



**XL-ICA-13x, 20x**

**User Manual**



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# Chapter 1 Network Camera Connection

## 1.1 Cable Network

Two methods can be used to connect between network camera and PC, shown as below:

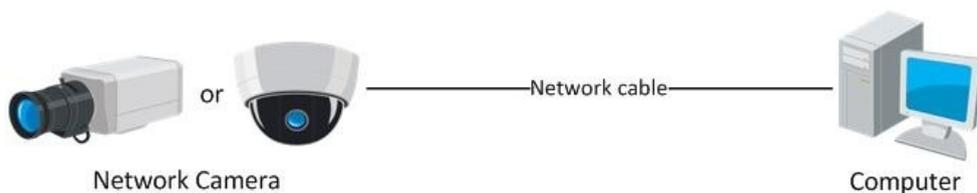


Fig. 1.1.1 Cross Line Connection

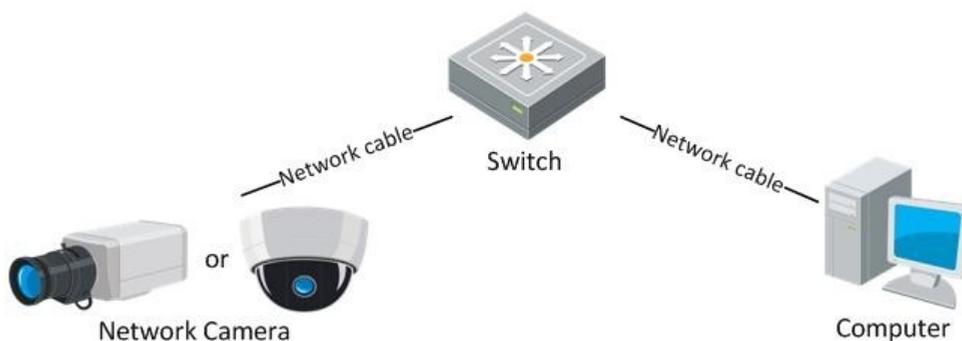


Fig. 1.1.2 Direct Line Connection

## 1.2 Wireless Network

**Note:** This section is only for wireless network camera with mark '-W' in the model number.



Fig. 1.2.1 Peer-to-peer Communication Through Wireless Network

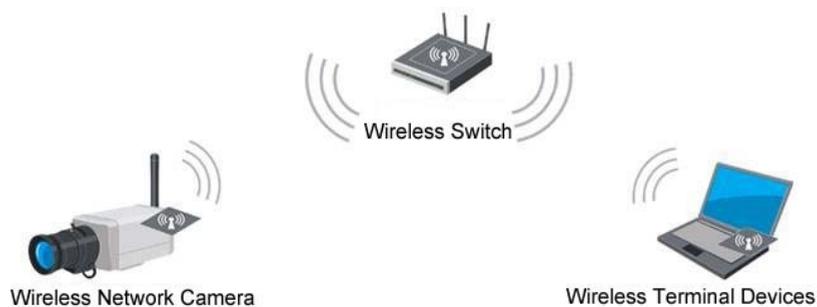


Fig. 1.2.2 Communication Via Wireless Switching Equipment

## 1.3 Network Connection

Before visiting network camera over network, user should acquire its IP address first. SADP is a software tool which can automatically detect network device in the LAN and give the device's information like IP address, mask, port number, device serial number, software version, etc., as shown in Fig. 1.3.1.

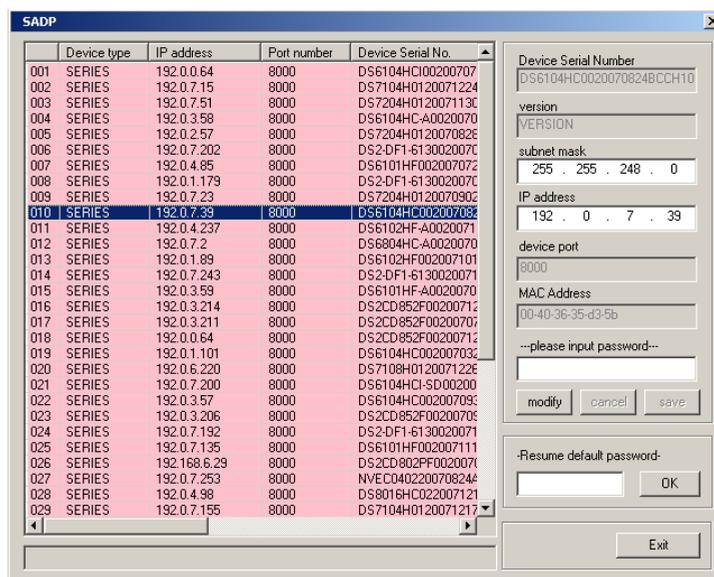


Fig. 1.3.1

Select the device, and set its IP address and mask at the same network segment with the PC. For the detailed introduction of SADP, please refer to Appendix 1.

**Note:** The network camera is set with the factory default IP address of "192.0.0.64", the port of "8000", the super user name of "admin" and the password of "12345".

## Chapter 2 Network Access

After hardware installation, user can view live video and configure parameters for the network camera, including IP address, subnet mask and port number, etc. The following two methods can be used to access the camera:

1. View live video and configure parameters over IE browser.
2. View live video and configure parameters over client software.

### 2.1 Access over IE Browser

Before access to the camera over IE browser, user should adjust the security level.

Open the IE browser, and set the security level to *Medium* in *Tools/InternetOptions/Security/Custom Level. . .*, and enable or prompt ActiveX Control and Plug-in directly as well.

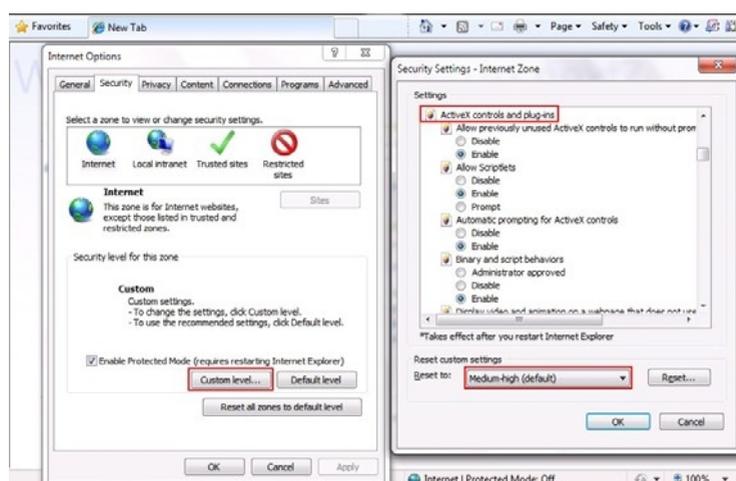


Fig. 2.1.1 Adjust the Security Level

#### 2.1.1 Live View

##### Step 1: Install Active-X Control

Type the IP address of the network camera and press *Enter*, then the ActiveX mention dialog will pop up.

Click *Install* to install the ActiveX control.

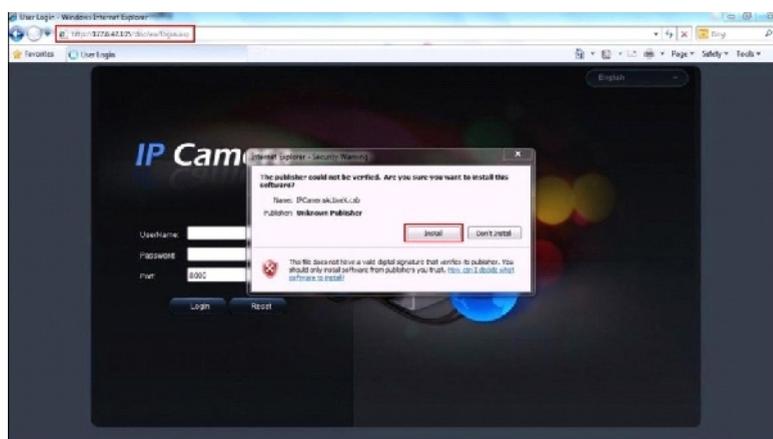


Fig. 2.1.2 Install the ActiveX Control

**Step 2:**

Input the *Username* (default: admin), *Password* (default: 12345) and *Port* (default: 8000) of the camera, and then click [Login].



Fig. 2.1.3 Login Interface

**Step 3:** After successful login, user is allowed to view the live video. Refer to Figure 2.1.4.

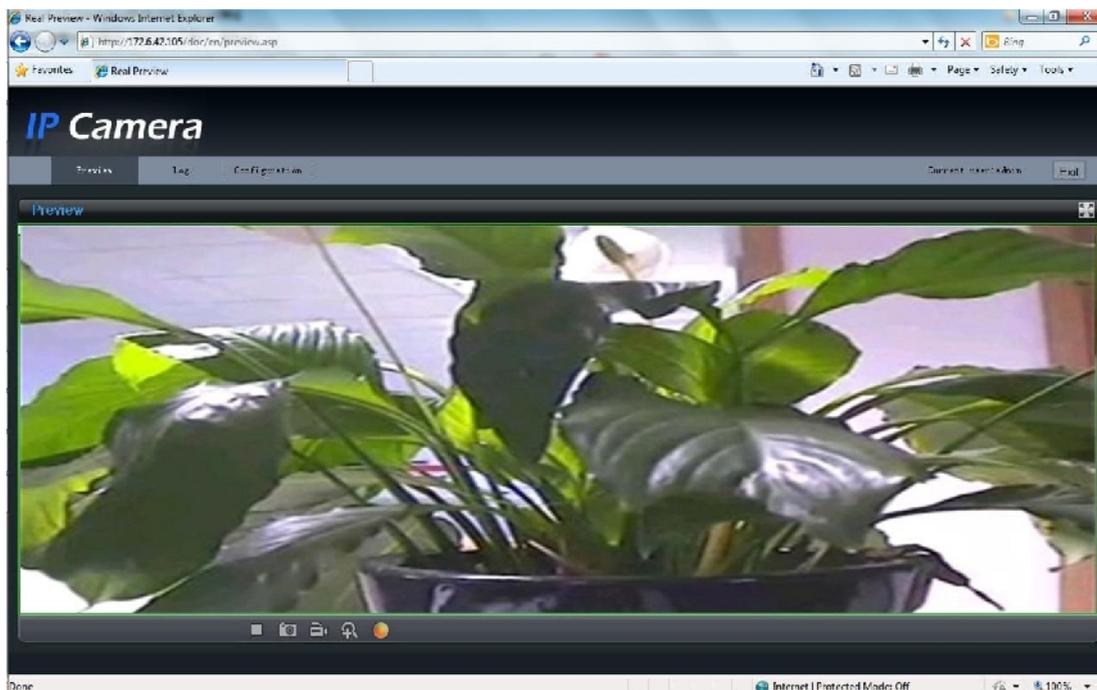


Fig. 2.1.4 Live View Page

Icons on Live View Page:

Icon	Description
	Full-screen display mode
	Exit full-screen display mode
	Start Preview
	Stop Preview
	Capture Picture
	Start/Stop Record
	Digital Zoom
	Video Parameters

**Digital Zoom:**

Click mouse in the desired position of live video image and scroll the mouse to realize zoom in and zoom out function.

**Video Parameters:**

Icon	Description
	Brightness: 0~100 configurable
	Contrast: 0~100 configurable
	Saturation: 0~100 configurable
	Hue: 0~100 configurable
	Gain: 0~100 configurable
	Exposure time: 0~40000 configurable
	Restore default

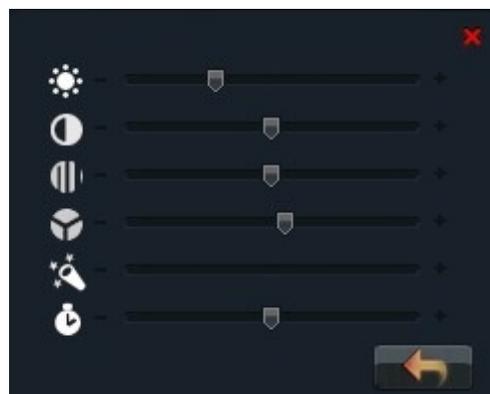


Fig. 2.1.5 Video Parameters

**Note:** Gain value is not configurable when the Day/Night mode is 'Auto'.

**2.1.2 Parameters Configuration**

Click **Configuration** to enter the Parameters Configuration interface.

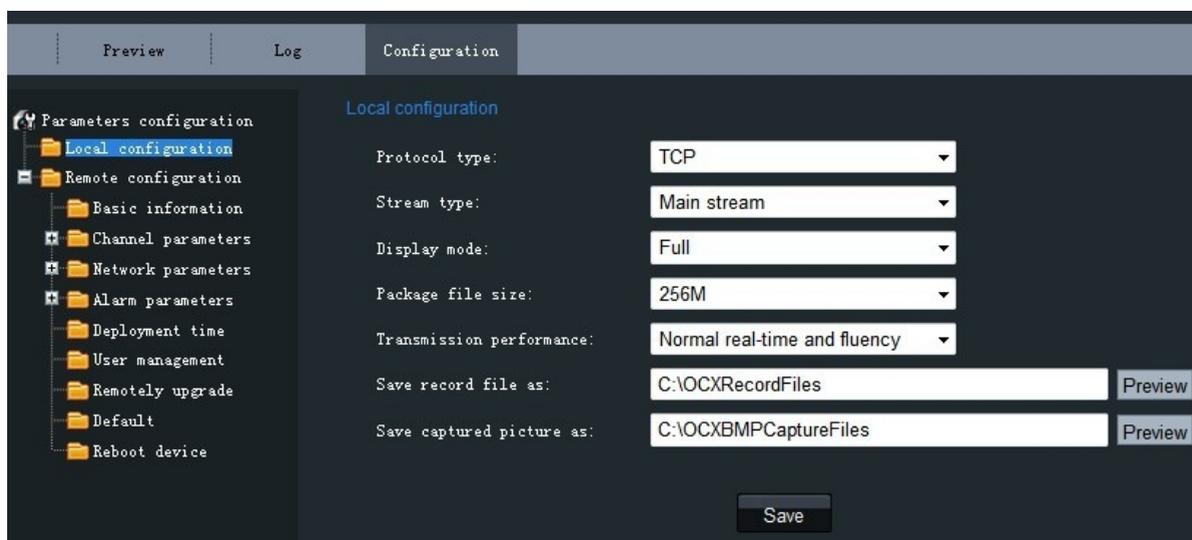
**2.1.2.1 Local Configuration**

Fig. 2.1.6 Local Configuration

**Local Configuration:**

Parameters	Description
Protocol type	TCP and UTP selectable
Stream type	Main stream and Sub stream selectable
Display mode	Full-screen, 4:3 mode, 16:9 mode or adjustable to resolution
Package file size	128M, 256M, 512M selectable
Transmission performance	Shortest delay mode, good real-time, normal real-time and fluency and good fluency options selectable
Save record file as	The default directory for saving record files is C:\OCXRecordFiles, which can be modified by user
Save captured picture as	The default directory for saving captured files is C:\OCXBMPCaptureFiles, which can be modified by user

**2.1.2.2 Remote Configuration****Basic Information:**

In the Basic Information settings interface, user is allowed to set the Device Name and Device ID, as well as view the information of IP camera, including Device Description, Device Location, MAC address, Device Type, Device SN, Firmware Version, and U-boot Version.

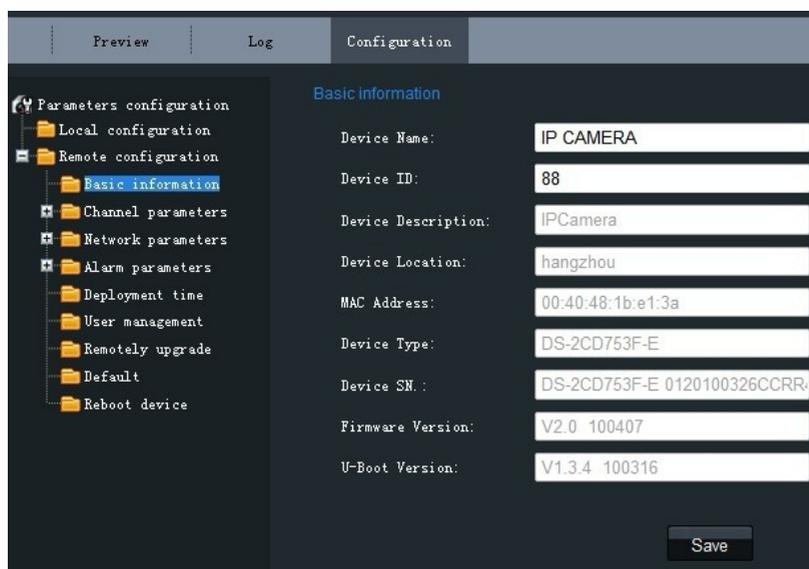


Fig. 2.1.7 Basic Information

**Channel Parameters→Display Setting:**

According to different requirements, enable the display of *Date&Time* and *Week* by clicking the checkbox. Different date formats can be selected.

The OSD Status can be set to transparent & flickering, transparent & unflickering, nontransparent & flickering, or nontransparent & unflickering.

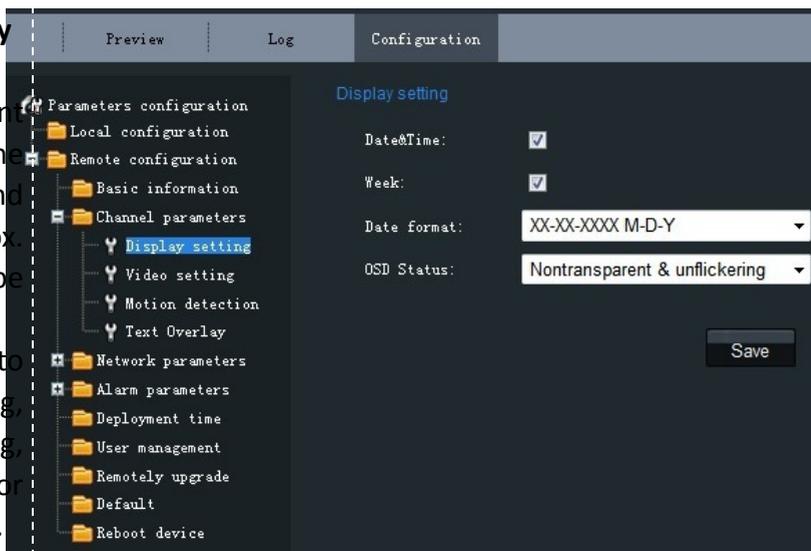


Fig. 2.1.8 Display Settings

**Channel Parameters→Video Settings:**

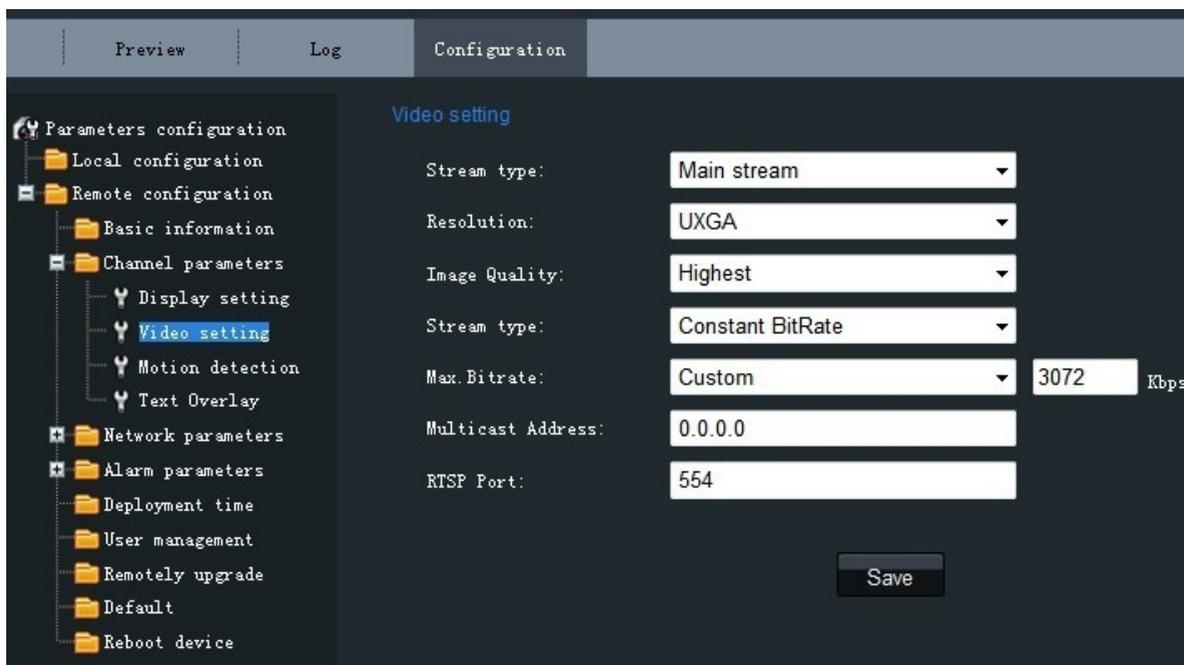


Fig. 2.1.9 Video Settings

Parameter	Description
Stream Type	Select stream type to Main stream or Sub stream
Resolution	Select the resolution for your need,
Image Quality	Select image quality to Highest, High, Medium, Low, Lower or Lowest
Stream Type	Select the bitrate type to Constant bitrate or Variable bitrate
Max. Bitrate	Select or custom bitrate according to the resolution
Multicast	Set the multicast address, with the default multicast of 0.0.0.0
RTSP Port	Set the RTSP port, with the default RTSP port of 554

### Channel Parameters→Motion Detection Setting:

Select the checkbox of *Enable motion detection* to enable this function.

### Zone Settings:

Click *Start draw* button to draw motion detection zone by clicking and dragging the mouse in the live video image.

User is allowed to draw multiple motion detection zones in the same picture.

When all zones have been set, click *Stopdraw* to finish drawing.

### Sensitivity:

The sensitivity level can be set to 0, 1, 2, 3, 4 and 5. When it is set to 0, the sensitivity is disabled.

### Linkage:

The Linkage method can be selected to either *Email link* or *Trigger alarm output*.

Click "Save" button to save the modified parameters.

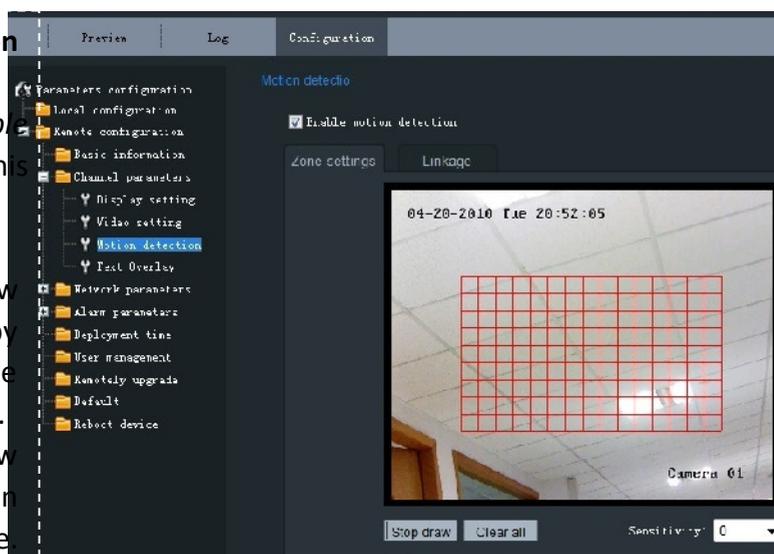


Fig. 2.1.10 Motion Detection Zone Settings

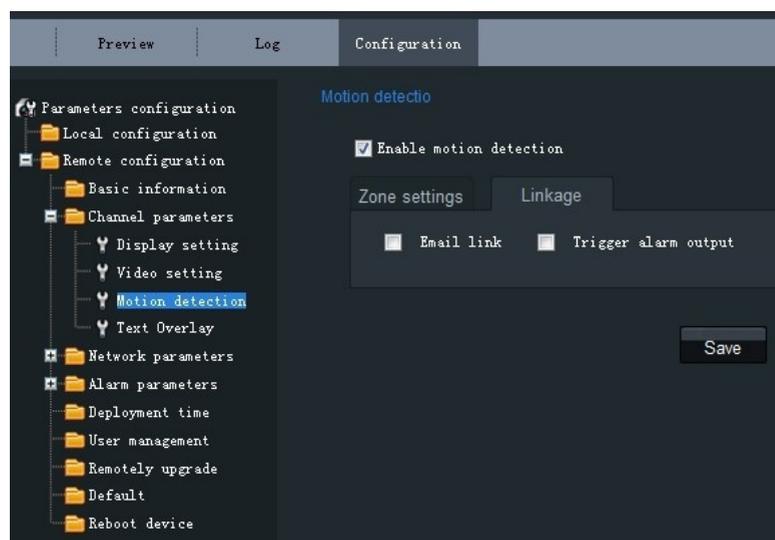


Fig. 2.1.11 Motion Detection Linkage Settings

**Channel Parameters→Text Overlay Setting:**

Input the characters in the *Text Information* box and define the OSD location in the image by setting the *XPosition* and *YPosition*, and then select the checkbox of *OSD Text*. After clicking *Save* to finish the settings, the defined title will be displayed on the image.

**Note:** The values of *XPosition* and *YPosition* are relative to the upper left corner origin of the image.

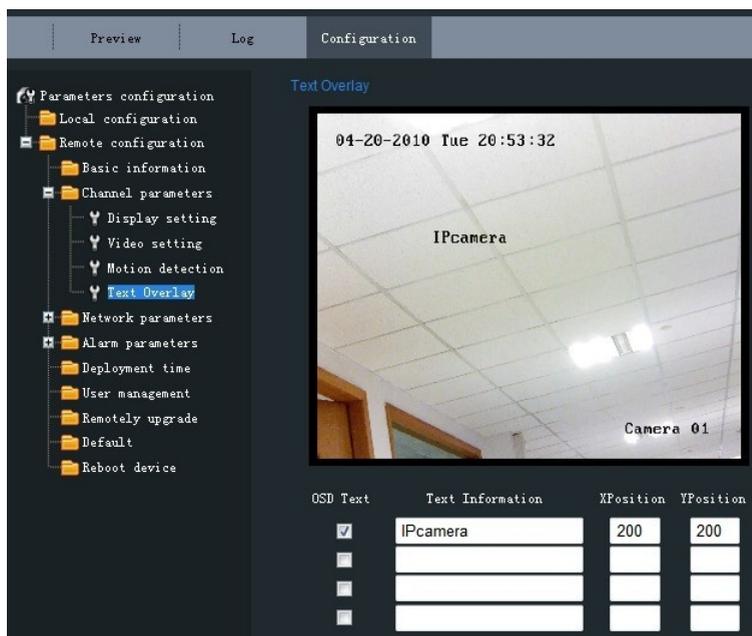


Fig. 2.1.12Text Overlay Settings

**Network Parameters→Network Setting:** Set the IP

Address, Subnet Mask, Gateway and DNS Server of the network camera.

Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

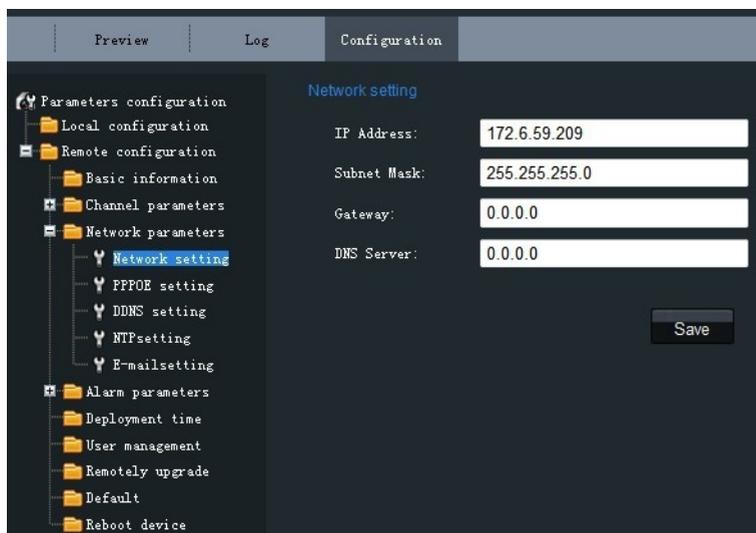


Fig. 2.1.13 Network Settings

### Network Parameters→PPPOE Setting:

Click the checkbox of *Enable PPPOE* to enable this function.

Input the PPPOE user name and password in the text box and then click *Save* to finish settings. After reboot, the camera will obtain a public IP address.

Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

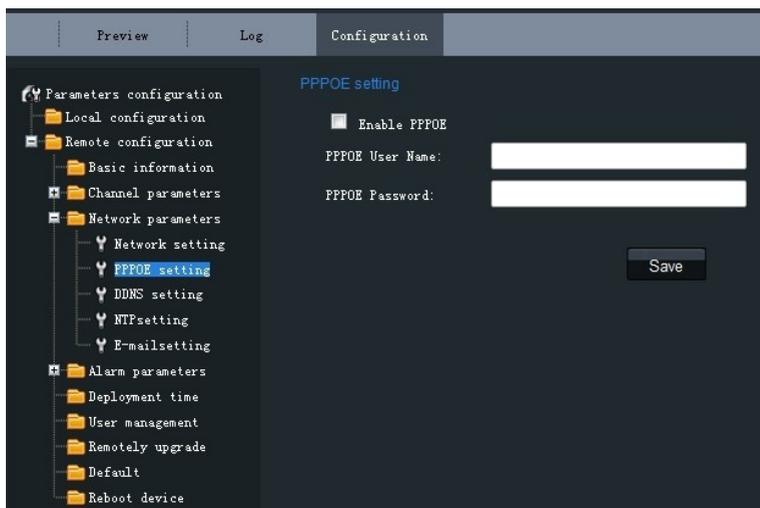


Fig. 2.1.14 PPPOE Settings

### Network Parameters→DDNS Setting:

Click the checkbox of *Enable DDNS* to enable this function.

The protocol type can be set to DynDNS or IPServer.

Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

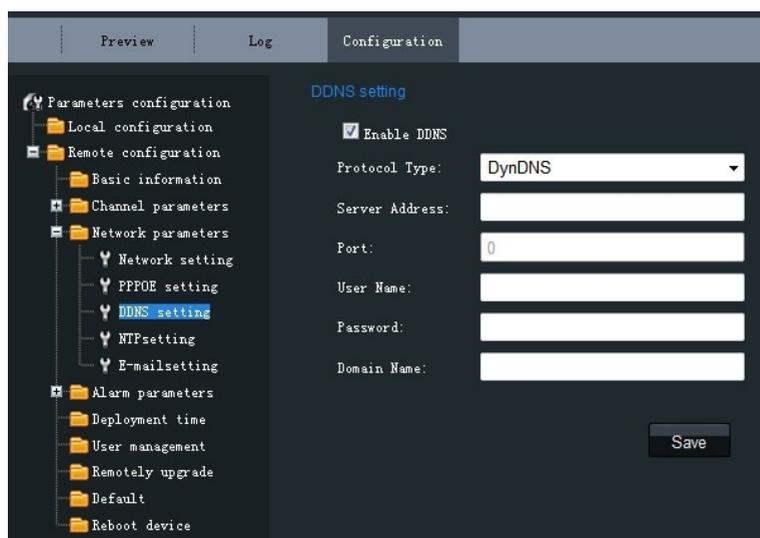


Fig. 2.1.15 DDNS Settings

If the protocol type is selected to DynDNS, please input the *Server Address*, e.g., members.dyn dns. org.

The *User Name* and *Password* refer to the user name and password registered in the DynDNS website.

The *Device Name* refers to the domain name applied in the DynDNS website.

Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

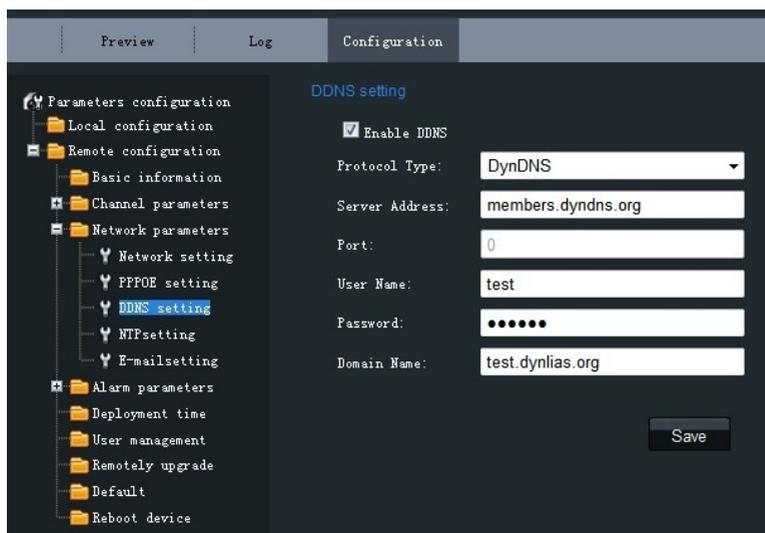


Fig. 2.1.16 DynDNS Settings

If the protocol type is selected to IP Server, please input the *Server Address* of the IP Server. Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

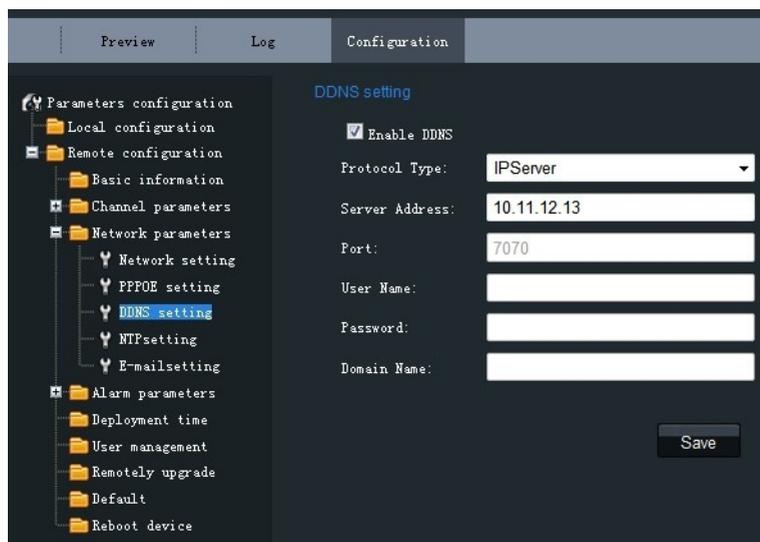


Fig. 2.1.17 IP Server Settings

### Network Parameters → NTP Setting:

Click the checkbox of *Enable NTP* to enable this function. Input the *Server Address* and *Port* of NTP.

If the public network is applied, please input the NTP *Server Address* with provision of time sync service, e.g., 210.72.145.44.

In the private network is applied, the NTP software can be used to establish NTP server to achieve time synchronization.

Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

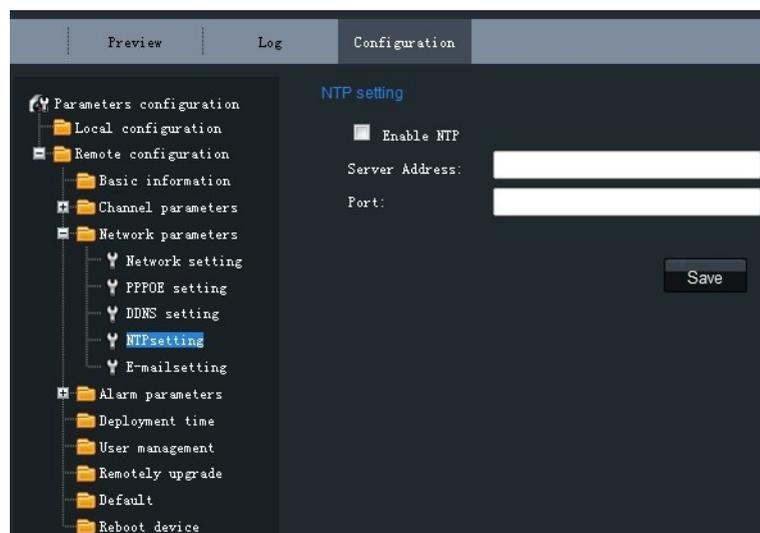


Fig.2.1.18 NTP Settings

### Network Parameters→E-mail Setting:

Through E-mail settings, the alarm message can be sent to the designated E-mail address when alarm event occurs.

Input the SMTP server, SMTP port, user name, password, E-mail sender and receiver, and finally click *Save* to finish E-mail settings.

Click "Save" button to save the modified parameters.

**Note:** Please reboot the network camera to validate the modified parameters.

### Alarm Parameters→Alarm Input Setting:

Set the type of *Relay Status* to NC or NO.

The *Linkage* method can be selected to *E-mail link* or *Trigger alarm output*.

Click "Save" button to save the modified parameters.

### Alarm Parameters→Alarm Output Setting:

The *Output Delay* refers to the length of time that the relay remains in effect after alarm occurs. The output delay time can be set to *5sec*, *10sec*, *30sec*, *1min*, *2min*, *5min*, *10min* or *Manual* (manually disable). Click "Save" button to save the modified parameters.

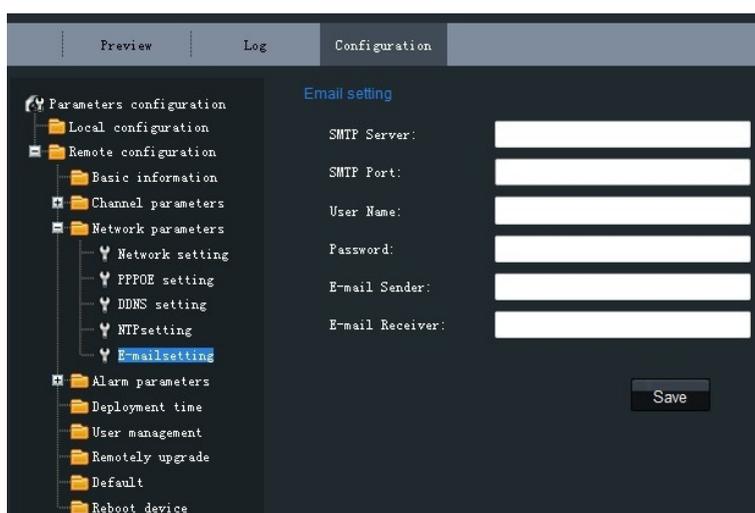


Fig. 2.1.19 E-mail Settings

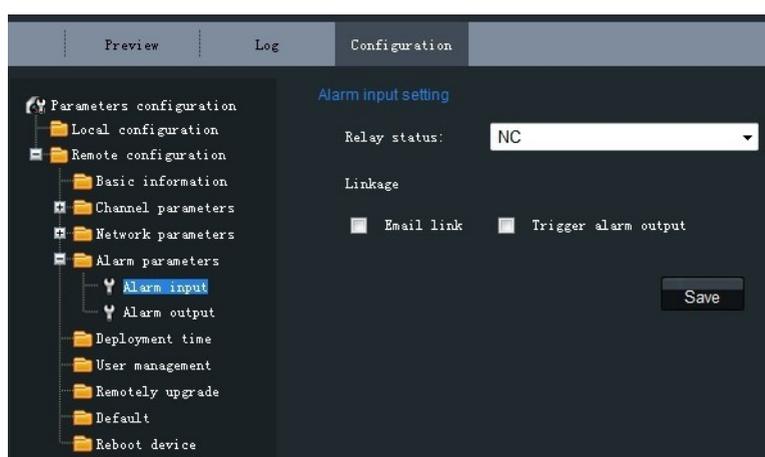


Fig. 2.1.20 Alarm Input Settings

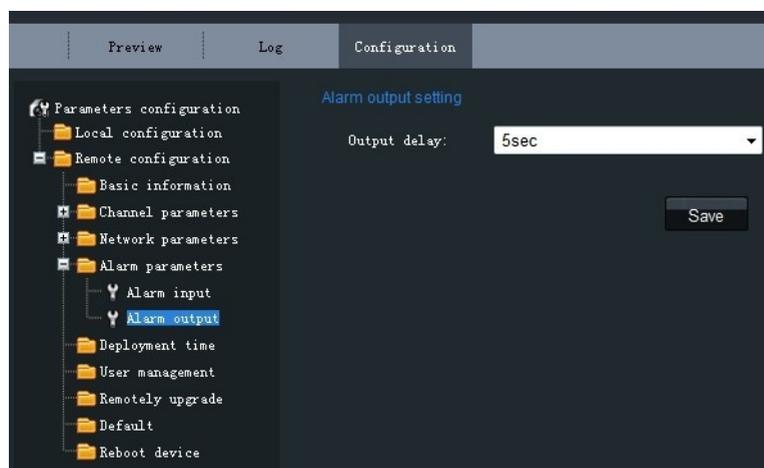


Fig. 2.1.21 Alarm Output Delay Settings

### Alarm Deployment Time:

The *Deployment time* can be set to several days a week or to all week, with only one period configurable for each day.

**Note:** The alarm deployment time setting is valid only when the camera has already been configured with the motion detection, alarm input and alarm output functions.

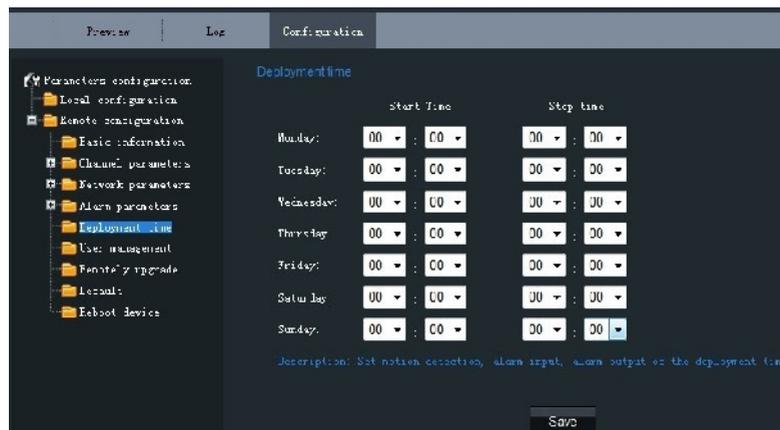


Fig. 2.1.22 Alarm Deployment Time Settings

Click "Save" button to save the modified parameters.

### User Management:

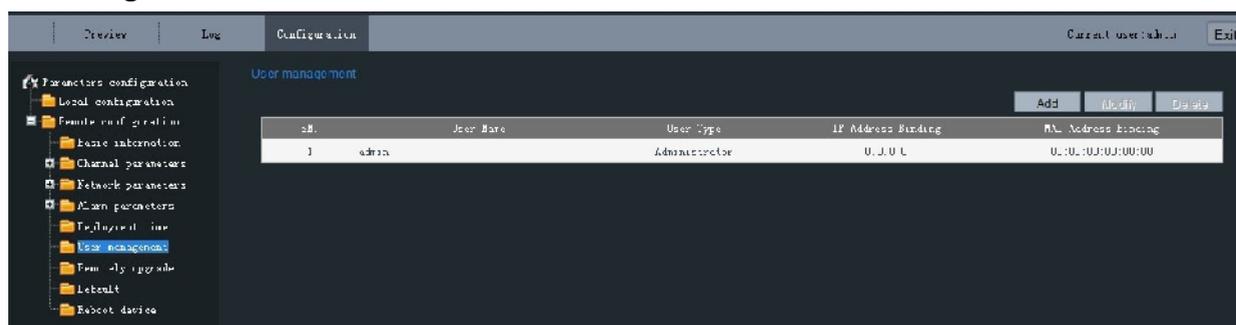


Fig. 2.1.23 User Management

When the current login user is *admin*, it is allowed to create other users. Up to 15 users can be created. Refer to Fig. 2.1.23.

### Add User:

Click *Add* to enter the settings interface as shown in Fig. 2.1.24.

Input the user name, password, IP address, MAC address, and then select user type. Finally, click *OK* to finish the user addition.

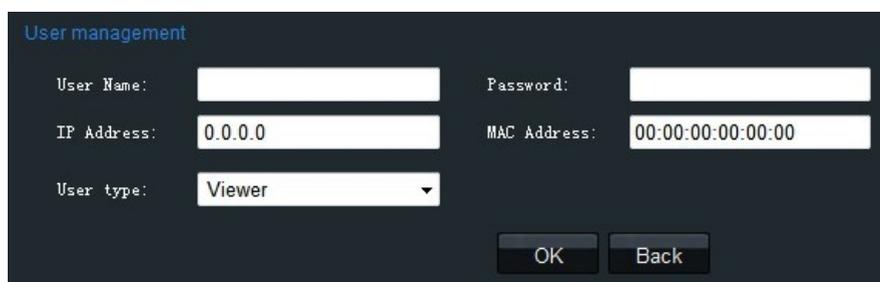


Fig. 2.1.24 Add User

### Modify User:

Click *Modify* to enter the settings interface as shown in Fig. 2.1.25.

It is allowed to modify the user name, password, IP address, MAC address, and then select user type. Finally, click *OK* to finish the user modification.

**Note:** Only the password of the user admin can be modified.

The screenshot shows a 'User management' window with the following fields:

- User Name: Camera
- Password: [masked]
- IP Address: 0.0.0.0
- MAC Address: 00:00:00:00:00:00
- User type: Viewer (dropdown menu)

Buttons: OK, Back

Fig. 2.1.25 Modify User

### Remote Upgrade:

Click *Browse* to select the local update file and then click *Upgrade* to finish remote upgrade.

The screenshot shows the 'Remotely upgrade' section of the configuration menu. The left sidebar lists various configuration categories, with 'Remotely upgrade' highlighted. The main panel contains:

- Update file: [input field] Browse...
- Update status: [input field] Update

Fig. 2.1.26 Remote Upgrade

### Restore Default:

Select *Full Mode* or *Basic Mode* to restore the default settings.

**Note:**

The *Full Mode* refers to restore all parameters to the factory default settings.

The *Basic Mode* refers to restore the parameters to factory default settings except IP address, subnet mask, gateway and port.

The screenshot shows the 'Default' section of the configuration menu. The left sidebar lists various configuration categories, with 'Default' highlighted. The main panel contains:

- Restore the default settings? (with a green information icon)
- Full Mode
- Basic Mode

Fig. 2.1.27 Restore Default

**Reboot Device:**

Click *OK* to reboot the network camera.

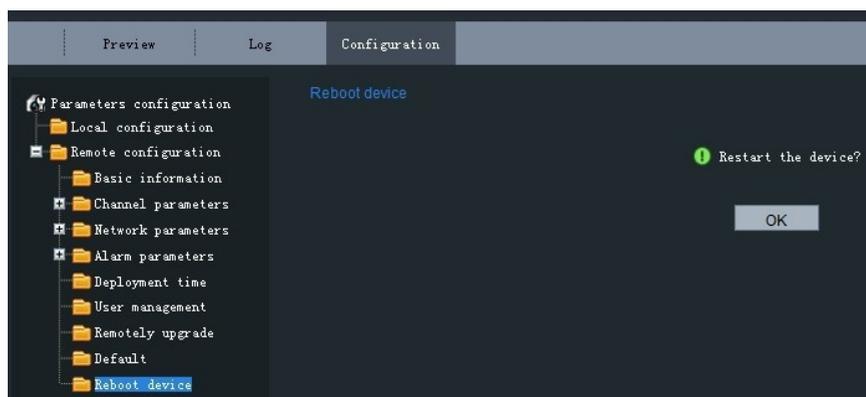


Fig. 2.1.28 Reboot Device

**2.1.2.3 Advanced Configuration**

**Note:** This chapter is applicable to professional configuration.

**1:** Input the IP address of the network camera and “config” (Such as <http://172.6.42.105/config>), and then click [Enter].



Fig. 2.1.29

**2:** Type the *Username* (default: admin), *Password* (default: 12345) and *Port* (default: 8000) of the camera, and then click [Login].



Fig. 2.1.30



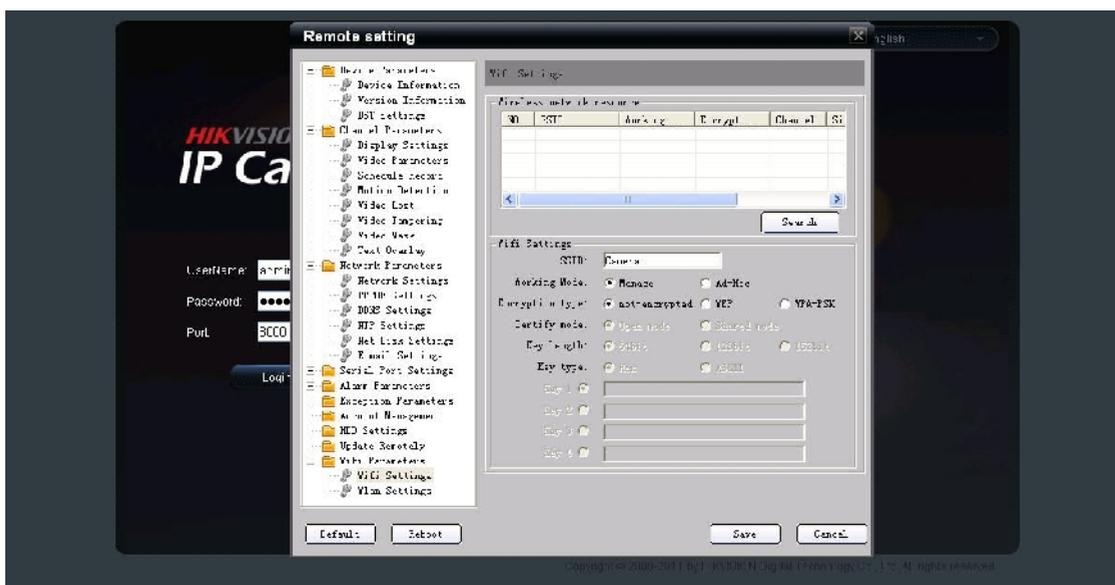


Fig. 2.1.32 WiFi Settings Interface

In the WiFi settings interface, if user select Ad-Hoc mode as the operating mode, please set the PC's wireless IP address in the same network segment as the IP address of wireless network camera. Select "View Wireless Networks" in the computer's "Wireless Network Connection". Find the device which has the same name as the SSID number of the wireless camera. Then point-to-point communication through wireless network is established successfully. So, there is no need to use an Access Point (AP) between the PC and wireless network camera.

If users need to enable encryption, select the appropriate encryption type and set the corresponding encryption parameters.

In the remote parameter settings interface, select "WiFi parameters"-> "Wlan Settings" to enter the Wlan settings interface, as shown in Fig. 2.1.33.

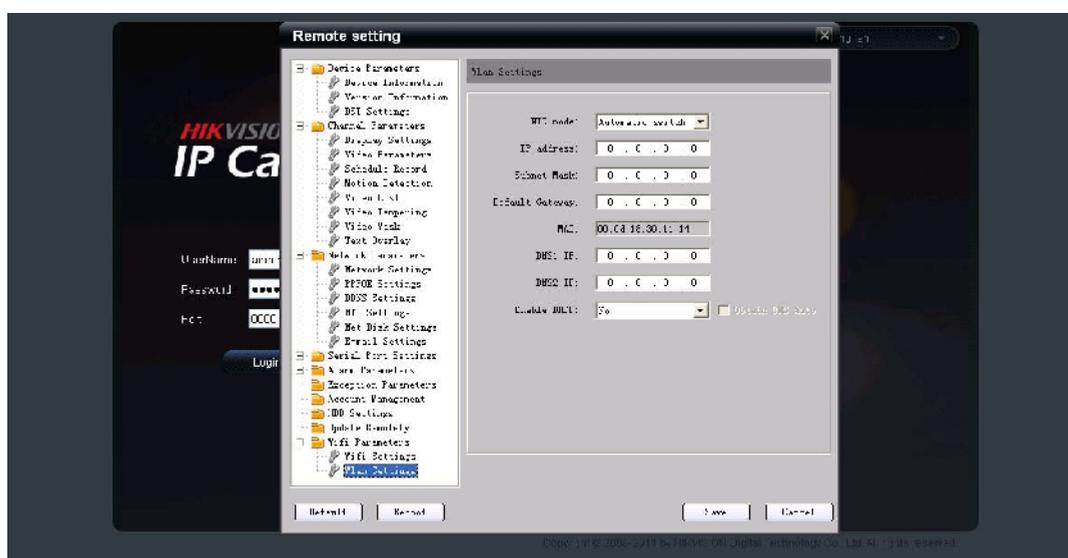


Fig. 2.1.33 Wlan Settings Interface

In the "Wlan settings" interface, user can set the wireless network camera's parameters like wireless IP address, subnet mask, gateway and DNS server address, etc. Unplug the network cable from

wireless network camera. The wireless network camera now can be accessed through wireless network after the related network parameters have been set. The way that accesses to wireless network camera through wireless network is similar to cable network. Refer to section 2.1.

## 2.2 Access over Client Software

Please refer to “iVMS-4000(v2.0) introducor.pdf” for detailed client software installation. You can find the document in the PC Operating System after the installation of client software 4000 v. 2.0 by selecting “Start”-> “All Programs”-> “iVMS 4000( v. 2.0)” -> “iVMS 4000( v. 2.0)”.

### 2.2.1 Live View

Right click to add devices in the setup interface of client software. Please refer to “iVMS-4000(v2.0) introducor.pdf” for more detailed device added process. You can find the document in the PC Operating System after the installation of client software 4000 v. 2.0 by selecting “Start”-> “All Programs”-> “iVMS 4000( v. 2.0)” -> “iVMS 4000( v. 2.0)”.

Click Preview, and then double click the device name in the left tree to view the live video. Refer to Fig. 2.2.1.

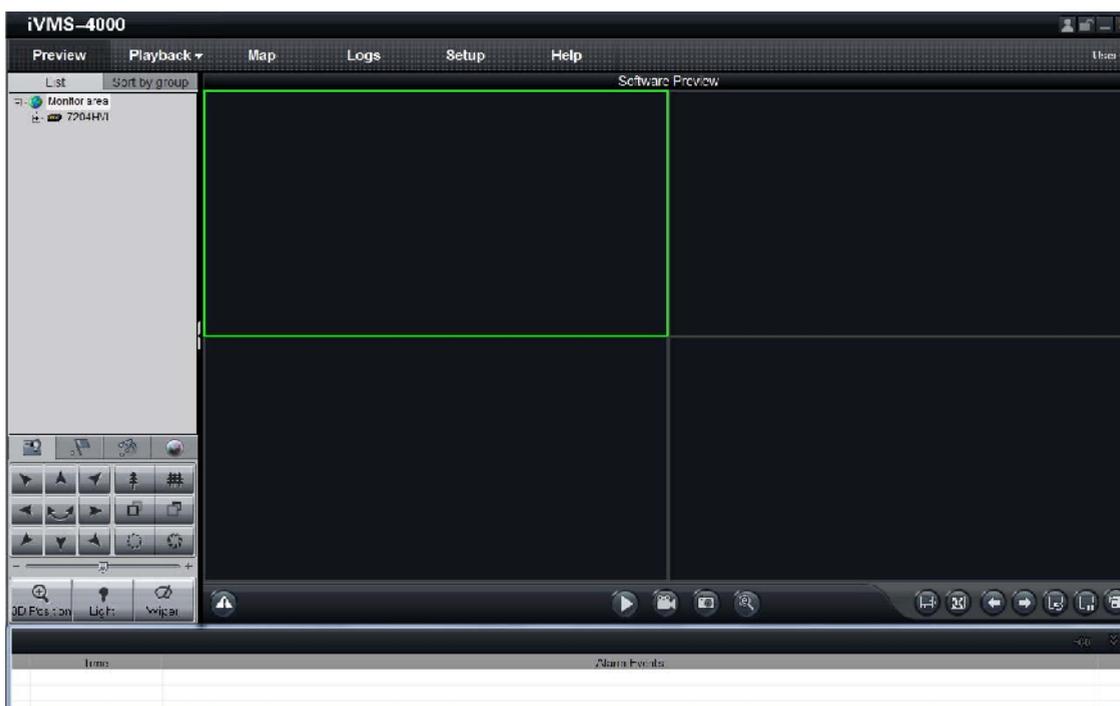


Fig. 2.2.1 Preview

Please refer to “iVMS-4000(v2.0) introducor.pdf” for more detailed parameters configuration. You can find the document in the PC Operating System after the installation of client software 4000 v. 2.0 by selecting “Start”-> “All Programs”-> “iVMS 4000( v. 2.0)” -> “iVMS 4000( v. 2.0)”.

## 2.2.2 Camera Parameters Configuration

### Note:

Different types of network cameras maybe have different configuration parameters in the interface of “Config Sensor Parameters”. This section takes a type of network camera for example to introduce configuration parameters in the interface of “Config Sensor Parameters”. If the information in the actual interface of “Config Sensor Parameters” is not different from the information shown in this section, then subject to the actual interface information.

For viewing better image, you can set the parameters of the camera, and operate as following:

#### Step 1:

Right click in the preview window, and click [Config Sensor Parameters...], then the [Config Sensor Parameters...] box will pop up.

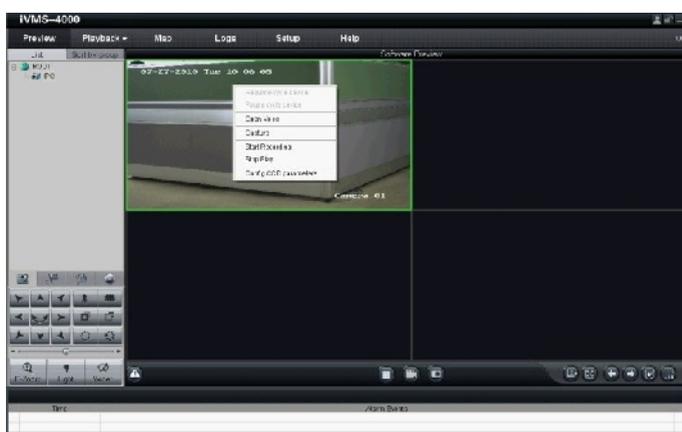


Fig. 2.2.2 Sensor Parameters

#### Step 2: Video Parameters Configuration

Adjust the value of “Brightness”, “Contrast”, “Saturation”, “Hue”, “Sharpness” and “Gain” for your need, which can be set from 1 to 100.

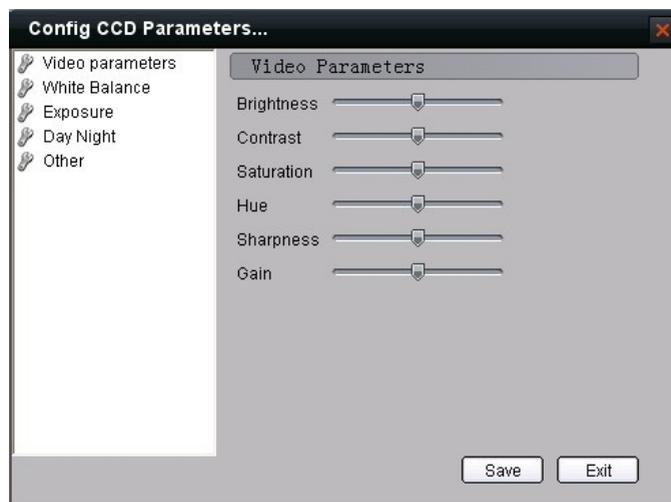


Fig. 2.2.3 Video Parameters

**Step 3: White Balance Configuration**

Select the mode to *Auto1* or *Off* for your need.

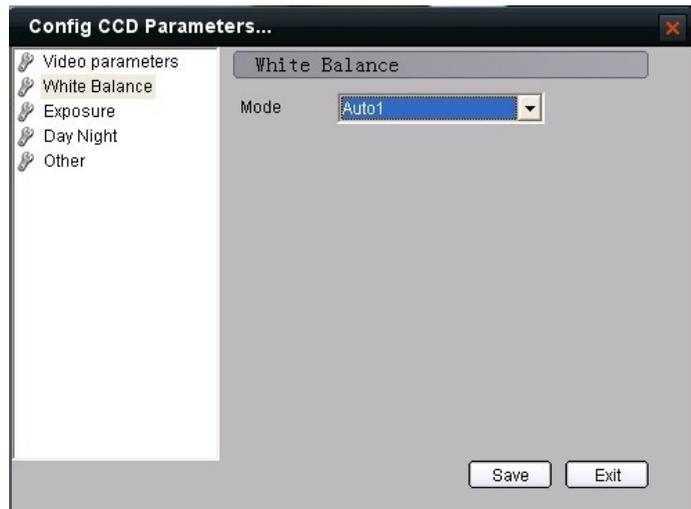


Fig. 2.2.4 White Balance

**Step 4: Exposure Configuration**

Select "Exposure time" and "Iris mode" for your need.

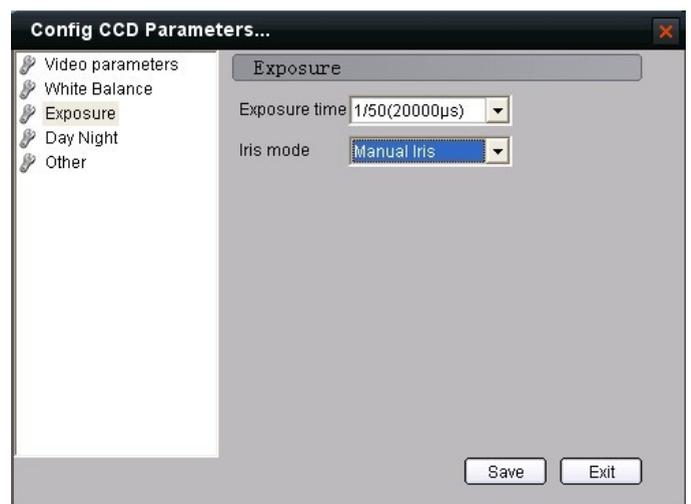


Fig. 2.2.5 Exposure

**Step 5: Day/Night Mode Configuration**

Select "Day", "Night" or "Auto" mode in *Mode* and adjust the value of "Day->Night", "Night->Day", and "Filter time" for your need.

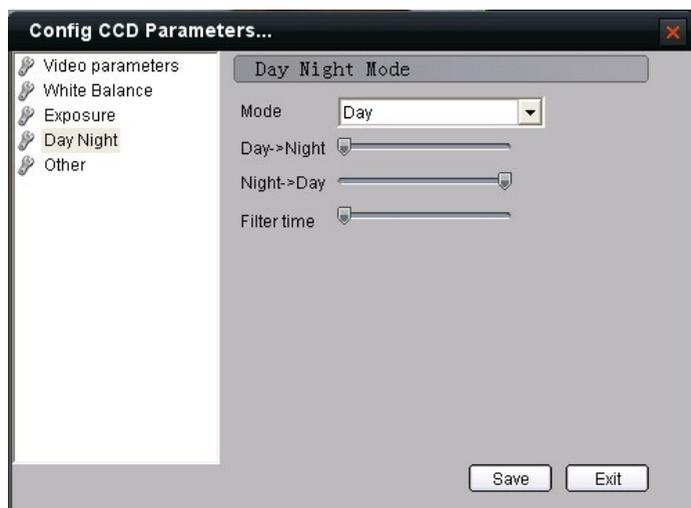


Fig. 2.2.6 Day/ Night Mode

**Step 6: Other Parameters Configuration**  
Select the value of “Power Line”, “Mirror”, “E-PTZ” and “Local Output”.

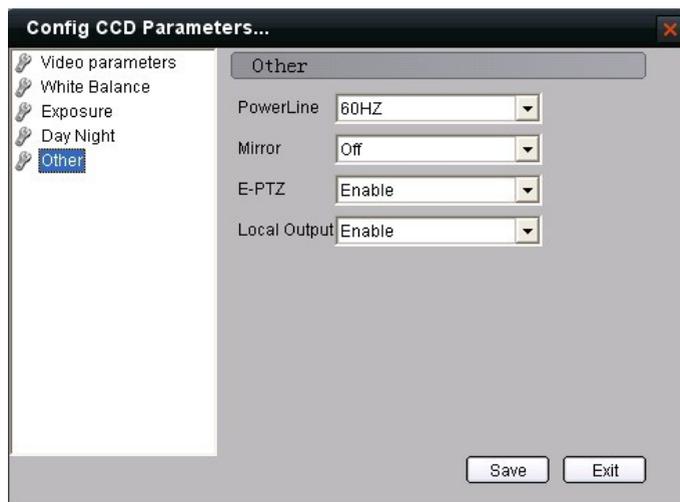


Fig. 2.2.7 Other Parameters

Please refer to “iVMS-4000(v2.0) introductor.pdf” for more detailed parameters configuration. You can find the document in the PC Operating System after the installation of client software 4000 v. 2.0 by selecting “Start”-> “All Programs”-> “iVMS 4000( v. 2.0)” -> “iVMS 4000( v. 2.0)”.

### 2.2.3 Wireless Parameter Configuration

**Note:** This section is only for wireless network camera with mark '-W' in the model number.

Click “setup” in the client software to enter the devices management interface. Right click the device that needs to be configured, select “Remote Configuration” to enter the remote configuration interface.

The way to configure the parameters in the client software is the same as the way in IE browser. Please refer to section 2.1.3 for more detailed parameters configuration.

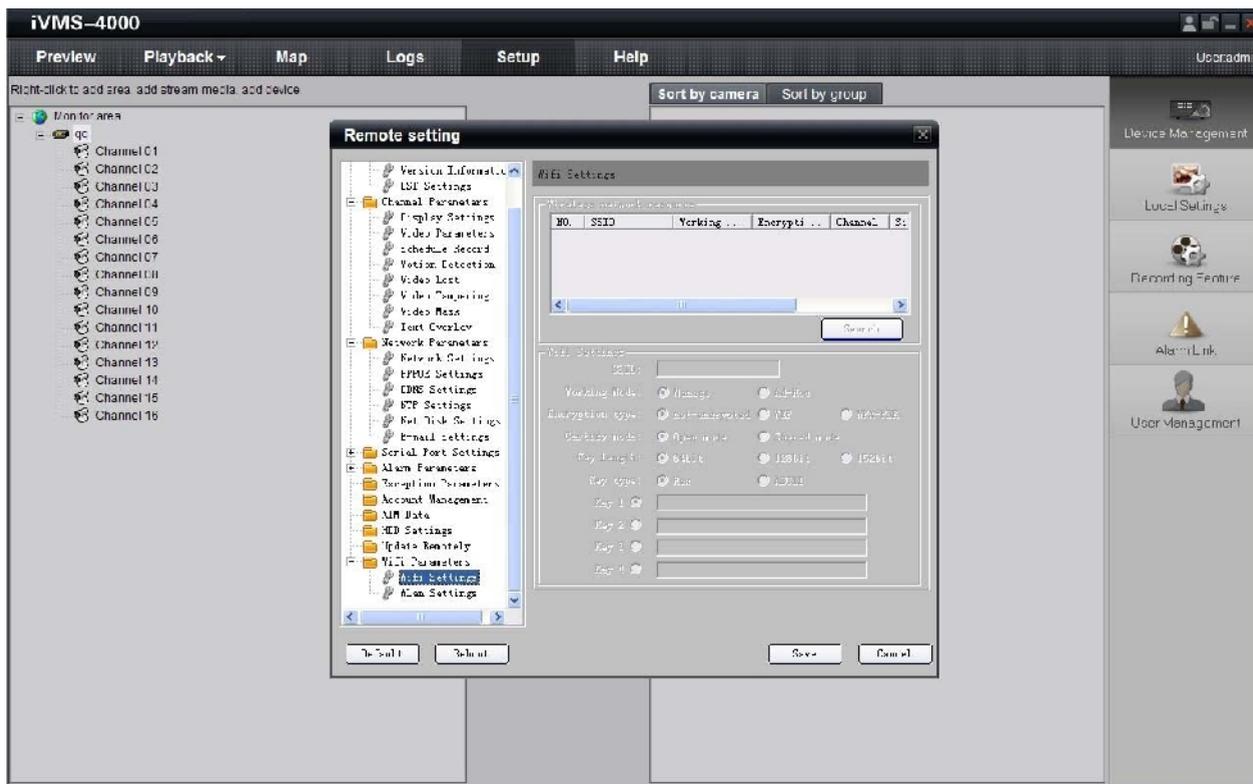


Fig. 2.2.8 Client Software Wireless Configuration Interface

## Chapter 3 Access over Internet

### 3.1 Access network camera with static IP

When there is a static IP from an ISP, open some ports (such as 80 and 8000 ports) in the router. Then a user can visit it through a web browser or client software via the internet. The steps for port forwarding are different for each model of router. Please call the router manufacturer for assistance with port forwarding or visit [www.portforward.com](http://www.portforward.com).

**Note:** Refer to Appendix 2 for a detailed explanation about Port Map.

Users can directly connect the network camera to the internet without using a router.

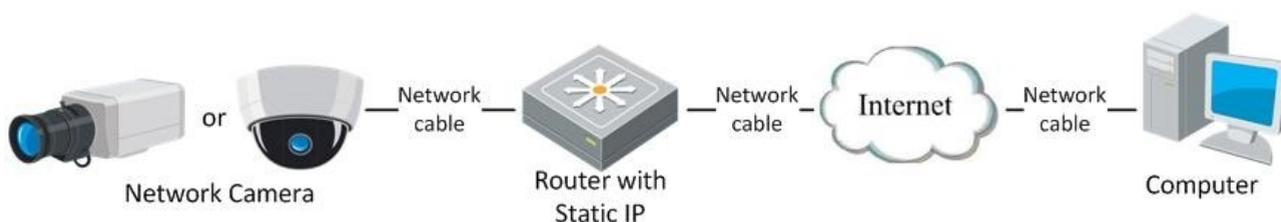


Fig. 3.1.1 Access IPC through Router with Static IP

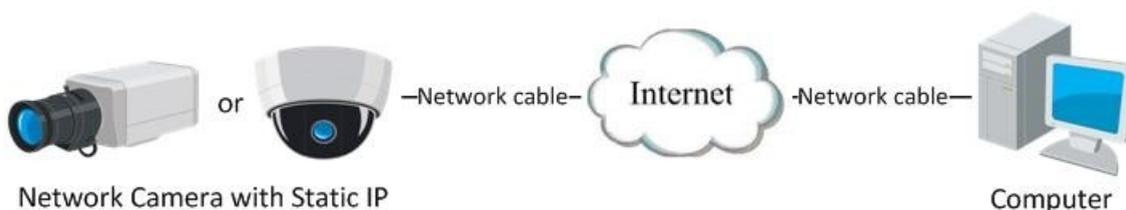


Fig.3.1.2 Access IPC with Static IP directly

For the client software to view the camera, in the adding equipment column, select the normal model, and then fill in the IP info.

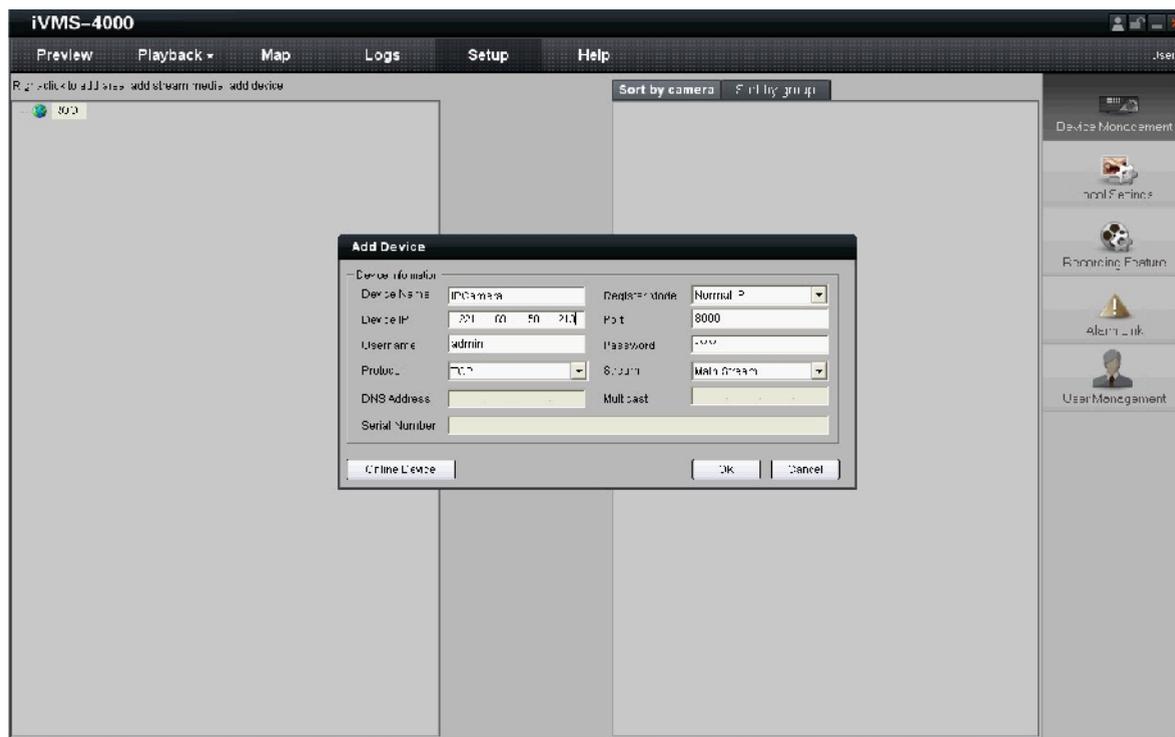


Fig. 3.1.3 Selecting Normal IP

## 3.2 Access network camera with dynamic IP

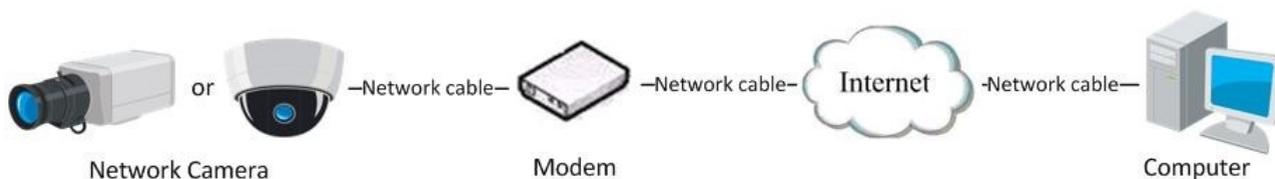


Fig. 3.2.1 Access IPC through PPPoE Dial-up

This camera supports the PPPoE auto dial-up function. The camera will get a public IP address by ADSL dial-up after the camera is connected to a Modem; First, access to the network camera through local network, select “Configure”→”Right Click the Device”, “Remote Configuration”, and finally select “PPPoE Settings” under “Network Parameters” to fill in the PPPoE user name and password and confirm the password. Please restart the network camera after completion of configuration. Then the network camera can obtain a dynamic IP from an ISP operation business. However, the obtained IP address is dynamically assigned via PPPoE, so the IP address always changes accompanied with modem rebooting.

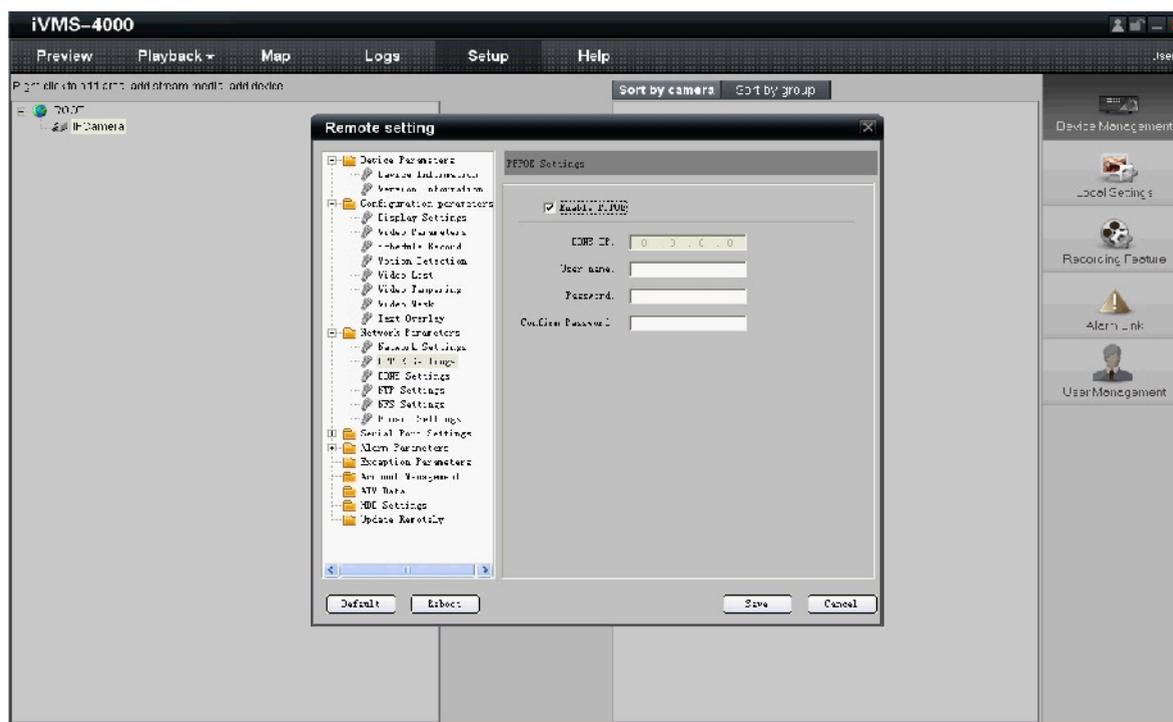


Fig. 3.2.2 PPPoE configuration Dialog box

It is inconvenient to view a network camera with a dynamic IP, therefore, users should register with a dynamic DNS provider. (Such as DynDns.com)

Domain name resolution contains normal domain name resolution and private domain name resolution. First, we will introduce normal domain name resolution.

### 1. Normal Domain Name Resolution

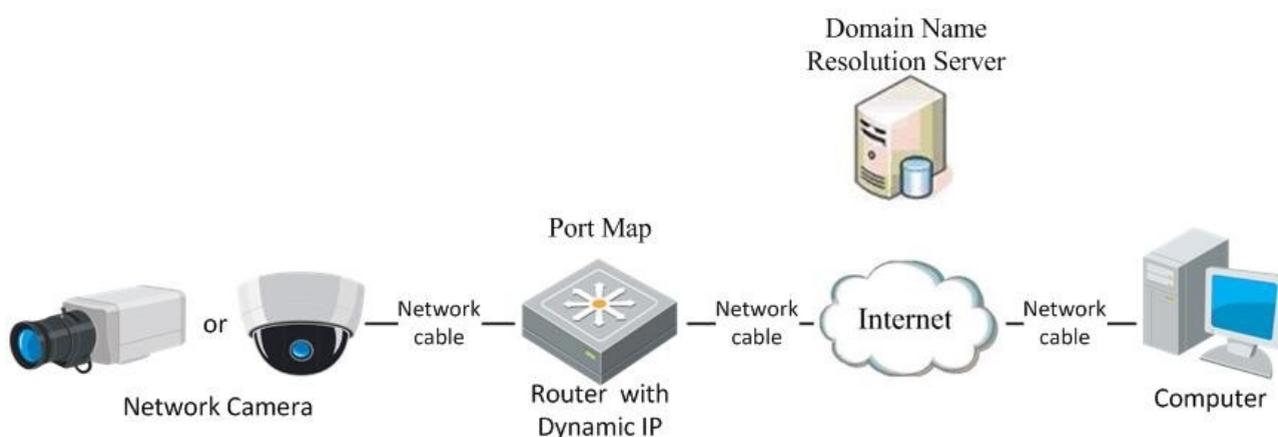


Fig. 3.2.3 Normal Domain Name Resolution

Apply a domain name from a domain name provider, then view the camera via the applied domain name. If the camera connects to the internet via a router, users should port forward the router. Please refer to Appendix 2.

Input domain names in the client software or IE to view the network cameras. Take the client

software configuration as an example.

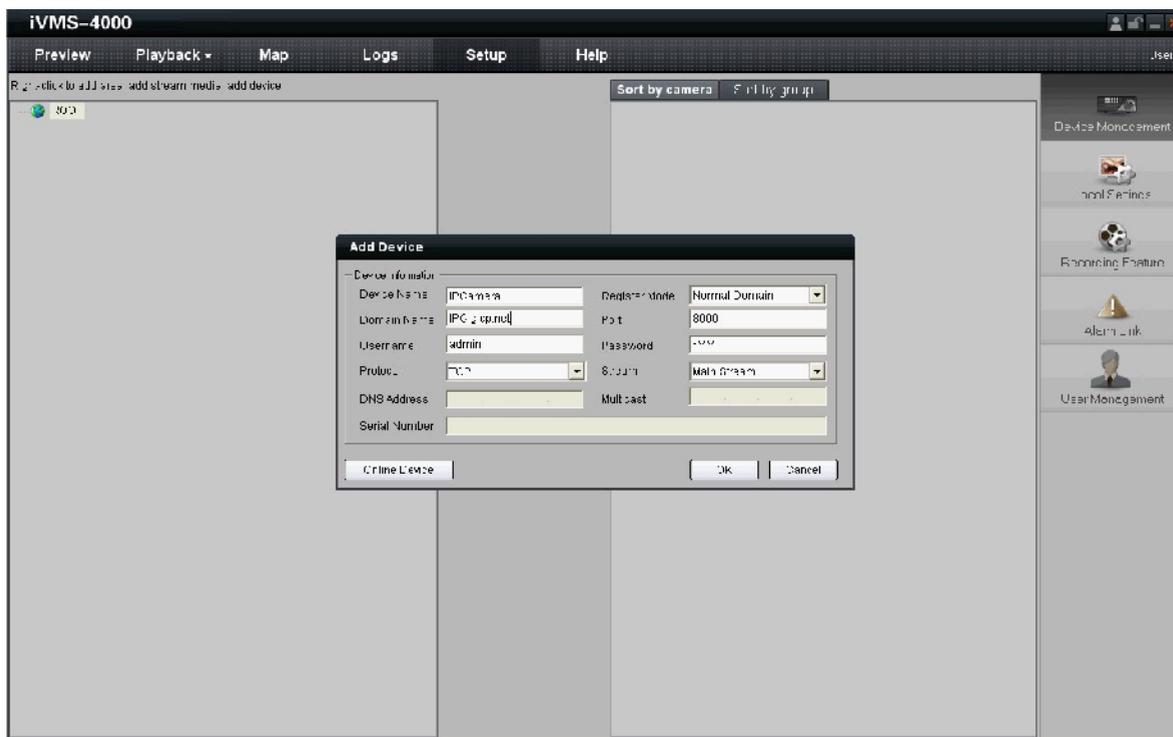


Fig. 3.2.4 Selecting Normal Domain Mode

## 2. Private Domain Name Resolution

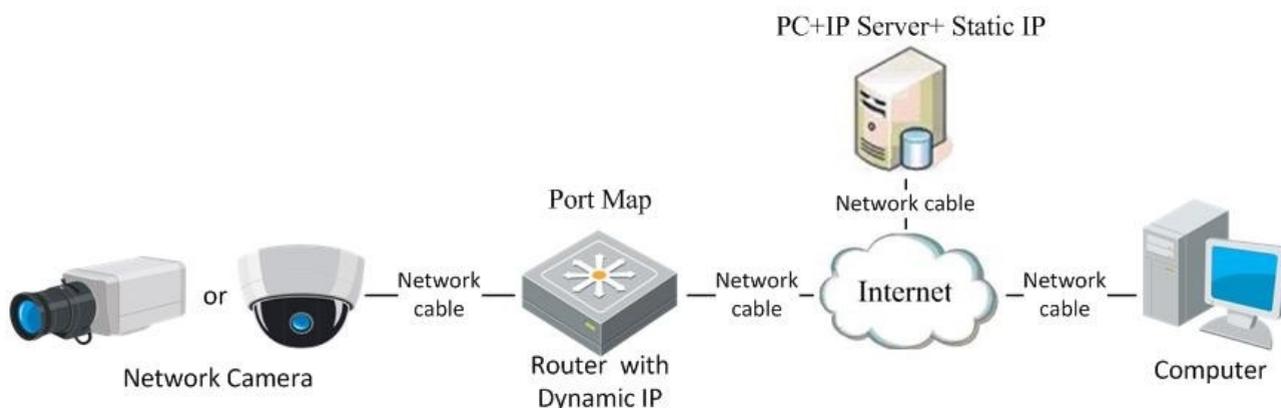


Fig. 3.2.5 Private Domain Name Resolution

A PC with a static IP which is running the domain name resolution service is necessary.

When the network camera connects to the internet through PPPoE and obtains an IP address, it will send its name and IP address to the resolution server. When the client software connects to the network camera, it will connect to the resolution server and tell the resolution server the expected camera's name. And the server will find the camera from all the registered cameras and send its IP address to the client software. Once the client software gets the IP address, it can connect the network camera.

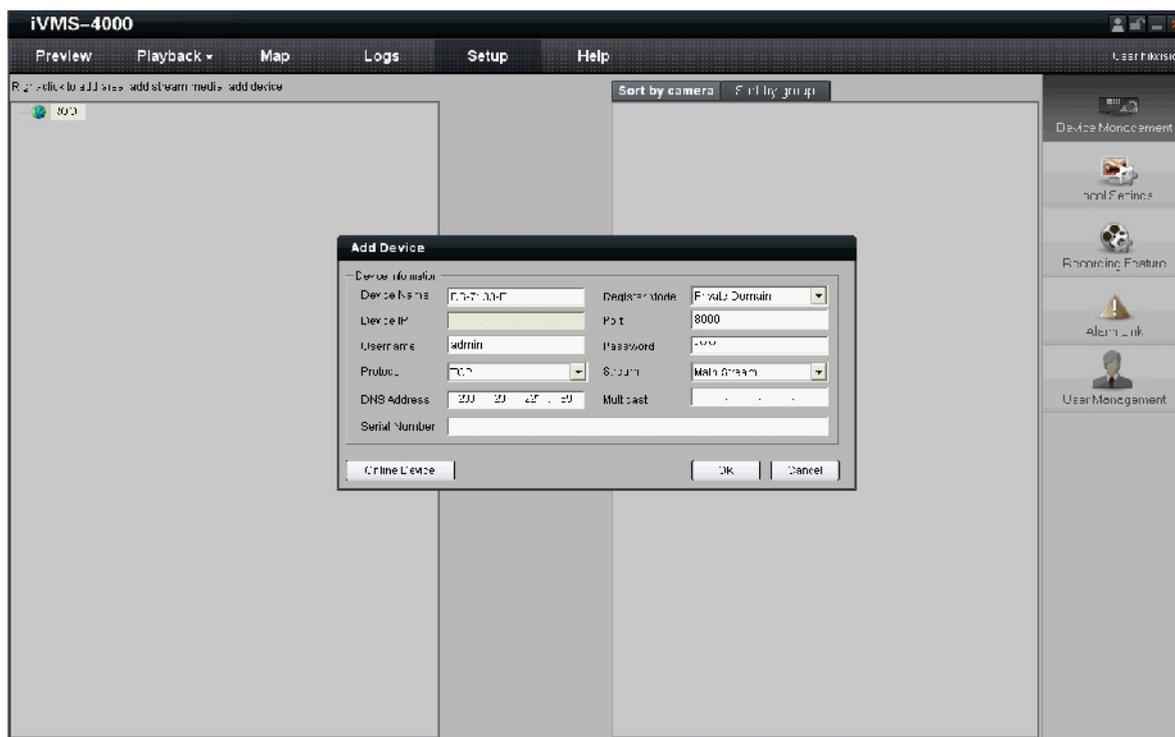


Fig. 3.2.6 Selecting Private Domain Mode

# Appendix 1 SADP Introduction

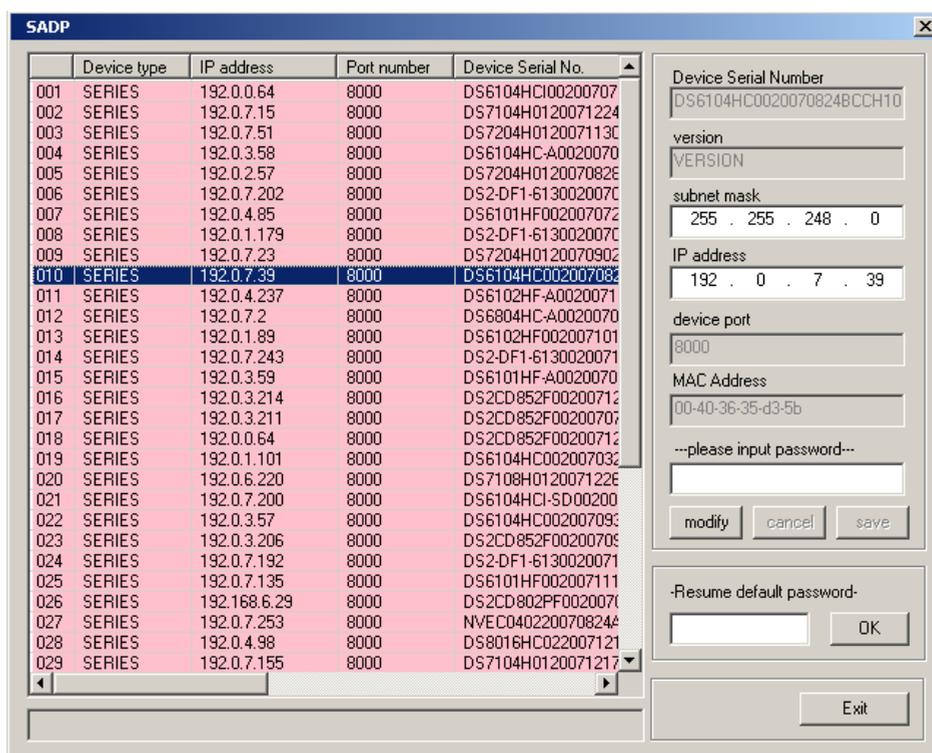
## 1. Brief introduction

SADP (Search Active Devices Protocol) is a kind of software which can automatically search network speed dome in LAN. User can modify the IP address, subnet mask and port of the device without visiting IP address of the device. Additionally, password of the super user in this device can be recovered as default.

SADP software needs to support SADP, so we should install WinPcap at first, which is placed at the directory of SADP software.

## 2. Search active devices online

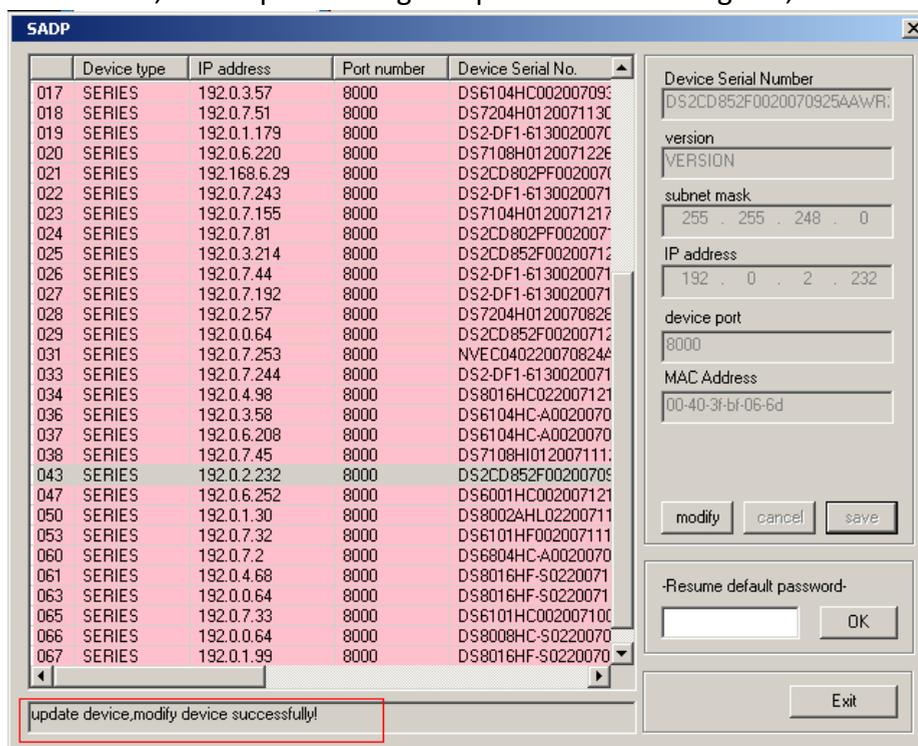
After installing WinPcap, double click sadpdlg.exe. The software will start to search active devices in LAN, and device type, IP address, Port number, Device Serial No., subnet mask, MAC address, the number of channels, main control and encoding version and device initiating time are showed in the list, as following:



## 3. Modify device information

Select the device that needs modification in the device list, then basic information of the device will be demonstrated in the information column on the right. Click “modify” button to activate IP address, subnet mask, device port editing and password validating box, as follows:

Select the device that needs modification in the device list, then basic information of the device will be demonstrated in the information column on the right. Click “modify” button to activate IP address, subnet mask, device port editing and password validating box, as following:



Input new IP address, subnet mask, and port number, and click “save” button. If a dialog pops up, showing “saved successfully”, that means you have modified the configuration information; if “saving failed” turns up, click the “cancel” button to quit it.

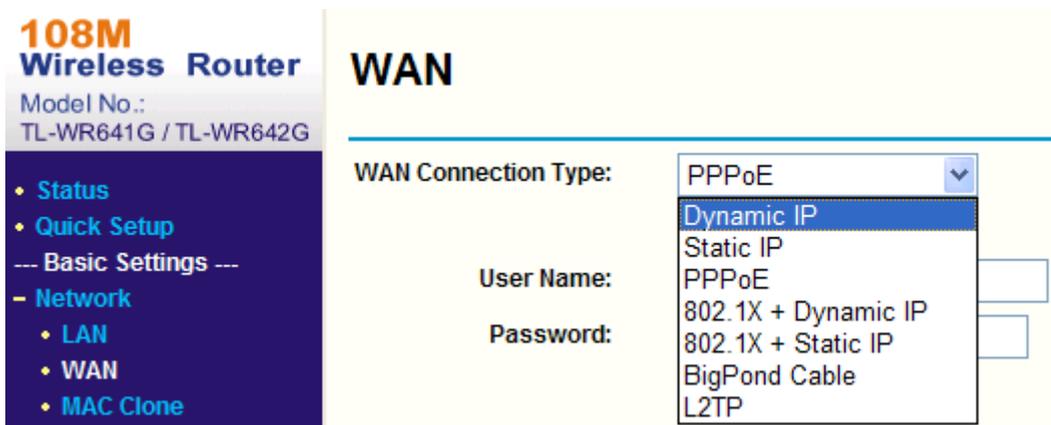
#### 4. Recover default password

You can reset the password of the super user as “12345” in the case of a lost password. Input certain validation code into the ‘Resume default password’ box, and click ‘OK’ to finish the administrator’s password initiating.

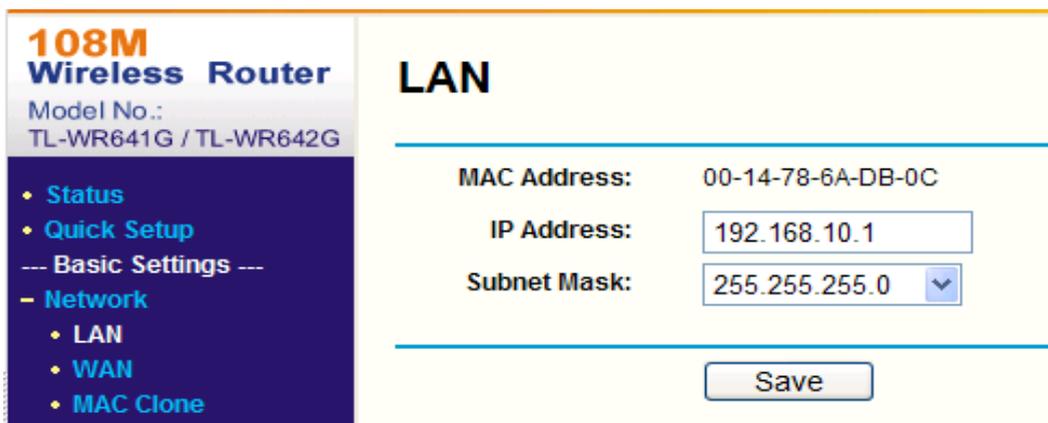
## Appendix 2 Port Map

**Note:** The following setting is about TP-LINK router (TL-R410), which is maybe distinct from other router’s setting.

1. Firstly, select the router’s WAN connection Type. As the following Fig. shows:



2. Set the “network parameter” of the router as the below figure. The setting includes subnet mask and gateway.



3. Set the port map in the virtual servers of Forwarding. By default, camera uses port 80, 8000, 554 and 8200. You can change these ports value with IE or client software.

The following figure gives the illustration. One camera’s ports are 80, 8000, 554, 8200 and its IP address is 192.168.1.23. The other camera’s ports are 81, 8001, 555, 8201 and IP is 192.168.1.24. Afterwards, enable all or TCP protocols. Enable the port map after pressing the ‘Save’.

**108M Wireless Router**  
Model No.: TL-WR641G / TL-WR642G

- Status
- Quick Setup
- Basic Settings ---
- + Network
- + Wireless
- Advanced Settings ---
- + DHCP
- Forwarding
  - Virtual Servers
  - Port Triggering
  - DMZ
  - UPnP
- + Security
  - Static Routing
  - Dynamic DNS
- Maintenance ---
- + System Tools

## Virtual Servers

ID	Service Port	IP Address	Protocol	Enable
1	80	192.168.10.23	ALL	<input checked="" type="checkbox"/>
2	8000	192.168.10.23	ALL	<input checked="" type="checkbox"/>
3	554	192.168.10.23	ALL	<input checked="" type="checkbox"/>
4	8200	192.168.10.23	ALL	<input checked="" type="checkbox"/>
5	81	192.168.10.24	ALL	<input checked="" type="checkbox"/>
6	8001	192.168.10.24	ALL	<input checked="" type="checkbox"/>
7	555	192.168.10.24	ALL	<input checked="" type="checkbox"/>
8	8201	192.168.10.24	ALL	<input checked="" type="checkbox"/>

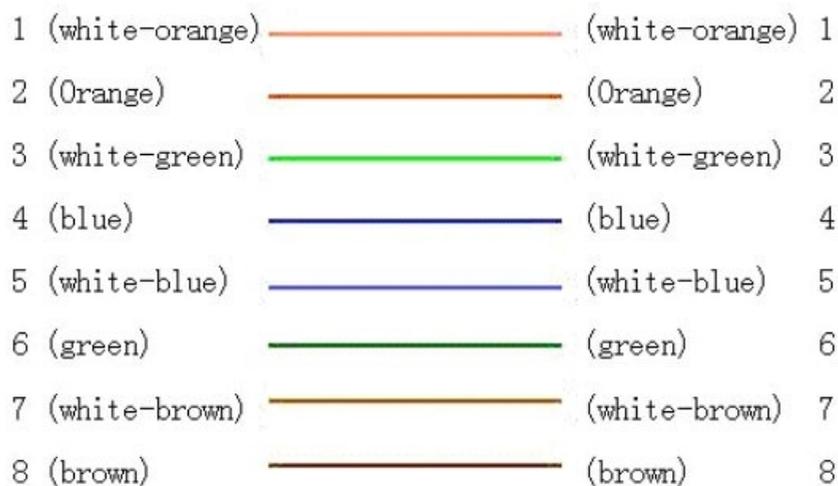
Common Service Port:  Copy to ID

As the settings mentioned above, map the router's port 80 and 8000 to the network camera at 192.168.1.23; and port 81 and 8001 to the network camera at 192.168.1.24. In this way, user can access the 192.168.1.23 through accessing the router's port 80 and 8000.

**Note:** The port of the network camera cannot conflict with other ports. For example, some router's web management port is 80. User can amend the router's or the camera's port to solve this problem.

## Appendix 3 Pin Definition

(1)UTP between the network port of camera and HUB (Direct Cable)



(2)UTP between the network port of camera and PC (Cross Cable):

