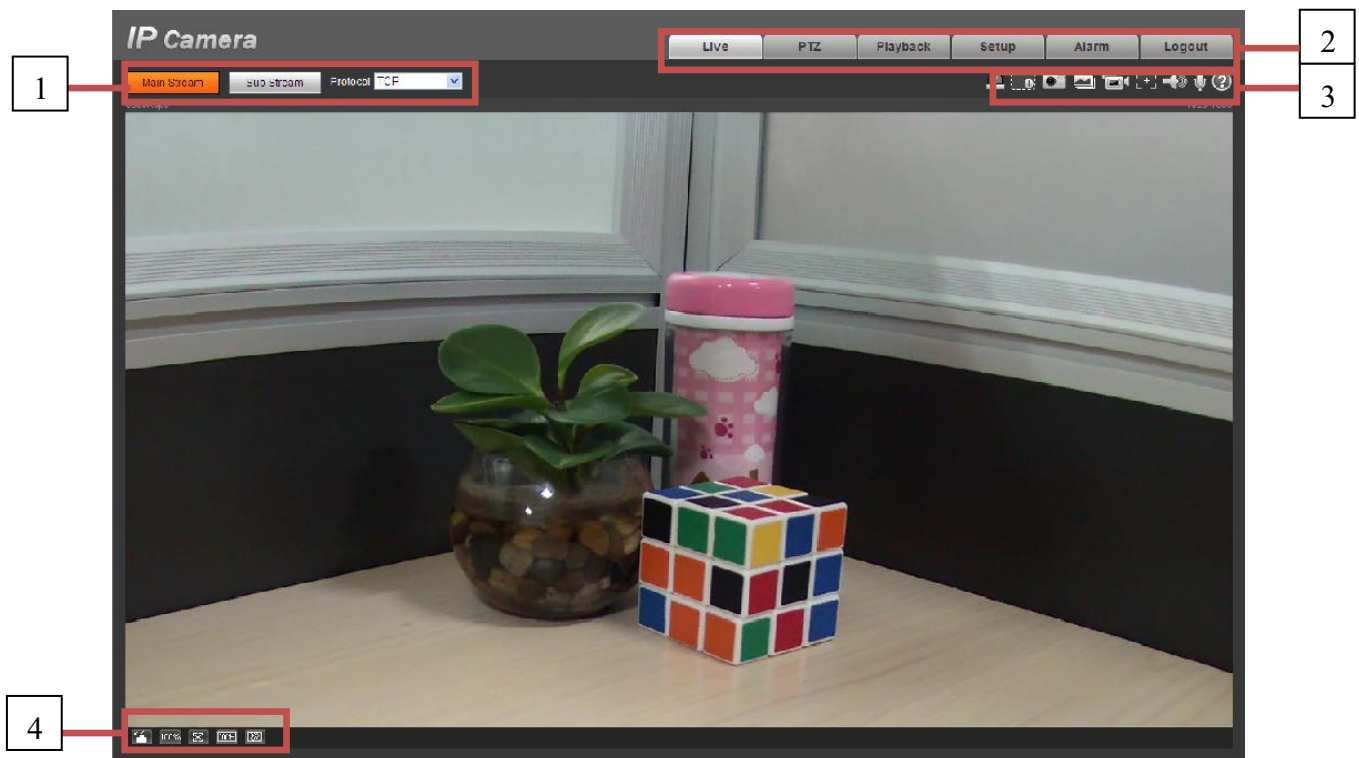


Figure 2-7

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 2-8.





Figure 2-8

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 2-9.

Please refer to chapter 2.2 Live, chapter 3 PTZ, chapter 4 Playback, chapter 5 Setup, chapter 6 Alarm, chapter 7 Log out for detailed information.



Figure 2-9

## 2.5 Video Window Function Option

The interface is shown as below. See Figure 2-10

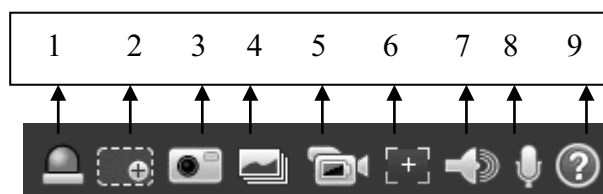


Figure 2-10

Please refer to the following sheet for detailed information.

SN	Parameter	Function
1	Alarm on/off	To control alarm output as: <ul style="list-style-type: none"> <li>● Red: means alarm output.</li> <li>● Grey: means alarm ends.</li> </ul>
2	Digital zoom	<ul style="list-style-type: none"> <li>● When the video is in the original status, click it you can select any zone to zoom in. In the non-original status, you can drag the zoom-in zone in specified range. Right click mouse to restore previous status.</li> <li>● Click it; you can use the middle button of the mouse to zoom in/out the video size.</li> </ul>

3	Snapshot	You can snapshot important video by clicking on this button. All images are memorized in system folder: \ picture download (default). You can go to Setup->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	For manual record. All records are memorized in Setup->Camera->Video->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 2-11.

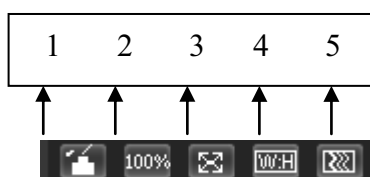


Figure 2-11

### 2.6.1 Image control

Click it to open picture setup interface. See Figure 2-12. This interface is on the top right pane.

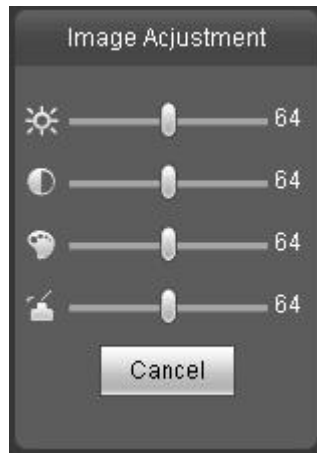






Figure 2-12

Please refer to the following sheet for detailed information.

Parameter		Function	
Video setup		It is to adjust monitor video brightness.	Note: <ul style="list-style-type: none"> <li>● All the operations here apply to WEB end only.</li> <li>● Please go to Setup-&gt;Camera-&gt;Conditions to adjust corresponding items.</li> </ul>
		It is to adjust monitor video contrastness.	
		It is to adjust monitor video hue.	
		It is to adjust monitor video saturation.	
	Reset	Restore brightness, contrastness saturation and hue to system default setup.	

### 2.6.2 Hide Image Control

Click this button to display/hide image control interface.

### 2.6.3 Original size

Click this button to go to original size. It is to display the actual size of the video stream. It depends on the resolution of the bit stream.

### 2.6.4 Full screen

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

### 2.6.5 Width and height ratio

Click it to restore original ratio or suitable window.

### **2.6.6 Fluency Adjustment**

There are three levels of fluency for you to select. The default is real-time with minimum delay. You may select fluent mode in case connection is slow.

### 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: It controls rotation speed. The step 8 speed is faster than step 1. Default value is 5.

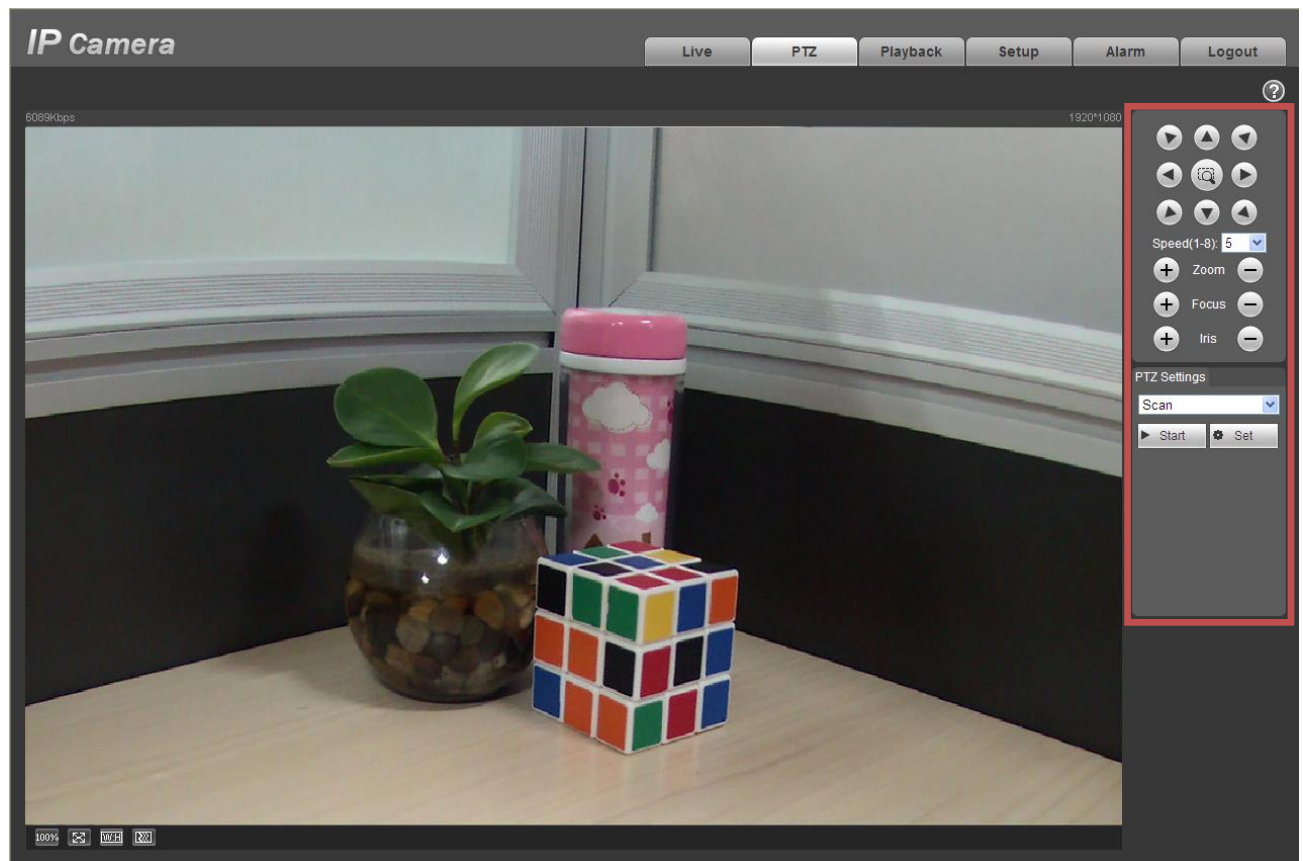


Figure 3-1

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

Here you can set scan, preset, tour, pattern, assistant function and light and wiper.

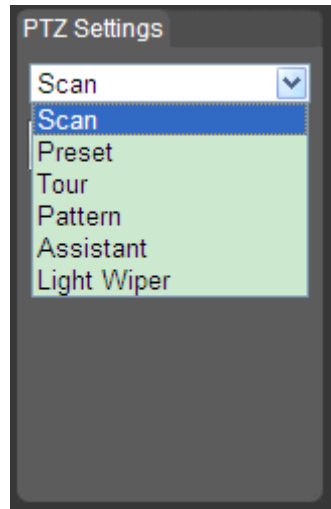


Figure 3-2

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	<ul style="list-style-type: none"> <li>● Click Setup button, you can set scan left and right limit.</li> <li>● 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.</li> </ul>
Preset	<ul style="list-style-type: none"> <li>● Input the preset value and then click Preset button, the camera turns to the corresponding position of the preset.</li> <li>● 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.</li> <li>● The preset value ranges from 1 to 255. (It may vary due to different protocols.)</li> </ul>
Tour	<ul style="list-style-type: none"> <li>● Click the Setup button, you can begin set tour.</li> <li>● Input tour value and then click the Set button. The tour value ranges from 1 to 255. (It may vary due to different protocols.)</li> <li>● Input preset value in the column. Click Add preset button, you have added one preset in the tour.</li> </ul> <p><b>Note:</b> 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.</p>
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 Playback

### 4.1 Playback Interface

The playback interface is shown as in Figure 4- 1.

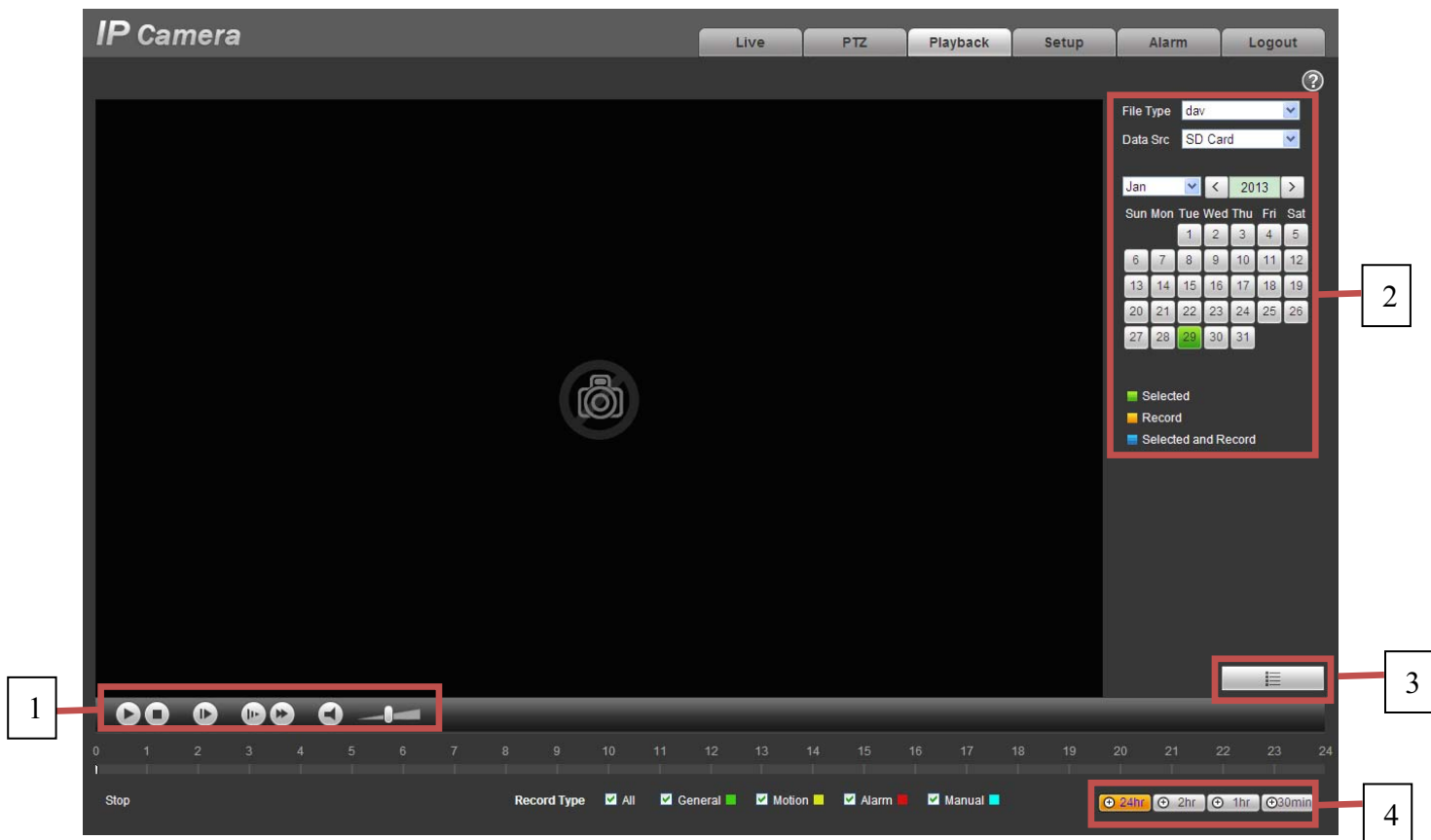


Figure 4- 1

There are four sections:

- Section 1: Function of play
- Section 2: Date
- Section 3: File list
- Section 4: Progress bar

### 4.2 Function of Play

The function of play is shown as in Figure 4- 2.





Figure 4- 2

1. Play: Play or pause video.
2. Stop: Stop video.
3. Play by frame: Skip to next frame.
4. Slow play: Slow down the video.
5. Quick play: Speed up the video.
6. Silent: Switch off/on sound.
7. Volume: Adjust volume of the video.

**Note: You must pause video before skipping to next frame.**

### 4.3 Date

There are various colors in calendar:

- Green: means currently selected date.
- Yellow: means current date has record file.
- Blue: means current date has record file which is/are selected.


Only file types selected will be displayed in progress bar and list.

### 4.4 File List

The file list is shown as in Figure 4- 3.



Figure 4- 3

Click on  to enter file list. Double click on record file in the list and this file will be played. You can view file size, start and end time.

Record type has four categories:

- Green means general record.
- Yellow means motion detection record.
- Red means alarm record.
- Blue means manual record.



Search: You can search record files within selected time interval.

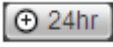
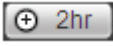
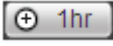
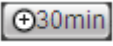


Download: Click on this button, you can download file to PC.



Back: Click on this button, you will go back to calendar page.

## 4.5 Progress Bar

-  means video in past 24 hours.
-  means video in past 2 hours.
-  means video in past 1 hour.
-  means video in past 30 min.

## 5 Setup

### 5.1 Camera

#### 5.1.1 Conditions

Here you can view device property information. Slight differences may be found due to different network camera series. The setups become valid immediately after you set. See Figure 5-1.

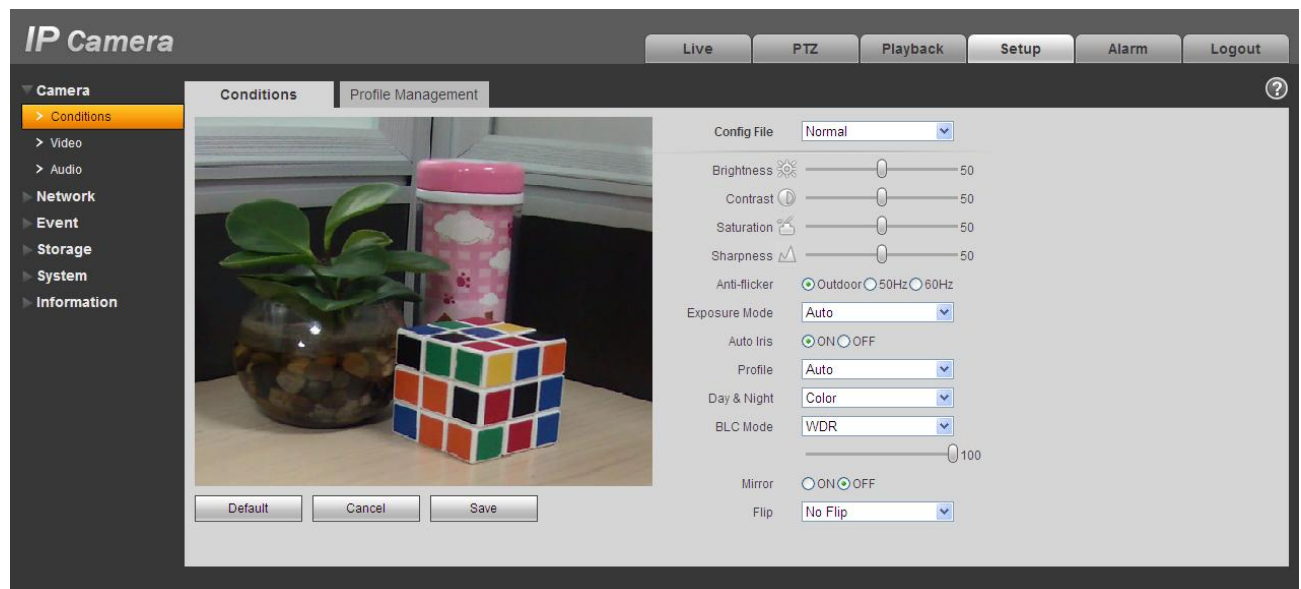



Figure 5-1

Please refer to the following sheet for detailed information.

Parameter	Function
Config File	You may select general, day and night mode.
Brightness	<p>It is to adjust monitor window bright. You can adjust this value if the video is too dark or too bright. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. Please note the video may become hazy if the value is too high.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.</p>

Contrast	<p>It is to adjust monitor window contrast. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. 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 .</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.</p>	
Saturation	<p>It is to adjust monitor window saturation. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60.</p> <p>The default value is 50.</p>	
Sharpness	<p>The value here is to adjust the edge of the video. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60.</p> <p>The default value is 50.</p>	
Anti-flicker	<ul style="list-style-type: none"> <li>● Outdoor: In this mode, you can switch exposure mode to get the effect under the corresponding exposure mode.</li> <li>● 50Hz: When the current is 50Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.</li> <li>● 60Hz: When the current is 60Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.</li> </ul>	
Exposure Mode	Auto	<p>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.</p>

	Low noise	<ul style="list-style-type: none"> <li>● 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.</li> <li>● For the same environments, the noise of the low noise mode shall be smaller than the noise of the auto mode.</li> </ul>
	Low motion blur	<ul style="list-style-type: none"> <li>● 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 weaker the blur is.</li> <li>● For the same environments, the noise of the low motion blur mode shall be smaller than that of the auto mode.</li> </ul>
	Manual	It is to display manual exposure value.
Auto Iris	<p>Before the setup, please make sure you have installed the auto iris.</p> <p>You can check the box before ON to enable this function. The auto iris may change if the light becomes different.</p> <p>When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control.</p> <p>This function is on by default.</p>	
Scene Mode	<p>It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default.</p> <p>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.</p> <ul style="list-style-type: none"> <li>● Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the video color is proper.</li> <li>● Sunny: The threshold of the white balance is in the sunny mode.</li> <li>● Night: The threshold of the white balance is in the night mode.</li> <li>● Customized: You can set the gain of the red/blue channel. The value ranges from 0 to 100.</li> </ul>	

Day&Night	<p>It is to set device color and the B/W mode switch. When config file is general, the default is auto. When config file is day, the default is color. When config file is night, the default is black &amp; white.</p> <ul style="list-style-type: none"> <li>● Color: Device outputs the color video.</li> <li>● 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.)</li> <li>● B/W: The device outputs the black and white video.</li> </ul>	
Backlight Mode	BLC	The device auto exposures according to the environments situation so that the darkest area of the video is cleared
	WDR	<p>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.</p> <p>The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.</p>
	HLC	<p>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.</p> <p>The value ranges from 0 to 100. The default value is 50 when HLC is on.</p> <p>HLC is enabled only when anti-flicker is outdoor and exposure mode is auto.</p>
	Off	It is to disable the BLC function. Please note this function is disabled by default.
Full-screen test	Click the  button on the video window, you can begin full-screen test.	
Flip	<p>It is to switch video up and bottom limit.</p> <p>This function is disabled by default.</p> <p>The video resolution shall be 720P or below if you want to flip 90°.</p>	
Mirror	<p>It is to switch video left and right limit.</p> <p>This function is disabled by default.</p>	

Cancel	It is to cancel the operation in current interface and restore previously saved operation.
Default	It is to set device default setup.

The profile management interface is shown as in Figure 5-2.

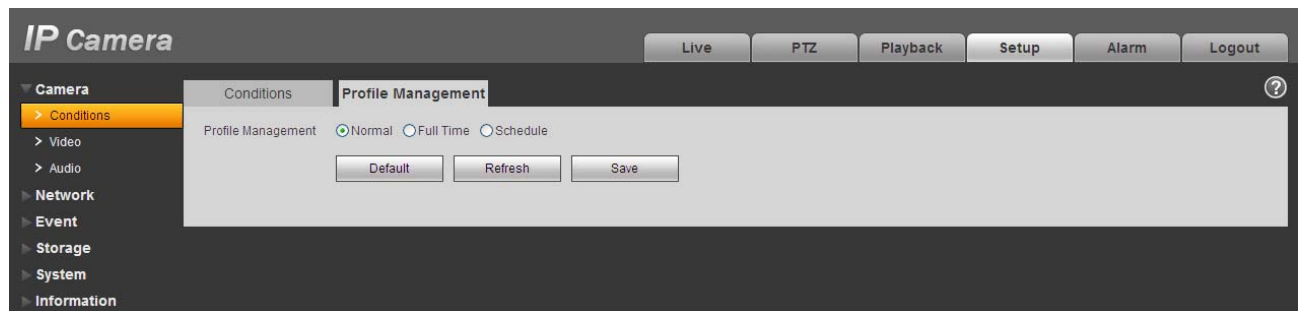


Figure 5-2

Profile management has three modes: general, full time and schedule. If you select general, the video will be configured as general. If you select full time, you must select either day or night, and the video will be configured accordingly. If you select schedule, you can decide detained time interval.

### Important

- The setup becomes immediately after you set.
- 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.
- You can see WDR option only if your camera supports WDR function. System does not support long-time exposure or low noise mode.

## 5.1.2 Video

### 5.1.2.1 Video bit stream

The video bit stream interface is shown as below. See Figure 5-3.



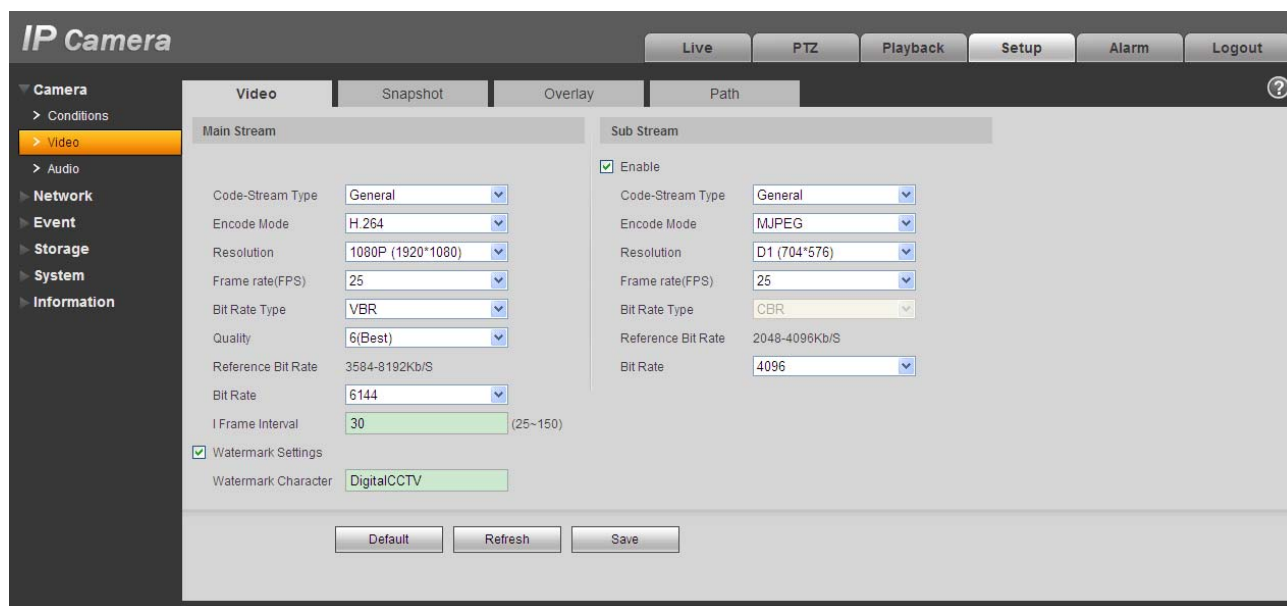


Figure 5-3

Please refer to the following sheet for detailed information.

Parameter		Function
Main stream	Bit stream type	<p>It includes general stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events.</p> <p>System supports active control frame function (ACF). It allows you to record in different frame rates.</p> <p>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.</p>
	Encode mode	<p>There are three options: H.264 (main profile standard), H.264H (high profile standard), H.264B (baseline standard)encode and MJPG encode.</p> <ul style="list-style-type: none"> <li>● H.264 : Main Profile encode mode.</li> <li>● H.264H : High Profile encode mode.</li> <li>● H.264B : Baseline Profile encode mode</li> <li>● 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.</li> </ul>

Parameter		Function
	Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p> <p><b>Important</b></p> <p>You can not set a resolution higher than 720P (not including 720P) when the flip function is in process.</p>
	Frame Rate	<p>PAL: 1~25f/s, NTSC: 1~30f/s..</p> <p>The frame rate may vary due to different resolutions.</p>
	Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p>
	Reference Bit Stream	Reference bit rate value according to the resolution and frame rate you have set.
	Bit Rate	<ul style="list-style-type: none"> <li>● In VBR, the bit rate here is the max value. In CBR, it is a fixed value.</li> <li>● See reference bit stream for recommended value.</li> </ul>
	I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>
	Watermark	<p>This function allows you to verify the video is tampered or not.</p> <p>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.</p>
Sub stream	Enable	<p>Please check the box here to enable extra stream function.</p> <p>This function is enabled by default.</p>
	Bit stream type	General bit stream.

Parameter		Function
	Encode mode	<p>There are three options: H.264(main profile standard, H.264H (high profile standard), H.264B(baseline standard)encode and MJPG encode.</p> <ul style="list-style-type: none"> <li>● The H.264, H.264H 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.</li> <li>● 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.</li> </ul>
	Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p>
	Frame Rate	<p>PAL: 1~25f/s, NTSC: 1~30f/s..</p> <p>The frame rate may vary due to different resolutions.</p>
	Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p>
	Recommended Bit	<p>Recommended bit rate value according to the resolution and frame rate you have set.</p>
	Bit Rate	<ul style="list-style-type: none"> <li>● 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.</li> <li>● The value is null in VBR mode.</li> <li>● Please refer to recommend bit rate for the detailed information.</li> </ul>
	I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>

#### 5.1.2.2 Snapshot

The snapshot interface is shown as in Figure 5-4.

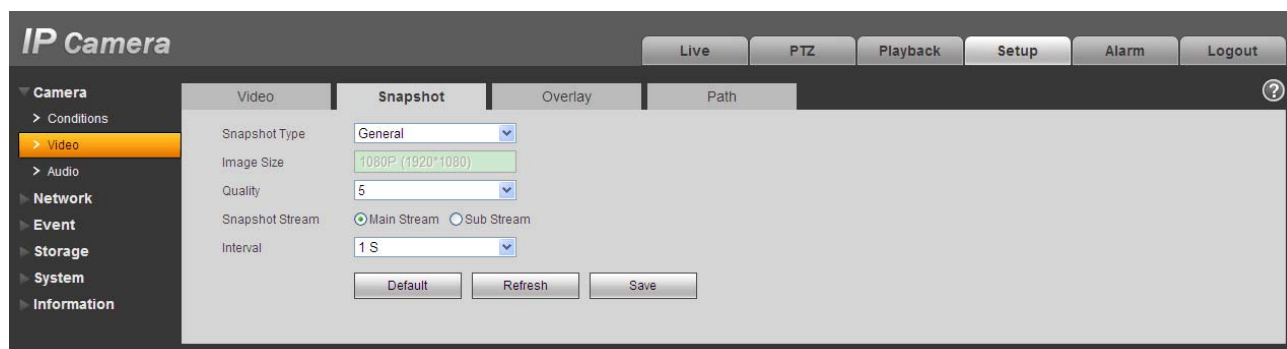


Figure 5-4

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.
Snapshot bit stream	It is to set snapshot bit rate as main or sub.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s.

### 5.1.2.3 Video Overlay

The video overlay interface is shown as in Figure 5-5.

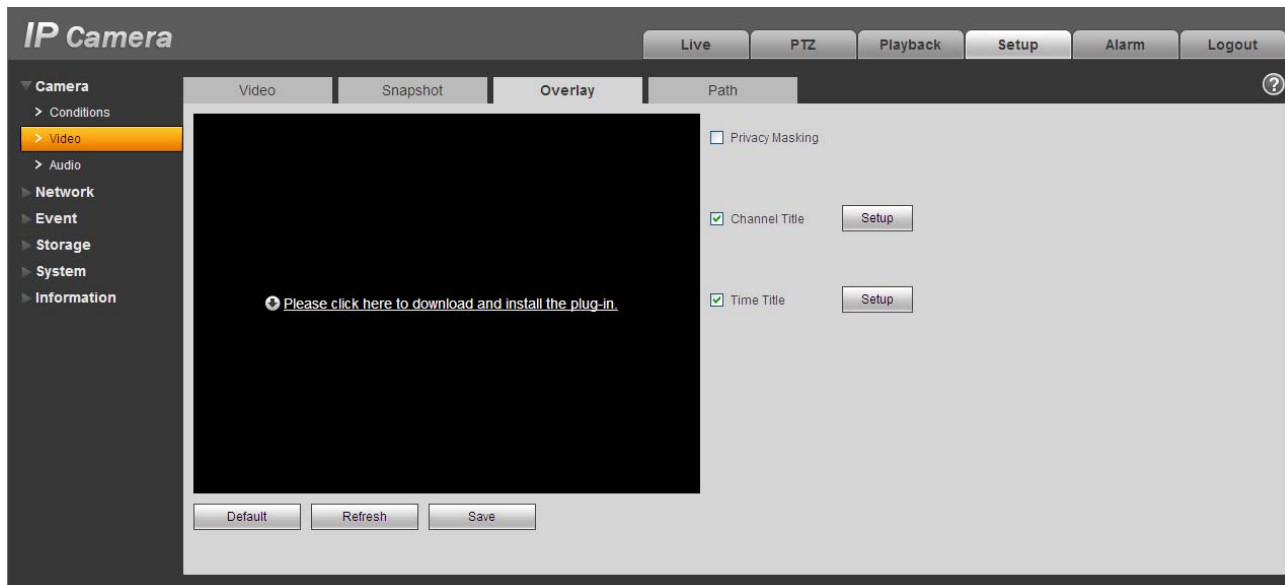




Figure 5-5

Please refer to the following sheet for detailed information.

Parameter	Function
Privacy mask	<ul style="list-style-type: none"> <li>● Here you can privacy mask the specified video in the monitor video.</li> <li>● System max supports 4 privacy mask zones.</li> </ul>
Time Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays time information in video window.</li> <li>● You can use the mouse to drag the time tile position.</li> </ul>
Channel Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays channel information in video window.</li> <li>● You can use the mouse to drag the channel tile position.</li> </ul>

#### 5.1.2.4 Path

The storage path interface is shown as in Figure 5-6.

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 and C:\RecordDownload. Please click the Save button to save current setup.

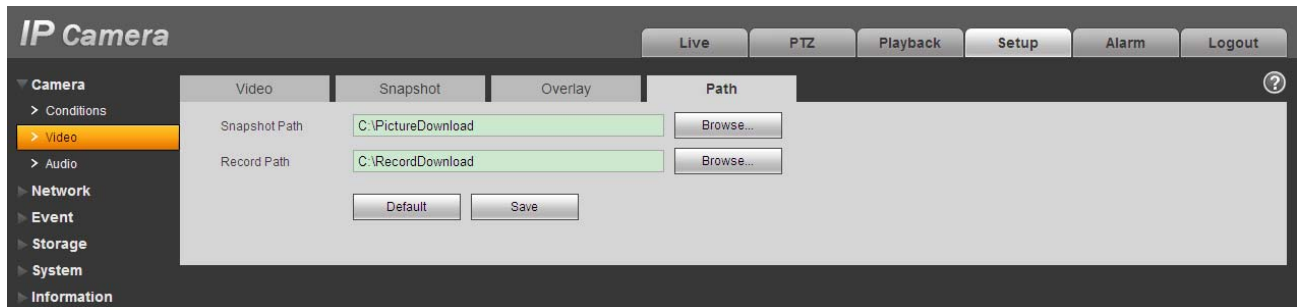


Figure 5-6

### 5.1.3 Audio

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

The audio interface is shown as below. See Figure 5-7.

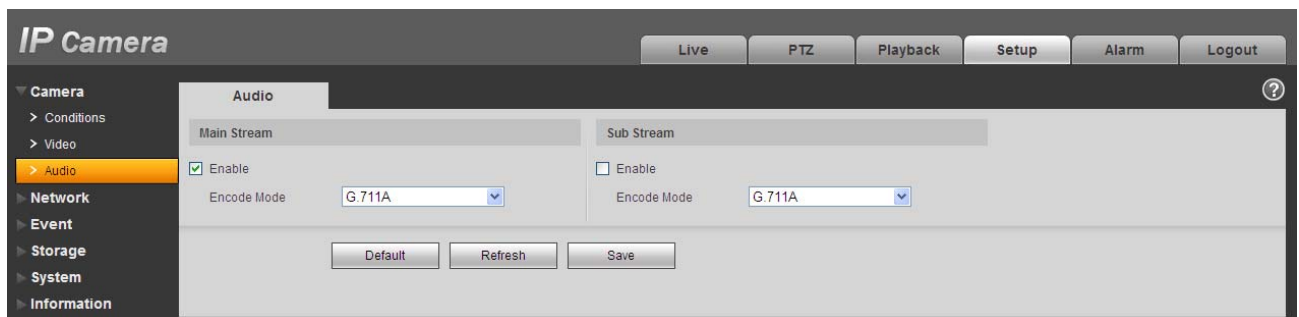


Figure 5-7

Please refer to the following sheet for detailed information.

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

## 5.2 Network

### 5.2.1 TCP/IP

The TCP/IP interface is shown as in Figure 5-8.

Figure 5-8

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	<p>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.</p> <p>Please note the device needs to reboot to activate the new setup once you modify the default setup.</p>
Mode	<p>There are two modes: static mode and the DHCP mode.</p> <ul style="list-style-type: none"> <li>● The IP/submask/gateway are null when you select the DHCP mode to auto search the IP.</li> <li>● If you select the static mode, you need to set the IP/submask/gateway manually.</li> <li>● If you select the DHCP mode, you can view the IP/submask/gateway from the DHCP.</li> <li>● If you switch from the DHCP mode to the static mode, you need to reset the IP parameters.</li> <li>● Besides, IP/submask/gateway and DHCP are read-only when the PPPoE dial is OK.</li> </ul>

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.	<p>You can use ARP/Ping command to modify or set the device IP address if you know the device MAC address.</p> <p>Before the operation, please make sure the network camera and the PC in the same LAN. This function is on by default.</p> <p>You can refer to the steps listed below.</p> <p><b>Step 1:</b> Get an IP address. Set the network camera and the PC in the same LAN.</p> <p><b>Step 2:</b> Get the physical address from the label of the network camera.</p> <p><b>Step 3:</b> Go to the Run interface and then input the following commands.</p> <pre>arp -s &lt;IP Address&gt; &lt;MAC&gt; ping -l 480 -t &lt;IP Address&gt;</pre> <p>Such as: arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125</p> <p><b>Step 4:</b> Reboot the device.</p> <p><b>Step 5:</b> 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.</p> <p><b>Step 6:</b> Open the browse and then input http://&lt;IP address&gt;. Click the Enter button, you can access now.</p>

### 5.2.2 Connection

The connection interface is shown as in Figure 5-9.



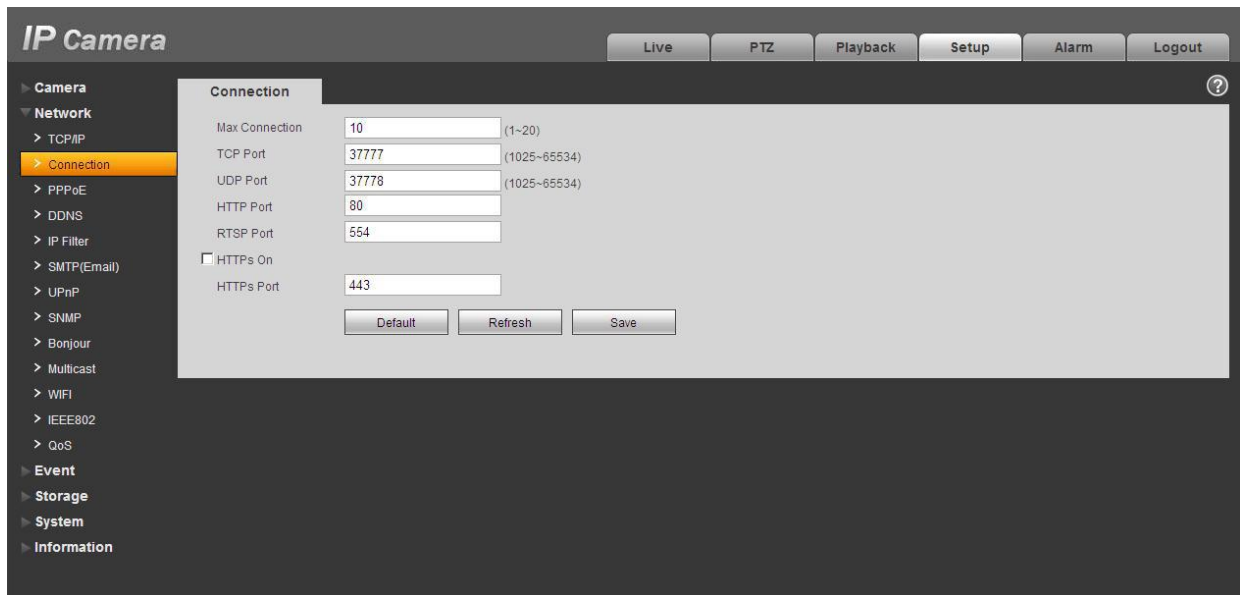


Figure 5-9

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	<p>The default value is 554. Rtsp stream query format is:</p> <p>Main stream:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=0</p> <p>Sub stream:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=1</p> <p>You need to input the following four items manually.  username/password/IP and port.</p> <p>The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value.</p> <p>Follow standard RTP protocol and when encode mode is MJPEG, the max resolution only supports 2040*2040.</p>

HTTPs Enable	The default value is 443.
-----------------	---------------------------

### 5.2.3 PPPoE

The PPPoE interface is shown as in Figure 5-10.

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

**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 5-10

### 5.2.4 DDNS

The DDNS interface is shown as in Figure 5-11.

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 changed. When the device connects to WLAN, you should disable UPnP.

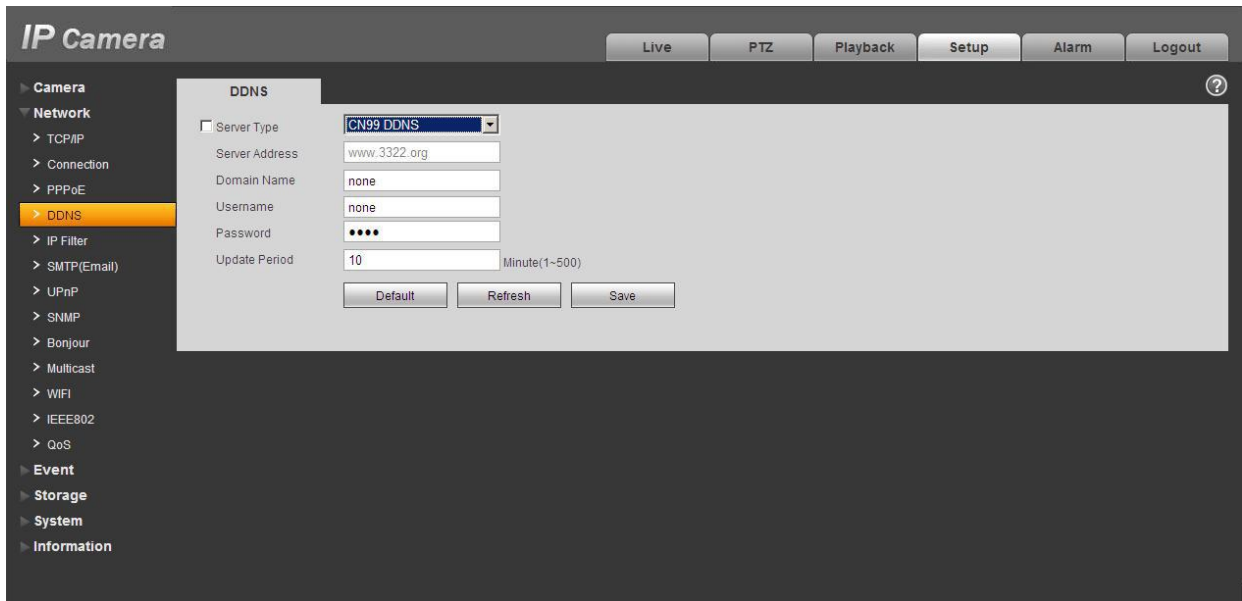


Figure 5-11

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 QUICK DDNS protocol means you use your self-defined private protocol to realize DDNS function.
Server Address	DDNS server IP address
Domain Name	Your self-defined domain name.
Username	The user name you input to log in the server.
Password	The password you input to log in the server.
Update period	<ul style="list-style-type: none"> <li>● Device sends out alive signal to the server regularly.</li> <li>● You can set interval value between the device and DDNS server here.</li> </ul>

The DDNS interface is shown as in Figure 5-12.

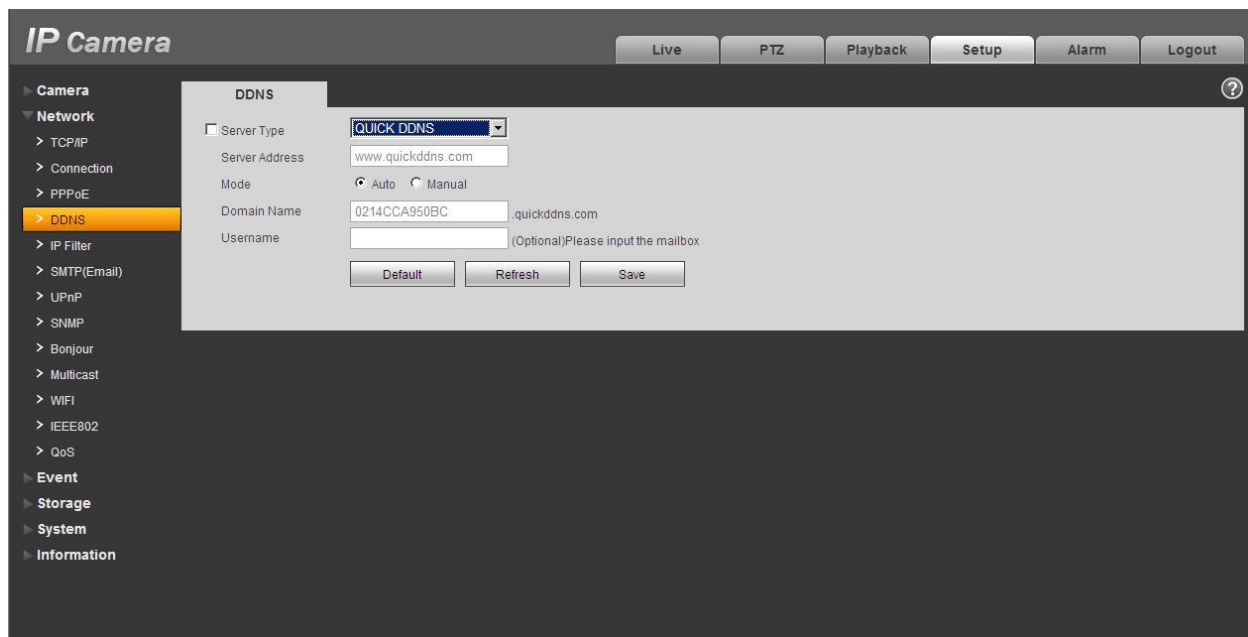


Figure 5-12

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function. The QUICK DDNS means you use your self-defined private protocol to realize DDNS function.
Server Address	DDNS server IP address. Under QUICK DDNS the default server address is www.quickddns.com
Mode	The default is auto, and you can select manual.
Domain Name	Auto and self-defined domain names are both MAC address.quickddns.com. You can self-define prefix.
Test	It is to test domain name. It is available only under manual mode.
Username	The user name you input to log in the server. Optional.

### 5.2.5 IP filter

The IP filter interface is shown as in Figure 5-13.

You can enable IP filter function so that some specified IP/MAC user can access the network camera. You can add IP address or IP address section.

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

Here you can add IP address and MAC address. You must add these address before enabling the trusted sites.

Please note: You must set MAC address in the same network segment.

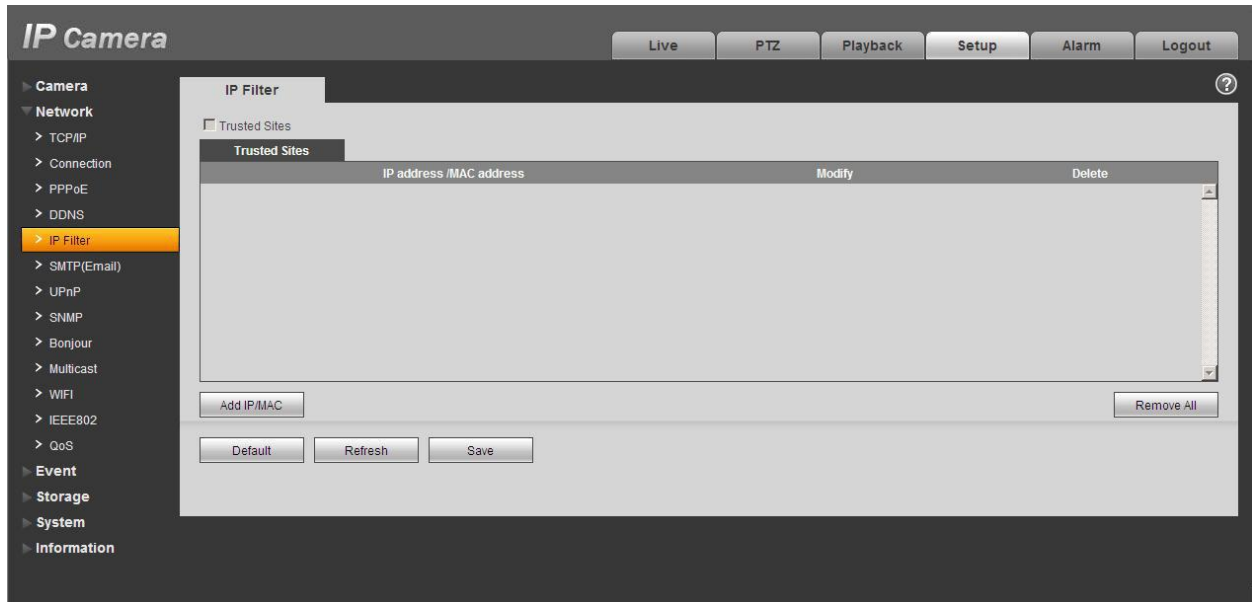


Figure 5-13

### 5.2.6 SMTP (e-mail)

The SMTP interface is shown as in Figure 5-14.

The screenshot shows the 'IP Camera' web interface. The top navigation bar includes 'Live', 'PTZ', 'Playback', 'Setup', 'Alarm', and 'Logout'. The left sidebar menu is expanded to 'SMTP (Email)'. The main configuration area for 'SMTP (Email)' includes the following fields and options:

- SMTP Server:** none
- Port:** 25
- Anonymity:** ☐ (unchecked)
- Username:** anonymity
- Password:** masked with dots
- Sender:** none
- Authentication:** None (dropdown menu)
- Title:** IPC Message
- Attachment:** ☒ (checked)
- Mail Receiver:** (empty text box with add and remove buttons)
- Interval:** 0 (text box) Second(0~3600)
- Health Mail:** ☐ (unchecked)
- Update Period:** 60 (text box) Second(1~3600)
- Buttons:** Email Test, Default, Refresh, Save

Figure 5-14

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 abnormality 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 abnormality 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.

### 5.2.7 UPnP

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

Here you can also add, modify or remove UPnP item. For UPnP on different routers, you must disable UPnP function. See Figure 5-15.

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 network camera can auto detect it via the "My Network Places"

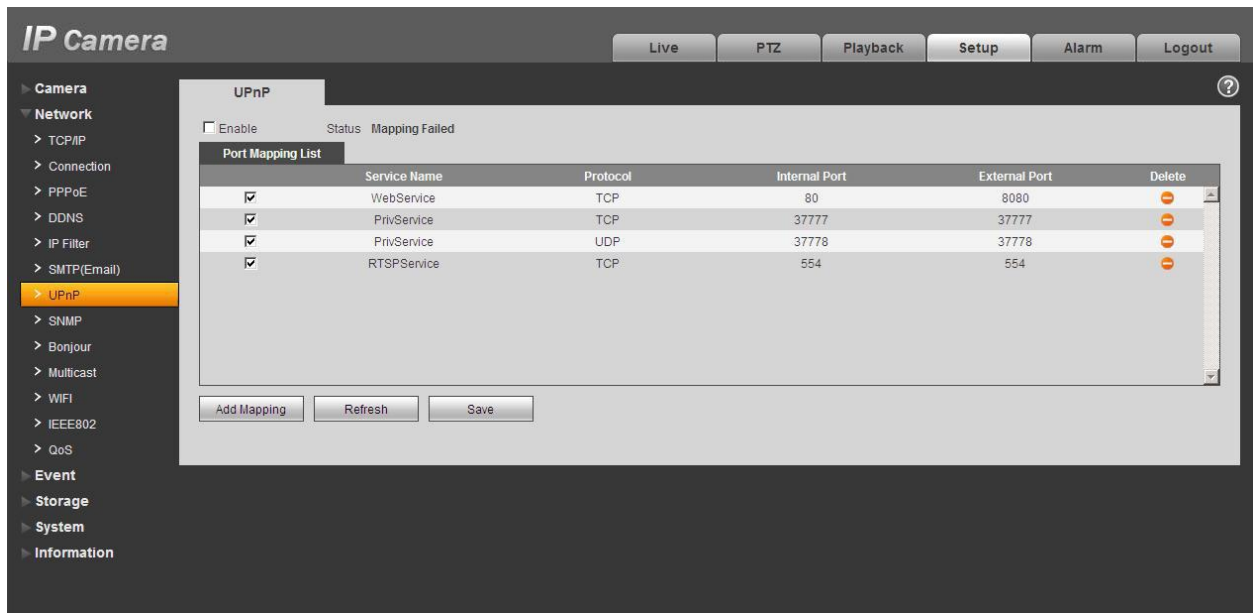


Figure 5-15

### 5.2.8 SNMP

The SNMP interface is shown as in Figure 5-16.

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.



The screenshot shows the 'SNMP' configuration page in the IP Camera web interface. The left sidebar has a tree view with categories: Camera, Network (expanded), Connection, PPPoE, DDNS, IP Filter, SMTP(Email), UPnP, **SNMP** (selected), Bonjour, Multicast, WIFI, IEEE802, QoS, Event, Storage, System, and Information. The main content area is titled 'SNMP' and contains the following fields:

- SNMP Port: 161 (range 1~65535)
- Read Community: public
- Write Community: private
- Trap Address: (empty)
- Trap Port: 162 (range 1~65535)
- SNMP Version: ☐ SNMP v1, ☐ SNMP v2, ☒ SNMP v3
- Read-only Username: public \*
- Authentication Type: MD5 (dropdown)
- Authentication Password: (empty)
- Encryption Type: CBC-DES (dropdown)
- Encryption Password: (empty)
- Read&write Username: private \*
- Authentication Type: MD5 (dropdown)
- Authentication Password: (empty)
- Encryption Type: CBC-DES (dropdown)
- Encryption Password: (empty)

At the bottom of the form are three buttons: Default, Refresh, and Save.

Figure 5-16

Please refer to the following sheet for detailed information.

Parameter	Function
SNMP port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. 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.

Parameter	Function
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.
SNMP version	<ul style="list-style-type: none"> <li>● SNMP V1: system only processes the information of V1.</li> <li>● SNMP V2: system only processes the information of V2.</li> <li>● SNMP V3: you can set user name and password. There is account security verification when the server wants to connect to the device. At the same time, the v1 and V2 is null and cannot select.</li> </ul>
Username read-only	Only when SNMP version is SNMP v3, you shall config this parameter. The default is public.
Authentication	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Username read/write	Only when SNMP version is SNMP v3, you shall config this parameter. The default is private.
Authentication	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.

### 5.2.9 Bonjour

The Bonjour interface is shown as below. See Figure 5-17.

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 network camera device and then access if you do not know the network camera information such as IP address.

You can view the server name when the network camera 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 network camera of the Bonjour function in the LAN.

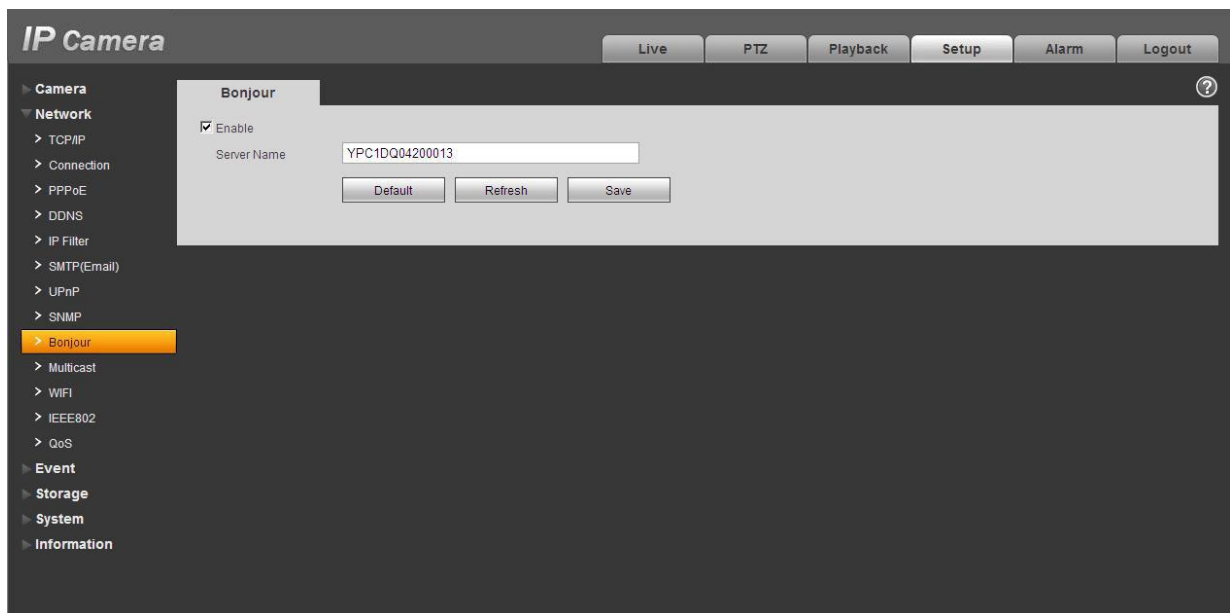


Figure 5-17

### 5.2.10 Multicast

The multicast interface is shown as in Figure 5-18.

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.

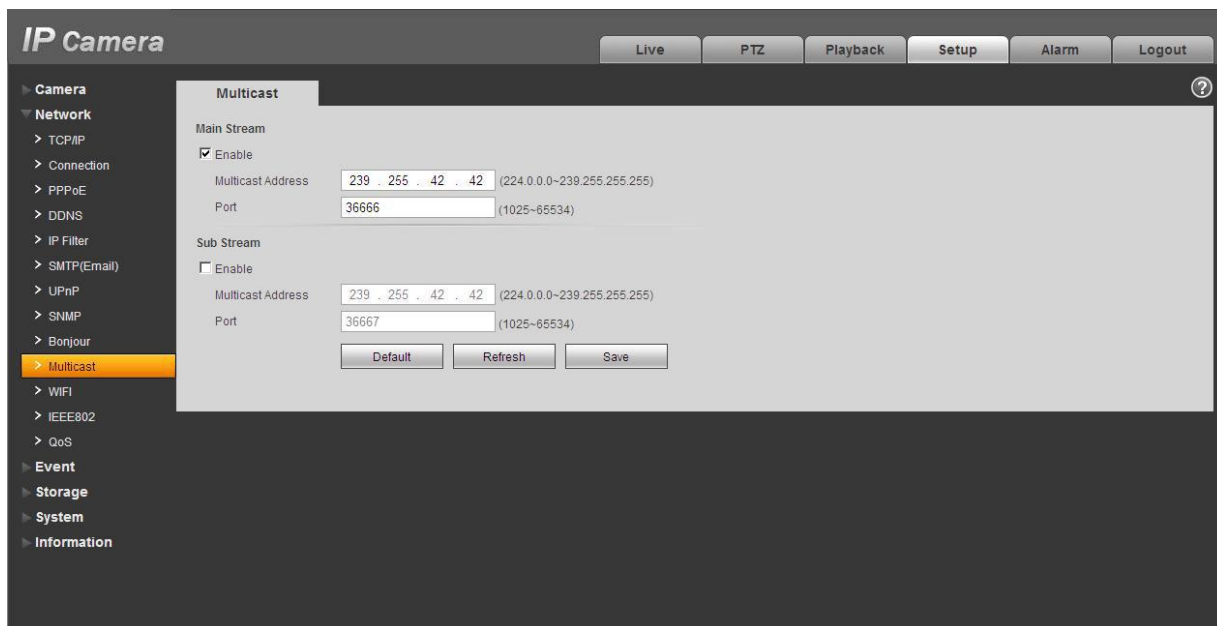


Figure 5-18

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Select to enable multicast function. Main stream and sub stream cannot be used at the same time.
Multicast address	Main/sub stream multicast address is 239.255.42.42 and its range is 224.0.0.0~239.255.255.255.
Port	Multicast port. Main stream is 36666, sub stream is 36667 and the range is 1025~65534.

### 5.2.11 WIFI

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

The WIFI interface is shown as in Figure 5-19.

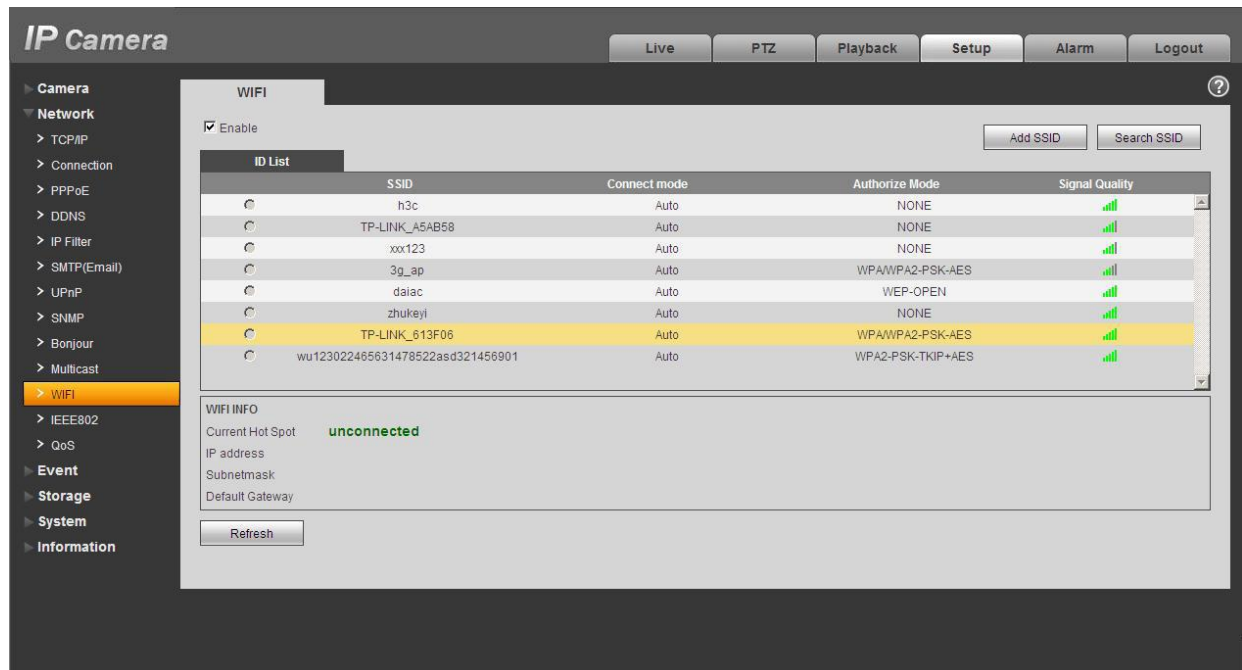


Figure 5-19

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. Click on add wireless ID, and add designated ID in dialog box. Please make sure that you can find the just added ID in list, otherwise you cannot use this ID. See Figure 5-20.

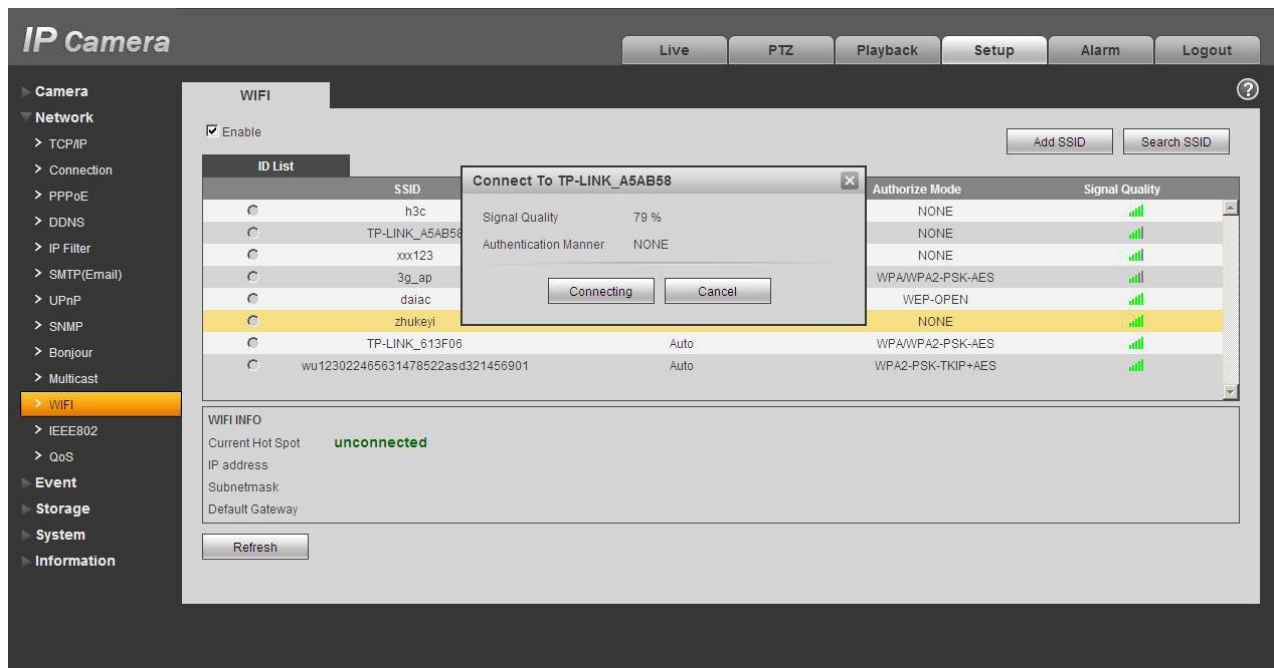


Figure 5-20

## 5.2.12 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 5-21.

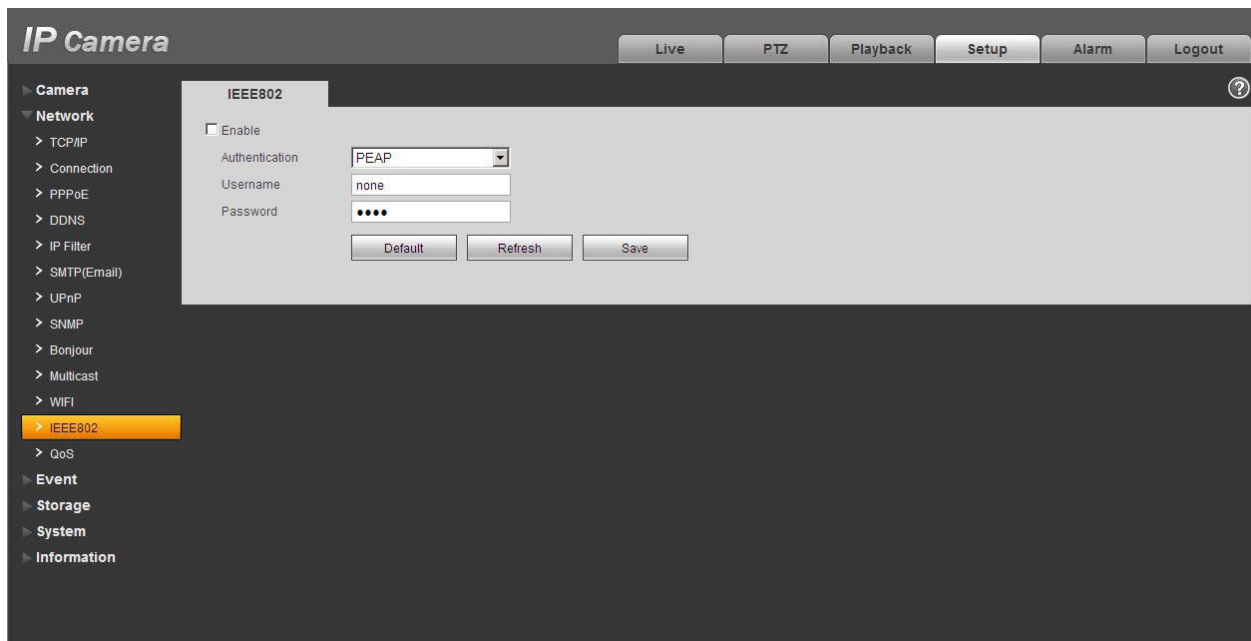


Figure 5-21

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.

### 5.2.13 QoS

The QoS interface is shown as below. See Figure 5-22.

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.

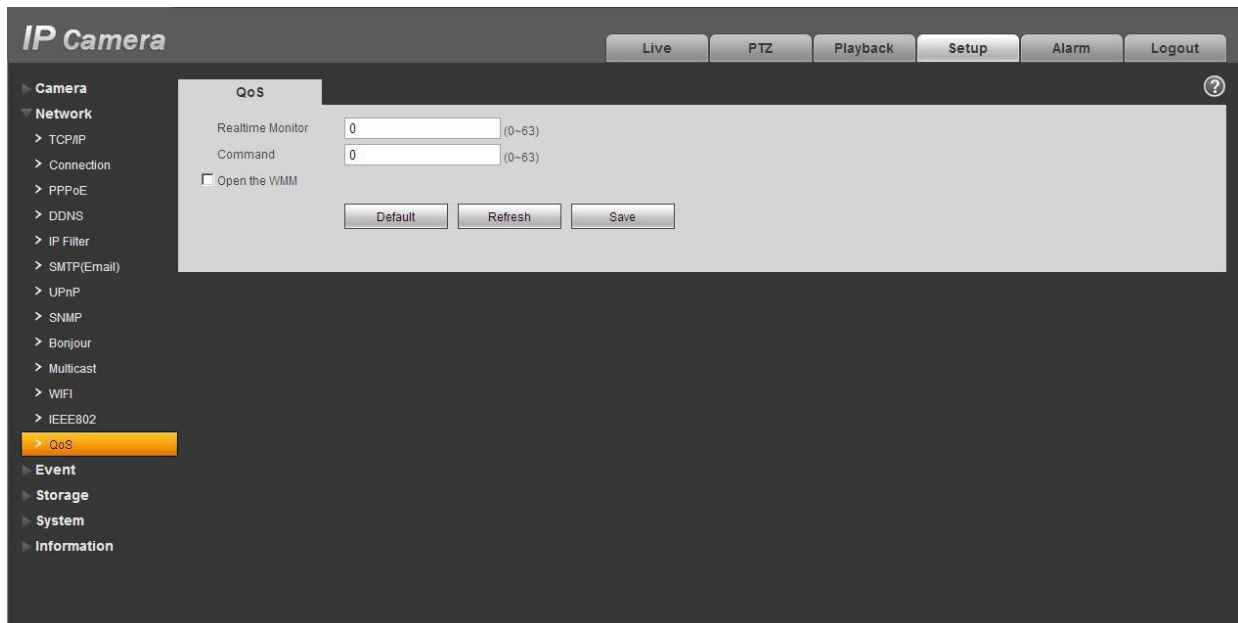


Figure 5-22

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.
Enable wireless QoS	Check it to enable QoS.

### 5.2.14 3G

**Note:** This function is only for series with 3G module.

The 3G interface is shown as in Figure 5-23.



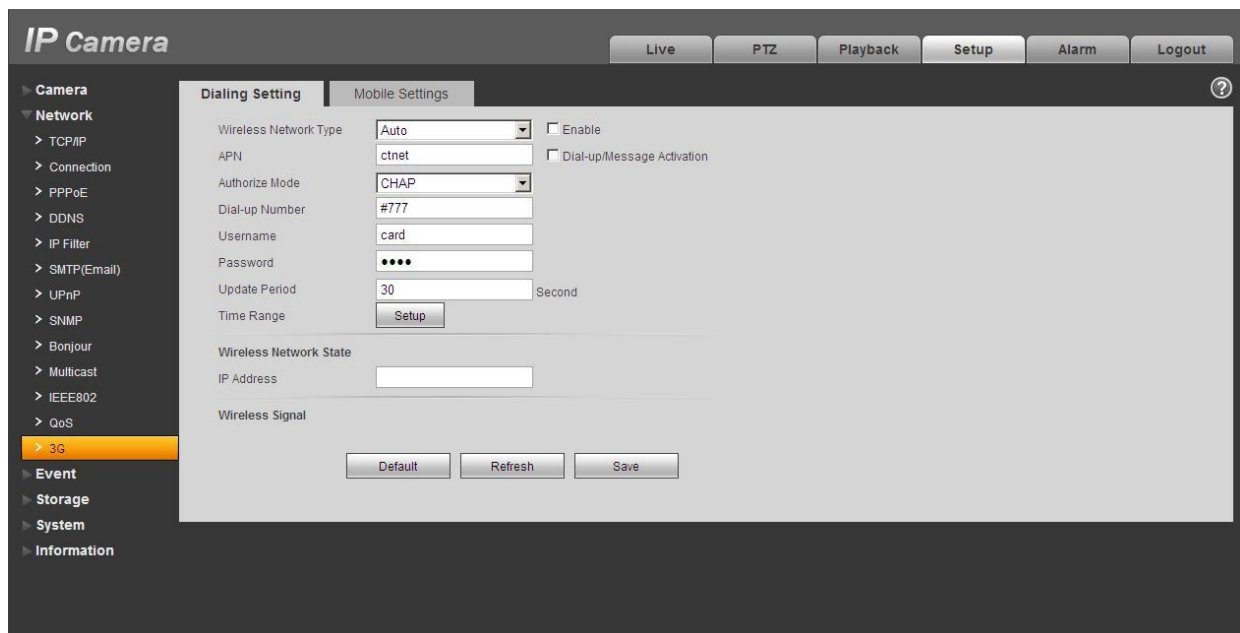


Figure 5-23

#### 5.2.14.1 Dial-up

The dial-up interface is shown as in Figure 5-24.

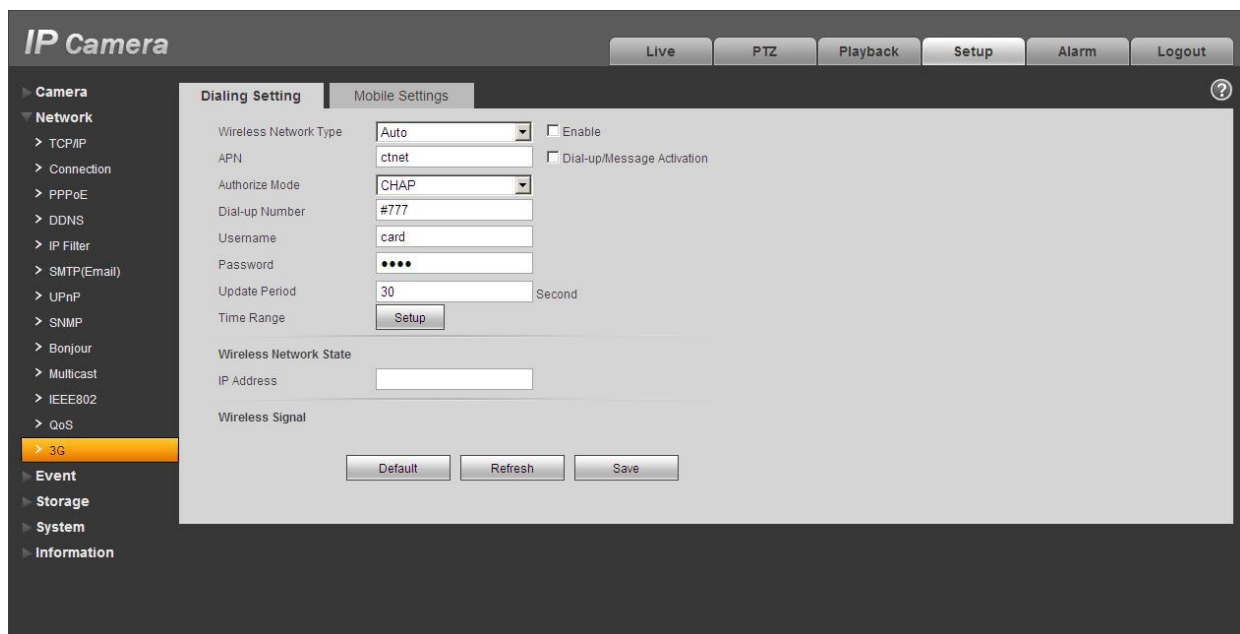


Figure 5-24

Please refer to the following sheet for detailed information.

Parameter	Function
Wireless connection type	The default is auto and it supports dial-up, sms and incoming call.
Enable	Check to enable 3G module.
Authentication	This function depends on your local 3G provider.
Dial-up	This function depends on your local 3G provider.
Username	This function depends on your local 3G provider.
Password	This function depends on your local 3G provider.
Auto period	It is period for device to receive 3G signal every 30s other than scheduled period. The default is 30s.
Interval	You can set dial-up interval. You also can dial if you enable dial-up/sms. The dial-up/sms and dial-up interval is related.
IP address	It displays received IP when 3G dial-up succeeds.

#### 5.2.14.2 Mobile Phone

The mobile phone interface is shown as in Figure 5-25.

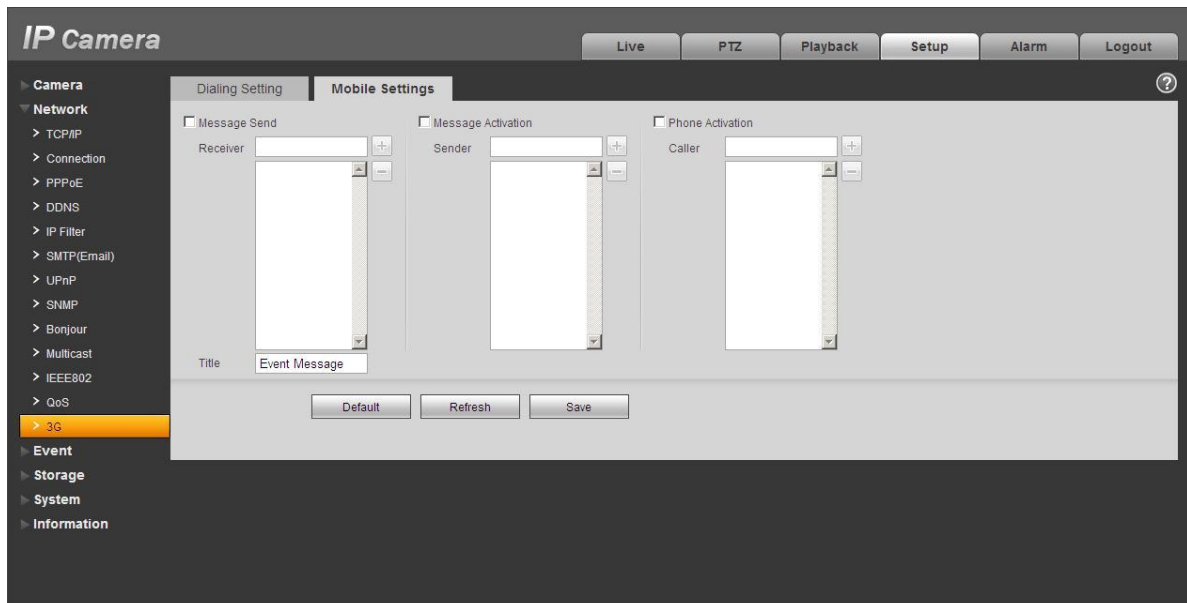


Figure 5-25

Please refer to the following sheet for detailed information.

Parameter	Function
SMS sending	In event management, check corresponding sms, so when there is event, a sms will be sent to mobile phone in corresponding receiving list. To use this function, you shall check sms enable in event management interface.
SMS enable	Mobile phone numbers in the list can enable/disable dial-up function and reboot device by sending sms to SIM card in the device.
Tel Activation	Mobile phone numbers in the list can call the SIM card in the device to enable/disable dial-up function.

## 5.3 Event

### 5.3.1 Video detect

#### 5.3.1.1 Motion Detect

The motion detect interface is shown as in Figure 5-26.

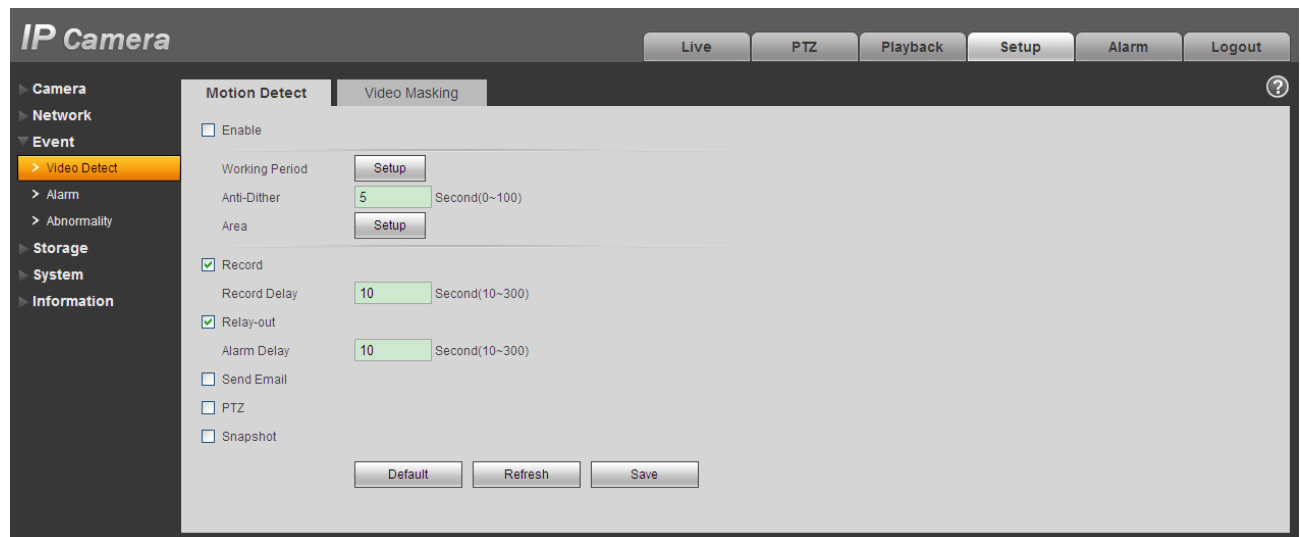


Figure 5-26

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable motion detection function.
Working Period	Here you can set arm/disarm period. Click on set button to open period setup menu.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Area	Here you can set motion detection region and its sensitivity and area. The default covers all regions. You must click on save before enabling your setup.
Record	When record is enabled, you can trigger motion detection to activate record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Parameter	Function
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	You need to check the box here so that system can backup motion detection snapshot file.

See Figure 5-27.

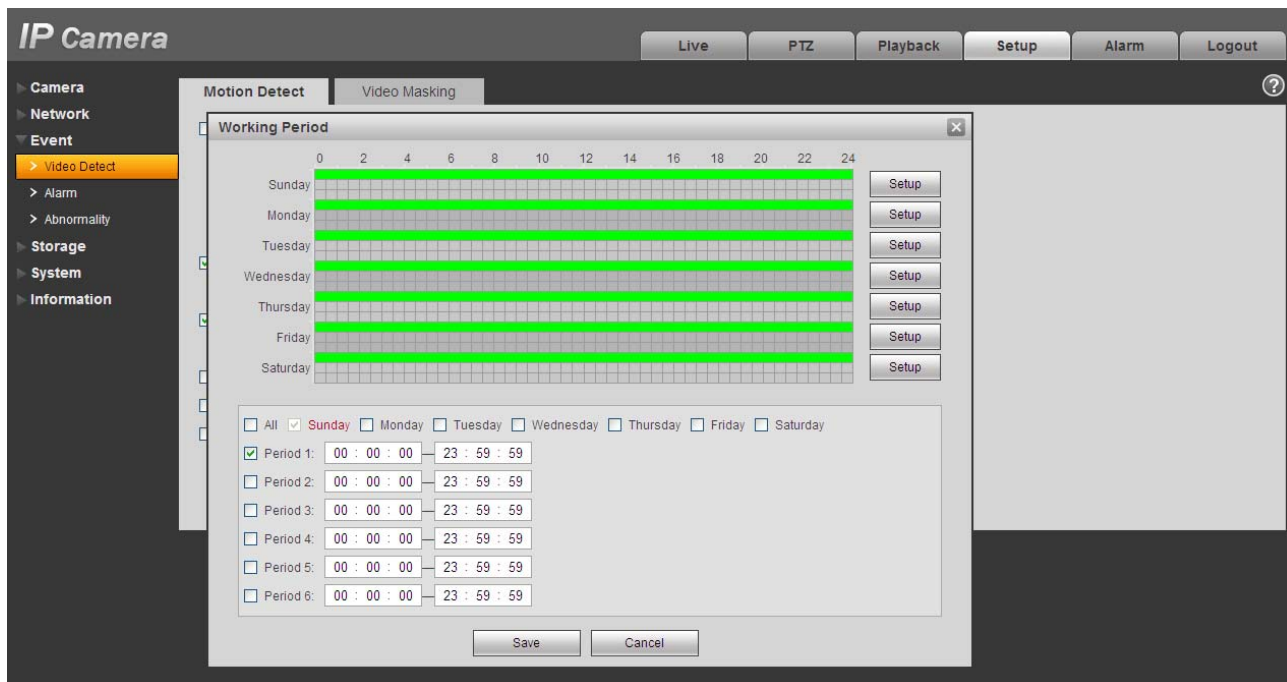


Figure 5-27

See Figure 5-28.

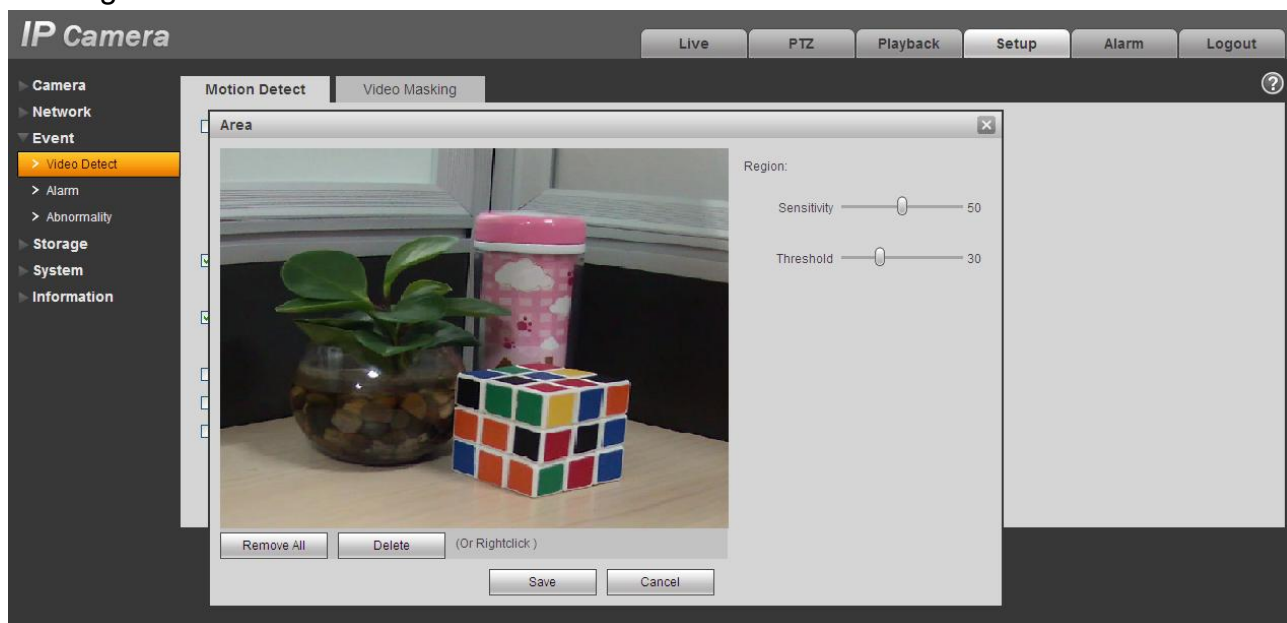


Figure 5-28

Please refer to the following sheet for detailed information.

Parameter	Function
Sensitivity	It is sensitivity of brightness as motion detection is more possible to be trigger with high sensitivity. You can set up to four areas. The range is 0~100. The recommenced value is 30~70. The default is 50.
Area threshold	It is to check target object area related to detection area. The lower the area threshold, the easier to trigger motion detection. You can set up to four areas. The range is 0~100. The recommenced value is 10~50.
Remove all	Clear all areas.
Delete	Delete selected area.

### 5.3.1.2 Video Masking

The video masking interface is shown as in Figure 5-29 and Figure 5-30.

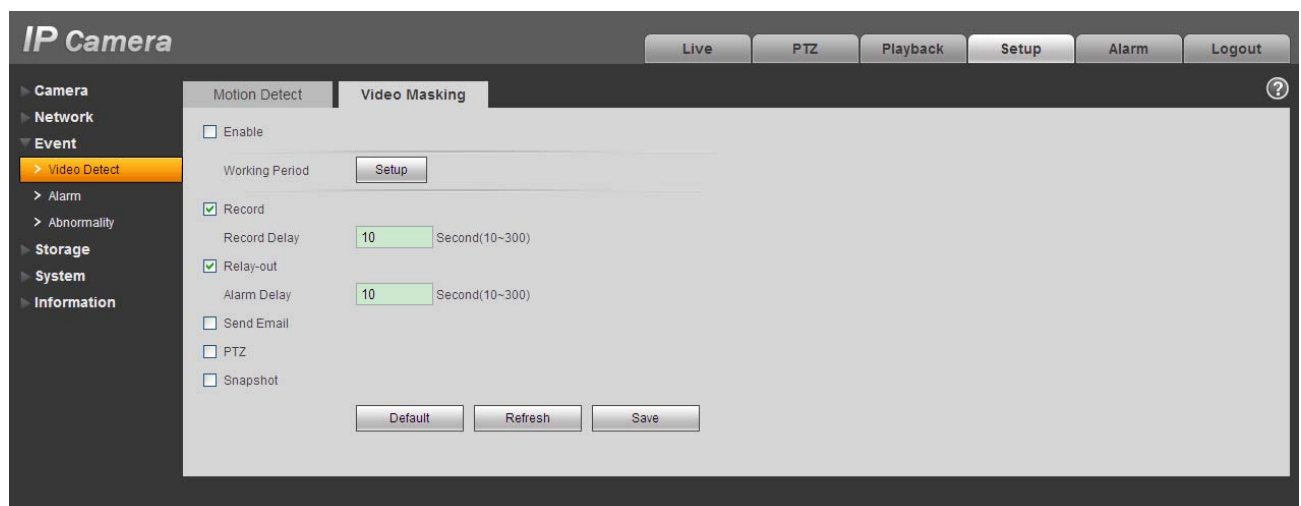


Figure 5-29

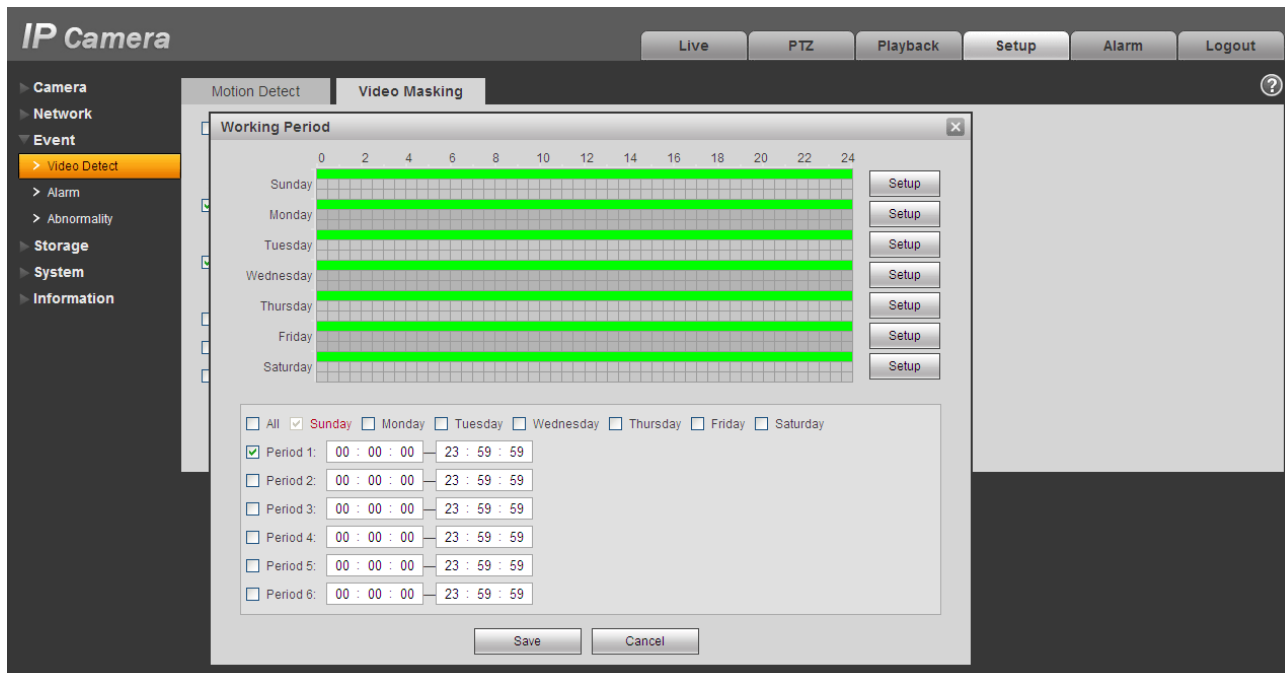


Figure 5-30

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Working period	<ul style="list-style-type: none"> <li>Video masking function becomes activated in the specified periods.</li> <li>There are six periods in one day. Please draw a circle to enable corresponding period.</li> <li>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.</li> <li>Click OK button, system goes back to motion detection interface, please click save button to exit.</li> </ul>
Record	After record is enabled, video masking can activate video.
Record delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs.
PTZ	<ul style="list-style-type: none"> <li>Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	After snapshot is enabled and alarm happens, the system will automatically snapshot and alarm.

### 5.3.2 Alarm

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

#### 5.3.2.1 Alarm activation

The alarm activation interface is shown as in Figure 5-31.

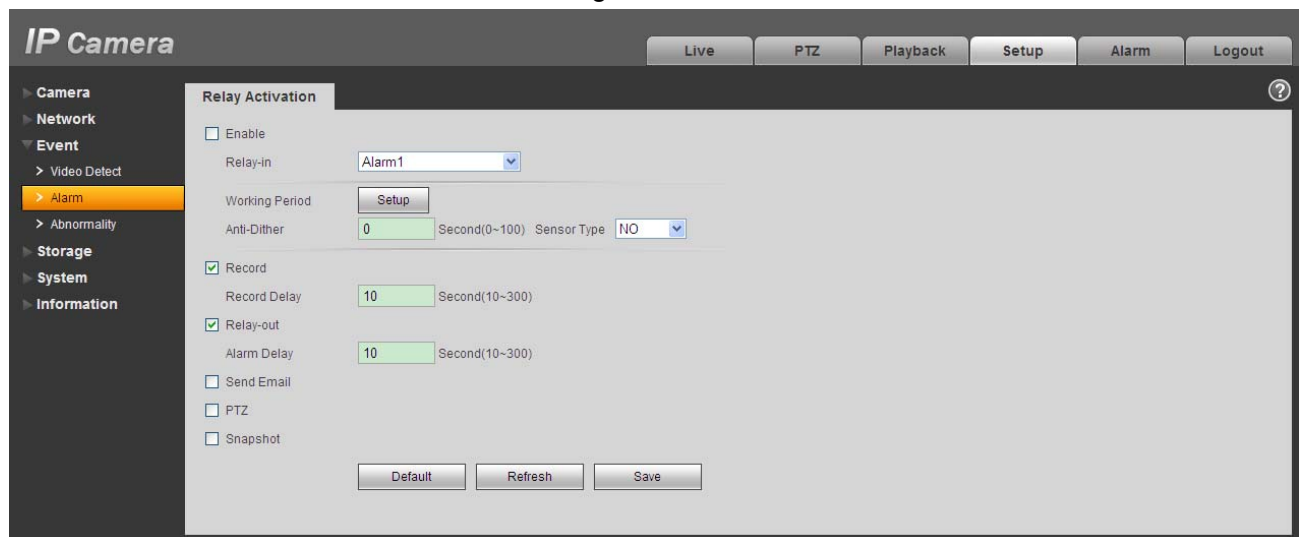


Figure 5-31

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Alarm input	The default is alarm 1 and for some devices may be alarm 2.



Parameter	Function
Working period	<ul style="list-style-type: none"> <li>● This function becomes activated in the specified periods.</li> <li>● There are six periods in one day. Please draw a circle to enable corresponding period.</li> <li>● 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.</li> <li>● Click OK button, system goes back to motion detection interface; please click save button to exit.</li> </ul>
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.
Record	System auto activates motion detection channel to record once alarm occurs (working with motion detection function).
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	<ul style="list-style-type: none"> <li>● There is 1-channel alarm output.</li> <li>● Corresponding to motion detection alarm output port.</li> <li>● Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.</li> </ul>
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	After you enabled snapshot, the system will automatically snapshot if alarm occurs.

### 5.3.3 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 5-32 through Figure 5-36.

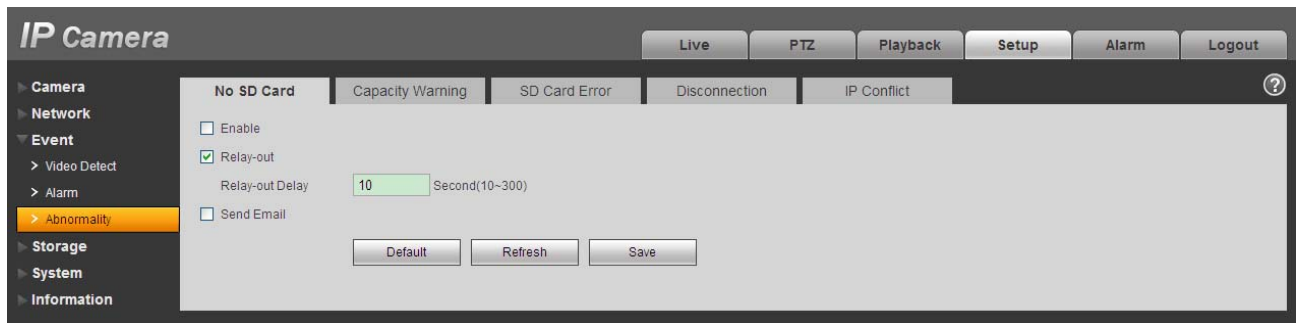


Figure 5-32

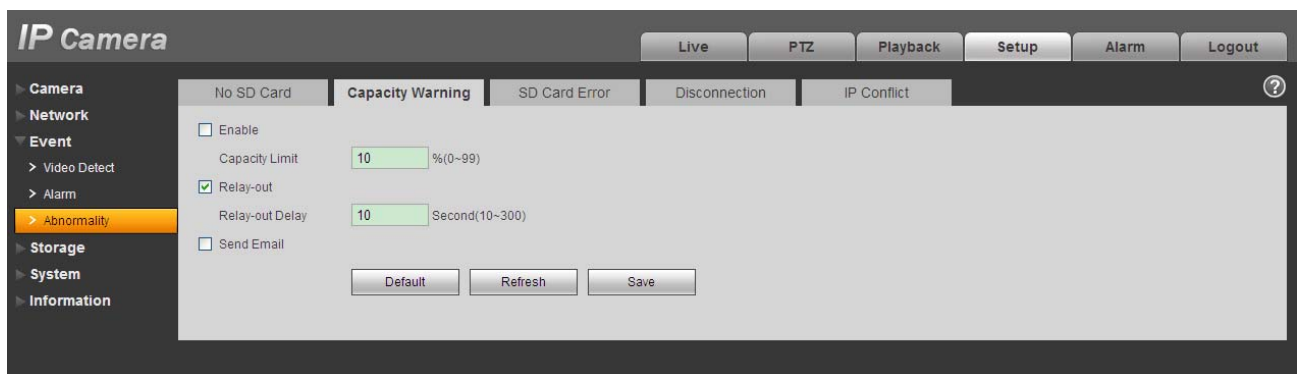


Figure 5-33

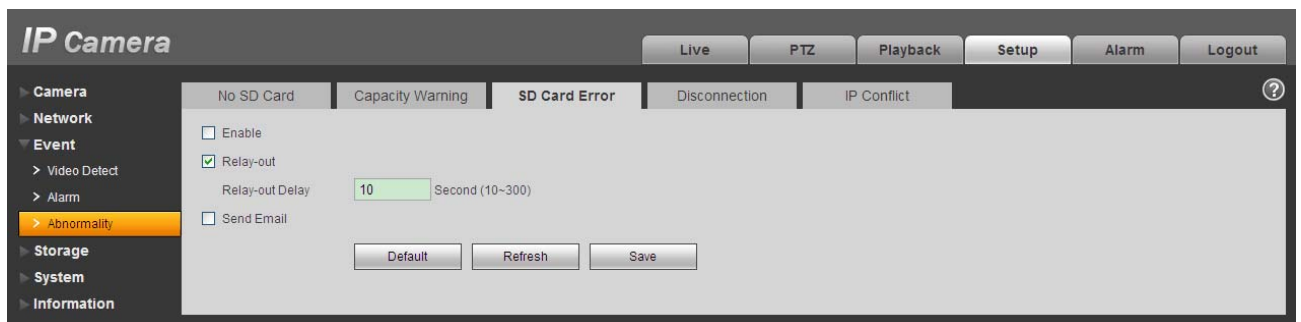


Figure 5-34

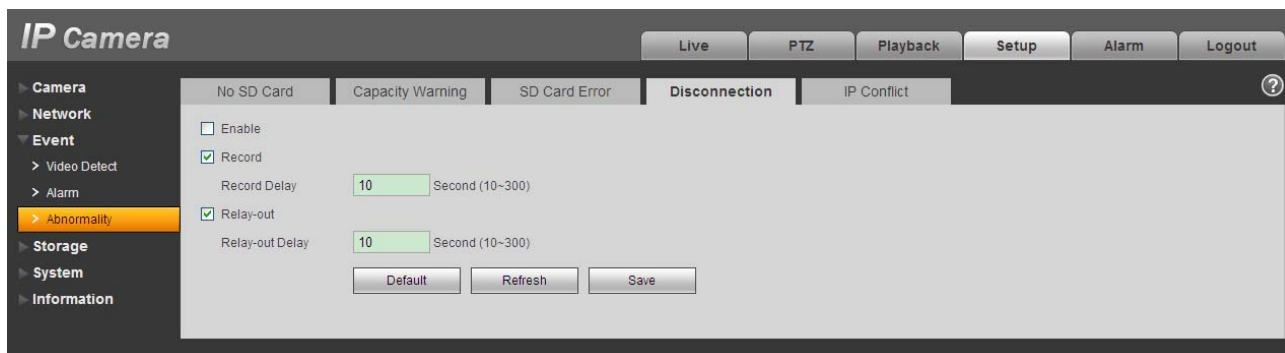


Figure 5-35

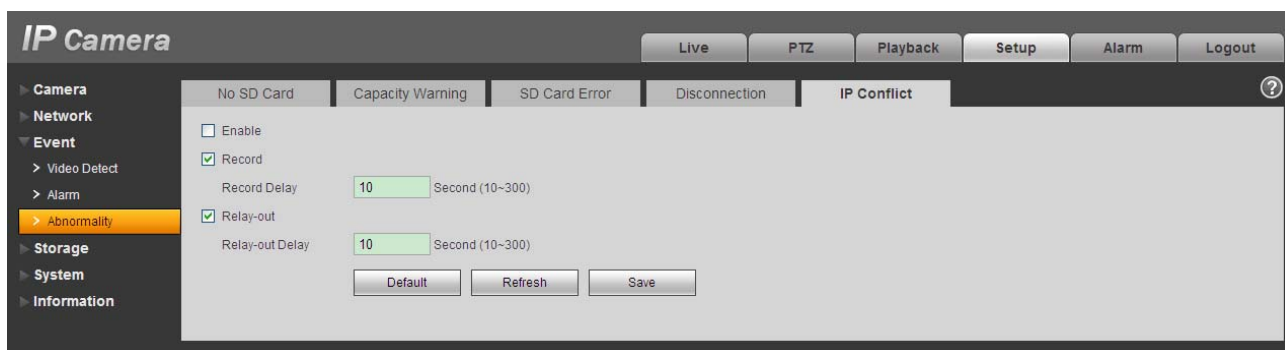


Figure 5-36

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	<ul style="list-style-type: none"> <li>The abnormal events include: no disk, no space, disk error, net error, offline, IP conflict.</li> <li>Threshold: You can set the minimum percentage value here. The device can alarm when capacity is not sufficient.</li> <li>You need to draw a circle to enable this function.</li> </ul>
Record	<p>System auto activates channel to record once alarm occurs (For offline type only. See Figure 5-36. ).</p> <p>You need to check the box to enable this function.</p>
Record delay	<p>System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.</p>
Relay Out	<p>The corresponding alarm output channel when alarm occurs. You need to check the box to enable this function.</p>
Relay out delay	<p>The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s.</p>

Parameter	Function
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.

## 5.4 Storage

### 5.4.1 Record Schedule and Snapshot Schedule

In these two interfaces, you can add or remove the schedule record/snapshot setup. See Figure 5-37 and Figure 5-38.

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.

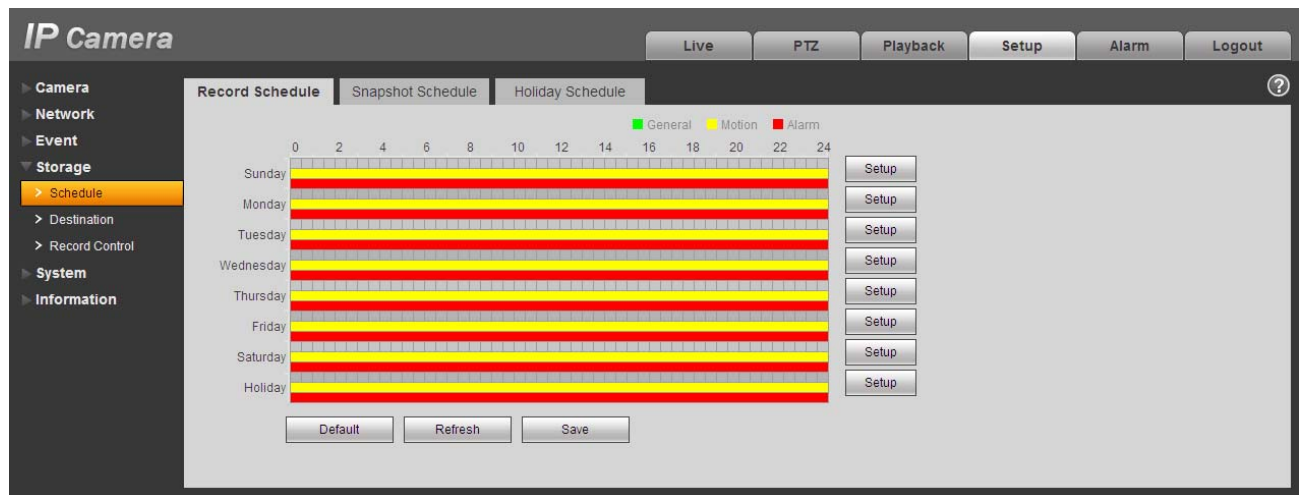


Figure 5-37

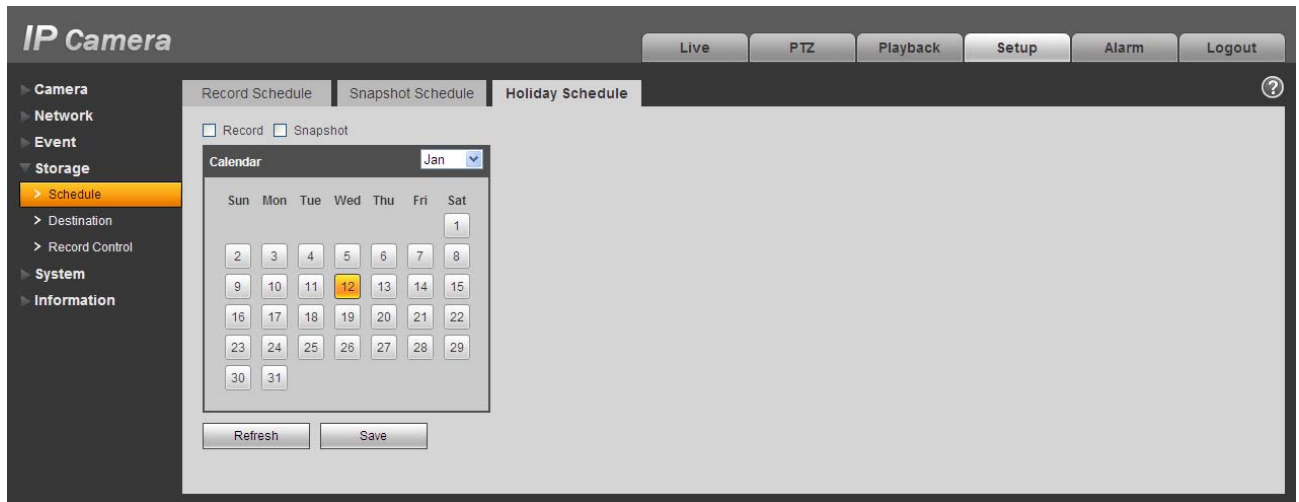


Figure 5-38

You can set specified dates as holiday. When snapshot of holiday is enabled, the selected dates will be snapshot/recorded according to holiday setup.

### 5.4.2 Destination

The destination interface is shown as in Figure 5-39.

It is to set the storage mode of the network camera 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.

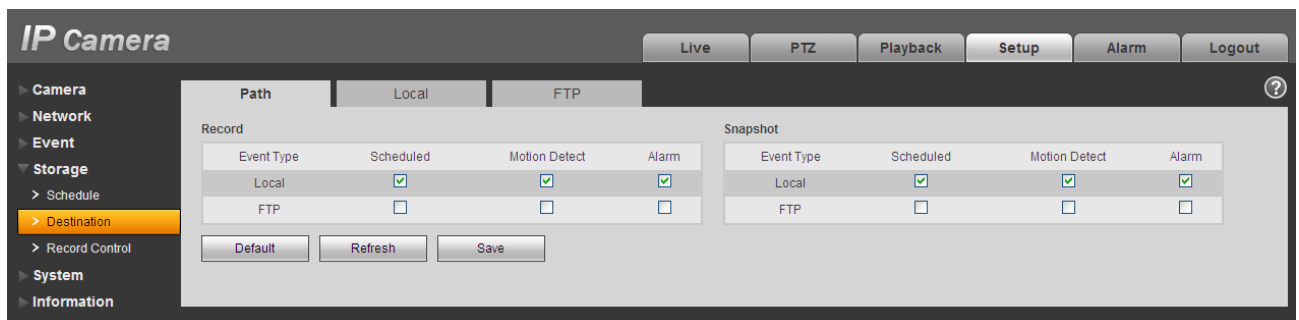


Figure 5-39

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	It includes: general, motion detect and alarm.

Parameter	Function
Local	It saved in the Micro SD card.
FTP	It saved in the FTP server.

The local interface is shown as in Figure 5-40. Here you can view local Micro SD card or disk information. You can also operate the read-only, write-only, hot swap and format operation.

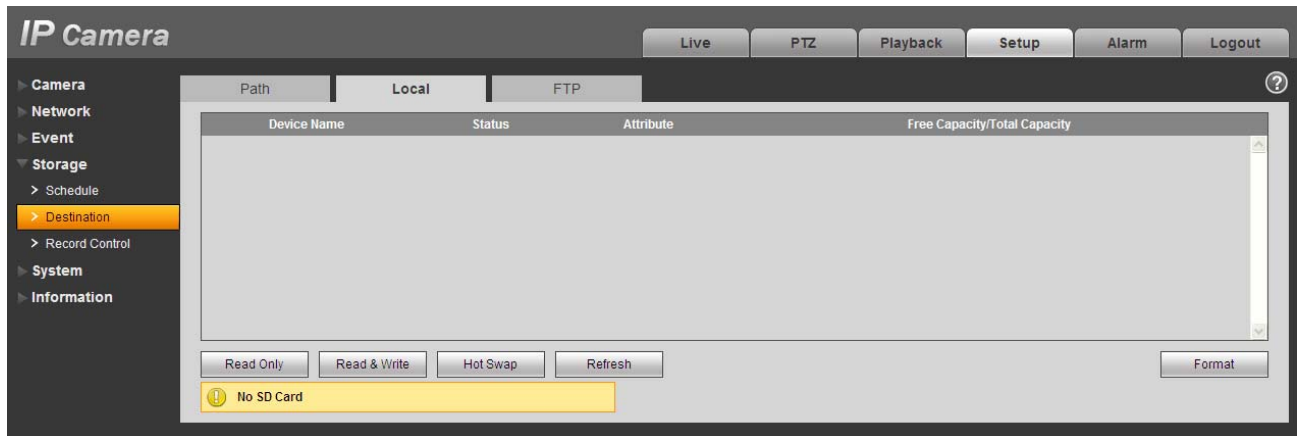


Figure 5-40

The FTP interface is shown as in Figure 5-41. 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 Micro SD card.



Figure 5-41

### 5.4.3 Record control

The record control interface is shown as in Figure 5-42.

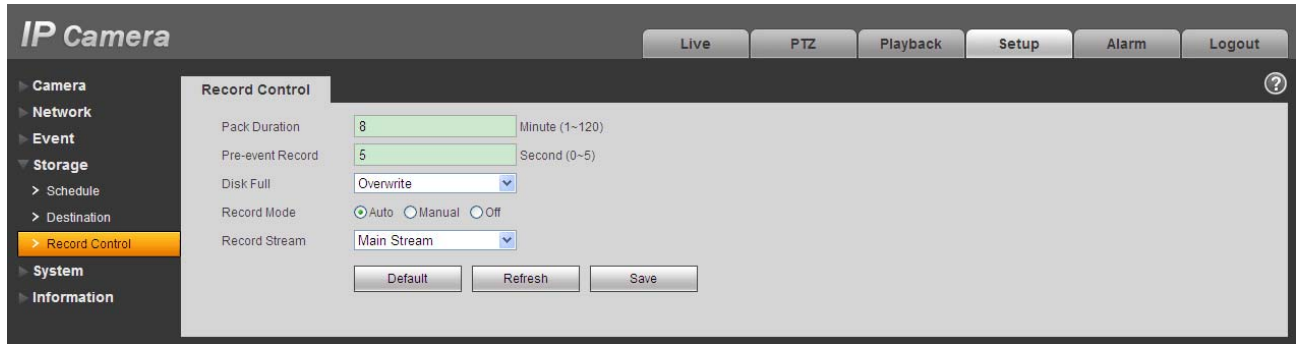


Figure 5-42

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. <ul style="list-style-type: none"> <li>● Stop: Current working HDD is overwriting or current HDD is full, it will stop record.</li> <li>● Overwrite: Current working HDD is full; it will overwrite the previous file.</li> </ul>
Record mode	There are three modes: Auto/manual/close.
Record stream	There are two options: main stream and sub stream.

## 5.5 System

### 5.5.1 General

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

#### 5.5.1.1 Local host

The local host interface is shown as in Figure 5-43.

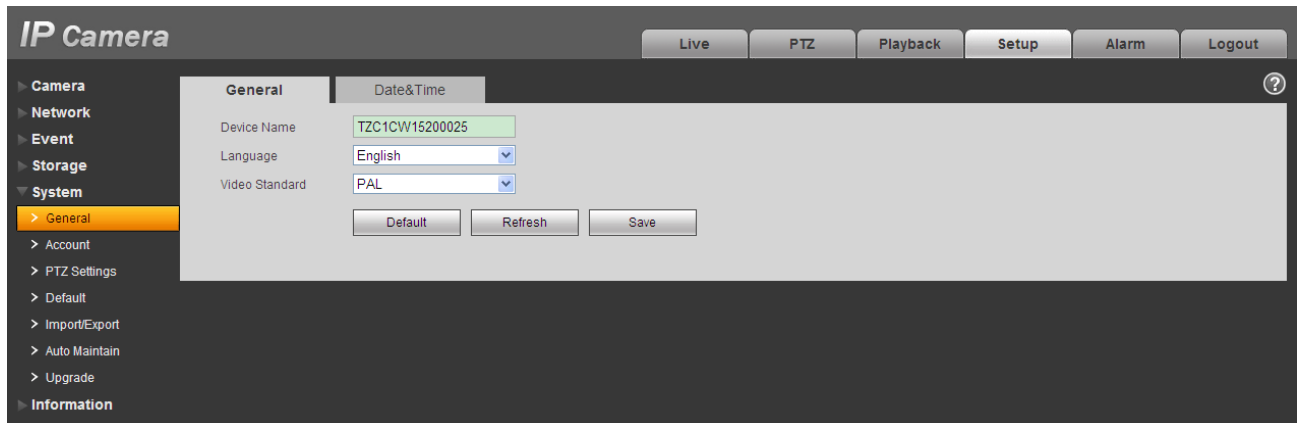


Figure 5-43

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.

#### 5.5.1.2 Date and time

The date and time interface is shown as in Figure 5-44.

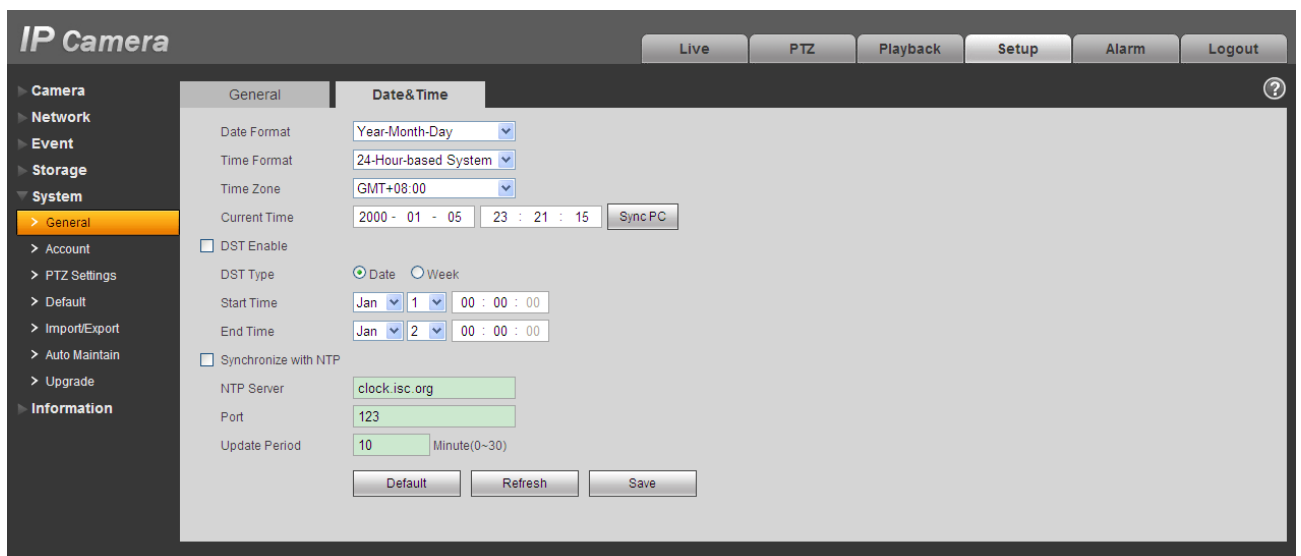


Figure 5-44



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.

## 5.5.2 Account

### Note:

- For the character in the following user name or the user group name, system max supports 15-digits. The valid string includes: character, number, and underline.
- The user amount is 18 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.

### 5.5.2.1 User name

In this interface you can enable anonymity login, add/remove user and modify user name. See Figure 5-45.

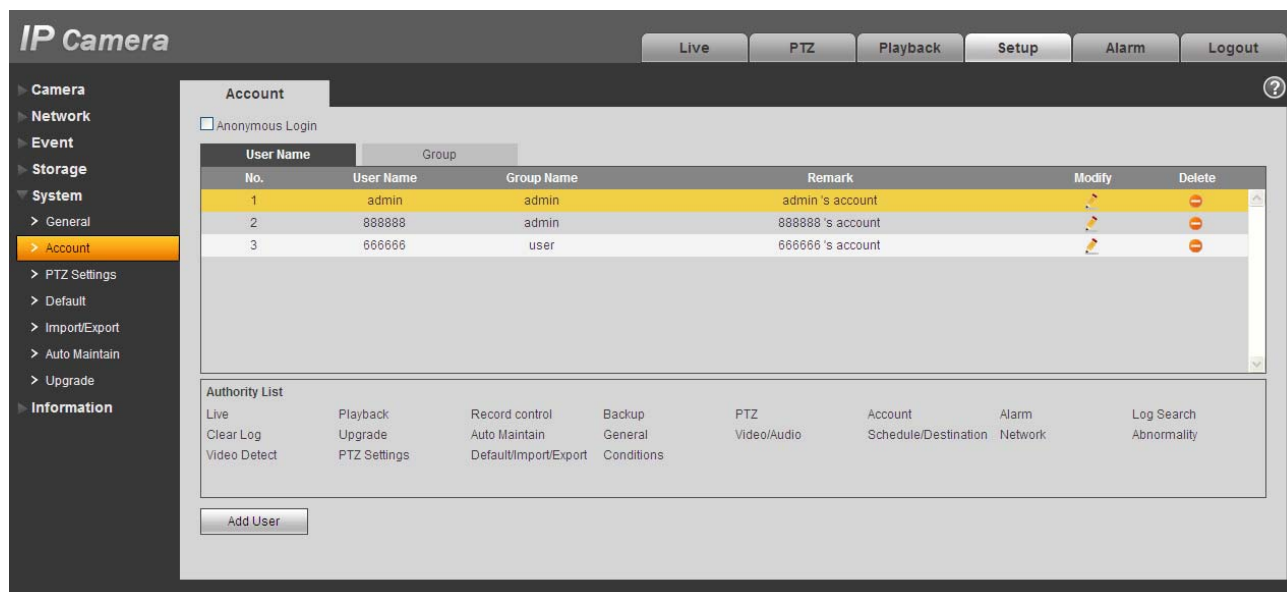


Figure 5-45

**Enable anonymity login:** Enable anonymity login, and input IP. No username or password is required, you can log in by anonymity (with limited rights). You can click logout to end your session.

**Add user:** It is to add a name to group and set the user rights. See Figure 5-46.

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 cannot 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.

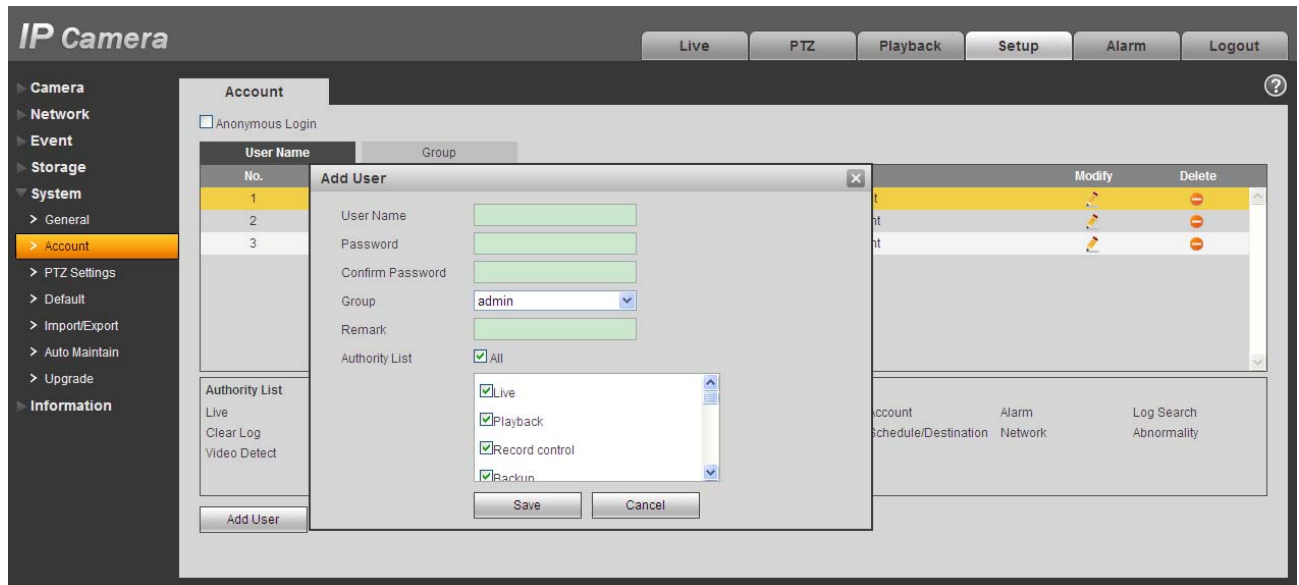


Figure 5-46

### Modify user

It is to modify the user property, belonging group, password and rights. See Figure 5-47.

### 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 0-digit to 32-digit. It shall include the number and letter only. For the user who has the account rights, he can modify the password of other users.

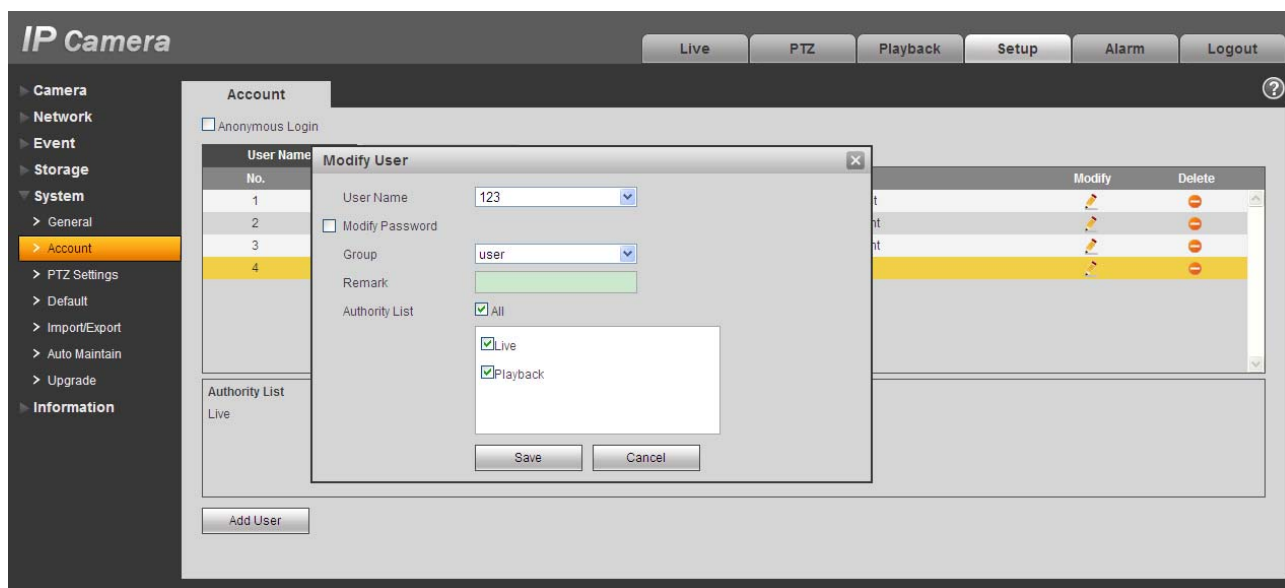


Figure 5-47

### 5.5.2.2 Group

The group management interface can add/remove group, modify group password and etc. The interface is shown as in Figure 5-48.

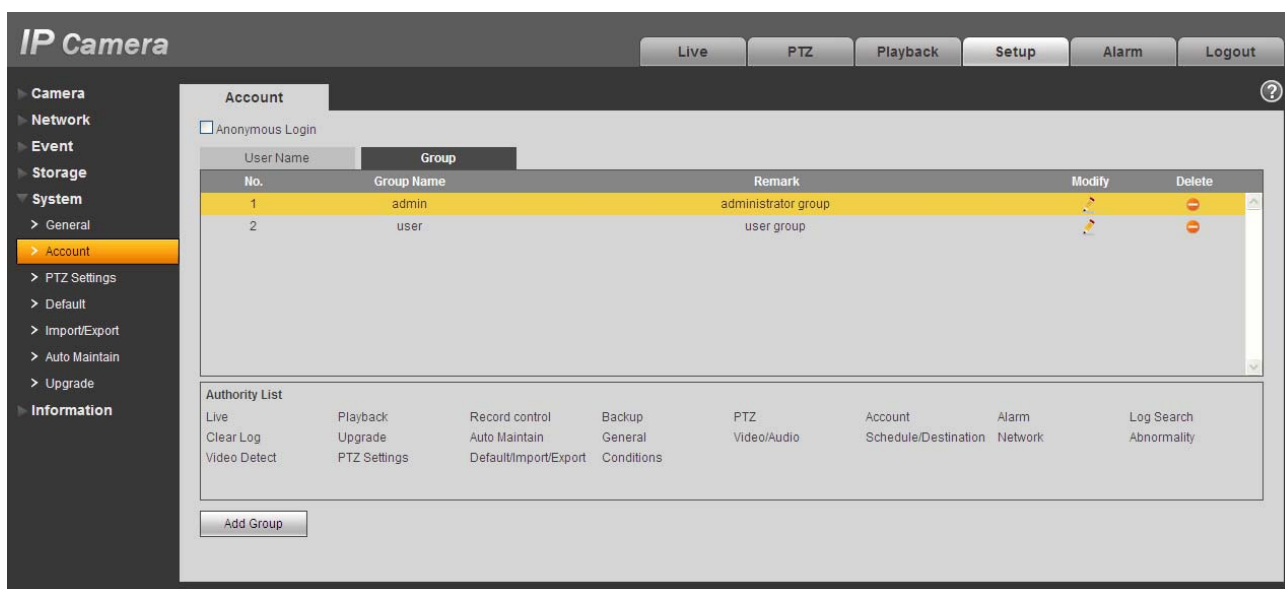


Figure 5-48

**Add group:** It is to add group and set its corresponding rights. See Figure 5-49.

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

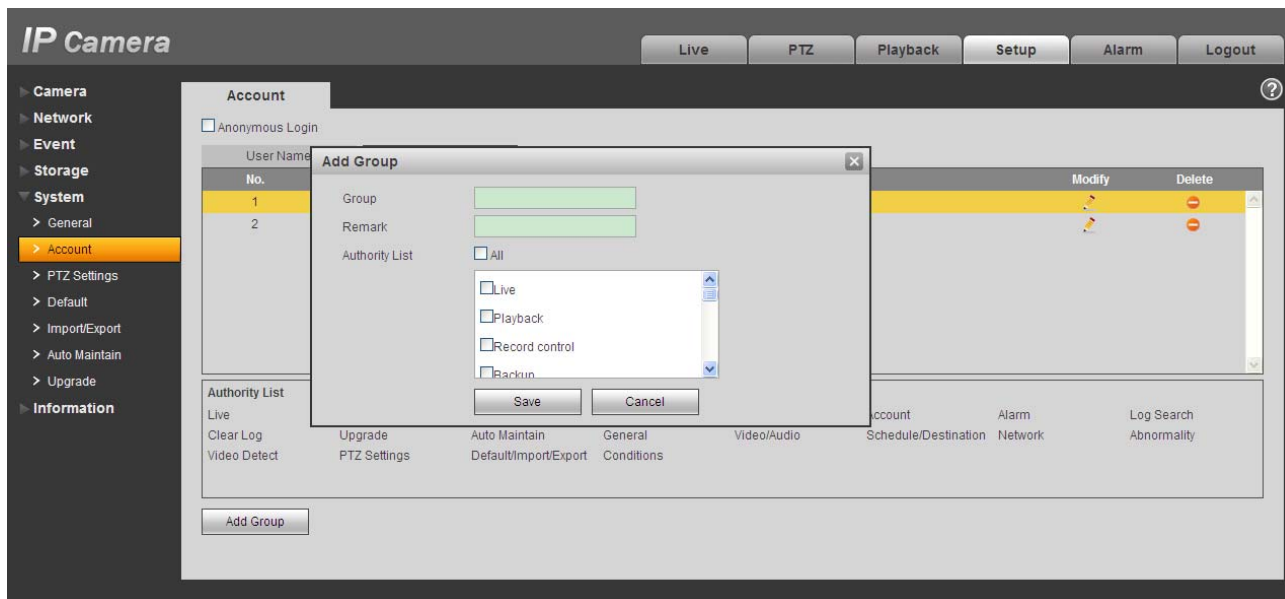


Figure 5-49

### Modify group

Click the modify group button, you can see an interface is shown as in Figure 5-50. Here you can modify group information such as remarks and rights.

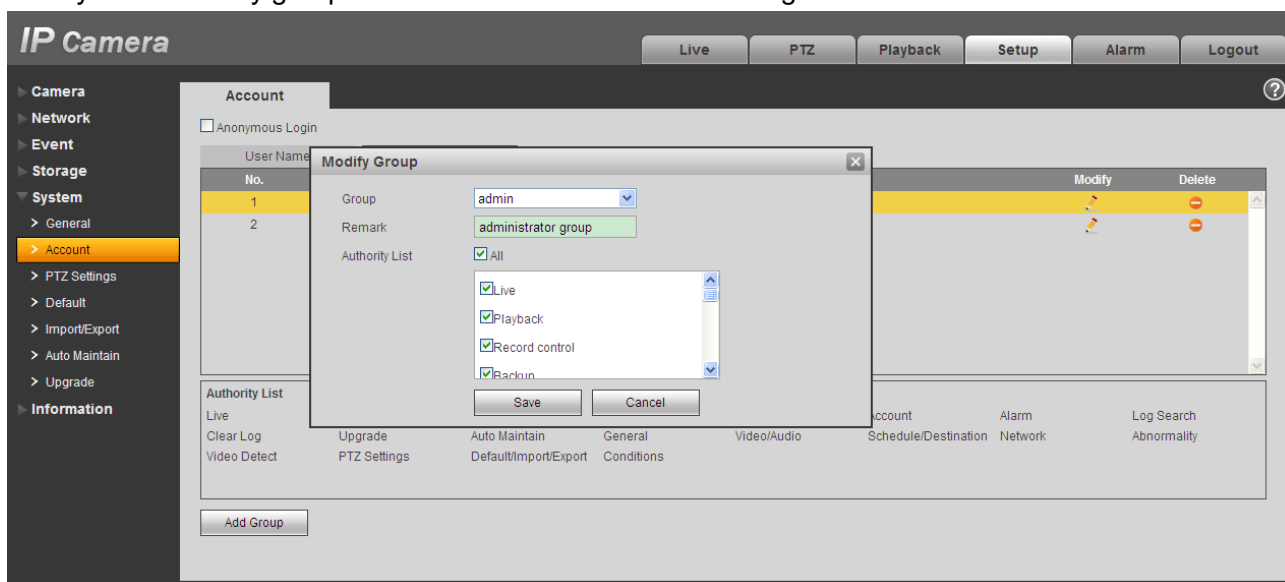


Figure 5-50

### 5.5.3 PTZ

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

The PTZ interface is shown as in Figure 5-51.

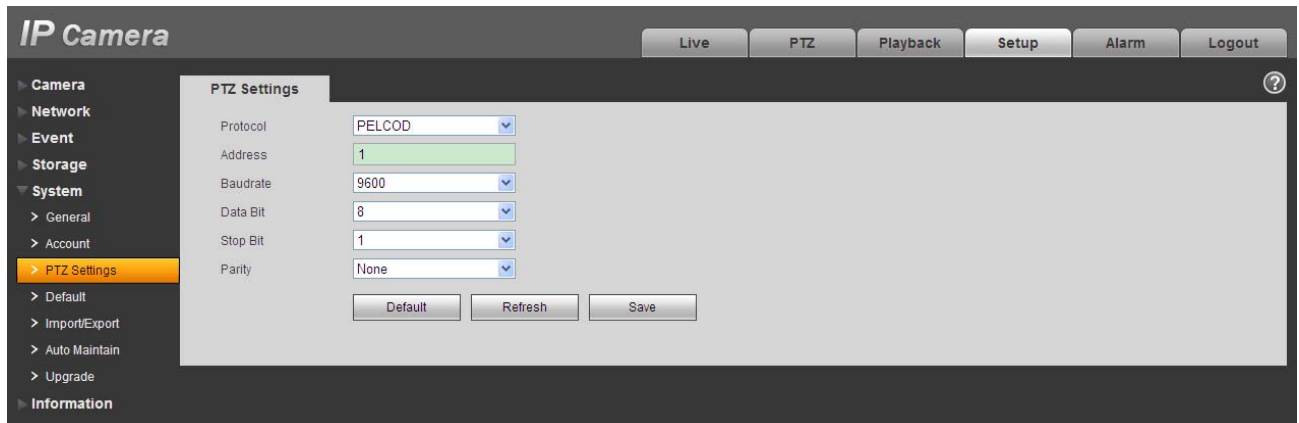


Figure 5-51

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.

#### 5.5.4 Default

The default setup interface is shown as in Figure 5-52.

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



Figure 5-52

### 5.5.5 Import/Export

The interface is shown as in Figure 5-53.



Figure 5-53

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.

### 5.5.6 Auto Maintenance

The auto maintenance interface is shown as in Figure 5-54.

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

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

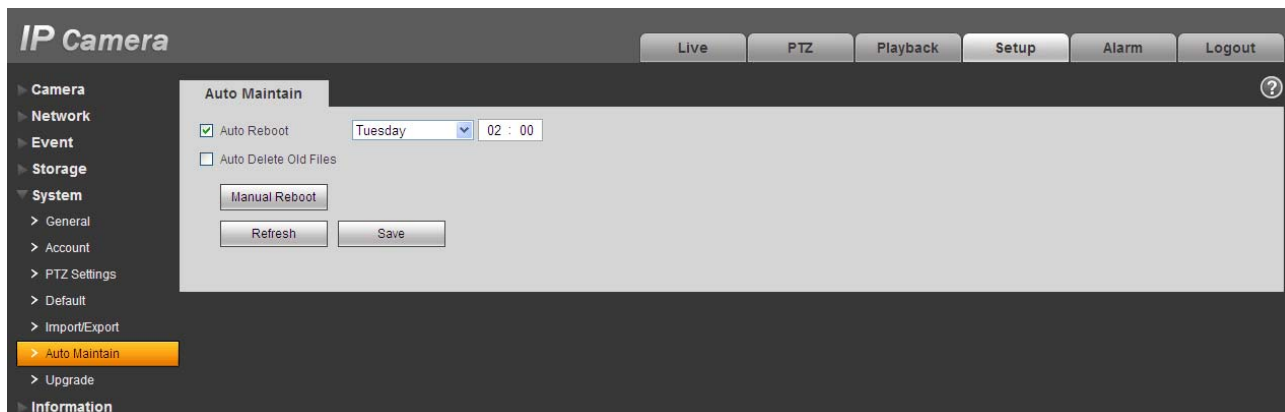


Figure 5-54

## 5.5.7 Upgrade

The upgrade interface is shown as in Figure 5-55.

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

### **Important**

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

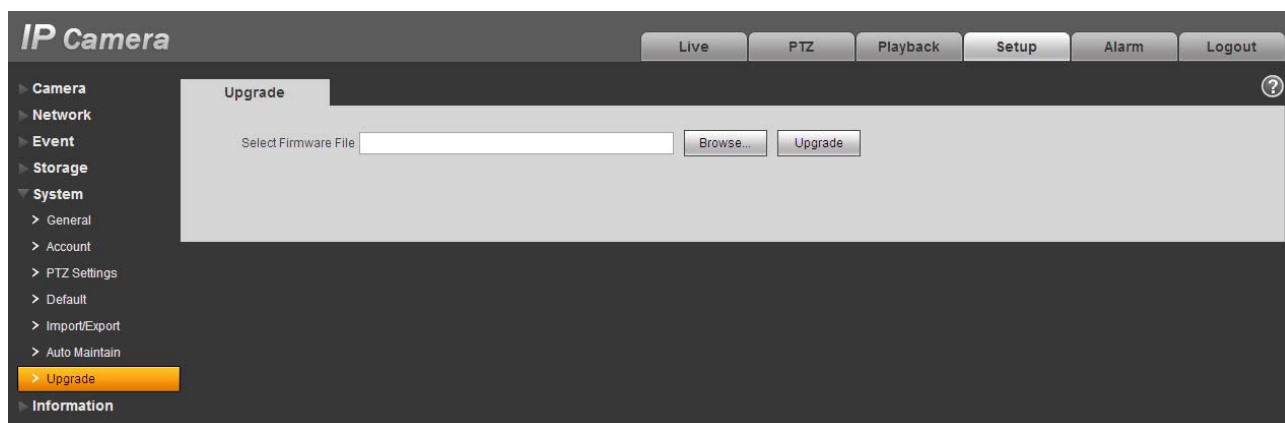


Figure 5-55

## 5.6 Information

### 5.6.1 Version

The version interface is shown as in Figure 5-56.

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



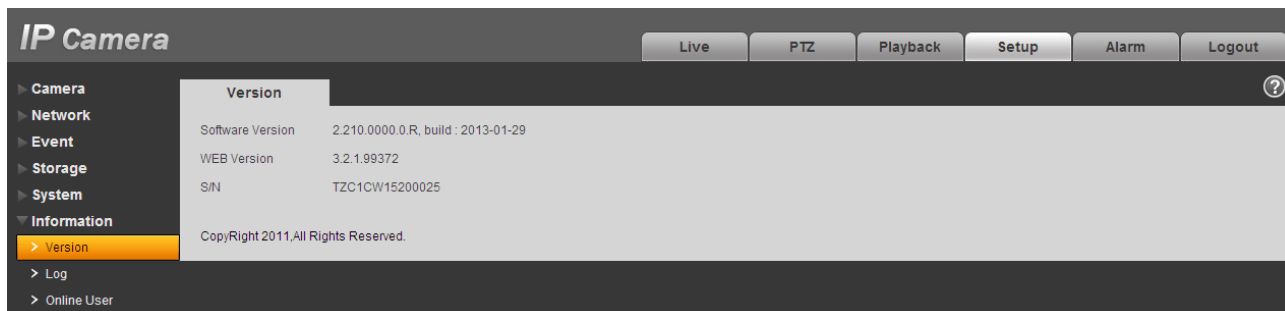


Figure 5-56

## 5.6.2 Log

Here you can view system log. See Figure 5-57.

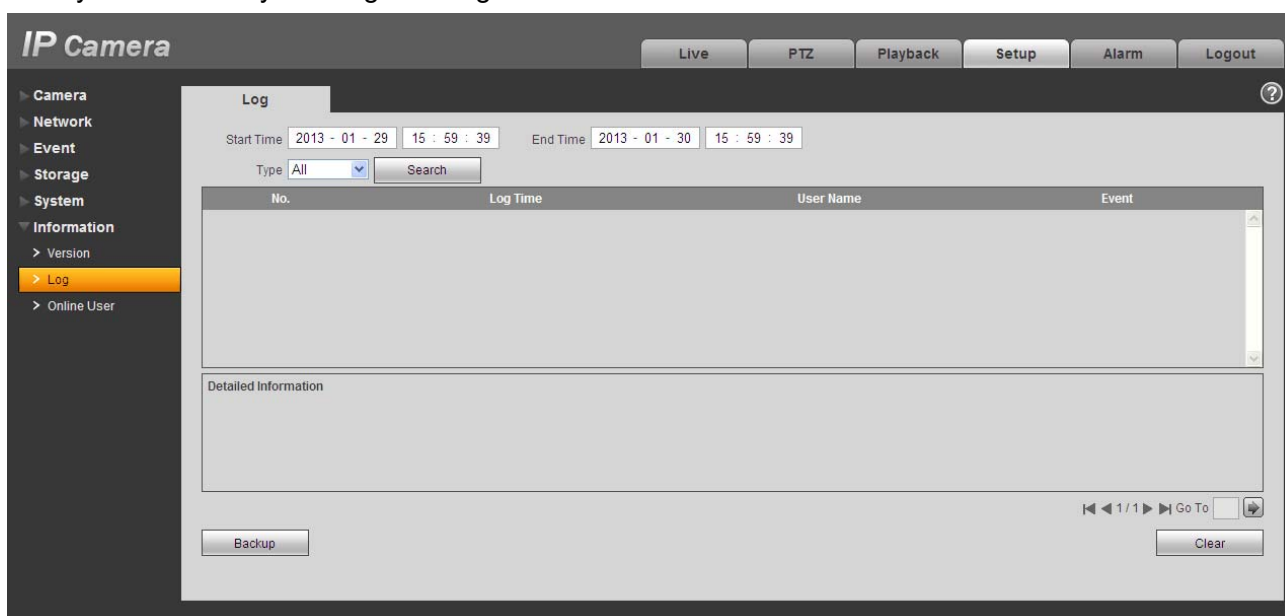


Figure 5-57

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.
End time	Set the end time of the requested log.

Parameter	Function
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.
Log 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.

### 5.6.3 Online User

The online user interface is shown as in Figure 5-58.

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

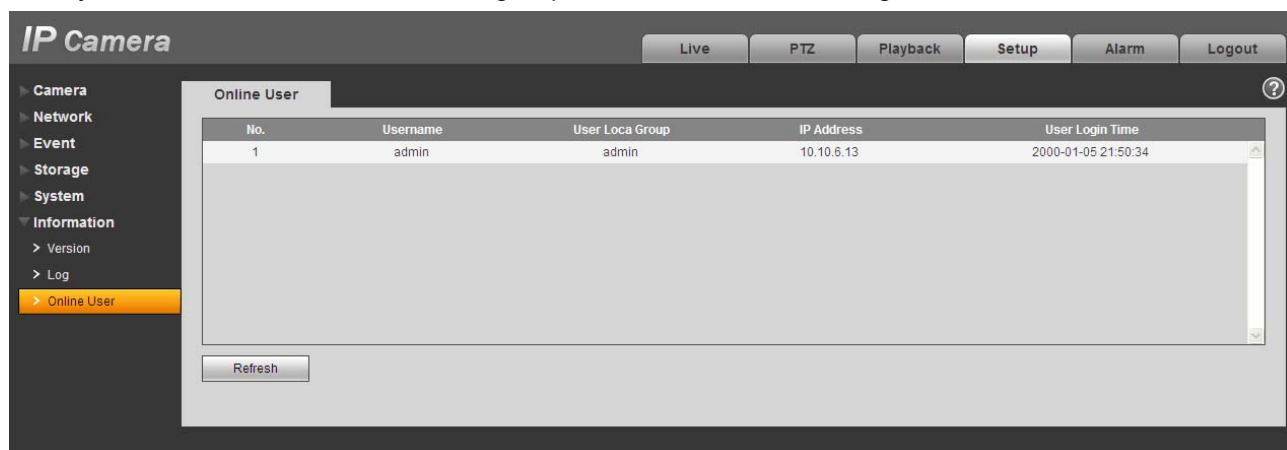


Figure 5-58

## 6 Alarm

Please note some series product does not support this function.

Click alarm function, you can see an interface is shown as in Figure 6-1.

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

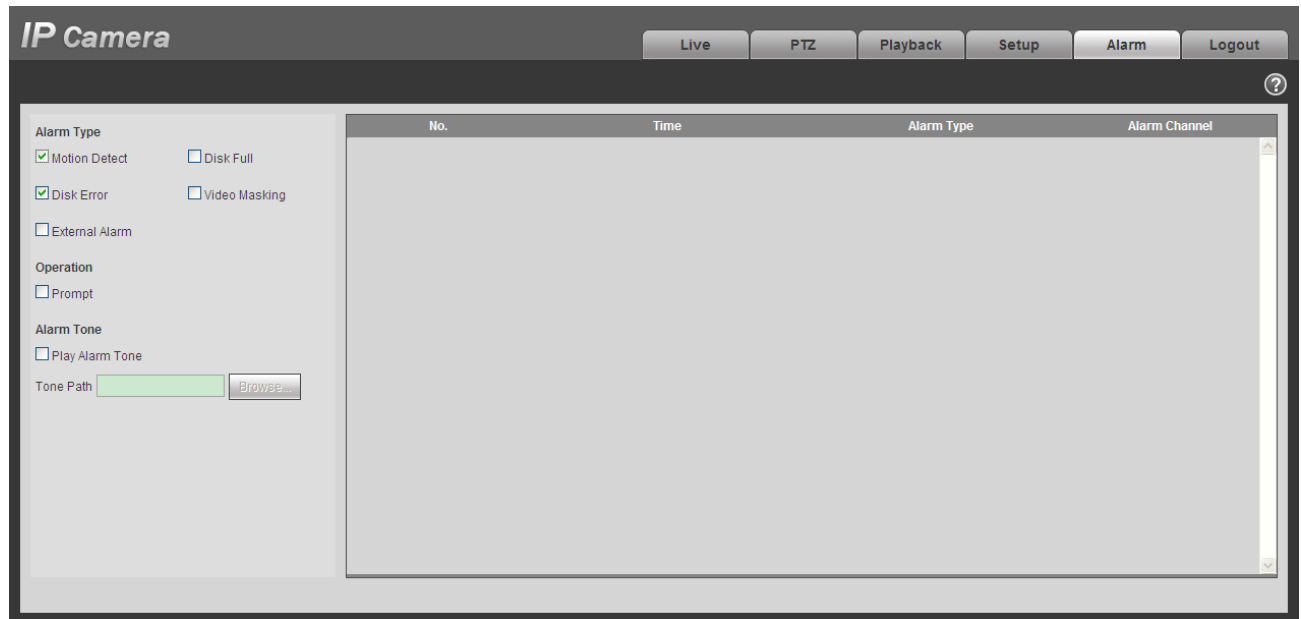


Figure 6-1

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.

## 7 Log out

Click log out button, system goes back to log in interface. See Figure 7-1.



Figure 7-1

**Note:**

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

**THC20IP**

**BROWSER  
MANUAL**

# **Network Camera Web3.0 Operation Manual**

**Version 4.0.0**

## Table of Contents

1	Network Connection .....	1
2	Main Interface Introduction .....	2
2.1	Log in .....	2
2.2	Live Interface .....	6
2.3	Encode Setup .....	6
2.4	System Menu .....	7
2.5	Video Window Function Option .....	7
2.6	Video Window Setup .....	8
2.6.1	Image control .....	8
2.6.2	Hide Image Control .....	9
2.6.3	Original size .....	9
2.6.4	Full screen .....	9
2.6.5	Width and height ratio .....	9
2.6.6	Fluency Adjustment .....	10
3	PTZ Control .....	11
4	Playback .....	14
4.1	Playback Interface .....	14
4.2	Function of Play .....	14
4.3	Date .....	15
4.4	File List .....	15
4.5	Progress Bar .....	17
5	Setup .....	18
5.1	Camera .....	18
5.1.1	Conditions .....	18
5.1.2	Video .....	22
5.1.3	Audio .....	28
5.2	Network .....	28
5.2.1	TCP/IP .....	28
5.2.2	Connection .....	30
5.2.3	PPPoE .....	32
5.2.4	DDNS .....	32
5.2.5	IP filter .....	34
5.2.6	SMTP (e-mail) .....	35
5.2.7	UPnP .....	37
5.2.8	SNMP .....	38
5.2.9	Bonjour .....	40
5.2.10	Multicast .....	41

5.2.11	WIFI .....	42
5.2.12	IEEE802 .....	44
5.2.13	QoS .....	45
5.2.14	3G.....	46
5.2.14.1	Dial-up .....	47
5.2.14.2	Mobile Phone .....	48
5.3	Event.....	49
5.3.1	Video detect.....	49
5.3.2	Alarm .....	54
5.3.3	Abnormity .....	55
5.4	Storage .....	58
5.4.1	Record Schedule and Snapshot Schedule .....	58
5.4.2	Destination.....	59
5.4.3	Record control .....	60
5.5	System.....	61
5.5.1	General.....	61
5.5.2	Account.....	63
5.5.3	PTZ.....	67
5.5.4	Default .....	68
5.5.5	Import/Export .....	69
5.5.6	Auto Maintenance.....	69
5.5.7	Upgrade .....	70
5.6	Information.....	70
5.6.1	Version .....	70
5.6.2	Log.....	71
5.6.3	Online User.....	72
6	Alarm.....	73
7	Log out .....	74



**Important**

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

# 1 Network Connection

These series network camera products support the Web access and management via PC.

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

Please follow the steps listed below for network connection.

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

## 2 Main Interface Introduction

### 2.1 Log in

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

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

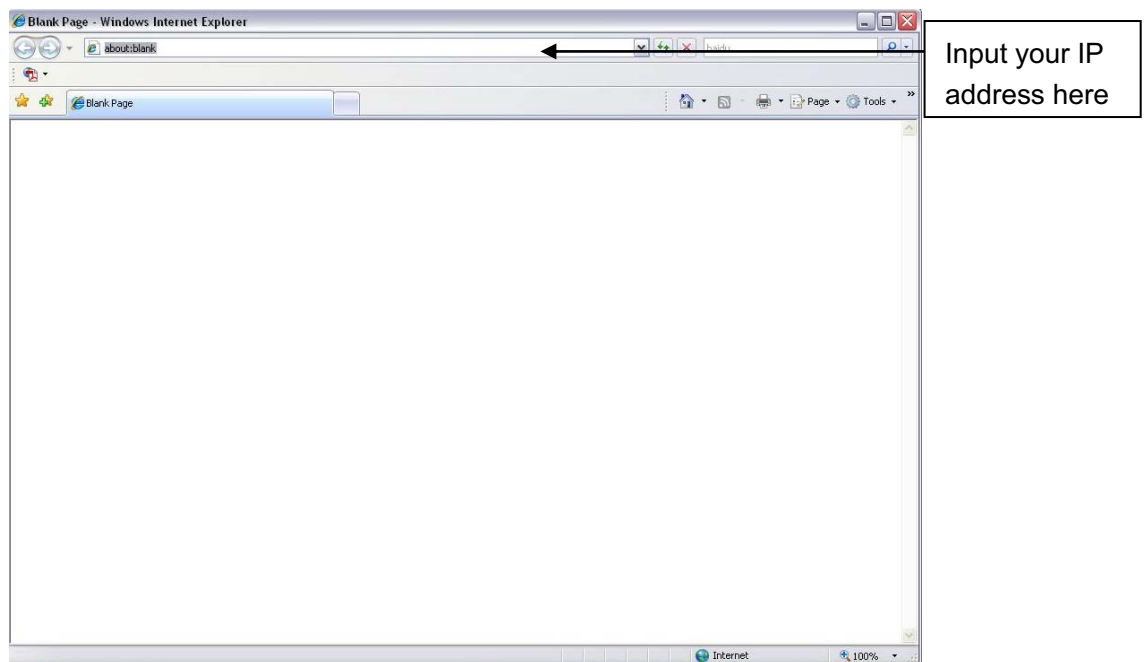


Figure 2-1

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

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

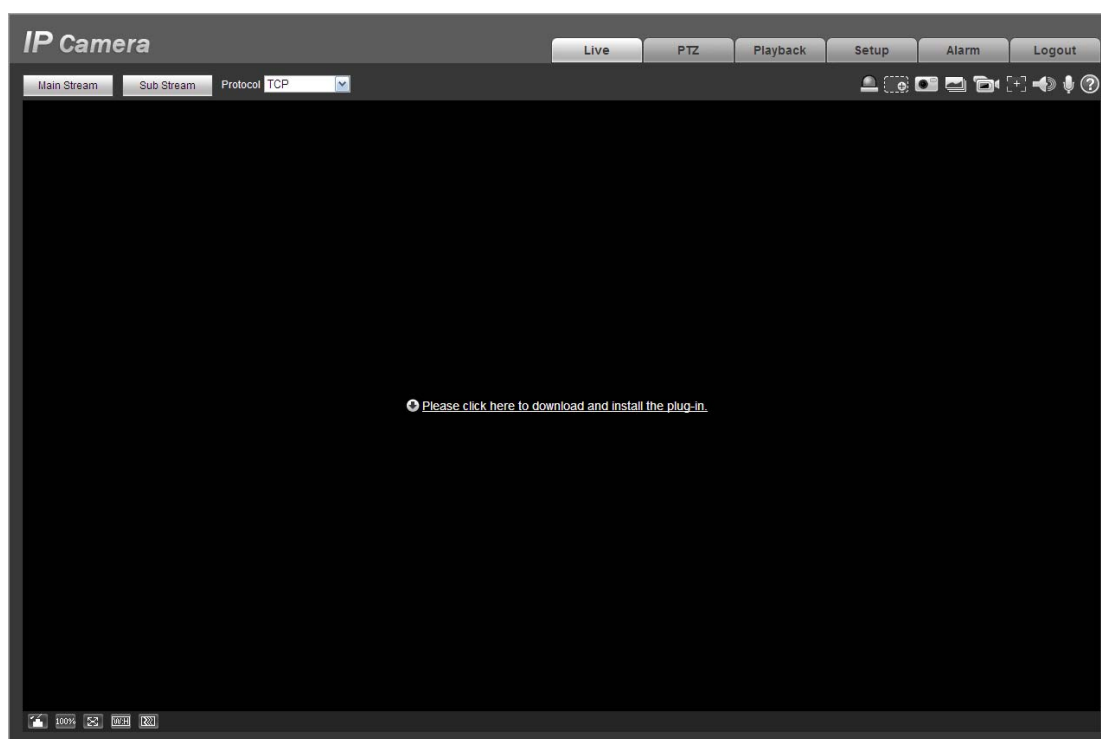


Figure 2-3

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

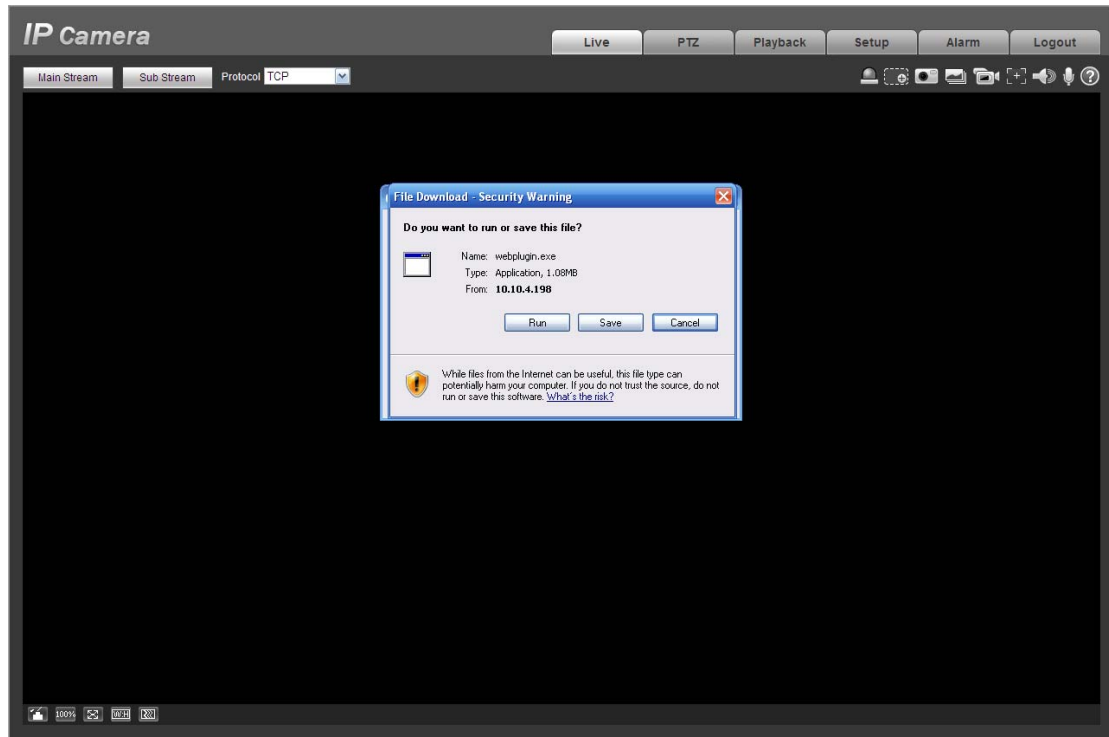


Figure 2-4

You must either run or save the file to local and install it. Follow the following steps. See Figure 2-5 and Figure 2-6.

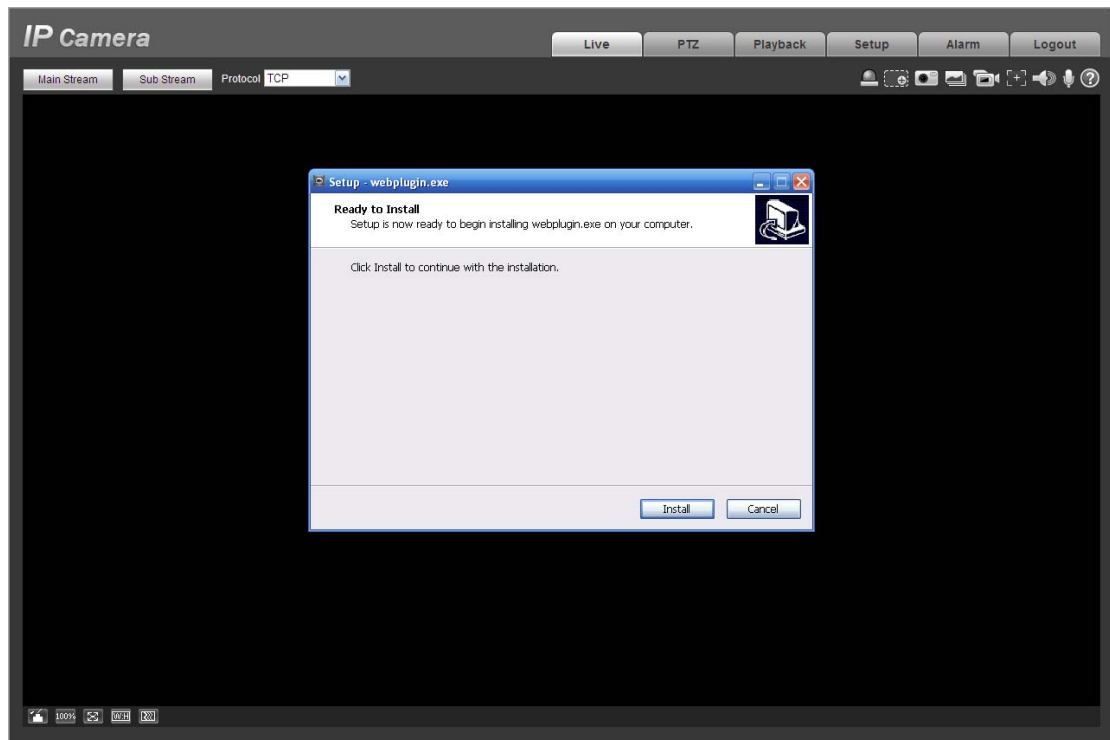


Figure 2-5

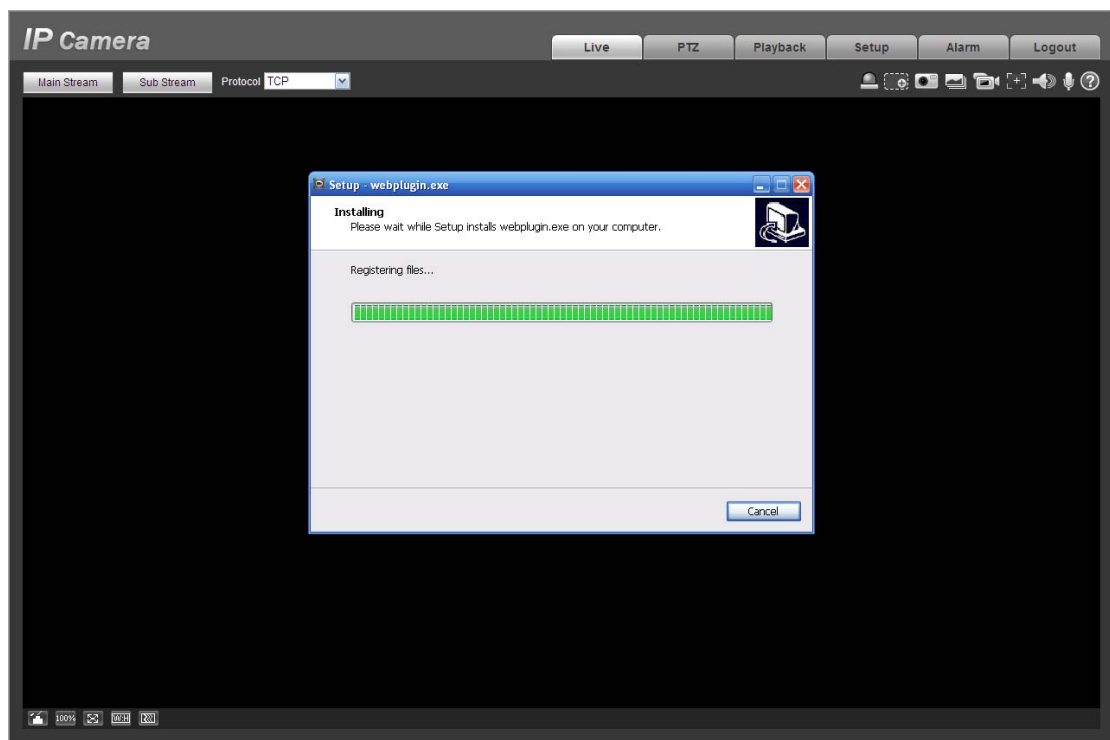


Figure 2-6

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

## 2.2 Live Interface

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

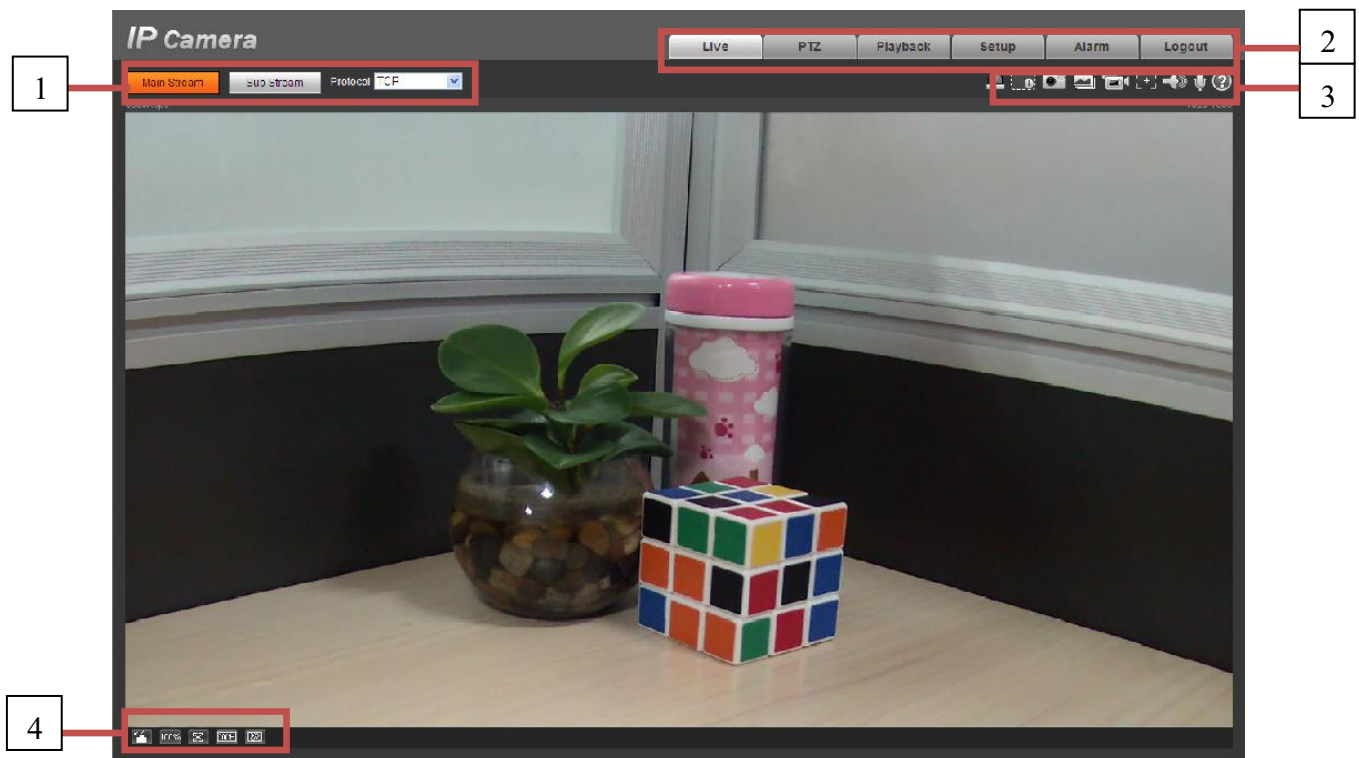


Figure 2-7

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 2-8.



Figure 2-8

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 2-9.

Please refer to chapter 2.2 Live, chapter 3 PTZ, chapter 4 Playback, chapter 5 Setup, chapter 6 Alarm, chapter 7 Log out for detailed information.



Figure 2-9

## 2.5 Video Window Function Option

The interface is shown as below. See Figure 2-10

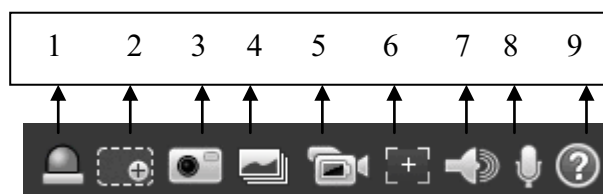


Figure 2-10

Please refer to the following sheet for detailed information.

SN	Parameter	Function
1	Alarm on/off	To control alarm output as: <ul style="list-style-type: none"> <li>● Red: means alarm output.</li> <li>● Grey: means alarm ends.</li> </ul>
2	Digital zoom	<ul style="list-style-type: none"> <li>● When the video is in the original status, click it you can select any zone to zoom in. In the non-original status, you can drag the zoom-in zone in specified range. Right click mouse to restore previous status.</li> <li>● Click it; you can use the middle button of the mouse to zoom in/out the video size.</li> </ul>



3	Snapshot	You can snapshot important video by clicking on this button. All images are memorized in system folder: \ picture download (default). You can go to Setup->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	For manual record. All records are memorized in Setup->Camera->Video->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 2-11.

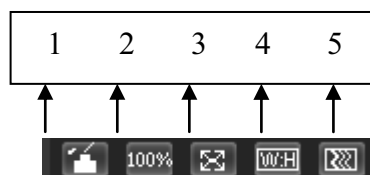


Figure 2-11

### 2.6.1 Image control

Click it to open picture setup interface. See Figure 2-12. This interface is on the top right pane.

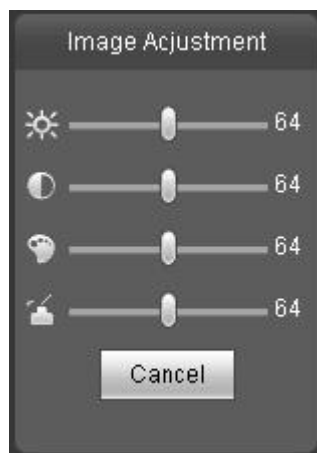






Figure 2-12

Please refer to the following sheet for detailed information.

Parameter		Function	
Video setup		It is to adjust monitor video brightness.	Note: <ul style="list-style-type: none"> <li>● All the operations here apply to WEB end only.</li> <li>● Please go to Setup-&gt;Camera-&gt;Conditions to adjust corresponding items.</li> </ul>
		It is to adjust monitor video contrastness.	
		It is to adjust monitor video hue.	
		It is to adjust monitor video saturation.	
	Reset	Restore brightness, contrastness saturation and hue to system default setup.	

### 2.6.2 Hide Image Control

Click this button to display/hide image control interface.

### 2.6.3 Original size

Click this button to go to original size. It is to display the actual size of the video stream. It depends on the resolution of the bit stream.

### 2.6.4 Full screen

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

### 2.6.5 Width and height ratio

Click it to restore original ratio or suitable window.

### **2.6.6 Fluency Adjustment**

There are three levels of fluency for you to select. The default is real-time with minimum delay. You may select fluent mode in case connection is slow.

### 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: It controls rotation speed. The step 8 speed is faster than step 1. Default value is 5.

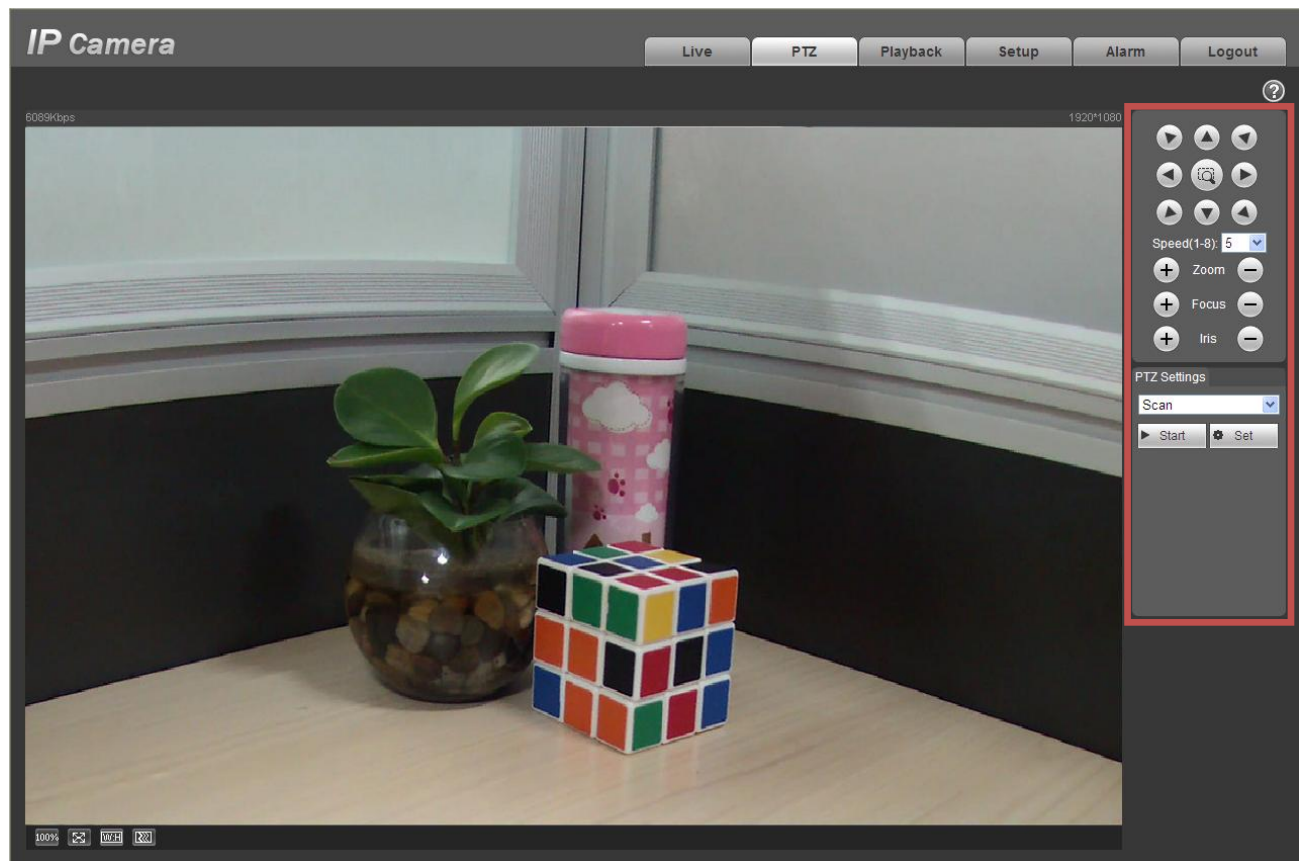


Figure 3-1

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

Here you can set scan, preset, tour, pattern, assistant function and light and wiper.

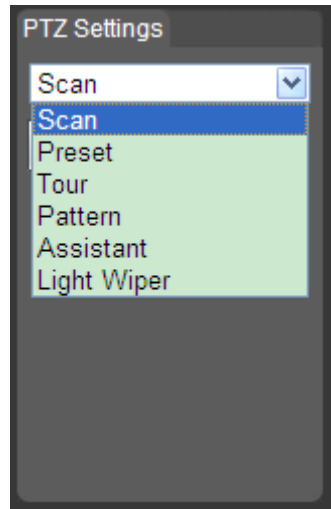


Figure 3-2

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	<ul style="list-style-type: none"> <li>● Click Setup button, you can set scan left and right limit.</li> <li>● 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.</li> </ul>
Preset	<ul style="list-style-type: none"> <li>● Input the preset value and then click Preset button, the camera turns to the corresponding position of the preset.</li> <li>● 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.</li> <li>● The preset value ranges from 1 to 255. (It may vary due to different protocols.)</li> </ul>
Tour	<ul style="list-style-type: none"> <li>● Click the Setup button, you can begin set tour.</li> <li>● Input tour value and then click the Set button. The tour value ranges from 1 to 255. (It may vary due to different protocols.)</li> <li>● Input preset value in the column. Click Add preset button, you have added one preset in the tour.</li> </ul> <p><b>Note:</b> 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.</p>
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 Playback

### 4.1 Playback Interface

The playback interface is shown as in Figure 4- 1.

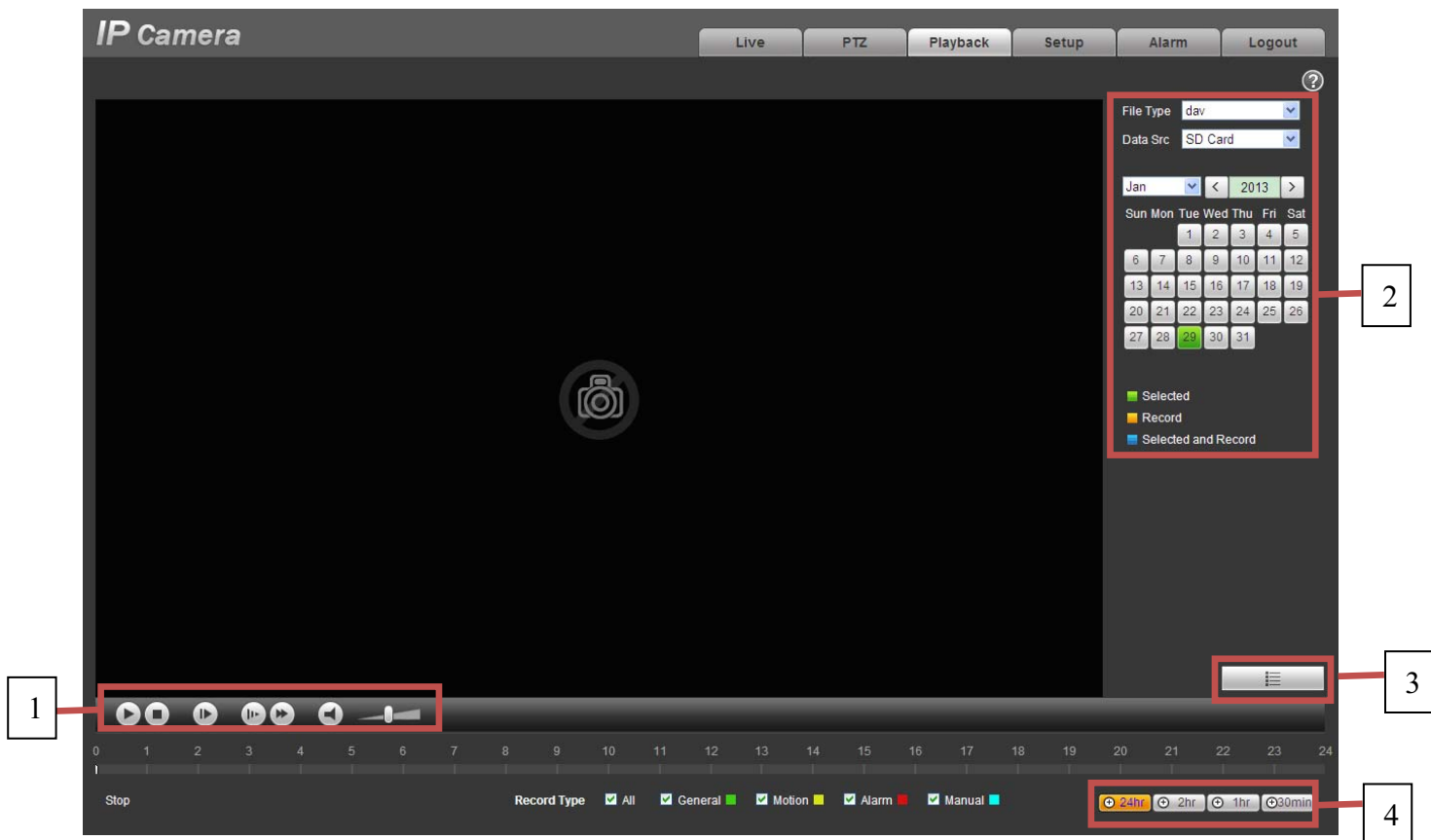


Figure 4- 1

There are four sections:

- Section 1: Function of play
- Section 2: Date
- Section 3: File list
- Section 4: Progress bar

### 4.2 Function of Play

The function of play is shown as in Figure 4- 2.



Figure 4- 2

1. Play: Play or pause video.
2. Stop: Stop video.
3. Play by frame: Skip to next frame.
4. Slow play: Slow down the video.
5. Quick play: Speed up the video.
6. Silent: Switch off/on sound.
7. Volume: Adjust volume of the video.

**Note: You must pause video before skipping to next frame.**

### 4.3 Date

There are various colors in calendar:

- Green: means currently selected date.
- Yellow: means current date has record file.
- Blue: means current date has record file which is/are selected.

Only file types selected will be displayed in progress bar and list.


### 4.4 File List

The file list is shown as in Figure 4- 3.





Figure 4- 3

Click on  to enter file list. Double click on record file in the list and this file will be played. You can view file size, start and end time.

Record type has four catagories:

- Green means general record.
- Yellow means motion detection record.
- Red means alarm record.
- Blue means manual record.



Search: You can search record files within selected time interval.

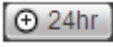
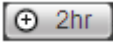
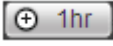
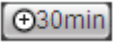


Download: Click on this button, you can download file to PC.



Back: Click on this button, you will go back to calendar page.

## 4.5 Progress Bar

-  means video in past 24 hours.
-  means video in past 2 hours.
-  means video in past 1 hour.
-  means video in past 30 min.

## 5 Setup

### 5.1 Camera

#### 5.1.1 Conditions

Here you can view device property information. Slight differences may be found due to different network camera series. The setups become valid immediately after you set. See Figure 5-1.

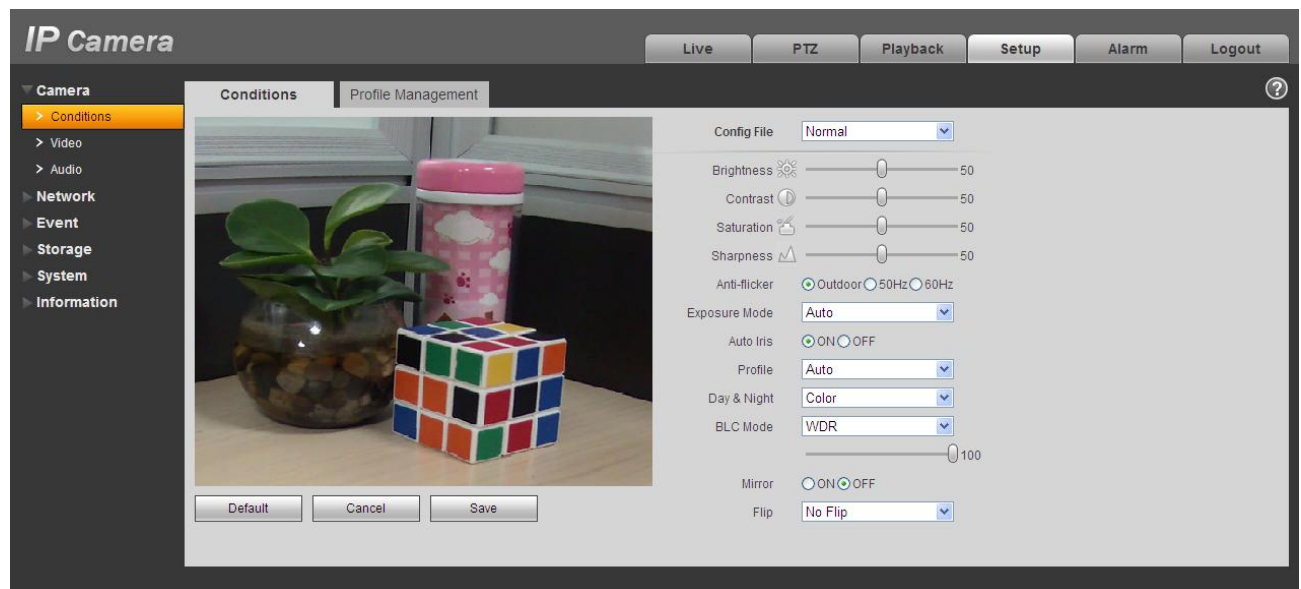



Figure 5-1

Please refer to the following sheet for detailed information.

Parameter	Function
Config File	You may select general, day and night mode.
Brightness	<p>It is to adjust monitor window bright. You can adjust this value if the video is too dark or too bright. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. Please note the video may become hazy if the value is too high.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.</p>

Contrast	<p>It is to adjust monitor window contrast. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. 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 .</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60. The default value is 50.</p>	
Saturation	<p>It is to adjust monitor window saturation. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60.</p> <p>The default value is 50.</p>	
Sharpness	<p>The value here is to adjust the edge of the video. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high.</p> <p>The value ranges from 0 to 100. The recommended value ranges from 40 to 60.</p> <p>The default value is 50.</p>	
Anti-flicker	<ul style="list-style-type: none"> <li>● Outdoor: In this mode, you can switch exposure mode to get the effect under the corresponding exposure mode.</li> <li>● 50Hz: When the current is 50Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.</li> <li>● 60Hz: When the current is 60Hz, system can auto adjust the exposure according to the environment brightness in case there is any strip.</li> </ul>	
Exposure Mode	Auto	<p>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.</p>

	Low noise	<ul style="list-style-type: none"> <li>● 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.</li> <li>● For the same environments, the noise of the low noise mode shall be smaller than the noise of the auto mode.</li> </ul>
	Low motion blur	<ul style="list-style-type: none"> <li>● 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 weaker the tail is.</li> <li>● For the same environments, the noise of the low motion blur mode shall be smaller than that of the auto mode.</li> </ul>
	Manual	It is to display manual exposure value.
Auto Iris	<p>Before the setup, please make sure you have installed the auto iris.</p> <p>You can check the box before ON to enable this function. The auto iris may change if the light becomes different.</p> <p>When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control.</p> <p>This function is on by default.</p>	
Scene Mode	<p>It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default.</p> <p>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.</p> <ul style="list-style-type: none"> <li>● Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the video color is proper.</li> <li>● Sunny: The threshold of the white balance is in the sunny mode.</li> <li>● Night: The threshold of the white balance is in the night mode.</li> <li>● Customized: You can set the gain of the red/blue channel. The value ranges from 0 to 100.</li> </ul>	

Day&Night	<p>It is to set device color and the B/W mode switch. When config file is general, the default is auto. When config file is day, the default is color. When config file is night, the default is black &amp; white.</p> <ul style="list-style-type: none"> <li>● Color: Device outputs the color video.</li> <li>● 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.)</li> <li>● B/W: The device outputs the black and white video.</li> </ul>	
Backlight Mode	BLC	The device auto exposures according to the environments situation so that the darkest area of the video is cleared
	WDR	<p>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.</p> <p>The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.</p>
	HLC	<p>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.</p> <p>The value ranges from 0 to 100. The default value is 50 when HLC is on.</p> <p>HLC is enabled only when anti-flicker is outdoor and exposure mode is auto.</p>
	Off	It is to disable the BLC function. Please note this function is disabled by default.
Full-screen test	Click the  button on the video window, you can begin full-screen test.	
Flip	<p>It is to switch video up and bottom limit.</p> <p>This function is disabled by default.</p> <p>The video resolution shall be 720P or below if you want to flip 90°.</p>	
Mirror	<p>It is to switch video left and right limit.</p> <p>This function is disabled by default.</p>	

Cancel	It is to cancel the operation in current interface and restore previously saved operation.
Default	It is to set device default setup.

The profile management interface is shown as in Figure 5-2.

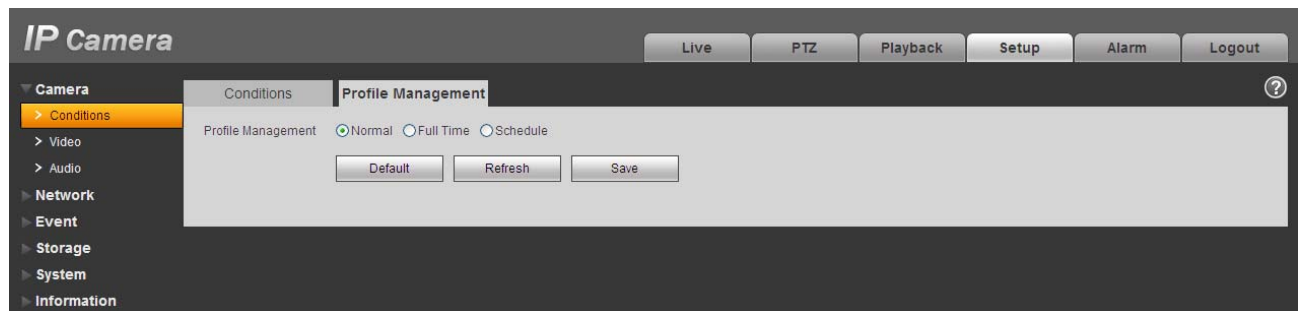


Figure 5-2

Profile management has three modes: general, full time and schedule. If you select general, the video will be configured as general. If you select full time, you must select either day or night, and the video will be configured accordingly. If you select schedule, you can decide detained time interval.

### Important

- The setup becomes immediately after you set.
- 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.
- You can see WDR option only if your camera supports WDR function. System does not support long-time exposure or low noise mode.

## 5.1.2 Video

### 5.1.2.1 Video bit stream

The video bit stream interface is shown as below. See Figure 5-3.

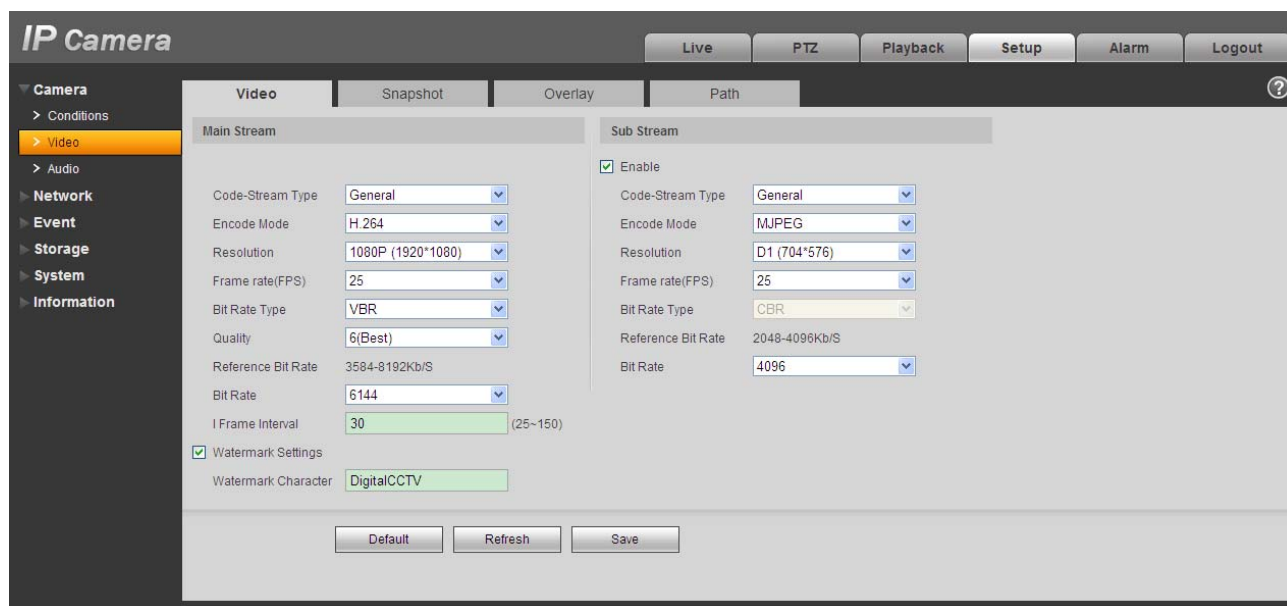


Figure 5-3

Please refer to the following sheet for detailed information.

Parameter		Function
Main stream	Bit stream type	<p>It includes general stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events.</p> <p>System supports active control frame function (ACF). It allows you to record in different frame rates.</p> <p>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.</p>
	Encode mode	<p>There are three options: H.264 (main profile standard), H.264H (high profile standard), H.264B (baseline standard)encode and MJPG encode.</p> <ul style="list-style-type: none"> <li>● H.264 : Main Profile encode mode.</li> <li>● H.264H : High Profile encode mode.</li> <li>● H.264B : Baseline Profile encode mode</li> <li>● 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.</li> </ul>



Parameter		Function
	Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p> <p><b>Important</b></p> <p>You can not set a resolution higher than 720P (not including 720P) when the flip function is in process.</p>
	Frame Rate	<p>PAL: 1~25f/s, NTSC: 1~30f/s..</p> <p>The frame rate may vary due to different resolutions.</p>
	Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p>
	Reference Bit Stream	Reference bit rate value according to the resolution and frame rate you have set.
	Bit Rate	<ul style="list-style-type: none"> <li>● In VBR, the bit rate here is the max value. In CBR, it is a fixed value.</li> <li>● See reference bit stream for recommended value.</li> </ul>
	I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>
	Watermark	<p>This function allows you to verify the video is tampered or not.</p> <p>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.</p>
Sub stream	Enable	<p>Please check the box here to enable extra stream function.</p> <p>This function is enabled by default.</p>
	Bit stream type	General bit stream.

Parameter		Function
	Encode mode	<p>There are three options: H.264(main profile standard, H.264H (high profile standard), H.264B(baseline standard)encode and MJPG encode.</p> <ul style="list-style-type: none"> <li>● The H.264, H.264H 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.</li> <li>● 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.</li> </ul>
	Resolution	<p>There are multiple resolutions. You can select from the dropdown list.</p> <p>For each resolution, the recommended bit stream value is different.</p>
	Frame Rate	<p>PAL: 1~25f/s, NTSC: 1~30f/s..</p> <p>The frame rate may vary due to different resolutions.</p>
	Bit Rate Type	<p>There are two options: VBR and CBR.</p> <p>Please note, you can set video quality in VBR mode.</p>
	Recommended Bit	<p>Recommended bit rate value according to the resolution and frame rate you have set.</p>
	Bit Rate	<ul style="list-style-type: none"> <li>● 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.</li> <li>● The value is null in VBR mode.</li> <li>● Please refer to recommend bit rate for the detailed information.</li> </ul>
	I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>

#### 5.1.2.2 Snapshot

The snapshot interface is shown as in Figure 5-4.

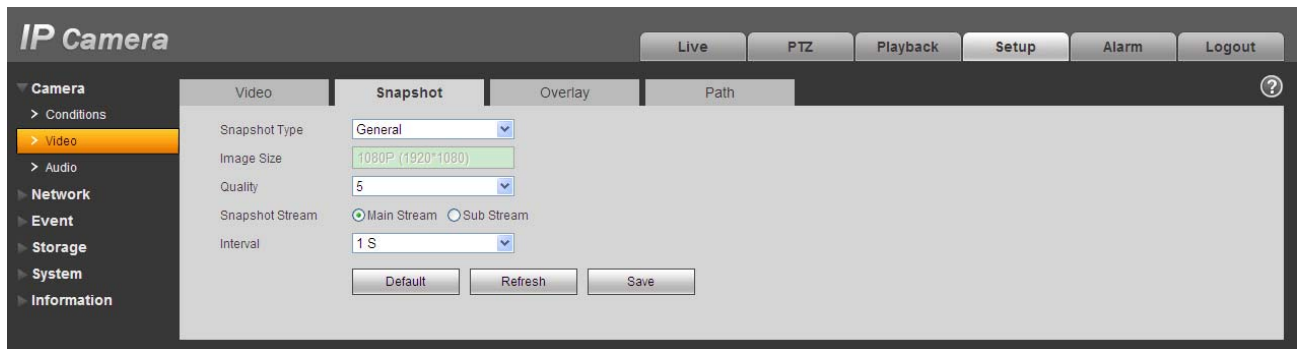


Figure 5-4

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.
Snapshot bit stream	It is to set snapshot bit rate as main or sub.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s.

#### 5.1.2.3 Video Overlay

The video overlay interface is shown as in Figure 5-5.

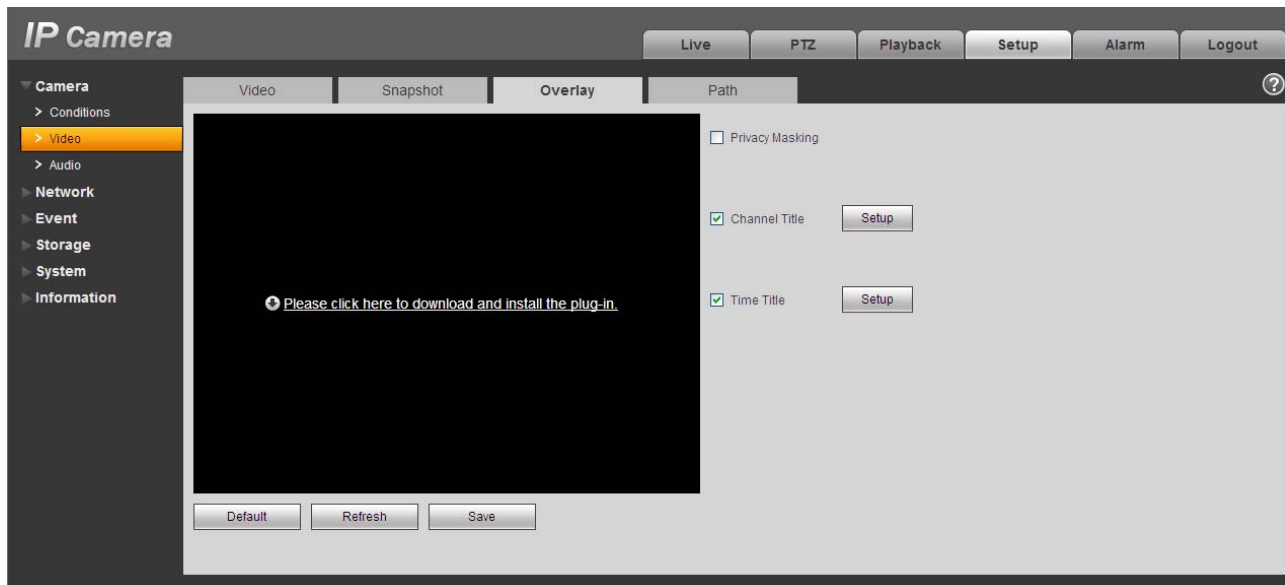




Figure 5-5

Please refer to the following sheet for detailed information.

Parameter	Function
Privacy mask	<ul style="list-style-type: none"> <li>● Here you can privacy mask the specified video in the monitor video.</li> <li>● System max supports 4 privacy mask zones.</li> </ul>
Time Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays time information in video window.</li> <li>● You can use the mouse to drag the time tile position.</li> </ul>
Channel Title	<ul style="list-style-type: none"> <li>● You can enable this function so that system overlays channel information in video window.</li> <li>● You can use the mouse to drag the channel tile position.</li> </ul>

#### 5.1.2.4 Path

The storage path interface is shown as in Figure 5-6.

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 and C:\RecordDownload. Please click the Save button to save current setup.

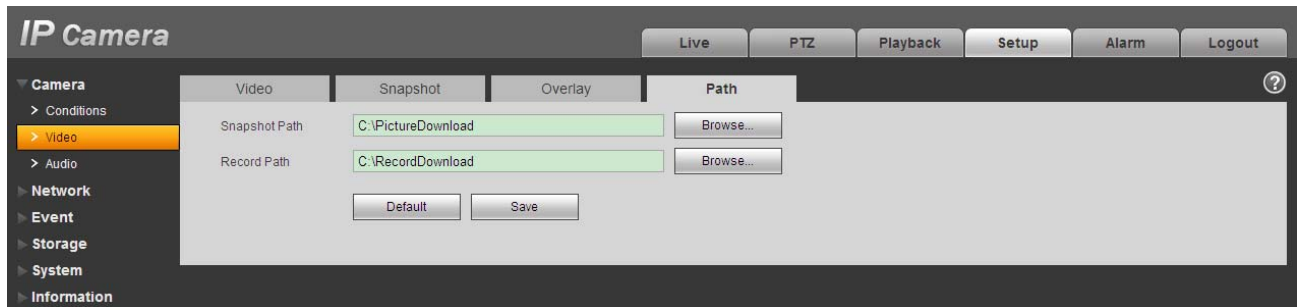


Figure 5-6

### 5.1.3 Audio

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

The audio interface is shown as below. See Figure 5-7.

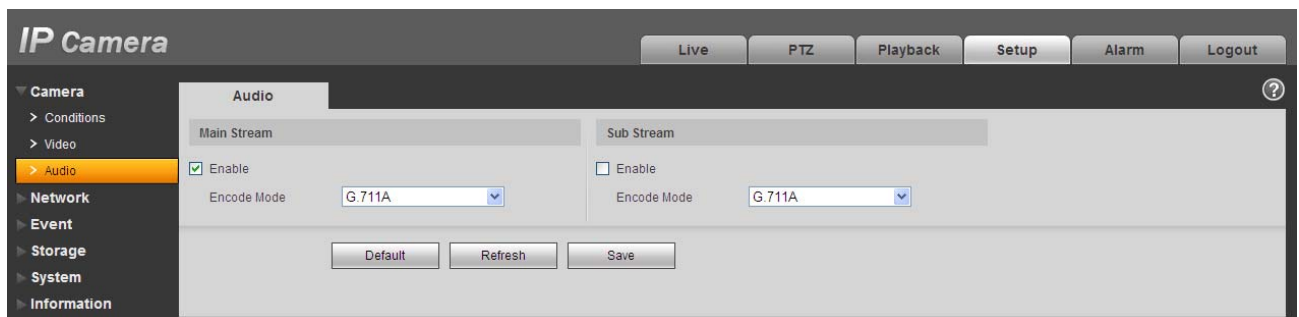


Figure 5-7

Please refer to the following sheet for detailed information.

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

## 5.2 Network

### 5.2.1 TCP/IP

The TCP/IP interface is shown as in Figure 5-8.

Figure 5-8

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	<p>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.</p> <p>Please note the device needs to reboot to activate the new setup once you modify the default setup.</p>
Mode	<p>There are two modes: static mode and the DHCP mode.</p> <ul style="list-style-type: none"> <li>● The IP/submask/gateway are null when you select the DHCP mode to auto search the IP.</li> <li>● If you select the static mode, you need to set the IP/submask/gateway manually.</li> <li>● If you select the DHCP mode, you can view the IP/submask/gateway from the DHCP.</li> <li>● If you switch from the DHCP mode to the static mode, you need to reset the IP parameters.</li> <li>● Besides, IP/submask/gateway and DHCP are read-only when the PPPoE dial is OK.</li> </ul>

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.	<p>You can use ARP/Ping command to modify or set the device IP address if you know the device MAC address.</p> <p>Before the operation, please make sure the network camera and the PC in the same LAN. This function is on by default.</p> <p>You can refer to the steps listed below.</p> <p><b>Step 1:</b> Get an IP address. Set the network camera and the PC in the same LAN.</p> <p><b>Step 2:</b> Get the physical address from the label of the network camera.</p> <p><b>Step 3:</b> Go to the Run interface and then input the following commands.</p> <pre>arp -s &lt;IP Address&gt; &lt;MAC&gt; ping -l 480 -t &lt;IP Address&gt;</pre> <p>Such as: arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125</p> <p><b>Step 4:</b> Reboot the device.</p> <p><b>Step 5:</b> 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.</p> <p><b>Step 6:</b> Open the browse and then input http://&lt;IP address&gt;. Click the Enter button, you can access now.</p>

### 5.2.2 Connection

The connection interface is shown as in Figure 5-9.

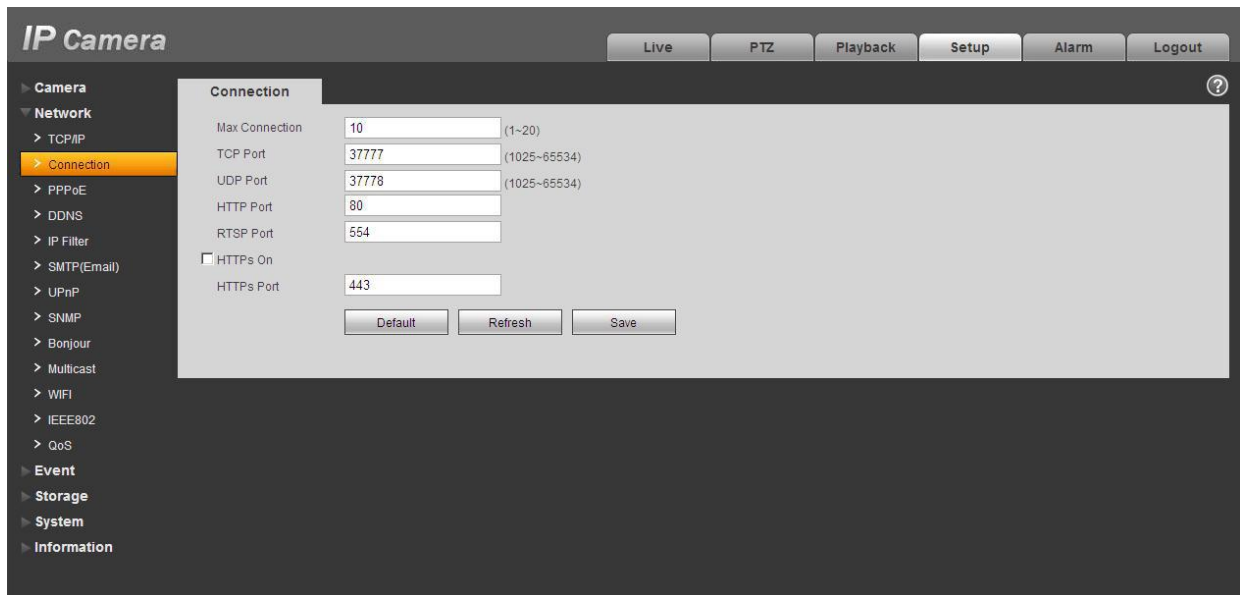


Figure 5-9

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	<p>The default value is 554. Rtsp stream query format is:</p> <p>Main stream:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=0</p> <p>Sub stream:  rtsp://username:password@ip:port/cam/realmonitor?channel=1&amp;subtype=1</p> <p>You need to input the following four items manually.  username/password/IP and port.</p> <p>The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value.</p> <p>Follow standard RTP protocol and when encode mode is MJPEG, the max resolution only supports 2040*2040.</p>



HTTPs Enable	The default value is 443.
-----------------	---------------------------

### 5.2.3 PPPoE

The PPPoE interface is shown as in Figure 5-10.

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

**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 5-10

### 5.2.4 DDNS

The DDNS interface is shown as in Figure 5-11.

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 changed. When the device connects to WLAN, you should disable UPnP.

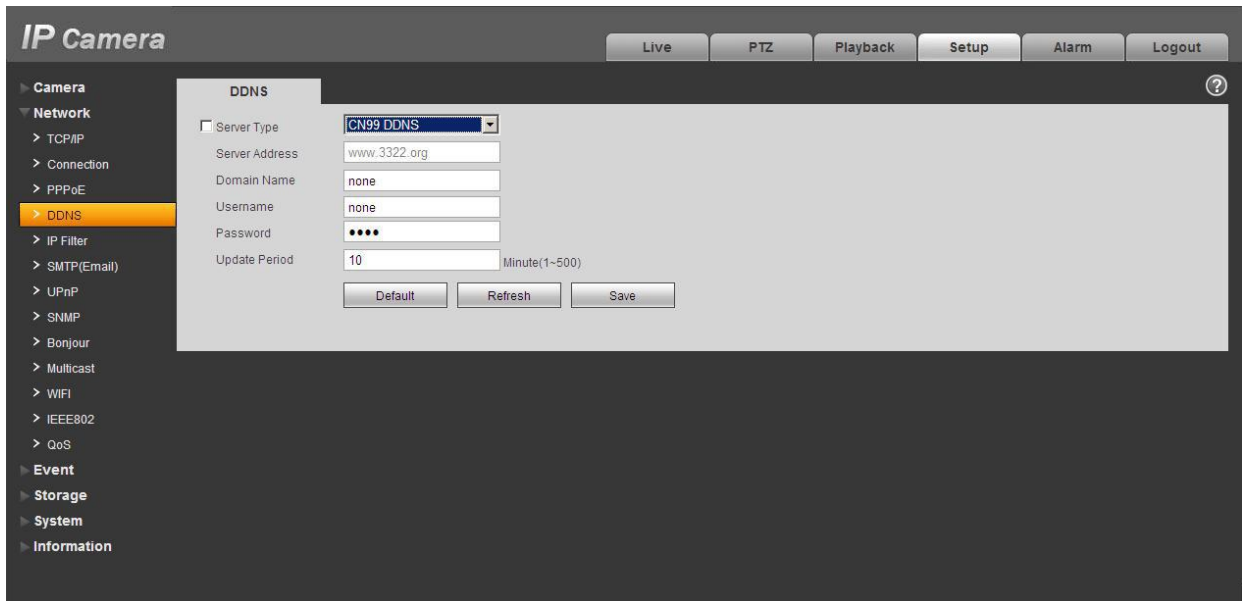


Figure 5-11

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 QUICK DDNS protocol means you use your self-defined private protocol to realize DDNS function.
Server Address	DDNS server IP address
Domain Name	Your self-defined domain name.
Username	The user name you input to log in the server.
Password	The password you input to log in the server.
Update period	<ul style="list-style-type: none"> <li>● Device sends out alive signal to the server regularly.</li> <li>● You can set interval value between the device and DDNS server here.</li> </ul>

The DDNS interface is shown as in Figure 5-12.

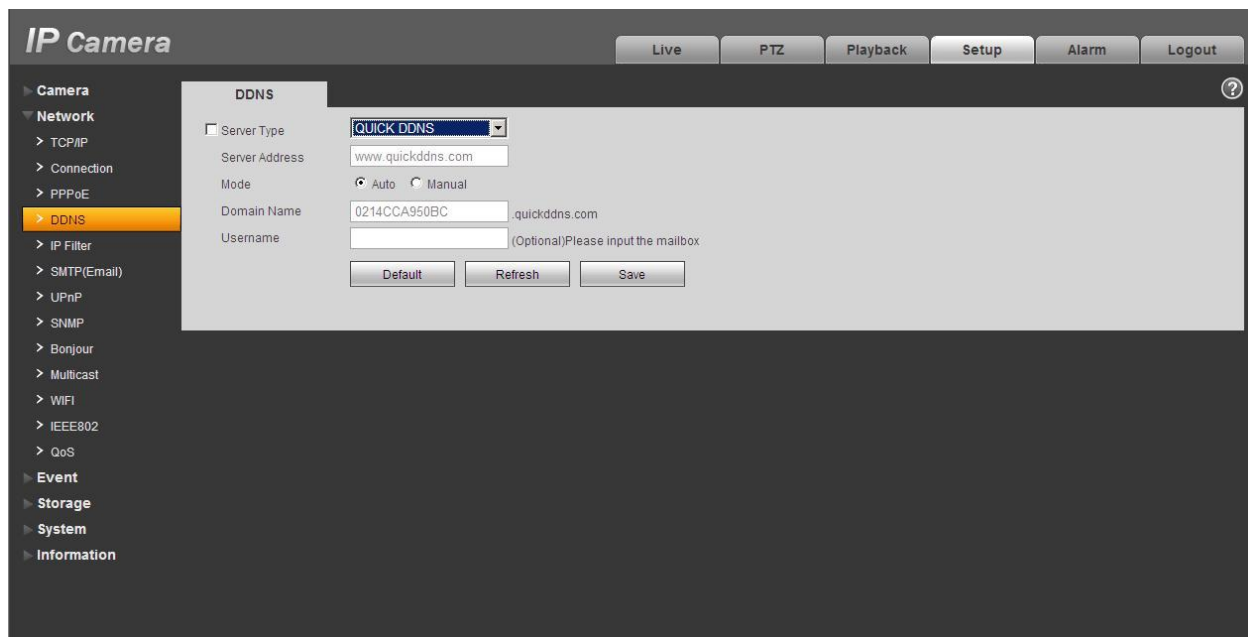


Figure 5-12

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function. The QUICK DDNS means you use your self-defined private protocol to realize DDNS function.
Server Address	DDNS server IP address. Under QUICK DDNS the default server address is www.quickddns.com
Mode	The default is auto, and you can select manual.
Domain Name	Auto and self-defined domain names are both MAC address.quickddns.com. You can self-define prefix.
Test	It is to test domain name. It is available only under manual mode.
Username	The user name you input to log in the server. Optional.

### 5.2.5 IP filter

The IP filter interface is shown as in Figure 5-13.

You can enable IP filter function so that some specified IP/MAC user can access the network camera. You can add IP address or IP address section.

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

Here you can add IP address and MAC address. You must add these address before enabling the trusted sites.

Please note: You must set MAC address in the same network segment.

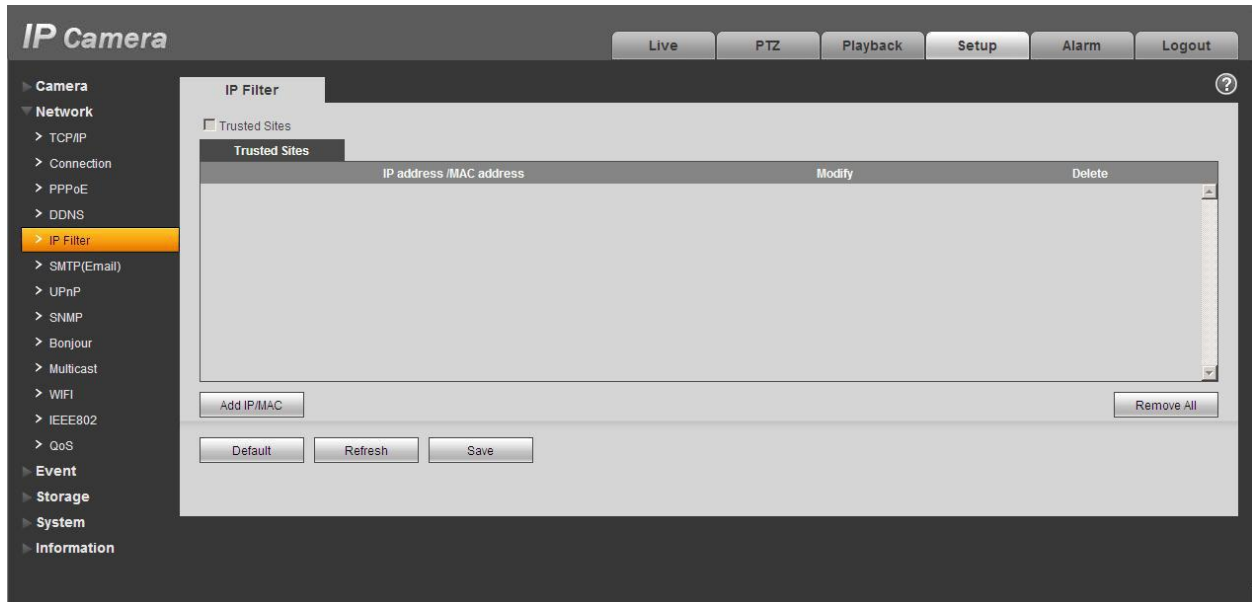


Figure 5-13

### 5.2.6 SMTP (e-mail)

The SMTP interface is shown as in Figure 5-14.

The screenshot shows the 'IP Camera' web interface. The top navigation bar includes 'Live', 'PTZ', 'Playback', 'Setup', 'Alarm', and 'Logout'. The left sidebar menu is expanded to 'SMTP (Email)'. The main configuration area for 'SMTP (Email)' includes the following fields and options:

- SMTP Server:** none
- Port:** 25
- Anonymity:** ☐ (unchecked)
- Username:** anonymity
- Password:** masked with dots
- Sender:** none
- Authentication:** None (dropdown menu)
- Title:** IPC Message
- Attachment:** ☒ (checked)
- Mail Receiver:** (empty text box with add and remove buttons)
- Interval:** 0 (text box) Second(0~3600)
- Health Mail:** ☐ (unchecked)
- Update Period:** 60 (text box) Second(1~3600)
- Buttons:** Email Test, Default, Refresh, Save

Figure 5-14

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 abnormality 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 abnormality 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.

### 5.2.7 UPnP

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

Here you can also add, modify or remove UPnP item. For UPnP on different routers, you must disable UPnP function. See Figure 5-15.

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 network camera can auto detect it via the "My Network Places"

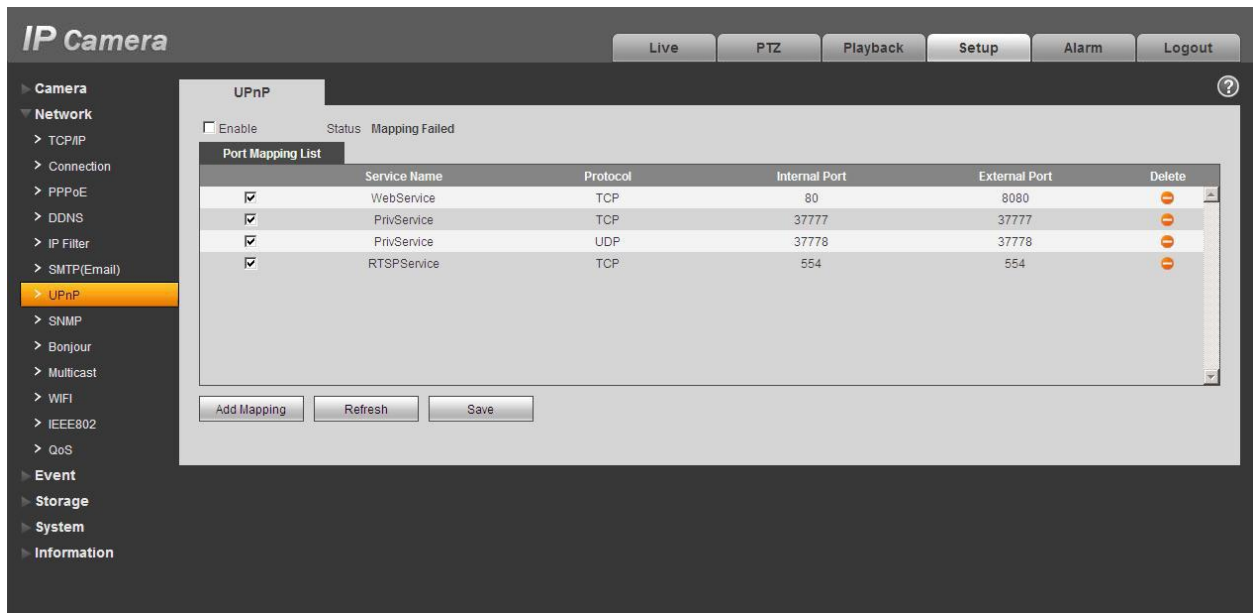


Figure 5-15

### 5.2.8 SNMP

The SNMP interface is shown as in Figure 5-16.

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.

The screenshot shows the 'SNMP' configuration page in the IP Camera web interface. The left sidebar has a tree view with categories: Camera, Network (expanded), Connection, PPPoE, DDNS, IP Filter, SMTP(Email), UPnP, **SNMP** (selected), Bonjour, Multicast, WIFI, IEEE802, QoS, Event, Storage, System, and Information. The main content area is titled 'SNMP' and contains the following fields:

- SNMP Port: 161 (range 1~65535)
- Read Community: public
- Write Community: private
- Trap Address: (empty)
- Trap Port: 162 (range 1~65535)
- SNMP Version: ☐ SNMP v1, ☐ SNMP v2, ☒ SNMP v3
- Read-only Username: public \*
- Authentication Type: MD5 (dropdown)
- Authentication Password: (empty)
- Encryption Type: CBC-DES (dropdown)
- Encryption Password: (empty)
- Read&write Username: private \*
- Authentication Type: MD5 (dropdown)
- Authentication Password: (empty)
- Encryption Type: CBC-DES (dropdown)
- Encryption Password: (empty)

At the bottom of the form are three buttons: Default, Refresh, and Save.

Figure 5-16

Please refer to the following sheet for detailed information.

Parameter	Function
SNMP port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. 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.



Parameter	Function
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.
SNMP version	<ul style="list-style-type: none"> <li>● SNMP V1: system only processes the information of V1.</li> <li>● SNMP V2: system only processes the information of V2.</li> <li>● SNMP V3: you can set user name and password. There is account security verification when the server wants to connect to the device. At the same time, the v1 and V2 is null and cannot select.</li> </ul>
Username read-only	Only when SNMP version is SNMP v3, you shall config this parameter. The default is public.
Authentication	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Username read/write	Only when SNMP version is SNMP v3, you shall config this parameter. The default is private.
Authentication	Only when SNMP version is SNMP v3, you shall config this parameter. You can select either MD5 or SHA. The default is MD5.
Authentication password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.
Encryption	Only when SNMP version is SNMP v3, you shall config this parameter. The default is CBC-DES.
Encryption password	Only when SNMP version is SNMP v3, you shall config this parameter. Password requires min of 8 characters.

### 5.2.9 Bonjour

The Bonjour interface is shown as below. See Figure 5-17.

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 network camera device and then access if you do not know the network camera information such as IP address.

You can view the server name when the network camera 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 network camera of the Bonjour function in the LAN.

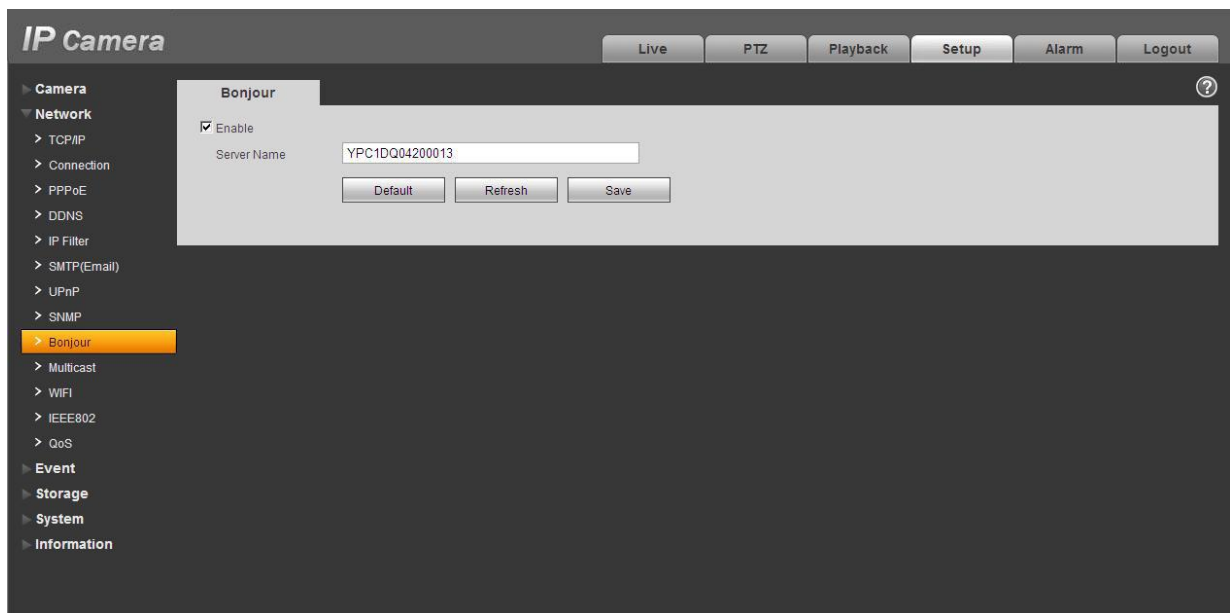


Figure 5-17

### 5.2.10 Multicast

The multicast interface is shown as in Figure 5-18.

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.

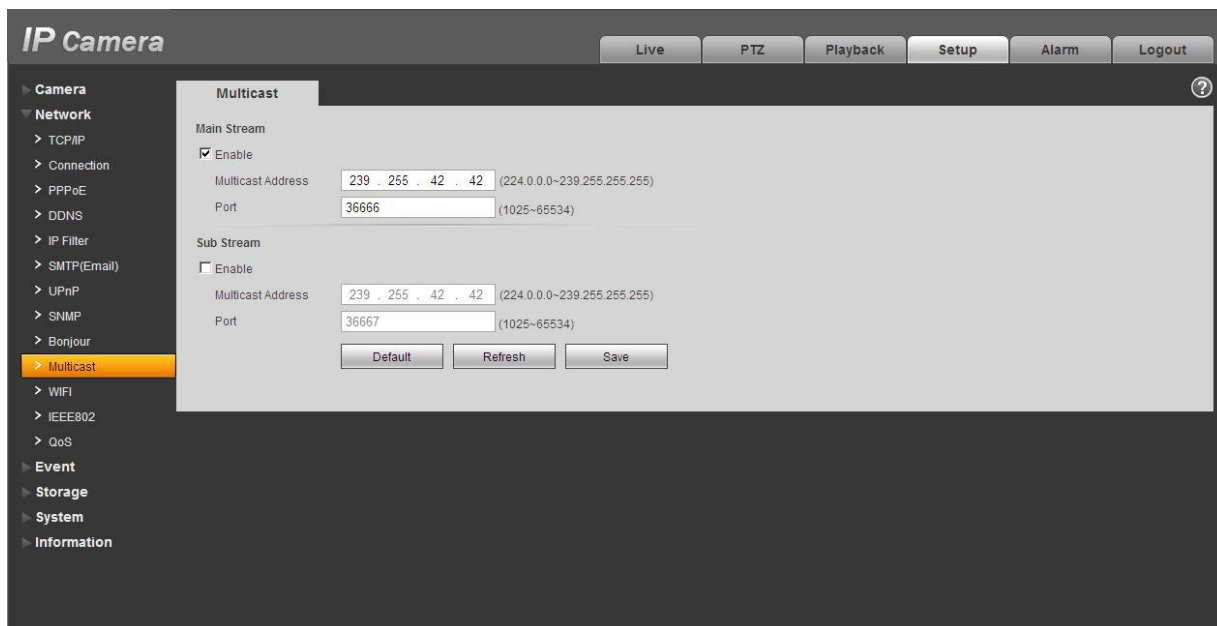


Figure 5-18

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Select to enable multicast function. Main stream and sub stream cannot be used at the same time.
Multicast address	Main/sub stream multicast address is 239.255.42.42 and its range is 224.0.0.0~239.255.255.255.
Port	Multicast port. Main stream is 36666, sub stream is 36667 and the range is 1025~65534.

### 5.2.11 WIFI

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

The WIFI interface is shown as in Figure 5-19.

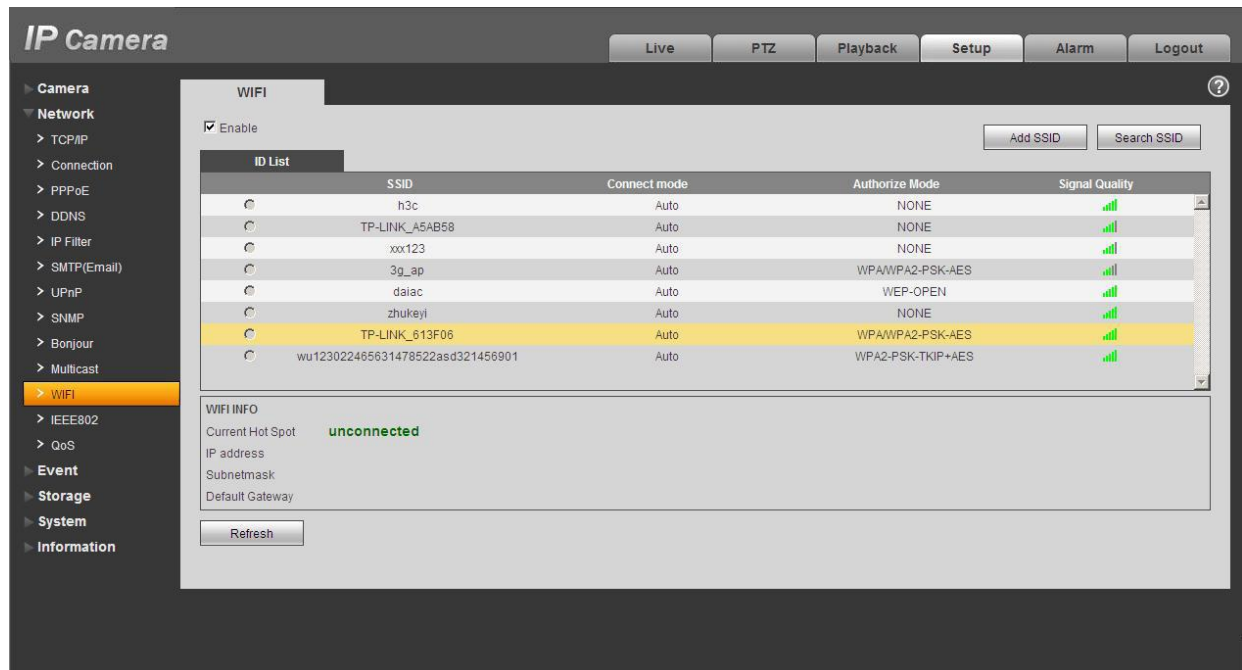


Figure 5-19

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. Click on add wireless ID, and add designated ID in dialog box. Please make sure that you can find the just added ID in list, otherwise you cannot use this ID. See Figure 5-20.

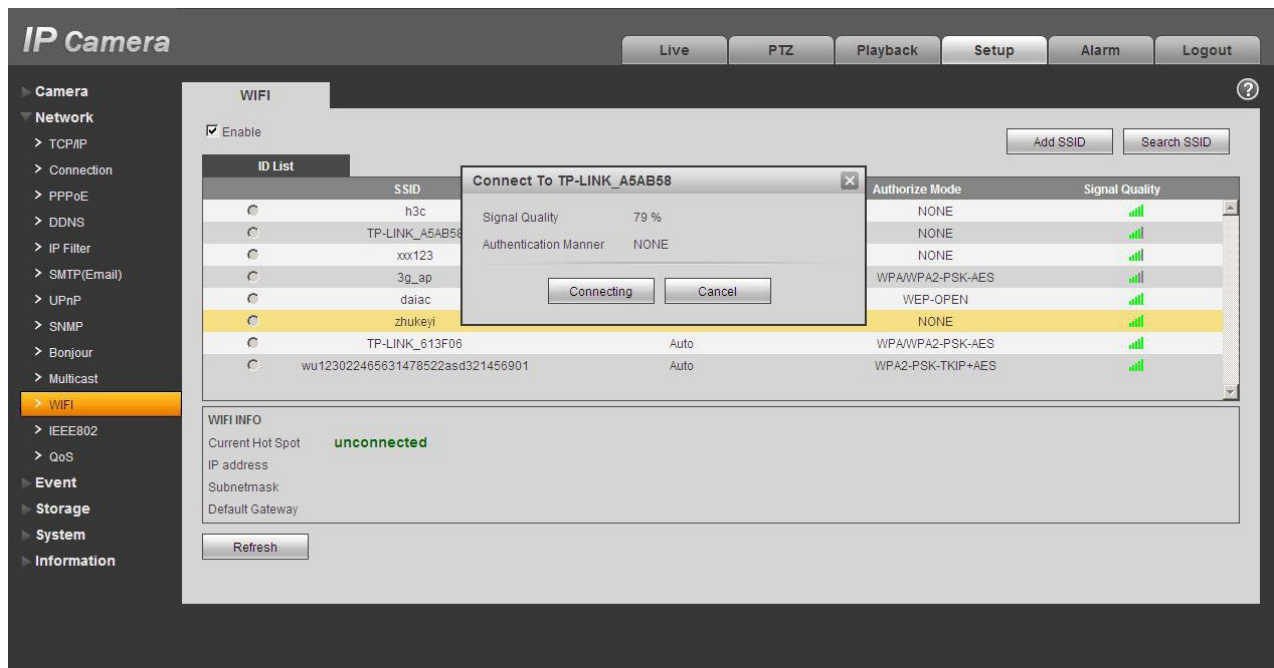


Figure 5-20

## 5.2.12 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 5-21.

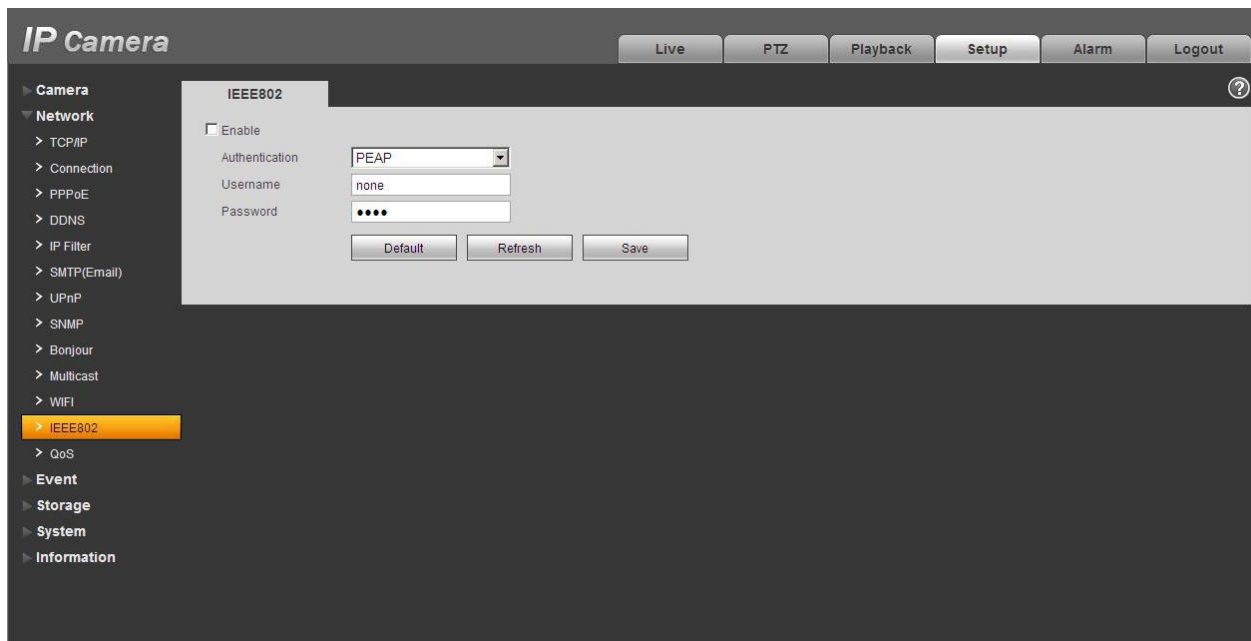


Figure 5-21

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.

### 5.2.13 QoS

The QoS interface is shown as below. See Figure 5-22.

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.

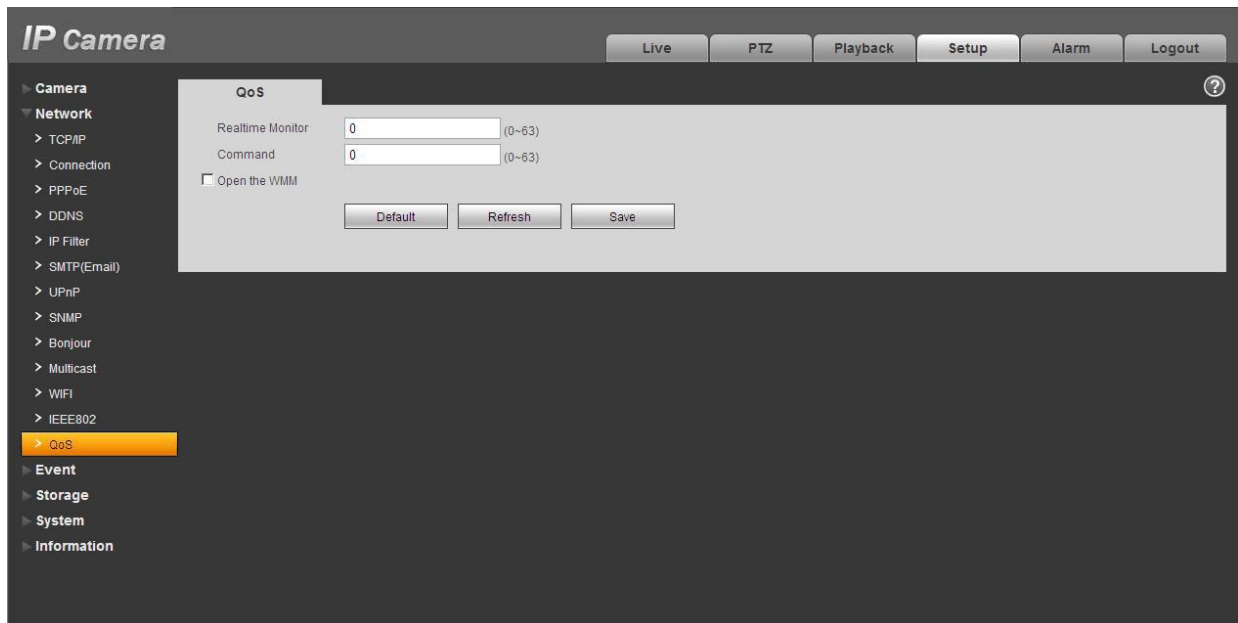


Figure 5-22

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.
Enable wireless QoS	Check it to enable QoS.

### 5.2.14 3G

**Note:** This function is only for series with 3G module.

The 3G interface is shown as in Figure 5-23.

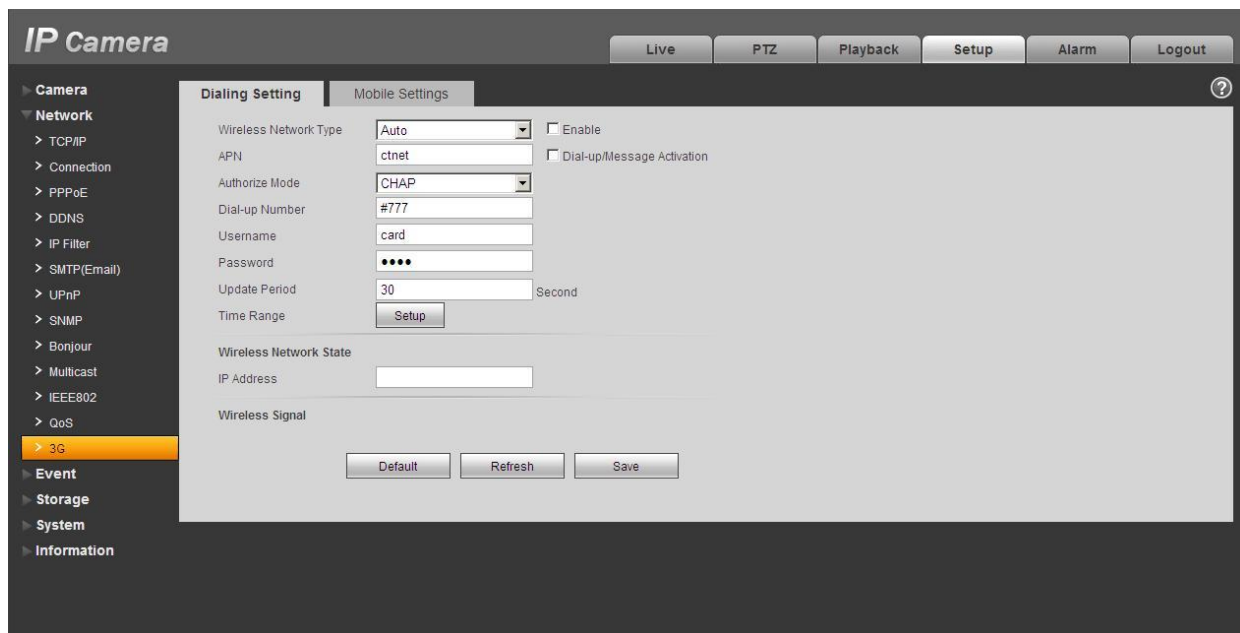


Figure 5-23

#### 5.2.14.1 Dial-up

The dial-up interface is shown as in Figure 5-24.

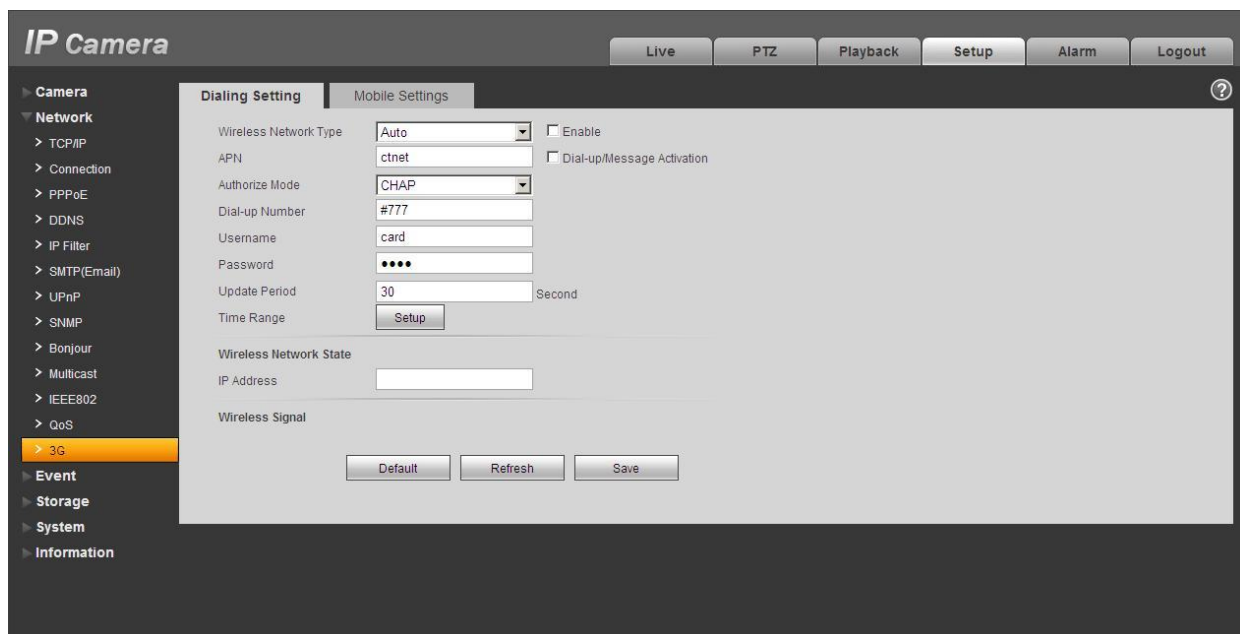


Figure 5-24



Please refer to the following sheet for detailed information.

Parameter	Function
Wireless connection type	The default is auto and it supports dial-up, sms and incoming call.
Enable	Check to enable 3G module.
Authentication	This function depends on your local 3G provider.
Dial-up	This function depends on your local 3G provider.
Username	This function depends on your local 3G provider.
Password	This function depends on your local 3G provider.
Auto period	It is period for device to receive 3G signal every 30s other than scheduled period. The default is 30s.
Interval	You can set dial-up interval. You also can dial if you enable dial-up/sms. The dial-up/sms and dial-up interval is related.
IP address	It displays received IP when 3G dial-up succeeds.

#### 5.2.14.2 Mobile Phone

The mobile phone interface is shown as in Figure 5-25.

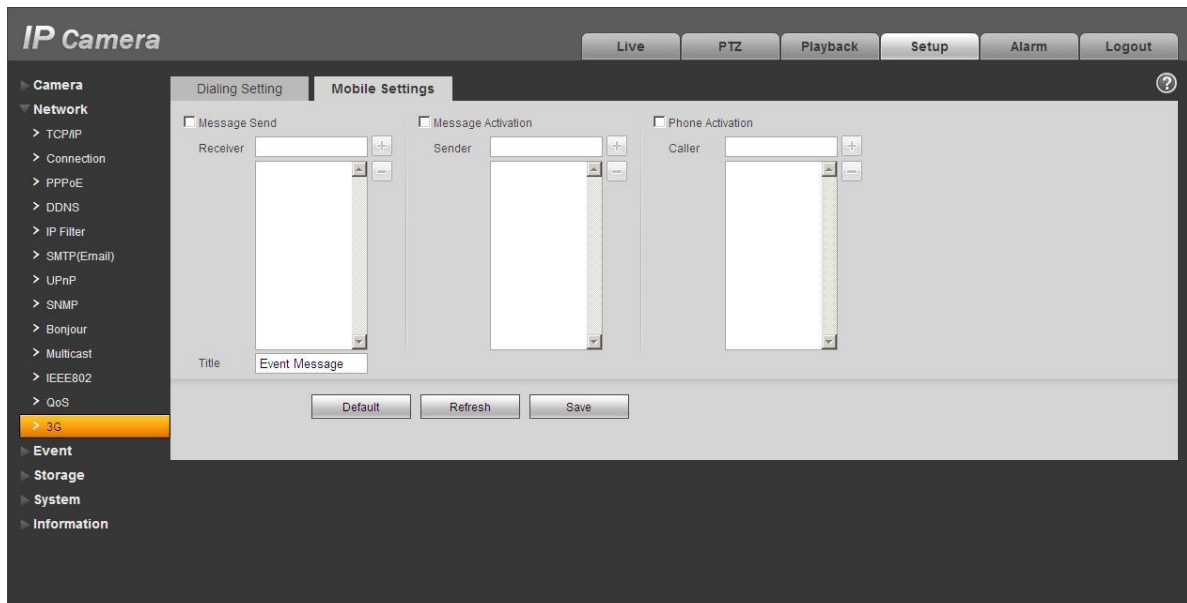


Figure 5-25

Please refer to the following sheet for detailed information.

Parameter	Function
SMS sending	In event management, check corresponding sms, so when there is event, a sms will be sent to mobile phone in corresponding receiving list. To use this function, you shall check sms enable in event management interface.
SMS enable	Mobile phone numbers in the list can enable/disable dial-up function and reboot device by sending sms to SIM card in the device.
Tel Activation	Mobile phone numbers in the list can call the SIM card in the device to enable/disable dial-up function.

## 5.3 Event

### 5.3.1 Video detect

#### 5.3.1.1 Motion Detect

The motion detect interface is shown as in Figure 5-26.

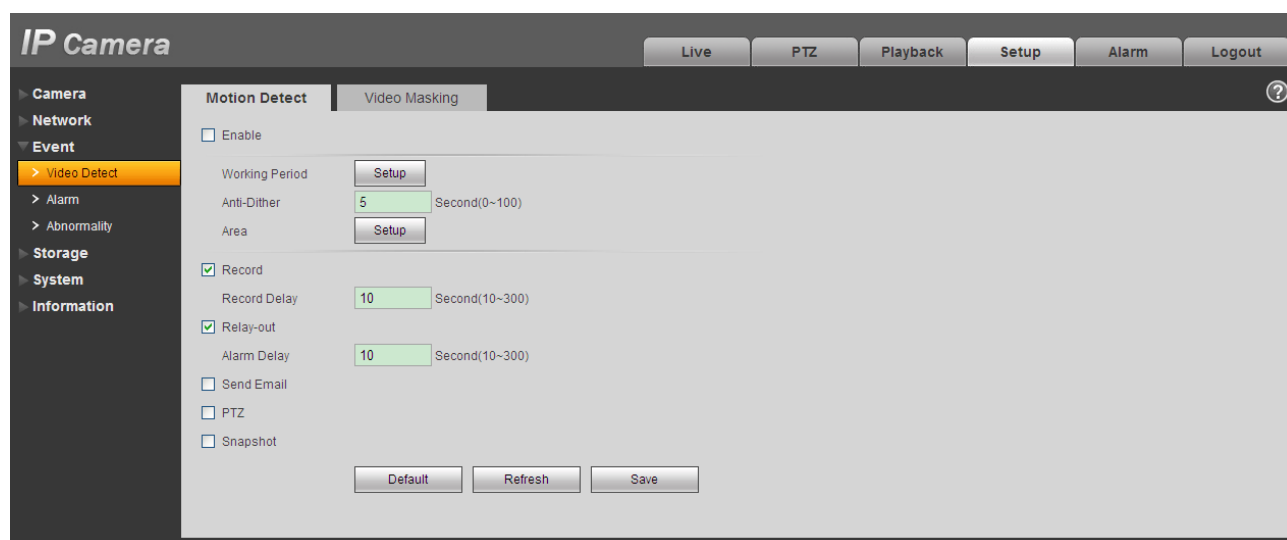


Figure 5-26

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable motion detection function.
Working Period	Here you can set arm/disarm period. Click on set button to open period setup menu.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Area	Here you can set motion detection region and its sensitivity and area. The default covers all regions. You must click on save before enabling your setup.
Record	When record is enabled, you can trigger motion detection to activate record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Parameter	Function
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	You need to check the box here so that system can backup motion detection snapshot file.

See Figure 5-27.

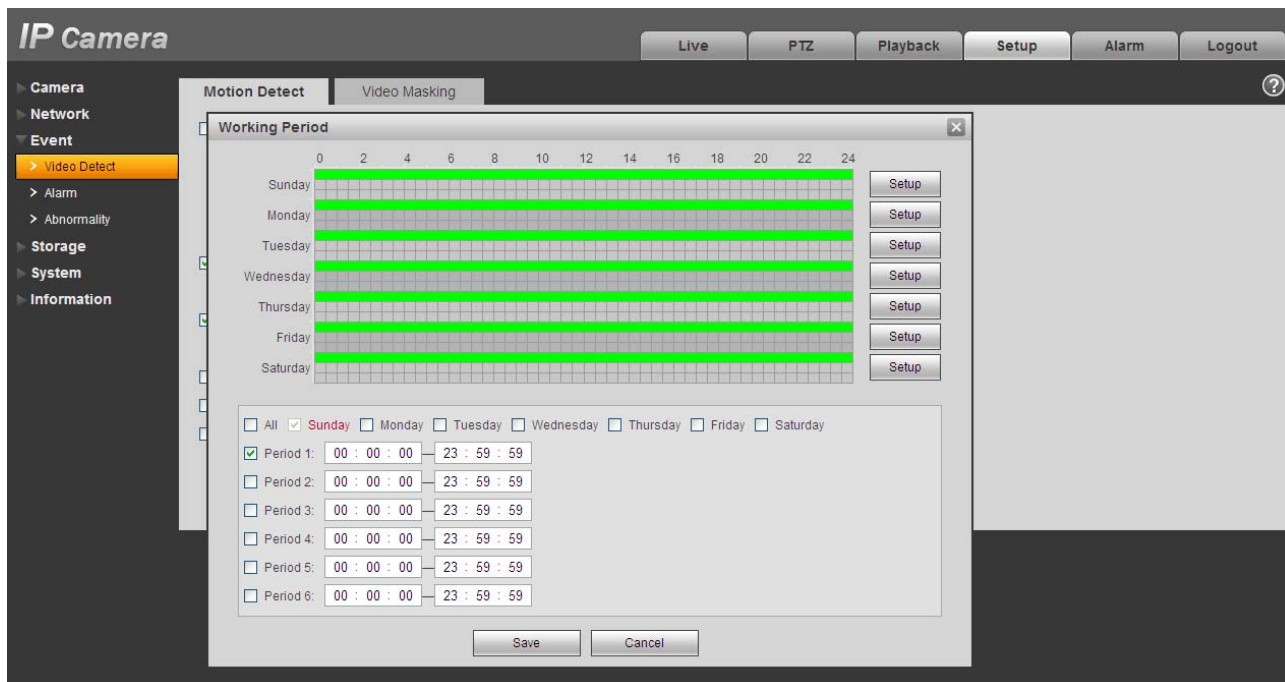


Figure 5-27

See Figure 5-28.

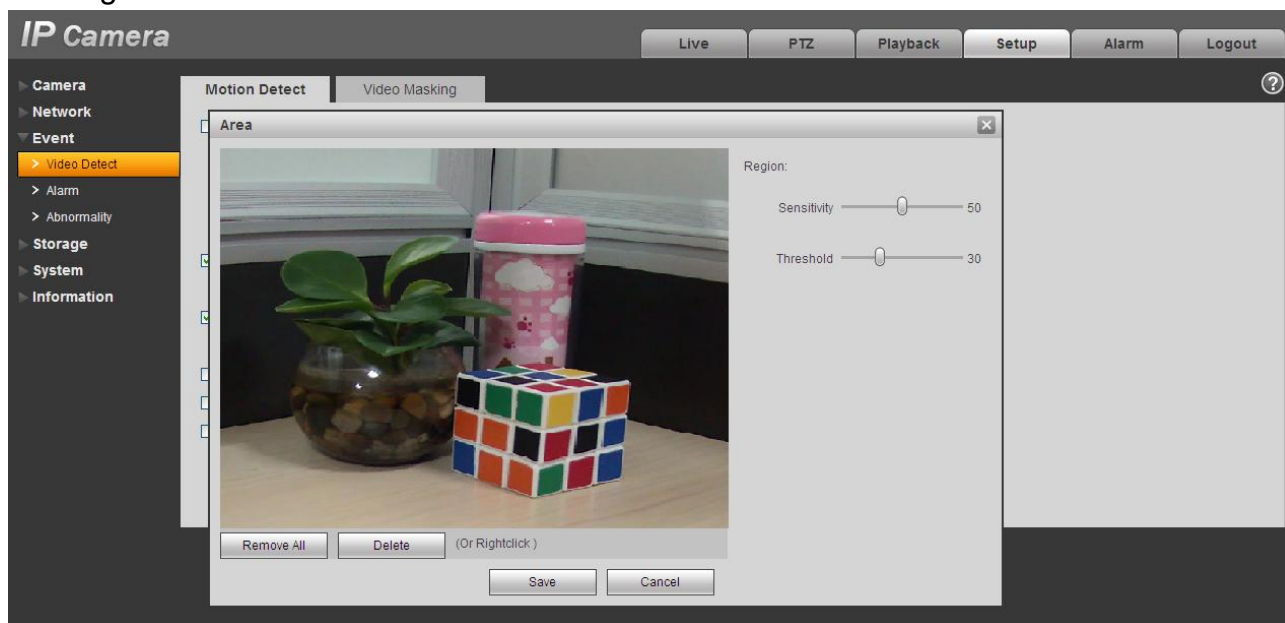


Figure 5-28

Please refer to the following sheet for detailed information.

Parameter	Function
Sensitivity	It is sensitivity of brightness as motion detection is more possible to be trigger with high sensitivity. You can set up to four areas. The range is 0~100. The recommenced value is 30~70. The default is 50.
Area threshold	It is to check target object area related to detection area. The lower the area threshold, the easier to trigger motion detection. You can set up to four areas. The range is 0~100. The recommenced value is 10~50.
Remove all	Clear all areas.
Delete	Delete selected area.

### 5.3.1.2 Video Masking

The video masking interface is shown as in Figure 5-29 and Figure 5-30.

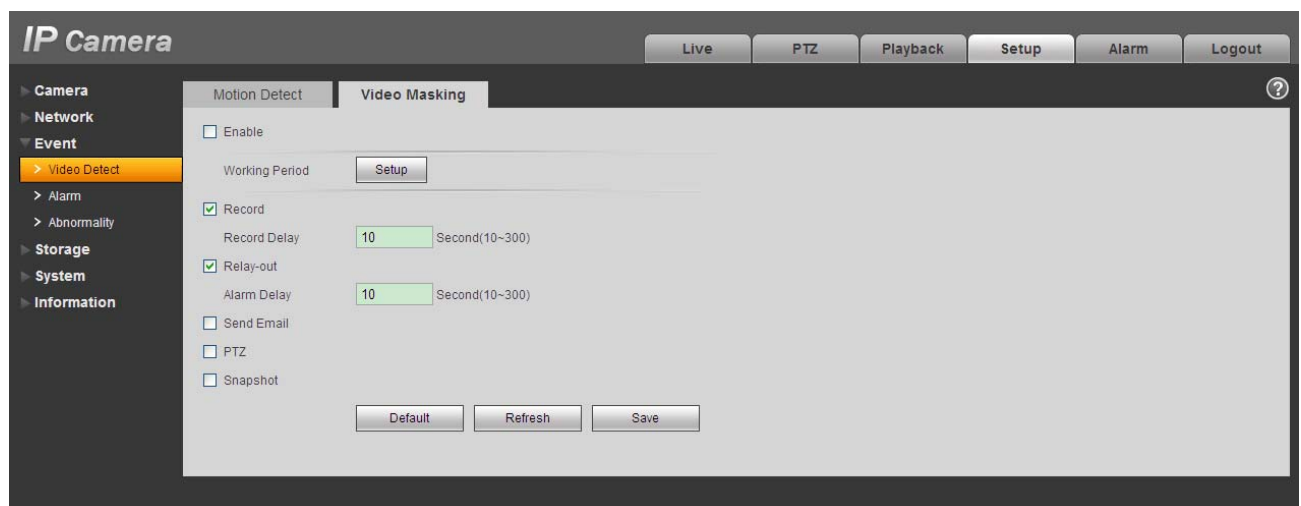


Figure 5-29

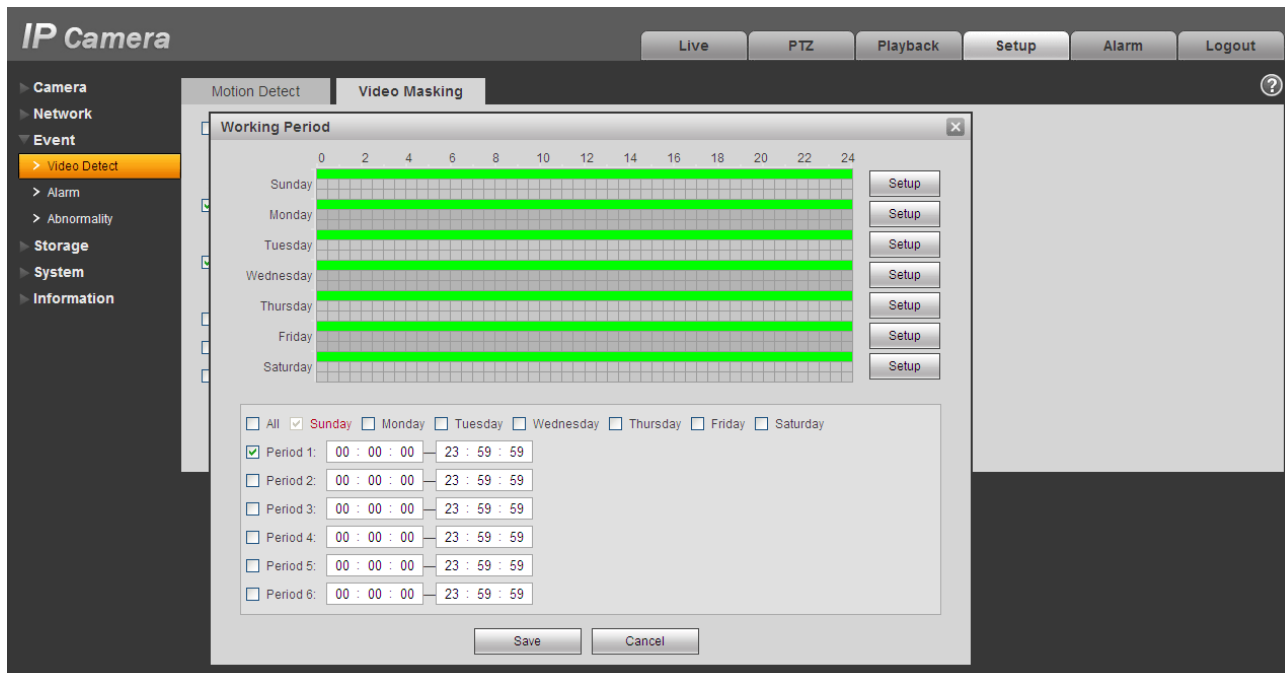


Figure 5-30

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Working period	<ul style="list-style-type: none"> <li>Video masking function becomes activated in the specified periods.</li> <li>There are six periods in one day. Please draw a circle to enable corresponding period.</li> <li>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.</li> <li>Click OK button, system goes back to motion detection interface, please click save button to exit.</li> </ul>
Record	After record is enabled, video masking can activate video.
Record delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs.
PTZ	<ul style="list-style-type: none"> <li>Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	After snapshot is enabled and alarm happens, the system will automatically snapshot and alarm.

### 5.3.2 Alarm

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

#### 5.3.2.1 Alarm activation

The alarm activation interface is shown as in Figure 5-31.

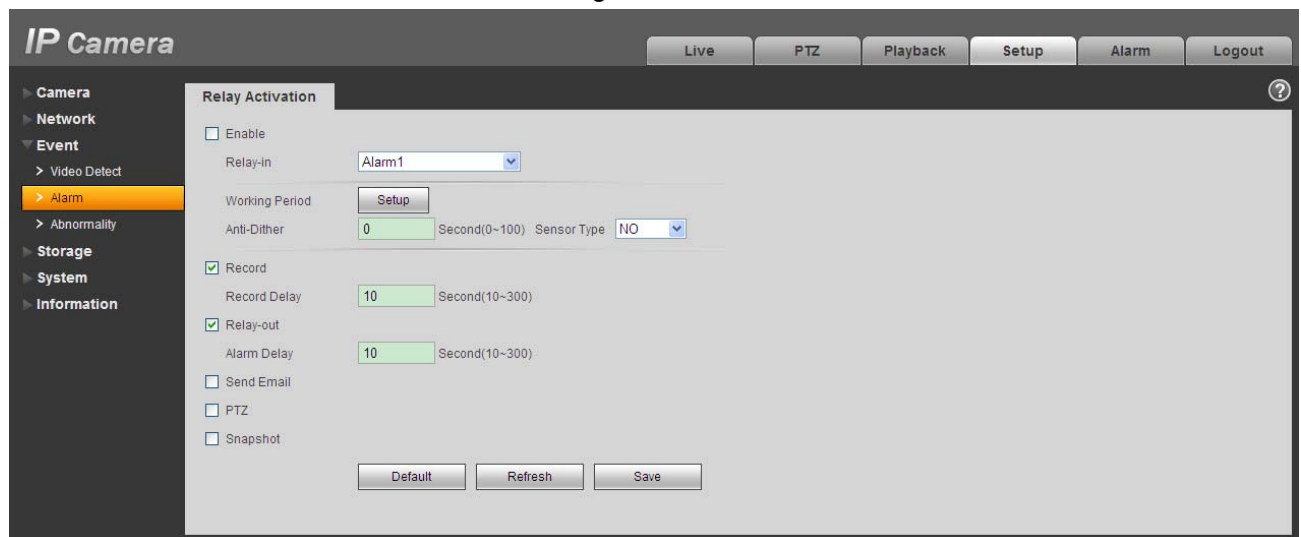


Figure 5-31

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function.
Alarm input	The default is alarm 1 and for some devices may be alarm 2.

Parameter	Function
Working period	<ul style="list-style-type: none"> <li>● This function becomes activated in the specified periods.</li> <li>● There are six periods in one day. Please draw a circle to enable corresponding period.</li> <li>● 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.</li> <li>● Click OK button, system goes back to motion detection interface; please click save button to exit.</li> </ul>
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.
Record	System auto activates motion detection channel to record once alarm occurs (working with motion detection function).
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	<ul style="list-style-type: none"> <li>● There is 1-channel alarm output.</li> <li>● Corresponding to motion detection alarm output port.</li> <li>● Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.</li> </ul>
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
PTZ	<ul style="list-style-type: none"> <li>● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.</li> <li>● The event type includes: preset, tour and pattern.</li> </ul>
Snapshot	After you enabled snapshot, the system will automatically snapshot if alarm occurs.

### 5.3.3 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 5-32 through Figure 5-36.



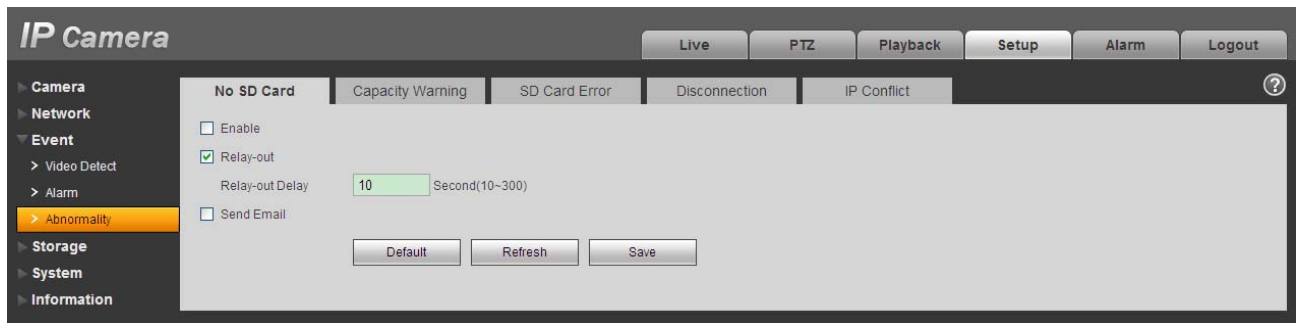


Figure 5-32

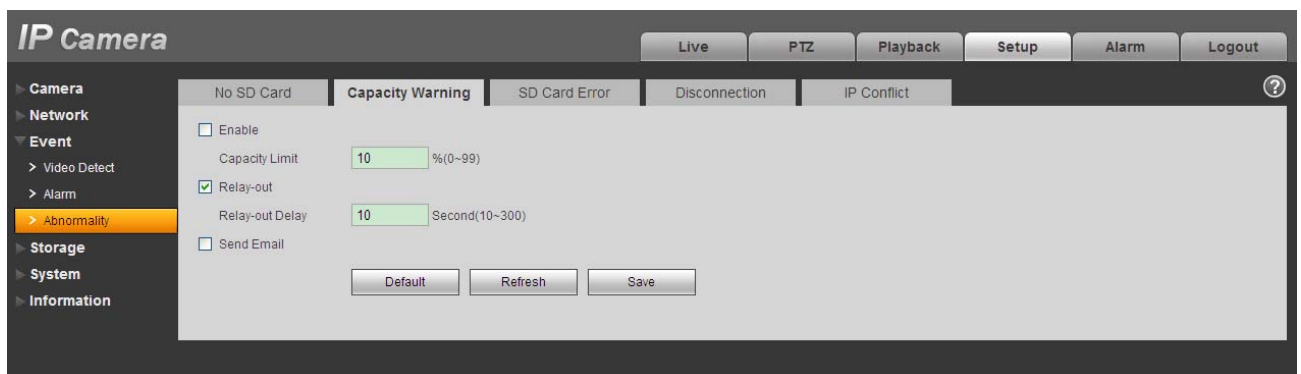


Figure 5-33

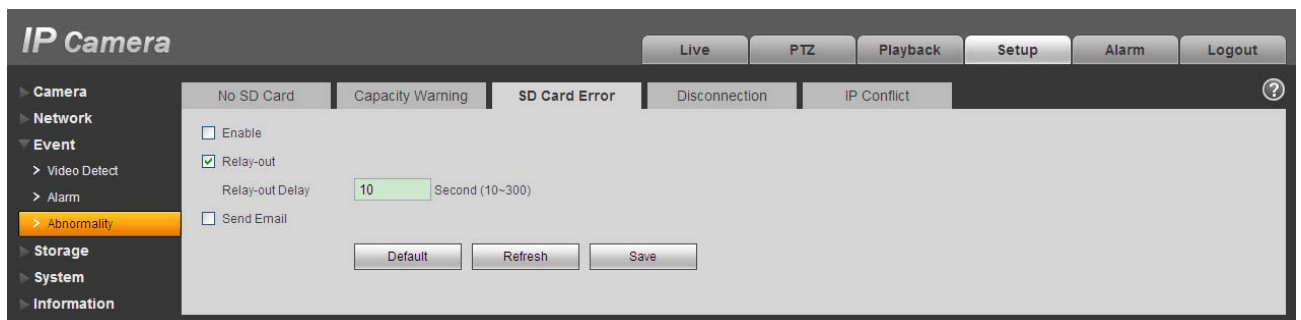


Figure 5-34



Figure 5-35

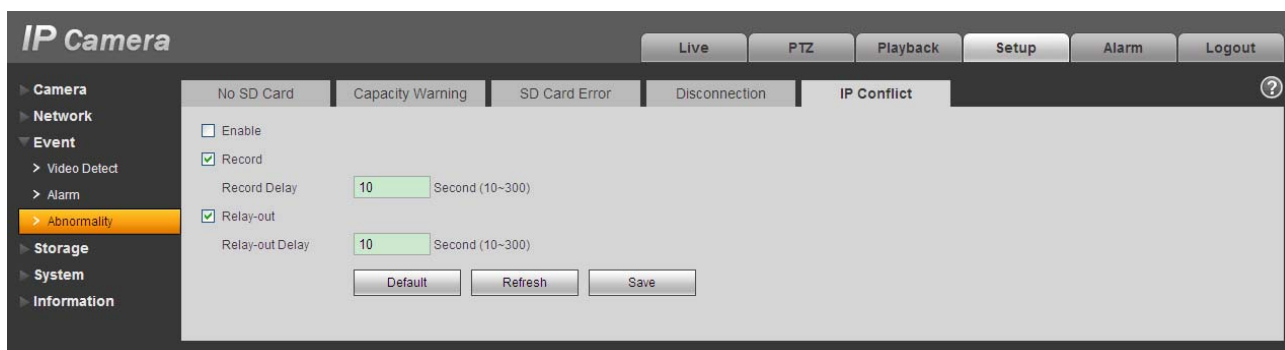


Figure 5-36

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	<ul style="list-style-type: none"> <li>The abnormal events include: no disk, no space, disk error, net error, offline, IP conflict.</li> <li>Threshold: You can set the minimum percentage value here. The device can alarm when capacity is not sufficient.</li> <li>You need to draw a circle to enable this function.</li> </ul>
Record	<p>System auto activates channel to record once alarm occurs (For offline type only. See Figure 5-36. ).</p> <p>You need to check the box to enable this function.</p>
Record delay	<p>System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.</p>
Relay Out	<p>The corresponding alarm output channel when alarm occurs. You need to check the box to enable this function.</p>
Relay out delay	<p>The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s.</p>

Parameter	Function
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.

## 5.4 Storage

### 5.4.1 Record Schedule and Snapshot Schedule

In these two interfaces, you can add or remove the schedule record/snapshot setup. See Figure 5-37 and Figure 5-38.

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.

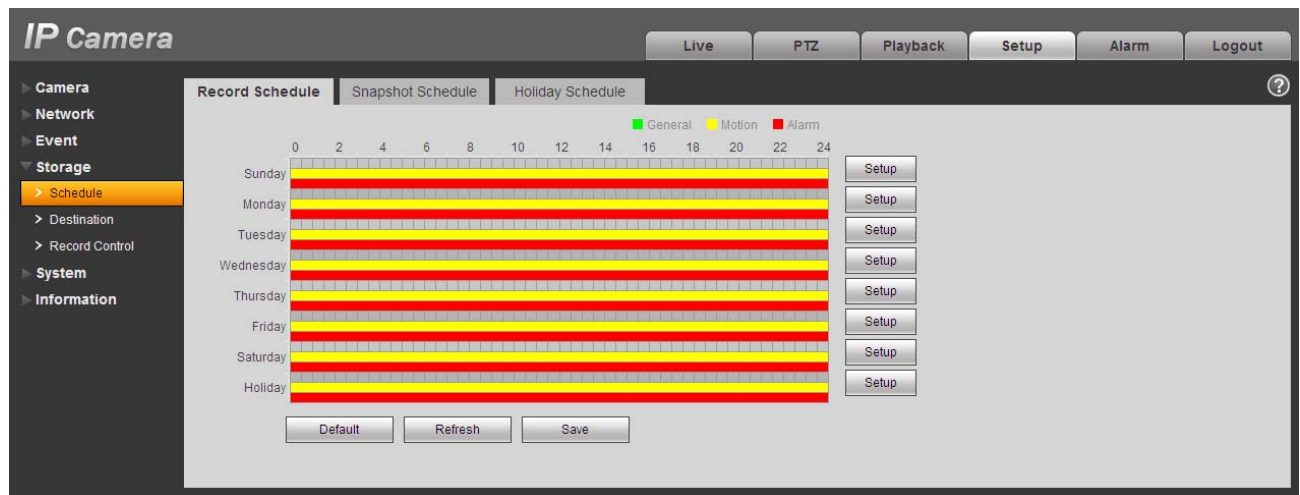


Figure 5-37

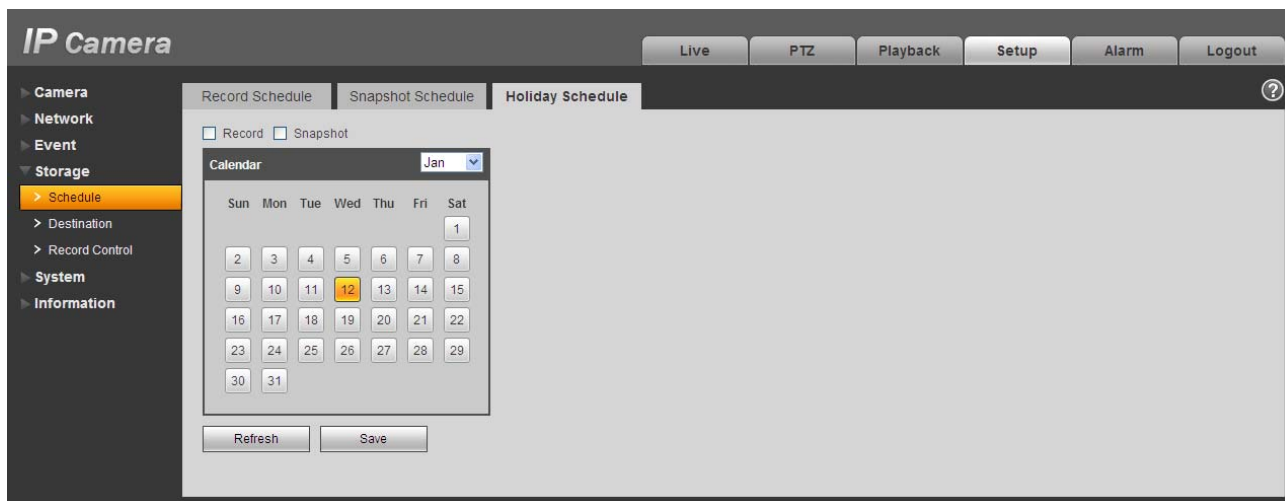


Figure 5-38

You can set specified dates as holiday. When snapshot of holiday is enabled, the selected dates will be snapshot/recorded according to holiday setup.

### 5.4.2 Destination

The destination interface is shown as in Figure 5-39.

It is to set the storage mode of the network camera 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.

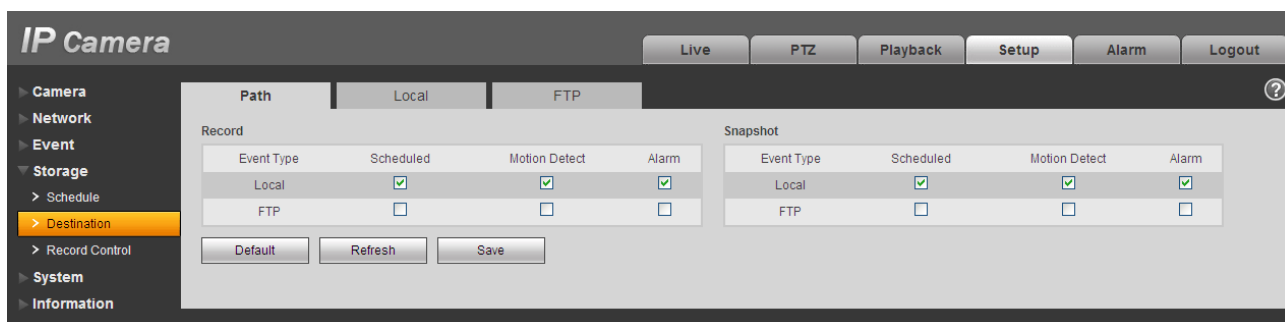


Figure 5-39

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	It includes: general, motion detect and alarm.

Parameter	Function
Local	It saved in the Micro SD card.
FTP	It saved in the FTP server.

The local interface is shown as in Figure 5-40. Here you can view local Micro SD card or disk information. You can also operate the read-only, write-only, hot swap and format operation.

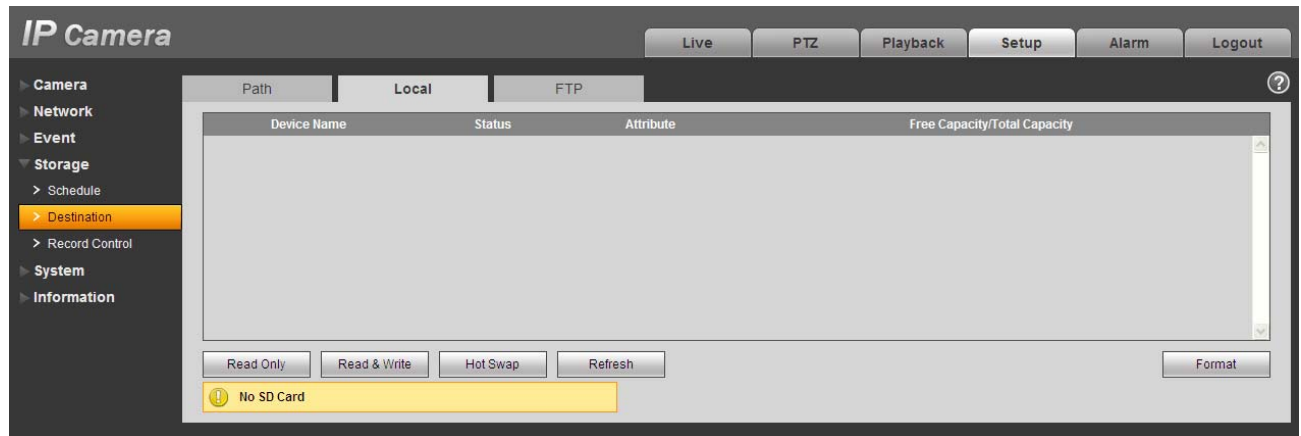


Figure 5-40

The FTP interface is shown as in Figure 5-41. 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 Micro SD card.



Figure 5-41

### 5.4.3 Record control

The record control interface is shown as in Figure 5-42.

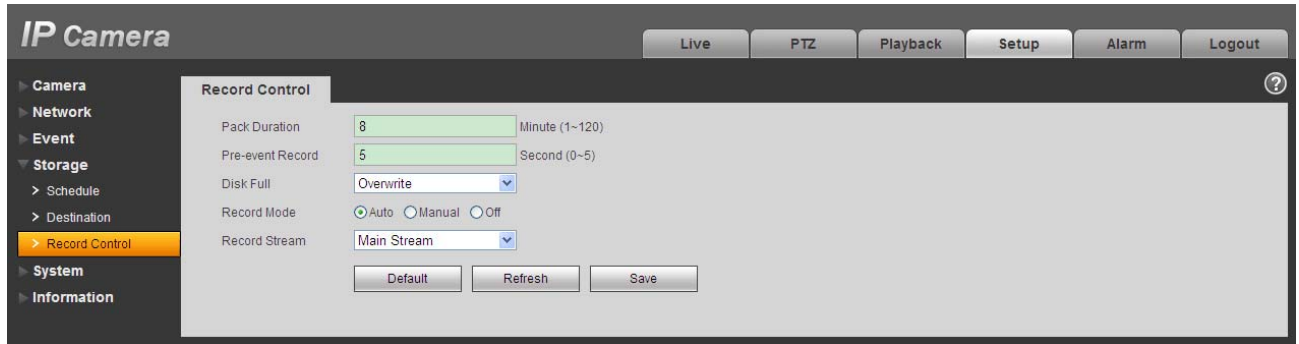


Figure 5-42

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. <ul style="list-style-type: none"> <li>● Stop: Current working HDD is overwriting or current HDD is full, it will stop record.</li> <li>● Overwrite: Current working HDD is full; it will overwrite the previous file.</li> </ul>
Record mode	There are three modes: Auto/manual/close.
Record stream	There are two options: main stream and sub stream.

## 5.5 System

### 5.5.1 General

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

#### 5.5.1.1 Local host

The local host interface is shown as in Figure 5-43.

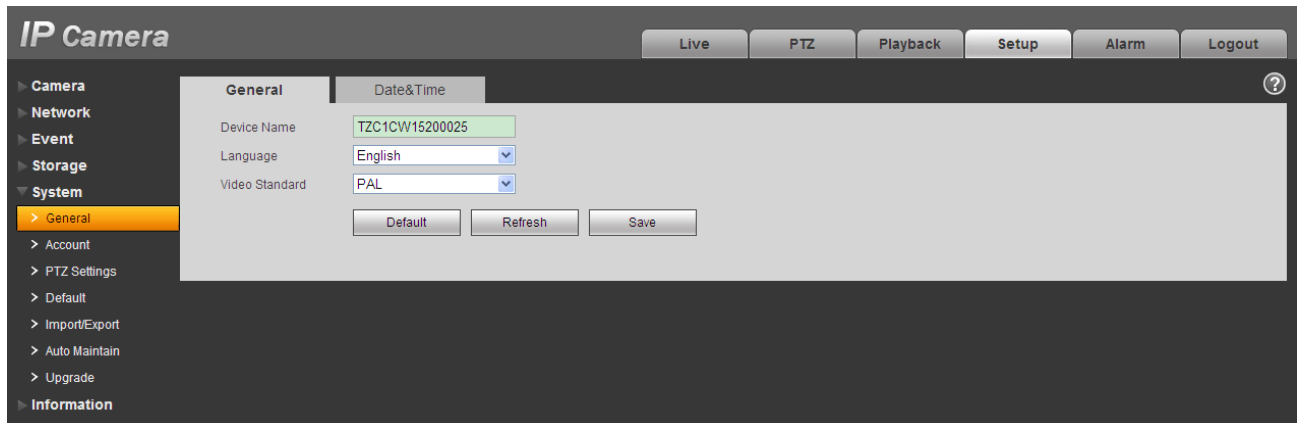


Figure 5-43

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.

#### 5.5.1.2 Date and time

The date and time interface is shown as in Figure 5-44.

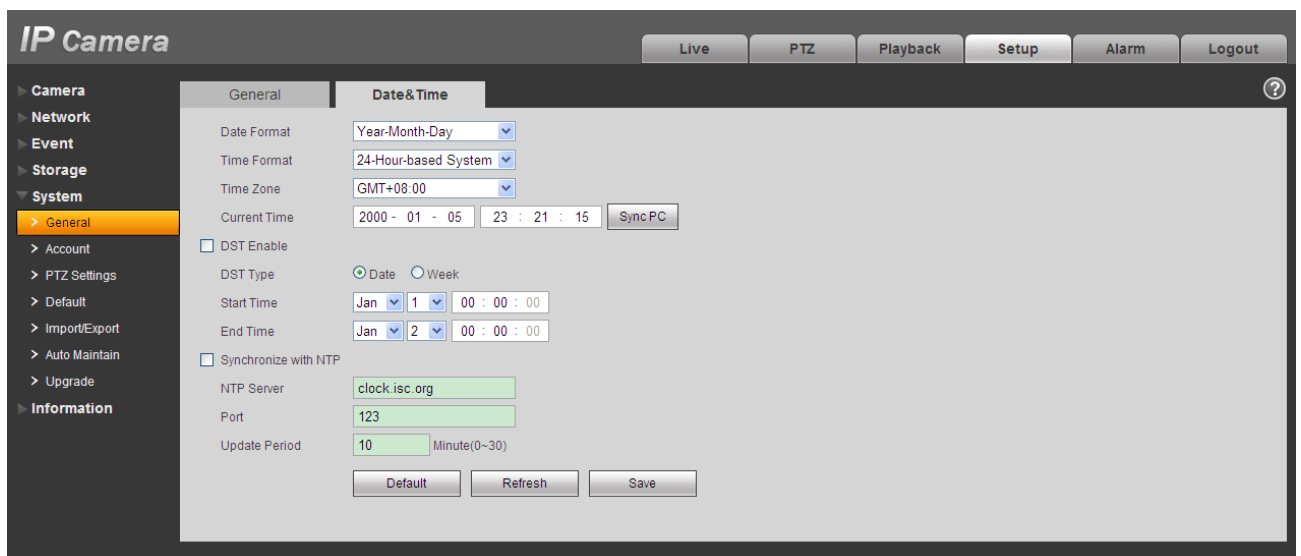


Figure 5-44

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.

## 5.5.2 Account

### Note:

- For the character in the following user name or the user group name, system max supports 15-digits. The valid string includes: character, number, and underline.
- The user amount is 18 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.

### 5.5.2.1 User name

In this interface you can enable anonymity login, add/remove user and modify user name. See Figure 5-45.



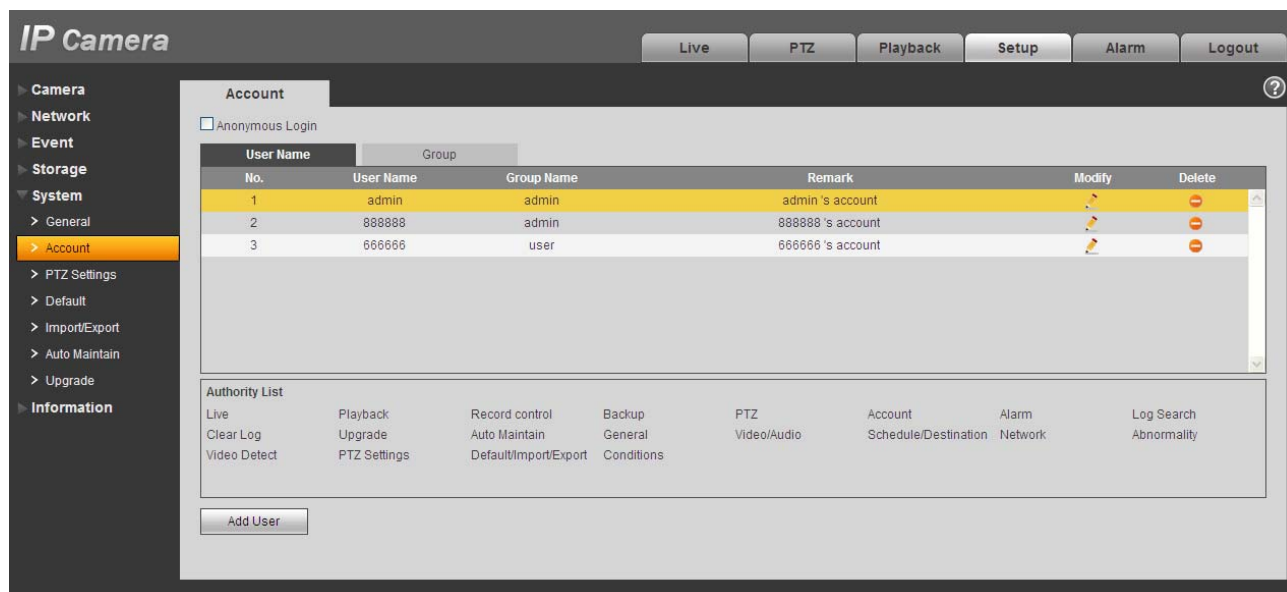


Figure 5-45

**Enable anonymity login:** Enable anonymity login, and input IP. No username or password is required, you can log in by anonymity (with limited rights). You can click logout to end your session.

**Add user:** It is to add a name to group and set the user rights. See Figure 5-46.

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 cannot 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.

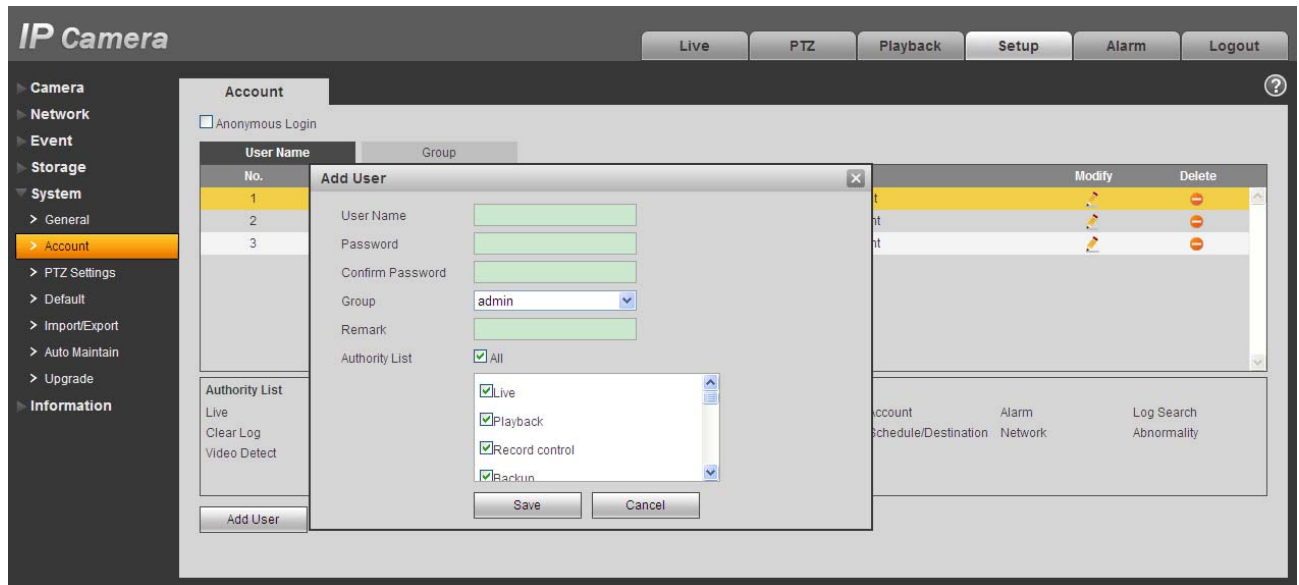


Figure 5-46

### Modify user

It is to modify the user property, belonging group, password and rights. See Figure 5-47.

### 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 0-digit to 32-digit. It shall include the number and letter only. For the user who has the account rights, he can modify the password of other users.

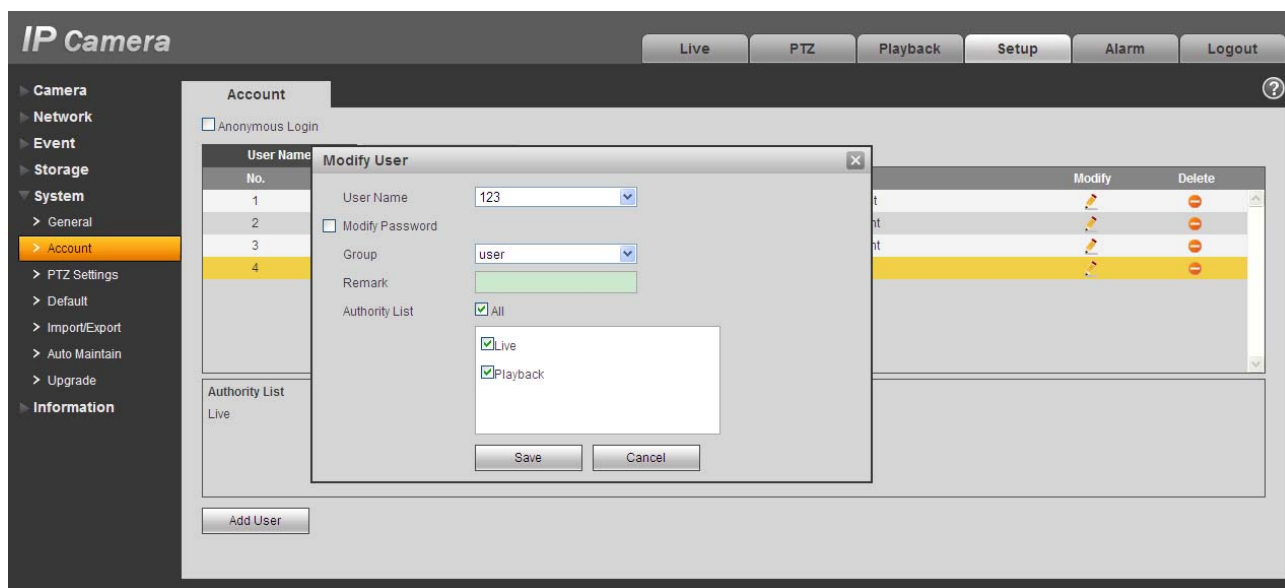


Figure 5-47

### 5.5.2.2 Group

The group management interface can add/remove group, modify group password and etc. The interface is shown as in Figure 5-48.

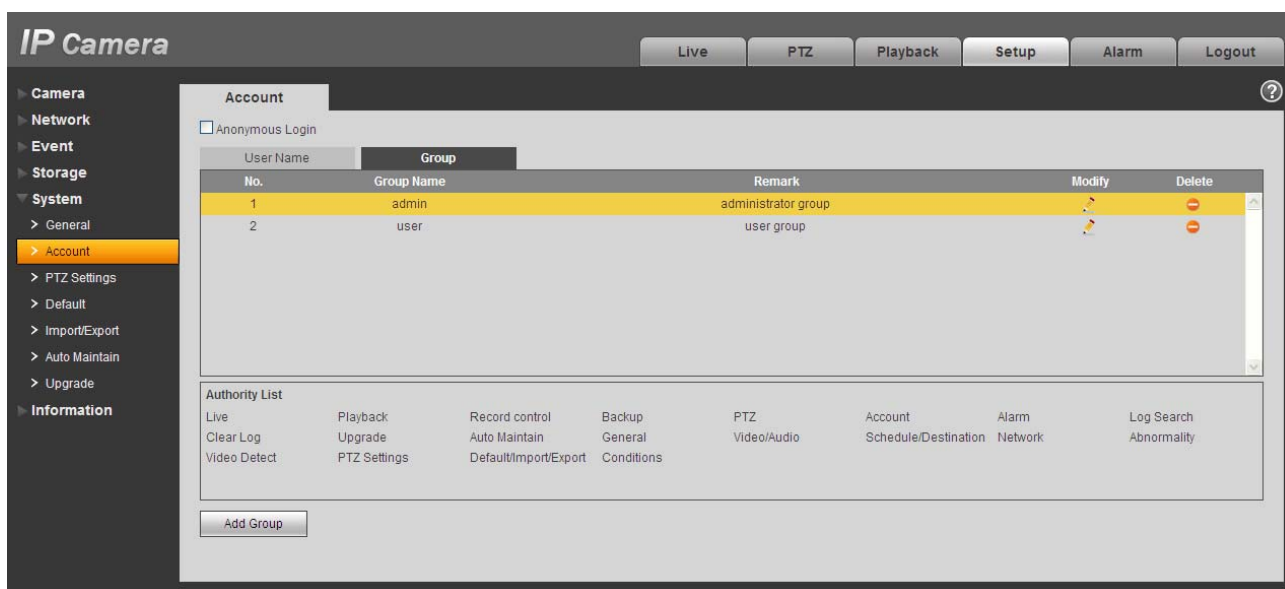


Figure 5-48

**Add group:** It is to add group and set its corresponding rights. See Figure 5-49.

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

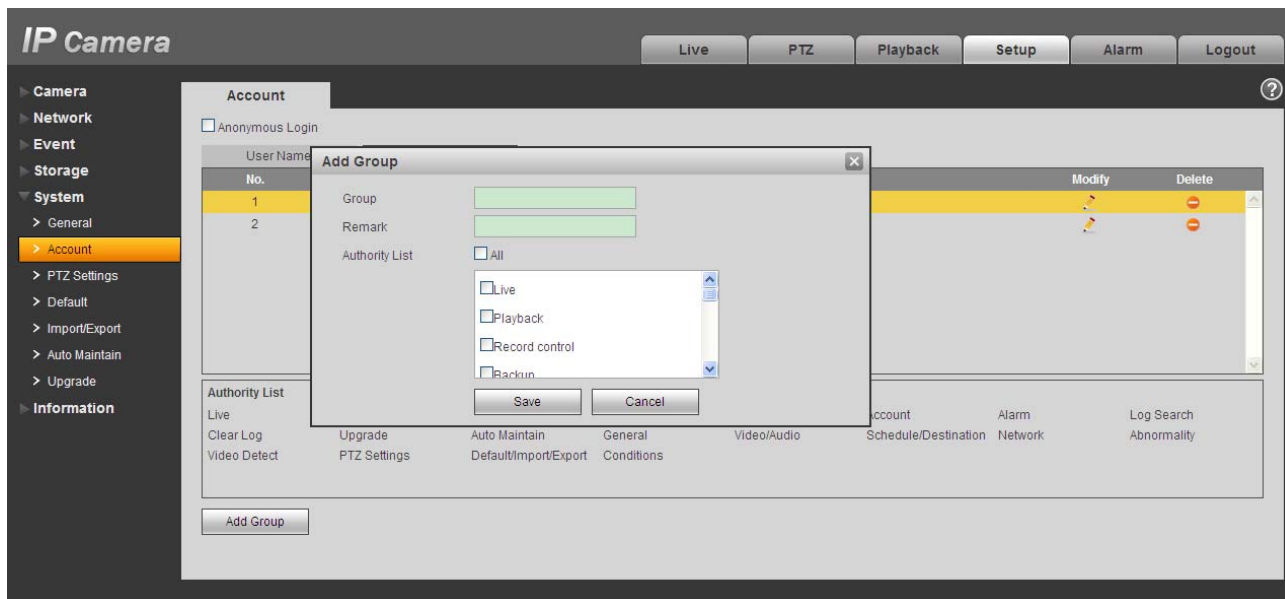


Figure 5-49

### Modify group

Click the modify group button, you can see an interface is shown as in Figure 5-50. Here you can modify group information such as remarks and rights.

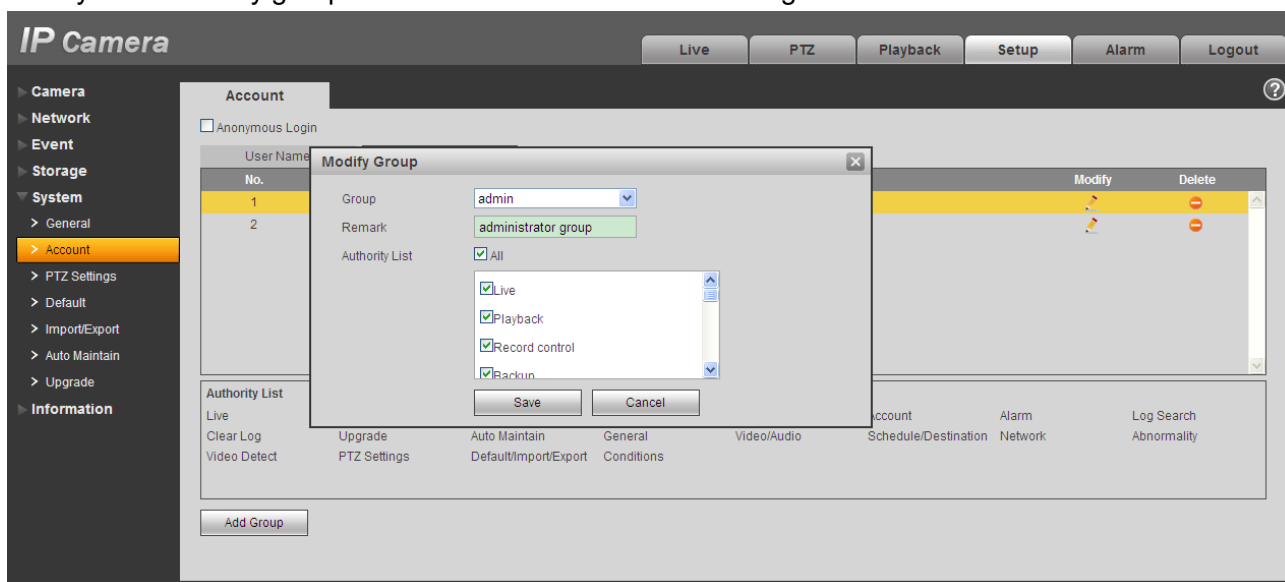


Figure 5-50

### 5.5.3 PTZ

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

The PTZ interface is shown as in Figure 5-51.

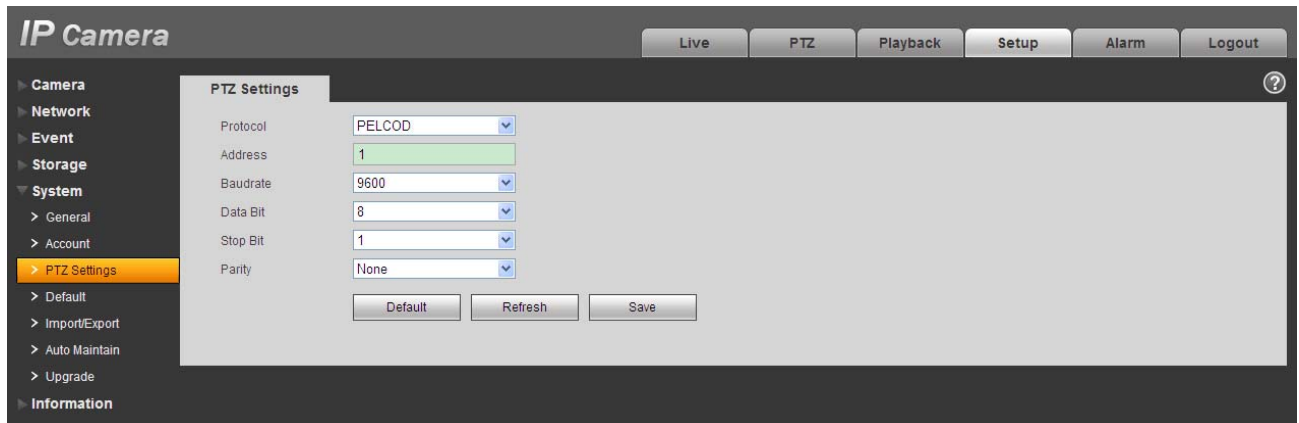


Figure 5-51

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.

#### 5.5.4 Default

The default setup interface is shown as in Figure 5-52.

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



Figure 5-52

### 5.5.5 Import/Export

The interface is shown as in Figure 5-53.



Figure 5-53

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.

### 5.5.6 Auto Maintenance

The auto maintenance interface is shown as in Figure 5-54.

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

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

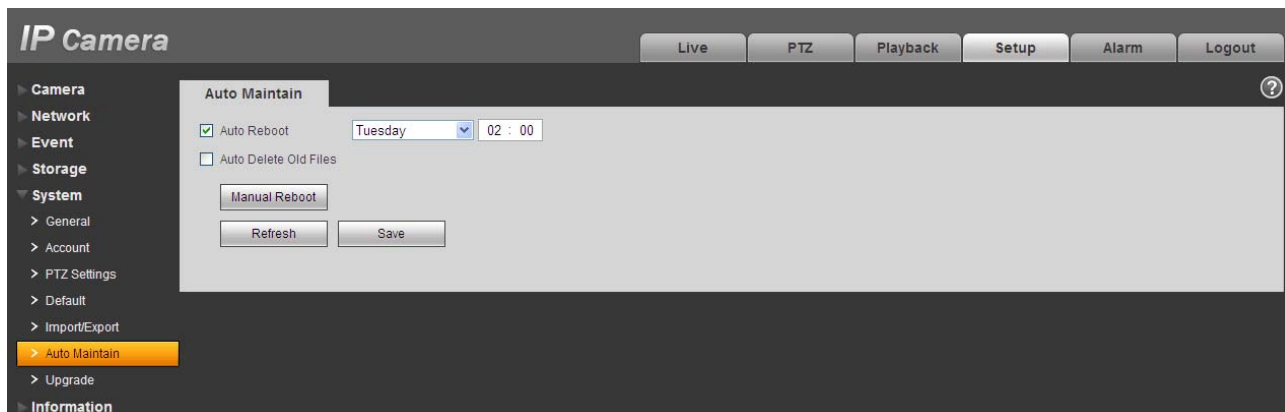


Figure 5-54

## 5.5.7 Upgrade

The upgrade interface is shown as in Figure 5-55.

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

### **Important**

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

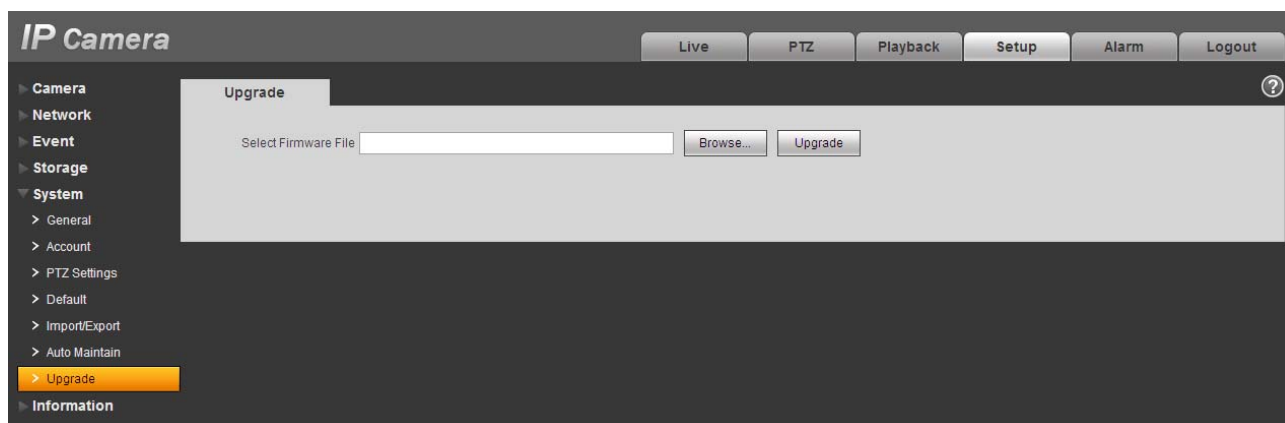


Figure 5-55

## 5.6 Information

### 5.6.1 Version

The version interface is shown as in Figure 5-56.

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

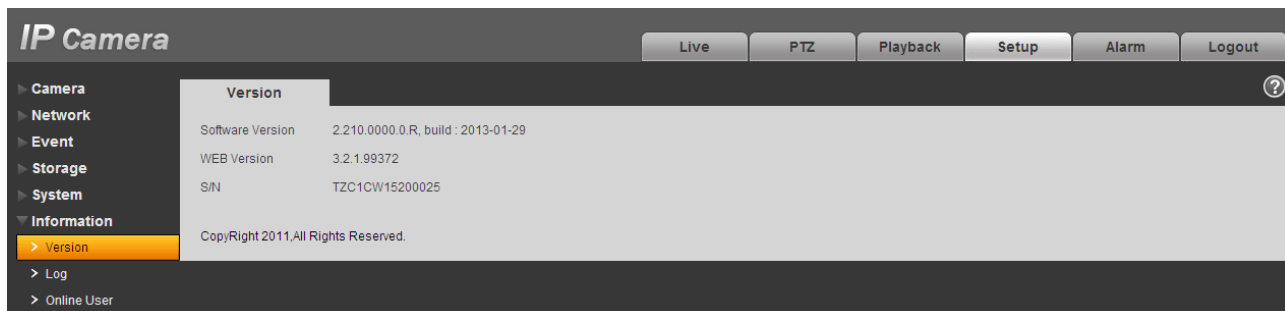


Figure 5-56

## 5.6.2 Log

Here you can view system log. See Figure 5-57.

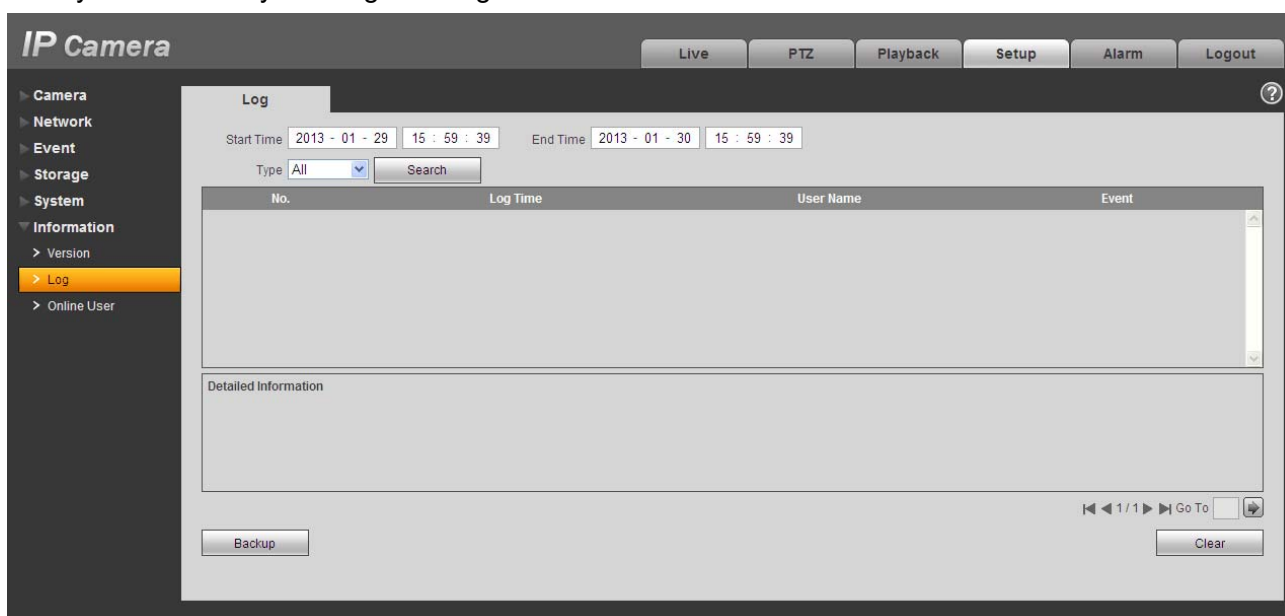


Figure 5-57

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.
End time	Set the end time of the requested log.



Parameter	Function
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.
Log 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.

### 5.6.3 Online User

The online user interface is shown as in Figure 5-58.

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

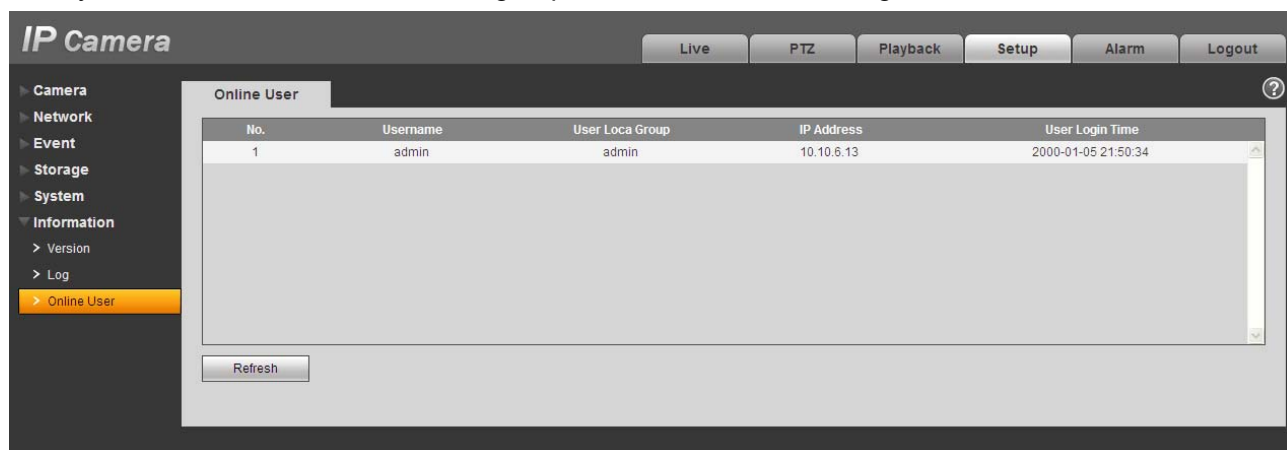


Figure 5-58

## 6 Alarm

Please note some series product does not support this function.

Click alarm function, you can see an interface is shown as in Figure 6-1.

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

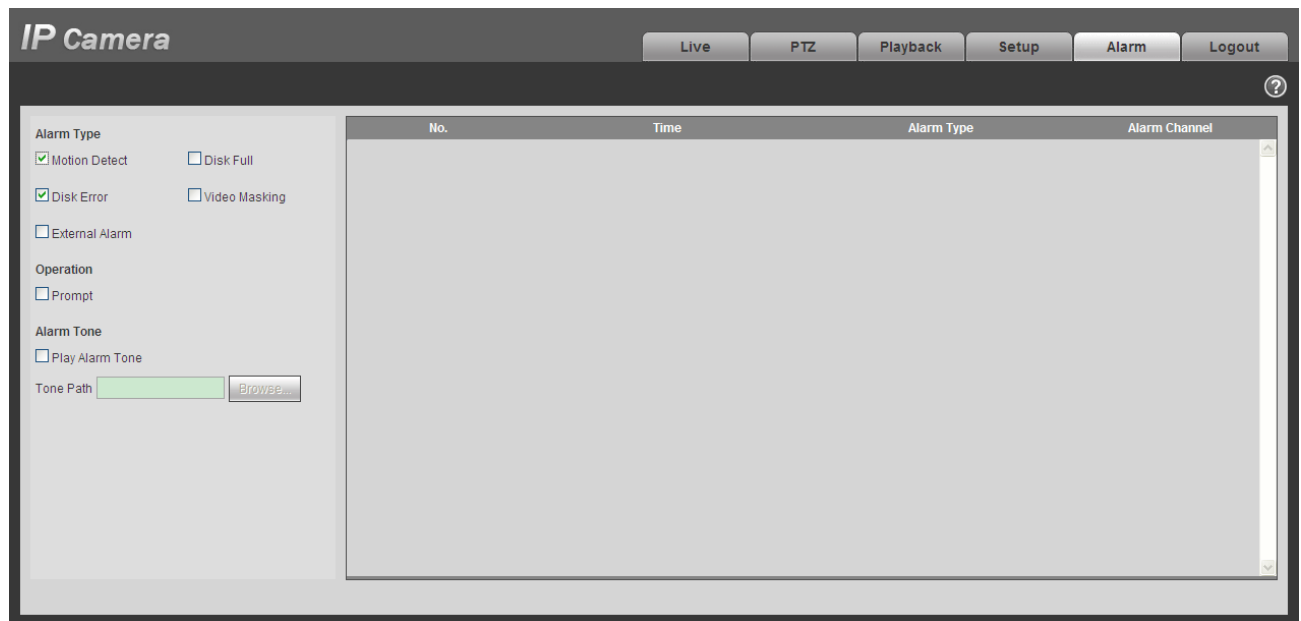


Figure 6-1

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.

## 7 Log out

Click log out button, system goes back to log in interface. See Figure 7-1.



Figure 7-1

**Note:**

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