



User Manual

CUBE IP CAMERA

V6-2.2.5_1608



CUBE IP CAMERA

This is a 1 / 2.7" Mega-Pixel CMOS sensor IP camera with a built-in web server. The user can view real-time video via IE browser. It supports H.264 and M-JPEG video compression which provides smooth and high video quality. The video can be stored in the Micro SD card and playback remotely.

With a user friendly interface, it is an easy-to-use IP camera for security applications.

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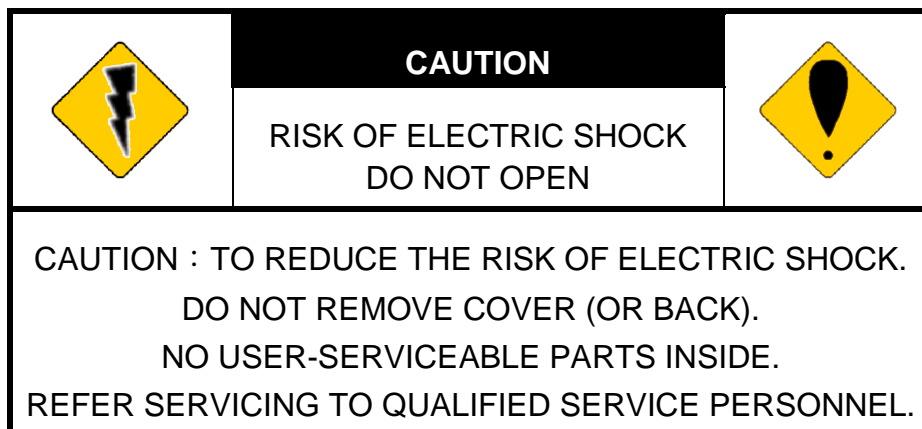
i. Warnings, Cautions and Copyright

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION



COPYRIGHT

THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.

ii. Product Specifications

Main Features:

- Full HD 1080P Real Time
- Digital Noise Reduction
- Digital Wide Dynamic Range
- Shutter Speed Adjustable
- Sense Up Adjustable
- Day & Night Switch Time Control Manfully
- Support PIR
- Support WPS (Optional)
- IR Built in 8 Meter
- Power over Ethernet
- 2-way Audio
- H.264/ M-JPEG Compression
- Micro SD Card Backup (Optional)
- Support iPhone/Android/Mac
- SDK for Software Integration
- Free Bundle 36 ch Recording Software

Hardware	
CPU	Multimedia SoC
RAM	128 MB
Flash	32 MB
Image sensor	1 / 2.7" Mega-Pixel CMOS sensor
Sensitivity	Color : 0.1 Lux (AGC ON) B / W: 0.05 Lux (AGC ON)
Lens Type	3.6 mm @ F2.1
View Angle	87°(H), 46°(V)
I/O	1 DI / 1 DO
Video Output	N/A

ICR	Mechanism IR cut Filter	
Audio	G.711(64K) and G.726(32K,24K) audio compression Input : Mic built-in Output : 3.5mm phone jack, or Speaker Support 2-way audio	
PIR	Yes	
Power over Ethernet	Yes	
Power Consumption	DC 12V Max: 4.0 W PoE Max: 6.0 W	
Operating Temperature	0°C ~ 45°C	
Wide Dynamic Range	70dB	
S/N Ratio	50dB	
Dimensions	62mm x 100(mm)x 44(mm)	
Weight	230g	
IR LEDs		
LEDs	4 LEDs, 850nm,	
IR distance	8M	
Network		
Ethernet	10/ 100 Base-T	
Network Protocol	IPv4, HTTP, HTTPS, SNMP, SSL, TLS, DNS, ICMP, IGMP, ARP, SNTP, RTSP/RTP/RTCP, TCP/IP, UDP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMBA, Bonjour	
Wireless (Optional)		
	Wireless	802.11b/g/n
	WPS	Yes
	Security	WEP,WPA-PSK,WPA2-PSK
Power Consumption	DC 12V Max: 5.0 W	
System		
Video Resolution	1920x1080@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps	
Video Adjust	Brightness, Contrast, Hue, Saturation, Sharpness, AGC, Night Mode, WDR, Flip, Mirror, Noise Reduction, Day&Night Adjustable, LDC	
Features	Motion Detection, Privacy Mask, Anti Fog, Corridor Mode, P2P (Optional)	
Triple Streaming	Yes	

Image Snapshot	Yes
Full Screen Monitoring	Yes
Privacy Mask	Yes, 3 different areas
Compression Format	H.264/ M-JPEG
Video Bitrates Adjust	CBR, VBR
Motion Detection	Yes, 3 Different Areas
Triggered Action	Mail, FTP, Save to SD card, Samba, DO
Pre/ Post Alarm	Yes, configurable
Security	Password protection, IP address filtering, HTTPS encrypted data transmission
Firmware Upgrade	HTTP mode, can be upgraded remotely
Simultaneous Connection	Up to 10
Micro SD card management	
Recording Trigger	Motion Detection, IP check, Network break down (wire only),Schedule, DI
Video Format	AVI, JPEG
Video Playback	Yes
Delete Files	Yes
Web browsing requirement	
OS	Windows 7, 8 , 10 ,XP, Microsoft IE 6.0 or above
Mobile Support	iOS 8 or above, Android 4.4.2 or above.
Hardware Suggested	Intel Dual Core 2.8G, RAM 4GB, Graphic card: 128MB

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION.

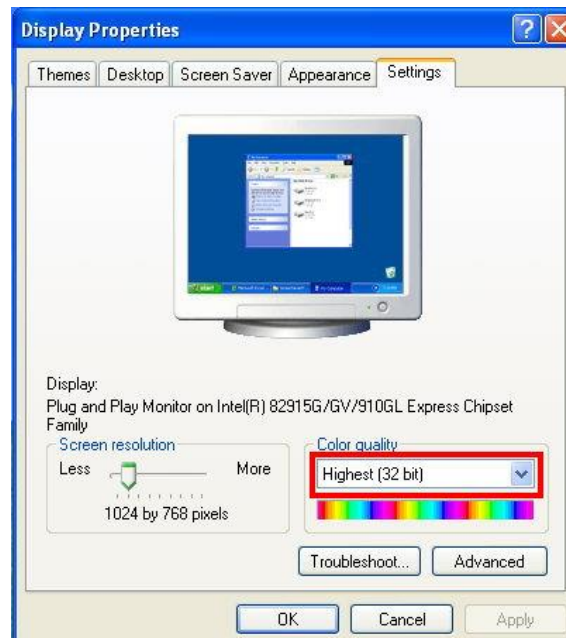
iii. Product Installation

* Monitor Settings

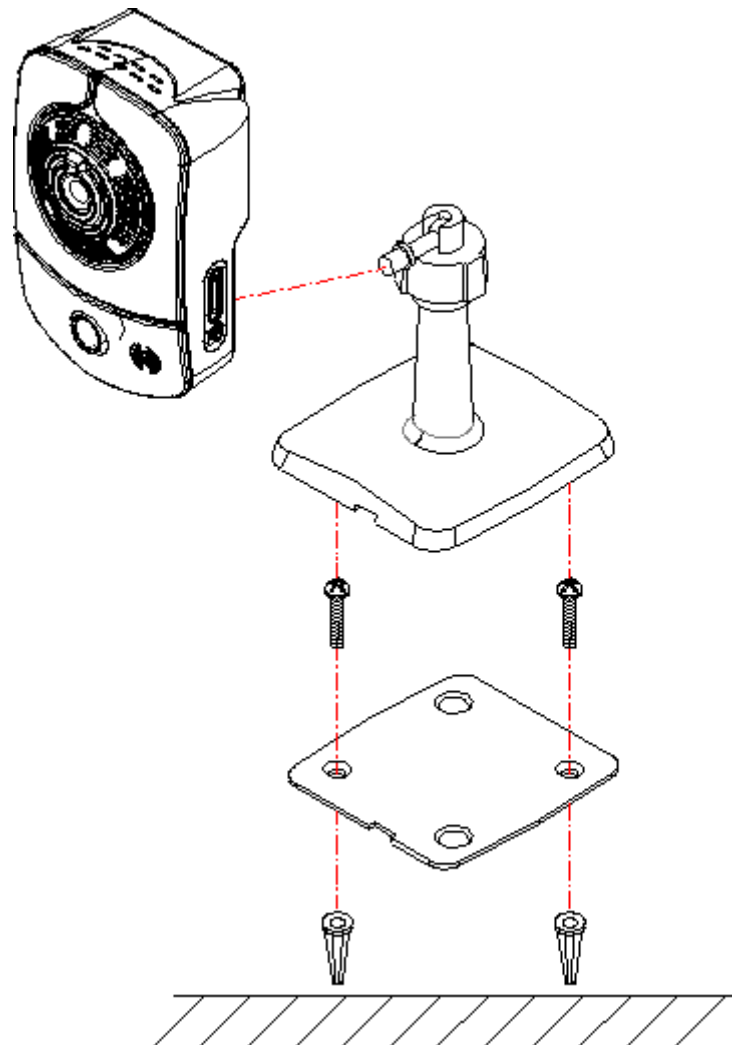
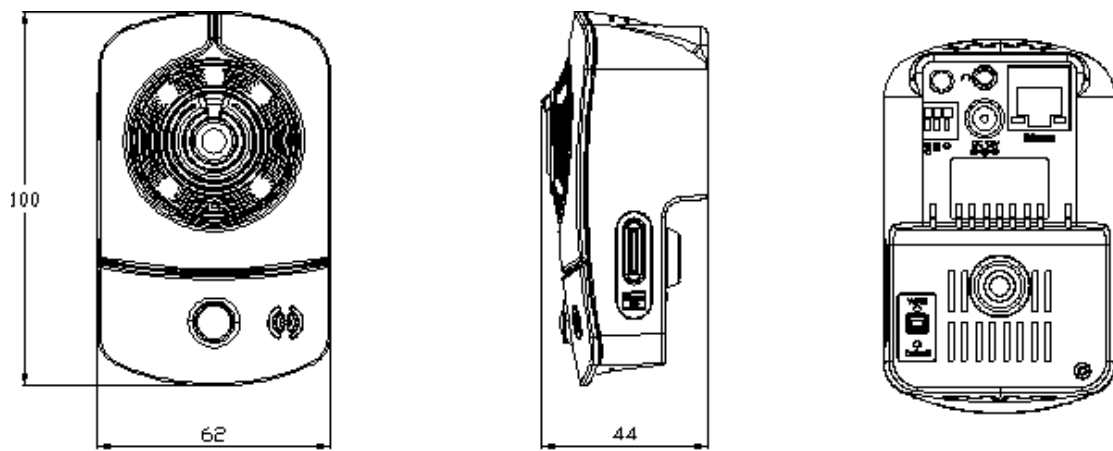
1. Right-Click on the desktop. Select **Properties**



2. Change color quality to highest (**32bit**).

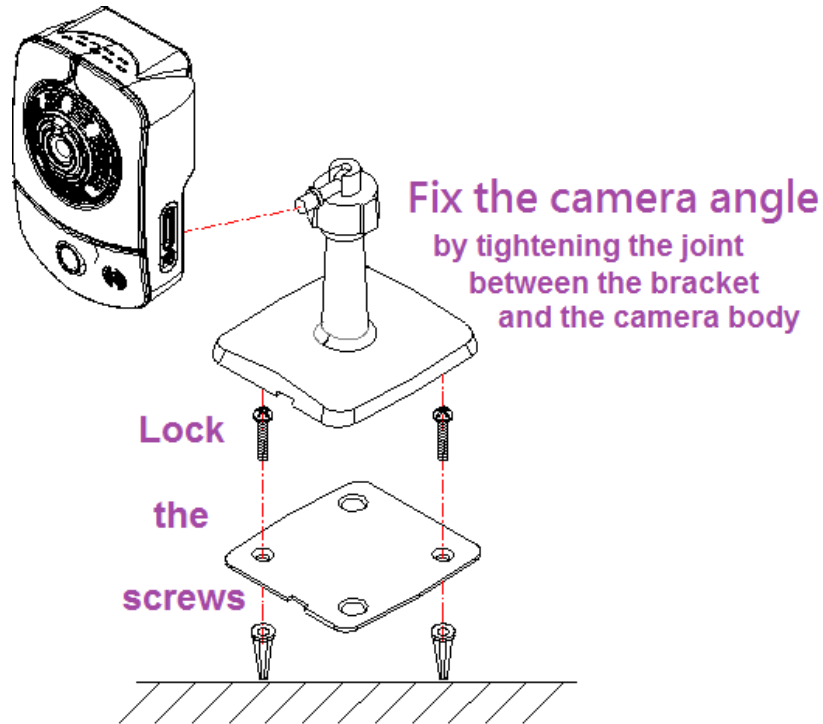


* Hardware Installation



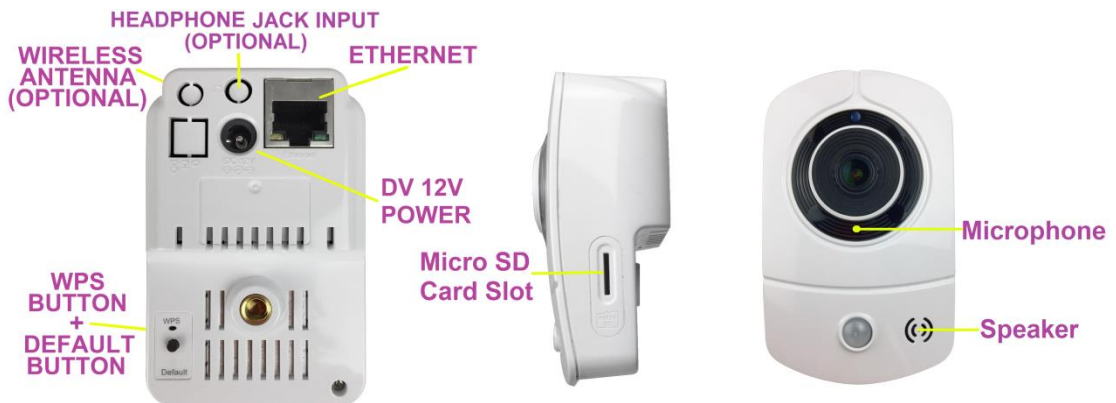
1. Using bracket

Please refer to the picture below. Use the screws to lock the bracket to the wall or ceiling, and then join the camera with the bracket. Tighten or loosen the camera by twisting the camera body unto the bolt.



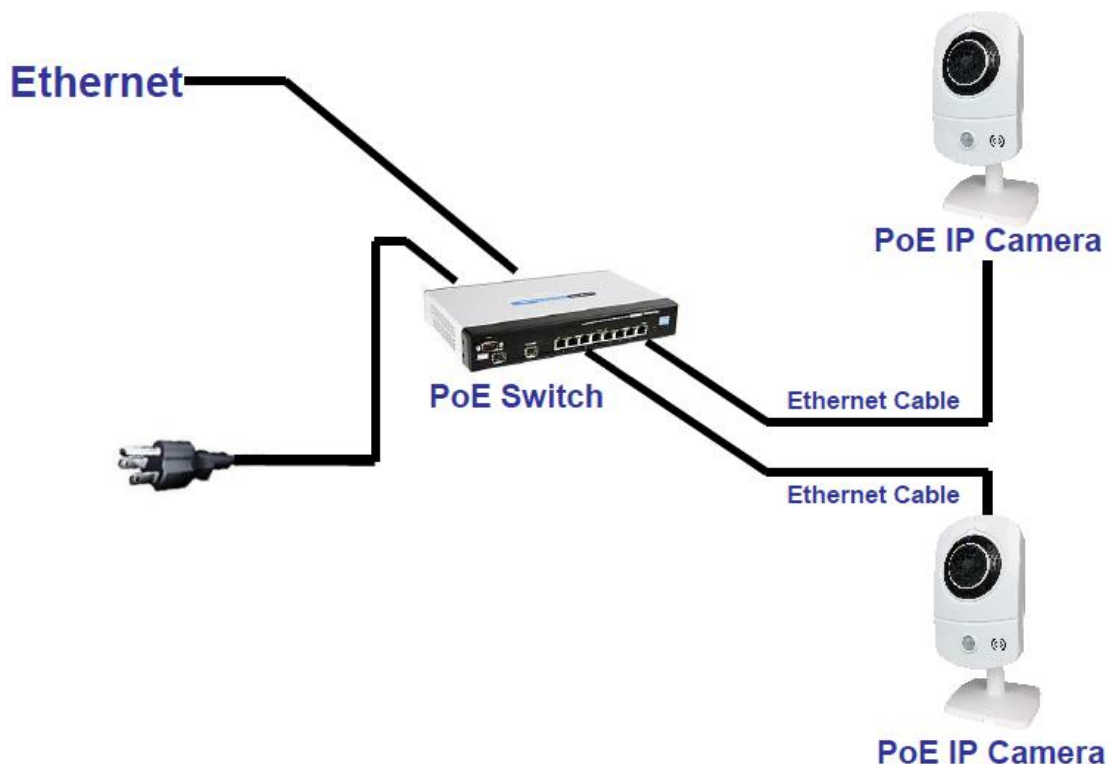
2. Connector Instruction

The camera connectors and functions are as below. Connect the power and the Ethernet cable to the camera and set it according to your monitoring and networking environment.



3. **PoE (Power Over Ethernet) (Optional) 802.3af, 15.4W PoE Switch is recommended**

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It allows providing power to a network device, such as an IP phone or a network camera, using the same cable as used for network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure an operation of 24 hours a day, 7 days a week.



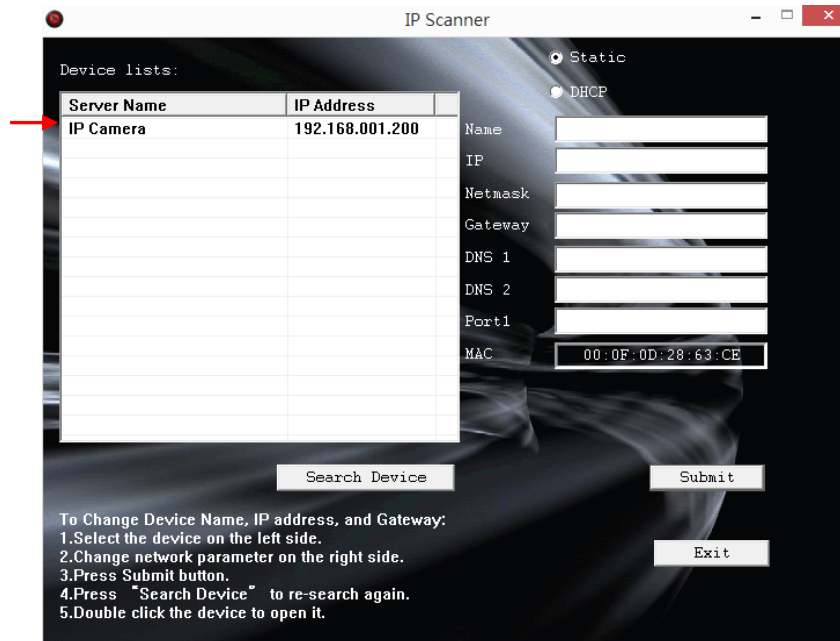
***IP assignment**

A. Cable Connection

1. Open the software **IP Scanner** to assign the IP address of the IP Camera. Find this software in the **Applications** folder in the software CD attached to the product's package.
2. **IP Scanner** supports two languages: This manual is for English version.
3. There are 3 kinds of IP configuration.
 - a. Fixed IP (Public IP or Virtual IP)
 - b. DHCP (Dynamic IP)
 - c. Dial-up (PPPoE)
4. Execute **IP Scanner**.
5. For Windows XP SP2 or above, a Windows Security Alert may pop up. Choose the network type based on your surveillance environment, and click on **Unblock**.



6. IP Scanner configuration:



7. **IP Scanner** will search for all the IP Cameras connected on the LAN. The user can click **Search Device** to search again.
8. Click one of the IP Cameras listed on the left side. The network configuration of this IP camera will be shown on the right side once you highlight the device with your mouse. You can change the **name** of the IP Camera to your preference (e.g.: Office, warehouse). Change the parameters and click **Submit**, then click **OK**, it will apply the changes and reboot the device.



9. Please make sure the subnet of the PC IP address and the IP Camera IP address are the same.

The same Subnet:

IP Camera IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

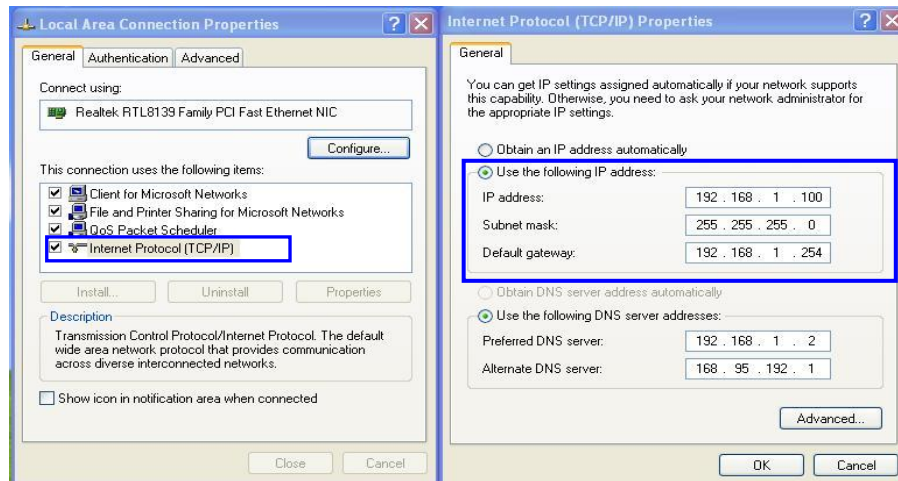
IP Camera IP address: 192.168.2.200

PC IP address: 192.168.1.100

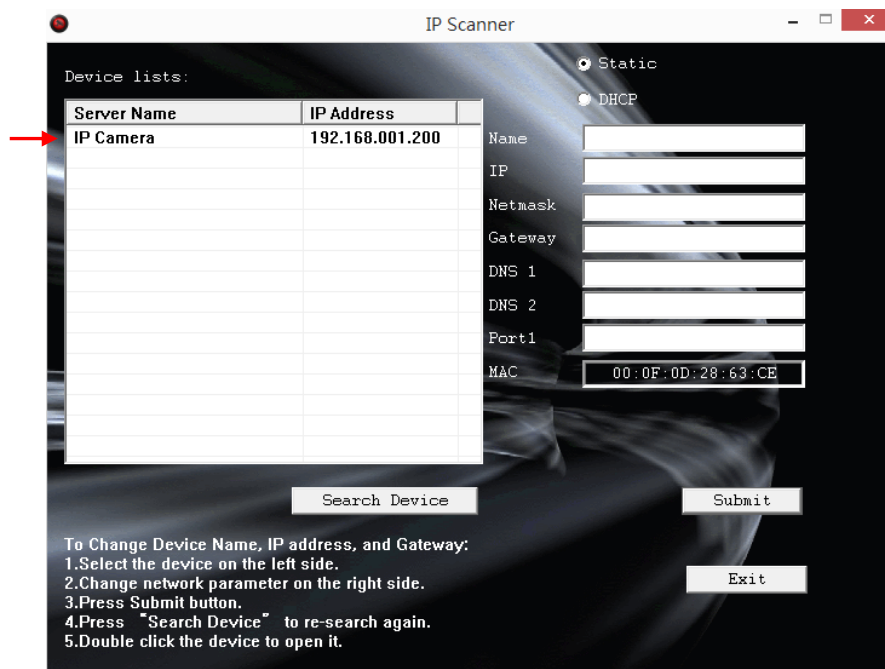
To Change the PC IP address:

Control Panel → Network Connections → Local Area Connection Properties → Internet Protocol (TCP/IP) → Properties

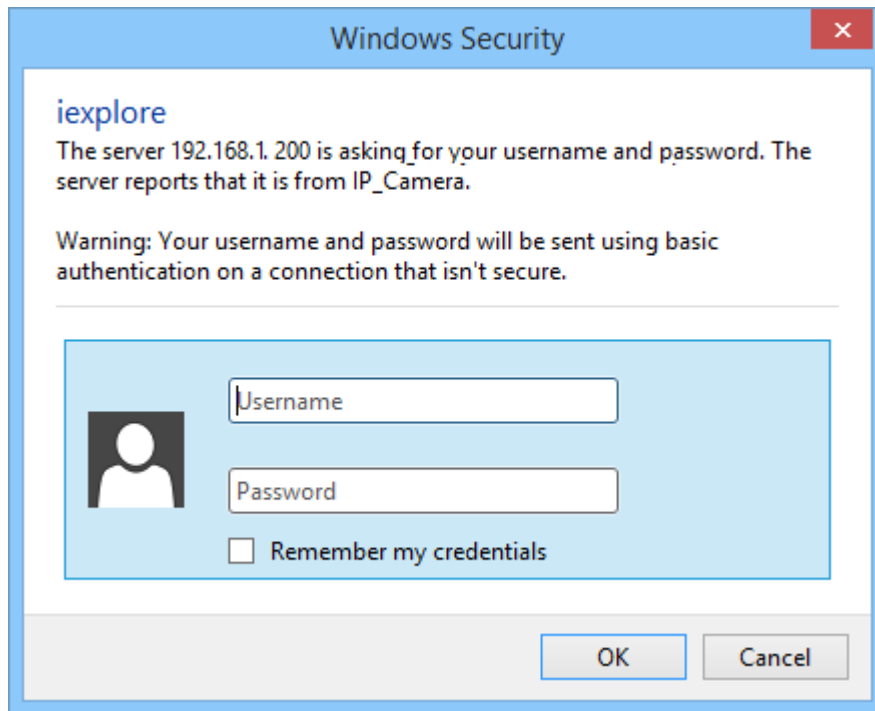
Make sure your IP Camera and PC are in the same Subnet. If not, change the IP Camera subnet or the PC IP subnet accordingly below.



10. To quickly access remote monitoring, left-click the mouse twice on the selected IP Camera listed under **Device list** of **IP Scanner**. A default network browser of the camera control interface will open.



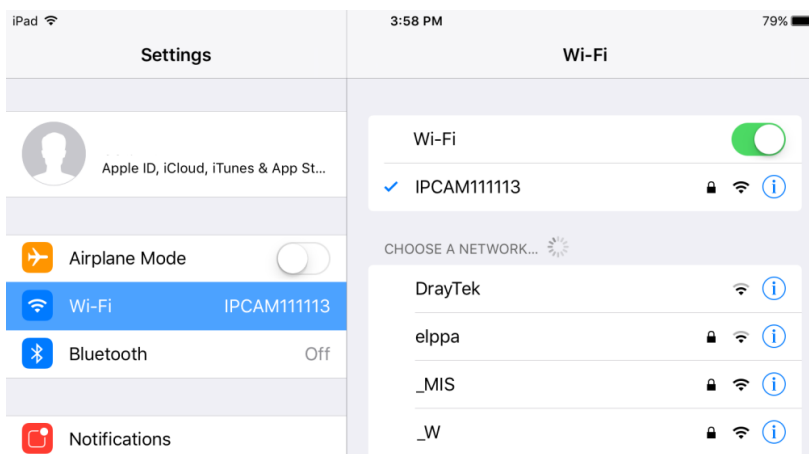
11. Enter **admin** for both Username and Password to gain access.



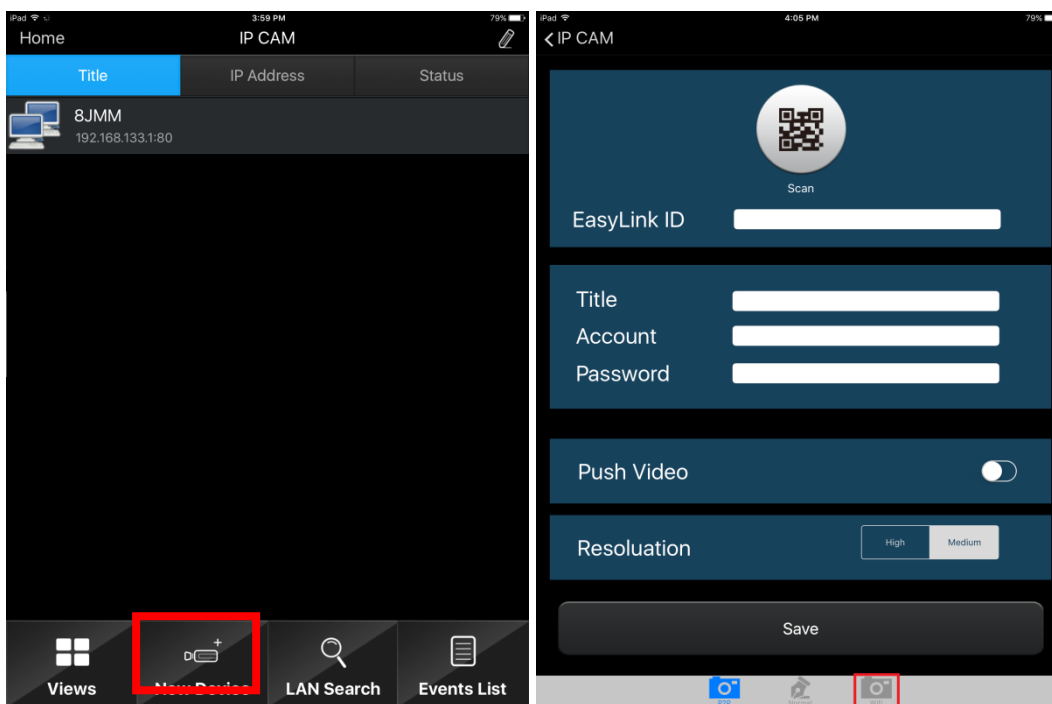
B. Wireless Connection

The user can establish the wireless connection via a router which shares the same LAN as the desktop computer. The wireless network can be set up using SSID to perform the remote operation.

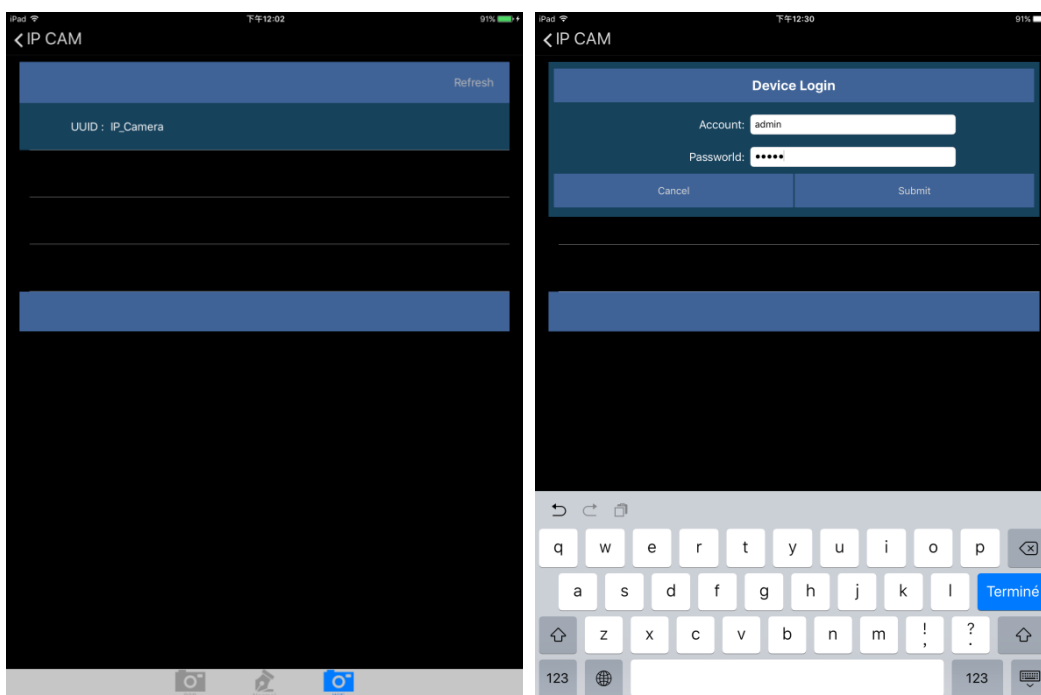
1. Once the camera is switched on, use the mobile device or tablet computer to search for SSID through Wi-Fi and establish a connection. As the image demonstrates below, the SSID name of the camera is **IPCAM111113**, which is derived from the term "IP CAM", with 111113 being the last 6 digits of the MAC address of the device, hence the SSID name **IPCAM111113**.



Enter the default password “**12345678**” for accessing the SSID. Once the connection has been successfully established, open the IPmotion APP, click on New Device, and click on WiFi icon as framed in the image below.

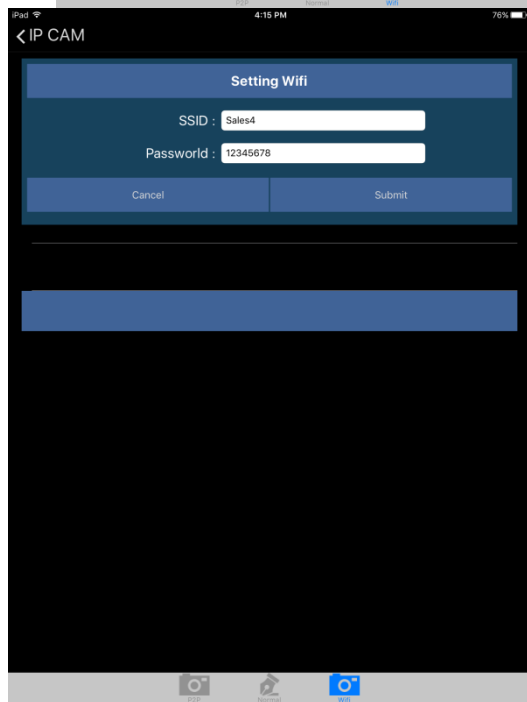
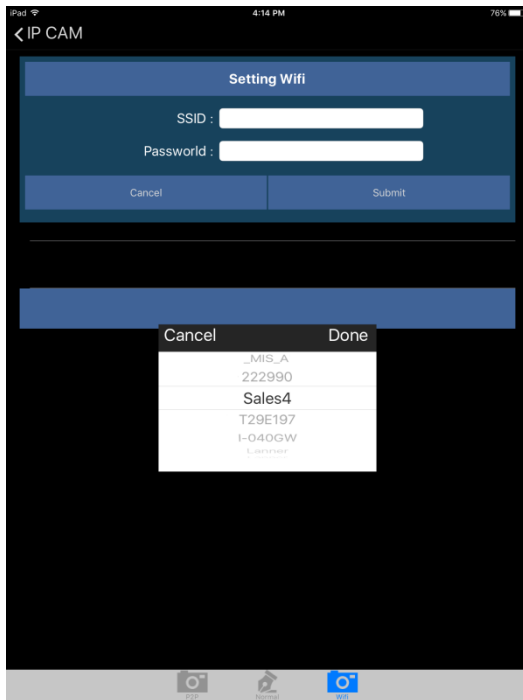


The same SSID name will be displayed in the WiFi interface which you have just entered. Click on the SSID and enter its account name and password. (Account: **admin** / Password: **admin**)

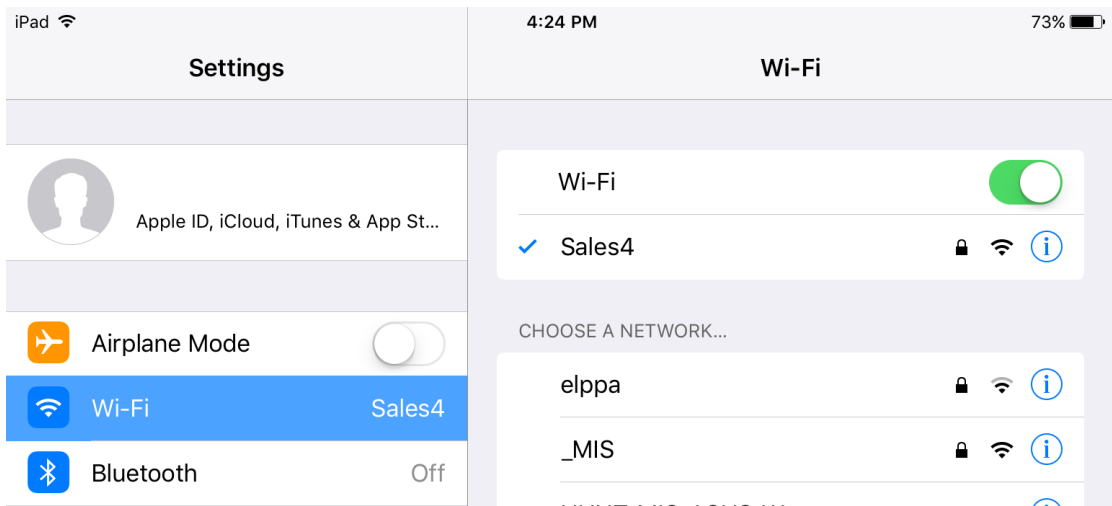


You will be asked to select the router which has been found online.

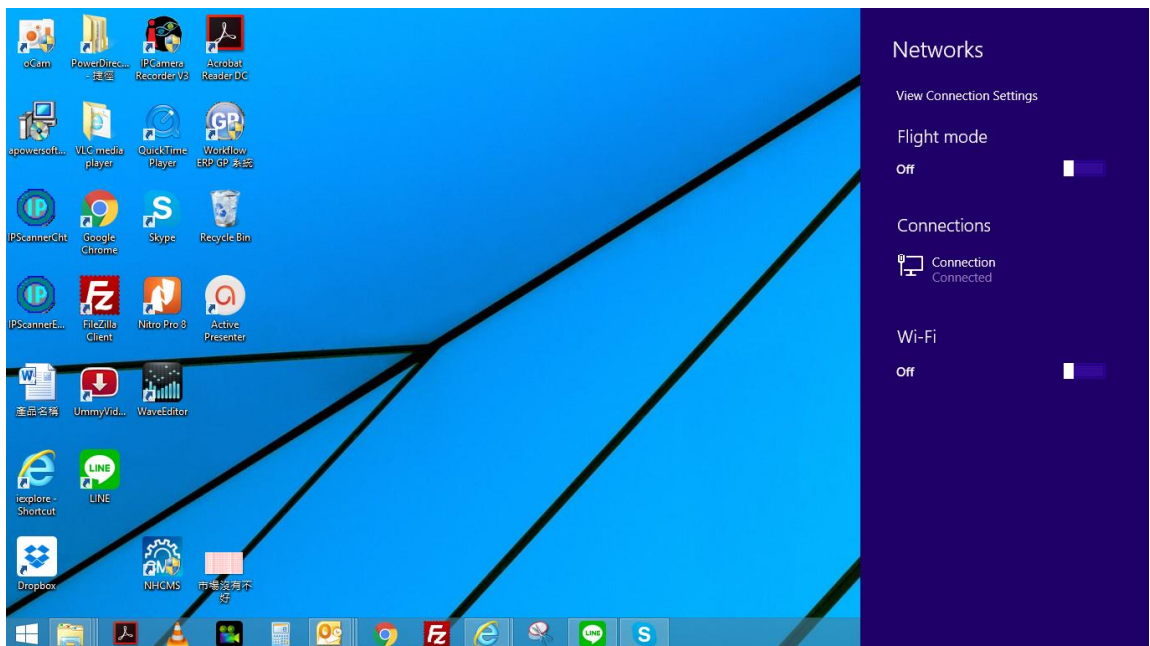
Click on the router which you would like to be connected with, key-in the password for the router, and click on Submit.




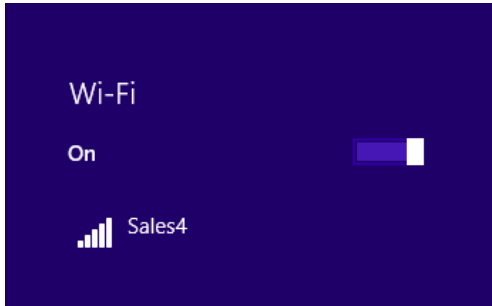
Take the image below as the reference. Open the setting of the mobile device or tablet computer, and select the same WiFi service which shares the same connection of the camera.



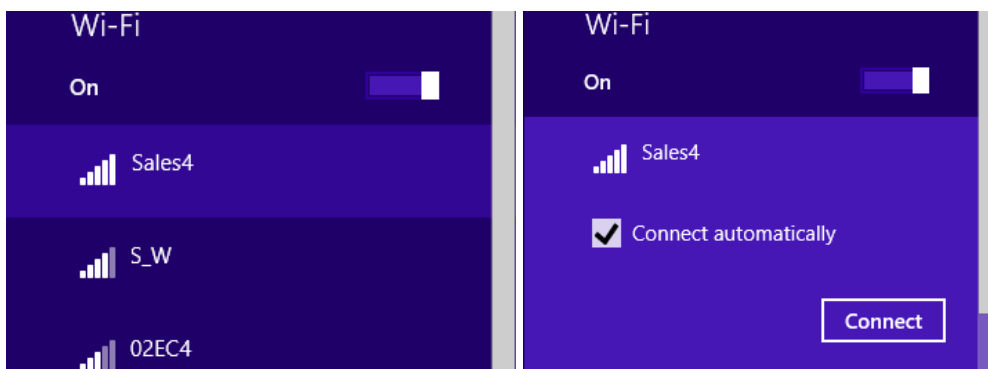
Now the camera is ready to be operated remotely from a desktop computer.



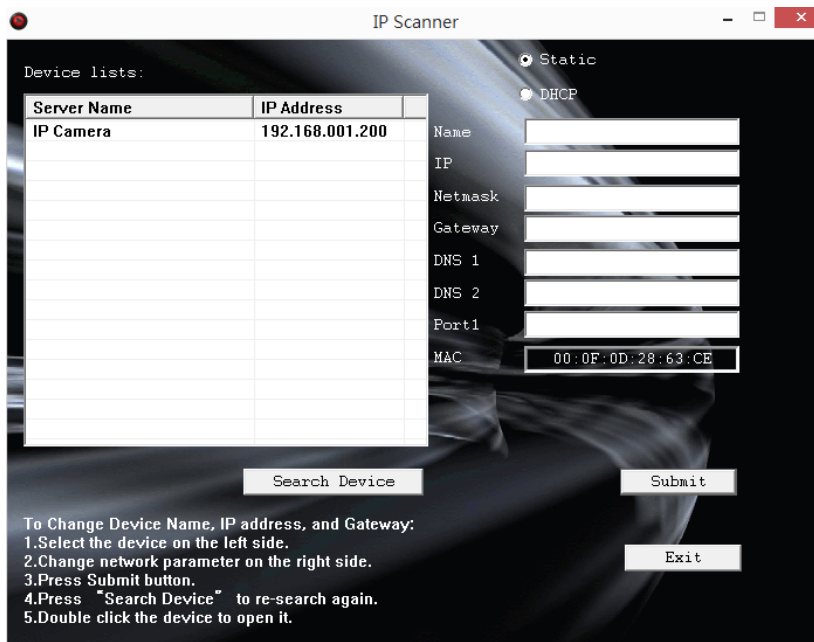
Click the  icon at the right corner of the menu bar. The setup menu will pop up from the right.



Turn on the Wi-Fi option by clicking on the bar with a mouse-click. Select the same server that operates the wireless connection. **In this case**, the Sales4 is the aimed server.



Click on **Connect** to allow the Wi-Fi connection to be established.



Execute **IP Scanner**, click on **Search Device** to find the expected IP camera or simply open an IE browser and enter the IP address of the IP camera which you would like to connect to.



A security window will pop up requiring the default Username & Password. Key-in **admin** for both columns to enter the camera operational page on IE browser.

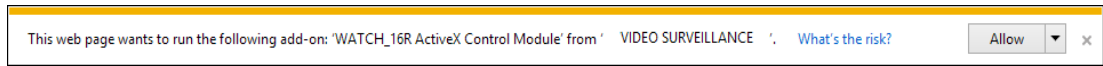
Please see further wireless connection options at chapter Network.

***Install ActiveX control**

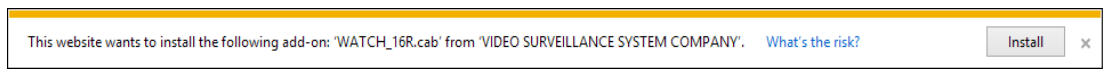
1. For users of IE 6.0 or above:

When viewing the camera video for the first time via IE, the browser will ask you to install the **ActiveX** component.

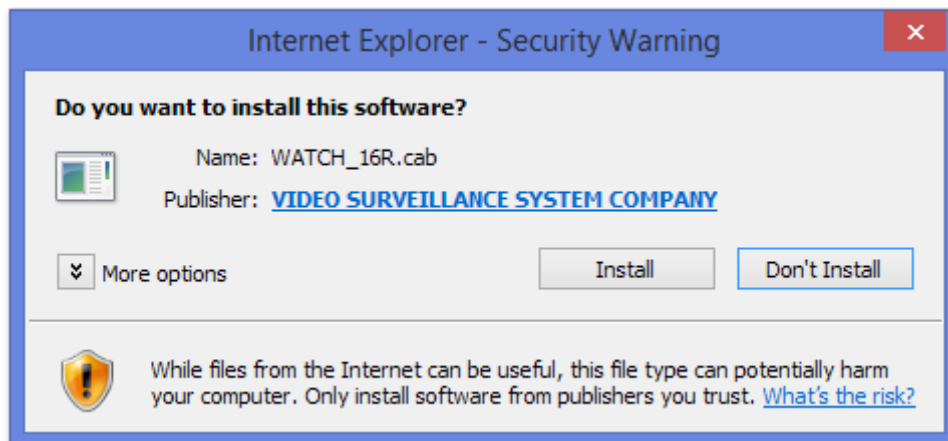
Choose 'Allow',




Then choose 'Install'.



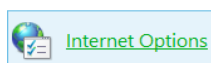
Start installing the ActiveX component.



If the installation fails, please check the security settings in the IE browser.

Go to **Start-Up Menu**  on the lower left corner of the **Windows**,

select **Control Panel**  then Double-click on



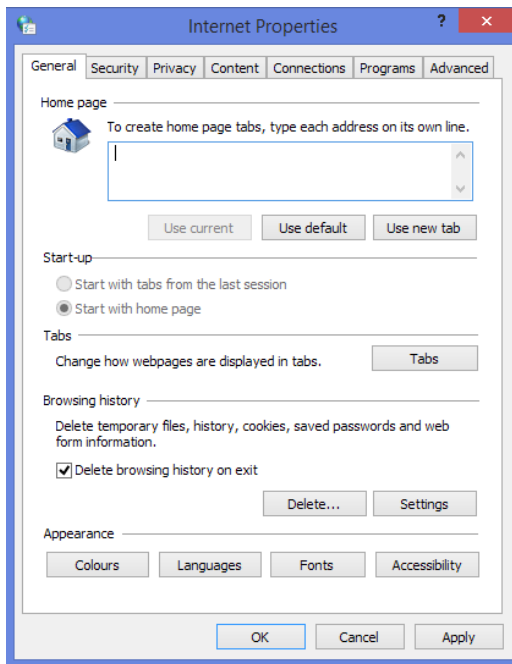
to access to **Internet Properties** settings.

Starting from **Internet Properties**, proceeding step **A** and **B**:

A. Security → Custom Level → Security Settings → Download unsigned ActiveX controls → Enable or Prompt (recommended).

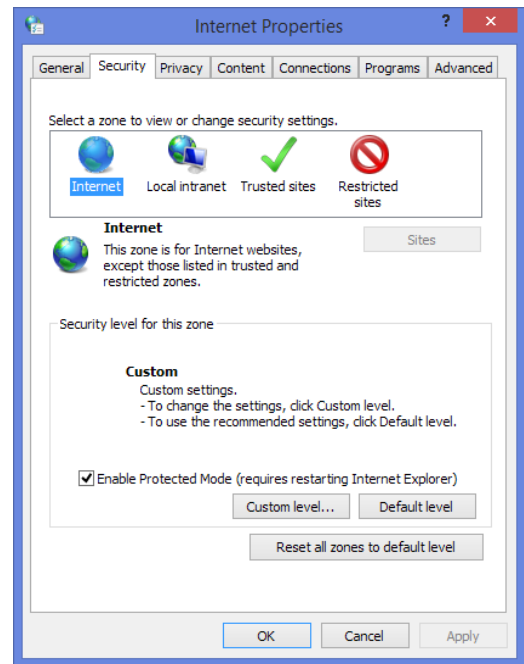
B. Security → Custom Level → Security Settings → Initialize and script ActiveX controls not marked as safe → Enable or Prompt (recommended).

1

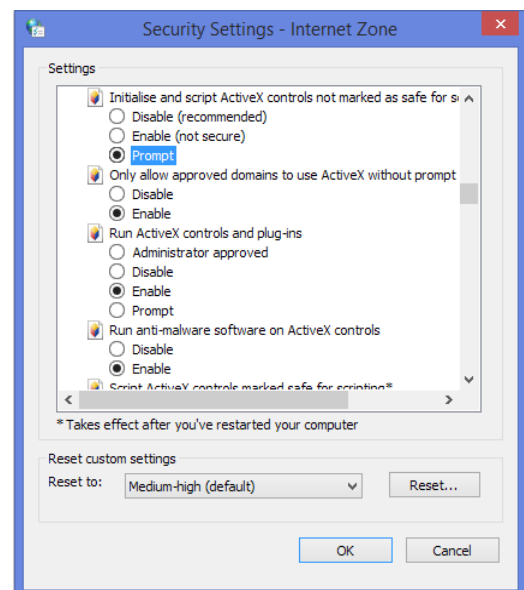
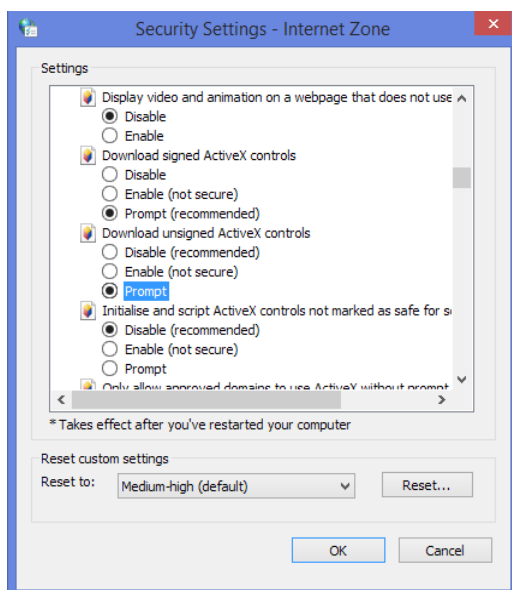


3

2

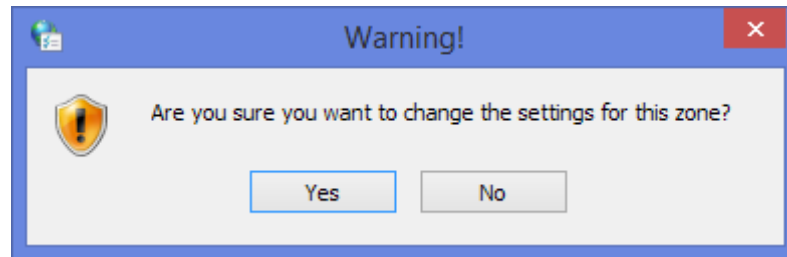


4



5

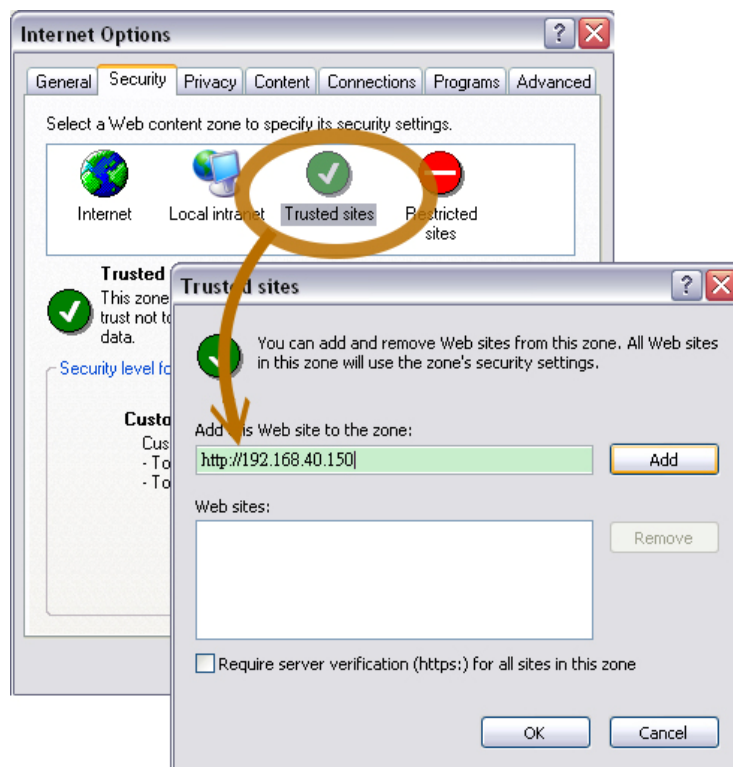
When popup the following dialogue box, click **Yes**.



2. You can choose another way:

Go to: IE→Tools → Internet Options... → Security Tab → Trusted sites → Add the IP address and click **OK**.

In the site list you can key one single IP address or a LAN address. For example, if you add **192.168.21.***, all the IP address under **21.*** on the LAN will be regarded as trusted sites.



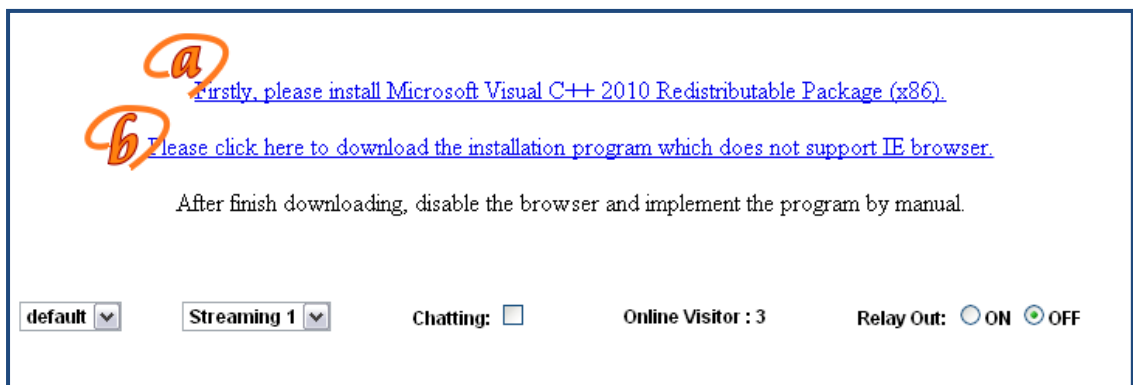
3. To Non-IE Web Browser Users

If you use Firefox or Google chrome to access the IP camera but fails to watch the live video, please follow the steps to install necessary tools:

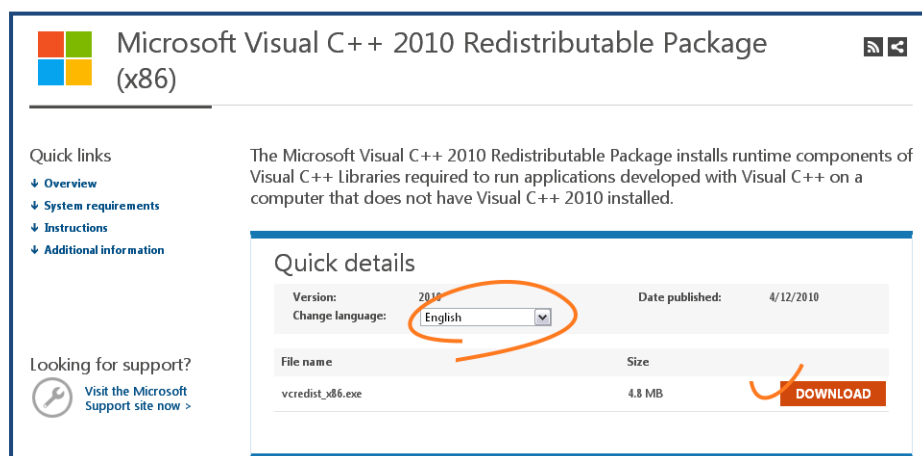
(The following pictures are based on chrome.)

a. You may see the prompt message as the picture below. Click the link:

Firstly, please install Microsoft Visual C++ 2010 Redistributable Package (x86).

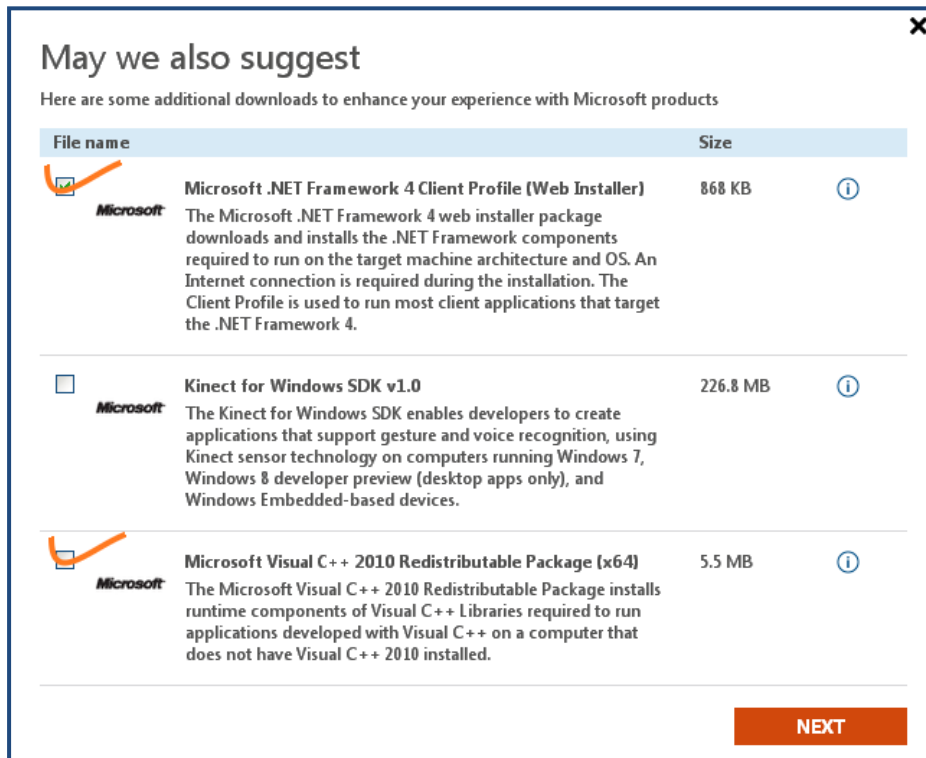


The link will conduct you to the Microsoft official site where you can download the tools. Please select the language and click **download**.



In the

pop-up window, please tick the first and the third file as the picture below. Click **Next** to download both **Microsoft .NET Framework 4 Client Profile (Web Installer)** and **Microsoft Visual C++ 2010 Redistributable Package (x64)**.

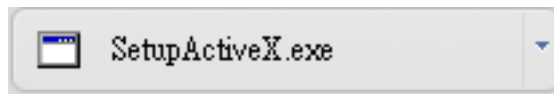


After finishing downloading, execute the two files respectively to install them. The windows may ask you to reboot the PC when the installation is finished.



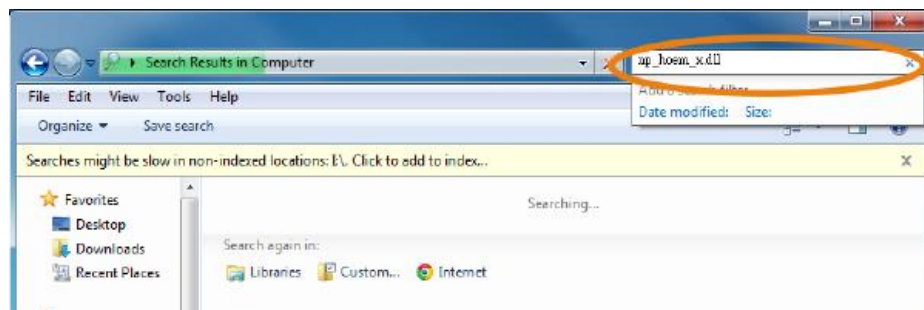
b. Then, click the second link **Please click here to download the installation program which does not support IE browser** to download Setup ActiveX.

After finishing downloading, execute the files to install **ActiveX**. Then restart the browser.

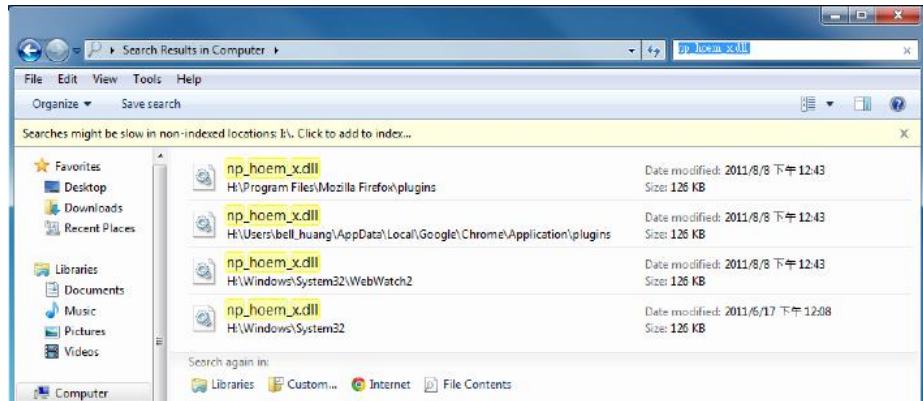


c. If you execute the steps above but still cannot see live video normally, please try the following solution:

Search for the file **np_hoem_x.dll** in your system disk. For Windows XP users, please go to **Start** → **Search** → Search for **All files and folders** and key-in **np_hoem_x.dll**. For Windows 7 users, please use the search bar on the top-right of the Windows Explorer.



Delete all the files named **np_hoem_x.dll**. They're the **ActiveX** control tools installed in your computer, but the old version of **ActiveX** might not be compatible with the new version of the browser. Therefore, they need to be deleted in order to install the latest **ActiveX** control.



Start your web browser, and repeat the step 2-b: **Download the installation program which does not support IE browser** to download and install **ActiveX**.

a [Firstly, please install Microsoft Visual C++ 2010 Redistributable Package \(x86\).](#)

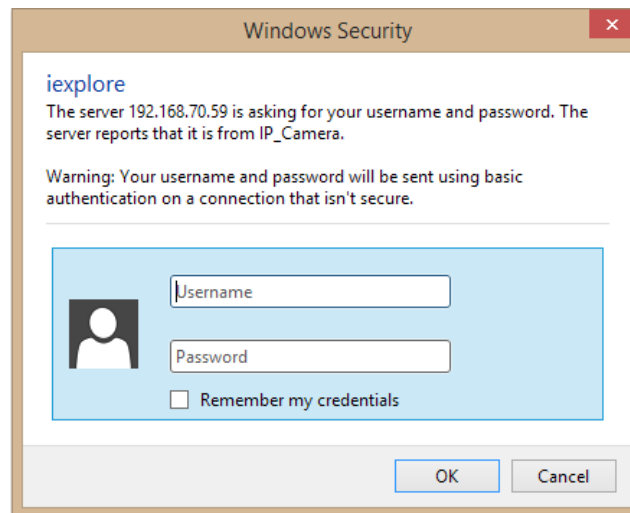
b [Please click here to download the installation program which does not support IE browser.](#)

After finish downloading, disable the browser and implement the program by manual.

default ▼ Streaming 1 ▼ Chatting: Online Visitor : 3 Relay Out: ON OFF

iv. Live Video

Start an IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name: **admin** and password: **admin**.

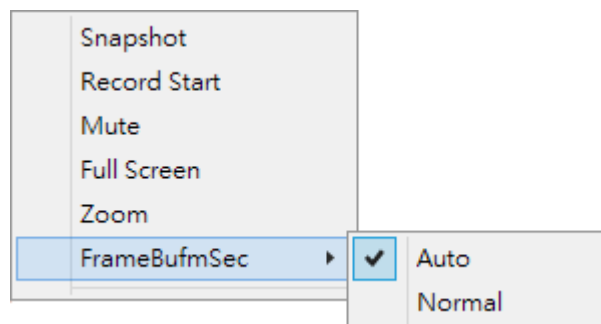


When the IP Camera is successfully connected it shows the following interface.



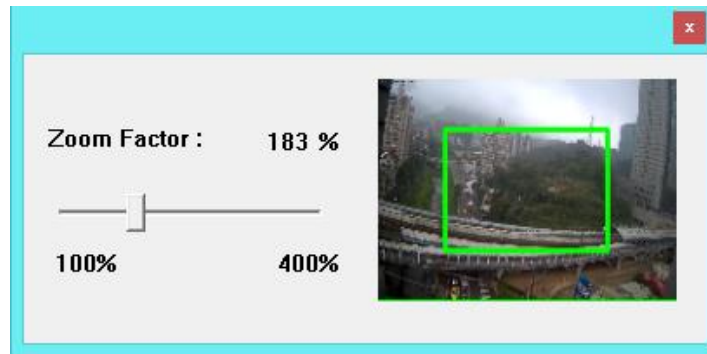
1. Get into the administration page.
2. Video Snapshot.
3. Show the system time, video resolution, and video refreshing rate.
4. Adjust image: 1/2x, 1x, 2x.
5. Selects the video streaming source: If the streaming 2 is closed, this function will not be displayed.
6. Tick on “Chatting” for enabling two-way audio.
7. Shows how many people are connected to this IP camera.
8. Control the relay output/DO connected to this camera.

Double-clicking on the video will change the view to full screen mode. Press **Esc** or double-click the video again for changing back to normal mode. Right-Click the mouse on the video, it will show a pop-up menu.



1. Snapshot: Save a JPEG picture.
2. Record Start: Record the video in the local PC. It will ask where to save the video. To stop recording, right-click again. Select “Record Stop”. The video format is AVI. Use Microsoft Media Player to play the recorded file.
3. Mute: Turn-off the audio. Click again to turn on it.

4. Full Screen: Full-screen mode.
5. Zoom: Enable the zoom-in and zoom-out functions. First, select “Enable digital zoom” option within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



6. Frame Buffm Sec: This function aims to build a temporary buffer to accumulate several video frames in a LAN network environment. It can make video streaming smooth when the network speed is slow.



Select **Auto** to allow this function automatically help fix the streaming performance whenever the video happens to be lagging.

Select **Normal** to play the video data based on the current network streaming performance. (Note: the lagging of the video displayed will not be seen as a result of the actual video data)

v. Camera Configuration

* System



Click  to get into the administration page. Click  to go back to the live video page.



The screenshot displays the camera's configuration web interface. On the left is a navigation sidebar with icons and menu items for System, Network, A/V Setting, and Event. The main content area is titled 'System Information' and contains several sections:

- Server Information:** Includes fields for MAC Address (00:0F:0D:27:F7:F3), Server Name (IP Camera), and a checkbox for Status Bar.
- LED Indicator:** A radio button selection between ON (selected) and OFF.
- Language:** Radio buttons for English (selected), 繁體中文, 简体中文, French, Russian, Italian, Spanish, German, Portuguese, Polish, and Japanese.
- OSD Setting:** Radio buttons for Time Stamp and Text, both set to Disabled. A text field contains 'OSD_Display' with a 'Text Edit' link.
- Time Setting:** Shows Server Time (2015/9/10 21:31:08), Date Format (yy/mm/dd selected), Time Zone (GMT+08:00), and an unchecked 'Enable Daylight Saving' checkbox.
- NTP:** Radio buttons for NTP (selected), Synchronize with PC's time, and Manual. NTP settings include Server (pool.ntp.org), Update (6 Hour), and Time Shift (0 Minutes).
- Synchronize with PC's time:** Date (2015/12/28) and Time (16:23:43) fields.
- Manual:** Date (2015/12/28) and Time (16:23:30) fields.
- Bottom:** A radio button for 'The date and time remain the same' and an 'Apply' button.

I. System Information

A. Server Information

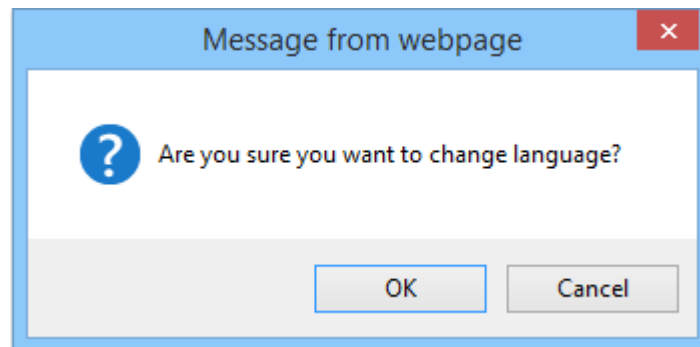
Set up the camera name, language, and the camera time.



The screenshot shows a 'Server Information' configuration window. It contains the following fields and options:


- MAC Address: 00:0F:0D:27:4A:4B
- Server Name: IP_Camera (with a checkbox for 'Status Bar')
- LED Indicator: ON (selected) / OFF
- Language: English (selected), 繁體中文, 简体中文, French, Russian, Italian, Spanish, German, Portuguese, Polish, Japanese

- a. **Server Name:** This is the Camera name. This name will be shown on the IP Scanner.
- b. **LED Indicator:** Turn on/off the LED indicator on the camera.
- c. **Language:** English and other languages can be selected. When a language preference is selected, the following dialogue box will pop up to confirm the change.



B. OSD Setting

Select a position where the date & time stamp / text are displayed on the screen.




The screenshot shows an 'OSD Setting' configuration window. It contains the following options:

- Time Stamp: Enabled / Disabled (selected)
- Text: Enabled / Disabled (selected)
- OSD_Display (highlighted) Text Edit

Click **Text Edit** for editing the OSD content, including text size and transparency. Click the **Upgrade** button to apply the settings.

Text Edit



Text Edit

Text

Size

Transparency

C. Time Setting

Select between **NTP**, **Synchronize with PC's time**, **Manual**, **The date and time remain the same** for setting the server time.

Time Setting

Server Time: 2015/7/28 12:43:57 Time Zone: GMT+08:00

Date Format: yy/mm/dd mm/dd/yy dd/mm/yy

Time Zone:

Enable Daylight Saving:

	Month	Day of Week	Time
DST Start:	<input type="text" value="Mar"/>	<input type="text" value="2nd"/>	<input type="text" value="12 am"/>
DST End:	<input type="text" value="Nov"/>	<input type="text" value="1st"/>	<input type="text" value="12 am"/>

NTP :

NTP Server :

Update : Hour

Time Shift : Minutes [-1440..1440]

Synchronize with PC's time

Date :

Time :

Manual

Date :

Time :

The date and time remain the same

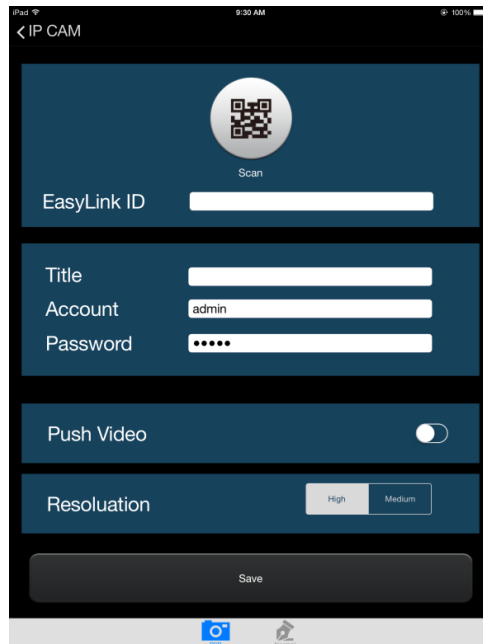
D. Askyviewer Pro P2P (Optional)



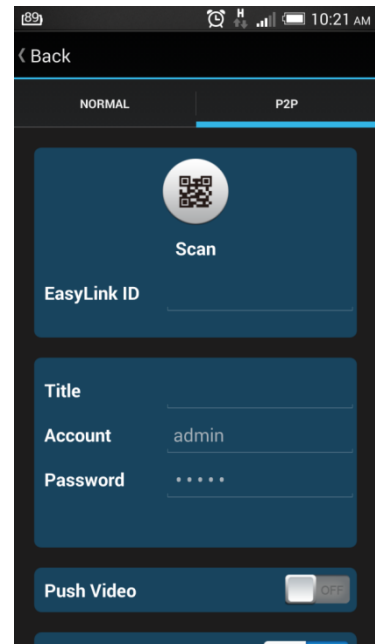
Install **Askyviewer Pro App** on your mobile phone to access **P2P** operations which allow users to watch IP Camera live view on their mobile phones. Once the installation is done, either enter the **P2P ID** from the IP camera web browser, or simply scan the **QR Code** to help you log in to your IP camera through **Askyviewer Pro App** and watch the live view

For more operating details of the **Askyviewer Pro for P2P**, please click on the icons below (**IOS Version** & **Android Version**) with your mouse to directly open the manual page.

IOS Version



Android Version



Note: Your smartphone must be equipped with a camera and featured with a QR code scanner application.

II. User Management

User Management			
Anonymous User Login			
<input type="radio"/> YES <input checked="" type="radio"/> NO			
Universal Password (differs by IP Address)			
<input checked="" type="radio"/> YES <input type="radio"/> NO			
<input type="button" value="Setting"/>			
Add User			
Username:	<input type="text"/>		
Password:	<input type="text"/>		
Confirm:	<input type="text"/>		
<input type="button" value="Add/Set"/>			
User List			
Username	User Group	Modify	Remove
admin	Administrator	Edit	-----
guest	Guest	Edit	Remove

The IP Camera supports three different users: **administrator**, **general**, and **anonymous** user.

A. Anonymous User Login

Select **Yes** for allowing access to watch live video of the IP camera without having to enter username and password. Yet when entering the configuration page of the IP camera, the system will do otherwise. Select **No** for requiring a username and login to access the camera.

B. Universal Password

Select **Yes** for allowing login to this IP camera by universal password. Please refer to **Universal Password** chapter for more explanations. Select **No** for disabling universal password.

C. Add user

Type the user name and password, then click **Add/Set**. The guest user can only browse live video page and is not allowed to enter the configuration page. Click “Edit” or “Remove” in the user list to modify them. The system will ask you to key-in the password in the pop-up window before you edit the user information.

III. System update

The screenshot shows a web interface titled "System Update". It is divided into four main sections:

- Firmware Upgrade:** Shows the current "Firmware Version: VE1.0.20.8". Below it is a "New Firmware:" field with a "Browse..." button and an "Upgrade" button.
- Reboot System:** A section with a "Start" button.
- Factory Default:** A section with a "Start" button.
- Setting Management:** Contains instructions: "Right click the mouse button on Setting Download and then select Save As to save current system's setting in the PC." Below this is a "New Setting File:" field with a "Browse..." button and an "Upgrade" button.

- A. **Firmware Upgrade:** To update the firmware online, click **Browse...** to select the firmware. Then click **Upgrade** to proceed.

- B. **Reboot system:** Restart the IP camera.

- C. **Factory default:** Delete all the settings of this IP camera.

- D. **Setting Management:** The user can download the current settings to PC, or upgrade from previous saved settings.
 - a. **Settings download**


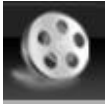
Right-click the mouse button on Setting Download → Select **Save AS...** to save current IP Camera settings in PC → Select saving directory → Save

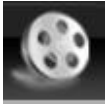
 - b. **Upgrade from previous settings**

Browse → search previous settings → open → upgrade → Settings update confirm → click **index.html**. for returning to the main page.

*Network



Click  to get into the administration page. Click  to go back to the live video page.



The screenshot displays the administration interface for an IP camera. On the left is a navigation sidebar with the following sections:

- System** (gear icon): System Information, User Management, System Update
- Network** (Wi-Fi icon): IP Setting, Advanced, PPPoE & DDNS, Server(Mail,FTP...)
- A/V Setting** (microphone icon): Image Setting, Video Setting, Audio
- Event** (notepad icon): Event Setting, Schedule, I/O Setting, Log List, SD Card

The main content area is titled "System Information" and contains the following settings:

- Server Information**
 - MAC Address: 00:0F:0D:27:F7:F3
 - Server Name: IP Camera Status Bar
 - LED Indicator: ON OFF
 - Language: English 繁體中文 简体中文 French Russian Italian Spanish German Portuguese Polish Japanese
- OSD Setting**
 - Time Stamp: Enabled Disabled
 - Text: Enabled Disabled
 - OSD_Display**
- Time Setting**
 - Server Time: 2015/9/10 21:31:08 Time Zone: GMT+08:00
 - Date Format: yy/mm/dd mm/dd/yy dd/mm/yy
 - Time Zone: GMT+08:00
 - Enable Daylight Saving:
 - NTP :
 - NTP Server : pool.ntp.org
 - Update : 6 Hour
 - Time Shift : 0 Minutes [-1440..1440]
 - Synchronize with PC's time
 - Date : 2015/12/28
 - Time : 16:23:43
 - Manual
 - Date : 2015/12/28
 - Time : 16:23:30
 - The date and time remain the same

I. IP Settings

IP Assignment

The IP Camera supports DHCP and static IP.

IP Setting	
IP Assignment	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address:	<input type="text" value="192.168.1.200"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
Gateway:	<input type="text" value="192.168.1.254"/>
DNS 0:	<input type="text" value="168.95.1.1"/>
DNS 1:	<input type="text" value="168.95.192.1"/>

- a. DHCP: The IP Camera will get all the network parameters automatically.
- b. Static IP: Type-in the IP address subnet mask, gateway, and DNS.

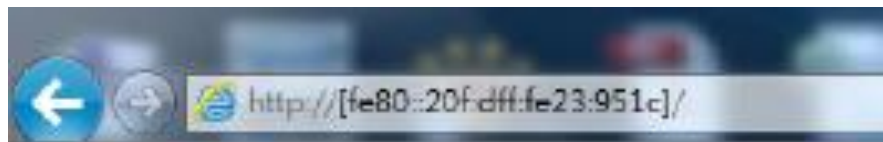
IPv6 Assignment

IPv6 Assignment	
<input checked="" type="checkbox"/> IPv6 Enabled:	
<input checked="" type="checkbox"/> Manually setup the IPv6 address:	
IPv6 Address/Prefix:	<input type="text" value="::"/> /
	<input type="text" value="64"/>
IPv6 Gateway:	<input type="text" value="::"/>
IPv6 DNS:	<input type="text" value="::"/>
DHCPv6:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
IPv6 Address:	fe80::20f:dff:fe00:284d

By enabling DHCPv6 you can configure the following IPv6 address settings:

- Manually setup the IPv6 address: Key-in the Address, Gateway, and DNS.
- DHCPv6: If you have a DHCPv6 server, enable it to assign the IPv6 automatically. The assigned IP address will be displayed beside the column.
- Automatically generated IPv6 Address: Indicates a virtual IPv6 address generated automatically by the IP camera. This virtual IPv6 address cannot be used on WAN.

To use IPv6 address to access the IP camera, open the web browser, and key-in the **[IPv6 address]** in the address bar. The [] parentheses mark is necessary.



- a. Port Assignment: The user might need to assign a different port to avoid conflicts when setting up the IP.

Port Assignment	
Web Page Port:	<input type="text" value="80"/>
HTTPS Port:	<input type="text" value="443"/>

HTTPS Setting

- b. Web Page Port: setup the web page connecting port and video transmitting port (Default: 80)
- c. HTTPs Port: setup the https port(Default: 443)

UPnP

UPnP	
UPnP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
UPnP Port Forwarding:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
External Web Port:	<input type="text" value="80"/>
External HTTPS Port:	<input type="text" value="443"/>
External RTSP Port:	<input type="text" value="554"/>

This IP camera supports UPnP, if this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to **My Network Places**.

UPnP Port Forwarding : Enable UPnP Port Forwarding for accessing the IP Camera from the Internet; this option allows the IP Camera to open ports on the router automatically so that video streams can be sent out from a LAN. There are three external ports for being set: **Web Port**, **Http Port** and **RTSP** port. To utilize of this feature, make sure that your router supports **UPnP** and is activated.

Note: *UPnP must be enabled on your computer.*

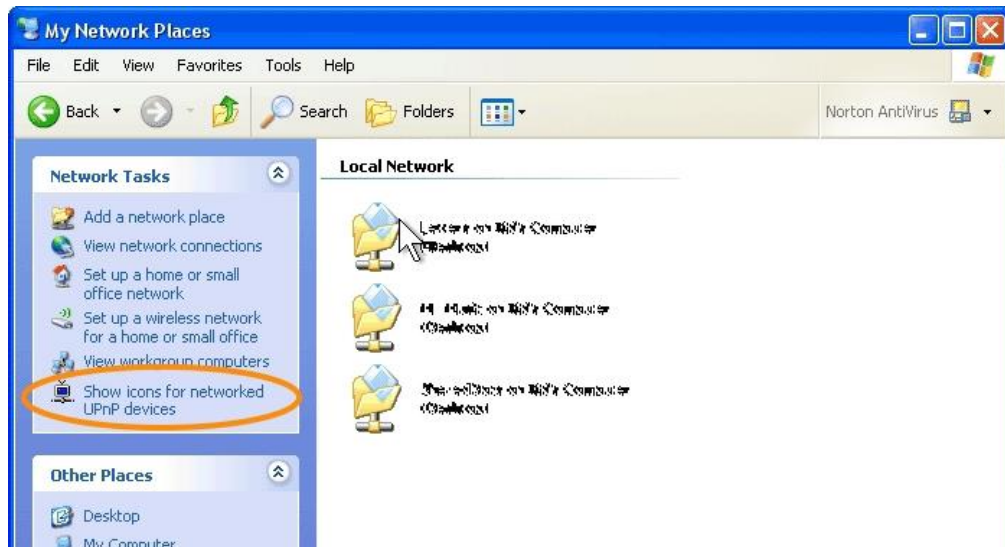
Please follow the procedure to activate UPnP:

<Approach 1>

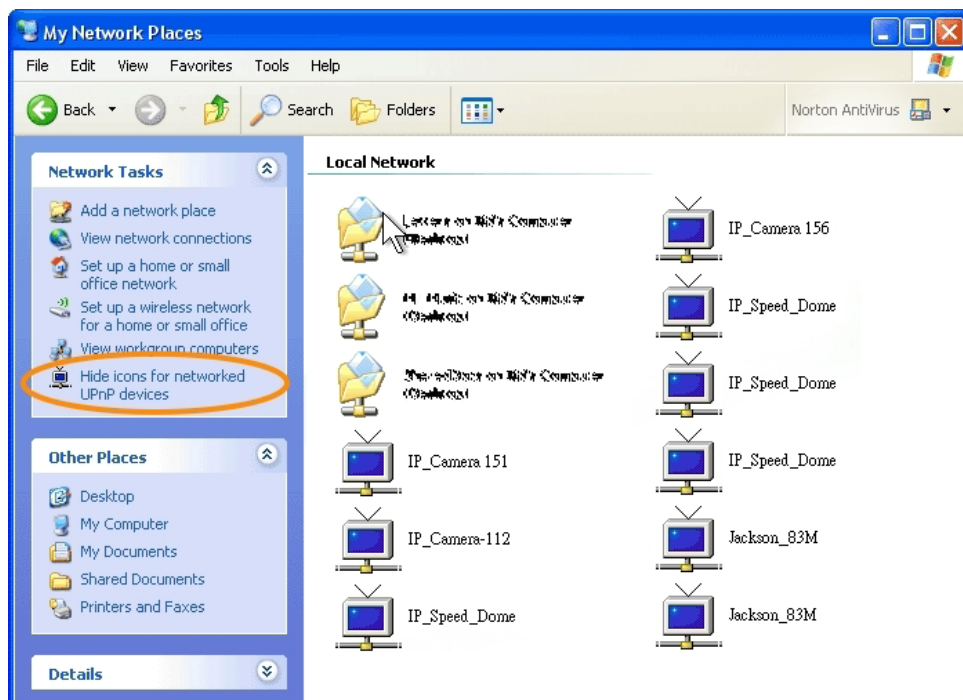
1. open the **Control Panel** from the **Start Menu**
2. Select **Add/Remove Programs**
3. Select **Add/Remove Windows Components** and open **Networking Services** section
4. Click **Details** and select **UPnP** to setup the service.
5. The IP device icon will be added to **My Network Places**.
6. The user may double click the IP device icon to access IE browser

<Approach 2>

1. Open My Network Space
2. Click **Show icons for networked UPnP devices** in the tasks column on the left of the page.
3. Windows might ask your confirmation for enabling the components. Click **Yes**.



4. Now the IP device is displayed under the LAN. Double-click the icon to access the camera via web browser. To disable the UPnP, click **Hide icons for networked UPnP devices** in the tasks column.



RTSP setting

RTSP Setting		
RTSP Server:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
RTSP Authentication:	Disable ▼	
RTSP Port :	554	
RTP Start Port:	5000	[1024..9997]
RTP End port:	9000	[1027..10000]

If you have a media player that supports RTSP protocol, you can use it to receive video streaming from the IP camera. The RTSP address can be set for two streamings respectively.

1. RTSP Server: enable or disable

Disable means everyone who knows your camera IP Address can link to your camera via RTSP. No username and password are required.

Under **Basic** and **Digest** authentication mode, the camera asks for a username and password before allows access.

The password is transmitted as a clear text under basic mode, which provides a lower level of security than under **digest** mode.

Make sure your media player supports the authentication schemes.

2. RTSP Port: setup port for RTSP transmitting (Default: 554)
3. RTP Start and End Port: in RTSP mode, you can use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

Multicast Setting (Based on the RTSP Server)

Multicast Setting (Based on the RTSP Server)		
Streaming 1:		
IP Address:	<input type="text" value="234.5.6.78"/>	[224.3.1.0 ~ 239.255.255.255]
Port:	<input type="text" value="6000"/>	[1 ~ 65535]
TTL:	<input type="text" value="15"/>	[1 ~ 255]
Streaming 2:		
IP Address:	<input type="text" value="234.5.6.79"/>	[224.3.1.0 ~ 239.255.255.255]
Port:	<input type="text" value="6001"/>	[1 ~ 65535]
TTL:	<input type="text" value="15"/>	[1 ~ 255]

Multicast is a bandwidth conservation technology. This function allows several users to share the same packet sent from the IP camera.

For using Multicast, appoint here an IP Address and port. TTL means the life time of packet, the larger the value is, the more users can receive the packet.

For using Multicast, be sure to enable the function **Force Multicast RTP via RTSP** in your media player. Then key in the RTSP path of your camera: **rtsp ://(IP address)/** to receive the multicast.

ONVIF

ONVIF		
ONVIF:	<input checked="" type="radio"/> v2.10/v1.02	<input type="radio"/> v1.01 <input type="radio"/> Disabled
Security:	<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
RTSP Keepalive:	<input checked="" type="radio"/> Enabled	<input type="radio"/> Disabled

1. Choose your ONVIF version and settings.

Under ONVIF connection, the video will be transmitted by RTSP. Be sure to enable the RTSP server in IP setting, otherwise the IP Camera will not be able to receive the video via ONVIF.

2. Security

By selecting **Disable**, the username and password are not required for accessing the camera via ONVIF. By selecting **Enable** the username and password are necessary.

3. RTSP Keepalive:

When the function is enabled, the camera checks once in a while if the user who is connected to the camera via ONVIF is still connected. If the connection has been broken the camera will stop transmitting video to the user.

Bonjour

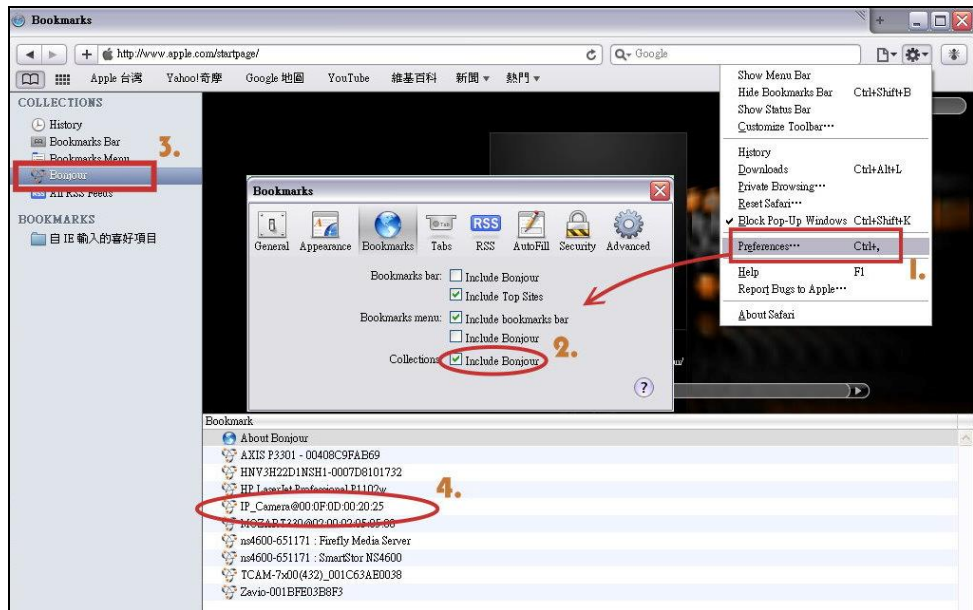
Bonjour	
Bonjour:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Bonjour Name:	<input type="text" value="IP_Camera"/> @00:0F:0D:00:28:4D

This function allows Apple systems to connect to this IP camera. On **Bonjour Name** key-in the name here.

The web browser **Safari** also has a Bonjour function. Tick **Include Bonjour** in the bookmark setting, for the IP camera to appear under the bonjour category. Click the icon to connect to the IP camera.

The Bonjour function on Safari browser doesn't support HTTPS protocol. If on the camera you select **https**, the camera will appear on Safari's bookmarks but it cannot be accessed.

Take as a reference the following image:



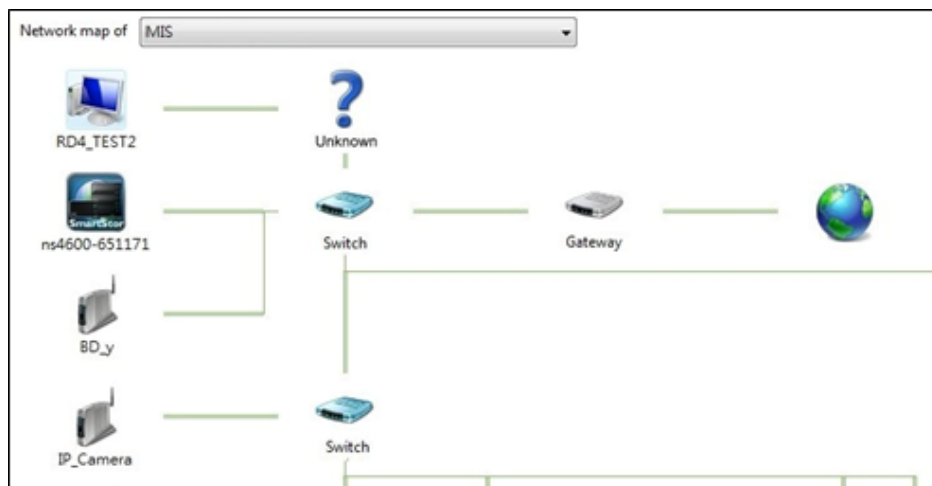
LLTD

LLTD (Link Layer Topology Discovery)	
LLTD:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled

If your PC supports LLTD, enable this function for allowing checking the connection status, properties, and device location (IP address) in the network map.

If the computer is running Windows Vista or Windows 7, you can find LLTD through the path:

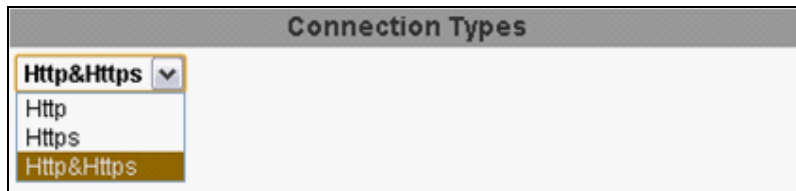
Control Panel → Network and Internet → Network and Sharing Center → Click **See full map**.



II. Advanced

a. Https (Hypertext Transfer Protocol Secure)

When the users access cameras via Https protocol, the transmitted information will be encrypted, increasing the security level.



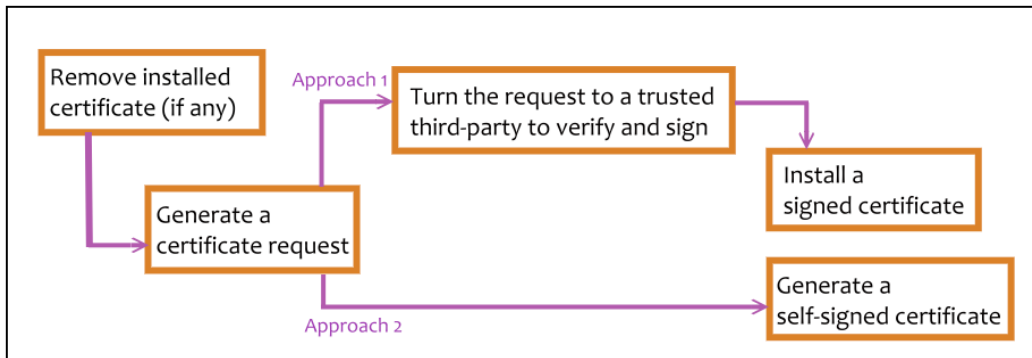
Select the connection type:

- Http: the user can access the camera via the Http path but cannot access it via the Https path.
- Https: the user can access the camera via the Https path but cannot access it via the Http path.
- Http & Https: Both the Http and Https path can be used to access the camera. When you change the connection type settings, it may cause connection error or disconnection error if you switch the protocol directly. Therefore, **Http & Https** mode is necessary.

If you want to change from Http to Https, please switch to **Http & Https** mode first, and then switch to **Https** mode and vice versa.

The Https protocol has a verifying mechanism. When the user access a website via Https, the browser will check the certificate of that domain and verify its trustiness and security.

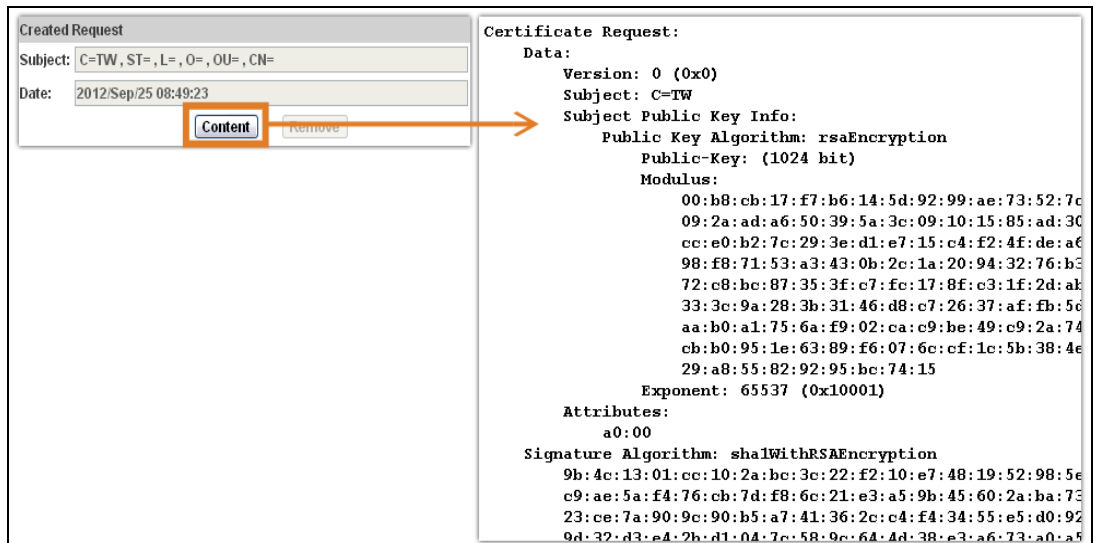
Certificate generation process:



- Remove the existing certificate: Before you generate a new certificate, please remove the installed one. Select the **Http** connection type and click **Remove**. If a dialog box pops up to ask you to confirm, click **Yes**.

- Created Request: Fill-in the following form and click **apply**.

- After generating a certificate request, if you choose to turn it and verified by a trusted third-party, click **Content** and copy all the request content.



- According to the certificate source, there are two ways to install the certificate:

If you had sent the certificate request for signing and receiving a signed certificate, click **browse** and find the certificate file in your computer. Click **Apply** to install it.

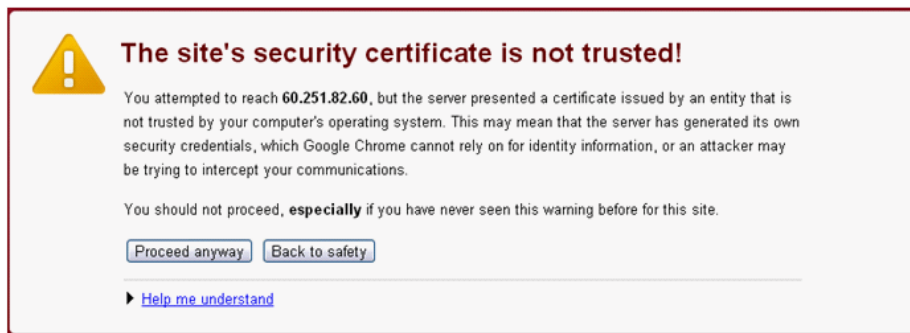
If you choose to generate a self-signed certificate, fill-in the following forms and set the validity day, click **Apply** to finish installed it.



After finishing the installation, click on **Content** to call out and check the certificate content.



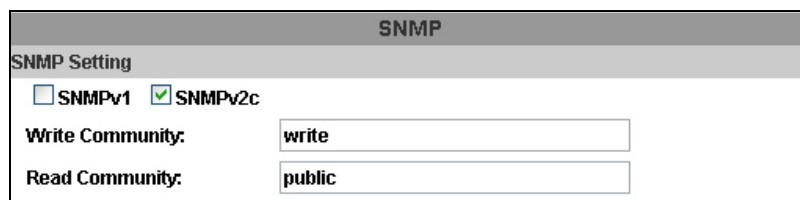
To use Https to access the camera, open your browser, and key-in **https:// (IP address)/** in the address bar. Now your data will be transmitted via encrypted communications. The browser will check your certificate status. It might show the following warning message:



Meaning that certificate is self-signed or signed by a distrusted institution. Click **Proceed anyway** for continuing to the camera page.

b. SNMP (Simple Network Management Protocol)

1. **SNMPv1** or **SNMPv2**: write the name of both **Write Community** and **Read Community**.



2. **SNMPv3**: Set the Security Name, Authentication Type, Authentication Password, Encryption Type, Encryption Password of Write mode and Read mode.

<input checked="" type="checkbox"/> SNMPv3	
Write Security Name:	<input type="text" value="write"/>
Authentication Type:	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password:	<input type="text" value="....."/>
Encryption Type:	<input checked="" type="radio"/> DES <input type="radio"/> AES
Encryption Password:	<input type="text" value="....."/>
Read Security Name:	<input type="text" value="public"/>
Authentication Type:	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password:	<input type="text" value="....."/>
Encryption Type:	<input checked="" type="radio"/> DES <input type="radio"/> AES
Encryption Password:	<input type="text" value="....."/>

3. Enable SNMPv1/SNMPv2 Trap for detecting the Trap server. Please set what event needs to be detected.

<input type="checkbox"/> SNMPv1/v2c Trap	
Trap Address:	<input type="text"/>
Trap Community:	<input type="text" value="public"/>
Trap Event:	<input type="checkbox"/> Cold Start <input type="checkbox"/> Warm Start <input type="checkbox"/> Link Up <input type="checkbox"/> Authentication Failed <input type="checkbox"/> SD Detect

- Cold Start: The camera starts up or reboots.
- Setting changed: The SNMP settings have been changed.
- Network Disconnected: The network connection was broken down (The camera will send trap messages after the network is connected again).
- V3 Authentication Failed: A SNMPv3 user account tries to get authentication but failed. (Due to incorrect password or community)
- SD Insert / Remove: A Micro SD card is inserted or removed.

c. Access list:

Enable IP address filter for setting the IP addresses which allows or denies this camera. There are two options: **single** and **range**.

IP FILTER

IP ADDRESS FILTER Setting

Enable ip address filter

IPv4 Setting:

add allow deny

single

single

range

IPv4 List:

No.	IP Address	Filter	Action
1			remove
2			remove
3			remove
4			remove
5			remove
6			remove
7			remove
8			remove
9			remove
10			remove

Allow admin ip address always access this device

Admin ip address:

apply

III. PPPoE & DDNS

PPPoE

PPPoE Setting

Enabled Disabled

Username:

Password:

Send mail after dialed

Enabled

Subject:

Apply

a. PPPoE: Select **Enabled** to use PPPoE. Key-in the the Username and password for ADSL connection.

Send mail after dialed: When connected to the internet, the camera will send a mail to a specific mail account.

b. DDNS (camddns example):

DDNS

DDNS Setting

Enabled Disabled

Provider: ddns.camddns.com

Username:

Schedule Update: 1440 Minutes

State

Idle

Apply

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Enable this service
2. Key-in the username.
3. IP schedule update. Default: 5 minutes
4. Click **Apply**.

DDNS Status

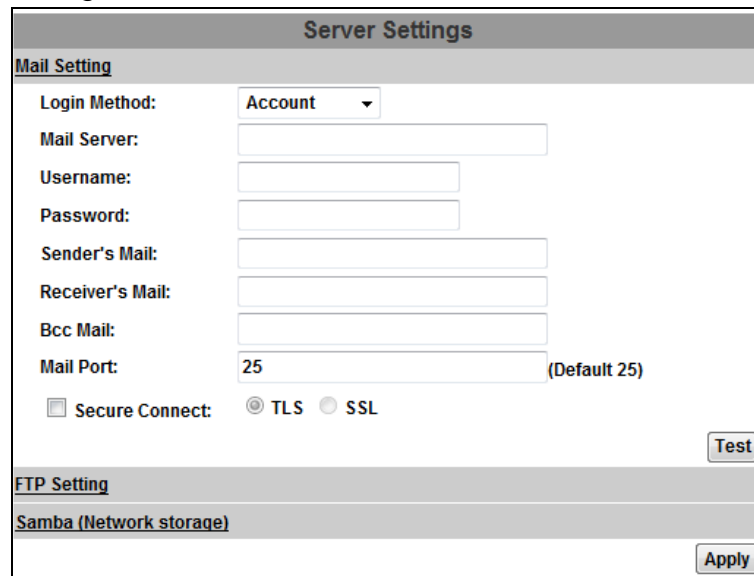
- (1) **Updating:** Information update
- (2) **Idle:** Stop service
- (3) **DDNS registration successful, can now log by**
<http://<username>.ddns.camddns.com>: Register successfully.
- (4) **Update Failed, the name is already registered:** The user name has already been used. Please change it.
- (5) **Update Failed; please check your internet connection:** Network connection failed.
- (6) **Update Failed, please check the account information you provided:** The server, user name, and password may be wrong.

IV. Server settings

There are three server types available: **Email**, **FTP** and **SAMBA**.
Select the item for display detailed configuration options.

You can configure either one or all of them.

To send out the video via mail of FTP, please set up the configuration first.

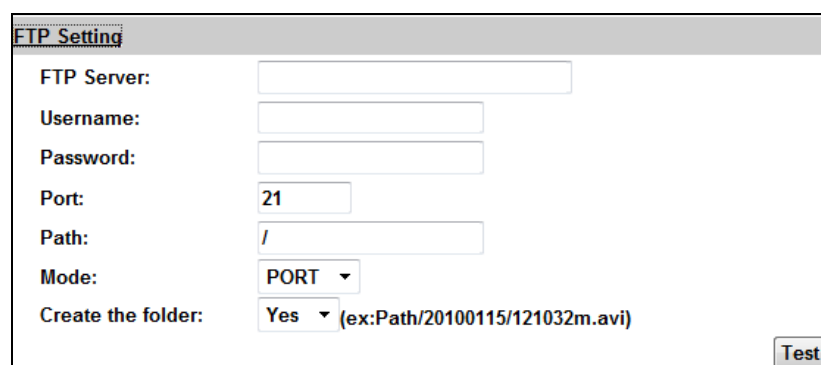


The screenshot shows a window titled "Server Settings" with three sections: "Mail Setting", "FTP Setting", and "Samba (Network storage)".

- Mail Setting:** Includes fields for Login Method (set to "Account"), Mail Server, Username, Password, Sender's Mail, Receiver's Mail, Bcc Mail, and Mail Port (set to 25, with "(Default 25)" next to it). There are radio buttons for "Secure Connect" with "TLS" selected and "SSL" unselected. A "Test" button is at the bottom right.
- FTP Setting:** Includes fields for FTP Server, Username, Password, Port (set to 21), Path (set to "/"), Mode (set to "PORT"), and Create the folder (set to "Yes" with an example "(ex:Path/20100115/121032m.avi)"). A "Test" button is at the bottom right.
- Samba (Network storage):** This section is currently empty, with an "Apply" button at the bottom right.

FTP

To send out the video via mail of FTP, please set up the configuration.



The screenshot shows a window titled "FTP Setting" with the following fields:

- FTP Server: [text input]
- Username: [text input]
- Password: [text input]
- Port: [text input with value 21]
- Path: [text input with value /]
- Mode: [dropdown menu with value PORT]
- Create the folder: [dropdown menu with value Yes] (ex:Path/20100115/121032m.avi)

A "Test" button is located at the bottom right.

Samba

Select this option to send the media files via a neighbor network when an event is triggered.

Samba (Network storage)

Location: (ex:\\Nas_ip\folder)

Workgroup:

Username:

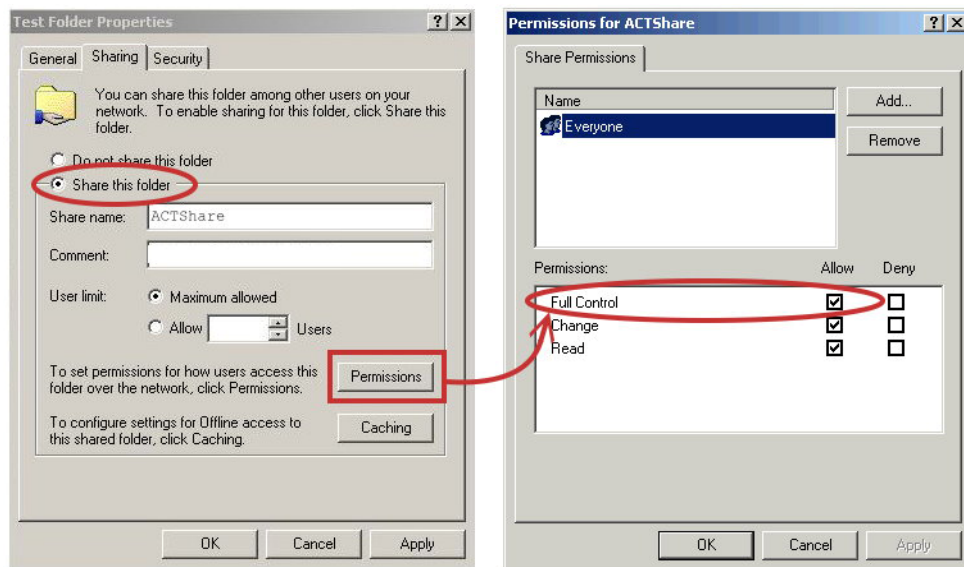
Password:

Create the folder: Yes ▾ (ex:Path/20100115/121032m.avi)

Test

Click **Apply** to save the setting, then use **Test** button to test the server connection. A message box will tell you **OK!** if it works, and a test document will be created in the location.

If the test failed, check the sharing setting of your location folder. The folder properties must be **shared** and the permissions must be **Full Control** as the picture.



V. Wireless Setting (Optional): Support 802.11 b/g/n

For setting up the IP camera via wireless network, first, use the Ethernet cable to connect the camera. After finishing the wireless settings and saving them, remove the Ethernet cable.

Note: The IP address is the same under both wireless and wired network. If the Ethernet cable is plugged in the camera, the IP camera will use it to link to the Internet instead of the wireless router.

a. Status of Wireless Networks

The camera scans and shows the SSID, Mode, Security, and Signal strength of the wireless network.

Wireless Setting			
Status of Wireless Networks			
SSID	Mode	Security	Signal Strength
RHOSON	Infrastructure	WEP	47
ZyXEL	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	42
_sal4_showroom	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	68
_MIS	Infrastructure	WPA2PSK/AES	52
fan	Infrastructure	WPAPSK/TKIP	52
MLink	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	31
sales-4 second	Infrastructure	WPAPSK/TKIP	47
eCoffee	Infrastructure	WPA2PSK/TKIPAES	31
ZyXEL-NVR	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	13
Lanner Wireless	Infrastructure	WPA/TKIPAES	26

b. Wireless Setting

Wireless Setting	
MAC Address:	00:0D:F0:64:27:AC
Mode:	Ad-hoc
Operation Mode:	Auto
SSID:	Default
Domain:	FCC (1~11Ch)
Channel:	6
Security:	None

- **Mode: Infrastructure** mode is used to link to the wireless router. **Ad-hoc** mode is used to link to the PC directly. **Domain** and **Channel** options appear only in the Ad-hoc mode.

Ad-hoc is a short term derived from wireless ad hoc network, known as **WANET**.

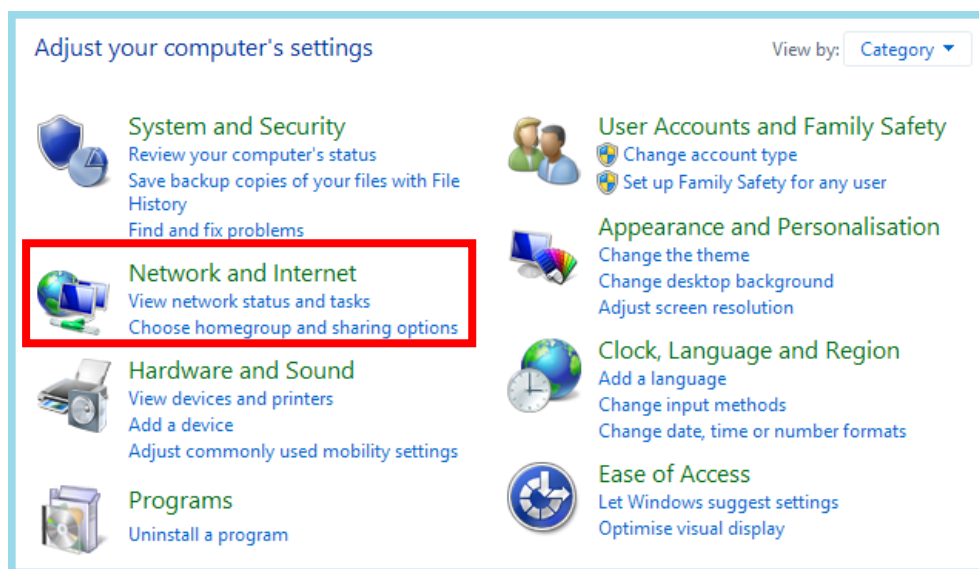
This type of network is only established temporarily, and does not rely on a pre-existing network through a router or Wireless Access Point.

How to connect to an ad-hoc Wi-Fi network in Windows 8.1

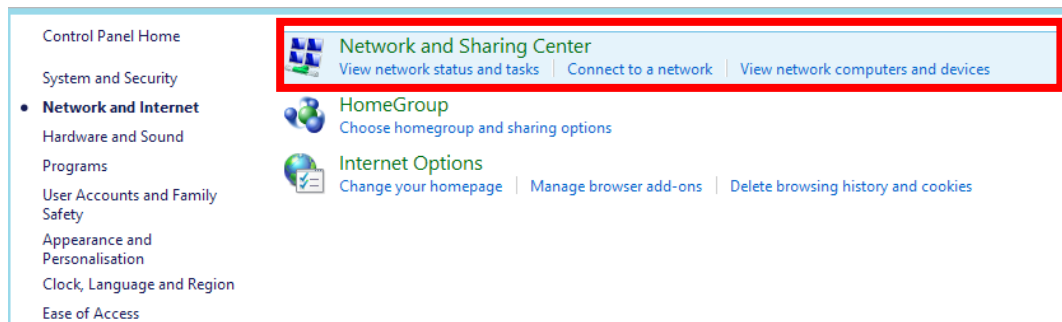
To make the Ad-hoc mode available, follow the steps below.

This is done manually. Note that this demonstration applies to Windows 8.1 since the Windows 8.1 system no longer shows Ad-hoc network in the Wi-Fi list.

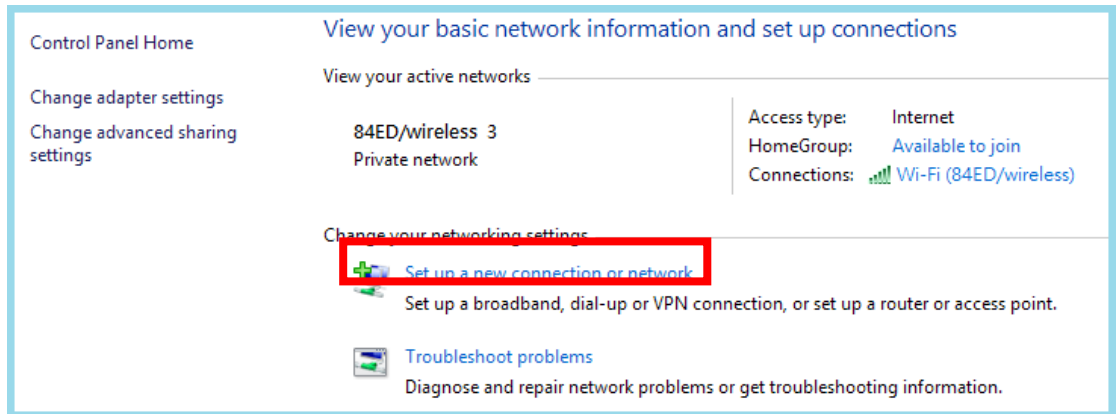
The following example is based on another type of IP camera. Go to "Control Panel", then "Network and Internet".



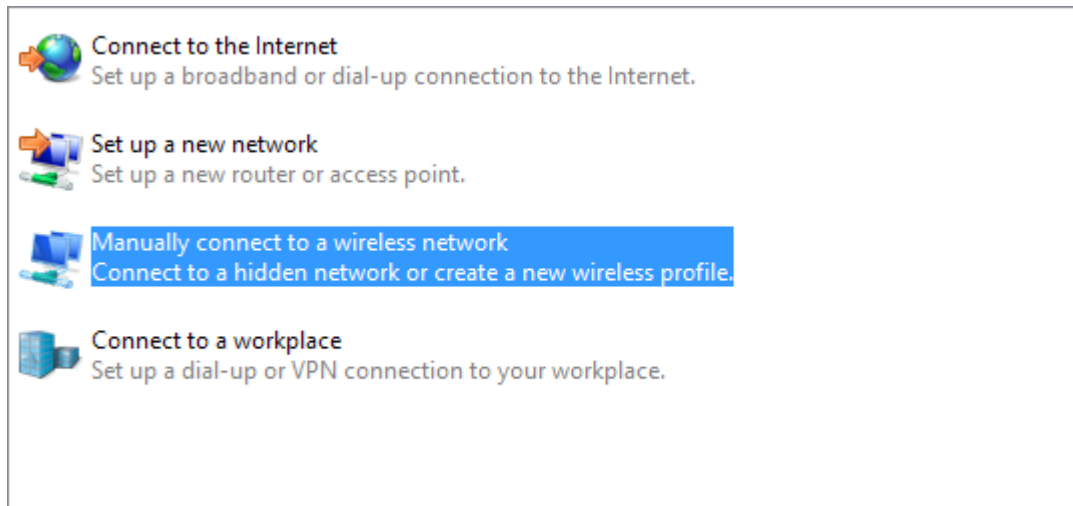
Click on "Network and Sharing Center".



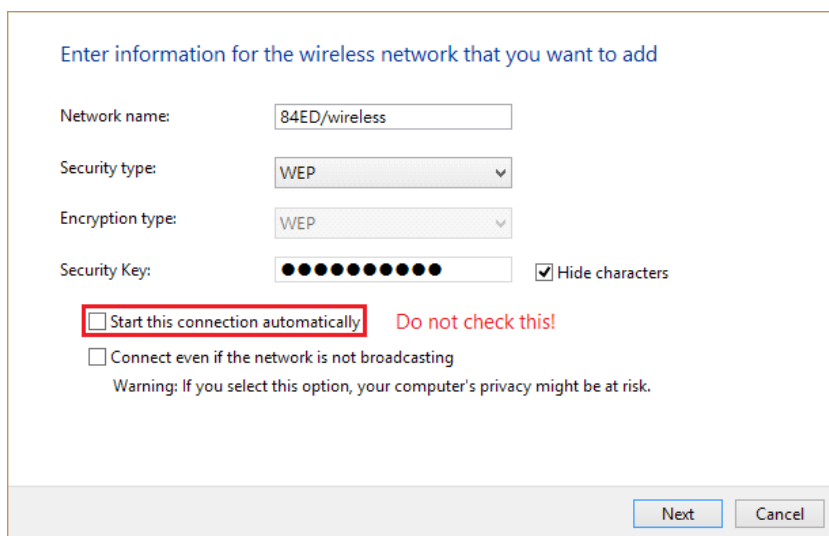
Click "Set up a new connection or network".



In the pop-up window, double click "Manually connect to a wireless network".

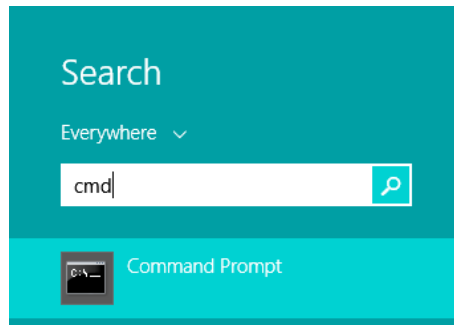


Enter the SSID of the ad-hoc network (as shown by "netsh wlan show networks") into the "Network name" field. Configure security settings accordingly.

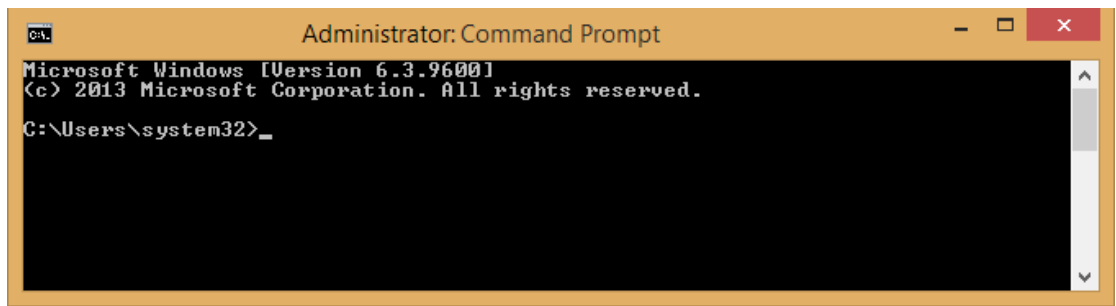


Make sure that "Start this connection automatically" is unchecked, click "Next", then "Close"

Open the search window (Windows key+Q) and search for "cmd"

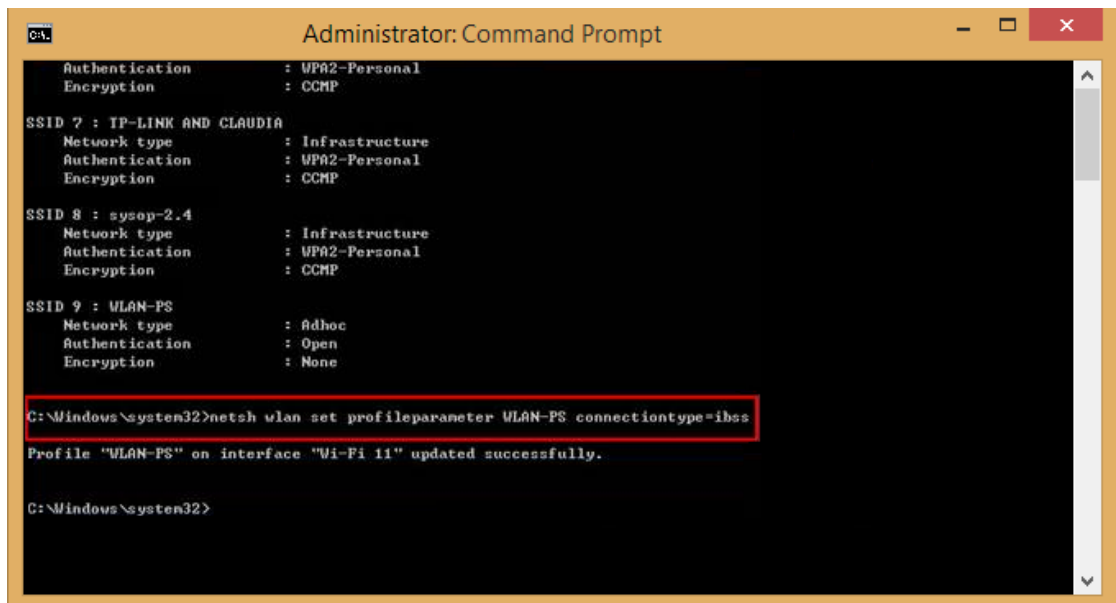


Run the command to open up a new window.



Enter the messages below.

1. > netsh wlan set profileparameter <ssid> connectiontype=ibss
2. > netsh wlan connect <ssid>



Now **Ad-hoc** mode is available after the IP settings completion.

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

Obtain an IP address automatically

Use the following IP address:

IP address:	192 . 168 . 1 . 65
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192 . 168 . 1 . 254

Obtain DNS server address automatically

Use the following DNS server addresses:

Preferred DNS server:	192 . 168 . 1 . 2
Alternative DNS server:	. . .

Validate settings upon exit

Advanced...

OK Cancel

- SSID: The ID of the wireless network service.
- Domain: The wireless network standards are different in each region. Please select the wireless standard of your location. FCC is the American standard. ETSI is the European standard. JP is the Japanese standard.
- Channel: Assign a channel for the camera in order to avoid interference.
- Security: Select WEP, WPA-PSK, or WPA2-PSK according to your wireless router settings.

c. WEP Setting

WEP Setting	
Authentication:	Shared Key ▾
Encryption:	64 bit ▾
Key Type:	HEX ▾ (10 character max)
Key 1:	<input type="radio"/> <input type="text"/>
Key 2:	<input checked="" type="radio"/> <input type="text"/>
Key 3:	<input type="radio"/> <input type="text"/>
Key 4:	<input type="radio"/> <input type="text"/>

Authentication: Open System or **Shared Key**, according to your wireless router.

Encryption: The option determines the length of the key password. In **HEX** type, 10 characters are allowed if you select 64 bit; 26 characters are allowed if you select 128bit; In **ASCII** type, 5 characters are allowed if you select 64 bit; 13 characters are allowed if you select 128bit.

Key Type: In **HEX** type, the key password can only be hexadecimal numbers. In ASCII type, the key password can be any letter and number. (Capital and lowercase letters are regarded as different.)

Key 1~4: Enter the key password according to your wireless router setting. The length and type must be consistent with the settings above.

d. WPA-PSK/ WPA2-PSK Setting

WPA-PSK Setting	
Encryption	TKIP ▾
Pre-Shared Key:	<input type="text" value="23133690"/> (ASCII format, 8~63)

Encryption: TKIP or **AES**, according to your wireless router.

Pre-Shared Key: Key-in the key password according to your wireless router settings. Any letters and numbers are allowed. (Capital and lowercase letters are regarded as different.)

e. WPS (Wi-Fi Protected Setup)

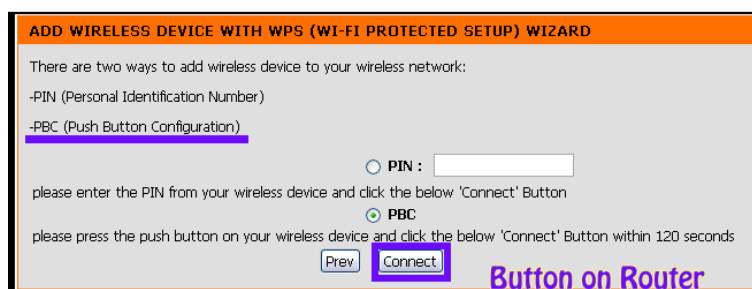
WPS (Wi-Fi Protected Setup) is an interface standard that allows users to easily establish wireless network, and be free from complicated security setting.

Please follow the steps for starting WPS. The menu and usage of every router may be different from the sample pictures.

Set up SSID and pre-shared key on your wireless router. WPS only supports WPA/WPA2 security. Do not select WEP security. Plug on the power adapter of the IP camera.

Use the Ethernet cable to connect the IP camera to the PC or network. Enter into the wireless setting page, and check if the SSID of your wireless router is listed in **Status of Wireless Networks**. If yes, continue toward next step, no other wireless settings are needed.

Access your router, and press the **Connect** button of the **PBC (Push Button Configuration)** setting page on your router. Then press the black button on the back of the camera. (Note: Only press and hold the button no longer than 3 seconds, otherwise the camera will then turn the command to factory default instead.)



The signal light under the WPS label will start flashing to indicate the connecting status. Once the WPS connection is successful, the light will then stop to flicker.



Refresh the wireless setting page on the camera; you will see that the security settings have been already automatically completed. Meanwhile you might see a message on your router page to inform you the connection is OK.

Now you can remove the Ethernet cable from the IP camera. If the light finally stops flashing but the lights are off, it means the WPS connection failed.

Check your wireless router setting, and make sure the SSID of the wireless router is found by the camera and listed in **Status of Wireless Networks**.

*A / V Settings



Click  to get into the administration page. Click  to go back to the live video page.



The screenshot shows the administration interface for an IP camera. On the left is a navigation menu with categories: System (containing System Information, User Management, System Update), Network (containing IP Setting, Advanced, PPPoE & DDNS, Server(Mail,FTP...)), A/V Setting (containing Image Setting, Video Setting, Audio), and Event (containing Event Setting, Schedule, I/O Setting, Log List, SD Card). The main content area is titled 'System Information' and contains several sections: 'Server Information' with fields for MAC Address (00:0F:0D:27:F7:F3), Server Name (IP Camera), and LED Indicator (ON/OFF); 'OSD Setting' with options for Time Stamp and Text (both Disabled), and a button for 'OSD_Display'; 'Time Setting' with fields for Server Time (2015/9/10 21:31:08), Date Format (yy/mm/dd), Time Zone (GMT+08:00), and NTP settings (Server: pool.ntp.org, Update: 6 hours, Time Shift: 0 minutes). There are also options for Daylight Saving, Synchronizing with PC's time, and Manual time setting. An 'Apply' button is at the bottom right.

1. Image Setting

The screenshot displays a camera interface with a live view of a reception area. Below the live view is a 'Privacy Mask' section with three colored buttons: Area 1 (blue), Area 2 (green), and Area 3 (red), followed by a 'Save' button and a red letter 'a'. Below that is an 'Image Setting' section with various controls. A red bracket labeled 'b' groups the Brightness, Contrast, Hue, Saturation, and Sharpness settings. Other settings include AGC (8x), Shutter Time (Outdoor), D-WDR (1 (Low)), Lens Distortion Correction (On), Video Orientation (Flip and Mirror checkboxes), Day & Night (Light Sensor Mode), White Balance (Auto), and Denoise (3D: On). A 'Default' button is located at the bottom right of the settings panel.

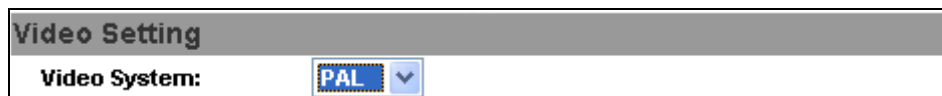
Please refer to the details below for image settings:

- a. For security and privacy purposes, there are three areas that can be set up for privacy. Click the **Area** button first, and then drag an area on the above image. Remember to save your settings. The masked area will not be shown on both live view and recording image.
- b. **Brightness**, **Contrast**, **Hue**, **Saturation**, **Sharpness** can be adjusted here.

- c. **AGC**: The sensitivity of the camera can be adjusted to the environmental lighting. By enabling this function the camera will get brighter images on low light, but the level of noise may also increase. The available values are: **16x, 24x, 32x, 48x**.
- d. **Shutter Time**: Choose the location of your camera or a fixed shutter time. The shorter the shutter time is the less light the camera receives and the image becomes darker.
Note: When you select a number in **Shutter Time**, the shutter time will vary in a range and be controlled by camera automatically. The following table shows the shutter time options and corresponding range.
- e. **D-WDR**: This function enables the camera to reduce the contrast in the view to avoid dark zones as a result of over and under exposure. If the Input resolution is 30fps, the default value is fixed on **ENABLED**. The available values are: **OFF, 1, 2, 3, 4, 5, 6, 7, 8**
If the D-WDR is enabled the values for bright, dark and contrast can be adjusted.
- f. **Lens Distortion Correction**: Straight the curves in the borders of the image caused by the lens angles. The available values are: **OFF, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10**.
- g. **Video Orientation**: Flip or mirror the image.
- h. **Day & Night**: The camera can detect the light level of the environment. If you choose **Light Sensor Mode**, the image will be turned black and white at night in order to keep a clear image. Under **Times Mode** the switch time of Color/Black and white will be according to the given time. You can also control it by choosing **Color** or **B/W**.
- i. **White Balance**: There are 6 modes which can be assigned for different lighting sources:
- AUTO - Continuously adjusts camera color balance according to any change of color temperatures and lightings.
 - Manual - Adjust color balance with Red Gain & Blue Gain values.

- j. **Denoise:** This function is able to filter the noise and blur from the image and show a clearer view. You can set the values for 3D filters.

2. Video Setting

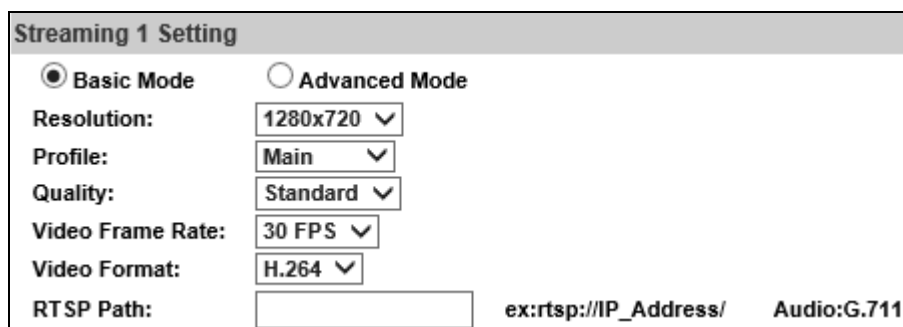


The screenshot shows a window titled "Video Setting". Inside, there is a label "Video System:" followed by a dropdown menu currently displaying "PAL".

Video System: NTSC or PAL

The IP Camera provides three types of streaming settings:

a. Streaming 1 & 2 Basic Mode:



The screenshot shows a window titled "Streaming 1 Setting". It has two radio buttons: "Basic Mode" (selected) and "Advanced Mode". Below are several settings:

- Resolution: 1280x720
- Profile: Main
- Quality: Standard
- Video Frame Rate: 30 FPS
- Video Format: H.264
- RTSP Path: [Empty text box] ex:rtsp://IP_Address/ Audio:G.711

1. 1920x1080@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps
2. Profile: Chose between Main or Baseline
3. Quality: There are 5 levels. **Best/ High/ Standard/ Medium/ Low**
The higher the quality is, the bigger the file size becomes. Not good for Internet transmission.
4. Video Frame Rate (**5~30 FPS**): The video refreshing rate per second.
5. Video Format: **H.264** or **JPEG**
6. RTSP Path: RTSP output name

b. Streaming 1 & 2 Advanced Mode:

Streaming 1 Setting

Basic Mode **Advanced Mode**

Resolution: 1280x720 ▾

Profile: Main ▾

Bitrate Control Mode: CBR CVBR

Video Quantitative: 7 ▾

Video Bitrate: 1Mbps ▾

Video Frame Rate: 30 FPS ▾

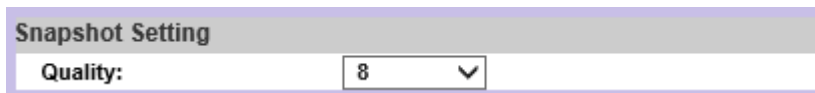
GOP Size: 1/2 X FPS ▾ GOP = 15

Video Format: H.264 ▾

RTSP Path: ex:rtsp://IP_Address/ Audio:G.711

1. 1920x1080@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps
2. Profile: Chose between Main or Baseline
3. Bitrate Control Mode: There are CBR (Constant Bit Rate) and CVBR (Constrained Variable Bit Rate)
 - **CBR**
Video Bitrate Limit: (32Kbps~8Mbps)
The higher the CBR is, the better the video quality is.
 - **CVBR**
Video Quantitative: 1(Low) ~10(High)
The higher the compression rate, the lower the picture quality is; vice versa. Avoid image breaking up or lagging by setting the bandwidth limit for CVBR streaming.
4. Video Frame Rate (**5~30 FPS**): The video refreshing rate per second.
5. GOP Size (**1, 1/2, 2**) X FPS: "Group of Pictures". The higher the GOP is, the better the quality is.
6. Video Format: **H.264** or **JPEG**
7. RTSP Path: RTSP output connecting path

c. Snapshot Setting:




The screenshot shows a 'Snapshot Setting' window with a 'Quality' dropdown menu set to '8'.

Select the snapshot image quality from 1(Low) ~10(High).

3. Audio

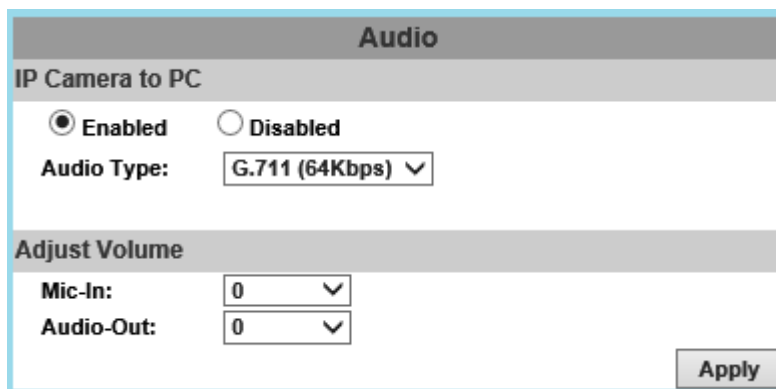
The IP Camera supports 2-way audio. The user can send audio from the IP Camera built-in microphone to the remote PC; the user can also send audio from remote PC to IP Camera's external speaker.

- a. **Audio from local PC to IP Camera:** Click on the  icon and mark "chatting" in the **Live View** browser page. **Note that the audio will not be smooth when the SD card is being recorded.**



The screenshot shows a 'Chatting' checkbox and 'Online Visitor : 1' text. The 'Chatting' checkbox is highlighted with a red box.


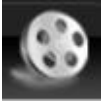
- b. **IP Camera to PC** (Audio from IP camera built-in microphone to local PC): Select **Enable** to start this function & you also can select the audio type.



The screenshot shows the 'Audio' settings window. Under 'IP Camera to PC', the 'Enabled' radio button is selected, and the 'Audio Type' is set to 'G.711 (64Kbps)'. Under 'Adjust Volume', both 'Mic-In' and 'Audio-Out' are set to '0'. An 'Apply' button is visible at the bottom right.

- c. **Adjust Volume:** When both **Chatting** (in live mode) and **Audio Out** are on, the built-in microphone may be automatically shut down to avoid echoing effects.

*Event List

Click  to get into the administration page. Click  to go back to the live video page.



The screenshot displays the administration interface of an IP camera. On the left is a navigation sidebar with the following sections:

- System** (gear icon): System Information, User Management, System Update
- Network** (Wi-Fi icon): IP Setting, Advanced, PPPoE & DDNS, Server(Mail,FTP...)
- A/V Setting** (microphone icon): Image Setting, Video Setting, Audio
- Event** (document icon): Event Setting, Schedule, I/O Setting, Log List, SD Card

The main content area is titled "System Information" and contains the following settings:

- Server Information**
 - MAC Address: 00:0F:0D:27:F7:F3
 - Server Name: IP Camera Status Bar
 - LED Indicator: ON OFF
 - Language: English 繁體中文 简体中文 French Russian Italian Spanish German Portuguese Polish Japanese
- OSD Setting**
 - Time Stamp: Enabled Disabled
 - Text: Enabled Disabled
 - OSD_Display
- Time Setting**
 - Server Time: 2015/9/10 21:31:08 Time Zone: GMT+08:00
 - Date Format: yy/mm/dd mm/dd/yy dd/mm/yy
 - Time Zone: GMT+08:00
 - Enable Daylight Saving:
 - NTP:
 - NTP Server: pool.ntp.org
 - Update: 6
 - Time Shift: 0
 - Synchronize with PC's time
 - Date: 2015/12/28
 - Time: 16:23:43
 - Manual
 - Date: 2015/12/28
 - Time: 16:23:30
 - The date and time remain the same

The IP Camera provides multiple event settings.

1. Event Setting

a. Motion Detection

Motion Detection

Area Setting: Area 1 Area 2 Area 3

Sensitivity: 5 5 5

Activate motion time: 1 sec

Area 1: E-mail FTP Save to SD card Samba

Area 2: E-mail FTP Save to SD card Samba

Area 3: E-mail FTP Save to SD card Samba

Subject:

Interval: 10 sec a period of time between every two motions detected.

Based on the schedule

To start a motion detection operation, tick **Area 1/2/3**, click **Area 1/2/3** in **Area Setting**, and draw an area on the preview screen. When motion is detected in the area, the word **Motion!** will be displayed on the live screen.

When motion is detected in the area, the word **Motion!** will be displayed on the live screen. The camera will send video or snapshot to specific **E-mail** addresses, trigger the output device, or save recorded data to **FTP/ Micro SD card/ Samba**.

By marking the **Save to SD card** checkbox, the video or snapshot will be saved to the **Micro SD card**. Also, by ticking **E-mail/ FTP/ Samba** on the **Log** option, the motion detection log will be sent to **E-mail/ FTP/ Samba** simultaneously.

- **Subject:** Type in the message you would receive when motion is detected. The default message is "IP Camera Warning!".
- **Interval:** For example, when selecting **10 sec**, once the motion is detected and the action is triggered, it cannot be triggered again within 10 seconds.

- **Based on the schedule**: When the option box is ticked, only during the selected schedule time the motion detection is enabled.

b. Record File

Record File	
File Format:	AVI File(with Record Time Setting)

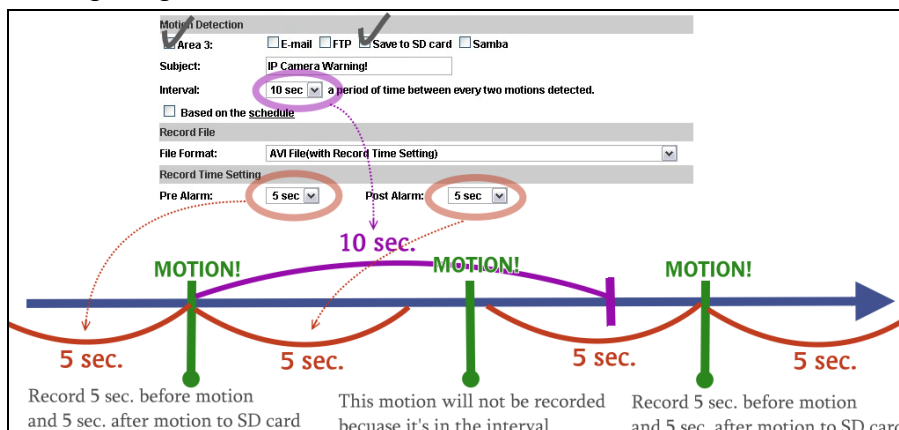
When an event occurs, the IP camera will record a video clip or take snapshot, and then send to mail/ FTP/ Samba. Select the file format to be saved.

- **AVI File (with Record Time Setting)**: Save AVI video file. The video length is according to the value set in Record Time Setting.
- **JPEG File (Single File with Interval Setting)**: Save single JPEG picture file when the event occurs.
- **JPEG Files (with Record Time Setting)**: Only when selecting "JPEG" in streaming 1 video format of Video Setting, this option can be enabled. Select this option to save several JPEG picture files. The successive picture files cover a period of time according to the value set in Record Time Setting.

c. Record Time Setting

Record Time Setting	
Pre Alarm:	5 sec
Post Alarm:	5 sec

When an event occurs, the IP camera can record a video clip or take a snapshot, and then send it via mail/ FTP/ Samba. Select the video recording length before and after the event is detected.



- d. **Network IP Check:** After enabling IP Check, the IP camera can check if the network server is connecting. If the IP camera checking failed, the image will be recorded to the SD card.

Network IP Check

IP Check: Enabled Disabled

IP Address:

Interval:

Check failed: Connection failed four times. Reboot IP Camera.
 Save to SD card

(When Schedule Record Enable, it'll stop saving to SD card)
(When IP check failed, first step will save to SD card, continuing other saving storage)

2. Schedule

- a. **Schedule:** Tick the grids on the calendar to manage the time of your schedule to automatically record video files, or take snapshots.

Schedule

All	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Mon.																									
Tue.																									
Wed.																									
Thu.																									
Fri.																									
Sat.																									
Sun.																									

With schedule setup.

- b. **Snapshot & Record:**

- **Record:** After completing the **Schedule**, the camera data will be recorded according to the schedule made from the calendar. **Be aware that SD cards may fail in time** for being recorded too long.

Record

Save to SD card Disabled

Record Memory:

You may set up how much you would like the SD card memory to be used in order to estimate when it is a right time to swap for a new one.

- **Snapshot:** After enabling the snapshot function; the user can select the storage position of the snapshot file, the interval time of the snapshot and the reserved file name of the snapshot.

- ◆ Interval: Users can set the interval between two snapshots.
- ◆ File Name: Enter the file name of your snapshot file.

- Restart IP Camera Automatically: Set up the time for IP camera to restart automatically after ticking **Restart** to enable access.

3. I/O Setting

- A. Input Setting:** The IP Cam supports input and output. When the input condition is triggered, it can trigger the relay; send the video to mail addresses/FTP server/SAMBA.

- Interval: For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.

- **Based on the schedule**: When the option box is ticked, only during the selected schedule time the I/O is enabled. For example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even if the camera detects input signal during 11:00~12:00 on Monday.

B. Output Setting: The output mode affects the DO or relay out duration.



- **Mode Setting**

(i) **ON/Off Switch**: The camera triggers the external device and lasts for 10 seconds. You can turn off the alarm manually by clicking “off” at the right bottom of the live video page.

(ii) **Time Switch**: The camera triggers the external device and lasts for certain time according to the internal setting, and the user is not allowed to break off the alarm manually.

Click on the button to keep all the changes.

- **Output Waveform**

Select either **HIGH** or **GROUND** for the output waveform.

4. Log List

Log List	
System Logs	Logs
Motion Detection Logs	Logs
I/O Logs	Logs
All Logs	Logs

Sort by System Logs, Motion Detection Logs and All Logs. In addition, System Logs won't lose data due to power failure.

All Log	
<System>	[2014/11/25 17:56:16] 192.168.23.65 login by admin.
<System>	[2014/11/25 17:42:31] 192.168.23.65 login by admin.
<Motion Detection>	[2014/11/25 17:32:28] Area 3 Motion Detection.
<Motion Detection>	[2014/11/25 17:32:28] Area 2 Motion Detection.
<Motion Detection>	[2014/11/25 17:32:28] Area 1 Motion Detection.
<Motion Detection>	[2014/11/25 17:18:49] Area 3 Motion Detection.
<Motion Detection>	[2014/11/25 17:18:49] Area 2 Motion Detection.
<Motion Detection>	[2014/11/25 17:13:41] Area 3 Motion Detection.

5. SD Card:

Please Insert the Micro SD card before use it. Make sure to push the Micro SD card into the slot completely.

a. Playback

Playback				
20171107	20171108	20171109		
Record				
20171109				
SD Card: << 9273M / 30416M >>				
SD Management				
Auto Deletion:	<input type="text" value="Off"/> (Keep 1/ 2/ 3/ 4...days)			
<input type="button" value="Format SD Card"/>				
It only support FAT32 format for SD card over 64G Please format SD card into FAT32 before installation				
<input type="button" value="Apply"/>				

Click the date under the **Playback** title and a list of files will pop up. For example, if the date **2017/11/07** is clicked, all the events happened within that time frame will then appear in a list like the one below.

2017/11/07			Del
Time	Video	Event Type	<input type="checkbox"/>
21:46:01	214601m.avi	Motion Detection	<input type="checkbox"/>
21:46:24	214624m.avi	Motion Detection	<input type="checkbox"/>
21:47:14	214714m.avi	Motion Detection	<input type="checkbox"/>
21:55:15	215515m.avi	Motion Detection	<input type="checkbox"/>
21:55:27	215527m.avi	Motion Detection	<input type="checkbox"/>
21:56:13	215613m.avi	Motion Detection	<input type="checkbox"/>
21:56:24	215624m.avi	Motion Detection	<input type="checkbox"/>
21:56:55	215655i	IVS	<input type="checkbox"/>
21 o'clock	21 o'clock	Schedule Snapshot	<input type="checkbox"/>
22:02:45	220245i	IVS	<input type="checkbox"/>

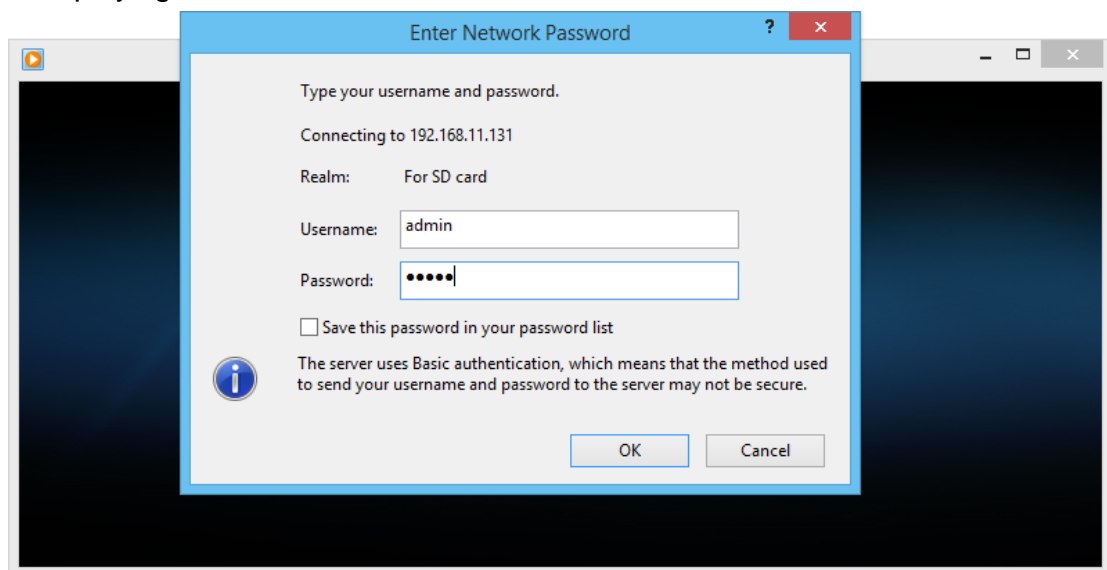
Files link daily.

The enlisted files under **Video** category are files representing events.

There are 3 types of file formats, and each is different for its own **Event Type**. Notice how the file name formations under the **Video** category represent the time when a file is created. For instance, the file name “214601m.avi” means the video is recorded at **21:46:01** today, **m** means **Motion Detection**, and **avi** represents the file format.

Click on the file name to open the file.

For **avi** files, you need Microsoft Media Player which is supposedly built-in in your PC. The default Username & Password for playing the video file are both **admin**.



Clicking on an **IVS** file (such as **215655i**) will bring out a pop-up window suggesting an **IVS** event captured as snapshots as the one below:



Clicking on any title that is labeled with “time unit” (such as **21 o'clock**) at the end will bring out a pop-up window indicating the snapshot taken as scheduled in **Schedule** mode and enabled in **Snapshot** mode.



Click the icon to delete any file by marking on the checkbox under the **Del** category with a mouse click.

b. Record

The recording mode is enabled after **Record** is set in **Schedule** mode. Take the schedule calendar below for example, the grids coloured in green between 3~12 are scheduled to start recording from 3 o'clock to 12 o'clock from Monday to Thursday.

Schedule																								
All	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon.																								
Tue.																								
Wed.																								
Thu.																								
Fri.																								
Sat.																								
Sun.																								

With schedule setup.

Once the recording mode is on, the video data recorded will be found and labelled as **2017/11/09**.



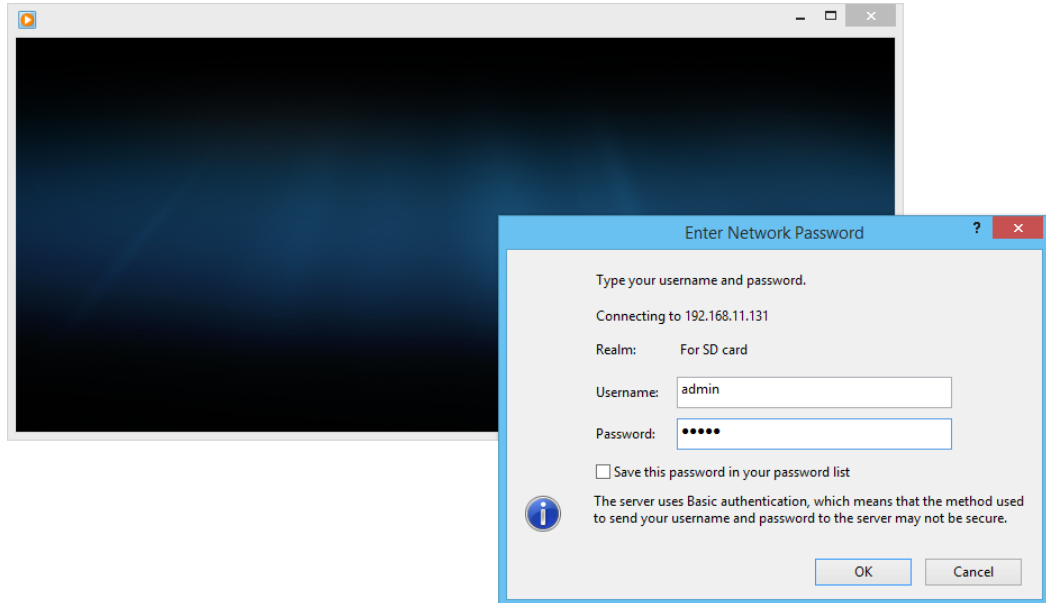
Click on **2017/11/09** to enter the next page where all files recorded on that date are enlisted.

2017/11/09			Del
Time	Video	Event Type	<input type="checkbox"/>
03:00:00	030000r	Record	<input type="checkbox"/>
04:00:00	040000r	Record	<input type="checkbox"/>
05:00:00	050000r	Record	<input type="checkbox"/>
06:00:00	060000r	Record	<input type="checkbox"/>
07:00:00	070000r	Record	<input type="checkbox"/>
08:00:00	080000r	Record	<input type="checkbox"/>
09:00:00	090000r	Record	<input type="checkbox"/>
10:00:00	100000r	Record	<input type="checkbox"/>
11:00:00	110000r	Record	<input type="checkbox"/>
12:00:00	120000r	Record	<input type="checkbox"/>

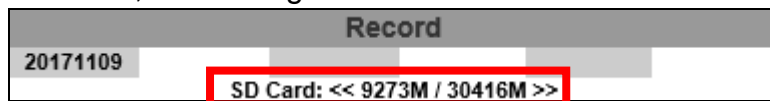
1 2

Files link daily.

Click on any video title to open Microsoft Media Player (supposedly already built-in in your PC) and play the video file. Key-in **admin** for both Username & Password to get permission to view the video.



The number at the bottom indicates the distributive law of the current SD Card memory which is divided and assigned to different types of recording purposes. The left side shows how much memory is still available, and the right side shows how much the total memory is.

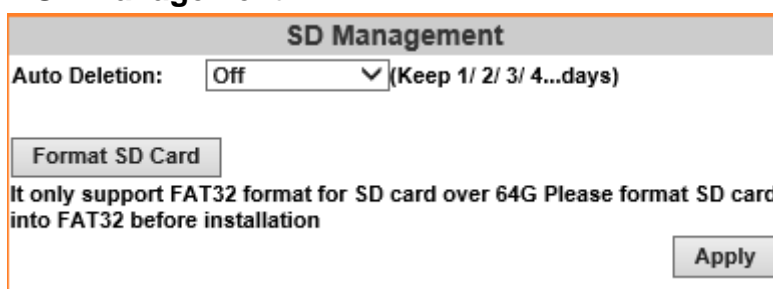


If the memory of the SD card is **over 128G**, **70%** of the memory will be used for scheduled recording, and **30%** will be used for event recording.

If the memory of the SD card is **below 128G**, **50%** of the memory will be used for scheduled recording, and **50%** will be used for event recording.

Click the **Del** icon to delete any file by marking on the checkbox under the Del category with a mouse click.

c. SD Management



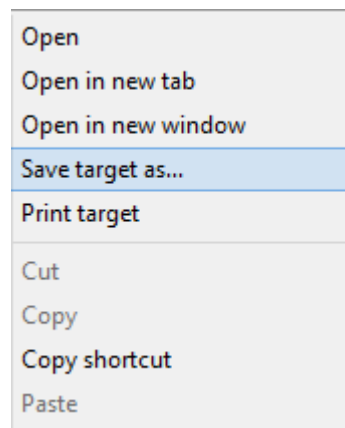
c1. Auto Deletion: Choosing “The 1st day” means the recording file will be kept for one day. Example: It is five o’clock now. Choose “The 1st day”. The files will be kept from five o’clock yesterday to five o’clock today. The oldest file will be deleted if the Micro SD card is full.

Note : The use of the SD card will slightly affect the operation of the IP Camera, such as affecting the frame rate of the video.

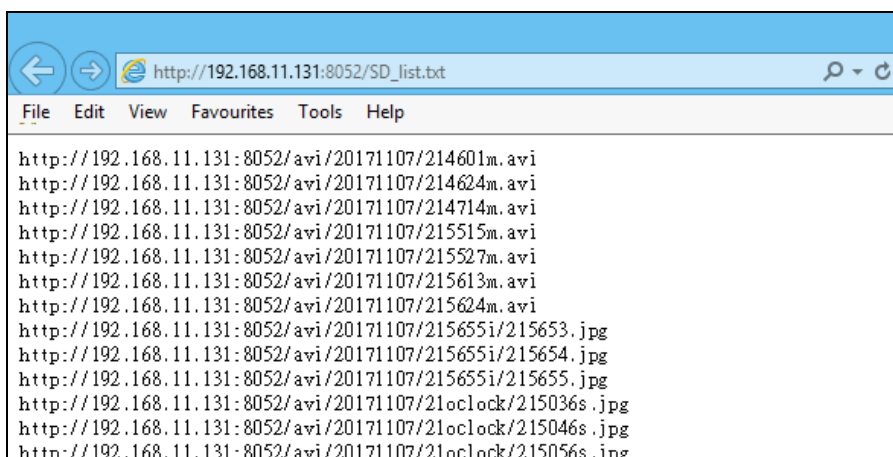
c2. Format SD Card: Click the icon to process the SD Card formatting into FAT32 format. Be cautious that since it only supports FAT format for SD Card over 64G, please format SD Card into FAT32 before installation.

d. SD Card Files

d1. Downloading the Files: For both **Playback** and **Record** mode, after entering a date data to see the **Video** and **Event Type**, right-click on a title under the **Video** list, and choose “**Save Target As...**” from its pop-up window to start downloading the file.



d2. Linking the Files: For both **Playback** and **Record** mode, find the **Files link daily.** link at the right corner of the bottom after entering a date data to see the **Video** and **Event Type**. Click on the link, a window will pop up.



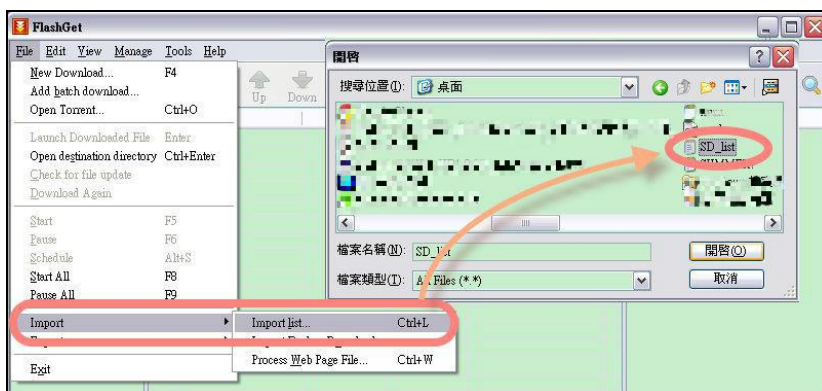
You may copy any of the protocol provided in the window and paste it on a web browser as a URL address to look at each file.

d3. Copy to PC: You can insert the Micro SD card to the PC and read the files directly, or use FlashGet instead to download the files from the IP camera. (In this way you do not need to pull out the Micro SD card from the camera.) To use FlashGet for downloading image and video data from the Micro SD card, please follow the steps:

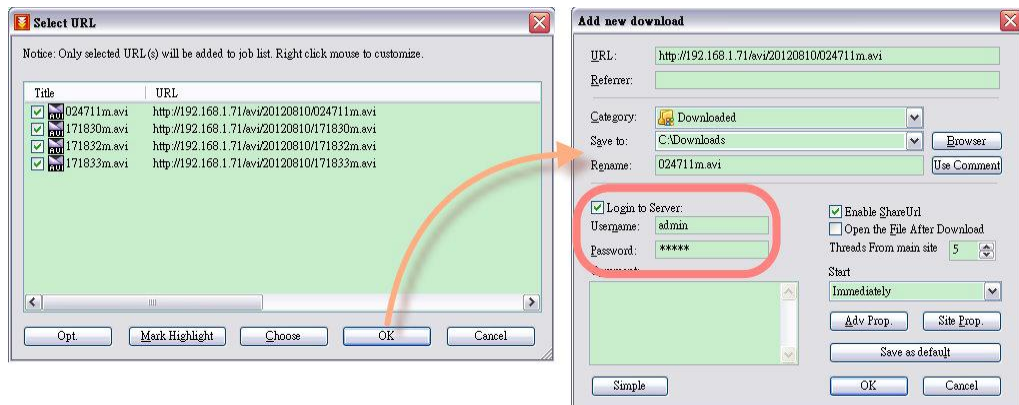
- i. Enter data list and right-click “Files link daily.”, select “save target as...” then save the link list to PC.



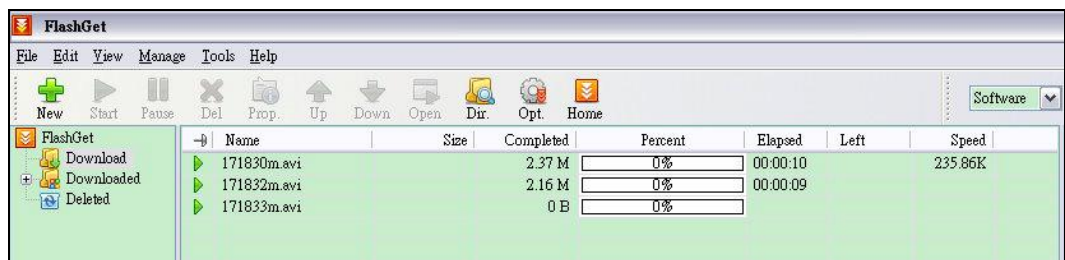
- ii. Open FlashGet, select "File"→ "Import" → "Import list", and find the link list file you just saved. The file name may be called “SD_list”.



- iii. FlashGet will show you the link list, and you can tick the files you want to copy to your PC. Give the directory path in the new download window, and remember to enable "Login to Server": key in the IP Camera username and password.



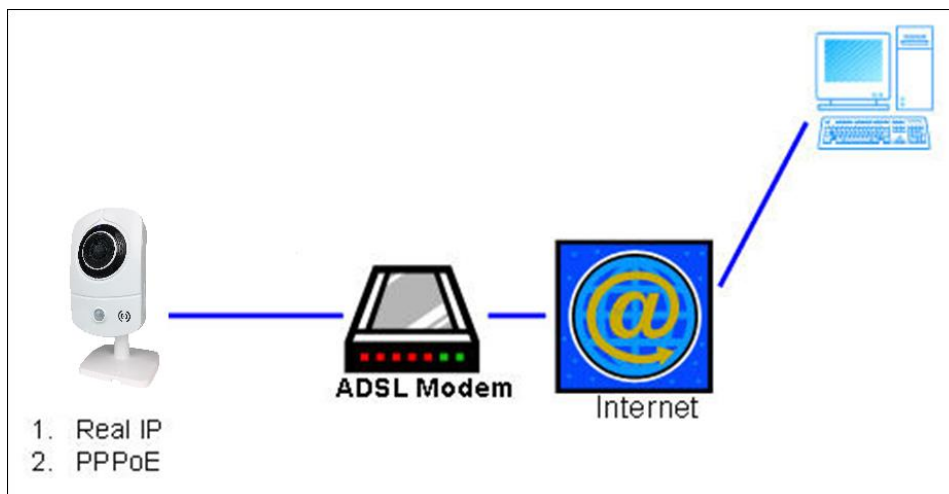
iv. Click OK to start download.



- FlashGet is free software that can be downloaded from FlashGet official website. The example above is based on FlashGet ver.1.9.6.

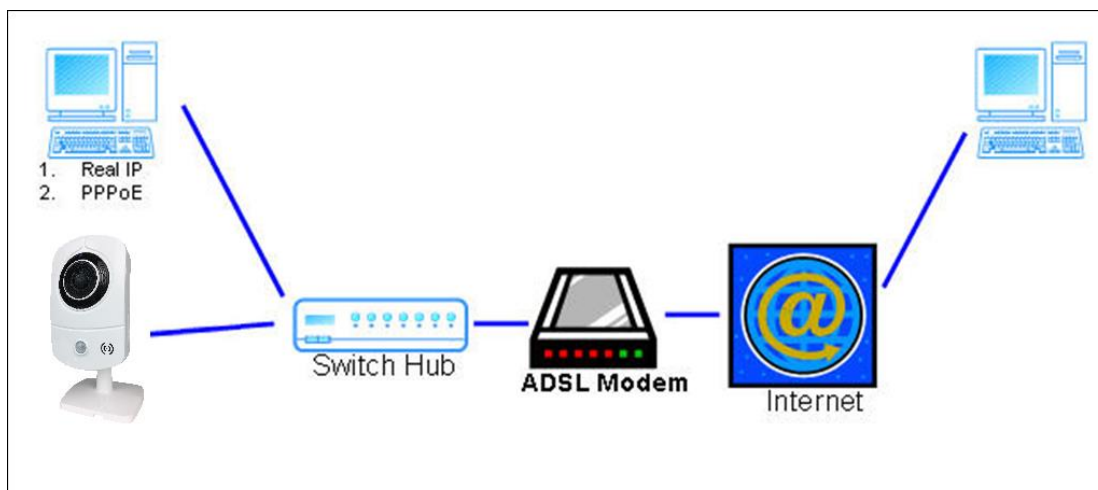
vi. Network Configuration

Configuration 1:



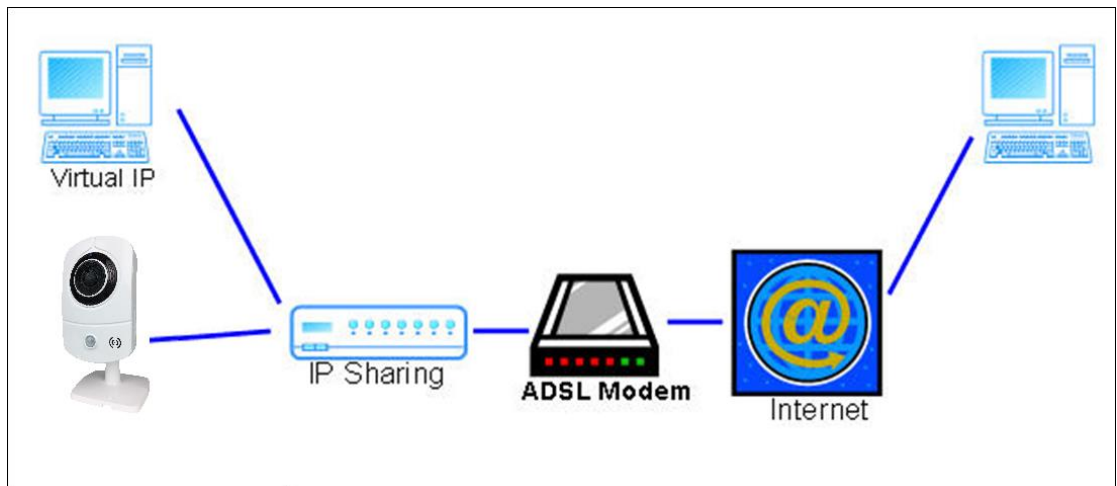
- a. Internet Access: ADSL or Cable Modem
- b. IP address: One real IP or one dynamic IP
- c. Only the IP Camera is connected to the internet
- d. For fixed real IP, set up the IP into IP Camera. For dynamic IP, start PPPoE.

Configuration 2:



- a. Internet Access: ADSL or Cable Modem
- b. IP address: More than one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: Switch Hub.
- e. For fixed real IP, set up the IP into IP Camera and PC. For dynamic IP, start PPPoE.

Configuration 3:

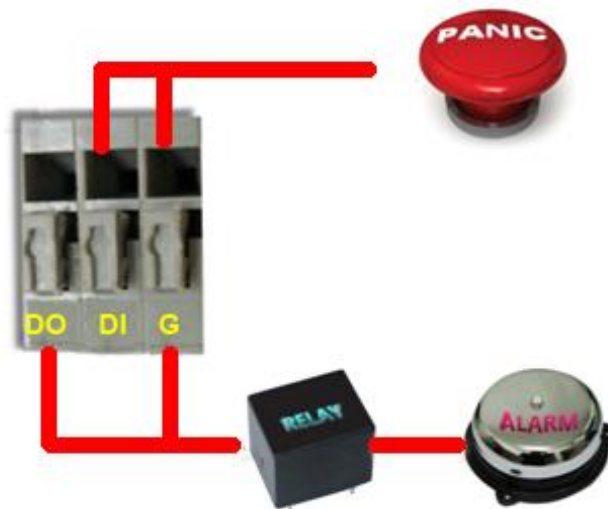


- a. Internet Access: ADSL or Cable Modem
- b. IP address: one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: IP sharing
- e. Use virtual IP, set up port forwarding in IP sharing

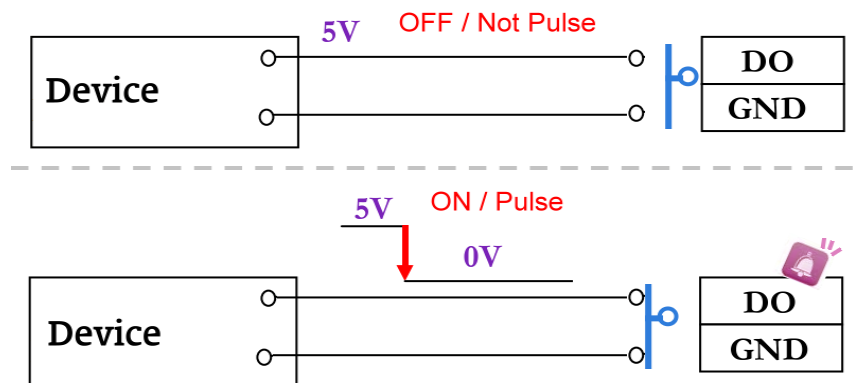
vii. I / O Configuration

1. I/O Connection

- Connect the GND & DO pin to the external relay (buzzer) device.
- Connect the GND & DI pin to the external trigger device.

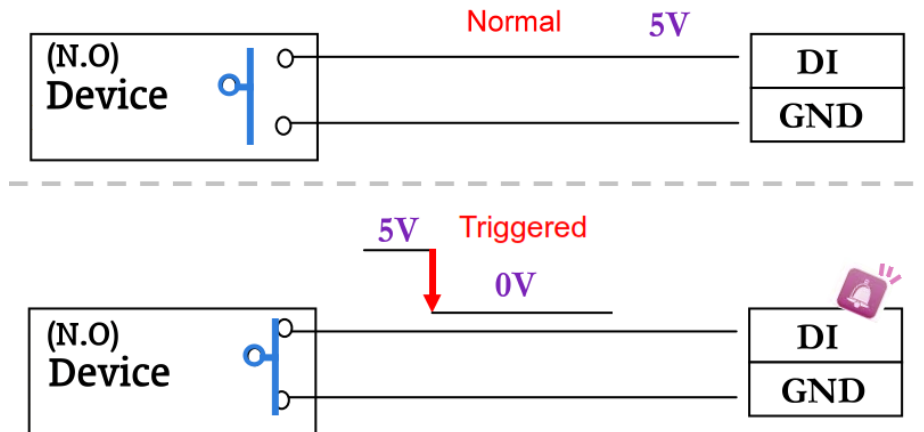


When no event occurs, the DO output is 5V (DO and GND are disconnected). When the camera detects events it will trigger and external alarm, DO output is 0V (DO and GND are connected).



If you select **N.O** on **Input sensor setting**, when the switch contacts are opened, the camera input alarm will be triggered and will execute the action user has set, for example, send a snapshot to E-mail address.

If you select **N.C** in **Input sensor setting**, when the switch contacts are closed, the camera input alarm will be triggered and will execute the action user has set, for example, send a snapshot to E-mail address.



c. I/O PIN definition

- GND (Ground): Initial state is LOW
- DO (Digital Output): DC 5V
- DI (Digital Input): 50mA, DC 5V

2. I/O Setup

- a. Click I/O Setting from the system setup page via IE, and check **Out1** to enable I/O signal.

The screenshot shows the I/O Setting configuration page. The 'Input Setting' section has two input sensors, both set to 'N.O.'. For each, 'Out1' is checked under 'Input Action'. The 'Subject' is 'GPIO In Detected!' and the 'Interval' is '10 sec'. There is an unchecked checkbox for 'Based on the schedule'. The 'Output Setting' section has 'Mode Setting' set to 'OnOff Switch' and 'Interval' set to '10 sec'. An 'Apply' button is at the bottom right.

- Interval: For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.

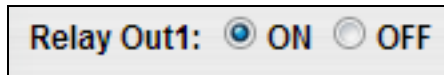
- Based on the schedule: When the option box is ticked, only during the selected schedule time the I/O is enabled. For example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even if the camera detects input signal during 11:00~12:00 on Monday.

b. Output Setting: After the external input and output hardware are installed, you can enable the "Relay Out" function on the live video page to test if DO / Relay Out works.

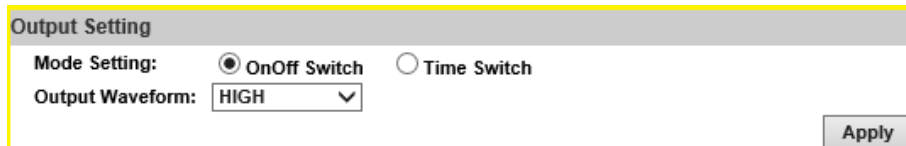
Mode Setting:

(i) On Off Switch mode:

Clicking "ON" will trigger the external output device for 10 seconds. For example, your alarm buzzer will continuously ring for 10 seconds. After 10 seconds the buzzer stops ringing, or you can manually break off the output signal by clicking "OFF".

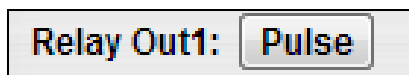


Select **HIGH** or **GROUND** To adjust the **Output Waveform**.

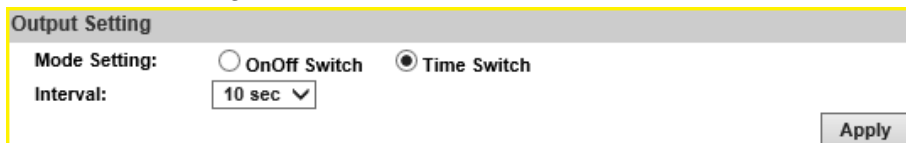


(ii) Time Switch mode:

Click "Pulse", the camera will trigger the external output device for several seconds; the duration length is according to the "interval" setting in Output Setting.



The duration length is based on the values set from **Interval**.



viii. Factory Default

If you forget your password, please follow the steps to revert back to default value.

- Remove the power adapter and Ethernet cable from the camera.
- Press and hold the **Default** button on the back of the camera for **at least 5 seconds**.



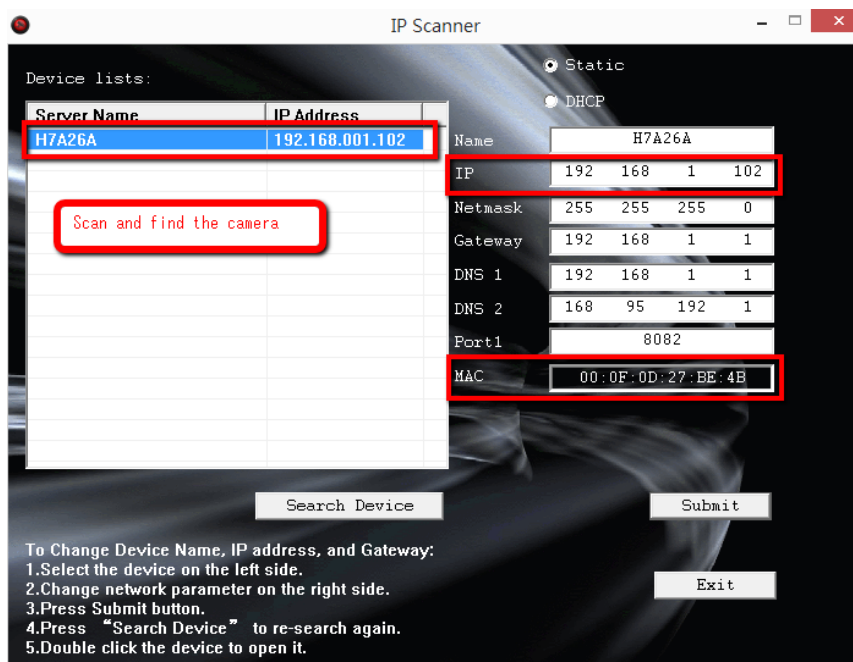
- Connect back the power to the camera. It will take around 30 seconds for the camera to boot.
- Release the Default button after the camera finishes booting.
- Log in the camera by using the default IP (<http://192.168.1.200>), and user name: **admin**, password: **admin**.

iv. Universal Password

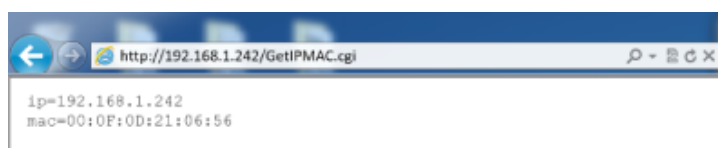
If you forgot the password of your IP camera, you can reset the camera to factory default, or follow the procedure below to generate a universal password.

Note: Universal password will be valid only when you enable the function in **User Management**.

1. First, you need to know the IP address and MAC address of your IP camera. You can use **IP Scanner** to scan the LAN, and see the IP address and MAC address on the side column.



Or, if you already know the IP address of camera: Open the web browser, key in [http:// \(IP address\) /GetIPMAC.cgi](http://(IP address) /GetIPMAC.cgi) and press enter. The IP address and MAC address will be displayed on browser.



2. Find the .html file named **Universal Password** in CD-ROM. Click to open it.



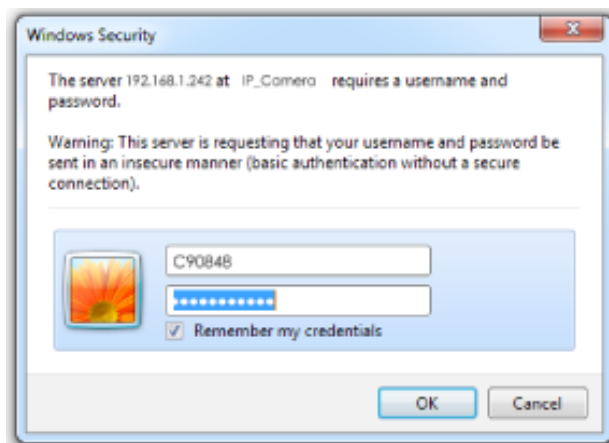
3. Key in the camera IP address **IP Address** column and MAC address in **MAC** column, and then click **encoder**, a set of username and password will appear, as shown in the picture below:

A screenshot of a web form with a grey background. It contains the following fields and elements:

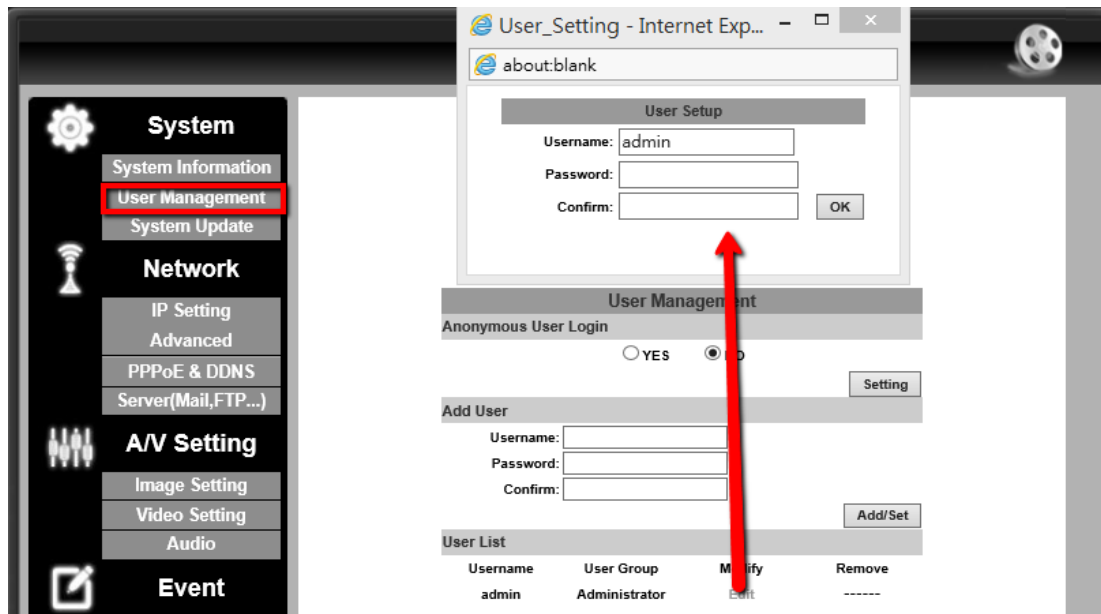
- "IP address:" followed by a text input field containing "192.168.1.200".
- "MAC:" followed by a text input field containing "00:0f:0d:11:22:33".
- "Username" label above a text input field.
- "Password" label above a text input field.
- An "encoder" button located at the bottom right of the form.

The universal username and password are generated from the IP address and MAC address you key-in, so if you change the camera IP address the universal password changes, too.

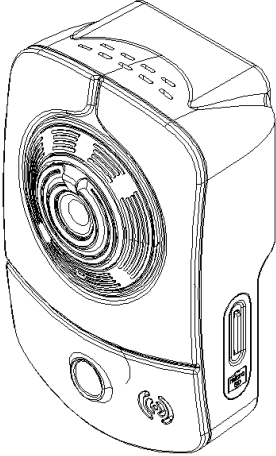
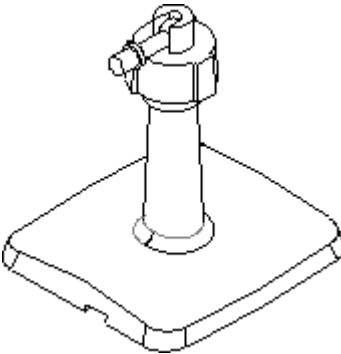
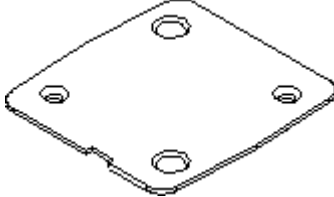
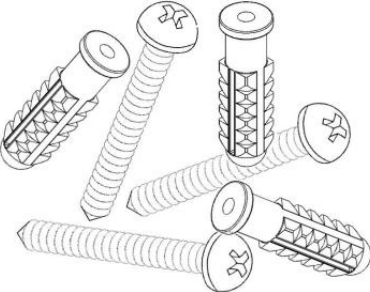

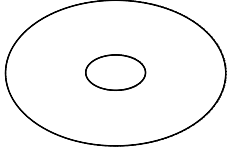
4. Take the generated username and password. Use them to log into the camera.



5. Now you can login as administrator. Turn to **User Management** page.
- The use of universal password does not affect the previous user setting, so the administrator account password does not change until you edit it.
- Please click **Edit** to give a new administrator password.



x. Package Contents

IP Camera	Bracket	Bottom plate
		
Screws Pack	Quick Installation Guide	CD
		

- The CD includes user manual and software tools

xi. Micro SD Card Compatibility (Optional)

The following are the recommended Micro SD Cards:

Transcend	SDHC class4 16GB
	SD class4 16GB
	SDHC class4 32GB
	SD class4 32GB
	SD class6 4GB
	SDHC class6 4GB
	SD class6 8GB
	SDHC class6 8GB
	SD class6 16GB
	SDHC class6 16GB
	SDHC class10 4GB
	SDHC class10 8GB
	SDHC class10 16GB
	SDXC class 10 Max. 64GB
SanDisk	SDHC class4 8GB
	SDHC class4 16GB
	SDHC class4 32GB
	SDXC class10 Max. 128GB