User Manual

Network Camera

Version: 2017.11

Directory

1 Note

Please kindly review this user manual before operation for reference.

The products described in this manual may be updated at any time without notice.

If any doubt, or to obtain the latest documentation, please contact the company service department.

2 Precautions

The content is to make sure your operations of the products are strictly in accordance with this manual, to prevent danger or loss of property. Therefore, please read the manual carefully and keep it for your future reference before using the products.

As shown below, the preventive measures are divided into "Warning" and "Attention":

Warning: Without Warning may lead to death or serious injury.

Attention: Without attention may lead to injury or loss of property.

Warning To remind users to keep away from potential death or danger of serious injury.	**Attention** To remind users to keep away from potential injury or danger of property from loss

Warning:

- Please use the required power meets SELV (safety extra-low voltage circuit) to supply. In the accordance of IEC60950-1, the power should comply with the rated voltage of DC 12V and AC 24V (Depends on the specific model) of Limited Power Source.
- If the equipment works abnormal, please contact your purchasing store or the nearest service center. Do not disassemble or modify the equipment in any methods. (If do without permission, user will be responsible for the result.)
- In order to reduce the risk of fire or electric shock, please prevent the product from raining and moisture.
- The installation should be done by the professionals and comply with local regulations.
- Please install the easy-used electric failure equipment into wiring of the building.
- The instruction of equipment installation on the ceiling: After installation, please to make sure the connection can withstand 50Newton (N) downward pull.

Attention:

- Before the camera running, please make sure whether the supply power is right.
- Please do not drop off or heavily strike the product.

- Please do not touch the image sensor optical element. If it is necessary to clean, please use the clean cloth slightly moist with alcohol to wipe dust; when not in use, please cover the lens to protect the image sensors.
- Please avoid focusing at glare (e.g. lighting, sunlight etc.), or it will be resulting in too bright or colorful vertical stripes on the screen (which is not camera's error) and affect life of image sensors.
- The laser beam may burn down image sensors. When the installation of laser beam used, please make sure that the surface of image sensors does not expose under the laser beam.
- Please avoid followed places: moisture, dusty, hottest, coldest (Normal work temperature range: -14°F～+ 140°F) and strong electromagnetic radiation etc.
- Please do not accumulate more heat and maintain ventilation flow around the camera.
- When using the camera, please do not make water and any liquid flow into it.
- When delivering the camera, please packing as shipping out or with the same quality material of the factory.
- Parts change regularly: Some parts of the products (e.g. Electrolytic Capacitors) should change regularly according to their average lifespan. Their lifespan would be different for the using environment and using time, so please check them regularly. For more information, please consult with your purchasing distributors.

3 Web Access

3.1 Network Connection

First to make sure the proper connection of the camera. Meanwhile, please check the PC's local network state. If the state shows "  ", the network connection is error.

The initial default IP address of the Camera is 192.168.1.88, please set IP address, Subnet mask and gateway for your computer.

Please make sure the proper setting of IP address. You can check network connection by tool "Ping" attached with the system after the setting.

3.2 Quick Access

The proper network connection can support multiple browsers, e.g. Internet Explorer, Firefox, Chrome etc.. To preview the camera by IE Browser, please see the operating steps as follows:

Open your Internet Explorer and choose Tools/ Internet Options/ Security /Custom Level, then check "Enabled" or "Pop Up" under "ActiveX Control and Plug -in" and set the security level lower.

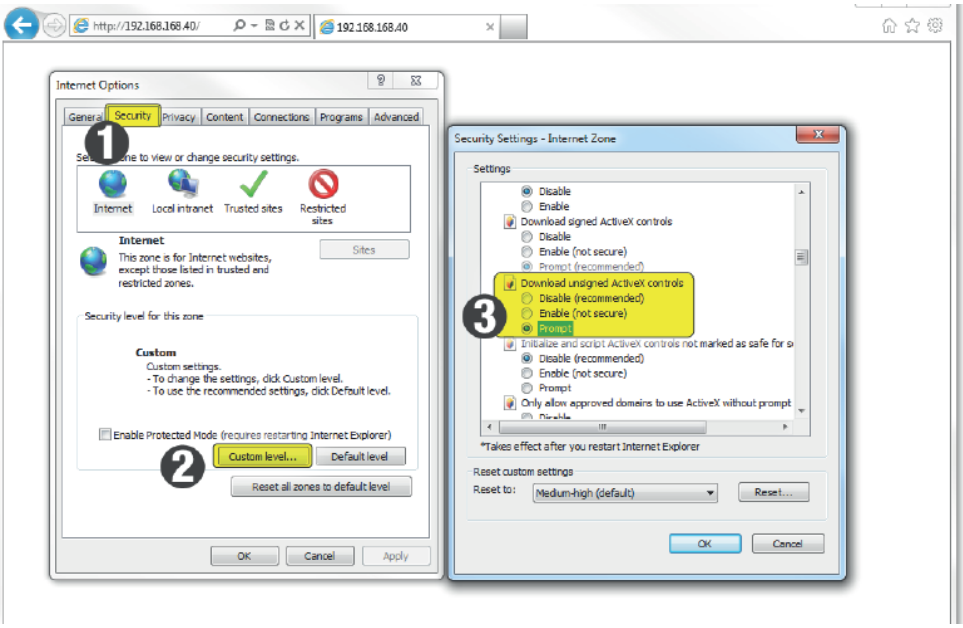


Figure 3-1 Set ActiveX Control and Plug-in

Please enter the camera's IP address in the address bar and click "Enter", the login interface will be shown up.

Then input your camera's "User Name" (Default: admin), "Password" (Default: 123456) and click "Log in".

Figure 3-2 Log in

Following interface will pop up a link “Please download the plug-in by clicking here” when you log in. Please click it and install the plug-in then restart your browser to log in.

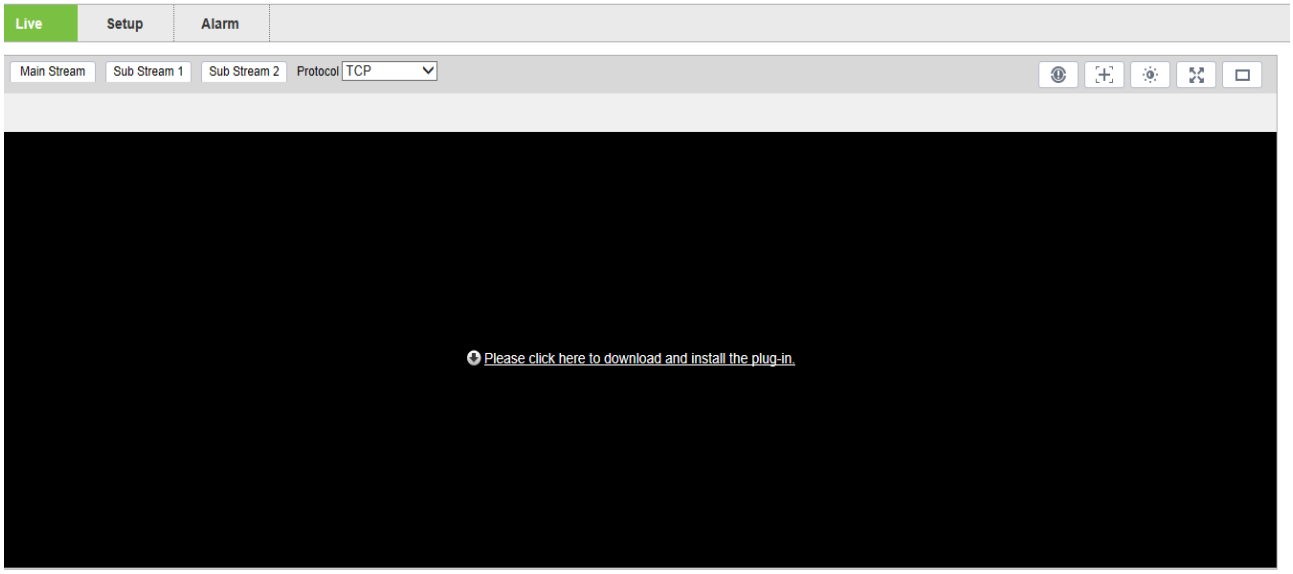


Figure 3-3 Download Plug –in

After installing the plug-in， Browsing the interface ：

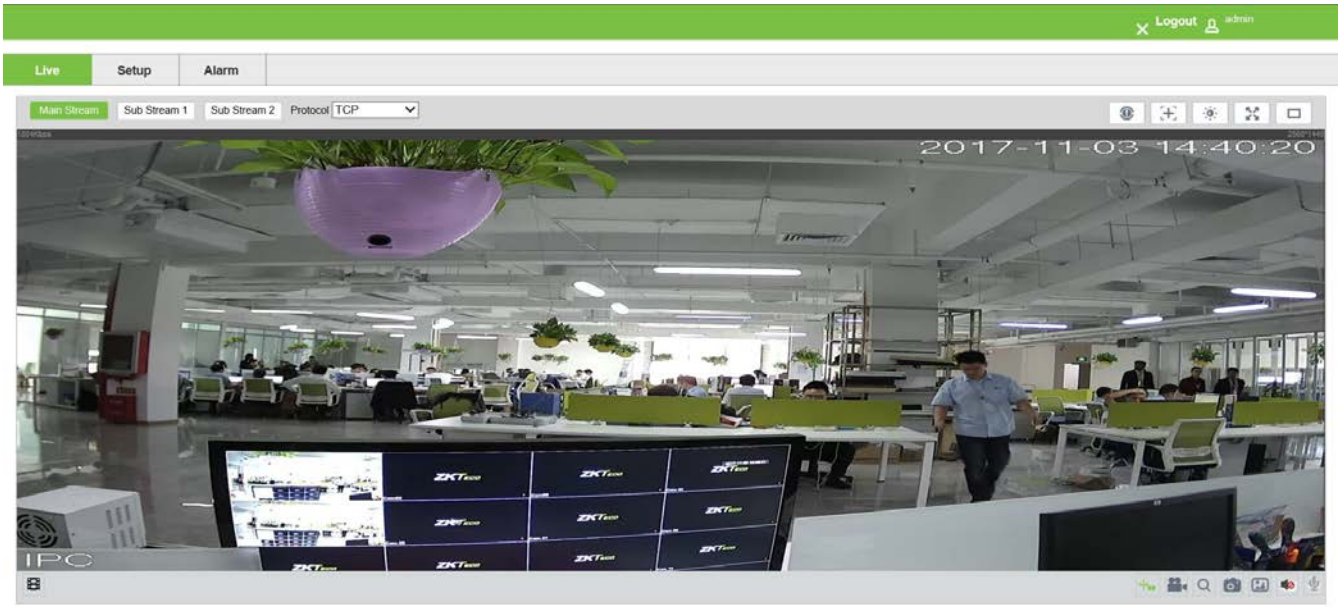


Figure 3-4 browsing the interface

Live: to preview.

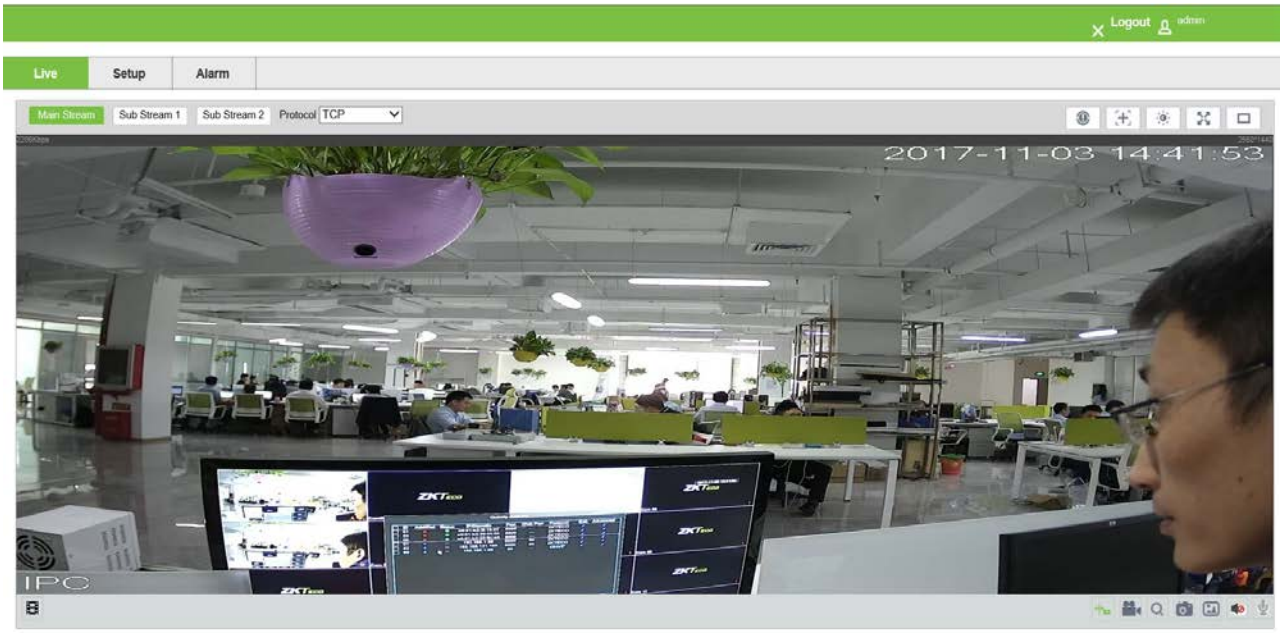
Setup: to set the parameters and functions.

Alarm: to check the alarm log.

4 Basic function operation

4.1 Preview interface information：

Click "Live" go to preview interface:



Stream: Mail Stream, Sub Stream 1, Sub Stream 2

Main Stream High Definition Stream

Sub Stream 1 Standard Definition Stream

Sub Stream 2 Standard Definition Stream

Protocol: TCP/ UDP/ Multicast

Play Local Video: Click to choose the recording file, then playback the video in the preview interface.

Display Alarm Subscription: Click , then right side will show the smart alarm monitor cascade interface

Zoom&Focus: Click ,then pop up Zoom&Focus interface.

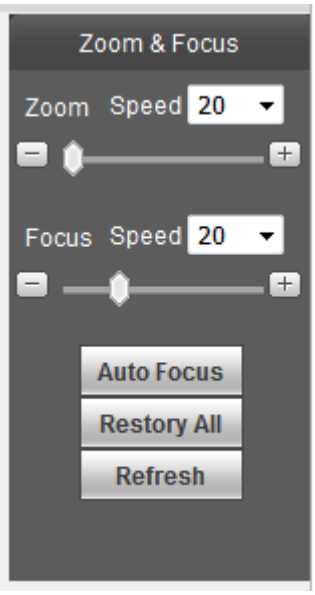
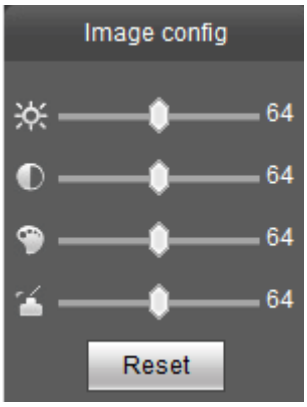


Image Config: Click , then pop up image configuration interface.



Full Screen: Click , the image is displayed in full screen.

Original/ Adaptive: Click , switching the screen aspect ratio

Display Rules: Click , display/ hide the rules

Relay-out: Click ,ON/OFF Relay. When the relay is opened, the button will change to ; after the relay off, the button will change to .

Record: Click to record files at this computer. The button will change to after record is enabled. Click this button, then will stop recording.

Digital Zoom: Click , enable the digital zoom function, the icon changed to . Drag the mouse from the upper left to the lower right corner, you can enlarge the preview image in the region. Click to recovery

preview image.

Snapshot: Click  to snapshot one picture.

Triple Snapshot: Click  to snapshot three pictures.

Audio: Click  , ON/OFF audio. When the audio is opened, the button will change to  , after the audio off, the button will change to  .

Talk: Click  , ON/OFF Talk. When the talk is off, the button will be turn on, or it will always be dark.

Tip: Talk and Audio can't at the same time open.

4.2 Setup

Click【Setup】， enter the parameter configuration interface.

4.2.1 Camera

4.2.1.1 Video Configuration

video configuration shown in Figure 4-1：

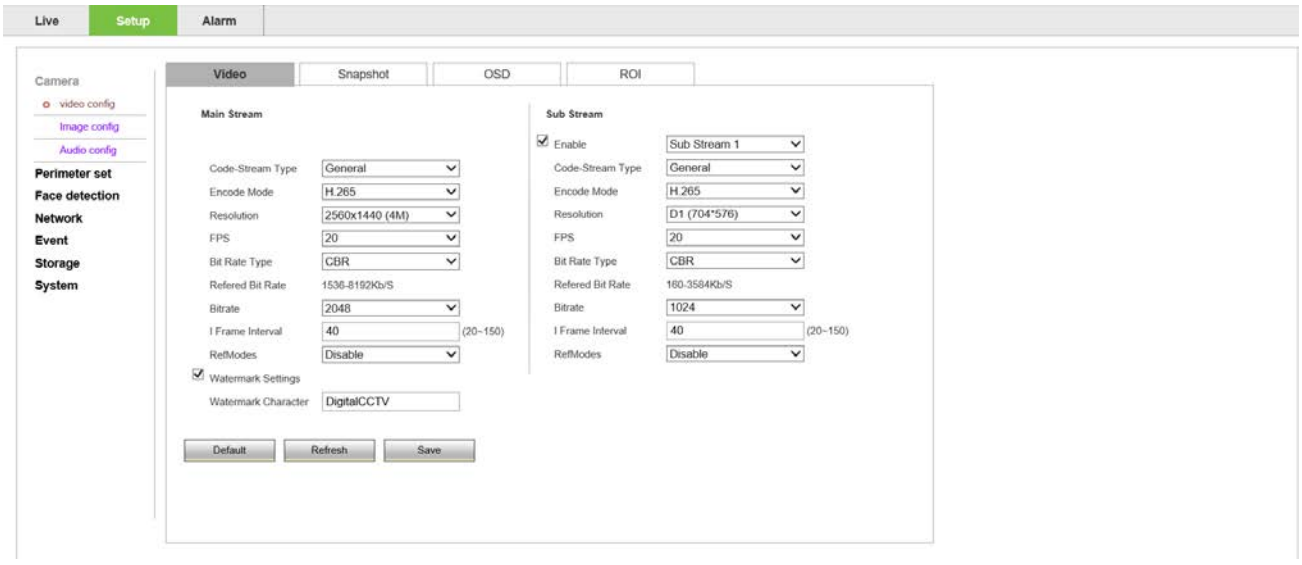


Figure4-1 Video Parameters

Video configuration → Main Stream

Video stream configuration parameters are described below：

Parameters	Description
Code-Stream Type	Choice of general code, motion detection code or alarm code
Encode Mode	Set video encoding mode according to the actual demand
Resolution	Different types of camera supports multiple resolutions, according to the actual demand selecting the appropriate resolution
FPS	According to the actual demand selecting the FPS
Bit Rate Type	Choice of CBR or VBR
Bit Rate	Set the appropriate rate according to the resolution
I Frame Interval	Not recommended modification
Watermark	Watermark Settings

After modifying parameters，please click【Save】to save the settings.

Snapshot shown in Figure 4-2

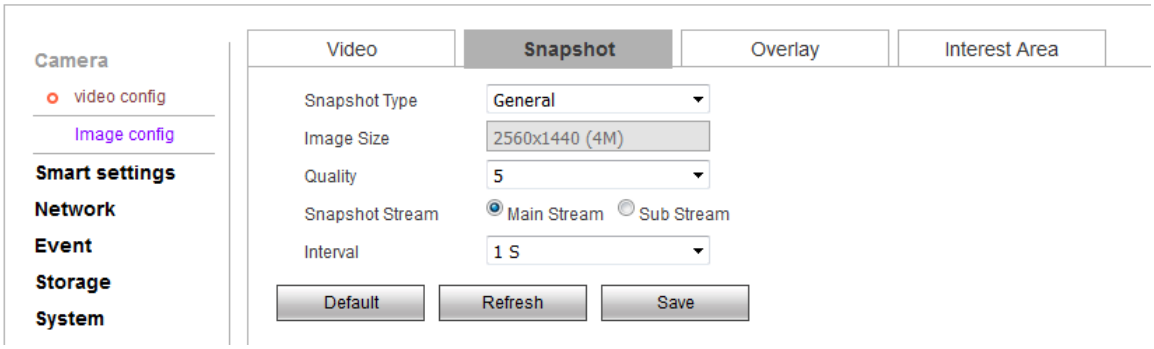


Figure 4-2 Snapshot

Video configuration → Snapshot

By configuring the capture parameters, the device can automatically capture.

Snapshot Type: can choice General or Event.

Image Size: the image size is based on the snapshot stream. Using the same resolution with snapshot stream's

Snapshot Stream: can choice "Main Stream" or "Sub Stream".

Picture Quality: can choice from 1-6（best）.

Interval: can choice according to the needing.

After modifying parameters，please click【Save】to save the settings.

Video configuration → Overlay

Channel Title / Time Title

Channel title can be set according to user needs. The display name, display date and display week can be chosen whether to enable according to the actual demand. User can drag the yellow box to change the time, date and the place of video channel names, and then click the save button

Video overlay shown in Figure 4-3：

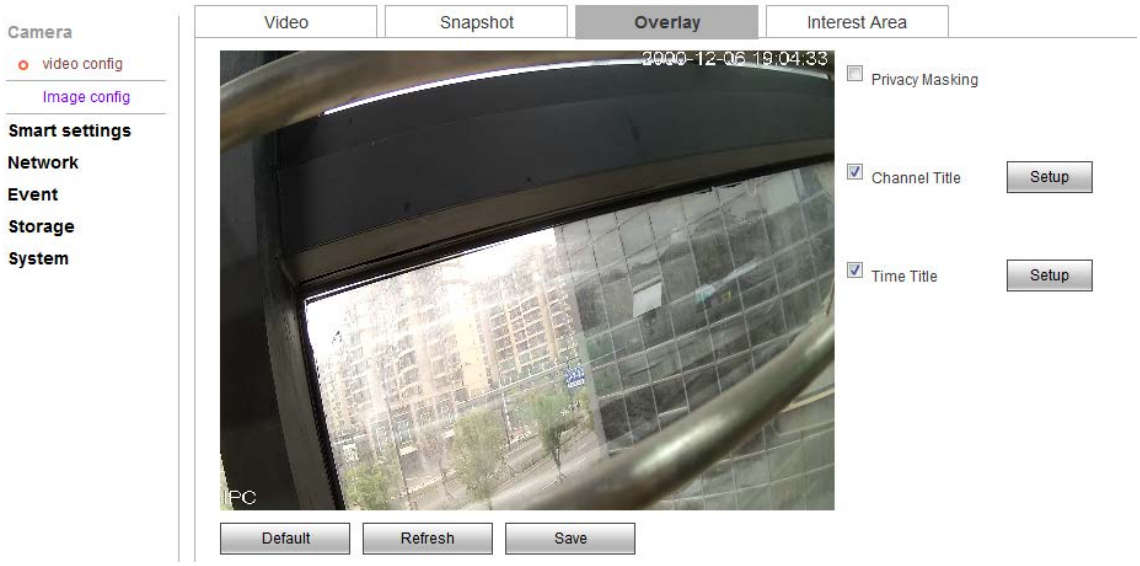


Figure 4-3 Overlay

Privacy Masking：

Checking the "overlay" means opening the video overlay function of IP Camera.

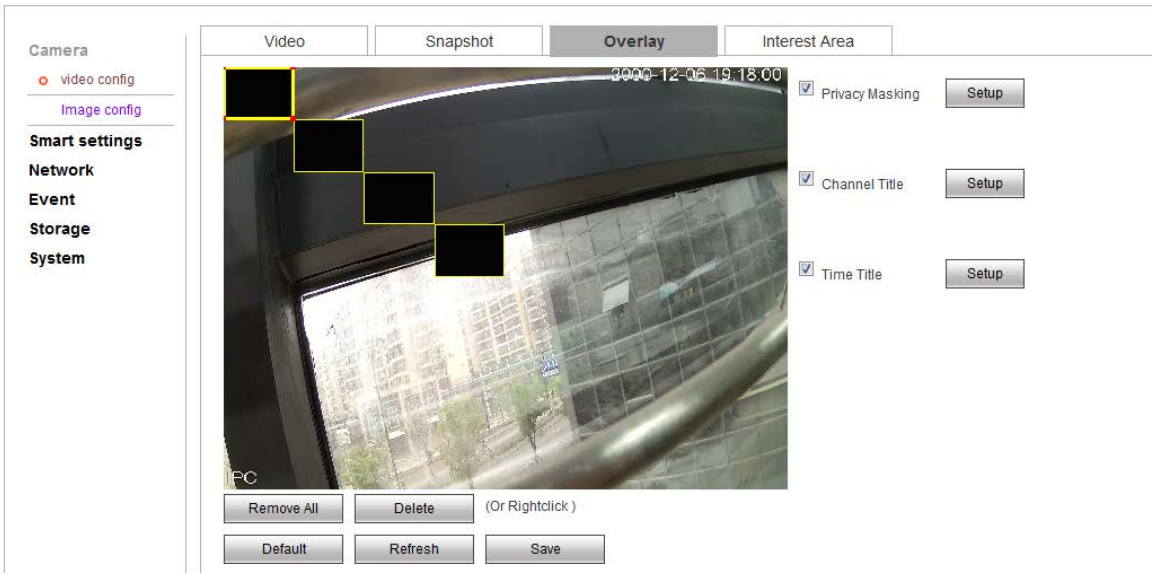


Figure 4-4 Overlay

Zone setting：

Click the left mouse button and drag in the picture, and then release. A regional map is finished.

Support up to 4 zones. When regional map is finished, click ok, end the regional map

Select draw area and click delete or click the right mouse button to clear the draw area.

After modifying related parameters, click ok button to save the Settings

Interest Area:

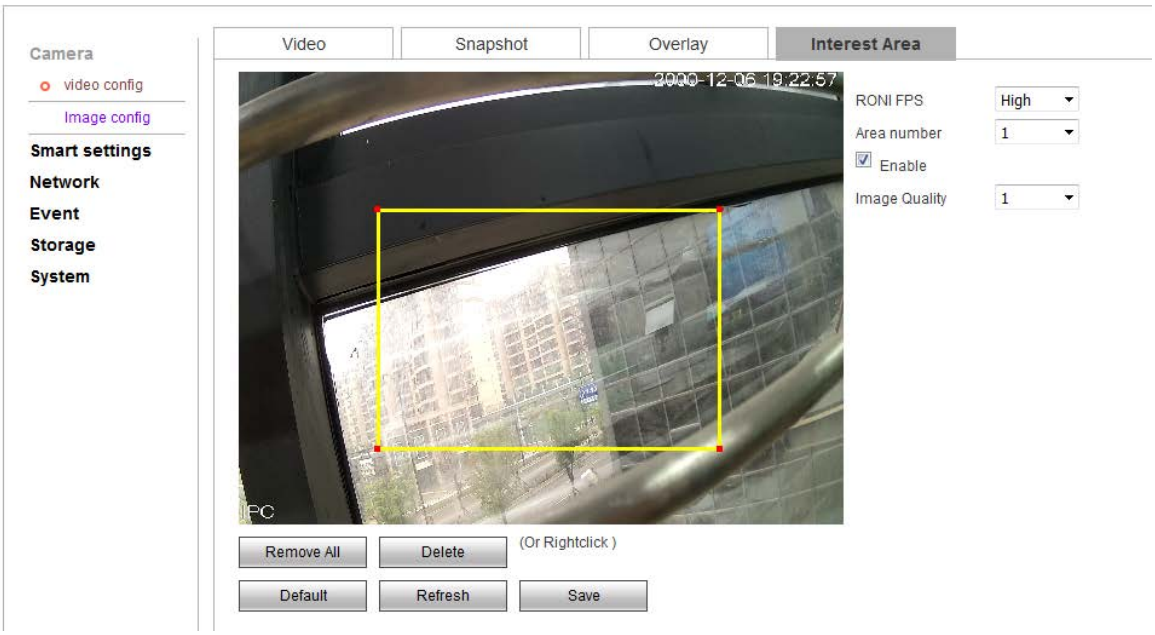


Figure 4-5 Interest area

Drag the mouse from the upper left to the lower right corner, you can draw an interested region in the image.

The image will much more clearly in this interest region.

If want more regions, can draw more, but up to 4.

The RONI FPS (the uninteresting areas): the FPS is lower, the interest area image is much clearer.

4.2.1.2 Image Configuration

Image configuration as show in figure 4-6:

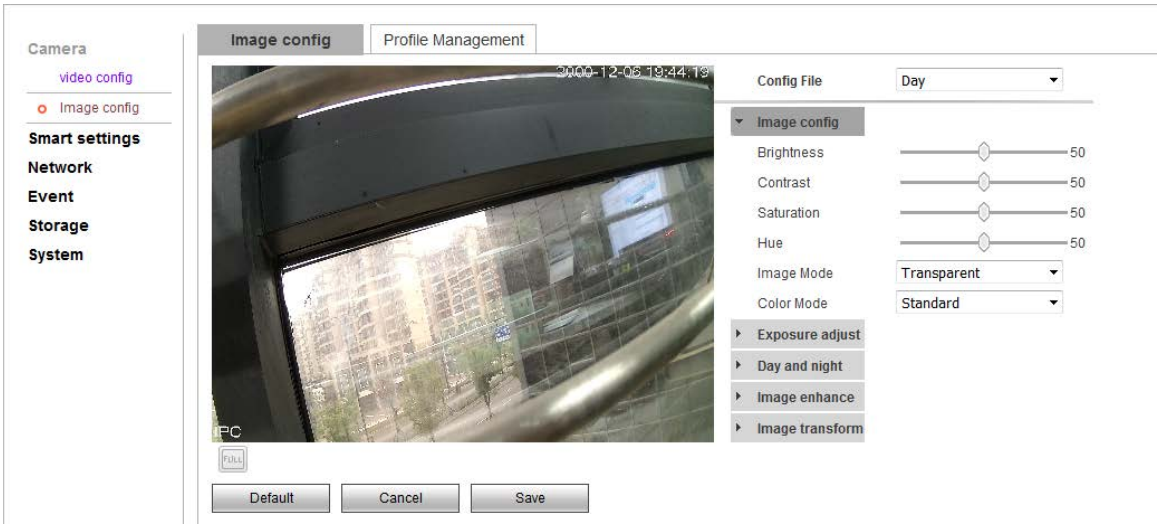


Figure 4-6 Image Configuration

Image configuration → Image configuration

Camera image configuration file is convenient for customer to quickly adjust, choose "day", "night" and "general" configuration according to actual situation.

Image Config

User can adjust the image parameters of the camera, like "Brightness", "Contrast", "Saturation", "Hue", "Image Mode", "Color Mode", according to picture effect.

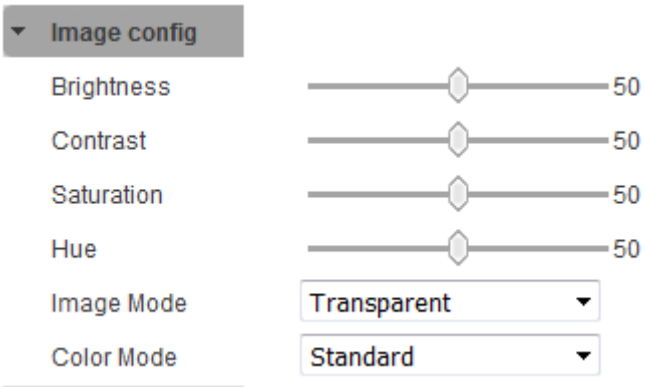


Figure 4-7 Image Config

Image Mode:

Transparent: Enhanced sharpness. The dark in the image will darker, the bright in the image will brighter

Real: Reduce sharpness. The image colors are more realistic

Exposure Adjust:

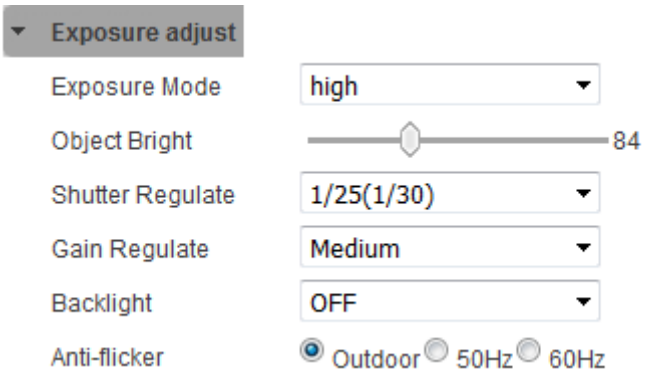


Figure 4-8 Exposure Adjust

Exposure Mode: The camera electronic shutter mode can set different shutter speed according to the different camera scenes, or choose the automatic mode that camera can adjust the shutter speed automatically according to the scene brightness.

Gain Regulate: Used to adjust the gain upper limit, the user can choose different gain level in view of the actual situation.

Day and Night:

Figure 4-9 Day and Night

Day & Night: There are three choices: "Auto", "Color", "Black & White".

"Color" mode stays color images.

"Black & White" mode stays black and white image.

"Auto" mode: equipment choose "day/night mode automatically" according to the external environment brightness.

Buffer Times: The image will change the day/night mode after the buffer time.

Image Enhance:

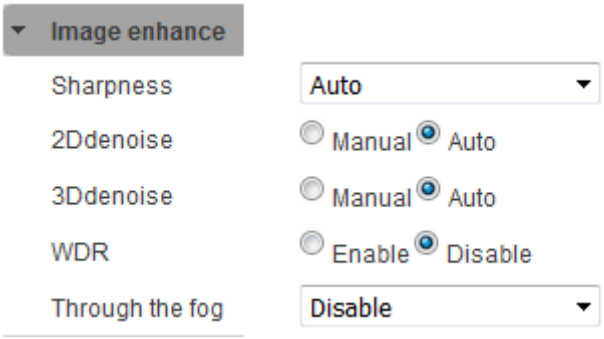


Figure 4-10 Image Enhance

WDR: It is suitable for the models with wide dynamic function, some models support wide dynamic level adjustment, user can adjust the dynamic value to change the strengthness of WDR according to the actual need.

3Ddenoise: It is used to reduce the image noise, user can choose to enable or not according to the situation.

Through the Fog: Users can choose "disable", "weak", "Medium", "Strong". It can improve the object recognizable degree in the mist weather.

Image Transform:

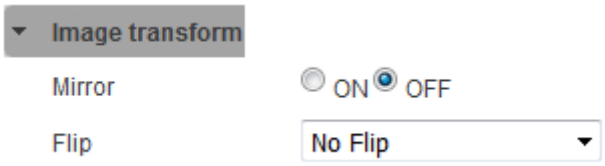


Figure 4-11 Image Transform

Mirror: It's Convenient for the customer to change the orientation of the picture at any time.

Notice:

The front-end parameters configuration options in the display setting include the possible options for all product models in the document. The actual models only have a part of options. Please refer to our specific equipment types. Part of parameters change need to restart the camera. Some options cannot be used at the same time.

4.2.1.3 Audio Configuration

Audio configuration shown in Figure 4-12：

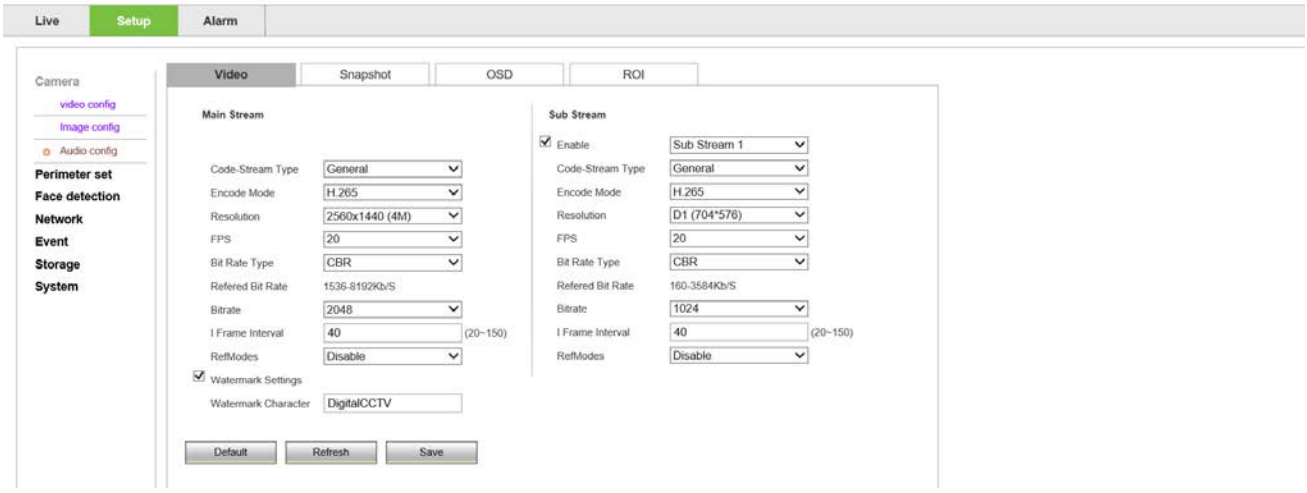


Figure 4-12 Audio Configuration

4.2.2 Perimeter set

This is for perimeter function.

4.2.2.1 Global Config

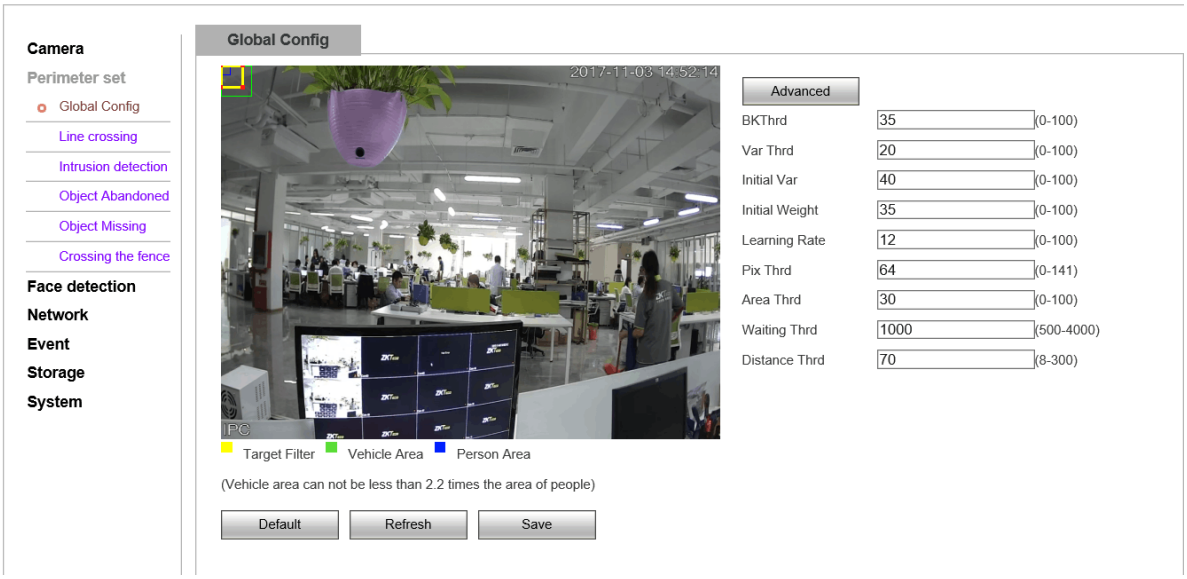


Figure 4-13 Global Configuration

Yellow Box is Target Filter; Green Box is Vehicle Area; Blue Box is Person Area.

Advance: can design parameter, example BKThrd, Var Thrd, Initial Var, Learning Rate, Pix Thrd, Area Thrd, Waiting Thrd, Distance Thrd.

Tip: Vehicle area can not be less than 2.2 time the area of people.

If the Object is small than the filter, then won't trigger when the object across the rule.

In the vehicle area and person area , if the object is big than the filter , than won't trigger when the object across the rule.

4.2.2.2 Line Crossing

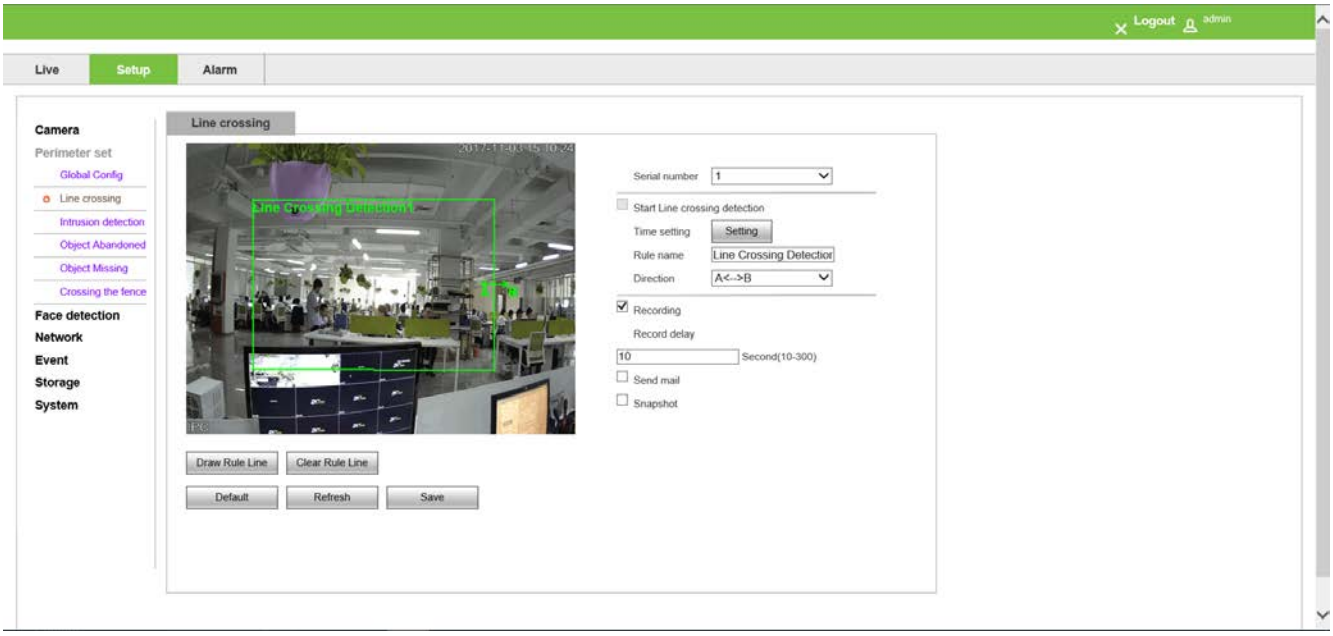


Figure 4-14 Line Crossing

This is Line Crossing function. You should enable and set rules first.

1) Enable the Line crossing.(if can't enable, please check whether you enable the motion detection, disable it, then enable the regional invasion).

2) Then draw rules. You draw 4 rules.

3) Back to the live view page. You will see the rule you drew. Click the alarm snapshots,and tick the line crossing, If event occurs, you will see the snapshots in the "Display alarm subscription"

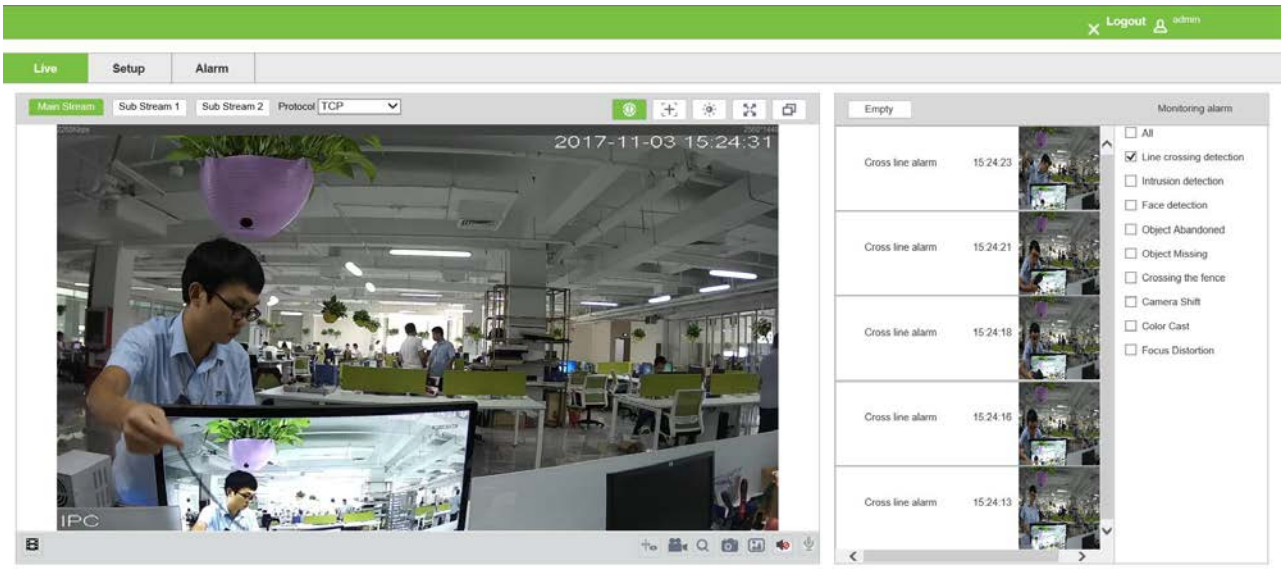


Figure 4-15 Display alarm subscription

4.2.3 Network

4.2.3.1 TCP/IP

In the TCP / IP configuration interface, tick the "DHCP", the IP camera can automatically obtain IP address. You also can manually modify the network parameters by ticking Static.

IP Version: Parts of IP cameras support IP v6 mode.

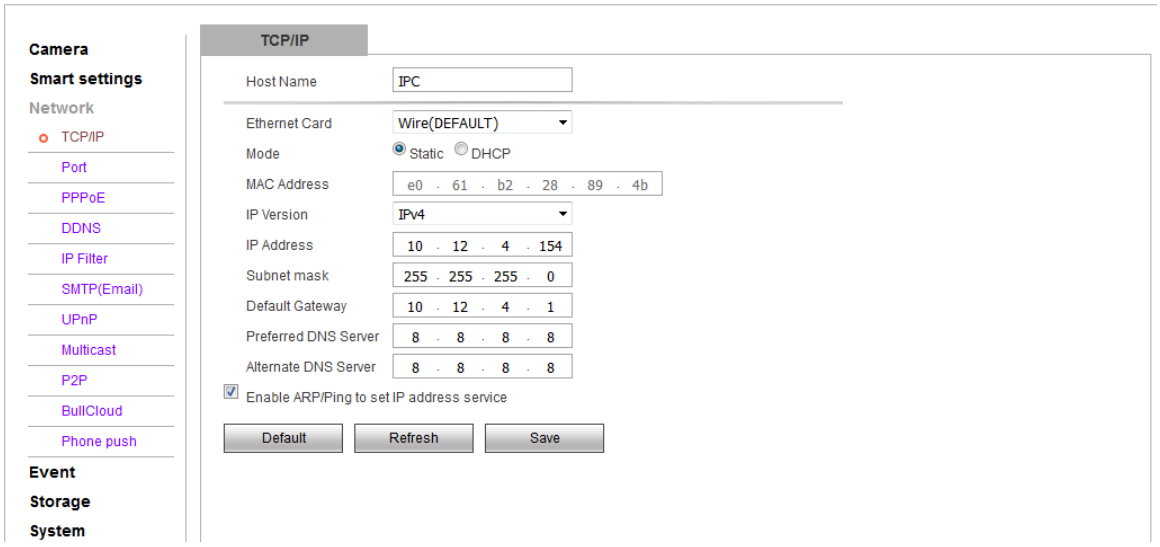


Figure 4-16 TCP/IP

4.2.3.2 PPPOE

PPPOE Settings as shown in figure 4-17 :

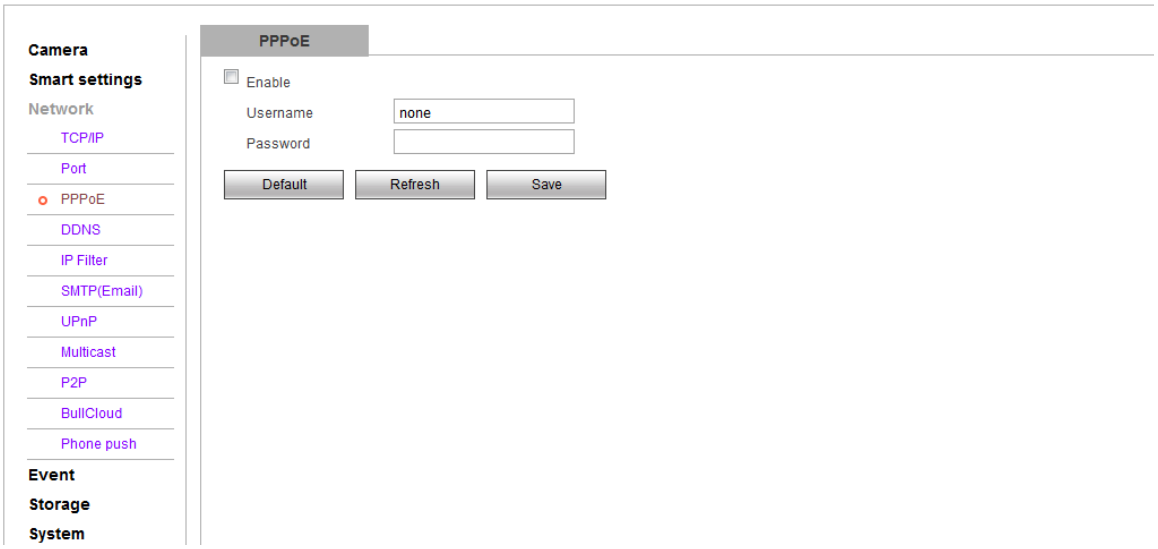


Figure 4-17 PPPOE

Check "enable dial", enable PPPOE function.

Input PPPOE username and password, click ok. If dial successfully, camera will get a public IP address

After modifying related parameters, it needs to click ok button to save the associated settings

Default gate way fail after PPPOE configuration open; after modifying the parameters of Network Settings, it needs to restart the IP camera.

4.2.3.3 DDNS

DDNS Settings as shown in figure 4-18:

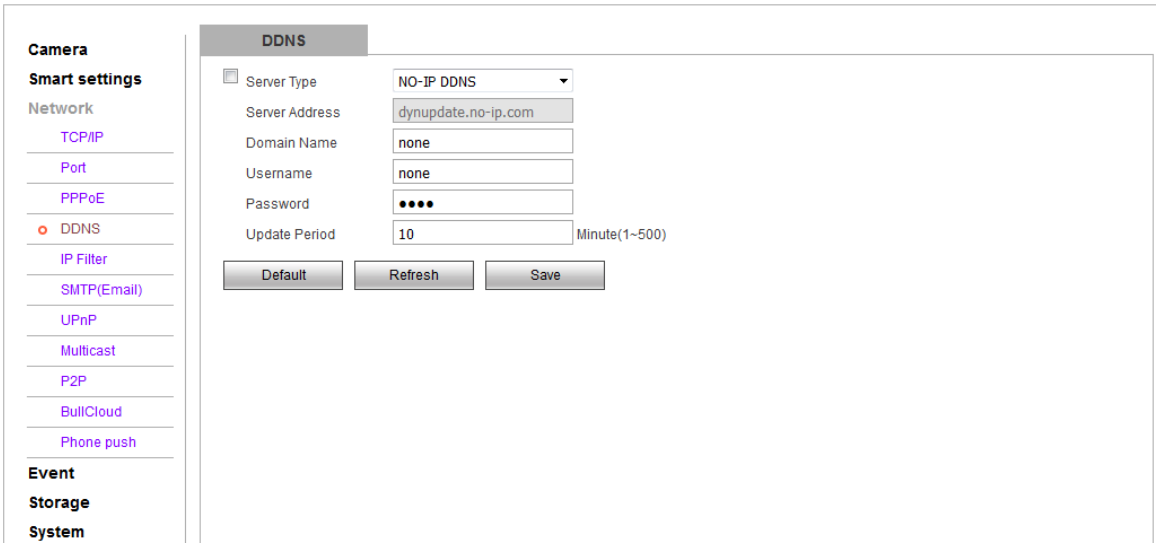


Figure 4-18 DDNS Setting

In public network environment, the majority of users use dynamic IP address by adopting DDNS (dynamic DNS) to access the network camera through the domain name, which can effectively solve the problem that it is unable to get the current dynamic IP to access the camera.

Check "enable DDNS" default that open DDNS function default.

"DDNS type" includes "NO - IP", "DynDNS" and "FNT".

When using "DynDNS", "NO - IP" and "FNT", operators have the default server address, and don't need to fill port number and device domain that users apply in software operator website. The user name and password is the same as the one that user register account.

After modifying related parameters, it needs to click ok button to save the Settings.

After modifying the parameters of Network setting, it needs to restart the network camera. DDNS function must be set to the correct IP address, mask, gateway, and DNS server, and this configuration can access the Internet.

4.2.3.4 IP Filter

IP filter setting as shown in figure 4-19:

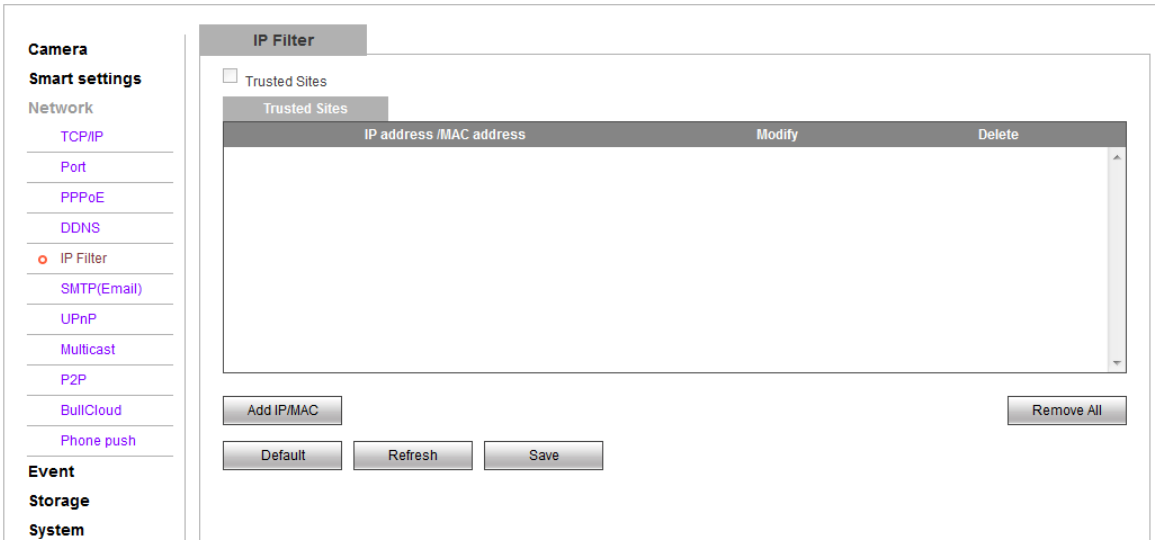


Figure 4-19 IP Filter Setting

Users can check the "white list" option to enable this feature.

"White List" means that the IP address added to the address pool will be allowed access to the camera.

Users can click on [add IP / MAC] to add a new IP address to the address pool, click the IP address added, then can operate the IP address pool by clicking the [amended], [deleted] and [empty] button .

4.2.3.5 SMTP(Email)

SMTP (E-mail) setting as shown in figure 4-20:

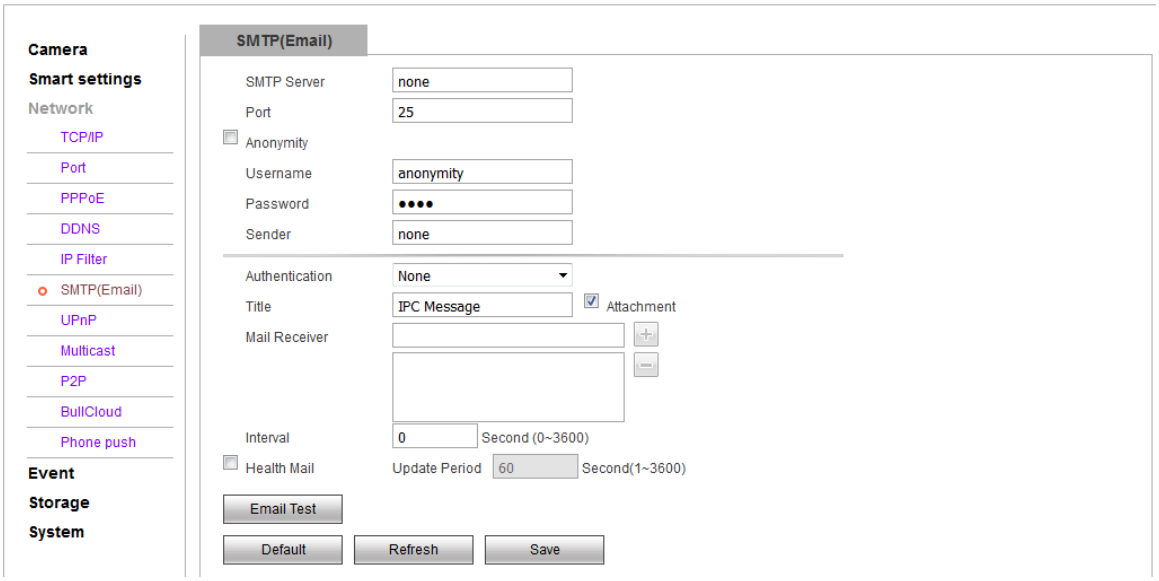


Figure 4-20 SMTP Setting

When an alarm occurs, it can send a message to the specified mailbox by setting mail parameters .

Enter the address of the SMTP server, SMTP port number (default 25), user name, password, e-mail sender and recipient's name, address, theme and other information, and then click OK.

Encryption can check the "SSL Encryption" or "TLS encryption" approach.

Check the "Support Annex" , the mail will come with instant capture. User can set the capture interval.

After modifying the parameters, it needs to click OK button to save the settings.

Check "send health messages", the camera will send the device to run health messages by interval.

Mail contents include: the camera channel names, event type, event date/time, equipment type and accessories.

4.2.3.6 UPnP

UPNP Settings are described in figure 4-21:

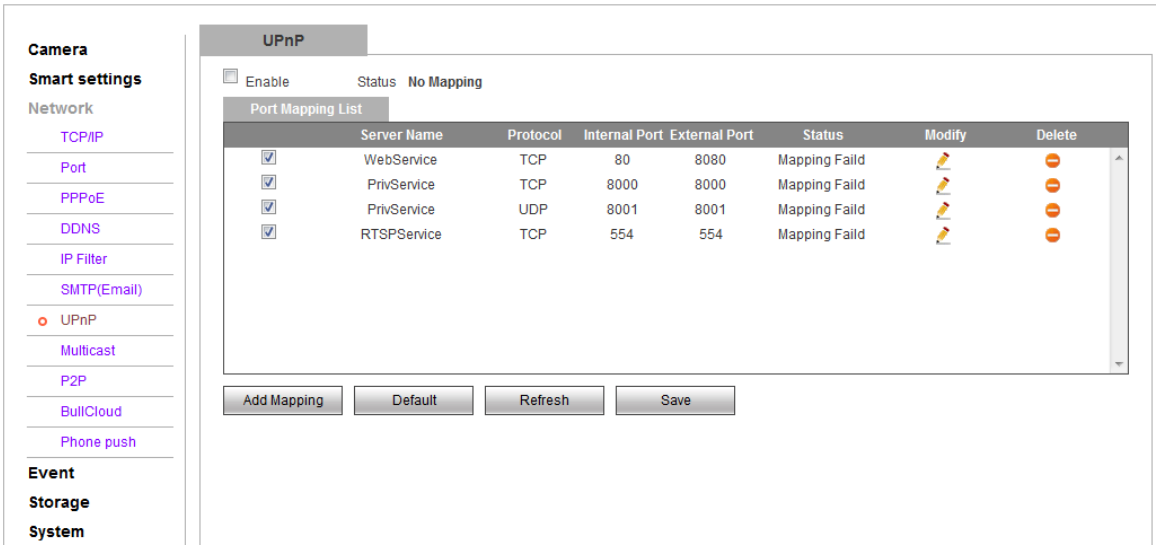
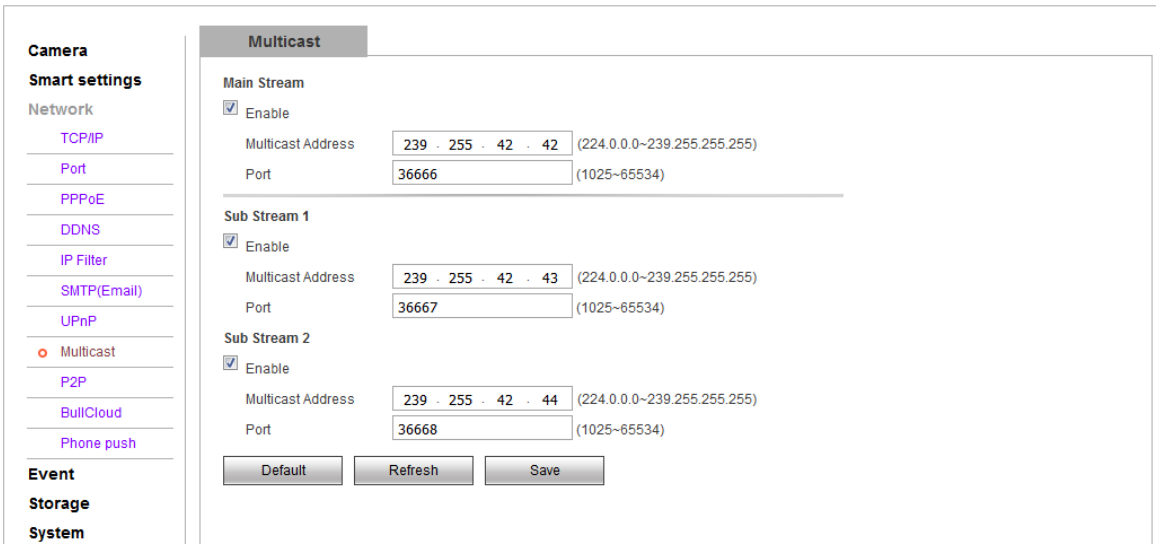


Figure 4-21 Upnp Settings

After the UPnP protocol enabled, this function makes the camera to be discovered automatically, it can also realize the function of automatically port mapping of the router.

4.2.3.7 Multicast

Multcast settings are described in figure 4-22：



Feature 4-22 Multicast settings

When multicast is on, you can realize multicast by setting the address of multicast. In this way, you can not only improve the efficiency of data transmission, but also can reduce the possibility of congestion in main network.

4.2.3.8 P2P

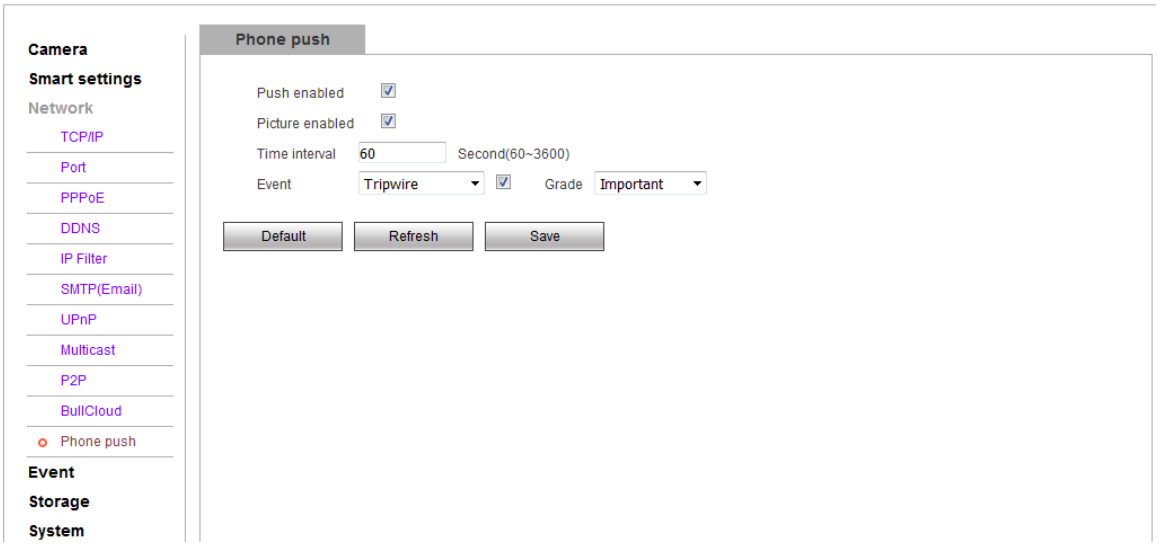
P2P settings are described in figure 4-23:

Feature 4-23 P2P setting

When in network service is on, the connection status is online, users can visit IPC with its ID and password by log in www.atvsip.com.

4.2.3.9 Phone Push

Phone push is described in figure 4-24:



Feature 4-24 Phone push setting

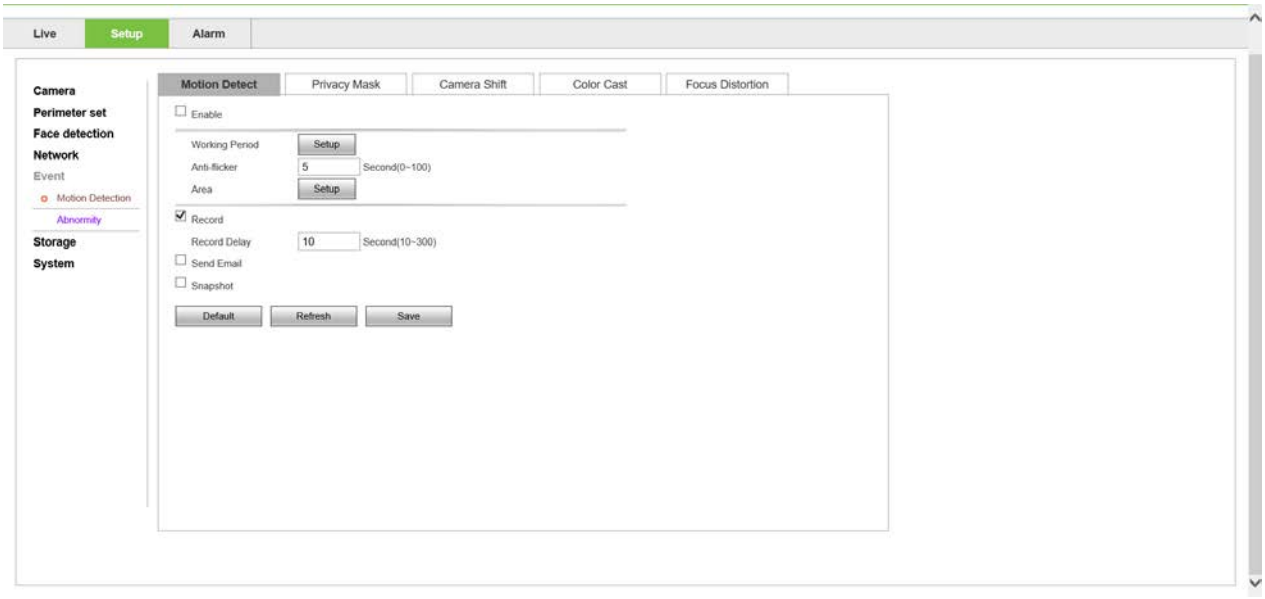
Event: Device Restart, Tripwire

Grade: Important, general, emergency. If the grade is emergency, the interval time will be invalid, the snapshot will be uploaded once triggered.

Add the P2P ID into the P2P account, then access this account on our smart APP- AntarView , enable the push function. The app will get the alarm information or snapshots.

4.2.4 Event management

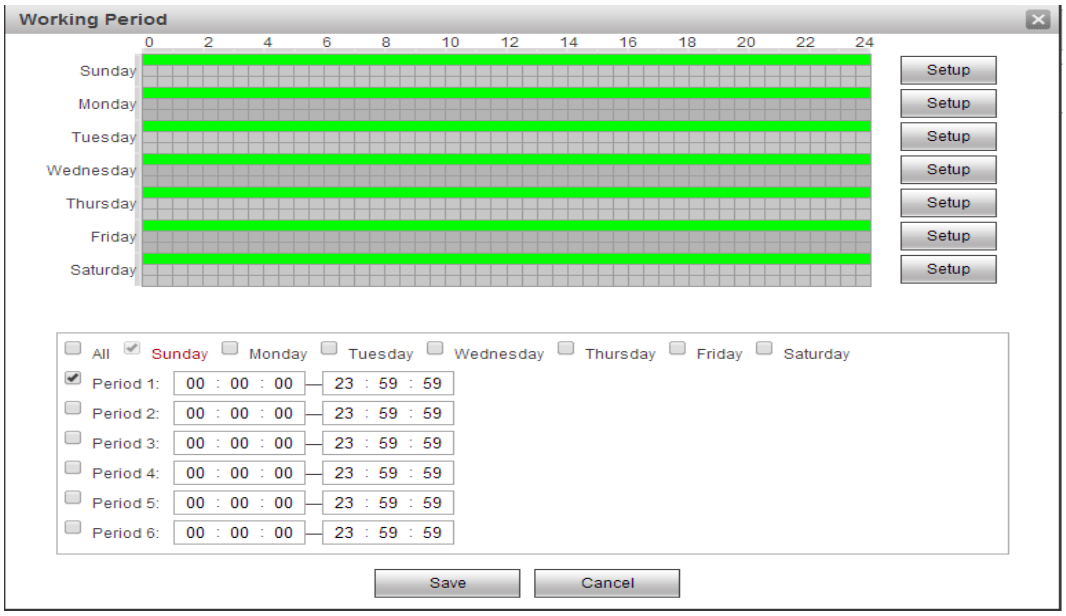
4.2.4.1 Video detection



Feature 4-25 Motion detection settings

Video detection → Motion detection

Check "Enable" means the function of motion detection of the IPC is on.



Feature 4-26 Working-Disarming Period settings

Arming-Disarming Period：

The "Arming Period" can display arming period of current motion detection.

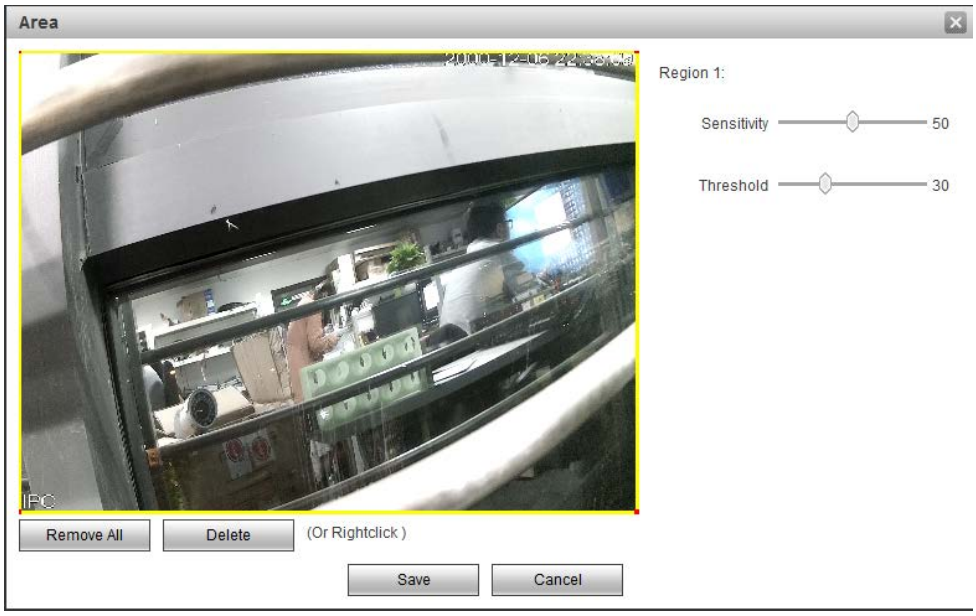
You can set arming period by clicking [settings], you also can set arming period of the whole week or one day in a week.

You can set 6 periods of arming and disarming in detail.

You need to click [OK] to save the settings, after you set the parameters.

Tips:

You need to check [start motion detection] before you set arming period.



Feature 4-27 Motion detection area settings

Set area:

Enter [Area settings] by clicking set, click left key of mouse, drag it, then loose the left key, then the drawing of a motional detection area is finished.

You can at most draw 4 motion detection areas in a screen, click [OK], after you finish drawing all the areas.

You can clear the areas you drew by clicking [Clear] or right key of the mouse.

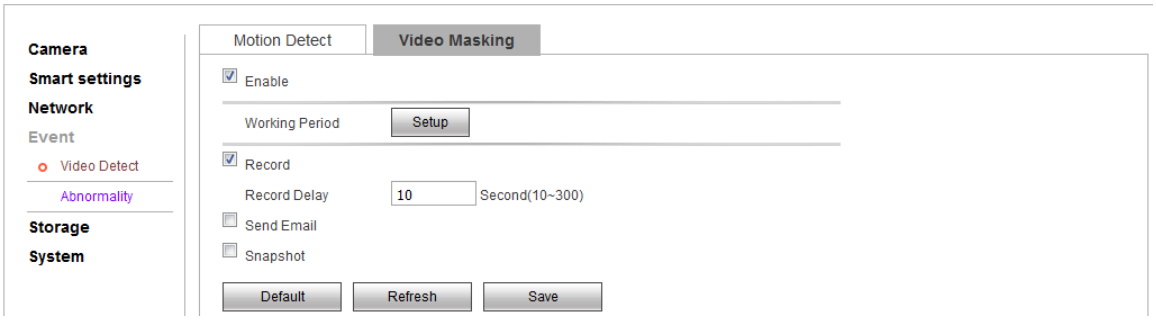
Sensitivity: Sensitivity coefficient in every area is 0-100, the function will not work when sensitivity coefficient is 0

Linkage pattern：

Linkage patterns are "Video link"、 send email and snap shot.

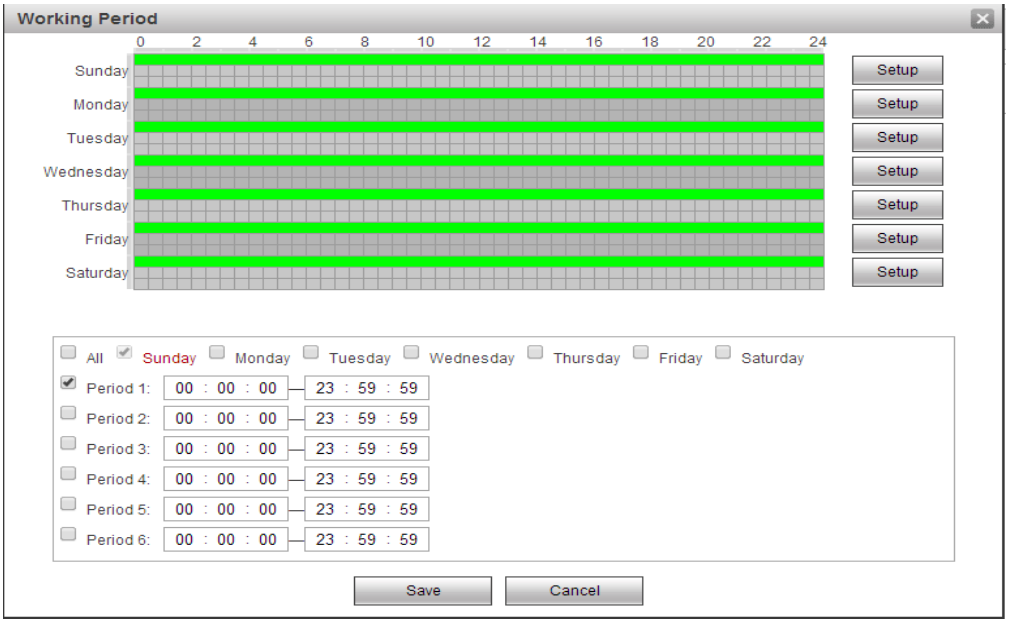
You need to click[OK] to save parameters.

Video detection → Video Masking



Feature 4-28 Video occlusion settings

Check "Default" means the function of abnormality of the IPC is on.



Feature 4-29 Working period settings

Working period settings:

Arming time of motion detection can be shown in the option of "Arming time".

You can edit arming time by clicking [Settings], you can set arming period of the whole week or one day in the week.

You can set start and end time in 6 periods of the day in detail.

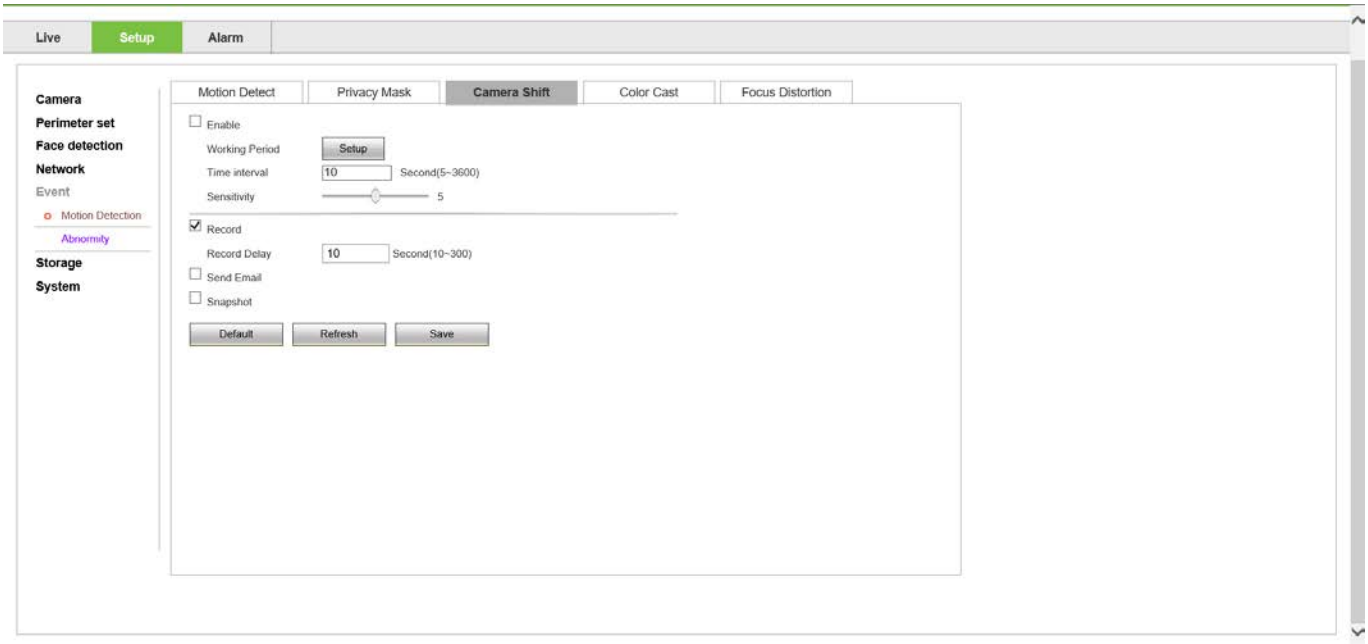
You can save the settings by clicking [OK] after you set the parameters.

Linkage model:

Linkage models are "video linkage"、"send email"、"snapshot".

You need to save settings by clicking [OK] after you change parameters.

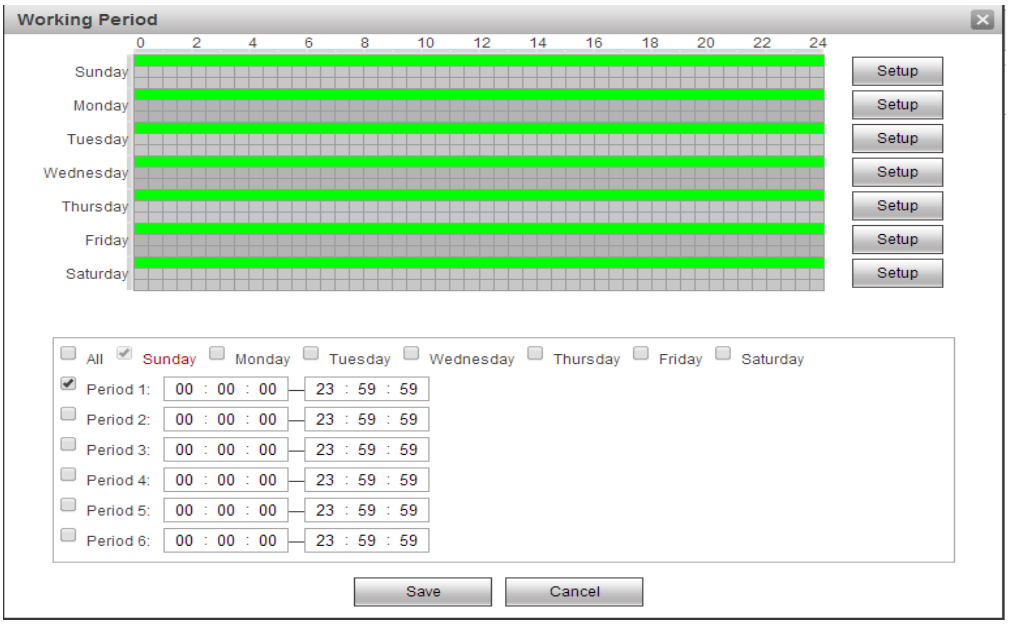
Video detection → Camera Shift



Feature 4-30 Camera Shift setting

Enable the camera shift (if can't enable, please check whether you enable the motion detection, disable it, then enable the camera move).

Check "Default" means the function of abnormality of the IPC is on.



Feature 4-31 Working period settings

Working period settings:

Arming time of motion detection can be shown in the option of "Arming time".

You can edit arming time by clicking [Settings], you can set arming period of the whole week or one day in the

week.

You can set start and end time in 6 periods of the day in detail.

You can save the settings by clicking [OK] after you set the parameters.

Linkage model:

Linkage models are "video linkage"、"send email"、"snapshot".

You need to save settings by clicking [OK] after you change parameters.

Back to the live view page. You will see the rule you drew. Click the alarm snapshots,and tick the camera move, If event occurs, you will see the snapshots in the "Display alarm subscription"

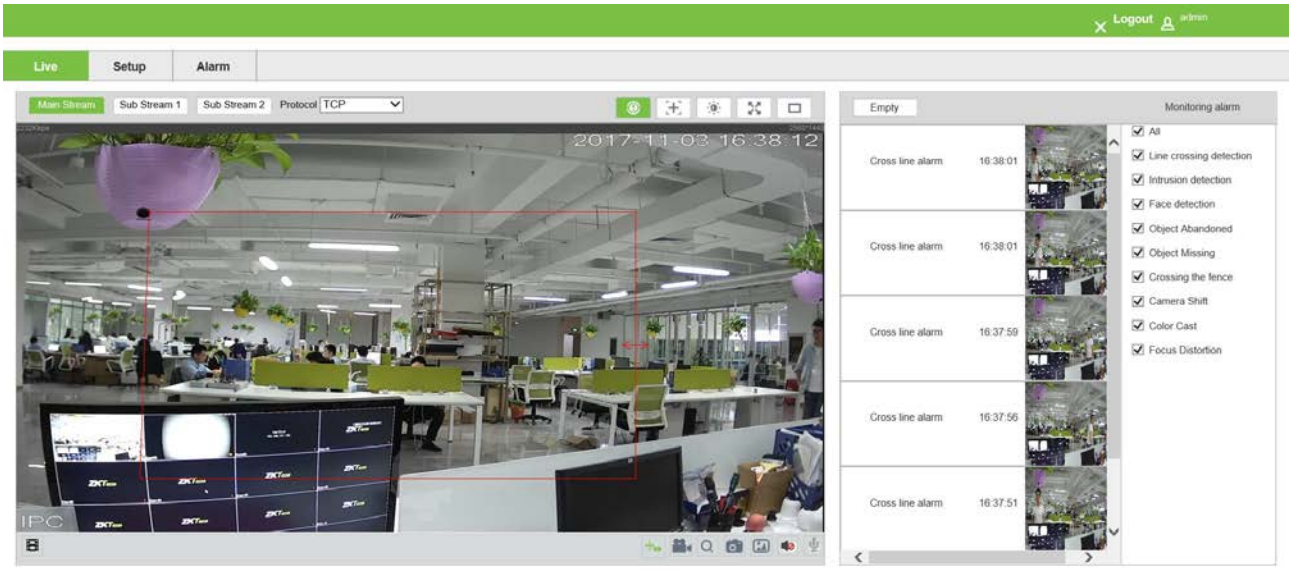
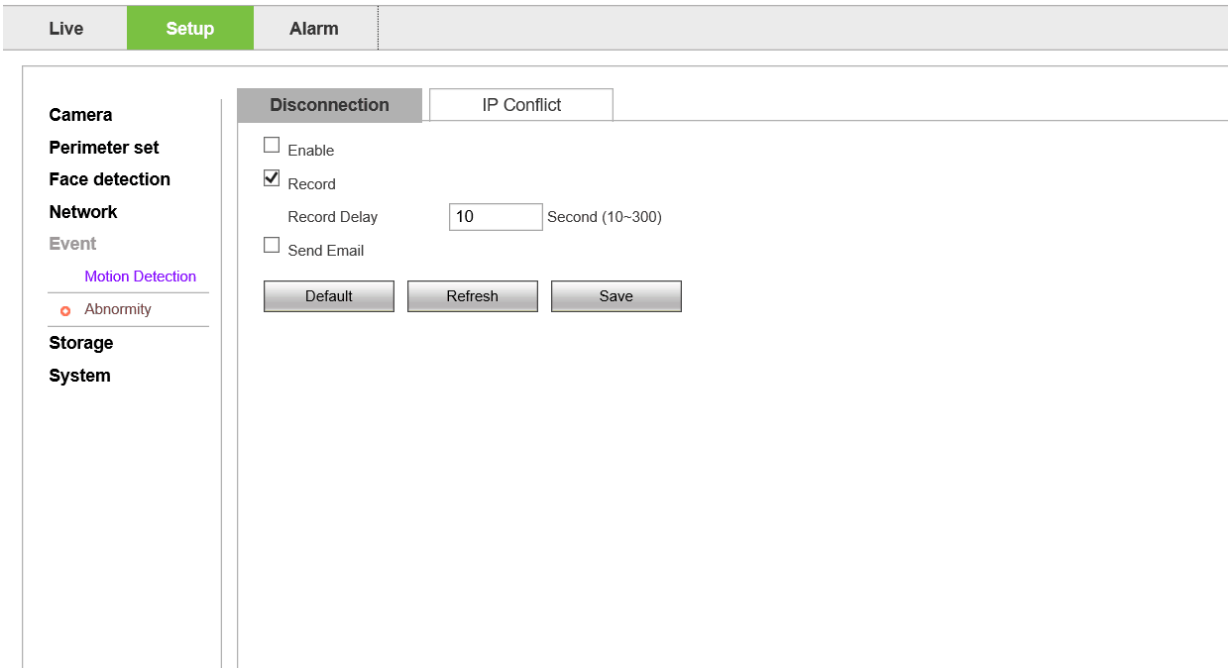


Figure 4-32 Display alarm subscription

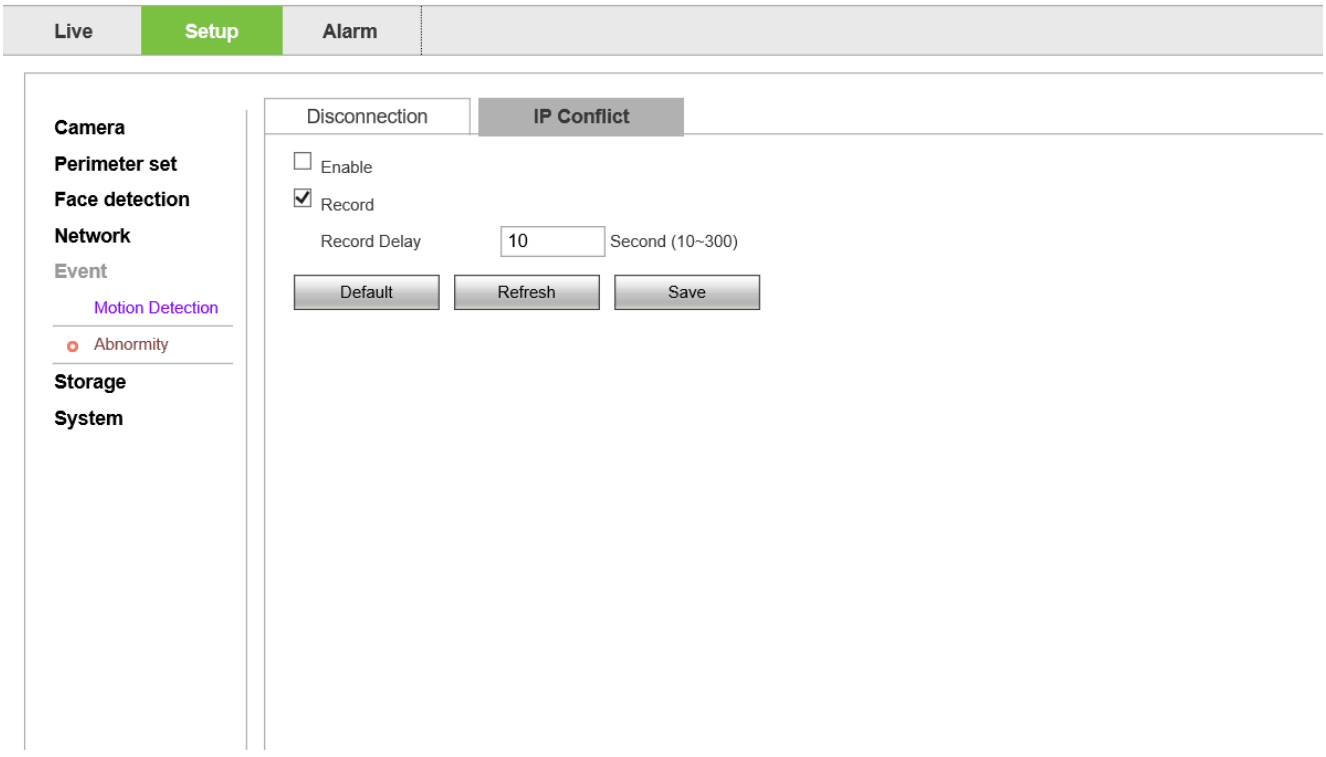
4.2.4.2 Abnormality

Abnormality can be divided into the following categories: Disconnection, IP Conflict.

The abnormality of each exception is shown below. When the interface is set to enable it ，will detected.



Feature 4-33 Disconnection



Feature 4-34 IP Conflict

4.2.5 Storage

4.2.5.1 Schedule

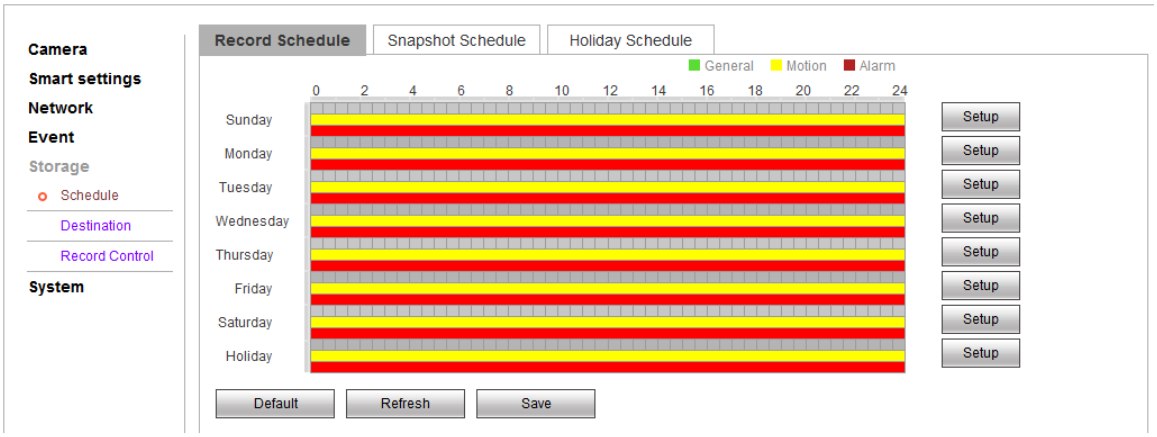
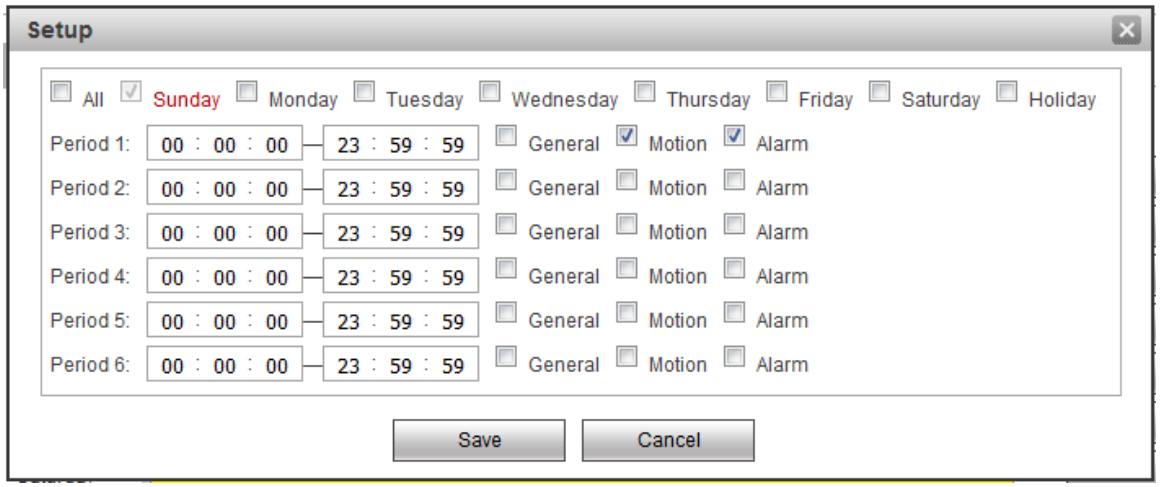


Figure 4-35 video management settings

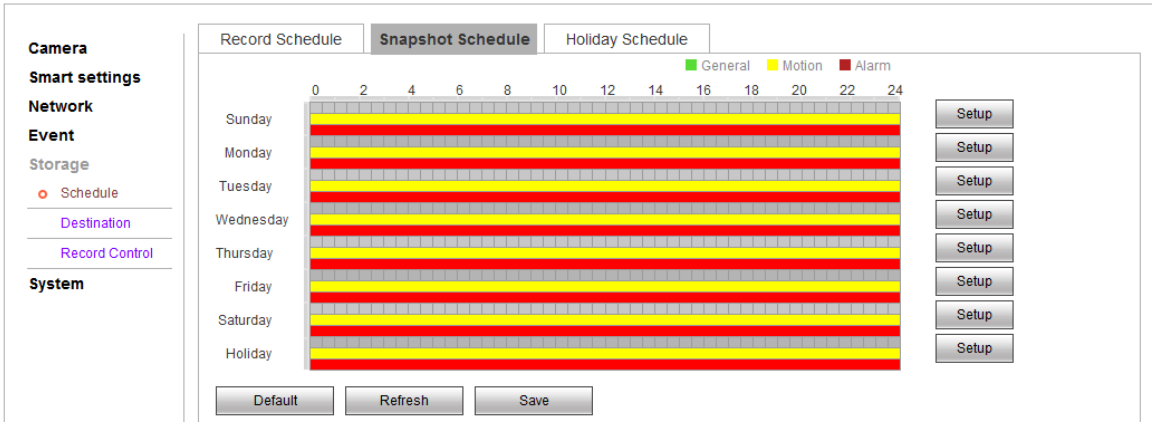
Record Schedule:

Click the "Setup" to manage the schedule time



Feature 4-36Arming period settings

Snapshot Schedule:



Feature 4-37 Arming period settings

Click "setting" to configure picture capturing, select the capturing schedule and saving path。

There are two kinds of picture capturing: automatic image capture and manual image capture. For the automatic image capturing, refer to all-day time image capturing. For the manual image capturing, you can configure the recording schedule as much as 6 different image capturing time each day.

The image capturing type can be normal/motion detection.

Holiday Schedule:

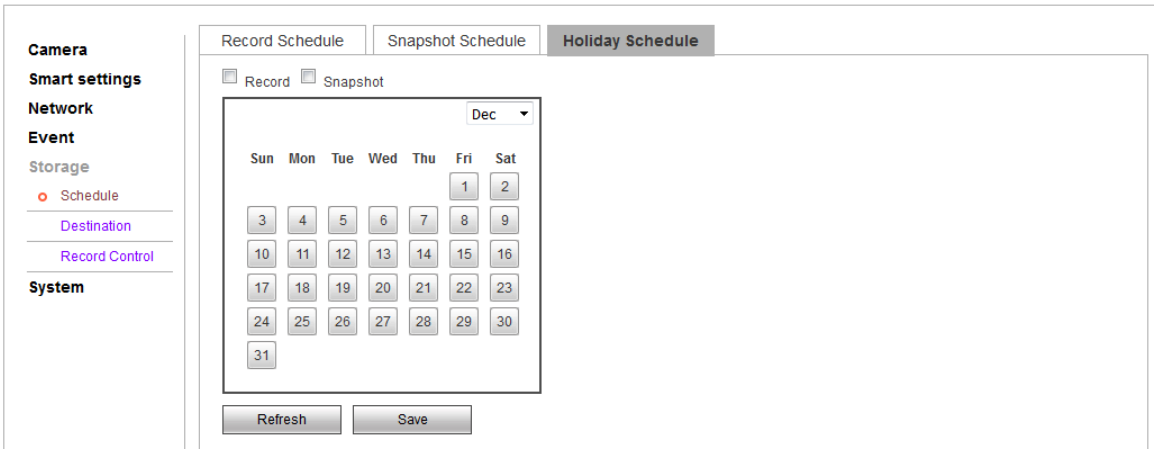


Figure 4-38 holiday time schedule setting

Select the holiday to configure the image recording and capturing mangement.

4.2.5.2 Location

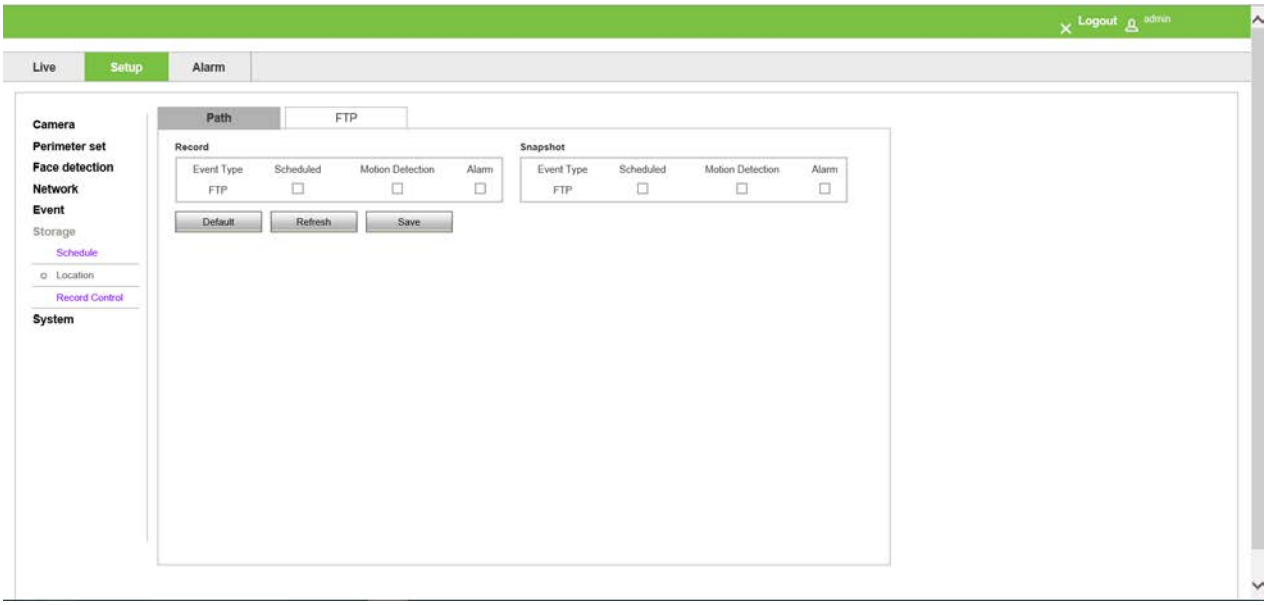


Figure 4-39 FTP setting

Local:

Tick local, you can Store files and pictures locally.

FTP:

By configure the FTP parameter, you can control the two-way transmission of files on the internet to upload the images and files to the fixed FTP.

The IP address and port to the same as the subnet as that of the FTP. Sign the use name and password with upload permission in the FTP function.

Click the "OK" to save the configuration.

4.2.5.3 Record Control

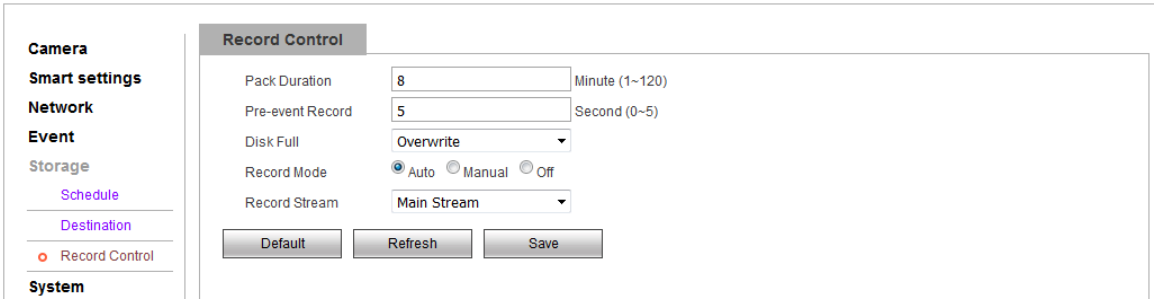


Figure 4-40 Record control settings

Record Control:

【Pack Duration】 to package according to the time you record a video

【Pre-recording】for time to pre-record the video before you start the record, 0-5s is optional.

【Disk Full】Select "Cover" or "Stop" when the Hard disk is full,

【Record Mode】Select Automatic/Manual/off to chose the recording mode.

【Record Stream】 Select Main Stream/Sub Stream 1/Sub Stream 2 to store the video.

4.2.6 System

Configuring system settings is mainly for the basic configuring of cameras, including "Local settings" "User Management""Default Settings""Automatic Maintenance""System Log""Version" and etc.

4.2.6.1 Local Settings

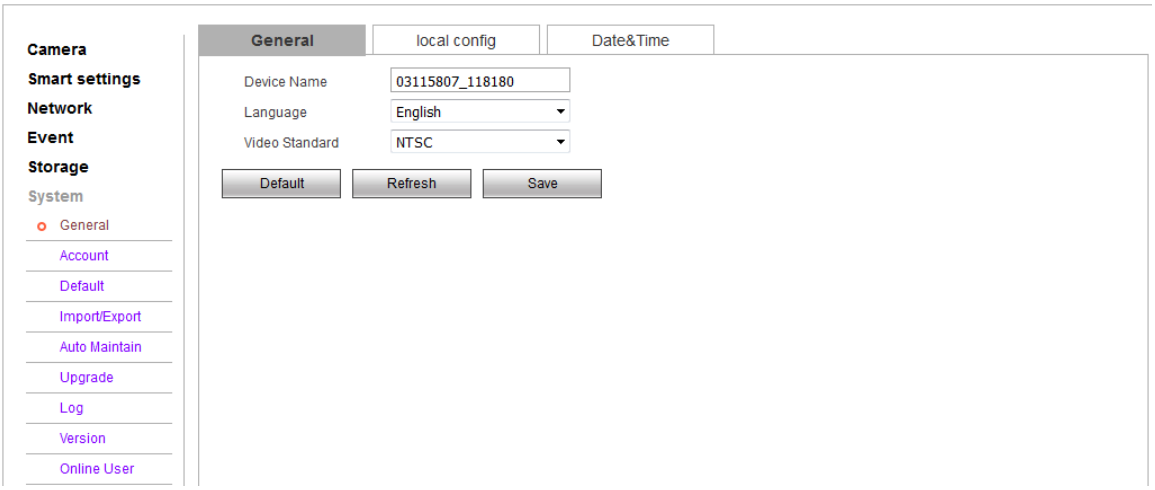


Figure 4-41 Local Configuration

Local Config:

In the Local Configuration Interface, you can set the Device name of the IP camera, the Language and the video format .

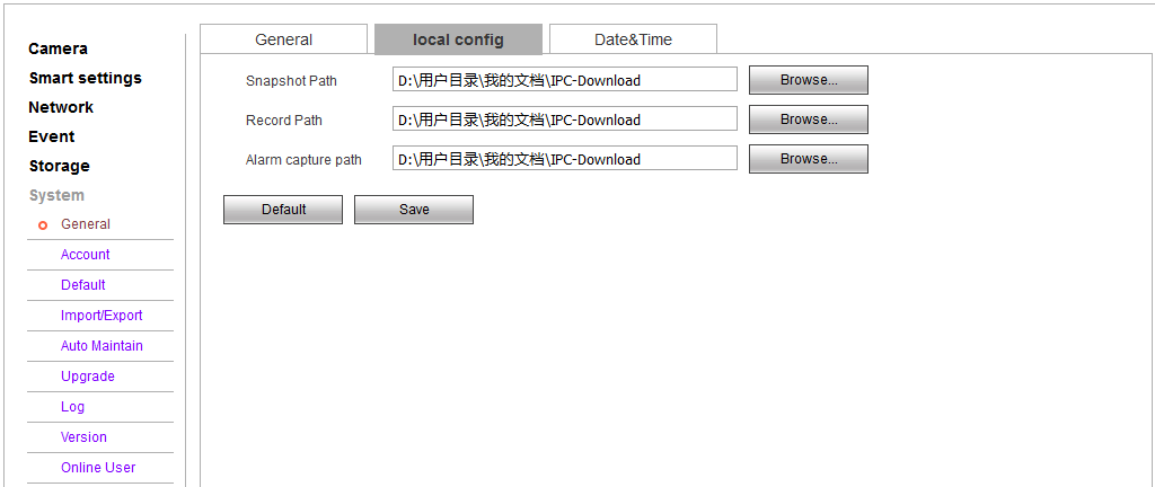


Figure 4-42 local config

Date & Time:

You can set the path of captured pictures and videos.

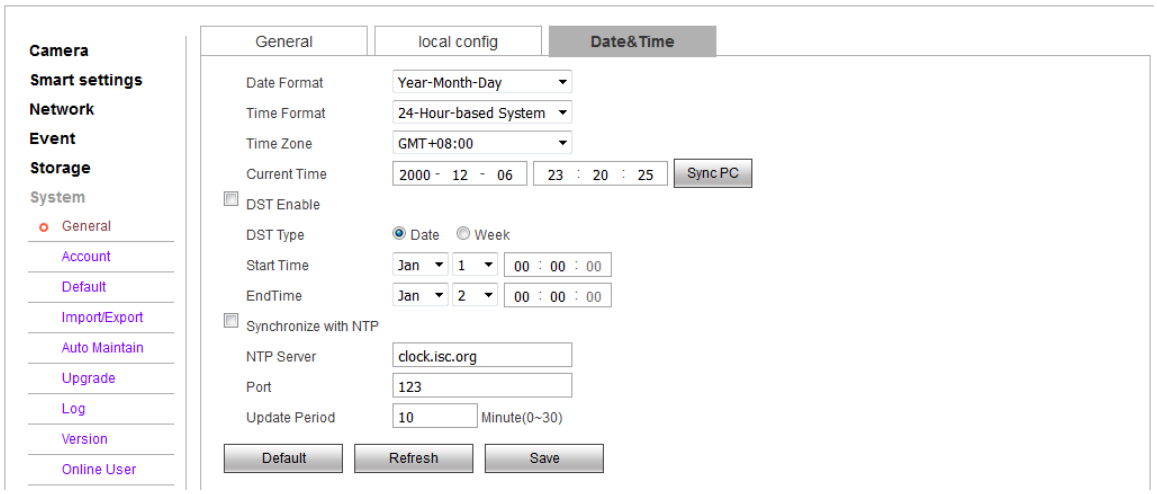


Figure 4-43 Time Settings

The Time Zone can be of your location or be set according to the actual situation.

In the Time Configuration Interface, you can configure the "NTP" settings to set NTP address, port number and time check interval, so as to check time at times according to the configuration; You can also click the **Sync with computer time** to synchronize the time of the camera with that of your computer.

You can enable daylight saving time if it is needed. The daylight saving time configuration can set the starting and ending date, specific to the hours.

Click Save to save the modified parameters.

4.2.6.2 Account

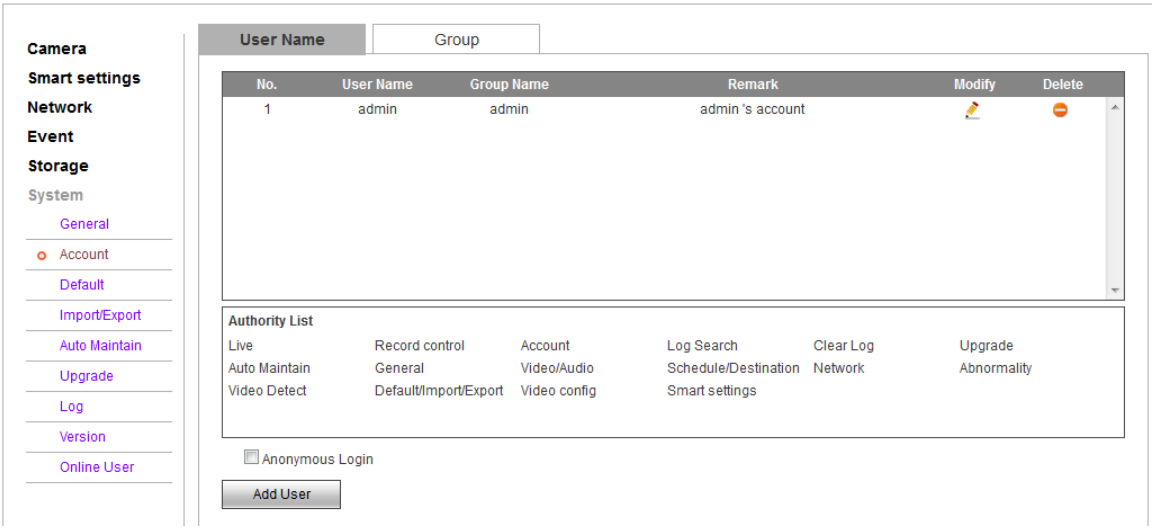


Figure 4-44 User Settings

Account → User Name

When the current user is "admin" super user, you can create as much as 32 users.

Create Users: Click "Create users" to enter the user addition interface

Insert user name and password, and the user group can select "admin" or "other group". "User right" can set the basic permission and channel permission. Click "OK" to finish creating users.

Alter Users: Select the user to modify, click "Modify" to enter the user editing interface, you can alter the User name, password, users group and privileges.

Add or modify the user both can configure the basic right and channel right settings.

Delete Users: Select the user to delete, click delete to enter into a confirmation dialogue box, click "OK".

Admin super user can only change the password. Different models can create different number of users, please regard a practical number as a standard.

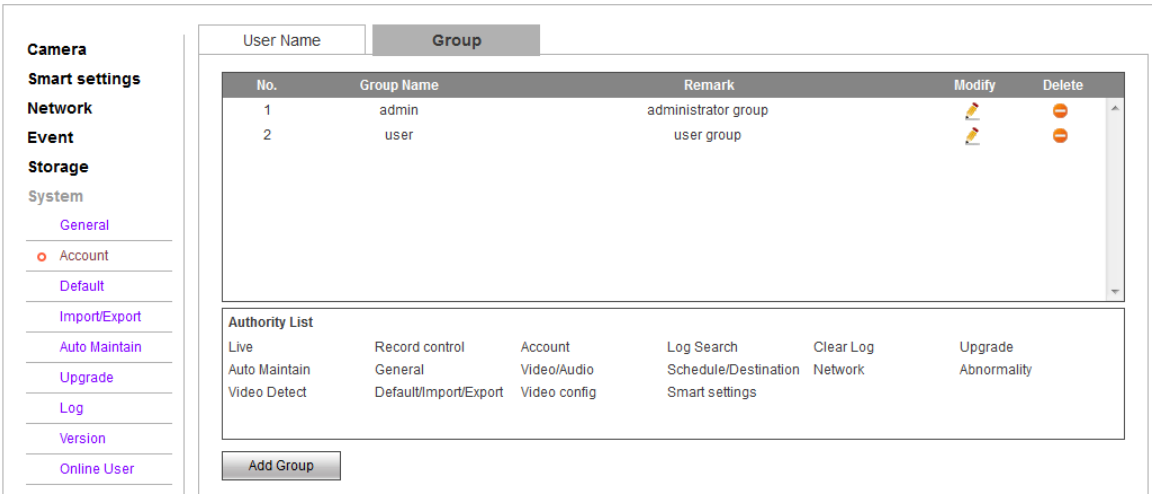


Figure 4-45 User Group Settings

Account → Group

Create user group:

Click "Add Group" to enter group adding interface.

Enter the group name and remark. "User group privilege" can set the basic privilege and channel privilege, and then click "OK" to finish user group adding.

Modify User Group:

Select the user to modify, click "modify" to enter the editing interface, and alter the remark and privilege.

Add or modify the user group both can configure the basic right and channel right settings.

4.3 Alarm

Figure 4-46 Alarm interface

Alarm → Alarm Type

Click 【Alarm】to enter alarm setting interface and check the alarm type on WEB port. Alarm type contains dynamic monitoring and monitoring masking. Alarm information including: Time, Alarm type, Alarm channel.

Alarm → Operation

Check【Prompt】Enable, Open reminding function: When the alarm occurs, the real-time previewing interface will appear alarm light, click alarm to enter alarming interface and check the text information.

Alarm→ Alarm Tone

Check【Play alarm tone enable】，It is selectable for the alarm tone with local HDD prerecording, the alarm tone is MP3 format.

5 Function

5.1 DDNS Function

5.1.1 3322（www.3322.org）

Register

Register New Users or Login at www.3322.org.

Click "My Control Panel" at the navigation bar.

Click "new" under the DDNS on the left side.

Fill in the name of the host machine, IP address will automatically detect in the current internet. Leave the Mail Servers blank, and then click the "OK" button.

Embedded IPC Setting

Open 【Main Menu】→【Configuration】→【Network】→【Advanced】→【DDNS】→Enable

Name	Configuration
DDNS	3322 DDNS
IP	Members.3322.org
Port	80
Domain name	xxx.3322.org
User	xxx
Password	xxxxxx

After setting up the information as above, user can access the Embedded IPC via XXX.3322.org

Notice: The main machine's IP should refer to the information of the website.

5.1.2 NO-IP（www.no-ip.com）

Register

Register new username at no-ip, click 【Create Account】.

Create domain name, click 【Add a Host】.

Embedded IPC Setting

Open 【Main Menu】→【Management】→【Network】→【Advanced】→【DDNS】→【Enable】

Name	Configuration
DDNS	NO-IP DDNS
IP	dynupdate.no-ip.com
Port	80
Domain name	xxx.xxx.org
User	xxx）
Password	xxxxxx

5.1.3 Dyndns DDNS（www.dyndns.com）

Register

To login at dyndns, register an account.

Click on the confirmation link, login the account, click【Add Host Services】 at [My Services], set your own realm name, and then operate according to the procedure.

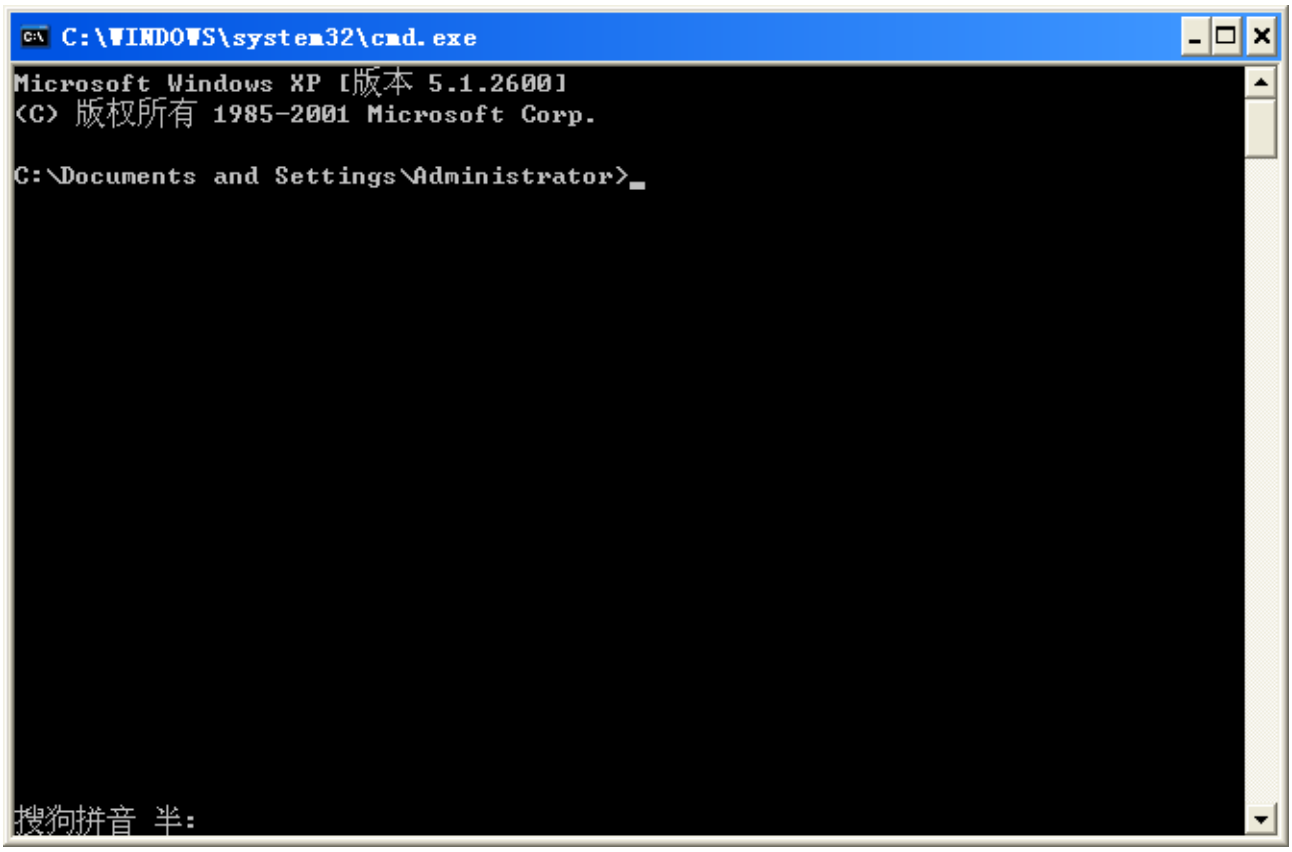
Configuration of the Embedded IPC

Open 【Main Menu】→【Management】→【Network】→【Advanced】→【DDNS】→【Enable】

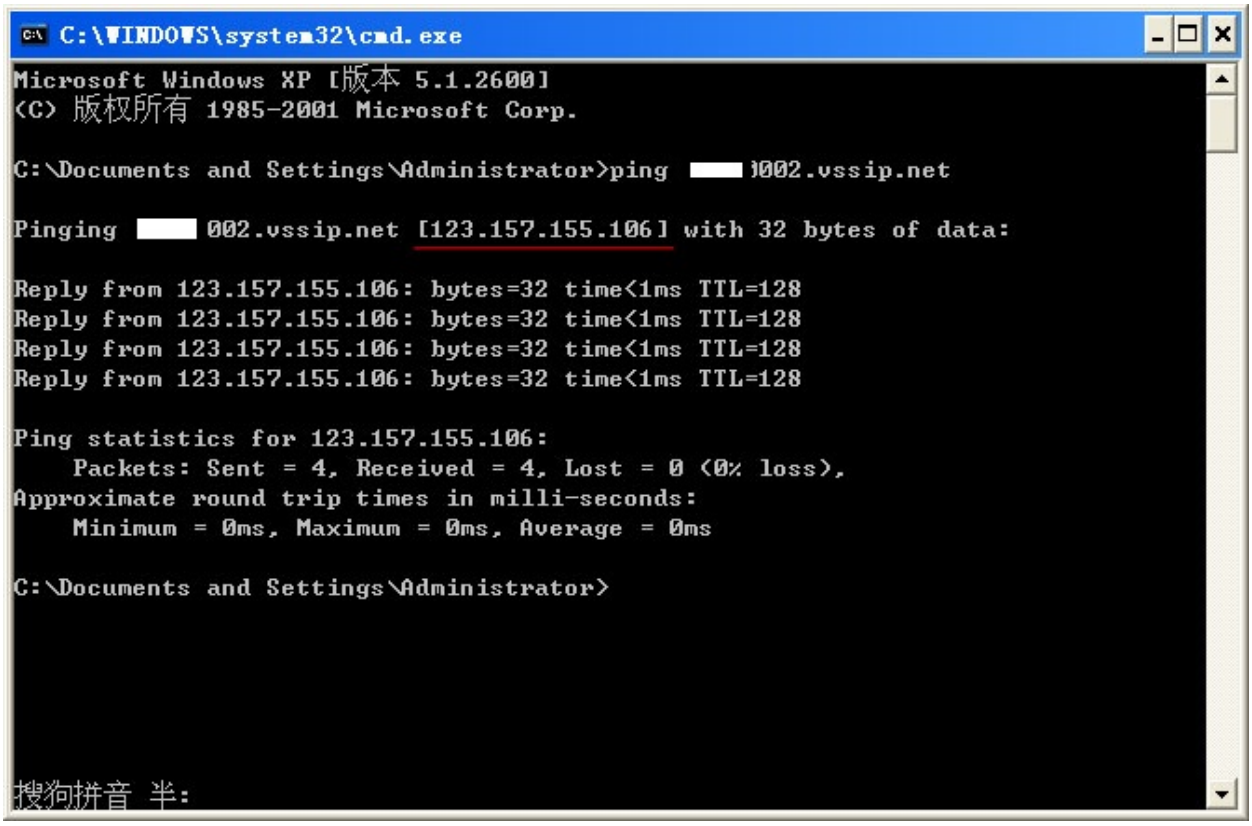
Name	Configuration
DDNS	Dyndns DDNS
IP	Members.dyndns.org
Port	80
Domain name	xxx.xxx.com
Username	xxx
Password	xxxxxx

5.1.4 Test and Verify DDNS

After setting the Embedded IPC, wait for a few minutes, analysis records will update. Click Operation in the Start Menu of computer, input "cmd", click "OK" to open a window.



Input "ping+ Domain name" then press Enter,



The computer will analyses the domain name configured in IPC, and return to the current IP, as the picture shows

underlined in red. When the IP corresponds to the embedded IPC's IP in Public internet, it means the DDNS is setting right. If they are not, please check the network connection of embedded IPC and DDNS information.

5.2 Port Mapping

Port mapping is mapping a port of outside web host's IP address to a machine inside web, and provide the service. When user connects to the port of the IP, the server will automatically map the request to the corresponding machine inside LAN.

With the function of port mapping, we can map many ports of a machine's IP address to different machines' different ports inside web. The port mapping can also have other special agent functions, like POP, SMTP, TELNET, etc. Theoretically, it can provide more than sixty thousand ports.For example, if we want to map a web server which has an IP address of 192.168.111.10, we just need to input the IP address and TCP port 80 into the port mapping chart of the router.

There are two ways to map the port: UPnP function of automatically map and modify the router's port mapping chart by manual.

5.2.1 UPnP Function

In order to get connection to the Embedded IPC through Public network, we need to set the Router to cross the NAT of Embedded IPC. UPnP can make the NAT cross automatically by the UPnP agreement of Embedded IPC, and don't have to set the Router.

⚠ *Note: to realize the UPnP Function, there must be Router support and enable the UPnP Function.*

The first step

Connect the Router to the network, get to the Menu of the Router, set the Router, then get to port, and enable the UPnP Function.

Routers made by different manufacturers may have some difference, please refer to the specification carefully before setting the Router.

The second step

Connect the Embedded IPCto the Router; the configuration will automatically gain the IP address or static IP. After setting up the IP, click the Advanced Config. And get to【the Network transmission capacity, ports and multicast etc. 】to open the Enable at the 【UPnP port mapping】.

The default access port of Embedded IPC contains HTTP port 80 and TCP port 8000. If the port has been occupied by other LAN equipment, please modify the default port number to an unuserd port number at 【network transmission capacity, ports, multicast etc.】.

The third step

Enter the Router management interface; detect the port if there is already a Port mapping. If there is, it shows UPnP setting's finished.

The forth step

Input the IP address in IE, and add port number of the Embedded IPC, for example: 155.157.12.227:81. If you want to enter by the Client Software, use the TCP port offered by the outer net.

⚠ *Note: if there are a few embedded IPCs need to set the UPnP function, in order to avoid IP conflict, set the ports of embedded IPC into different ports numbers. Otherwise, it will choose the embedded IPC port set preceded as the first choice.*

5.2.2 Manual Port Mapping

The first step

Connect the Embedded IPC to the Router, set the static IP.

The second step

Log in Router, enter into the configuration menu of Router, and set the menu. Then get to port, set the IP distributed by the Embedded IPC, and set the rule of port mapping, add HTTP and TCP port into mapping list.

Default access ports of Embedded IPC include HTTP port 80 and TCP port 8000, if the ports are occupied by other LAN devices, please modify the default port of the Embedded IPC into other vacant ports at 【network transmission capacity, ports, multicast etc.】.

The third step

Input the public net IP address in the IE, and add the port number of the Embedded IPC you want to access after the IP, for example: http://155.157.12.227:81. If you want to access by Client Software, you can use the outer net TCP port directly.

⚠ *Notice: for detail configuration setting, please refer to the user manual of Router.*

5.3 NTP Function

Enable NTP function; make the time synchronization with both the IPC and GPS clock server, to ensure the accuracy of device time.

5.3.1 Internet Configuration

Get to the 【Configuration】→【Network】, choose 【Advanced】, and then choose 【NTP】to set.

After the device can access the Internet, NTP server can use the standard NTP server at Internet as clock source. For example, China National Center server timing (IP address: 210.72.145.44). Input the IP address and domain name of relative server at NTP setting.

To activate NTP, click to choose "Enable".

The interval of changing time is from 1 to 65535 minutes.

5.3.2 Intranet Configuration

If IPC work under the intranet, user can set up a privately-owned server as clock source. NTP address in IPC configuration fill in privately-owned NTP address can work.

Privately-owned NTP server can adopt standard NTP products and accurate time PC system. Please refer to below instruction when adopt PC system as a NTP server.

NTP Server Set Up under Windows

Click "Start" menu → "Run" (or Win+R), and input "regedit" to get into REGEDIT.

Build a new key assignment of DWORD Value under :

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters registry subkey;

Change the value to 1, and save.

Restart the computer.

NTP server set up under Linux system

Due to the particularity of Linux system, for detail way to erect the NTP server, please refer to every editions of the manual.

5.4 Voice Intercom

5.4.1 Summary

Embedded IPC Bidirectional Talk: user can talk to remote client software or Web via IPC audio input and output

ports; user can hear voice via IPC audio output ports when talking to remote by the client software or WEB voice intercom.

5.4.2 Configuration

Local Configuration

Connect a microphone to the MIC input port, connect loudspeaker to the audio output port.

Note: local output needs active audio output device.

Remote PC Configuration

Connect microphone and loudspeaker to computer.

Using

To use voice intercom, please open remote client software or Web and click "voice intercom" to achieve voice intercom function.

6 APPENDIX

6.1 TERMS

Dual-stream

Dual-stream: one high bit rate stream for the local HD store, QCIF/CIF/2CIF/DCIF/4CIF coding, other low bit rate stream for network transmission, such as QCIF / CIF coding.

Dual-stream can achieve two different bandwidth stream requires of local transmission and remote transmission. Local transmission with high stream can get a higher HD video storage and remote transmission use lower stream to adapt to the CDMA / ADSL or other network to obtain higher image fluency.

I Frame

I frame: intra frame image, remove redundant information to compress the transmittal data, also called key frames.

B Frame

B frame: According to time redundant of the source image sequence previously encoded frame and account the source image after the encoded frame to compress transmittal data, also known as bi-directional prediction frame.

P Frame

P-frame: according to image frame lower than the previous 'time redundant to compress transmittal data, also called predicted frames.

Wide Dynamic

Bright parts and dark parts in particular can be seen very clearly at the same time. Wide dynamic range is a ratio between the brightest luminance signal value and the darkest value.

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