

# **NETWORK CAMERA**

## **User Manual**

**V2.0.0**

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Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual applies to DS-2CD862MF-E, DS-2CD852MF-E, DS-2CD762MF-FB(H), DS-2CD752MF-FB(H), DS-2CD752MF(-E), DS-2CD852F series Network Camera

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

#### DISCLAIMER STATEMENT

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## Safety Instruction

These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into 'Warnings' and 'Cautions':

**Warnings:** Serious injury or death may be caused if any of these warnings are neglected.

**Cautions:** Injury or equipment damage may be caused if any of these cautions are neglected.

	
<b>Warnings</b> Follow these safeguards to prevent serious injury or death.	<b>Cautions</b> Follow these precautions to prevent potential injury or material damage.



### Warnings

1. In the use of the product, you must strictly comply with the electrical safety regulations of the nation and region.
2. Source with AC 24V or DC 12V according to the IEC60950—1 standard. Please refer to technical specifications for more details.
3. Do not connect several devices to one power adapter as an adapter overload may cause over-heating and can be a fire hazard.
4. Please make sure that the plug is firmly inserted into the power socket.
5. When the product is installed on a wall or ceiling, the device should be firmly fixed.

6. If smoke, odor, or noise rise from the device, turn off the power at once and unplug the power cable, then contact the service center.
7. If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

**Notice:**

1. Make sure the power supply voltage is correct before using the camera.
2. Do not drop the camera or subject it to physical shock.
3. Do not touch CCD (Charge Coupled Device) modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the CCD from dirt.
4. Do not aim the camera at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of CCD at the same time.
5. The CCD may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the CCD will not be exposed to the laser beam.
6. Do not place the camera in extremely hot or cold temperatures (the operating temperature should be between  $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$ ), dusty or damp locations, and do not expose it to high electromagnetic radiation.
7. To avoid heat accumulation, good ventilation is required for a proper operating environment.
8. Keep the camera away from liquids.
9. While shipping, the camera should be packed in its original packing, or packing of the same texture.
10. Regular part replacement: a few parts (e.g. electrolytic capacitor) of the equipment should be replaced regularly according to their average life time. The average time varies

because of differences between operating environment and usage history, so regular checking is recommended for all users. Please contact with your dealer for more details.

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# Chapter 1 Introduction

Network camera is a kind of embedded digital surveillance product that combines the features of both traditional analog camera and net DVS (Digital Video Server). Due to the embedded Linux operation system and the latest Davinci hardware platform of TI, the system operates with high scheduling efficiency. Furthermore, the firmware is burned in the flash, which makes the product small, reliable and highly stable.

## 1.1 Network camera Functions and Features

Functions:

- ◆ Network Function :support the TCP/IP protocols(TCP/IP,HTTP,DHCP,DNS,RTSP RTCP,PPPoE, Furthermore,FTP,SMTP,NTP,SNMP addible),and IE browsing.
- ◆ Heartbeat Function: The server can acquire real time operating performance of the network camera through the heartbeat function.
- ◆ Alarm Function: The product includes 1 channel of alarm signal input and 1 channel of alarm on/off output, and supports motion detection, video missing, mask alarm and external alarm input.(Get details in Specification)
- ◆ Voice Talking: Support bidirectional voice talking and monomial voice broadcasting.
- ◆ User Management: Support multilevel right management. The administrator can create up to 15 separate users with different right levels, which highly improves the system security.

Compression Functions:

- ◆ Support resolution of 4CIF (PAL:704 × 576, NTSC:704 × 480), DCIF (PAL:528 × 384, NTSC:528 × 320), 2CIF (PAL:704 × 288, NTSC:704 × 240), CIF (PAL:352 × 288, NTSC:352 × 240), QCIF (PAL:176 × 144, NTSC:176 × 120).

Support resolution up to 1600×1200 Pixels for 2.0 megapixels Network Camera.

Support resolution up to 1280×960 Pixels for 1.3 megapixels Network Camera.

### Remote Control:

- ◆ The product offers a 10M/100M self-adaptive Ethernet interface.
- ◆ Support TCP / IP, HTTP, DNS, RTP / RTCP, PPPoE protocols.
- ◆ Set the parameters, browse real time videos or check the camera performance through software or IE, and get external alarming and store the compressed bit rate through network.
- ◆ Support remote upgrades and maintenance.
- ◆ RS-485 supports monomial transparent channel function so that clients on remote PC can control the serial devices.
- ◆ Support NAS storage.

## 1.2 Applications

This camera is ideal for remote control network applications. E.g.:

1. Network surveillance for ATM, bank counters, supermarkets and factories.
2. Remote surveillance for nursing homes, kindergartens and schools.
3. AI janitors.

4. AI building/district management systems.
5. Self-service systems of power plants.
6. Outdoor monitoring systems for bridges, tunnels and crossroad traffic.
7. Pipelining and warehouse monitoring.
8. 24-hour monitoring for road traffic.
9. Remote monitoring of forest and water resources.
10. Surveillance for airdrome, railway station, bus stop etc.

# Chapter 2 Installation

## Notes:

1. Please check if all the items on the package list have been included with your camera.
2. Read the following contents carefully before the installation.
3. Make sure that all the related equipment is power-off during the installation.
4. Check the power supply to prevent any damage caused by mismatching problems.
5. If the product does not operate properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. Users are responsible for any problem caused by modification or repairing without authorization.

## 2.1 Panels Description

### 2.1.1 Side Elevation of the Camera

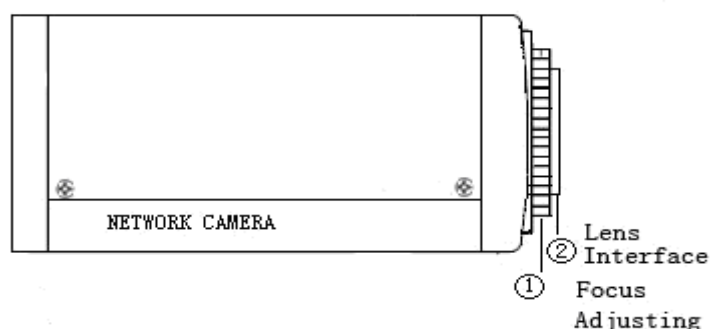


Fig 2.1.1 Side Elevation of DS-2CD852MF-E and DS-2CD852F network camera

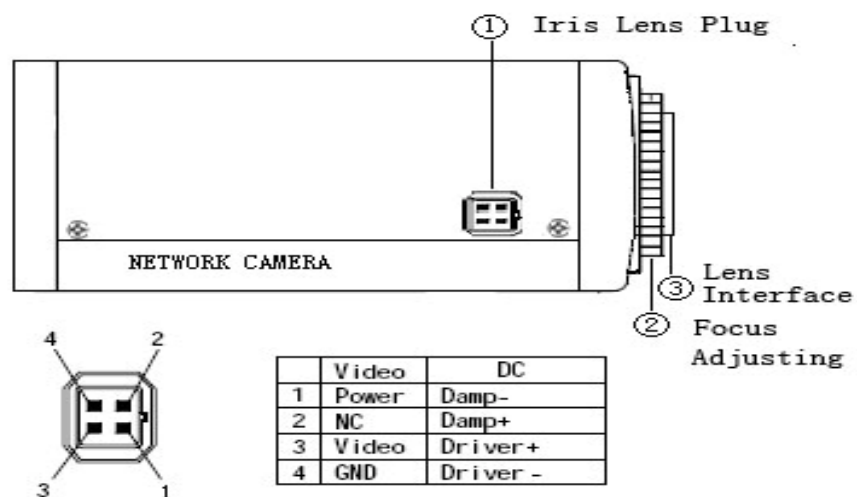


Fig 2.1.2 Side Elevation of DS-2CD862MF-E network camera

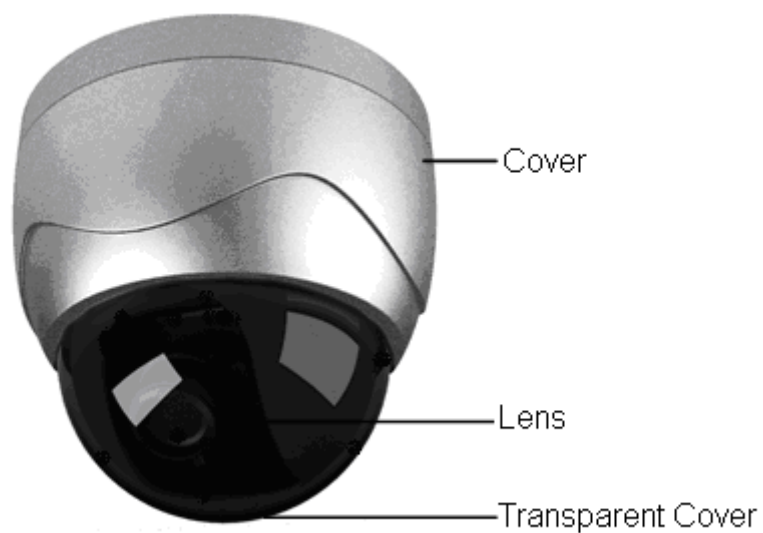


Fig 2.1.3 Side Elevation of DS-2CD752MF-E network camera

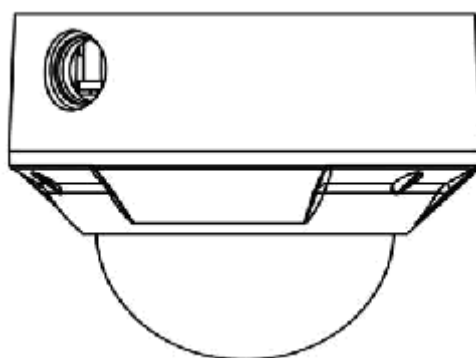


Fig 2.1.4 Side Elevation of DS-2CD752MF-FB DS-2CD762MF-FB network camera

## 2.1.2 Rear Panel Description

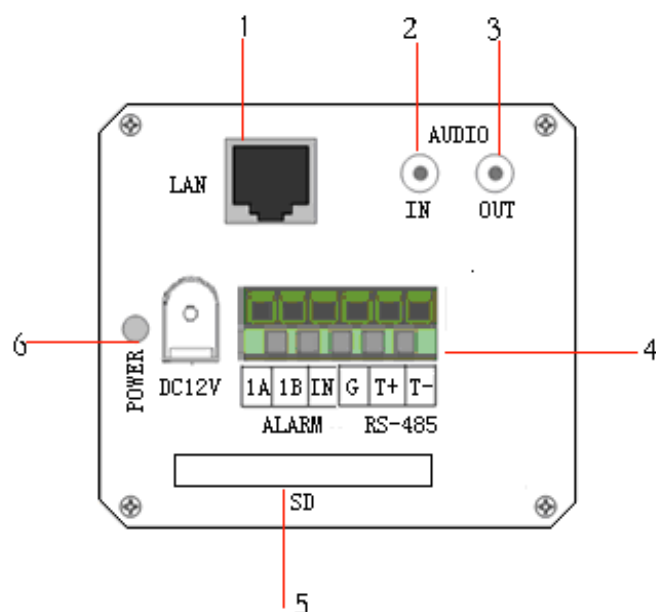


Fig. 2.1.4 Rear Panel of DS-2CD852F series

1. Standard Ethernet (UTP) RJ45 (10M/100M self-adaptive).
2. 1 channel voice talk input, 3.5mm audio interface, 2.0~2.4Vp-p, 1kΩ.
3. 1 channel voice talk output, 3.5mm audio interface, electric line level, 600Ω.
4. 1 channel alarm output (1A 1B). 1 channel alarm input signal (IN,G). RS-485 bus interface (T+ T-).
5. SD card slot (Support SDHC ).
6. Power supply interface of 12VDC, ±10%.

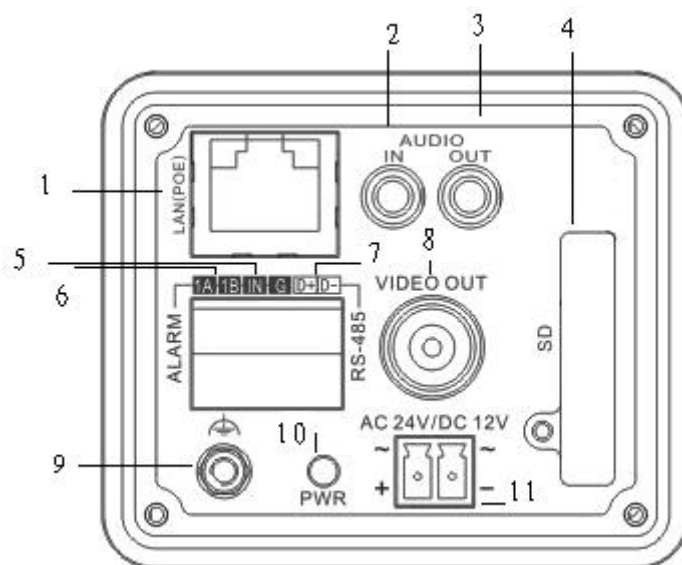


Fig. 2.1.6 Rear Panel of DS-2CD852MF-E, DS-2CD862MF-E network camera

1. Standard Ethernet (UTP) RJ45 (10M/100M self-adaptive).
2. 1 channel voice talk input, 3.5mm audio interface, 2.0~2.4Vp-p, 1k $\Omega$ .
3. 1 channel voice talk output, 3.5mm audio interface, electric line level, 600 $\Omega$ .
4. SDHC card slot (Support SDHC ).
5. 1 channel alarm input signal.
6. 1 channel alarm output (1A 1B). Please refer to Section 2.3.2 for pin definition. (The external series-wound power should be under 12V DC/ 30mA).
7. RS-485 bus interface (T+ T-).
8. Standard BNC for 1 channel video output.
9. GND.
10. Power supply indicate lamp.
11. Power supply interface of AC24V or DC12V.

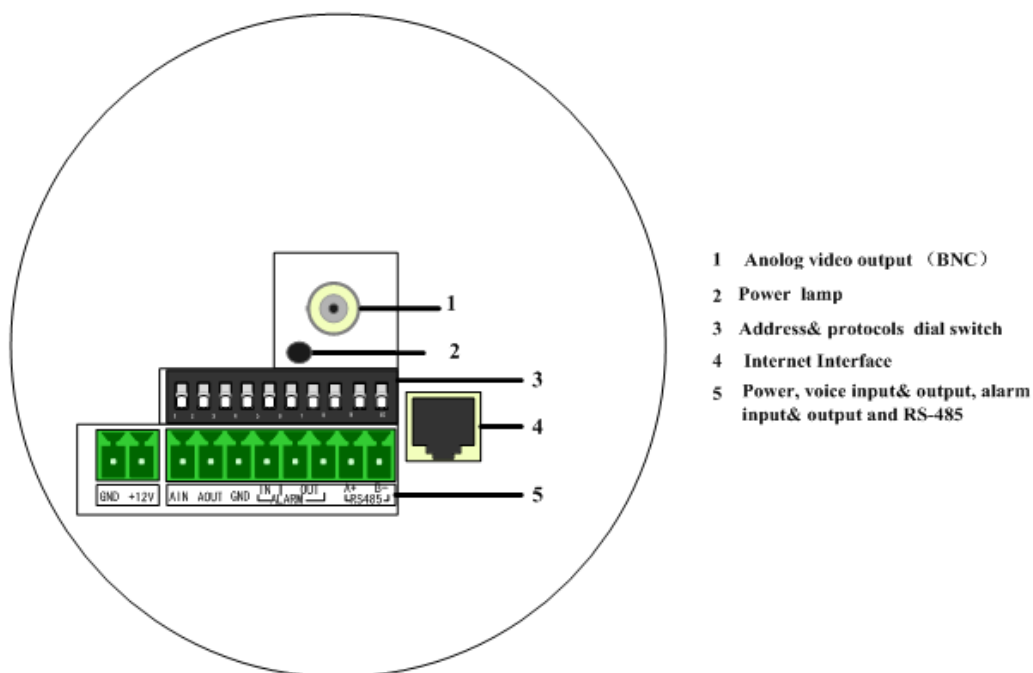



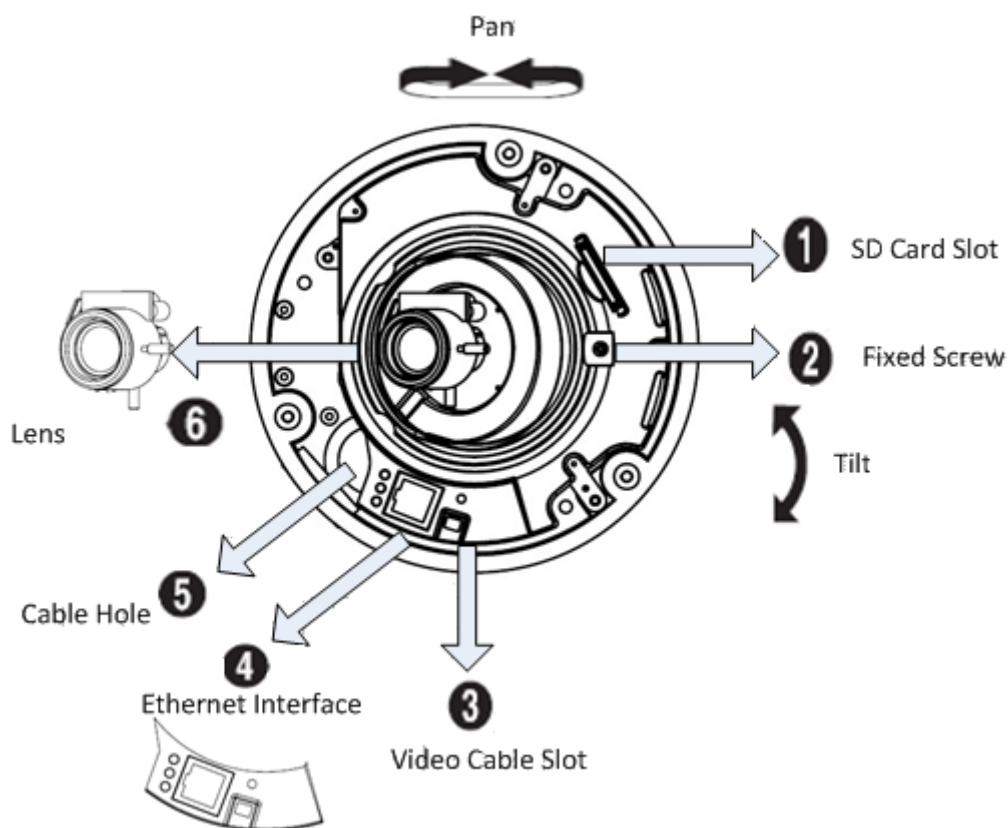
Fig. 2.1.7 Rear Panel of DS-2CD752MF-E series

Address& protocols dial switch, define for dial switch: , from 1 to 5 dial switch function as follows:

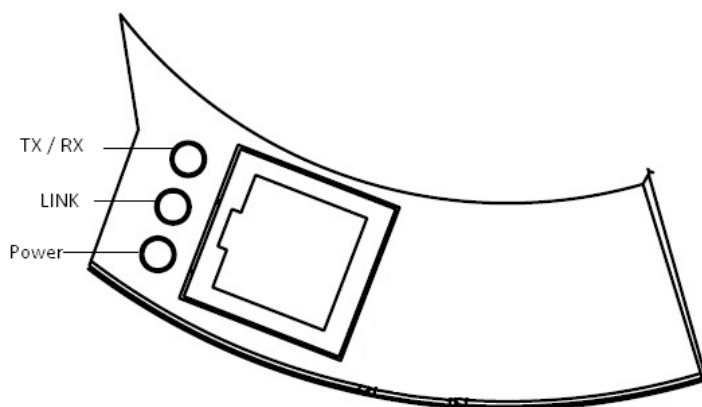
Switch \ Function	ON	OFF
1	SHARP	SOFT
2	AES	AI
3	BLC	OFF
4	FL	ON
5	NAGC	SAGC

Notices: There are invalid dial switches for DS-2CD702, DS-2CD712, DS-2CD792, DS-2CD732 series from 6 to 10;



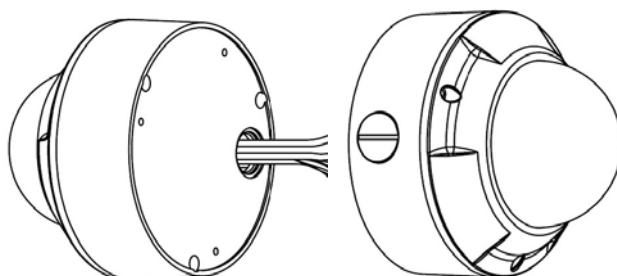


1. SD card slot: Supports SDHC card, and the dimensions of SD meet the market's normal standard.
2. Fixed Screw: Loosen this screw to rotate the camera horizontally and vertically to adjust the pan and tilt position. When the camera angle is determined, lock the fixed screw to fix the camera.
3. Video cable slot: The analog output is not as high definition as network output. The analog video output is just for testing when something unexpected happens.
4. Ethernet Interface:

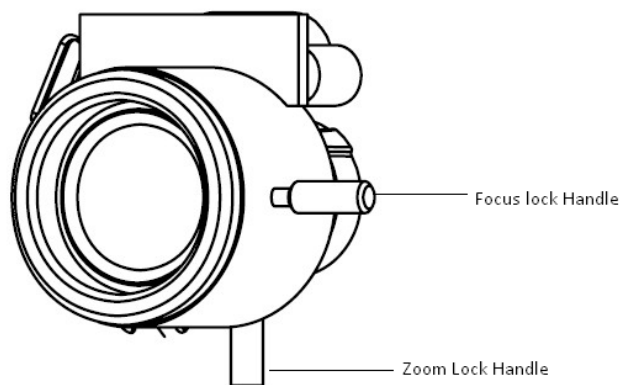


The Ethernet interface is a RJ45 10M / 100M self-adapted Ethernet port. And the three indicate LED's respectively mean transmission and receipt status, link status and power status.

5. Cable Hole: User can select a cable hole from the side or bottom of the camera to thread the cables. When selecting one direction to thread the cable, please cover the other cable hole with a waterproof plug.



6. Lens:



First, loosen the zoom lock handle, rotate it until there is an appropriate view angle

between TELE and WIDE, then tighten the handle.

Loosen the focus lock handle, rotate it until getting a clear image between NEAR and FAR, then tighten the handle.

## **2.2 Product Installation**

### **2.2.1 Box camera Installation**

Box camera can be fixed in both metope and ceiling. Customers can choose whichever way according to their specific needs. Please follow the steps below:(Take fixing in ceiling as an example, fixing in metope follows the same rule).Choose the fixing method and fix the camera bracket accordingly. If it is metope, then you need to fix the expand bolt (note: the mounting hole of the expand bolt should align with the bracket) before fixing the bracket. If the wall surface is wooden, the first step can be ignored and you can use the self-tapping screw to directly fix the bracket. Please note that the metope on which the camera is fixed should be able to bear at least three times the weight of the bracket and the camera.

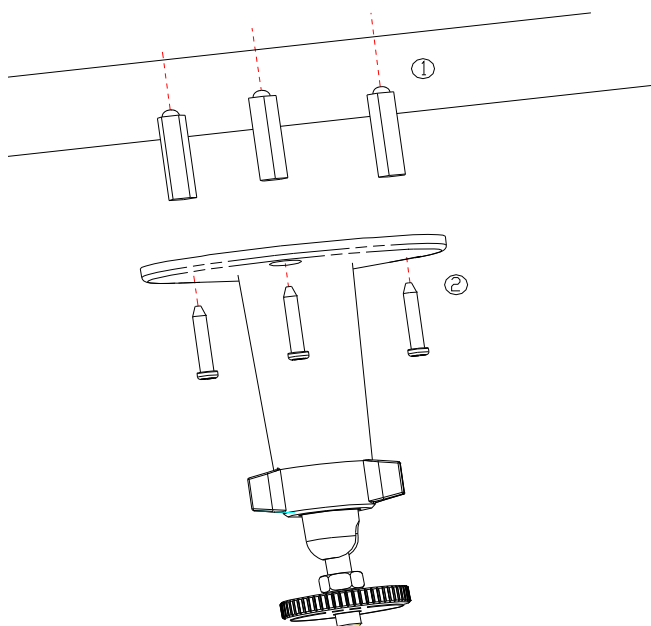


Fig 2.2.1 Fix Ceiling Bracket

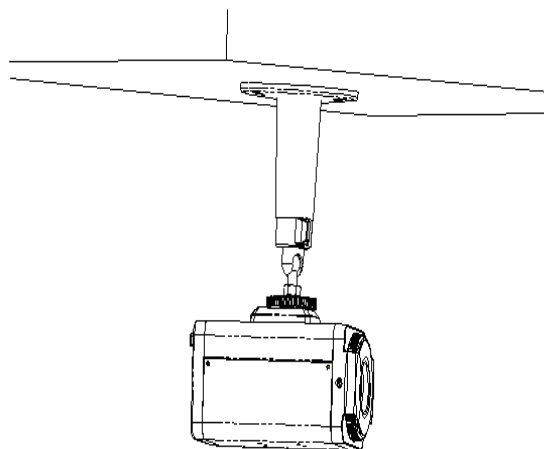


Fig 2.2.2 Fix Camera

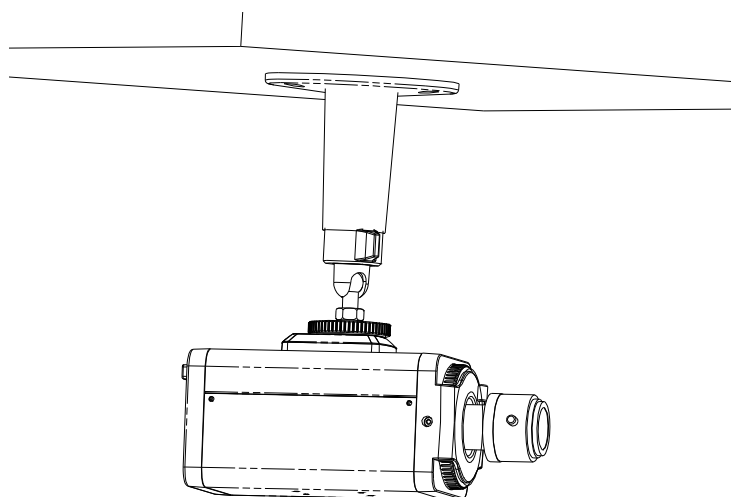


Fig 2.2.3 Fix Lens

## 2.2.2 Dome camera Installation

Dome camera can be installed include hold equipment, ceiling mounted, cylinders and other styles. Client can be installed in accordance with their own ways to achieve the installation. Please according the following specific steps to install (take ceiling mounted as example), when the wall is wood, use the self-tapping screws to fix the ceiling plate to the

wall surface.

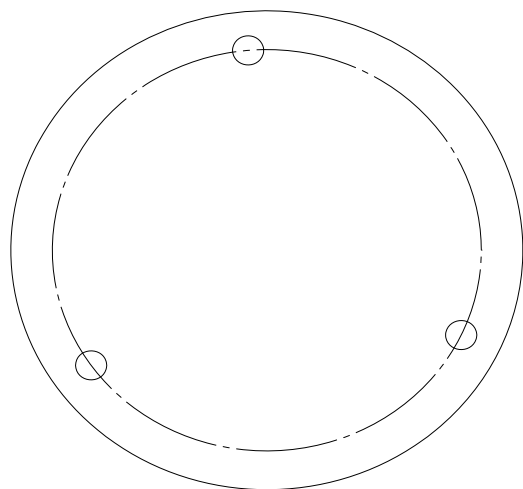


Fig 2.2.4 Fix card

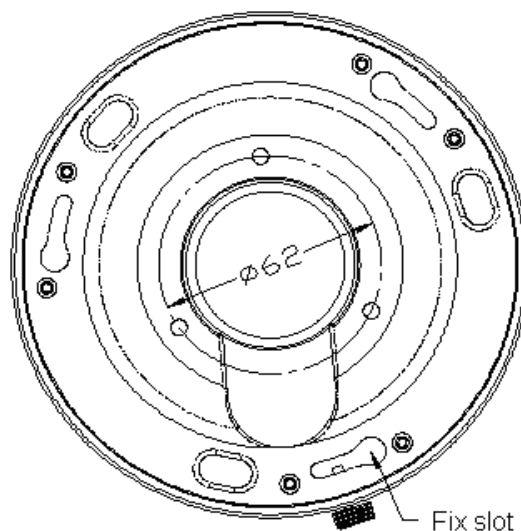


Fig 2.2.5 Fix in Ceiling

Take the three columns of Dome camera insert in the three fix slot of the ceiling plate. Pay attention to the direction of insertion. Let the ceiling plate "I" logo and the Dome camera "I" logo in the same direction. Meanwhile, make the Dome camera along the counterclockwise Rotate 15 degrees until the switch to the fixed date. At the same time, the "I" signs on the Dome camera and the locking screw on the ceiling plate is alignment. Then screw down the locking screw on the Ceiling plate.

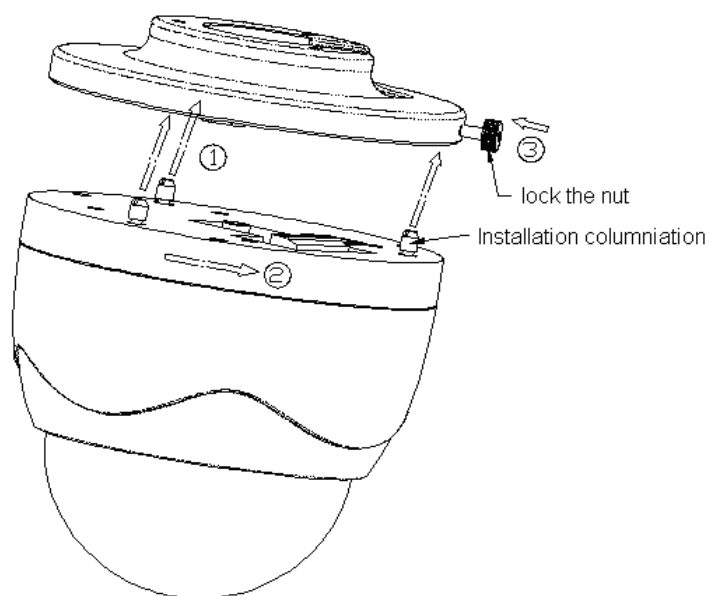


Fig 2.2.6 Dome camera fixing

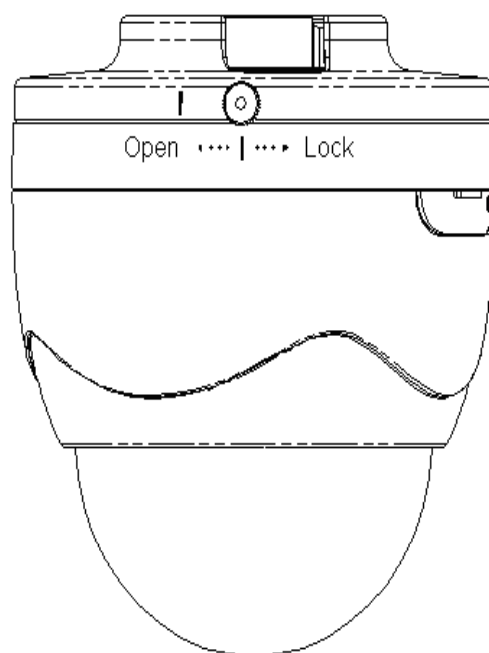


Fig 2.2.7 Dome camera fixed

## 2.2.3 Vandal proof Dome camera Installation

The ceiling mount is a suitable installation method for this camera. Please stick to the following steps:

1. First, loosen the screw with a hexagonal Screw driver (attached with the camera), and take down the transparent cover shown as below:

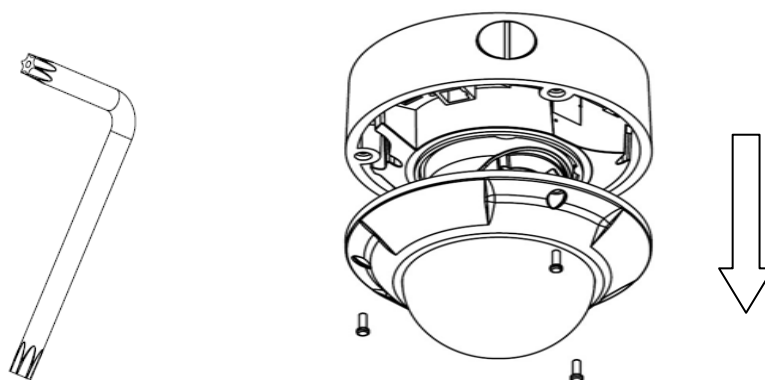


Fig. 2.2.8 Unload the Cover

2. Use the screws to fix the dome camera on the ceiling.

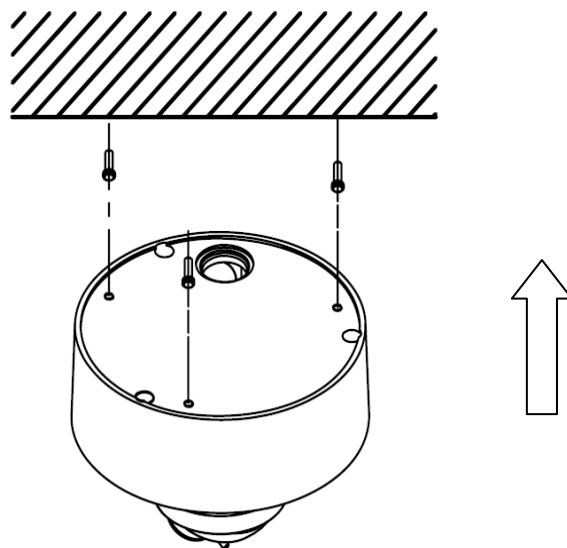


Fig. 2.2.9 Install the Camera

3. Adjust the camera's view angle while watching the video on the adjustment monitor. Loosen the fixed screws, and adjust horizontally and vertically the camera pan and tilt. Adjust the lens focus to get optimal video effect.
4. Tighten the screw after adjusting camera's view angle, and cover the transparent casing.

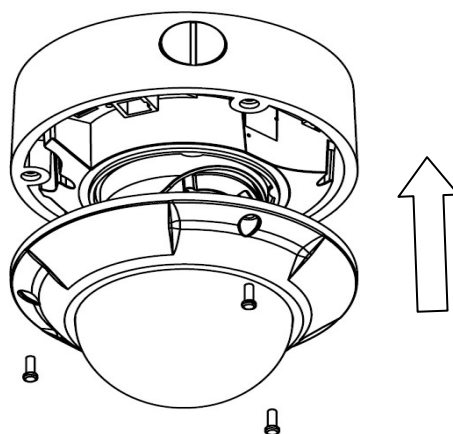
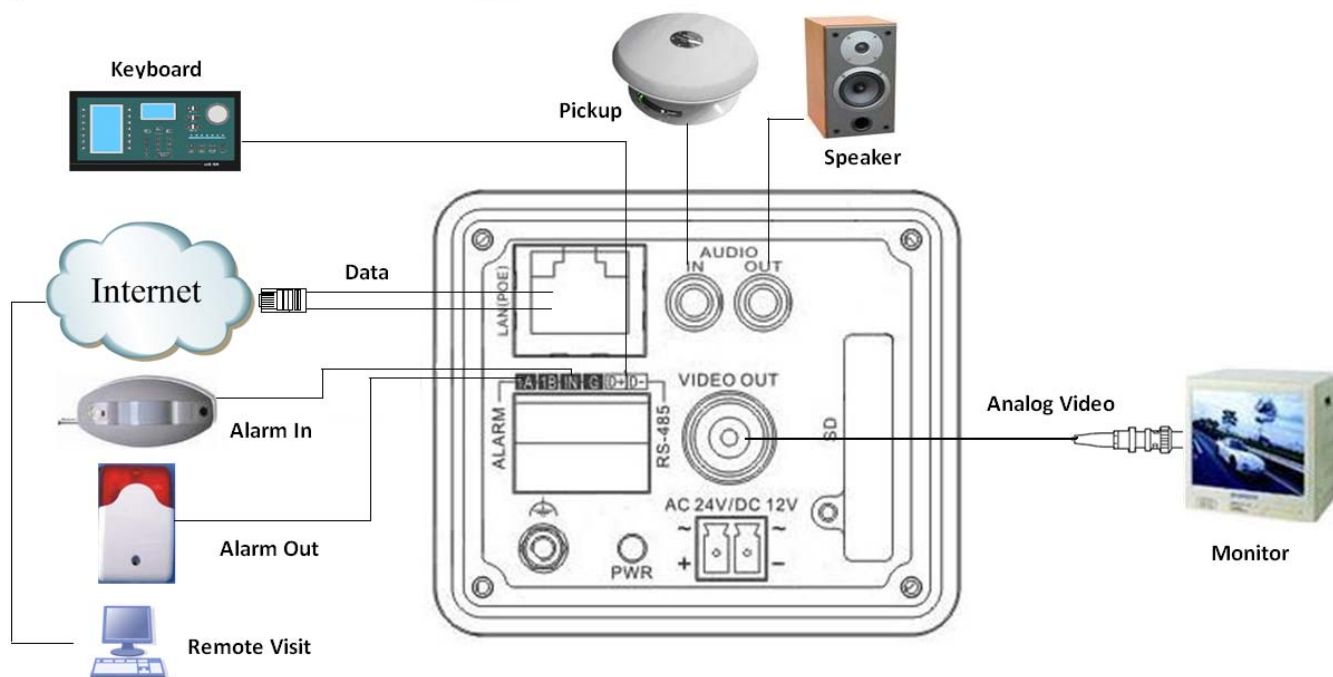


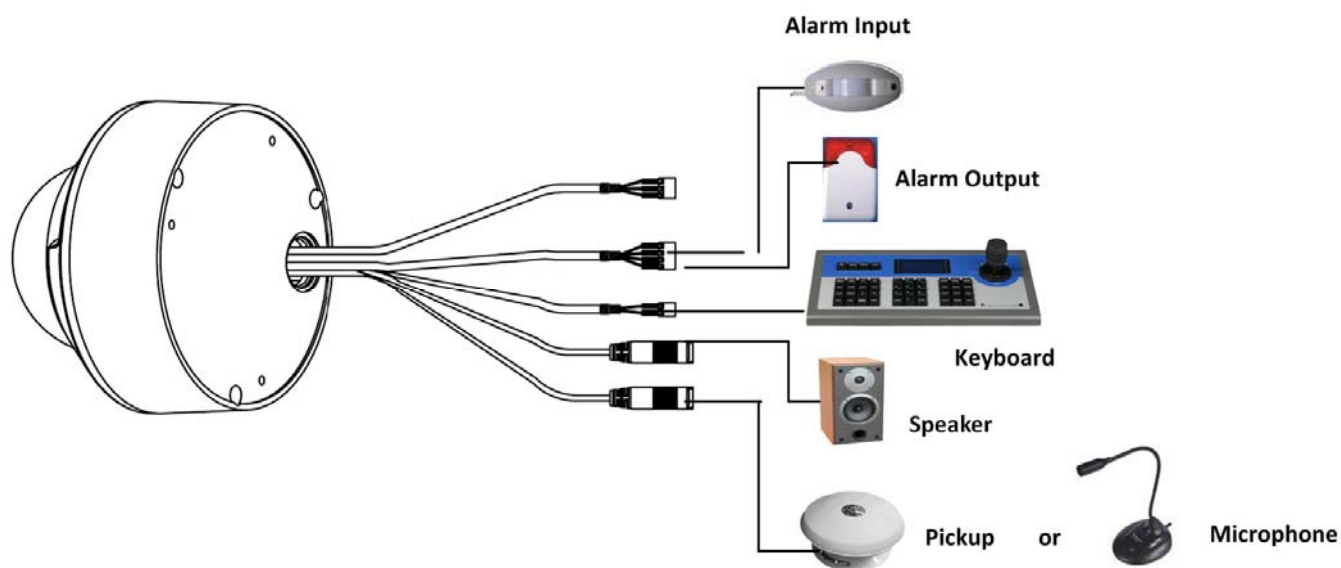
Fig. 2.2.10 Install the Cover

## 2.2.4 Topological graph of network camera

### Megapixels Network Box Camera Application:



### Megapixels Network Dome Camera Application:



### Notice:

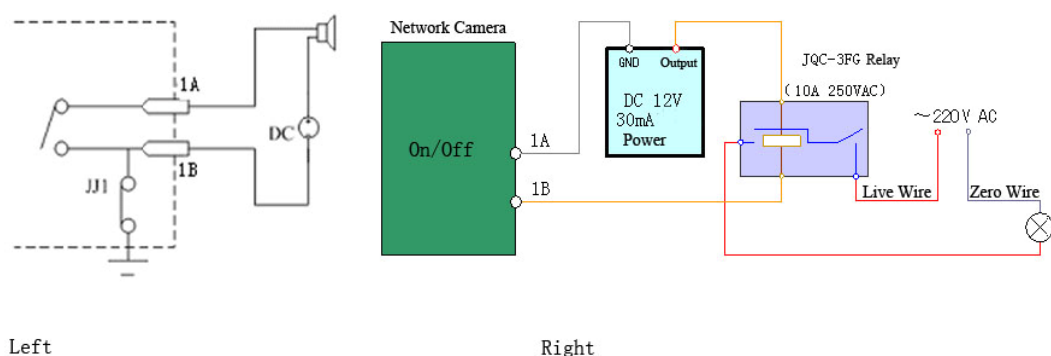




Fig 2.1.12 Alarm output

The alarm output is an on/off output that requires external power supply on connection. The external power supply shall be 12V DC/30mA, or use AC with external relays. Equipment damage or electric shock may cause if without relays.

## 2.3 Client Software Installation

### **Note:**

It is recommended that user's computer adopted INTEL P3, P4, C4, Core4 CPU, and well-known brands (Asus, Gigabyte, MSI, ECS, and INTEL etc.) Intel chipset motherboard, to ensure the stability of the system. Tested the following models of the current graphics cards support the software

installed, ATIRadeonX1650, X1600, X1550, X1300, X800, X600, X550, HD2400, HD2600, NVIDIA GeForce 8600GT, 8500GT, 8400GS, 7600, 7300LE, 6600LE, 6200LE, INTEL915/945G, pay attention to graphics driver must support hardware scaling function.

Step1: Double click 'Client software 4000 (v2.0)' in the Windows Operating System. The 'Preparing Setup' dialog box will pop up automatically;

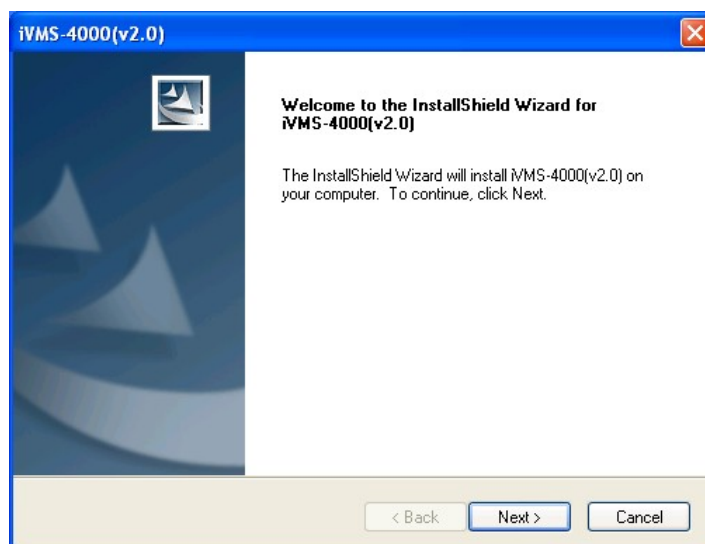


Fig.2.3.1 Client Software Installation

Step2: Input "User Name", "Company Name";

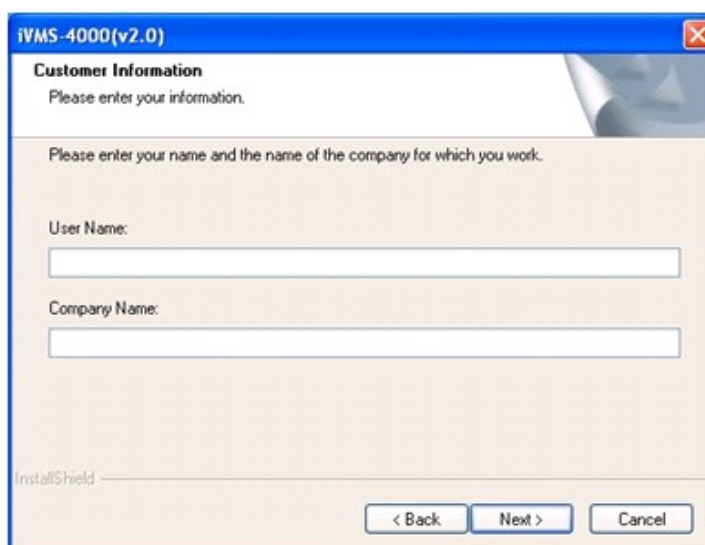


Fig.2.3.2 Customer Information

Step3: Select the destination folder and click 'Next' to go to the next step.

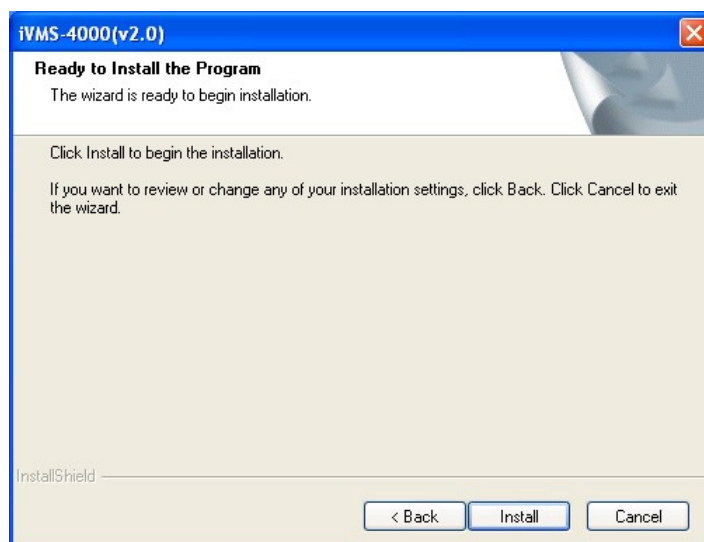


Fig2.3.3 Ready to Install the Program

Step4: Click 'Install' to start installation till finish the installation;

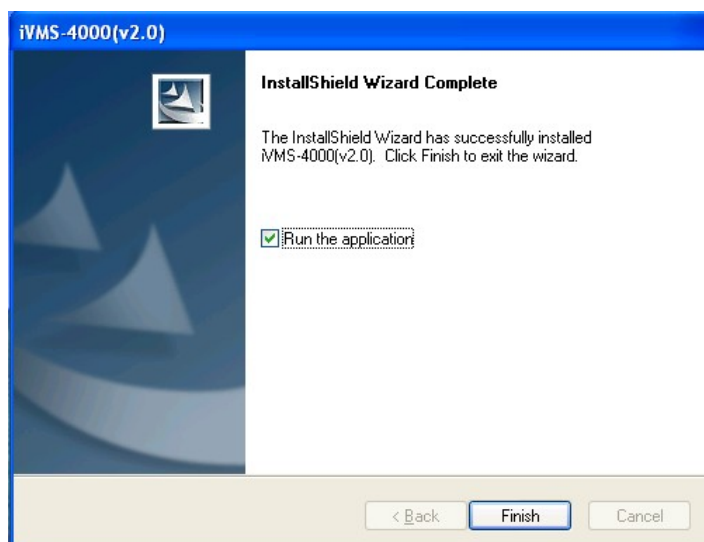


Fig2.3.4 Installation Complete

Click the 'Finish' button to close the dialog box.

After the client software has been installed, you can find the remote client software through "Start" -> "Programs" on your PC.

## Chapter 3 Parameter Configuration

There are several network parameters of the camera which need to be set after the hardware

installation. Those parameters including IP address, subnet mask and port number, etc. can be set through various kinds of methods, 2 of which are introduced as below.

1. Set the camera parameters via IE.
2. Set the camera parameters through the client software.

Please make sure that the PC and network camera are connected and can ping successfully before the parameter setting.

### 3.1 Visit Network Camera in LAN

There are two ways of connecting between IPC and PC as below:

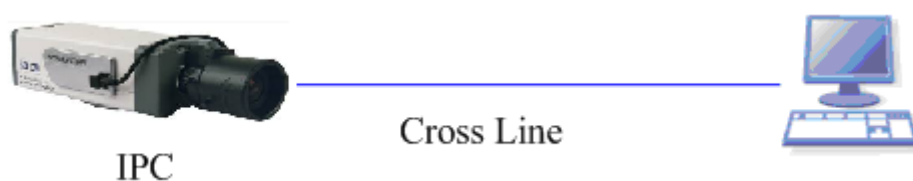


Fig. 3.1.3 Cross Line Connection

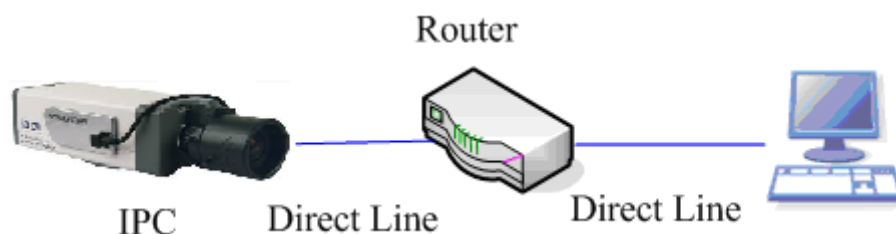


Fig. 3.1.1 Direct Line Connection

Before visiting network camera, user should detect its IP address. SADP is a tool software which can automatically detect hikvision's network device in the LAN and give the device's information like IP address, mask, port number, device serial number, software version and so on.

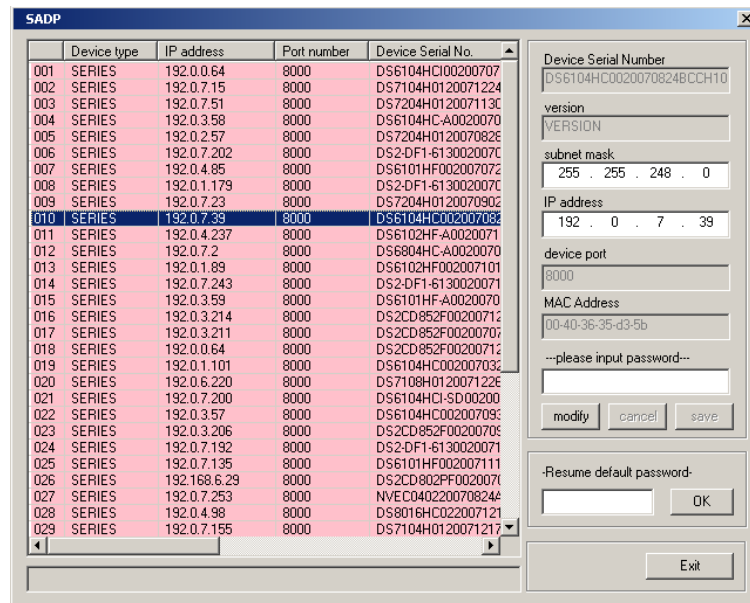


Fig. 3.1.2

Select the device, and set its IP address and mask at the same network segment with the PC.

The detailed introduction of SADP, please refer to Appendix 1.

## 3.2 Configuration via Web browser

Before visit the camera via web browser, user should adjust security level. Open the web browser, and enter the menu "Tool/ internet option/Security/Custom level", then set the security level to Security Level –Low, or enable ActiveX Control and the Plug-in directly. Figure 3.2.1 gives you a visual illustration. After you can see the camera video, recover the security level for security.

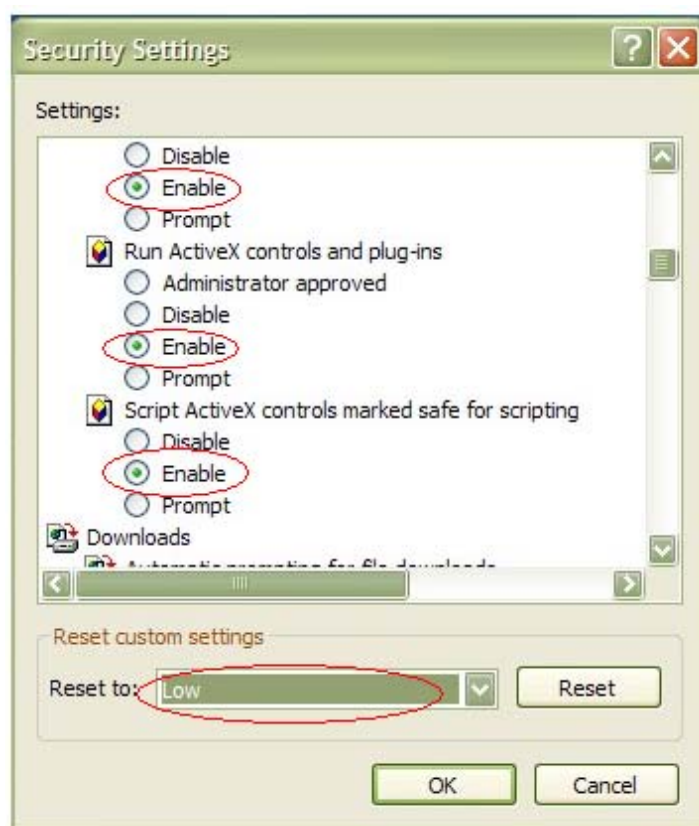
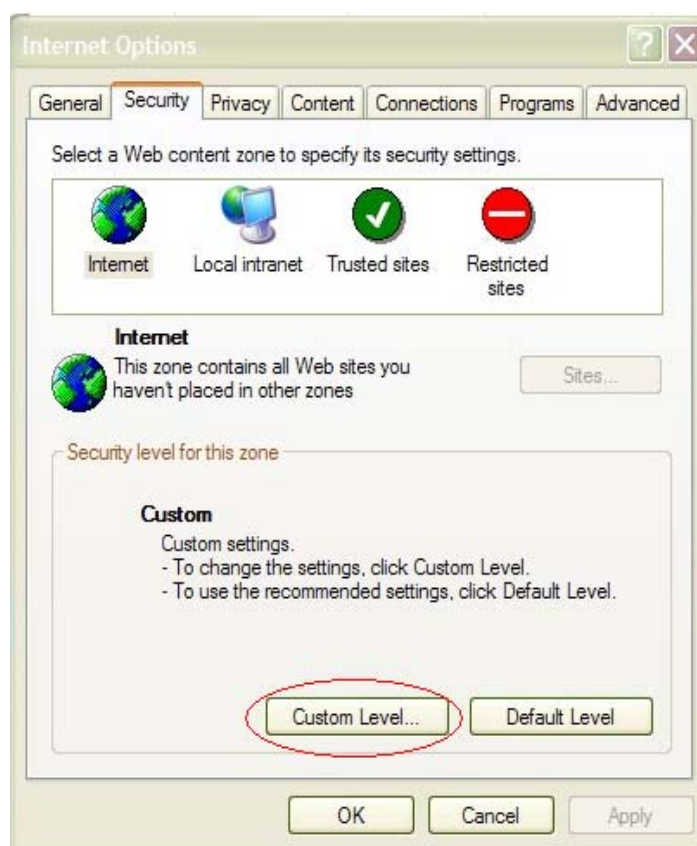


Fig. 3.2.1 Set the Security Level

The default IP of the camera is 192.0.0.64 with 8000 as the default port, admin as the

administrator, and 12345 as the password. The administrator can create up to 15 separate operators with different right levels.

To login the camera through IE, input the IP address in the address column, and the "Login" dialog box will pop-up as Fig. 3.2.2. Input your user name and password, and then click "Login" to enter the "preview" page. Double click the "Camera 01" channel or "Preview" button to preview the video as Figure 3.2.3. Right click the "Camera 01" channel, and the "Main Stream", "Sub Stream" and "Open sound" options will popup. Select the Open sound option if you connect a pickup to the camera.

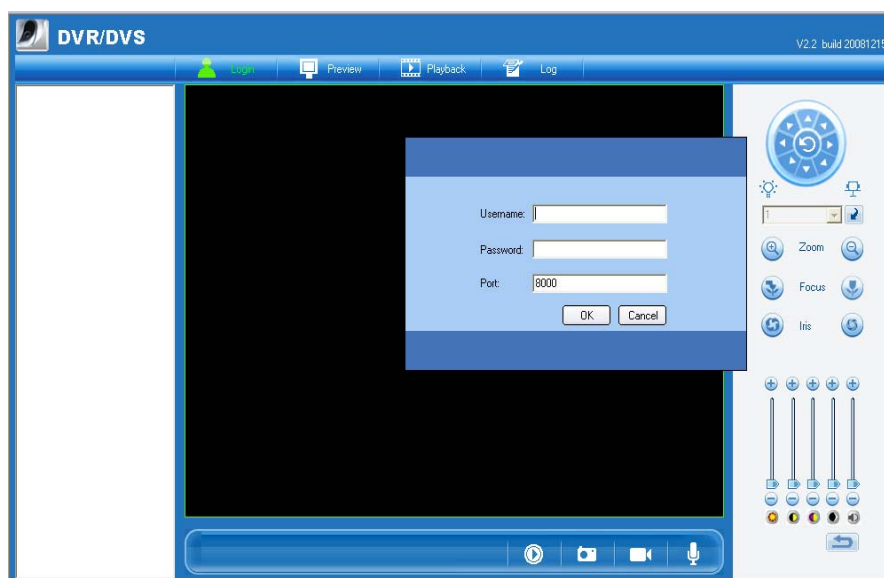


Fig. 3.2.2 Login Interface

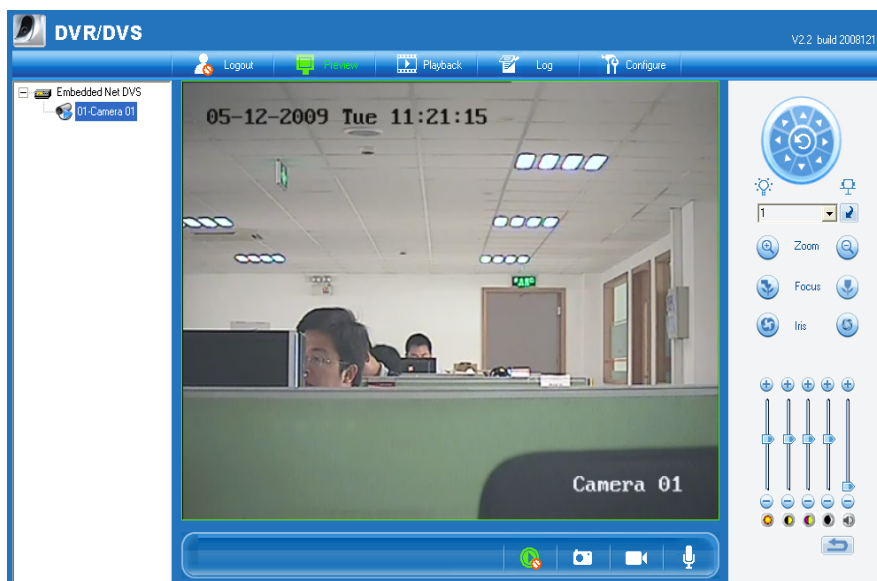


Fig 3.2.3 Preview Interface

The "Playback" and "Log" functions can be used only in the condition of existing SD card. To set the camera parameters through IE browser, click "Config" and wait for the "Remote Parameters Config" dialog box to pop up, and then set the parameters like IP address, etc. for your demand as Fig. 3.2.4.

Enter the menu by invoking the 95<sup>th</sup> preset. Select the function you want by clicking the direction key. Click the IRIS+ button you can enter the submenu. The menu operation is like the remote control.

**Note: If plug the SD card into the camera, user should enter the "config" and select "other function" to format the SD card.**

For more specific information of "Remote Parameters Config", please refer to "Instructions of Client Software (version 4.01)" from Section 2.5.3 of remote-distance parameter settings. Instructions can be found in the client software4.01 in the path of "Start" → "Program" → "client software 4.01" after installation.



**Remote parameters Config**

**DVSR parameters information**

DVSR Name	network camera	Cycle Record	Yes
Device ID	88	Use Scale	UnUse
Channel Number	1	HDD Number	0
AlarmIn Number	4	AlarmOut Number	2
DVSR Type	DVS		
Serial Number	DS6101HF-IP0020070519BCCH004000055WCU		

**DVSR net parameters information**

NIC Type	10M/100M AUTO	MAC Address	00:40:30:7c:c4:07
DVSR IP	192 . 0 . 0 . 5	Port	8000
Subnet Mask	255 . 255 . 248 . 0	Gateway IP	0 . 0 . 0 . 0
DNS IP	192 . 0 . 1 . 13	Multicast IP	0 . 0 . 0 . 0
Manage Host IP	192 . 0 . 1 . 13	Manage Host Port	7200
Use PPPoE	UnUse	PPPoE IP	0 . 0 . 0 . 0
PPPoE User		PPPoE Password	
NAS Host IP	0 . 0 . 0 . 0	NAS Directory	
HTTP Port	80		

**DVSR version information**

SoftwareVersion	V2.0 build 070427	HardwareVersion	0x0
DSP Version	V4.0 build 070411	FrontPanel Version	0

Buttons: Restore, Reboot, Save, Exit

Fig. 3.2.4 Remote Parameters Configuration

### 3.3 Configuration via Client Software

After the installation of client software-4000(v2.0), there is a short-cut icon named "Client Software-4000(v2.0)" on computer's desktop. Please double click client software icon, a message box of "Register Administrator" as Fig. 3-4-1 will appear the first time running. Password should be more than 6 digits for registration.

**Note: Please keep the user name and password in mind .You will not be able to get access the software without the proper login information.**

**Register administrator**

Please register one administrator

Administrator	
Login	
Verify	

Buttons: Register, Cancel

Fig.3.4.1 Register Administrator

Enter the registered user name and password as Fig. 3.3.2. Click "Login" to enter the

"Preview" menu as Fig. 3.3.3.



Fig. 3.4.2 User Login

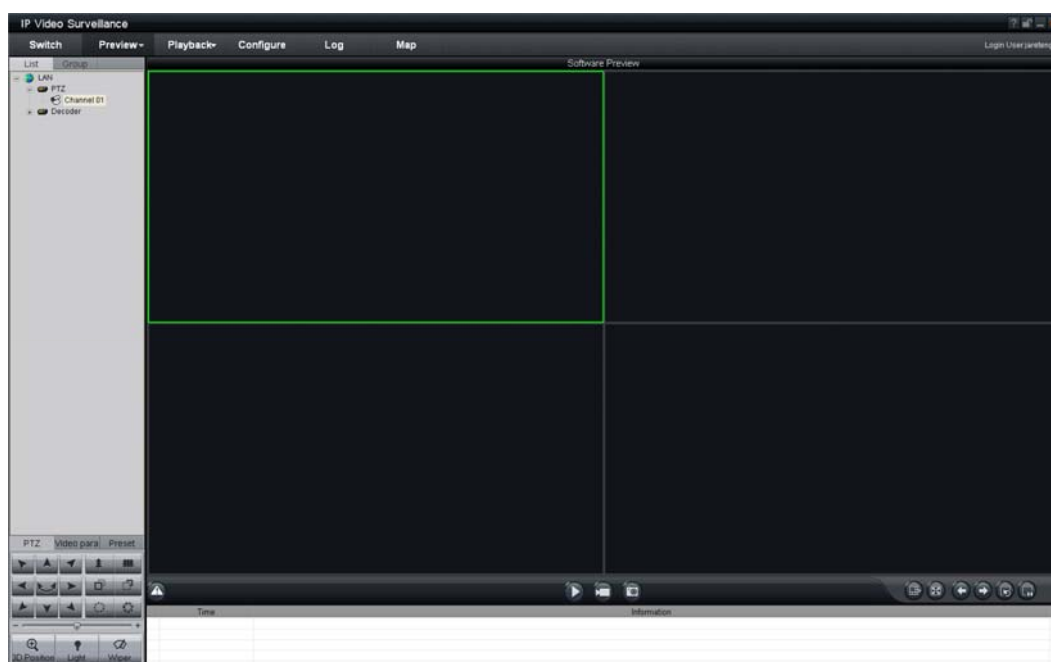


Fig. 3.4.3 Preview Menu

Click the "Configure" button in Fig. 3.3.4, and then right click the blank white space. Click the "Add Area" button, and the "Add Area" message will pop up.

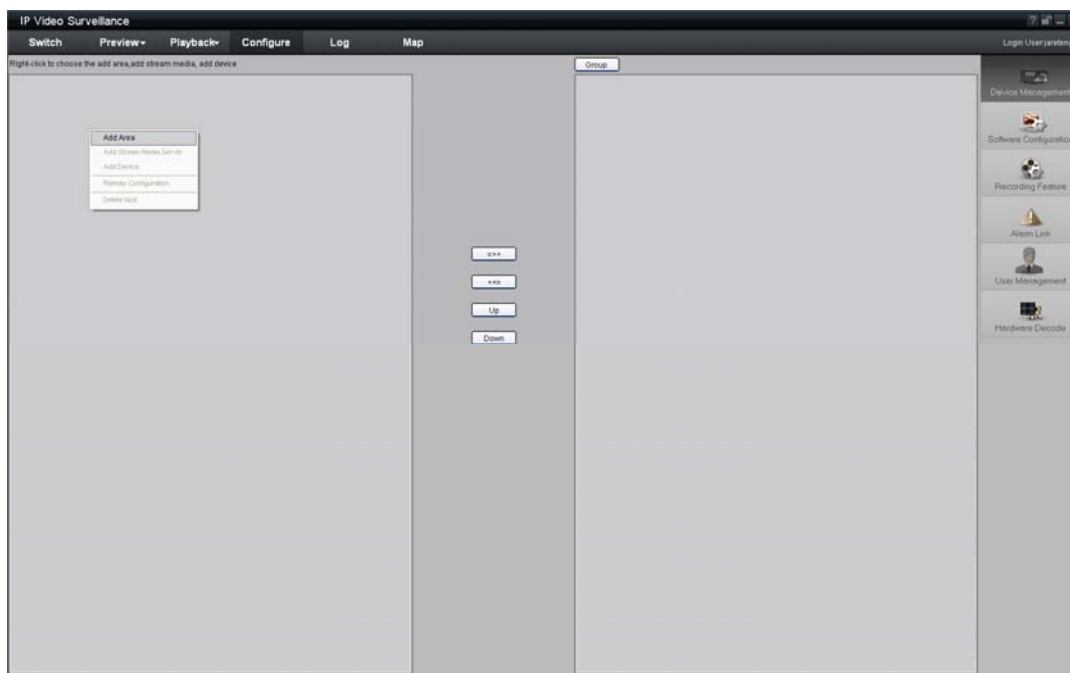


Fig. 3.4.4 Add Area

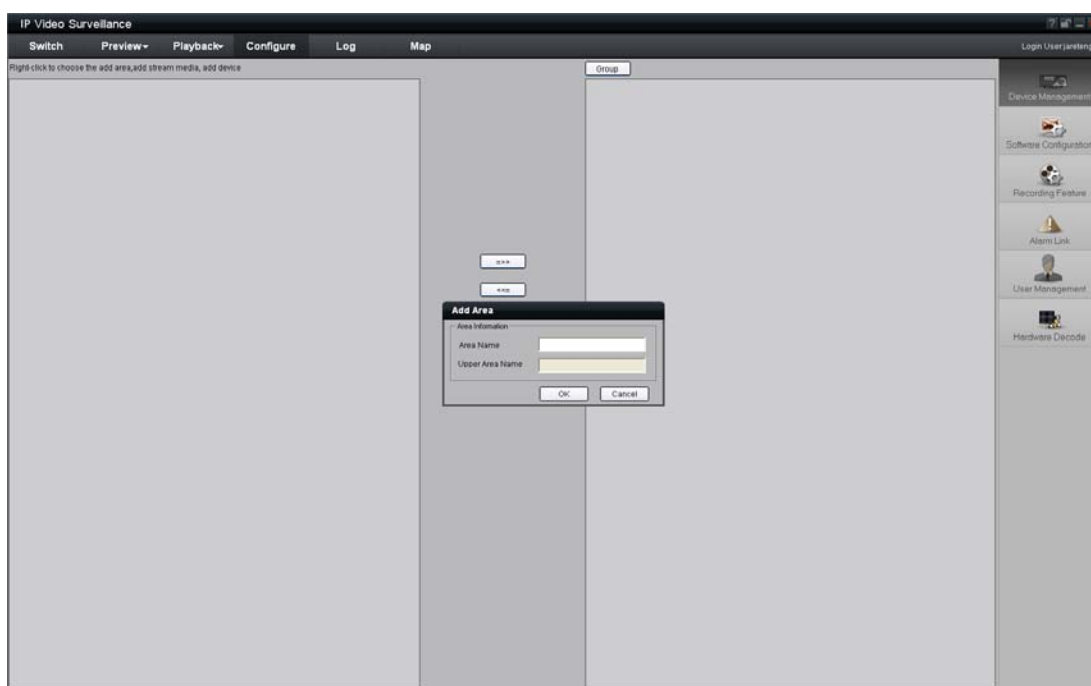


Fig. 3.4.5 Add Area Properties

Input the area name (you can create whatever name you like) and click "OK" as Fig. 3.3.6.

Then right click the area you have just created as Fig. 3.3.7.

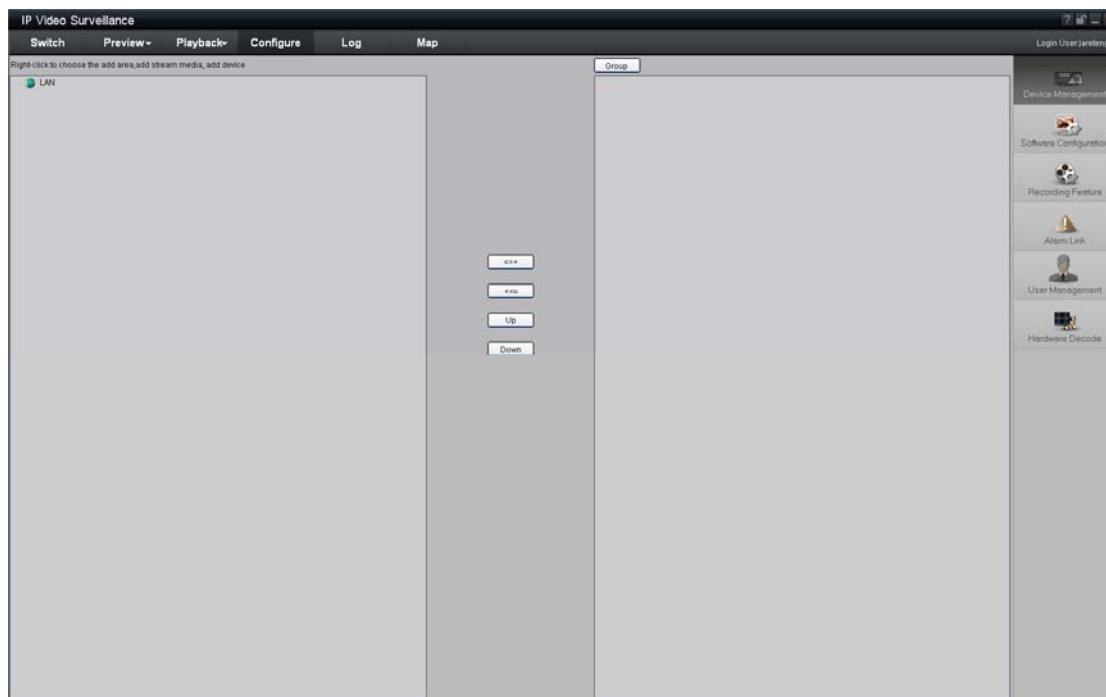


Fig. 3.4.6 Area Name Adding Completed

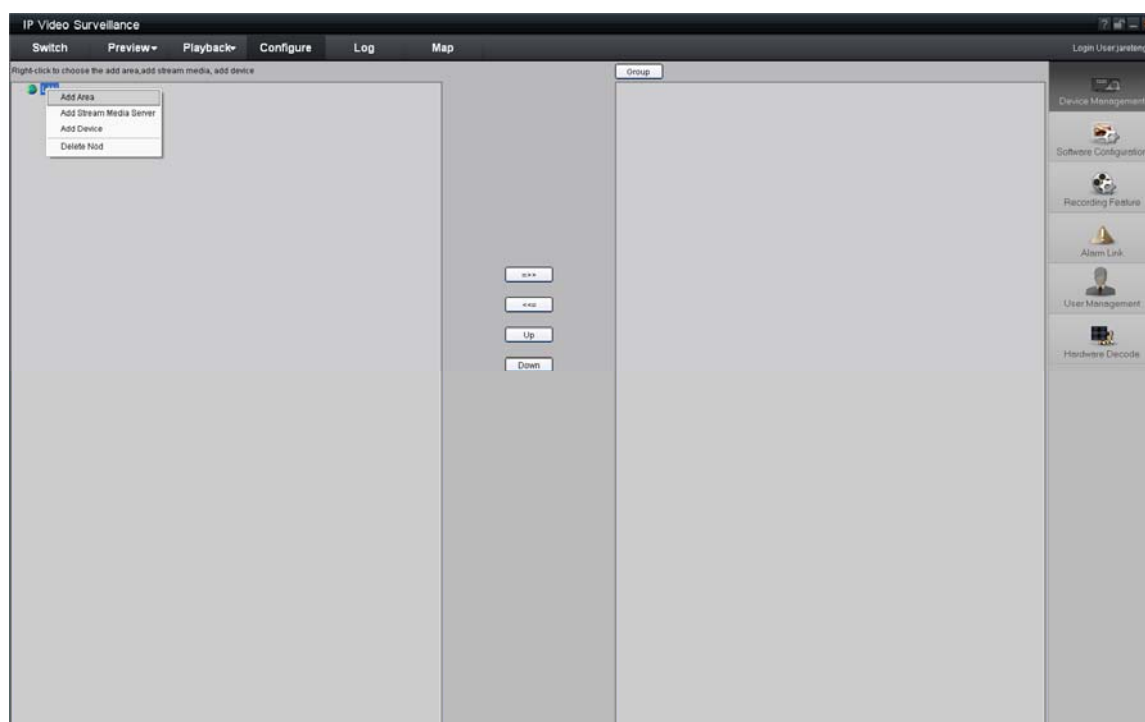


Fig. 3.4.7 Right Click the Area Name

Click "Add Device", and the "Add Device" dialog box will pop up as Fig. 3.3.8. Input your "Device Name". Select "Normal" from "Register" option. Input your camera IP in "Device IP",

e.g. 192.0.0.64; "User Name": admin, "Password": 12345, and 8000 for the default "Port", and then modify "Channel" to 1. Click the "OK" button as Fig. 3.3.8.

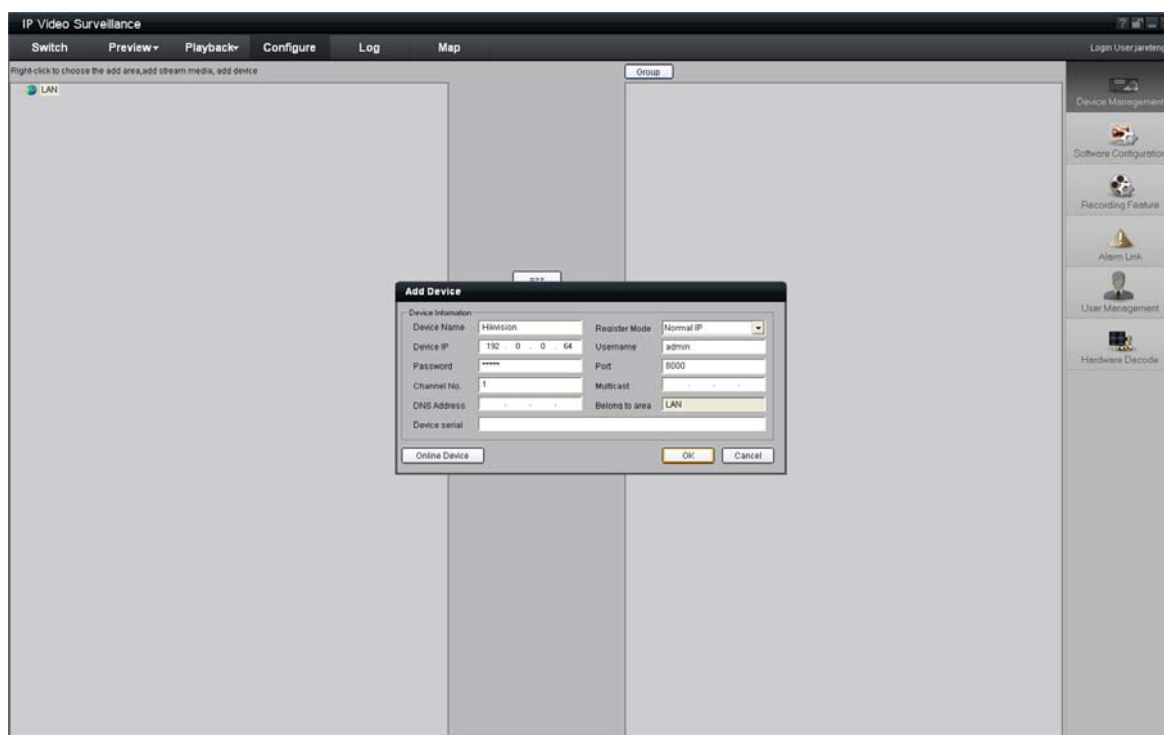


Fig. 3.4.8 Add Device

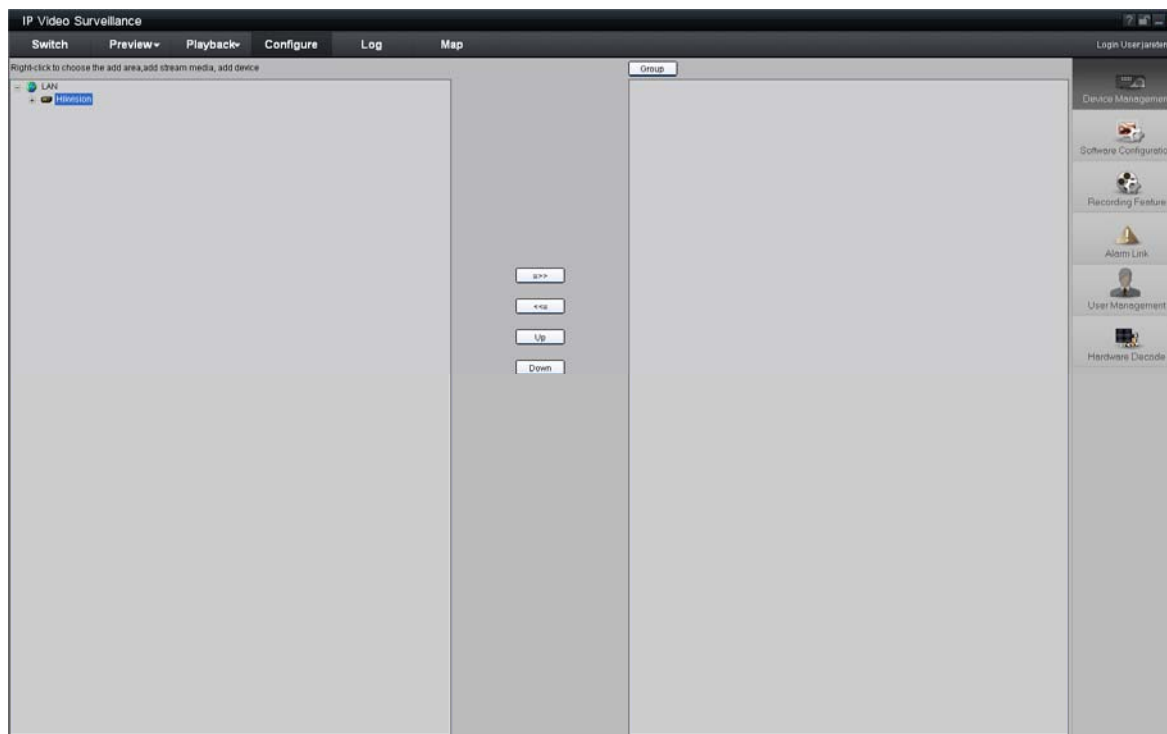


Fig.3.4.9 Camera Adding Completed

Click the "Preview" button to enter the "Preview" menu as Fig. 3-3-10. Double click the channel name in the left tree to preview the camera feed.

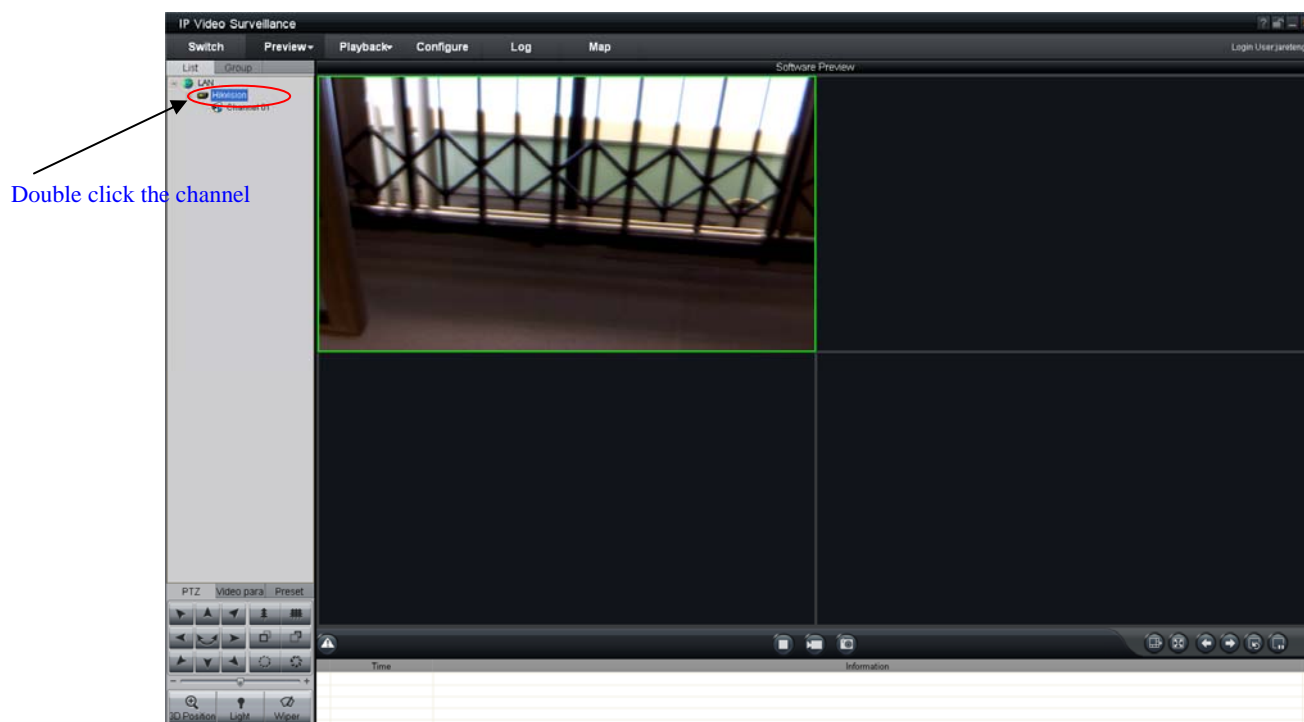


Fig.3.4.10 Preview Menu

Please refer to "Client Software-4000(v2.0)\_ENG.pdf" for a more detailed parameters configuration. You can find the document in the PC Operating System after the installation of client software 4000 v. 2.0 by selecting "Start"-> "All Programs"-> "client software 4000 v. 2.0".

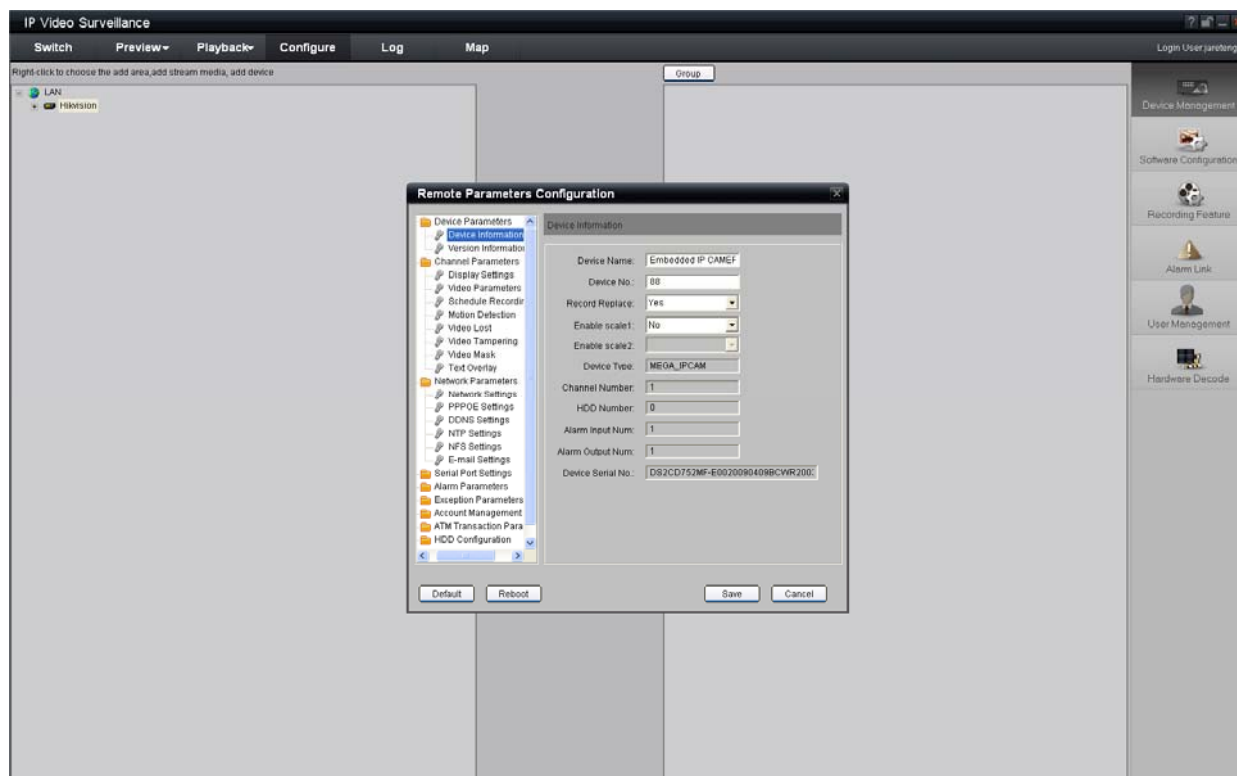


Fig.3.4.11 Remote Configuration

## 3.4 Visit Network Camera in Internet

### 3.4.1 Visit network camera with static IP

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

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

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

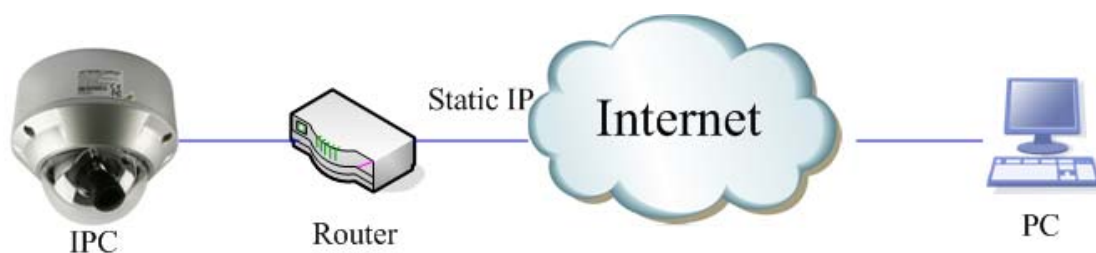


Fig.3.5.1 Static IP through Router access IPC



Fig.3.5.2 Static IP access IPC directly

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



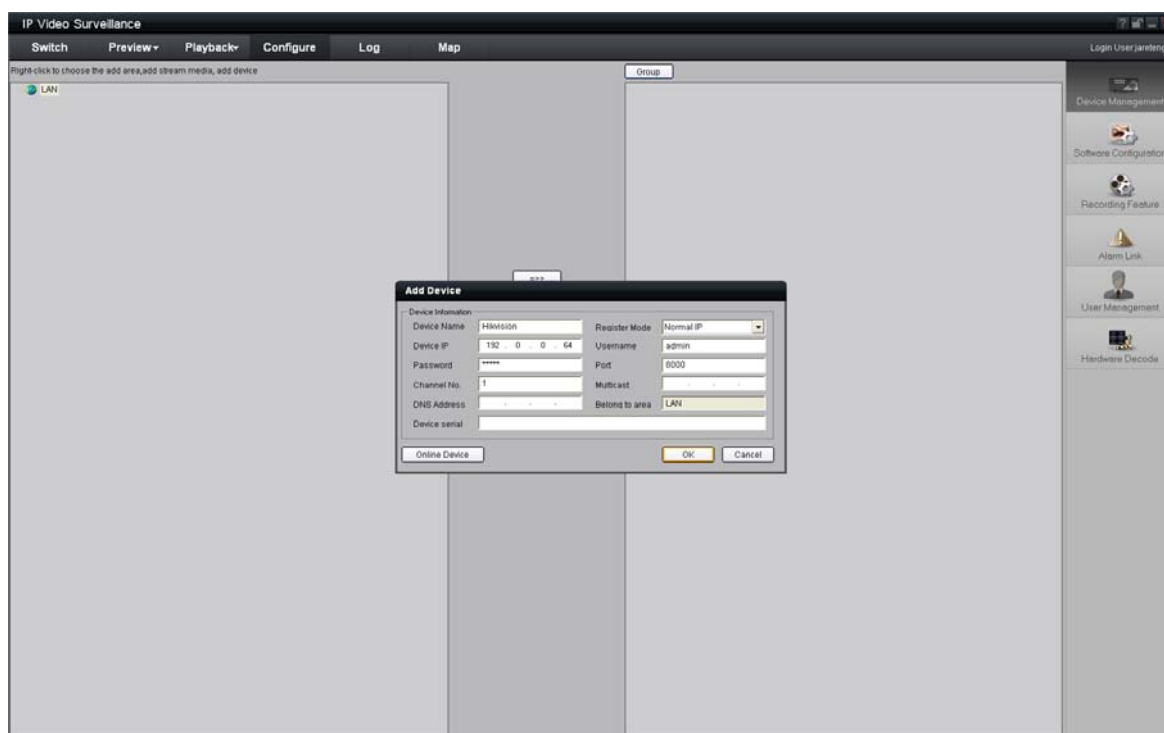


Fig.3.5.3 Selecting Normal Mode

### 3.4.2 Visit network camera with dynamic IP



Fig.3.5.4 Visit camera through PPPoE dial-up

This camera supports the PPPoE auto dial-up function, connecting the camera to a Modem for dial-up access to an ADSL network to get a public IP address; First, through local network access to the network camera, select "Configure"→"Right Click the Device", Select "Remote Configuration", Select "PPPoE Settings" under "Network Parameters" fill in the PPPoE user name and password and confirm the password. Please restart the network camera after completion of configuration. Then the network camera can obtain a dynamic IP from an ISP operation business. However, the obtained IP address is dynamically assigned via PPPoE, so

the IP address always changes accompanied with modem rebooting.

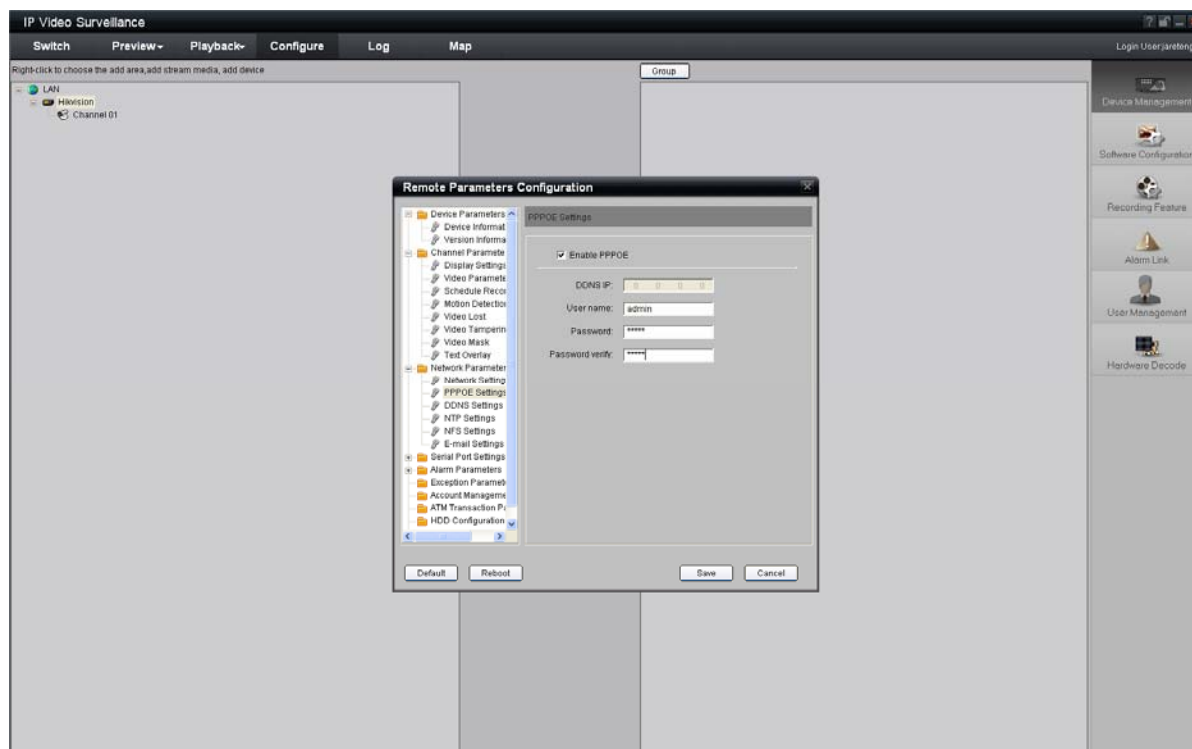


Fig.3.5.5 PPPoE configuration dialog box

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

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

## 1. Normal Domain Name Resolution

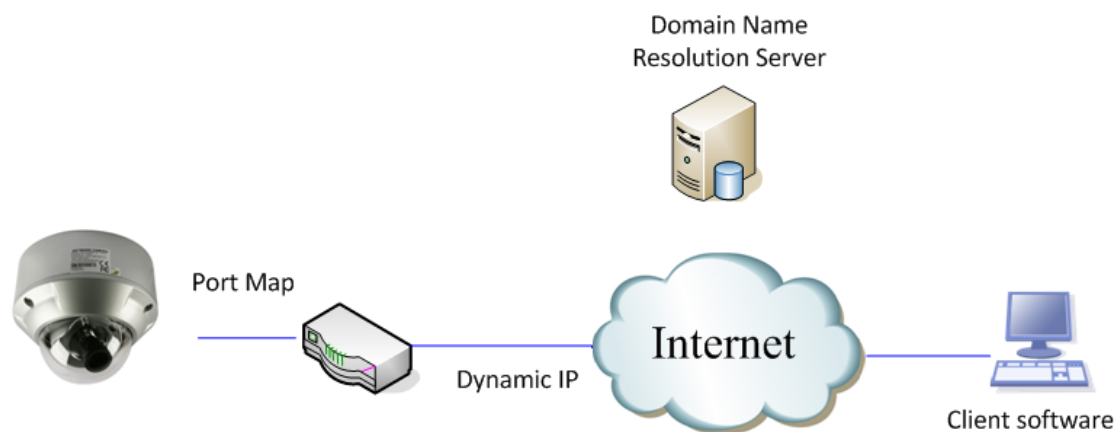


Fig.3.5.6 Normal Domain Name Resolution

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

Input domain names in the client software or IE to view the network cameras. Take the client software configuration as an example.

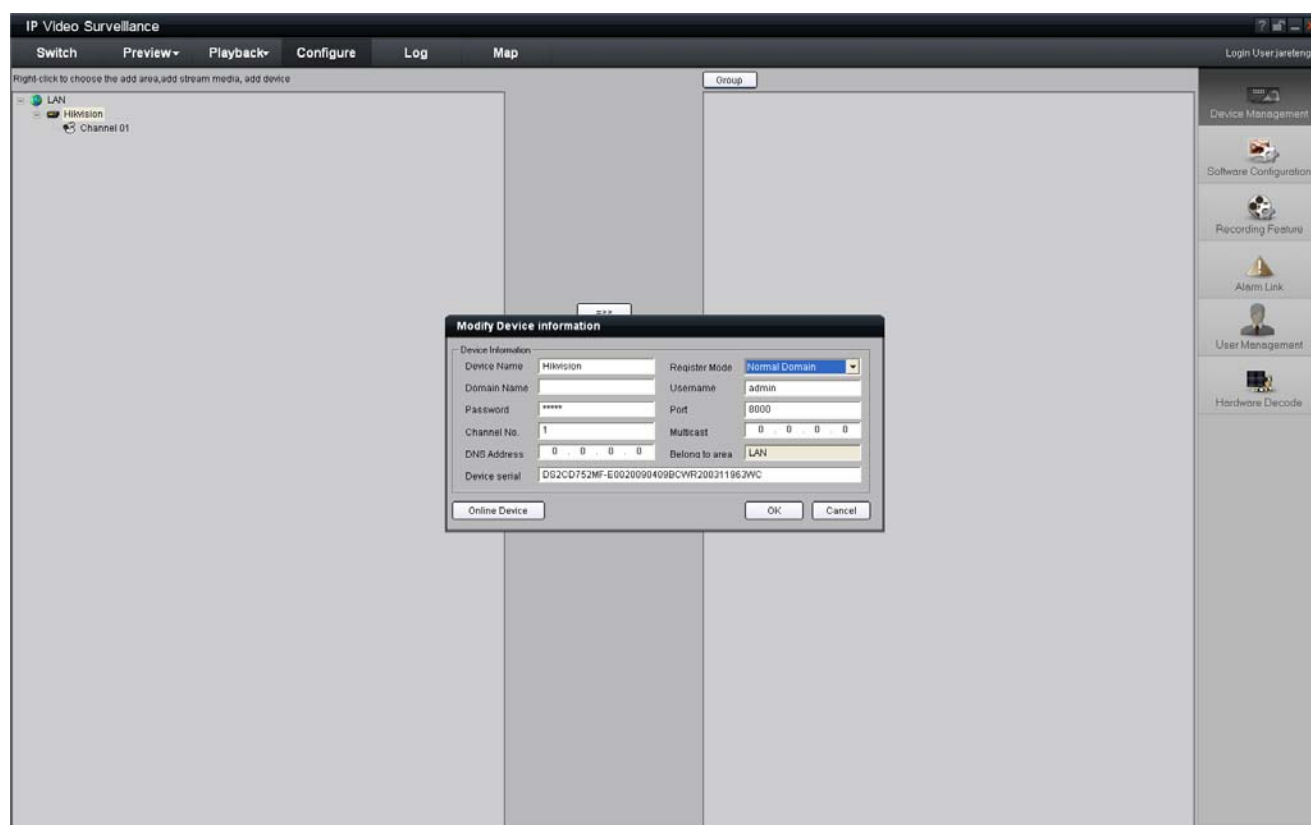


Fig.3.5.7 Selecting Normal Domain Mode

## 2. Private Domain Name Resolution

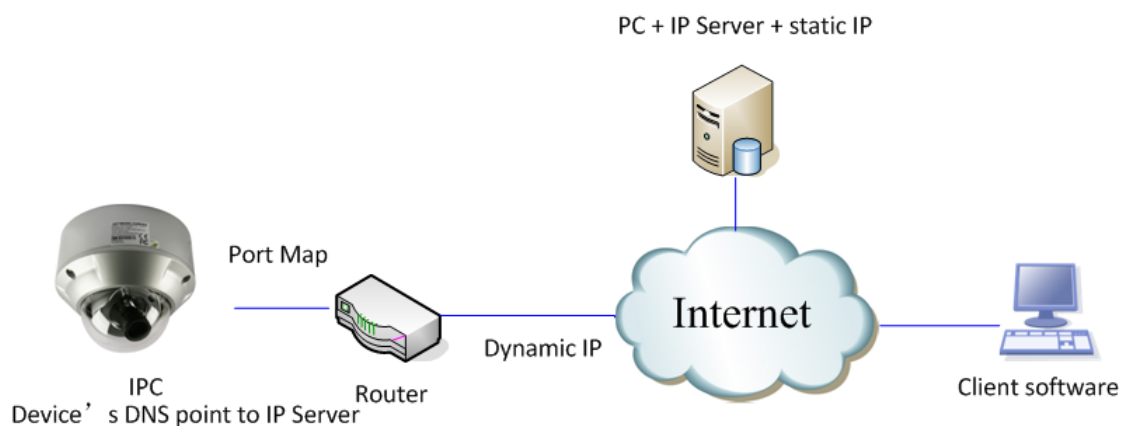


Fig.3.5.8 Private Domain Name Resolution

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

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

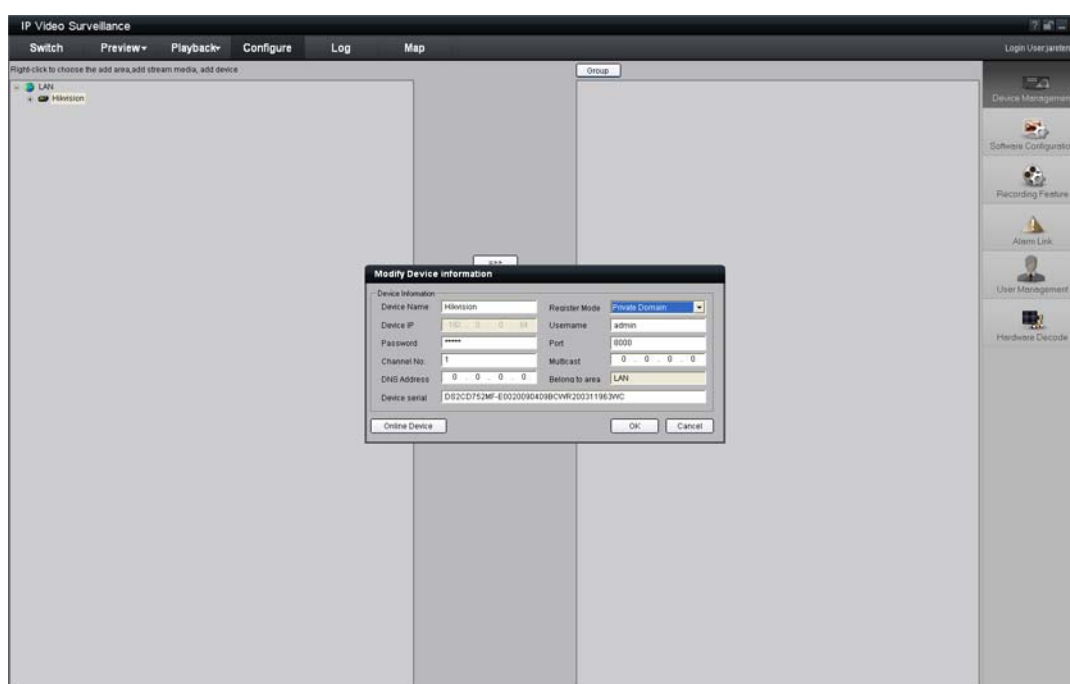


Fig.3.5.9 Selecting Private Domain Mode

# Chapter 4 Menu Introduction

**Note:** In this chapter, we call DS-2CD852MF-E, DS-2CD752MF-FB, DS-2CD752MF(-E), DS-2CD852F, as 2.0 megapixels CMOS network camera. And call DS-2CD862MF-E, DS-2CD762MF-FB as 1.3 megapixels CCD network camera.

## 4.1 Main Menu

Call preset 95 and the menu will appear on the screen. "IRIS +" means "enter", while "IRIS -" means "cancel". Press up / down to move the cursor, and press left / right to select the item.

**Note:** Take 2.0 megapixels CMOS network camera for example.



Fig.4.1.1 Call 95<sup>th</sup> Preset

The main menu displays as below:

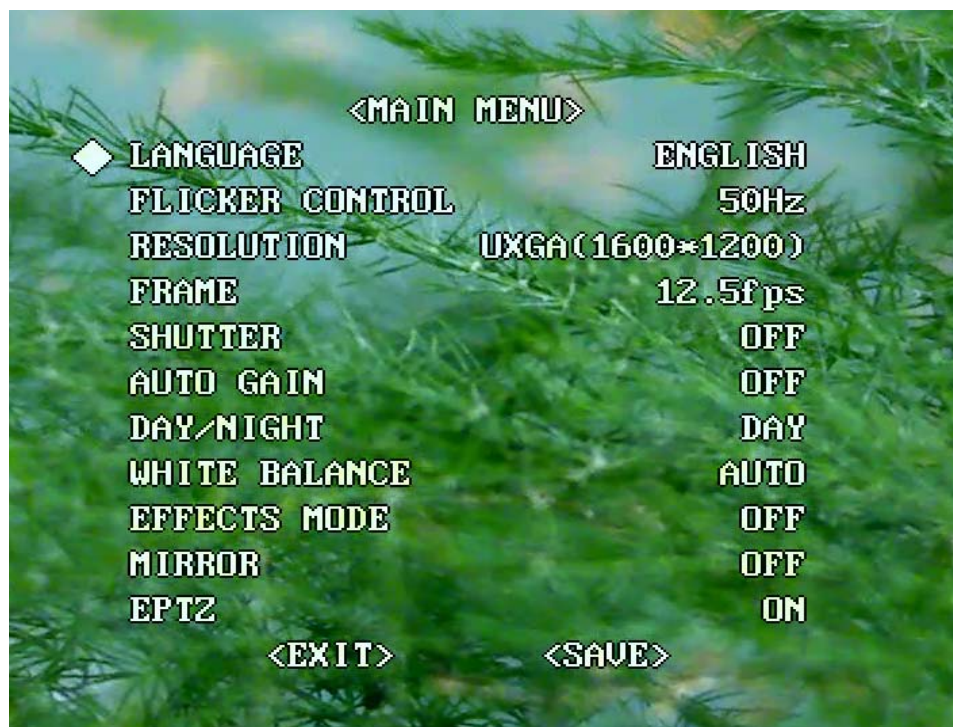


Fig.4.1.2 Main Menu

## 4.2 Menu Introduction of 2.0 Megapixels CMOS Network Camera

### 4.2.1 Language settings

Press left / right to select language between Chinese and English;

### 4.2.2 Flicker Control

Press left / right to select frequency between 50HZ and 60HZ in the FLICKER CONTROL item;

### 4.2.3 Resolution settings

RESOLUTION can't be changed by pressing left / right button; User can select resolution

through "configuration"→"remote configuration"→ "channel configuration "→"Resolution";

## 4.2.4 Frame settings

FRAME can't be changed by pressing left / right button; User can select resolution through

"configuration"→"remote configuration"→ "channel configuration "→"Frame rate";

The relationship between frame and resolution is as below table:

<i>Model</i>	<i>Resolution</i>	<i>Max. Frame Rate</i>	<i>Max bitrate (recommended)</i>
		NTSC	
<b>DS-2CD852MF-E</b> <b>DS-2CD752MF(-E)</b> <b>DS-2CD752MF-FB</b>	UXGA	10	4M
	HD720p	15	3M
	SVGA	30	2.5M
	4CIF	30	1.5~2M
	VGA	30	1.5M
	Dcif	30	1.5M
	2cif	30	1.5M
	Cif	30	384K~768K
	Qcif	30	384K~512K

Note: DS-2CD852F's frame and resolution relationship is different from above table. Please refer to the specifications in the Appendix.

## 4.2.5 Shutter settings

SHUTTER can be adjusted by pressing left / right. And there are three options in this item:

OFF, auto × 2 and auto × 5;

"OFF" means the regulation of the shutter exposure time is default;

"Auto × 2" means the regulation of shutter the exposure time is considerably wider;

"Auto × 5" means the regulation of the shutter exposure time is at its maximum.

The corresponding frame and resolution at different SHUTTER modes is as below:

	<i>60Hz</i>		
<i>Resolution</i>	OFF	Auto × 2	Auto × 5



<b>QCIF</b>			
<b>CIF</b>			
<b>2CIF</b>			
<b>DCIF</b>	30fps	15fps	5fps
<b>4CIF</b>			
<b>VGA</b>			
<b>SVGA</b>			
<b>HD720p</b>	15fps	15fps	5fps
<b>UXGA</b>	10fps	10fps	5fps

## 4.2.6 Auto Gain settings

Press left / right to adjust AUTO GAIN level among OFF, low, middle and high;

## 4.2.7 DAY / NIGHT Settings

Press left / right to select DAY / NIGHT mode among DAY, NIGHT and AUTO;

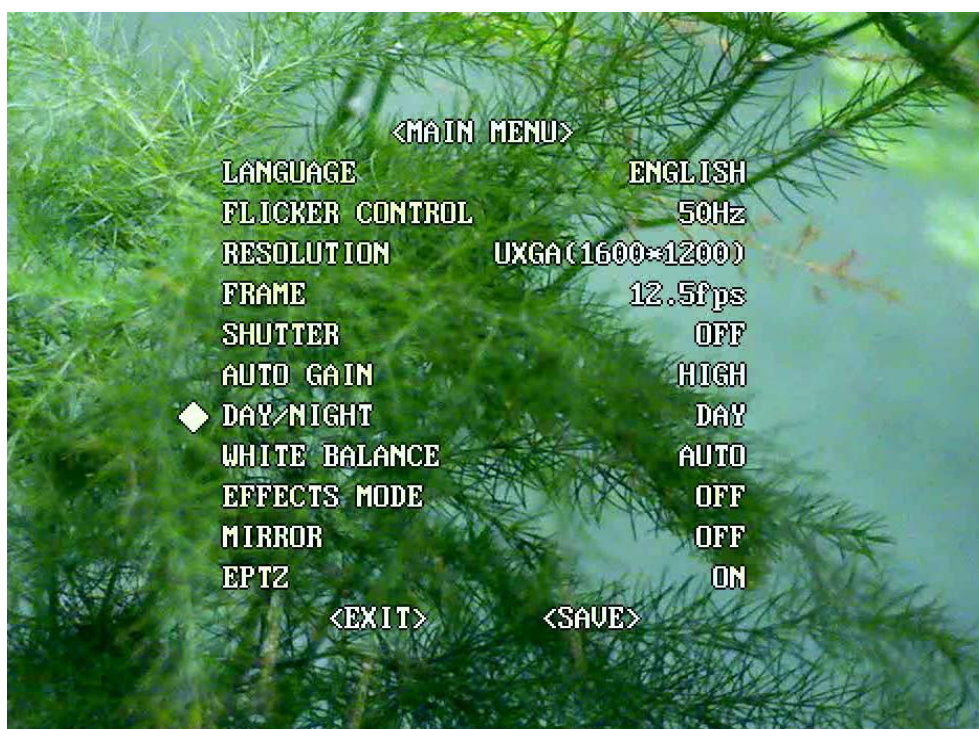


Fig.4.2.1 DAY Mode



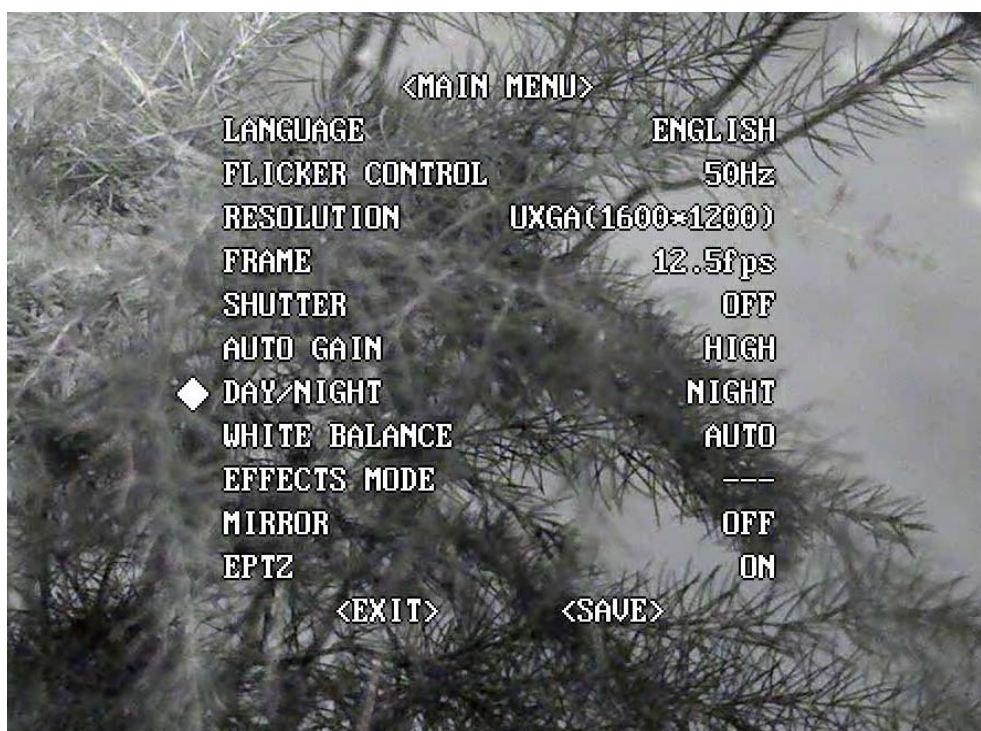


Fig.4.2.2 NIGHT Mode

## 4.2.8 White Balance Settings

Press left / right to set WHITE BALANCE AUTO or OFF;

## 4.2.9 Effect Mode settings

Press left / right to select EFFECTS MODE among OFF, SPEIA, NEGATIVE, SOLARIZE1 and SLOARIZE2;

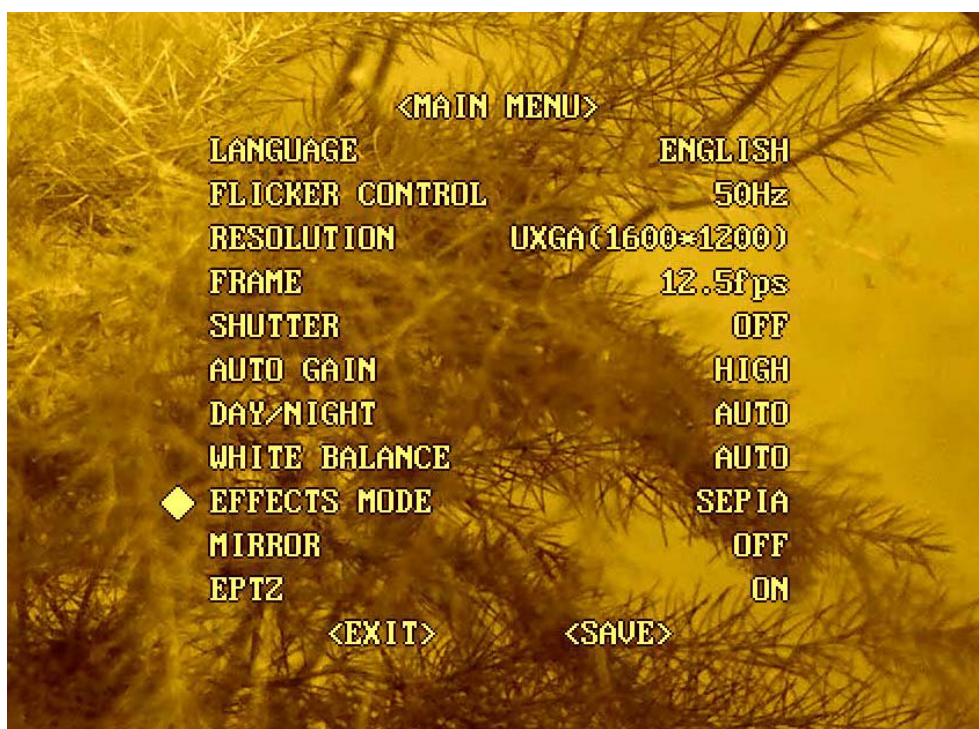


Fig.4.2.3 SEPIA Mode



Fig.4.1.1 NEGATIVE Mode

## 4.2.10 Mirror mode settings

Press left / right to select MIRROR mode among OFF, LEFT RIGHT, UP BOTTOM, and CENTER;



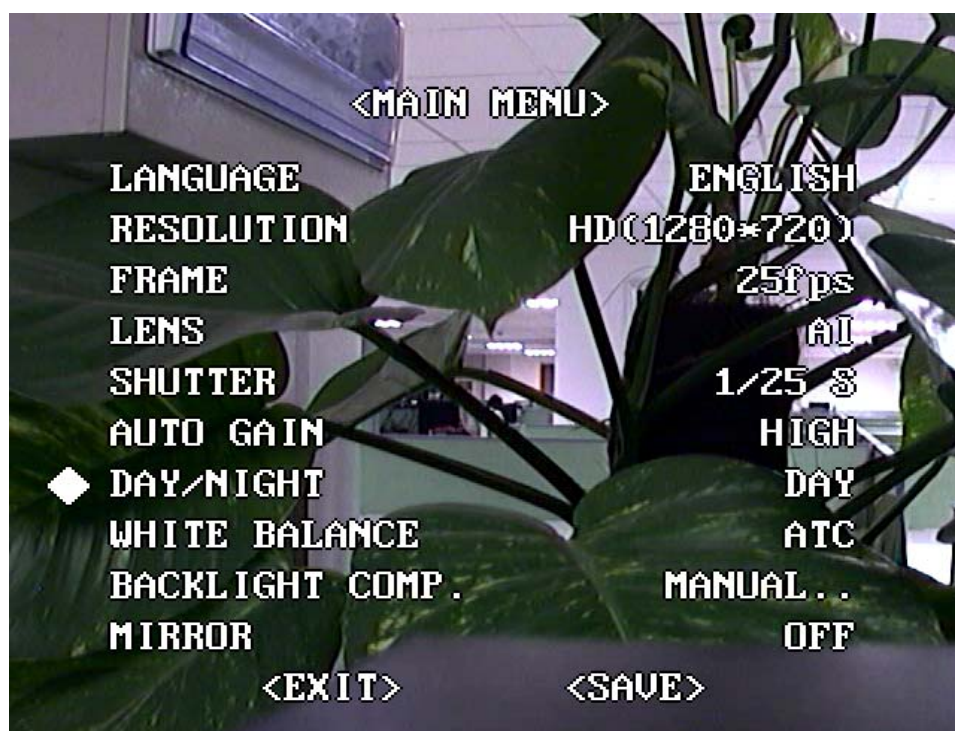
### 4.2.11 ePTZ settings

Press left / right to set ePTZ ON or OFF;

Under the resolution of QCIF/CIF/DCIF/2CIF/VGA/D1/SVGA, support pan\tilt\zoom operation, pan and tilt operation can be carried out only after zooming in, Support 127 preset positions (95 is excluded and used to call menu). Patrol path supports the preset of movement from Top left-hand corner of the screen to the bottom right-hand, supports 8 manual disposition patrols as well. HD720p resolution only supports pan and tilt operation, does not support zoom operation. UXGA resolution does not support the ePTZ function.

## 4.3 Menu Introduction of 1.3Megapiixels CCD Network Camera

The main menu displays as below:



### 4.3.1 Language settings

Press left / right to select language between Chinese and English.

### 4.3.2 Resolution settings

RESOLUTION can't be changed by pressing left / right button; User can select resolution through client software, and the path is "configuration"→"remote configuration"→ "channel configuration "→"Resolution".

### 4.3.3 Frame settings

FRAME can't be changed by pressing left / right button; User can select resolution through "configuration"→"remote configuration"→ "channel configuration "→"Frame rate".

### 4.3.4 Lens settings

Press left / right to select lens type between AI (auto iris) and AES (automatic electronic shutter);

### 4.3.5 Shutter

Press left / right to adjust the exposure time from 1/25s, 1/50s, 1/100s, 1/250s, 1/500s, 1/1ks, 1/2ks, 1/4ks, 1/10ks, 1/100ks.

### 4.3.6 Auto Gain settings

Press left / right to adjust AUTO GAIN level among OFF, low, middle and high;

**Note: When DAY / NIGHT mode is AUTO, AUTO GAIN is invalid.**

### 4.3.7 DAY / NIGHT Settings

Press left / right to select DAY / NIGHT mode among DAY, NIGHT and AUTO;

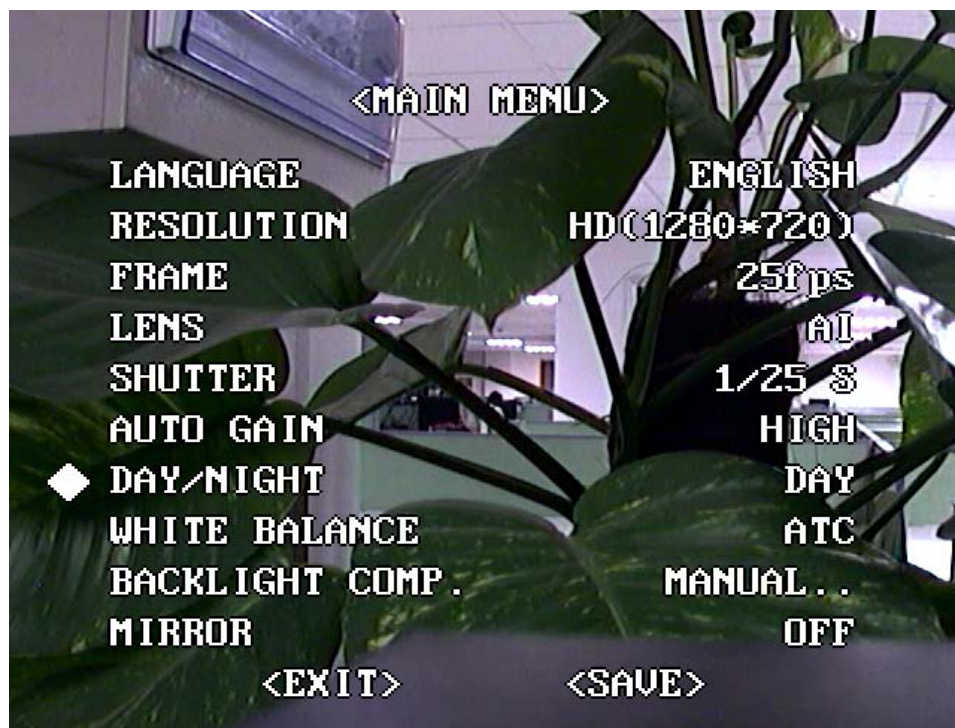


Fig.4.2.1 DAY Mode

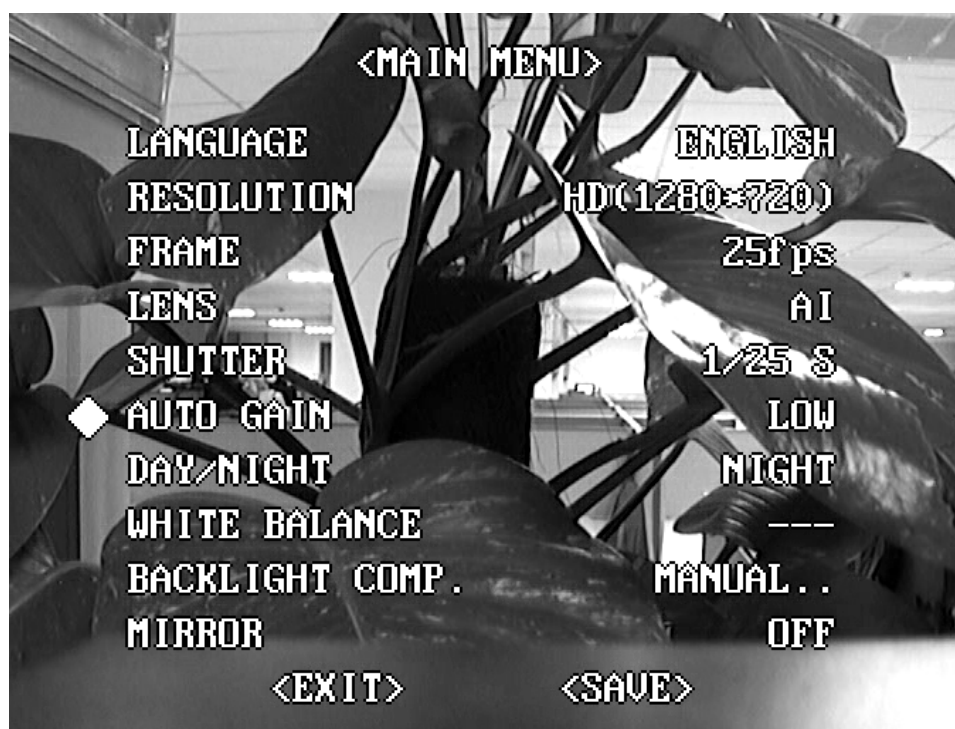


Fig.4.2.2 NIGHT Mode

### 4.3.8 White Balance Settings

Press left / right to set WHITE BALANCE ATW1, ATW2, ATC or MANUAL;

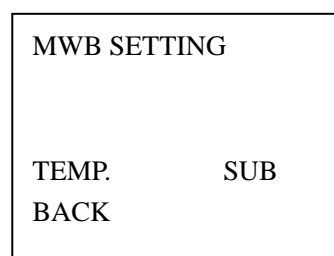
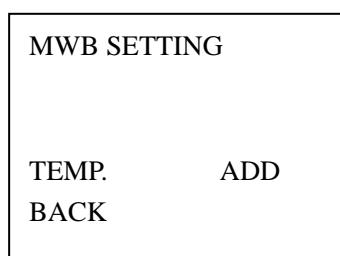
ATW1: Camera uses TTL auto white balance algorithm to ideally recovery color, temperature range is from 2500K to 6500K.

ATW2: Camera uses TTL auto white balance algorithm to ideally recovery color, temperature range is from 2500K to 15000K.

Manual: Adjust temperature value to realize white balance.

Manual WB setting is as below:

Select MWB and the menu will display on the screen:



Press up / down to "Temp", and press left / right to add or subtract the value of temperature.

After settings, move the cursor to "back" and press confirm button "IRIS+" to return to the previous menu.

Note: When DAY / NIGHT mode is NIGHT, the WHITE BALANCE is invalid. Or DAY / NIGHT mode is AUTO, and the video is white and black, WHITE BALANCE is invalid too.

### 4.3.9 BACKLIGHT COMPENSATION

Press up / down to "BACKLIGHT COMPENSATION", and press left / right to select "OFF" or "MANUAL". Selecting "MANUAL" and the menu will display on the screen:



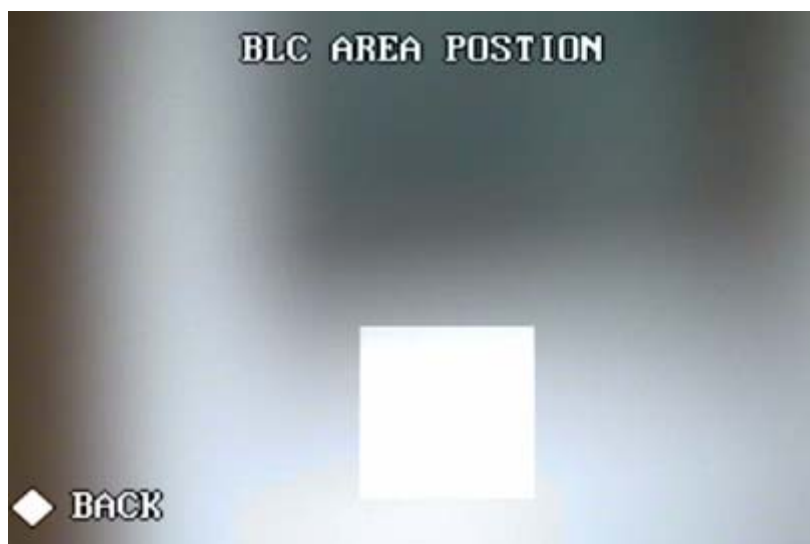
Move cursor to "BLA", and press left / right to set the BLC area as up, down, left, right, middle or manual, then the BLC area is on the screen:

BLA MANUAL setting step is as following:

Move cursor to "BLA MANUAL", and press "IRIS+" to confirm and go to the submenu:



Move cursor to "POSITION", and press "IRIS+" to enter the submenu; Press up / down / left / right to adjust the position of BLC area. After setting, press BACK to return to the previous menu.



Adjust the BLA size through the same operation as the above BLA position.

#### **4.3.10 Mirror mode settings**

Press left / right to select MIRROR mode among OFF, LEFT RIGHT, UP BOTTOM, and CENTER;



# Appendix 1 SADP Introduction

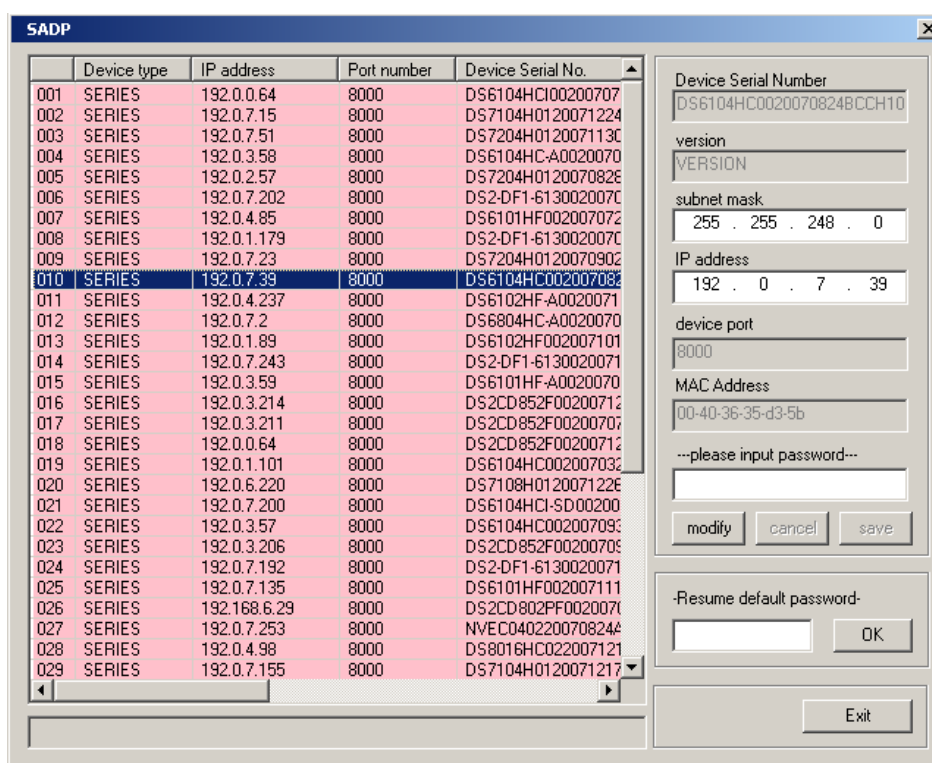
## 1. Brief introduction

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

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

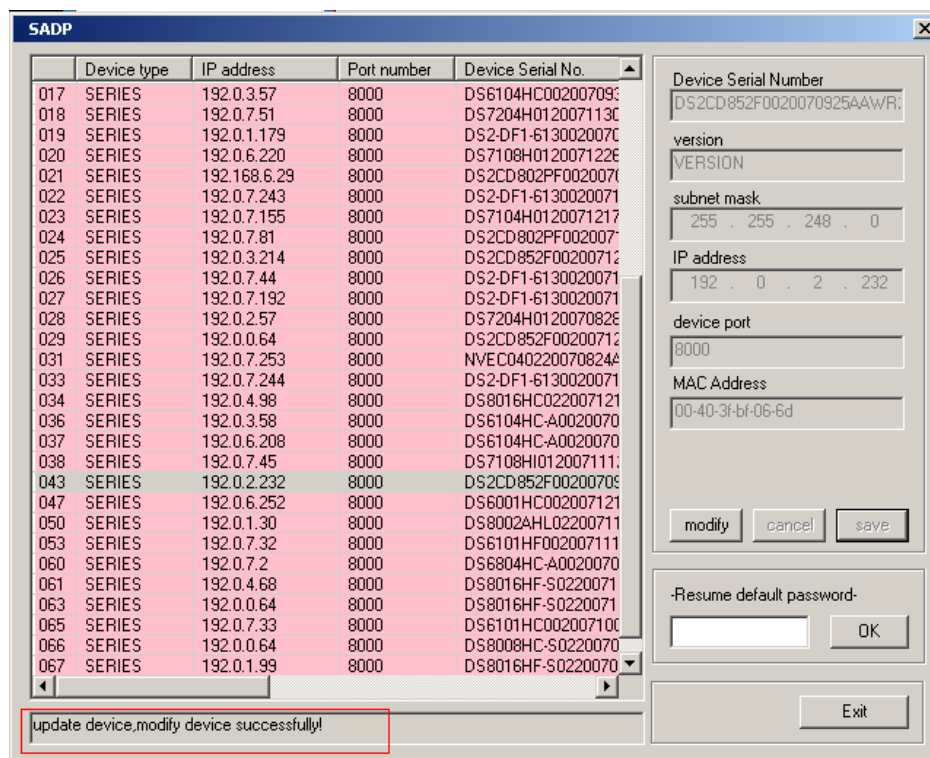
## 2. Searching active devices online

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



## 3. Modifying the information of active devices

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



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

#### 4. Recovering default password

You can reset the password of the super user as '12345' in the case of a lost password.

Input certain validation code into the 'Resume default password' box, and click 'OK' to finish the administrator's password initiating.

**Note:** Password reset code can be obtained by the technicians from Hikvision after you provide the device Serial NO.

## Appendix 2 Port Map

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

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

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

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

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

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

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

## Virtual Servers

ID	Service Port	IP Address	Protocol	Enable
1	<input type="text" value="80"/>	192.168.10. <input type="text" value="23"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
2	<input type="text" value="8000"/>	192.168.10. <input type="text" value="23"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
3	<input type="text" value="554"/>	192.168.10. <input type="text" value="23"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
4	<input type="text" value="8200"/>	192.168.10. <input type="text" value="23"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
5	<input type="text" value="81"/>	192.168.10. <input type="text" value="24"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
6	<input type="text" value="8001"/>	192.168.10. <input type="text" value="24"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
7	<input type="text" value="555"/>	192.168.10. <input type="text" value="24"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>
8	<input type="text" value="8201"/>	192.168.10. <input type="text" value="24"/>	ALL <input type="button" value="v"/>	<input checked="" type="checkbox"/>

Common Service Port:   ID

As the above mentioned setting, we map the router's port 80, 8000, 554, 8200 to the network camera 192.168.1.23; and port 81, 8001, 555, 8201 to the network camera 192.168.1.24. In this way, user can visit the 192.168.1.23 through visiting the router's port 80, 8000, 554 and 8200.

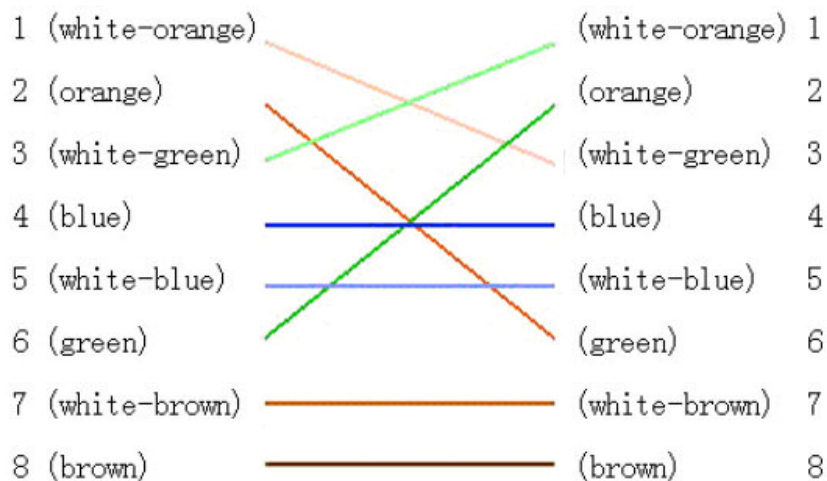
**Note: The port of the network camera cannot conflict with other ports. For example, some router's web management port is 80. User can amend the router's or the camera's port to solve this problem.**

## Appendix 3 Pin Definition

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



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



# Appendix 4 Product Specification

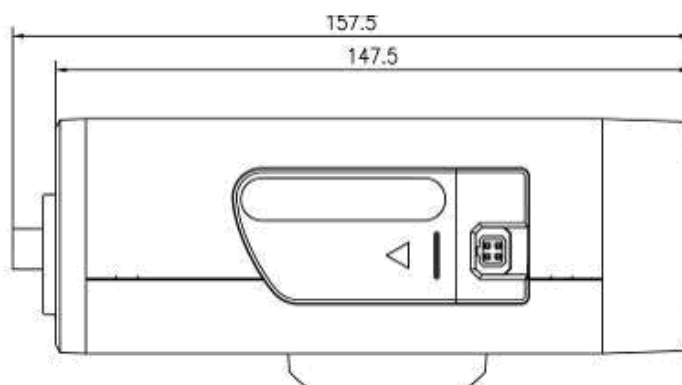
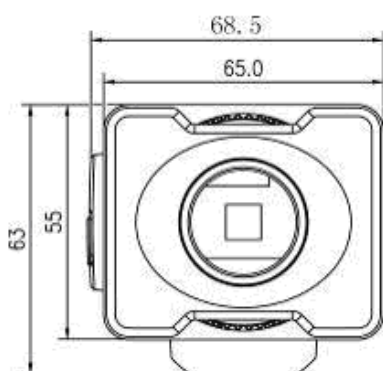
## DS-2CD862MF-E

### Specification

Parameter	Model	DS-2CD862MF-E
<b>Camera</b>		
Image Sensor		1/3 inch SONY progressive scan CCD
Effective Pixels		1280 (H) × 960 (V), 1.3M CCD
Min. Illumination		Color: 0.1Lux @ F1.2, B / W: 0.01Lux @ F1.2
Electronic Shutter		1/4s to 1/100,000 s
Auto Iris Lens		DC Drive or Video Drive
Day & Night		ICR
S/N Ratio		More than 50dB
Lens		Option
Lens Mount		C / CS mount
Video Output		1Vp-p Composite Output (75Ω/BNC)
<b>Compression Standard</b>		
Video Compression		H.264 or MPEG-4
Video Output		32 K ~ 2M, adjustable ( 8Mbps maximum)
Audio Compression		OggVorbis
<b>Image</b>		
Max. Image Resolution		1280 × 960
Frame Rate		12.5fps(1280 × 960), 25fps (1280 × 720), 25fps (640 × 480)
<b>Functions</b>		
Motion Detect		Support
Dual Stream		Support
SD Card Local Recording		Support
Heartbeat		Support
Password Protect		Support
Protocols		TCP/IP,HTTP,DHCP,DNS,RTP/RTCP, PPPoE (FTP, SMTP, NTP, SNMP addible)
<b>Interface</b>		
Audio Input		1 channel 3.5mm audio interface (2.0 ~ 2.4Vp-p, 1kΩ)
Audio Output		1 channel 3.5mm audio interface (Line level, 600Ω)
Communication		1 RJ45 10M / 100M self-adaptive Ethernet port and 1 RS-485 interface
Alarm Input		1 channel input
Alarm Output		1 channel signal relay output

Others	
Working Temperature	-10℃ ~ 60℃
Power Supply	AC24V, ±10% / DC12V, ±10%, PoE (Power over Ethernet).
Power Consumption	4W MAX (10W max with ICR working)
Dimensions (mm)	68.5 x 63 x 157.5(2.71" x 2.5" x 6.25")
Weight	600g (1.32lbs)

## Dimension



## DS-2CD852MF-E

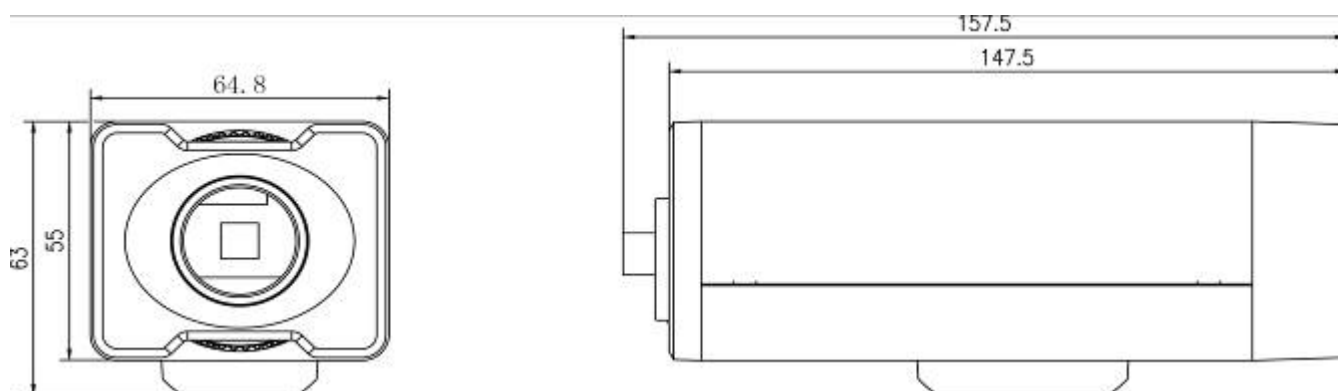
### Specification

Parameter	Model	DS-2CD852MF-E
<b>Camera</b>		
Image Sensor		1/3 inch CMOS
Effective Pixels		1600 (H) × 1200 (V)
Min. Illumination		0.5Lux @ F1.2 0.1Lux @ F1.2, sense up × 5
Electronic Shutter		Auto
Auto Iris Lens		---
Day&Night		Electronic (ICR option)
Lens		Option
Lens Mount		C / CS mount
Video Output		1Vp-p Composite Output (75Ω/BNC)
<b>Compression Standard</b>		
Video Compression		H.264 or MPEG-4
Video Output		32 K ~ 2M, adjustable ( 8Mbps maximum)
Audio Compression		OggVorbis
<b>Image</b>		
Max. Image Resolution		1600 x 1200
Frame Rate		12.5fps (1600 x 1200), 25fps (1280 x 720), 25fps (704 x 576), 30fps (704 x 480)
<b>Functions</b>		
e-PTZ		Support
Motion Detect		Support
Dual Stream		Support
SD Card Local Recording		Support
Heartbeat		Support
Password Protect		Support
Protocols		TCP / IP, HTTP, DHCP, DNS, RTP / RTCP, PPPoE (FTP, SMTP, NTP, SNMP addible)
<b>Interface</b>		
Audio Input		1 channel 3.5mm audio interface (2.0~2.4Vp-p, 1kΩ)
Audio Output		1 channel 3.5mm audio interface (Line level, 600Ω)
Communication		1 RJ45 10M / 100M self-adaptive Ethernet port and 1 RS-485 interface
Alarm Input		1 channel signal input
Alarm Output		1 channel signal relay output



Others	
Working Temperature	-10℃ ~ 60℃
Power Supply	AC24V, ±10% / DC12V, ±10%, PoE (Power over Ethernet).
Power Consumption	4W MAX
Dimensions (mm)	64.8 x 63 x 157.5 (2.57"x 2.5" x 6.25")
Weight	600g (1.32lbs)

## Dimension



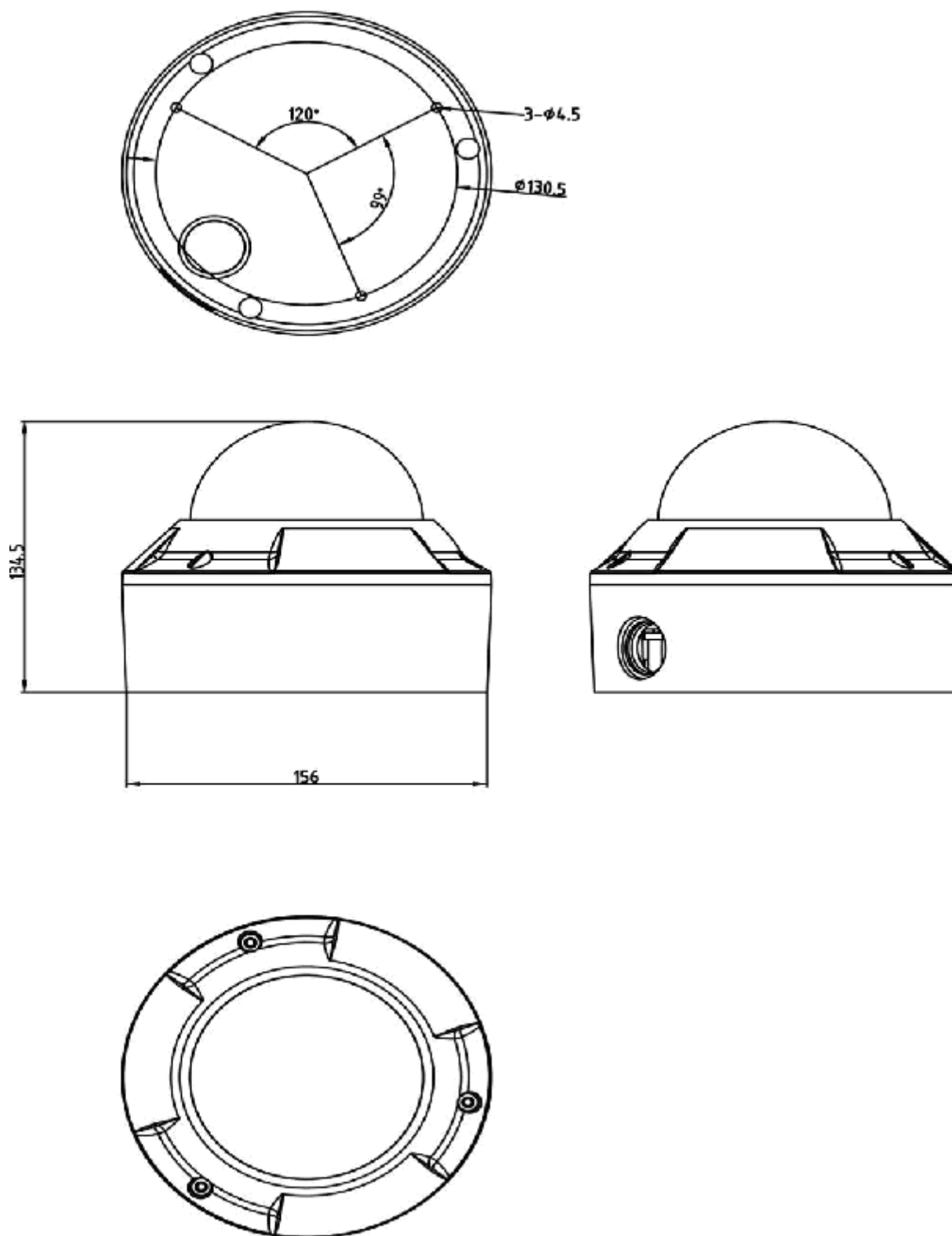
## DS-2CD762MF-FB

### Specification

Model	DS-2CD762MF-FB
Parameter	
<b>Camera</b>	
Image Sensor	1/3 inch SONY progressive scan CCD
Effective Pixels	1280 (H) × 960 (V), 1.3M CCD
Min. Illumination	0.1Lux @ F1.2 (Color), 0.01Lux @ F1.2 (B/W)
Lens	3.3-12mm @ F1.4 /Auto Iris lens
Day&Night	ICR
<b>Compression standard</b>	
Video Compression	H.264 or MPEG-4
Video Output	32 K ~ 2M, adjustable (8Mbps maximum)
Audio Compression	OggVorbis
<b>Image</b>	
Max. Image Resolution	1280 × 960
Frame Rate	12.5fps (1280 × 960), 25fps (1280 × 720), 25fps (640 × 480)
<b>Function</b>	
ePTZ	---
Motion Detect	Support
Dual Stream	Support
SD Card Local Recording	Support
Heartbeat	Support
Password Protect	Support
Protocols	TCP / IP, HTTP, DHCP, DNS, RTP / RTCP, PPPoE (FTP, SMTP, NTP, SNMP addible)
<b>Interface</b>	
Audio Input	1 channel (2.0 ~ 2.4Vp-p, 1kΩ)
Audio Output	1channel (Line level, 600Ω)
Communication	1 RJ45 10M / 100M self-adapted Ethernet port and, 1 RS-485 interface
Alarm Input	1 channel signal input
Alarm Output	1 channel signal Relay output
<b>Others</b>	
Working Temperature	-10℃ ~ 60℃ ("H" series support -40℃ ~ 60℃)
Power Supply	AC24V±10% / DC12V±10% , or PoE (Power over Ethernet)
Power Consumption	5W (10W ICR working)
Impact Protection	IEC60068-275Eh, 50J; EN50102, exceeding IK10
Water and Dust Resistance	IP66

Dimension(mm)	$\varnothing 156 \times 134.5$ ( $\varnothing 6.2'' \times 5.33''$ )
Weight	1400g (3.08lbs)

## Dimension



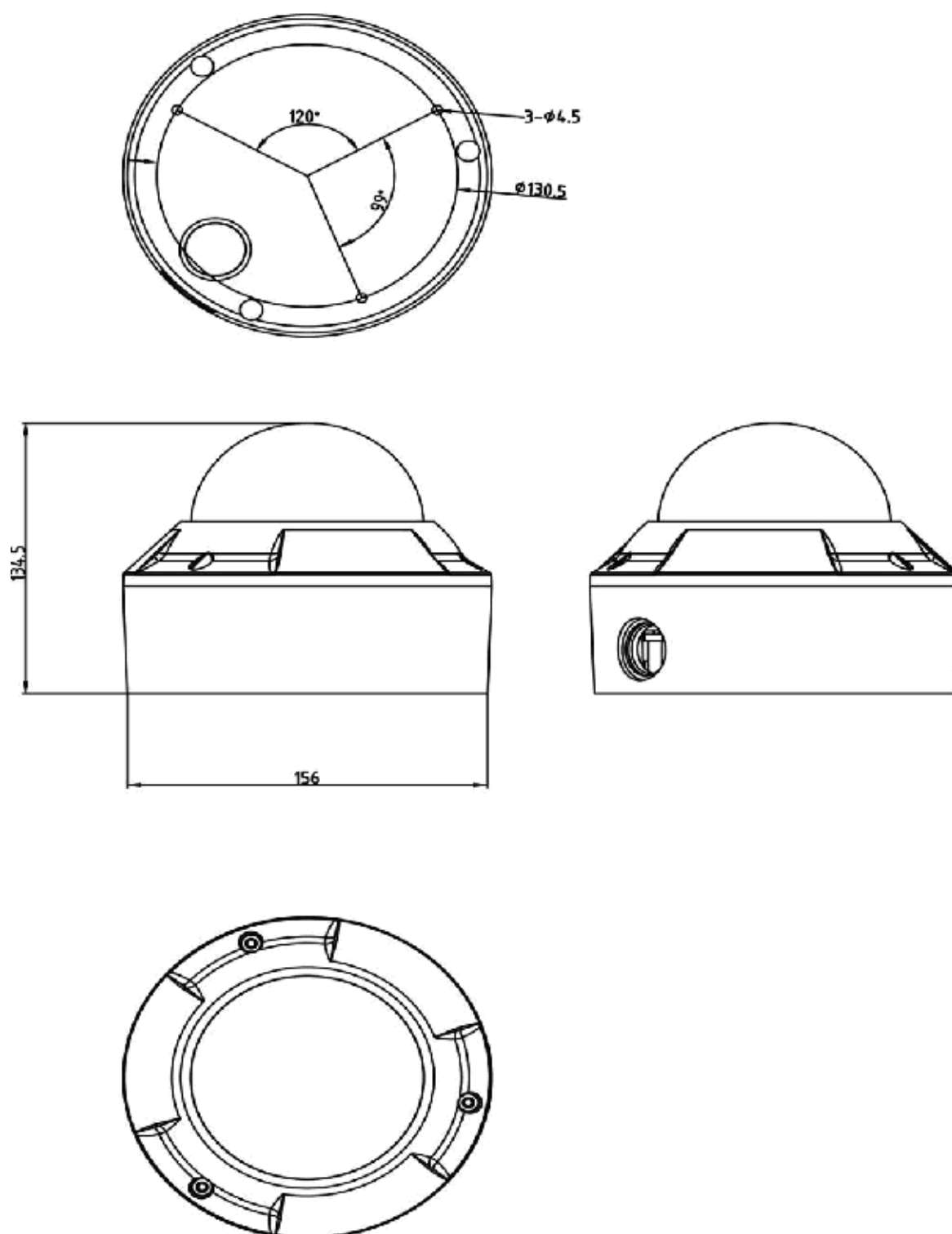
## DS-2CD752MF-FB

### Specification

Model	DS-2CD752MF-FB
Parameter	
<b>Camera</b>	
Image Sensor	1/3 inch CMOS
Effective Pixels	1600 (H) × 1200 (V)
Min. Illumination	0.5Lux @ F1.2, 0.1Lux @ F1.2, sensitization ×5
Lens	3-9mm@ F1.4 / Fixed Iris lens
Day&Night	Electronic (ICR Option)
<b>Compression standard</b>	
Video Compression	H.264 or MPEG-4
Video Output	32 K ~ 2M, adjustable (8Mbps maximum)
Audio Compression	OggVorbis
<b>Image</b>	
Max. Image Resolution	1600 × 1200
Frame Rate	12.5fps (1600 × 1200), 25fps (1280 × 720), 25fps (704 × 576), 30fps (704 × 480)
<b>Function</b>	
ePTZ	Support
Motion Detect	Support
Dual Stream	Support
SD Card Local Recording	Support
Heartbeat	Support
Password Protect	Support
Protocols	TCP / IP, HTTP, DHCP, DNS, RTP / RTCP, PPPoE (FTP, SMTP, NTP, SNMP addible)
<b>Interface</b>	
Audio Input	1 channel(2.0 ~ 2.4Vp-p, 1kΩ)
Audio Output	1channel (Line level, 600Ω)
Communication	1 RJ45 10M / 100M self-adapted Ethernet port and, 1 RS-485 interface
Alarm Input	1 channel signal input
Alarm Output	1 channel signal Relay output
<b>Others</b>	
Working Temperature	-10℃ ~ 60℃ (" -H" series support-40℃ ~ 60℃)
Power Supply	AC24V±10% / DC12V±10% , or PoE (Power over Ethernet)
Power Consumption	4W MAX (15W MAX heat )
Impact Protection	IEC60068-275Eh,50J;EN50102, exceeding IK10
Water and Dust Resistance	IP66

Dimension(mm)	$\varphi 156 \times 134.5$ ( $\varphi 6.2'' \times 5.33''$ )
Weight	1400g (3.08lbs)

## Dimension



## DS-2CD752MF-E

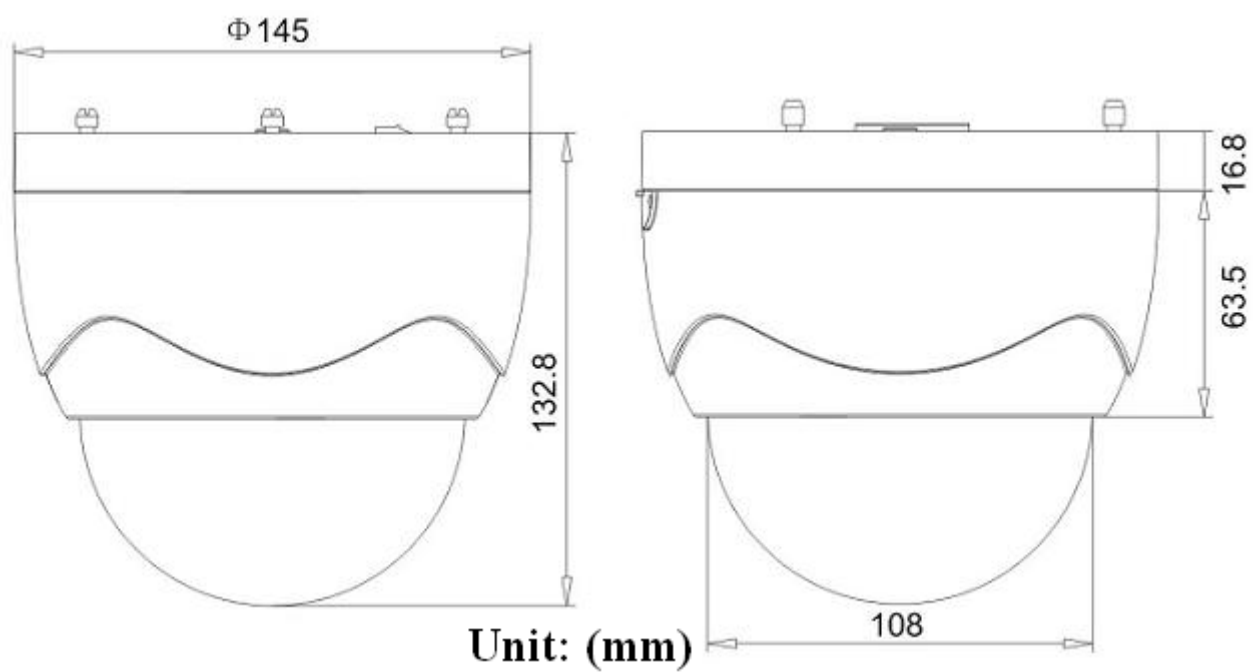
### Specification

Parameter	Model	DS-2CD752MF-E
Camera		
Image Sensor	1/3 inch CMOS	
Effective Pixels	1600 (H) × 1200 (V)	
Lens	2.8 ~ 11mm, F1.4 manual Iris lens	
Min. Illumination	0.5Lux @ F1.2 0.1Lux @ F1.2, sense up × 5	
Video Output	1.0Vp-p Composite Output (75Ω/BNC)	
Day & Night	Electronic	
Compression Standard		
Video Compression	H.264 or MPEG-4	
Video Output	32 K ~ 2M, adjustable (8Mbps maximum)	
Audio Compression	OggVorbis	
Image		
Max. Image Resolution	1600 × 1200	
Frame Rate	12.5fps (1600 × 1200), 25fps (1280 × 720), 25fps (704 × 576), 30fps (704 × 480)	
Functions		
Motion Detect	Support	
Dual Stream	Support	
SD Card Local Recording	Support	
Heartbeat	Support	
Password Protect	Support	
Protocols	TCP / IP, HTTP, DHCP, DNS, RTP / RTCP, PPPoE (FTP, SMTP, NTP, SNMP addible).	
Interface		
Audio Input	1 channel (2.0 ~ 2.4Vp-p,1kΩ)	
Audio Output	1 channel (Line level, 600Ω)	
Communication	1 RJ45 10M / 100M self-adaptive Ethernet port and 1 RS-485 interface	
Alarm Input	1 channel signal input	
Alarm Output	1 channel signal relay output	
Others		
Working Temperature	-10℃ ~ 60℃	
Power Supply	12VDC, ±10%, (-E) series support PoE (Power over Ethernet)	
Power Consumption	4W MAX	
Dimensions (mm)	φ145 × 132.8 (φ5.75" × 5.26")	



Weight	900g (1.98lbs)
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## Dimension



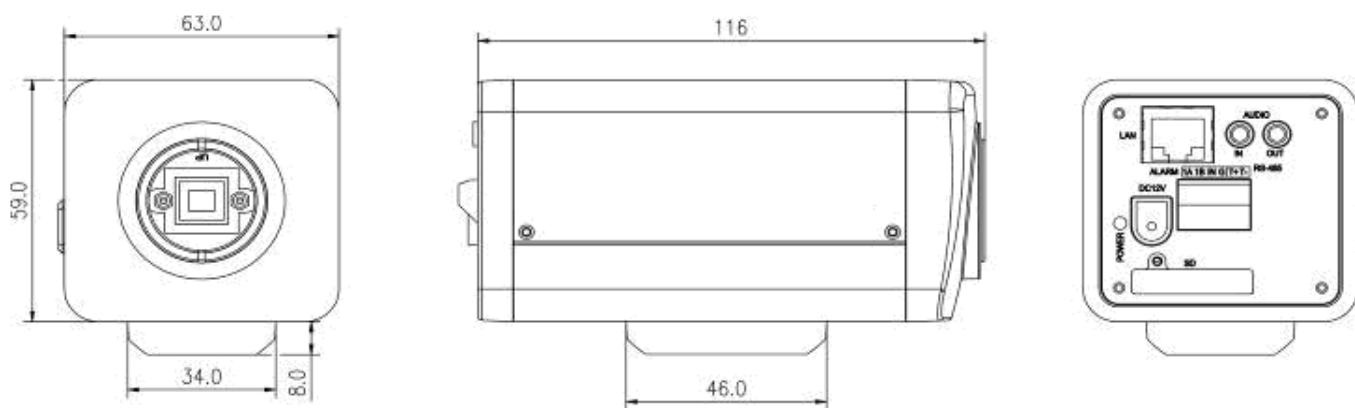
# DS-2CD852F

## Specification

Parameter	Model	DS-2CD852F
Camera		
Image Sensor	1/3 inch CMOS	
Effective Pixels	1600 (H) × 1200 (V)	
Min. Illumination	0.5Lux @ F1.2 0.1Lux @ F1.2, sense up × 5	
Electronic Shutter	Auto	
Auto Iris Lens	---	
Day&Night	Electronic (ICR option)	
Lens	Option	
Lens Mount	C / CS mount	
Video Output	1Vp-p Composite Output (75Ω/BNC)	
Compression Standard		
Video Compression	H.264 or MPEG-4	
Video Output	32 K ~ 2M, adjustable ( 8Mbps maximum)	
Audio Compression	OggVorbis	
Image		
Max. Image Resolution	1600 x 1200	
Frame Rate	25fps(704x576), 12.5fps(1280x720) 5fps(1600x1200)	
Functions		
e-PTZ	Support	
Motion Detect	Support	
Dual Stream	Support	
SD Card Local Recording	Support	
Heartbeat	Support	
Password Protect	Support	
Protocols	TCP / IP, HTTP, DHCP, DNS, RTP / RTCP, (FTP, SMTP, NTP, SNMP addible)	
Interface		
Audio Input	1 channel 3.5mm audio interface (2.0~2.4Vp-p, 1kΩ)	
Audio Output	1 channel 3.5mm audio interface (Line level, 600Ω)	
Communication	1 RJ45 10M / 100M self-adaptive Ethernet port and 1 RS-485 interface	
Alarm Input	1 channel signal input	
Alarm Output	1 channel signal relay output	

Others	
Working Temperature	-10℃ ~ 60℃
Power Supply	DC12V, ±10%,
Power Consumption	3W MAX
Dimensions (mm)	63*59*116
Weight	650g

## Dimension



Unit:mm

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