IP Camera

IE Browser User Manual

(**Support Windows XP/2003/2008/Vista/Win7**)

Document edition: V1.1

Preface

Thank you for using our IP camera products. This series of IP cameras designed for network video surveillance, including box IP camera, infrared box IP camera, dome IP camera, speed dome IP camera, etc. The products adopt high performance and powerful single SOC chip media processor to integrate audio and video capture, compression and transmission. Standard H.264 Main Profile coding algorithm ensures clearer and smoother video transmission effect. Built-in Web Server allows users to easily perform real-time monitoring and remote control over front-end cameras via IE browser.

This series of IP cameras is suitable for small and medium-sized enterprises, families, and other environments that require remote network video transmission and monitoring. It is easy to install and operate.

Statement:

- Contents in this manual may be different from the edition that you are using. Should any unsolved problem occur given that the product is used according to this manual, please contact our technical support department or your product suppliers.
- The content of this manual may be updated at irregular intervals without prior notice.

Readship:

This manual is suitable for engineers as follow:

- System planning person
- Support and maintenance person
- Administrator
- User

Notes:

- “IP Camera” mentioned in this manual refers to network camera, including Box IP camera, Dome IP camera, Infrared Box IP camera, Infrared Bullet IP Camera and Speed dome IP camera, ect.
- Click: Press the left mouse button once.
- Double-click: Press the left mouse button twice.
- “**[ ]**”: Window name, menu name and datasheet.

Modify record：

Recording the corresponding update, the latest document includes all of the content in previous editions.

Modify date	Edition	Explanation
2013/8/15	V1.0	According to the write standards of our company, typesetting the document again.

Table of Contents

1 Download and install OCX

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

ActiveX installing method:

Download installation

Input the IP address of IP camera in Internet Explore to enter into login page(see Figure 1),

Click [File] to download the OCX:

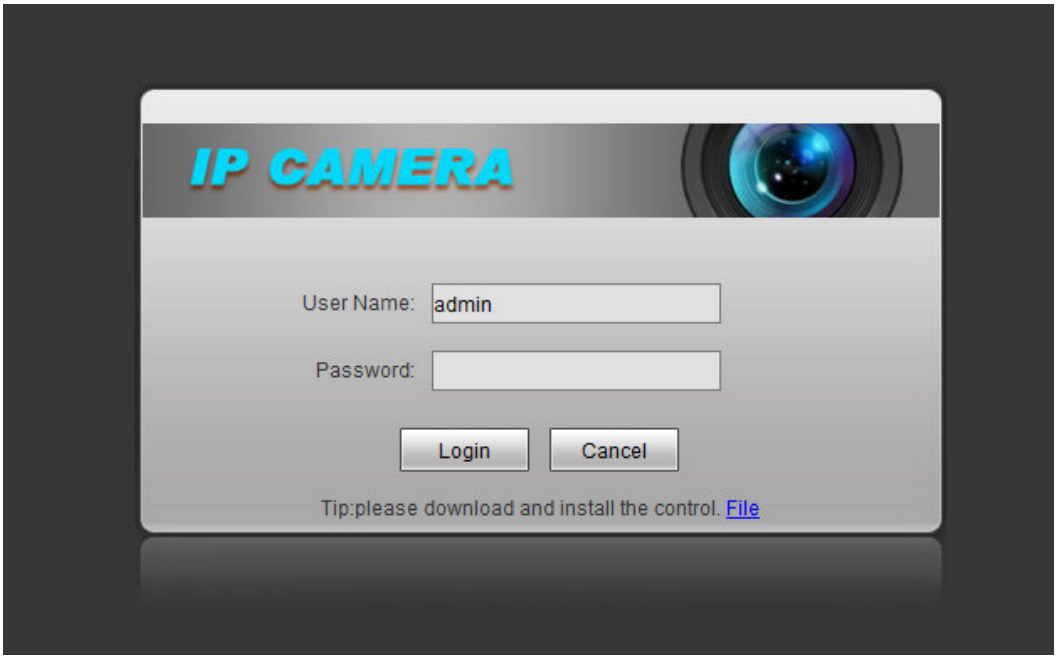


Figure 1

File download dialogue box pops up, click [Run] or [Save] to download ActiveX, after download it; double-click the downloaded file “xdview.exe” to install it. After installation completes, a message “Register OCX success！” will appear(see Figure 2).

If the IE was opened, there will pop up a dialogue box (see Figure 3), click [ok] then all of the opened IE will be closed.

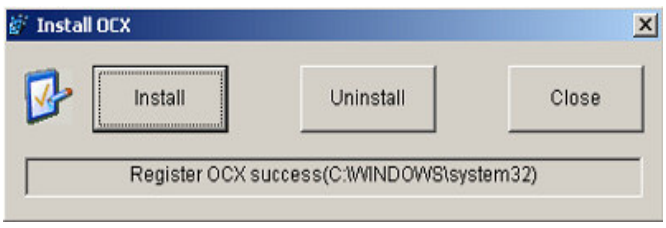


Figure 2

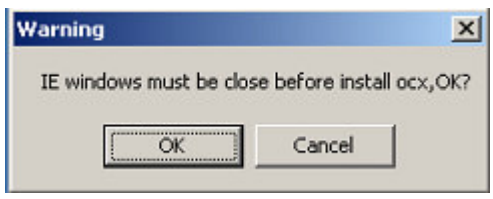


Figure 3

2 Login

Reopen Internet Explorer after ActiveX installation completes, input IP address of the IP camera to turn to login page, enter username (default setting is admin) and password (default setting is admin), click login to enter into main interface(see Figure 4):

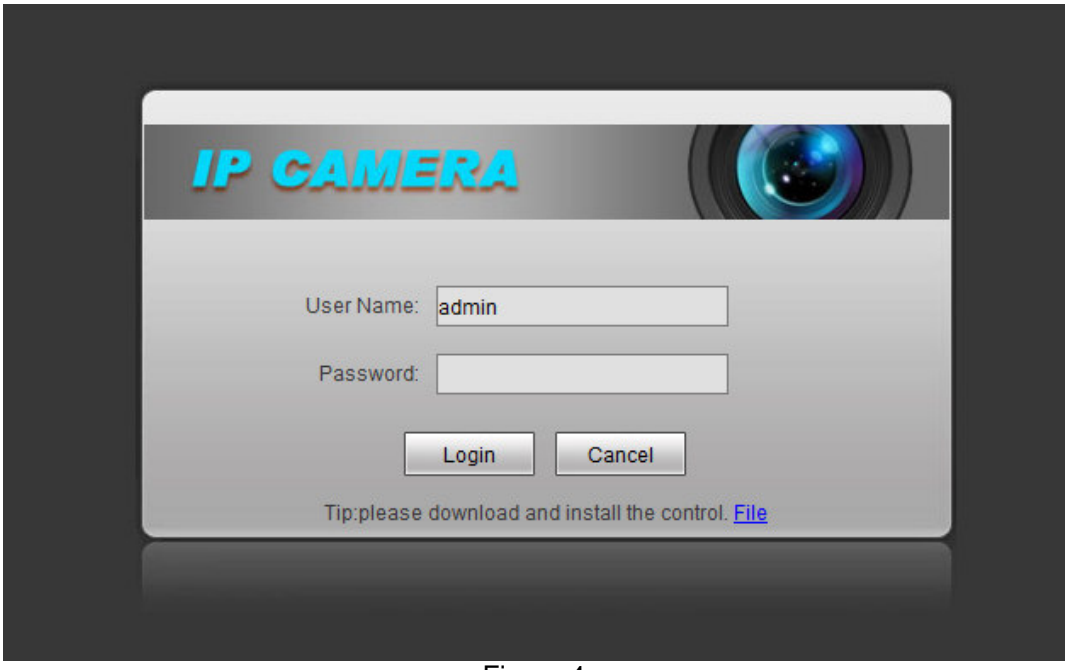


Figure 4

3 Live View

See Figure 5 for the interface of “Live View”:

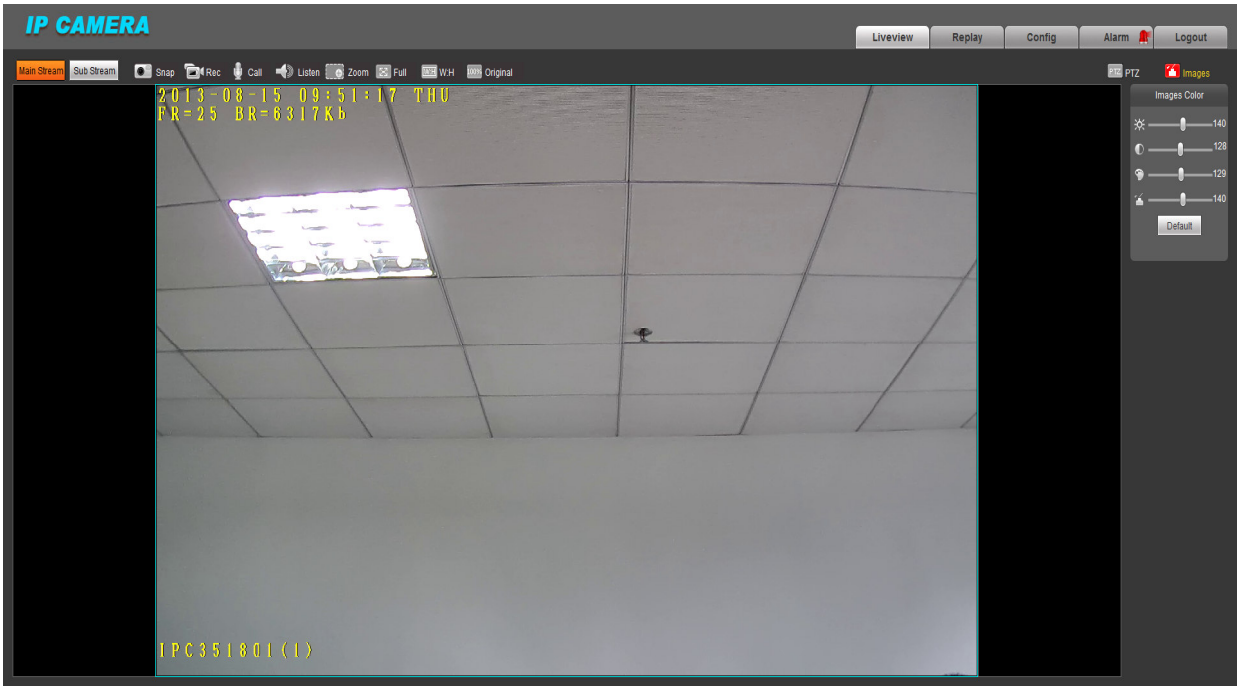


Figure 5

In the Liveview interface, users can do operations like Snapping, Recording, Playback, Call, Listen, Clear Alarm, Log Search, Local Zoom of Image, Full-screen Viewing, PTZ.

[Snap]: click “Snap”, snap the current image and save it in .JPG format automatically to the storage directory of snapped images.

[Record]: Manual image recording, automatically record current images and save them in .264 format to the storage directory of recorded images after the recording function turned on.

Displayed status after recording starts:

[Call]: After turn on the audio talkback switch, the talkback between PC and IP camera can be performed given that audio talkback device is installed to the IP camera. The displayed status after audio turns on:

[Listen]: After switch on the monitoring switch, PC can monitor the sound at the device end. The displayed status after monitoring starts :

[Zoom In]: This feature allows the manual drag and drop of video display area to realize partial zoom in.

[Full Screen]: Display images in full-screen, right click to exit full screen mode.

[W:H]: Display images in aspect ratio, left click again to exit this screen mode.

[Original]: Display images in original size, left click again to exit original screen mode.

[Alarm]: When there is an alarm, click [Alarm] to query alarm log.

[Replay]: Click “Replay”, the playback page will pop up for searching and playback of recorded files or snapped pictures.

[Config]: Set System Parameters.

[exit]: Return to the login page.

[PTZ Control]: Allows four-directional rotation, automatic adjustment of PTZ rotation speed (see Figure 6).

[Lens Control]: Allows PTZ operations like Zoom, Focus, Aperture, Light, Clip, Preset set, and Preset Call (see Figure 7).

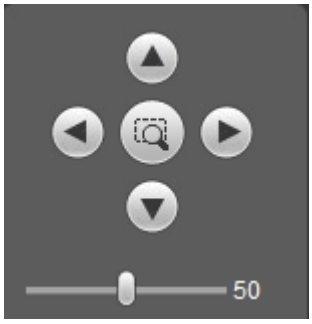


Figure 6

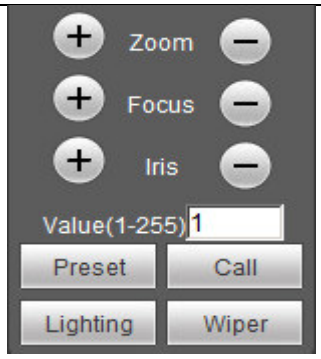


Figure 7

[Images]:Adjust the image bright color(see Figure 8).

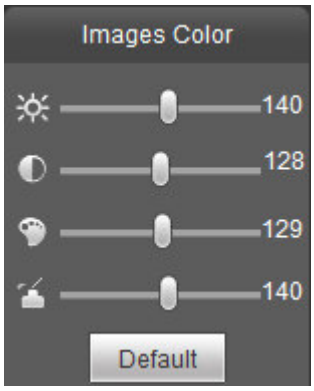


Figure 8

4 Record Playback

Click **[Replay]**enters into video playback page (see Figure 9).

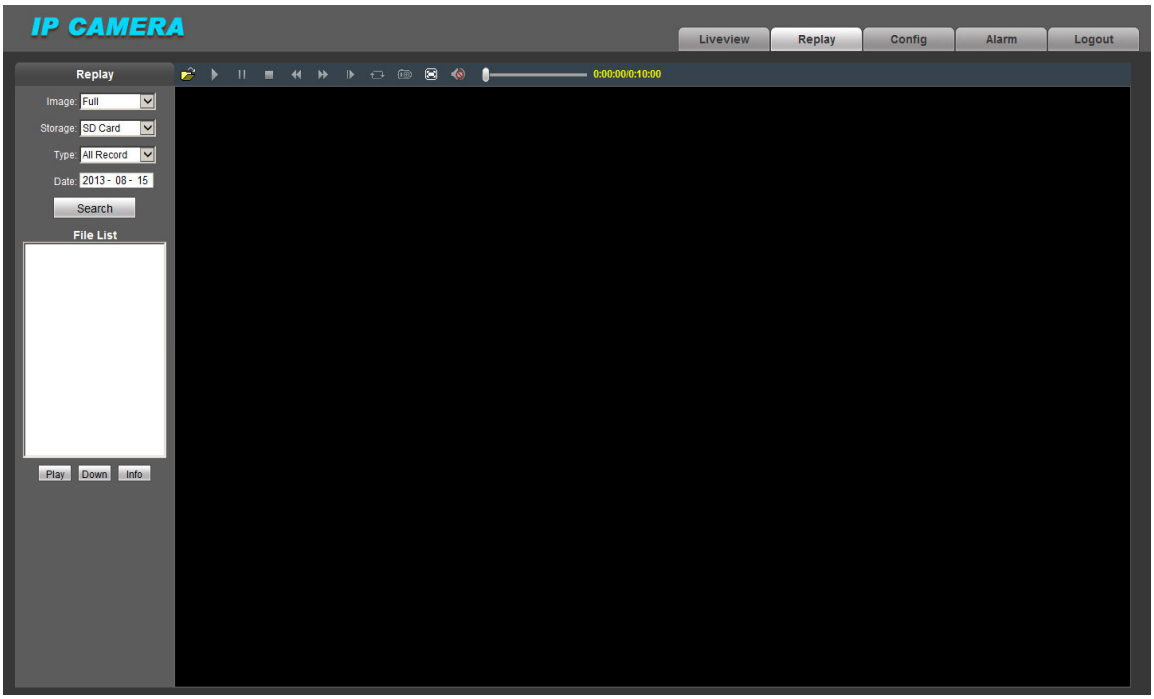


Figure 9

Users can search for recorded image files or snapped pictures in local PC or storage device

according to date.

[Date]: Users can select certain date to perform recorded image file or snapped picture searching.

[PC]: Users can select certain date to perform recorded image file or snapped picture (stored in local PC) searching.

[SD Card]: Users can select certain date to perform recorded image file or snapped picture (stored in device SD card) searching.

[File List]: Shows the recorded image files or snapped pictures searched in the File List.

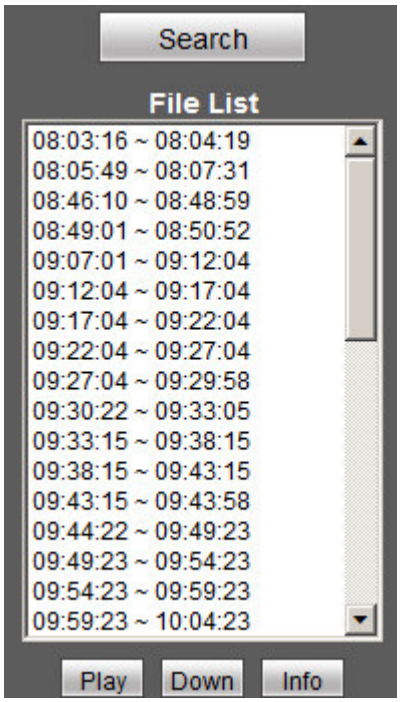


Figure 10

[Play]: Choose the recorded image or snapped picture in file list, right click the file or picture or click**[Play]** to play. The contents will be displayed in the right window; users can view the playing information and control the process (see Figure 11):

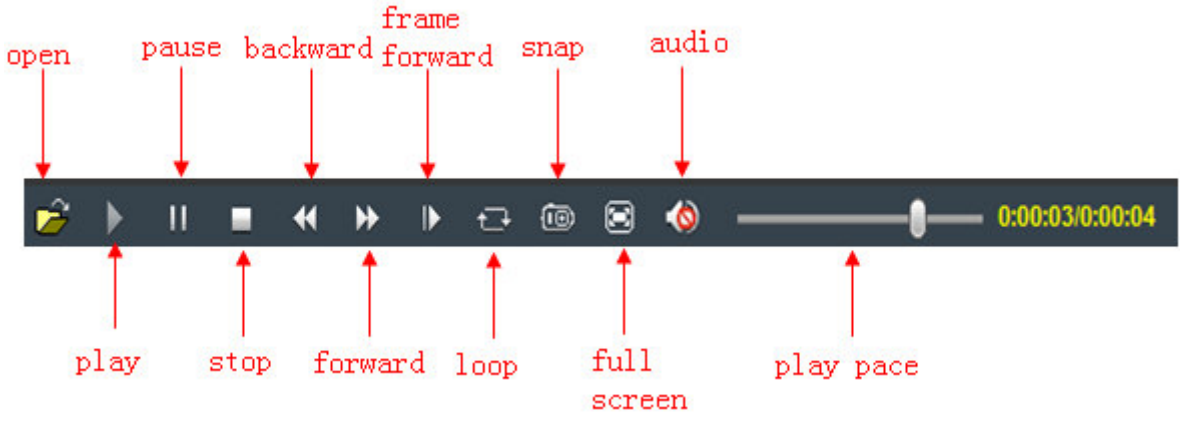


Figure 11

[Download]: Select the recorded files or snapped pictures searched from SD card in the file list, click **[down]** to download the files to PC.

[info]: Users can view the information downloaded after clicking “info” (see Figure 12):

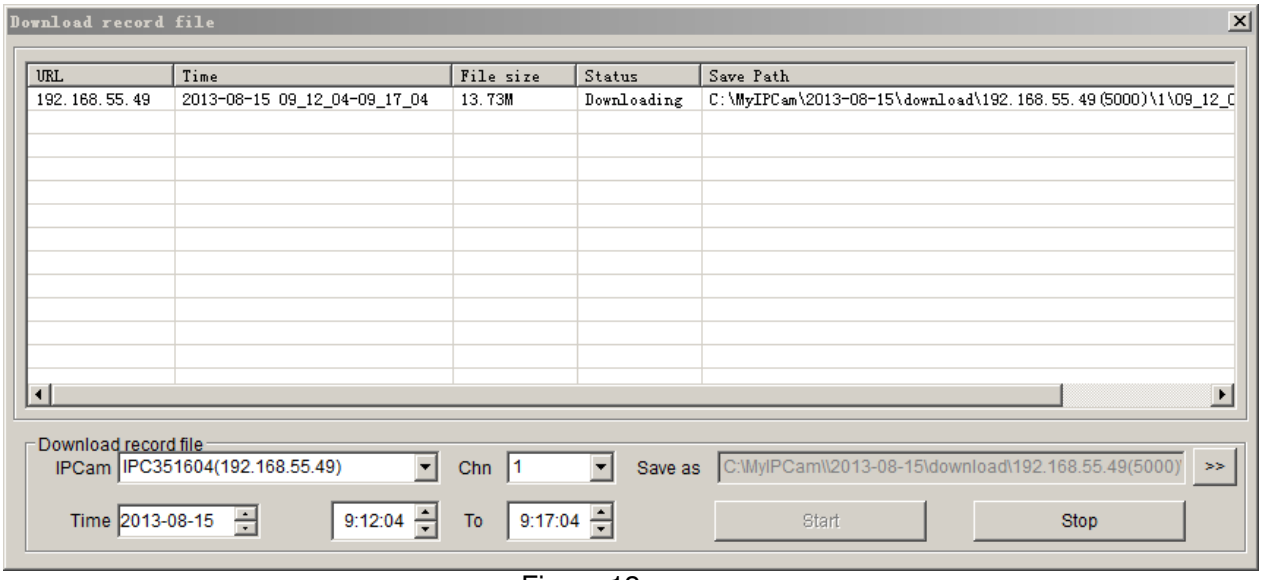


Figure 12

Click **[Start]** to download the file, click **[Stop]** to stop the downloaded file, click  to close the download information interface.

5 Config

5.1 Local config

See Figure 13 for the interface of “Local config”:

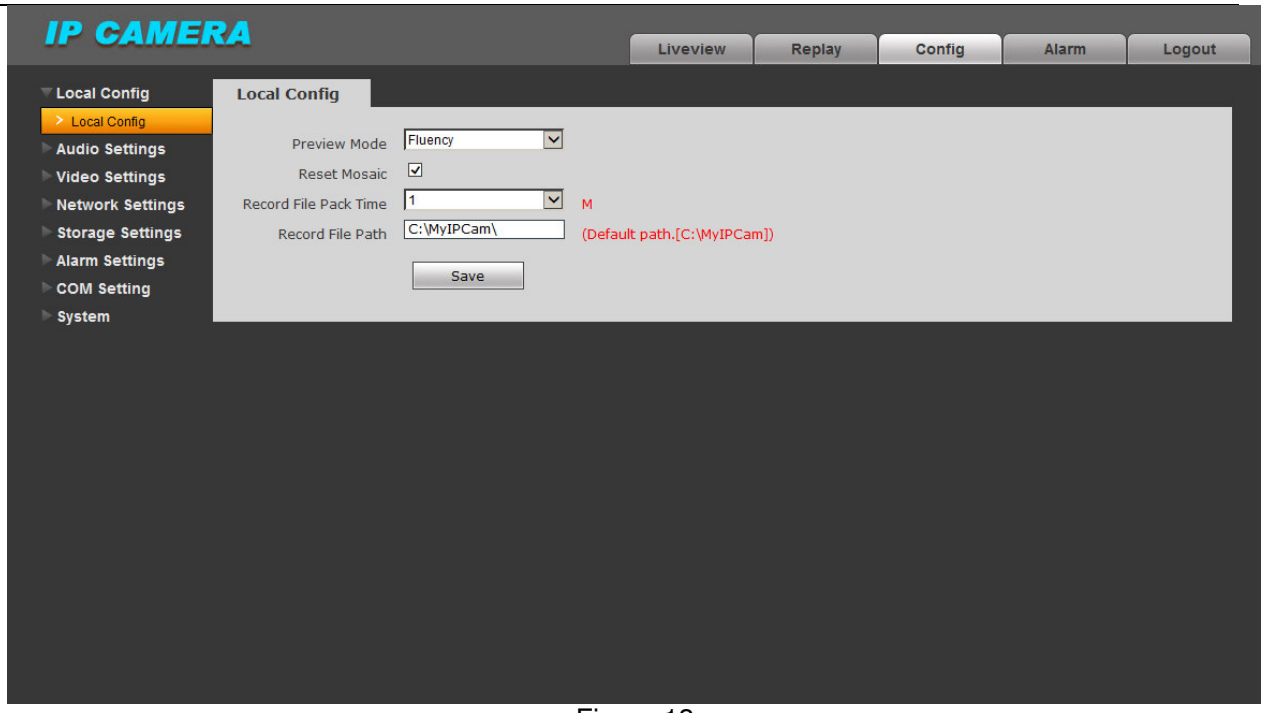


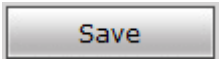
Figure 13

Preview mode: users can choose Real time priority or Fluency priority mode according to their needs.

Reset Mosaic: select this option to make image quality better, but CPU usage rate will be higher at the same time.

Record file pack time: set packing time of record files for local PC when it is recording.

Record file path: set the storage directory for local records and snapped files, the default path is C:\XDNVS.

After you set these parameters, please click  to make them valid.

5.2 Remote config

5.2.1 Audio Settings

See Figure 14 for the interface of “Audio Parameter”.

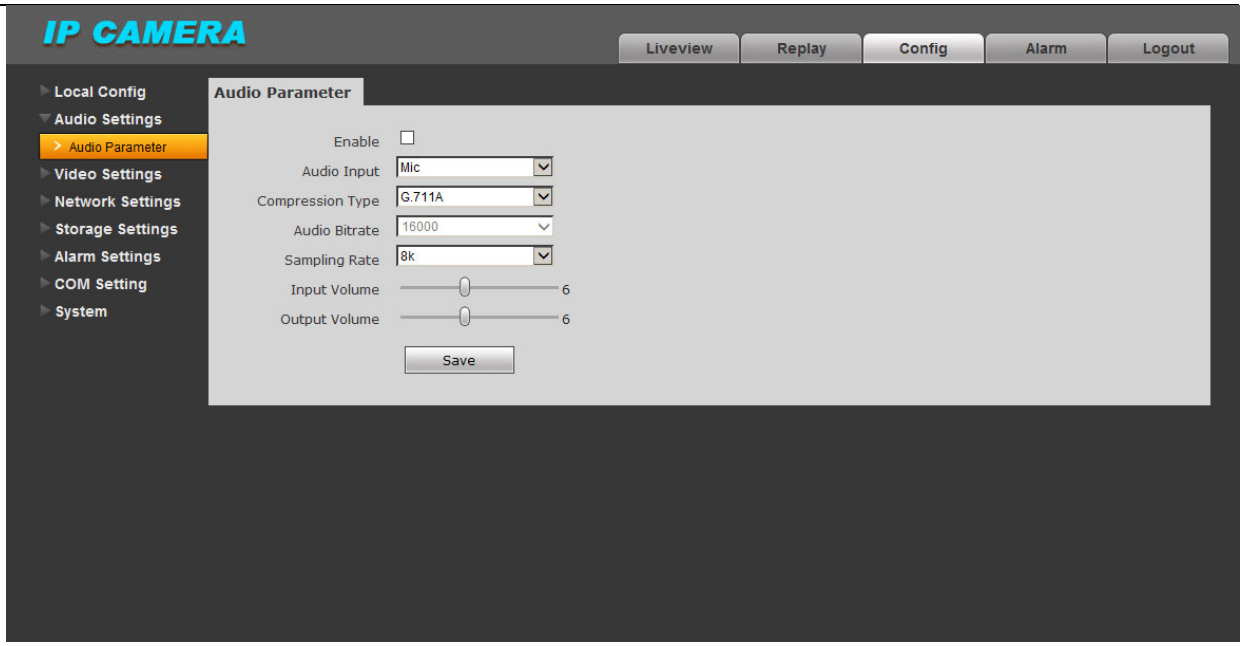


Figure 14

[Enable]: turn on or turn off the audio of IP camera, when there is no need for audio, close audio input to save DSP resource and network resource. Audio is disabled by default.

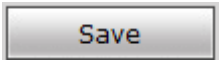
[Audio Input]: You can choose MIC or Line In input.

[Compression Type]: Support three types of audio compressed format:G726,G711A,G711U.

[Sampling Rate]: Support audio sample rates of 8k and 32k.

[Input Volume]: Adjust the device's input volume to control the volume of Listen.

[Output Volume]: Adjust the device's output volume to control the volume of Call.

After you set these parameters, please click 

to make them valid.

5.2.2 Video Settings

5.2.2.1 Text Overlay

See Figure 15 for the interface of "**Text Overlay**":

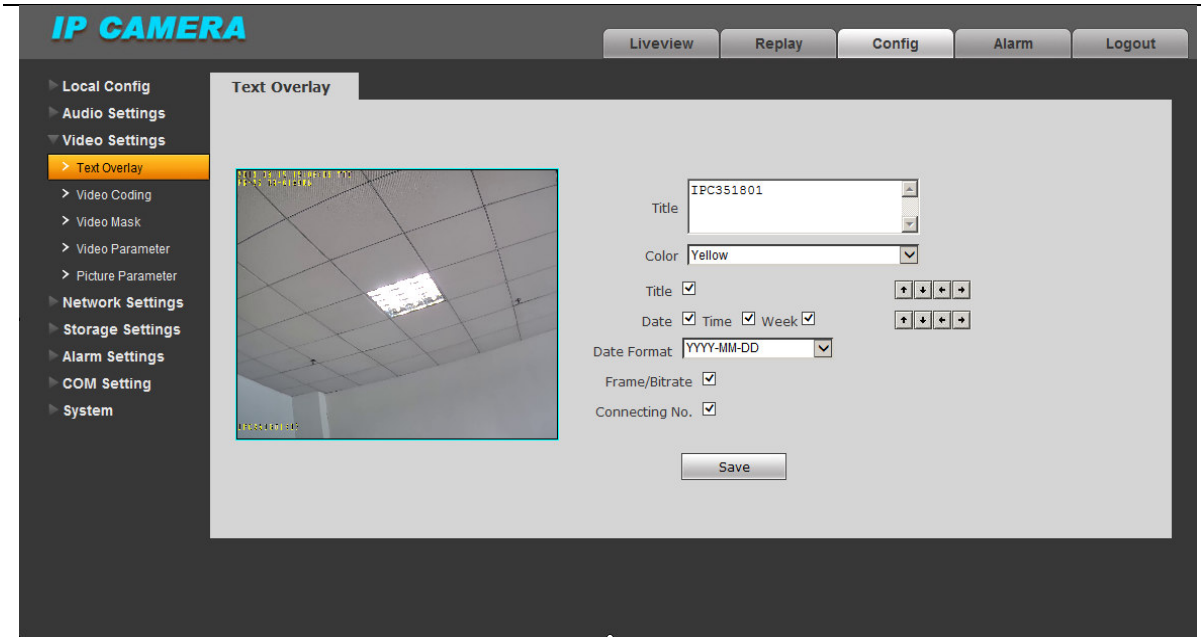


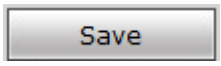
Figure 15

[Title]: the name of video channel, displayed at the bottom left of image(movable), maximum characters allowed: 32.

[Color]: You can choose different colors for the text.

[OSD]: Display or not to display Title, Date, Time, Week, Date Format, Frame/Bitrate and Connecting No. of channels.

[Position]: Can adjust the display position of video title and Date, Time, Week.

After you set these parameters, please click 

to make them valid.

5.2.2.2 Video Coding

See Figure 16 for the interface of “Video Coding”:

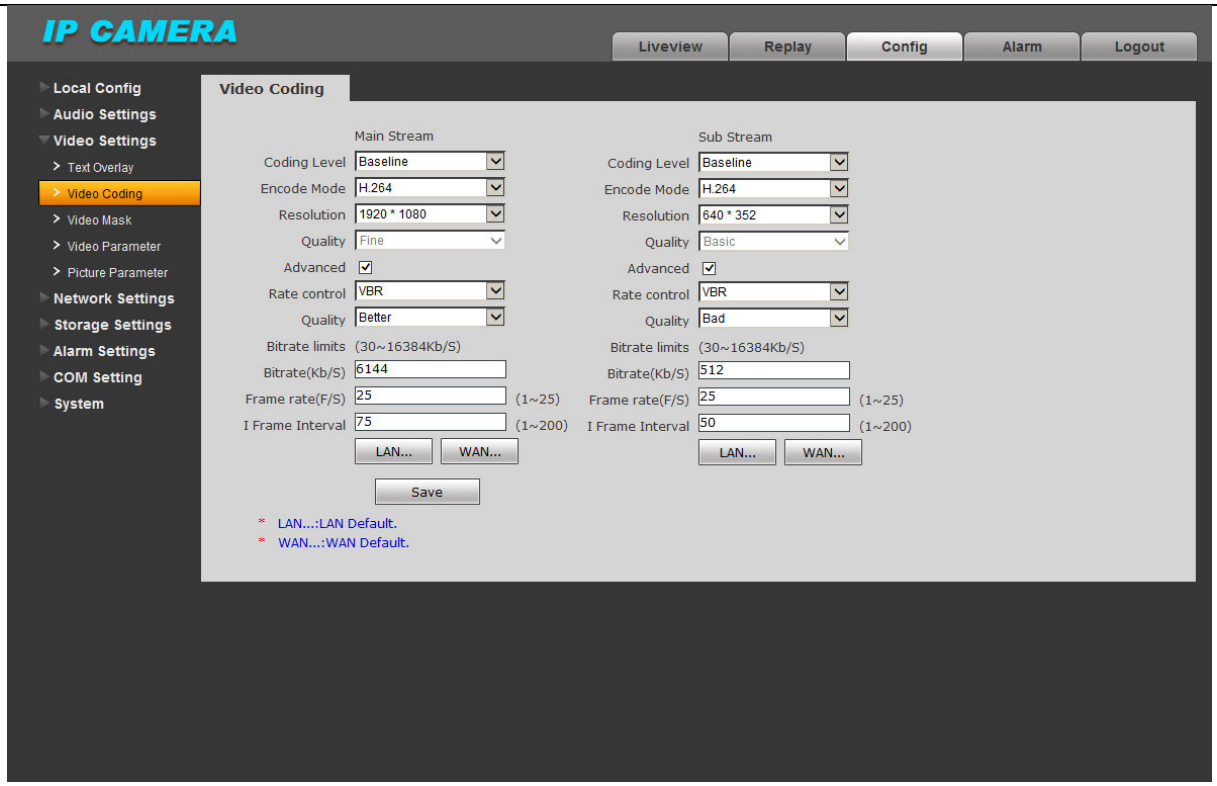


Figure 16

[Coding Level]: Baseline, Main Profile and High Profile.

[Encode Mode]: H.264 and MJPEG.

[Resolution]: set definition of images.

HD CMOS support:

Preferred Stream: 1920*1080/1280*720;

Alternate Stream:960*528,640*352/480*256;

[Quality]: You can choose the right quality according to your need: Fine, Normal, Basic, and the parameters can also be user-defined by choosing **[advanced]**.

[Rate control]: CBR and VBR are optional. CBR adopts constant encoding bitrate, VBR adopts variable encoding bitrate.

[Quality]: Under CBR setting: set the bitrate range via “Image Quality”, 1 means it is controlled by the software, 2~6 means corresponding bitrate range is ±10%～±50%

Under VBR setting: set image quality via “Image Quality”, smaller value of image quality means better quality and higher bitrate, but the bitrate will not exceed its set value.

[Bitrate]: The range of preferred and alternate stream is 30~16384Kbps.Higher bitrate setting can generate better image quality, but it occupies more bandwidth, please adjust the setting according to your actual bandwidth.

Under CBR setting, [Bitrate] is the constant bitrate of encoding.

Under VBR setting, [Bitrate] is the variable bitrate of encoding.

[Frame rate]: Set encoding frame rate per second. Under poor network condition, frame rate can be reduced to control encoding bitrate to make motion images flow more smoothly.

[I frame interval]: Adjustable between 1～200.Smaller I frame interval means higher image bitrate and better image quality. It is recommended to set the I frame interval as above 25.

[LAN default value]:

HD camera

Preferred Stream:

H.264 Coding: I frame interval: 75, frame rate: 25, bitrate: VBR, 720P: 4096 kbps, 1080P:6144kbps .image quality:2;

MJPGE Coding: I frame interval: 75, frame rate: 25, bitrate: VBR, 720P: 9216 kbps, 1080P:10240kbps .image quality:2;

Alternate Stream:

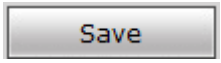
H.264 Coding: I frame interval: 50, frame rate: 25, bitrate: VBR: 512 kbps,.image quality:4;

MJPGE Coding: I frame interval: 50, frame rate: 25, bitrate: VBR: 4096 kbps.image quality:4;

[WAN default value]:

H.264 Coding: I frame interval: 25, frame rate: 5, bitrate: VBR: 384kbps, image quality:4

MJPGE Coding: I frame interval: 25, frame rate: 5, bitrate: VBR: 4096kbps, image quality:4

After you set these parameters, please click 

to make them valid(Sometimes if you modify the [image],the device will be reboot).

Note: Non-professional users please use "Advanced Settings" with caution.

5.2.2.3 Video Mask

See Figure 17 for the interface of “Video Mask”:

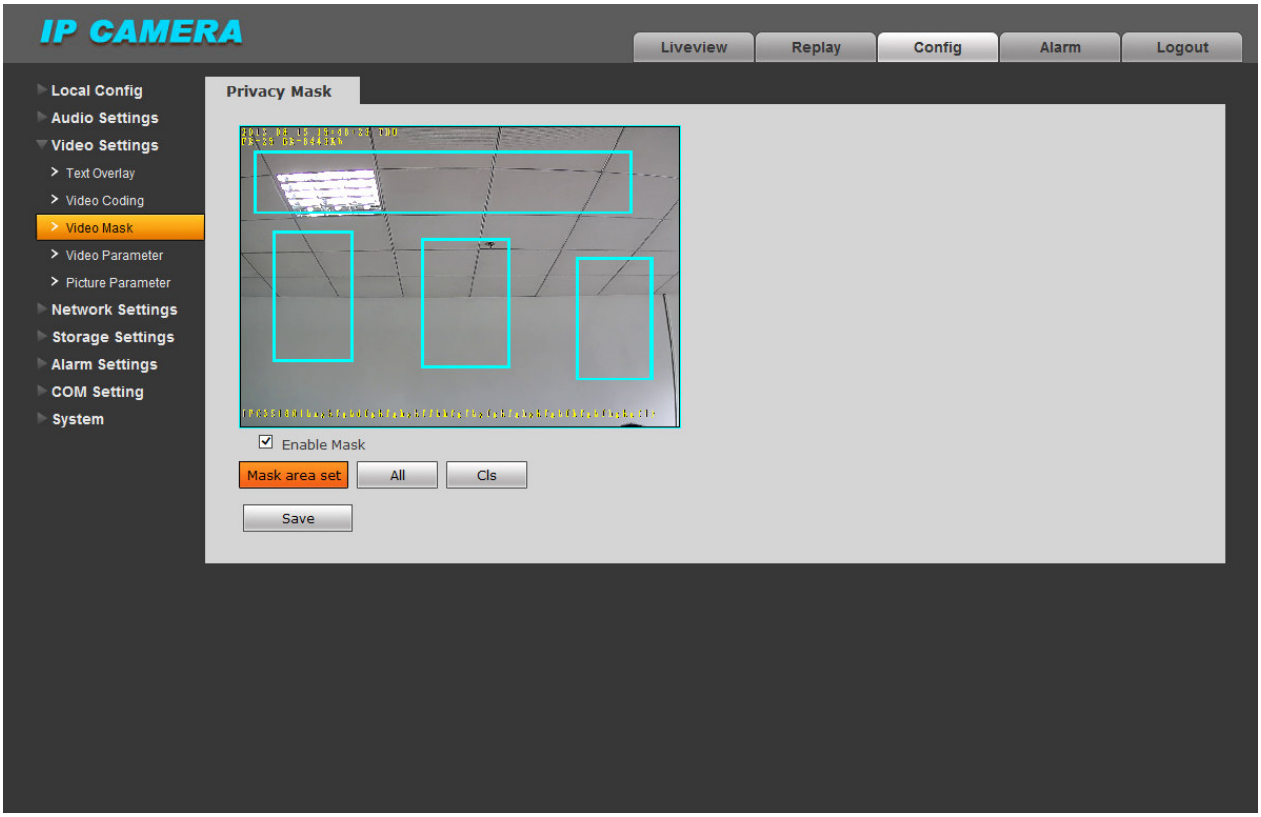


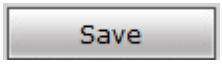
Figure 17

[Enable Mask]: Enable or disable video masking.

[Mask area set]: Click and move cursor to set image masking area, an image can be entirely or partially masked, maximum 4 areas supported.

[All]: Mask the whole image.

[Cls]: Clear masked areas.

After you set these parameters, please click  to make them valid.

5.2.2.4 Video Parameter

See Figure 18 for the interface of “Video Parameter”:

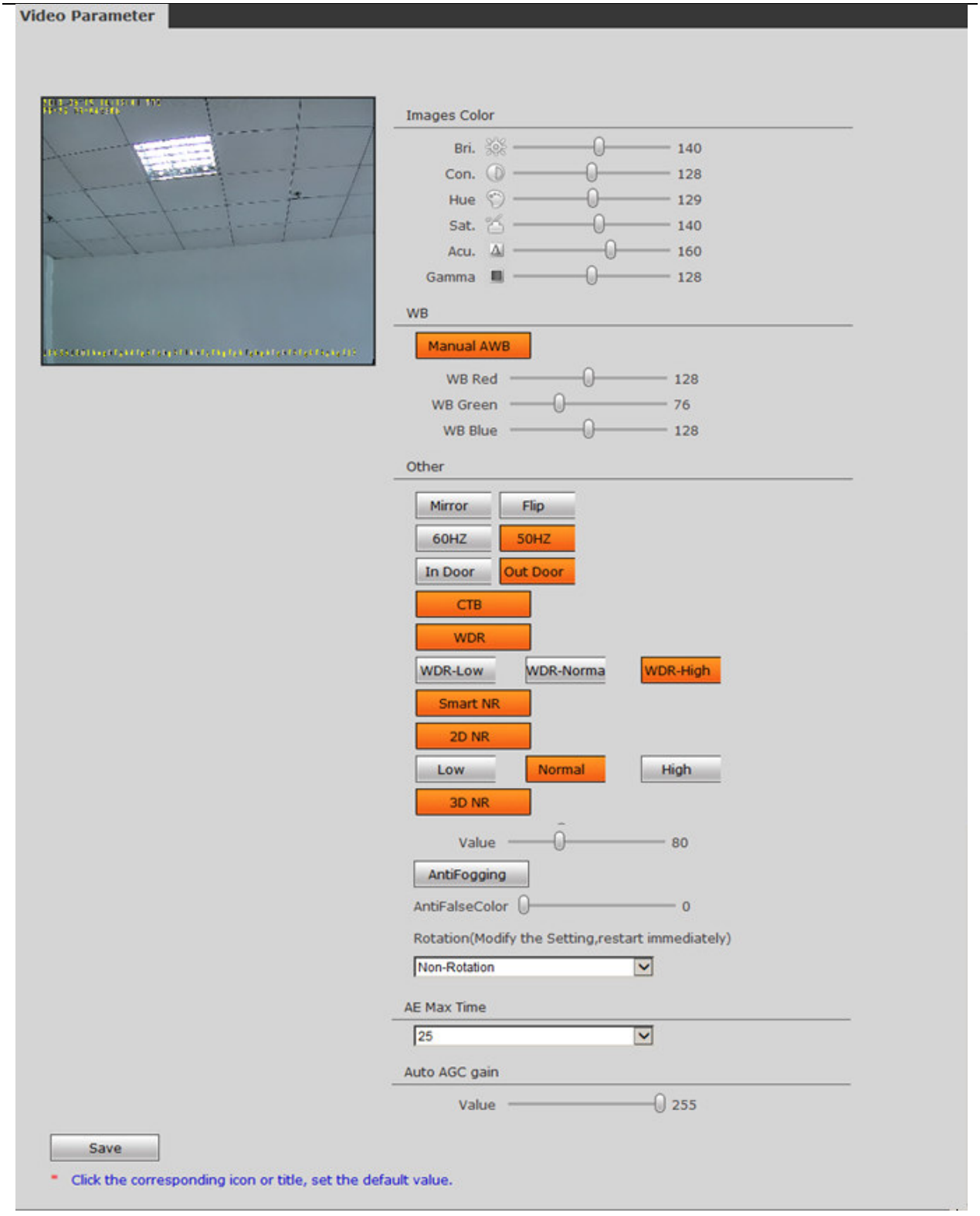


Figure 18-1 (720P,Low Light CMOS)

[Images Color]: Adjust the Brightness, contrast, Hue, saturation, Acutance, Gamma of video.

[WB]: Adjust the image of red, green, blue.

[Other]: Set Mirror, horizontally rotate the video

Set Flip, vertically rotate the video

In indoor environment, if the flashing of lamps results in the flickering of images,

please choose 50HZ or 60HZ according to the power frequency.

Set CTB, IPC will automatically turns on D/N function according to the image's situation. Works only on auto-iris lens.

Set WDR，Enhance the image quality in such area: strong light source (sunlight, lamps or reflectors, etc.) shadow of high-brightness, backlight

Set Smart NR to improve 3DNR effectivity at low light environment. It must work with 3DNR.

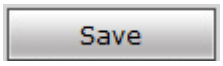
Set 2D NR to reduce the image noise fore each frame.

Set 3D NR to get a clearer picture in low light environment, effectively eliminate video noise and color noise In low light conditions.

Antifogging is for vision in fog or smoke.

Rotation is for image flip 90° or 270°.

AE Max Time to set auto exposure time.

Please click 

to make them valid.

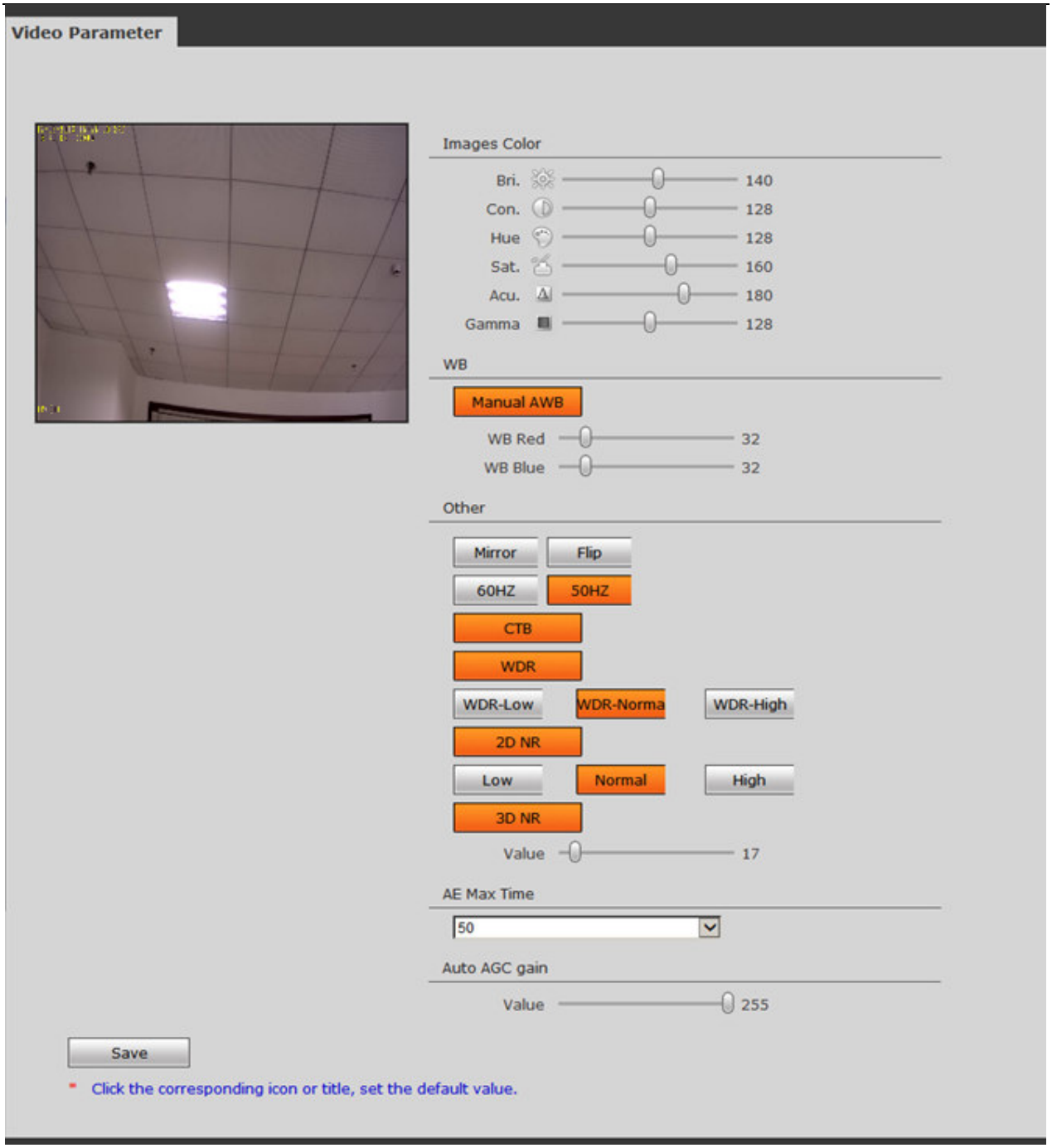


Figure 18-2 (1080P Low light 1080P HD CMOS)

[Images Color]: Adjust the Brightness, Contrast, Saturation, Acutance, Red, Blue, Gamma of video.

[BLC]: To get better image effect, you can select BLC. If the backlighting of the monitored objects is strong, it will compensates light automatically for the scope where is necessary.

[Shutter]: Set the Shutter value to control the light. This setting is associated with the choice of the aperture lens。See **[Iris]**

[Other]: Set Mirror, horizontally rotate the video

Set Flip, vertically rotate the video

In indoor environment, if the flashing of lamps results in the flickering of images, please choose 50HZ or 60HZ according to the power frequency.

Set CTB, IPC will automatically turns on D/N function according to the image's situation. Works only on auto-iris lens.

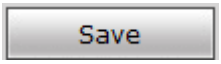
Set WDR，Enhance the image quality in such area: strong light source (sunlight, lamps or reflectors, etc.) ,shadow of high-brightness, backlight

Set 3D-DNR to get a clearer picture in low light environment, effectively eliminate video noise and color noise in low light conditions.

Set smart DNR; reduce the smearing of moving objects

[Iris]: Set Non-Auto Iris, Can be used with non-auto iris lens. Camera works in automatic exposure mode

Set DC Auto Iris, Adjust the control level of auto-iris to control the luminous flux . Turn on this feature, the "shutter" option will appear, you can choose different fixed shutter speed, the system automatically adjust the aperture size according to the external light conditions

Please click 

to make them valid.

5.2.2.5 Picture Parameter

See Figure 19 for the interface of "Snap Parameter":

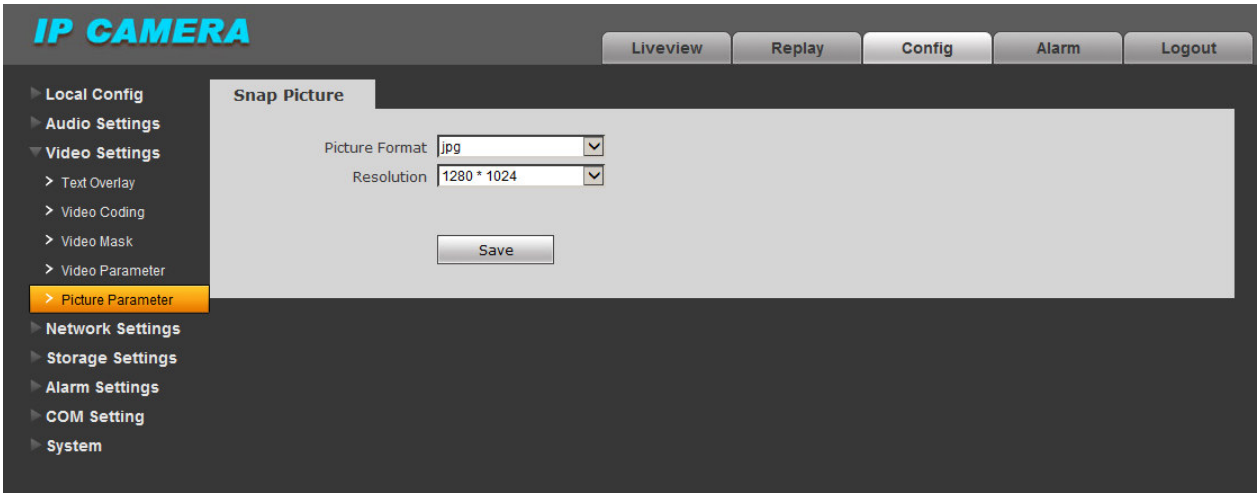


Figure 19

[Snap picture parameter setting]: Supports only images of JPG format currently, megapixel camera definition is the same as set in [video definition], other cameras can choose different pixel by

you.

After you set these parameters, please click Save to make them valid.

5.2.3 Network Settings

5.2.3.1 Basic Setting

See Figure 20 for the interface of “Basic setting”:

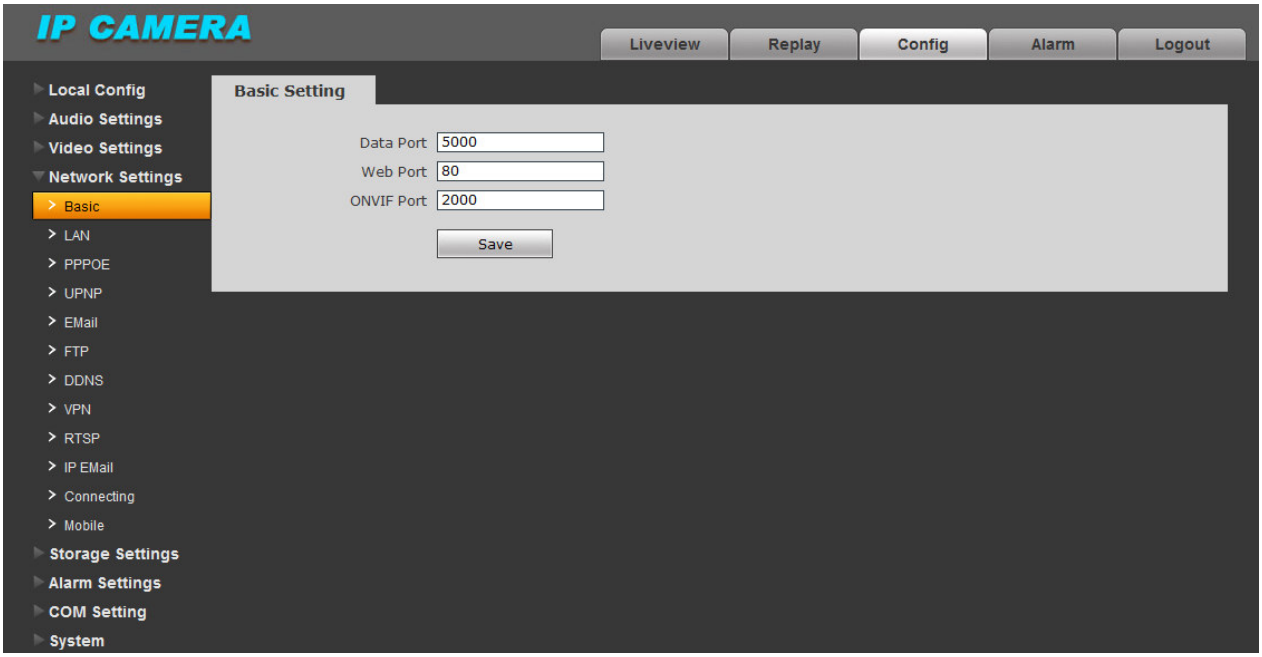


Figure 20

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

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

[ONVIF port]: Default value is 2000 (users are recommended not to change it).

After you set these parameters, please click Save and the device will reboot to make the parameters valid.

5.2.3.2 LAN Setting

See Figure 21 for the interface of “LAN setting”:

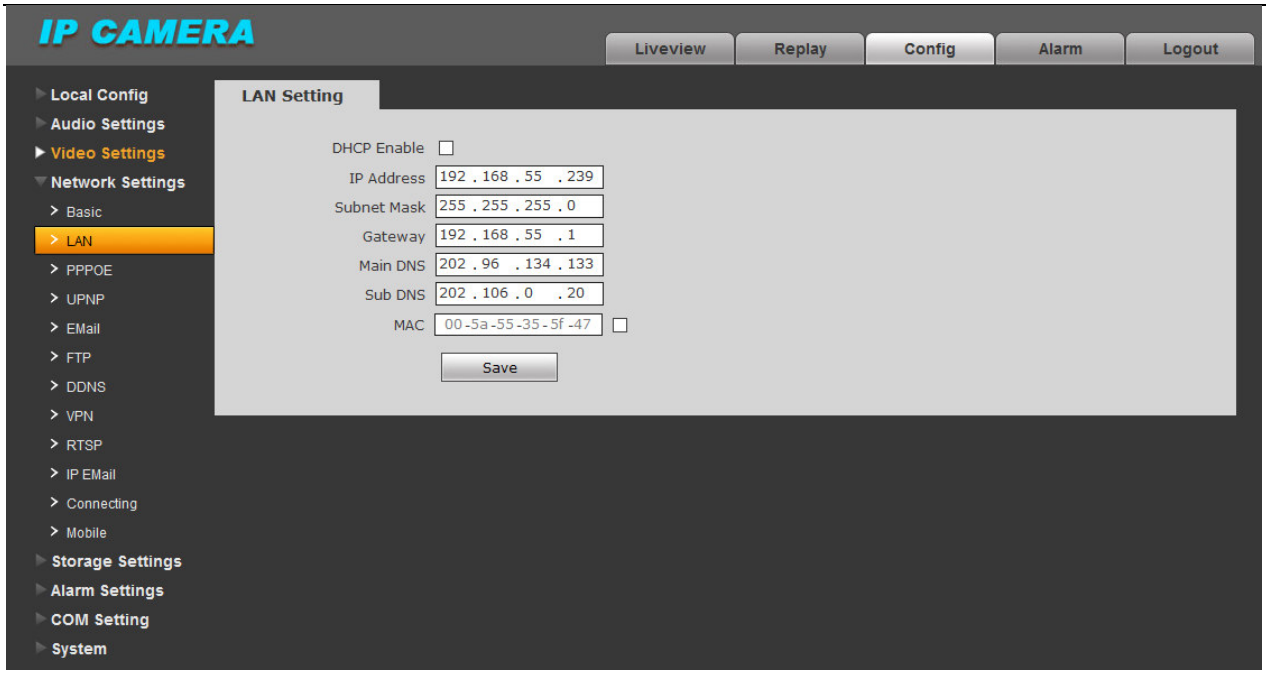


Figure 21

[DHCP]: If DHCP function of the router is enabled, IP camera will automatically fetch IP address from the router.

[IP address]: Set the camera's IP address.

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

[Gateway]: Set the gateway IP of IP camera, for example when the device is connected to public network via a router, the gateway IP is the router IP.

[DNS]: The default DNS address is the DNS address of Guangdong province, users outside the area please use DDNS function to set the DNS address as their local DNS address.

[MAC]: The Physical address of IP camera (users are recommended not to change it).

Note: After revise and save parameters, the device will restart. If it is applied in LAN, please pay attention to avoid conflict between its IP address and the IP addresses of other devices or PC in the LAN.

5.2.3.3 PPPOE Setting

See Figure 22 for the interface of “PPPOE setting”:

Figure 22

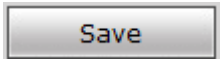
[Enable PPPOE]: Enable or disable PPPOE dial-up function.

[IP]: After successful setting of device dial-up, it will display the public IP Address.

[Username]: ADSL dial-up account, obtain from the IP service provider.

[Password]: ADSL dial-up password, obtain from the IP service provider.

[Online time]: Start timing after dial-up to see the online duration after successful dial-up.

After you set these parameters, please click  to make them valid.

5.2.3.4 UPNP setting

See Figure 23 for the interface of “UPNP setting”:

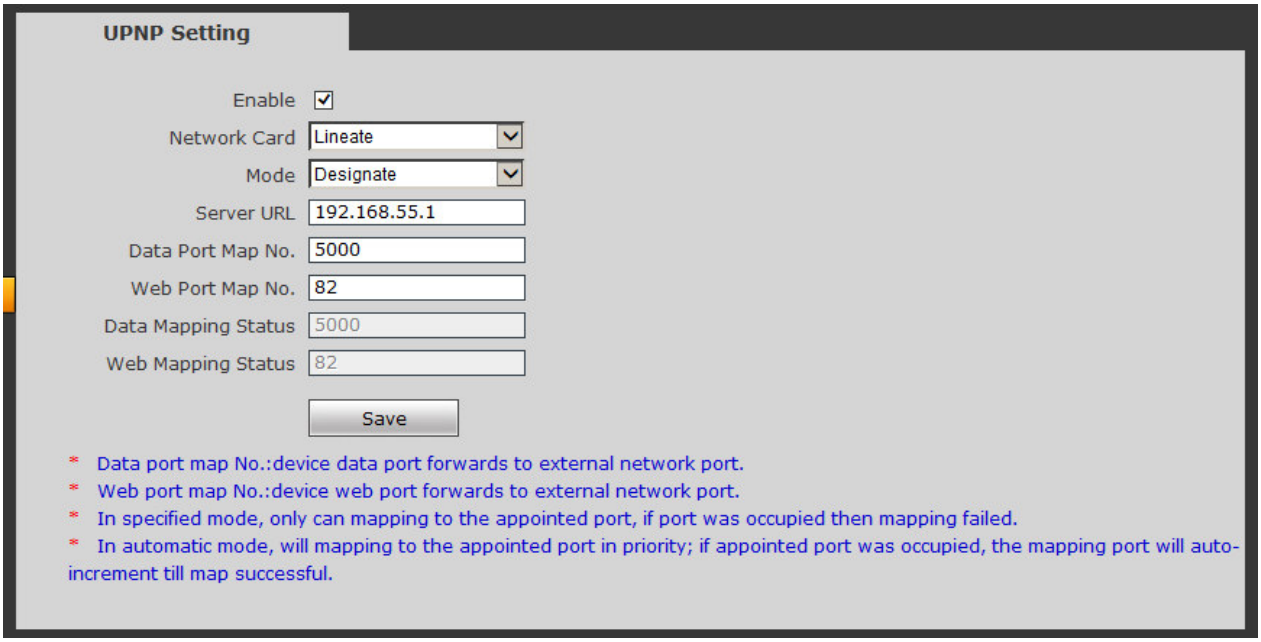


Figure 23

Auto-mapping of port, when IP camera is connected to a router with UPNP function enabled, the router will automatically map the port in UPNP settings to public network, manual port mapping by users is not necessary.

[Network card]: select the type of NIC connecting UPNP router. For WiFi models, when IP camera is connected to router via WiFi network, select “wireless” mode.

[Mode]: specified mode and auto mode.

Specified mode means to specify data mapping port and web mapping port to router.

Auto mode means data mapping port and web mapping port are set up by router.

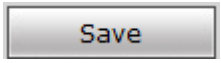
[Server URL]: IP address of the router with UPNP.

[Data port map No.]: Data mapping port of user-specified device on the router(works only under specified mode).

[Web port map No.]: Web mapping port of user-specified device on the router(works only under specified mode).

[Data mapping status]: When UPNP function runs successfully, the status bar will echo the data port mapped to the router by the device.

[Web mapping status]: When UPNP function runs successfully, the status bar will echo the web port mapped to the router by the device.

After you set these parameters, please click 

to make them valid.

5.2.3.5 Email setting

See Figure 24 for the interface of “UPNP setting”:

Figure 24

To set the mailbox addresses and parameters of alarm mails and public network IP mails.

[SMTP server]: The address of servers that send the mails, the address format of mail servers varies from provider to provider, e.g. the SMTP server of 163 mailbox is smtp.163.com.

[MAIL From]: Mailbox that sends mails.

[MAIL To]: Mailbox that receives mails.

[SMTP username]: The login user name of the mailbox that sends mails.

[SMTP password]: The login password of the mailbox that sends mails.

[MAIL title]: Title of mails.

[SMTP Port]: Port of SMTP port, different mail server has different port. For example, the server port of Gmail is 465

Commonly used mail server configuration:

	Gmail	Yahoo	163
SMTP server	smtp.gmail.com	smtp.mail.yahoo.com	smtp.163.com
SMTP user name	username@gmail.com	username@yahoo.com OR username@yahoo.com.cn	username
SMTP port:	587	465	25
SSL	enabled	enabled	disabled

5.2.3.6 FTP setting

See Figure 25 for the interface of “FTP setting”:

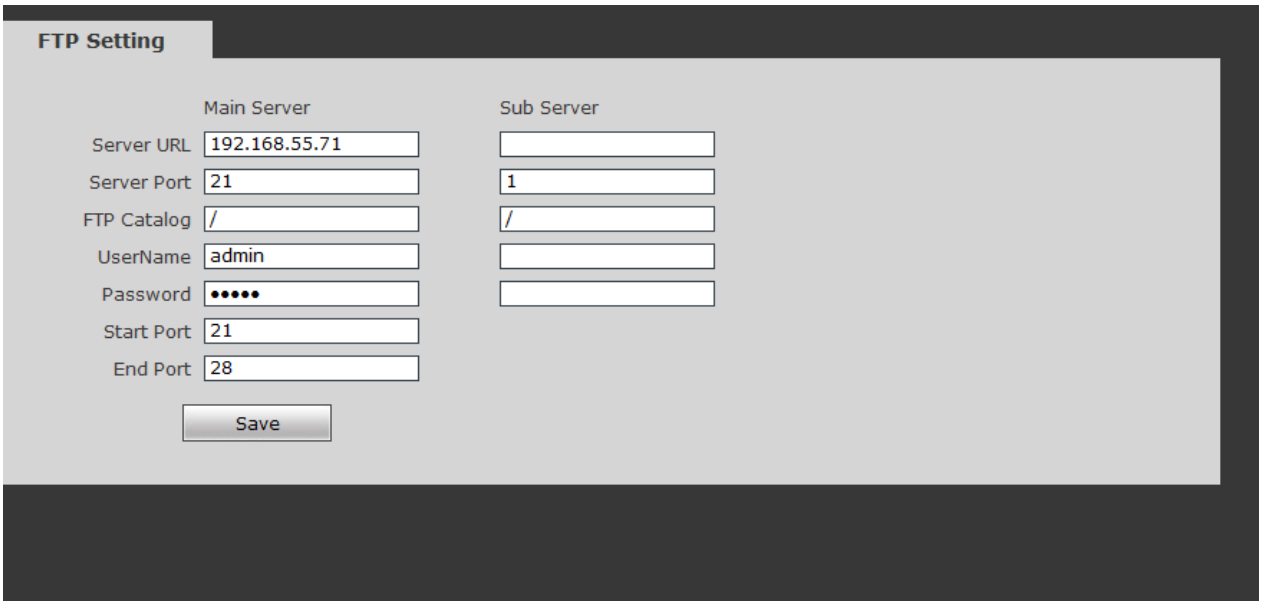


Figure 25

FTP server sends the record files and snapped images generated after alarm is triggered in FTP mode to specified FTP server, supports 2 FTP servers, when the preferred one goes wrong, system will switch to the alternate one.

[FTP URL]: The IP address or HTTP address of FTP server.

[Server port]: Port of FTP server, the default port is 21.

[FTP catalog]: Path on remote FTP server, if the path doesn't exist or has not been filled in, the device will create a file folder under the root directory of FTP server.

[User name] and **[Password]**: User name and password of FTP server.

Notice：If you want to upload the record files and snapped images,you must have the authority to write on the FTP server.

5.2.3.7 DDNS setting

See Figure 26 for the interface of "DDNS setting":

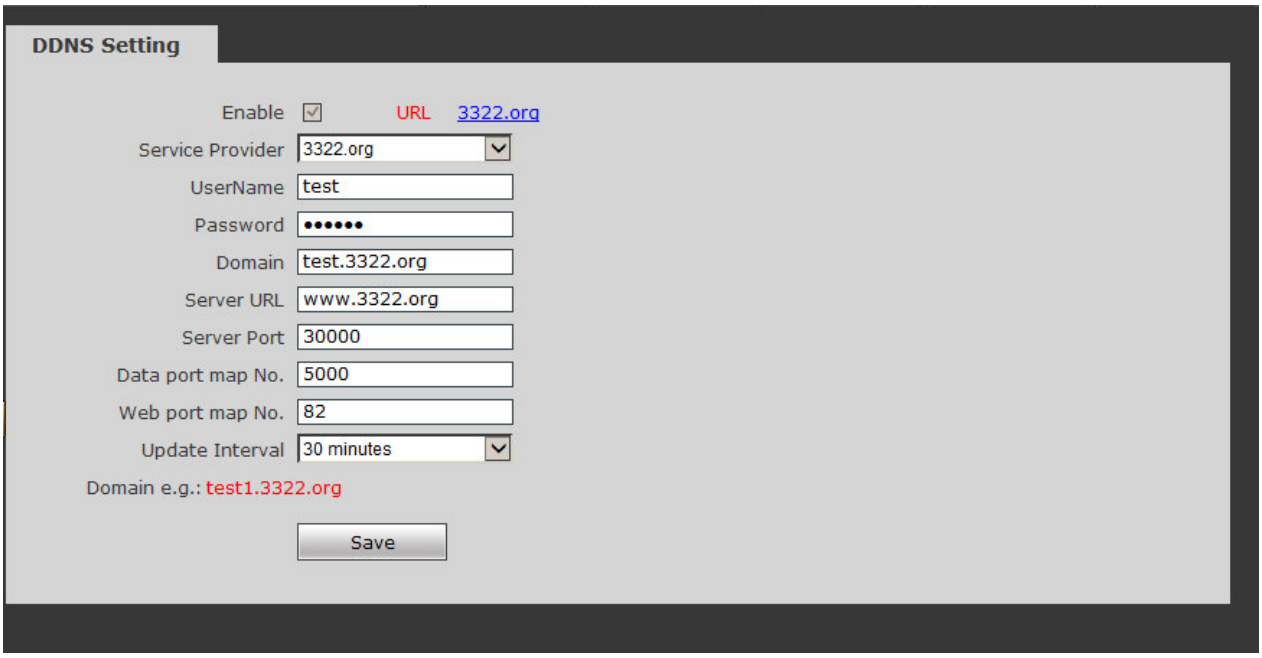


Figure 26

Bind the device with a fixed domain name by DNNS setting so that visiting to the device can be realized no matter how the public IP changes.(Refer to Appendix 3 for detailed steps)

[Enable DDNS]: Enable or disable DDNS function.

Link mvddns.net: click this link to turn to www.3322.org, users can sign up on this website.

[Provider]: mvddns.net, 3322.org and user dyndns server are selectable.

[RegName]: User registered in DDNS server.

[Password]: User password registered in DDNS server.

[Domain]: The domain name set up by users, e.g.: test1.3322.org

[Server URL]: DDNS server address. When DDNS address is the domain name, please set the DNS address in [Basic Parameters] correctly.

[Server port]: Default value is 30000 (users are recommended not to change it).

[Data port map No.]: Fill in the external data port mapped by the IP camera on the router that is connected to public website.

[Web port map No.]: Fill in the external web port mapped by the IP camera on the router that is connected to public website.

After you set these parameters, please click Save to make them valid.

5.2.3.8 VPN setting

See Figure 27 for the interface of “VPN setting”:

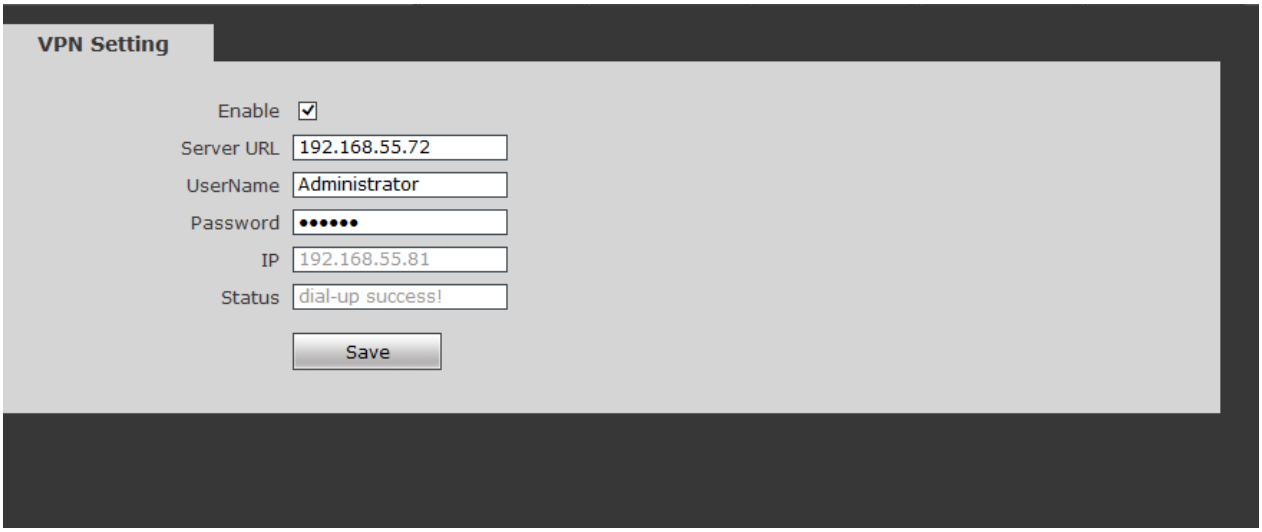


Figure 27

[Enable VPN]: Enable or disable VPN function.

[Server URL]: IP address or domain of VPN server.

[Name]: User registered in VPN server.

[Password]: User password registered in VPN server.

[IP]: Display ip after VPN dial-up success.

[Status]: Display the status of dial-up.

After you set these parameters, please click Save to make them valid.

5.2.3.9 RTSP setting

See Figure 28 for the interface of “RTSP setting”:

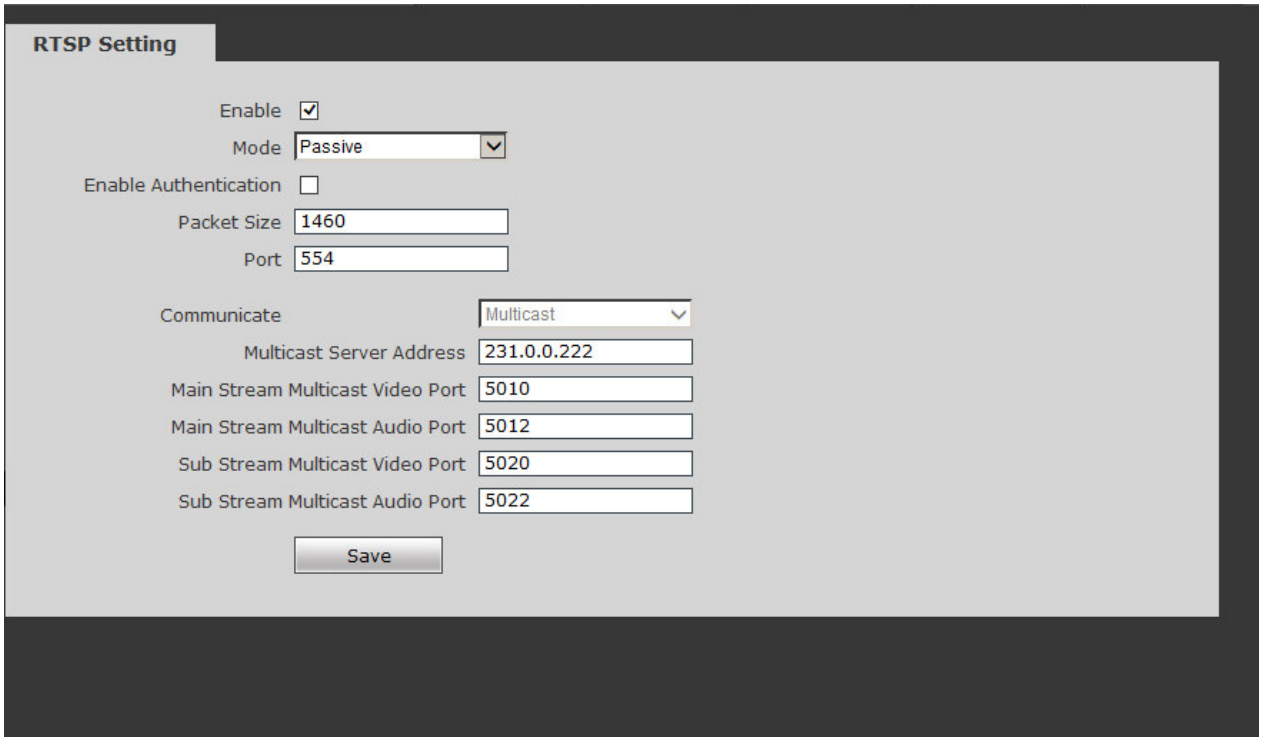


Figure 28

[Enable RTSP]: check RTSP switch to enable RTSP function.

[Enable encryption]: check encryption switch, you need the password then using VLC player connect camera.

Open: rtsp://ip/av0_0&user=admin&password=admin;

Close：rtsp://ip/av0_0;

“av0_0 ”,frist“0” shows channel:0,1,2,3，represent the channel :1,2,3,4;HD IP speed dome camera has only one channel, fill in“0”;The second “0” shows preferred / alternate stream,0:preferred stream,1:alternate stream;

If the authentication mode is changed, the camera reboots.

RTSP port: Default port is 554.

With RTSP function enabled, users can review the audio and video streams in real time via players that supports standard RTSP protocol

[Communicate]:Unicast and Multicast optional.

With RTSP function enabled, users can review the audio and video streams in real time via players that supports standard RTSP protocol

After you set these parameters, please click Save to make them valid.

5.2.3.10 IP Email

See Figure 29 for the interface of “IP Email”:

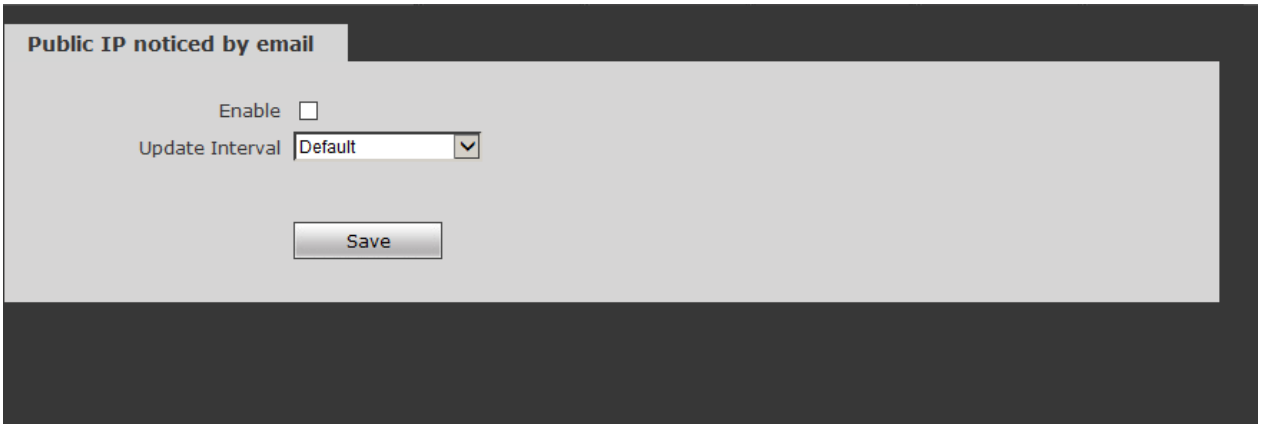


Figure 29

[Enable]: Send an email when the network IP changed.

After you set these parameters, please click Save to make them valid.

5.2.3.11 Connect setting

See Figure 30 for the interface of “Public IP noticed by email”:

Figure 30

[Auto connect]: Enable or disable active connection of the device to surveillance center.

[Central URL]: The address of surveillance center (e.g. 192.168.55.8).

[Central port No.]: The port of surveillance center (e.g. 6000).

After setting all the network parameters, click [save] to make the parameters valid.

5.2.3.12 Mobile Setting

See Figure 31 for the Mobile setting

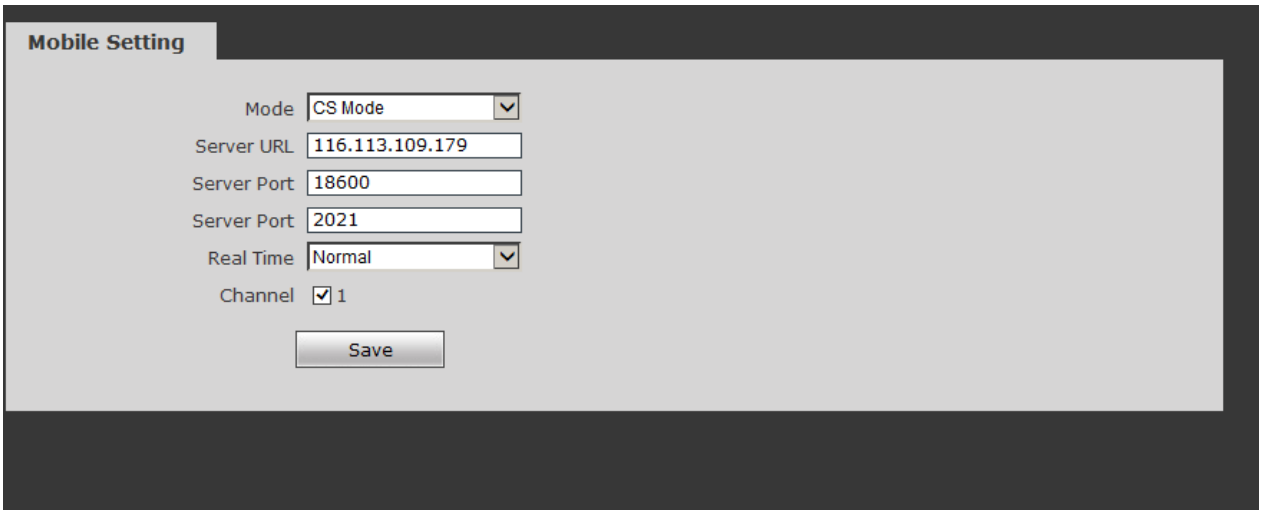


Figure 31-1（CS Mode）

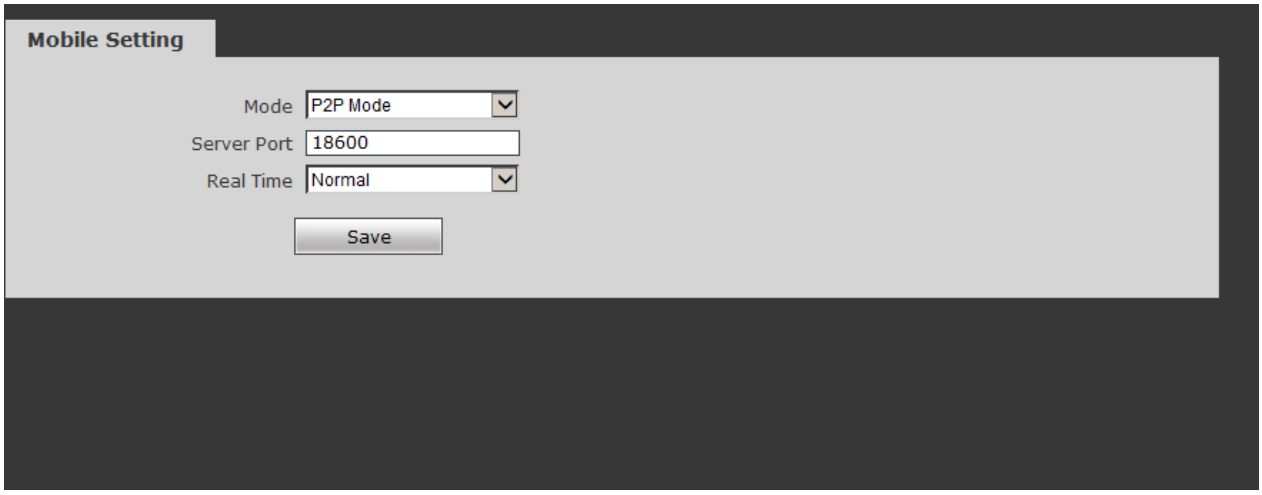


Figure 31-2（P2P Mode）

[Mode]: CS Mode and P2P Mode

[Server URL]: IP address or domain of Mobile server.

[Port]: Port of server,

[Device ID]: ID of device

[Real time]: Fine, Normal and Basic

[Channel]: Channel of video streaming

5.2.4 Storage Settings

5.2.4.1 Device Setting

See Figure 32 for the interface of “Device Setting”:

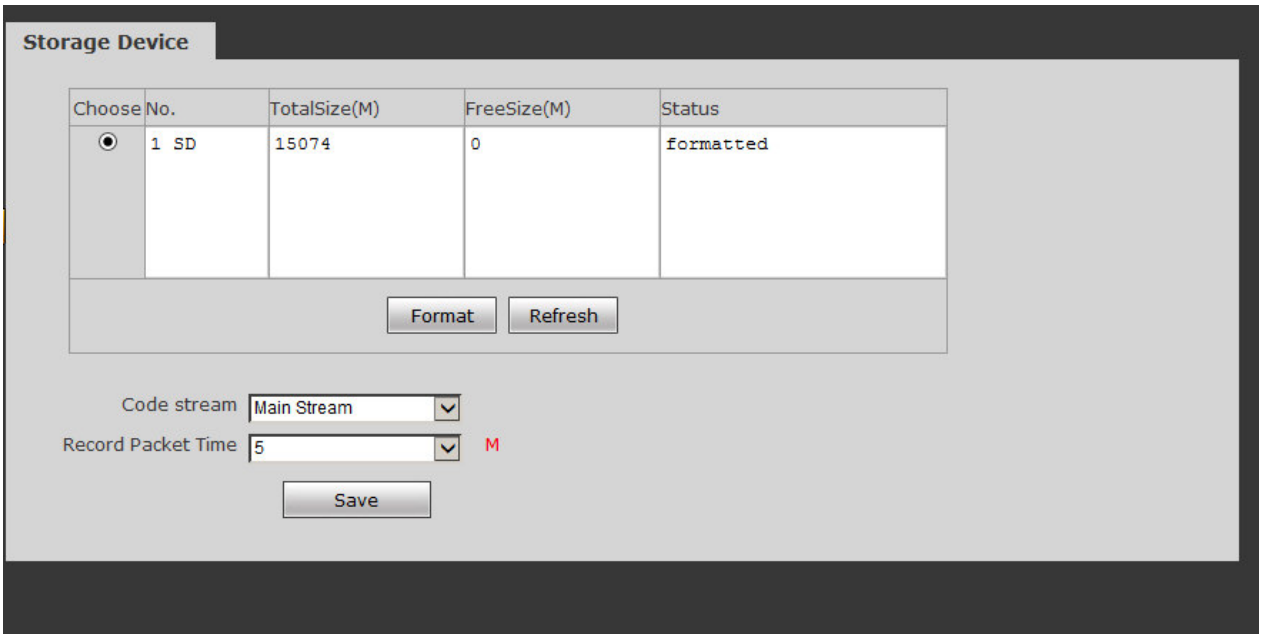


Figure 32

[Storage Device Info]: View information of SD card here, including No, Total Size, Free Size and Status. Users can also click [Format] button to format SD card, during the formatting process, please click [Refresh] button to the display formatting completion percentage.

[Storage device record parameters]

Code stream: Set record stream for SD card, preferred stream and alternate stream are selectable.

Record file packet time: Set packing intervals for each segment of record file when SD card is recording.5 means files will be packed every 5 minute.

After setting all the parameters, click [save] to make the parameters valid.

By the way, when the storage capacity of SD card is used up, the device will delete old files automatically.

Note：

- **Hot-plugging is not recommended for SD card, compulsory hot-plugging may damage the SD card, causing data loss or abnormal operation.**
- **Do not cut off the power of the device during formatting process.**

- **Ext2 file is used to format system by default.**
- **IP Camera doesn't support the storage that can be formatted into several partitions, so if you want to format it on PC before using it, please format it into one partition.**

5.2.4.2 Record Setting

See Figure 33 for the interface of "Record Setting":

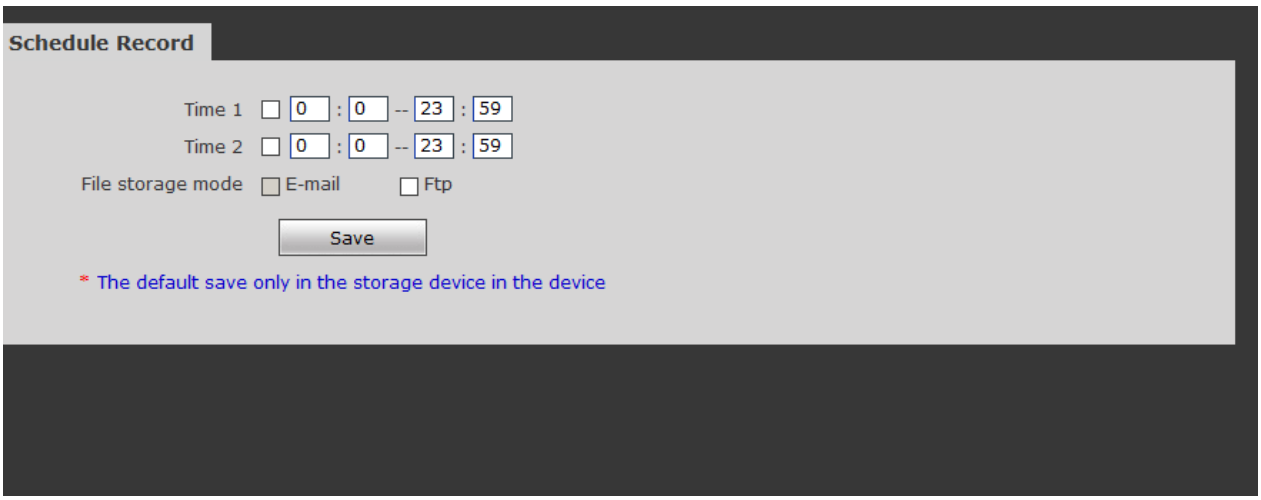


Figure 33

[Record Schedule]: Set the period of scheduled recording, two periods allowed.

[File save mode]: Set the save scheduled recorded files to FTP server via FTP uploading, FTP server can be set up in [FTP settings].

After setting all the parameters, click [save] to make them valid.

Notice：Record files are saved via FTP uploading. SD card is needed for cache memory support, otherwise record files will be overwritten by new files due to insufficient cache memory space.

5.2.4.3 Snap Setting

See Figure 34 for the interface of “Snap Setting”:

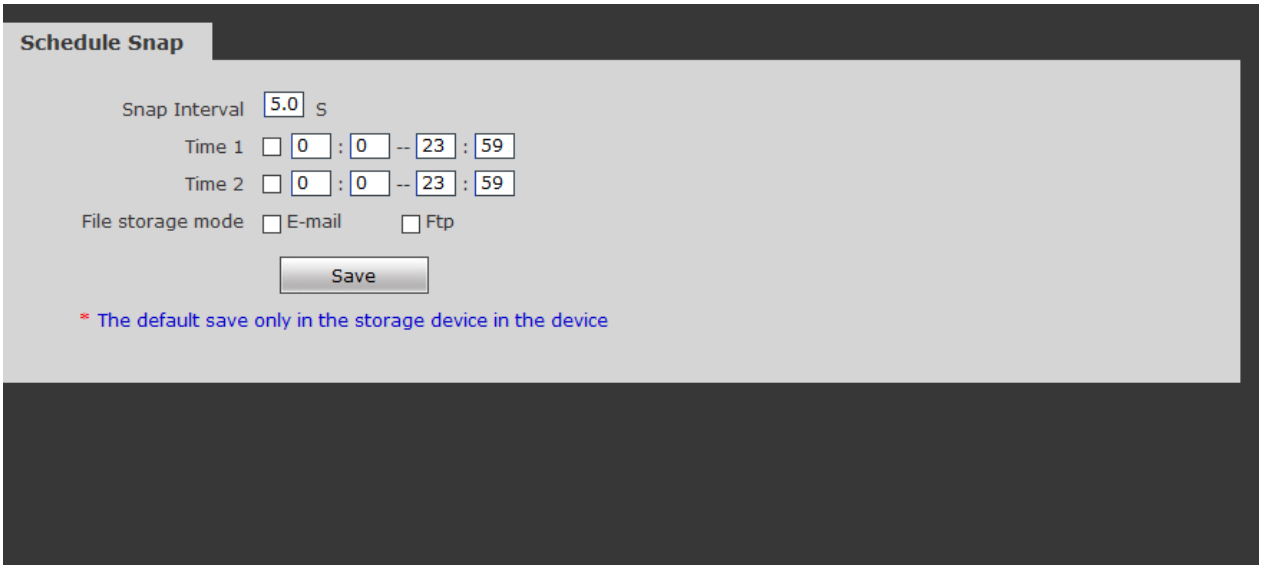


Figure 34

[Snap parameter]: Set the interval of IP camera picture snapping, minimum interval is 1 second.

[Snap schedule]: Set the period of scheduled snapping, two periods allowed.

[File save mode]: IP camera snapped pictures can be saved via E-mail sending or FTP uploading. E-Mail server can be set up in [Mail Settings], FTP server can be set up in [FTP Settings].

After setting all the parameters, click [save] to make the parameters valid.

5.2.5 Alarm Settings

5.2.5.1 Motion detection

See Figure 35 for the interface of “Motion detection”:

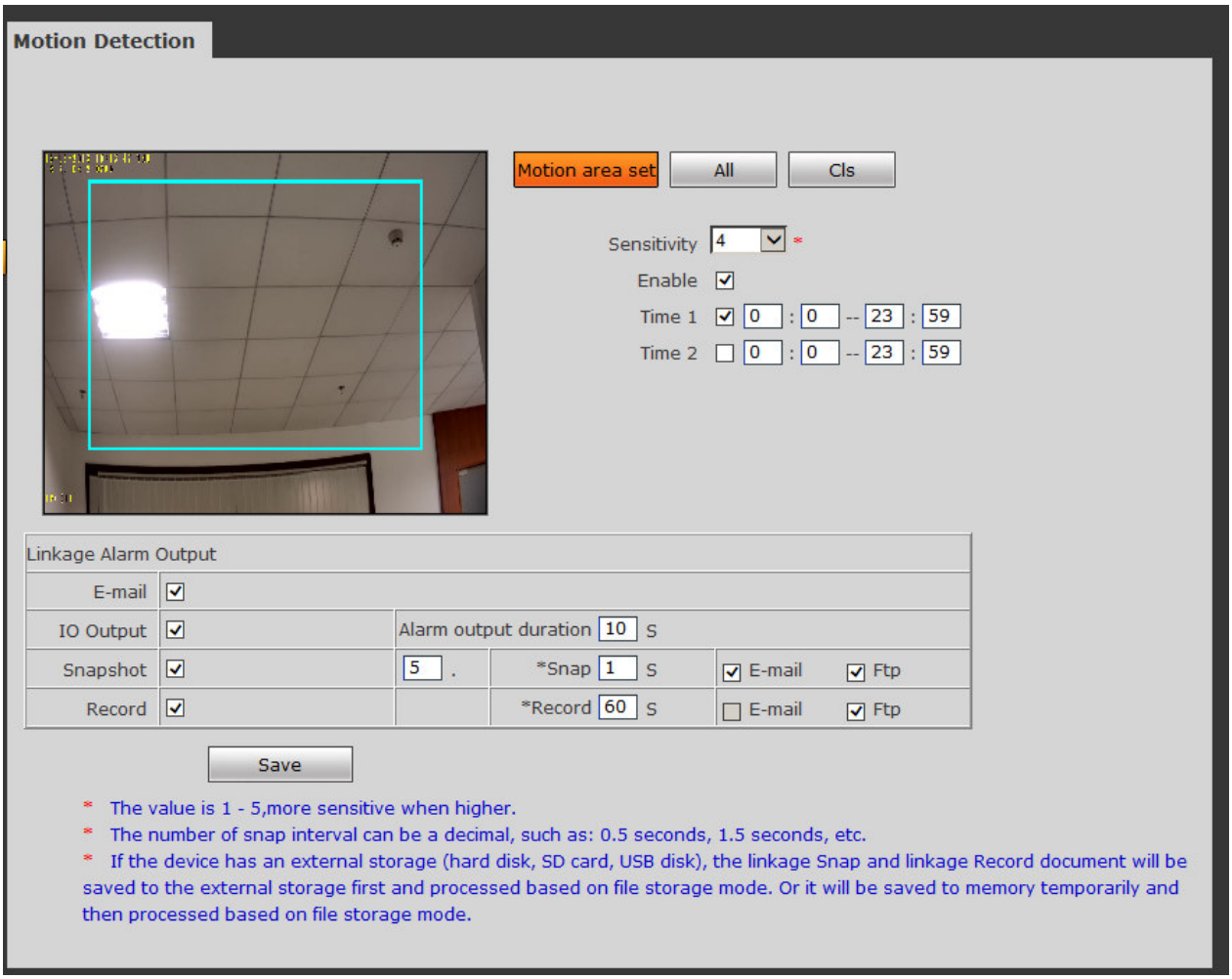


Figure 35

In this page, users can set features like motion detection on/off, sensitivity, detection time, linkage alarm output, alarm output duration, E-mail sending when alarm been triggered, linkage snapping/recording, etc.

[Motion Detection Area]: Left click and drive the mouse to set the surveillance areas (4 areas at most).

[All]: Set the whole video as motion detection area.

[Clear]: Clear all motion detection areas.

[Enable detect]: Enable or disable motion detection.

[Sensitivity]: Sensitivity range is 1~5, greater value means higher sensitivity.

[Deployment Time]: Set the period of time for motion detection, two periods allowed.

[Alarm output]: Enable or disable linkage alarm output

[Alarm Output duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s.0 means that there is no limit for alarm output.

[E-mail]: Send motion detection alarm information to users via E-mail, details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: When alarm is triggered, the device SD card will be driven to snap pictures. The pictures can be saved via E-mail sending or FTP uploading. For snapping parameters, if the number of pictures snapped at one time is set as 10, and the snapping interval is 1 second, that means when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.

[Linkage recording]: When alarm is triggered, the device SD card will be driven to record images. The record files can be saved via E-mail sending or FTP uploading.

After setting all the parameters, click [save] to make the parameters valid.

 **Notice：Record file packet time equals duration of alarm add the record time set in [Linkage recording].**

5.2.5.2 Sensor Setting

See Figure 36 for the interface of “Sensor Setting”:

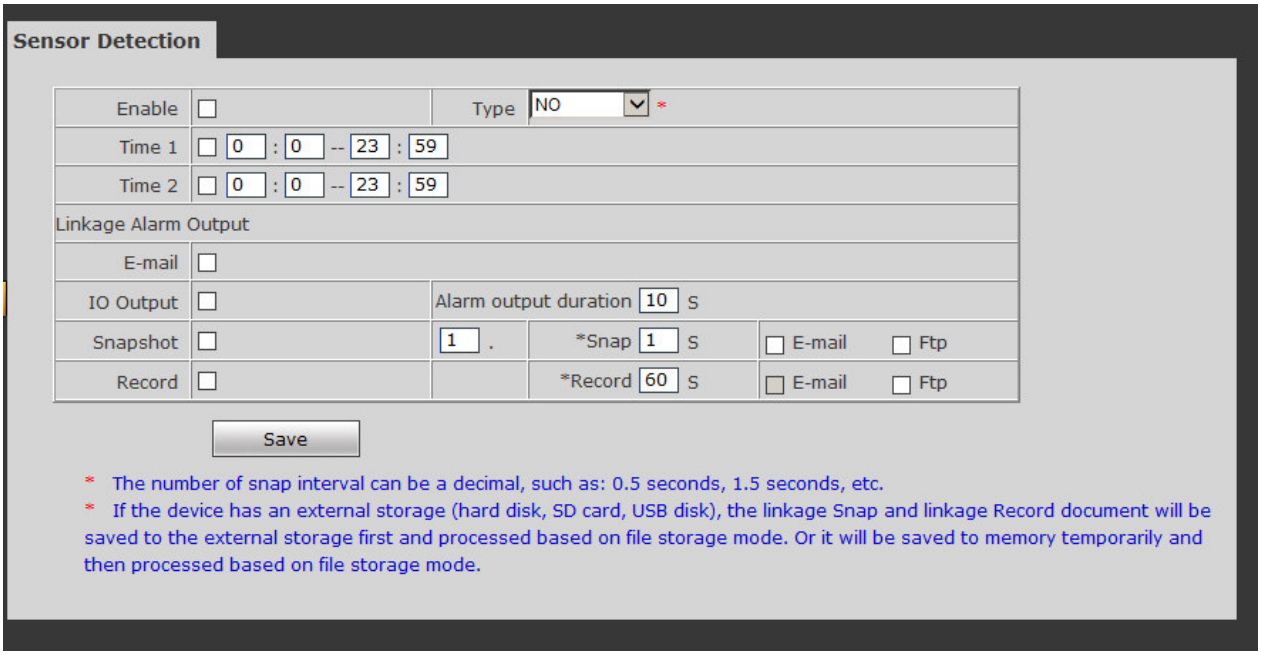


Figure 36

Set sensor alarm parameters here: Enable detect, sensor type, deployment time, linkage alarm output, linkage output duration, E-mail sending when alarm has been triggered, linkage snapping/recording, etc.

[Enable detect]: Enable or disable sensor alarm detection.

[Sensor type]: NO and NC mode.

[Deployment Time]: Set the period of time for sensor alarm detection, two periods allowed.

[Alarm output]: Enable or disable linkage alarm output

[Alarm output duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s.0 means that there is no limit for alarm output.

[E-mail]: Send sensor alarm information to users via E-mail, details about E-mail setting please refer to [Network Settings].

[Snap]: When alarm is triggered, the device SD card will be driven to snap pictures. The pictures can be saved via E-mail sending or FTP uploading. For snapping parameters, if the number of pictures snapped at one time is set as 10 and the snapping interval is 1 second, which means when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.

[Record]: When alarm is triggered, the device SD card will be driven to record images. The record files can be saved via E-mail sending or FTP uploading.

After setting all the parameters, click [save] to make the parameters valid.

Notice：Record file packet time equals duration of alarm add the record time set in [Linkage recording].

5.2.5.3 Network Failure Detection Setting

See Figure 37 for the interface of “Failure Setting”:

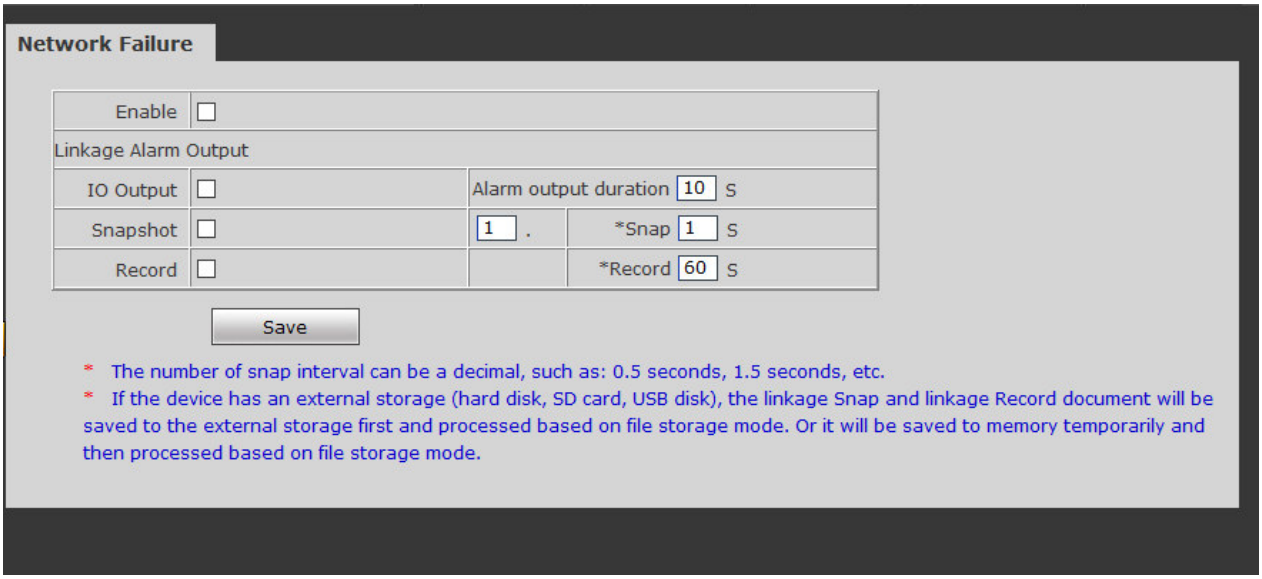


Figure 37

Set network failure alarm parameters here: detection on/off, linkage alarm, alarm output duration, E-mail sending when alarm has been triggered, linkage snapping/recording, etc.

[Enable detect]: Enable or disable network failure alarm detection.

[Sensor type]: NO and NC mode.

[Alarm output]: Enable or disable linkage alarm output

[Alarm output duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s.0 means that there is no limit for alarm output.

[Snap]: When alarm is triggered, the device SD card will be driven to snap pictures. The pictures can be saved via E-mail sending or FTP uploading. For snapping parameters, if the

number of pictures snapped at one time is set as 10, and the snapping interval is 1 second, that means when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.

[Record]: When alarm is triggered, the device SD card will be driven to record images. The record files can be saved via E-mail sending or FTP uploading.

After setting all the parameters, click [save] to make the parameters valid.

Notice：

- **Record file packet time equals duration of alarm add the record time set in [Linkage recording].**
- **When network failure occurs, E-mail sending and FTP uploading cannot be performed, the pictures and recorded files will be stored in SD card. E-mail sending and FTP uploading will resume after network is recovered.**

5.2.5.4 COM Setting

See Figure 38 for the interface of “COM Setting”:

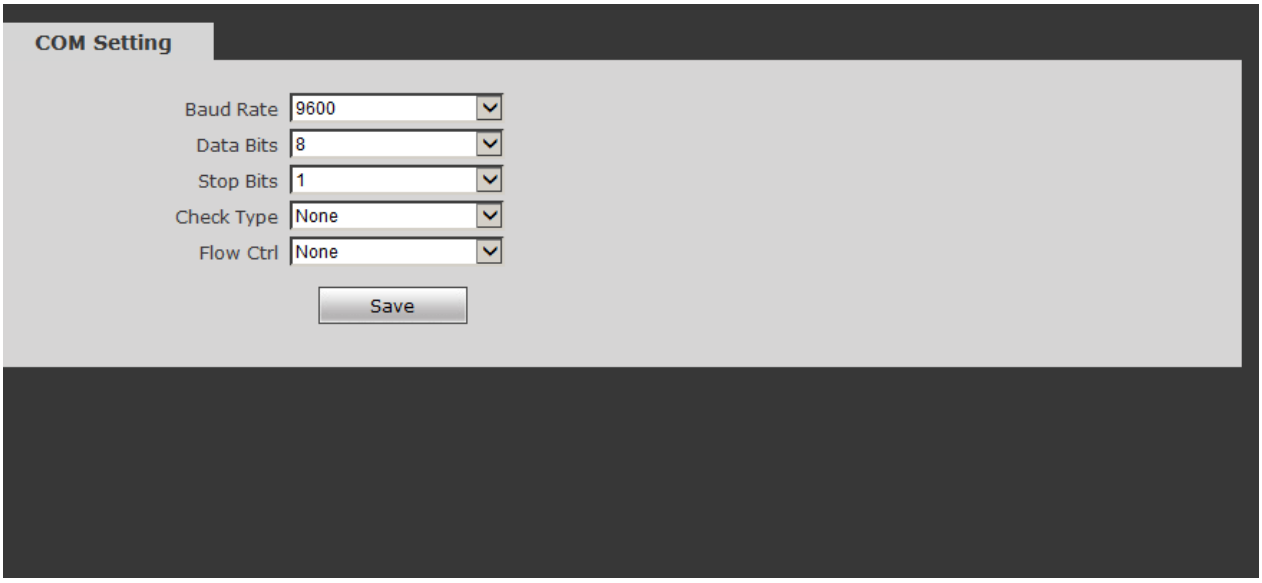


Figure 38

[COM Setting]: When IP camera is connected to RS485 (or RS232) communication or control device (e.g. PTZ decoder, dome camera), the parameters of RS485 (or RS232) need to be set according to the settings of the communication control device (address, protocol, baud rate), and the corresponding protocol need to be downloaded.

Notice：Only when the parameters and protocol are correctly set that the control of add-on communication control device can be implemented.

5.2.7 System Setting

5.2.7.1 System Info

See Figure 39 for the interface of “System Info”:

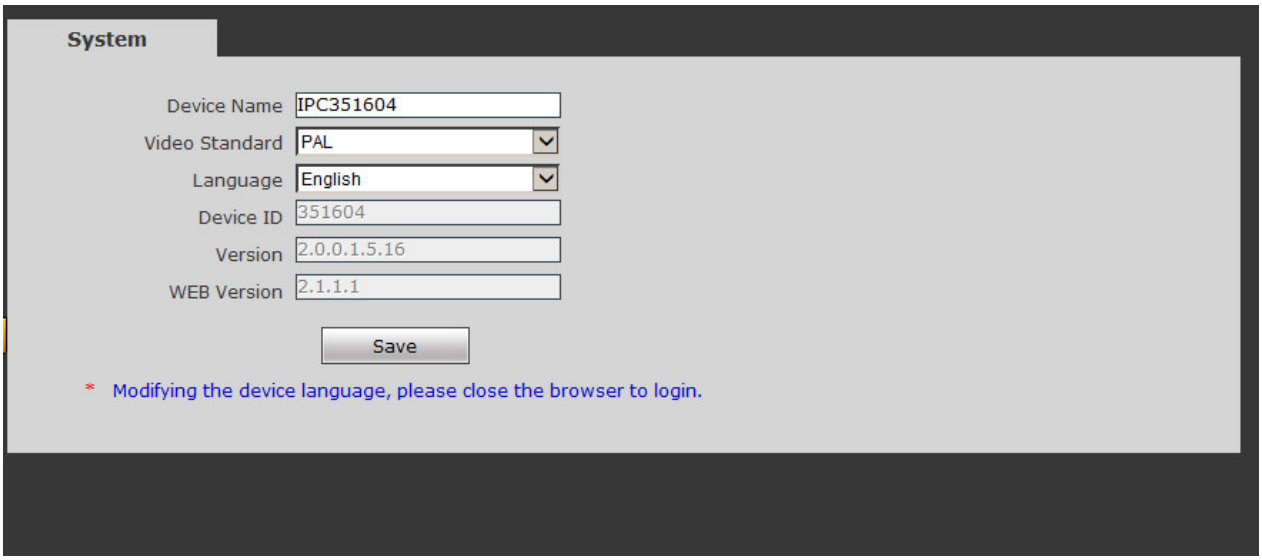


Figure 39

[System Info]: Display device name, device ID, Language, version, you can define the device name.

After setting all the parameters, click [save] to make the parameters valid.

5.2.7.2 System Time

See Figure 40 for the interface of “System Time”:

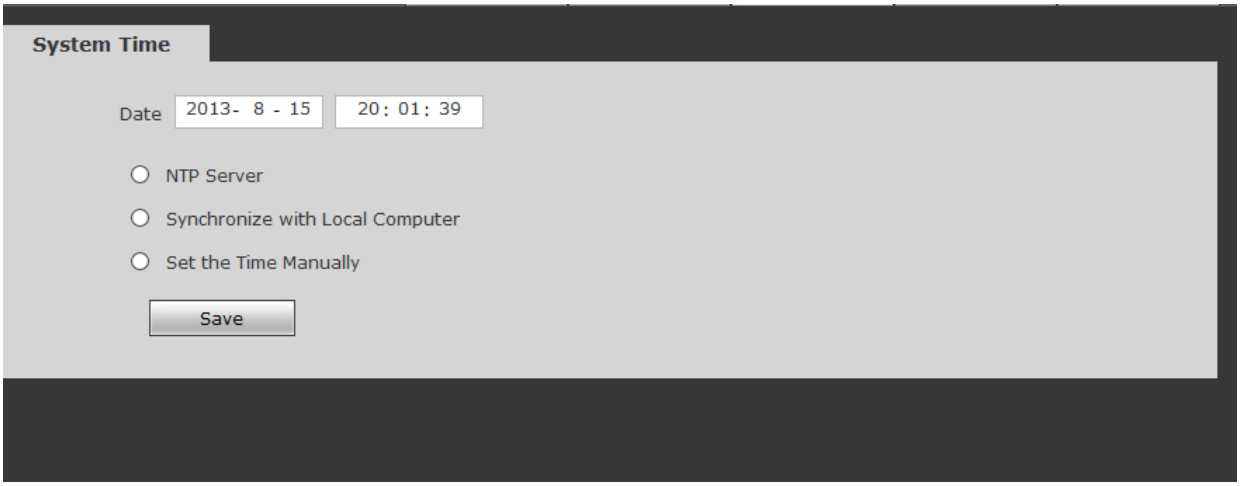


Figure 40

[System time set]: You can choose the proper time zone.

Update via NTP Server: After starting the function, switch on NTP switch and select time zone, save it to turn to [Liveview], the system time that has been automatically corrected by NTP server can be displayed.

Synchronize with Local Computer: After starting the function, the date and time of IP camera will be synchronized with the PC.

Set the Time Manually: If you select this option, you can modify the time in [System time].

. After setting all the parameters, click [save] to make the parameters valid.

5.2.7.3 User Management

See Figure 41 for the interface of “System Time”:

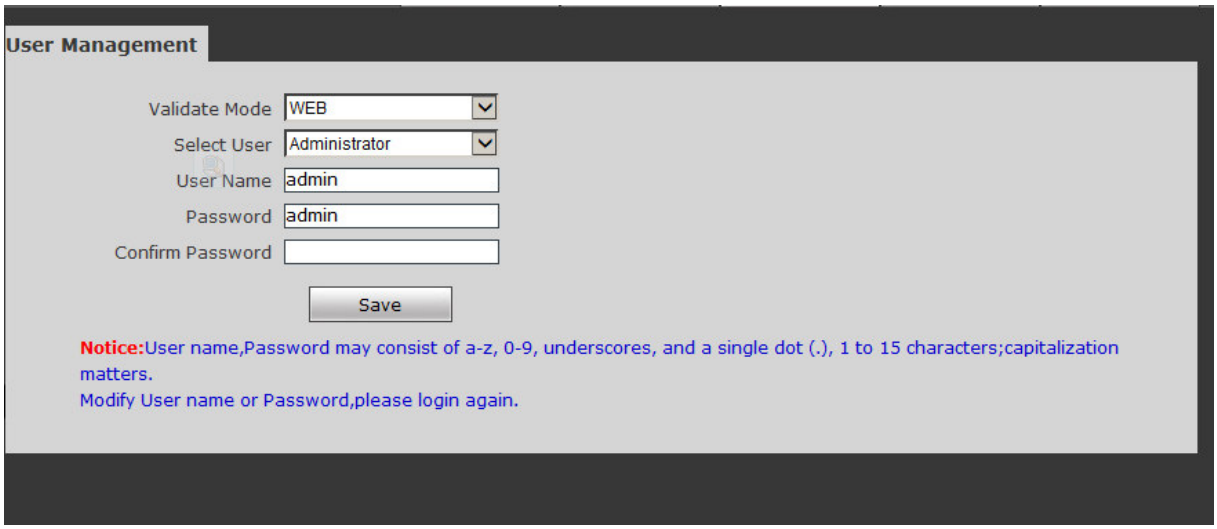


Figure 41

[Validate Mode]: You can select WEB or Digest mode.

You can set three users for every camera, one is Administrator, the others are general users.

Administrator authority: can operate and set all functions and parameters of IP camera

General user authority: (1) can perform operations like snapping, recording, playback, talkback, monitoring, alarm clearing, log searching, zooming and full-screen reviewing;

(2) Can perform operations like visit setting, image lightness and color adjustment, PTZ and lens control, etc.

Default user name of administrator: **admin**	Password: **admin**
Default user name of general user: **user 1 \user 2**	Password: **user 1 \user 2**
Note: user name and password are case sensitive	

Notice：User name and password must be 1-15-character-strings consisted by letters, numbers, underlines or dots. The characters are case sensitive.

5.2.7.4 Upgrade

See Figure 42 for the interface of “Upgrade”:

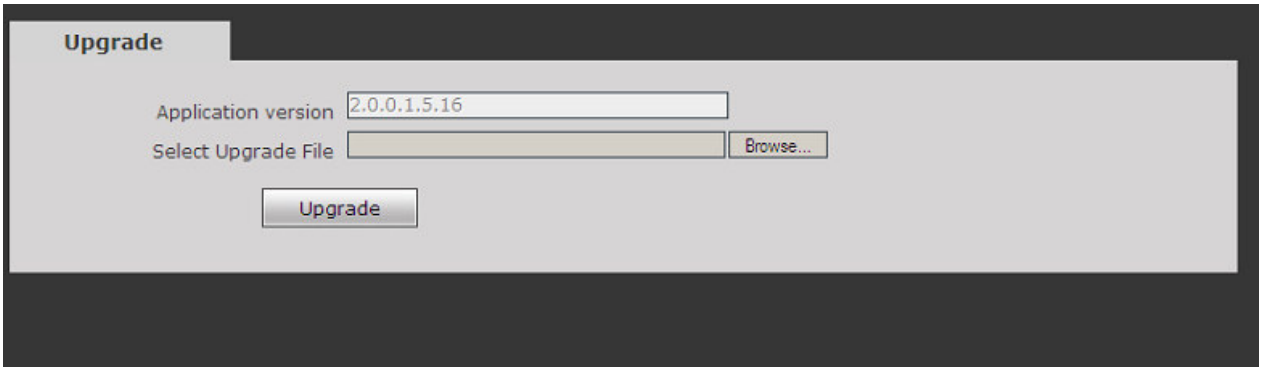


Figure 42

Click “Browse” button, and select correct file of upgrade (udx), click [upgrade], then you can upgrade your system, the completion rate will be displayed during this process. After upgrade completes, IP camera will restart automatically. Re-log in device, enter into system settings page, check to see whether the kernel edition is the upgraded edition. For example: kernel edition of the current IP camera is (V2.0.0.1.16), the latest edition obtained from supplier is (V2.0.0.1), then the kernel edition after upgrade should be V2.0.0.1

Notice：

1. **Don’t cut off the power and internet connection while upgrading.**
2. **If you use win7 system, please set IE parameters before upgrade. Open the IE browser, click Ineternet Option into the "Security" page, click the "Custom Level"—Security—Custom—Miscellaneous—Include local directory path when uploading files to a server—Enable.**

5.2.7.5 PTZ Upgrade

See Figure 43 for the interface of “PTZ Upgrade”:

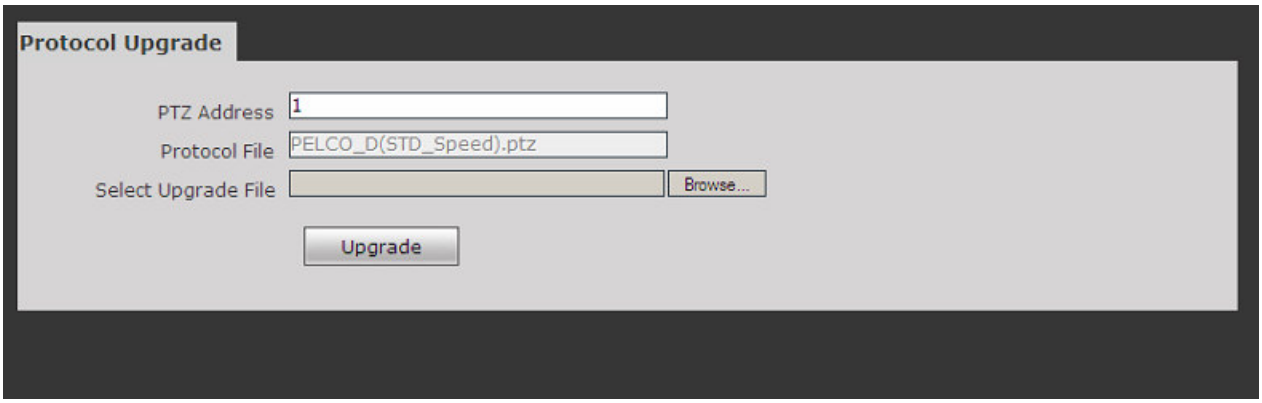


Figure 43

[PTZ address]: 1~255.

[Protocol file]: Echo the built-in protocol name of current IP camera.

[File]: You can upload the decoder/dome camera communication protocol selected by yourself. The system supports hundreds of decoder/dome camera communication protocols; it can also be defined by you according to the standard format of protocols.

After setting all the parameters, click [save] to make the parameters valid.

5.2.7.6 Restore

See Figure 44 for the interface of “Restore”:

Figure 44

All device parameters (including network parameters, excluding physical address) will be recovered as factory setting values.

5.2.7.7 Reboot

See Figure 45 for the interface of “Reboot”:

Figure 45

Click [Reboot], it will pop up a box; enter the password, the IP camera will restart.

5.2.7.8 System Log

See Figure 46 for the interface of “System log”:

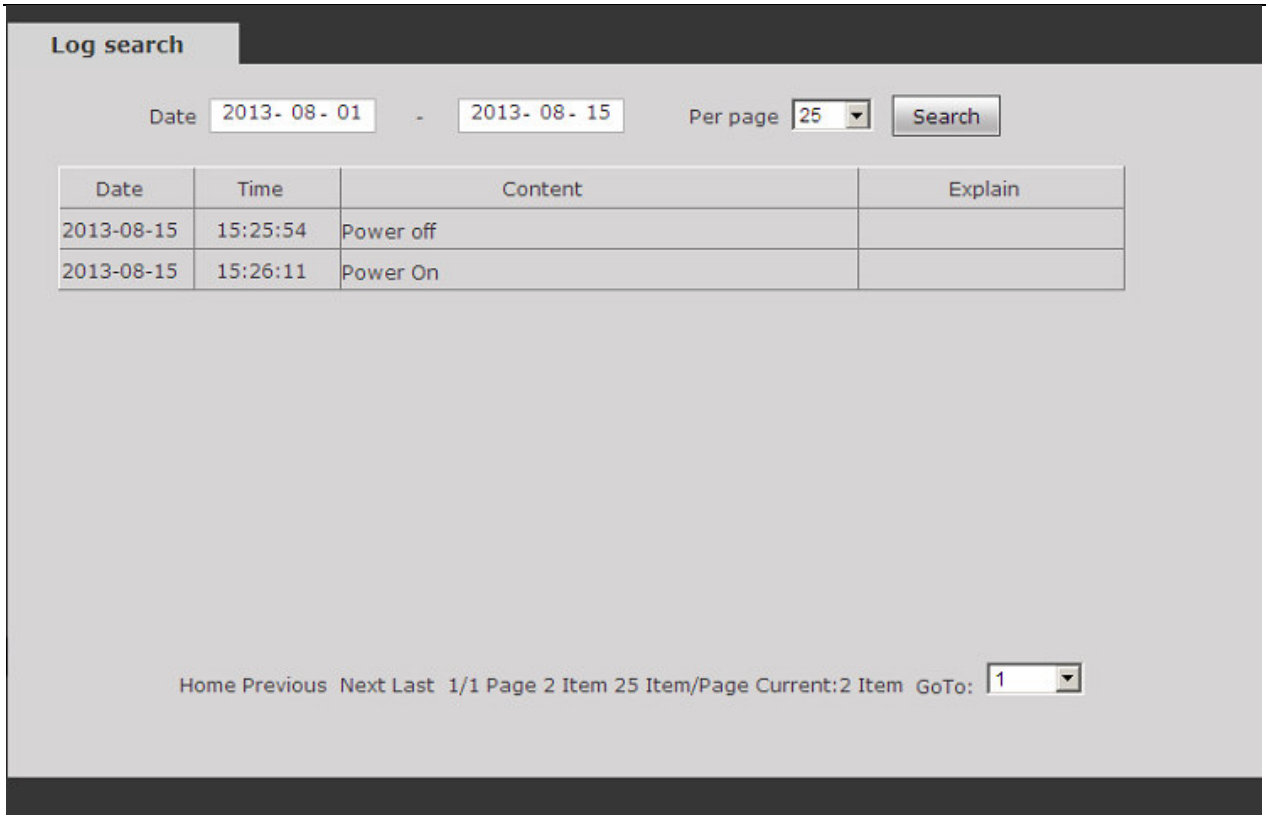


Figure 46

[Search]: Allow users to search for log. The maximum capacity is 512 entries of message, when the number of entries exceeds 512, system will delete records of the earliest date automatically.

Appendix 1 Network Interface of IP Camera

The default network ports of IP camera are:

TCP	80	Web port
	5000	Communication port, audio/video data transmission port, talkback data transmission port
UDP	5000	Audio/video data transmission port
ONVIF	2000	Communication to third party software through ONVIF protocols
Multi-cast port	Multicast original port + channel number	

Appendix 2 Default Network Parameters

Default network parameters

Cabled Network:
IP Address: 192.168.55.100 Data Port: 5000
Subnet mask: 255.255.255.0 Web Port: 80
Gateway: 192.168.55.1 DHCP: Off

Appendix 3 Apply for DDNS domain name service

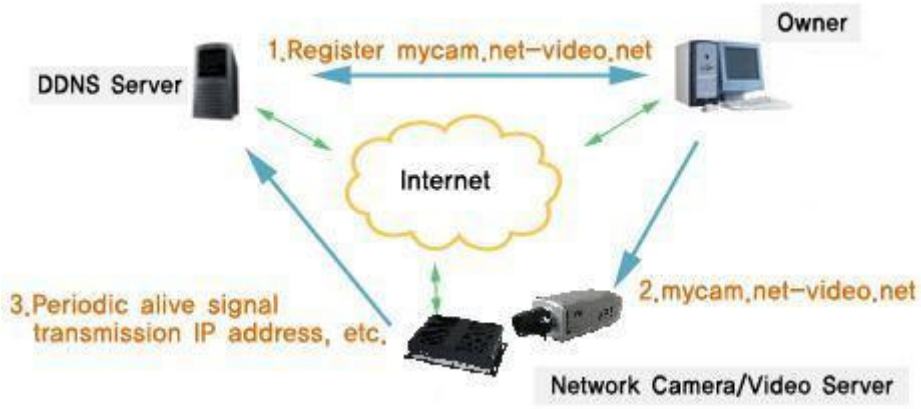
1 IP camera DDNS introduction

➢ DDNS function of IP camera

DDNS (Dynamic Domain Name Service) refers to the real-time analysis of a fixed domain name and the dynamic public IP address of the IP camera.

With this function, all Internet users can visit the IP camera via a fixed domain name.

➢ The DDNS process of IP camera is as follow:

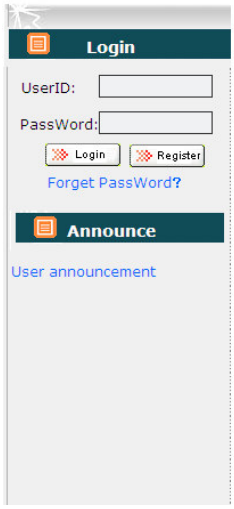


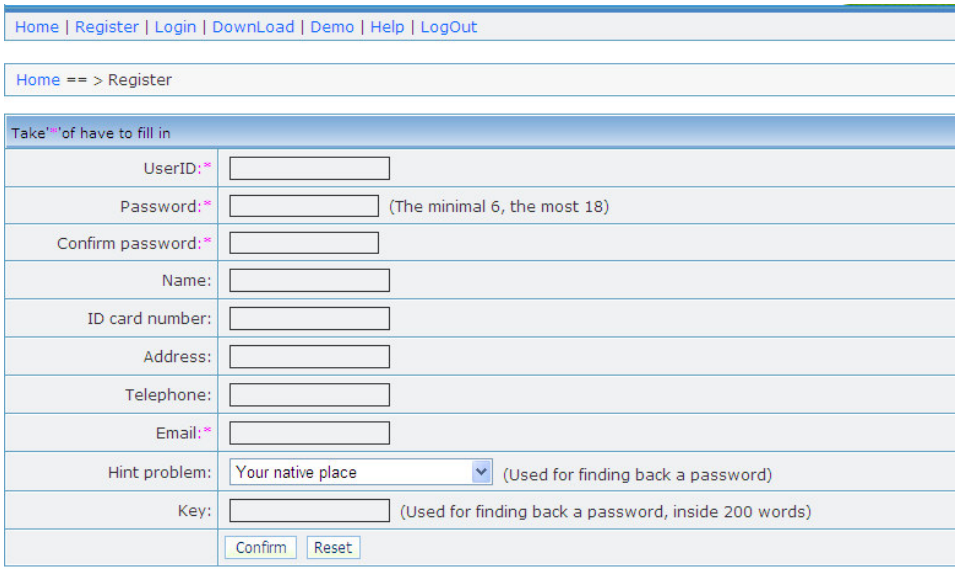
The DDNS process flow diagram of IP camera

2 Apply for DDNS domain name service

Step 1: Sign up

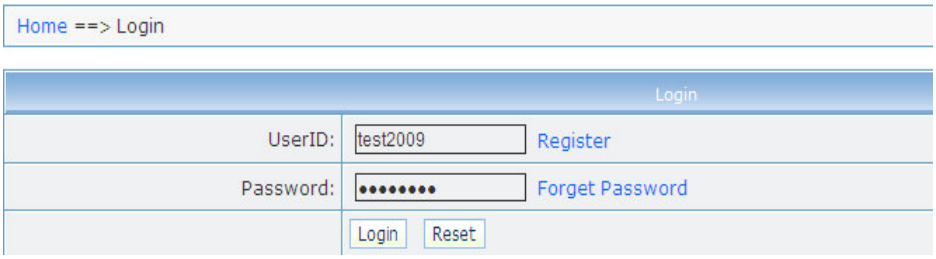
Users need to sign up to manage and inquire about domain name status when using this dynamic domain name management system for the first time. Visit DDNS server (http://www.mvddns.net) to sign up. See the picture below:





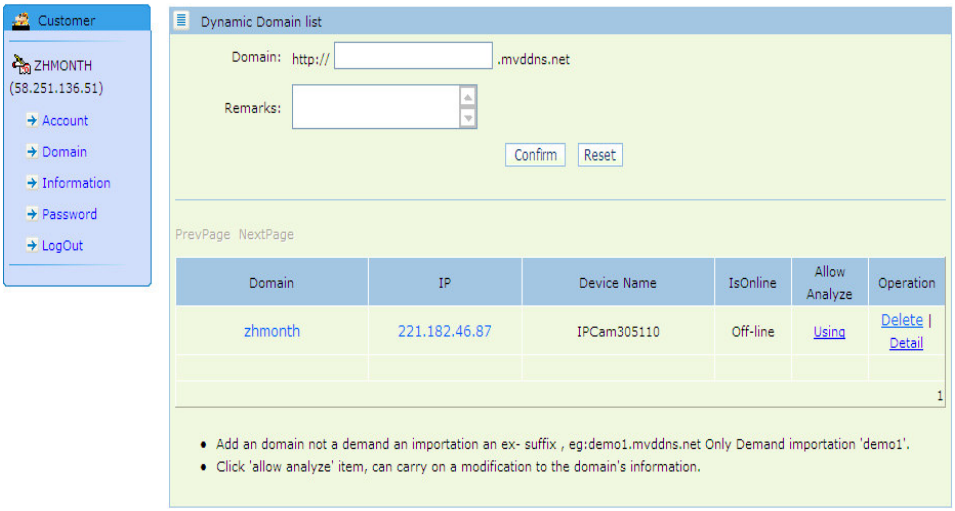
Step 2: User login

Enter registered user name and password, click “login” to enter into domain name management interface as follow:



Step 3: Domain name registration

A domain name must be registered first, then put into use. Click “Domain name management”, a page appears as follow:



Register and submit the domain name to be used. For example: “test.mvddns.net”.

Appendix 4 Visit IP camera under different network environments

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

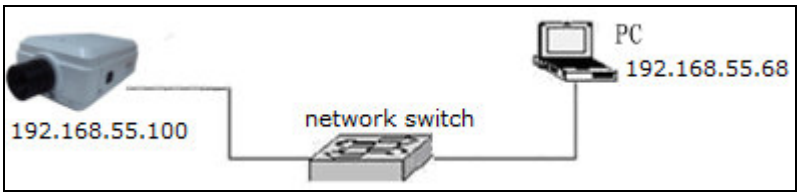
1 LAN

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

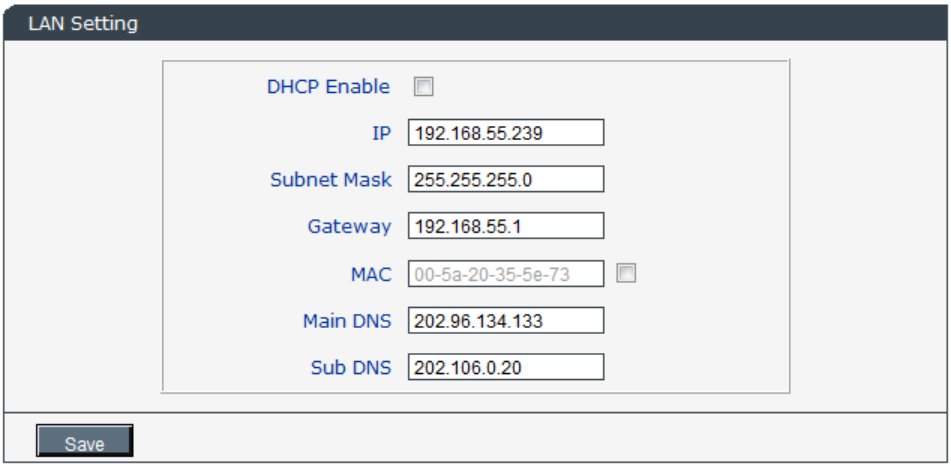
- Static IP

Static IP means that Your network administrator assigns a LAN IP address to IP camera. The IP of your PC and IP camera must be in the some network segment to make visiting to the camera possible.

See below picture for the network topology:



Please refer to below picture for the network settings:



Setup steps:

Step 1: Log in IP camera via the IE browser (the default IP is 192.168.55.100).

Step 2: Switch to the page [network settings], fill in the device IP address assigned by network administrator in to [Basic Parameters], e.g. 192.168.55.100;

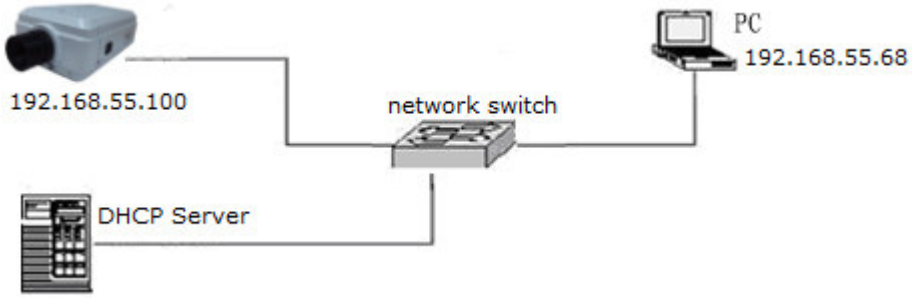
Step 3: Fill in subnet mask, default value is 255.255.255.0;

Step 4: Fill in gateway address, default value is 255.255.255.0;

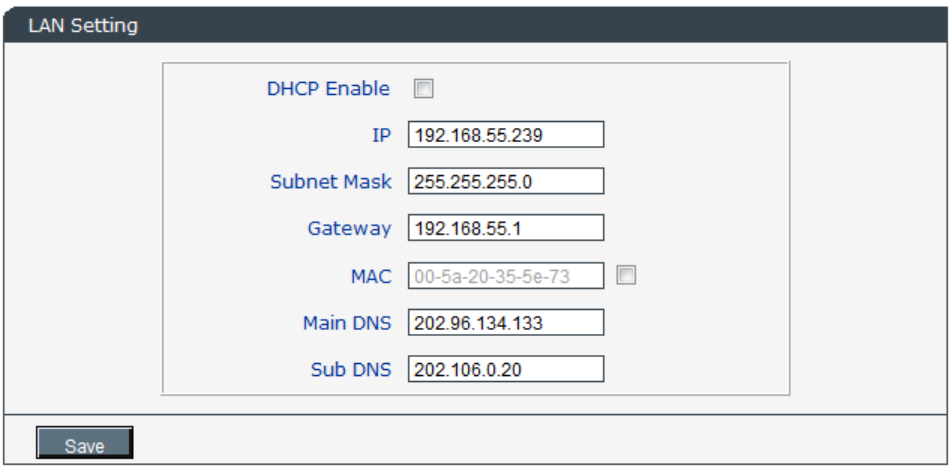
Click [Save] to save the parameters. Start the device, enter its IP address into IE browser to visit it.

➢ Dynamic IP

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



Please refer to below picture for the network settings:



Log in IP camera via IE, turn to [Network Settings] and check [Enable DHCP].

Set all the parameters done, click [save] and restart to make the parameters valid.

2 Internet

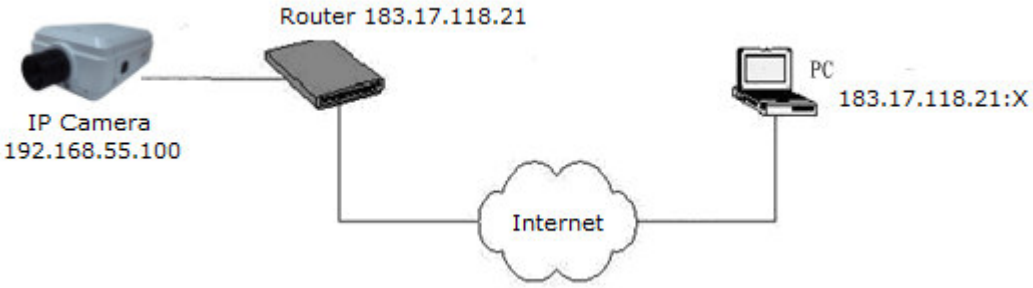
You have three ways to connect IP camera to Internet:

- Fixed IP mode;
- Broadband and router sharing Internet access mode (dynamic obtainment of extranet IP address mode) like ADSL and so on;
- PPPoE dial-up access.

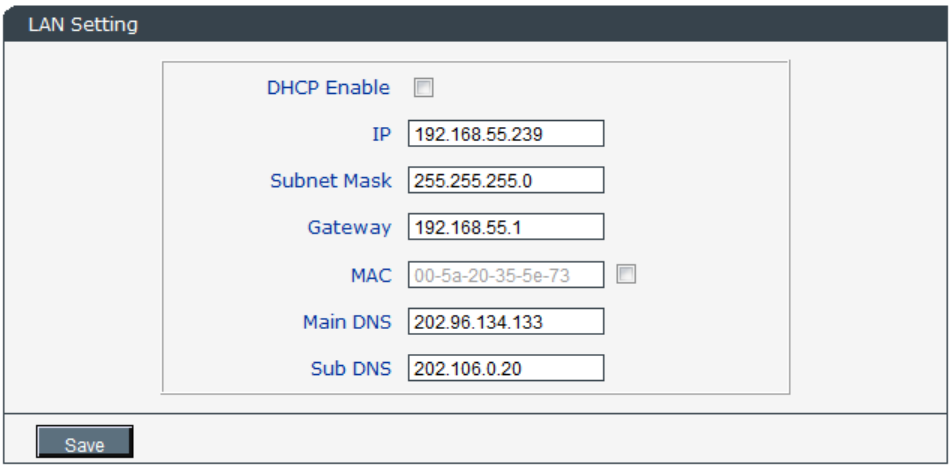
After IP camera is connected to Internet, remote Internet users can visit it directly via domain name or IP address.

➢ Fixed IP mode

See below picture for the network topology:



Please refer to below picture for the network settings:



Setup steps:

Step 1: Log in IP camera via crossover cable direct connection.(For details, please refer to [Hardware Installation])

Step 2: Switch to the page [network settings], fill in the device IP address requested from network service provider in to [Basic Parameters], e.g. 218.84.31.168;

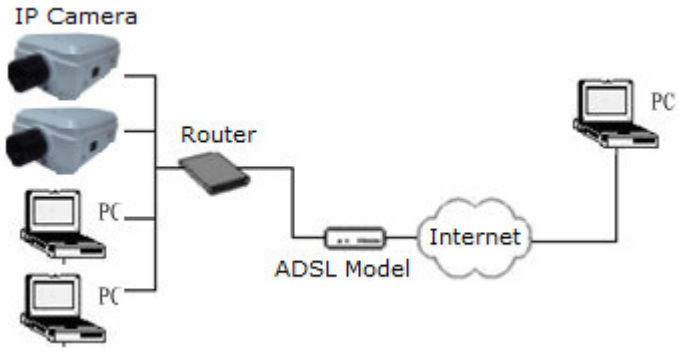
Step 3: enter correct subnet mask, e.g. 255.255.255.192;

Step 4: enter correct gateway, e.g. 218.84.31.131;

After setup completes, click [Save] and restart the device, then connect it to public network so that all Internet users can visit the IP camera remotely via entering http://218.84.31.168 to IE browser.

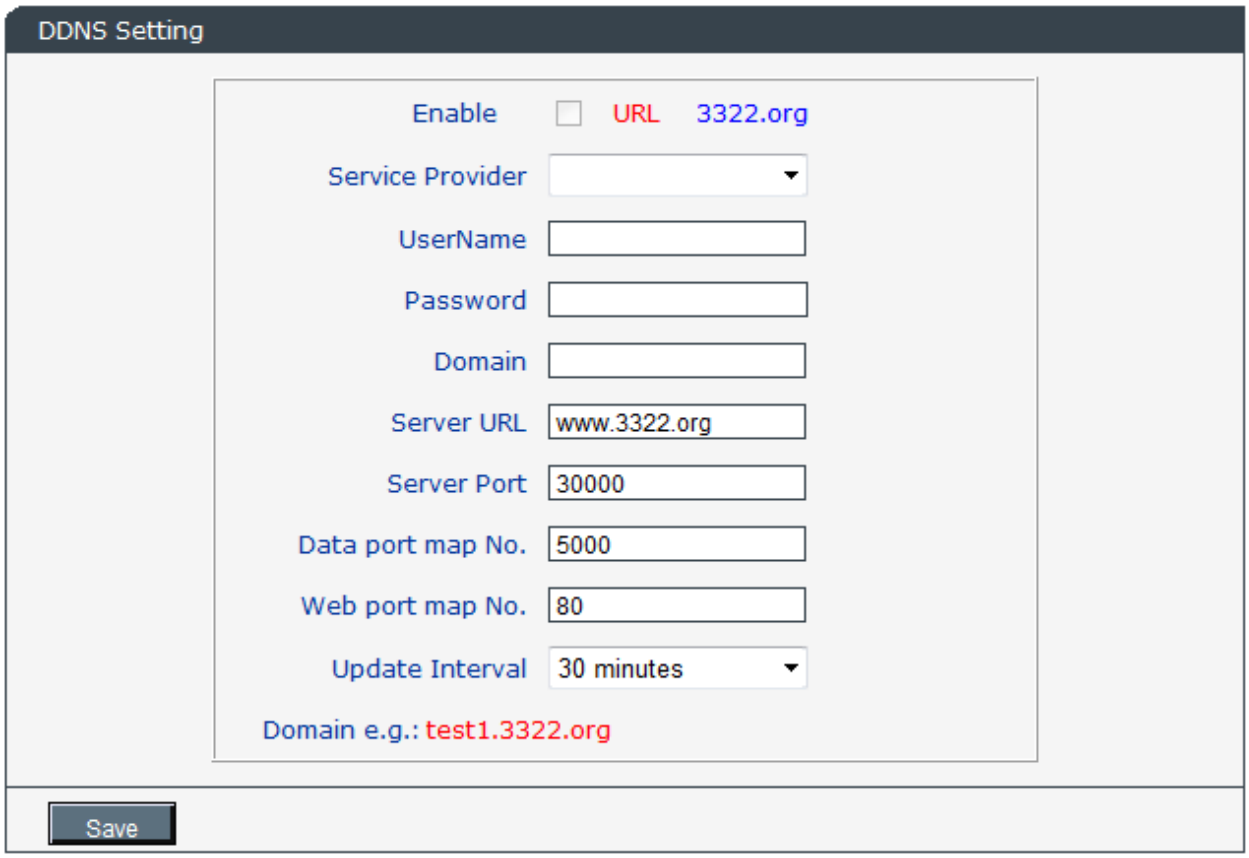
➢ Broadband and router sharing Internet access mode (dynamic obtainment of extranet IP address mode) like ADSL and so on;

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



Users can set up DDNS domain name service at the same time. Fill the username and password which were applied in the DDNS server into the DDNS setting item, implement port mapping from the router. The router determines and points to the IP camera that need to be visited according to different ports, long-distance Internet user can visit the IP camera on the network via domain name directly.

Please refer to below picture for the network settings:



DDNS setup steps:

Step 1: Log in DNNS server (e.g.http://www.mvddns.net), register user account and password.(For details, please refer to Appendix 3)

Step 2: Click to open DDNS;

Step 3: Select DDNS service provider, e.g. mvddns.net;

Step 4: Fill in the registration name to log into DDNS server;

Step 5: Fill in the registration password to log into DDNS server;

Step 6: fill in the domain name applied on DDNS server, e.g. test.mvddns.net;

Step 7: Fill in DDNS server address, e.g.www.mvddns.net;

Step 8: fill in the port of DDNS server, default value is 30000 (users are recommended not to change it);

Step 9: fill in the port number of public network data after mapping, the default port is 5000.If several IP cameras are connected to one router, different web ports need to be specified for each device, and port mapping needs to be done for every specified port.

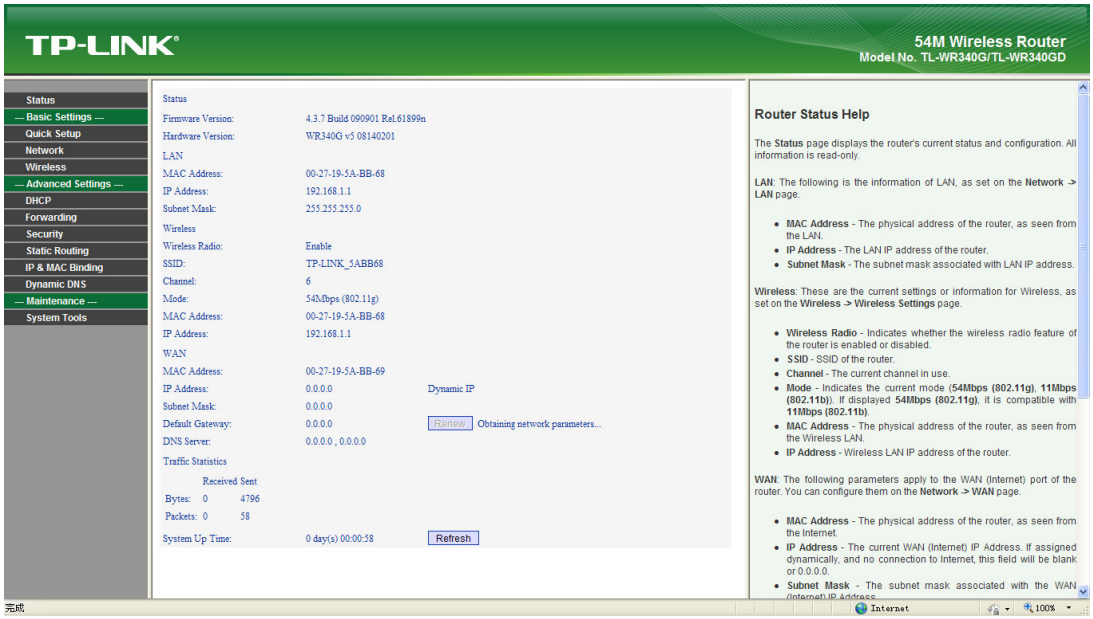
Step 10: fill in the port number of public network web after mapping, the default port is 80.If several IP cameras are connected to one router, different web ports need to be specified for each device, and port mapping needs to be done for every specified port.

After setting all the parameters, click [save] and restart to make the parameters valid.

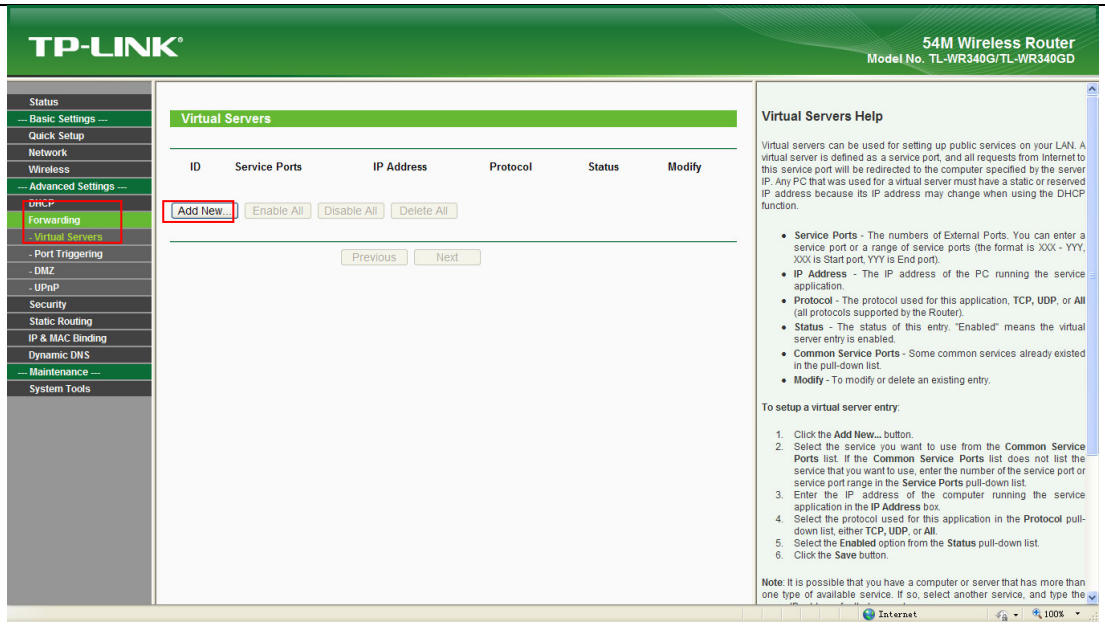
Port mapping setup steps:

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

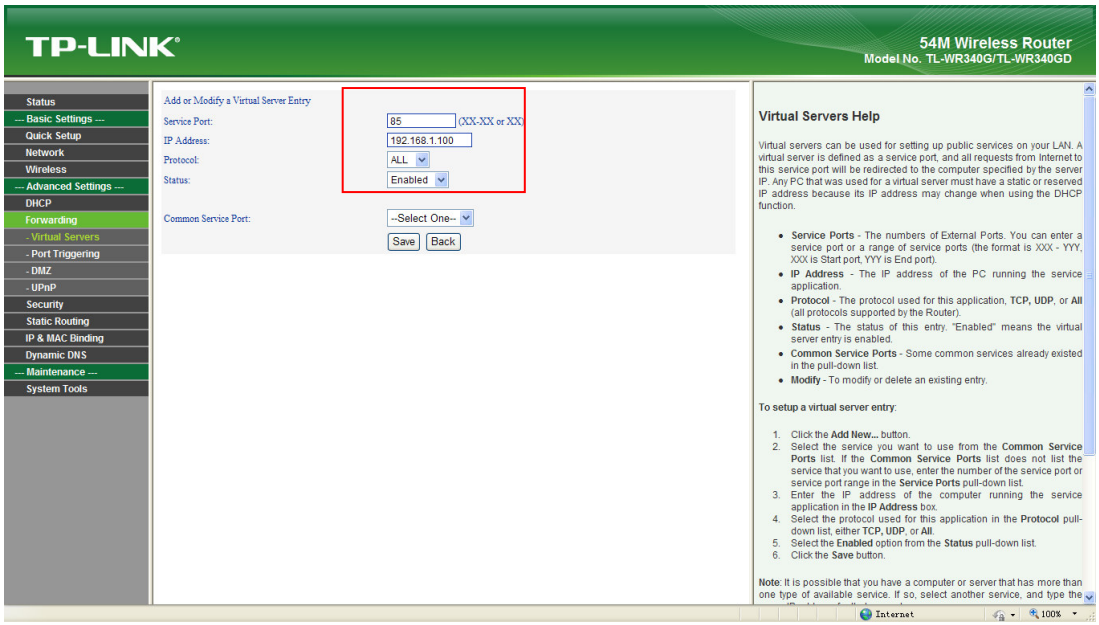
Step 1: Ask network administrator for the IP address of the router (i.e. LAN gateway address), login user name and password, then log in the router. The main interface is as follow:



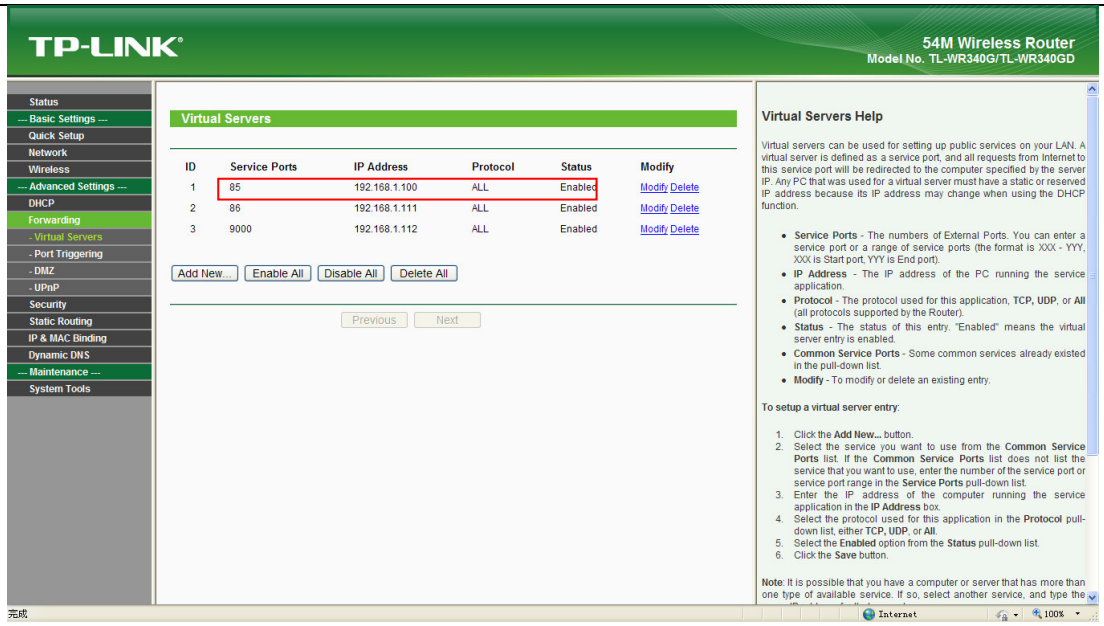
Step 2: Open “Forwarding”, select “Virtual Servers” as below picture shows:



Step 3: Select “Add New Items”, enter the IP address of the IP camera (e.g.192.168.1.100), port (e.g. 85), status (valid) and other information, click save, see below picture:



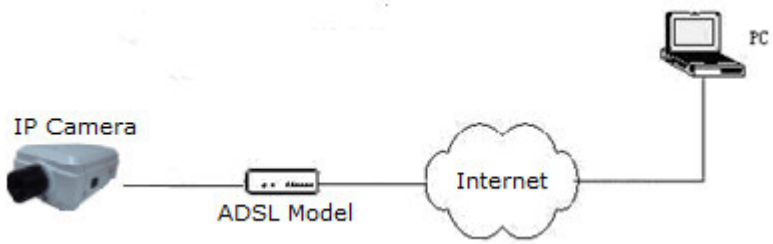
Step 4: After save successfully, below screen appears:



Step 5: If DDNS is successfully set in “Network Settings” of IP camera, direct visit to the IP camera can be realized via entering http://test.mvddns.net:85 into IE browser.

➢ PPPoE dial-up access

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



Setup steps:

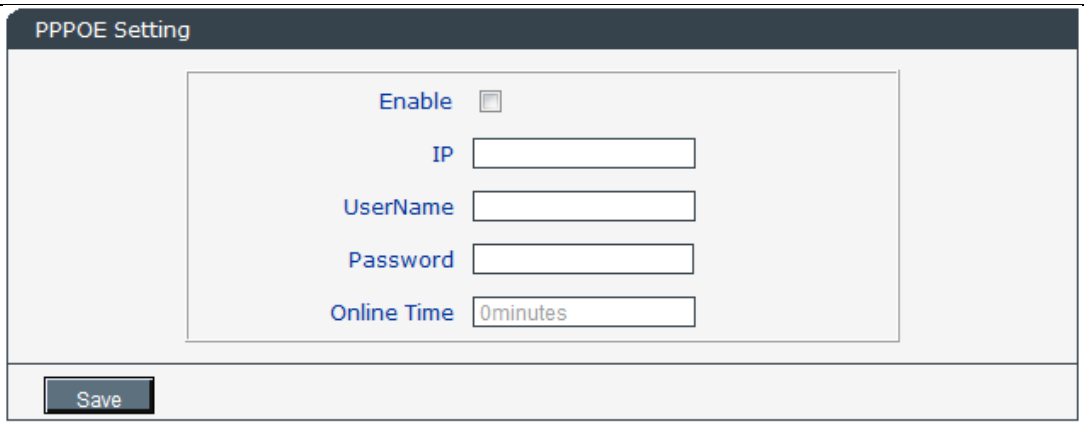
Step 1: Log in IP camera via crossover cable direct connection.(For details, please refer to [Hardware Installation])

Step 2: Set PPPoE parameters.(for details, please refer to [PPPOE settings])

Step 3: Connect IP camera to Internet.

Step 4: If DDNS service is successfully set for the device, the device can be visited via entering domain name into IE browser.

See below picture for PPPoE settings:



Appendix 5 FAQs

1、 Forget Password

Solution: There is a [RESET] button on the back panel of the IP camera, press it 3 times to restore all default parameters (Factory Settings), user name and password are both “admin”.

Notice：

1、Please don’t press RESET if you are not a professional operator. After reset, all parameters will restore factory settings (except for the physical network address).

2、RESET method:

- **Press [RESET] button 3 times in 2 ~10 second**
- **Between Push buttons and Release Button，must be an interval of 0.5 seconds**

2、IP camera audio/video function fails after abnormalities or abnormal power cut occur during upgrade, core edition is V4.0.0.0 (Backup file)

Solution: Connect the power cord and network cable of IP camera, press on RESET button and release it after 10 seconds, system will run the back-up programme automatically. After enter into the back-up programme, upgrade system. After upgrade completes, the IP camera will work normally. The back-up programme offers only upgrade and parameter setup functions, audio and video functions are not available.

3、No video image displayed in IE browser

Possible reason: ActiveX not installed

Solution: ActiveX must be installed when visiting IP camera for the first time via Internet Explore.

How to install: Visit IP camera, click [Download Address], file download dialog will pop up, select [Run] or [Save] to download. After download finishes, installation interface will pop up, click “install”, the installation of ActiveX will start

automatically, “Register OCX success” dialog box will pop up to remind the completion of installation process.

4、Fail to visit IP camera via IE after upgrade

Solution: Delete the caching of Browser.

Steps: Open IE—click “Tools”—select “Internet Options”—click “delete files” button in “Internet temporary files”, select “delete all offline contents”, then click “OK” and re-log in IP camera.

5、The images do not flow

Possible reason 1: The frame rate of IP camera is too low.

Solution: Increase the video frame rate

Possible reason 2: Too many users are viewing the images.

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

Possible reason 3: The bandwidth is low.

Solution: Reduce video frame rate or video compression bitrate.

6、Fail to visit IP camera via IE browser

Possible Reason 1: Network is disconnected.

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

Possible reason 2: IP Address has been occupied by other devices

Solution: Stop the connection between IP camera and Network, hook up IP camera to PC separately, reset IP address according to the proper operations recommended.

Possible reason 3: IP addresses are in different subnets.

Solution: Check IP address, subnet masking address of the DVS and the settings of Gateway.

Possible reason 4: Physical address of network conflict with IP camera

Solution: modify the physical address of IP camera.

Possible Reason 5: Web port has been modified

Solution: Contact Network Administrator to obtain related information.

Possible Reason 6: Unknown

Solution: Press RESET to restore default settings then connect it again, the default IP address is 192.168.55.100, subnet mask is 255.255.255.0

7、There is no sound while monitoring

Possible Reason: No audio input connection

Solution: Check audio connection of the host

Possible Reason 2: the audio option of IP camera is off

Solution: Check audio parameter settings to see if you have opened the audio.

8、Search NVS software cannot find device

Possible reason: Search NVS software adopts multicast protocol to perform searching. But the firewall forbids multicast data packet.

Solution: disable the firewall.

9、 Image processing doesn't work properly

Possible Reason 1: system issue, DirectX function is disabled, which will cause slow display of images and abnormal color.

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

Solution: install DirectX image drive, then Start→Run→input "DXDIAG" as follows:

Notice：Enable DirectDraw speedup, Direct3D speedup, AGP veins speedup in DirectX function. If they can not be enabled, that means DirectX installation fails or hardware not supportive.

END