

# User Manual

## Mega-Pixel IP CAMERA

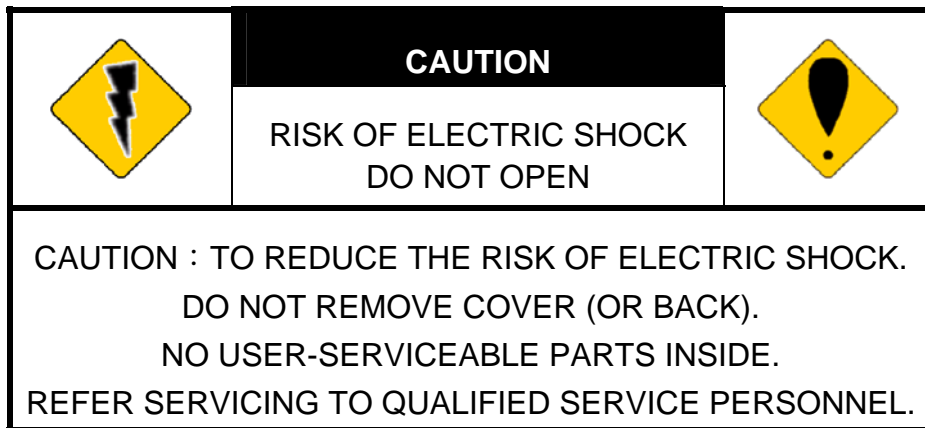


**WARNINGS**

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

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

**CAUTION**



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# Content

<b>I. PREFACE.....</b>	<b>4</b>
<b>II. PRODUCT SPECIFICATIONS .....</b>	<b>4</b>
<b>III. PRODUCT INSTALLATION.....</b>	<b>6</b>
A. MONITOR SETTING.....	6
B. HARDWARE INSTALLATION .....	7
C. IP ASSIGNMENT .....	7
D. INSTALL ACTIVE X CONTROL:.....	9
<b>IV. LIVE VIDEO .....</b>	<b>12</b>
<b>V. IP CAMERA CONFIGURATION .....</b>	<b>14</b>
A. SYSTEM .....	15
B. NETWORK .....	18
C. A/V SETTING .....	24
D. EVENT LIST.....	31
<b>VI. NETWORK CONFIGURATION.....</b>	<b>33</b>
<b>VII. FACTORY DEFAULT.....</b>	<b>35</b>
<b>VIII. PACKAGE CONTENTS.....</b>	<b>35</b>

# I. Preface

This IP camera is a high resolution Mega-Pixel IP Camera. It has the web server built in. User can view real-time video via IE browser. It supports MPEG-4 & MJPEG video compression which provides smooth and high video quality. With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

# II. Product Specifications

- Small Compact Size
- MegaPixel (SXGA Resolution)
- MPEG-4/ MJPEG Compression Format
- 2-way audio
- Supports Cell phone/PDA/3GPP
- Dual Streaming
- SDK for Software Integration
- Wireless (Optional)
- Free Bundle 36 Channel Recording Software

### Specifications

Hardware	
CPU	ARM 9, 32 bit RISC
RAM	32MB
ROM	8MB
Image sensor	1/4" CMOS
Sensitivity	1.5 lux @ F2.0
Lens Type	4.0mm, F2.0
Audio Out	1 (3.5mm Phone Jack)
Power Consumption	LAN: DC 12V, 0.2A
	WLAN : DC 12V, 0.25A
Operating Temperature	-10°C ~45°C

Dimensions (WxHxD)	59 (mm) x 93.7 (mm) x 45.5 (mm)	
Weight	180g	
<b>Network</b>		
Ethernet	10/ 100 Base-T	
Wireless (Optional)	802.11b/g	
WEP	64/ 128 bit	
Network Protocol	HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, 3GPP, UPnP	
<b>System</b>		
Video Resolution	1280x1024, 640x480, 320x240, 160x120	
Video adjust	Brightness, Contrast, exposure, sharpness	
Dual Streaming	Yes	
Image snapshot	Yes	
Full screen monitoring	Yes	
Compression format	MPEG-4/ MJPEG	
Video bitrate adjust	CBR, VBR	
Motion Detection	Yes, 3 different areas	
Triggered action	Mail, FTP	
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 (Duplex Support)	
<b>Web browsing requirement</b>		
OS	Windows 2000, XP, 2003, IE 6 or above	
Hardware	Suggested	Intel-C 2.0G, RAM : 512MB, Graphic card : 64MB
	Minimum	Intel-C 1.6G, RAM : 256MB, Graphic card : 32MB

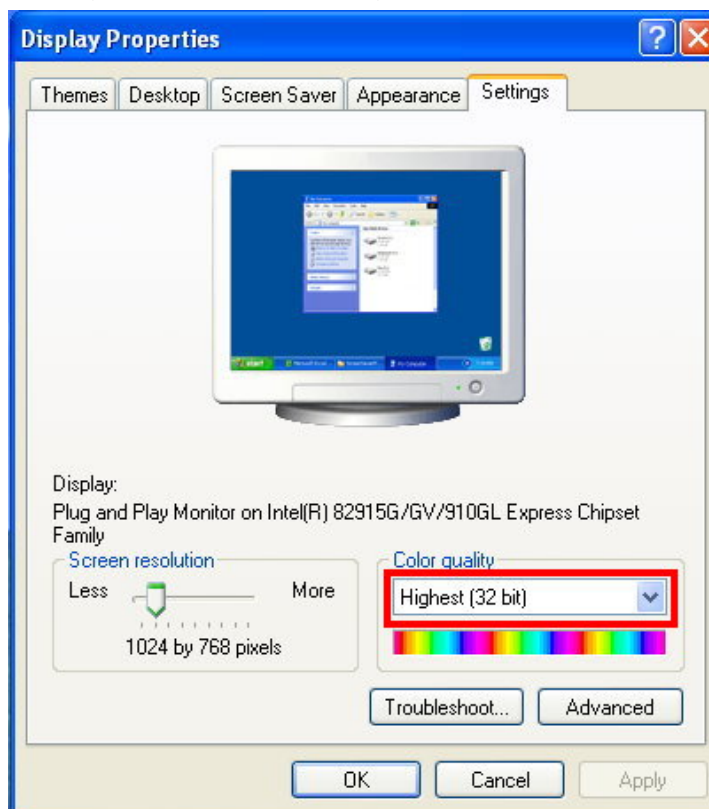
## III. Product Installation

### A. Monitor Setting

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



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



## B. Hardware Installation

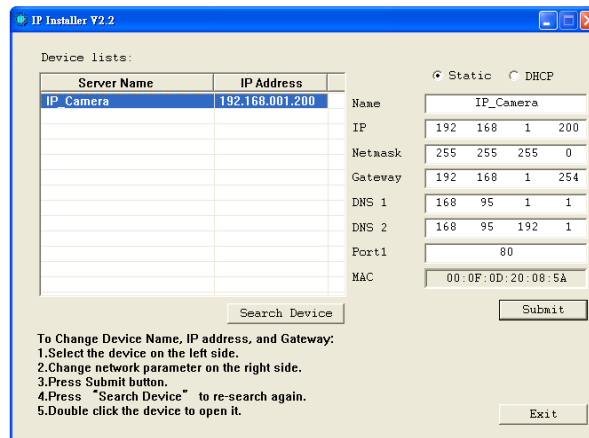
- i. Connect power adaptor
- ii. Connect Ethernet cable
- iii. Connect IP Camera to PC or Network
- iv. Set up the network configurations according to the network environment.  
For further explanation, please refer to chapter VI, “Network Configuration for IP CAMERA”.

## C. IP Assignment

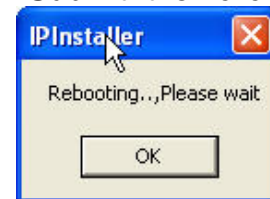
- i. Use the software, “IP Installer” to assign the IP address of IP CAMERA. The software is in the attached software CD.
- ii. IP Installer supports two languages:
  - a. IPInstallerCht.exe : Chinese version
  - b. IPInstallerEng.exe : English version
- iii. There are 3 kinds of IP configuration.
  - 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, the following message may show. 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



- ix. will apply the change and reboot the Device. 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

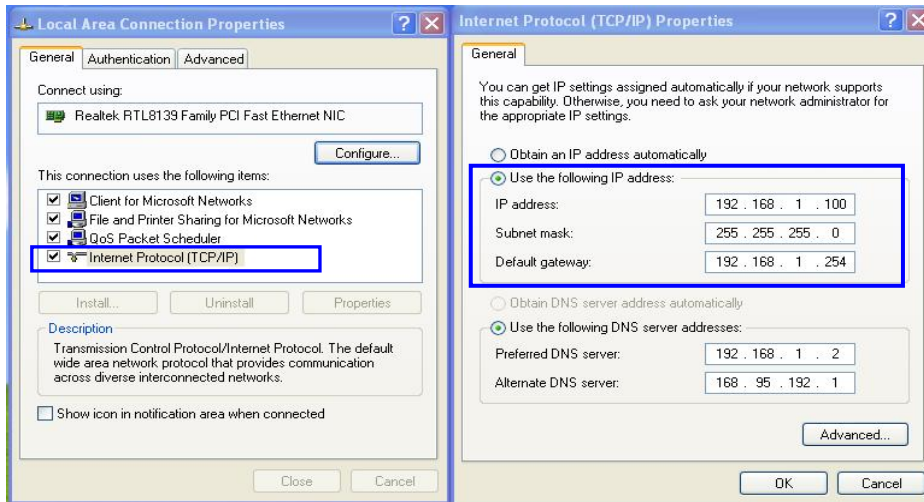
PC IP address: 192.168.1.100

**To Change PC IP address:**

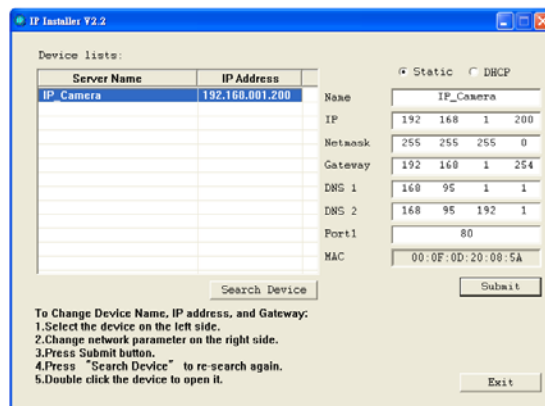
Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties

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

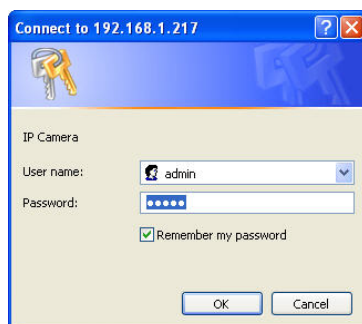




- x. A quick way to access remote monitoring is to left-click the mouse twice on a selected IP Camera listed on “Device list” of IP Installer. An IE browser will be opened.



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



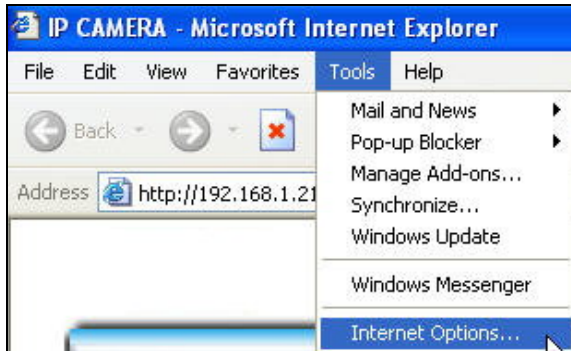
## D. Install ActiveX control:

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

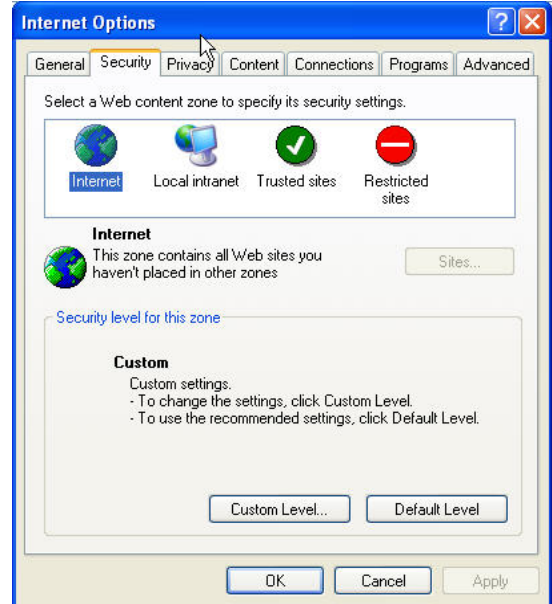
If the installation failed, please check the security setting for the IE browser.

- 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.

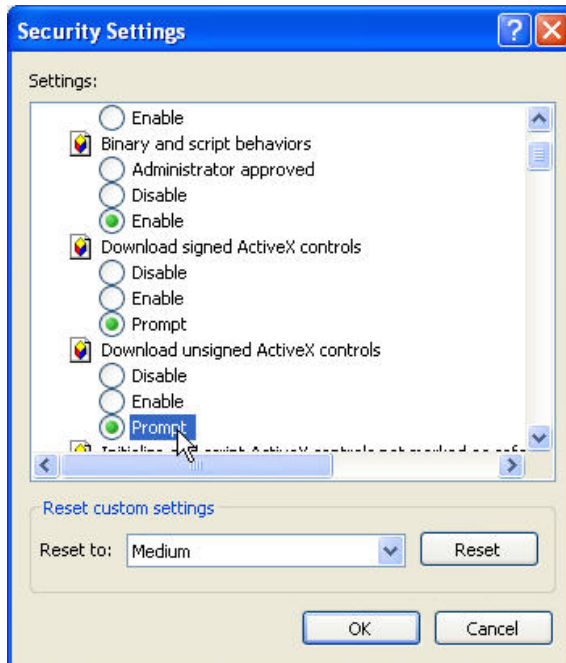
1



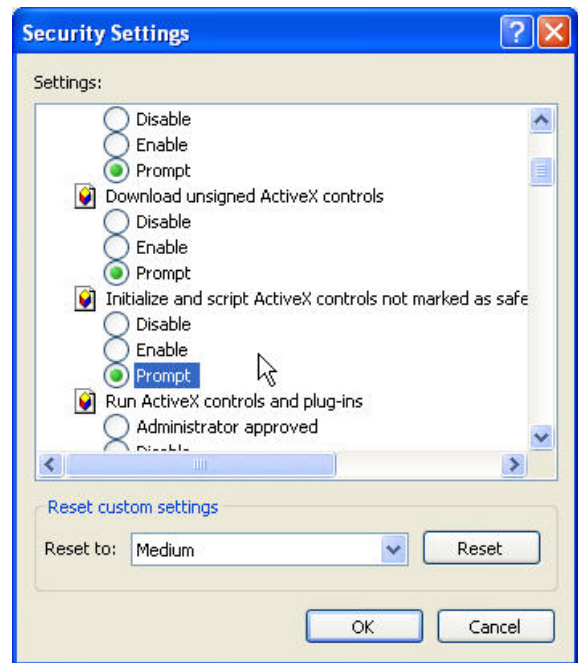
2



3

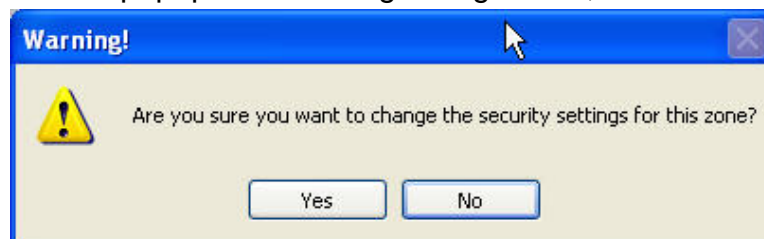


4



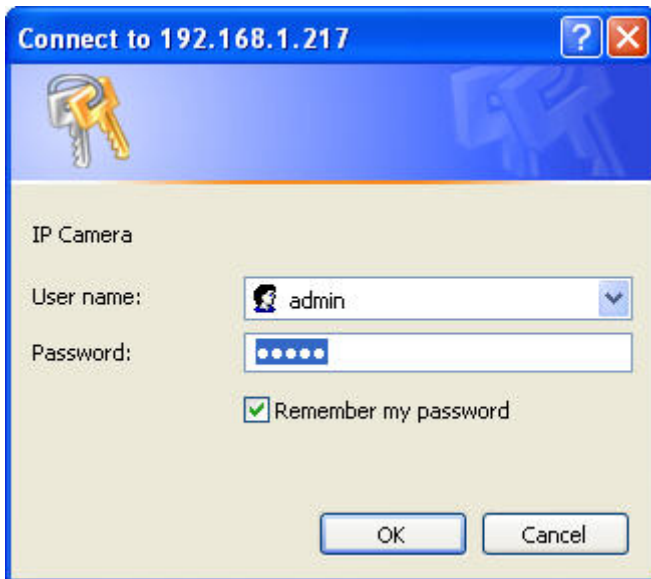
5

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

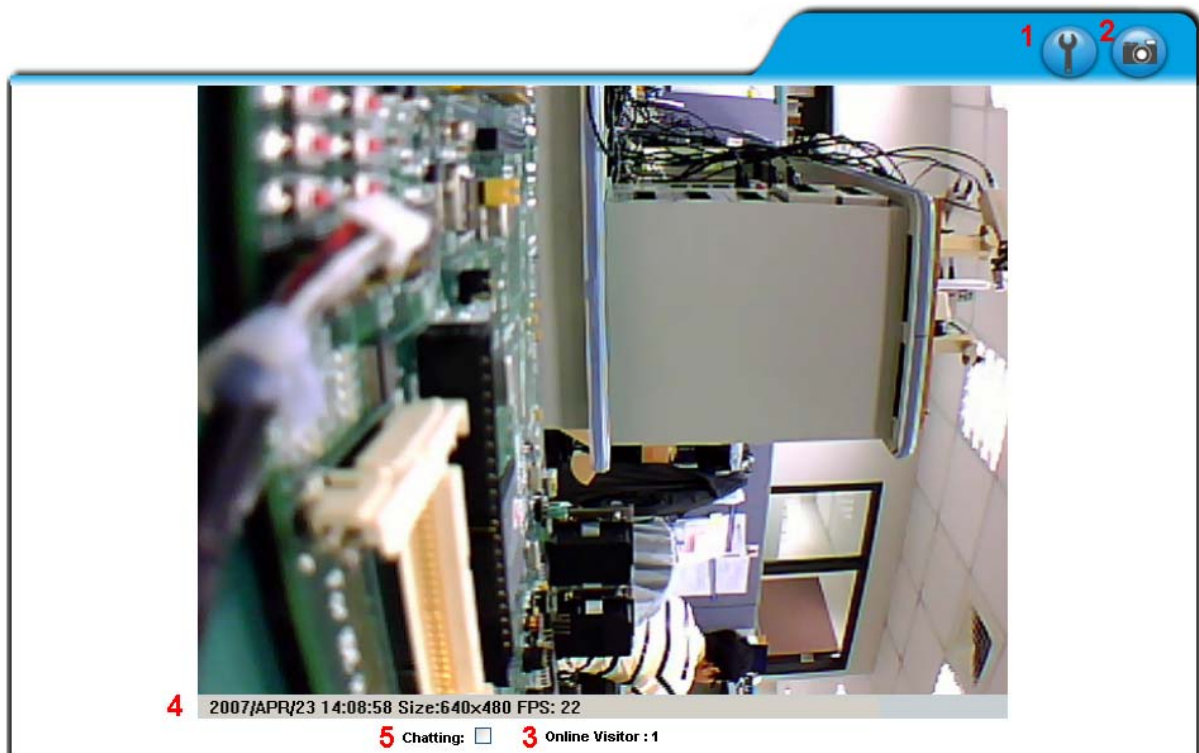



## IV. Live Video

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



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



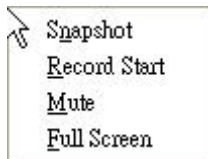
1.  : Get into the administration page

2.  : Video Snapshot

3. Shows how many people connect to this IP camera
4. Show system time, video resolution, and video refreshing rate
5. IP CAMERA supports 2-way audio. Click the “Chatting” check box. Then you can use microphone which connect to the PC to talk to server side, which is IP CAMERA side.

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.



1. Snapshot : Save a JPEG picture
2. 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.
3. Mute : Turn of the audio. Click again to turn on it.
4. Full Screen : Full-screen mode.

## V. IP CAMERA Configuration

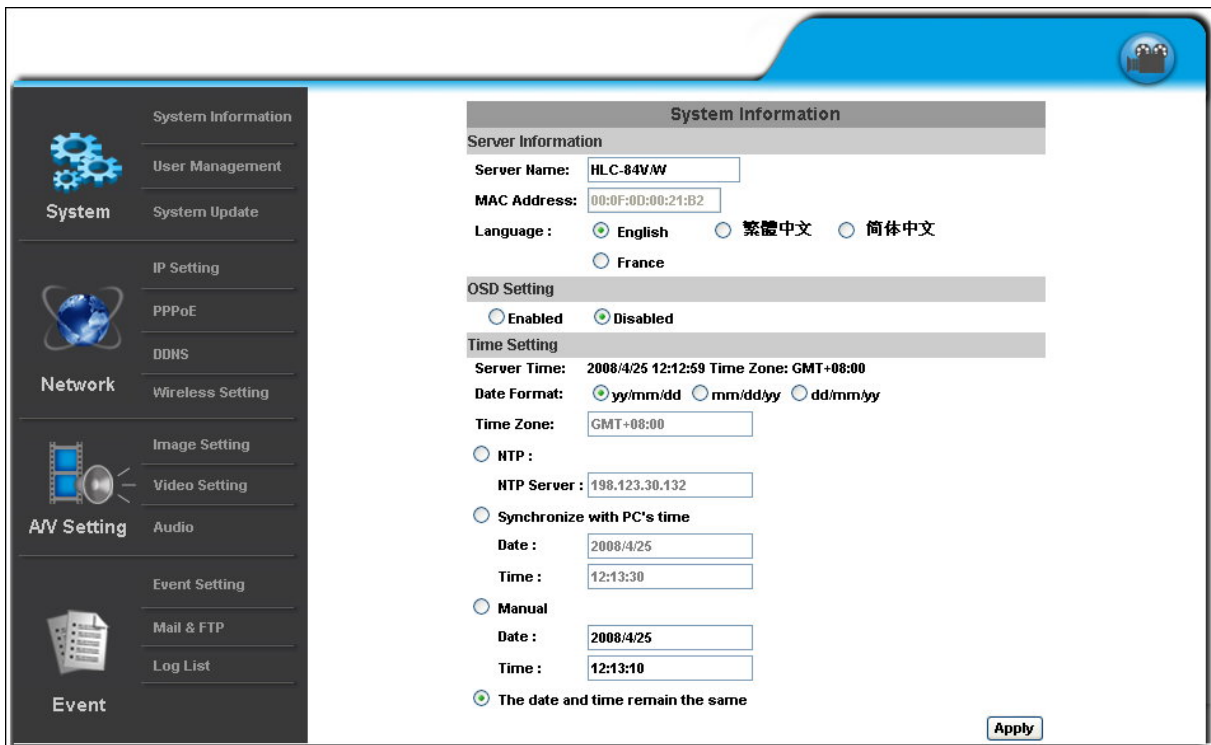


Click



to get into the administration page. Click

to back to the live video page.



The screenshot displays the configuration web 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, PPPoE, DDNS, Wireless Setting), A/V Setting (containing Image Setting, Video Setting, Audio), and Event (containing Event Setting, Mail & FTP, Log List). The main content area is titled 'System Information' and includes the following settings:

- Server Information**
  - Server Name: HLC-84V/W
  - MAC Address: 00:0F:0D:00:21:B2
  - Language:  English,  繁體中文,  简体中文,  France
- OSD Setting**
  - Enabled,  Disabled
- Time Setting**
  - Server Time: 2008/4/25 12:12:59 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
  - Synchronize with PC's time
    - Date : 2008/4/25
    - Time : 12:13:30
  - Manual
    - Date : 2008/4/25
    - Time : 12:13:10
  - 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 :

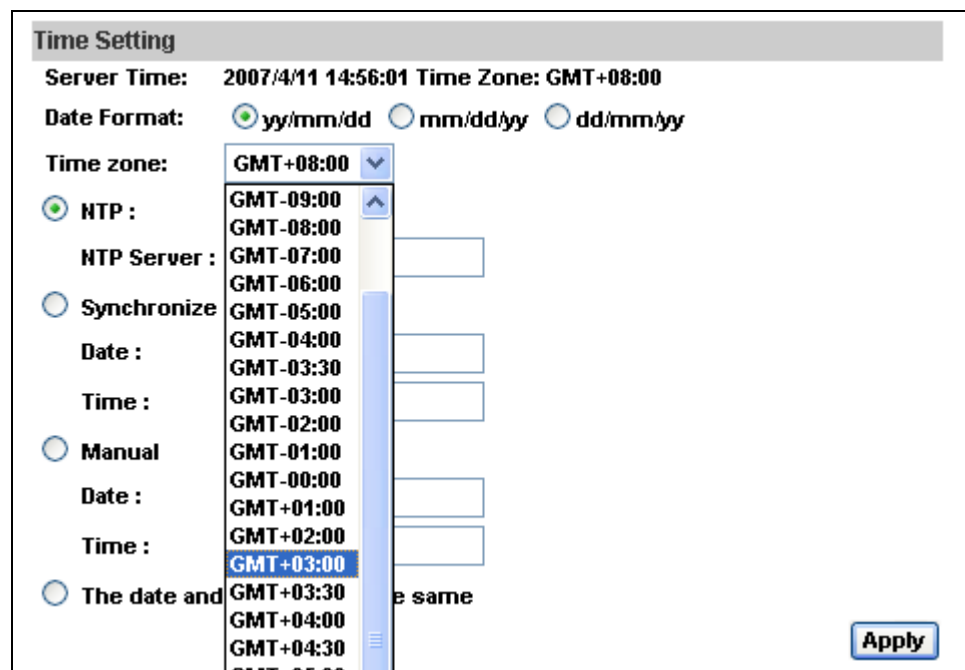
a. Server Information : Set up the camera name, select language, and set up the camera time.

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.

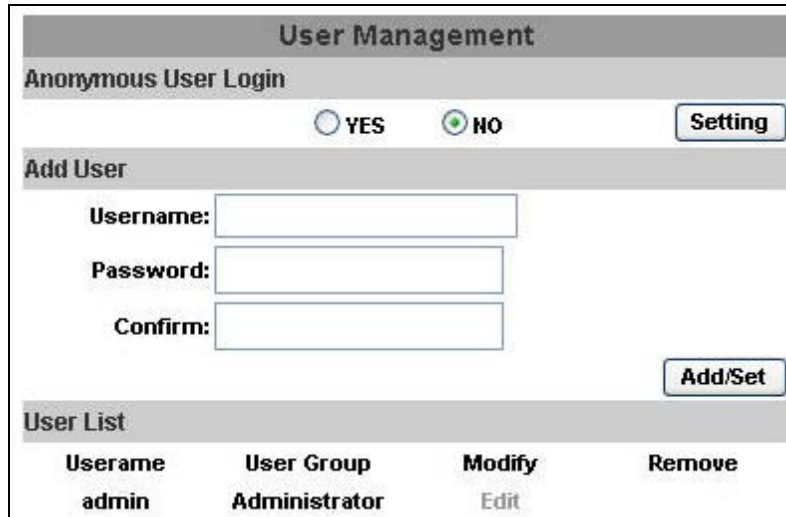


b. Server time setting : Select options to set up time - "NTP", "Synchronize with PC's time", "Manual", and "The date and time remain the same".



ii · User Management

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



The screenshot shows the 'User Management' web interface. It has a title bar 'User Management' and a sub-section 'Anonymous User Login' with radio buttons for 'YES' and 'NO' (selected), and a 'Setting' button. Below is the 'Add User' section with input fields for 'Username:', 'Password:', and 'Confirm:', and an 'Add/Set' button. At the bottom is the 'User List' table:

Username	User Group	Modify	Remove
admin	Administrator	Edit	

- a. Anonymous User Login :  
Yes : Allow anonymous login  
No : Need user name & password to access this IP camera
- b. Add user :  
Type the user name and password, then click "Add/Set".  
**Note:** Allow guest to login as a Guest. Guest is only allowed to browse the page.
- c. Click "edit" or "delete" to modify the user.



The screenshot shows a 'User Setup' dialog box in a Microsoft Internet Explorer window. It has input fields for 'Username:' (containing 'admin'), 'Password:', and 'Confirm:', and an 'OK' button.



iii 、 System update :

System Update	
<b>Firmware Upgrade</b>	
Firmware Version:	V3.2.20
New Firmware:	<input type="text"/> 浏览... <span style="float: right;">Upgrade</span>
<b>Reboot System</b>	
	<span>Start</span>
<b>Factory Default</b>	
	<span>Start</span>
<b>Setting Management</b>	
Save As a File:	Right click the mouse button on <b>Setting Download</b> and then select <b>Save As</b> to save current system's setting in the PC.
New Setting File:	<input type="text"/> 浏览... <span style="float: right;">Upgrade</span>

- 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 settings and restore defaults system.
- 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

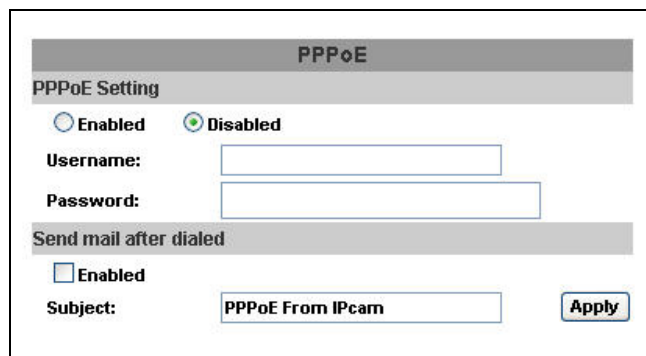
This IP camera supports UPnP, If this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to “My Network Places.”

**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 "PPPoE Setting" section. It contains two radio buttons: "Enabled" (unselected) and "Disabled" (selected). Below these are two text input fields labeled "Username:" and "Password:". A second section titled "Send mail after dialed" contains a checkbox for "Enabled" (unselected) and a "Subject:" field with the text "PPPoE From IPcam". An "Apply" button is located at the bottom right of the window.

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 :

IP camera 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:**

- 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.
- 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 be 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 used only 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 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"/>

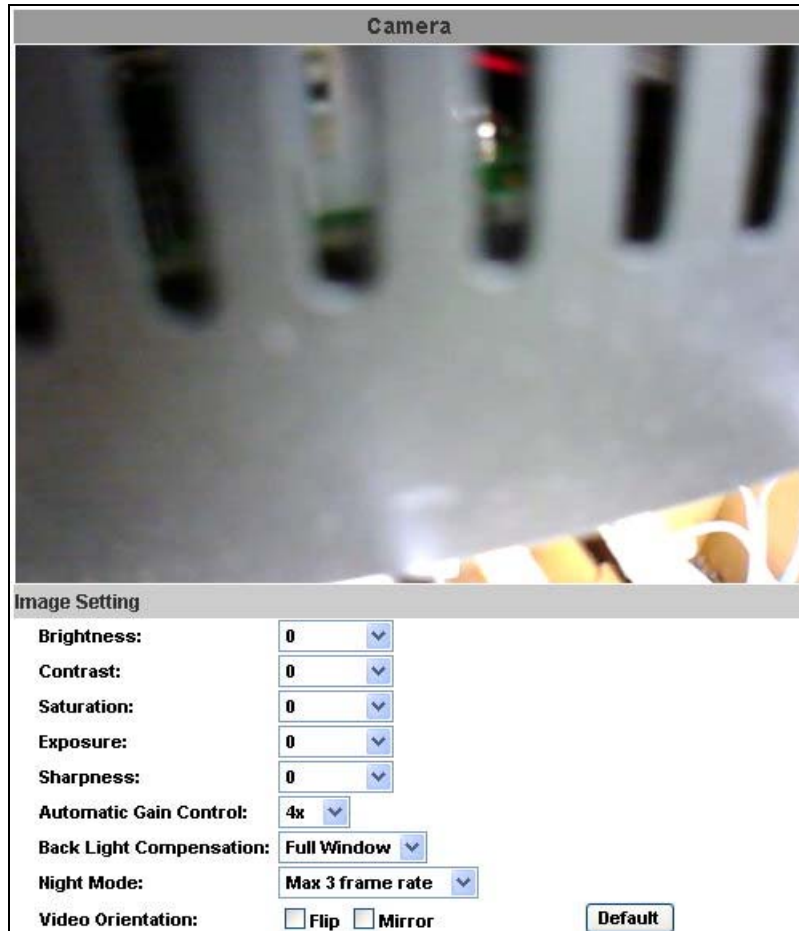
- Authentication : There are Open System and Shared Keys, it is based on different encryptions. This has to be the same as the Router’s setting.
  - Encryption : There are 64 bits and 128 bits. This is based on Key Type based on the Router’s setting.
  - Key Type : There are HEX and ASCII. When selecting 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



Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video. Automatic gain control, night mode, and video orientation are adjustable.

#### **Night mode:**

This function can be set at different Frame rate to increase night illumination. Lower the Frame rate set, slower the frame refresh rate, but better the night illumination.

Night mode will be activated automatically depending on lux illumination, if set at 15 frame rate, when night mode activated at night, the frame rate will not be more than 15FPS

### ii. Video Setting

User may select 2 streaming output simultaneously:

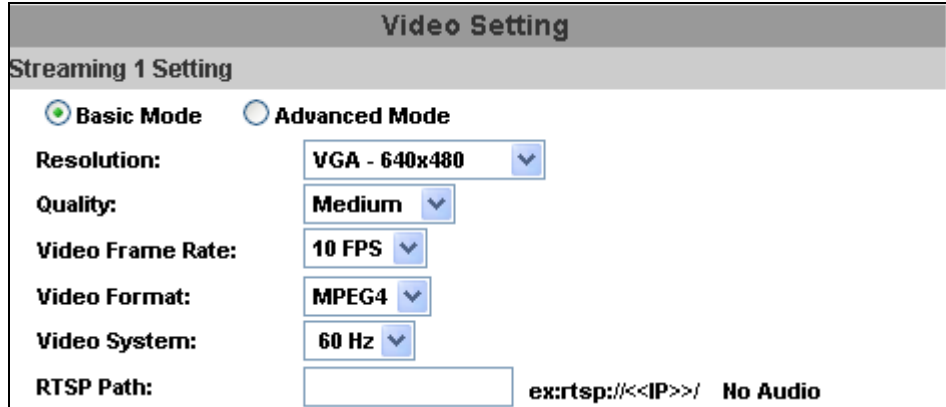
Streaming 1 Setting: Basic mode and Advanced mode

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 :



**Video Setting**

**Streaming 1 Setting**

Basic Mode  Advanced Mode

**Resolution:** VGA - 640x480

**Quality:** Medium

**Video Frame Rate:** 10 FPS

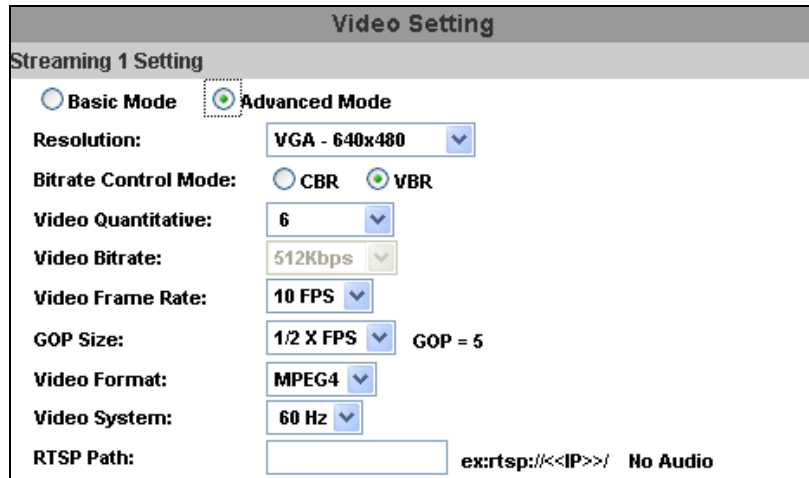
**Video Format:** MPEG4

**Video System:** 60 Hz

**RTSP Path:**  ex:rtsp://<<IP>>/ No Audio

1. Resolution :  
There are 4 resolutions to choose.  
SXGA – 1280x1024      VGA – 640x480  
QVGA – 320x240      QQVGA – 160x120
2. Quality :  
There are 5 levels to adjust. The higher the quality is, the bigger the file size is.
3. Video Frame Rate:  
The video refreshing rate per second  
[Max 30 FPS \(10FPS at resolution 1280x1024\)](#)
4. Video Format :  
There are 2 Video Formats to choose  
MPEG4 or MJPEG.
5. Video System :  
Please select 60 (Hz) if you are in America, Taiwan...  
Please select 50 (Hz) if you are in Europe, China...
6. RTSP Path: RTSP output name

b. Streaming 1 Advanced Mode :



The screenshot shows the 'Video Setting' window for 'Streaming 1 Setting'. The 'Advanced Mode' radio button is selected. The settings are as follows:

- Resolution: VGA - 640x480
- Bitrate Control Mode: VBR
- Video Quantitative: 6
- Video Bitrate: 512Kbps
- Video Frame Rate: 10 FPS
- GOP Size: 1/2 X FPS (GOP = 5)
- Video Format: MPEG4
- Video System: 60 Hz
- RTSP Path: [Empty field] ex:rtsp://<<IP>>/ No Audio

1. Resolution :

There are 4 resolutions to choose.

SXGA – 1280x1024      VGA – 640x480  
 QVGA – 320x240      QQVGA – 160x120

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 , vice versa)

VBR : 1~10 (Compression Rate)

3. Video Frame Rate

The video refreshing rate per second.

[Max 30 FPS \(10FPS at resolution 1280x1024\)](#)

4. GOP Size

It means "Group of Pictures". (The higher the GOP is, the better the quality is, vice versa)

5. Video Format : MPEG4 or MJPEG

6. Video System :

Please select 60 (Hz) if you are in America, Taiwan...

Please select 50 (Hz) if you are in Europe, China...

7. RTSP Path: RTSP output name

c. Streaming 2 Basic Mode :

(Dual Streaming is supported only when resolution is set at VGA or below)

Streaming 2 Setting			
<input checked="" type="radio"/> Basic Mode	<input type="radio"/> Advanced Mode	<input type="radio"/> 3GPP Mode	<input type="radio"/> Close
Resolution:	QQVGA - 160x120 ▾		
Quality:	Low ▾		
Video Frame Rate:	20 FPS ▾		
Video Format:	MPEG4 ▾		
RTSP Path:	v2      ex:rtsp://<<IP>>/v2    No Audio		

1. Resolution :

There are 3 resolutions to choose.

VGA – 640x480

QVGA – 320x240

QQVGA – 160x120

2. Quality :

There are 5 levels to adjust. The higher the quality is, the bigger the file size is.

3. Video Frame Rate:

The video refreshing rate per second

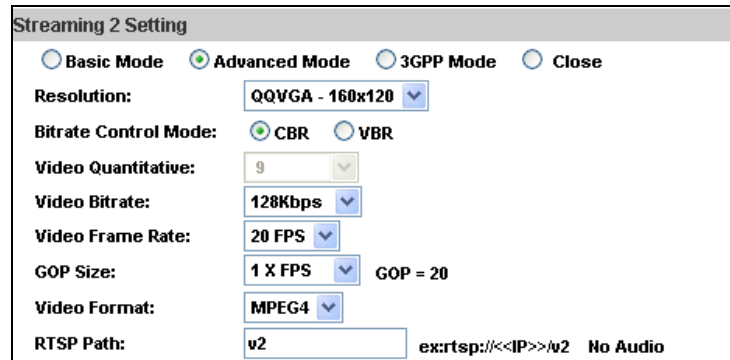
4. Video Format :

There are 2 Video Formats to choose

MPEG4 or MJPEG.

5. RTSP Path: RTSP output name

d. Streaming 2 Advanced Mode :



The screenshot shows the 'Streaming 2 Setting' dialog box with the following configuration:

- Mode:  Basic Mode,  Advanced Mode,  3GPP Mode,  Close
- Resolution: QQVGA - 160x120
- Bitrate Control Mode:  CBR,  VBR
- Video Quantitative: 9
- Video Bitrate: 128Kbps
- Video Frame Rate: 20 FPS
- GOP Size: 1 X FPS, GOP = 20
- Video Format: MPEG4
- RTSP Path: v2, ex:rtsp://<<IP>>/v2 No Audio

1. Resolution :

There are 3 resolutions to choose.

VGA – 640x480

QVGA – 320x240

QQVGA – 160x120

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 : 1~10 (Compression Rate)

3. Video Frame Rate

The video refreshing rate per second.

4. GOP Size

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

5. Video Format : MPEG4 or MJPEG

6. RTSP Path: RTSP output name

e. Streaming 2, 3GPP mode:

**Streaming 2 Setting**

Basic Mode    Advanced Mode    3GPP Mode    Close

**Resolution:**  

**Bitrate Control Mode:**    CBR    VBR

**Video Quantitative:**  

**Video Bitrate:**  

**Video Frame Rate:**  

**GOP Size:**      **GOP = 20**

**Video Format:**  

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

3GPP default value is QVGA , 128Kbp , 5FPS , GOP=1XFPS

3GPP mode suggested setting: QVGA, lower than 128kbps, 5FPS, GOP= 1x FPS or 2x FPS, MPEG4 format

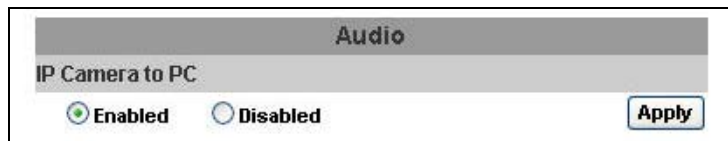
3GPP can achieve up to 10FPS, In 3GPP mode, Stream 1 & Stream 2 combined frame rate is 20FPS

1. Fix Resolution :  
QQVGA – 160x120
2. Bitrate Control Mode  
There are CBR [ Constant Bit Rate ] and VBR [ Variable Bit Rate ] to use.  
CBR : 32Kbps~320bps (the higher the CBR is, the better the video quality is)  
VBR : 1~10 (Compression Rate)
3. Video Frame Rate ( **5 FPS is recommended** )  
The video refreshing rate per second.
4. GOP Size  
It means "Group of Pictures". The higher the GOP is, the better the quality is.
5. Video Format : MPEG4
6. 3GPP: 3GPP output name

iii 、 Audio :

IP Camera supports 2-way audio.

- a. For IP camera to local PC, select “Enable” to start this function  
(When enabled, you can send audio via external mic in the IP Camera)



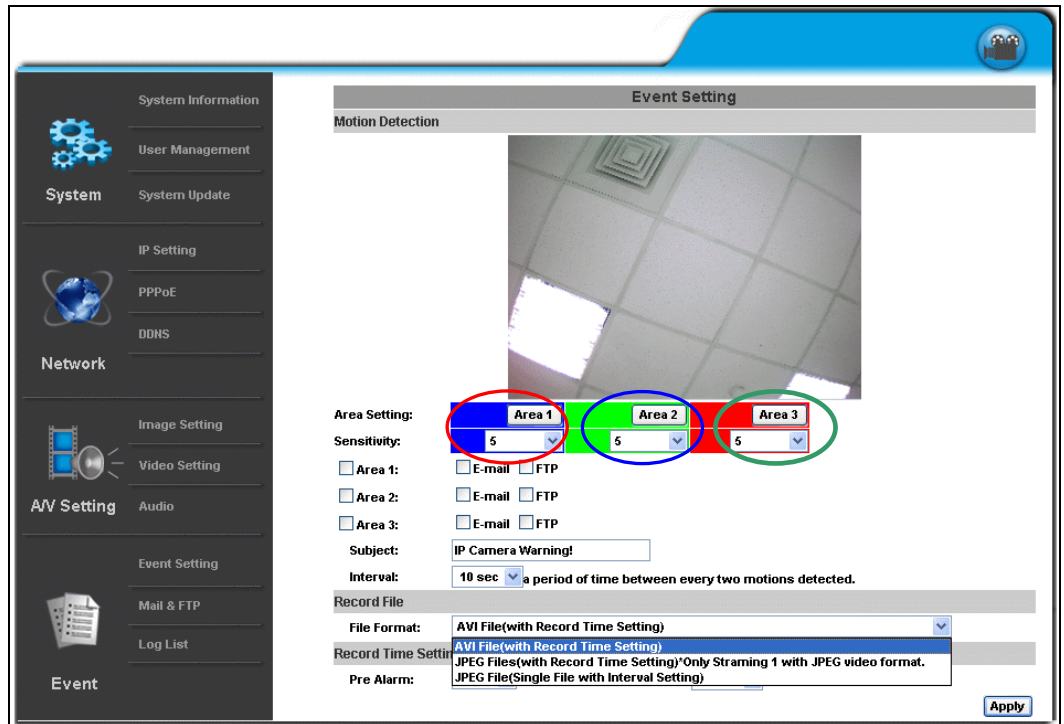
- b. For local PC to IP camera, check “chatting” in the browsing page  
(You will need a mic to send audio from local PC to IP Camera)



## 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 video to some specific mail addresses, transmit video to remote ftp server and trigger the relay. To set up the motion area, click "Area Setting". Using mouse to drag and set 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.

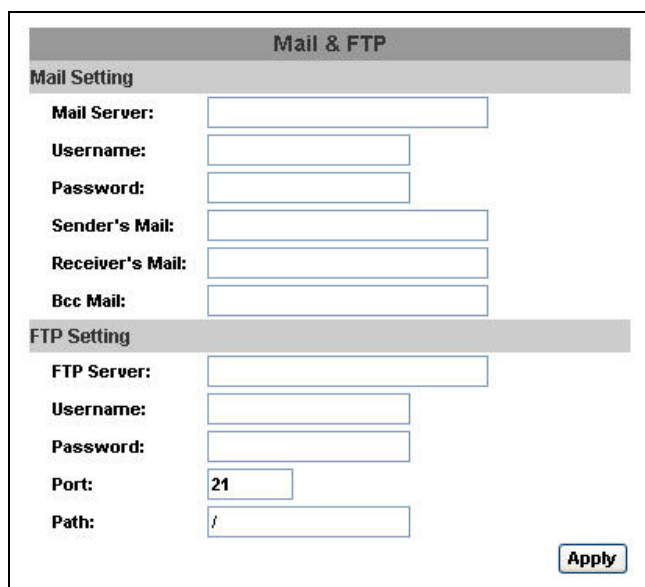
1. AVI File (With Record File Setting )
2. Multi-JPEG (With Record File Setting), only with JPEG compression format.
3. Single JPEG (Single File with Interval Setting)

- c. Record Time Setting : Pre Alarm and Post Alarm setups for video start and end time when motion detected.

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

- ii \ Mail & FTP :

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



The screenshot shows a web interface titled "Mail & FTP". It is divided into two sections: "Mail Setting" and "FTP Setting".

**Mail Setting:**

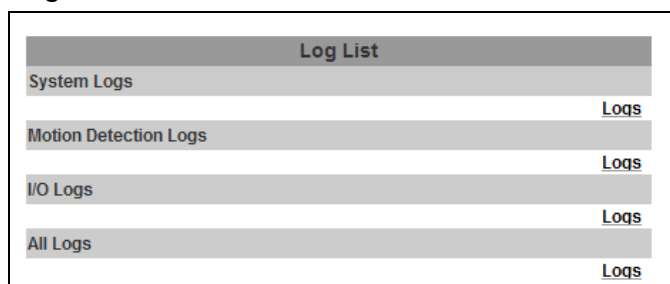
- Mail Server:
- Username:
- Password:
- Sender's Mail:
- Receiver's Mail:
- Bcc Mail:

**FTP Setting:**

- FTP Server:
- Username:
- Password:
- Port:
- Path:

An "Apply" button is located at the bottom right of the form.

- iii \ Log List



The screenshot shows a web interface titled "Log List". It contains a table with four rows, each representing a different log type and a link to view the logs.

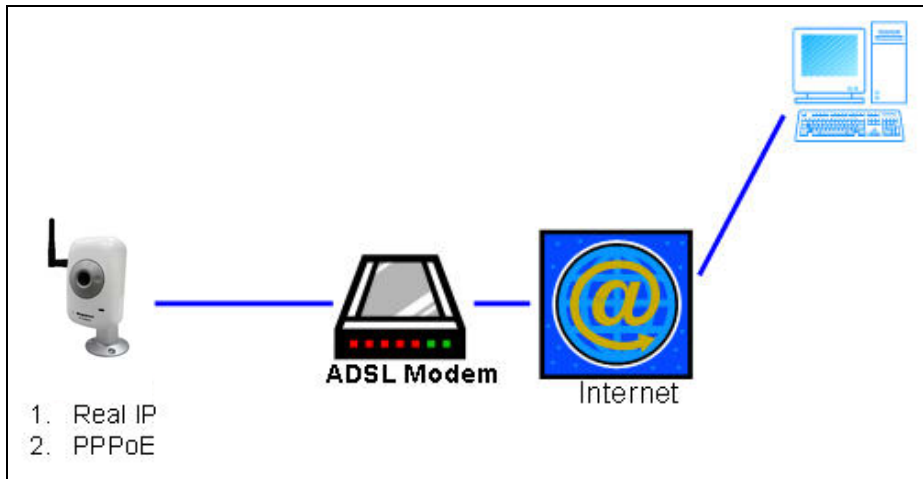
Log List	
System Logs	<a href="#">Logs</a>
Motion Detection Logs	<a href="#">Logs</a>
I/O Logs	<a href="#">Logs</a>
All Logs	<a href="#">Logs</a>

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.



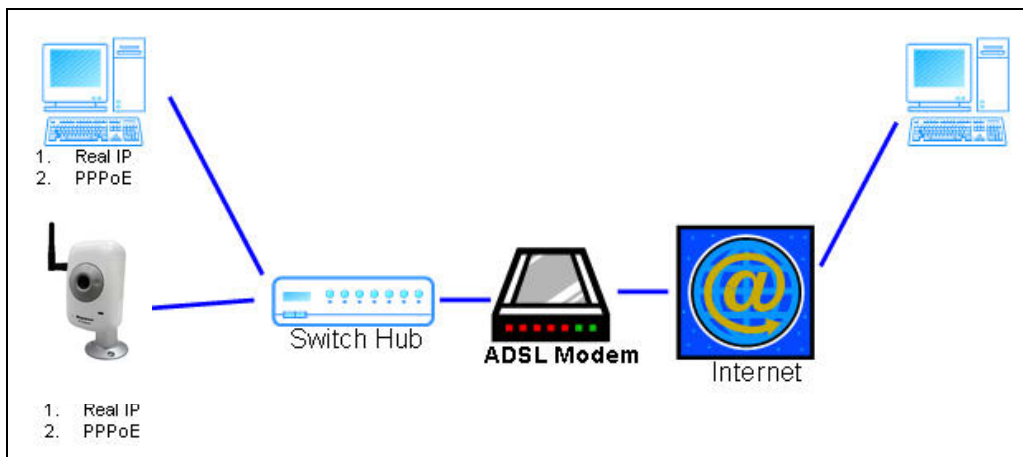
## VI. Network Configuration

i \ Configuration 1 :



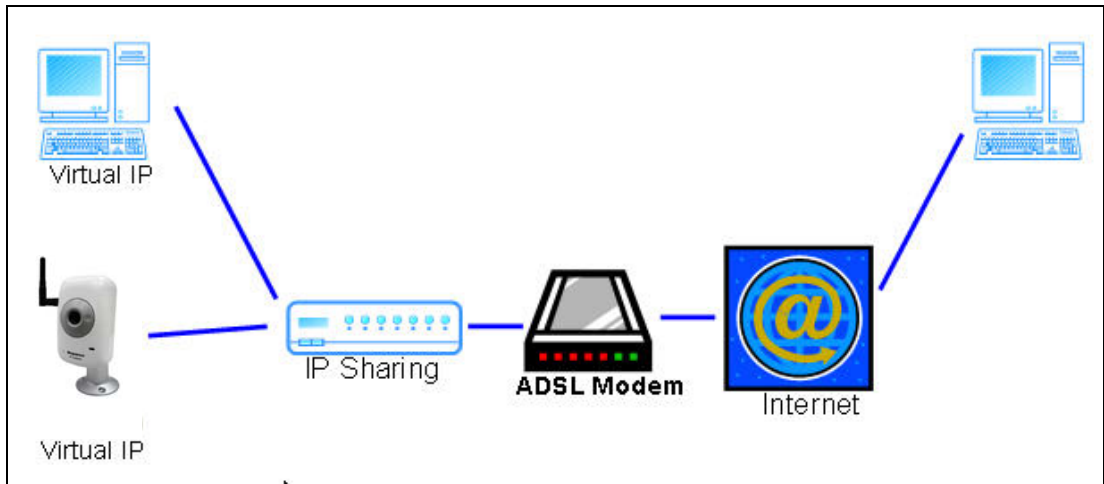
- a. Internet Access : ADSL or Cable Modem
- b. IP address : One real IP or one dynamic IP
- c. Only IP CAMERA connects to the internet
- d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

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.

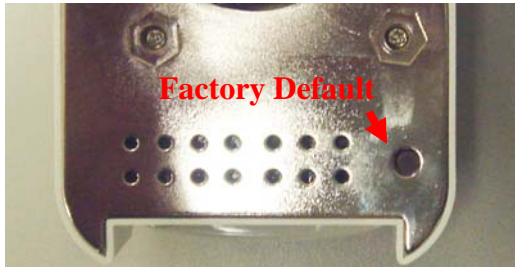
iii 、 Configuration 3 :



- 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.



- 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 process.
- 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 \ Quick Guide
- v \ CD title (User manual, IP installation Utility)