# User Manual

## IR IP CAMERA

**WARINGS**

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

DO NOT INSERT ANY METALLIC & ELETRIC CONDUCTIVE OBJECT THROUGH VENTILATION GRILLS.

**CAUTION**

|  | **CAUTION** |  |
|---|---|---|
| | RISK OF ELECTRIC SHOCK<br>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.

**COPYRIGHT**

# Content

# I. Preface

IR IP CAMERA is a professional MegaPixel CMOS IP camera. It has built-in web server which enables user to view real-time video via IE browser. It also supports simultaneously MPEG-4&JPEG video compression and dual streaming which provides smooth and high video quality. The video can be stored in the SD card, and can be playback remotely.

IR IP CAMERA is an easy-to-use IP Camera which is designed for security application.

# II. Product Specifications

- IP 66
- External Varifocal Lens adjustment
- True Day/Night Function
- Mechanism IR Cut Filter available
- IR Distance 20M
- MPEG-4/ MJPEG Compression Format
- Support Cell Phone/ PDA/ 3GPP
- Dual streaming
- SDK for software Integration
- Free Bundle 36 Channel Recording Software

**Specifications**

| **Hardware** | |
|---|---|
| CPU | ARM 9 ,32 bit RISC |
| RAM | 64MB |
| ROM | 8MB |
| Image sensor | 1/4” CMOS |
| Sensitivity | 0 Lux (IR On) |
| Lens Type | Varifocal Auto IRIS 2.8~10mm |
| ICR | Mechanism IR Cut Filter |
| LED | IR Distance 20M |
| Power over Ethernet | Yes |

| | | |
|---|---|---|
| Power Consumption | | DC 12V, 450mA |
| Operating Temperature | | -10℃ ~ 40 ℃ |
| Dimensions | | 83mm (W) x 79.5mm (H) x 182.5mm (D) |
| Weight | | 700g |
| **Network** | | |
| Ethernet | | 10/ 100 Base-T |
| Network Protocol | | HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP |
| **System** | | |
| Video Resolution | | 1280x1024, 640x480, 350x240, 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 |
| **Web browsing requirement** | | |
| OS | | Windows 2000/ 2003, XP, Vista, Microsoft IE 6.0 or above |
| Hardware | | |
| | Suggested | Intel-C 2.0G, RAM：512MB, Graphic card：64MB |
| | Minimum | Intel-C 1.6G, RAM：256MB, Graphic card：32MB |

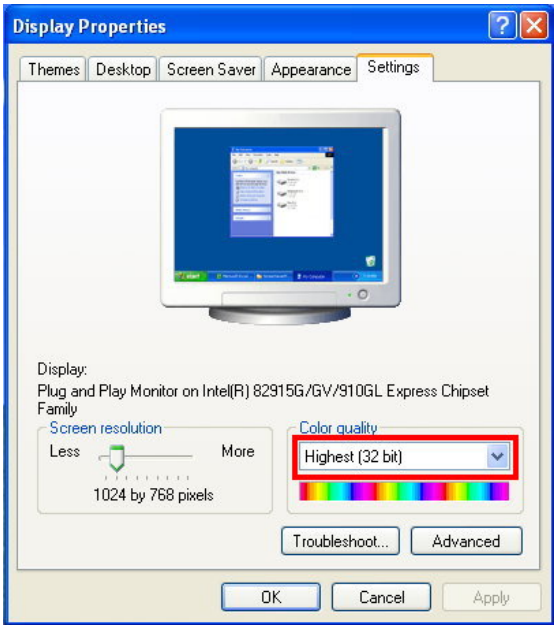
* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

# III. Product Installation

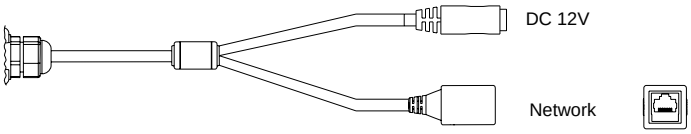
## A. Monitor Setting

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


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



# B. Hardware Installation

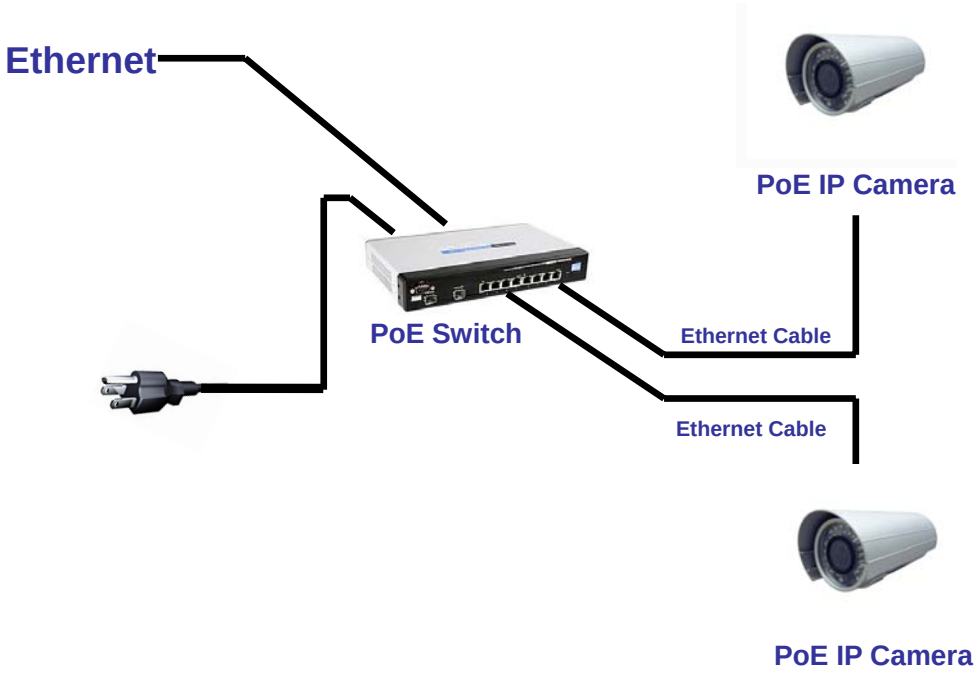



i. Connect power adaptor

ii. Connect Ethernet cable to IP Camera

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) **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.** There are two languages for the IP installer

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)

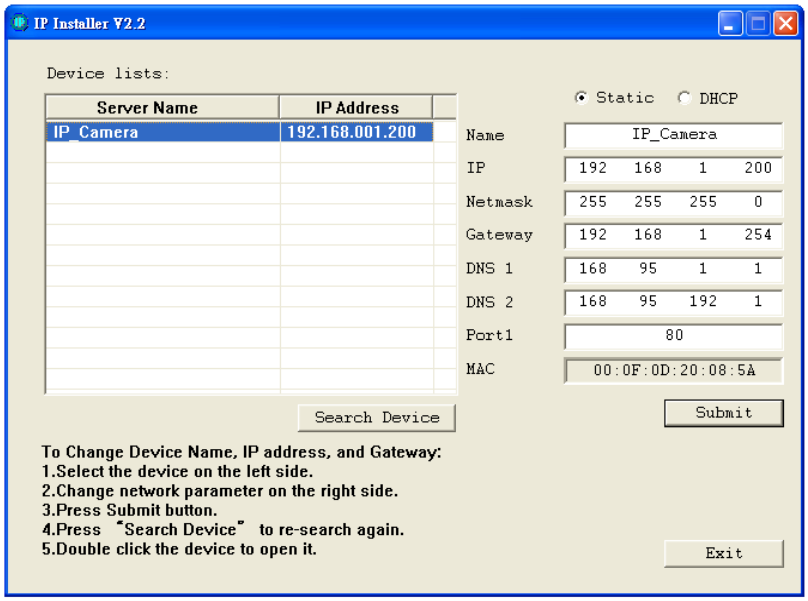
b. DHCP (Dynamic IP)

c. Dial-up (PPPoE)

**iv.** Please execute IP Installer

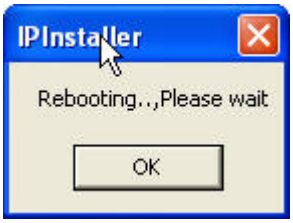
**v.** For Windows XP SP2 user, the following message box may appear. Please click “Unblock”.


**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”. The following dialogue box will show. Just 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:**

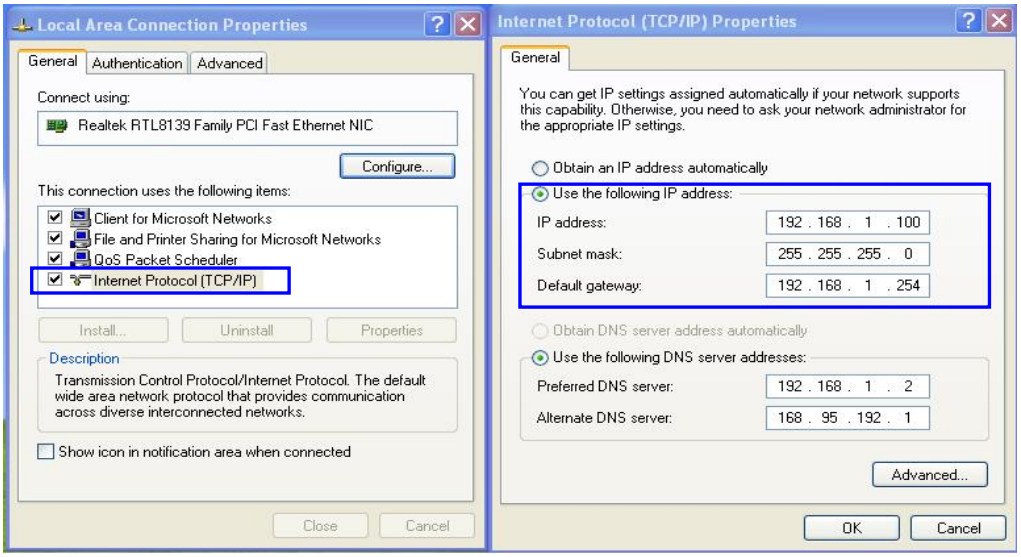
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

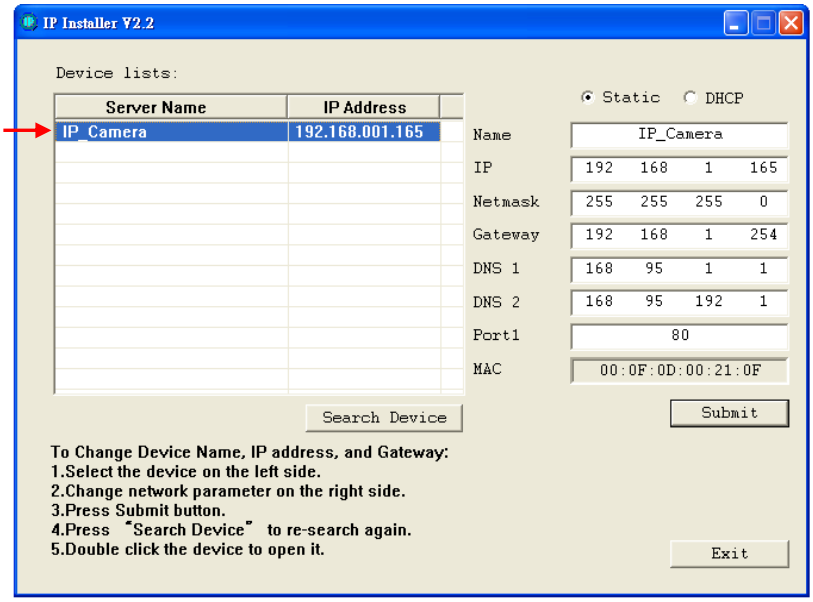
**To Change PC IP address:**

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

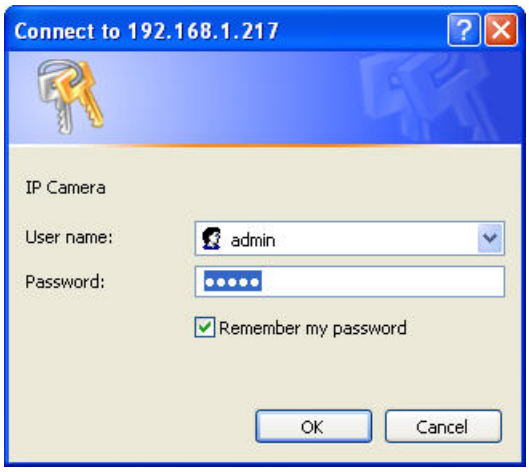
Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera subnet or PC IP subnet accordingly.




**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.

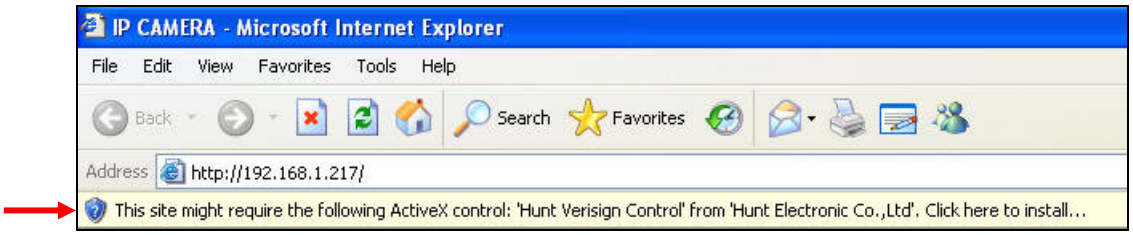


**xi.** Then, please key in the default “user name: admin” and “password: admin”.




# D. Install ActiveX control:

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

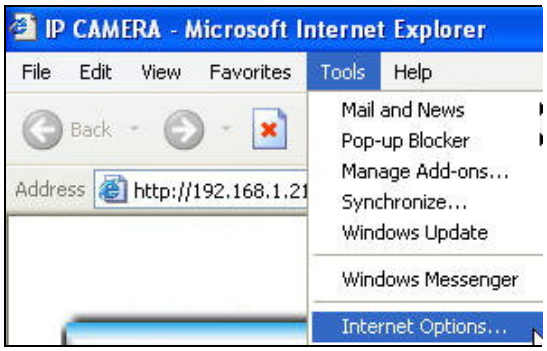



If the installation failed, please check the security setting for the IE browser.

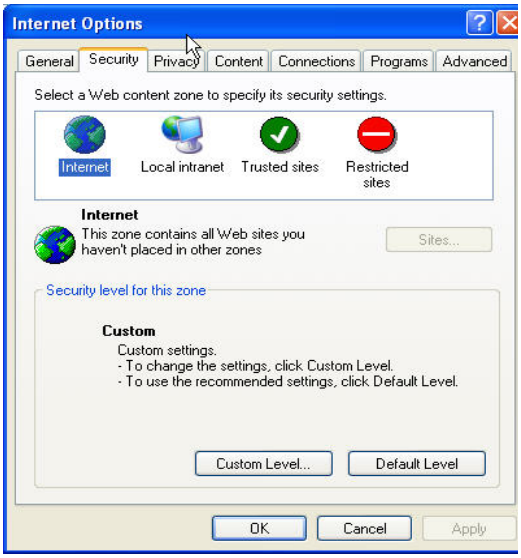
**i.** IE → Tools → Internet Options… → Security Tab → Custom Level… → Security Settings → Download unsigned ActiveX controls→ Select “Enable” or Prompt.

**ii.** IE → Tools → Internet Options… → Security Tab → Custom Level… →Initialize and script ActiveX controls not marked as safe → Select “Enable” or Prompt.

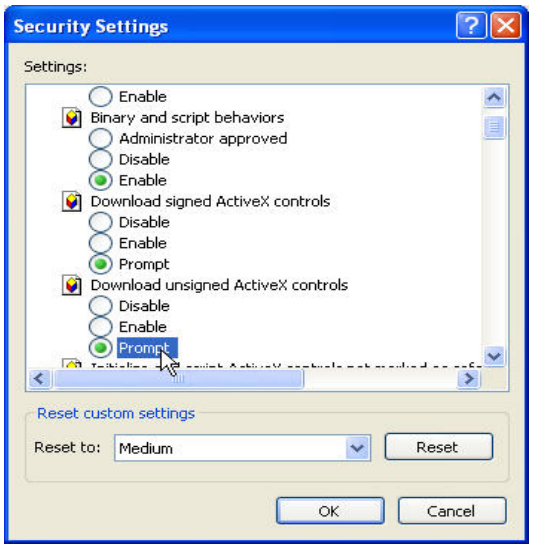
**1**




**2**



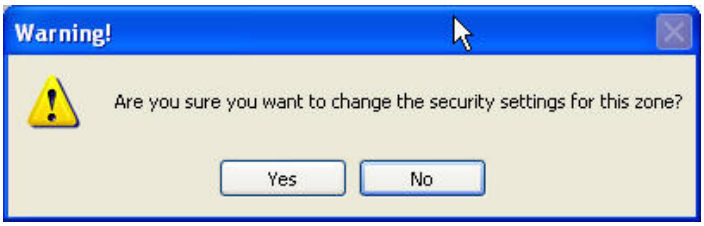

**3**




**4**

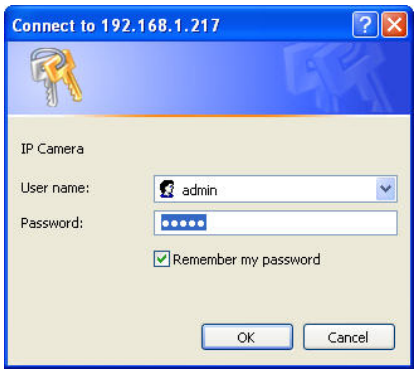

**5**

When popup the following dialogue box, click “Yes”.

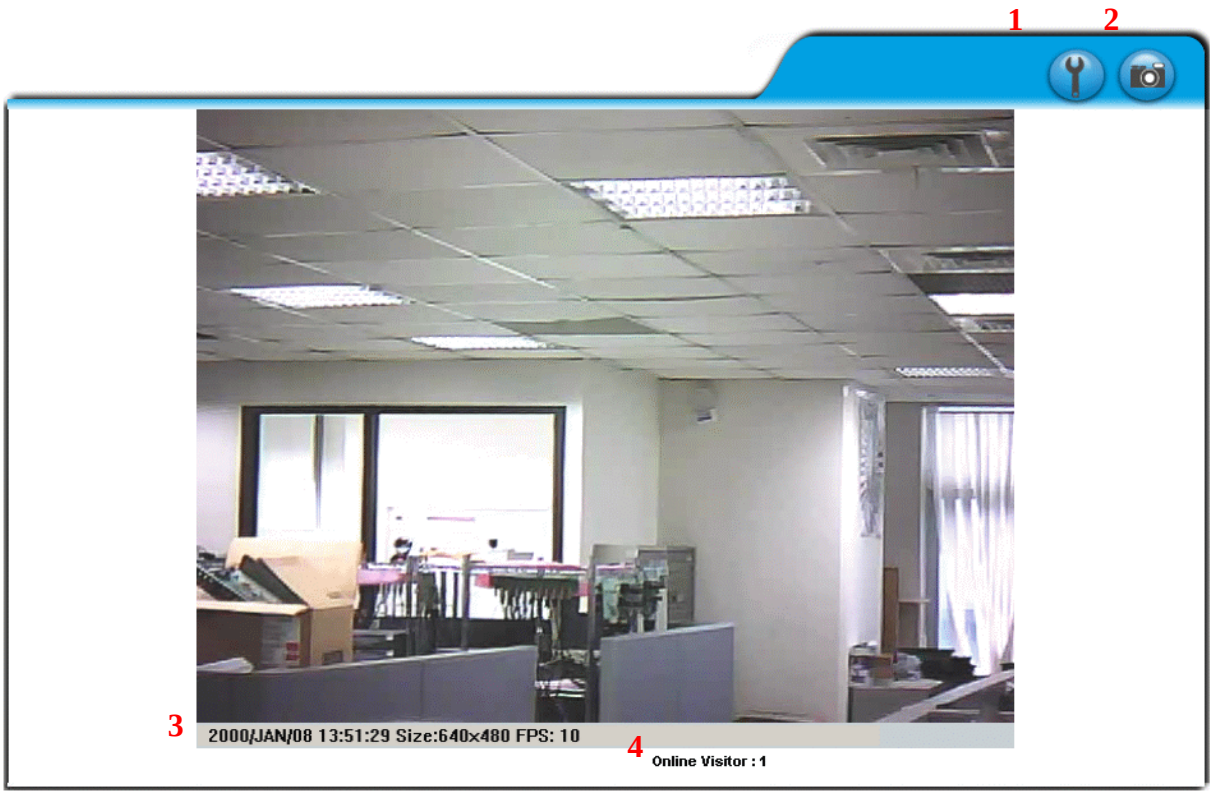


# IV. Live Video

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

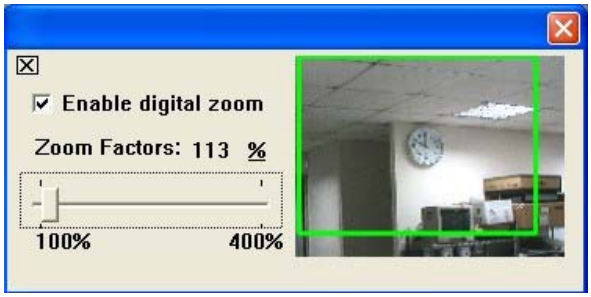
2.  ：Video Snapshot

3. Show system time, video resolution, and video refreshing rate
4. Shows how many people connect to this IP 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.

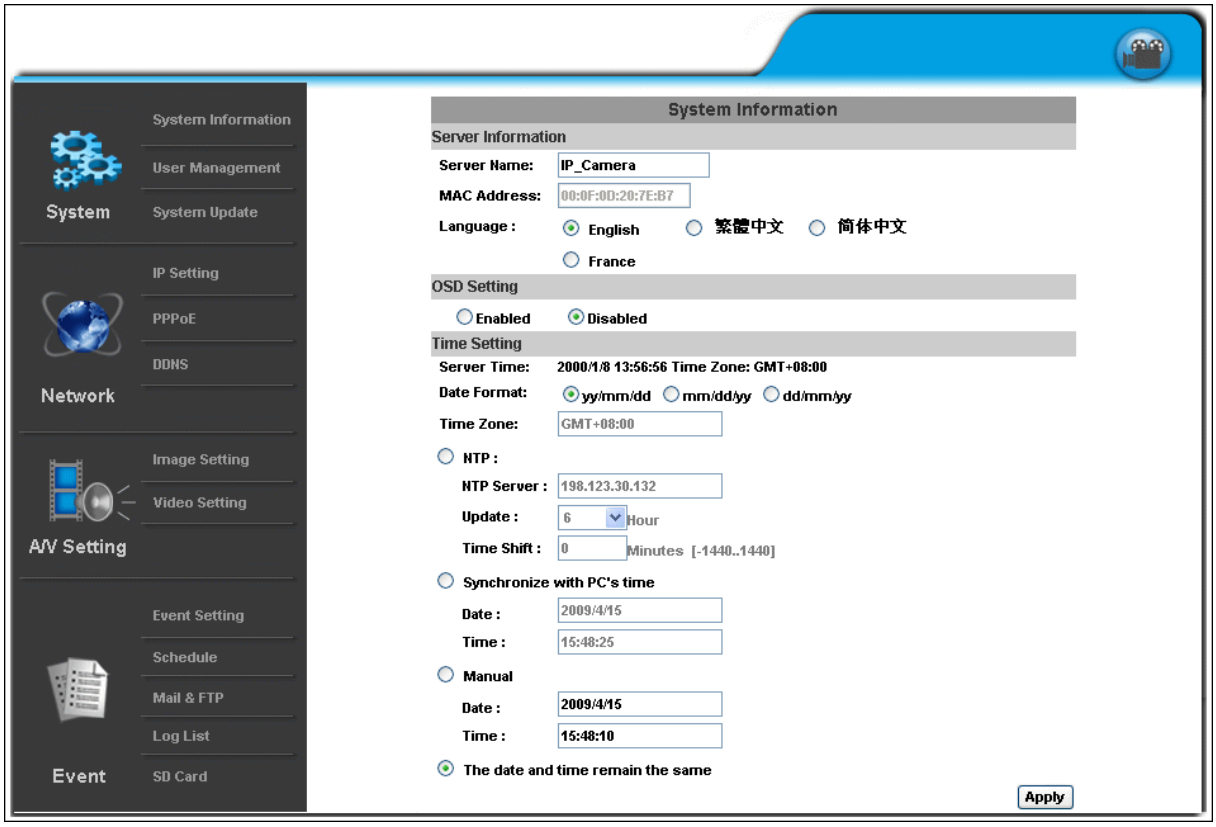
Right-Click the mouse on the video, it will show a pop-up menu.


1. Snapshot：Save a jpg picture
2. Record Start：Record 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. Full Screen：Full-screen mode.
4. 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. IR IP CAMERA Configuration

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



# A.System

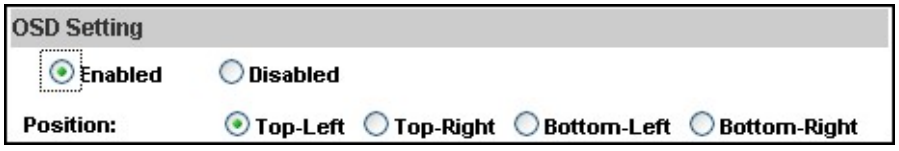
i、 System Information

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

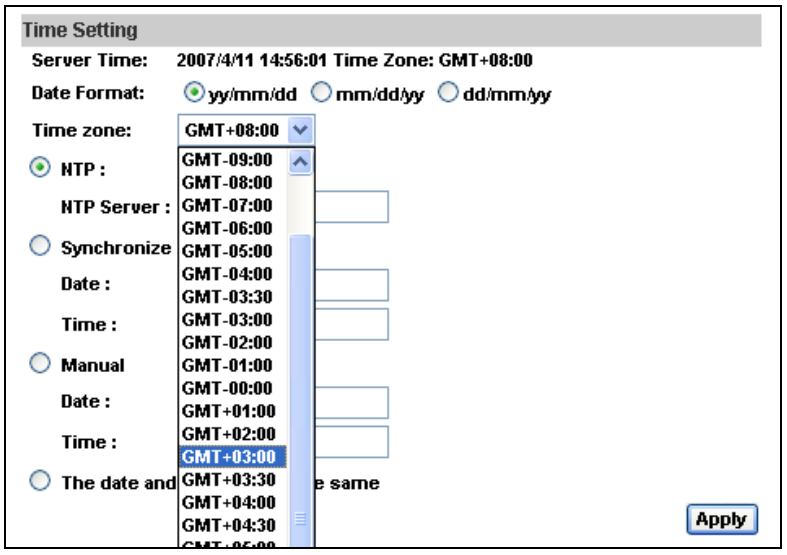
**1.** Server Name：This is the Camera name. This name will show on the IP Installer.

**2.** Select language：There are English, Traditional Chinese, and Simple Chinese to select. When changed, it will show the following dialogue box for the confirmation of changing language.


**b.** OSD Setting：select a position where date & time display on screen.

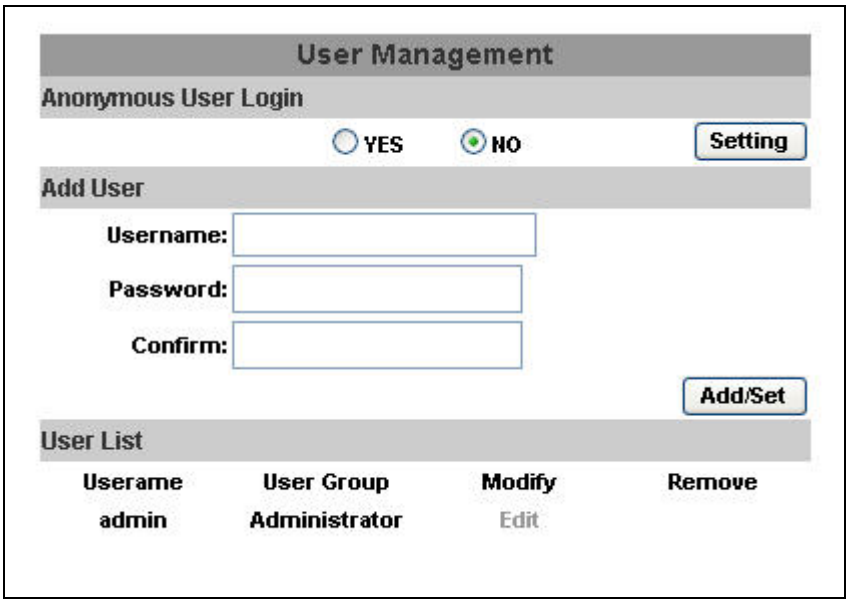



**c.** Server time setting：Select options to set up time - “NTP”, “Synchronize with PC’s time”, “Manual”, “The date and time remain the same”.



ii、 User Management

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




**a.** Anonymous User Login：

Yes：Allow anonymous login

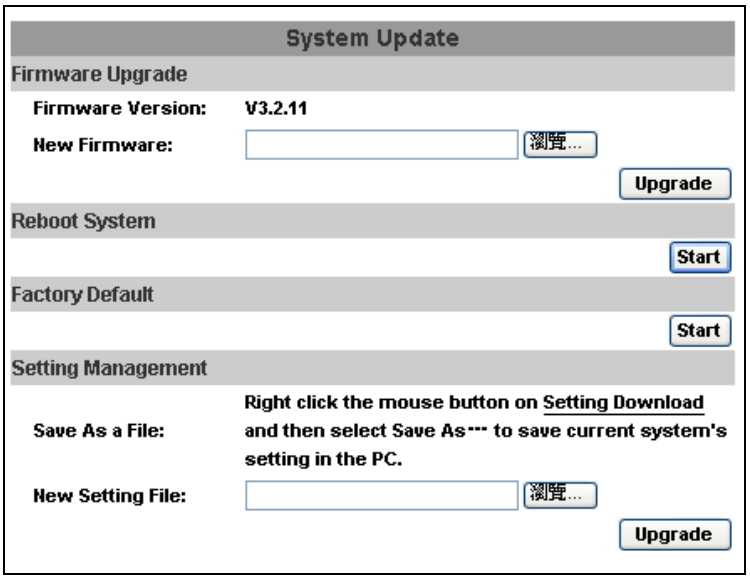
No：Need user name & password to access this IP camera

**b.** Add user：

Type the user name and password, then click “Add/Set”.

**c.** Click “edit” or “delete” to modify the user.

**iii**、System update：




**a.** To update the firmware online, click “Browse…” to select the firmware. Then click “Upgrade” to the proceed.

**b.** Reboot system：re-start the IP camera

**c.** Factory default：delete all the settings and restore defaults system.

**d.** Setting Management：User may download the current setting to PC, or upgrade from previous saved setting.

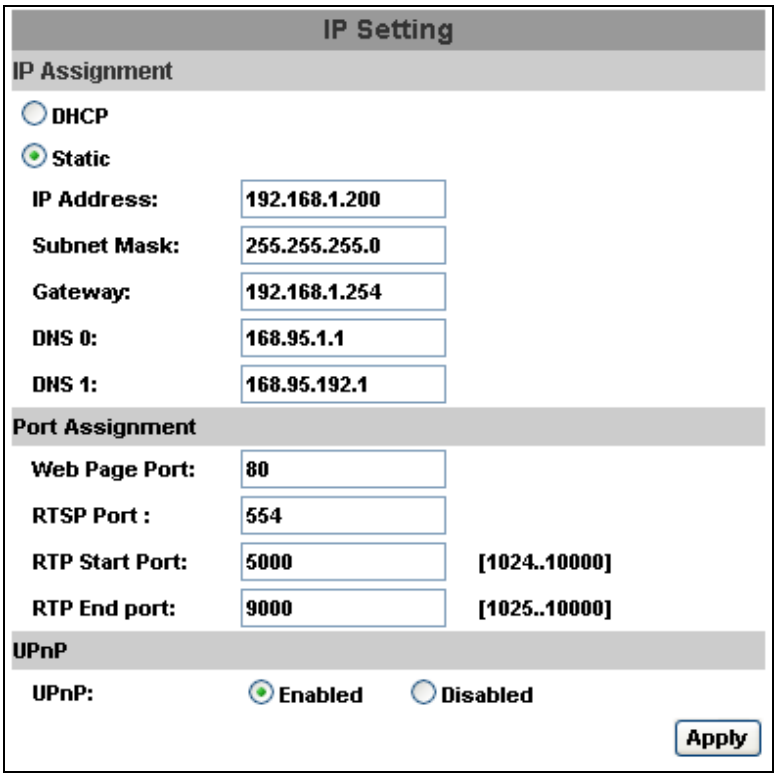
**1.** Setting download:
Right-click the mouse button on Setting Download → Select “Save AS…” to save current IP CAM setting in PC → Select saving directory → Save

**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

IR IP CAMERA supports DHCP and static IP.




**a.** DHCP：Using DHCP, IR 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

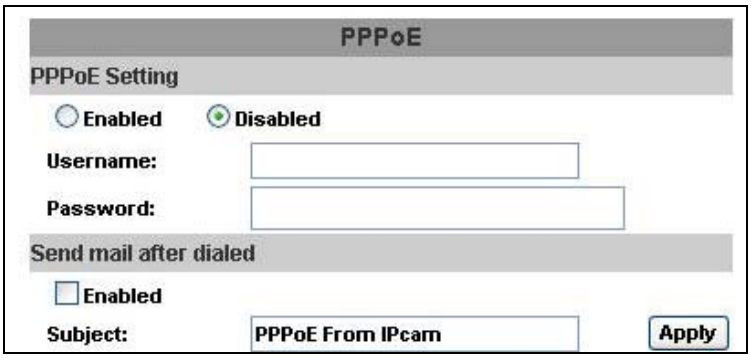
This IP camera supports UPnP, If this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to "My Network Places."

**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：




Select "Enabled" to use PPPoE.

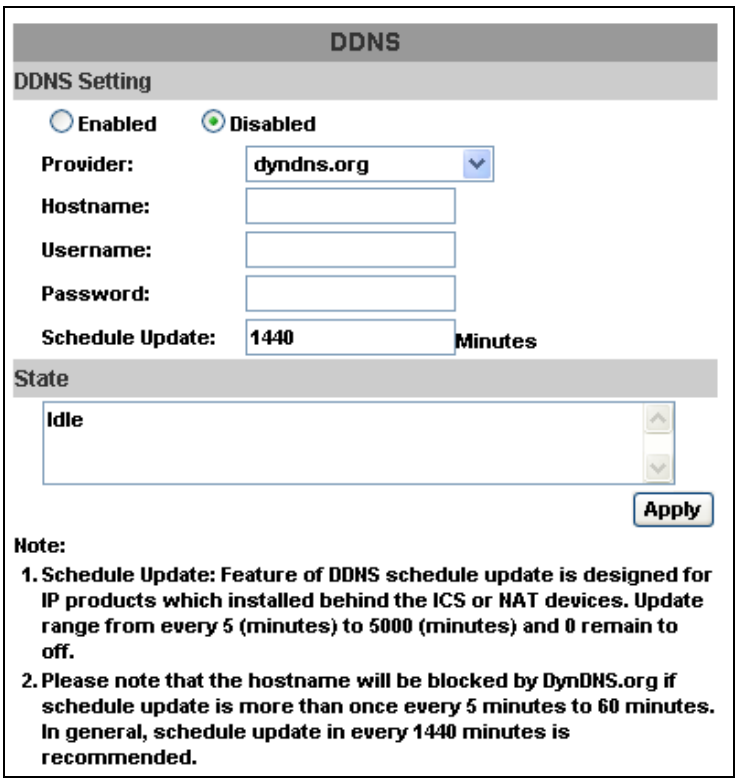
Key-in Username and password for the ADSL connection.

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：

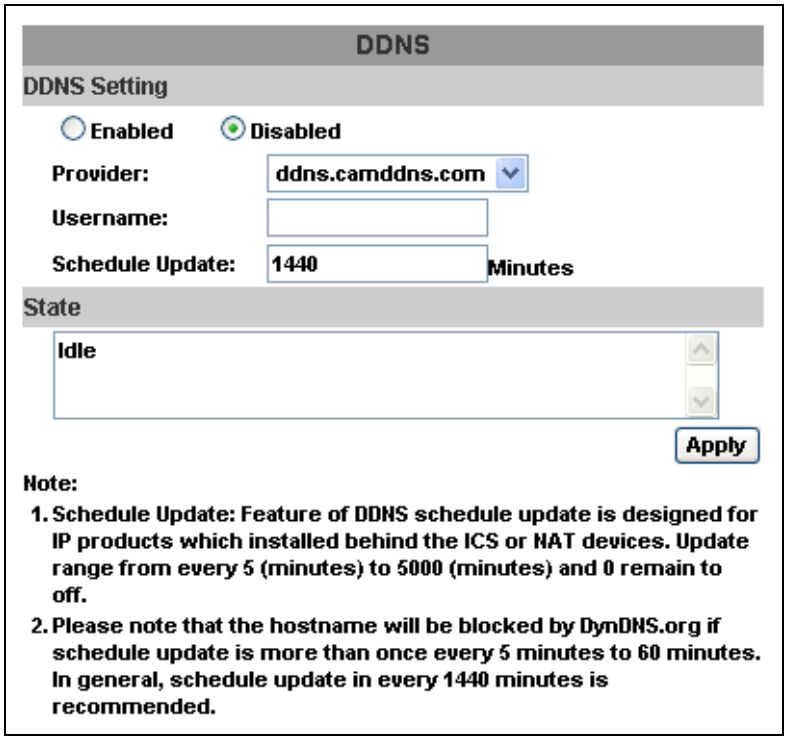
IR IP camera supports DDNS (Dynamic DNS) and Manual Built-in DDNS services.

**a.** DynDNS：




1. Please 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：



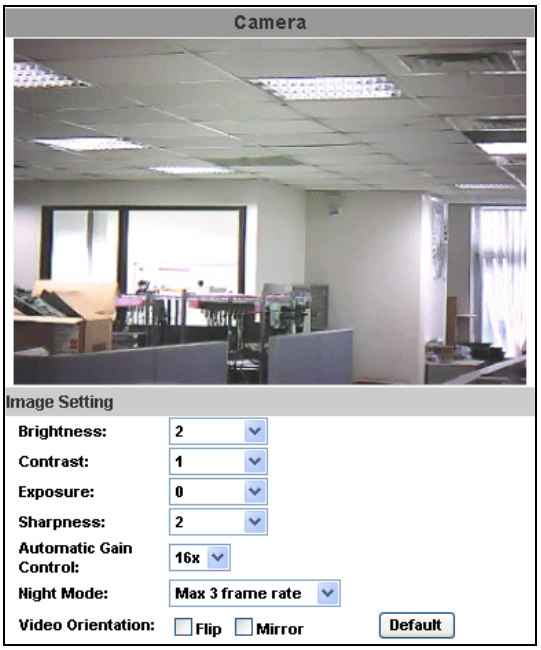

1. Please enable this service
2. Key-in user name.
3. IP Schedule update is default at 5 minutes
4. Click “Apply”.

**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.

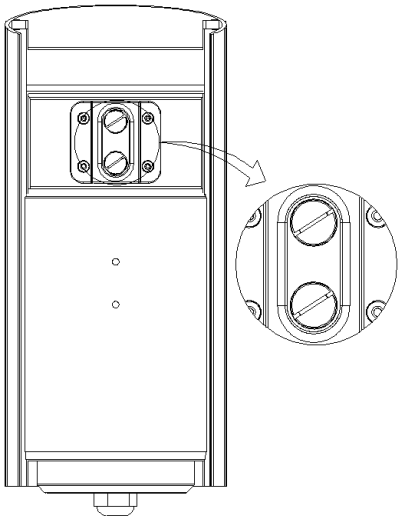
# C.A/V Setting

**i**、 Image Setting




Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video. If needed, please select “Back Light Compensation” ON to compensate back light situation

**ii**、 This IP camera belongs to external varifocal lens adjustment camera. Please adjust “**ZOOM**” first and “**FOCUS**” in the following to complete the adjustment.



**iii**、Video Setting

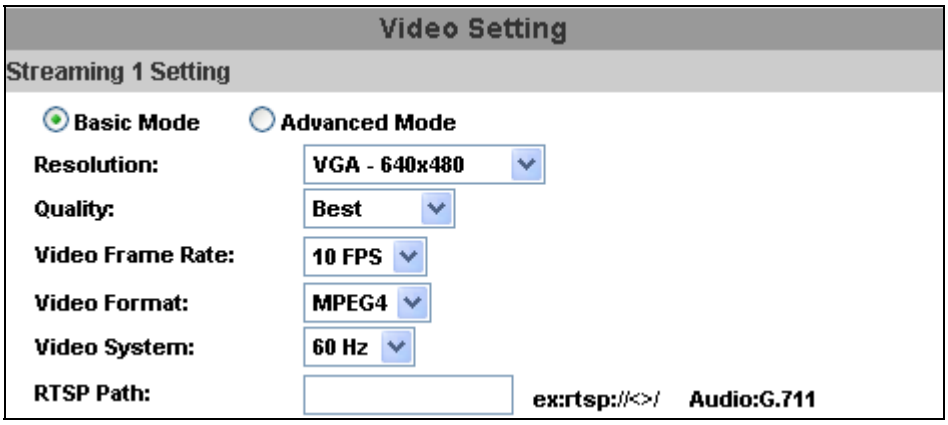
User may select 2 streaming output simultaneously:

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：




**1.** Resolution：

There are 4 resolutions to choose.

NTSC and PAL

SXGA – 1280x1024

VGA – 640x480

QVGA – 320x240

QQVGA – 160x120

**2.** Quality：

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

The higher the quality is, the bigger the file size is.

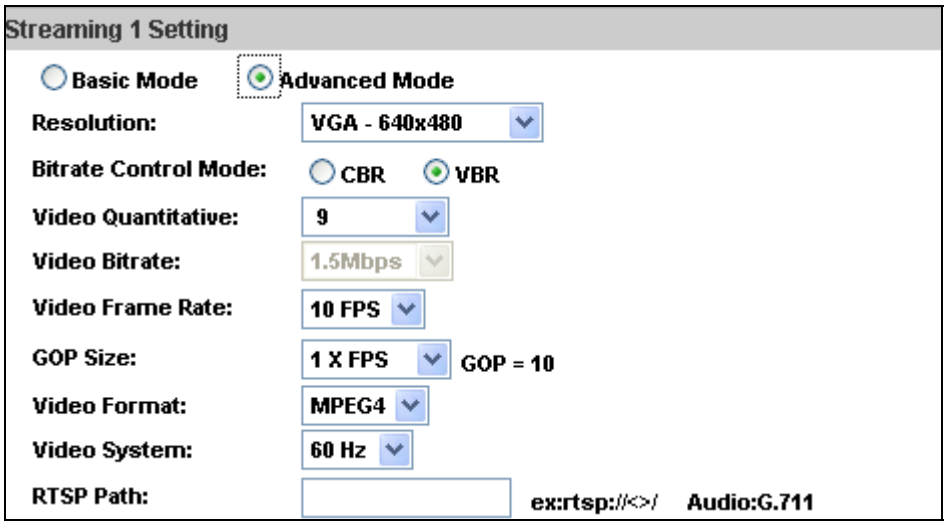
Also not good for internet transmitting

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

**4.** Video Format：MPEG4 or JPEG.

**5.** RTSP Path: RTSP output name

**b.** Streaming 1 Advanced Mode：




**1.** Resolution：

There are 4 resolutions to choose.

NTSC and PAL

SXGA – 1280×1024

VGA – 640×480

QVGA – 320×240

QQVGA – 160×120

**2.** Bitrate Control Mode

There are CBR〔Constant Bit Rate〕 and VBR〔Variable Bit Rate〕to use.

CBR：32Kbps~4Mbps – Increase CBR to increase the picture qulity; vise versa

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

Picture display frame per second

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

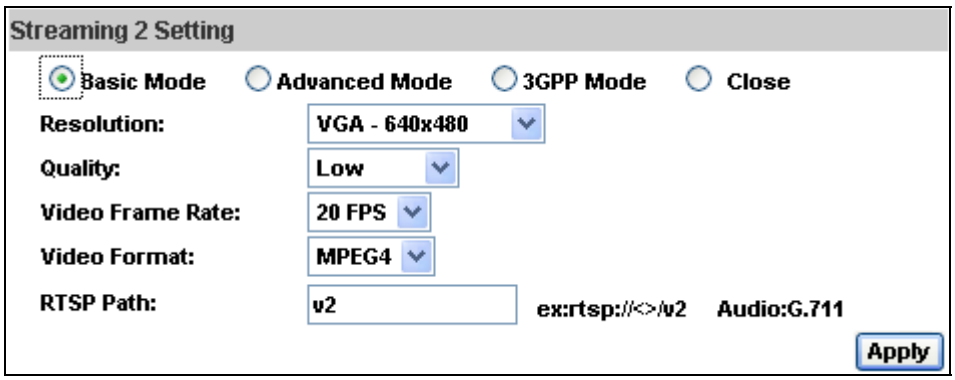
**4.** GOP Size

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

**5.** Video Format：
There are 2 Video Format to choose
MPEG4 or JPEG.

**6.** RTSP Path: RTSP output connecting route

**c.** Streaming 2 Basic Mode：




**1.** Resolution：
There are 3 resolutions to choose.
NTSC and PAL
VGA – 640x480
QVGA – 350x240
QQVGA – 160x120

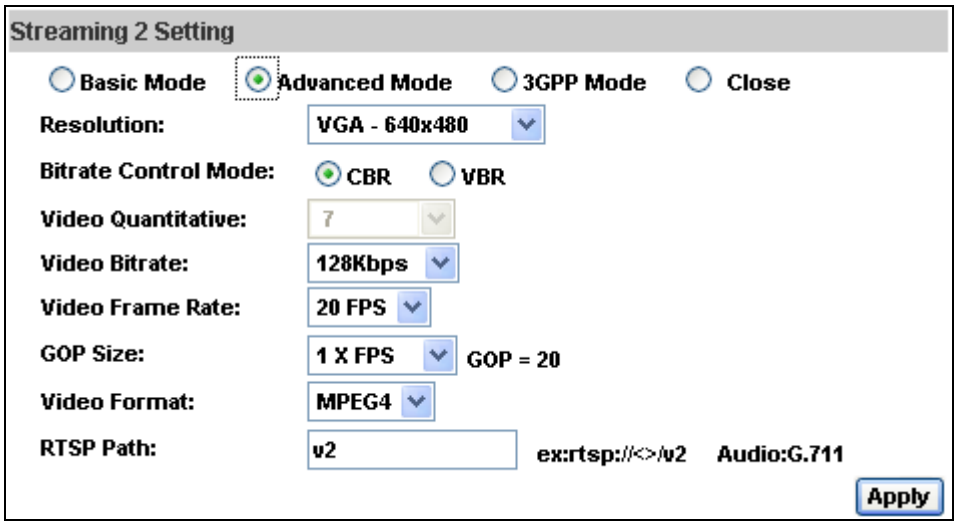
**2.** Quality：
There are 5 levels to adjust:
Best/ High/ Standard/ Medium/ Low
The higher the quality is, the bigger the file size is. Also not good for internet transmitting

**3.** Video Frame Rate：
Picture display frame per second.
Max 30 frames/second (1280x960 Max FPS :15)

**4.** Video Format：MPEG4 or JPEG

**5.** RTSP Path: RTSP output connecting route

**d.** Streaming 2 Advanced Mode：




**1.** Resolution：
There are 3 resolutions to choose.
NTSC and PAL
VGA – 640×480
QVGA – 350×240
QQVGA – 160×120

**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)

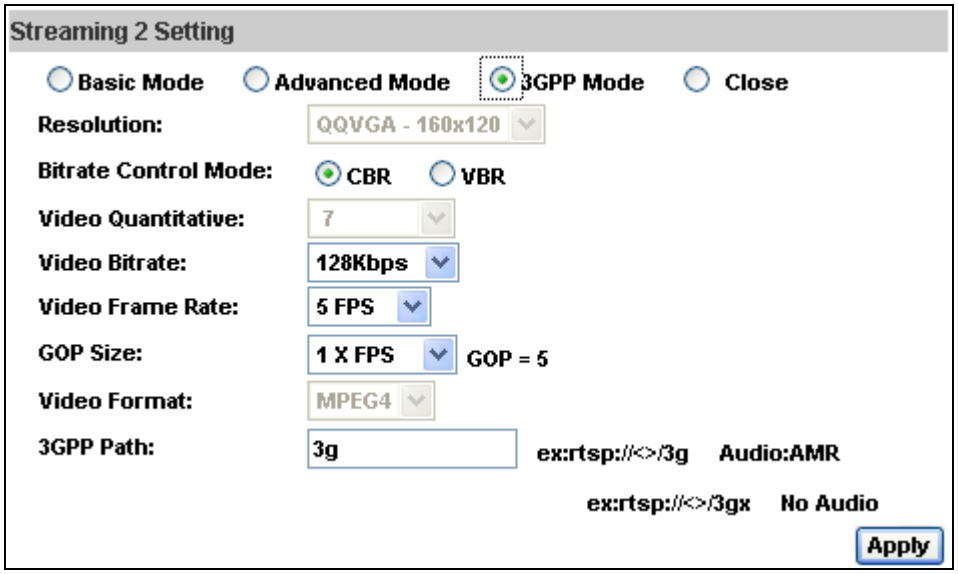
**3.** Video Frame Rate
The video refreshing rate per second.

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

**5.** Video Format：MPEG4 or JPEG

**6.** RTSP Path: RTSP output name

**e.** Streaming 2, 3GPP mode:




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

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

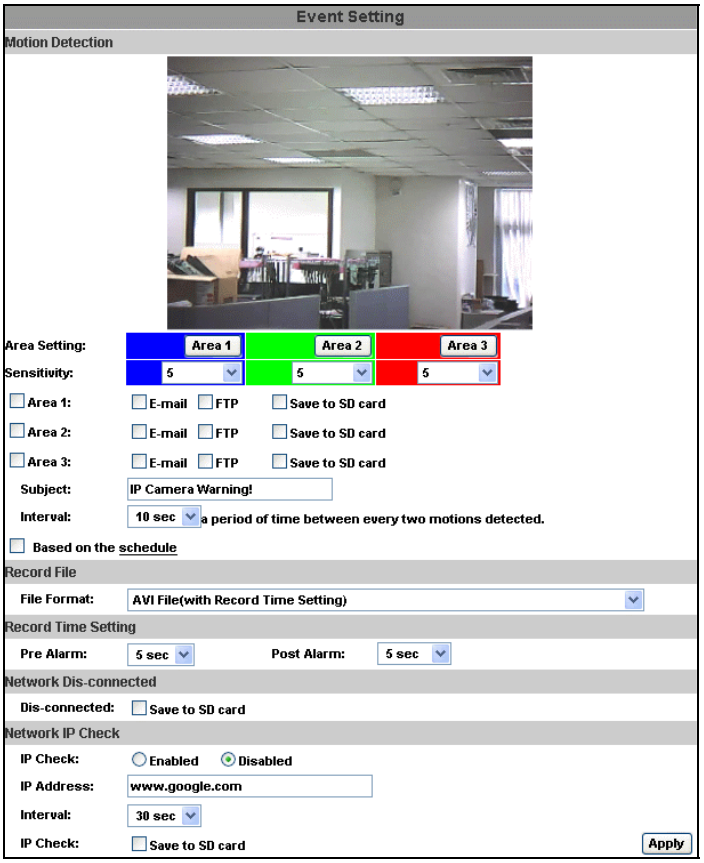
3GPP can achieve up to 10FPS, In 3GPP mode, Stream 1 & Stream 2 combined frame rate is 20FPS

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 or JPEG
6. 3GPP: 3GPP output name

# D.Event List

IR 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. 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.

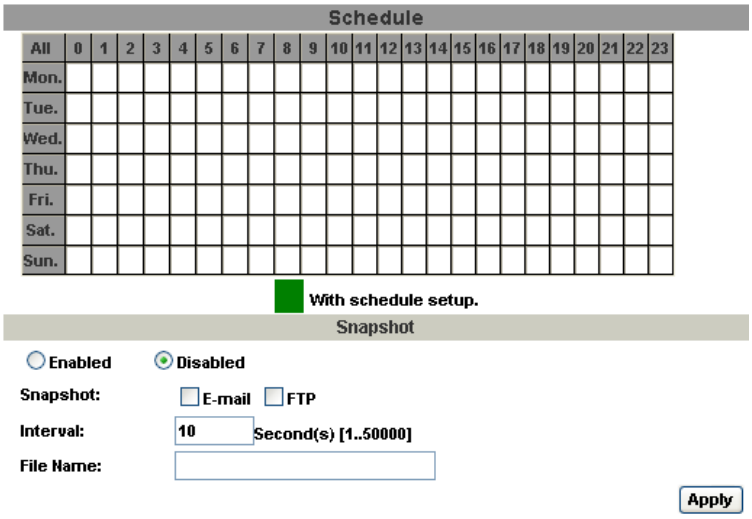
When motion/alarm is triggered, there are 3 different types of record mode.

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, 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.

**ii**、 Schedule

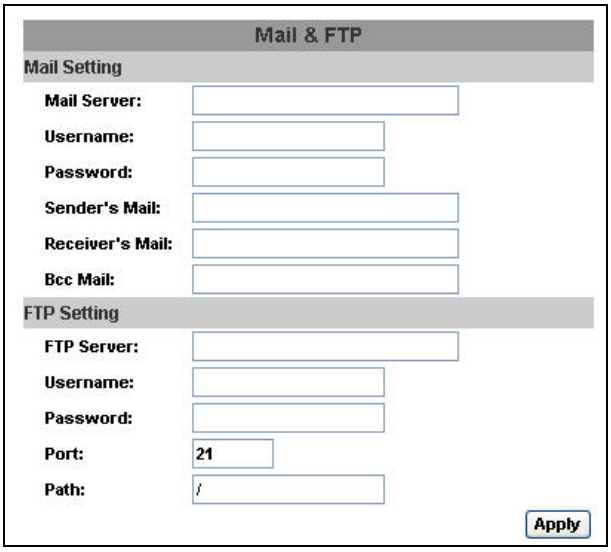



**a.** Schedule : Use the mouse to perform the schedule setting. The set up date will be shown in green.

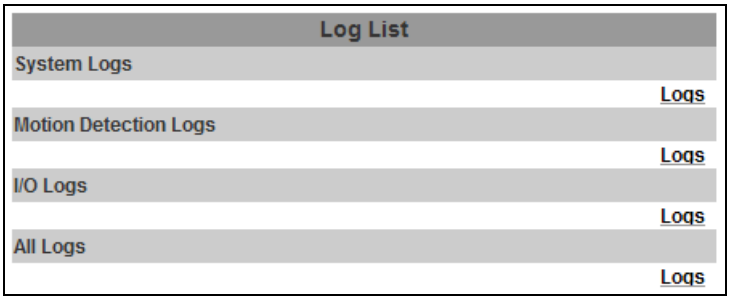
**b.** Snapshot: the snapshot file can be send by E-mail and FTP. Moreover, the snapshot interval cab be set from 1 ~50000 sec.

**iii**、 Mail & FTP

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



**iv**、Log List




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.

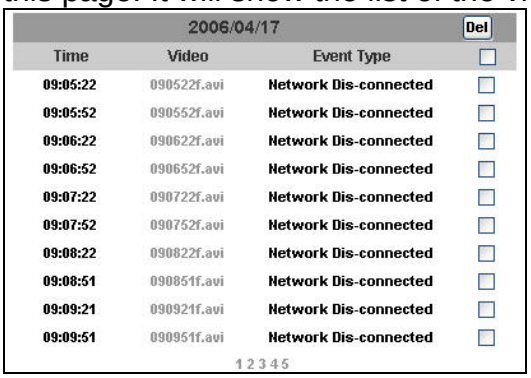
**v**、SD card

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.

a. 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.

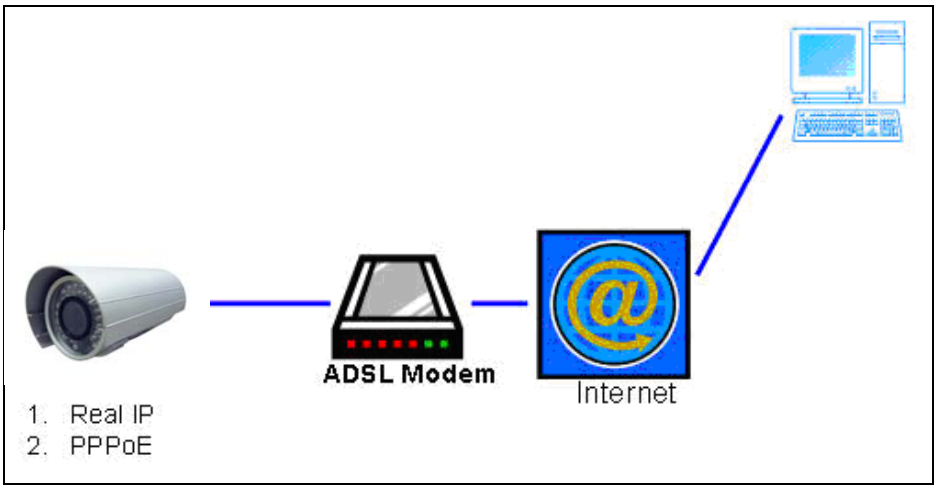



2. The video format is AVI. Click the video to start Microsoft Media Player to play it.

   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：



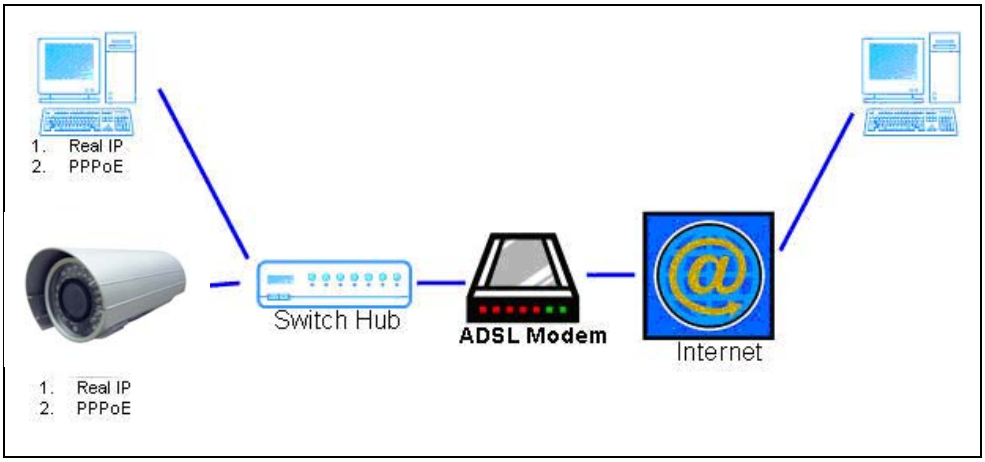

**a.** Internet Access：ADSL or Cable Modem

**b.** IP address：One real IP or one dynamic IP

**c.** Only IR IP CAMERA connects to the internet

**d.** For fixed real IP, set up the IP into IR IP CAMERA. For dynamic IP, start PPPoE.

ii、 Configuration 2：




**a.** Internet Access：ADSL or Cable Modem

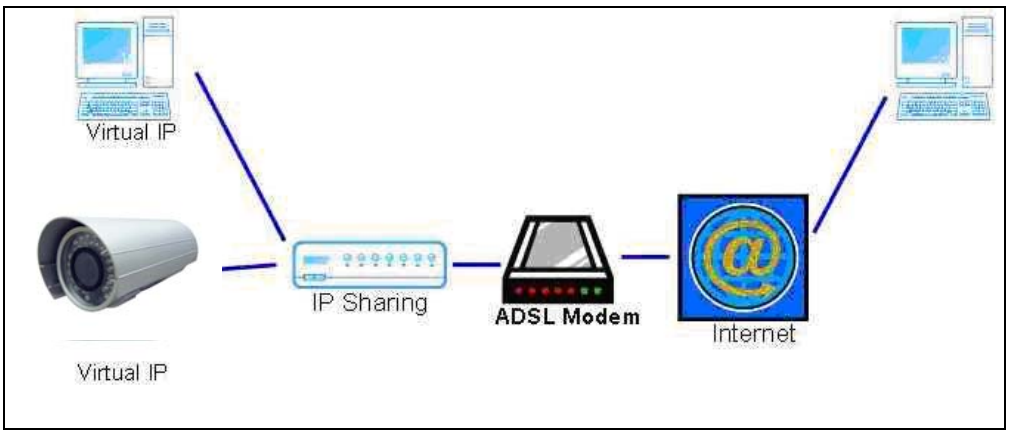
**b.** IP address：More than one real IP or one dynamic IP

**c.** IR IP CAMERA and PC connect to the internet

**d.** Device needed：Switch Hub

**e.** For fixed real IP, set up the IP into IR 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.** IR 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. Package contents

**i、** IR IP CAMERA Network Camera

**ii、** Adaptor

**iii、** Ethernet Cable

**iv、** CD title (User manual, IP installation Utility)

# Appendix I

SD Card Recommended：

| | |
|---|---|
| SanDisk 128M | Transcend 128M 80X |
| SanDisk 256M | Transcend 256M 80X |
| SanDisk 512M | Transcend 512M 80X |
| SanDisk 1G | Transcend 1G 80X |
| SanDisk 2G | Transcend 2G 80X |
| SanDisk 4G | Transcend 4G 80X |