IP Camera

User Manual

For WindowsXP/2003/Win7/Vista

Preface

- Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.
- This manual is applicable to IP Camera.
- This manual may contain several technical inaccuracies or typographical errors, or places that do not match the product. If you have any unsolved problems in the process of using product according to this manual, please contact our technical support department.
- The content of this manual may be updated at irregular intervals without prior notice.
- This manual is for reference only. IP Camera's functions and operations with different models may be different, please regard the actual product as the truth.

Table of Contents

Chapter 1 Product Introduction

1.1 Overview

This series of products are all-in-one IP Cameras (IPC for short) designed for network video surveillance, including Network Box Camera, Network Dome Camera, Network IR Camera, Network Speed Dome, etc. IP Camera is a new generation product of combining traditional camera and network video technology. These digital equipments compress real-time video stream and transmit to different clients over the network with embedded real-time operating system. The remote user can view camera video through standard web browser and mobile side at any moment without, and authorized users can control PTZ and configure system.

IP Camera can be widely applied to family, office, enterprise, supermarket, factory, chain store, school and other occasions that require remote network video transmission and monitoring.

1.2 Main Features

- H.264, M-JPEG, JPEG video encoding compression
- Support ISP 2A Technology with (AWB, AE)
- Support 1280*720@30FPS, 1280*960@30FPS, 1920*1080@30FPS, 2688*1520@30FPS resolution real-time encoding
- Support CGI/SDK/GB28181 Development, ONVIF V2.4, ONVIF ProfileS (Platform / NVR: Milestone, QNAP, AXXON, HIKVISION, DAHUA, DIGIFORT, EXACPVISION, VIDEONET, NUUO, VIDEOINSIGHT, GEOVISION, ONSSI, SYNOLOGY)
- IE BROWSER/SAFARI/GOOGLE CHROME/FIREFOX/OPERA, Search Tool, ISS PC, ISS Mobile (Android Phone/PAD, IPHONE, IPAD), ISS PRO
- Support multi-viewer to access concurrently
- Support dual-encoding streams: Main stream, sub stream
- Support bi-directional real time audio transmission
- Support privacy protection mode, motion detection and sensor alarm functions

- Auto-retrieve function and auto-connection network
- Network Protocol: TCP/IP, UDP, HTTP, HTTPS, 802.1x, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, SNMP, FTP, UPNP
- FREE DDNS: HDCCTVDDNS, NO-IP, DYNDNS, 3322
- Multi-language: Chinese, English, Japanese, Portuguese, Russian, Spanish
- Advance Feature: HTTPS, 802.1X, AES, ROI Encoding, Multicast, DWDR, 3D-DNR, Secure Login, RTSP, Authority, Video Watermark, Quick Setup, Digital Zoom, Auto Maintain
- Expandable: WIFI, 3G/4G, POE, Heater, Alarm IN/OUT, Audio IN/OUT, PIR, CVBS OUT, TF Card Slot(Up to 64GB)

1.3 Caution

- Please read this user manual carefully before using the camera, and keep it well for future reference.
- Please transport, use and place the camera in allowable temperature and humidity range.
- Please avoid heavy stress or violent vibration.
- To reduce the risk of fire or electrical shock, do not expose this product near the heat, water or moisture.
- Please disconnect any cables during an electrical storm or the camera will not be used for an extended period of time.
- Must observe all electrical safety standards; make sure the power supply voltage is correct before using the camera.
- Do not aim the camera lens at the strong light, otherwise it will cause fatal damage to photosensitive element.
- Do not install the camera near the outlet of air conditioners, otherwise lens will become fuzzy due to condensation.
- If cleaning is necessary, use dedicated lens paper or a clean soft cloth with a bit of neutral detergent diluted with water and wipe it gently.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself.

1.4 Audience

This manual applies to the following persons:

- System planning person
- Technical support and maintenance person
- Administrator
- End users, retailers, professional users and ordinary civilian users, etc.

Chapter 2 System Connection

Please read the connection diagram as shown in Fig 2-1 and Fig 2-2. Any wrong wiring may lead to damage the IP Camera or other equipment.

Example 1:

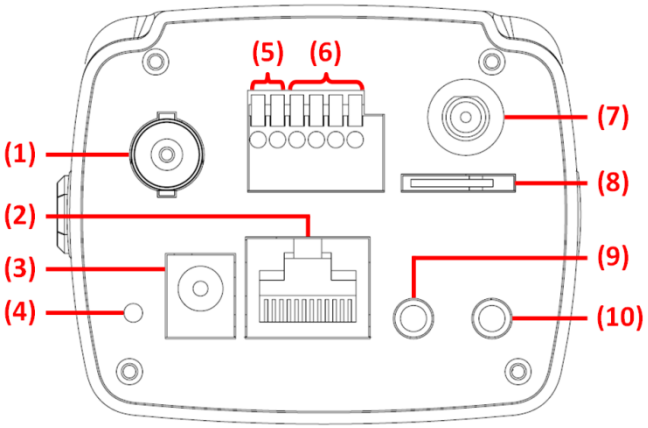


Fig 2-1

Note: The picture is only for reference, Please make the object as the standard.

Item	Name	Description
1	V-OUT	Video output: connect to monitor with BNC interface.
2	POE/ETHERNET	POE Power supply/Network connector.
3	DC 12V	Power input: DC 12V
4	POWER	POWER Indicator
5	RS485	Connect to PTZ.
6	ALARM	IN: alarm input: connect to external alarm sensor. A/B: alarm output: connect to external alarm output device.
7	WIFI	Insert WIFI antenna.
8	MICRO SD	Insert SD card for local storage.
9	A-OUT	Audio output: connect to sound box and other audio output equipment.
10	MIC-IN	Audio input: connect to microphone and other audio collecting equipment.

Example 2:

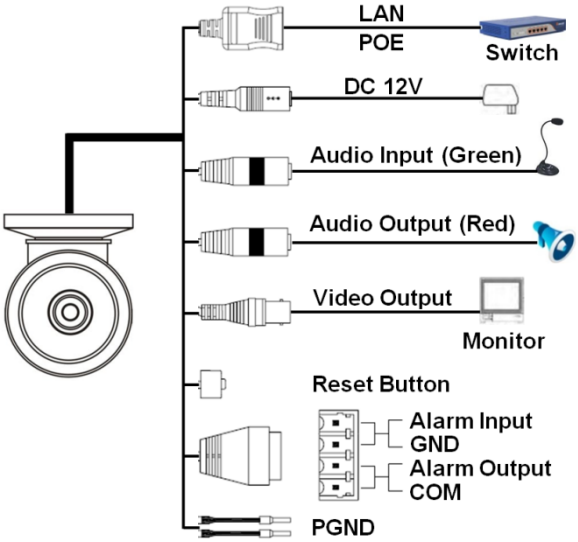


Fig 2-2

Note: The picture is only for reference, Please make the object as the standard.

Name	Description
LAN / POE	Network connector / POE Power supply.
DC 12V	Power input: DC 12V.
Audio Input	Connect to microphone and other audio collecting equipment.
Audio Output	Connect to sound box and other audio output equipment.
Video Output	Connect to monitor with BNC interface.
Reset Button	Long-press this button to restore the factory settings and restart IPC.
Alarm Input	Connect to external alarm sensor.
Alarm Output	Connect to external alarm output device.

Chapter 3 Access IPC through IE Browser

3.1 Download and Install ActiveX

You need to install ActiveX Control when you access IP Camera for the first time through IE browser.

Installation Method:

1) Input the IP address of IP Camera in the browser's address bar (for example: 192.168.1.10) to enter into login page.
2) Click [Download ActiveX], as shown in Fig 3-1:

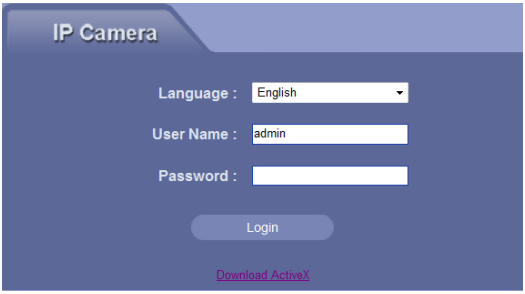


Fig 3-1

3) Pop up a file download dialog box, click [Run] or [Save] to download ActiveX.
4) After the download is complete, double-click the downloaded file “WebClient”, select the installation path, and click [Install] to install “WebClient”, as shown in Fig 3-2:

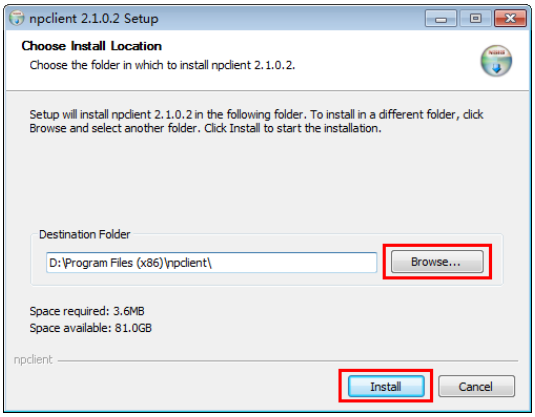


Fig 3-2

5) After the installation is complete, click [Finish] to exit, as shown in Fig 3-3:

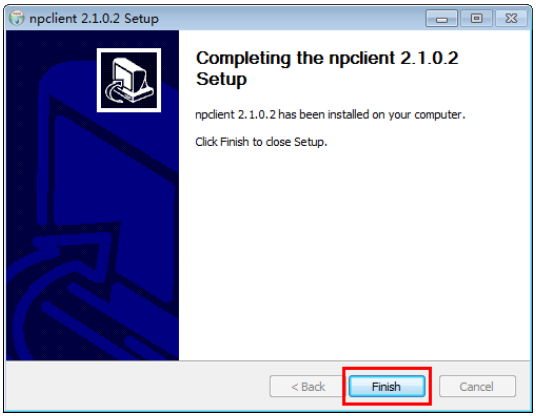


Fig 3-3

User can also access IP Camera through SearchTool, please refer to Appendix 2 for SearchTool User Guide.

3.2 User Login

Reopen IE web browser after the ActiveX installation completes, input the IP address of IP Camera (192.168.1.10 by default) to enter into login page, as shown in Fig 3-4. Select the system language, input user name and password, then click [Login] button to enter the main interface.

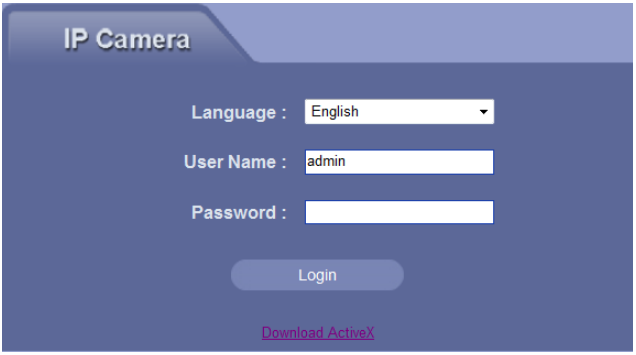


Fig 3-4

Note: The default user name is "admin", the default password is blank.

3.3 Live Video

After signing in you will see the live video page, or click [Live Video] button in the menu bar to enter this page.

User can do many operations like play, stop, talkback, monitor audio, record, capture, zoom in, show alarm, view in full-screen mode, control PTZ, adjust video parameters, select stream type and adjust display scale. As shown in Fig 3-5:

Fig 3-5

3.3.1 Video Control

[Main / Sub Stream]: Select the stream according to the network environment: main stream is HD channel and sub stream is SD channel.

[16:9 / 4:3]: Adjust the display scale.

[Play]: Click  button to open the current video.

[Stop]: Click  button to close the current video.

[Talkback]: Audio talkback switch. Click  button to perform the talkback between PC and IP Camera; the state is changed to  after enable audio talkback, click this button to stop talkback.

[Audio]: Open  or close  the sound of live video.

[Record]: Manual recording switch. Click  button to record current video, and save them in AVI format to "Local recording files path" of local config; the state is changed to  after enable recording, click this button to stop recording.

[Capture]: Click  button to generate the screenshot of current views, and save it in JPG format to "Local capture files path" of local config.

[Digital Zoom]: Click  button to enter the E-Zoom mode. The image will be magnified. User can click and hold your left mouse button to move the image, click  to exit the E-Zoom mode.

[Show Alarm]: Click  button to pop up alarm information list, it shows the alarm IP, alarm time and alarm description. Click close button or  button to close it.

[Full Screen]: Double-click the video screen to display video in full-screen mode, double-click again or press Esc key to exit full screen mode.

[Video Parameters]: Click  to open PTZ control panel, and adjust the brightness, hue, contrast, saturation and sharpness of video, click [Default] button to restore the default values.

 **Note: Support 5 users online at the same time.**

3.3.2 PTZ Control

Click  to open PTZ control panel; the state is changed to  , click this button to hide PTZ control panel.

[PTZ Speed]: Eight grades: 1~8, "1" is slowest, "8" is fastest, and "5" is moderate.

[PTZ Rotation]: Four rotation directions: up, down, left, right; Zoom, focus and iris are adjustable.

[Preset]: Set, remove and call any preset point with a maximum of 128.

3.4 Playback

Click [Playback] button in the menu bar to enter the video playback page, as shown in Fig 3-6:

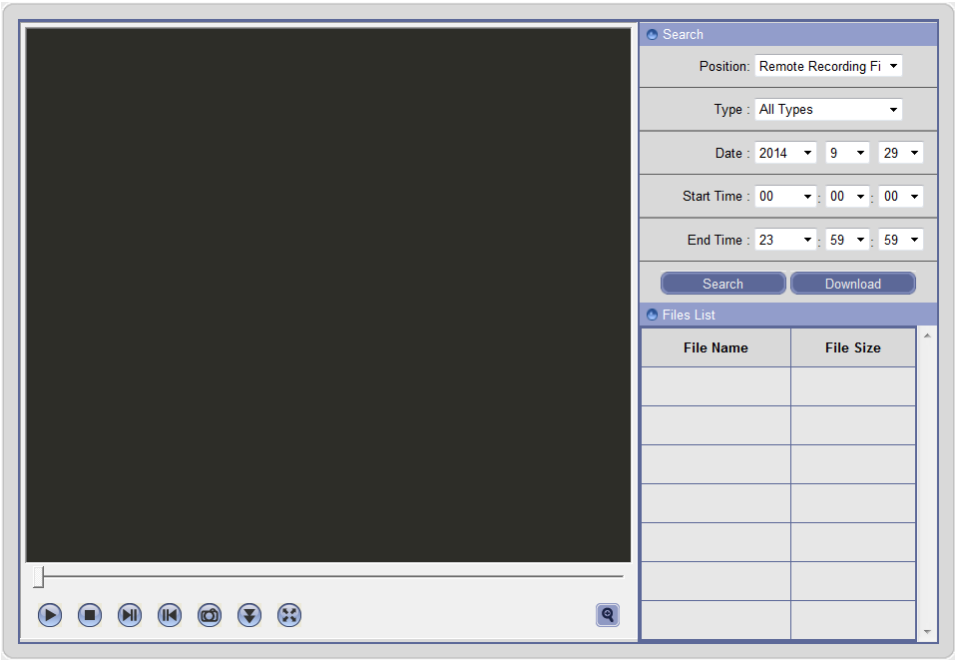


Fig 3-6

User can search for recording files or capture images in local PC or storage device on the IP Camera according to search criteria.

[Position]: Select remote recording files, remote capture images, local recording files or local capture images.

[Type]: Select the file type; remote recording files can be searched by motion alarm recording, I/O alarm recording and time recording, local recording files can be searched by local files and download files.

[Date]: Select a certain date.

[Start Time / End Time]: Set a specific time period.

[Files List]: Click [Search] button after setting the search criteria, the searched files information will be displayed in the Files List.

[Play]: Double-click a video file or click a picture file in the files list, or click button to playback. Support file switching, screenshot, downloading and positioning playback by dragging the progress bar during playback. As shown in Fig 3-7:

Fig 3-7

(1) Process Bar	(2) Play	(3) Stop
(4) Next Segment	(5) Previous Segment	(6) Capture
(7) Download	(8) Full Screen	(9) E-Zoom

[Download]: Select the remote recording files or remote capture images in the files list, and click this button to download to your PC. IP Camera cannot search and download files again during the download.

3.5 Configure

Click [Configure] button in the menu bar to configure parameters.

3.5.1 Quick Setup

Step 1: Time Parameters

The interface of time parameters is shown in Fig 3-8:

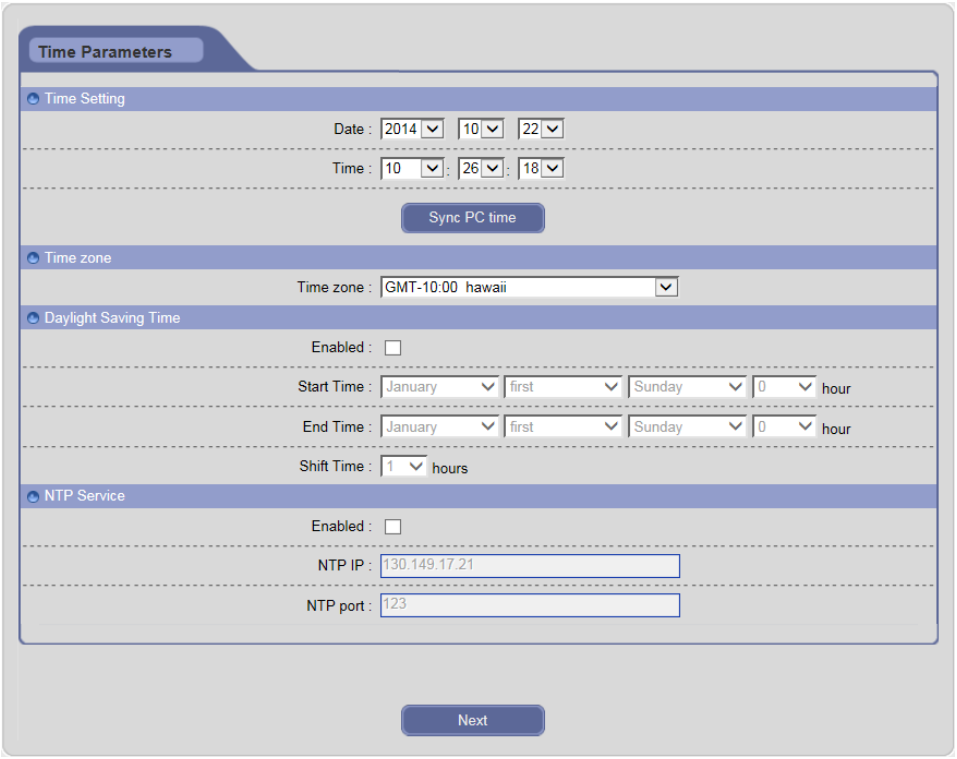


Fig 3-8

1) Set up the IP Camera's date, time and current time zone, or click [Sync PC time] to sync system time with PC. Enable NTP Service and set its IP and port number, IP Camera will sync system time with NTP server.
2) If you want to use DST function, enable it and set start & end time and shift time.
3) Click [Next] to proceed.

Note: User can refer to Chapter 3.5.8.1 Time Parameters for details.

Step 2: Stream Configure

The interface of stream configure is shown in Fig 3-9:

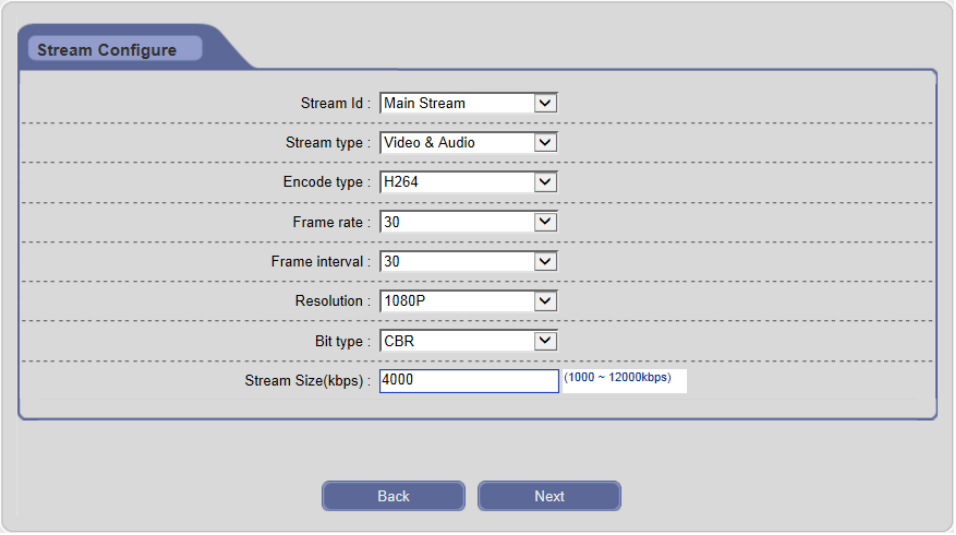


Fig 3-9

1) Set up appropriate stream parameters.

Parameter	Description
Stream ID	Main stream: HD channel. Sub stream: SD channel.
Stream type	Include Only Video and Video & Audio.
Encode type	Support the standard H.264 and M-JPEG video encoding.
Frame rate	Set the encoding frame numbers per second.
Frame interval	The smaller frame interval, the higher image bitrate and the better image quality you get.
Resolution	Set the resolution of video.
Video format	Set PAL or NTSC.
Bit type	CBR: constant encoding bitrate. VBR: variable encoding bitrate.
Stream Size	Different stream ID has different bitrate.

2) Click [Back] to change previous settings. Click [Next] to proceed.

Note: User can refer to Chapter 3.5.5.1 Stream Configure for details.

Step 3: User Management

The interface of user management is shown in Fig 3-10:

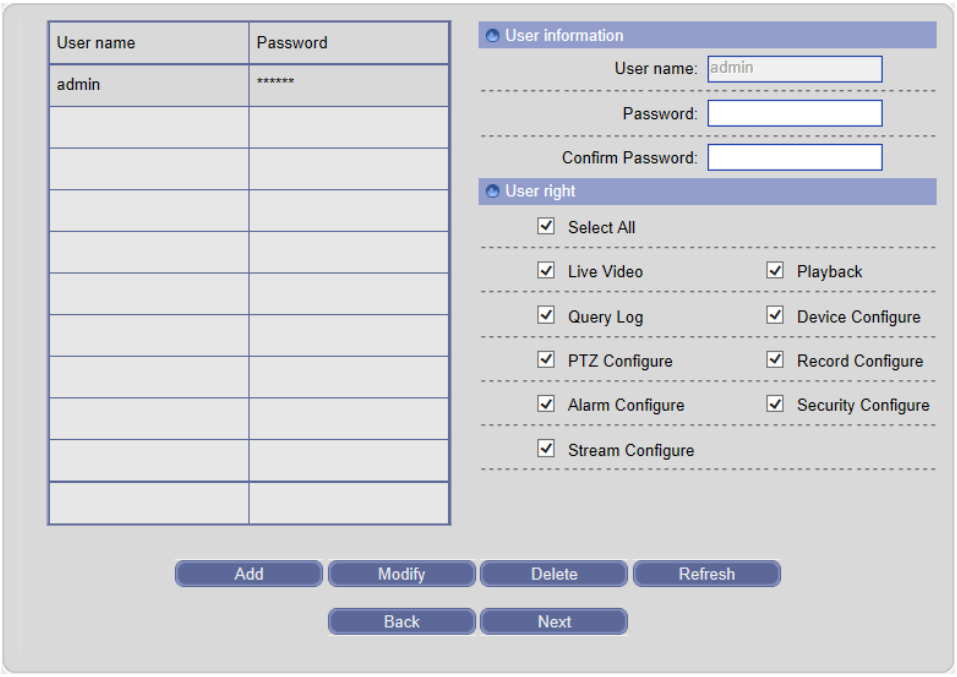


Fig 3-10

1) Add a user: Enter the new user's name and password, set the appropriate user right, and then click [Add].
2) Modify a user: Select a user in the list, modify user information or right, and then click [Modify].
3) Delete a user: Select a user in the list, and then click [Delete].
4) Click [Back] to change previous settings. Click [Next] to proceed.

Note: User can refer to Chapter 3.5.7.1 User Management for details.

Step 4: Network Parameters

The interface of network parameters is shown in Fig 3-11:

1) Set up the IP Camera's port number.
2) Set up its IP address, net mask and gateway. Please avoid conflict with the IP addresses of other devices or PC. If DHCP function of router and IP Camera is enabled, it will automatically obtain IP address from the router.
3) If you want to use multicast function, set its IP address and port number.

4) Set up the DNS server as your local DNS address for using DDNS function.

5) Click [Back] to change previous settings. Click [Completed] to save the settings.

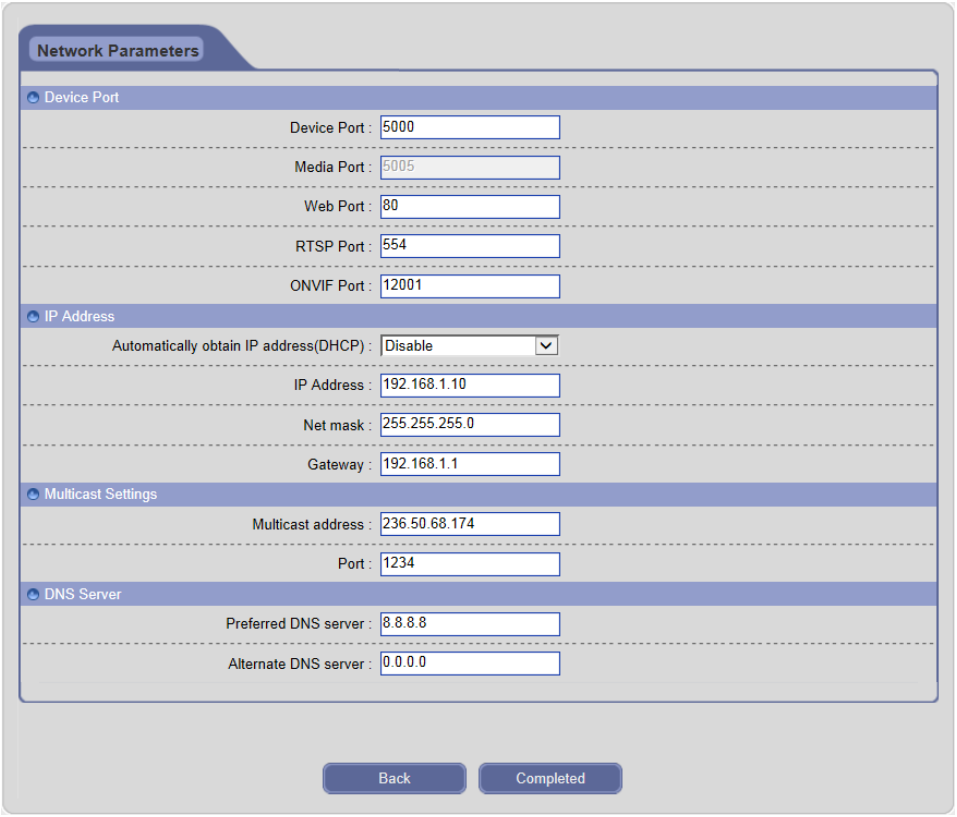


Fig 3-11

Note: User can refer to Chapter 3.5.3.1 Network Configure for details. After modify and save network parameters, IP Camera will restart. All ports (including device port, media port, web port, ONVIF port, etc) must be forwarded when IPC is accessed via internet.

3.5.2 Image

3.5.2.1 ISP Configure

The interface of ISP configure is shown in Fig 3-12:

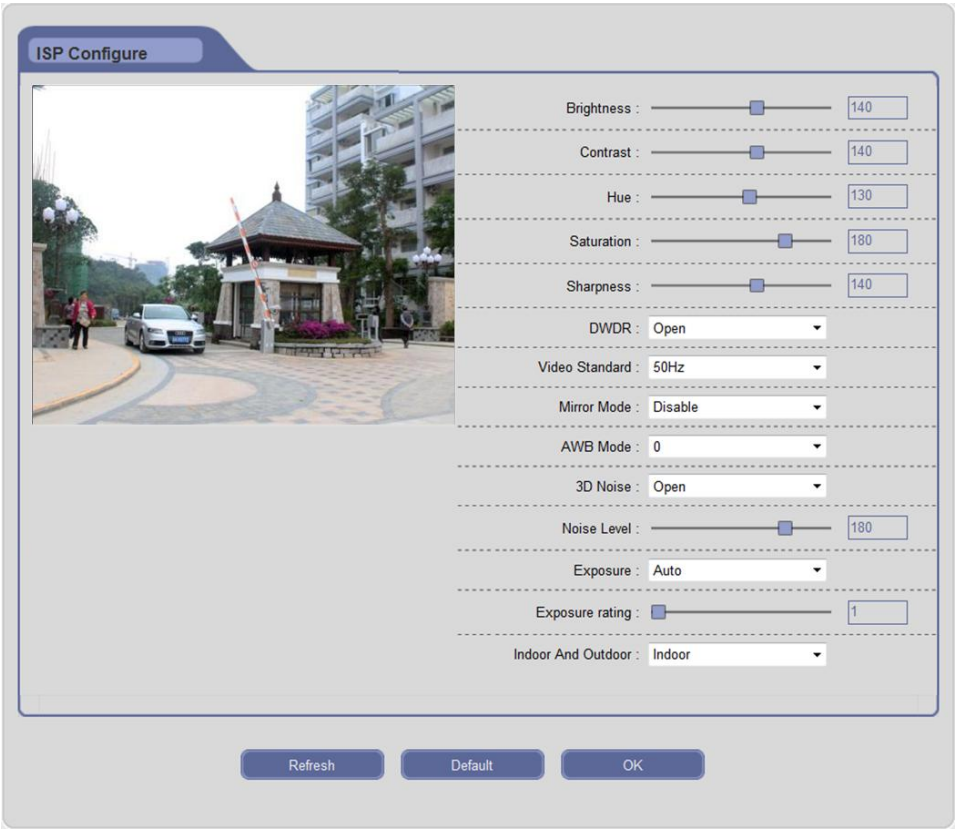


Fig 3-12

[Brightness / Contrast / Hue / Saturation / Sharpness]: Drag the slider to adjust the brightness, contrast, hue, saturation and sharpness of video, range from 1 to 255.

[DWDR]: Open this function to balance the contrast between light and dark areas within an image. User can see highlight areas (under strong light) and low-light areas (shadows, backlighting, etc) simultaneously, otherwise highlight areas display white and dark areas display black.

[Video Standard]: In indoor environment, if the flashing lamps result in image scintillation, please select 50HZ or 60HZ according to the power frequency.

[Mirror Mode]: Enable or disable mirroring function, set the mirror / flip / mirror and flip mode, video will rotate horizontally / vertically / both horizontally and vertically.

[AWB Mode]: Select the appropriate mode to adjust the color of screen and make the picture closer to actual results. There are six modes to choose from.

[3D Noise]: Open or close 3D DNR function.

[Noise Level]: Drag the slider to set the processing level of reducing noise, range from 1 to 255.

[Exposure]: Auto exposure will adjust exposure automatically according to the intensity of light. Manual exposure can adjust exposure rating manually.

[Indoor And Outdoor]: Select indoor or outdoor mode to get the suitable display result.

Click OK button to save the setting. Click Default button to restore the default setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.2.2 Privacy Regional

The interface of privacy regional is shown in Fig 3-13:

Fig 3-13

[Enable]: Enable or disable privacy function.

[Color]: Select the color overlay of privacy area.

Enable privacy function, click and drag cursor to set the privacy area of video image. An image can be entirely or partially masked, it supports 4 areas (superposable) at maximum.

Click **Clear all** button to clear all privacy areas. Click **Clear Selected Area** button to clear selected privacy area.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.2.3 OSD

The interface of OSD configure is shown in Fig 3-14:

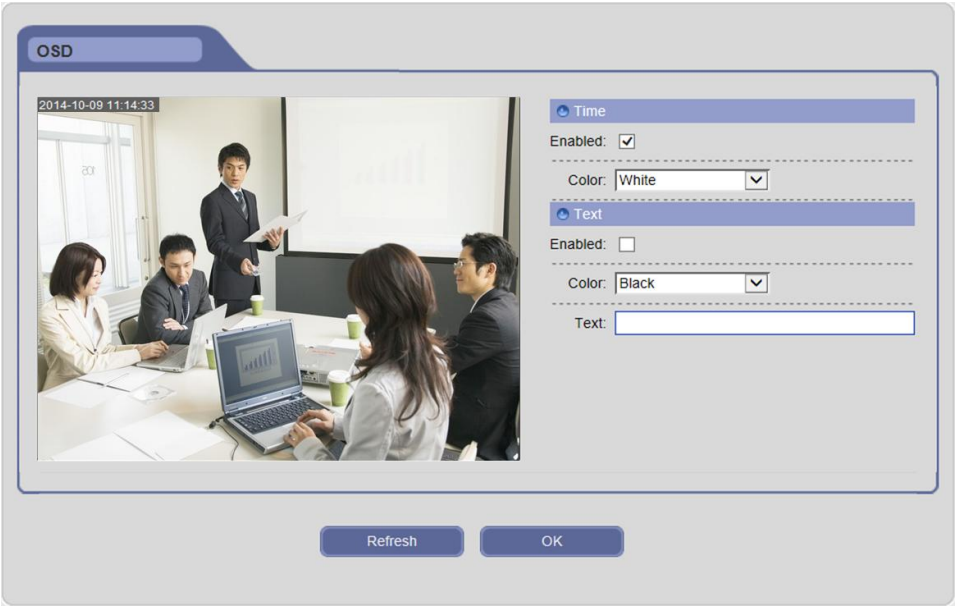


Fig 3-14

Time

[Enable]: Enable this function to display system time.

[Color]: Select different colors for time display. The background color of time area which has a transparency of 30% will automatically adjust according to the character color.

Text

[Enable]: Enable this function to display text content.

[Color]: Select different colors for text display. The background color of text area which has a transparency of 30% will automatically adjust according to the character color.

[Text]: Click text box to self-define the channel name, it supports 40 English characters or 20 Chinese words at maximum.

Click and drag system time or text content to adjust the display position.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.2.4 Day/Night Configure

The interface of day/night configure is shown in Fig 3-15:

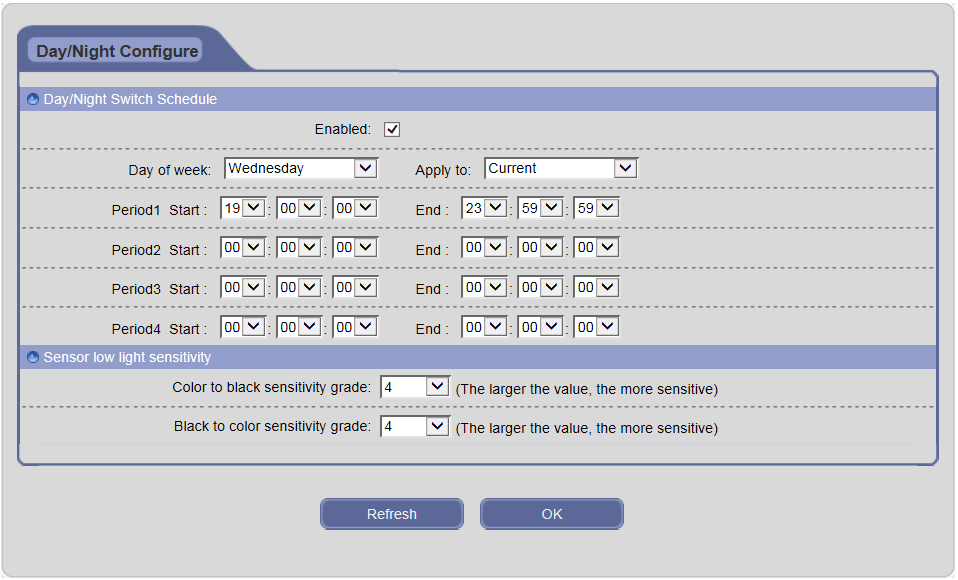


Fig 3-15

[Day/Night Switch Schedule]: Enable this function, user can set a daily schedule of switch. The start time should be earlier than the end time. You can copy and apply time settings to the other date or every day. Click OK button to save your settings, click Refresh button to update the schedule.

[Sensor low light sensitivity]: Set the sensitivity of sensor in low-light conditions: 1 ~ 8

grades. The larger the value, the more sensitive it will change to Day/Night mode.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.3 Network

3.5.3.1 Network Configure

The interface of network parameters is shown in Fig 3-16:

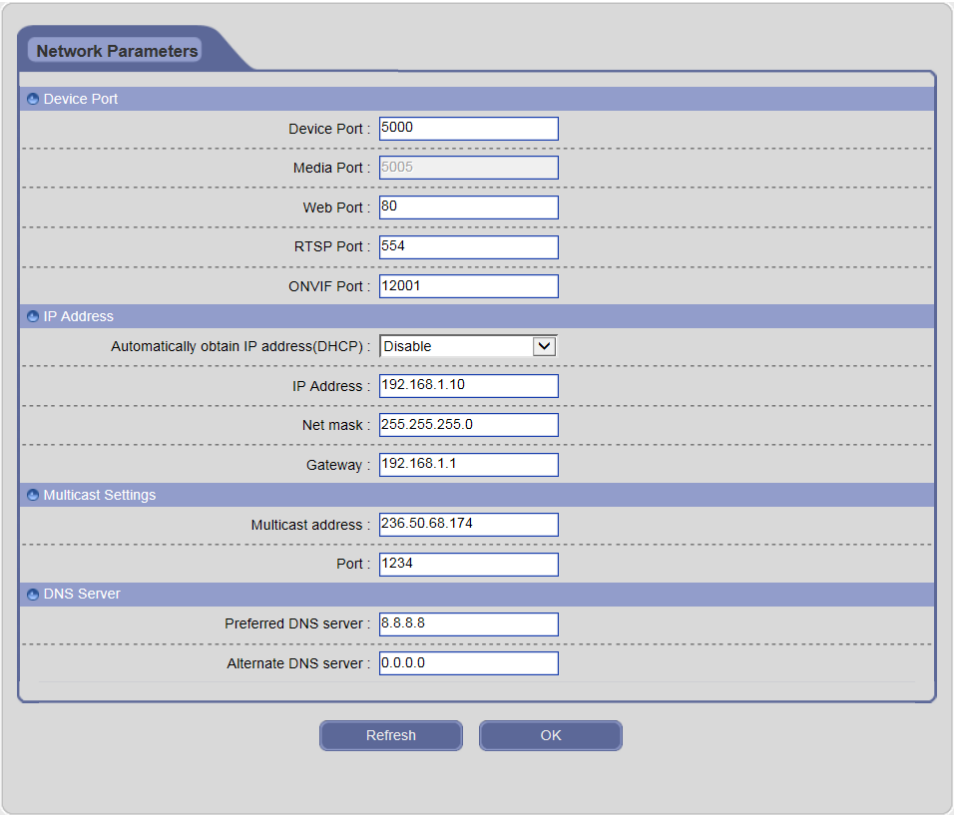


Fig 3-16

[Device Port]: Default value is 5000 (users are recommended not to change it).

[Media Port]: Default value is 5005.

[Web Port]: Default value is 80 (users are recommended not to change it).

[RTSP Port]: Default value is 554 (users are recommended not to change it).

[ONVIF Port]: Default value is 12001 (users are recommended not to change it).

[DHCP]: If DHCP function of router is enabled, IP Camera will automatically obtain IP address from the router, and revert to manual IP automatically when DHCP failed.

[IP Address]: Set the IP Camera's IP address.

[Net mask]: Default value is 255.255.255.0 (users are recommended not to change it).

[Gateway]: Set the IP Camera's gateway. When the device is connected to public network via a router, gateway should be set to the router's IP.

[Multicast Settings]: Multicast means the hosts of a group can receive all the data within this group. Set the IP address and port number of multicast.

[DNS Server]: User needs to set up the DNS server as your local DNS address for using DDNS function.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Notice: User needs to map all ports when IP Camera is accessed via internet. Please refer to Appendix 6 for port mapping.

Note: After modify and save network parameters, IP Camera will restart. If the device is applied in LAN, please avoid conflict with the IP addresses of other devices or PC.

3.5.3.2 WiFi Configure (for some models)

Step 1: Enter into WiFi Configure, as shown in Fig 3-17. Enable WiFi function of IP Camera and set up a wireless IP, or enable DHCP function to obtain the wireless IP automatically. Click [OK], the device will automatically restart.

Step 2: Open IE web browser and enter the IP address of wireless router, set up your router's IP, encryption mode, password, etc. (Skipping this step if your wireless router has been set)

Note: The wireless IP of your router and IP Camera must be on the same network segment.

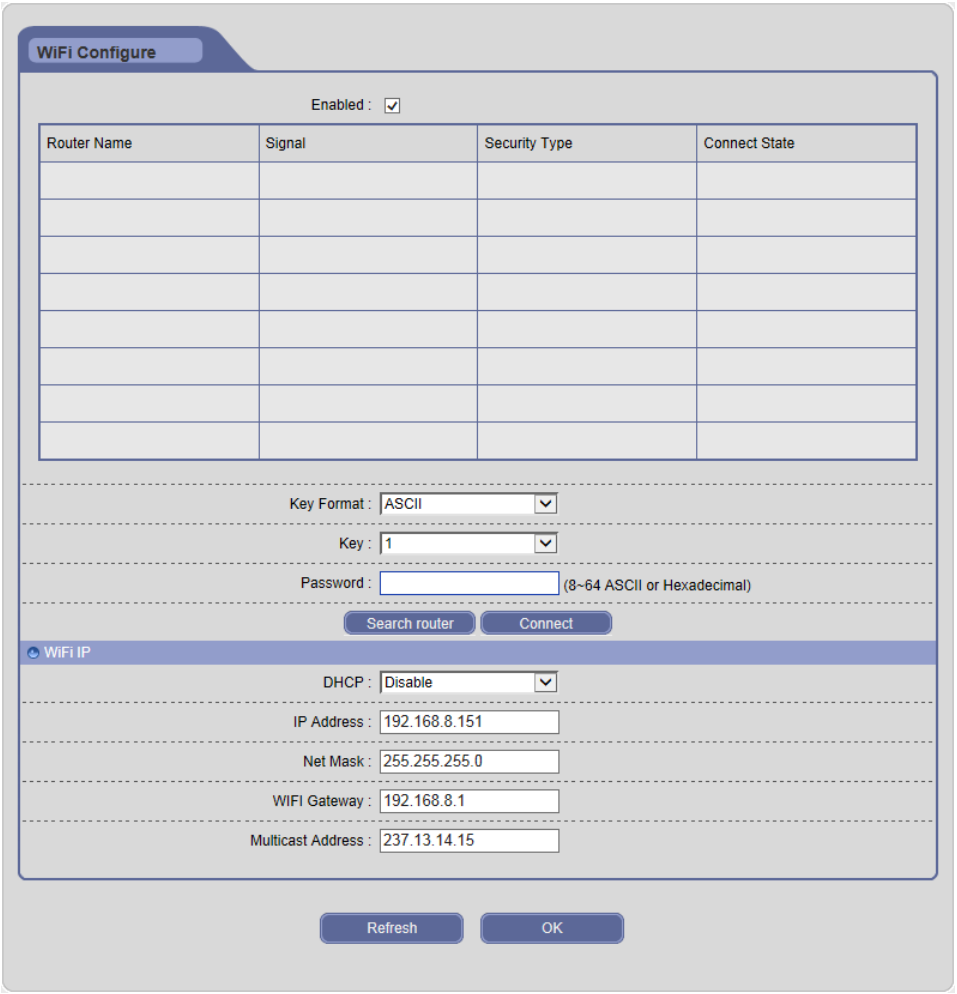


Fig 3-17

Step 3: Reenter the WiFi Configure page of IP Camera, click [Search router] button to automatically search router.

Step 4: Select your wireless router, and set up the key and password, click [Connect] button.

Note: If the router's security type is Auto, user can click [Connect] directly without setting parameters; if the security type is WPA, user need to enter

password and then click [Connect]; if the security type is WEP, user need to set the WEP key format, WEP key and password, then click [Connect]. These settings must be consistent with wireless router.

Step 5: When the connect state is displayed as "Connect", unplug the network cable of IP Camera, open IE web browser and enter the wireless IP to access IP Camera.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Note: Only for the models with WiFi function. If your IP Camera has no WiFi function, there is no WiFi Configure. Please refer to Appendix 3 for configuring wireless route.

3.5.3.3 PPPoE Configure

The interface of PPPoE configure is shown in Fig 3-18:

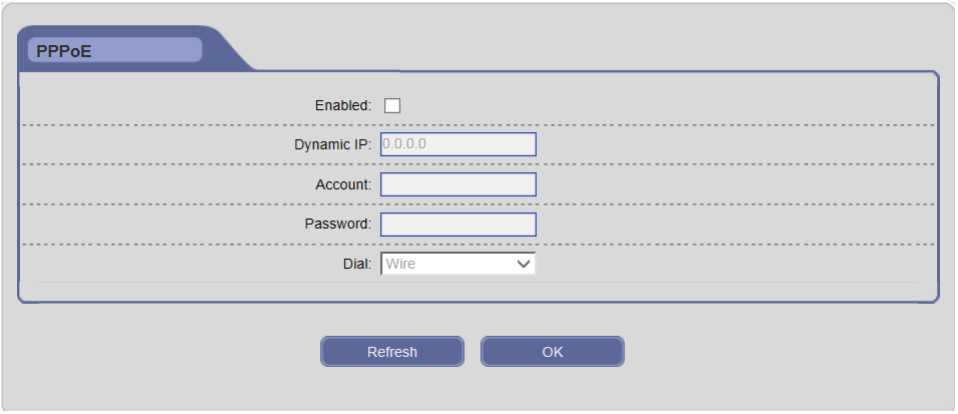


Fig 3-18

[Enable]: Enable or disable PPPoE dial-up function.

[Dynamic IP]: Display the public IP Address after the success of dial-up.

[Account/Password]: The account / password of ADSL dial-up, obtained from the internet service provider.

[Dial]: Support PPPoE dialing with wired and wireless.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.3.4 3G Configure (for some models)

Step1: Power off your IP Camera.

Step2: Insert 3G network card on the IP Camera. It currently supports WCDMA network card.

Step3: Power on your IP Camera.

Step4: Enter into 3G configuration page, as shown in Fig 3-19.

Step5: Enable 3G function and set up dialing information, then click Save button to connect automatically, please wait a moment.

Step6: Access your IP Camera through 3G network.

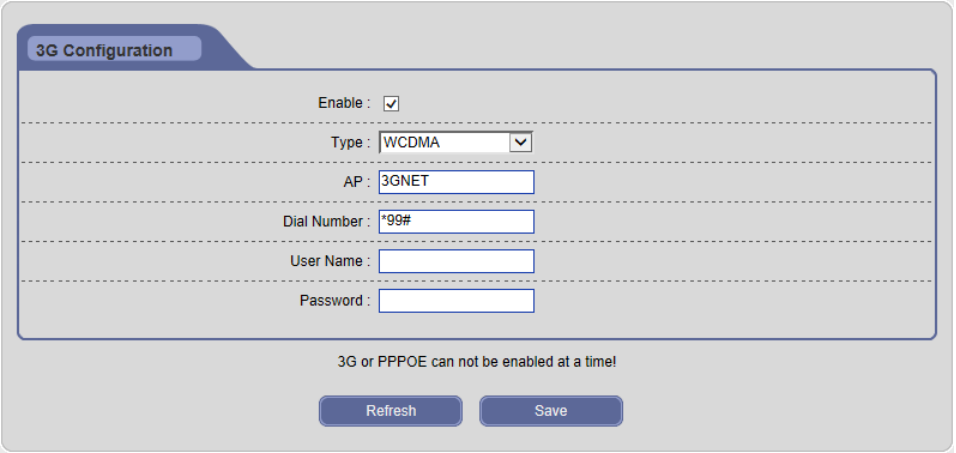


Fig 3-19

Note: Only for the models with 3G function. If your IP Camera has no 3G function, there is no 3G Configure. 3G and PPPOE function cannot be enabled at the same time.

3.5.3.5 DDNS Configure

The interface of DDNS configure is shown in Fig 3-20:

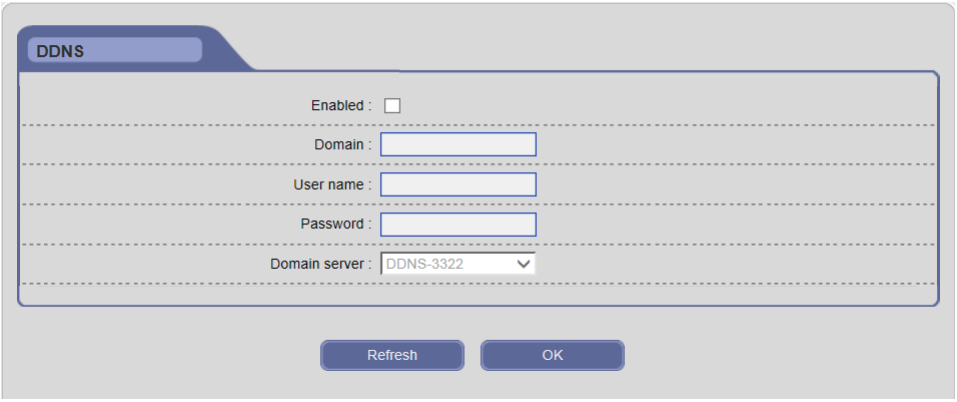


Fig 3-20

Bind the device with a fixed domain name, so that user can visit the device no matter how the public IP changes.

[Enable]: Enable or disable DDNS function.

[Domain]: Domain name set up by user (e.g. MyIPC.no-ip.org).

[User name/Password]: User name / password registered in DDNS server.

[Domain server]: Select the correct DDNS server.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Note: Please refer to Appendix 4 for DDNS service.

3.5.3.6 E-mail Configure

The interface of E-mail configure is shown in Fig 3-21:

[Enable]: Enable or disable E-mail notification function.

[SSL]: Enable or disable mail encryption function.

[SMTP server]: Outgoing Mail Server Address. Mail server addresses are different for different Email service providers, e.g. the SMTP server of 163.com is smtp.163.com, and

the SMTP server of Gmail mailbox is smtp.gmail.com. Support Gmail and 163.com only.

[Port]: Port number of SMTP server, usually is 25 or 465.

[Sender address]: The E-mail address of sending mail.

[Recipient address]: The E-mail address of receiving mail. Here user can add two E-mail addresses at most.

[Sender name]: Sender's name.

[User name]: E-mail login user name.

[Password]: E-mail login password.

[Subject]: The subject of sending messages.

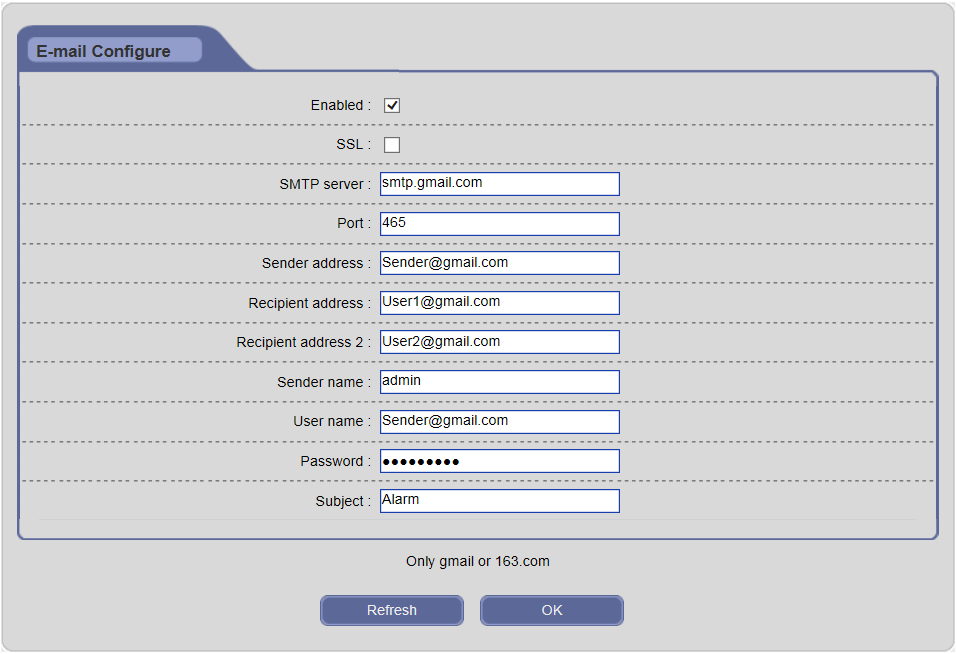


Fig 3-21

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.3.7 FTP Configure

When an alarm is triggered, IP Camera will upload text messages and images to FTP server.

The interface of FTP configure is shown in Fig 3-22:

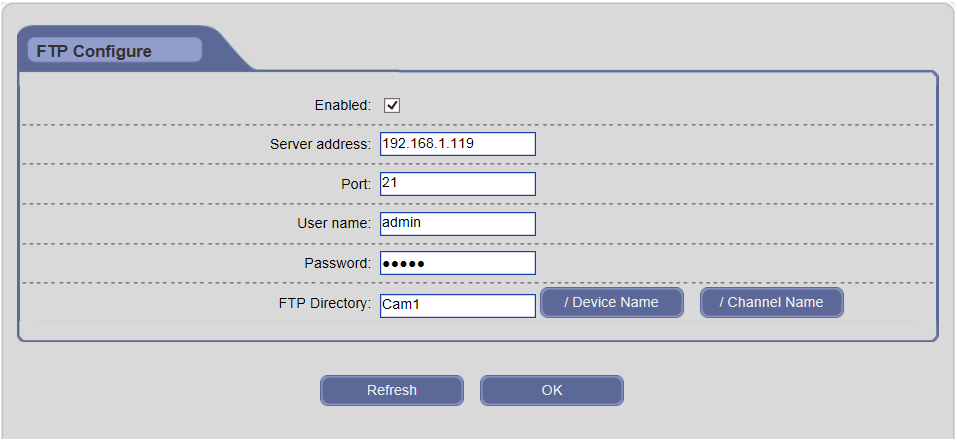


Fig 3-22

[Enable]: Enable or disable FTP function.

[Server address]: FTP server's IP address or domain name, such as 192.168.1.119.

[Port]: FTP server's port number, the default value is 21.

[User name/Password]: FTP server's user name and password.

[FTP Directory]: Set the transmission path on remote FTP server. Click [/Device Name] and [/Channel Name] button to create a path quickly. It can rename the file, reconnect automatically when time out, and create folders automatically in the root directory of FTP server.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.3.8 Port Mapping

The interface of port mapping configure is shown in Fig 3-23:

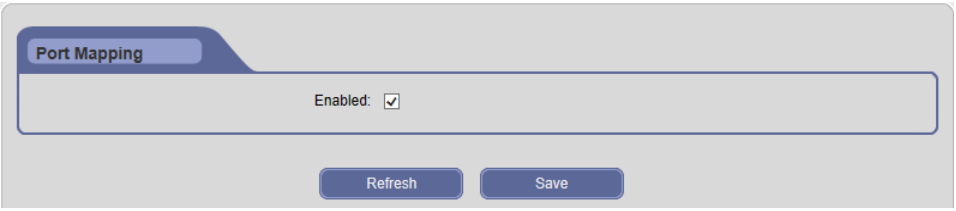


Fig 3-23

Enabling this function can automatically map the port currently in use to router.

If you want to map the port manually, please refer to Appendix 6 for port mapping.

3.5.4 Alarm

3.5.4.1 Motion Detection

The interface of motion detection configure is shown in Fig 3-24:

[Enable]: Enable or disable motion detection function.

[Set Motion Area]: Click and drag cursor to set the area of motion detection in the video window. An image can be entirely or partially set, it supports 1 area for detection.

[Sensitivity]: Set the sensitivity of motion detection: low, normal, high; the higher grade means higher sensitivity.

[Detection Time Interval]: The time interval between two adjacent detective motions, range from 5 to 10s. If there is other motion detected during this period, it will be considered continuous movement; otherwise should be regarded as two different motion events.

[Alarm Schedule]: User can set a daily schedule of motion detection. The start time should be earlier than the end time. You can copy and apply time settings to the other date or every day. Click OK button to save your settings, click Refresh button to update the schedule.

[Output]: Linkage alarm output with built-in relay when alarm is triggered.

[Delay]: The duration of linkage alarm output when alarm is triggered, range from 1 to 10s.

[Record]: Linkage recording and store in the SD card when alarm is triggered.

[Linkage Mode]: The duration of linkage recording when alarm is triggered, time range: 5/10/30/60/120/300/600/900/1200/1800s.

[Capture]: Linkage capture and store in the SD card when alarm is triggered.

[E-mail]: Enable this function, the alarm information of motion detection will be sent to mailbox (refer to E-mail Configure). The notification email can contain text messages and images.

[FTP]: Enable this function, the alarm information of motion detection will be saved in FTP Server. It can upload text messages and images.

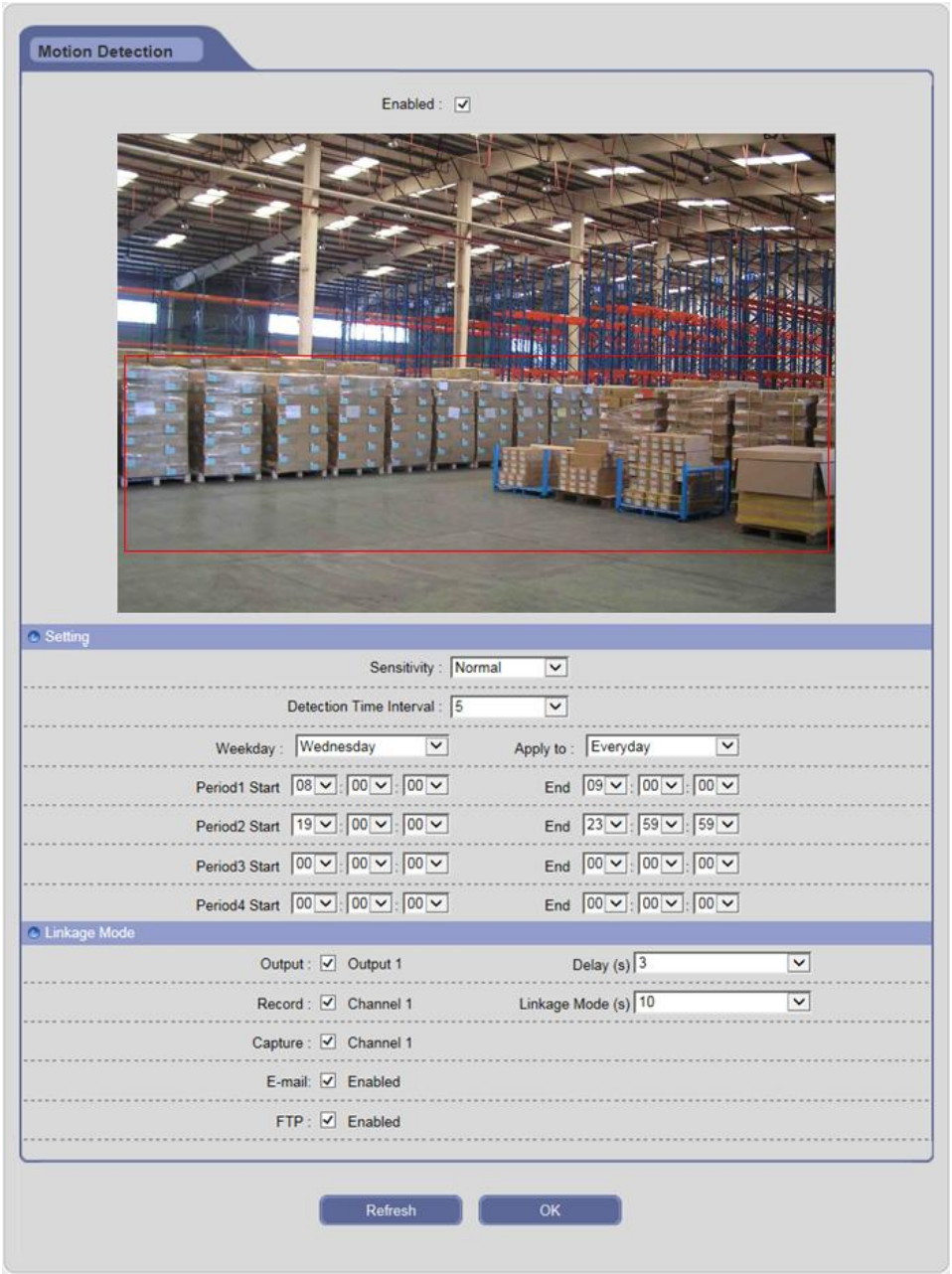


Fig 3-24

Click OK button to save the setting. When the setting is not saved, click Refresh

button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.4.2 I/O

The interface of I/O alarm configure is shown in Fig 3-25:

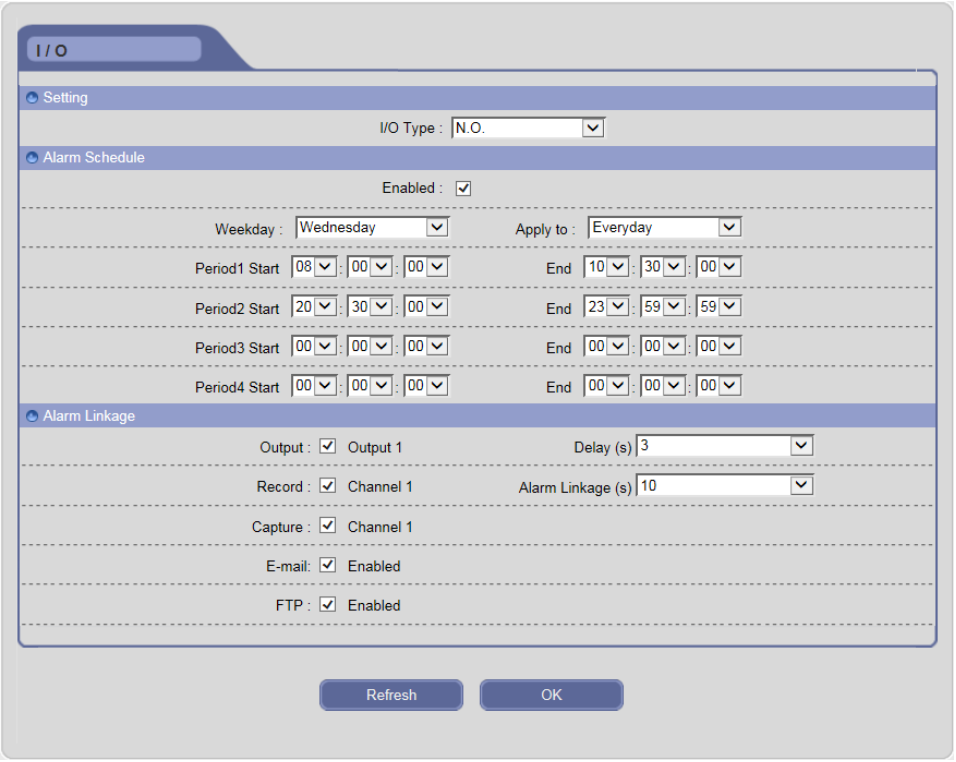


Fig 3-25

[I/O Type]: Select the I/O alarm type according to alarm trigger type: N.O. (normally open) and N.C. (normally closed).

[Alarm Schedule]: Enable this function, user can set a daily schedule of I/O detection. The start time should be earlier than the end time. You can copy and apply time settings to the other date or every day. Click OK button to save your settings, click Refresh button to update the schedule.

[Output]: Linkage alarm output with built-in relay when alarm is triggered.

[Delay]: The duration of linkage alarm output when alarm is triggered, range from 1 to

10s.

[Record]: Linkage recording and store in the SD card when alarm is triggered.

[Alarm Linkage]: The duration of linkage recording when alarm is triggered, time range: 5/10/30/60/120/300/600/900/1200/1800s.

[Capture]: Linkage capture and store in the SD card when alarm is triggered.

[E-mail]: Enable this function, the information of I/O alarm will be sent to mailbox (refer to E-mail Configure). The notification email can contain text messages and images.

[FTP]: Enable this function, the information of I/O alarm will be saved in FTP Server. It can upload text messages and images.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.5 Audio & Video

3.5.5.1 Stream Configure

The interface of stream configure is shown in Fig 3-26:

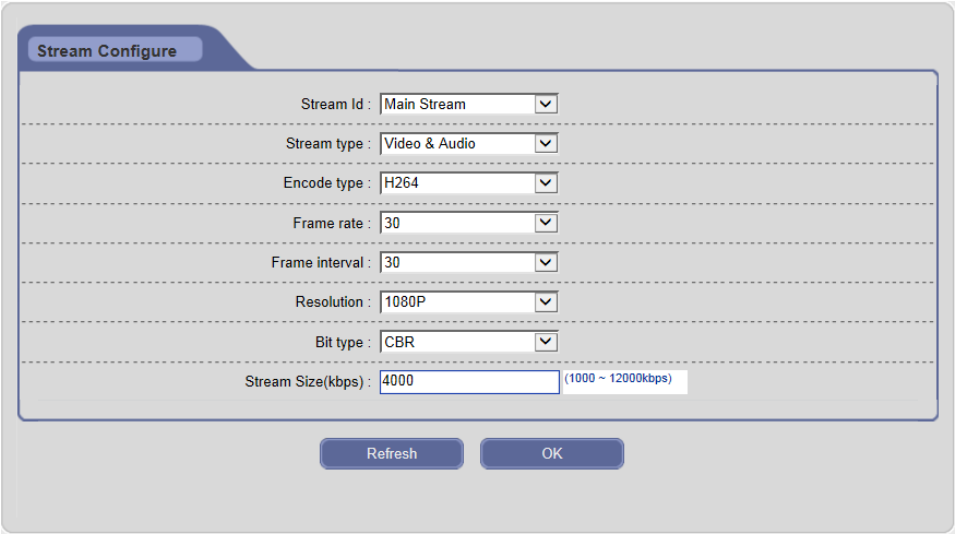


Fig 3-26

[Stream ID]: Support two types of streams: main stream is HD channel, and sub stream is SD channel.

[Stream type]: Include Only Video and Video & Audio.

[Encode type]: Support the standard H.264 (under main stream and sub stream) and M-JPEG (under sub stream) video encoding.

[Frame rate]: Set the encoding frame numbers per second. The adjustable range synchronizes with stream ID.

[Frame interval]: The smaller frame interval, the higher image bitrate and the better image quality you get.

[Resolution]: Set the resolution of video. It can be set as 1080P, 960P, 720P under main stream; and CIF, D1, VGA under sub stream.

[Video format]: It will appear after selecting sub stream and CIF or D1, set PAL or NTSC.

[Bit type]: CBR adopts constant encoding bitrate, VBR adopts variable encoding bitrate.

[Stream Size]: Different stream ID has different bitrate. Its range is 1000~12000kbps (under main stream) or 64 ~ 2048kbps (under sub stream). The higher bitrate can generate better image quality, but it occupies more bandwidth, please adjust the bitrate value according to your actual bandwidth.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Notice: Resolution and frame rate are determined by the model specifications.

3.5.5.2 ROI Setting

The interface of ROI setting is shown in Fig 3-27:

Select a region needs to be processed, that is ROI (region of interest). User can set the main concern and the most interesting region on the video, and IP Camera will improve the corresponding region's image quality while encoding.

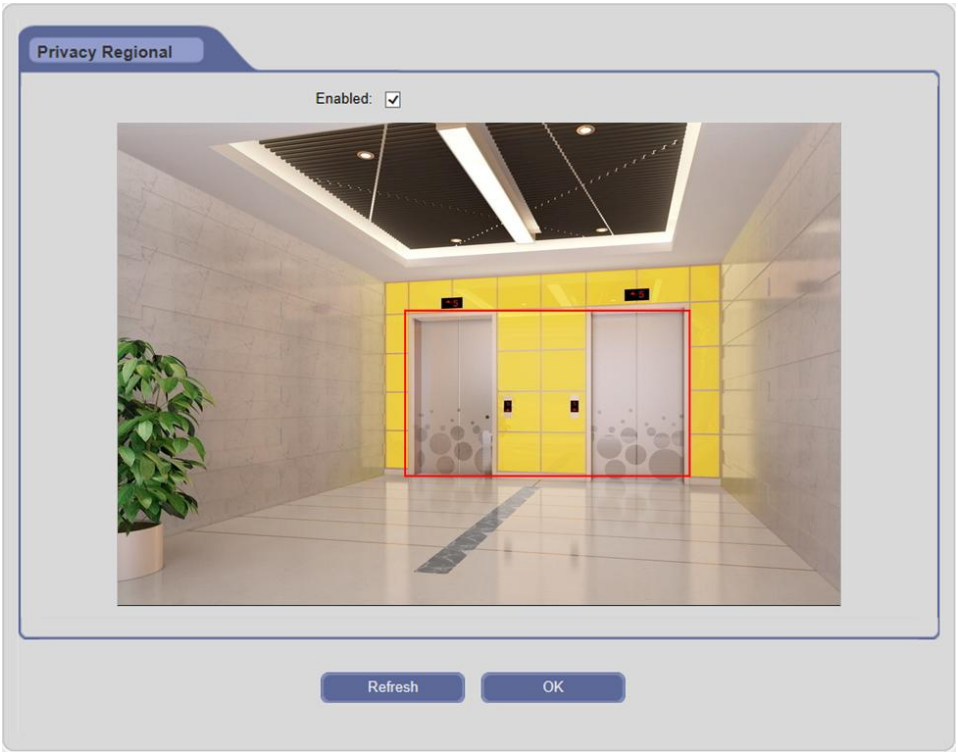


Fig 3-27

3.5.5.3 Audio Configure

The interface of audio configure is shown in Fig 3-28:

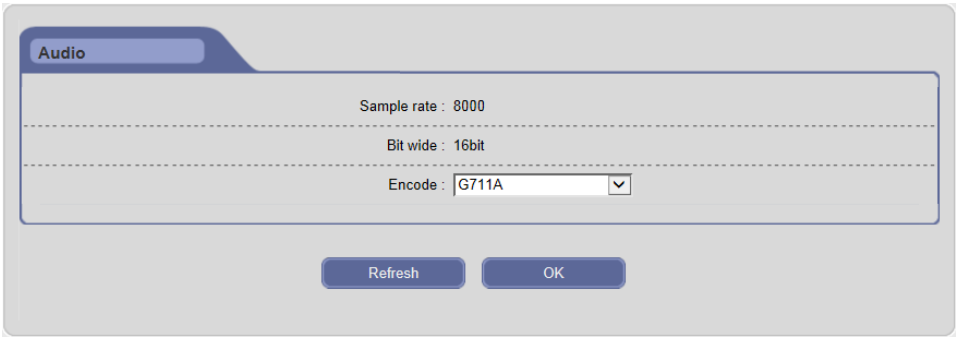


Fig 3-28

In this interface, user can view the IP Camera's audio sample rate and bit wide,

support G711a and G711U audio encoding formats.

Click OK button to save the setting. Click “Refresh” button to refresh the above info.

3.5.6 Storage

3.5.6.1 Record Configure

The interface of record configure is shown in Fig 3-29:

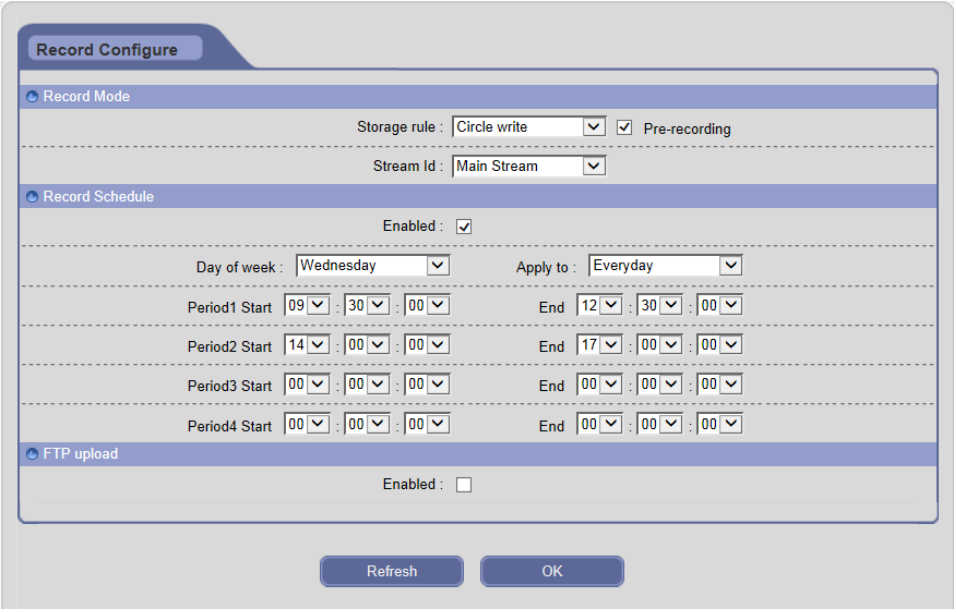


Fig 3-29

[Storage rule]： When the storage space is full, “Circle write” will cover the earliest storage files and keep recording, “Not overwrite” will stop recording and generate alarm automatically.

[Pre-recording]: Alarm signals need a little time to process and trigger recording, it may not record some important information before alarm activation. This function can save pre-recording (usually is 6~7s) and improve monitoring system reliability, otherwise it only writes the current video data to SD card.

[Stream ID]: The smaller record stream you set, the more video files are stored in SD card. Select a stream type for recording: main stream is HD channel, and sub stream is SD channel.

[Record Schedule]: Enable this function, user can set a daily schedule of recording. The start time should be earlier than the end time. You can copy and apply time settings to the other date or every day. Click OK button to save your settings, click Refresh button to update the schedule.

[FTP upload]: Enable this function to upload the timing record to FTP Server.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Notice:

- **Don't pull out SD card during recording.**
- **If you change the record stream during recording, it will reproduce other new video file.**

3.5.6.2 Capture Configure

The interface of capture configure is shown in Fig 3-30:

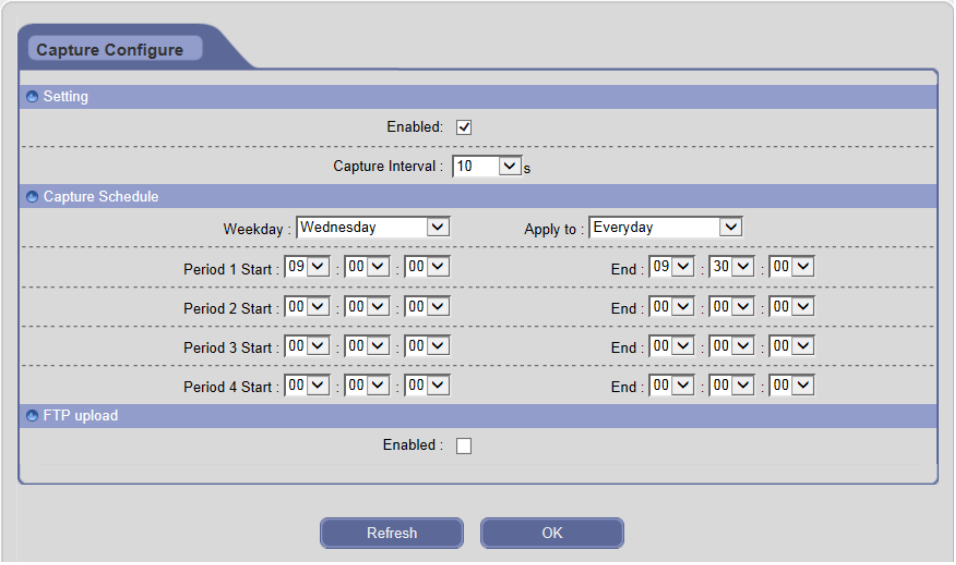


Fig 3-30

[Setting]: Enable or disable timing capture function; set the time interval of capture, time range: 5/10/15/30/60s. If the capture interval is set to 5s, IP Camera will capture a picture every 5 seconds in the period of capture schedule, and store them in the SD card.

[Capture Schedule]: User can set a daily schedule of timing capture. The start time should be earlier than the end time. You can copy and apply time settings to the other date or every day. Click OK button to save your settings, click Refresh button to update the schedule.

[FTP upload]: Enable this function to upload the pictures of timing capture to FTP Server.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.6.3 SD Card

The interface of SD card configure is shown in Fig 3-31:

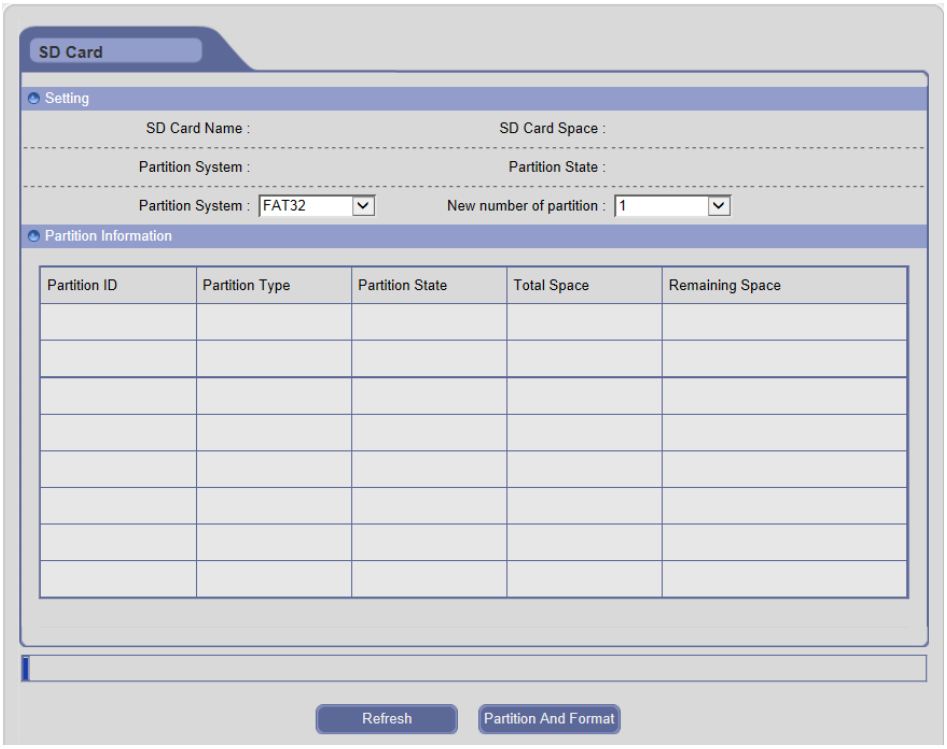


Fig 3-31

Click [Refresh] button to view the information of SD card on your IP Camera. Click [Partition And Format] button to format SD card, it supports disk cache, smart drive, FAT32 file system and 64GB maximum capacity with a fixed partition.

When the setting is not saved, click [Refresh] button to return to the previously saved parameters; when the setting has been saved, click [Refresh] button to query whether the setting is successful.

Notice:

- **Power off and restart the IP Camera to identify correctly after inserting SD card.**
- **Hot-plugging is not recommended for SD card, it may damage the data of SD card.**
- **Don't allow formatting during the process of using SD card (capture or record).**
- **Don't cut off the power during formatting.**
- **FAT32 is used to file system format by default.**
- **IP Camera doesn't support the storage formatted into multi-partition, if user wants to format SD card on PC before using, please format it into one partition.**

3.5.7 Security

3.5.7.1 User Management

The interface of user management is shown in Fig 3-32:

Enter the new user's name and password, set the appropriate user right, then click [Add] button to add this user into the user list.

Select a user in the user list, modify user information or right, and then click [Modify] button to confirm the changes.

Select a user in the user list, click [Delete] button to delete this user.

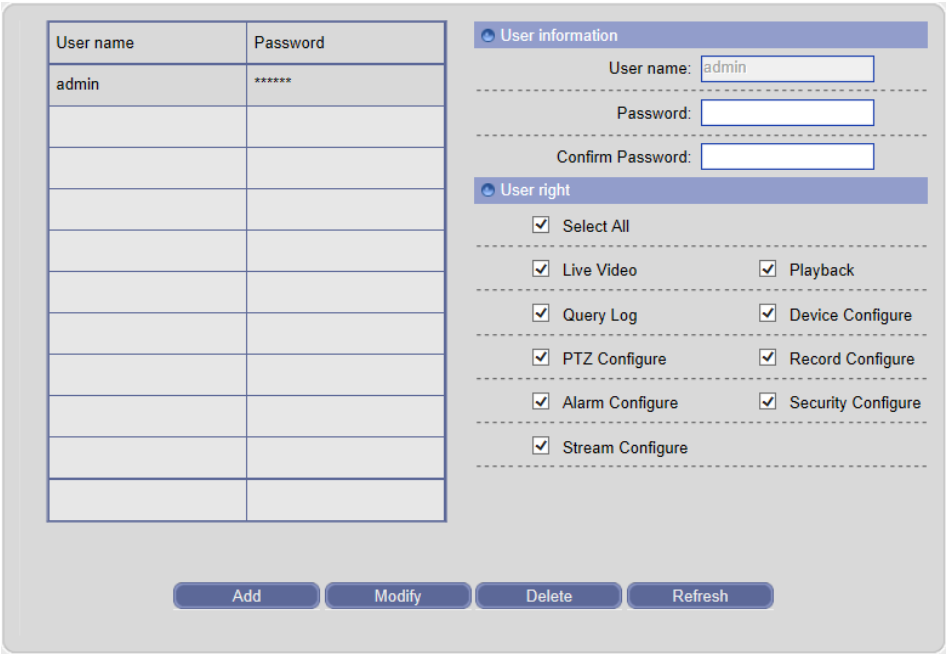


Fig 3-32

Note: 20 users can be added for each IP Camera at most. The admin cannot be modified and deleted.

3.5.7.2 IEEE 802.1xs

IP Camera supports IEEE 802.1X. This protocol is used to verify the connected device's user rights. The interface of IEEE 802.1xs setting is shown in Fig 3-33:

If the verification fails, IEEE 802.1X will establish point-to-point connections or prevent access from LAN port. IEEE 802.1X prevents "Port Hijacking" (an unauthorized computer accesses the Internet through the network jack of inside and outside building). It is very practical for network video application as the network jacks in public space where IP Cameras are installed often have a potential security liability. In today's enterprise networks, IEEE 802.1X is becoming the basic requirement of various network connection devices.

IEEE 802.1X, which is based on port, examines objects including requester (such as IP Camera), verifier (such as switch) and authentication server.

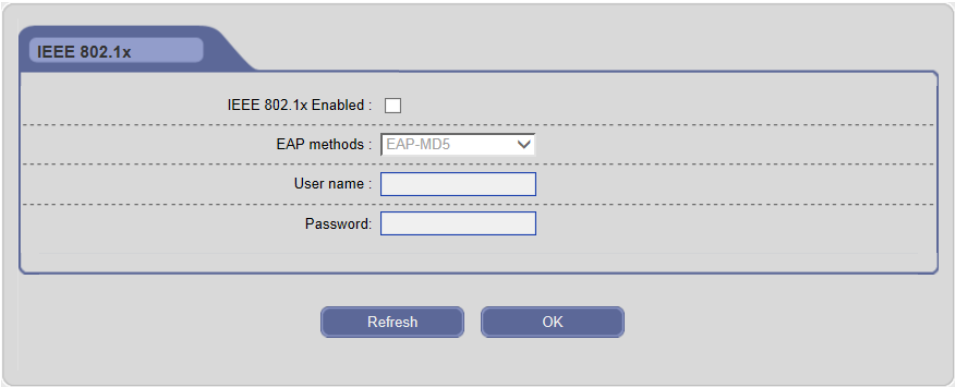


Fig 3-33

Its work processes in the network video system are as follows:

Step 1: IP Camera sends the network access request to switch or AP (Access Point);

Step 2: Switch or AP sends this request to authentication server, such as RADIUS server (Remote Authentication Dial In User Service) - Microsoft Internet Authentication Service.

Step 3: If the validation is successful, the server informs switch or AP of opening port, and allows IP Camera's data to be sent through the switch on the network.

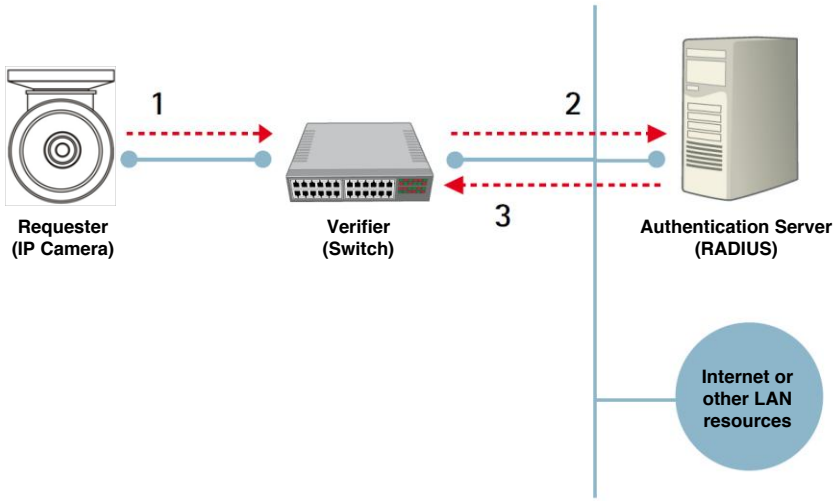


Fig 3-34

3.5.7.3 HTTPS Configure

The interface of HTTPS setting is shown in Fig 3-35:

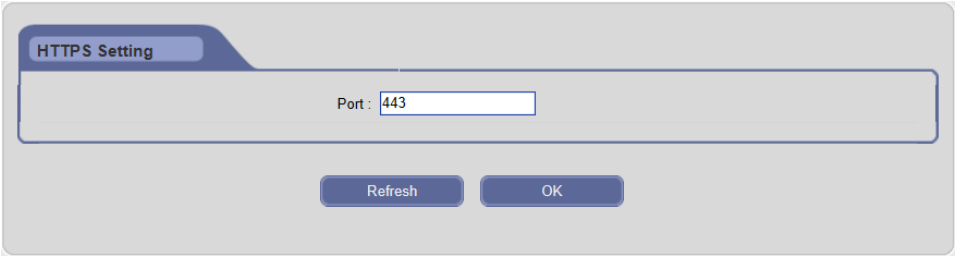


Fig 3-35

HTTPS (Hyper Text Transfer Protocol over Secure Socket Layer) is equivalent to HTTP. The one key difference: HTTPS transmitted data uses SSL (Secure Sockets Layer) or TLS (Transport Layer Security) encryption. This security method encrypts the data itself. This product has HTTPS built-in supporting ability in order to guarantee the web browser to view the video safely. However, using HTTPS will reduce the communication links' speed and affect video frame rate.

3.5.7.4 RTSP Authentication

The interface of RTSP authentication setting is shown in Fig 3-36:

Fig 3-36

When RTSP request is being sent, IP Camera needs to carry authentication information after enabling the RTSP authentication function.

3.5.8 System

3.5.8.1 Time Parameters

The interface of time parameters is shown in Fig 3-37:

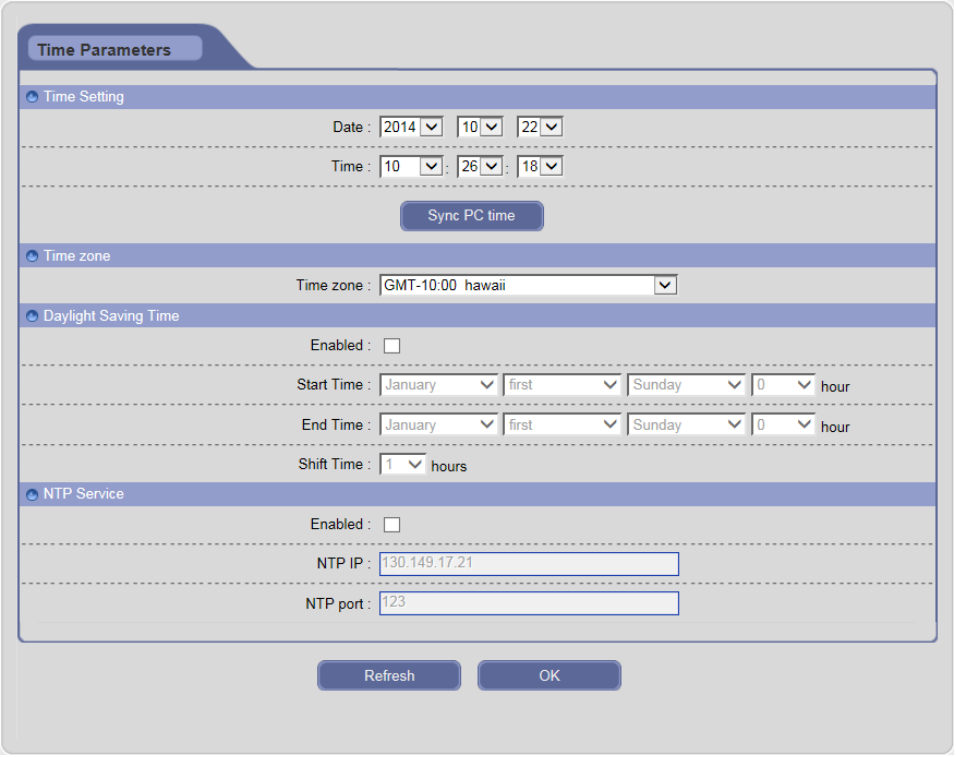


Fig 3-37

[Time Setting]: Manually set the date and time of IP Camera.

[Sync PC time]: Click this button to sync system time with PC.

[Time zone]: Set the current time zone.

[Daylight Saving Time]: User can enable DST function, and set start & end time and shift time.

[NTP Service]: Enable this function, IP Camera will sync system time with NTP server according to the time zone; user can also manually set the IP and port number of NTP server.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.5.8.2 Device Information

The interface of device information is shown in Fig 3-38:

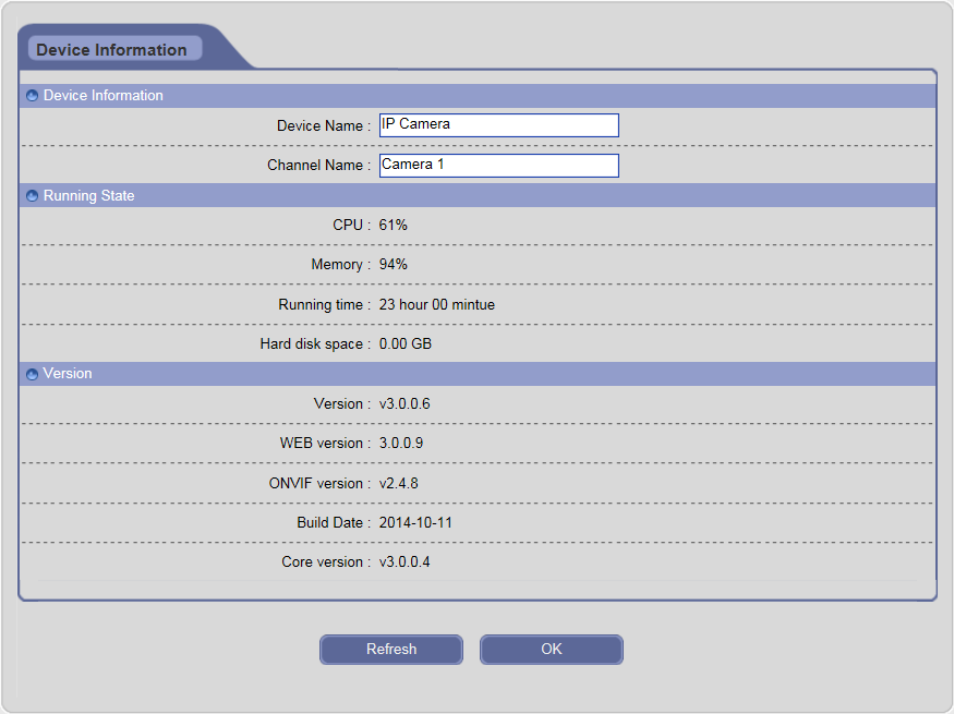


Fig 3-38

[Device information]: Self-define device name and channel name displayed in the search list while searching for devices. They support 24 characters (only contain Chinese characters, letters, numbers and underline).

[Running State]: View CPU and memory utilization, running time and hard disk space.

[Version]: View the version number, WEB version number, ONVIF version number, build date and core version number.

Click OK button to save the setting. Click Refresh button to refresh these info in real time. When the setting is not saved, click Refresh button to return to the previously saved parameters.

3.5.8.3 Maintenance

The interface of maintenance is shown in Fig 3-39:

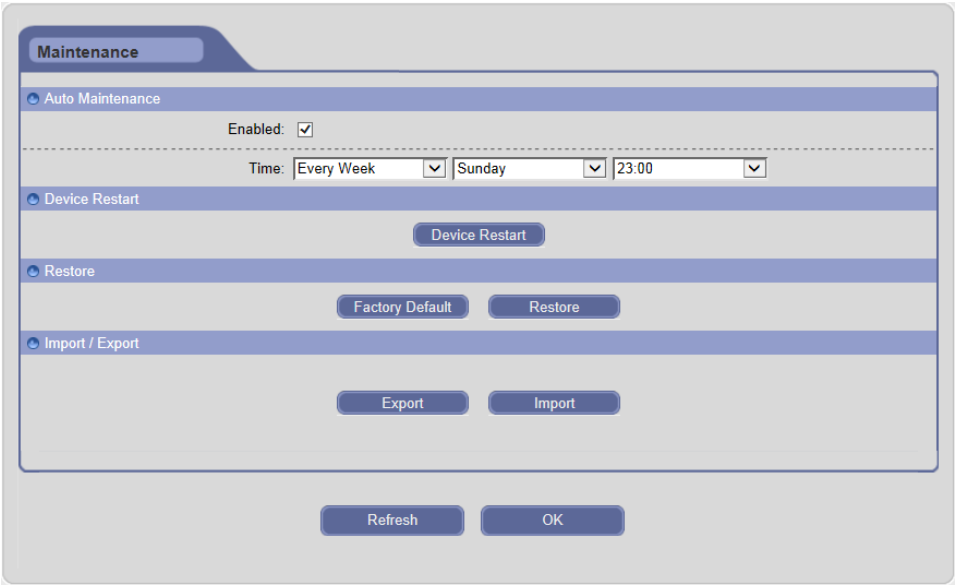


Fig 3-39

[Auto Maintenance]: User can enable the timing reboot function of IP Camera, and set reboot date and time.

[Device Restart]: Click [Device Restart] button to pop up a dialog box, then click OK button to restart IP Camera.

[Restore]: Click [Factory Default] button to pop up a warning window, then click OK button to restore factory settings and restart the device automatically. Click [Restore] button to pop up a warning window, then click OK button to restore default values and restart the device automatically.

[Import / Export]: User can export the data files of IP Camera into PC as backup function, or import specified data files from PC to IP Camera.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Notice: "Restore factory settings" can restore all user settings and network parameters; "Restore default values" can restore all user settings and reserve network parameters.

Note: Please refer to Appendix 1 for factory default parameters.

3.5.8.4 Upgrade Device

The interface of upgrade device is shown in Fig 3-40:

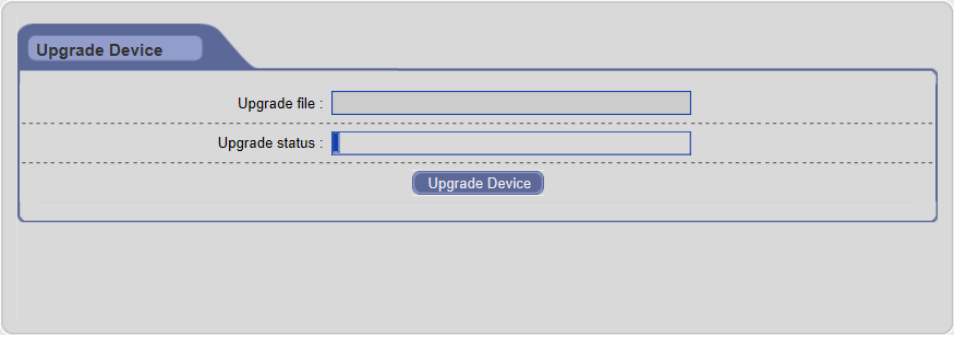


Fig 3-40

Click [Upgrade Device] button to select the correct upgrade file, then click [Open] button to upgrade device, and upgrade status bar will show the current progress. After upgrade completes, IP Camera will restart automatically. User needs to login again, and enter into device information page to check the version number.

Note: The suffixes of upgrade files for network are ".ram", for example, kernel file is kernelfs.ram, burn file is burnin.1.0.ram, boot file is nsboot.1.0.ram, and application file is usersection.2.0.8.ram.

Notice: Don't cut off the power and internet connection during an upgrade activity, IP Camera cannot be recovered after power off.

3.5.8.5 PTZ Configure

The interface of PTZ configure is shown in Fig 3-41:

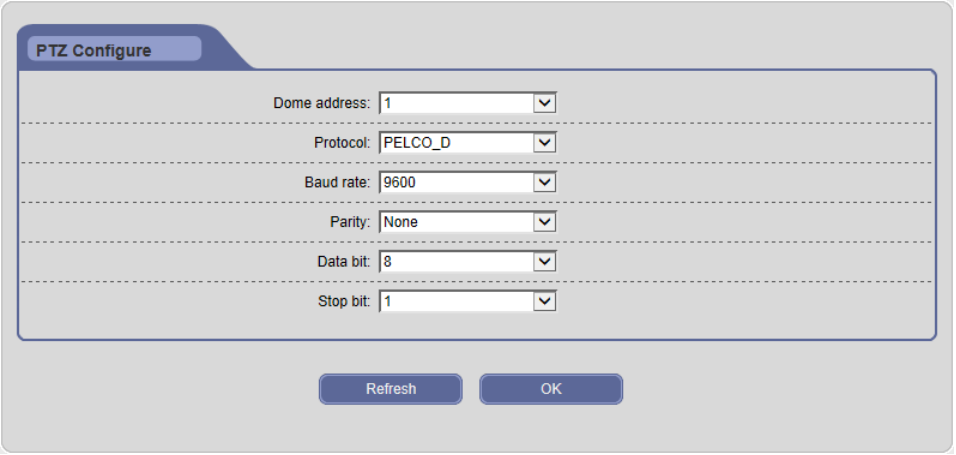


Fig 3-41

[PTZ configure]: When IP Camera is connected to RS485 communication or control device (e.g. PTZ decoder, dome camera), user needs to select the correct PTZ settings according to the parameters of external communication device (address, protocol, baud rate, etc).

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

Notice: Only setting the correct parameters and protocol can you control the external communication device.

3.5.8.6 Connection

The interface of online user is shown in Fig 3-42:

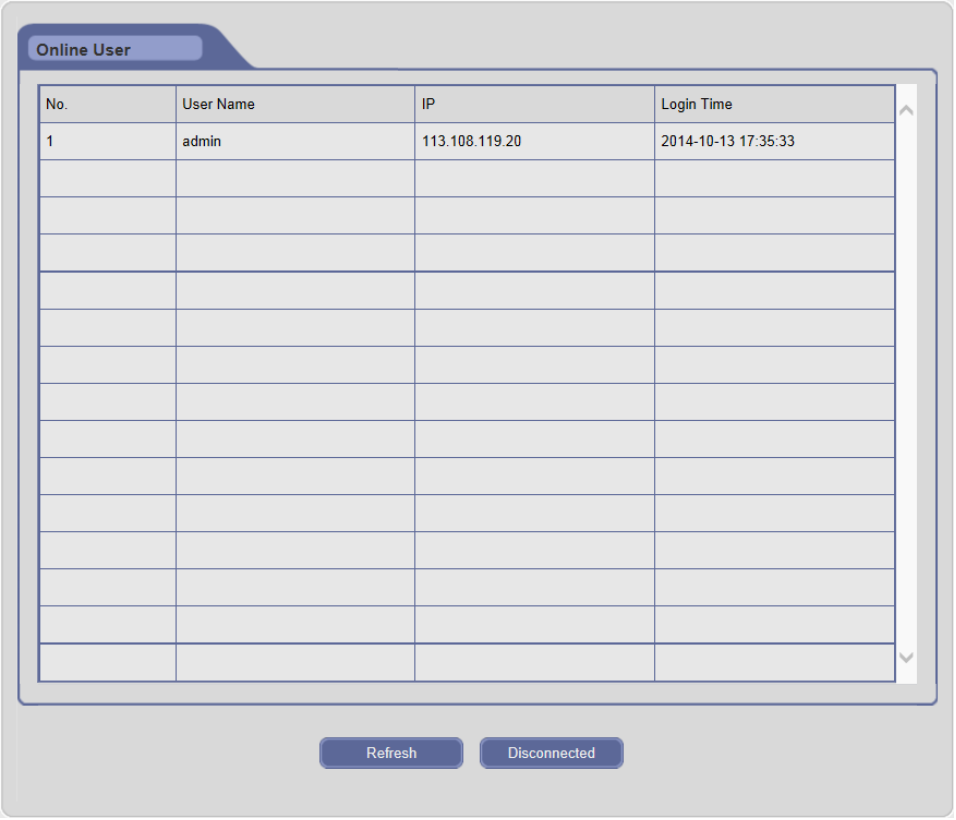


Fig 3-42

In this interface, user can view all user information. Click “Refresh” button to refresh the online user list. User can preview and configure device remotely through IE web browser, ISS, ISS Mobile and other client. Clicking “Disconnected” button can take the client offline.

3.5.9 Local Configure

The interface of local configure is shown in Fig 3-43:

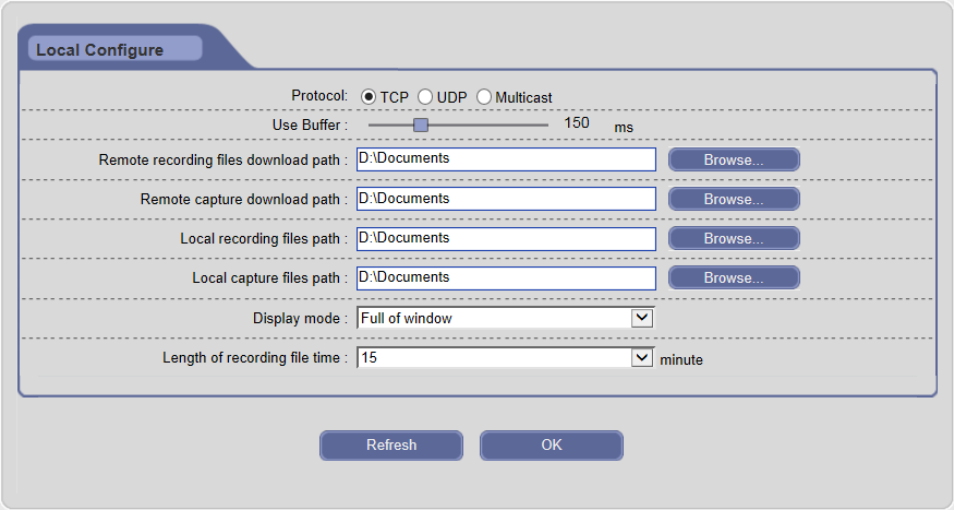


Fig 3-43

[Protocol]: Support TCP, UDP and multicast network protocol.

[Use Buffer]: In order to avoid the stagnation caused by network congestion during play, using buffer function can save a certain amount of data before playing. The longer buffer time you set, the longer it takes for video data to arrive on the client.

[Path]: Click [Browse] button to configure the download path of remote recording files and remote capture files, configure the storage path of local recording files and local capture files.

[Display mode]: Select the video display mode. Two options: full of window and original proportion.

[Length of recording file time]: Select the recording time for each local recording file.

Click OK button to save the setting. When the setting is not saved, click Refresh button to return to the previously saved parameters; when the setting has been saved, click Refresh button to query whether the setting is successful.

3.6 Log

Click [Log] button in the menu bar to enter the log search page.

[Start Date / End Date]: Select the start date and end date.

[Log Type]: Select the type of log. Five options: all types, system, alarm, operation and

network.

After setting the search criteria, click [Refresh] button to search log, the searched log information will be displayed in the list, as shown in Fig 3-44:

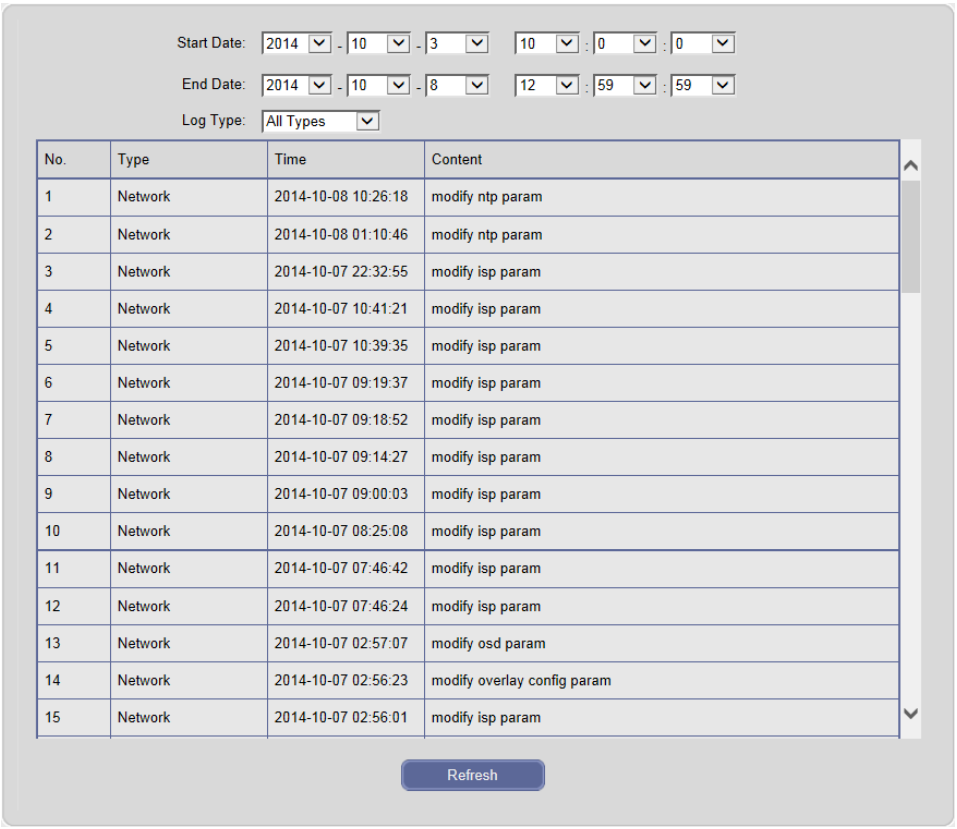


Fig 3-44

3.7 Logout

Click [Logout] button in the menu bar to log out, and return to the login page.

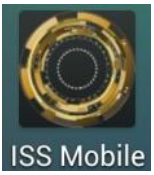
Chapter 4 Mobile Surveillance

4.1 Overview

ISS MOBILE client software, which is designed for mobile phone on the basis of iOS (Version 7.0 or higher), can be used to remotely monitor the live video from embedded DVR, NVR, IP Camera and network speed dome via wireless network, play back record files and control PTZ as well. ISS MOBILE software can support multiple network connections, such as Wi-Fi or 3G. If the device is in your private LAN network, it needs to forward device port.

4.2 For Mobile Phone

Install and run ISS MOBILE on your mobile phone. Its shortcut icon and splash screen are as follows:



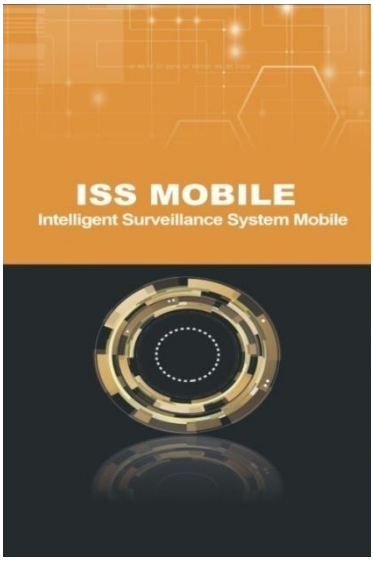


Fig 4-1

4.2.1 Device Management

User needs to add device(s) when running ISS MOBILE for the first time.

4.2.1.1 Adding a Device

(1) Click  in the upper left corner, then select  to enter the Device Manager page.

(2) Click  to enter the New Device page.

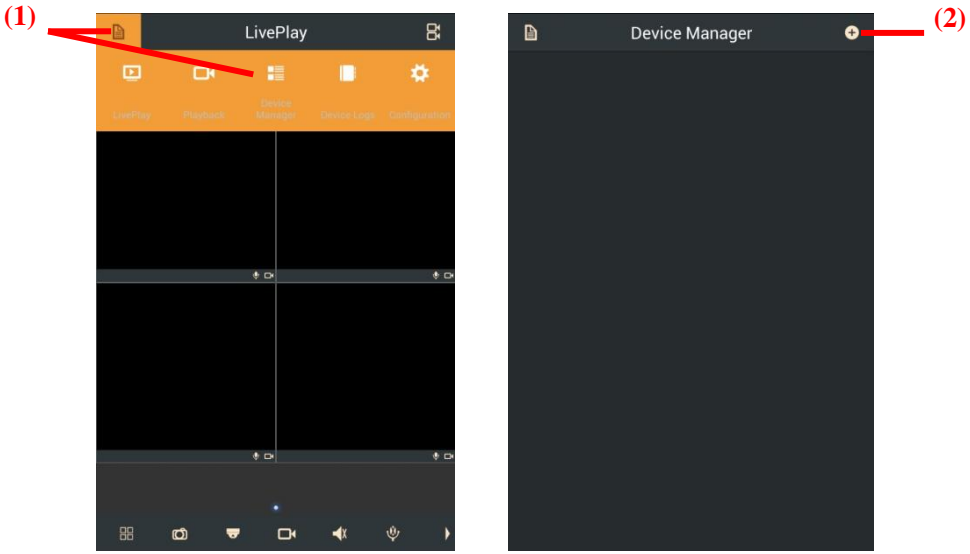


Fig 4-2

(3) Input the IP address and port of the device. Or click  button to search online devices, click  to search again, select a device you want to add.

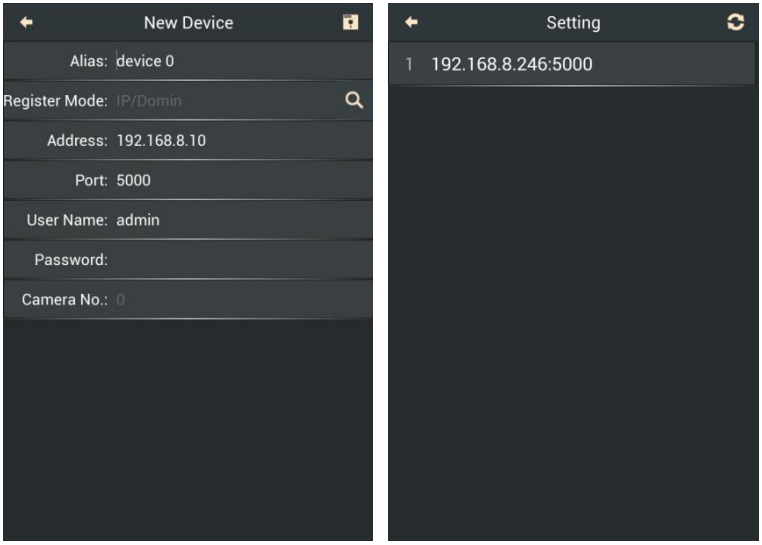


Fig 4-3

(4) Edit an alias name as desired, input the user name and password.

(5) Click  to save the device information.

Note: When you add a new device, the information such as device name cannot be the same as the added device.

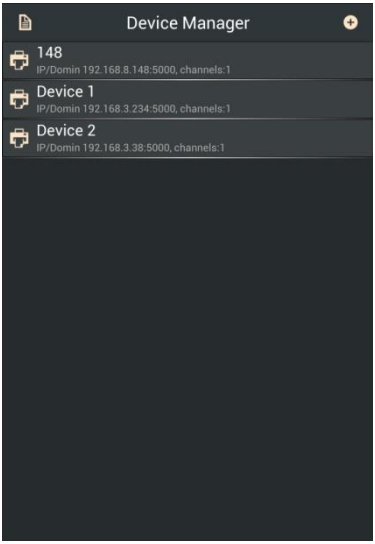


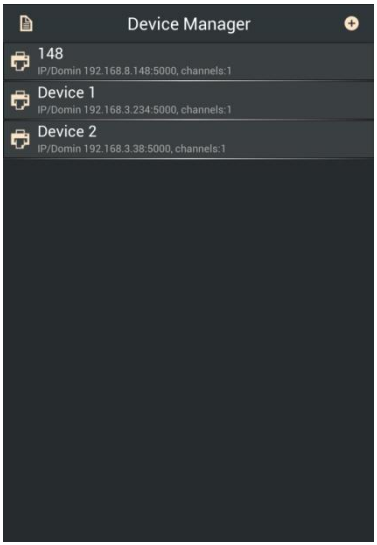
Fig 4-4

4.2.1.2 Modifying a Device

(1) In the Device Manager page, click the device item to view its parameters.

(2) Modify the parameters of device according to actual needs.

(3) Click  to save the changes.



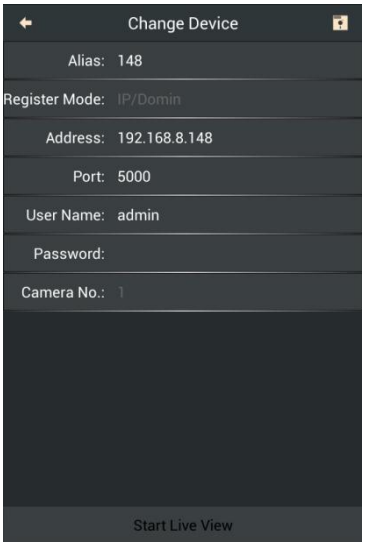


Fig 4-5

Note: If the device connection is successful, it will appear "Start Live View" in the Change Device page. You can click it to view the video in real-time.

4.2.1.3 Deleting a Device

(1) In the Device Manager page, long press a device item to pop up a hint.

(2) Click “Confirm” to delete the selected device.

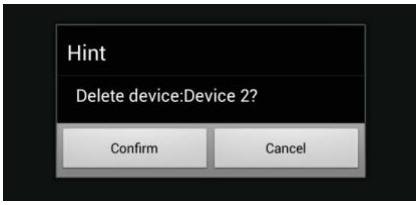


Fig 4-6

4.2.2 Live View

User can view the device channel after successfully adding a device. If the front-end device is a Speed Dome Camera or a PTZ Camera, you can also control the PTZ through software.

Click  in the upper left corner, then select  to enter the Live Play page. It will display the talkback and recording status in the lower right corner of each video window.

The description for the buttons of the sliding sidebar is shown as below:

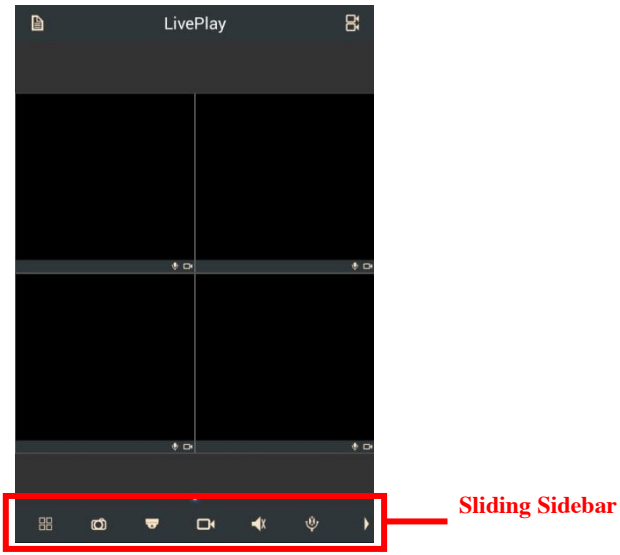


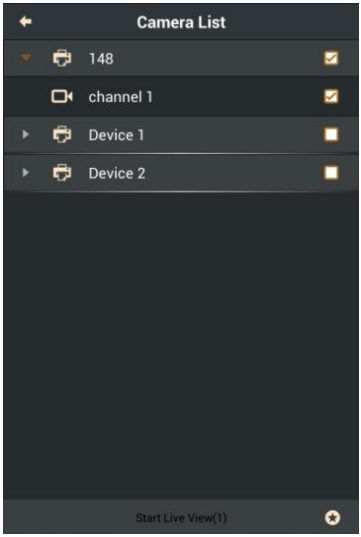
Fig 4-7

Button	Description
	Select screen mode
	Capture 1/3/5 pictures of the selected live view window
	Open/Close PTZ control
	Open/Close manual recording
	Open/Close audio of live view
	Open/Close two-way talkback
	Control alarm output

Button	Description
	Adjust image quality
	Open/Close full-screen view
	Stop/Start all the live view
	Synchronize device time

4.2.2.1 Start Live View

In the LivePlay page, click  and then click device item to expand the channel list, select the channel(s), and then click “Start Live View” to view the video.



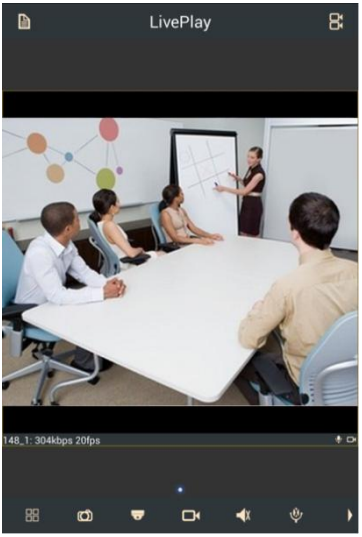


Fig 4-8

4.2.2.2 Stop Live View

- In the LivePlay page, click  to stop live view of all channels.
- Drag the channel window which needs to stop live view, and the  icon shows on the top of window. Drag this window up to  until  changes to  and then release the window. In this way, you can stop the specified live video.

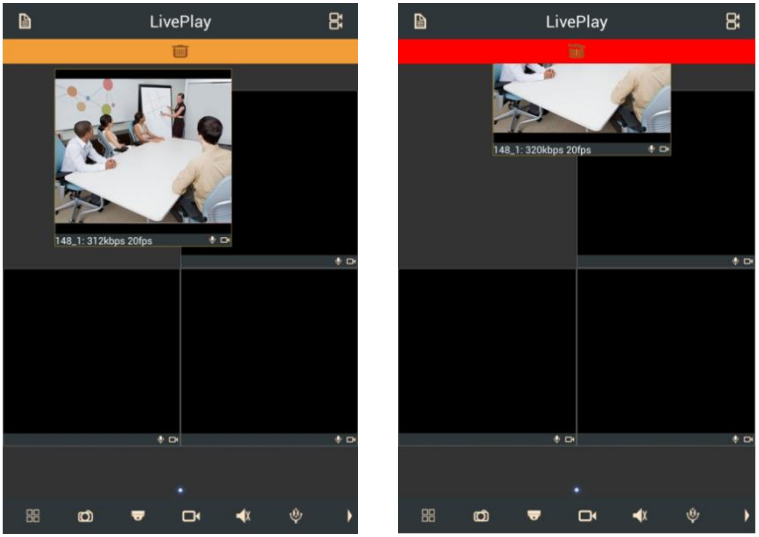


Fig 4-9

4.2.2.3 Digital Zoom

Spread two fingers apart to zoom in the single-screen live view, slide on the screen with single finger to move and view the partial area, and pinch two fingers together to zoom out the live view.

4.2.2.4 PTZ Control

(1) Click  to activate the PTZ control, and this icon turns into  .

(2) The description for PTZ control buttons is shown as below:

Button	Description
	Start/Stop auto-scan
	 Focus+;  Focus-
	 Zoom+;  Zoom-
	 Iris+;  Iris-
	Click “Set” to save the preset point. Select a preset point, and click “Use” to call the preset point.

(3) Under PTZ control mode, you can slide on the live view window to realize the PTZ movements (Support eight directions).

(4) Click  to exit the PTZ control status.

4.2.2.5 Add to Favorites

In the LivePlay page, click  to select one or more device channels, then click  , enter favorites name and click “Confirm” to add these channels to another virtual device.

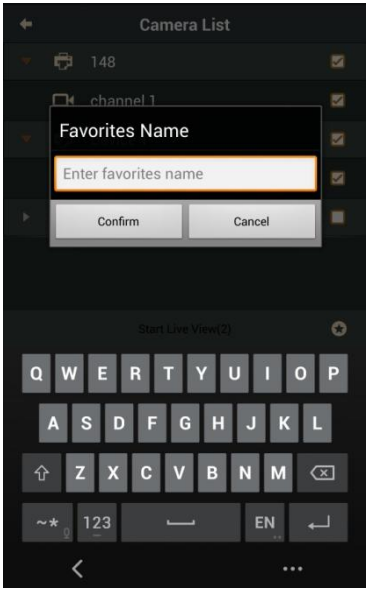


Fig 4-10

Long press a device item to pop up a hint in the Device Manager page, click “Confirm” to delete the selected device. Click  to return to the LIvePlay page.

4.2.2.6 Other View Operations

In the live view window:

- Click on a view window to set it as the currently active window.
- A view window can be dragged to any window to display.
- Double-click to realize the currently active window with single-screen displaying.

Double-click again to return to the previous screen.

- Spread two fingers apart or pinch them together to switch the screen mode.
- Sliding to left/right can move to the previous/next group of channel(s).
- Click  to full screen display video of the currently active window. Click  to return to its original size.

4.2.3 Playback

Click  and select  to enter the Playback page.

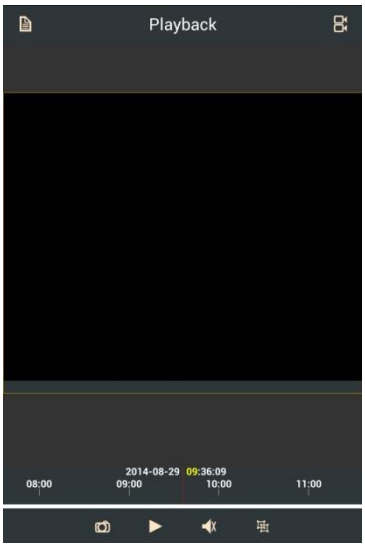


Fig 4-11

4.2.3.1 Video Search

(1) In the Playback page, click  .

(2) Set a specific time period.

(3) Select video type, including all records, timer records, manual records, cover records, motion detection, IO alarm, PIR alarm and local records.

(4) Click device item to expand the channel list, select a channel which needs to search the video.

(5) Click “Start Search” to start playback.

Fig 4-12

4.2.3.2 Playback Control

Fig 4-13

You can slide the timeline bar to adjust the playback time. The scales on the timeline bar show the time, time display can be widen or narrow. The range of blue line means have record data. Red pointer indicates the current playing position, and shows its time above the scales. Playback window will play the video when the red pointer is within the scope of the blue line, otherwise it will pause the playback.

Button	Description
	Capture a picture of the playback window
	Pause/Play the playback
	Open/Close the audio of playback video

Button	Description
	Open/Close full-screen view

4.2.4 Log Search

(1) Click  and select  to enter the Device Logs page.

Fig 4-14

(2) Click  to select the start time and end time.

(3) Select the type of log, including all, system, alarm and operation.

(4) Select a device which needs to search logs.

(5) Click “Start Search” to show the log information.

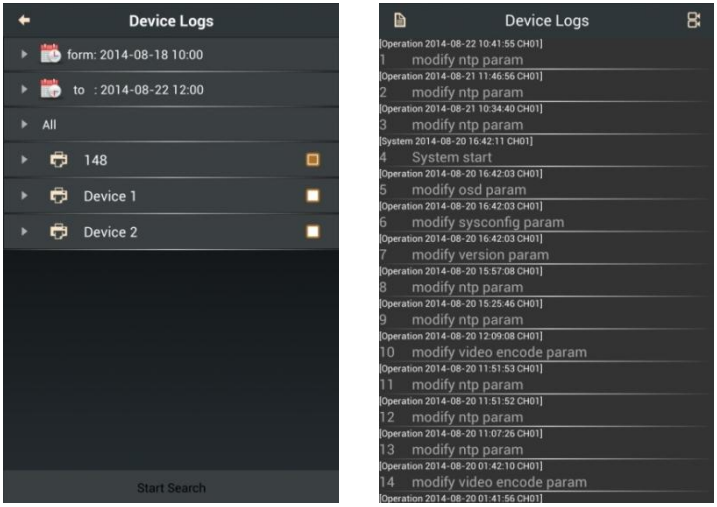


Fig 4-15

4.2.5 Configuration

User can set password protection, view the help, configure software update, manage video files and check the software's version information and main features, etc.

Click  and select  to enter the Configuration page.

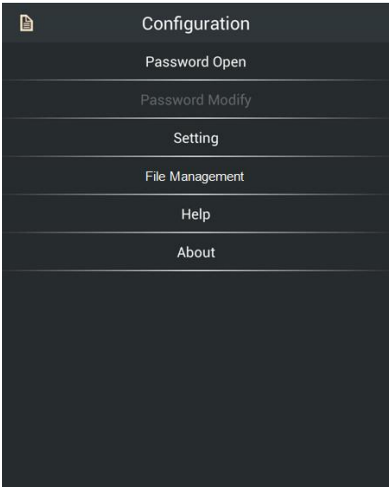


Fig 4-16

4.2.5.1 Password Protection

- Creating a password: Click “Password Open”, enter and confirm the password in the dialog box, click  to save. As this password takes effect, user needs to enter the correct password when you next log in.

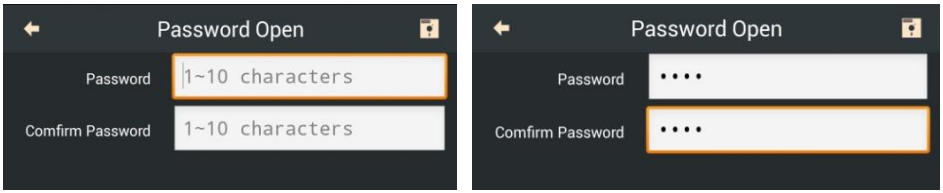


Fig 4-17

- Modifying your password: Click “Password Modify”, enter your current password and new password in the dialog box, click  to modify your password.

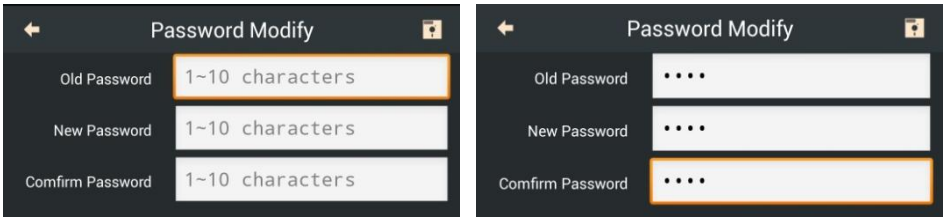


Fig 4-18

- Cancelling the password: If you want to disable the password protection, click “Password Close” and enter the password, click  to cancel the password.

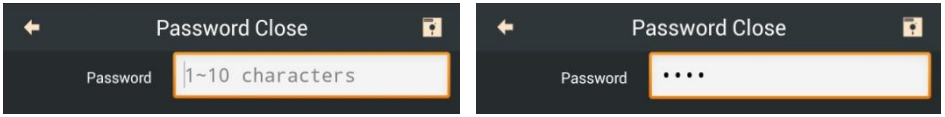


Fig 4-19

4.2.5.2 Setting

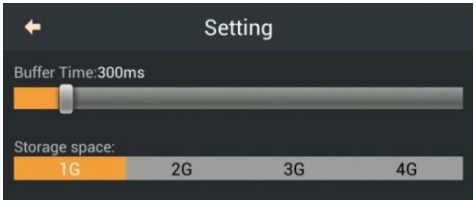


Fig 4-20

- Buffer Time: In order to avoid the stagnation caused by network congestion during play, setting buffer time can save a certain amount of data (0~3000ms) before playing. The longer buffer time you set, the longer it takes for video data to arrive on the client.
- Storage Space: Set the maximum occupying space during local record.

4.2.5.3 File Management

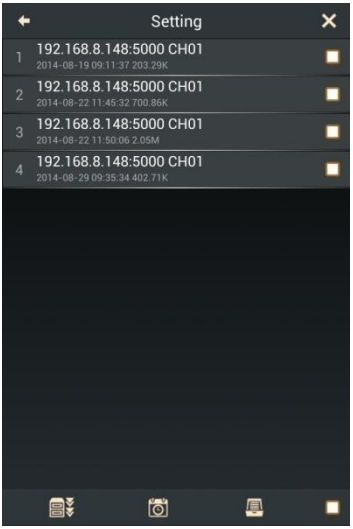


Fig 4-21

User can manage all video files in this page.

Button	Description
/	Ordered by file name: sequential/reverse.
/	Ordered by time: sequential/reverse.

Button	Description
/	Ordered by file size: sequential/reverse.
	Select video files.
	Delete the selected files.

4.2.5.4 Help

User can click “Help” to open the help file.

4.2.5.5 About

Click “About” to enter the About interface. You can check the software’s version number.

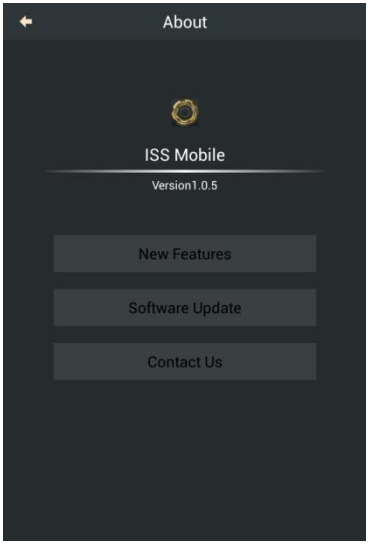


Fig 4-22

- Click “New Features” to view the version description, click to return.
- Click “Software Update” to online detect the software’s new version. Then you can click again to open the browser and select update if a new version exists.
- Click “Contact Us” to view the company information.

4.3 For iPad

Install and run ISS MOBILE on your iPad.

4.3.1 Device Management

User needs to add device(s) when running ISS MOBILE for the first time.

4.3.1.1 Adding a Device

(1) Click  to enter the Device Management interface.

(2) Input the IP address and port of the device. Or click  button to search online devices, click  to search again, select a device you want to add.

(3) Edit an alias name as desired, input the user name and password.

(4) Click  to save the device information.

Note: When you add a new device, the information such as device name cannot be the same as the added device.

4.3.1.2 Modifying a Device

(1) In the Device Management interface, click the device item to view its parameters.

(2) Modify the parameters of device according to actual needs.

(3) Click  to save the changes.

Note: If the device connection is successful, it will appear "Start live view" in the Device Information interface. You can click it to view the video in real-time.

4.3.1.3 Deleting a Device

(1) Slide a device item from right to left in the Device Management interface.

(2) Click “Delete” to delete the selected device.

4.3.2 Live View

User can view the device channel after successfully adding a device. If the front-end device is a Speed Dome Camera or a PTZ Camera, you can also control the PTZ through software.

Click  to enter the Live View interface. It will display the talkback and recording status in the lower right corner of each video window.

The description for the buttons of the sliding sidebar is shown as below:

Button	Description
	Select screen mode
	Capture 1/3/5 pictures of the selected live view window
	Open/Close PTZ control
	Open/Close manual recording
	Open/Close audio of live view
	Open/Close two-way talkback
	Control alarm output
	Adjust image quality
	Open/Close full-screen view
	Stop/Start all the live view
	Synchronize device time

4.3.2.1 Start Live View

In the Live View interface, click device item to expand the channel list, select the channel(s), and then click “Start live view” to view the video.

4.3.2.2 Stop Live View

- Click  to stop live view of all channels.
- Long press the channel window which needs to stop live view and the  icon shows on the top of window, drag the window to  until  changes

to  and then release the window. In this way, you can stop the specified live video.

4.3.2.3 Digital Zoom

Spread two fingers apart to zoom in the single-screen live view, slide on the screen with single finger to move and view the partial area, and pinch two fingers together to zoom out the live view.

4.3.2.4 PTZ Control

(1) Click  to activate the PTZ control, and this icon turns into  .

(2) The description for PTZ control buttons is shown as below:

Button	Description
	Start/Stop auto-scan
	 Focus+;  Focus-
	 Zoom+;  Zoom-
	 Iris+;  Iris-
	Click “Set” to save the preset point. Select a preset point, and click “Use” to call the preset point.

(3) Under PTZ control mode, you can slide on the live view window to realize the PTZ movements (Support eight directions).

(4) Click  to exit the PTZ control status.

4.3.2.5 Add to Favorites

Select one or more device channels and click “Add to Favorites”, enter favorites name and click OK to add these channels to another virtual device.

Slide a device item from right to left to show  , click it to delete the device.

4.3.2.6 Other View Operations

In the live view window:

- Click on a view window to set it as the currently active window.

- A view window can be dragged to any window to display.
- Double-click to realize the currently active window with single-screen displaying. Double-click again to return to the previous screen.
- Spread two fingers apart or pinch them together to switch the screen mode.
- Sliding to left/right can move to the previous/next group of channel(s).
- Click  to full screen display video of the currently active window. Click  to return to its original size.

4.3.3 Playback

Click  to enter the Playback interface.

4.3.3.1 Video Search

(1) Set a specific time period.

(2) Select video type, including timer records, manual records, cover records, motion detection, IO alarm, PIR alarm, local records and all records (In addition to the local records).

(3) Click device item to expand the channel list, select a channel which needs to search the video.

(4) Click “Search” to start playback.

4.3.3.2 Playback Control

Fig 4-23

You can slide the timeline bar to adjust the playback time. The scales on the timeline bar show the time, time display can be widen or narrow. The range of blue line means have record data. Red pointer indicates the current playing position, and shows its time above the scales. Playback window will play the video when the red pointer is within the scope of the blue line, otherwise it will pause the playback.

Button	Description
	Capture a picture of the playback window

Button	Description
	Pause/Play the playback
	Open/Close the audio of playback video
	Open/Close full-screen view

4.3.4 Log Search

(1) Click  to enter the Device Logs interface.

(2) Select the start time and end time.

(3) Select the type of log, including all, system, alarm and operation.

(4) Select a device which needs to search logs.

(5) Click “Search” to show the log information.

4.3.5 Configuration

User can set password protection, view the help, configure software update, manage video files and check the software’s version information and main features, etc.

Click  to enter the Configuration interface.

4.3.5.1 Password Protection

- Creating a password: Click “Turn Password On”, enter and confirm the password in the dialog box. As this password takes effect, user needs to enter the correct password when you next log in.
- Modifying your password: Click “Modify Password”, enter your current password and new password in the dialog box to modify your password.
- Cancelling the password: If you want to disable the password protection, click “Turn Password Off” and enter the password to confirm the settings.

4.3.5.2 Setting

- Buffer Time: In order to avoid the stagnation caused by network congestion during play, setting buffer time can save a certain amount of data (0~3000ms) before

playing. The longer buffer time you set, the longer it takes for video data to arrive on the client.

- Storage Space: Set the maximum occupying space during local record.

4.2.5.3 File Management

User can manage all video files in this page.

Button	Description
	Ordered by file name: sequential/reverse.
	Ordered by time: sequential/reverse.
	Ordered by file size: sequential/reverse.
	Select video files.
	Delete the selected files.

4.3.5.4 Help

User can click “Help” to open the help file.

4.3.5.5 About

Click “About” to enter the About interface. You can check the software’s version number.

- Click “Software Update” to online detect the software’s new version. Then you can click again to open the browser and select update if a new version exists.
- Click “New Features” to view the version description, click  to return.
- Click “Contact Us” to view the company information.

Appendix 1 Factory Default Parameters

- IP Address: 192.168.1.10
- User Name: admin
- Password is blank
- Device Port: 5000
- Media Port: 5005
- WEB Port: 80
- Net Mask: 255.255.255.0
- Gateway: 192.168.1.1
- RTSP Port: 554
- ONVIF Port: 12001
- DHCP: Off
- Wireless IP Address: 192.168.2.10
- Wireless Gateway: 192.168.2.1

Appendix 2 SearchTool User Guide

1. Introduction

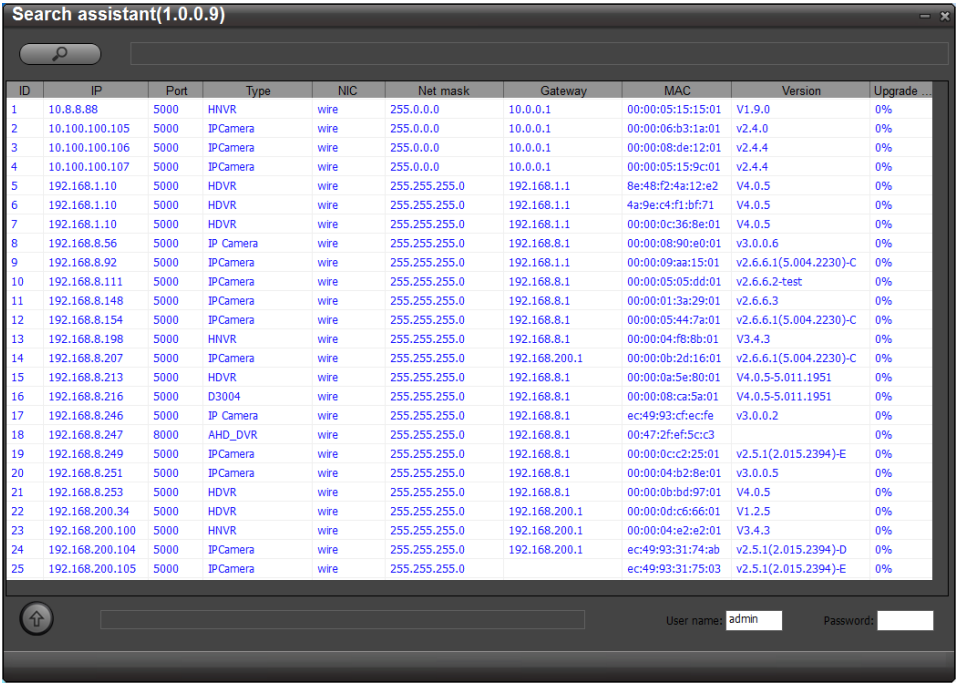
"Search Assistant" can search for devices on the intranet automatically, and doesn't need the IP address to configure device.

2. Search online device

Run the executable SearchTool file from CD (included) to install Search Assistant.

Then double-click the Search Assistant to search online devices on the intranet automatically, as shown in Fig 5-1.

Click Search  button to search online devices again.



ID	IP	Port	Type	NIC	Net mask	Gateway	MAC	Version	Upgrade ...
1	10.8.8.88	5000	HNVR	wire	255.0.0.0	10.0.0.1	00:00:05:15:15:01	V1.9.0	0%
2	10.100.100.105	5000	IPCamera	wire	255.0.0.0	10.0.0.1	00:00:06:b3:1a:01	v2.4.0	0%
3	10.100.100.106	5000	IPCamera	wire	255.0.0.0	10.0.0.1	00:00:08:de:12:01	v2.4.4	0%
4	10.100.100.107	5000	IPCamera	wire	255.0.0.0	10.0.0.1	00:00:05:15:9c:01	v2.4.4	0%
5	192.168.1.10	5000	HDVR	wire	255.255.255.0	192.168.1.1	8e:48:f2:4a:12:e2	V4.0.5	0%
6	192.168.1.10	5000	HDVR	wire	255.255.255.0	192.168.1.1	4a:9e:c4:f1:bf:71	V4.0.5	0%
7	192.168.1.10	5000	HDVR	wire	255.255.255.0	192.168.1.1	00:00:0c:36:8e:01	V4.0.5	0%
8	192.168.8.56	5000	IP Camera	wire	255.255.255.0	192.168.8.1	00:00:08:90:e0:01	v3.0.0.6	0%
9	192.168.8.92	5000	IPCamera	wire	255.255.255.0	192.168.1.1	00:00:09:aa:15:01	v2.6.6.1(5.004.2230)-C	0%
10	192.168.8.111	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:05:05:dd:01	v2.6.6.2-test	0%
11	192.168.8.148	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:01:3a:29:01	v2.6.6.3	0%
12	192.168.8.154	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:05:44:7a:01	v2.6.6.1(5.004.2230)-C	0%
13	192.168.8.198	5000	HNVR	wire	255.255.255.0	192.168.8.1	00:00:04:f8:8b:01	V3.4.3	0%
14	192.168.8.207	5000	IPCamera	wire	255.255.255.0	192.168.200.1	00:00:0b:2d:16:01	v2.6.6.1(5.004.2230)-C	0%
15	192.168.8.213	5000	HDVR	wire	255.255.255.0	192.168.8.1	00:00:0a:5e:80:01	V4.0.5-5.011.1951	0%
16	192.168.8.216	5000	D3004	wire	255.255.255.0	192.168.8.1	00:00:08:ca:5a:01	V4.0.5-5.011.1951	0%
17	192.168.8.246	5000	IP Camera	wire	255.255.255.0	192.168.8.1	ec:49:93:cf:ec:fe	v3.0.0.2	0%
18	192.168.8.247	8000	AHD_DVR	wire	255.255.255.0	192.168.8.1	00:47:2f:ef:5c:c3		0%
19	192.168.8.249	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:0c:c2:25:01	v2.5.1(2.015.2394)-E	0%
20	192.168.8.251	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:04:b2:8e:01	v3.0.0.5	0%
21	192.168.8.253	5000	HDVR	wire	255.255.255.0	192.168.8.1	00:00:0b:bd:97:01	V4.0.5	0%
22	192.168.200.34	5000	HDVR	wire	255.255.255.0	192.168.200.1	00:00:0d:c6:66:01	V1.2.5	0%
23	192.168.200.100	5000	HNVR	wire	255.255.255.0	192.168.200.1	00:00:04:e2:e2:01	V3.4.3	0%
24	192.168.200.104	5000	IPCamera	wire	255.255.255.0	192.168.200.1	ec:49:93:31:74:ab	v2.5.1(2.015.2394)-D	0%
25	192.168.200.105	5000	IPCamera	wire	255.255.255.0		ec:49:93:31:75:03	v2.5.1(2.015.2394)-E	0%

Fig 5-1

3. Configure parameters of online device

Click IP address to open the URL of online device.

Double click the other information to configure the device's network parameters, restore defaults, and restore the factory settings, as shown in Fig 5-2:

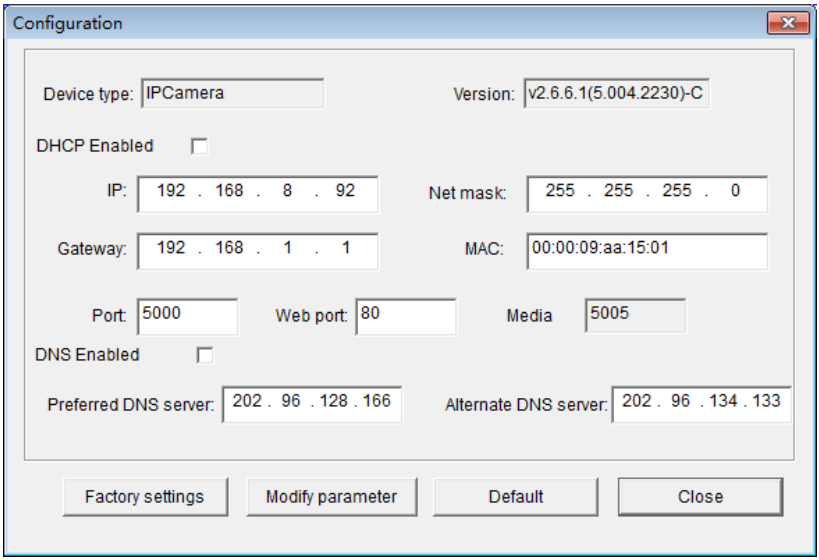
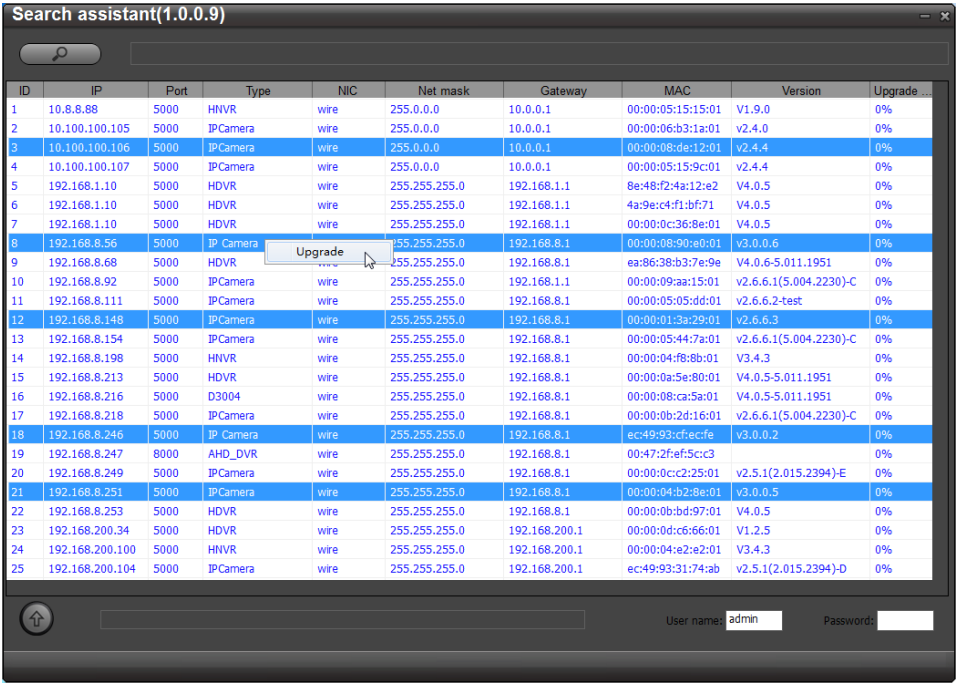


Fig 5-2

4. Upgrade online device

Click Upgrade  button in the lower left corner of the main interface to pop up a dialog box, select the correct upgrade file, click "Open" to upgrade.

- Upgrade a device: Right-click a device in the list, select "Upgrade" option.
- Upgrade multiple devices: Hold down the "CTRL" key and click the devices you need to upgrade in the list, right-click any selected device, select "Upgrade" option, as shown in Fig 5-3:



ID	IP	Port	Type	NIC	Net mask	Gateway	MAC	Version	Upgrade ...
1	10.8.8.88	5000	HNVR	wire	255.0.0.0	10.0.0.1	00:00:05:15:15:01	V1.9.0	0%
2	10.100.100.105	5000	IPCamera	wire	255.0.0.0	10.0.0.1	00:00:06:b3:1a:01	v2.4.0	0%
3	10.100.100.106	5000	IPCamera	wire	255.0.0.0	10.0.0.1	00:00:08:de:12:01	v2.4.4	0%
4	10.100.100.107	5000	IPCamera	wire	255.0.0.0	10.0.0.1	00:00:05:15:9c:01	v2.4.4	0%
5	192.168.1.10	5000	HDVR	wire	255.255.255.0	192.168.1.1	8e:48:f2:4a:12:e2	V4.0.5	0%
6	192.168.1.10	5000	HDVR	wire	255.255.255.0	192.168.1.1	4a:9e:c4:f1:bf:71	V4.0.5	0%
7	192.168.1.10	5000	HDVR	wire	255.255.255.0	192.168.1.1	00:00:0c:36:8e:01	V4.0.5	0%
8	192.168.8.56	5000	IP Camera	wire	255.255.255.0	192.168.8.1	00:00:08:90:e0:01	v3.0.0.6	0%
9	192.168.8.68	5000	HDVR	wire	255.255.255.0	192.168.8.1	ea:86:38:b3:7e:9e	V4.0.6-5.011.1951	0%
10	192.168.8.92	5000	IPCamera	wire	255.255.255.0	192.168.1.1	00:00:09:aa:15:01	v2.6.6.1(5.004.2230)-C	0%
11	192.168.8.111	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:05:05:dd:01	v2.6.6.2-test	0%
12	192.168.8.148	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:01:3a:29:01	v2.6.6.3	0%
13	192.168.8.154	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:05:44:7a:01	v2.6.6.1(5.004.2230)-C	0%
14	192.168.8.198	5000	HNVR	wire	255.255.255.0	192.168.8.1	00:00:04:f8:8b:01	V3.4.3	0%
15	192.168.8.213	5000	HDVR	wire	255.255.255.0	192.168.8.1	00:00:0a:5e:80:01	V4.0.5-5.011.1951	0%
16	192.168.8.216	5000	D3004	wire	255.255.255.0	192.168.8.1	00:00:08:ca:5a:01	V4.0.5-5.011.1951	0%
17	192.168.8.218	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:0b:2d:16:01	v2.6.6.1(5.004.2230)-C	0%
18	192.168.8.246	5000	IP Camera	wire	255.255.255.0	192.168.8.1	ec:49:93:cf:ec:fe	v3.0.0.2	0%
19	192.168.8.247	8000	AHD_DVR	wire	255.255.255.0	192.168.8.1	00:47:2f:ef:5c:c3		0%
20	192.168.8.249	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:0c:c2:25:01	v2.5.1(2.015.2394)-E	0%
21	192.168.8.251	5000	IPCamera	wire	255.255.255.0	192.168.8.1	00:00:04:b2:8e:01	v3.0.0.5	0%
22	192.168.8.253	5000	HDVR	wire	255.255.255.0	192.168.8.1	00:00:0b:bd:97:01	V4.0.5	0%
23	192.168.200.34	5000	HDVR	wire	255.255.255.0	192.168.200.1	00:00:0d:c6:66:01	V1.2.5	0%
24	192.168.200.100	5000	HNVR	wire	255.255.255.0	192.168.200.1	00:00:04:e2:e2:01	V3.4.3	0%
25	192.168.200.104	5000	IPCamera	wire	255.255.255.0	192.168.200.1	ec:49:93:31:74:ab	v2.5.1(2.015.2394)-D	0%

Fig 5-3

Note: Please enter the correct user name and password in the figure above during the upgrade, otherwise it cannot be upgraded.

Appendix 3 Configure the Wireless Router

The wireless router is mainly used to Internet access and wireless coverage. A wireless router needs to be deployed in order to use the Wi-Fi function of IP Camera. User needs to find the wireless router's user name, password and IP, and connect your PC to wireless router before you use it. In general, the router's IP is "192.168.1.1", user name and password are "admin", and user can also find them in wireless router's instruction.

The following example for TP-Link WR340G 54M Wireless Router shows the configuration steps of wireless router.

1. Set up the wireless router's network parameters

Enter your wireless router's IP in web browser to pop up login page, fill in the user name and password to enter into the router's config page, then switch to the "LAN Setting" page under "network parameter" menu, set the wireless router's IP, as shown in Fig 5-4:

Fig 5-4

2. Turn to the "basic settings" page under "wireless parameters" menu, as shown in Fig 5-5:

(1) Set SSID

This SSID is for identity validation of wireless network, it must be the same as the SSID setting of IP Camera.

(2) Frequency range

It determines the frequency range of network working; select range: 1~13, the default value is 6.

Note: If your neighbor also uses wireless network and its frequency is 6, you should

change it to 1 or 13 to reduce radio interference between the two routers.

(3) Mode

Set the working mode of wireless router. The mode must be compatible with the supported modes of IP Camera.

Wireless mode supported by IP Camera: 802.11b/g protocol (low power Wi-Fi model)

802.11a/b/g/n protocol (high power Wi-Fi model)

(4) Enable Wi-Fi function (compulsory)

(5) Enable security setting (optional)

This option can enable the security certification of wireless router. If it is enabled, users need to select the corresponding security mode (encryption mode) and set up authentication password.

(6) Select security type (encryption mode)

Three options: WEP, WPA and WPA2.

(7) Security options

WEP security type: developing system, sharing key and auto-selection.

WPA, WPA2 security type: TKIP and AES.

(8) Set key (authentication password)

After configuring wireless router is complete, reboot the router.

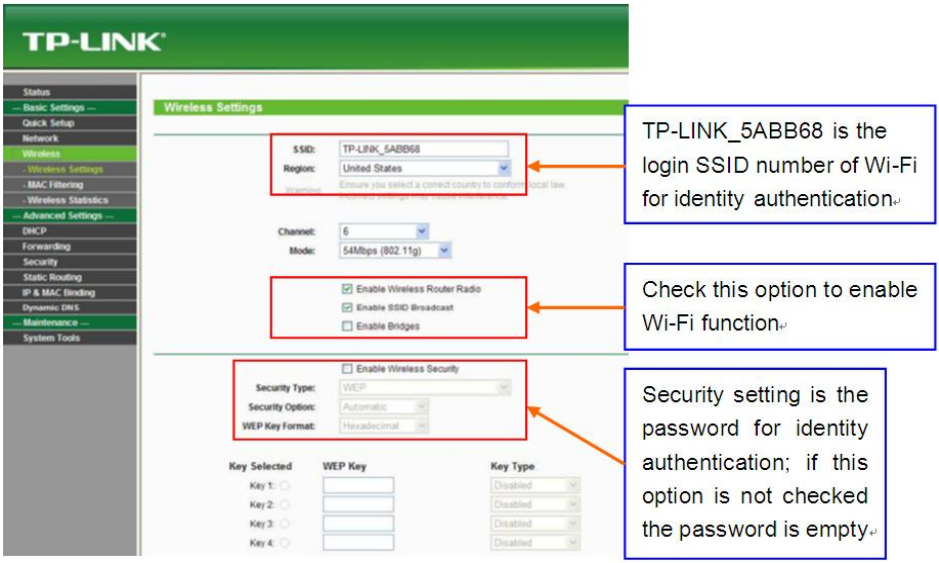


Fig 5-5

Appendix 4 Apply for DDNS Service

1. DDNS function of IP Camera

DDNS (Dynamic Domain Name Service) refers to the real-time analysis of a fixed domain name and the IP Camera's dynamic public IP address. With this function, all Internet users can visit the IP Camera via a fixed domain name. The DDNS process flow diagram is displayed as follow:

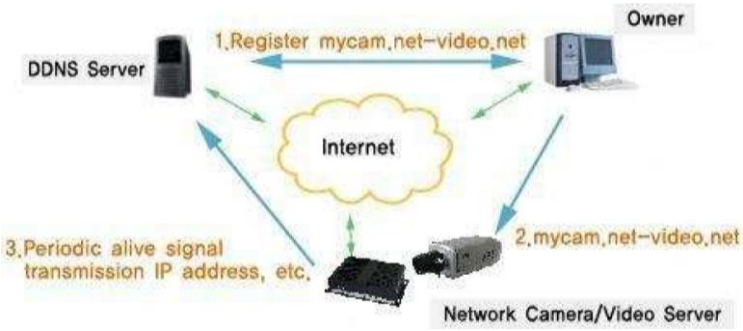


Fig 5-6

2. Access IP Camera by domain name

Register DDNS on the third party website (take no-ip for example).

2a. Go to http://www.noip.com and click “Sign Up”.

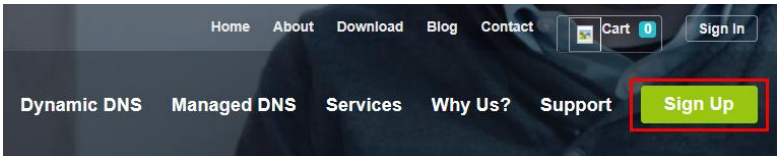


Fig 5-7

2b. Fill in the required fields on the form, and click "Free Sign Up".

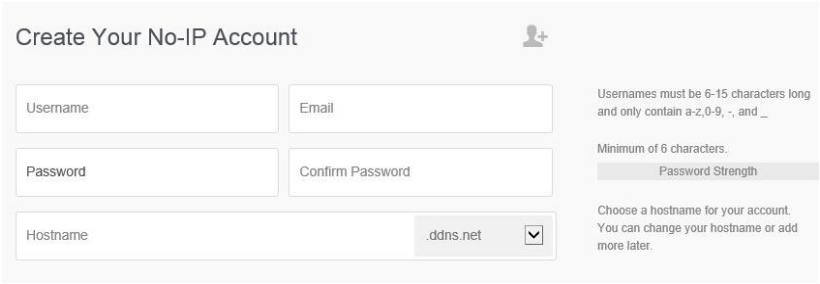


Fig 5-8

Note: Please read the tips when creating your account. You can change your hostname or add more lately, or upgrade to No-IP Enhanced for more hostnames and less hassles.

2c. Once you have submitted your account information, it will send a confirmation email to the address you provided. The email contains a link you must click in order to confirm your account.

2d. Login to your account.

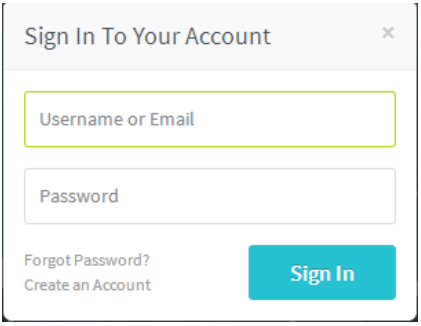


Fig 5-9

2e. Click “Add a Host”, fill out the following fields to configure your host. After you are done, click “Add Host” to add your host.

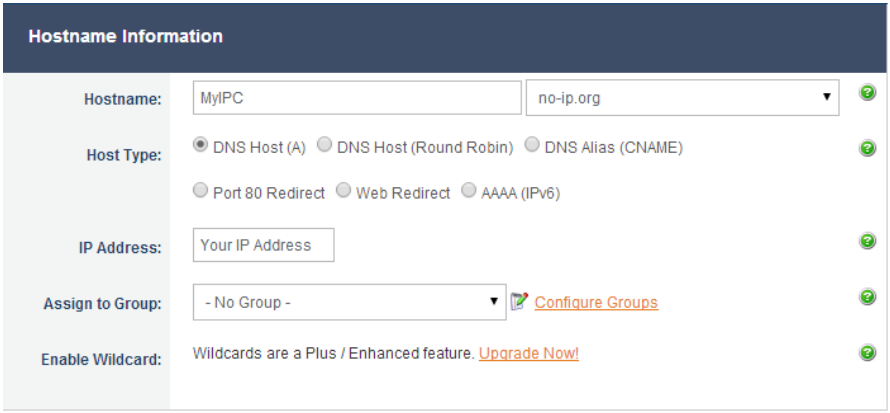


Fig 5-10

2f. Enable DDNS on the IP Camera.

Go to Configure→Network→DDNS Configure to enable DDNS function, input host domain, user name and password you created, choose NO IP as domain server, then click OK.

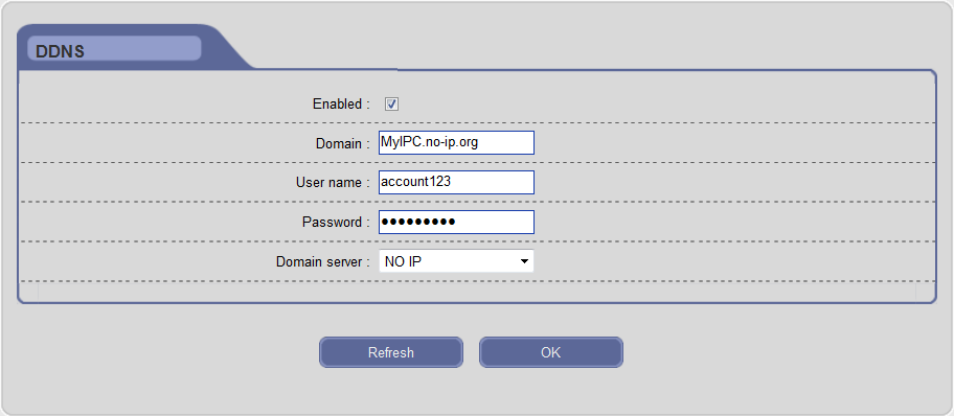


Fig 5-11

2g. Open IE and enter the host name (e.g. http://MyIPC.no-ip.org) to access your IP Camera remotely.

Note: please visit http://www.noip.com/support/ for more detailed guide of No-IP service.

3. HDCCTVDDNS

Nowadays, most of the domestic and foreign domain name service providers will charge if you use their domain name. And if you do not renew the domain name, it will be invalid. In order to make users more convenient to use our network equipment by DDNS, we provide the users with a free domain name registration service.

3a. Go to http://www.hdcctvddns.com/ and click Register, as shown in Fig 5-12.

3b. Fill in your user name and password. The user name should be your email address. Then fill in the verify code and click register, as shown in Fig 5-13.

Fig 5-12

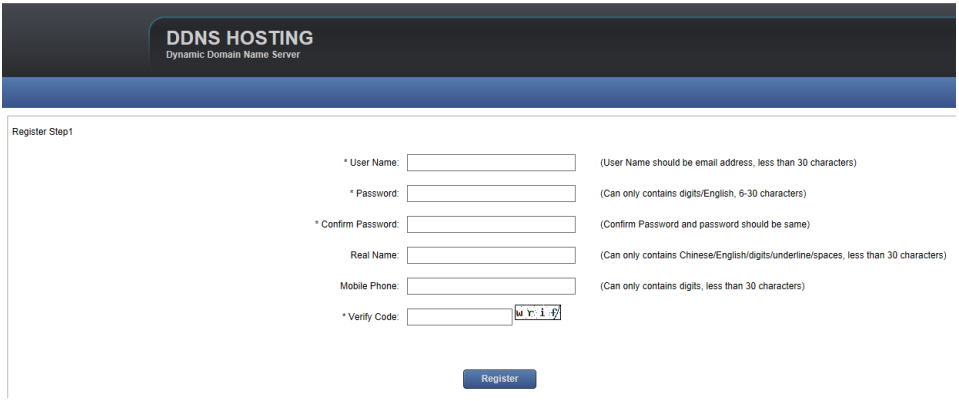


Fig 5-13

3c. Enable and set up the IP Camera's DDNS parameters.

3d. Open IE and enter the host name to access your IP Camera remotely.

Appendix 5 Visit IP Camera under Different Network Environments

You can visit IP Camera with your PC via LAN or WAN, the following contents will introduce how to use IP Camera under different network environments.

1. LAN

There are two ways to connect IP Camera to LAN: static IP and dynamic IP.

➢ **Static IP**

Static IP means that your network administrator assigns a LAN IP address to IP Camera. The IP Camera and your PC must be on the same network segment.

See picture below for the network topology:

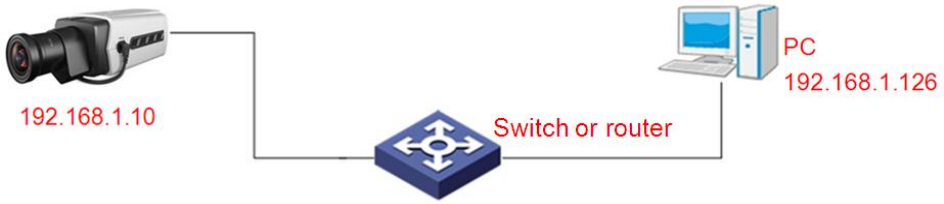


Fig 5-14

Please refer to picture below for the network settings:

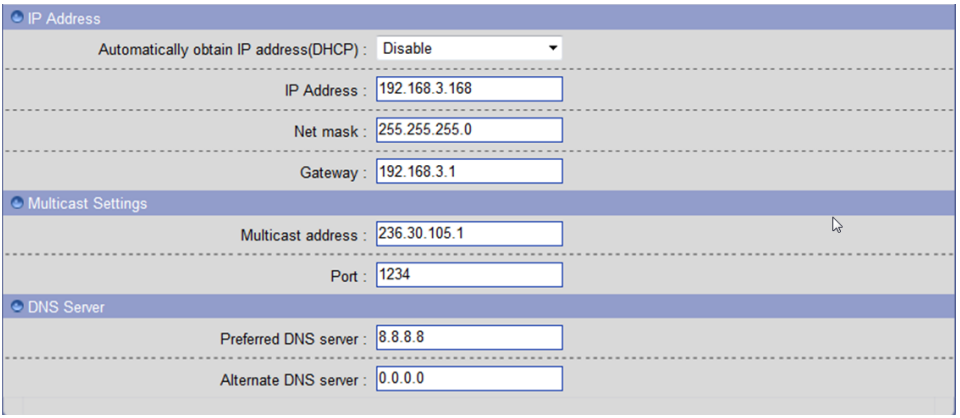


Fig 5-15

If a wireless IP Camera needs to be visited via WiFi mode, user should set [WiFi Configure] correctly.

Setup steps:

Step 1: Login your IP Camera by IE (192.168.1.10 by default);

Step 2: Switch to the [Network Configure] page, fill in the device's IP address assigned by network administrator, e.g. 192.168.3.168;

Step 3: Fill in the correct net mask, e.g. 255.255.255.0;

Step 4: Fill in the correct gateway, e.g. 192.168.3.1;

Click OK button to save the setting, then restart your IP Camera, enter the new IP address to visit it.

- **Dynamic IP**

Dynamic IP means that IP Camera obtains IP address from DHCP server automatically. See picture below for the network topology:

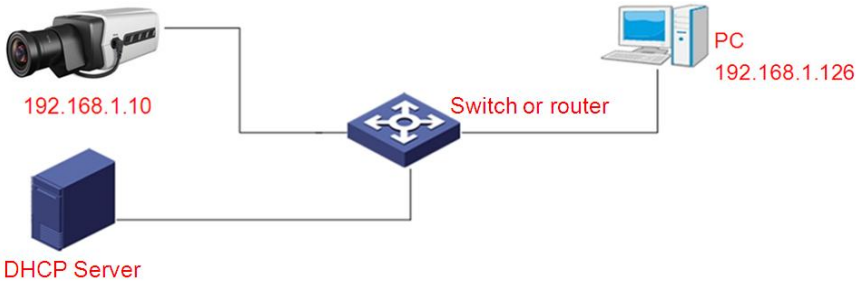


Fig 5-16

Please refer to picture below for the network settings:

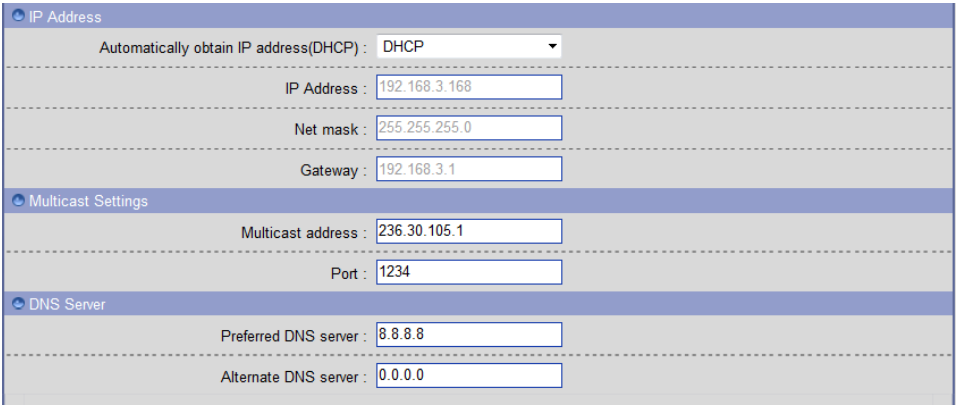


Fig 5-17

Setup steps:

Login your IP Camera by IE, switch to the [Network Configure] page and select

"DHCP", click OK button to save the setting, and restart your IP Camera to make the parameters valid.

2. Internet (WAN)

There are three ways to connect IP Camera to Internet:

1) Fixed IP mode;
2) Broadband and router sharing Internet access mode (dynamically obtain extranet IP address mode) like ADSL and so on;
3) PPPoE dial-up access mode.

After IP Camera is connected to Internet, remote Internet users can visit it directly via domain name or IP address.

➢ **Fixed IP mode**

See picture below for the network topology:

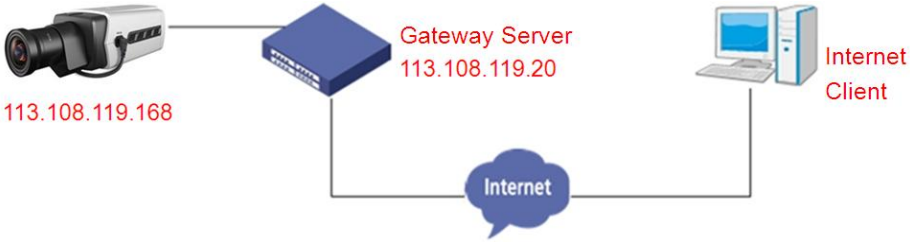


Fig 5-18

Please refer to picture below for the network settings:

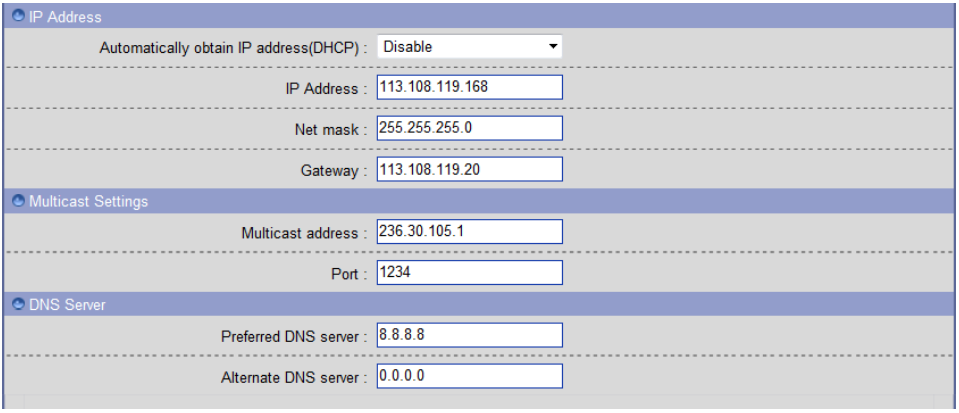


Fig 5-19

Setup steps:

Step 1: Login your IP Camera via crossover cable direct connection (refer to Appendix 7);

Step 2: Switch to the [Network Configure] page, fill in the device's IP address requested from network service provider, e.g. 113.108.119.168;

Step 3: Fill in the correct net mask, e.g. 255.255.255.0;

Step 4: Fill in the correct gateway, e.g. 113.108.119.20.

Click OK button to save the setting, and then restart your IP Camera. Connect IP Camera to public network so that all Internet users can visit it remotely by entering http://113.108.119.168/.

- **Broadband and router sharing Internet access mode like ADSL and so on**

For dial-up access with router, see picture below for the network topology:

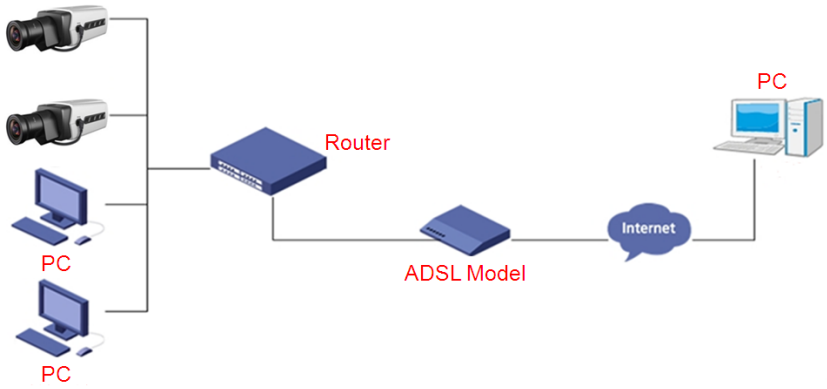


Fig 5-20

User can set up DDNS service, please refer to Appendix 4 for DDNS settings. Switch to the [DDNS Configure] page, enter the relevant information applied in the DDNS server, and map the ports from router. The router judges and points to IP Camera according to the different ports. Remote Internet users can visit the IP Camera on the network via domain name.

Open IE and enter the domain name and port number (without entering port number if it is the default value "80"), for example: http:// MyIPC.no-ip.org:2318.

- **PPPoE dial-up access**

For IP Camera dial-up access, see picture below for the network topology:

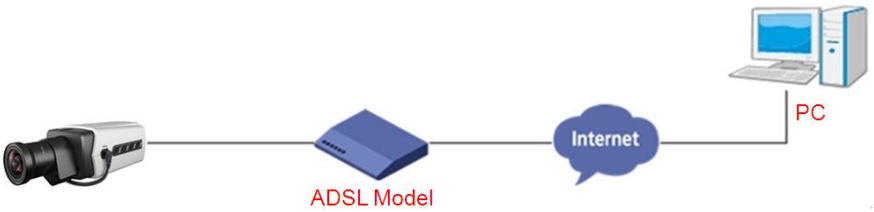


Fig 5-21

Setup steps:

Step 1: Login your IP Camera via crossover cable direct connection (refer to Appendix 7);

Step 2: Set PPPOE parameters (please refer to [PPPOE Configure] for more details);

Step 3: Connect IP Camera to Internet;

Step 4: After user successfully set up the PPPOE dial-up, you can visit IP Camera on the network via dynamic IP.

Appendix 6 Port Mapping

Take the TL-WR340G router of TP-LINK as an example for illustration:

Step 1: Ask network administrator for the IP address of router (i.e. LAN gateway address), and enter user name and password to log into the router. The main interface is shown as follow:

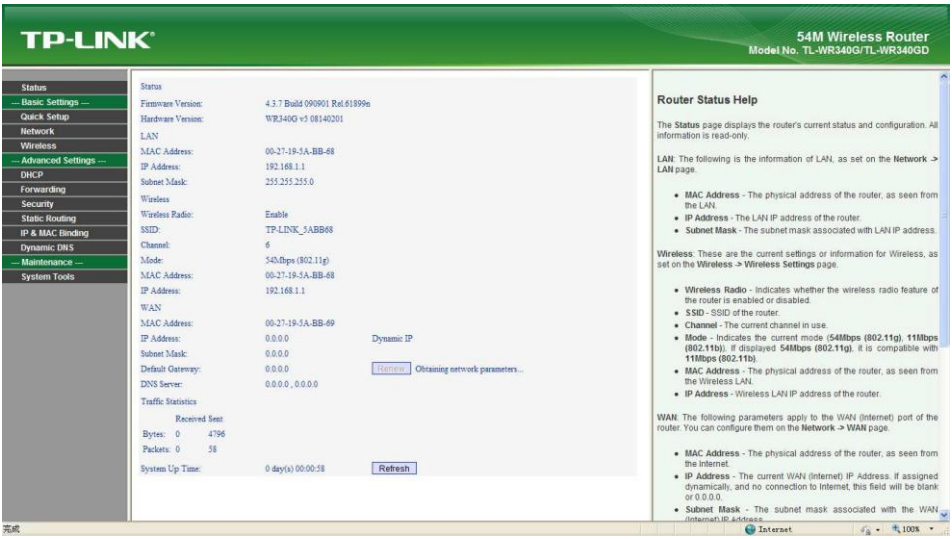


Fig 5-22

Step 2: Open “Forwarding”, select “Virtual Servers”, as shown below:

Fig 5-23

Step 3: Select “Add New…”, and enter the IP address of IP Camera (e.g.192.168.1.100),

port (e.g. 85), status (valid) and other information, click save, as shown below:

Fig 5-24

Step 4: After save successfully, as shown below:

Fig 5-25

Step 5: After user successfully set up DDNS in [Network Configure], you can visit the IP Camera via entering http://MyIPC.no-ip.org:85.

Appendix 7 Network Cable Connection

1. Materials and Tools Required

Use an 8-pin twisted pair (within the effective transmission distance of 100m), two standard RJ45 plugs and a RJ45 special tool to process the network cable.

Note: A network cable tester is recommended to prepare for testing the produced network cable.

2. Pin Definitions

(1) Pin definitions of the straight network cable used for connecting Camera and HUB, switch or other network devices, as shown in Fig 5-26(a):

Fig 5-26(a)

(2) Pin definitions of the crossover network cable used for directly connecting Camera and PC, as shown in Fig 5-26(b):

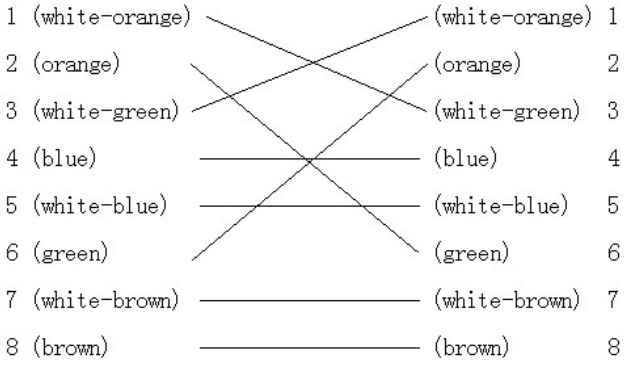


Fig 5-26(b)

Appendix 8 FAQ

1. IE browser cannot access the login page.

Possible Reason 1: Network is disconnected.

Solution: Connect your PC to network, checking whether it works properly or not. Check whether there is cable failure or network failure caused by PC virus, until PCs can be connected with the command of Ping.

Possible Reason 2: IP address has been occupied by other device.

Solution: Stop the connection between IP Camera and network, connect IP Camera to PC, and reset IP address according to the proper operations recommended.

Possible Reason 3: IP addresses are in different subnets.

Solution: Check IP address, subnet mask of server and the settings of Gateway.

Possible Reason 4: Physical addresses of network and IP Camera are conflicting.

Solution: Modify the physical address of IP Camera.

Possible Reason 5: Web port has been modified.

Solution: Set a new Web port number by using SearchTool.

Possible Reason 6: Unknown.

Solution: Restart the IP Camera; restore the factory default state through SearchTool, then reconnect it by using default IP address (192.168.1.10).

2. IE browser can access the login page but cannot login successfully.

Possible Reason 1: Not install the ActiveX.

Solution: ActiveX must be installed when visiting IP Camera for the first time via IE. How to install: Visit IP Camera, click [Download ActiveX] to pop up file download dialog, select [Run] or [Save] to download, double-click the downloaded file "WebClient" to install ActiveX, then reopen IE and login again.

Possible Reason 2: Port number is incorrect.

Solution: Input the correct port number; set a new port number by using SearchTool if you do not remember it, then input the new port number in IE login screen.

Possible Reason 3: User name or password is incorrect.

Solution: Input the correct user name and password; if users do not remember them, you can restore factory settings (IP is 192.168.1.10, username is admin, and password is blank) by using SearchTool.

3. Fail to visit IP Camera via IE after upgrade.

Solution: Delete the caching of browser.

Steps: Open IE →click “Tools” →select “Internet Options” →click “delete files” button in “Internet temporary files” →select “delete all offline contents” →click “OK” →login IP Camera again.

Note: Users need to delete ActiveX in the computer, and re-install the new version when the update have successfully completed.

4. The video image is not fluent.

Possible Reason 1: The frame rate of IP Camera is too low.

Solution: Recommend user to change the stream to sub stream, or increase the video frame rate.

Possible Reason 2: Too many users are viewing the video.

Solution: Block some clients or reduce the video frame rate.

Possible Reason 3: The bandwidth is low.

Solution: Reduce the video frame rate or bitrate.

5. The color of images is abnormal (green or other colors).

Possible Reason: The settings of color adjustment are not properly.

Solution: Restore the default settings in [Video Parameters], or **s**et the ISP parameters properly.

6. There is no sound while monitoring.

Possible Reason 1: No audio input connection; audio input and output reversed.

Solution: Check audio connection of the host (green port is audio input, red port is audio output).

Possible Reason 2: The audio option of live video is closed; “Stream Type” is not set to "Video & Audio".

Solution: Open the audio; “Stream Type” of stream configure should set to "Video & Audio".

7. “SearchTool” software cannot find device.

Possible Reason: “SearchTool” adopts multicast protocol to perform searching, but the firewall forbids multicast data packet.

Solution: Disable the firewall.

8. Image processing doesn’t work properly.

Possible Reason 1: System issue. DirectX function is disabled, which will lead to images display slow and abnormal color.

Possible Reason 2: Hardware issue. Graphics card doesn’t support image acceleration and hardware zooming. (For hardware issue, the only solution is replace graphics card)

Solution: Install DirectX image driver, then open Start Menu→Run→input “DXDIAG” command.

Note： Enable DirectDraw speedup, Direct3D speedup, AGP veins speedup in DirectX function. If they cannot be enabled, that means DirectX installation failed or hardware not supportive.

9. The infrared lamp (IR LED) does not light.

Solution: Cover the photoresistor with your hands (must be completely covered). If IR LED is not light, the infrared module is bad, otherwise, please check [Day / Night Configure] and [Time Parameters].

10. Day / Night function breaks down.

Models with IR:

a) Cover the photoresistor with your hands (must be completely covered). If IR LED is not light, the infrared module is bad, otherwise, please check [Day / Night Configure] and [Time Parameters].

b) Disable timing Day/Night switch.

Models without IR:（Auto mode）

a) Disable timing Day/Night switch.

b) If IR switches repeatedly, turn down the sensitivity; if IR is hard to switch, turn up the sensitivity.

Models without IR:（Timing switch mode）

a) Make sure that the device time synchronizes with PC.

b) Enable timing Day/Night switch.

c) Set the Day/Night Switch Schedule. IP Camera will switch to night mode within certain period of time; otherwise it will switch to day mode.