Dear customers, you are strongly recommended to read the "User's Manual" carefully before use since the machine needs a professional job for functional settings.

Ivision IP Camera

User's Manual

Release date: 2011/10/26

Revision: 1.0

Declaration

Some technical details in this User’s Manual may not be described accurately or some printing errors may exist in this user’s Manual. When you use the product and have any problems that could not be solved by following this User’s Manual, please call our Technical Dept. for troubleshooting. This User’s Manual is subject to update without notice.

Packing List

Name	Qty
Host of IPC	1 Set
12V/1A or 12V/3A Power	1 Set
“User’s Manual for IPC”	1 Copy
Supporting Disc	1 Disc
Conformity Certificate And Warranty Card	1 Card

Precautions for use

1. Installation Environment ；

- Keep this NVS away from heat source, high temperature environment and direct sunlight;
- Keep the NVS away from the unventilated site to ensure normal heat dissipation; make sure to keep the NVS away from water, dampness and lightning. If installing this NVS outdoor, please provide the waterproof tank to fix the NVS inside;
- Please install the NVS horizontally or on wall surface; keep the installation site away from intense shock; never place any other devices on NVS.

2. Electrical shock and fire control

- Never touch the power source or NVS with wet hand;
- Never drop any fluid on the NVS, otherwise it may cause short circuit or fire inside the NVS;
- Never put any other devices on the NVS directly;
- No unprofessional person is allowed to open the housing; otherwise it may cause damage or electric shock.

3. Transport and handling

- It has been made the shock-resistant design and test for packaging to ensure the NVS be out of unexpected damage in transit; when handling this NVS, you'd better use the original packaging materials and cartons;
- When transporting the NVS with the hard disc, it is required to fix the hard disc on the disc holder inside the NVS and use the screws to fix; otherwise it may cause the hard disc to be damaged;
- Never move the NVS in the super-cooled or super-hot conditions; otherwise it may cause the machine to frost inside and cause influence on the use life;
- It is prohibited to move the NVS when power supply is on; otherwise it will damage the hard disc and main board.

Catalogue

1 About the product

1.1 Product introduction

Thank you to use our product, we shall provide you the best service.
The NVS offers a smooth video transmission and higher level of resolution, high performance operating system and sound video frequency compression algorithm, 3G and WIFI for optional. The NVS is available multiple ports for function expansion so as to meet your higher requirement; with the built-in WEB server, it can enhance the performance of the traditional monitoring system, and provide network connectivity for publishing monitoring image on a safe LAN or Internet. The NVS is easy to use the Internet Explore(IE browser) management, configuration, monitor, and the operation is rather simple and convenient.

1.2 Function introduction

- Support D1, 2CIF, CIF, QCIF,(704*576、704*288、352*288、176*144) resolution;
- Support H.264, MJPEG image compression encoding;
- Support two-way Talkback, third-class user rights, with perfect functions;
- Two-way voice Talkback, support external audio input and output;
- Complete network protocol, support RTSP, VLC（PS/TS） Media Protocol;
- Support the mobile phone for remote monitoring;

1.3 Technical specifications

Parameter/Model	**IV-NT6811D/NT9011D**
Compression standard	
Video frequency compression standard	H.264/MJPEG
Compression output code rate	32K～4Mbps/1M～16Mbps
Audio frequency compression standard	G.711
Audio frequency output code rate	64Kbps
Image	
Image size	704*576；704*288；352*288； 176*144 704*480；704*240；352*240
Frame Rate	1-30f/s
Image Setting	Brightness,contrast,saturation,hue,Exposal control
Function	
Mobile phone monitoring	Support
Network protocol	PPPoE、DHCP、TCP/IP、HTTP、UDP、RTP/RTCP、RTSP、UPNP、SMTP、FTP、SIP、DDNS、DNS
Video frequency	One-way video input
Audio frequency	One-way linear audio input/output; one-way microphone input; one-way earphone output

Motion detection	Support
Area shield	Support
SD Card local storage	N/A
General specifications	
Working temperature	-10℃～65℃
Working humidity	85%RH or less
Power source	DC12V/1A
Power consumption	<5W

2 Appearance and description

IV-NT6811D

IV-NT9011D

IV-NT6811B

IV-NT9011B

You can use the following steps to restore to the Default Settings, i.e.:

1. Switch the power source off;
2. Press and hold the Reset button;
3. Switch the power source on;
4. The indicating lamp will be on;
5. The relay sends sound; release the Reset button; at this time the product is restored to the Default Settings, and the indicating lamp flashes.

3 Equipment and installation

3.1 Operation environment

Operating system: Windows2000server/professional/XP
Network protocol: TCP/IP
Client terminal PC: P4/128MRAM/40GHD/ Support scaling display card; Support DirectX8.0 or above.

3.2 Installation of equipment

1. Connect the NVS with PC via cross network cable;
2. Switch the DC12/1A power on;
3. If the network connection is successful, the indicating lamp (orange) at the network interface will flash within 5 seconds and the indicating lamp of data (green) will be on; at this time, the physical connection of the NVS is finished.

4 IE Version Client Terminal

4.1 Preparations

1) The NVS default IP address is 192.168.1.19, and the subnet mask is 255.255.255.0; it can change the IP address of the NVS, for instance, change the IP address of the NVS into 192.168.1.194; if so, it should change the IP address of your computer into the network segment as same as the one of the NVS, and the same subnet mask, i.e.: 192.168.1.171.
2) Test if the NVS starts normally. Under the WINDOWS system, please follow <Start→run→command> to operate and open the Command Line Window, and then enter Ping 192.168.1.19; if there is no “Request Time Out” to disappear, it means the start is done normally;
3) When using the Internet Explore to access to the NVS firstly, it must decline the security setting temporarily so as to install ActiveX component into the network one time. You can finish this operation by following this path, i.e.: Tool → Internet → Security → Customer level → Active X control and plug-in component; please set the low security level and click the Reset button.

4.2 Start to login

1) Enter http:192.168.1.19 in the Address Bar of the Internet Explore, and then it will display a Log-in Interface as follows:

2) Read carefully the hints on the interface; if the Activex is a must, please click “Download and install controls” button, and then follow the hints to finish installation;
3) If the IE (Internet Explore) version that is used is less than 6.0 version, please upgrade the IE accordingly;
4) Enter user name: 888888 (factory defaults, admin user) or 1 (client user);
5) Enter password: 888888 (factory defaults, administrator password) or 1 (client user

password);

6) Click “OK” button to open Preview of NVS as follows:

4.3 Function introduction

4.3.1 Real-time monitoring

[Network Mode]: TCP and Multicast, choose as per your own demand;

[Play real-time video]: Click “ 

” button, it will play all real-time video of all channels in the preview window;

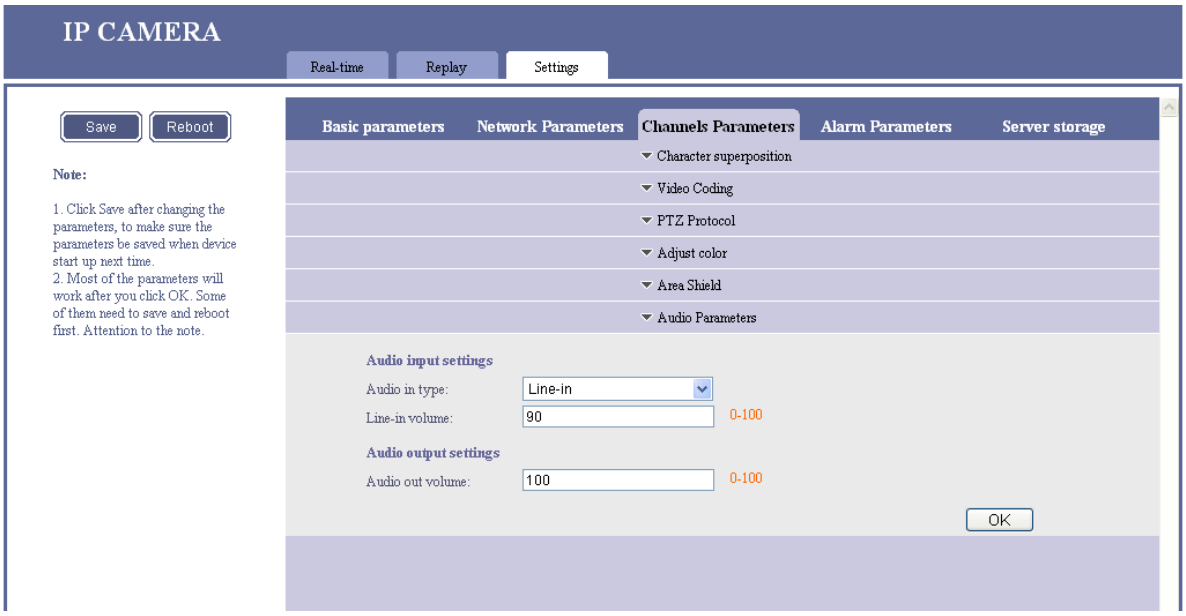
[Stop playing video]: Click “ 

” button, it will stop playing all real-time video of all channels in the preview window;

[Audio frequency]: Click “ 

” button, the button will become orange.

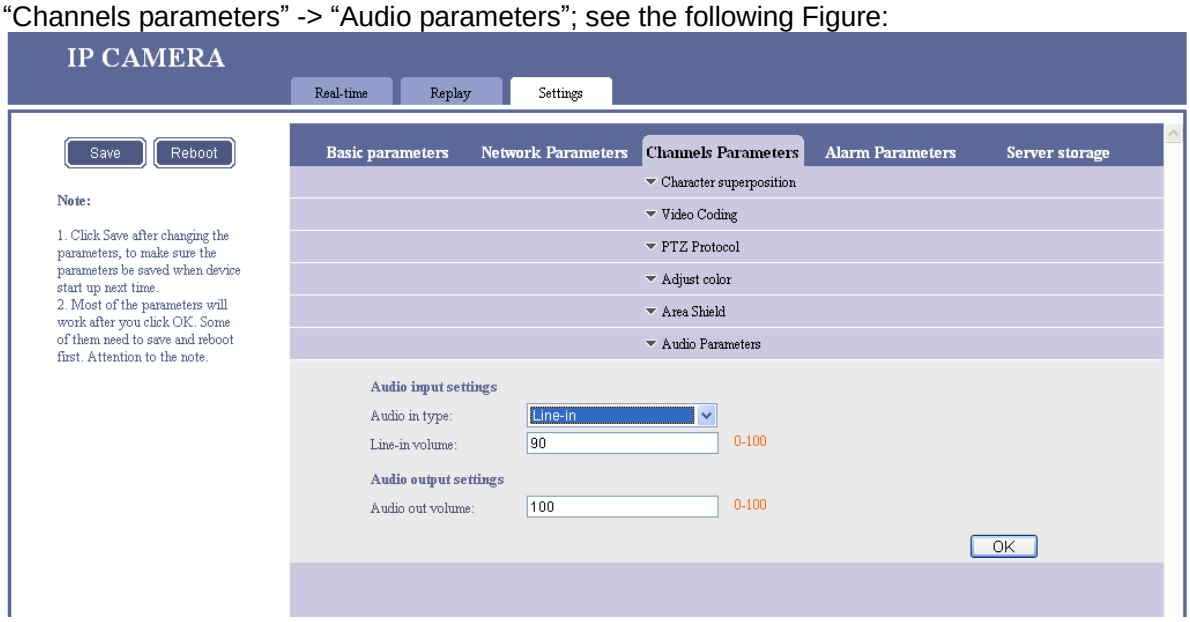
Microphone input: Import the audio from the audio input port of the NVS; access to the device through your computer and start the audio function; if you can hear a voice, it means the microphone input of audio is finished. The audio parameter setting needs to be set as per the following path, i.e.: “Parameter setting” -> “Channel parameter” -> “Audio parameters”; see the following Figure:



Set the “Audio-in Type” into “Microphone input”; when starting Boost of the microphone, the sound will be amplified.

Linear input: for the NVS, it can also use the audio cable to connect its audio input port with the audio output port of the computer. When using a computer to play music, it can access to the device through other computer and starting the audio frequency function to hear the music, and thence it can realize the linear input of audio frequency.

The Audio parameters is required to set by the following path, i.e.: “Parameter settings” -> “Channels parameters” -> “Audio parameters”; see the following Figure:



Set the “Audio-in Type” into “Line-in”, the tone is adjustable (1-100).

[Talkback]: Click “ 

Talkback” button, the button will become orange. Connect the microphone with the microphone input port of computer and the sound with the audio output port of the device, and then speak towards the microphone, the sound will play the voice; optionally, it can connect the linear input port of computer with the output port; when a computer plays music, the sound will play the music too. The Talkback can set the tone of the audio frequency exported from the NVS; see the following Figure, i.e.:

Note: It supports the device with the Talkback function.

[Snapshot]: Click " 

Snapshot" button, it can save the current screen image in the C::\temp catalogue of the local computer as the *.Bmp format; the naming method of the image file is as follows, i.e.: device name + time; for instance: "video server_1_105210"; the size of image file is in accordance with the resolution of image. If there is the superimposed character and time display on the preview image, the superimposed character and time display will be available on the Snapshot.

[Local video]: Click " 

local video" button, the button will become orange and the system will start recording pictures. The system will create a file folder to be named by the current date in D disc of the local computer automatically, and save the video in the file folder in *264 format. The naming method of the video file is as follows, i.e.: IP address + Channel number + time; for instance: the video file on November 5, 2009 will be saved in "d:\20091105\ Video Server _1_155327.264"; if D disc is full, it will go to the next disc to save automatically; if there is no sufficient space in the disc, it will delete the video file to be saved in earlier time and save the current file. Click the Video button again, it will stop recording and the button will become white.

4.3.2 Video replay

[Video replay]: Select "Video replay" option, it will access to the interface for replaying video, i.e.:

Front-end device: Search the front-end SD card video file

Enter the data, start and end time of the query video (local video and remote video) and click “Search” button, it will display all video files that meet the query conditions in the file list.

1. Play: Click the “Play” button at the rear of the video file, it will play the video in the preview window; when finishing playing, the last image will be stayed on the preview window;
2. Download: Click the button beneath the download, it can download the remote video file;
3. RTSP historic replay: Click RTSP, it can display the historic video file through the streaming media.

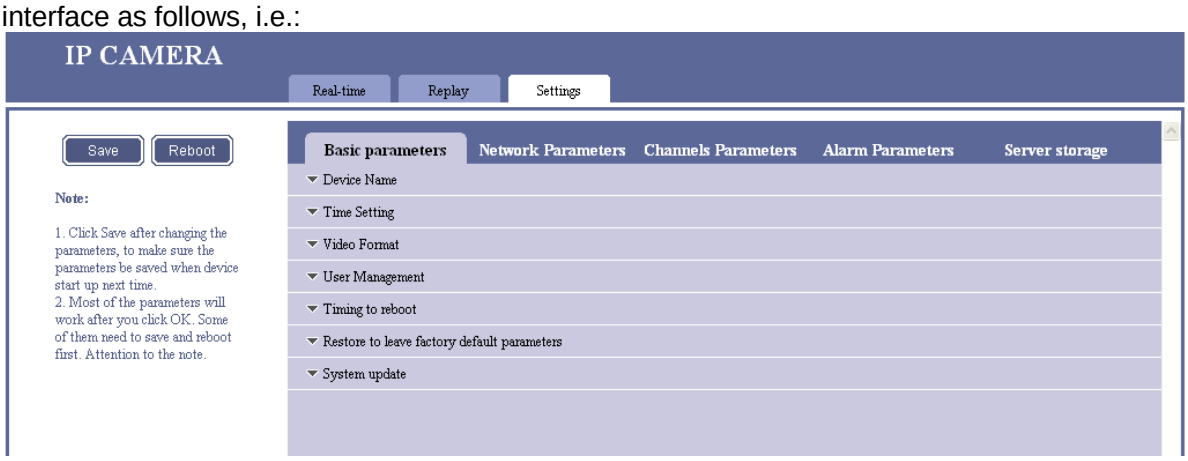
Note: Please install VLC and QuickTime Player Software before playing.

[Size of preview image]: Click "  ,  ,  " button respectively, it will play the preview image in the 1X, 2X and full screen size; the selected size button will become white; when choosing the full screen size, it can restore the original size by clicking the right mouse.

[Image buffering]: Click "  ,  ,  ,  ,  " button respectively, it will set the buffer class of image, i.e.: "0, 5, 10, 20, 50 and 100". The bigger the digit is, the more delay the image will have, and the better fluency the image will have. The selected buffer button will become white.

4.3.3 Parameter setting

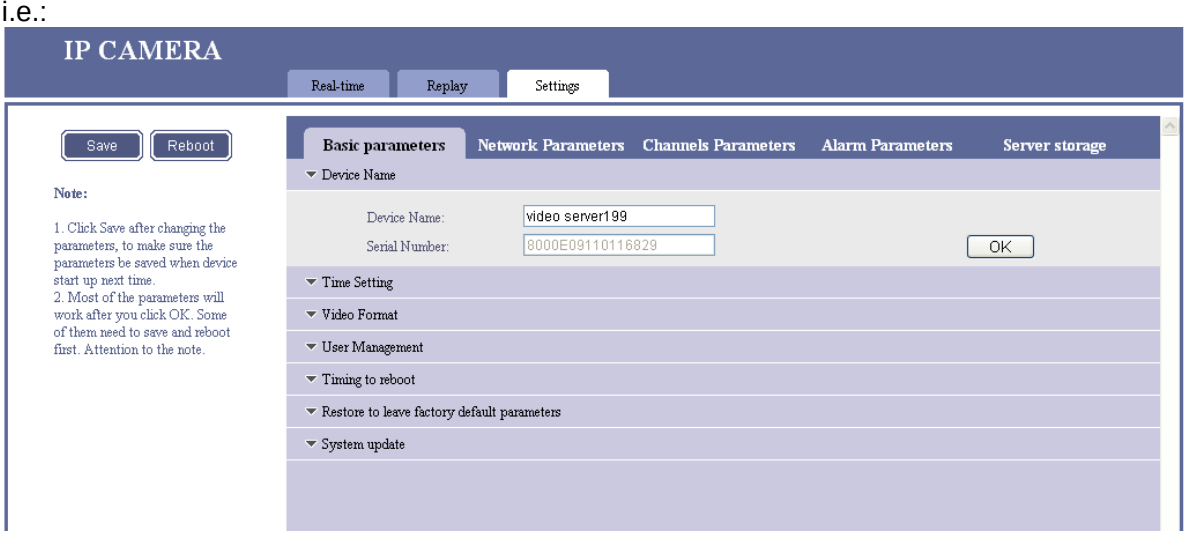
[Parameter setting]: Select "Parameter setting" option, it will access to the parameter setting interface as follows, i.e.:



The parameter setting includes: basic settings, network parameters, channels parameters, alarm parameters and the Server-end storage.

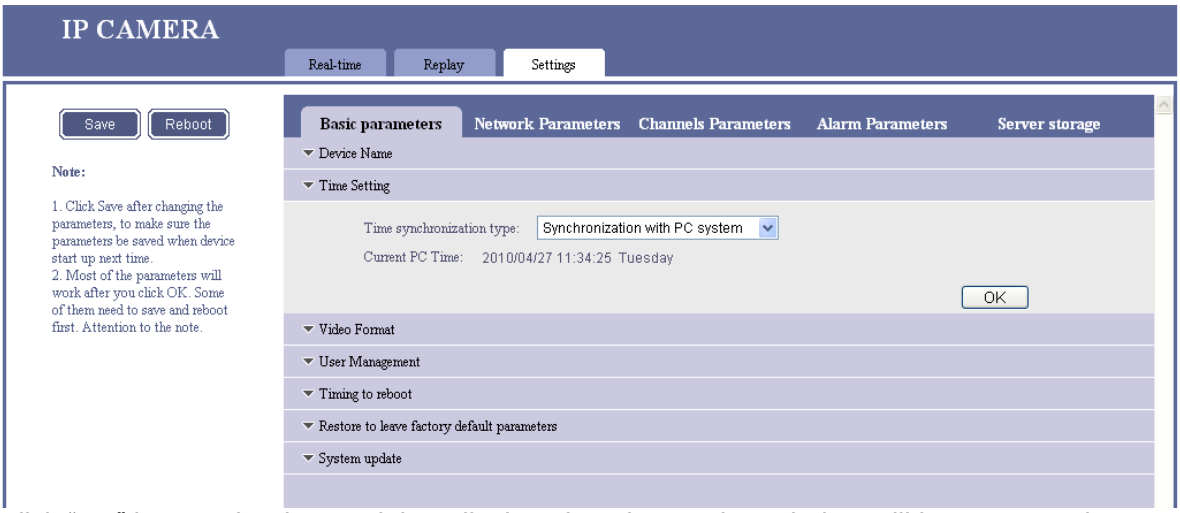
4.3.3.1 Basic information setting

[Basic information]: Click "Basic information" line, it will unfold the setting interface beneath, i.e.:



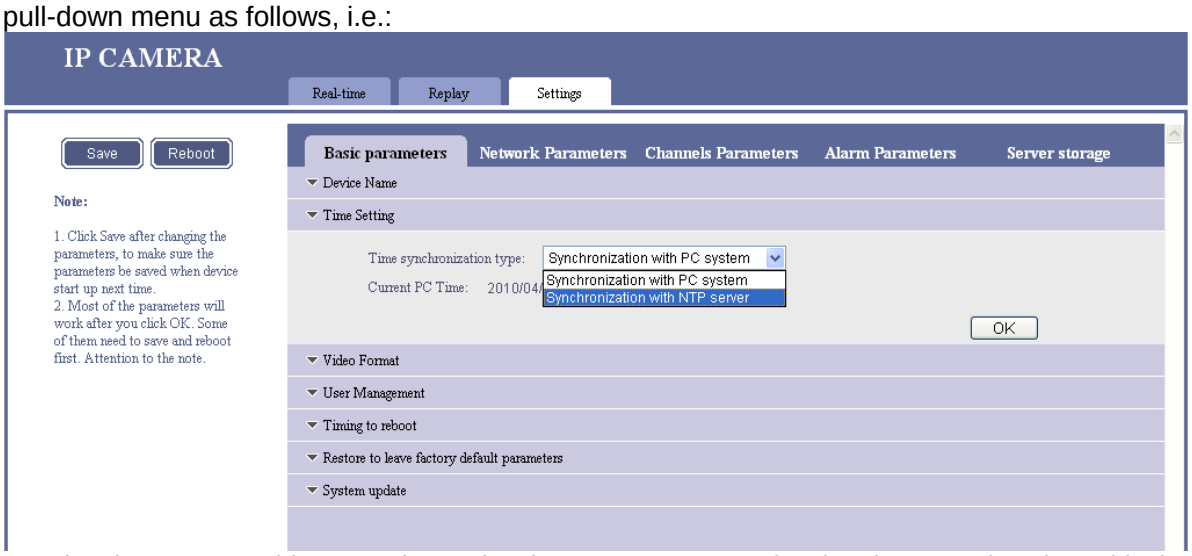
Enter the name of the equipment, and then click "OK", it can change the name of equipment.

[Time synchronization type]: 1. Click "Date and time" line, it will unfold the setting interface beneath as follows, i.e.:



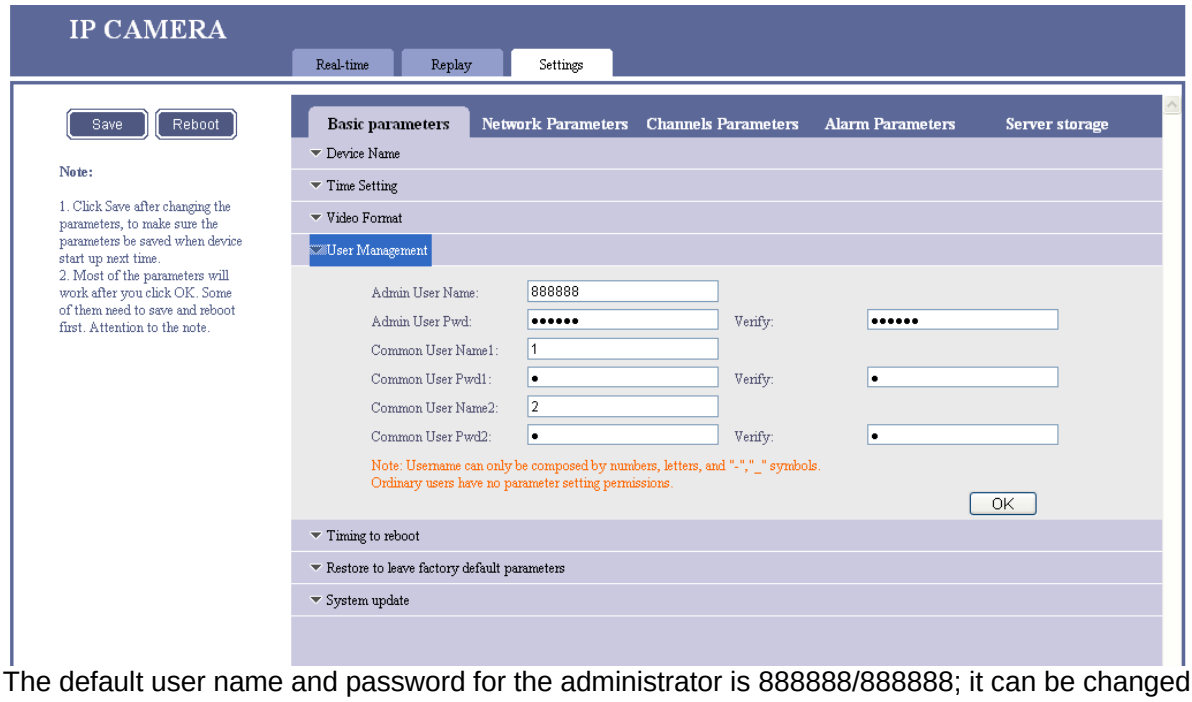
Click “OK” button, the date and time displayed on the preview window will become synchronous with the date and time of the computer being accessed.

2. **Synchronization with NTP Server:** Select “synchronization with NTP Server” from the pull-down menu as follows, i.e.:



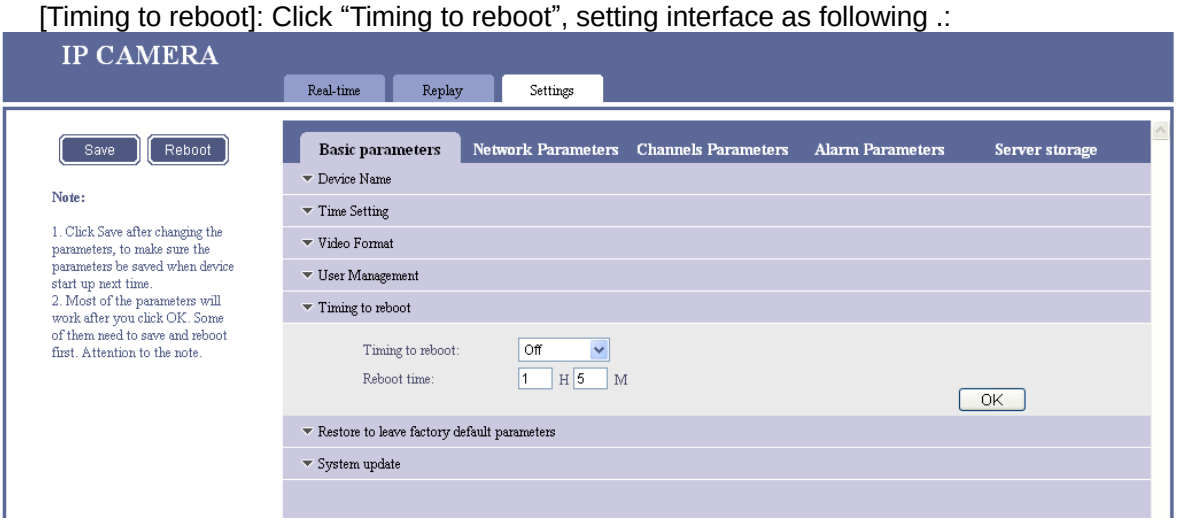
Set the time zone, address and port for the NTP server, make the time synchronize with the current time.

[User Management]: Click “User Management” line, it will unfold the setting interface beneath; See the following Figure, i.e.:



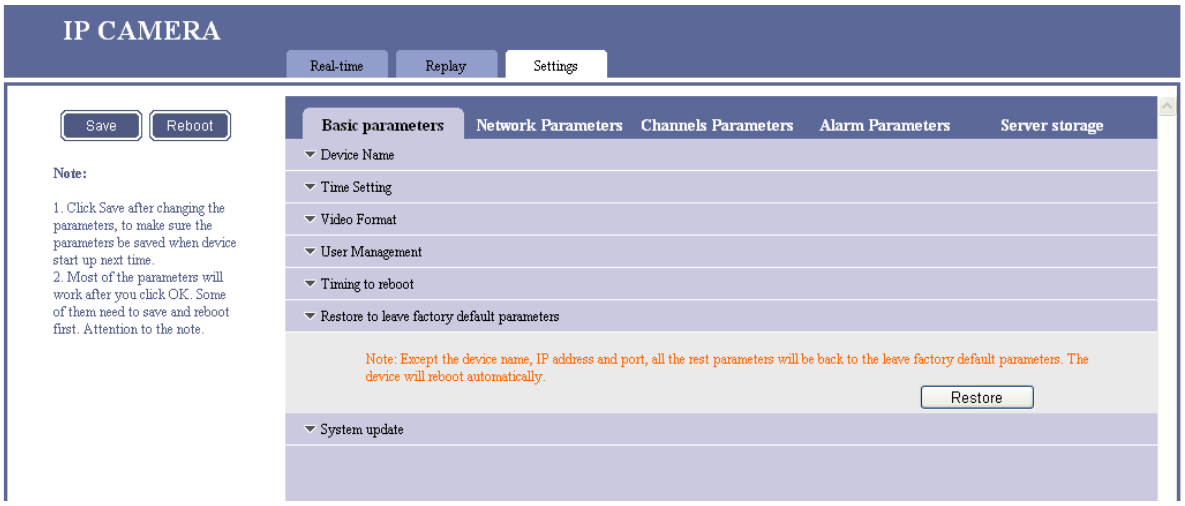
The default user name and password for the administrator is 888888/888888; it can be changed the user name and password; after changing, click the “OK” button to confirm and login the webpage again; afterwards it can view the real-time video; similarly, it can be changed the name and password of two default common users, i.e.: 1/1 and 2/2.

[Timing to reboot]: Click “Timing to reboot”, setting interface as following .:



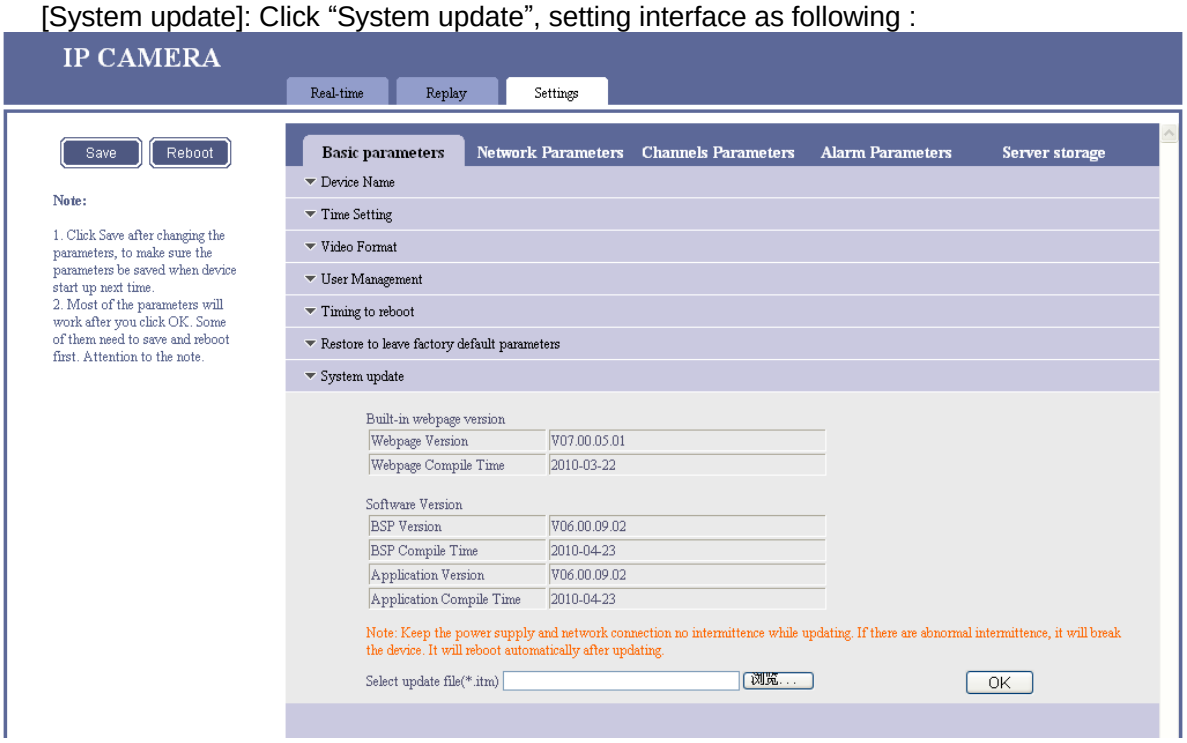
Enter the Reboot time and click “OK”, the network video server will reboot on the assigned time.

[Restore to leave factory default parameters]: Click “Restore to leave factory default parameters” , setting interface as following :



Click “Restore to leave factory default parameters” , restart the network video server manually to restore the default parameters, except the network parameters and device name (the device name will not be restored).

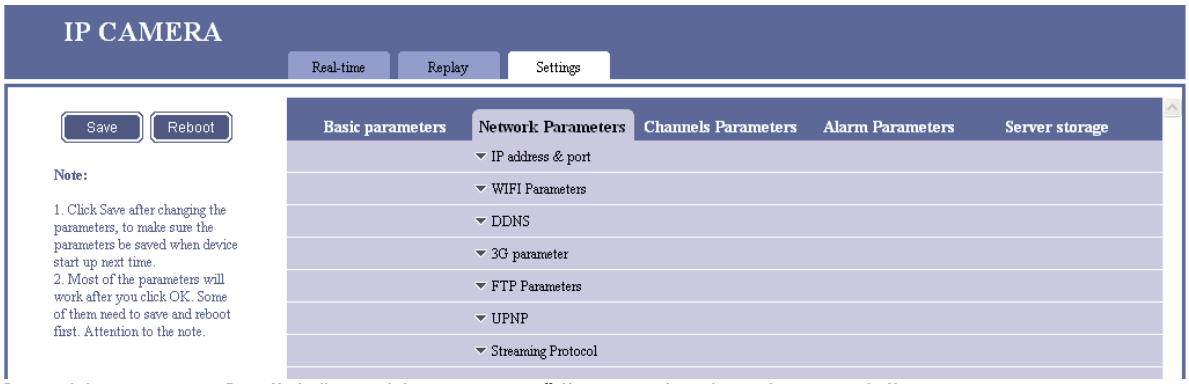
[System update]: Click “System update”, setting interface as following :



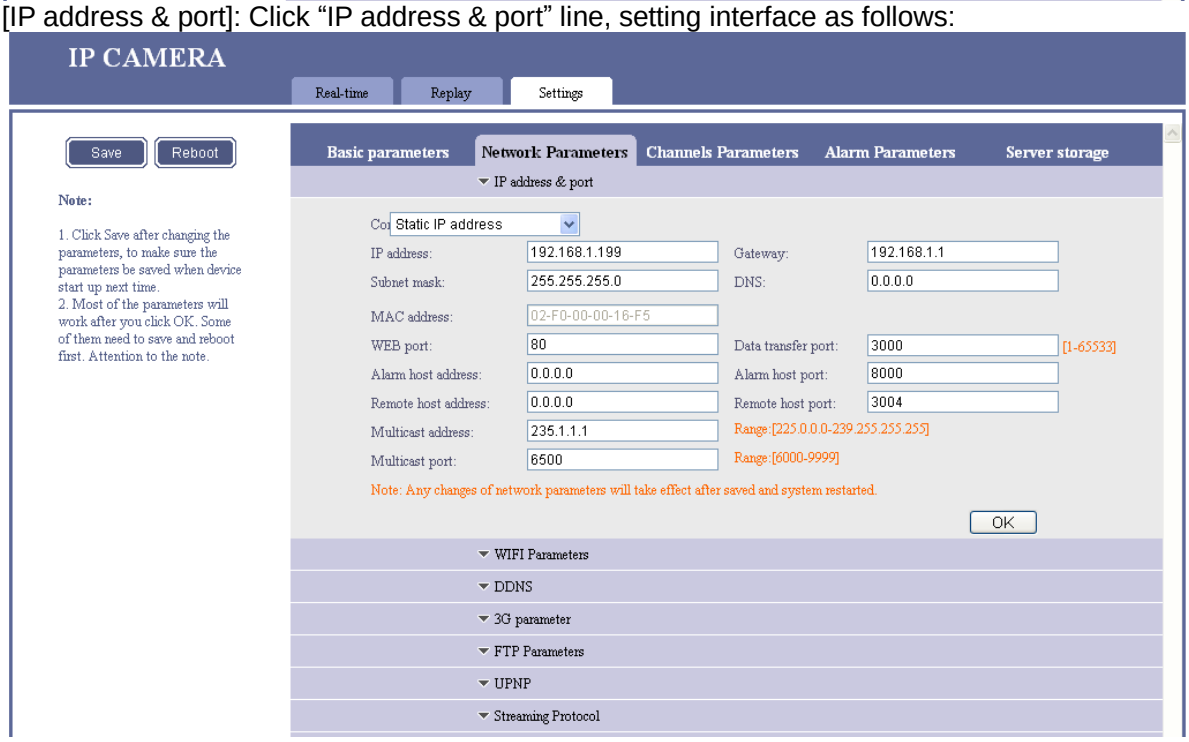
Click “Browse…” button and select the *.itm that for the device,, and then click “OK” button; after updating, the interface will prompt “The program is upgraded successfully, please re-login”, and the device will re-start automatically. When updating ,the “OK” button is unavailable status, can read the webpage and the version number of ITM.

4.3.3.2 Network Parameter Setting

[Network parameters]: Click "network parameters" option, setting interface as follows:

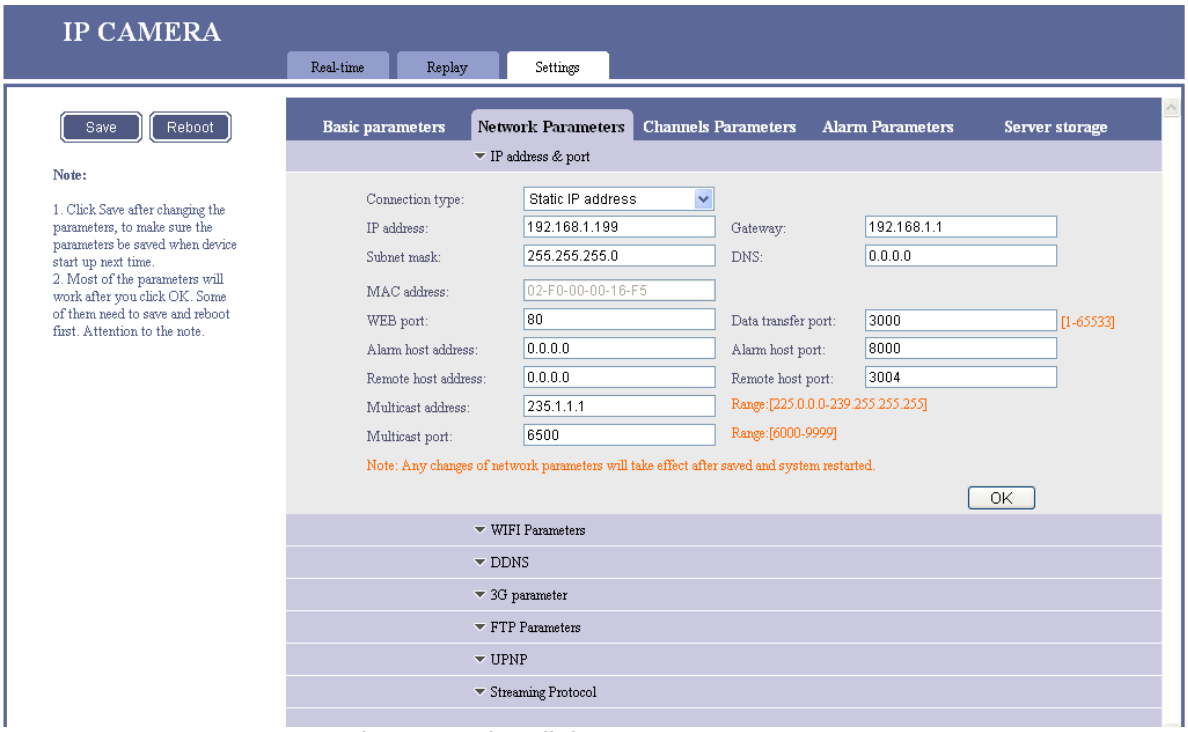


[IP address & port]: Click “IP address & port” line, setting interface as follows:



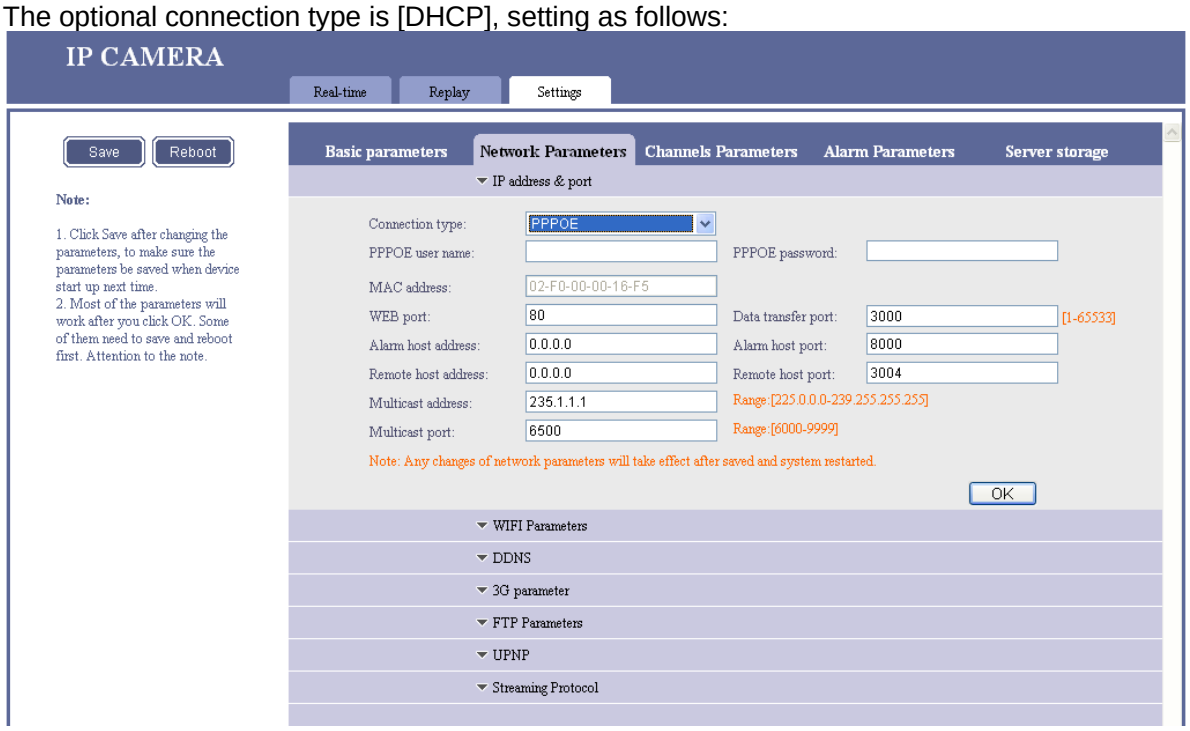
Change the IP address, subnet mask, gateway, web port, Data transfer port remote host address and port , Multicast etc, as well as the web port, UPNP, PPPOE service; after changing, please click “OK” button and click “Save ” button on the left and reboot the device.

The optional connection type is PPPOE , setting as follows:



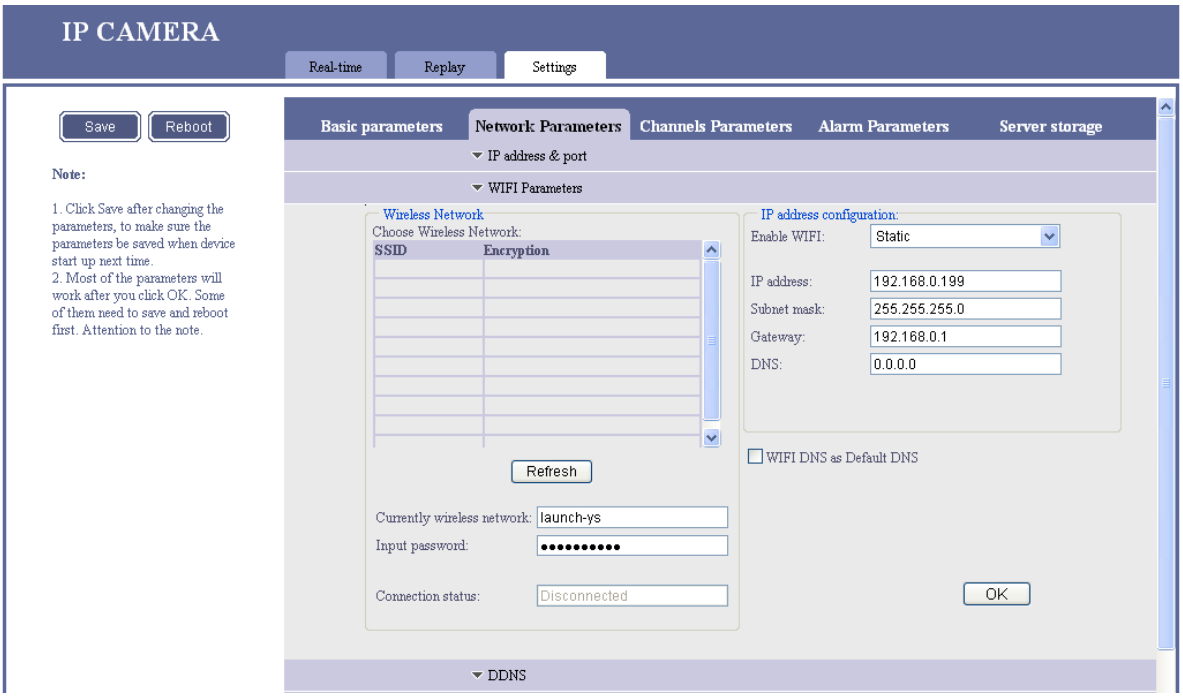
Enter PPPOE user name and password to dial up.

The optional connection type is [DHCP], setting as follows:

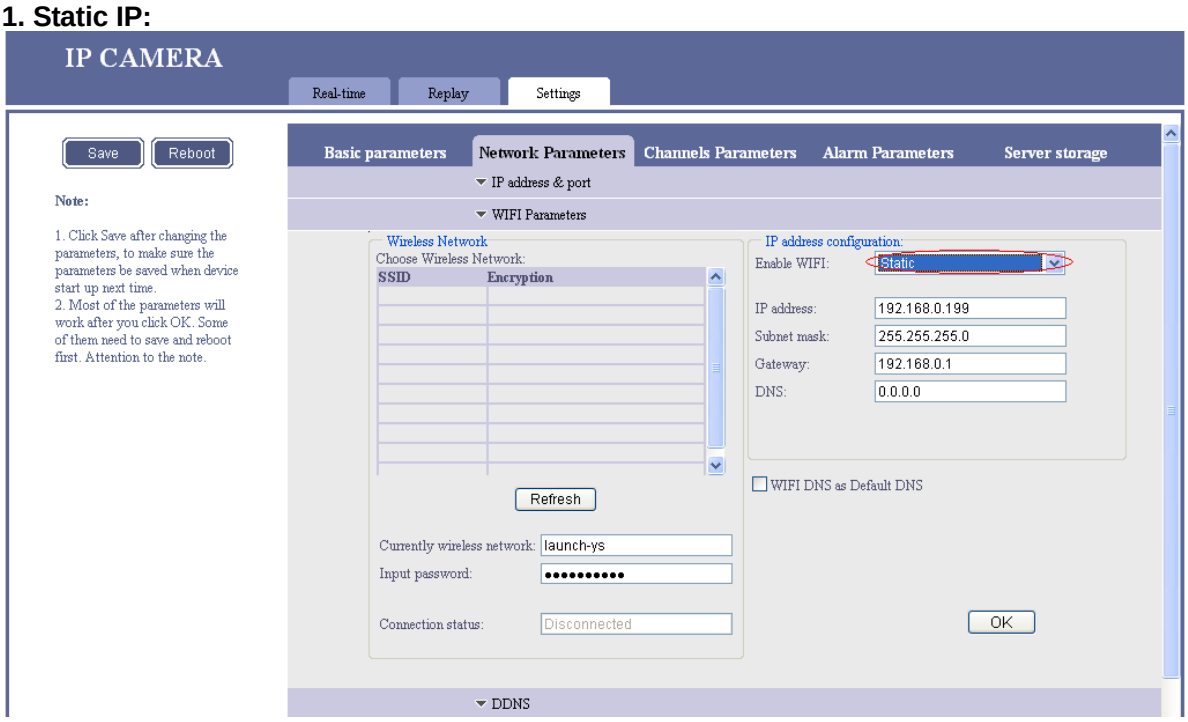


The default DHCP is the Disable Status. After starting DHCP, save the parameters and re-boot, and then connect the network video server and PC to a router with the DHCP function; the router will distribute an IP at the same network segment as the router to the network video server automatically (for instance: the IP address of router is 192.168.0.1; after starting DHCP, the IP address of network video server will be 192.168.0.100).

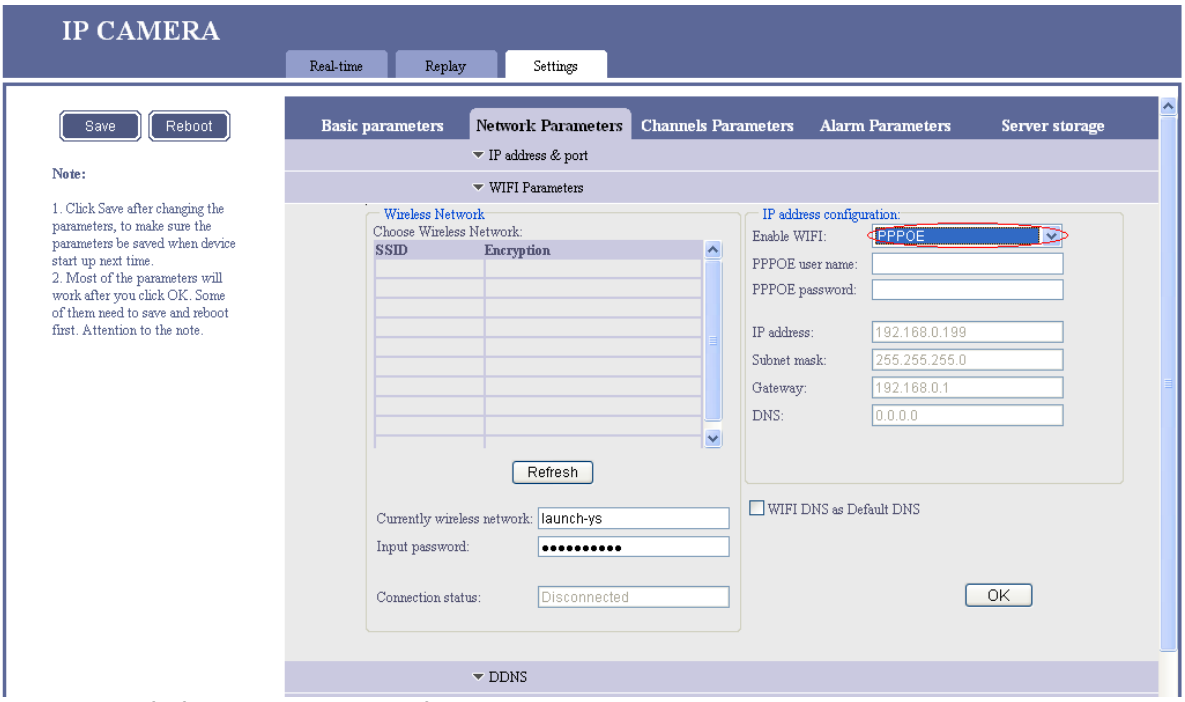
[WIFI parameters]: Click “WIFI parameters” , setting interface as follows:



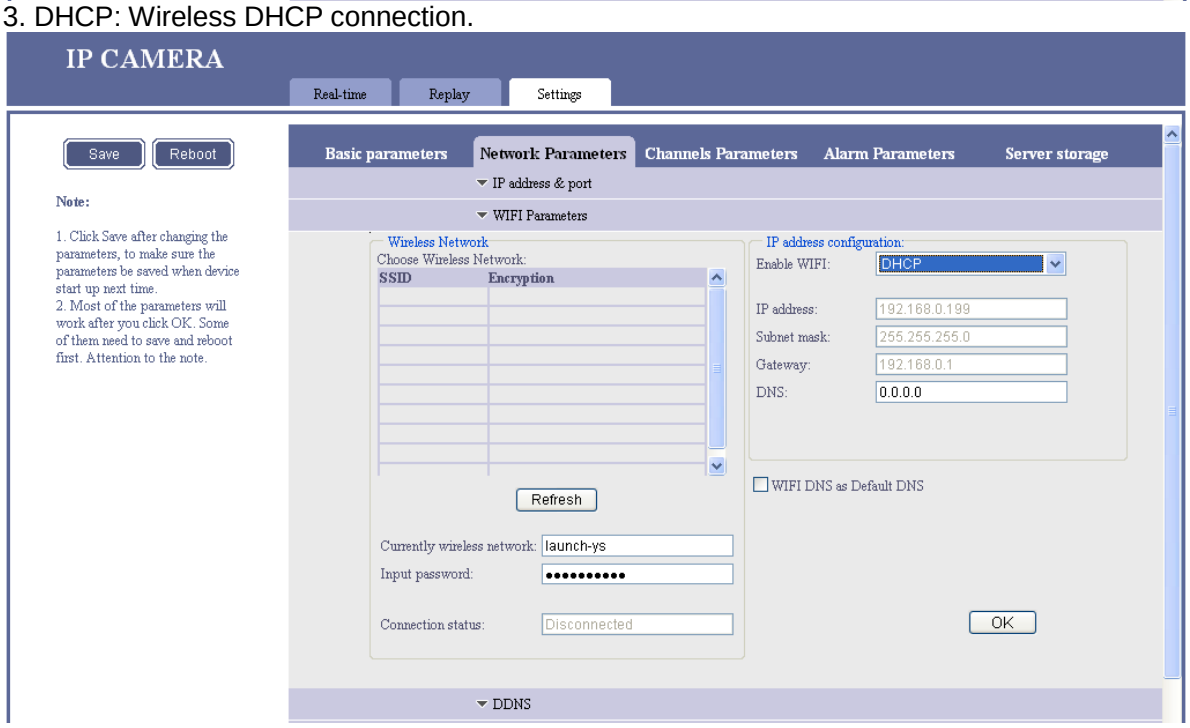
1. Static IP:



Click “refresh”, and then double click the wireless network name, enter the password;
Enable WIFI, select network type
Setting default gateway: check
Wireless SSID: enter SSID of the wireless route
Input password: Enter the encryption key
Test the wireless network: click “refresh” button to search wireless network device;
Connection status: it will display the connection status of device (connected/disconnected)
IP address: It will display the distributed IP address.
2. PPPOE: Wireless dial-up. Set the username and password for dial-up.



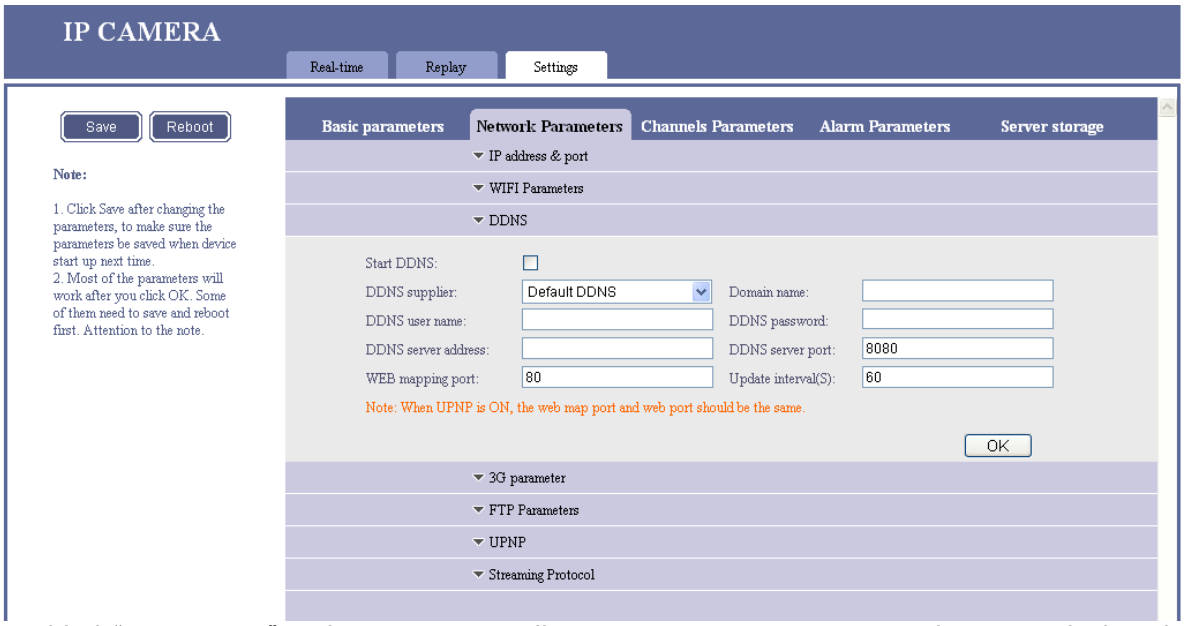
3. DHCP: Wireless DHCP connection.



Search the wireless router that with DHCP function, the router will assigned a wireless IP address at the same network segment as the router to network video server automatically (for instance: the IP address of router is 192.168.0.1; after starting DHCP, the IP address of network video server will be 192.168.0.100).

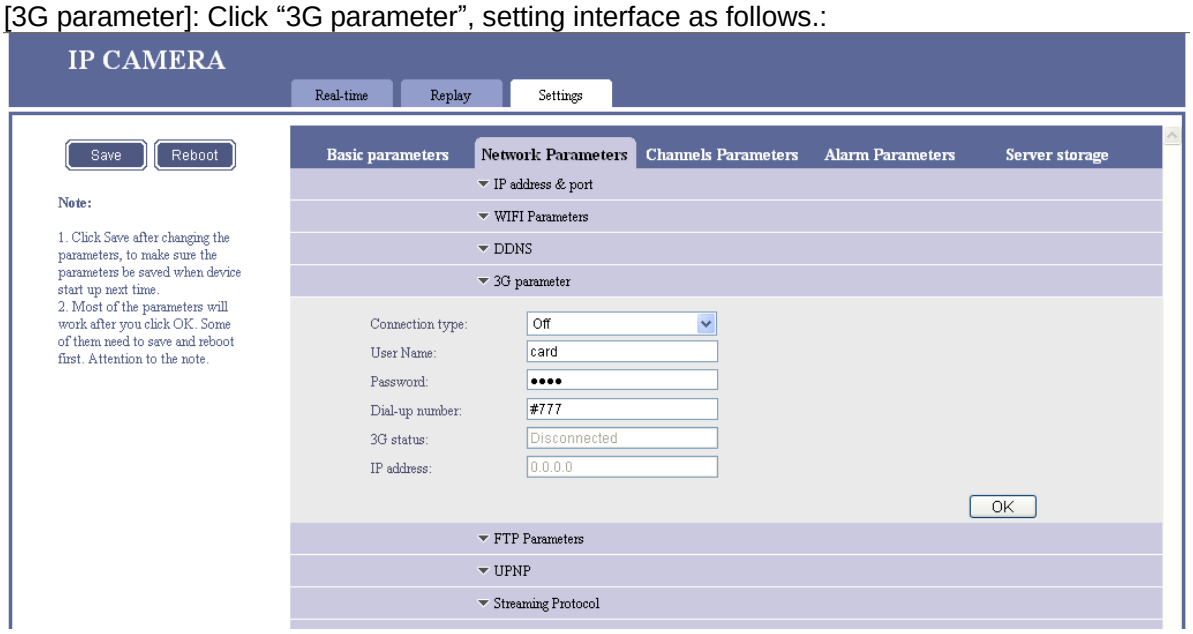
Note: The network segment of WIFI IP address must be difference from the wired IP address

[DDNS]: Click “DDNS” , interface as follows.:



Enabled “start DDNS”, select DDNS supplier, enter DDNS username and password, domain name, DDNS server address and port, and set the Web mapping port and update interval, and then click “OK” button. Enter the domain name in the web browser; if it can access to the device, it means the domain name is setted successfully.

[3G parameter]: Click “3G parameter”, setting interface as follows.:

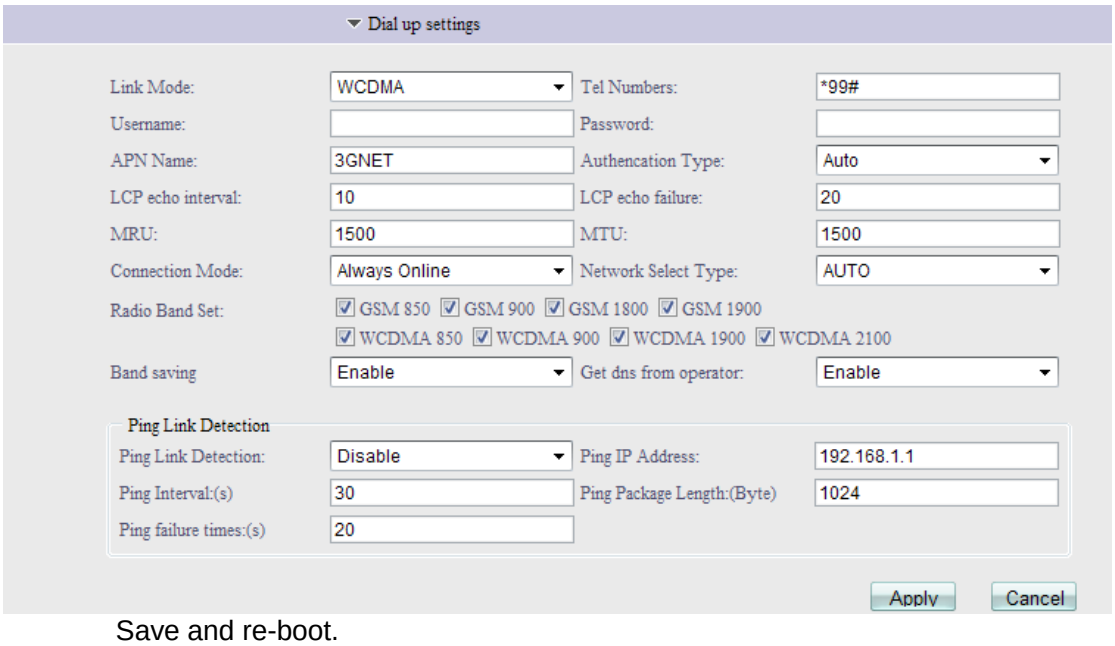


Start 3G, it will display the connection status as “Connected” , and the IP address，

WCDMA Description：

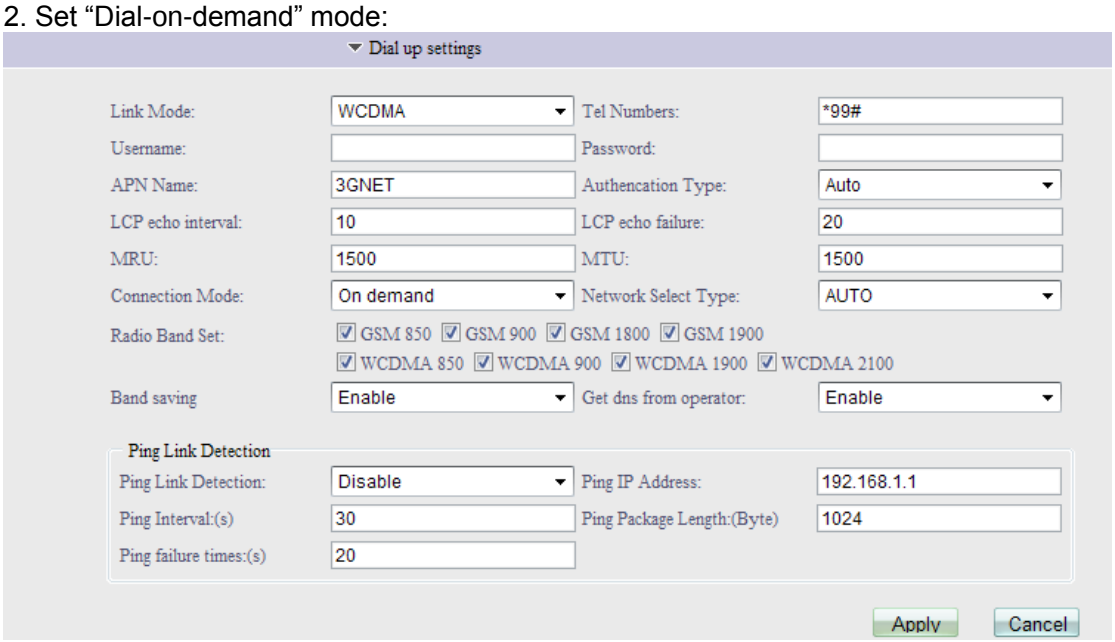
I. Online mode of equipment

1. Set “Keeping Online”, See the following Figure, i.e.:



Save and re-boot.

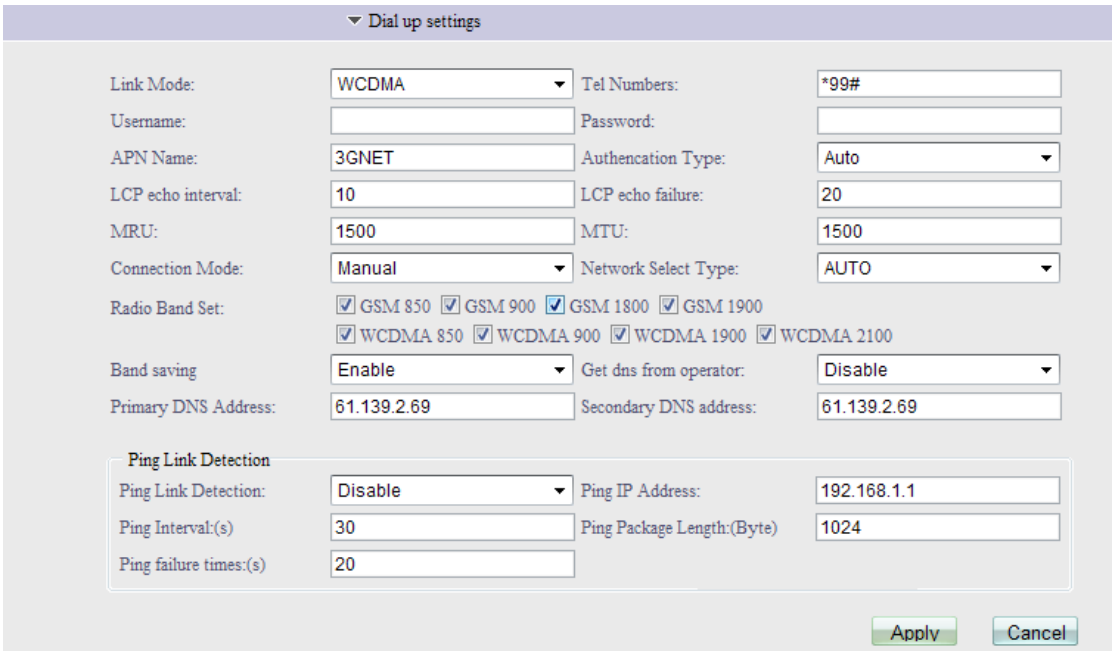
2. Set “Dial-on-demand” mode:



1) Set the address for remote host;
2) Set Ping Link Detection shown by Figure 2 and set Ping IP address;

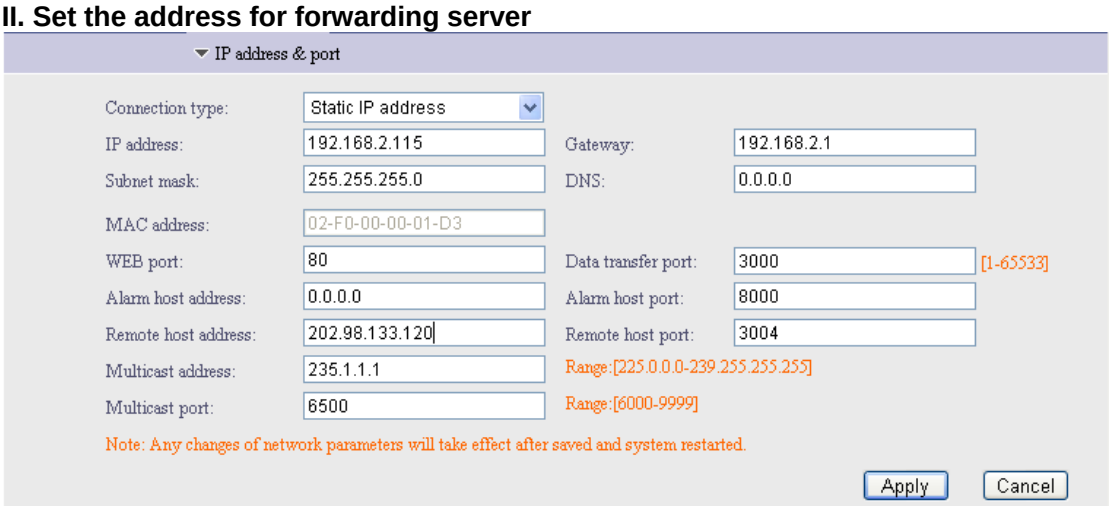
It can realize the dial-on-demand through the two methods said above.

3. Set “Manual-dial-up” mode

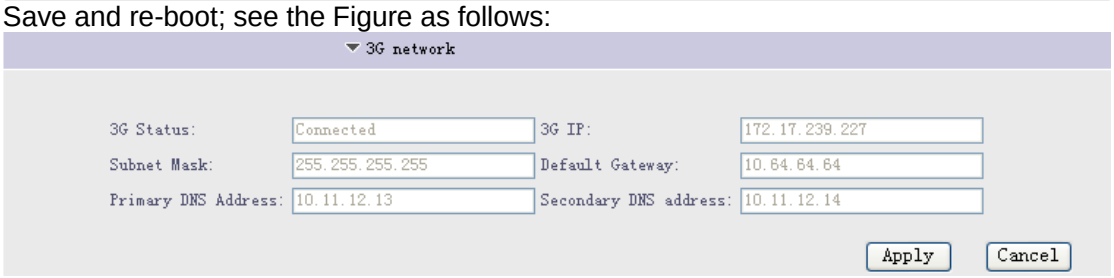


Save and re-boot; and then access to “Dial up settings” interface, click “Apply” to realize the manual dialing (for manual dialing, it does not set the parameter options for LCP echo interval and LCP echo failure; such parameters have no business with the manual dialing).

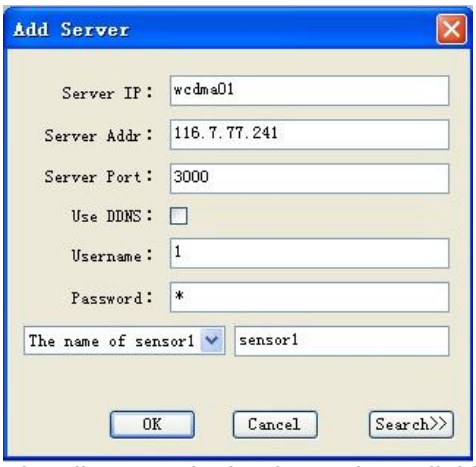
II. Set the address for forwarding server



Save and re-boot; see the Figure as follows:



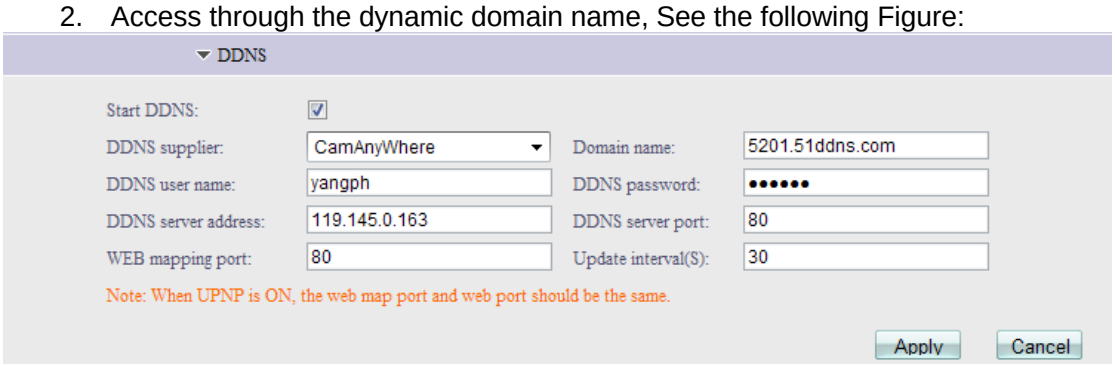
Connect with the intranet address of the forwarding server:



The client-terminal software is available to view image immediately.

III. Access method of external network

1. After making the device online, enter 3G IP in the address bar to access;
2. Access through the dynamic domain name, See the following Figure:



IV. Other options description

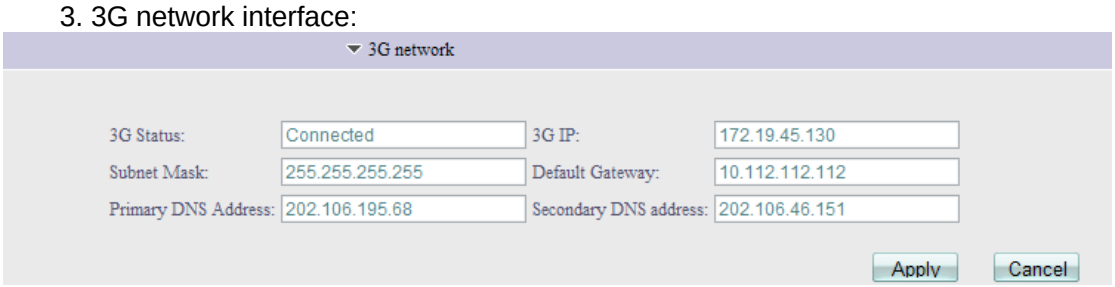
1. Authentication Methods

In the “Dial up settings” interface, it can choose the Authentication Methods from “Auto, PAP and CHAP”.

2.Ping Link Detection：

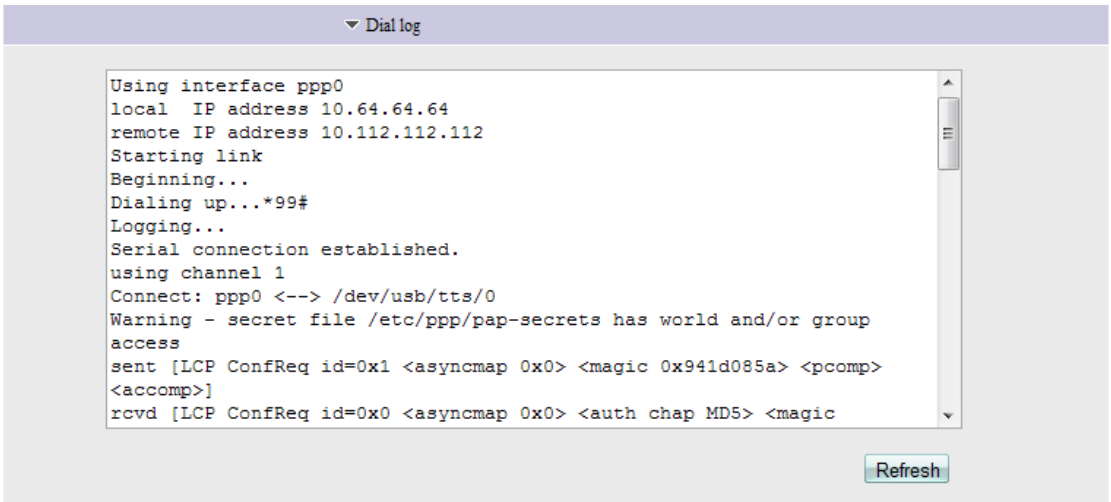
Set in the “Dial up setting” interface; its purpose is to let the equipment perform Ping command as the given time and frequency.

3. 3G network interface:



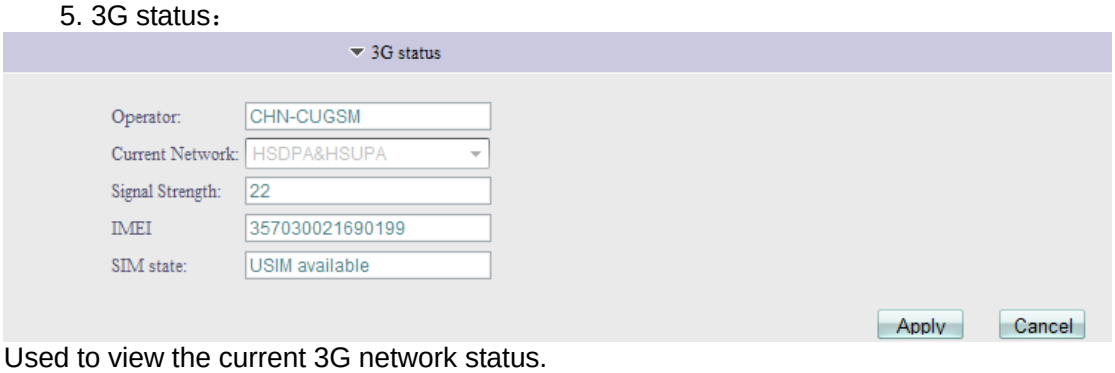
Used to view the current 3G status.

4.Dial log：



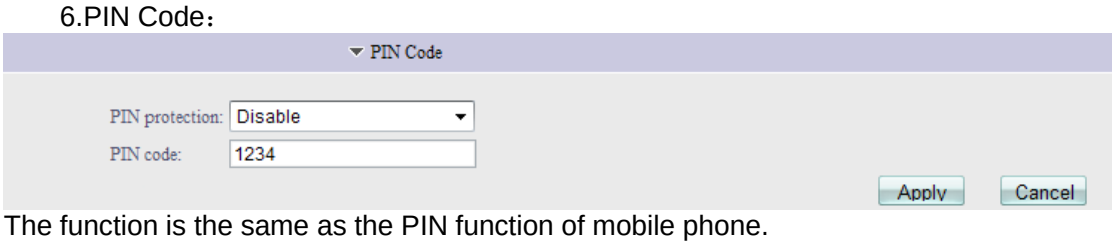
Used to view the 3G connection log after re-booting.

5. 3G status：



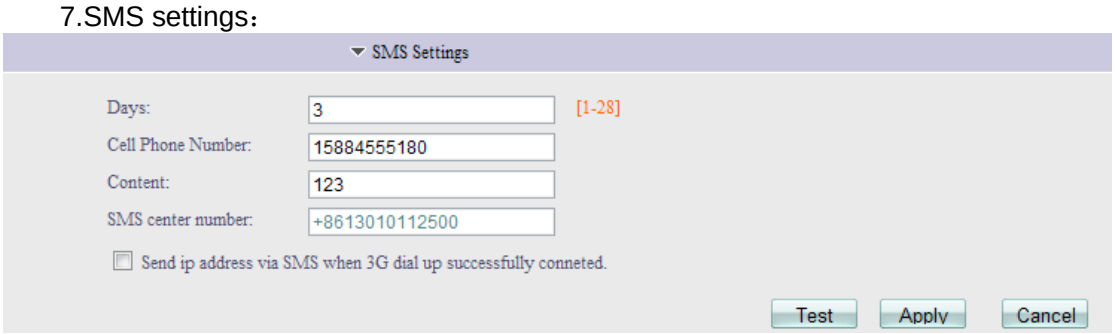
Used to view the current 3G network status.

6.PIN Code：



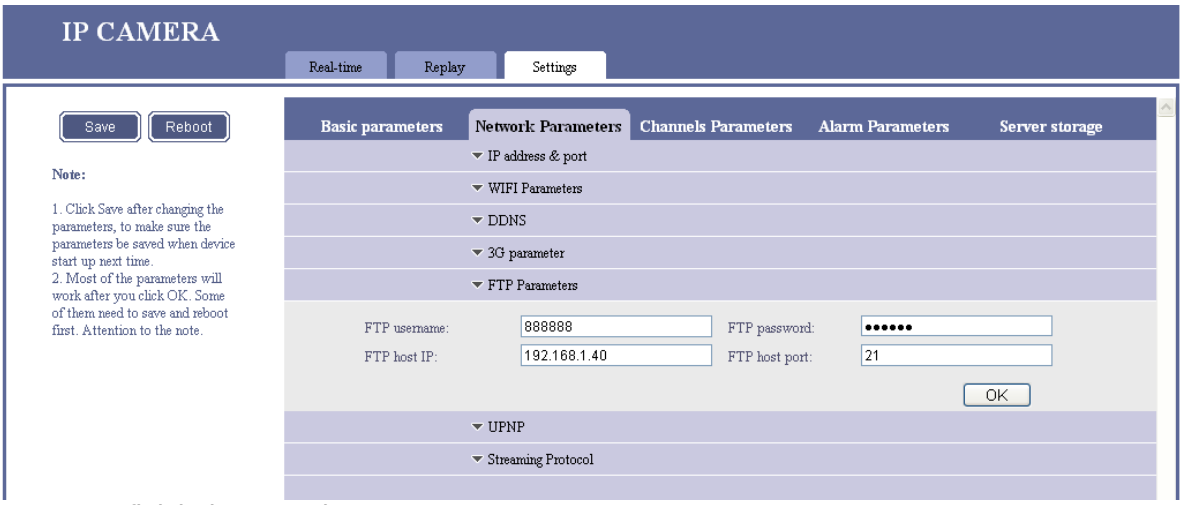
The function is the same as the PIN function of mobile phone.

7.SMS settings：



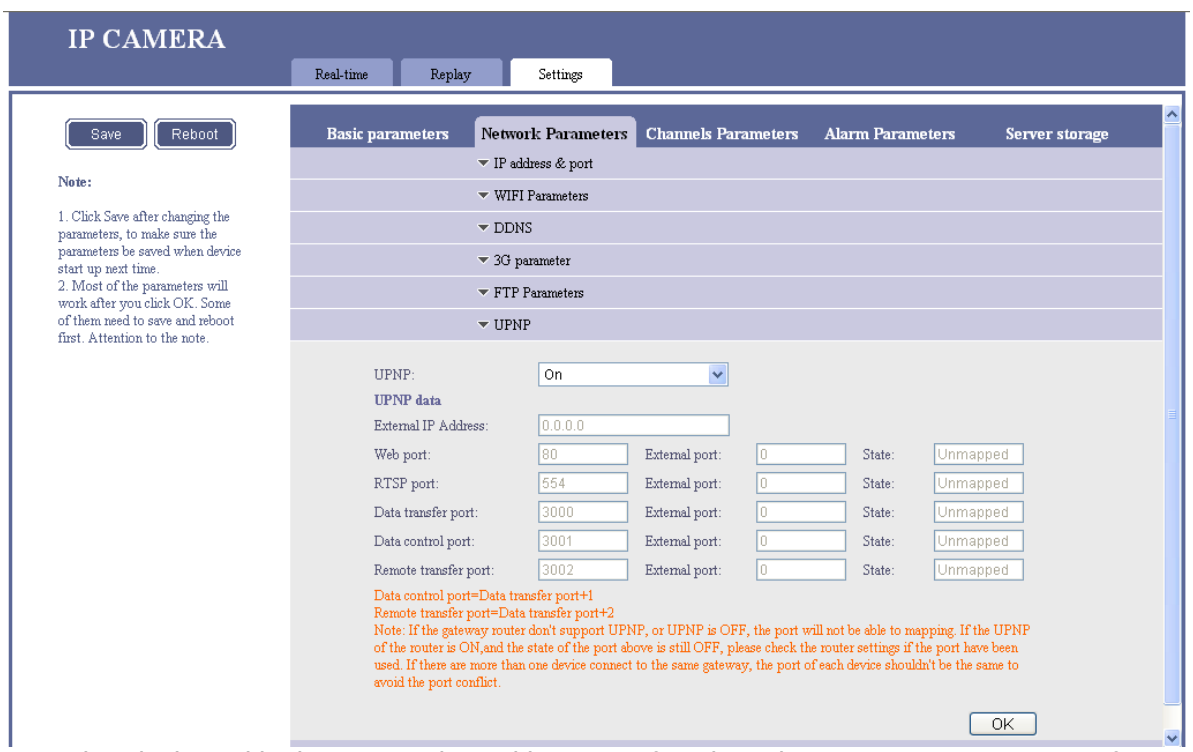
Used to set phone number and content for short message, and if it will use the short message to inform when equipment is online.

[FTP parameters]: Click “FTP parameters” , setting interface as follows:



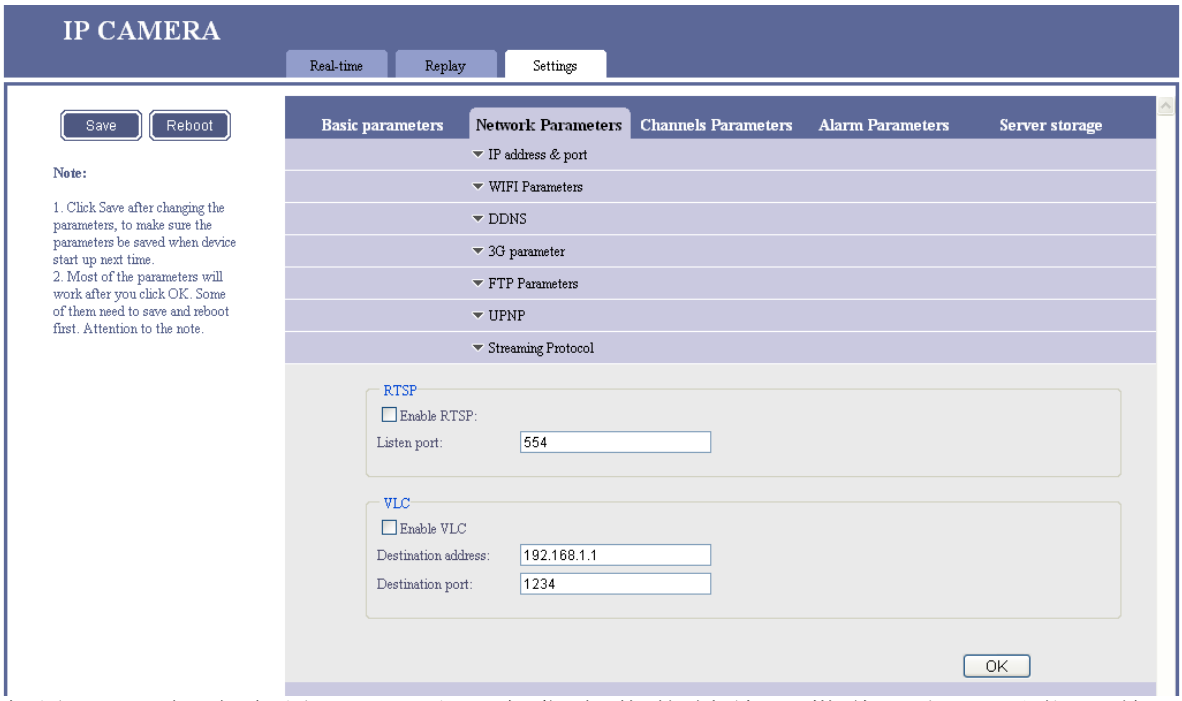
Start FTP, finish these settings
Upload snapshot and record to FTP when alarming, or upload timing snapshot to FTP

[UPNP]: Click “UPNP parameter” , setting interface as follows:



Connect the device with the router that with UPNP function, the WEB port, Data transfer port,RTSP port , Data control port and remote transfer port will be mapped , and the status will display “Mapping”.

[Streaming protocol]: Click “RTSP” , setting interface as follows:



启用 Rtsp: 勾选启用 Rtsp 后，在你安装的播放器媒体 -> 打开网络里输入“rtsp://192.168.1.19:554/live”播放实时视频。

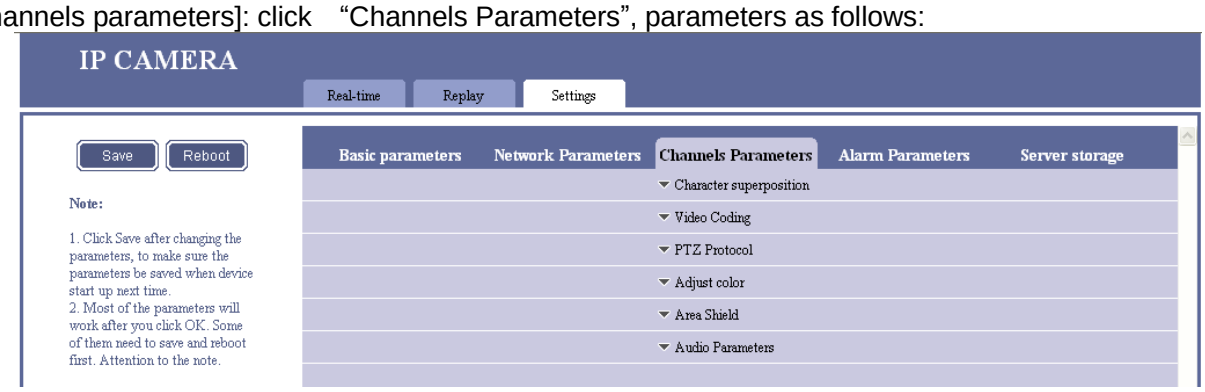
Enable Rtsp: enable RTSP,you can play the real-time video by entering “rtsp://192.168.1.19:554/live” after opening the network from the player media you have already installed.

启用 VLC：填入目的地址和端口，使用流媒体软件播放实时，历史视频。

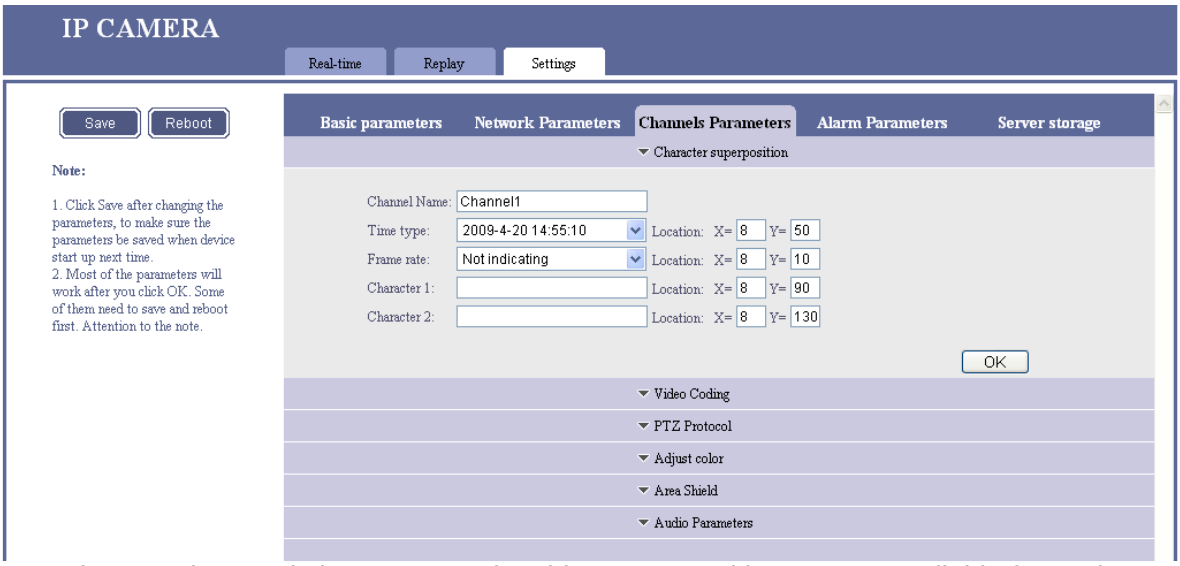
Enable VLC: enter the Destination address and port to use the streaming media player play the real-time or historic video.

4.3.3.3 Channels parameters setting

[Channels parameters]: click “Channels Parameters”, parameters as follows:

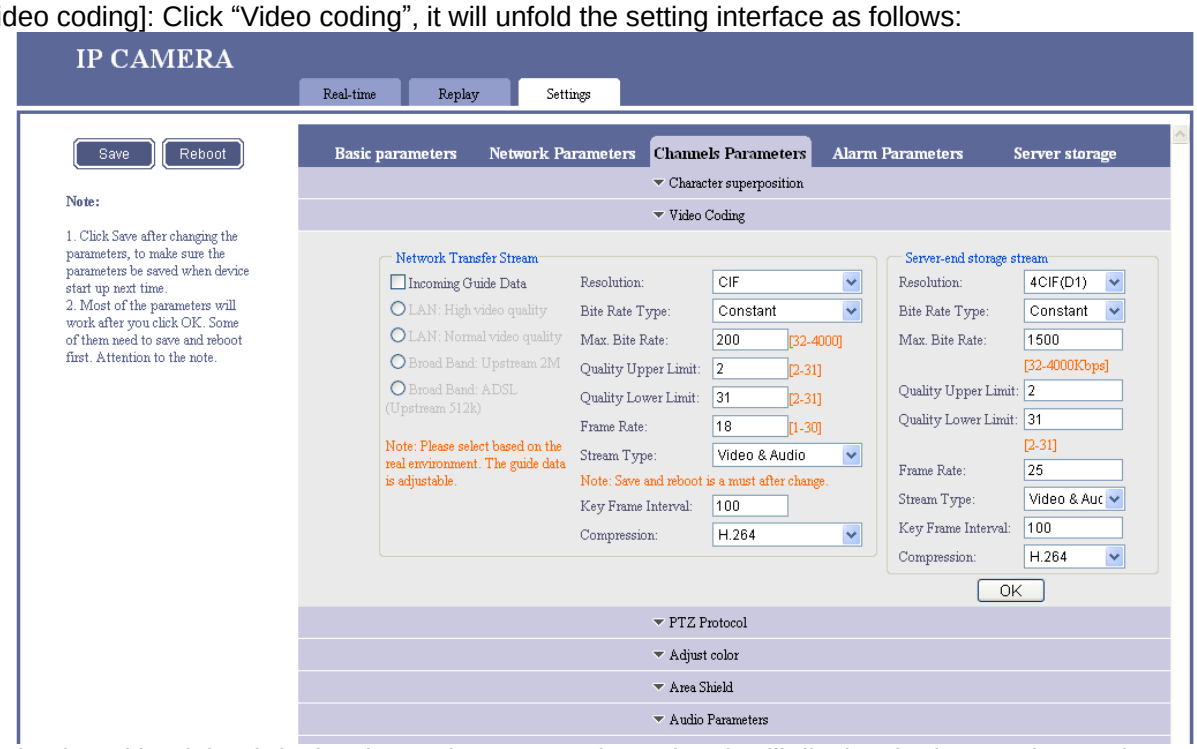


[Character superposition]: Click “Character superposition” , setting interface as follows:



Enter the superimposed characters on the video screen, with two rows available for setting, including the Chinese characters, letter in capital and lower case, figures and special character; set the coordinates position where will display, select time format, set the position for the displayed coordinates; check the displayed code rate and set the coordinates position displayed by the code rate; afterwards click “OK”. It can only allow to enter 24 characters and 24 bytes at most.

[Video coding]: Click “Video coding”, it will unfold the setting interface as follows:

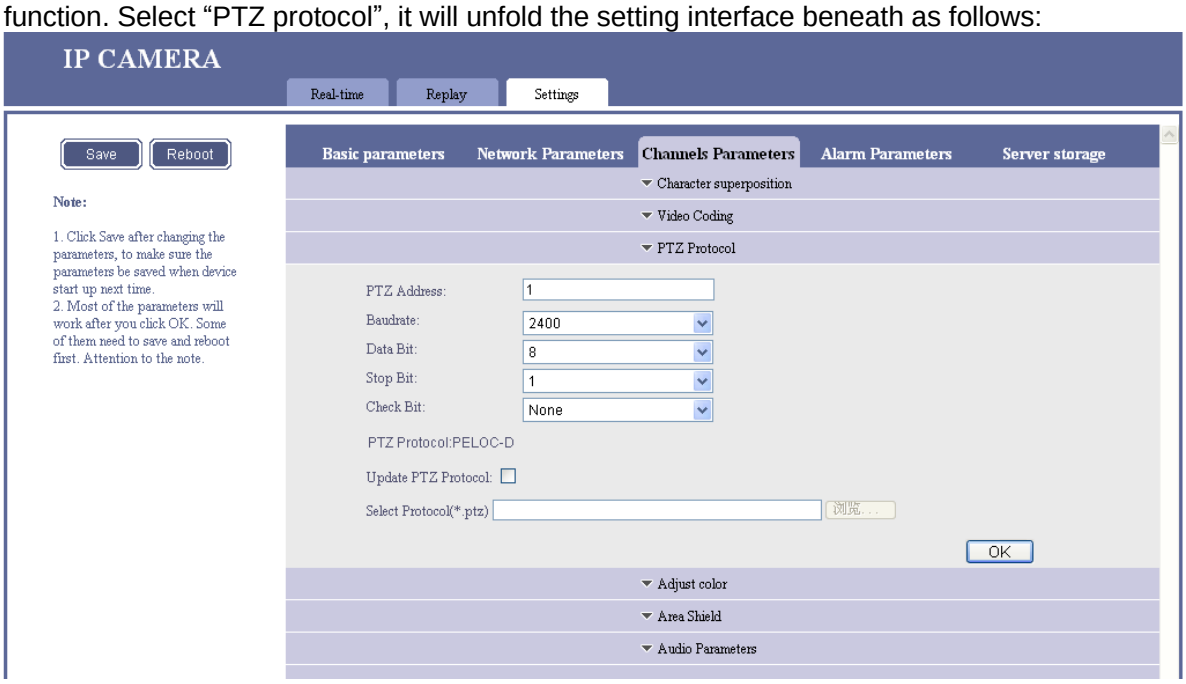


Check and load the default value, select one setting value, it will display the image size, code rate, worse quality, frame rate at the right side; or don’t check and load the default value; and set the parameters above directly. Set the parameters directly The image size can be D1,2CIF,CIF,QCIF. The network video server can only show the normal image when being connected with the video source of the same resolution and frequency; when fixing the code rate, keep the same average code rate of the image; when fixing the quality, change the average code rate of the image according to the image complicacy. H.264 compression code rate range 32-4000Kbps; MJPEG compression optional, the code rate range 1000-16000Kbps. When the code stream format is the compound format (audio/video), the audio and video will be

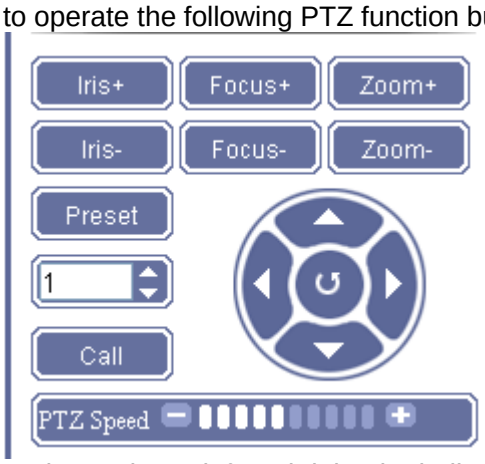
transferred simultaneously; if the code stream format is the video format, it will only transfer the video, but not the audio. After changing the code stream format, it needs to re-boot the device to activate.

Note: After selecting MJPEG encode, the code rate will be turned to 8000 automatically. (Avoid the Mosaic of low code rate after setting MJPEG)

[PTZ function]: The RS485 interface of device is connected with the high-speed camera with PTZ function. Select “PTZ protocol”, it will unfold the setting interface beneath as follows:



Select update the PTZ control document, click “Browse…” button to select the PTZ Protocol to upgrade; click “OK” to upgrade the PTZ protocol; set the PTZ address, baud rate, data bit, stop position and check bit of device, and make them conforming with the PTZ. It can copy such settings to all channels or any channels among them (except the PTZ address). Access to “Real-time monitoring” interface to operate the following PTZ function buttons.



Operate the PTZ to move towards up, down, left and right; the ball machine can move as per the operation directions;

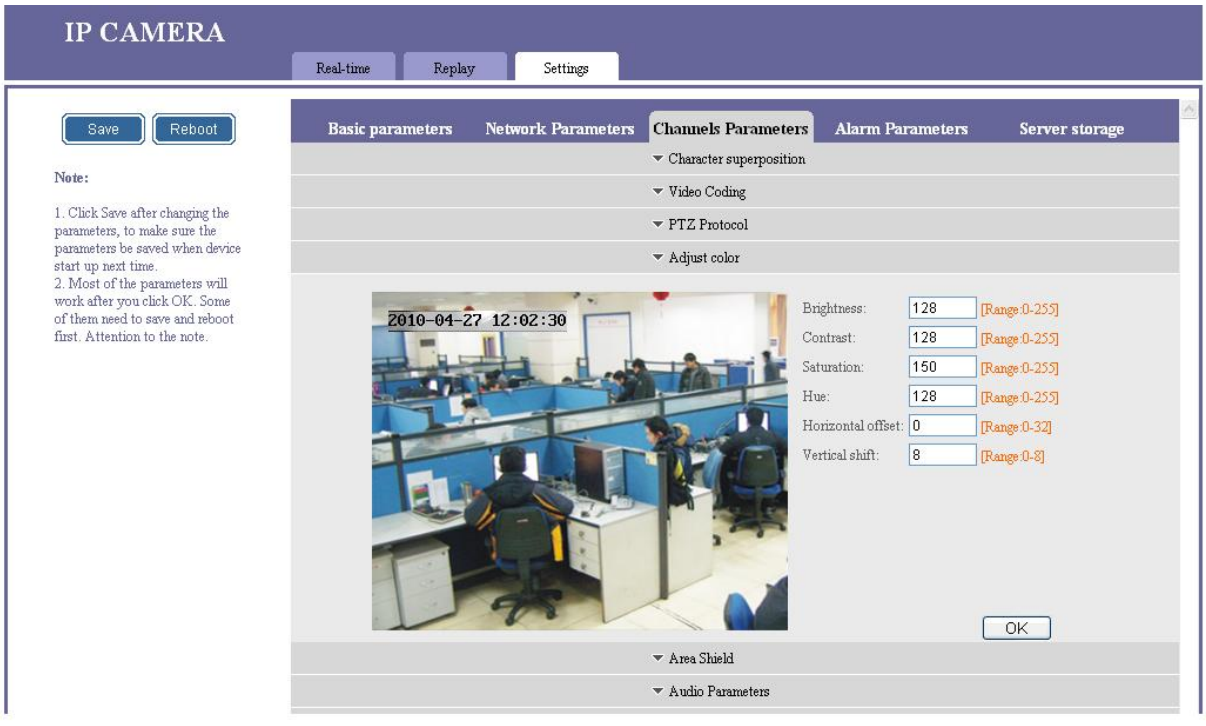
Adjust the speed of PTZ; control the rotation of PTZ; the ball machine can turn as per the given speed;

Click “Focus +” or “Focus -” button, it can increase or reduce the focal distance of image;

Click “Preset” button, it can set the preset point;

Enter the number of preset point and click “Transfer” button, it can transfer call the preset point;

[Brightness and color adjustment]: Click “Adjust color” line, it will unfold the setting interface as follows:

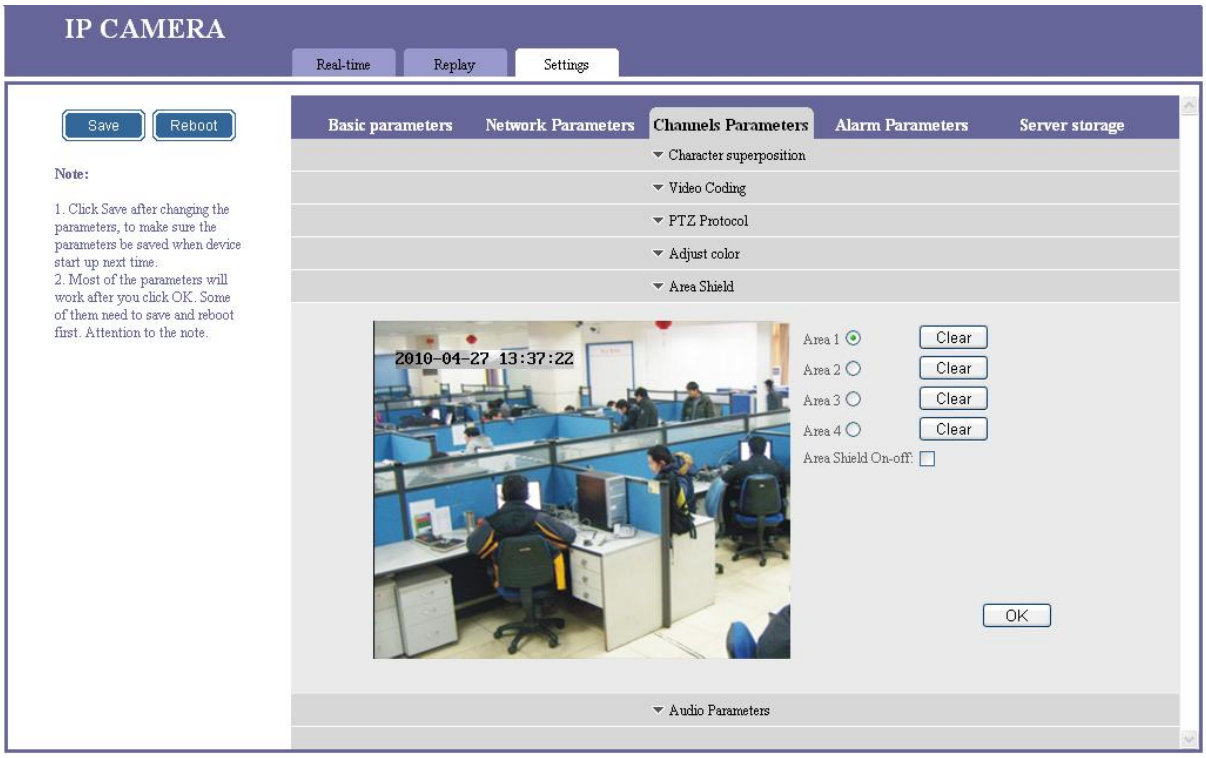


Set the brightness, contrast, saturation and horizontal offset of image.

Note: The horizontal offset refers to the left-side offset.

[Area shield]: Click “Area shield” line, it will unfold the setting interface as follows:

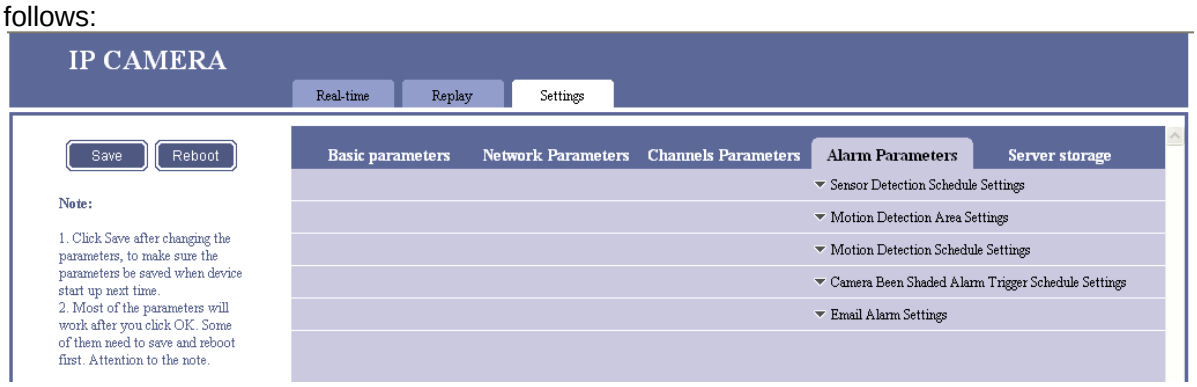
Select the “Setting Privacy Switch” Area Shield, hold the left mouse , drag the mouse on the preview screen, select the range you want to shield. The maximum range is one quarter of whole screen; it can set 4 Area shields at most; click “OK” button to save. If clearing the Area shield where has been set, click “OK” button.



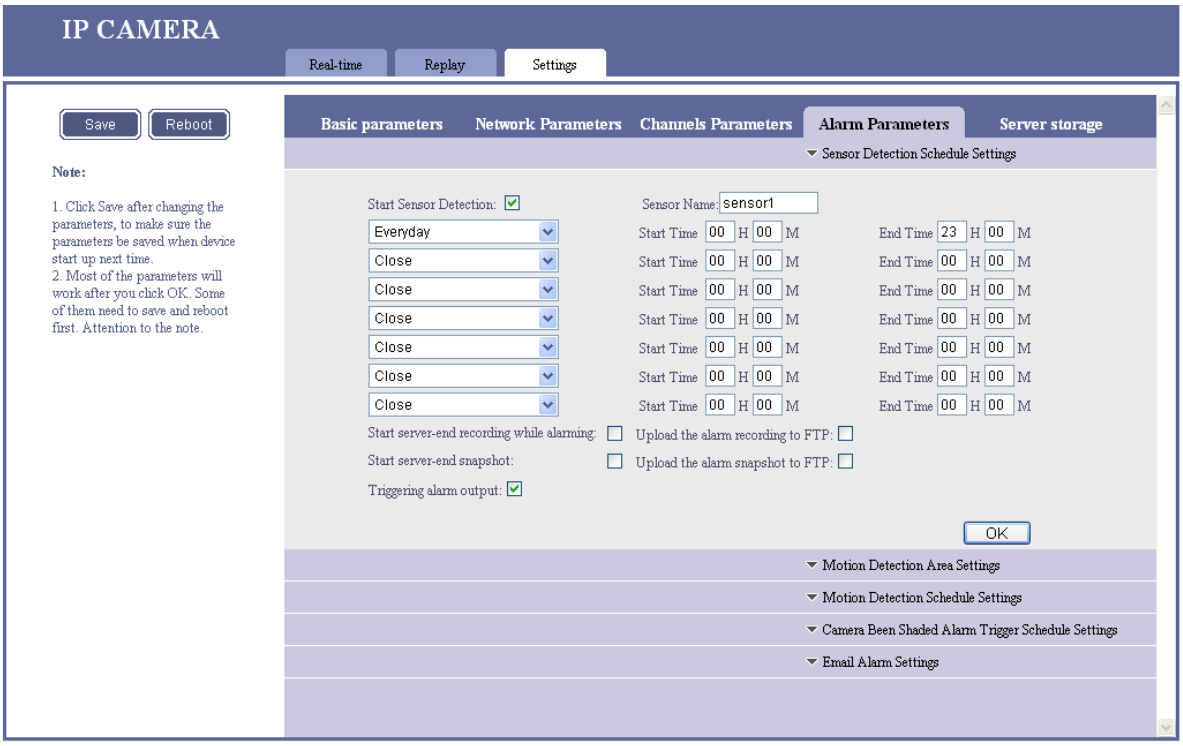
[Audio parameter]: Select “Audio parameter” option, it will display the audio parameter setting page beneath; when setting the audio parameters, please refer to the above audio frequency and Talkback function.

4.3.3.4 Alarm parameters setting

[Alarm parameters]: Select “Alarm parameters” option, it will display the parameters beneath as follows:



[Sensor Detection Schedule Settings]: Click “Sensor Detection Schedule Settings” line, it will unfold the setting interface beneath as follows:

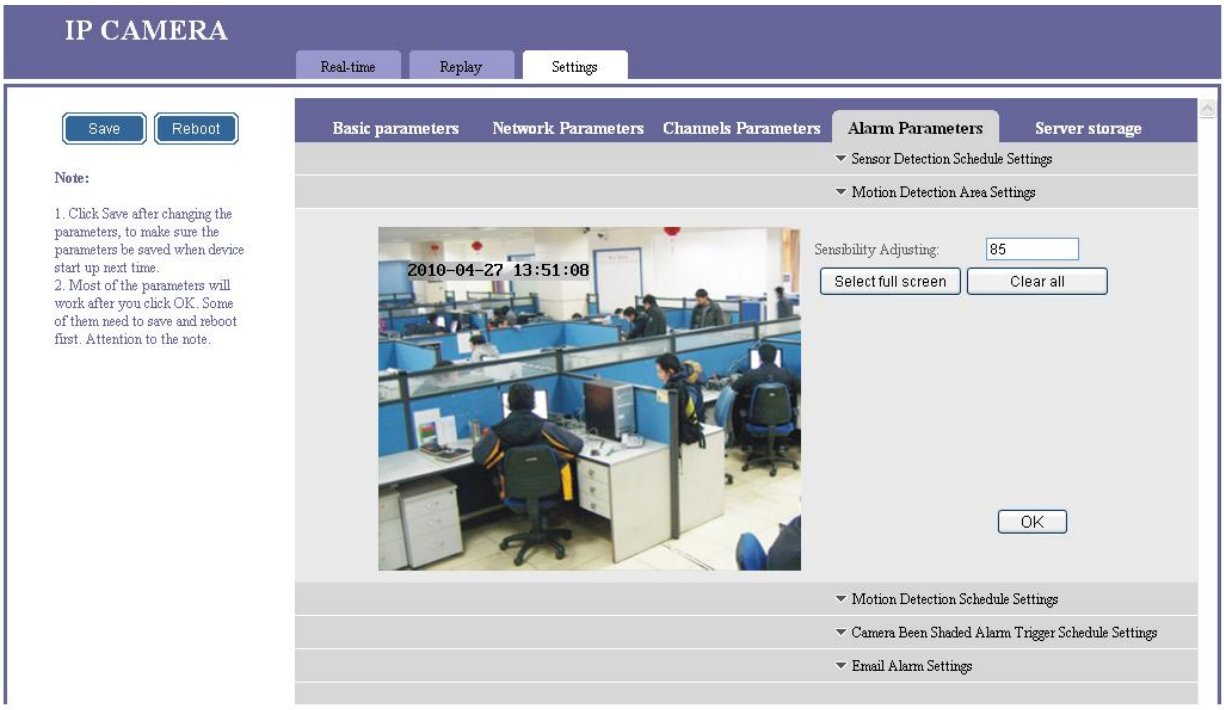


Under the normal open mode, it need to trigger the alarm (connect the alarm input with the earth);

Under the normal close mode: the network video server will be under the alarm status; after triggering alarm (connect the alarm input with the earth)), the alarm will stop.

Start the Trigger Channel Snapshot, the image will be saved in the fore-end storage device.

[Motion Detection Area Settings]: Click “Motion Detection Area Settings” line, it will unfold the setting interface as follows:

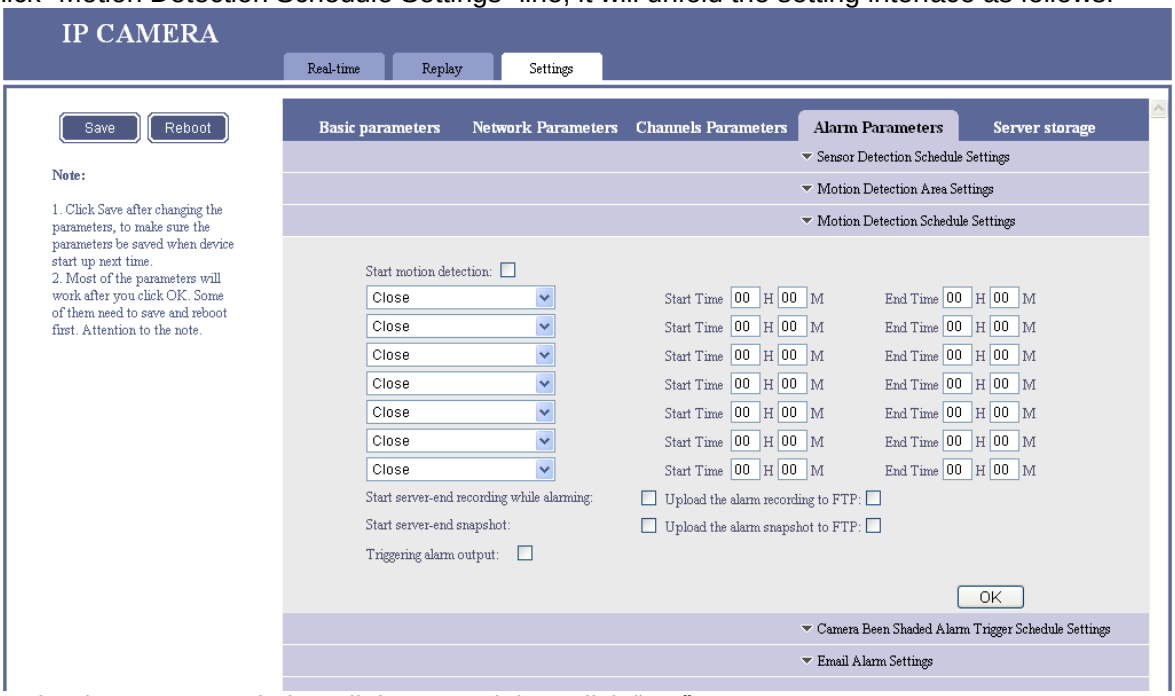


Select the range and sensitivity of detection; the default sensitivity is 86.

Note: If the sensitivity is too high, the jump of OSD will trigger the Motion Detection Area

Setting alarm when OSD superposition displays.

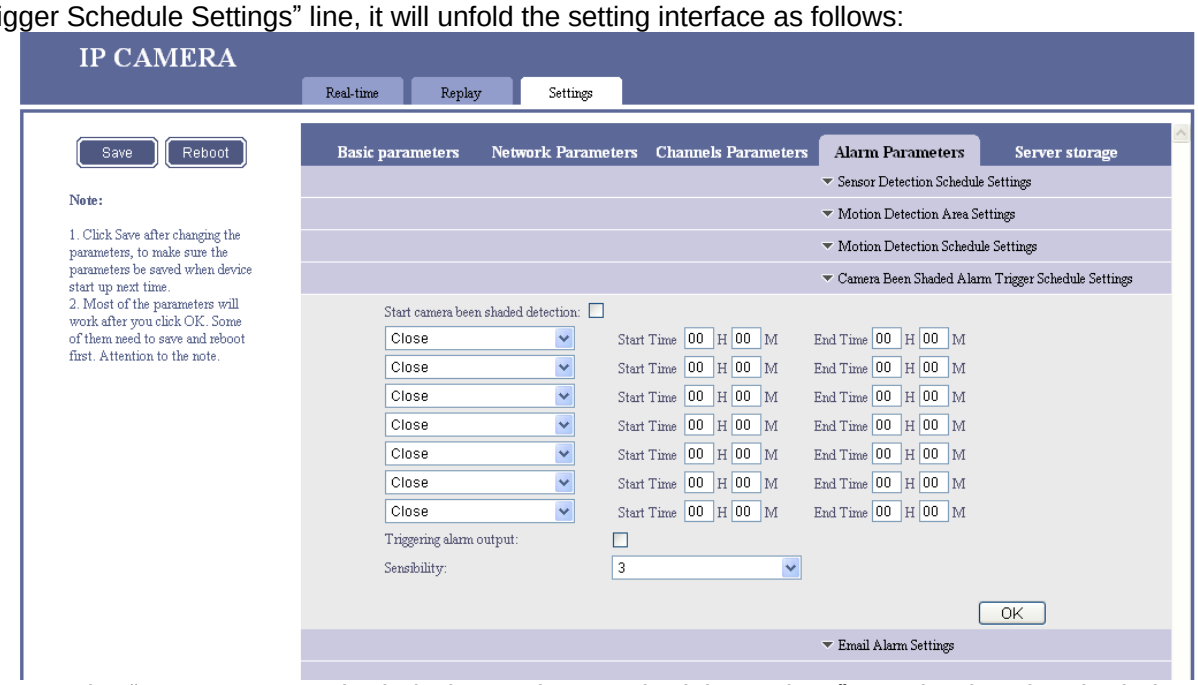
Click “Motion Detection Schedule Settings” line; it will unfold the setting interface as follows:



Set the time group and alarm linkage, and then click “OK”;

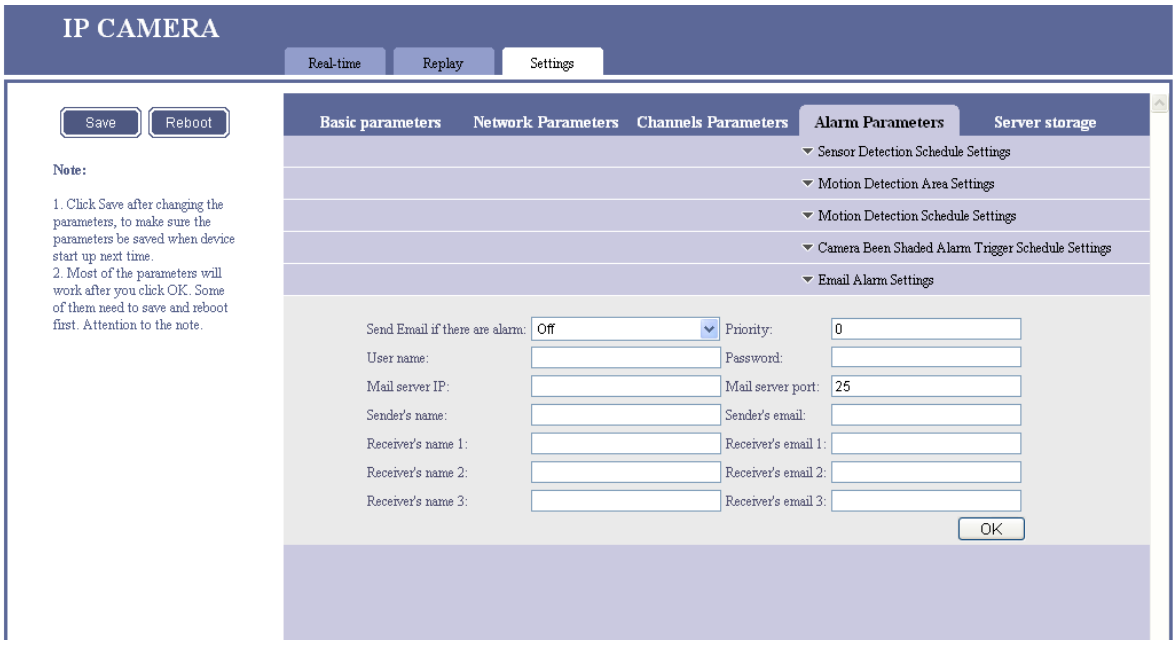
Start the Trigger Channel Snapshot and save the image in the Server-end storage. fore-end storage device. Trigger ”Upload the alarm snapshot to FTP”; upload the picture to the designated root directory of FTP Server.

[Camera Been Shaded Alarm Trigger Schedule Settings]: Click “Camera Been Shaded Alarm Trigger Schedule Settings” line, it will unfold the setting interface as follows:



Start the “Camera Been Shaded Alarm Trigger Schedule Settings”, set the time for shaded detection and the sensitivity (1-5) to make video shielding arrangement; the higher the sensitivity is, the more sensitive it will have.

[Email Alarm Settings]: Click “Email Alarm Settings” line, it will unfold the setting interface as follows:

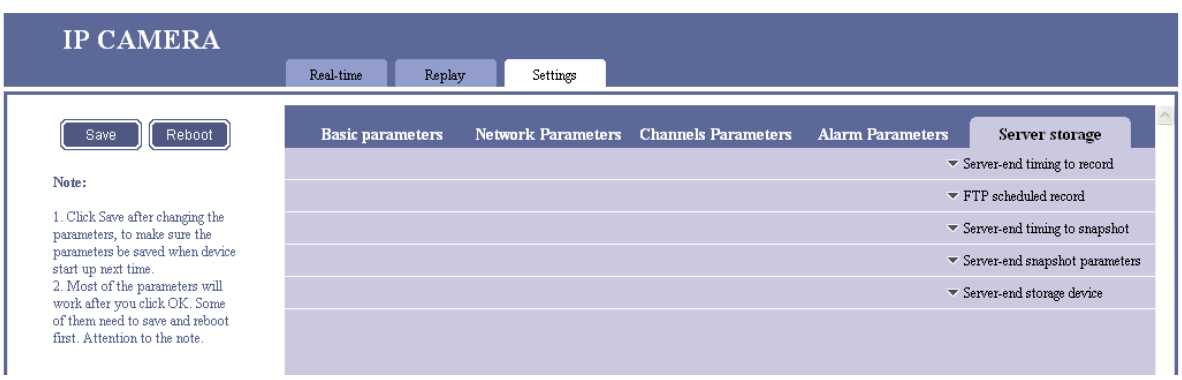


Firstly, install email server in the LAN, such as CMailServer installation; add the email account.

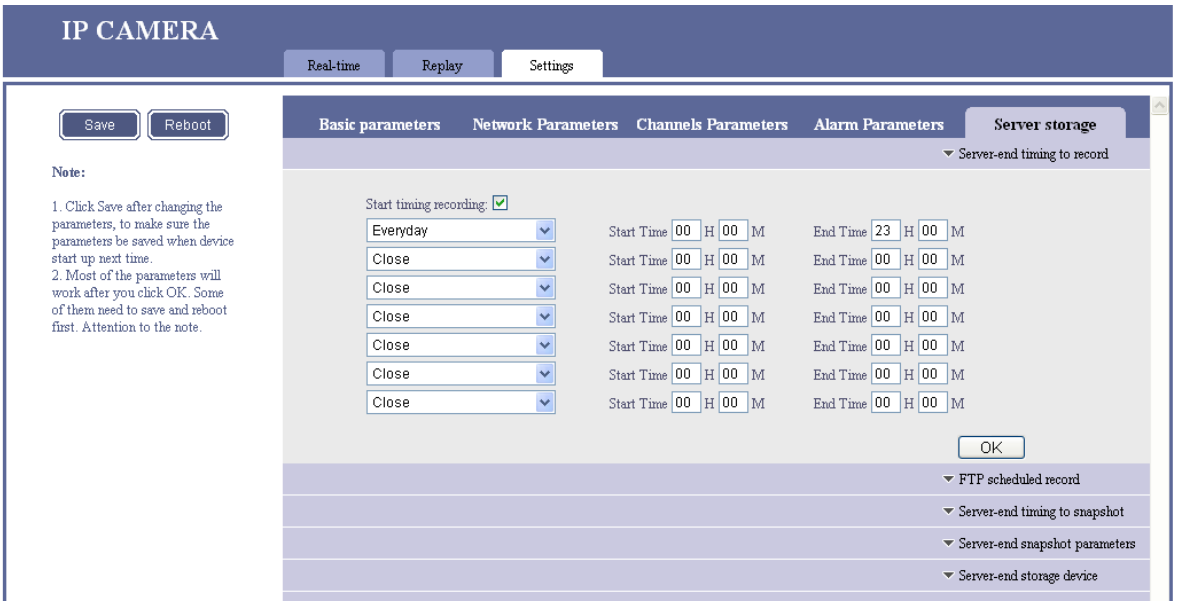
Even though the Motion Detection Area Settings and sensor alarm does not start the alarm linkage Snapshot, the email box of the recipient will receive alarm email. The email will comprise the email subject and text only (no picture).

4.3.3.5 Server-end storage setting

[Server-end storage]: Click “Server-end storage” option, it will display the parameters as follows:

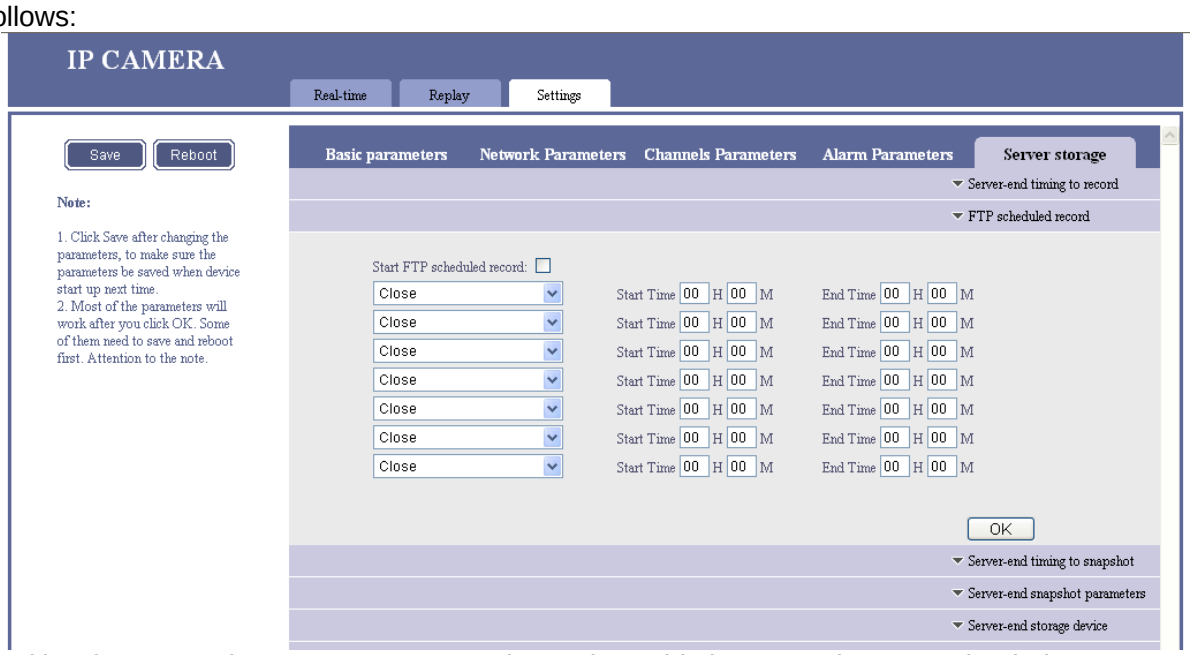


[Server-end timing to record]: Click “Server-end timing to record” line, it will unfold the setting interface as follows:



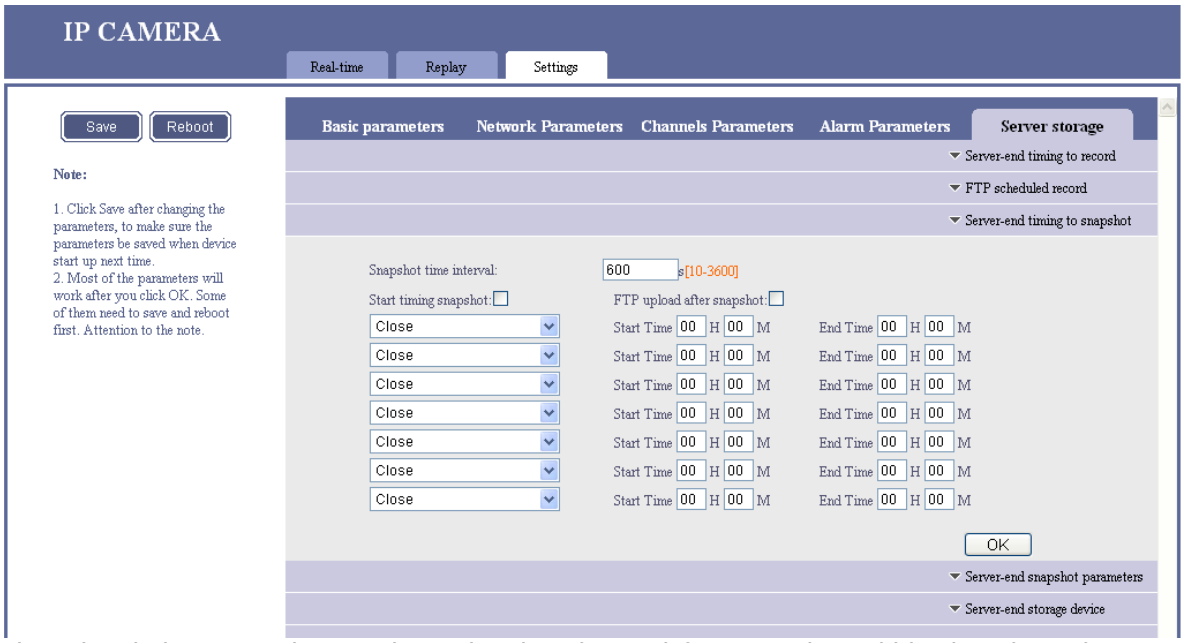
Start the front-end timing video, set the time segment for timing video, and then click “OK” button; the device will start recording pictures on the given time.

[FTP scheduled record]: Click “FTP scheduled record” line, it will unfold the setting interface as follows:



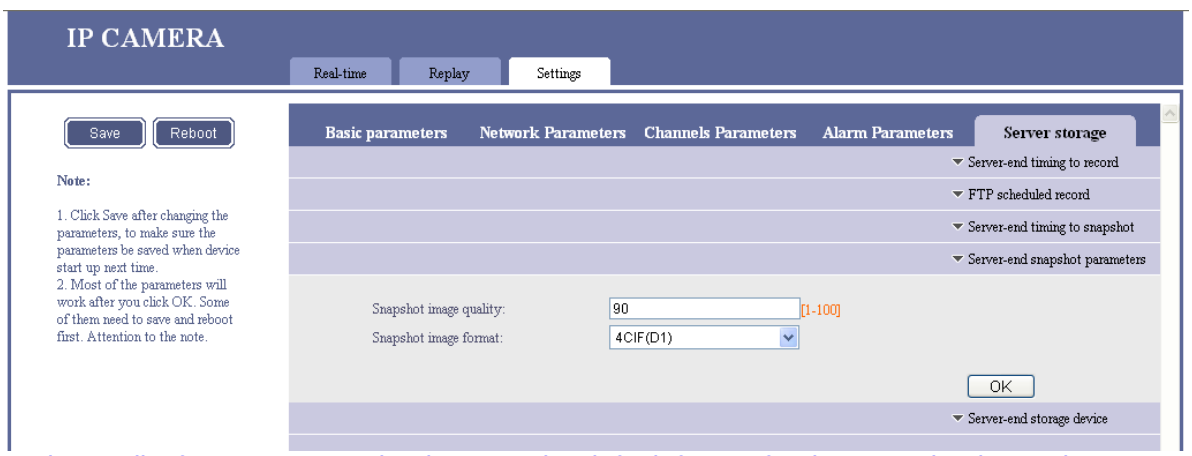
With reference to the FTP parameter setting option said above, set the FTP uploaded server, select the FTP timing video, set the time for timing video, and then click “OK” button; afterwards, the FTP will upload the timing video.

[Server-end timing to snapshot]: Click “Server-end timing to snapshot” line, it will unfold the setting interface as follows:



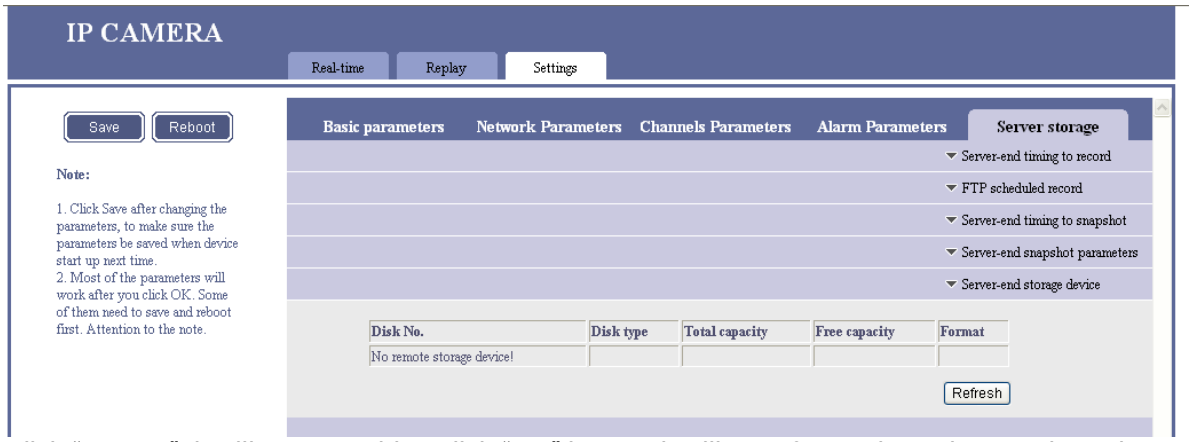
Select the timing Snapshot, and set the time interval for Snapshot within the given time period. The network video server will make Snapshot and save it in the Server-end storage with the setting time interval. If “Snapshot FTP Upload” is triggered, the Snapshot picture will be uploaded to the local root directory of FTP Server.

[Server-end snapshot parameters]: Click “Server-end snapshot parameters” line, it will unfold the setting interface as follows:

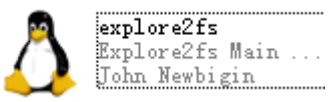


Set the quality for JPEG Snapshot image; , the default format for the Snapshot image is D1. The pictures in the Server-end storage and FTP snapshot setting like the method. The snapshot picture don’t display bit-rate.

[Server-end storage device]: Examine the information of the front-end SD card, see the following Figure:



Click “Format”, it will pop up a hint; click “OK” button, it will start formatting. Please reboot the system after successfully format. By refreshing the webpage, it can examine the free space.



Note: The file system is EXT3. If using the software explore2fs.exe and card reader independently, it can download file. Double click “explore2fs.exe”, it will display the SD Card File Folder List at the left side of the software and the Snapshot picture and video file at the right side. The video file will be played by RealMp4Player.

5. FQA

5.1 It can not access to the Network Video Server through the Internet Explore

- Possible reason: The network is jammed;
- Solution: Connect the PC to the network to test if the network works normally; firstly it should remove the cable problem, and then the network problem caused by PC virus. Until you can successfully finish the Ping connection between the PC and NVS.
- Possible reason: IP address is occupied by other devices?
- Solution: Disconnect the network video server and the network; connect the network video server and PC independently; re-set the IP address as per the appropriate recommendations.
- Possible reason: IP address is located in the different subnets?
- Solution: Check the IP address of the network video server, the address of subnet mask and the setting of gateway.
- Possible reason: Unknown
- Solution: Press the Reset button at the rear of the network video sensor to restore to the factory defaults.

5.2 Pan / tilt or dome camera is out of control

- Possible reason: the PTZ, baud rate, address and the PTZ protocol, baud rate and address of the PTZ or dome camera is different;

- Solution: Access to the setting interface to change the PTZ protocol, baud rate and address into the using PTZ.

- Possible reason: the signal cable is not connected properly;
- Solution: Re-connect the control cable between the PTZ or dome camera and the network video server.

5.3 It can not play the video normally after the program upgrades

- Solution: Close all webpage; seek NetClient.dll, NetViewX.cab, NetViewX.ocx file from the system directory and delete them, and then use the Internet Explore to connect the NVS, and the NVS will show the new display plug-in component automatically.

5.4 How to transfer video on the Internet through the NVS

If trying to transfer data on the Internet through the NVS, it should know the network connection mode firstly. If it is the internet static IP address, it can directly set the IP address of the NVS, subnet mask and gateway into the static address provided by ISP, and then it can Internet Explore normally. Additionally, the network that is used widely, i.e.: ADSL and Residential Broadband, such two connection methods are required to make certification process. The certification can be finished by using some intelligent devices, such as PC or small router. If it is in a LAN, it will have a IP address for the Internet, so the external network will have no way to view the inside of the network; under such circumstances, it needs to make certain setting on the NVS.

- Solution

1) If using for the LAN of office or building, and trying to access to the NVS in another city, it can use the device that is connected with the Internet to forward, i.e.: it can use the Port Mapping Method to finish the forward of information package. Some popular port mapping software will be available for use after making a simple setting, for instance: Portmap, portunnel. Select all IP among the IP addresses to be accessed to, and then fill the address of the NVS insider the LAN in the IP address bar at the rear end.
2) If there is no PC and it selects the router as the device for forward, this is also workable. Most of the routers have the port mapping function, which is called also DMZ. Designate DMZ address as the address of the NVS.
3) Set a VPN server as the server for a virtual exclusive network, and then dial up at the remote client terminal; after connecting, it can access to the internal host.

5.5 Why the normal data could not go through the exchanger

- Possible reason:
  1. If it is a second-tier switch, does it make the address wrong?
  2. If it is a three-tier switch, does it make the port and physical address binding?
  3. Does it consider the NVS when setting the firewall rule?
- Solution:

1) Before finding the network failure, please use Ping command under the command line mode to connect the address of the other party. After viewing ping, the information returned is a very important link. If there is no information returned, it means the network is in problem certainly.
2) If binding IP and Mac address, it will need to make some setting inside the exchanger, i.e.: add a new binding; that is to say, bind the IP address of the NVS and Mac address.
3) If no NVS is considered when setting firewall rule for the exchanger, it is necessary to allow the NVS make communications at the port of 3000, 3001, 3002, 3004 and 80. Otherwise all data package will be filtered and fail to reach.

5.6 Why it goes wrong when visiting the NVS through Internet Explore after upgrading

Delete the cache of Internet Explore. You can follow this steps to realize this operation, i.e.: select “Tool menu” — “Internet option”, click “Delete file” button on the 2nd item (Temporary Internet file); check the option of “Delete All Off-line Content”, and then click “OK”. Afterwards, re-access to the NVS.

6.Appendix

Appendix A: Explanation for Port In Use (mapping) of NVS

When transferring video, the NVS will occupy the following ports as the defaults, i.e.:
80------ Web Port
3000------ Data Transfer Start Port
3001------ Data Control Port
When accessing to the NVS through the public internet, it must make port mapping operation on such three ports.
If there are multiple NVS under an IP address output, it must change the corresponding port of sensor as per the demand, such as Web port, Data transfer start port and data control port.

Appendix B Factory Default Parameters

- **Factory Default Network Parameters**

Parameter	Default Value
IP address	192.168.1.19
Subnet mask	255.255.255.0
Gateway	192.168.1.1
Transfer start port	3000
Data control port	3001
Remote replay port	3002
Web port	80
Multicast address	235.1.1.1
Multicast port	6500
DDNS	Close
Motion detection	Close
Probe alarm	Close
PPPOE	Disconnected
Remote host port	3004
Alarm host port	8000
DNS server port	8080

- **User & password**

Parameter	Default Value
Factory default admin username	888888
Password	888888
Factory default common user 1 username	1
Password	1
Factory default common user 2 username	2
Password	2

The common user can not make parameter setting after login.

7. Interpretation of terms

1. Dual-stream

The dual-stream uses one-way code stream with high code rate for the local high resolution storage, for instance: QCIF/CIF/2CIF/DCIF/4CIF number, and one-way code stream with low code rate for network transfer, such as QCIF/CIF number; meanwhile it covers the local storage and remote network transfer. The dual-stream can realize two different bandwidth code stream demand, i.e.: the local transfer and the remote transfer. The local transfer uses the high code stream to save high resolution video, whereas the remote transfer uses the low code stream to adapt to the higher image fluency obtained by CDMA/ADSL and other interwork.

2. I frame

I frame is the one to compress and transfer infra-frame coding image of volumes of data by removing the redundant information of image space; it is called also the key frame.

3. B frame

B frame is the one to compress and transfer encoded image of volumes of data by considering the encoded frame before the source image sequence and the time redundancy information between the encoded frames behind the source image sequence; it is called also the dual-way predicated frame.

4. P frame

P frame is the one to compress and transfer encoded image of volumes of data by reducing the time redundancy information of the encoded frame before the image sequence; it is called also the predicated frame.

5. BBP frame

BBP frame is the video frame; it is mainly encoded as per the I BBP BBP BBP… frame structure; there are two B frame before each P frame.

6. Transparent channel

The transparent channel is a technology to send the analyzed IP data message to the serial ports, acting to extend the control distance of serial equipment and use the IP network to control multiple serial equipments. For users, it will only focus on point-to-point transfer, but not the network transfer process; therefore it is called the serial transparent channel.

7．DHCP

DHCP is the abbreviation of Dynamic Host Configuration Protocol; its former was BOOTP. BOOTP was originally used for the network without disc host; the network host uses BOOT ROM to start and connect with the network, but not the disc; whereas BOOTP can set TCP/IP environment for the host. Actually it comprises two parts, i.e.: server terminal and client terminal. All IP network setting data are controlled centrally by DHCP server, and the DHCP server is responsible for dealing with DHCP requirement of client terminal; however, the client terminal will use the IP environmental data configured by the server.

8. PPPOE

pppoe is the abbreviation of point-to-point protocol over Ethernet; it can make the host of the Ethernet connect with a far-end access concentrator through a simple bridging device. Through the pppoe protocol, the far-end access concentrator can realize the control and charging on each accessed user. Comparing with the traditional connection mode, pppoe has the better cost performance, and has been used widely in the network construction of residential community and other application fields. Currently the popular bandwidth connection mode is ADSL, which is the one that uses the pppoe protocol.

9.DDNS

DDNS is the abbreviation of Dynamic Domain Name Server. Based on DDNS, the dynamic IP address of user will be mapped to a fixed domain name resolution service; every time when user connects the network, the client-terminal program will transfer the dynamic IP address of the host to the server program of the host of the service provider through the information transfer way; the service provider program will provide the DNS service and realize dynamic domain name resolution. That is to say, DDNS will capture the IP address that is changed by user, and then make it correspond to the given domain name; if so the other online users will be available to make communication through the domain name.

10.FTP

FTP is the abbreviation of File Transfer Protocol, used for making dual-way transfer on the control file through Internet. Meanwhile, FTP is an application program, and user can connect its own PC with all servers that use FTP protocol all over the world to access to the program and information on the server.

The main function of FTP is to make a user connect with a remote computer (such computer must use FTP server program) to view the files saved in the remote computer, and then copy such file to the local computer, or send the file in the local computer to the remote computer.

11.UPNP

UPnP (Universal Plug and Play) is the general name of a set of protocols; it can not be deemed as the UPnP= “automatic port mapping. When downloading through Bitcomet, UpnP comprises two aspects, i.e.:

1. For an Intranet computer, the UPnP function of BitComet can let the NAT module of gateway or router make automatic port mapping, and map the port to be monitored by BitComet to the Intranet computer through the gateway or router;

2. The network firewall module of gateway or router will open the port for the other computers on the Internet.

UPNP is the abbreviation of Universal Plug and Play, i.e.: the Universal Plug and Play Protocol. It is actually a structure to realize peer-to-peer network connection for computer and intelligent electrical appliances, whereas the intranet address and the network address is changed based on this protocol. Therefore, as long as our router support UPnP and we use the XP operating system that supports the protocol, we can improve the point-to-point transfer speed accordingly.

Access to the setting interface of router; if your router supports UPnP, you will see UPnP setting option beneath the Forwarding Rules Option card (it will be different if the router is different). For this option, we select “Enable UPnP”, and then we re-start the router. Just like this, we finish setting the router.

12.RTSP

RTSP（Real Time Streaming Protocol）is an Application layer protocol among the TCP/IP protocol system; it is an IETF RFC standard submitted by Columbia University, Netscape and Real Networks Corporate. This protocol defines how the one-to-many application program may forward the multimedia data through IP network, The system structure of RTSP is higher than RTP and RTCP, using TCP or RTP to finish data transfer. Comparing with the HTTP and RTSP, the HTTP transfers HTML, but RTP transfers the multimedia data. The HTTP request is sent by the client host, and the server will respond; when using the RTSP, the client host and server may send request, i.e.: RTSP is of dual-way.

RTSP is the multimedia serial protocol to control voice or image, and the Multicast is allowed simultaneously; when transferring, the network communication protocol is out the defined range, therefore it can select TCP or UDP to transfer the serial content at the server terminal. RTSP has the grammar and operation flow similar to HTTP 1.1, but it does not emphasize the time synchronization, so it can tolerate the network delay. However, the Multicast said above, can not only reduce the network flow at the server terminal, but also support Video Conference between multiple parties.

13. VLC

VLC multimedia player (named as VideoLan client terminal initially) is a multimedia player of Video Lan plan; it supports multiple audio and video encoders and file formats, and supports DVD, VCD and other streaming protocols. Meanwhile, it can also be used as the streaming server for unicast or multicast to use for IPv4 or IPv 6 high speed network connection. VLC is integrated with encoder planned by FFmpeg and libdvdcss pool, which makes it available the function to play multimedia file and encrypted DVD.

14. NTP

Network Time Protocol（NTP）is a protocol to make the time of computer synchronize; it can make the computer synchronize the server or clock source (for instance: quartz clock, GPS and so on); it can provide high accuracy time correction (with the difference less than 1ms between LAN and the standard, and less than dozens of millisecond for WAN), and it can choose the encryption confirmation method to prevent evil protocol attack.

15. 3G

3G Digit Content College co-works with the Information Industry Department to declare that, the 3rd General Mobile Communication Technology is the cell mobile communication technology supports high speed data transfer. The 3G service can transfer voice (call) and data information (email, instant message and so on) simultaneously; its typical feature is the one to provide high speed data service.

3G is the abbreviation of the Third Generation, referring to the 3rd-general mobile communication technology. Comparing with the 1st-general analogue mobile phone and the 2nd-general digital mobile phone (such as GSM and CDMA), the 3G mobile phone is the new generation of mobile communication system to integrate the wireless communication and international internet and other multimedia communications.

16. WIFI

Wi-Fi is a technology to connect the personal computer, hand-held equipment (i.e.: PDA, mobile phone) and other terminals in the wireless method.

In fact, Wi-Fi, is the another name of IEEE 802.11b, an industrial term to be published by Wireless Ethernet Compatibility Alliance (WECA), meaning the Wireless Fidelity in Chinese. It is a kind of short-distance wireless transfer technology, supporting the internet-based wireless signal within

hundreds of feet. As the technology develops and the standard promulgates, such as the IEEE802.11a and IEEE802.11g and others, the IEEE 802.11 has been collectively called as the Wi-Fi. In view of the application layer, user is required to be available the user-terminal device covering Wi-Fi firstly if intending to use Wi-Fi.

Thank you to use our NVS. However since the difference of models and other differences caused by the system software upgrade, as well as the appearance and function difference between the real product and the User's Manual, please contact us immediately. We feel sorry for our change which may not be informed of you timely.