

USER MANUAL

Network Speed Dome

Version: 1.0

Date: June 2018

WARNINGS AND CAUTIONS

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH VENTILATION GRILLS OR OPENINGS ON THE EQUIPMENT.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user the presence of non-insulated "dangerous voltage" within the product's enclosure that maybe of sufficient magnitude to constitute a risk of electric shock to different persons.



The exclamation point within an equilateral triangle, is intended to alert the user the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product

PRECAUTIONS:

- Persons without technical qualifications should not attempt to operate this dome device before reading this manual thoroughly.
- Remove any power to the dome before attempting any operations or adjustments inside the dome cover to avoid potential damage to the mechanism.
- Inside the dome cover there are precision optical and electrical devices. Heavy pressure, shock and other sudden adjustments or operations should be avoided. Otherwise, you may cause irreparable damage to the product.
- Please DO NOT remove or disassemble any internal parts of the video camera to avoid normal operation and possibly void the warranty. There are no serviceable parts inside the camera.
- All electrical connections to the dome should be made in strict accordance with the attached labels and wiring instructions in this manual. Failure to do so may damage the dome beyond repair and void the warranty.
- For outdoor installation especially in high places or poles, it is highly recommended that the proper lightning arrestors and surge suppressors are installed before the dome is entered into service.
- Please do not use the product under circumstances where the limits exceed the maximum specified temperature, humidity or power supply specifications.
- First please set the network data after login. The gateway address is the one to connect the IP camera.
- IP address should be different from other devices' IP address. Otherwise, video is not available.

IMPORTANT SAFEGUARDS

1. Read these instructions before attempting installation or operation of dome device.
2. Keep these instructions for future reference.
3. Heed all warnings and adhere to electrical specifications follow all instructions.
4. Clean only with non abrasive dry cotton cloth, lint free and approved acrylic cleaners.
5. Should the lens of the camera become dirty, use special lens cleaning cloth and solution to properly clean it.
6. Do not block any ventilation openings. Install in accordance with manufacturer's instructions.
7. Use only attachments or accessories specified by the manufacturer.
8. Verify that the surface you are planning to use for attaching the dome can adequately support the weight of the device and mounting hardware.
9. Protect this device against lightning storms with proper power supplies.
10. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, when liquid traces are present, or the presence of loose objects is evident or if the device does not function properly, or has received sever impact or has been dropped accidentally.
11. Indoor dome is for indoor use only and not suitable for outdoor or high humidity locations. Do not use this product under circumstances exceeding specified temperature and humidity ratings.
12. Avoid pointing the camera directly to the sun or other extremely bright objects for prolonged period of time avoiding the risk of permanent damages to the imaging sensor.
13. The attached instructions are for use by qualified personnel only. To reduce the risks of electric shock do not perform any servicing other than contained in the operating instructions unless you are qualified to do so.
14. During usage, user should abide by all electrical safety standards and adhere to electrical specifications for the operation of the dome.
15. Use supplied power supply transformer only.

INDEX

WARNINGS AND CAUTIONS	1
WARNING	1
CAUTION	1
EXPLANATION OF GRAPHICAL SYMBOLS	1
PRECAUTIONS:	2
IMPORTANT SAFEGUARDS	3
1 Product Introduction	1
1.1 Package Contents	1
1.2 Specification	2
1.3 Performance Features	4
2 Installation	5
2.1 Dimension	5
2.2 Installation	6
2.2.1 Wall Mounted	6
2.2.2 Corner Mounted	7
2.2.3 Pole Mounted	9
2.2.4 Ceiling Mounted	10
2.3 Connection	12
2.3.1 PTZ Connection Way	12
2.3.2 Connecting the Device	12
2.3.3 Setting the IE Browser	12
2.3.4 Install Video Software	13
2.4 Login IE Interface	15
2.5 Browser	17
2.5.1 Video Browsing	17
2.5.2 PTZ Control	17
2.5.3 PTZ Function	18
2.5.4 Common Shortcuts	19

2.6 Setting.....	20
2.6.1 System	20
2.6.2 Network.....	23
2.6.3 Management Software	28
2.6.4 IP Cameras.....	28
2.6.5 Audio & Video	33
2.6.6 PTZ Function.....	37
2.6.7 Alarm.....	39
2.6.8 User	40
2.6.9 log.....	41
3. Function Instruction.....	42
3.1 Basic Function	42
3.2 Special Function	43
Appendix I Anti-lightning, Anti-surge	44
Appendix II Clean Transparent Cover	45
Appendix III Exception Handling.....	46
Copyright Statement.....	47

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* Indicates the functions with default protocol, it might not function by using other protocols

※ Indicates the optional functions, only with certain mode

1 Product Introduction

1.1 Package Contents

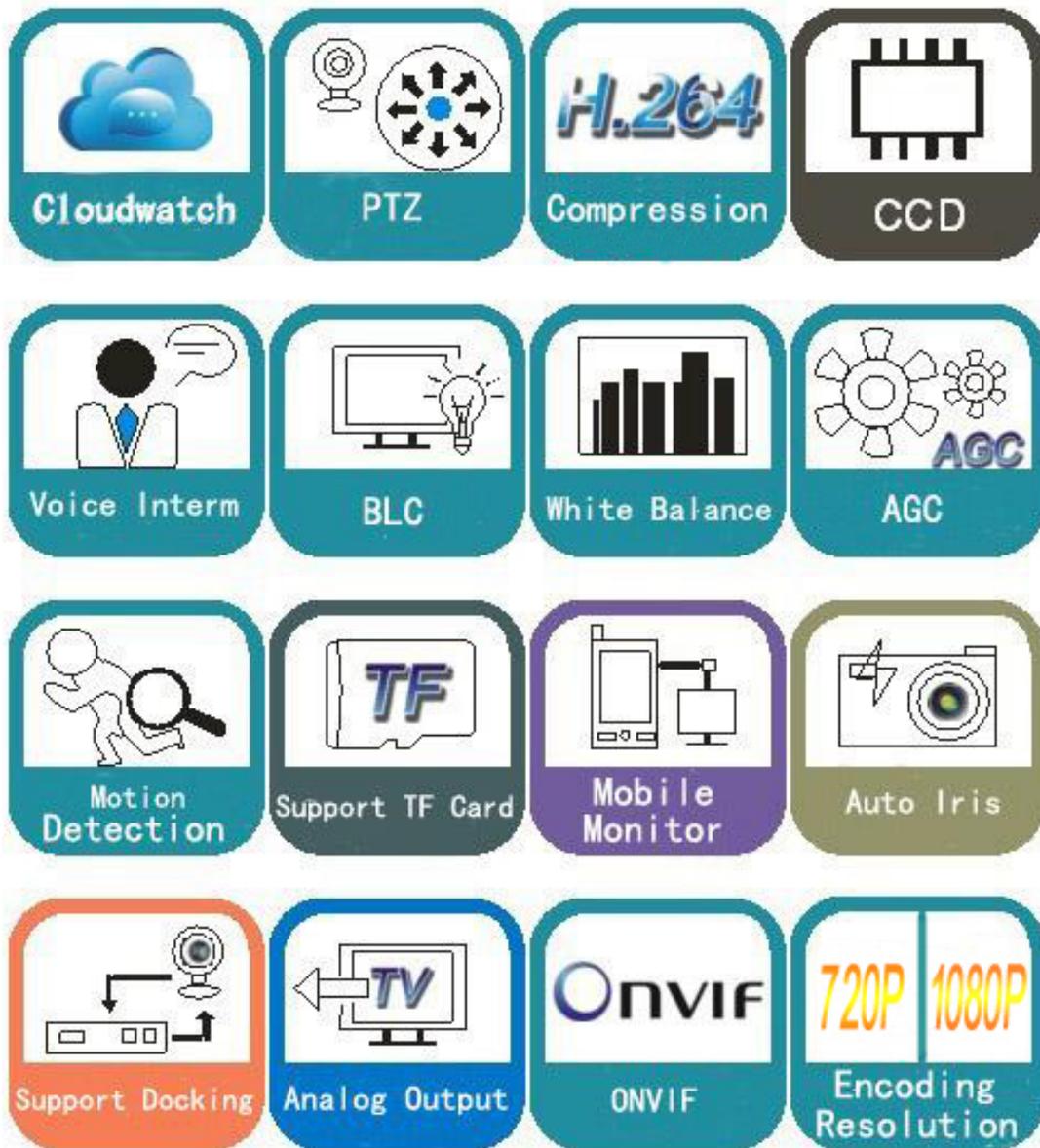
IP IR Speed dome	1pc
Wall mount bracket	1pc
Power supply	1pc
Screws kits	1pc
User manual	1pc
CD (with CMS etc.)	1pc

1.2 Specification

Image Sensor	1/3" SONY CMOS
Preview video resolution	1920×1080
Mini Illumination	Color:0.5Lux B/W:0.05Lux IR ON:0Lux
Signal Noise Ratio	≥50dB
Focus	Auto/Manual
D/N	IR-Cut
F-Stop	F1.6(color),F1.8(IR on),Auto
Close-up	INF(Color),1000mm(Far)
Horizontal Rotation Range & Speed	Range:360° ,Speed:0.02~480°/s
Tilt Rotation Range & Speed	Range:93° ,Speed:0.02~160°/s
360°Scan	1-64 grades setting available
Go to Preset Speed	01-64 levels available
Guard Tours	8 groups, Max.16 points, dwell time user selectable
Pattern Scan	4 pcs
Park Time	1-60mins available
PWR On Action	Memory/Pattern 1/Tour 1/360° scan/A-B scan/Park 1/None
Operation menu	Multiple languages for OSD menu, English, Italian, Spanish etc.;
Time Scheduling Function	6 tasks
Presets	220
Power off Memory	Support
Video output	RJ45 10/100M Ethernet
Mini Delay Time	0.18s

Frame rate	60Hz:30fps(1920×1080/432×240) 60Hz:30fps(1280×720/432×240)
Compressed Image Format	H.264/MPEG-4
Communication Protocol	TCP/IP,HTTP,NTP,IGMP,DHCP,UDP,SMTP,RTP,RTSP,ARP,DDNS,DNS,HTTPS,P2P
Compressed Image Rate	500Kbps~7Mbps
Power	DC 12V-4A
Back End Record Mode	PDVR, PC, Megapixel HD system card, NVR, IP-SAN
Power Consumption	≤ 25W
Operating Temperature	Indoor: 0°~ +40° Outdoor: -40°~ +60°
Operating Humidity	≤95% Non Condensing
Weight	4~8kg
Protection	IP66,Transient voltage 6000V

1.3 Performance Features

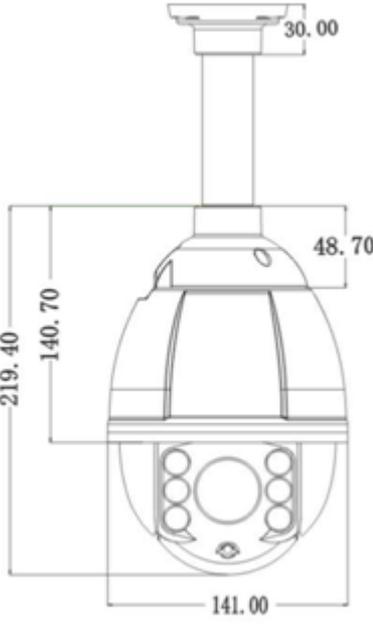
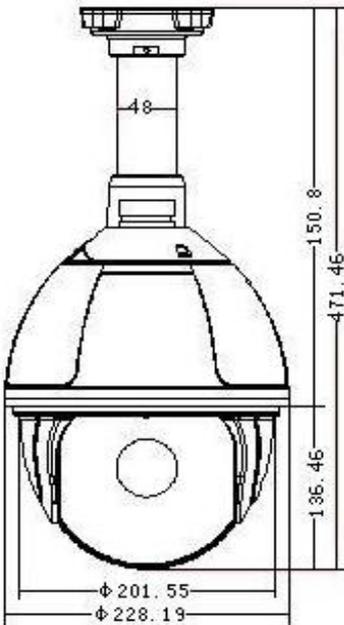


- Use high performance 1/3" CMOS, great low light performance.
- Support high definition resolution 1280x720P / 1920x1080P.
- 10x / 18x / 30x / 36x zoom as optional.
- IR distance reach up to 50m (10x)-180m (20x-36x).
- Dual-stream output.
- Support ONVIF protocol.

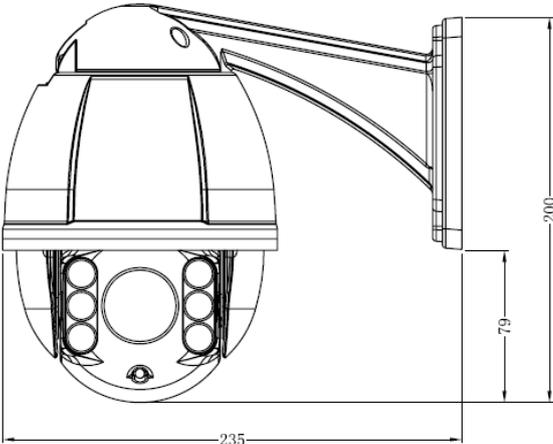
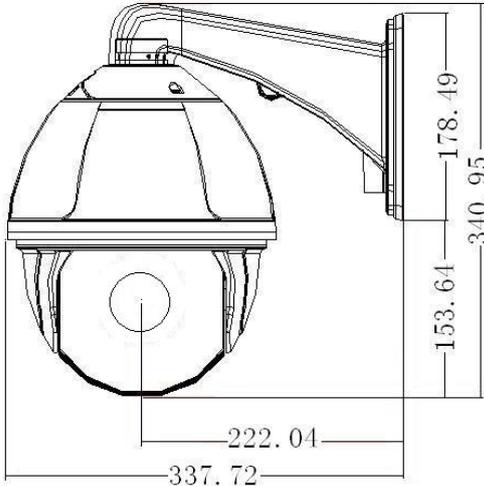
2 Installation

2.1 Dimension

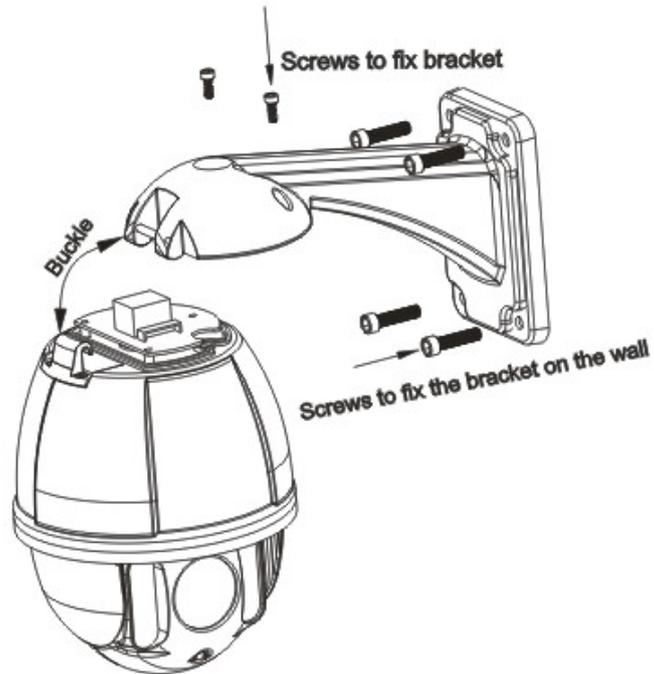
Ceiling Installation



Bracket Installation



2.2 Installation



2.2.1 Wall Mounted

Installation conditions:

Wall mounted dome can be used in the hard wall structure whose thickness should be enough to install expansion bolt in indoor and outdoor environment. The wall can bear at least 4 times the weight of the dome. Install wall hanging bracket:

- a. As shown in fig 2.3, with the installation holes in the underside of the wall hanging bracket as pattern, draw punched locations and punch.

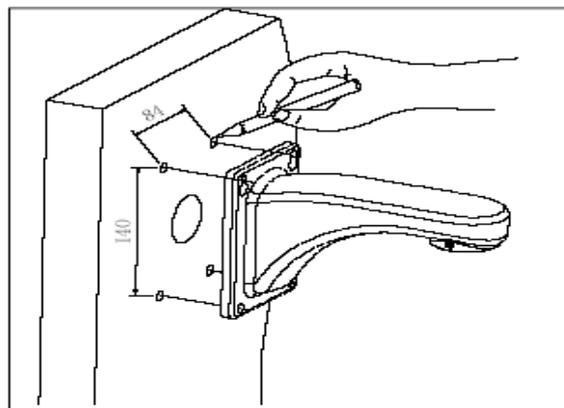


Fig 2.3

b. As shown in fig 2.4, fix the wall hanging bracket on the wall with wire and cable through it.

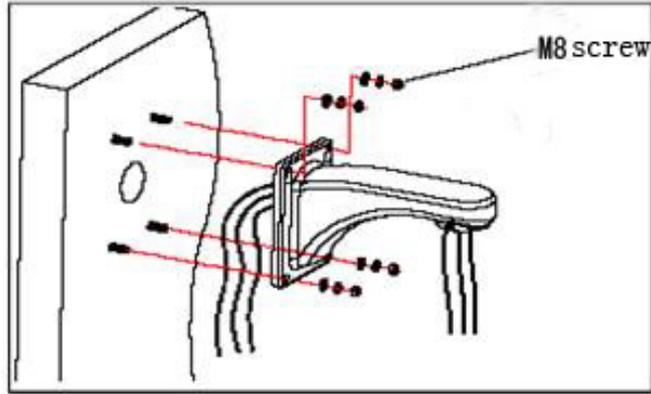


Fig 2.4

2.2.2 Corner Mounted

Installation conditions:

Corner mounted dome can be used in the hard wall structure with an angle of 90° whose thickness should be enough to install expansion bolt in indoor and outdoor environment. The wall can bear at least 4 times the weight of the dome. Install corner mounted attachment and wall hanging bracket:

a. As shown in fig 2.5, with the installation holes in the corner mounted attachment as pattern, draw punched locations on the wall with an angle of 90° and punch to install expansion bolt.

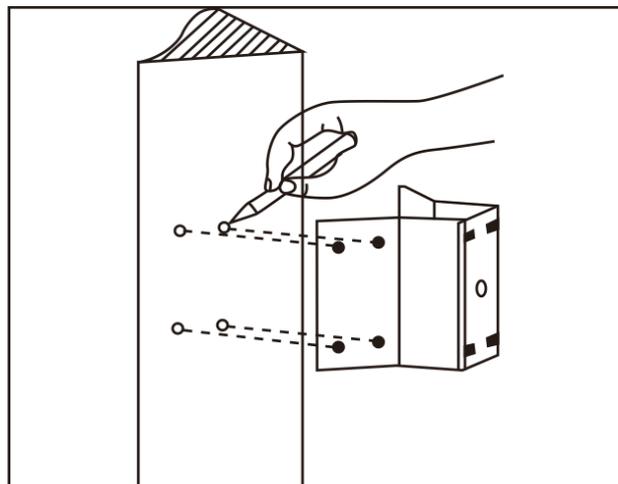


Fig 2.5

b. As shown in fig 2.6, use M8 screw nut to fix the base of corner mounted on the wall with all cables through the center holes of the corner mounted, marine glue and bracket. Enough wiring length should be left.

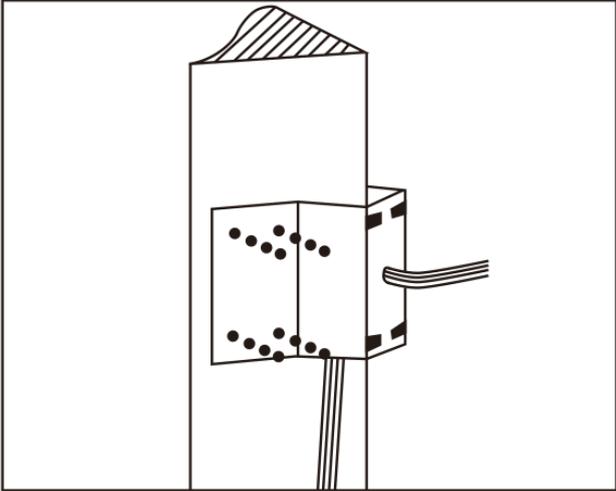


Fig 2.6

c. As shown in fig 2.7, fix the wall hanging bracket with all cables power through it on the corner mounted attachment.

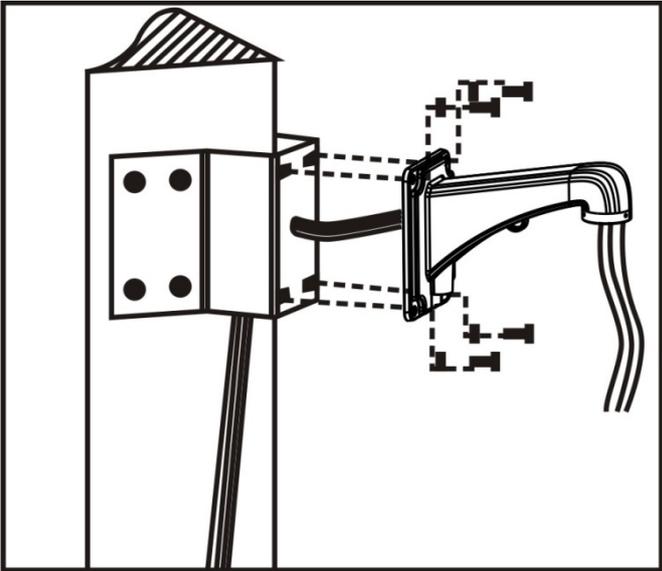


Fig 2.7

2.2.3 Pole Mounted

Installation conditions:

Pole mounted dome can be used in the hard pole structure in indoor and outdoor environment whose diameter should match the installation size of stainless hose clamps. Factory default is 6 inches stainless hose clamps (fit ϕ 130-152mm pillar). The pole structure can bear at least 4 times the weight of the dome.

Install corner mounted attachment and wall hanging bracket:

a. As shown in fig 2.8, use the stainless hose clamps to fix the pole mounted attachment with all cable through it on the pole structure.

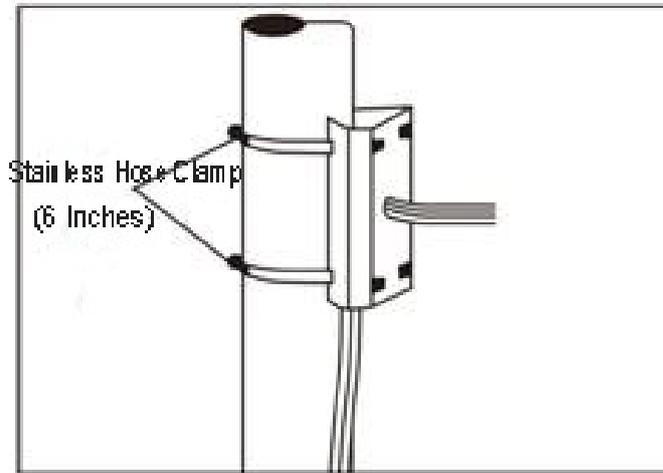


Fig 2.8

b. As shown in fig 2.9, fix the wall hanging bracket with all cables through it on the pole mounted attachment.

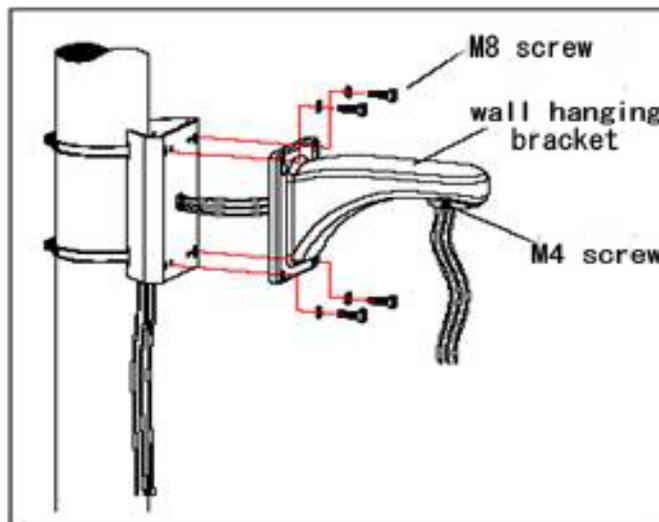


Fig 2.9

2.2.4 Ceiling Mounted

Installation conditions:

Ceiling mounted dome with thick pole can be used in the hard ceiling structure whose thickness should be enough to install expansion bolt in indoor and outdoor environment. The ceiling can bear at least 4 times the weight of the dome. Install the base of ceiling and boom:

a. As shown in fig 2.10, with the installation holes in the base of ceiling as pattern, draw punched locations in the ceiling and punch to install M6 expansion bolt.

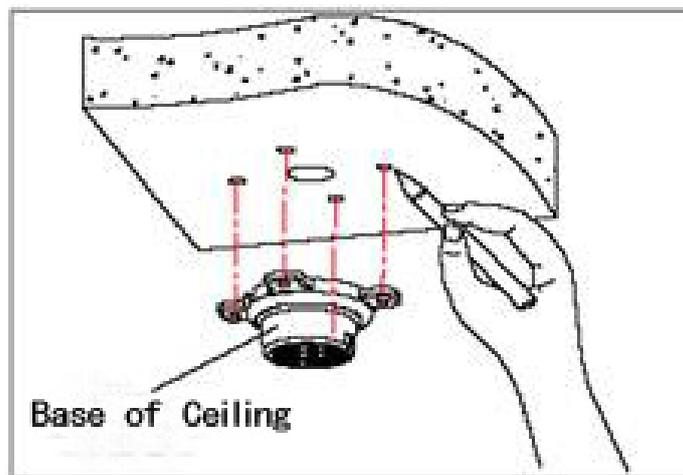


Fig 2.10

b. As shown in fig 2.11, at first unscrew the M4 screw at the side of the base of ceiling and split the base of ceiling and boom. Then make the three groups of cables of power, video/control and alarming into the side recessing seal groove of the ceiling connector bottom and through the core hole of the base of ceiling mounted. Fix the base of hang ceiling on the ceiling board.

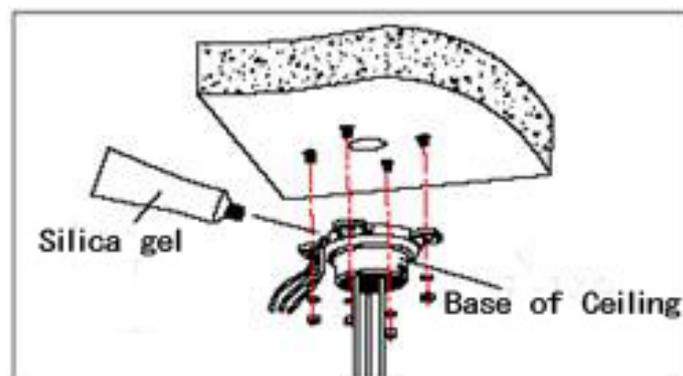


Fig 2.11

☺**Note:** If the dome is used in the outdoor conditions, use the silica gel on the faying surface of the base of hang ceiling and the ceiling board and around the out-holes to be sure water proof

c. As shown in the fig 2.12, tighten the boom with electrical wire and cable through it on the base of ceiling and screw up the M4 screw.

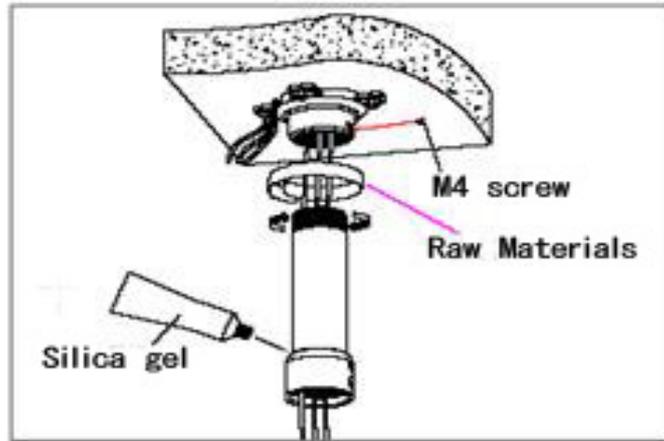


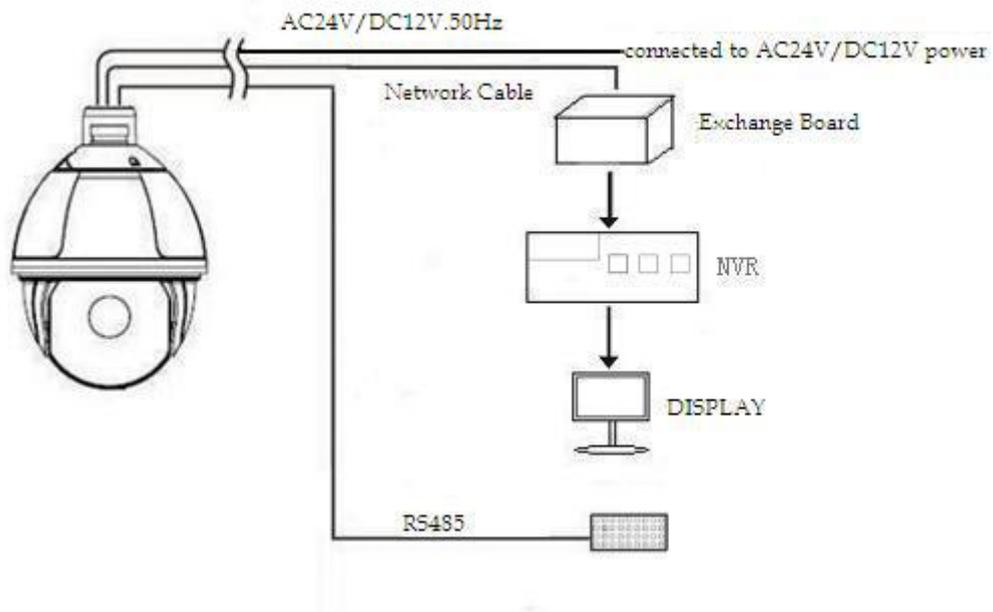
Fig 2.12

☺**Note:** If the dome is used in the outdoor conditions, after using enough raw materials to wrap the thread at the upper end of boom, tighten the boom on the base of ceiling. Use the silica gel around the joint sleeve and connector of the boom to be sure water proof

2.3 Connection

2.3.1 PTZ Connection Way

Before connecting, please turn off the power and read carefully the instructions of all connected devices.



2.3.2 Connecting the Device

The device can be directly connected to the computer and the network;

Please use the cross-over cable when connecting to the computer;

Please use the straight through cable when connecting to the network.

☺**Note:** Please check the power cables are solid or not when connecting the power supply.

2.3.3 Setting the IE Browser

User can browse the video through IE, HVMS or other software, while ActiveX is required to install.

Otherwise, video is not available. And, user is supposed to set the IE security level before downloading the plug-in.

1. From menu, click "**tool**", then choose "**Internet options**".
2. Then click "**Security**" as the follows:



Fig 2.13

3. Choose internet icon, click “**Customs level**”. Then the follow pops up:

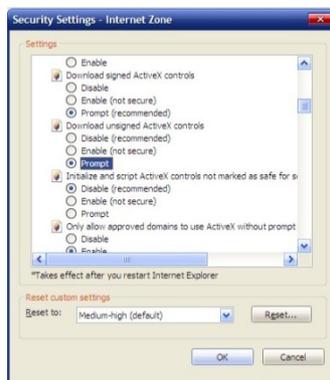


Fig 2.14

4. Change option “**Download unsigned ActiveX controls**” into “**Enable**” or “**Prompt**”. User can optionally change “**Running ActiveX controls and plug-in**” into “**Start**” to avoid the prompt of running.

2.3.4 Install Video Software

Please take the tips as follows when installing the software of the IP camera:

(1) Download controls

First, please login to the system with IPC's default ID and password as a super user. After that, you will get the following prompt whether to install ActiveX controls. Please rightly click “**loading procedure**” if your system is XP.

(2) Install and run controls

Please click "**Run**" in the prompt box above, and the controls are to be installed to run. After that, you are able to view the video in real time.

☺Note:

1. The steps above are not sequential. After operating (1) and (2), if not successful, then please try the website downloading method.
2. If your computer system is Microsoft Windows 2003 and you're unable to view the video after installing the controls, please start the computer's hardware acceleration.

Above all is the preparation work for the video browsing on IE.

2.4 Login IE Interface

When the system starts up for 110 seconds, please open the IE browser, input the IP camera address. The default IP is <http://192.168.1.110>. (©Note: System default subnet mask is 255.255.255.0; default gateway is 192.168.1.110. Please correctly set the local IP address before login and access.)

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\ASUS>ping 192.168.1.110

Pinging 192.168.1.110 with 32 bytes of data:
Reply from 192.168.1.110: bytes=32 time=1ms TTL=64
Reply from 192.168.1.110: bytes=32 time<1ms TTL=64
Reply from 192.168.1.110: bytes=32 time<1ms TTL=64
Reply from 192.168.1.110: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.110:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\ASUS>
```

The language for login interface is consistent with the operation system. Below is the picture in Chinese operation system:



Fig 2.15

If it is the first time you run the software, please login as a super user. The system default user name is admin (password is admin); input the correct user name and password, and click **login**. During login, if you would like to reset the username and password, please click **Cancel** to clear the blank. After login, you will enter the following interface:



Fig 2.16

The IP Camera supports H.264/MJPEG dual encoding format. After login, you will enter the real time video interface in the format of H.264 compression. User can click “MJPEG” button, and enter the real time video in the format of MJPEG . Please refer to picture as following:



Fig 2.17

2.5 Browser

In the browsing interface, you can set video browse, PTZ control, commonly used shortcuts (like photography, recording, audio input, audio output, Language setting, etc.) to get the satisfying video.

2.5.1 Video Browsing

Video Browsing: For camera capture display setting, you can set the video type, video size, play mode, image color and illumination. On the browsing interface, you can click “**video browsing**” to enter system setting interface. Here is the picture

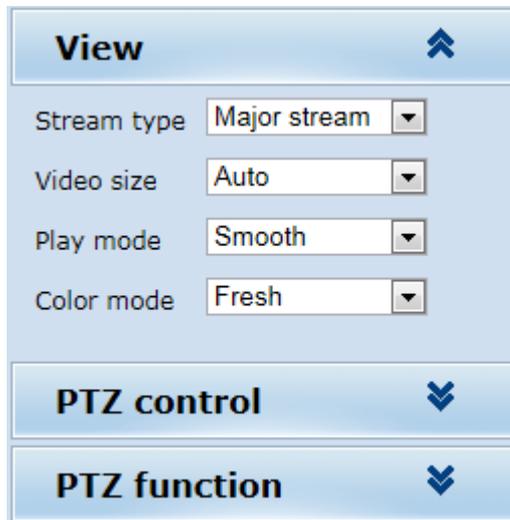


Fig 2.18

Set the video in the menu above:

Video Type: H.264 main stream, H.264 deputy stream, MJPEG.

Video Size: screen original size 1*, original size *1/2, adaptive.

Play mode: real time, smooth.

Image Color: standard, vivid

Illumination: Standard, low light

2.5.2 PTZ Control

PTZ control: Adjust the rotation in all directions, set horizontal speed, vertical speed. The picture is as follows:



Fig 2.19

PTZ direction: adjust the PTZ's eight directions.

Horizontal speed: 1 — 8 optional

Vertical speed: 1 — 8 optional

2.5.3 PTZ Function

PTZ functions: preset, auto pan, pattern, tour. (Patternis not available)

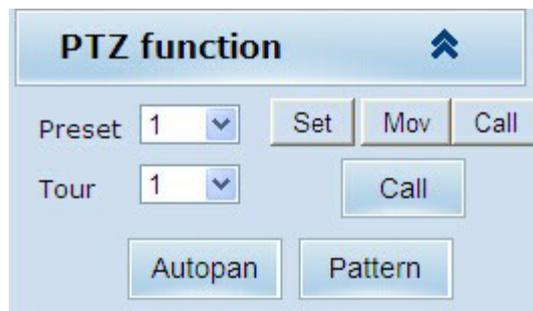


Fig 2.20

2.5.4 Common Shortcuts

Common shortcuts: 3D location photograph, record, audio input, audio output, Languages selection



Fig 2.21

Frequently set common functions of the IP cameras. The storage path of photographing and recording complies with the one from setting .The snapshots are stored in the name of IP address and time of the device. For example, the file name is 20140520_221325_125_01_192.168.1.110.jpg, which means the device's IP address is 192.168.1.110 and snapshot's time is at 22:13:25:125 on May 20th 2014.

2.6 Setting

Setting: detailed setting of system, network, IPC, audio & video, PTZ functions, alarm, user, Blog.

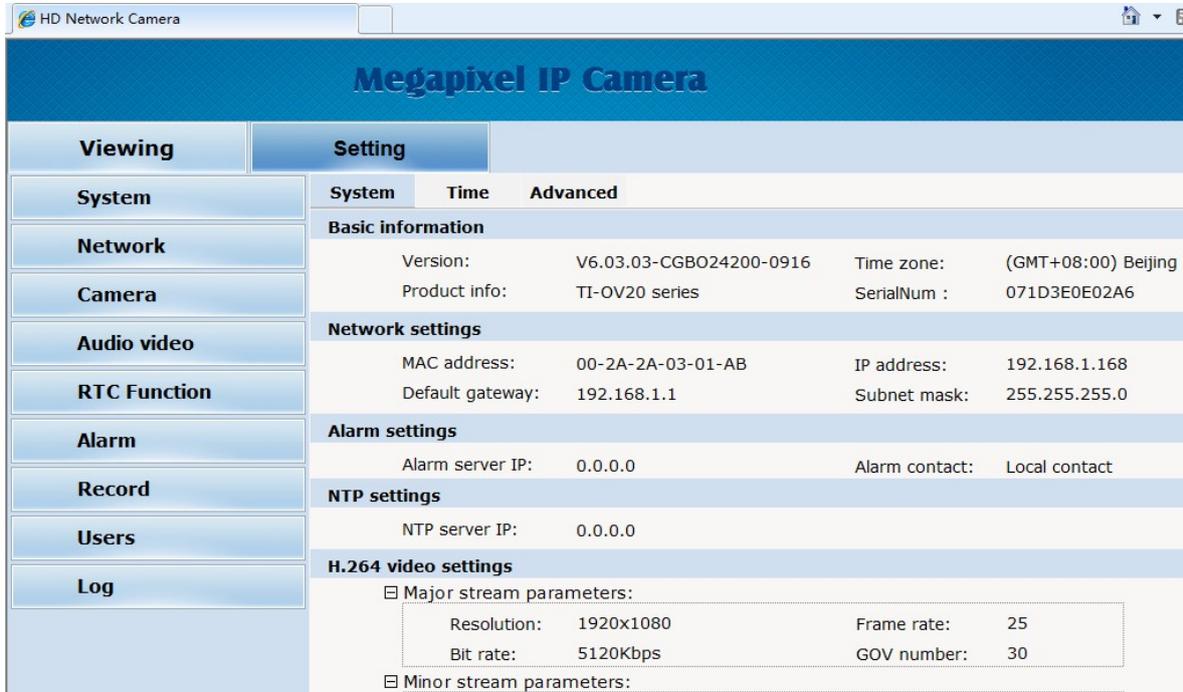


Fig 2.22

2.6.1 System

System: upgrade the system info, time and maintenance.

System info: The initial interface of system setting is the display interface of system info. User can learn more about the setting info, like basic info, network parameter alarm setting, NTP setting, H.264 video parameter setting, MJPEG video parameter setting.

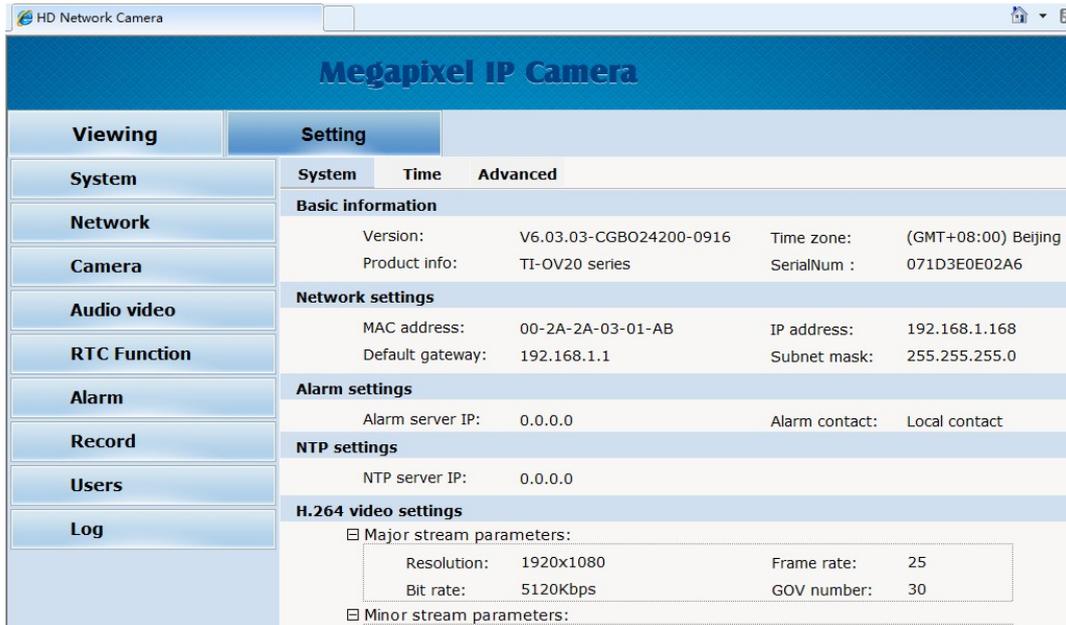


Fig 2.23

Basic Info: The IPC's version number, time zone, product series, serial number.

Network parameter: MAC address, IP address, default gateway, subnet mask.

Alarm setting: Alarm server IP, alarm correlation.

NTP setting: NTP server IP.

H.264 video parameter: main stream/sub stream resolution, frame rate, bit rate, I/P rate.

MJPEG parameter setting: resolution, frame rate.

Time: time zone setting, NTZ setting, real-time synchronization parameter setting.

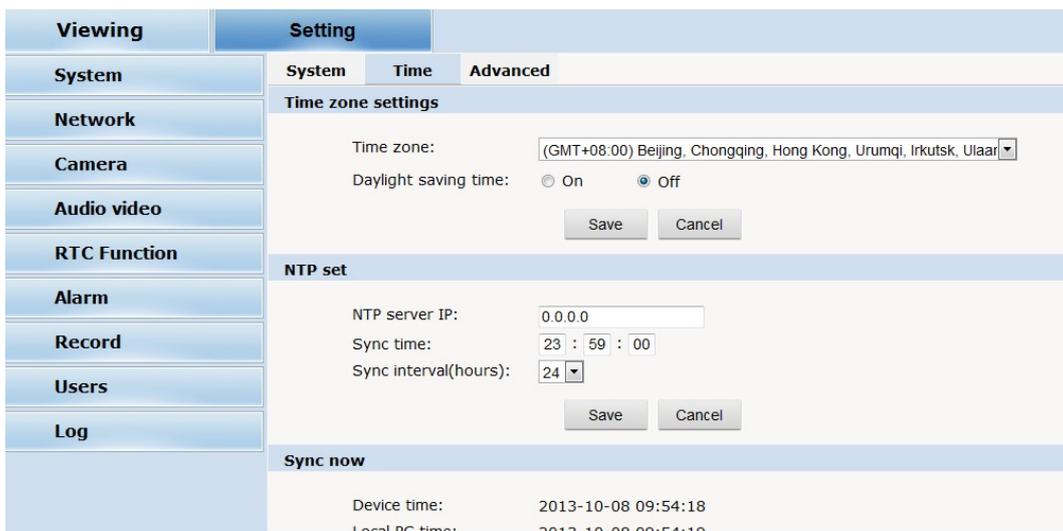


Fig 2.24

Time zone setting: select your time zone from the drop down list, click "setting" and it's done. 26pcs

time zones are optional for setting, range “GMT-12:00~GMT~GMT+13:00”. Of all, GMT+08:00 is China Beijing time. The default setting is GMT standard time. If your local time is daylight saving time, please click “automatically adjust clock for daylight saving changes” option. NTP setting: set NTP server IP is the same with the device’s IP address. Synchronization time: set the time for synchronization. Synchronization time intervals: every a time period (6--12—24) for time synchronization.

Real-time synchronization: Synchronize the time of the device. You can choose NTP or localsynchronization.

The device’s time: display existing time.

Local PC time: error correct the system time and local pc time. Click “setting” button to synchronize.

NTP Synchronization: whether to start NTP service. Select to start NTP service, otherwise do not select. If NTP service starts, you can input NTP server address in the IP field, and click “setting” button. After NTP is activated, the system corrects the time with NTP automatically.

Local synchronization: set camera time to synchronize local PC.

Maintenance: contains upgrading the device’s software, restoring factory settings and restarting the system.

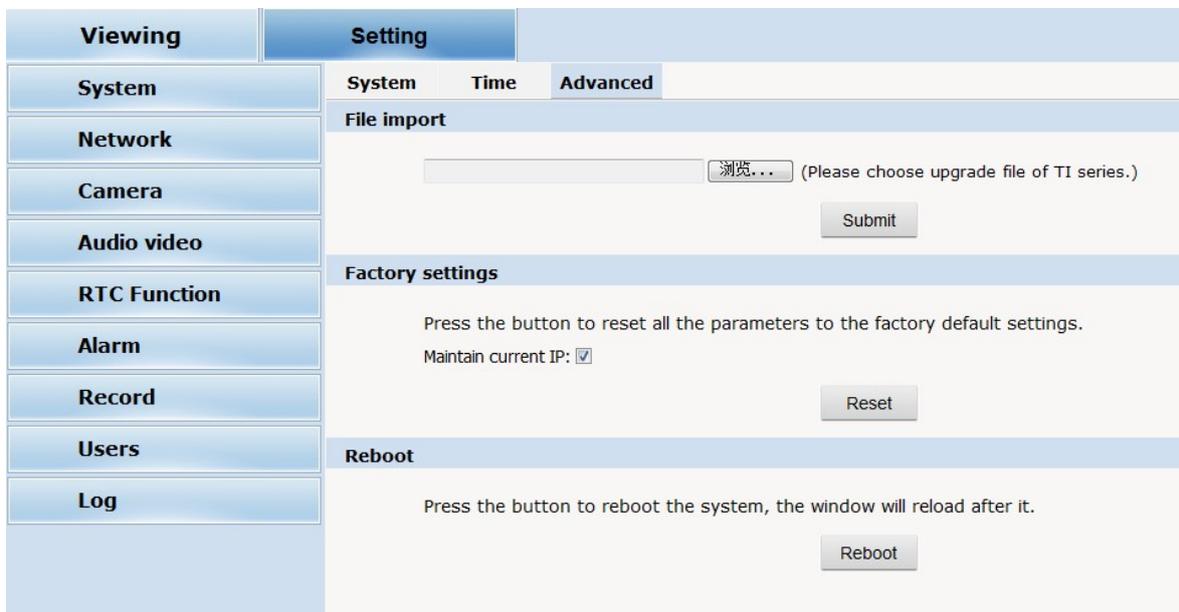


Fig 2.25

Software upgrade: The IP camera’s network service system can enjoy free remote software upgrade, which reduces the cost of system maintenance.

First, user can remotely submit system upgrade request via internet. According to user's submission, we'll send the device's relative edition upgrade for confirmation, and provide the latest software downloading, helping upgrade the IP Camera. User can upgrade the system as the following steps:

Click "Browsing" icon, and select IFU upgrade file and upload it.

Please restart the device after upgrading.

Restore factory setting: The device's network system provides online resetting functions, through which all system settings can be restored to factory default. It is a great convenient to the clients. If you select to keep the IP address, it is the existing address; while if you cancel it, it will be restored to factory default address: 192.168.1.110.

System restart: click "restart" button, the system restarts. The time is around 80 seconds.

After that, the webpage is closed.

2.6.2 Network

Network: The device's relevant network parameter setting, including Network、FTP、SMTP/HTTPS、QoS、IGMP、SIP、DDNS、PORT.

Network	FTP	SMTP	QoS	IGMP	PORT	DDNS	CloudLens
Network							
DHCP:	<input type="radio"/> On <input checked="" type="radio"/> Off						
IP address:	<input type="text" value="192.168.1.115"/>						
Subnet mask:	<input type="text" value="255.255.255.0"/>						
Default gateway:	<input type="text" value="192.168.1.1"/>						
Primary DNS server:	<input type="text" value="192.168.1.1"/>						
Secondary DNS server:	<input type="text" value="0.0.0.0"/>						
				<input type="button" value="Save"/>			
				<input type="button" value="Cancel"/>			

Fig 2.26

Network: setting of the device's network parameter.

Network

DHCP: On Off

IP address: 192.168.1.113

Subnet mask: 255.255.255.0

Default gateway: 192.168.1.1

Primary DNS server: 192.168.1.1

Secondary DNS server: 0.0.0.0

Save Cancel

Fig 2.27

DHCP: Dynamic Host Configuration Protocol, one of TCP/IP, mainly allocating dynamic IP address for network clients. Select "on", the camera's IP address and the subnet mask cannot be modified, but automatically allocated by the host. Select "off", you're supposed to set the network data by yourself and make sure the IP address and gateway address on the same segment.

FTP: FTP (File Transfer Protocol) is application layer protocol, based on transport layer for client's service. FTP is in charge of transferring files. The IP camera supports FTP photo uploading function on alarming. On FTP interface, set the server address, username and password, activate FTP alarm at alarm setting, the FTP photo uploading can be realized.

FTP

Server : 0.0.0.0

Port : 21 (1-65535)

User name:

Password:

Server Path : /

FileName :

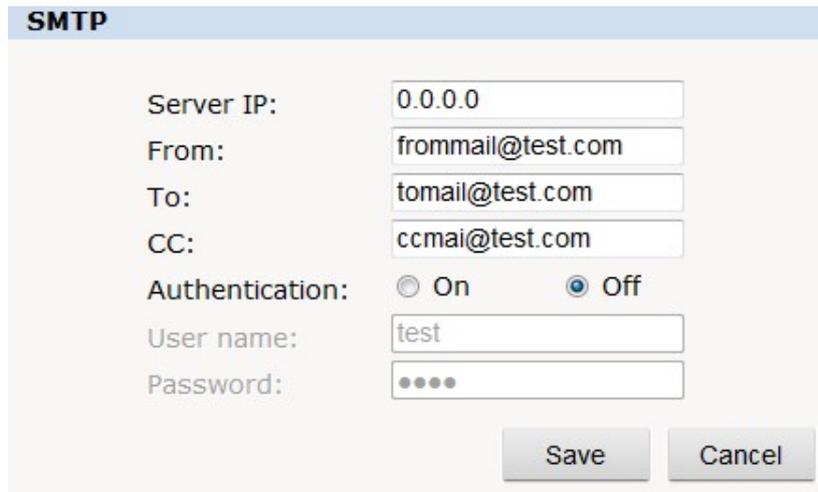
Snap Number : 1

Snap Interval : 0 s

Save Cancel

Fig 2.28

SMTP: SMTP belongs to TCP/IP, help to find the next destination for each computer when sending or transiting letters .



The image shows a dialog box titled "SMTP" with the following fields and options:

- Server IP: 0.0.0.0
- From: frommail@test.com
- To: tomail@test.com
- CC: ccmai@test.com
- Authentication: On Off
- User name: test
- Password: [masked with dots]

Buttons: Save, Cancel

Fig 2.29

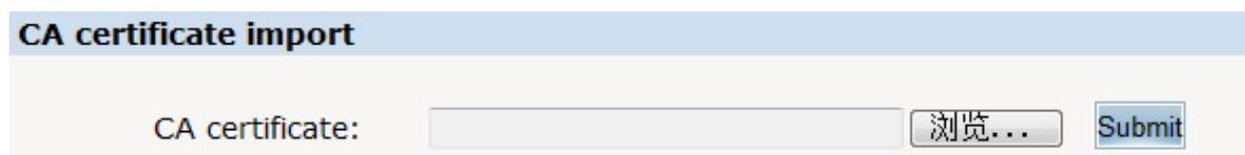
- ✧ Server IP: set up mail server IP.
- ✧ Sender: set up the email address of the sender.
- ✧ Authentication: Turn on or off the authentication function via mail server verification.
- ✧ User name: Sender's name. User can set by itself.
- ✧ Password: Set sender's password.
- ✧ TO: Recipient's mail address.
- ✧ CC: mail's address.

☺**Note:** No restrictions for setting username and password.

After setting, please click "set" to effect the setting.

If the user selects "mail" at "Alarm Setting", the system would send emails according to the SMTP setting.

HTTPS: a safe-protection channel, shortly, a secure version of HTTP.

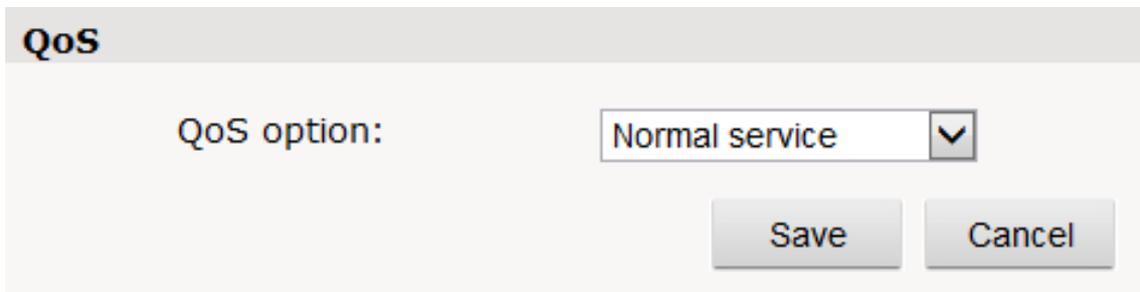


The image shows a dialog box titled "CA certificate import" with the following fields and buttons:

- CA certificate: [text input field]
- 浏览... (Browse...)
- Submit

Fig 2.30

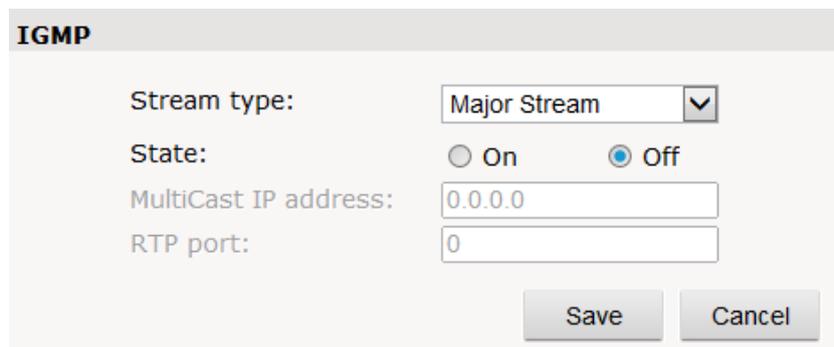
QoS: Quality of Service, a kind of network secure mechanism, a technology of solving network delay and congestion.



The image shows a configuration dialog box titled "QoS". It contains a label "QoS option:" followed by a dropdown menu currently set to "Normal service". Below the dropdown are two buttons: "Save" and "Cancel".

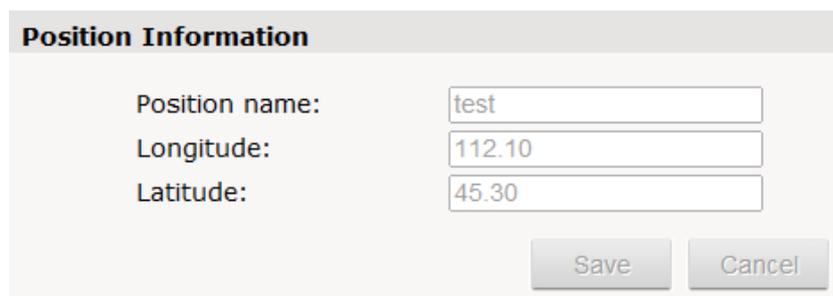
Fig 2.31

IGMP: It is a multi-cast protocol of internet family, helping IP Host report their membership to the adjacent routers.



The image shows a configuration dialog box titled "IGMP". It contains four fields: "Stream type:" with a dropdown menu set to "Major Stream"; "State:" with radio buttons for "On" and "Off", where "Off" is selected; "MultiCast IP address:" with a text input field containing "0.0.0.0"; and "RTP port:" with a text input field containing "0". At the bottom are "Save" and "Cancel" buttons.

Fig 2.32



The image shows a configuration dialog box titled "Position Information". It contains three text input fields: "Position name:" with the value "test"; "Longitude:" with the value "112.10"; and "Latitude:" with the value "45.30". At the bottom are "Save" and "Cancel" buttons.

Fig 2.33

DDNS: The user's dynamic IP address is mapped to a fixed domain name resolution service.

When connecting network each time, the client's procedure would pass the host's IP address to the server's procedure which provides DNS service and realize domain name resolution. That is, DDNS captures the changing IP address and corresponds the domain name, which is how other clients communicate.

DDNS

DDNS State: On Off

Method: ▼

UserName:

Password:

Domain:

Fig 2.34

PORT: an interface, passing data between the computer and other devices (e.g. Printer, mouse, keyboard, monitors), among network, or other computers in connection.

PORT

RTSP Port:

Onvif Port:

Http Port:

Video Port:

Notes: Settings are invalid while the ports are repeat!
Please reboot the device and refresh the page after changing the ports.

Fig 2.35

Cloudlens

CloudLens

P2P: ON OFF

ID:



Fig 2.36

2.6.3 Management Software

This section is very simple, and here is the introduction:

Software initial user name is admin, while password is 123456.

After login, you can find “search” button on the top of the interface, and click to search all IP cameras in the LAN area.

Among all the camera lists found out, tick the ones you want to manage and click “save” on the left upper corner. Then turn off the dialog to enter the interface, and double click the IP camera and you will open the video.

Other relative settings are very simple to set. Please operate by the reference of the interface prompts.

2.6.4 IP Cameras

IP Cam: setting of the camera parameter, like basic settings, expose settings, effect setting, white balance and reset.

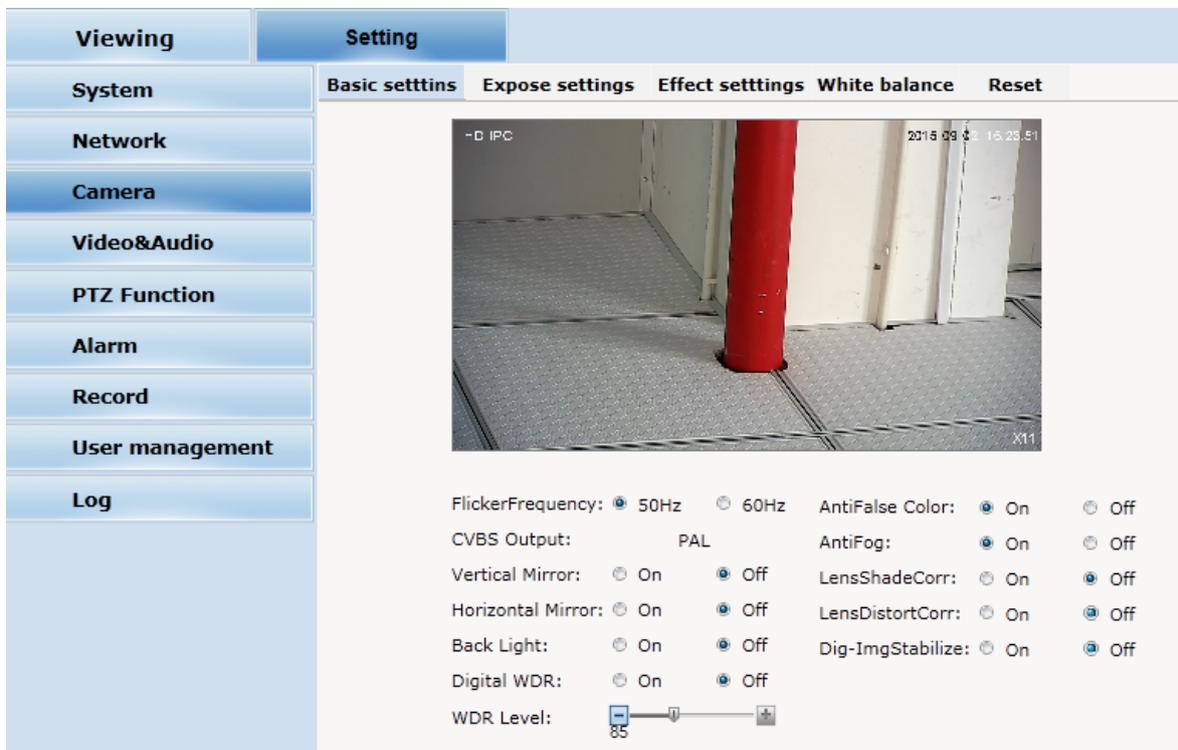


Fig 2.37

Basic set: Enable and disable setting of camera system, noise, mirror, BLC and other function (this depends on the function of zoom module).

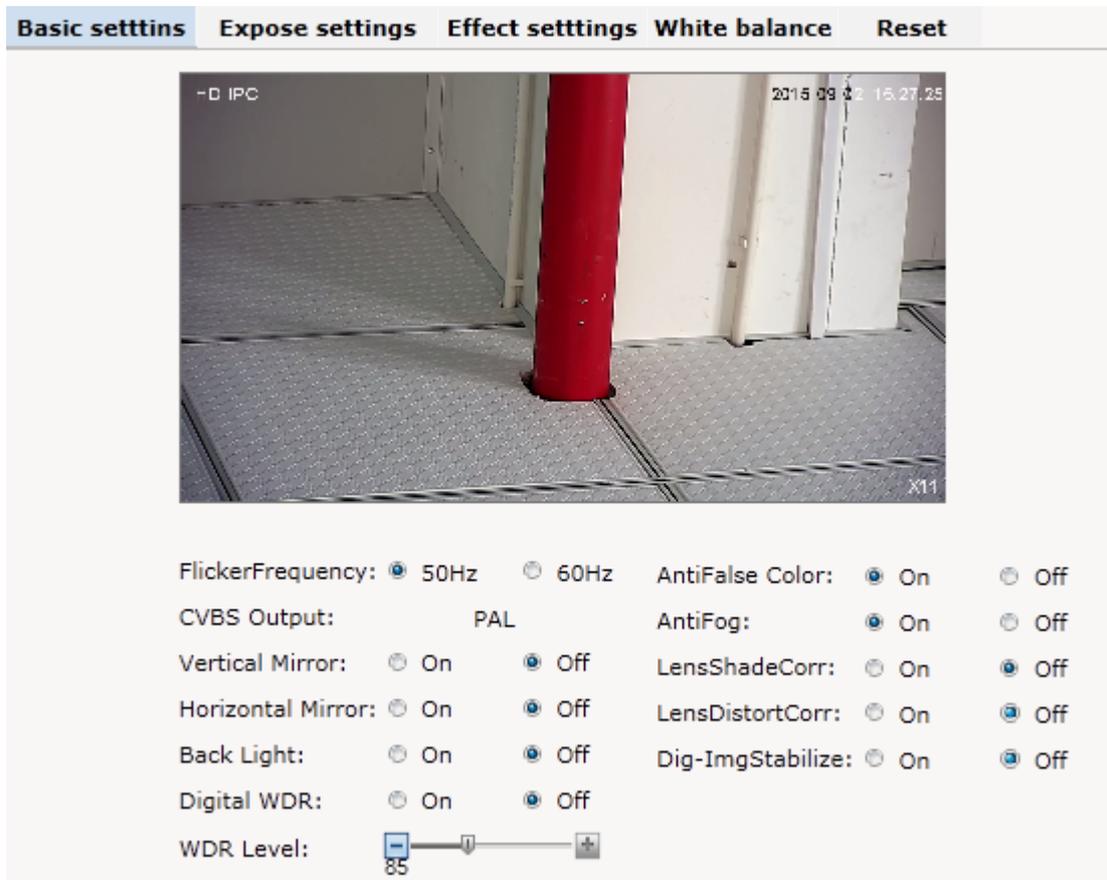


Fig 2.38

Power Frequency: 50HZ domestic use; 60HZ abroad use.

Horizon Mirror: image horizontal mirror display.

Vertical Mirror: image vertical mirror display.

BLC: divided into different zones and each zone expose separately. BLC offers ideal exposure in front of strong back light. There is low, medium and high level optional.

Expose settings: expose mode, Color to Black, Scene select, and AGC setting.

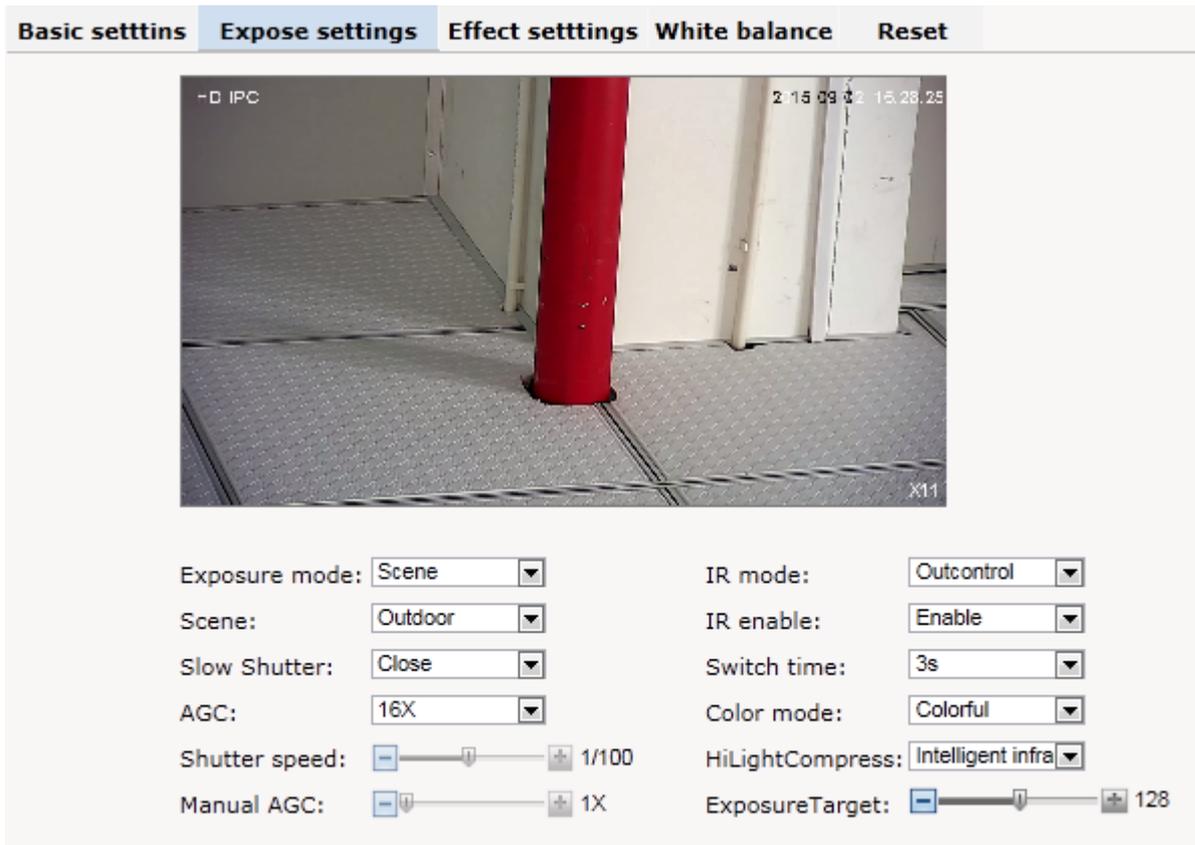


Fig 2.39

Expose set: program mode, for normal video mode; shutter mode, for fast moving objects.

Scene Select: Indoor, eliminate indoor lighting flash; Outdoor, eliminate outdoor overexposure.

Slow shutter: shutter setting, default is off.

AGC: A kind of control method of automatically adjusting amplifier circuit with signal intensity. The higher the gain is, the brighter the evening image becomes. You can adjust the image according to the real requirement. Higher gain dims the image.

IR mode: change IR mode

IR enable: enable and disable IR LED

Switch time: IR on and off switching duration

Color mode: change color mode

HLC: Hight light compress

Exposure Target

Effect Setting: setting of image sharpness, brightness, contrast, saturation.

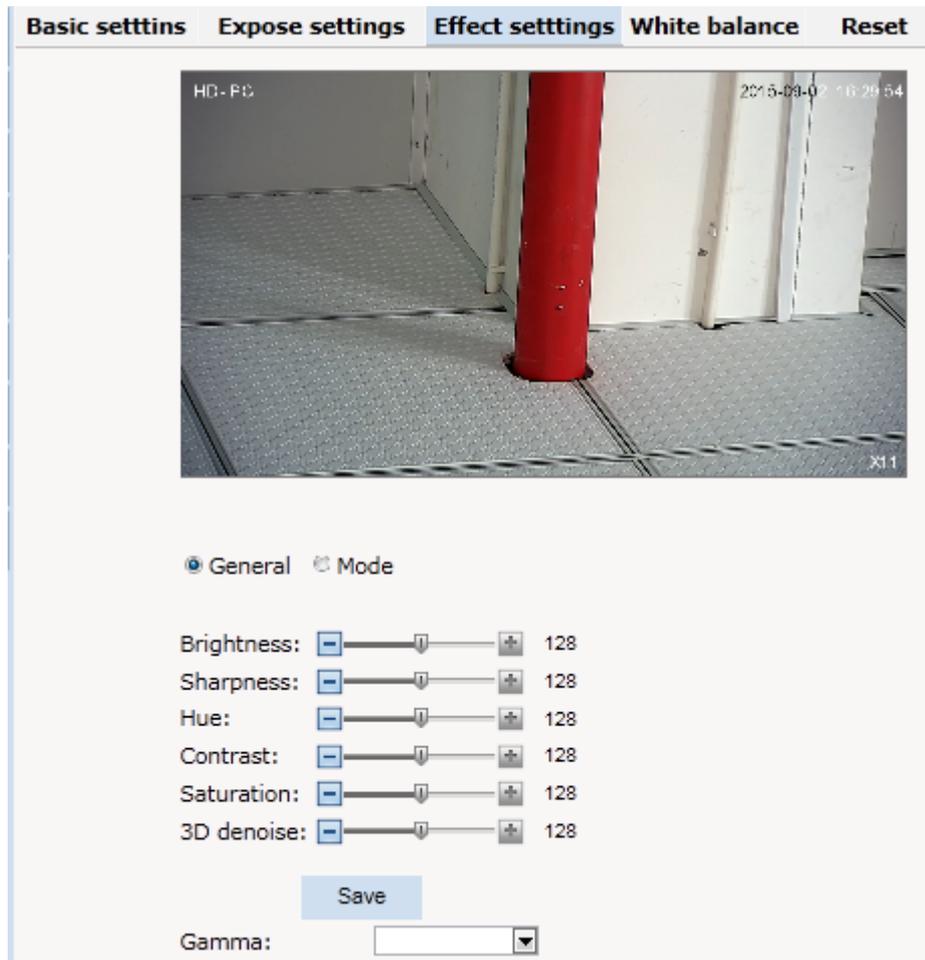


Fig 2.40

Brightness: unit projected area of brightness intensity would bring the overall brightness of the image. Over higher brightness would cause the insufficient permeability.

Sharpness: also called “resolution”, which reflects the image plane clarity and edge sharpness. Adjust the sharpness higher, the contrast details on the plane image become higher and then the image looks much clear. If the sharpness is set too high, white trim lines would appear next to both black lines and you will get distorted glare image.

Hue: adjust the color

Contrast: It is critical to the image effect. Generally, the higher the contrast is, the more clear vivid the image becomes; small contrast brings grey screen quality.

Saturation: refers to the vividness of the color, also known as the purity of the color. The higher the color content is, while the larger the saturation is; the higher the achromatic color is, while the smaller the

saturation is.

3D Noise: Noise reduction adjust during night

White Balance: Balance the white. Regardless of any light, the white objects would return to white color.

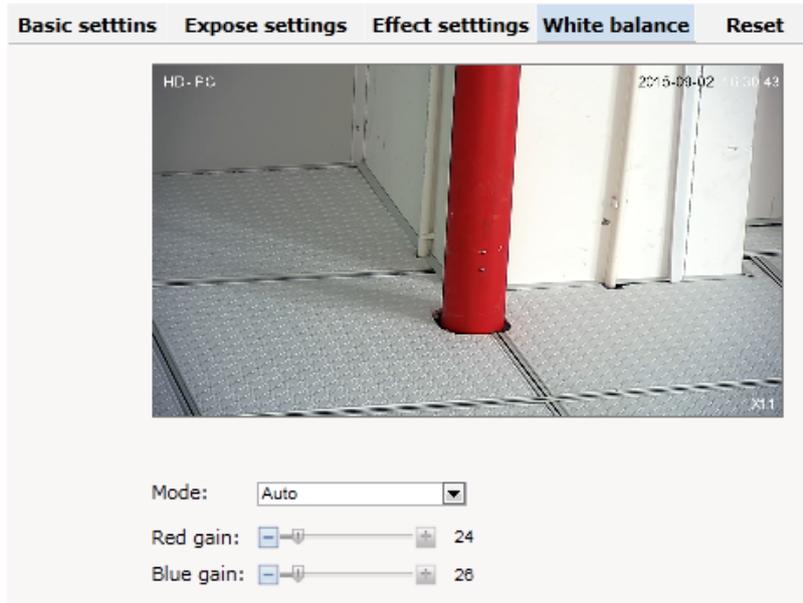


Fig 2.41

White Balance: auto, cloudy, Day (D65), Day (50), Fluorescent Light, Filament Lamp, Sun Up, Manual.

Reset: fix the camera data. Click "Reset" to return to factory default.

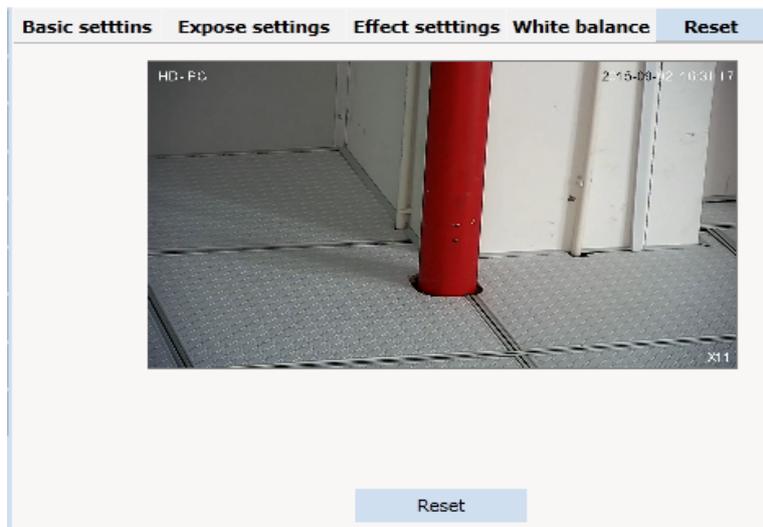


Fig 2.42

2.6.5 Audio & Video

Audio & Video: setting of camera audio, video, OSD, and path.

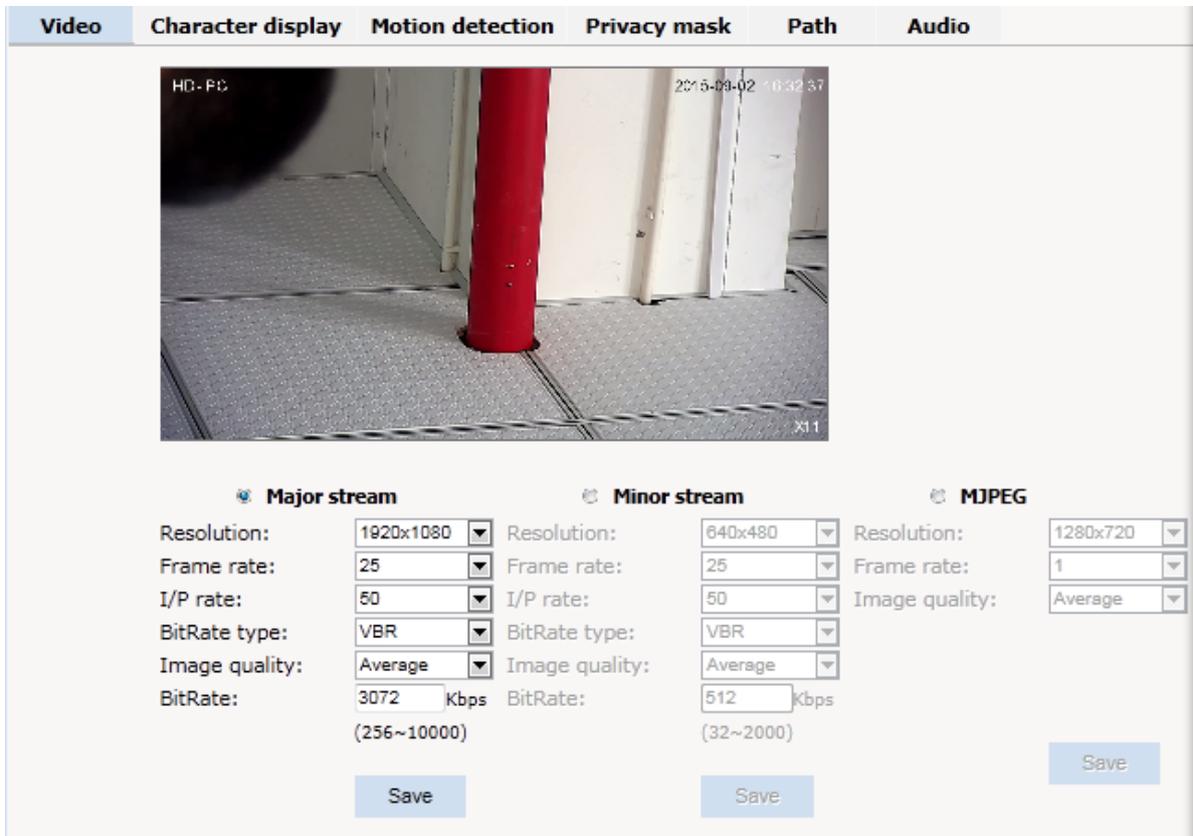


Fig 2.43

Video: Main Stream, Minor Stream, MJPEG.

Resolution: 1920*1080, 1280*1024, 1280*960, 1280*720, 640*480.

Frame: the number of IP Cam's processing compressed frames. If the number of the frame is set bigger, the image would become more continuity, but it reduces the performance of CPU processing other events. If the frame rate is set smaller, the continuity gets worse, but CPU could process more other events. Recommendation: NTSC system: 30; PAL: 25.

I/P Rate: user can change the I/P rate according to the demand, do not recommend to change the setting if user are not professional.

Image quality: change the setting to choose the picture quality display

Bitrate Type: VBR — constant image quality, normal use when the bandwidth is sufficient. CBR — image transmission with fixed bandwidth.

Bit rate: 512K, 1024K, 2048K, 3072K, 4096K, 5120K, 6144K. The bit rate is higher, the footprint is bigger, while the image is better. 720P/2M 1080P/4M are commonly used. I/P rate: the contrast of I frame and P frame. The bigger the ratio is, the data is smaller. Recommendation: set 15.

Text Overlay: Text, time, date can be displayed on the screen. XY 2 dimension stands for position.

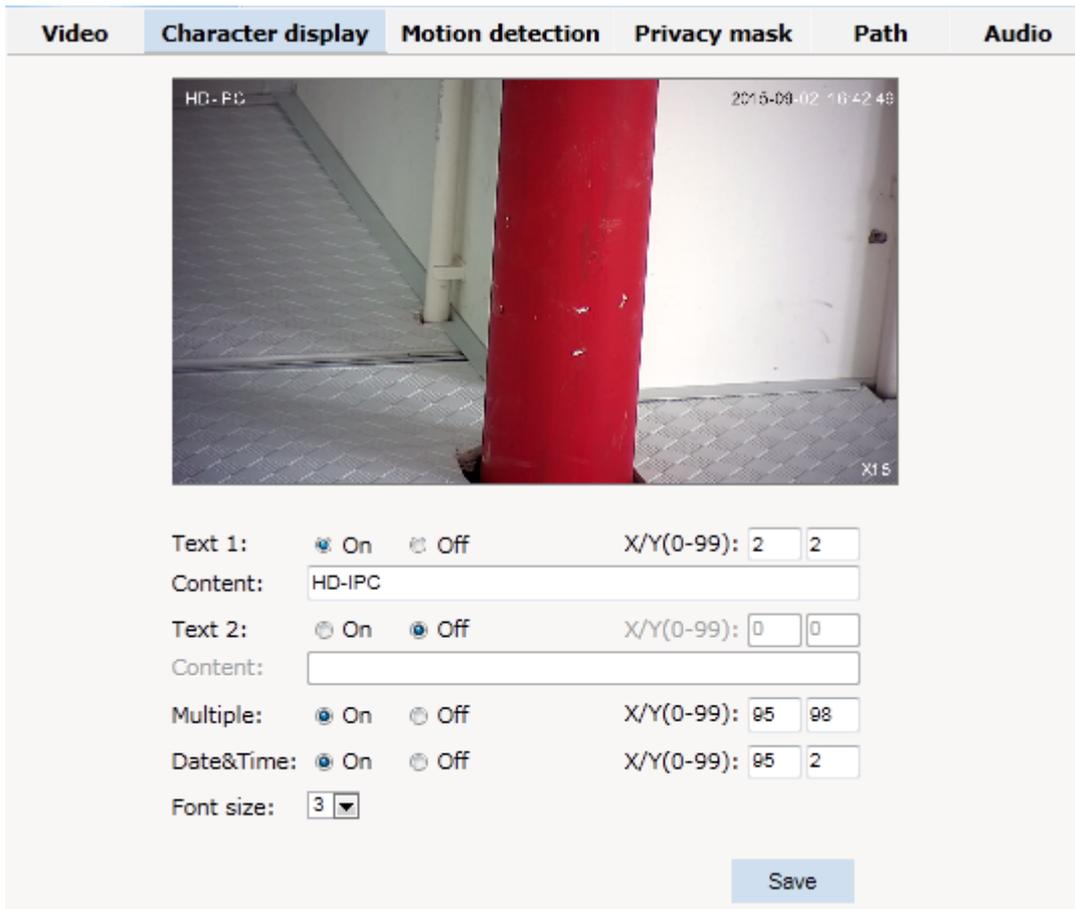


Fig 2.44

OSD setting includes: text OSD, date OSD and time OSD.

Text OSD: set the subject and position. Choose On or Off to display the text or not. Input the content in the form after the text, where 24 characters can be displayed. X and Y coordinate is based on the zero coordinate on the upper left corner of the image. X and Y coordinate can be set to an integer between 0 to 99.

After setting the text content and coordinate, click display and the following setting. Then the text would appear on the real live video. If you want to cancel it, please tick off the option and choose setting.

Date OSD: set date, position, ON or OFF of the date display.

Time OSD: set the position of time display, ON or OFF of the time display.

Motion Detection: commonly used in unmanned video and alarm.

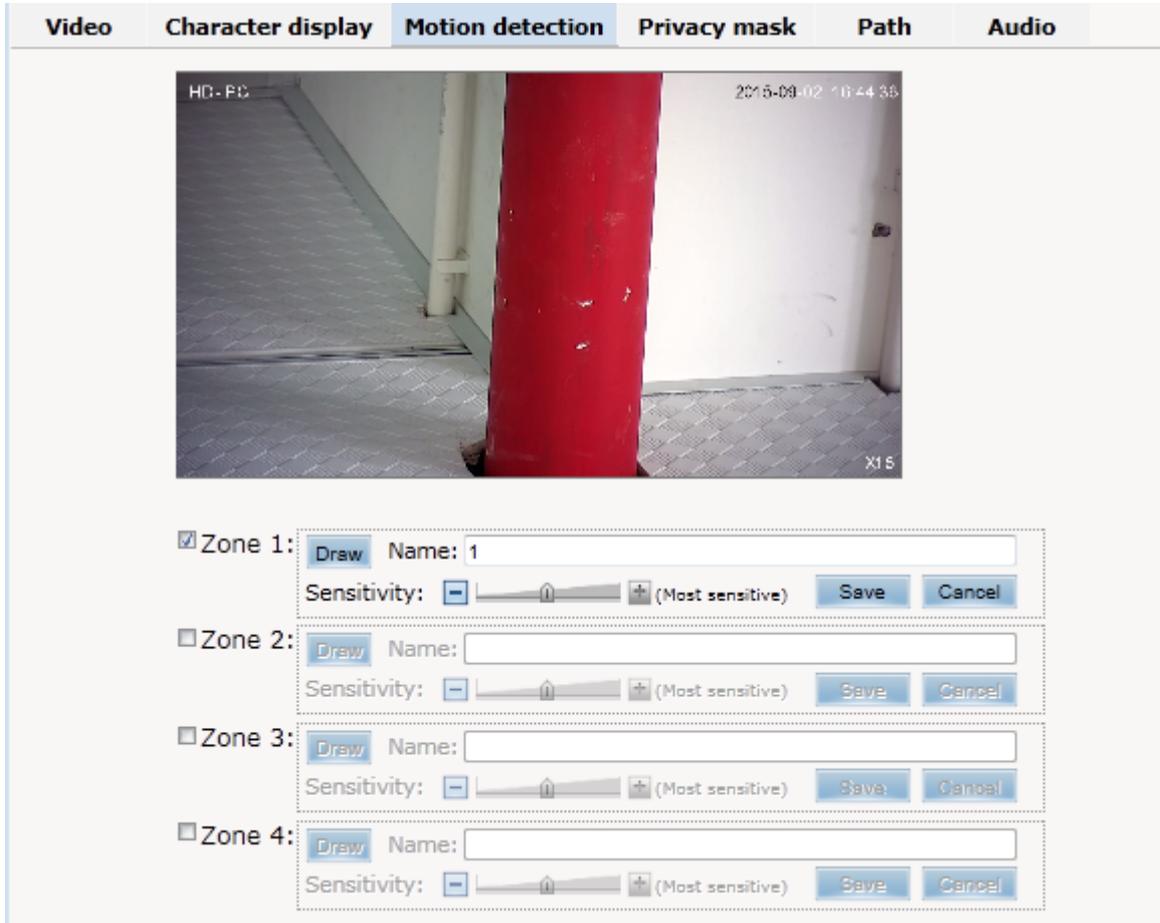


Fig 2.45

【Sensitivity】 : Setting motion detection sensitivity. The sensitivity can be set from 1 to 100. The smaller the number is, the higher the sensitivity is. Recommendation: 15.

【Zone】 : You can set 4 motion detection zones. Each of them can be drawn and set with a mouse. When the set zone detects motion, the alarm is triggered and the log is recorded.

【Motion detection switch】 : You can set or cancel motion detection alarm.

☺**Note:** With detection alarm on and 5 seconds thereafter, the zone begins to detect the motion.

Privacy Zone: setting the privacy zone of the camera. This zone can not move . It is available if PTZ is in a fixed place.

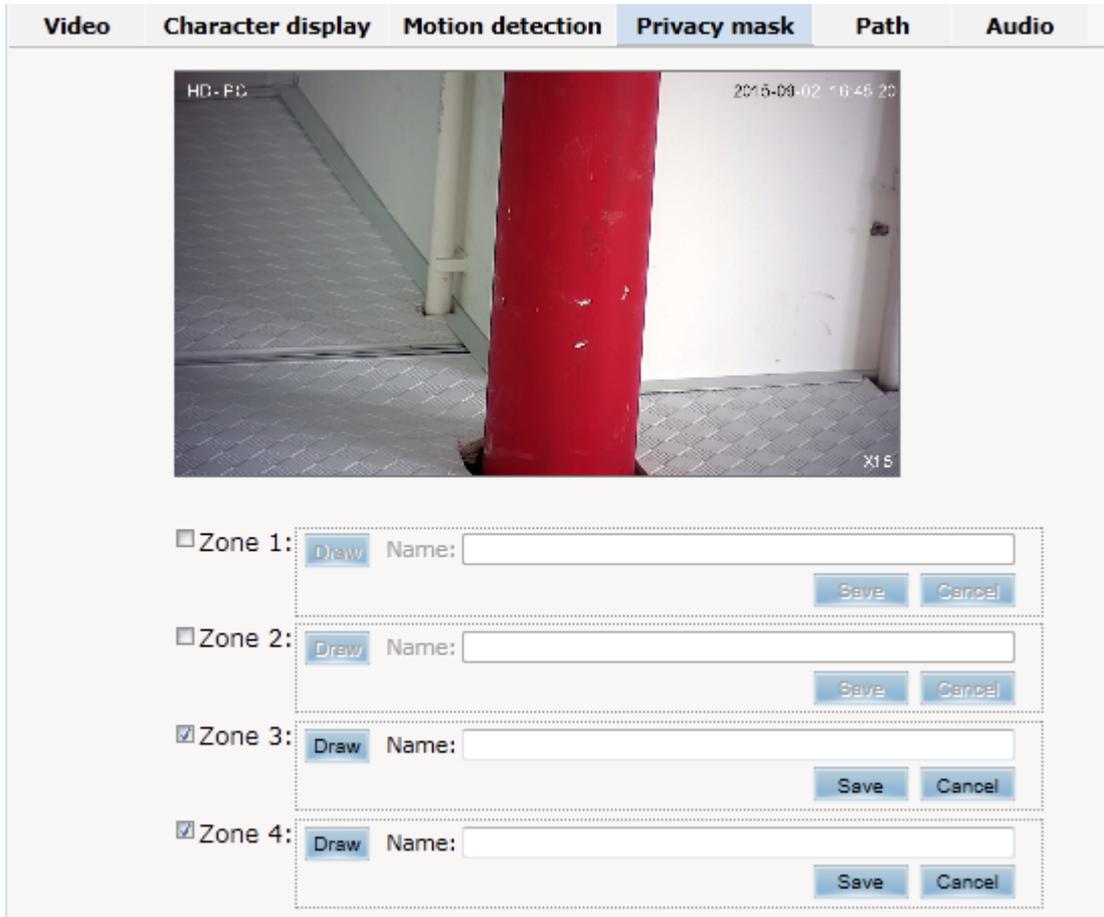


Fig 2.46

IP Cameras support privacy zone function. When a special zone is not allowed to be seen by the operator, you can use this function. Through MASK setting, the specific zone is covered and the operator cannot see the video of the zone.

【Zone】 : You can set 4 privacy zones. Each of them can be drawn and set with a mouse.

Select save and the zone is covered. You can set the coordination of the privacy zone as well and click save to effect immediately.

Path: storage path of IE recording and snapshot.

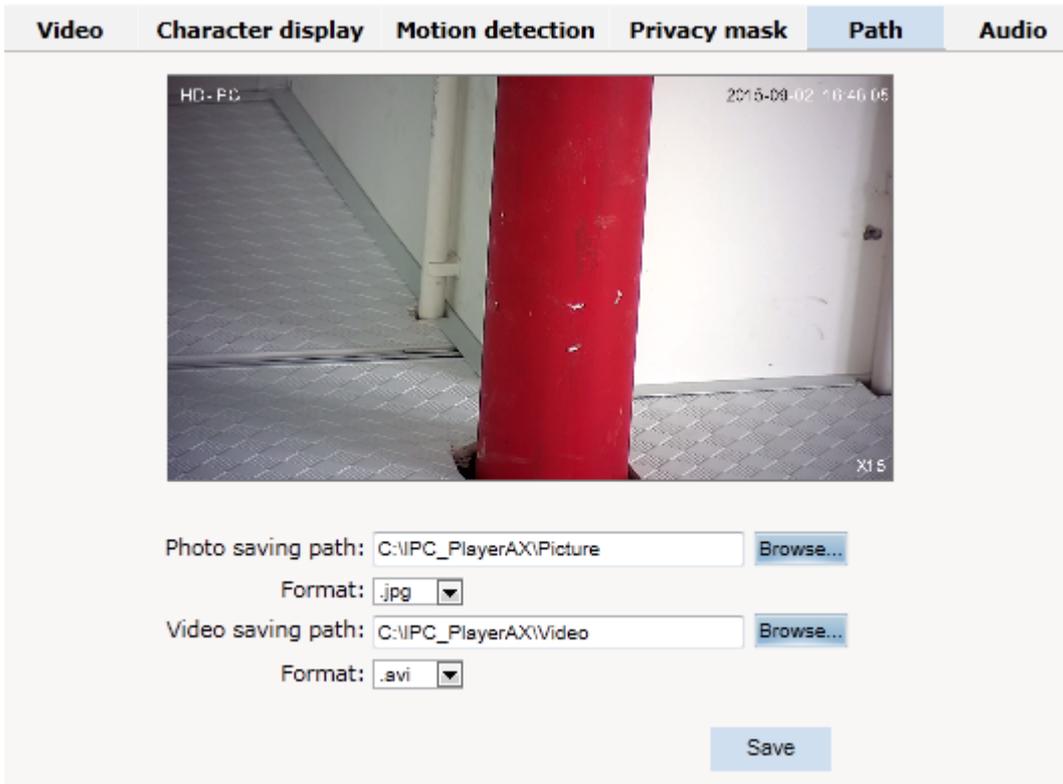


Fig 2.47

The default is C drive control folder. Click browse to re-select the storage path. For the type of the file, photos is jpg/bmp and video is avi/ifv.

2.6.6 PTZ Function

PTZ function: preset, auto tour , PTZ protocol.

Preset: When the PTZ patrols to an important spot and commands a preset, the PTZ would record the location and status to build up the link. When the command is shot, the camera fast patrols to the spot and the camera returns to that memory. The operator obtains the spot fast and easily. 254 preset positions are optional.

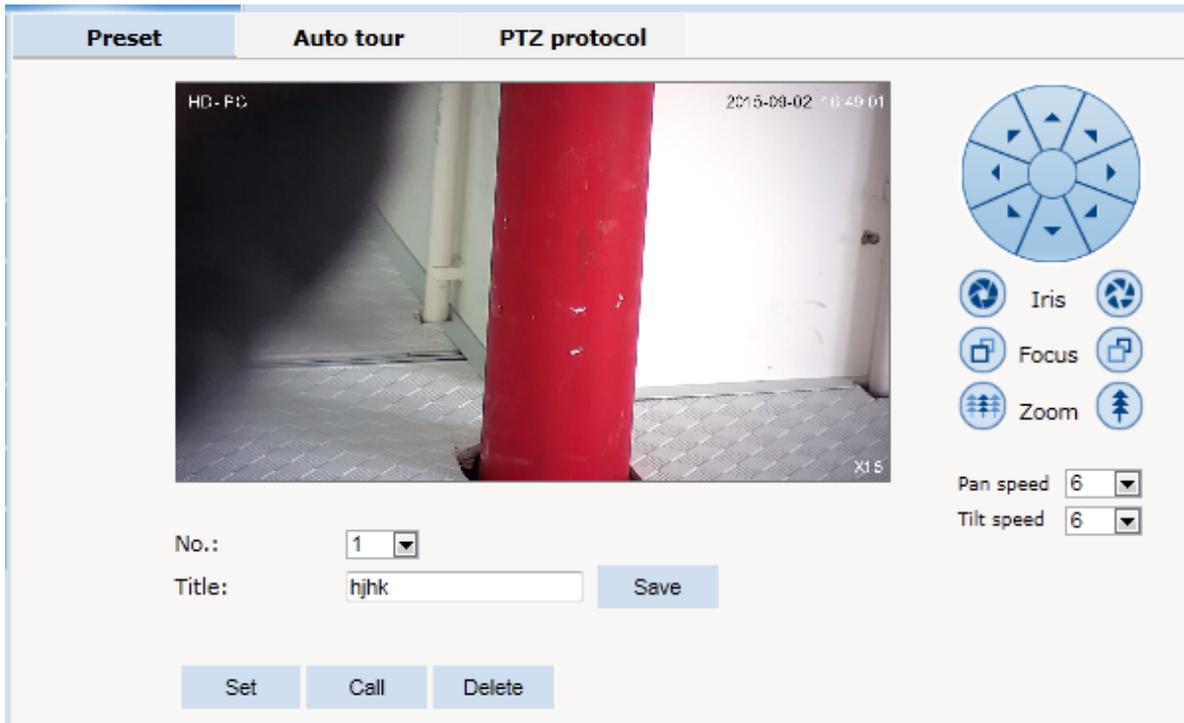


Fig 2.48

Auto Tour:

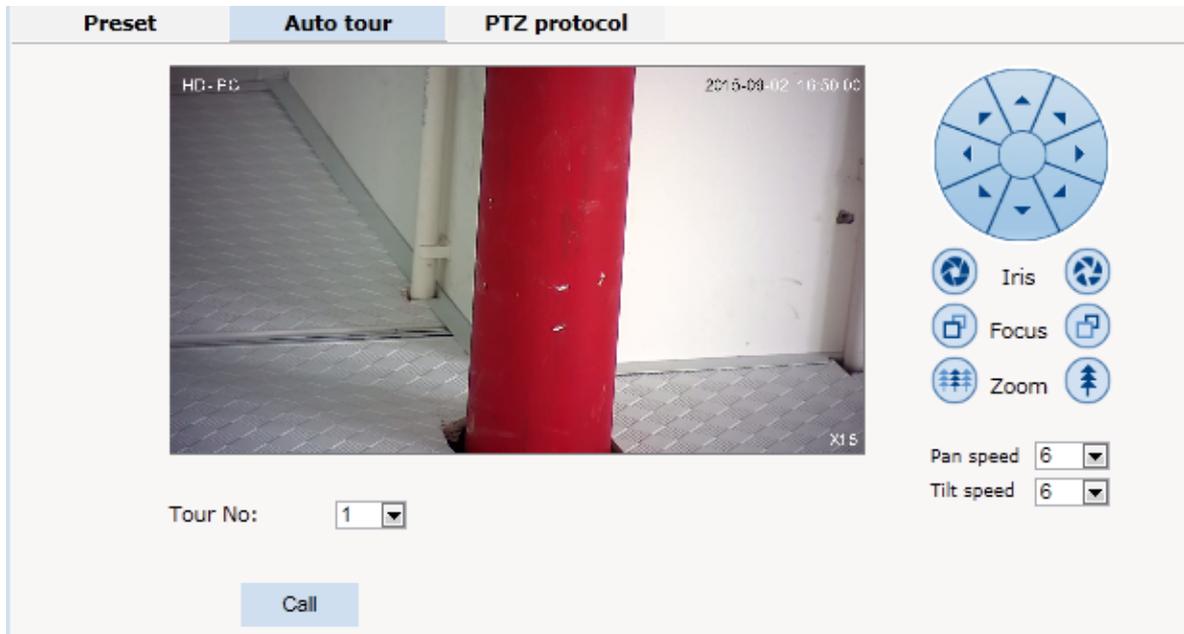


Fig 2.49

Protocol set:

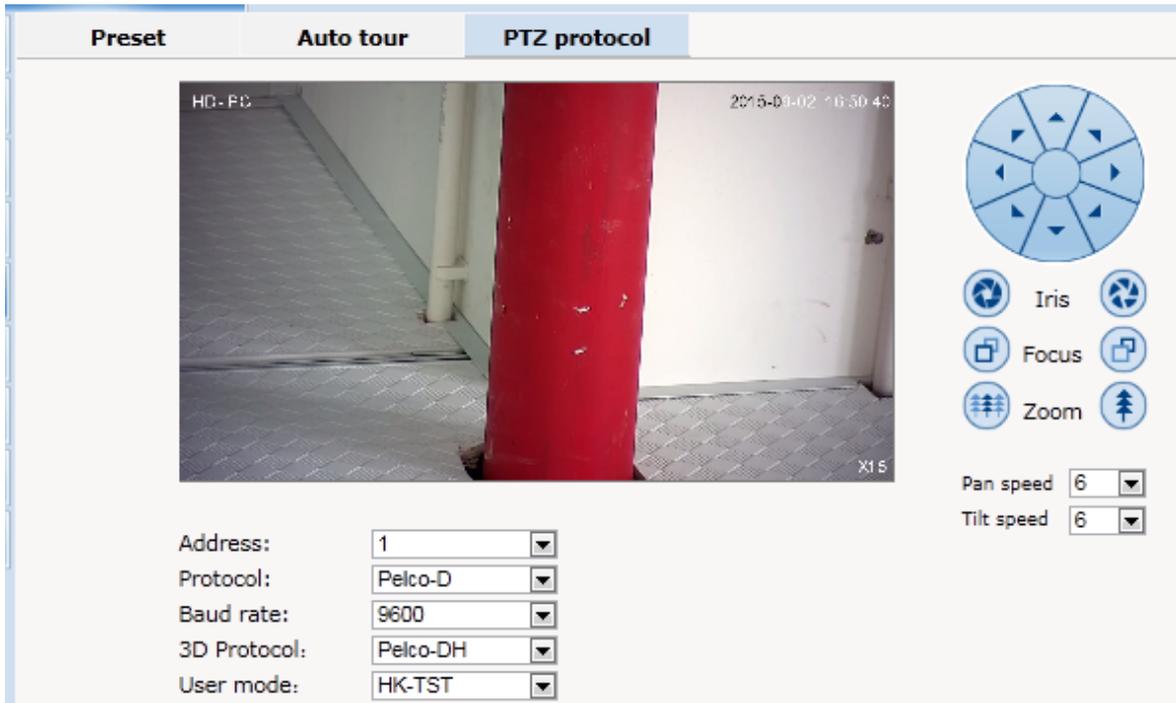


Fig 2.50

2.6.7 Alarm

Alarm: grounded circuit and open circuit for I/O. Set net contact or local contact.

Alarm configuration

I/O In 1:

Alarm out contact:

Alarm server IP:

Alarm out contact

	I/O out 1	Mail	Localsave	FTP	Audio	Select all
I/O In 1	<input type="checkbox"/>					
Motion area 1	<input type="checkbox"/>					
Motion area 2	<input type="checkbox"/>					
Motion area 3	<input type="checkbox"/>					
Motion area 4	<input type="checkbox"/>					

Alarm schedule

	Start time	End time
<input type="checkbox"/> Sun.	00 : 00	23 : 59
<input type="checkbox"/> Mon.	00 : 00	23 : 59
<input type="checkbox"/> Tue.	00 : 00	23 : 59
<input type="checkbox"/> Wed.	00 : 00	23 : 59
<input type="checkbox"/> Thu.	00 : 00	23 : 59
<input type="checkbox"/> Fri.	00 : 00	23 : 59
<input type="checkbox"/> Sat.	00 : 00	23 : 59
<input type="checkbox"/> Everyday	00 : 00	23 : 59

Save

Fig 2.51

The IP camera supports 2 channel alarm in. User can set grounded or open circuit for each I/O.

Alarm out contact: transmission method of alarm signal.

Local contact: local alarm out. Default local contact.

Net contact: internet transmission.

☺**Note:** The function requires the synchronous use of digital video management software, e.g. HVMS. Choosing net contact, user is supposed to set the alarm IP as HVMS-CMS IP. Finishing data set of HVMS, the relay switch can be remotely controlled. For more details, please refer to HVMS manual.

Alarm IP: set the IP address of the alarm.

User can set each channel signal alarm in or alarm method of each motion detection: Alarm in 1 (for net contact, the alarm in 1 is ineffective.), sending emails, FTP uploading, audio and others. The setting takes into effect after clicking setting button.

Alarm Schedule: user can set alarm schedule by day and exactly time.

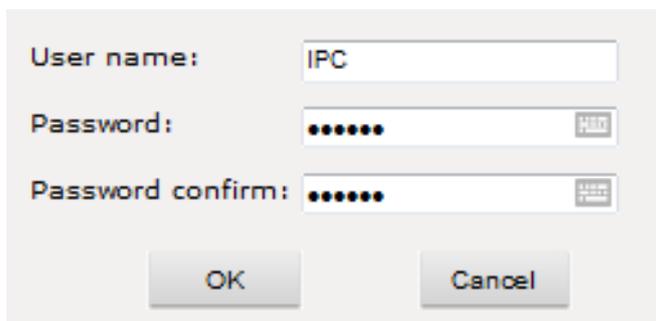
2.6.8 User

User: Administrator's authority to operate the camera.

Add user 			
Num	User name	Property	Operation
1	admin		

Fig 2.52

Add user: click the image "Add user ", you will get the following dialog:



The dialog box contains three input fields and two buttons. The 'User name' field contains the text 'IPC'. The 'Password' and 'Password confirm' fields contain seven dots each. The 'OK' button is on the left and the 'Cancel' button is on the right.

Fig 2.53

Input user name and password.

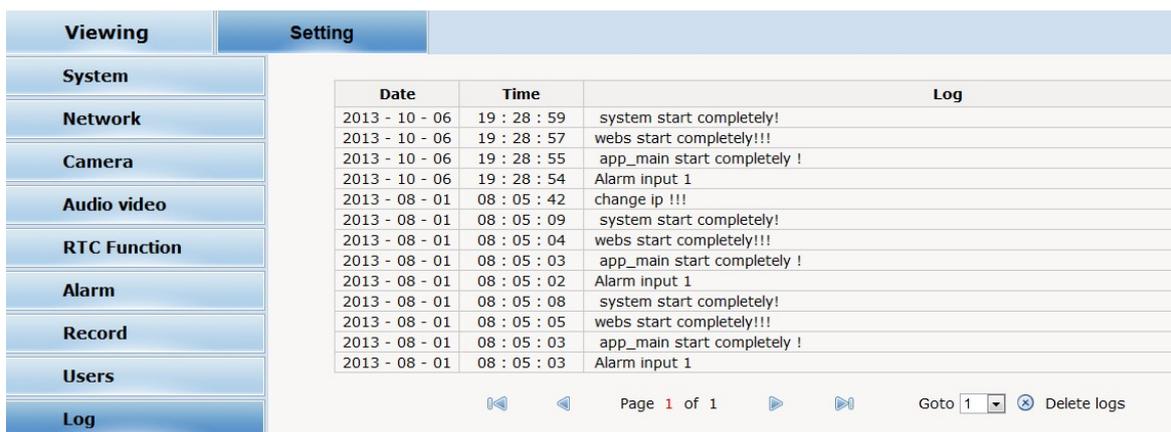


Add user 			
Num	User name	Property	Operation
1	admin		
2	IPC		 

Fig 2.54

2.6.9 log

Log: recording of each operation



Viewing		Setting	
System			
Network			
Camera			
Audio video			
RTC Function			
Alarm			
Record			
Users			
Log			

Date	Time	Log
2013 - 10 - 06	19 : 28 : 59	system start completely!
2013 - 10 - 06	19 : 28 : 57	webs start completely!!!
2013 - 10 - 06	19 : 28 : 55	app_main start completely !
2013 - 10 - 06	19 : 28 : 54	Alarm input 1
2013 - 08 - 01	08 : 05 : 42	change ip !!!
2013 - 08 - 01	08 : 05 : 09	system start completely!
2013 - 08 - 01	08 : 05 : 04	webs start completely!!!
2013 - 08 - 01	08 : 05 : 03	app_main start completely !
2013 - 08 - 01	08 : 05 : 02	Alarm input 1
2013 - 08 - 01	08 : 05 : 08	system start completely!
2013 - 08 - 01	08 : 05 : 05	webs start completely!!!
2013 - 08 - 01	08 : 05 : 03	app_main start completely !
2013 - 08 - 01	08 : 05 : 03	Alarm input 1

Page 1 of 1 Goto 1 Delete logs

Fig 2.55

3. Function Instruction

3.1 Basic Function

- **Dome Running**

Control joystick or up, down, left and right key in the keyboard.

- **Zoom**

Press ZOOM- button to make the lens farther and minify the scene.

Press ZOOM+ button to make the lens closer and magnify the scene.

- **Focus**

After FOCUS- button is pressed, the object in vicinity will become clearer while the object far away will become ambiguous.

After FOCUS+ button is pressed, the object far away will become clearer while the object in vicinity will be ambiguous.

- **Iris**

Press IRIS- to gradually shrink the iris and decrease the image brightness.

Press IRIS+ to enlarge the iris and increase the image brightness.

- **Preset Point**

Setting preset press button "preset"+"number"+"Enter".

Calling preset press button "call"+"number"+"Enter".

Deleting preset press button "clear"+"number"+"Enter".



Remark: Some preset points are used tentatively for special functions.

3.2 Special Function

The follow presets are predefined as special function, please shot+ preset No+ enter to enable those functions:

PREST	FUNCTION	PRESET	FUNCTION
34	Reset	84	Turn on far light
35	Run Wiper	85	Turn on near light
36	Stop Wiper	91(31)	Call A-B scan
75	Pattern 1	1	Set left point of A-B scan
76	Pattern 2	2	Set right point of A-B scan
77	Pattern 3	96	Guard tour 3
78	Pattern 4	97	Guard tour 2
81(41)	Auto Day/Night	98(38)	Guard tour 1
82(42)	Night Mode	99	Pan scan
83	Day Mode		

 **Remark:** If use some other equipments to control IR dome, some special functions probably can't be effective because of the limit of protocol.

Appendix I Anti-lightning, Anti-surge

This product is extremely air discharge and lightning protection with TVS tube technology, which can effectively prevent the transient lightning below voltage 3000V, surge and damages caused by other types of pulse signals.

However, necessary protective measures should be made in the premise of ensuring electrical safety for outdoor installation according to the actual situation:

- Signal transmission line must be at least 50 meters far away from the high-voltage equipment or high voltage cable.
- Try to choose outdoor wiring lay down along the roof line.
- Way of sealed steel pipe buried wiring is used in the area which opened, and steel pipe units grounded in one point. Overhead wiring is absolutely prohibited.
- In the strong thunderstorms area or areas with high induced voltage (such as high voltage substations), measure of installation of additional high power lightning protection equipment and lightning rod must be taken.
- Lightning protection and grounding of outdoor devices and lines must take the lightning-protection requirements of buildings into consideration, and comply with the related national standards and industry standards.
- System must be equipotent grounding. Grounding device must meet dual requirements of anti-interference and electrical safety, and should not be shorted or mixed with the adjacent lines in the strong power grid. When system is independently grounded, grounding impedance should be less than 4Ω , and cross-sectional area of grounding conductor must be not less than 25m^2 .

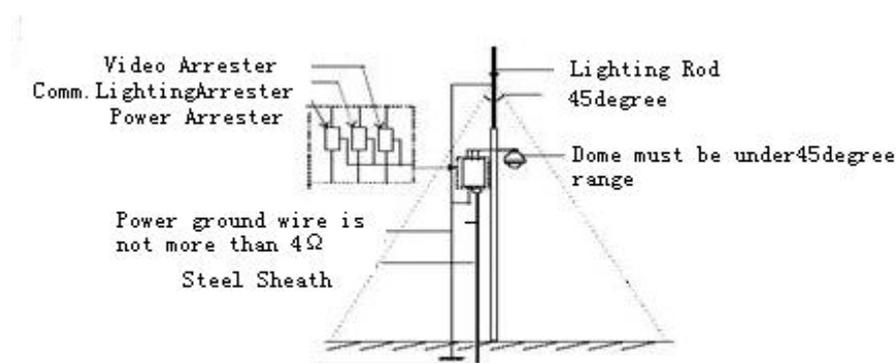


Fig 25

Appendix II Clean Transparent Cover

In order to assure a clear image of dome, the under cover of dome should be cleaned regularly.

- Be careful when cleaning and hold the outer ring of under cover by hands to avoid directly touching with it. Because the acid sweats of finger membrane may corrode the surface coating of under cover. Hard tool scratching the under cover may lead to blurring the images of dome so that affecting image quality.
- Please uses a soft enough dry cloth or other alternatives to wipe internal and external surface.
- If dirt is serious, user can use a mild detergent. Any senior furniture cleaning products can be used to clean the under cover.

Appendix III Exception Handling

Issue	Possible Reason	Solution
After power is applied, there is no action (self-test)	Cable harness is improperly connected	Verify that the orientation of the connector input
	Input power voltage is too low	Verify the voltage of the input power
	Power supply does not work	Change a new power supply
	PTZ has not finish self-test	Please wait 90 seconds
Noise after self-testing	Mechanical obstruction	Verify and correct it
	Camera module is not installed correct	Correct
	Low power	Change the correct power supply
Image is no stable.	Low power	Check the power supply or make sure the power input is AC24V / DC12V
	Network cable properly connected.	Verify the connection of the network cable
Image is blurring	Camera is on manual focus	Change to auto focus
	The lens is dusted	Clean the lens
Controlling the dome is not smooth	Power is too low	Change the AC24V / DC12V Power supply
	Communication distance is too long	Make sure the distance is in the allowed range
No video signal	Wrong installation of plug-in for video	Refer to the installation part, use controls and reset up the plug-in
	IP address fails to ping	Set default as 192.168.110 segment, or revise the IP address
	IP address pings through, but no video	Check whether the video is recorded online or stop the recording
	IP address conflicts with other devices	Set one IP different from others

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