

# User Manual

## IP Camera





**WARNINGS**

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**

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

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## I. Preface

This is a CCD IP camera with the web server built in. User can view real-time video via IE browser. It supports H.264, JPEG and MPEG4(3GPP streaming format) video compression which provides smooth and high video quality. The video can be stored in the SD card and playback remotely.

With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

## II. Product Specifications

- D-WDR system
- Next Generation 3D DNR
- Sense-Up function
- Support video out
- Power over Ethernet available
- H.264/ JPEG/ MPEG4 (3GPP only) compression
- SD card backup
- 2-way audio
- Support Cell Phone/PDA/3GPP
- Triple Streaming
- SDK for Software Integration
- Free Bundle 36 ch recording software

### Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	256MB
Flash	16MB
Image sensor	1/3" CCD Sensor
Lens Changeable	Yes, Vari-focal 3.7~12mm, board type
Support DC IRIS	Yes for option
ICR	Yes for option

I/O	1 in/ 1 Relay Out for option	
RS-485	No	
Video Out	BNC x1, 1.0Vp-p 75Ω	
Audio in	x1 for option	
Audio Out	x1 for option	
Power over Ethernet	Optional	
Power	DC 12V 470mA	
Dimensions	131mm(ψ) x 94.5mm(H)	
<b>Network</b>		
Ethernet	10/ 100 Base-T	
Network Protocol	HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, UPnP forwarding, Multicast	
Wireless (Optional)		
	Wireless	No
	Security	No
<b>System</b>		
Video Resolution	NTSC - 720x480, 704x480, 352x240, 176x144 PAL - 720x576, 704x576, 352x288, 176x144	
Triple Streaming	Yes	
CMOS setting	Brightness, Contrast, Saturation, Hue, Sharpness	
Image snapshot	Yes	
Full screen monitoring	Yes	
Privacy Mask	Yes, 3 different areas	
Compression format	H.264/ M-JPEG/ MPEG4(3GPP only)	
Video bitrates adjust	CBR, VBR	
Motion Detection	Yes, 3 different areas	
Triggered action	Mail, FTP, Save to SD card, Relay	
Pre/ Post alarm	Yes, configurable	
Security	Password protection	
Firmware upgrade	HTTP mode, can be upgraded remotely	
Simultaneous connection	Up to 10	
Audio	Yes, 2-way for option	
<b>SD card management</b>		

Recording trigger	Motion Detection, IP check, Network outage (wire only), schedule, alarm	
Video format	AVI, JPEG	
Video playback	Yes	
Delete files	Yes	
<b>Web browsing requirement</b>		
OS	Windows 2000, XP, 2003, Microsoft IE 6.0 or above	
Hardware	Suggested	Intel Dual Core 1.66G, RAM: 1024MB, Graphic card: 128MB
	Minimum	Intel-C 2.8G, RAM: 512MB, Graphic card: 64MB

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

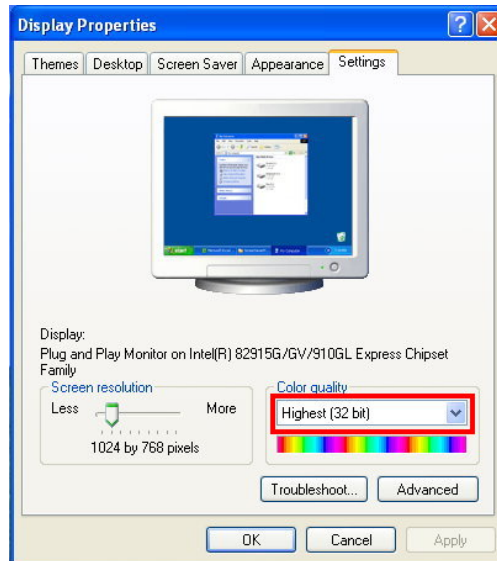
## III. Product Installation

### A. Monitor Setting

- i. Right-Click on the desktop. Select “ Properties”



- ii. Change color quality to highest (32bit).

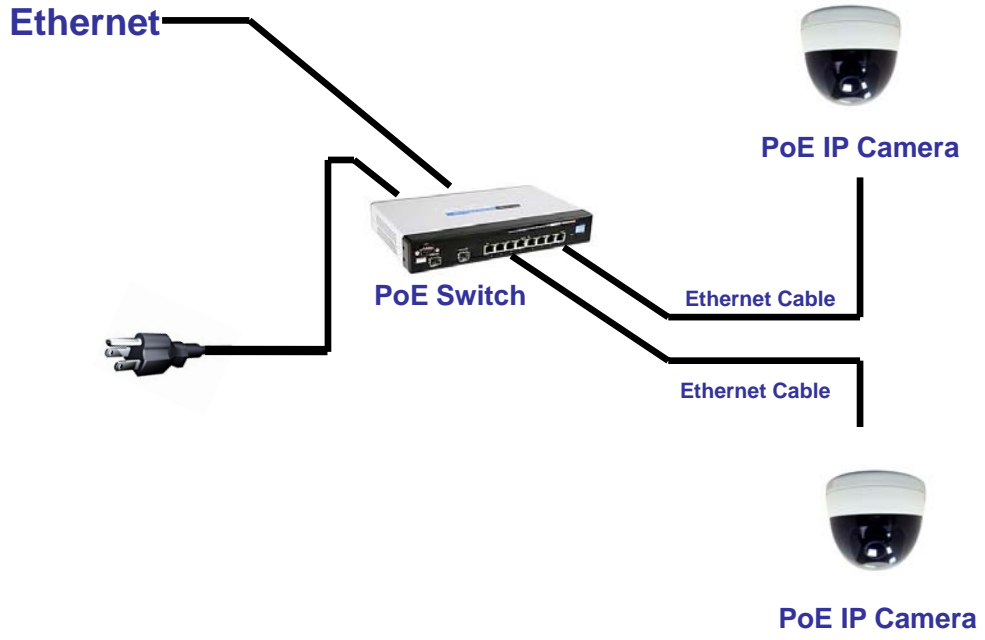


## B. Hardware Installation and I/O Pin

### Assignment

- i. Connect power adaptor
- ii. Connect IP Cam to PC or network with Ethernet cable
- iii. Set up the network configurations according to the network environment. For further explanation, please refer to chapter VI, "Network Configuration for IP CAMERA".
- iv. 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 enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that 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 24 hours a day, 7 days a week operation.



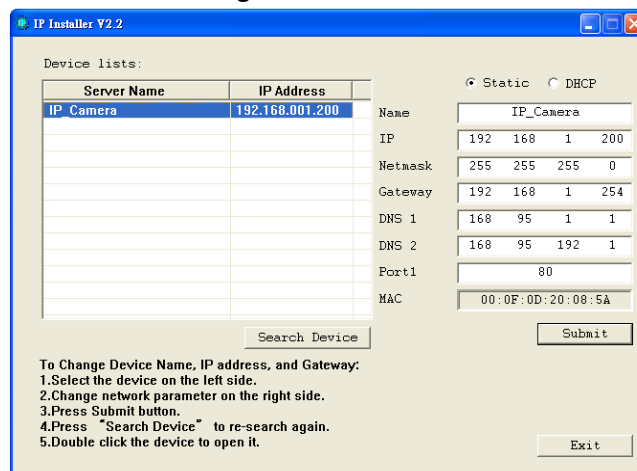


## C. IP Assignment

- i. Use the software, “IP Installer” to assign the IP address of IP CAMERA. The software is in the attached software CD.
- ii. IP installer supports two languages
  - a. IPInstallerCht.exe : Chinese version
  - b. IPInstallerEng.exe : English version
- iii. There are 3 kinds of IP configuration.
  - a. Fixed IP (Public IP or Virtual IP)
  - b. DHCP (Dynamic IP)
  - c. Dial-up (PPPoE)
- iv. Execute IP Installer
- v. For Windows XP SP2 user, it may popup the following message box. Please click “Unblock”.



- vi. IP Installer configuration:



- vii. IP Installer will search all IP Cameras connected on Lan. The user can click “Search Device” to search again.

- viii. Click one of the IP Camera listed on the left side. The network configuration of this IP camera will show on the right side. You may change the “name” of the IP Camera to your preference (eg: Office, warehouse). Change the parameter and click “Submit” then click “OK”. It will apply the change and reboot the Device.



- ix. Please make sure the subnet of PC IP address and IP CAM IP address are the same.

**The same Subnet:**

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

**Different Subnets:**

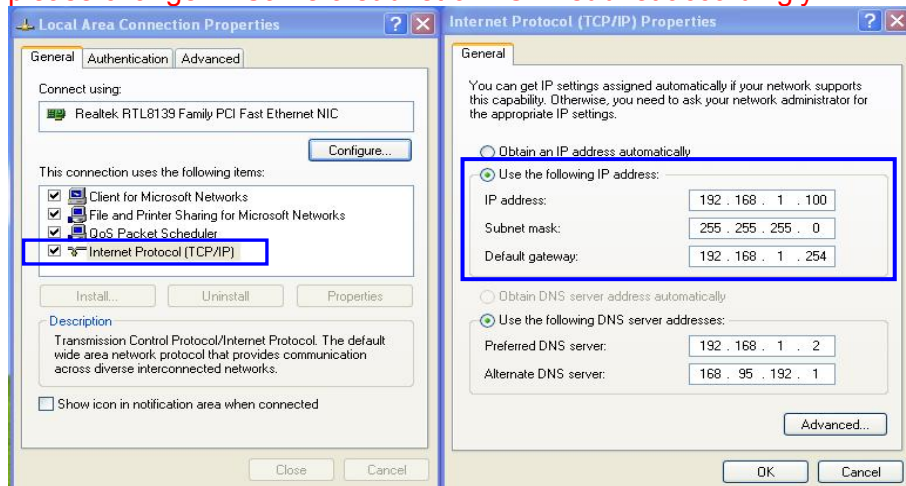
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

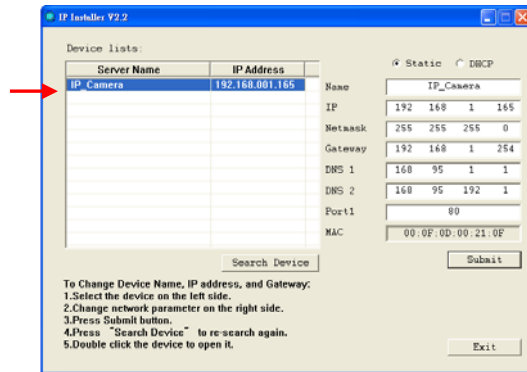
**To Change PC IP address:**

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

Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera subnet or PC IP subnet accordingly.



- x. A quick way to access remote monitoring is to left-click the mouse twice on a selected IP Camera listed on “Device list” of IP Installer. An IE browser will be opened.



- xi. Then, please key in the default “user name: admin” and “password: admin”.



## D. Install ActiveX control:

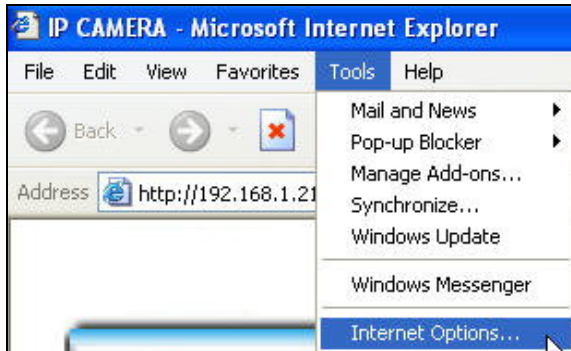
For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

 This website wants to install the following add-on: 'WEBWATCH2.cab' from

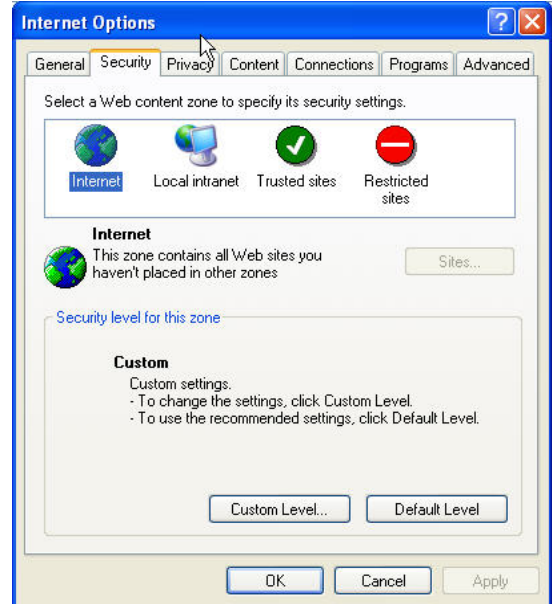
If the installation failed, please check the security setting for the IE browser.

- i. IE → Tools → Internet Options... → Security Tab → Custom Level... → Security Settings → Download unsigned ActiveX controls → Select “Enable” or Prompt.
- ii. IE → Tools → Internet Options... → Security Tab → Custom Level... → Initialize and script ActiveX controls not marked as safe → Select “Enable” or Prompt.

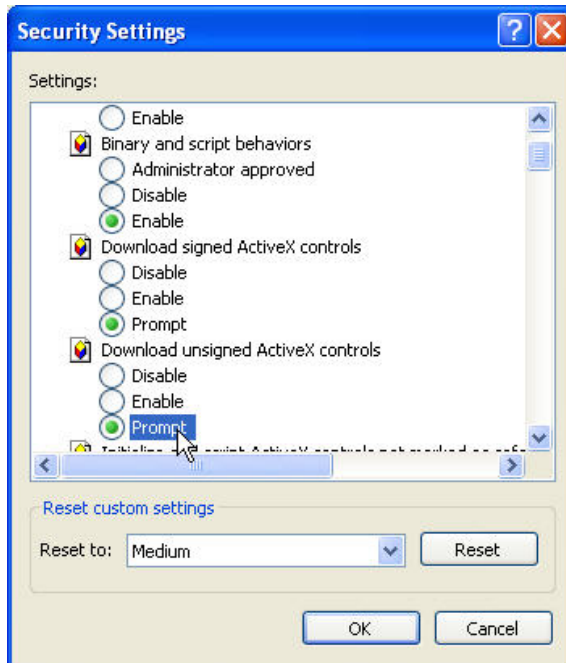
1



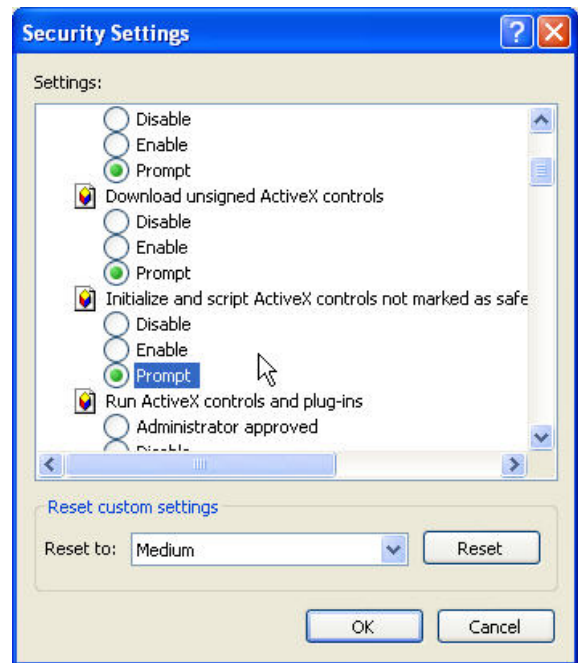
2



3

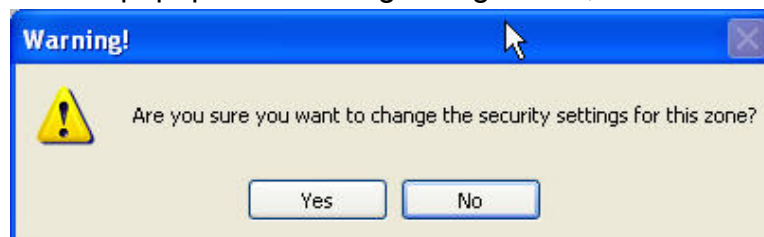


4



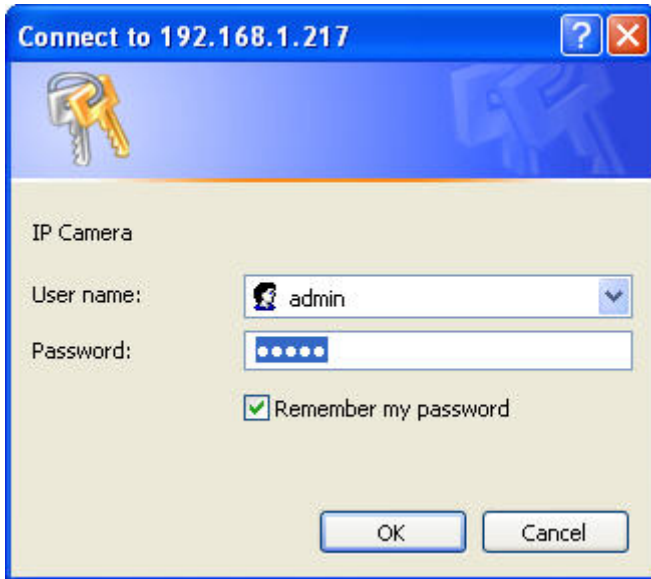
5

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

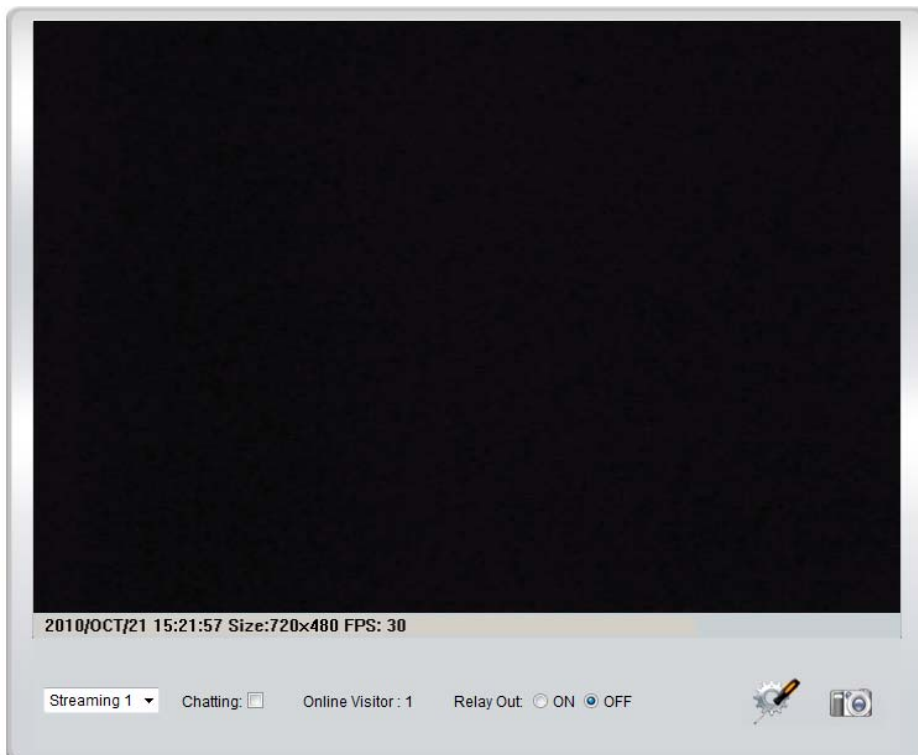




## IV. Live Video

Start a 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 and password. The default user name and password are “**admin**” and “**admin**”.



When connect to the IP CAMERA ◦ The following program interface shows.



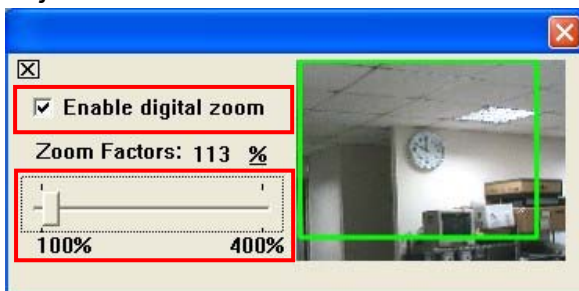
-  : Get into the administration page
-  : Video Snapshot
- Show system time, video resolution, and video refreshing rate
- Select video streaming source **(When streaming 2 setting in 『Video Setting』 is closed, this function will not display)**
- IP Camera supports 2-way audio. Click the “Chatting” check box. Then you can use microphone which connects to the PC to talk to server side, which is IP Camera side
- Shows how many people connect to this IP camera
- Control the relay which is connected to this camera.

Double-click the video, it will change to full screen mode. Press “Esc” or double-click the video again, it will change back to normal mode.

Right-Click the mouse on the video, it will show a pop-up menu.



- Snapshot : Save a JPEG picture
- Record Start : Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select “Record Stop”. The video format is AVI. Use Microsoft Media Player to play the recorded file.
- Mute : Turn of the audio. Click again to turn on it.
- Full Screen : Full-screen mode.
- ZOOM: Enable zoom-in and zoom-out functions. Select “Enable digital zoom” option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



## V. Configuration

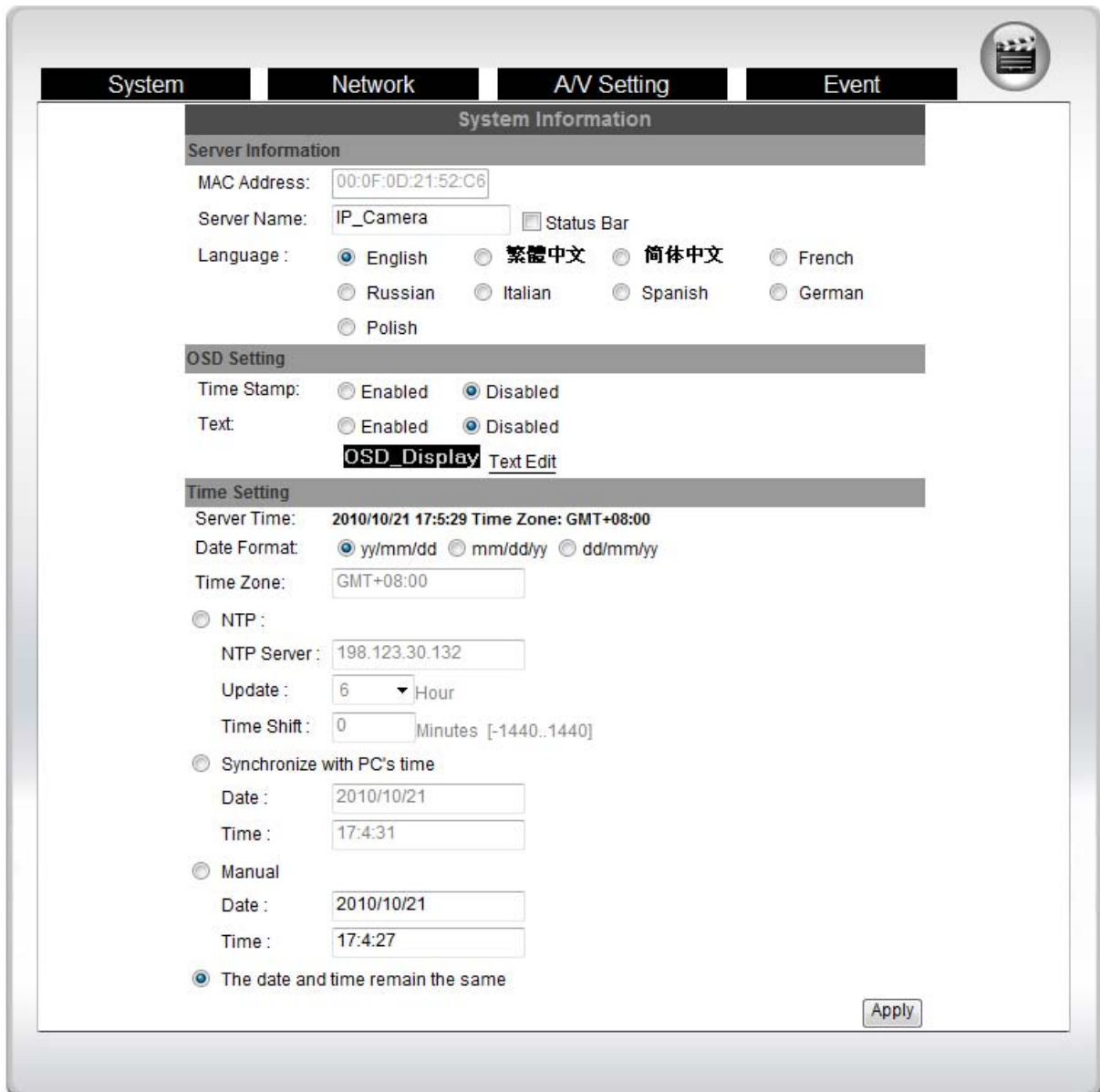


Click



to go back to the live

video page.



The screenshot shows the configuration page for an IP camera, divided into four tabs: System, Network, AV Setting, and Event. The 'System' tab is active, displaying the following settings:

- System Information**
  - MAC Address: 00:0F:0D:21:52:C6
  - Server Name: IP\_Camera  Status Bar
  - Language:  English  繁體中文  简体中文  French  Russian  Italian  Spanish  German  Polish
- OSD Setting**
  - Time Stamp:  Enabled  Disabled
  - Text:  Enabled  Disabled
  - OSD Display** [Text Edit](#)
- Time Setting**
  - Server Time: 2010/10/21 17:52:29 Time Zone: GMT+08:00
  - Date Format:  yy/mm/dd  mm/dd/yy  dd/mm/yy
  - Time Zone: GMT+08:00
  - NTP :
    - NTP Server: 198.123.30.132
    - Update: 6 Hour
    - Time Shift: 0 Minutes [-1440..1440]
  - Synchronize with PC's time
    - Date: 2010/10/21
    - Time: 17:4:31
  - Manual
    - Date: 2010/10/21
    - Time: 17:4:27
  - The date and time remain the same

An 'Apply' button is located at the bottom right of the configuration area.

## A. System

### i. System Information

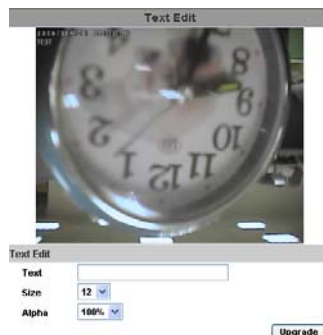
- a. Server Information: Set up the camera name, select language, and set up the camera time.
  1. Server Name : This is the Camera name. This name will show on the IP Installer.
  2. Select language : There are English, Traditional Chinese, and Simplified Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.



- b. OSD Setting: Select a position where date & time stamp / text showing on screen.

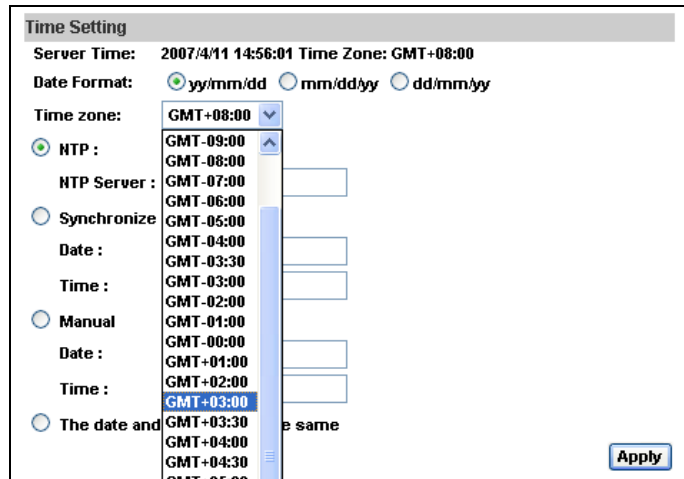


Moreover, click Text Edit can entry to adjust the OSD contents which is including Size and Alpha of text. Finally, click **Upgrade** button to reserve the setting.



- c. Server time setting : Select options to set up time - "NTP", "Synchronize with PC's time", "Manual", "The date and time remain the same".





**Time Setting**

Server Time: 2007/4/11 14:56:01 Time Zone: GMT+08:00

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

Time zone: GMT+08:00

NTP :  
 NTP Server : GMT-09:00  
 GMT-08:00  
 GMT-07:00  
 GMT-06:00  
 GMT-05:00  
 GMT-04:00  
 GMT-03:30  
 GMT-03:00  
 GMT-02:00  
 GMT-01:00  
 GMT-00:00  
 GMT+01:00  
 GMT+02:00  
 GMT+03:00  
 GMT+03:30  
 GMT+04:00  
 GMT+04:30  
 GMT+05:00

Synchronize  
 Date :  
 Time :

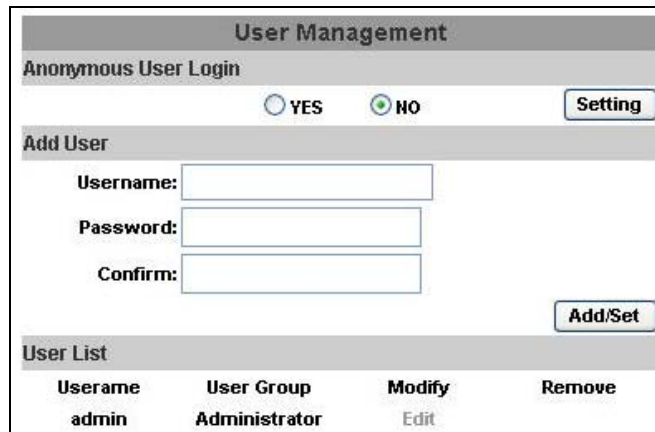
Manual  
 Date :  
 Time :

The date and time are the same

Apply

ii . User Management

IP CAMERA supports three different users, administrator, general user, and anonymous user.



**User Management**

Anonymous User Login

YES  NO Setting

Add User

Username:

Password:

Confirm:

Add/Set

User List

Username	User Group	Modify	Remove
admin	Administrator	Edit	

- Anonymous User Login :  
 Yes : Allow anonymous login  
 No : Need user name & password to access this IP camera
- Add user :  
 Type the user name and password, then click "Add/Set".
- Click "edit" or "delete" to modify the user.



User\_Setting - Microsoft Internet Explorer

**User Setup**

Username: admin

Password:

Confirm:

OK

iii、System update：

System Update	
<b>Firmware Upgrade</b>	
Firmware Version:	V3.2.11
New Firmware:	<input type="text"/> 瀏覽...
<input type="button" value="Upgrade"/>	
<b>Reboot System</b>	
<input type="button" value="Start"/>	
<b>Factory Default</b>	
<input type="button" value="Start"/>	
<b>Setting Management</b>	
Save As a File:	Right click the mouse button on <u>Setting Download</u> and then select Save As... to save current system's setting in the PC.
New Setting File:	<input type="text"/> 瀏覽...
<input type="button" value="Upgrade"/>	

- a. To update the firmware online, click “Browse...” to select the firmware. Then click “Upgrade” to proceed.
- b. Reboot system：re-start the IP camera
- c. Factory default：delete all the settings in this IP camera.
- d. Setting Management：User may download the current setting to PC, or upgrade from previous saved setting.
  1. Setting download:  
Right-click the mouse button on Setting Download → Select “Save AS...” to save current IP CAM setting in PC → Select saving directory → Save
  2. Upgrade from previous setting  
Browse → search previous setting → open → upgrade → Setting update confirm → click index.html. to return to main page

## B.Network

### i. IP Setting

IP Camera supports DHCP and static IP.

IP Setting	
<b>IP Assignment</b>	
<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"/>
<b>Port Assignment</b>	
Web Page Port:	<input type="text" value="80"/>
RTSP Port :	<input type="text" value="554"/>
RTP Start Port:	<input type="text" value="5000"/> [1024..10000]
RTP End port:	<input type="text" value="9000"/> [1025..10000]
<b>UPnP</b>	
UPnP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
<input type="button" value="Apply"/>	

- a. DHCP : Using DHCP, IP Camera will get all the network parameters automatically.
- b. Static IP : Please type in IP address, subnet mask, gateway, and DNS manually.
- c. Port Assignment: user may need to assign different port to avoid conflict when setting up IP assignment.
  1. Web Page Port: setup web page connecting port and video transmitting port (Default: 80)
  2. RTSP Port: setup port for RTSP transmitting (Default: 554)
  3. RTP Start and End Port: in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

d. UPnP

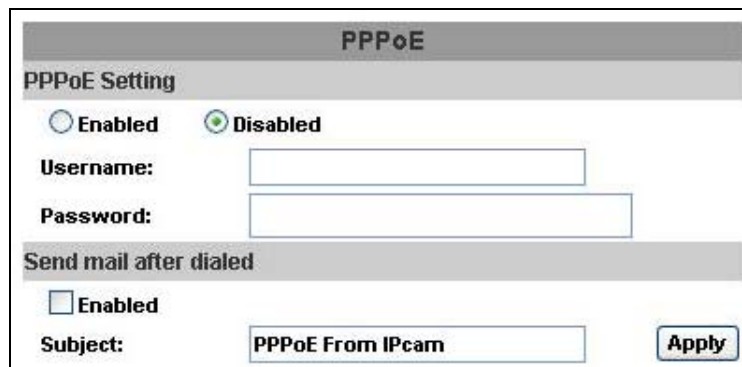
This IP camera supports UPnP, If this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to “My Network Places.”

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

Please follow the procedure to activate UPnP

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. User may double click the IP device icon to access IE browser

ii \ PPPoE :



The screenshot shows a window titled "PPPoE" with a sub-header "PPPoE Setting". It contains two radio buttons: "Enabled" (unselected) and "Disabled" (selected). Below these are two text input fields labeled "Username:" and "Password:". A section titled "Send mail after dialed" contains a checkbox labeled "Enabled" which is unselected. Below this is a "Subject:" label followed by a text input field containing "PPPoE From IPcam" and an "Apply" button.

Select “Enabled” to use PPPoE.

Key-in Username and password for the ADSL connection.

Send mail after dialed : When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to “Mail and FTP” settings.

iii \ DDNS :

It supports DDNS (Dynamic DNS) service.

a. DynDNS :

**DDNS**

**DDNS Setting**

Enabled     Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update:  Minutes

**State**

Idle

**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 DynDNS server name, user name, and password.
3. Set up the IP Schedule update refreshing rate.
4. Click "Apply"
5. If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

b. Camddns service :

**DDNS**

**DDNS Setting**

Enabled     Disabled

**Provider:**  ▼

**Username:**

**Schedule Update:**  Minutes

**State**

Idle

**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. Please enable this service
2. Key-in user name.
3. IP Schedule update is default at 5 minutes
4. Click "Apply".

c. 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 provide : The server, user name, and password may be wrong.

iv · Wireless Setting (Wireless Network Optional)

Supports 802.11 b/g wireless connection.

**Notice :** Wireless network and Ethernet network use the same IP, the user has to unplug Ethernet cable, if Ethernet cable is not unplug, wireless setting can not be executed.

Wireless Setting			
Status of Wireless Networks			
SSID	Mode	Security	Signal strength
allan	Infrastructure	WPA	79
RHOSON	Infrastructure	WEP	16
Link	Infrastructure	OFF	16
SinoStar	Infrastructure	WEP	11
7f-2	Infrastructure	WEP	12
00160159A7FA	Infrastructure	WEP	56
RDTEST	Infrastructure	WEP	48
3Com	Infrastructure	OFF	43
Default	Infrastructure	WPA	74

Wireless Setting	
MAC Address:	00:16:16:16:DD:E1
Mode:	Infrastructure ▾
Operation Mode:	Auto ▾
SSID:	allan
Security:	None ▾
<input type="button" value="Apply"/>	

- a. Status of Wireless Networks ;  
scan all wireless services.
- b. Wireless Setting :
  1. **Mode** : There are Infrastructure and Ad-hoc. Infrastructure is for connecting with the router. Ad-hoc is for connecting with PC. There is “Channel” to select only when user uses Ad-hoc mode.  
e.g. If one PC’s channel is 1, the other’s channel has to 1, too.

Wireless Setting	
MAC Address:	00:11:E2:03:37:48
Mode:	Ad-hoc ▾
Operation Mode:	Auto ▾
SSID:	Default
<b>Channel:</b>	6 ▾
Security:	None ▾

2. **SSID** : Based on AP setting.
3. **Channel** : This is only be used when the user selects Ad-hoc mode in order to avoid conflict.
4. **Security** : It supports “None”, “WEP”, “WPA-PSK” security encryption based on the setting of the Router.
5. **WEP** :

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

- Authentication : There are Open System and Shared Keys, it is based on different encryptions. This has to be the same as the Router’s setting.
  - Encryption : There are 64 bits and 128 bits. This is based on Key Type based on the Router’s setting.
  - Key Type : There are HEX and ASCII. When selecting HEX, the user only can input 0~9 characters and use A, B, C, D, E, and F.
  - When selecting ASCII, the user can input any character.  
(Case sensitive)
  - Key 1~4 : Based on Key Type to input characters.
6. **WPA-PSK** :

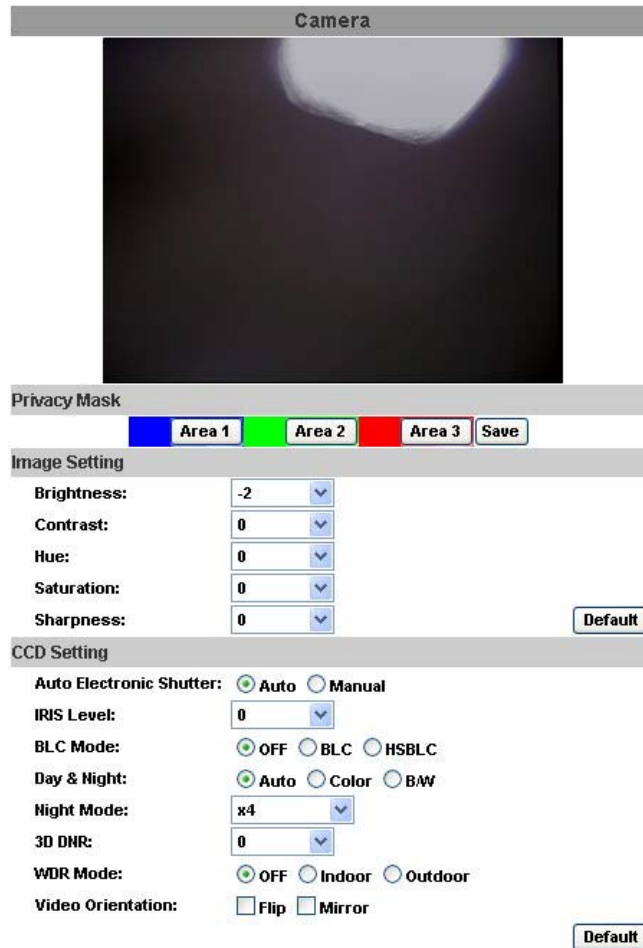
Security:	WPA-PSK
<b>WPA-PSK Setting</b>	
Encryption	TKIP
Pre-Shared Key:	<input type="text"/> (ASCII format, 8-63)

- Encryption : There are TKIP and AES.
- Pre-Shared Key : Allow any characters .(Case sensitive)



## C. A/V Setting

### i. Image Setting



The screenshot displays the camera's configuration interface. At the top, there is a 'Camera' header and a video feed area. Below the video feed is the 'Privacy Mask' section, which includes three colored buttons for 'Area 1' (blue), 'Area 2' (green), and 'Area 3' (red), along with a 'Save' button. The 'Image Setting' section contains five adjustable parameters: Brightness (-2), Contrast (0), Hue (0), Saturation (0), and Sharpness (0), each with a dropdown menu and a 'Default' button. The 'CCD Setting' section includes: Auto Electronic Shutter (Auto selected), IRIS Level (0), BLC Mode (OFF selected), Day & Night (Auto selected), Night Mode (x4), 3D DNR (0), WDR Mode (OFF selected), and Video Orientation (Flip and Mirror checkboxes).

HSBLC : Highlight Suppress BLC

For the security purpose, there are three areas can be setup for privacy mask. Click Area button first and pull a area on the above image. Finally, click **Save** button to reserve the setting.

Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video. Moreover, IP CAMERA supports “Back Light Compensation”, “Night Mode” and “Video Orientation”.

Among CCD Setting, user can adjust “Electronic Shutter”, “IRIS Level” with drop down list and other settings such as BLC Mode, Day & Night, Night Mode, 3D DNR, WDR Mode and Video Orientation.

ii · Video Setting

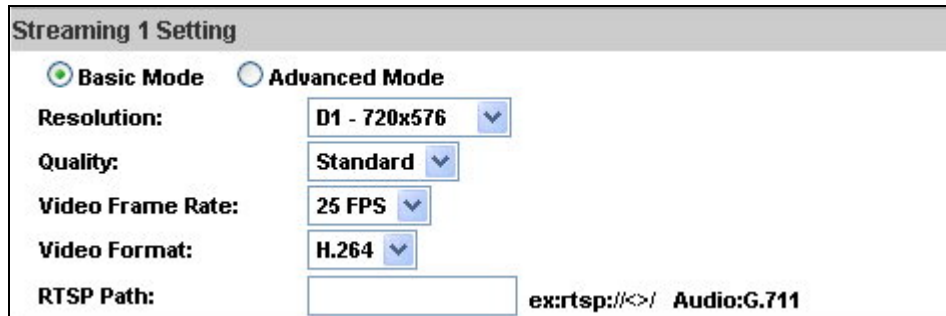
User may select 2 streaming output simultaneously:

Streaming 1 Setting: Basic mode and Advanced mode

Streaming 2 Setting: Basic mode, Advanced mode, and 3GPP mode

**(Max Video Frame Rate for both streaming combined is 30 FPS)**

a. Streaming 1 Basic Mode :



The screenshot shows the 'Streaming 1 Setting' window. It has two radio buttons: 'Basic Mode' (selected) and 'Advanced Mode'. Below are several settings: 'Resolution' is set to 'D1 - 720x576', 'Quality' is 'Standard', 'Video Frame Rate' is '25 FPS', and 'Video Format' is 'H.264'. The 'RTSP Path' field is empty, with a placeholder example 'ex:rtsp://</>' and 'Audio:G.711' shown to the right.

1. Resolution :

There are 4 resolutions can be chosen.

D1 – 720 x 480

4CIF – 704 x 480

CIF – 352 x 240

QCIF – 176 x 144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

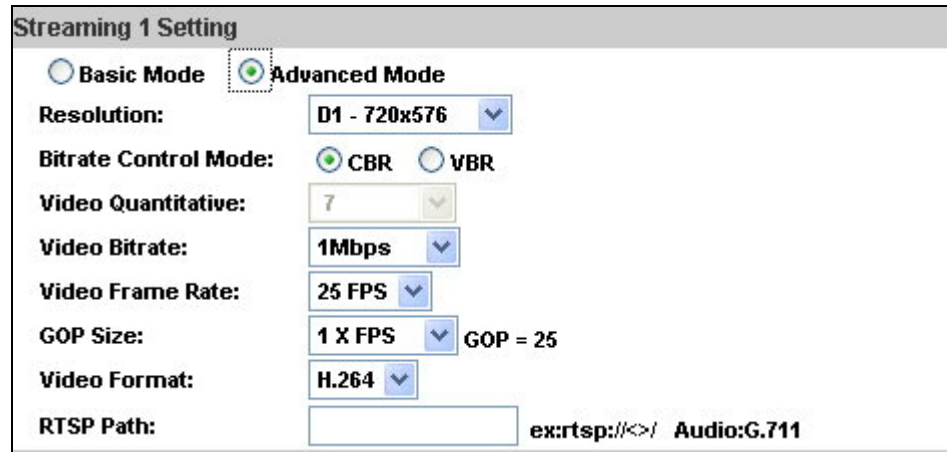
The higher the quality is, the bigger the file size is. Also not good for internet transmitting

3. Video Frame Rate : The video refreshing rate per second.

4. Video Format : H.264 or JPEG

5. RTSP Path: RTSP output name

b. Streaming 1 Advanced Mode :



The screenshot shows the 'Streaming 1 Setting' dialog box. It has two tabs: 'Basic Mode' and 'Advanced Mode'. The 'Advanced Mode' tab is selected. The settings are as follows:

- Resolution: D1 - 720x576
- Bitrate Control Mode: CBR (selected), VBR
- Video Quantitative: 7
- Video Bitrate: 1Mbps
- Video Frame Rate: 25 FPS
- GOP Size: 1 X FPS, with a note 'GOP = 25'
- Video Format: H.264
- RTSP Path: (empty field) ex:rtsp://</> Audio:G.711

1. Resolution :

There are 4 resolutions can be chosen.

- D1 – 720 x 480
- 4CIF – 704 x 480
- CIF – 352 x 240
- QCIF – 176 x 144

2. Bitrate Control Mode

There are CBR [ Constant Bit Rate ] and VBR [ Variable Bit Rate ] to use.

CBR : 32Kbps~4Mbps (the higher the CBR is, the better the video quality is)

VBR : 1(Low)~10(High) – Compression rate, the higher the compression rate, the lower the picture quality is; vise versa. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.

3. Video Frame Rate

The video refreshing rate per second.

NTSC: Max 30 frames/second PAL: Max 25 frames/second

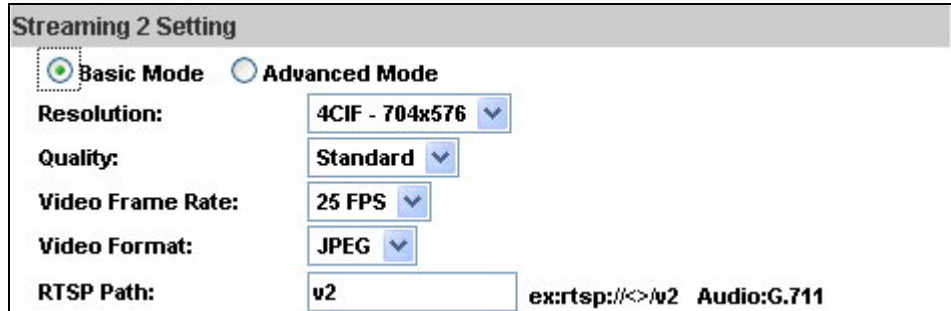
4. GOP Size

It means "Group of Pictures". The higher the GOP is, the better the quality is.

5. Video Format : H.264 or JPEG

6. RTSP Path: RTSP output connecting route

c. Streaming 2 Basic Mode :



The screenshot shows the 'Streaming 2 Setting' window with 'Basic Mode' selected. The settings are as follows:

Setting	Value
Resolution:	4CIF - 704x576
Quality:	Standard
Video Frame Rate:	25 FPS
Video Format:	JPEG
RTSP Path:	v2

Below the RTSP Path field, the text 'ex:rtsp://</>v2 Audio:G.711' is displayed.

1. Resolution :

There are 4 resolutions can be chosen.

D1 – 720 x 480

4CIF – 704 x 480

CIF – 352 x 240

QCIF – 176 x 144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

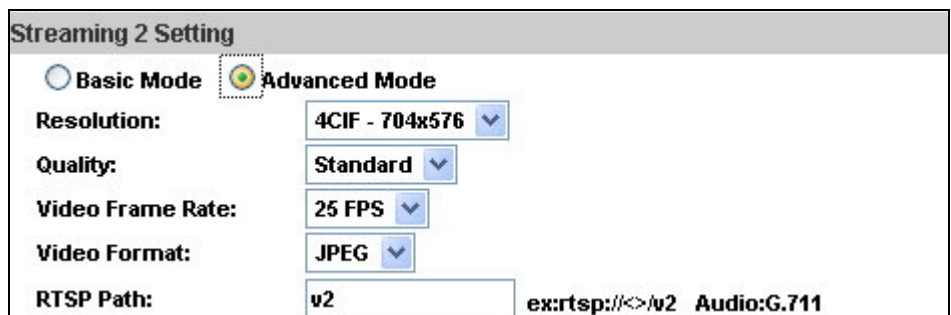
The higher the quality is, the bigger the file size is. Also not good for internet transmitting

3. Video Frame Rate : The video refreshing rate per second.

4. Video Format : H.264 or JPEG

5. RTSP Path: RTSP output connecting route

d. Streaming 2 Advanced Mode :



The screenshot shows the 'Streaming 2 Setting' window with 'Advanced Mode' selected. The settings are identical to the Basic Mode screenshot:

Setting	Value
Resolution:	4CIF - 704x576
Quality:	Standard
Video Frame Rate:	25 FPS
Video Format:	JPEG
RTSP Path:	v2

Below the RTSP Path field, the text 'ex:rtsp://</>v2 Audio:G.711' is displayed.

1. Resolution :

There are 4 resolutions can be chosen.

D1 – 720 x 480

4CIF – 704 x 480

CIF – 352 x 240

QCIF – 176 x 144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

The higher the quality is, the bigger the file size is. Also not good for internet transmitting

3. Video Frame Rate :  
The video refreshing rate per second.
4. Video Format : H.264 or JPEG
5. RTSP Path: RTSP output name

e. 3GPP Streaming mode:

**3GPP Streaming Setting**

Enabled     **Disabled (Resolution=176x144, FPS=5, Format=MPEG4)**

**3GPP Path:**        **ex:rtsp://</>/3g Audio:AMR**  
**ex:rtsp://</>/3gx No Audio**

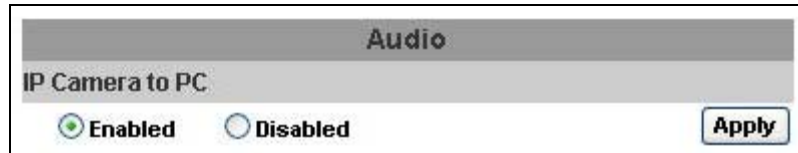
[3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format](#)

1. Enable or Disable 3GPP Streaming
2. 3GPP: 3GPP output name

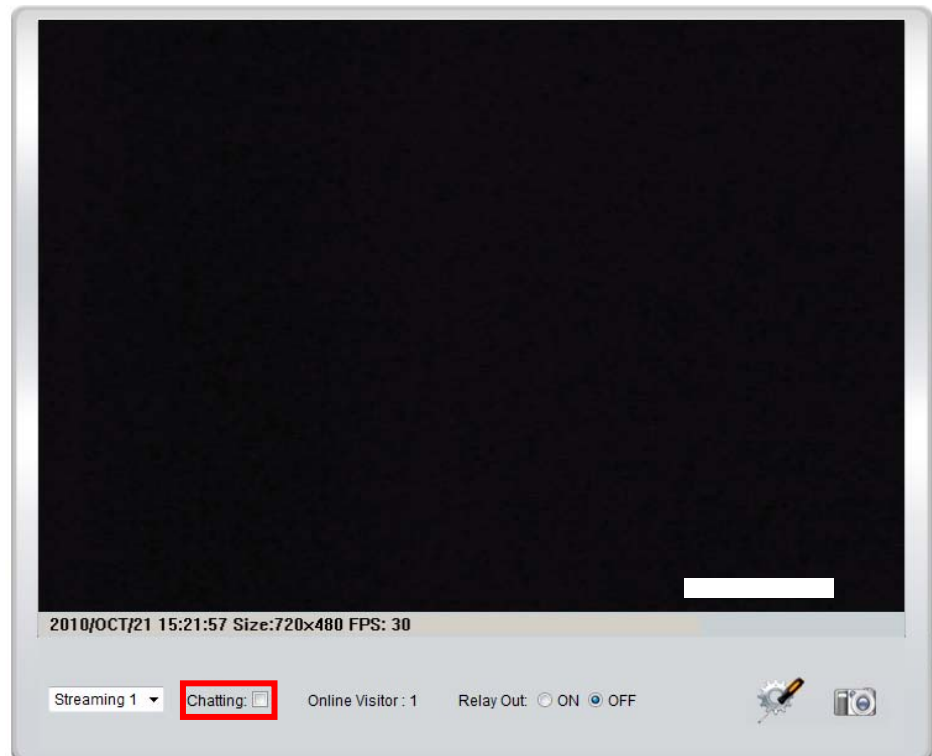
iii 、 Audio :

IP CAMERA supports 2-way audio. User can send audio from IP Camera Built-in mic to remote PC; User can also send audio from remote PC to IP Camera's external speaker.

- a. Audio from IP camera built-in mic to local PC: select "Enable" to start this function.



- b. Audio from local PC to IP Camera: Check "chatting" in the browsing page.

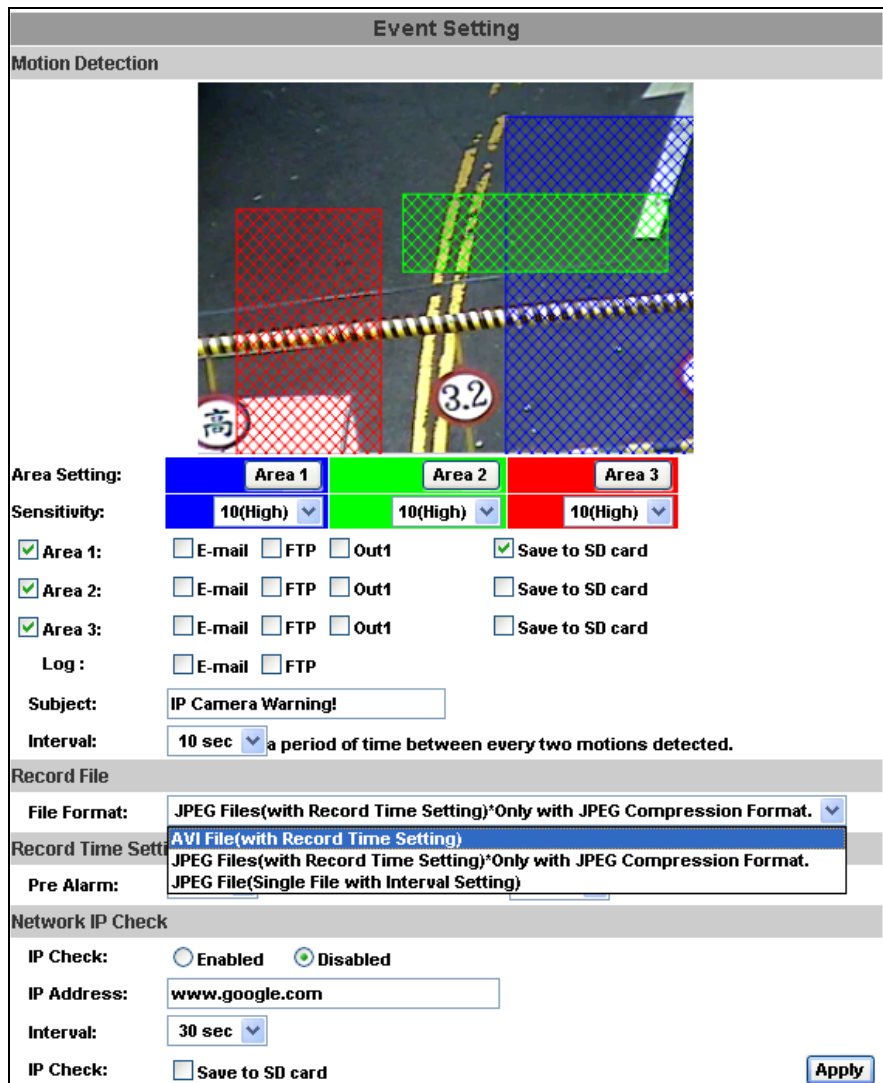


The Audio will not be smooth when enable SD card recording function simultaneously.

## D.Event List

IP CAMERA provides multiple event settings.

i. Event Setting



a. Motion Detection :

IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card. To set up the motion area, click “Area Setting”. Using mouse to drag and draw the area. The same operation for area 2 and 3.

b. Record File Setting: IP CAMERA allows 3 different types of recording file to change its record size.

When motion/alarm is triggered, there are 3 different types of record mode.

1. AVI File (With Record File Setting )
  2. Multi-JPEG (With Record File Setting), only with JPEG compression format.
  3. Single JPEG (Single File with Interval Setting)
- c. Record Time Setting :
- Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered.
- Note: Pre/Post Alarm record time is base on record time setting and IP Cam built-in Ram memory. Limited by IP Cam built-in Ram Memory, When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.
- d. Network Dis-connected :
- When the network is down, it will save the video to local SD card.  
**This function is only enabled in wire connection.**
- e. Network IP check
- When the connection is down, it records the video to SD card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of "Save to SD card", then click "Apply".  
**The interval of two video files on SD card is fixed with 30 seconds.**
- ii \ Schedule
- a. Schedule: After complete the schedule setup, the camera data will be recorded according to the schedule setup.
  - b. Snapshot: After enable the snapshot function, user can select the storage position of snapshot file, the interval time of snapshot and the reserved file name of snapshot.



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.

Snapshot	
<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Snapshot:	<input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Save to SD card
Interval:	<input type="text" value="10"/> Second(s) [1..50000]
File Name:	<input type="text" value="Snapshot"/>

iii 、 I/O Setting

IP CAMERA supports 1 input/ 1 output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.

I/O Setting	
<b>Input Setting</b>	
Input 1 Sensor:	<input type="text" value="N.O"/>
Input 1 Action:	<input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input checked="" type="checkbox"/> Out1 <input type="checkbox"/> Save to SD card
Subject:	<input type="text" value="GPIO In Detected!"/>
Interval:	<input type="text" value="10 sec"/>
<input type="checkbox"/> Based on the schedule	
<b>Output Setting</b>	
Mode Setting:	<input checked="" type="radio"/> OnOff Switch <input type="radio"/> Time Switch
Interval:	<input type="text" value="10 sec"/>

**CATUTION!!**

Please connect to propriety relay box to reduce the risk of electric shock & damaged.

**Alarm Input Setting**

By GPIO I/O port input that provide related action while I/O input triggered.

**GPIO Output Setting**

By GPIO I/O port output that provide OnOff Switch, Slide Switch & Pan/Tilt

Module for using with relay box.

**GPIO pin define please refer to the part of Front / Back plane & I/O port pin assignment**

<b>GPIO 0</b>	ALARM INPUT
<b>GPIO 1</b>	Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
<b>GPIO 2</b>	ALARM OUTPUT
<b>GPIO 3</b>	Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)

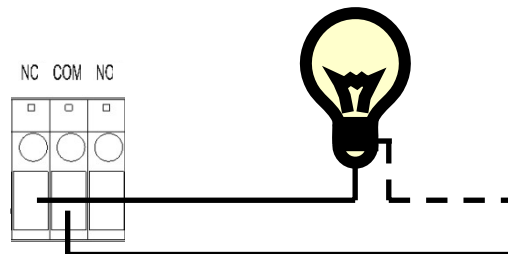
### GPIO INSTALLATION EXAMPLE 1

Trigger a normal off (Normal Open) alarm siren on when event/motion occur at COM:



### GPIO INSTALLATION EXAMPLE 2

Trigger the normal on (Normal Close) indoor illumination off when event / motion occur at COM:



iv、Mail & FTP

To send out the video via mail or ftp, please set up the configuration first.

Mail & FTP	
<b>Mail Setting</b>	
Mail Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Sender's Mail:	<input type="text"/>
Receiver's Mail:	<input type="text"/>
Bcc Mail:	<input type="text"/>
<b>FTP Setting</b>	
FTP Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Port:	<input type="text" value="21"/>
Path:	<input type="text" value="/"/>
<input type="button" value="Apply"/>	

v、Log List

Log List	
System Logs	<a href="#">Logs</a>
Motion Detection Logs	<a href="#">Logs</a>
I/O Logs	<a href="#">Logs</a>
All Logs	<a href="#">Logs</a>

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

vi、SD card



Please Insert SD card before use it. Make sure pushing SD card into the slot completely.

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

Playback :



1. It will show the capacity of the SD card. Click the date listed on this page. It will show the list of the video.

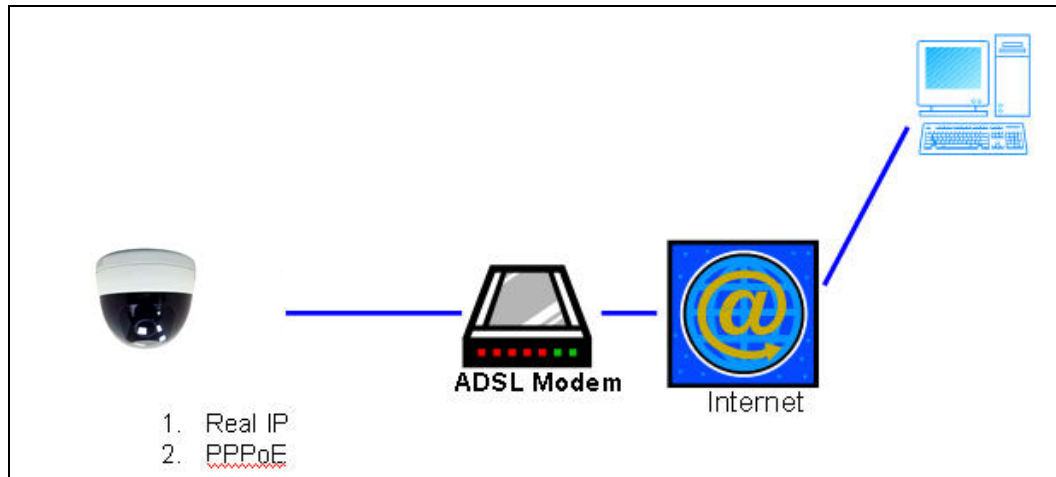
2006/04/17			Del
Time	Video	Event Type	<input type="checkbox"/>
09:05:22	090522f.avi	Network Dis-connected	<input type="checkbox"/>
09:05:52	090552f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:22	090622f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:52	090652f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:22	090722f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:52	090752f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:22	090822f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:51	090851f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:21	090921f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:51	090951f.avi	Network Dis-connected	<input type="checkbox"/>

1 2 3 4 5

2. The video format is AVI. Click the video to start Microsoft Media Player to play it.
3. To delete the video, check it, then click **Del**. When the SD card is full, it will remove the oldest video automatically.

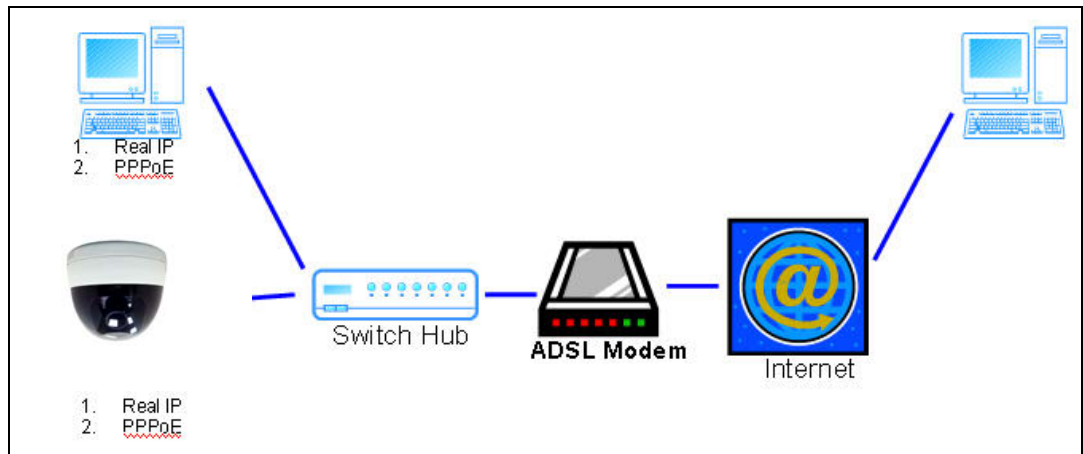
## VI. Network Configuration

i \ Configuration 1 :



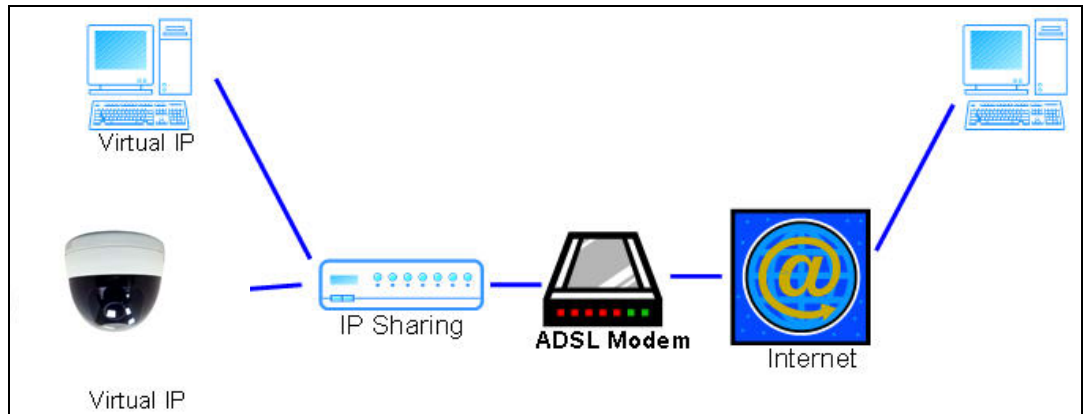
- a. Internet Access : ADSL or Cable Modem
- b. IP address : One real IP or one dynamic IP
- c. Only IP CAMERA connects to the internet
- d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

ii \ 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.

iii 、 Configuration 3 :



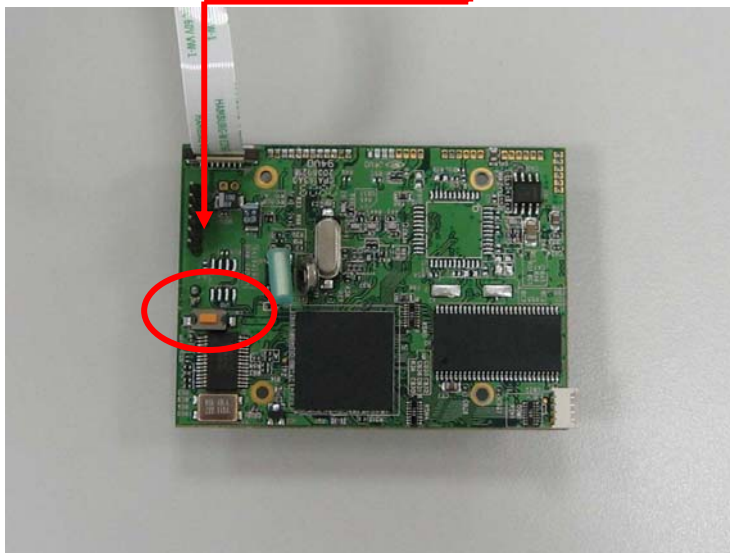
- a. Internet Access : ADSL or Cable Modem
- b. IP address : one real IP or one dynamic IP
- c. IP CAMERA and PC connect to the internet
- d. Device needed : IP sharing
- e. Use virtual IP, set up port forwarding in IP sharing.

## VII. Factory Default

- i \ To recover the default IP address and password, please follow the following steps.
- ii \ Remove power, and press and hold the button in the back of IP CAMERA.



**Factory Default**



- iii \ Power on the camera. Don't release the button during the system booting.
- iv \ It will take around 30 seconds to boot the camera.
- v \ Release the button when camera finishes proceed.
- vi \ Re-login the camera using the default IP (<http://192.168.1.200>), and user name (admin), password (admin).

## VIII. Package contents

- i、 IP CAMERA Network Camera
- ii、 Adaptor
- iii、 Ethernet Cable
- iv、 CD title (User manual, IP installation Utility)

## Appendix I

SD Card Recommended :

SanDisk 128M  
SanDisk 256M  
SanDisk 512M  
SanDisk 1G  
SanDisk 2G  
SanDisk 4G

SanDisk 8GB  
SanDisk 16GB  
SanDisk 32GB  
Transcend 4GB  
Transcend 8GB  
Transcend 16GB  
Transcend 32GB