

\*\*\* USER'S MANUAL \*\*\*

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**FCC ID : UTBHLT86FW**

## **The Federal Communication Commission Statement**

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures: -

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.**
- **Consult the dealer or an experienced Radio/TV technician for help.**

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that change or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

# User Manual

## Pan-Tilt 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

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>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.</p>		

## COPYRIGHT

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

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**V1.7 2007/JUNE/21**

## I. Preface

This IP Camera is a Pan-Tilt IP camera. It has the web server built in. User can view real-time video via IE browser. IP Camera supports simultaneously MPEG-4&JPEG video compression which provides smooth and high video quality. The Pan-Tilt function can be controlled remotely. 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

- Pan/Tilt remote control
- Support two streaming
- MPEG4&JPEG compression
- Supports SD card for local recording
- Wireless network connection [ Optional ]
- 2-way audio
- Support Cell Phone/PDA
- Support 3GPP
- Online firmware upgrade
- Compatible with Microsoft Windows Media Player

### Specifications

Hardware	
CPU	ARM 9, 32 bit RISC
SDRAM	64MB
Flash	8MB
Image sensor	1/4" CCD
Lens	3.6mm,F2.0
Video Out	1-ch RCA type (CBVS Monitor output)
Audio in/ out	1 in/ 1 out (3.5 mm Phone Jack )
Alarm I/O	1 in/ 1 out
Pan angle	270°
Tilt angle	120°

Power Consumption	LAN: 5V, 1.3A / WLAN: 5V, 1.5A
Dimensions (WxHxD)	105x128.6x105 mm
<b>Network</b>	
Ethernet	10/ 100 Base-T
Wireless	802.11b/g (Optional)
WEP	64/ 128 bit
Network Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, 3GPP, UPnP
<b>System</b>	
Video Resolution	NTSC : 720x480, 704x480, 352x240, 176x120 PAL : 720x576, 704x576, 352x288, 176x144
Video adjust	Brightness, Contrast, Saturation, Hue
Dual Streaming	Yes
Image snapshot	Yes
Full screen monitoring	Yes
Pan/ Tilt control	Yes, remotely
Preset Point	8
Patrol	Yes
Auto Pan	Yes
Pan/ Tilt speed control	Yes
Compression format	MPEG-4/ JPEG
Video bitrate adjust	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered action	Mail, FTP, Save to SD card
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
<b>SD card management</b>	
Recording trigger	Motion Detection, IP check, Network status (wire connection only)
Video format	AVI, JPEG
Video playback	Yes
Delete files	Yes
<b>Web browsing requirement</b>	

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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

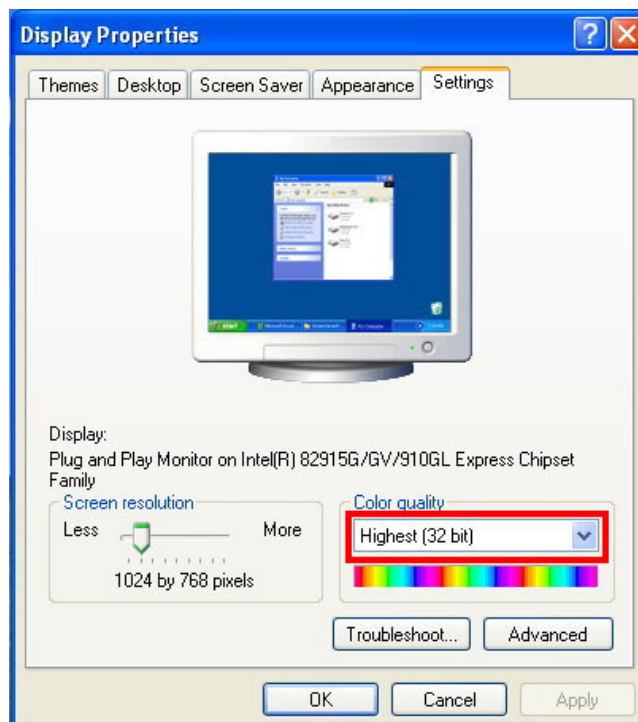
## III. Product Installation

### A. Monitor Setting

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



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





## B. Hardware Installation

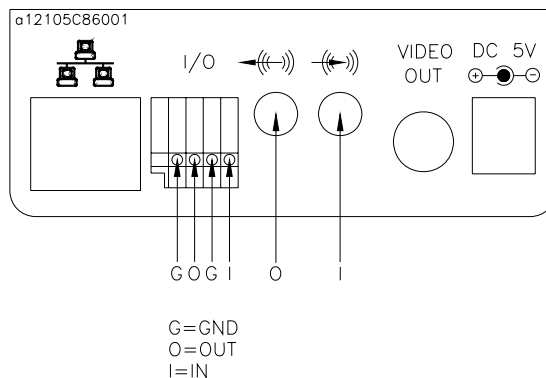
- i. Connect power adaptor



- ii. Connect IP Camera to PC or network with 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".
- v. Back Panel for your reference



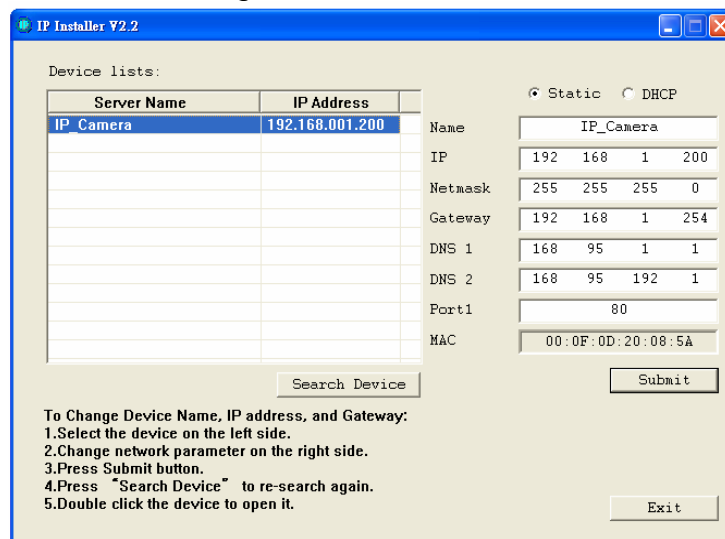
## C. IP Assignment

- i. Use the software, "IP Installer" to assign the IP address of IP Camera.  
The software is in the attached 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. 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:**

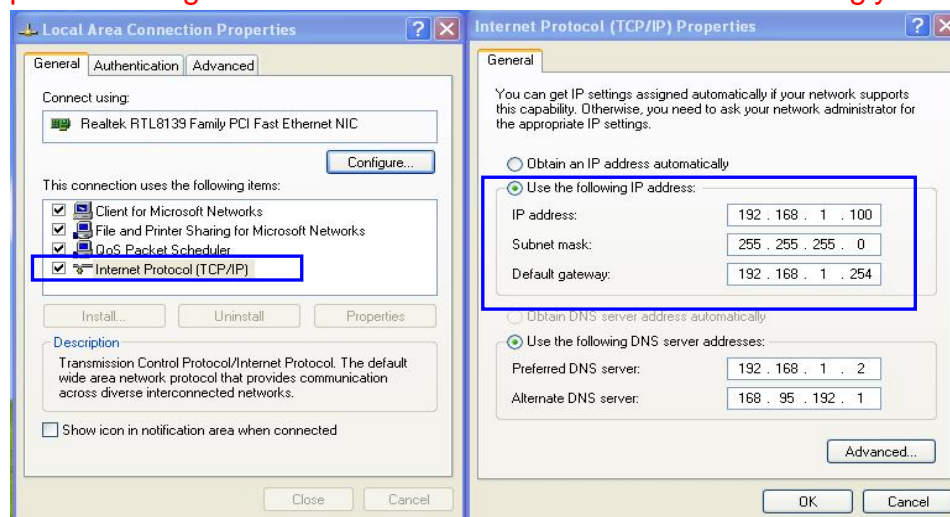
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

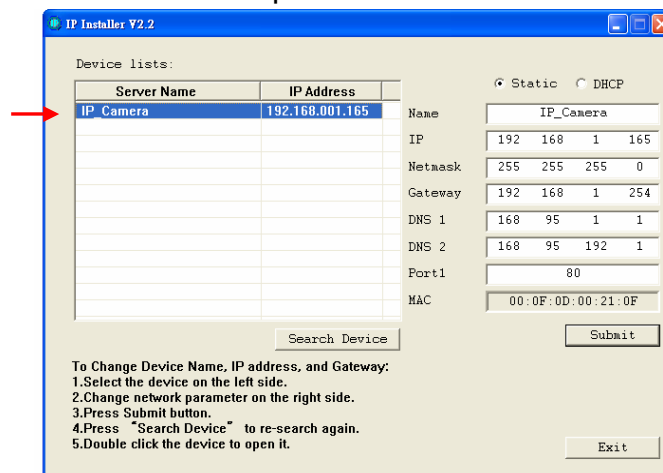
**To Change PC IP address:**

**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.

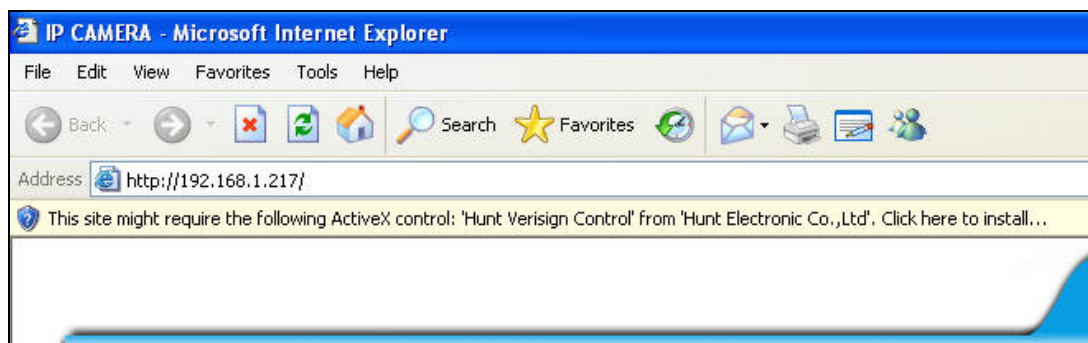


- xi. Then, please key in the default “user name: admin” and “password: admin”.



## D. Install ActiveX control:

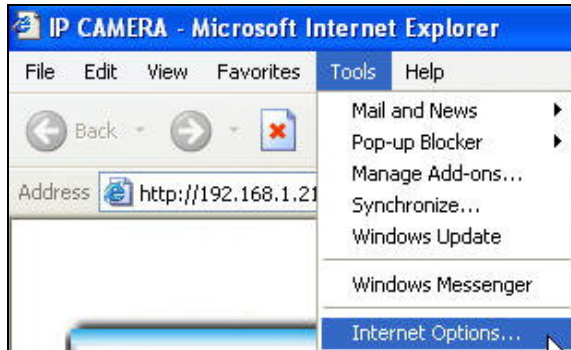
For the first time to view the camera video via IE, it will ask you to install the ActiveX component.



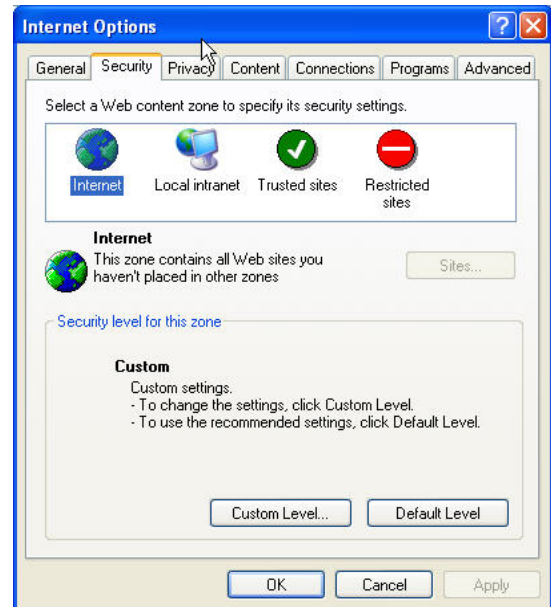
If the installation failed, please check the security setting for the IE browser.

- 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.

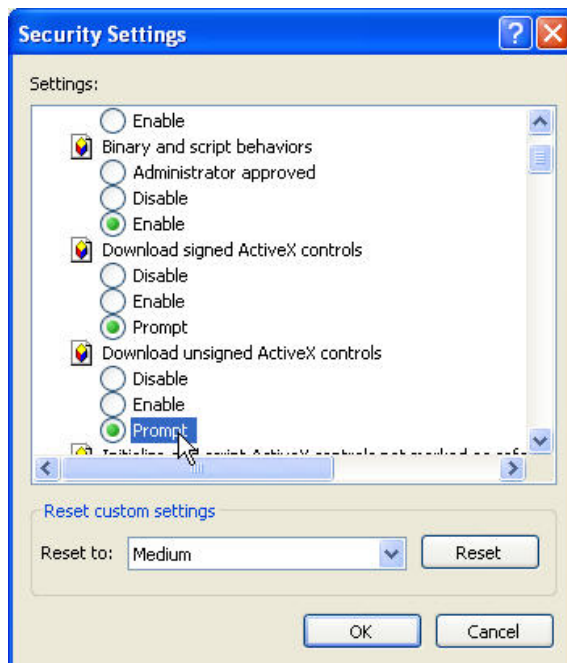
1



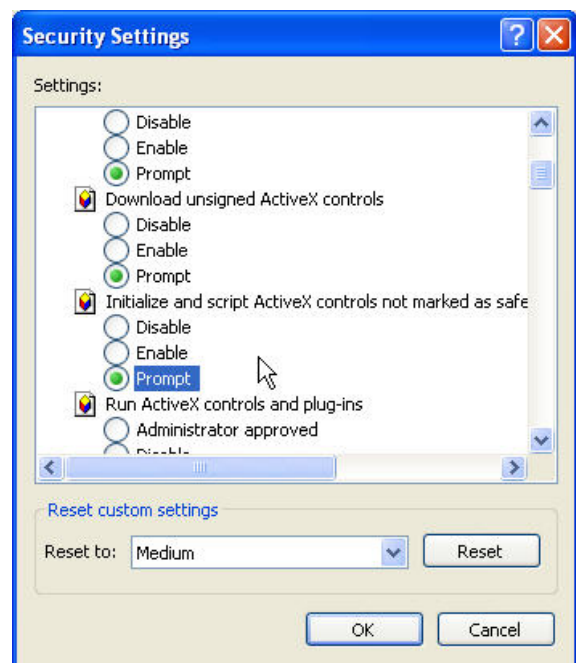
2



3

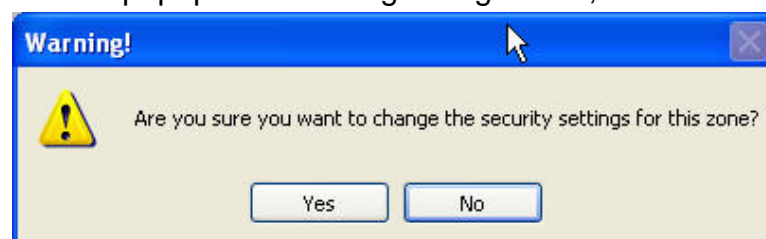


4



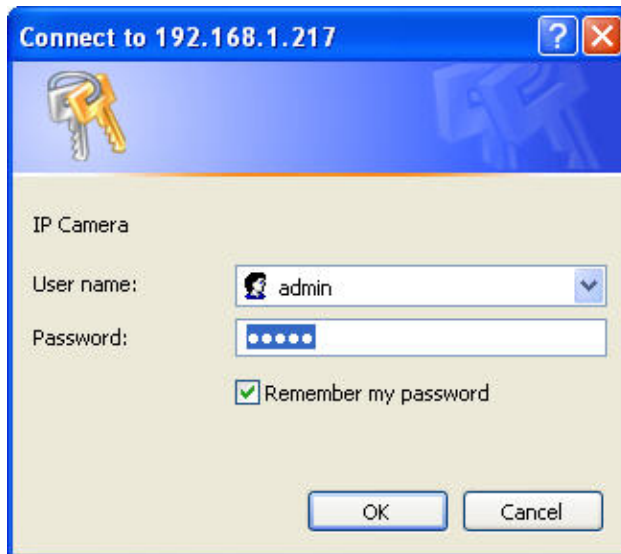
5

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

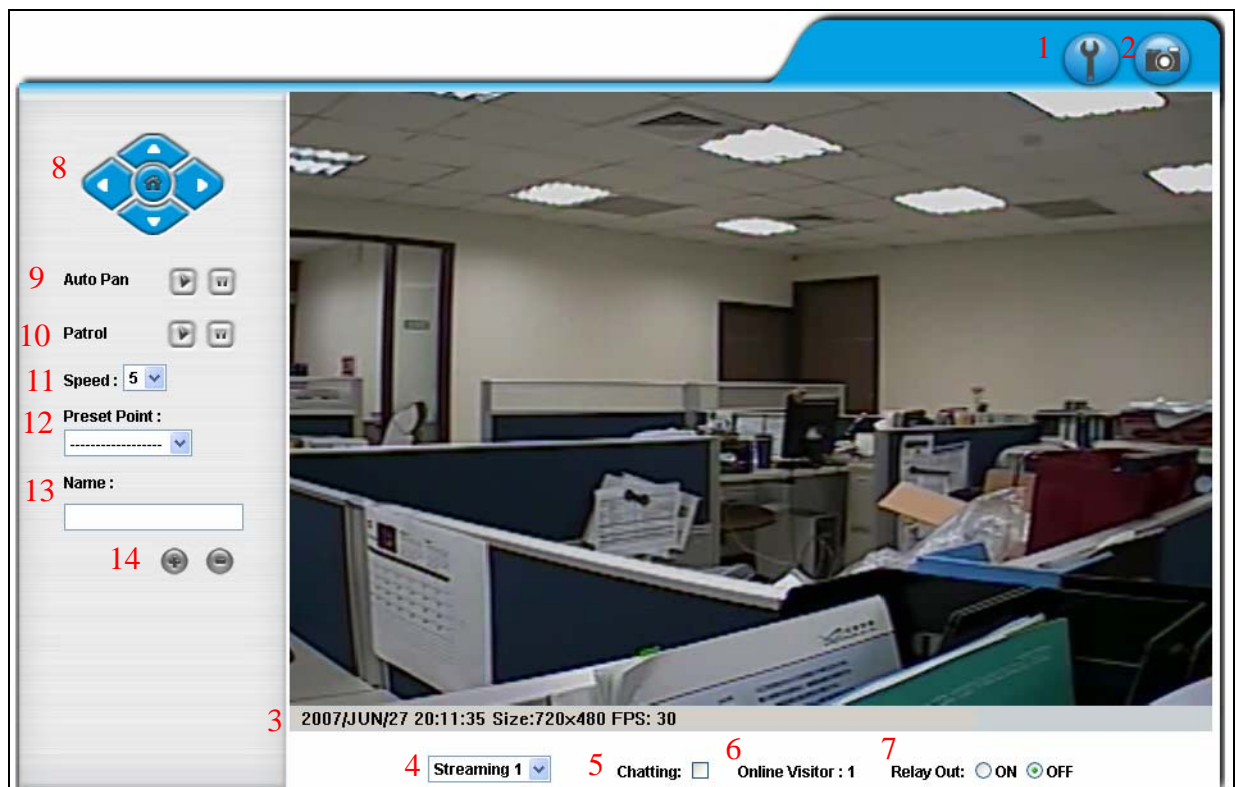


## IV. Live Video



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. Select video streaming source (When streaming 2 setting in 『Video Setting』 is closed, this function will not display)
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.
6. Shows how many people connect to this IP camera
7. Relay out: On or Off
8. Pan Tilt control of this IP camera
9. Auto Pan : The camera will pan horizontally.
10. Patrol : The camera will move alone with the preset points.
11. Speed : The speed of the camera move.
12. Preset Point
13. Set up the name of the preset point
14. Add/ remove preset point

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 shows the IP Camera Configuration web interface. On the left is a sidebar menu with categories: System (containing System Information, User Management, System Update), Network (containing IP Setting, PPPoE, DDNS), A/V Setting (containing Image Setting, Video Setting, Audio), and Event List (containing Event Setting, I/O Setting, Mail & FTP, SD Card, Log List). The main content area is titled 'System Information' and contains the following sections:

- Server Information**
  - Server Name:
  - MAC Address:
  - Language: ☒ English ☐ 繁體中文 ☐ 简体中文
- Overlay Setting**
  - ☒ Enabled ☐ Disabled
  - Position: ☒ Top-Left ☐ Top-Right ☐ Bottom-Left ☐ Bottom-Right
- Time Setting**
  - Server Time: 2007/5/8 10:52:44 Time Zone: GMT+08:00
  - Date Format: ☒ yy/mm/dd ☐ mm/dd/yy ☐ dd/mm/yy
  - Time zone:
  - ☐ NTP :
    - NTP Server :
  - ☐ Synchronize with PC's time
    - Date :
    - Time :
  - ☐ Manual
    - Date :
    - Time :
  - ☒ 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 Simple Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.



- b. Overlay Setting (Display Time&Date on Screen)

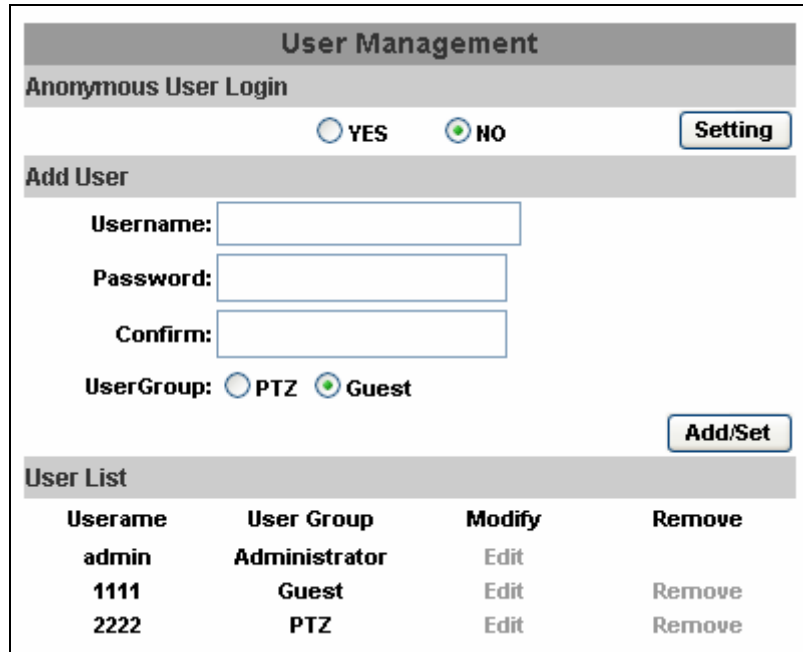
Overlay Setting	
<input checked="" type="radio"/> Enabled	<input type="radio"/> Disabled
Position:	<input checked="" type="radio"/> Top-Left <input type="radio"/> Top-Right <input type="radio"/> Bottom-Left <input type="radio"/> Bottom-Right

- 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:	<input checked="" type="radio"/> yy/mm/dd <input type="radio"/> mm/dd/yy <input type="radio"/> dd/mm/yy
Time zone:	<div> <div>GMT+08:00</div> <div> <div>GMT-09:00</div> <div>GMT-08:00</div> <div>GMT-07:00</div> <div>GMT-06:00</div> <div>GMT-05:00</div> <div>GMT-04:00</div> <div>GMT-03:30</div> <div>GMT-03:00</div> <div>GMT-02:00</div> <div>GMT-01:00</div> <div>GMT-00:00</div> <div>GMT+01:00</div> <div>GMT+02:00</div> <div>GMT+03:00</div> <div>GMT+03:30</div> <div>GMT+04:00</div> <div>GMT+04:30</div> <div>GMT+05:00</div> </div> </div>
<input checked="" type="radio"/> NTP :	
NTP Server :	
<input type="radio"/> Synchronize	
Date :	
Time :	
<input type="radio"/> Manual	
Date :	
Time :	
<input type="radio"/> The date and time remain the same	
<input type="button" value="Apply"/>	

ii 、 User Management

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



The 'User Management' interface is divided into three main sections:

- Anonymous User Login:** Features radio buttons for 'YES' and 'NO' (selected), and a 'Setting' button.
- Add User:** Includes input fields for 'Username:', 'Password:', and 'Confirm:', and a 'UserGroup:' selector with 'PTZ' and 'Guest' (selected) options. An 'Add/Set' button is at the bottom right.
- User List:** A table showing existing users and their management options.

Username	User Group	Modify	Remove
admin	Administrator	Edit	
1111	Guest	Edit	Remove
2222	PTZ	Edit	Remove

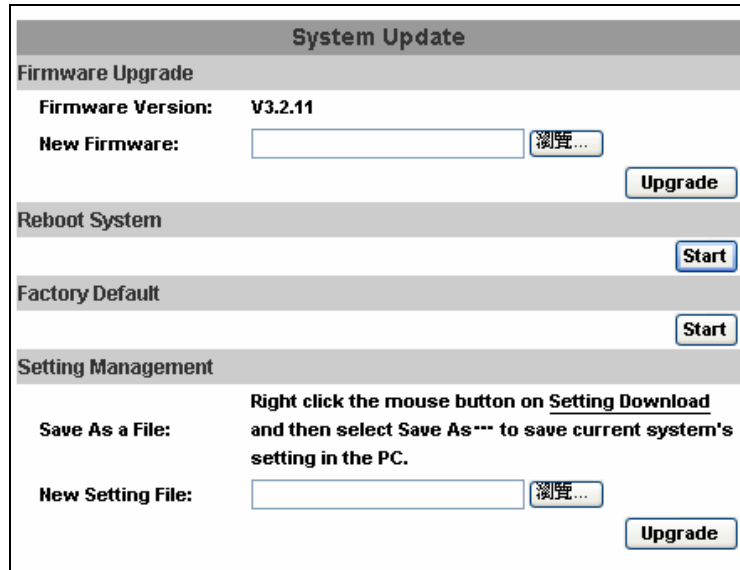
- Anonymous User Login :  
Yes : Allow anonymous login  
No : Need user name & password to access this IP camera
- Add user :  
Type the user name and password, then click "Add/Set".
- Click "edit" or "delete" to modify the user.



The 'User Setup' dialog box, titled 'User\_Setting - Microsoft Internet Explorer', contains the following fields and controls:

- Username:** Text field containing 'admin'.
- Password:** Text field.
- Confirm:** Text field.
- OK:** Button to confirm the setup.

iii 、 System update :



The image shows a web interface titled "System Update". It contains several sections: "Firmware Upgrade" with fields for "Firmware Version: V3.2.11" and "New Firmware:" with a "Browse..." button and an "Upgrade" button; "Reboot System" with a "Start" button; "Factory Default" with a "Start" button; and "Setting Management" with a "Save As a File:" section containing a "New Setting File:" field with a "Browse..." button and an "Upgrade" button. A note in the "Setting Management" section reads: "Right click the mouse button on Setting Download and then select Save As... to save current system's setting in the PC."

- 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

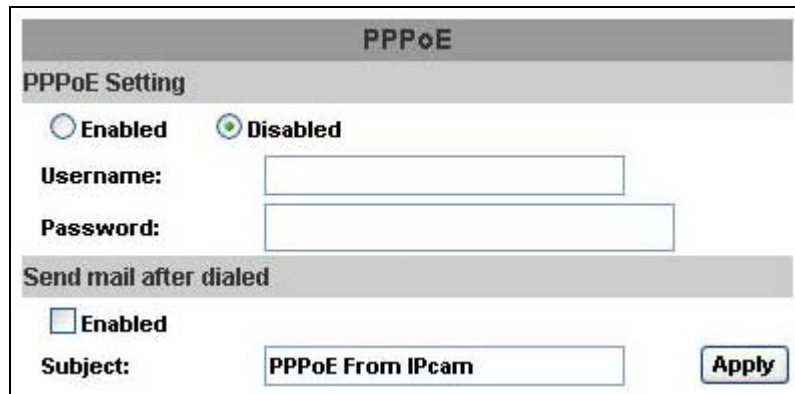
### i、 IP Setting

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:
  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 (Universal Plug and play): Display UPnP device icon in 『My Network Places』 for hyper link.

ii 、 PPPoE :



Select “Enabled” to use PPPoE.

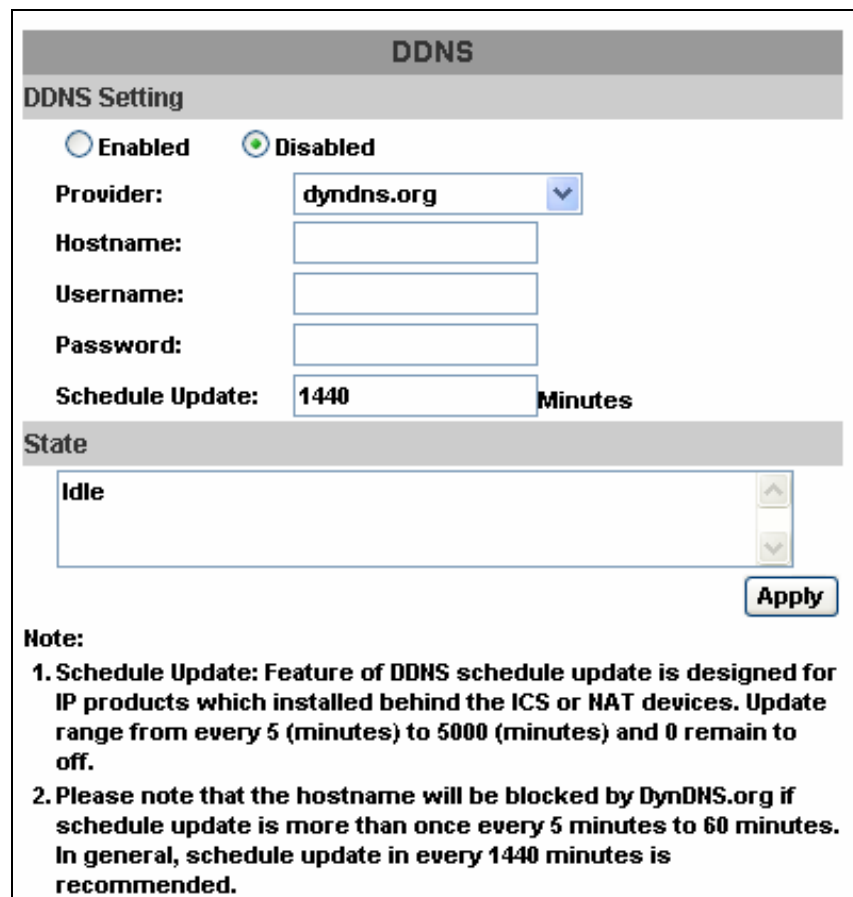
Key-in Username and password for the ADSL connection.

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 :

IP Camera supports DDNS (Dynamic DNS) service.

a. DynDNS :

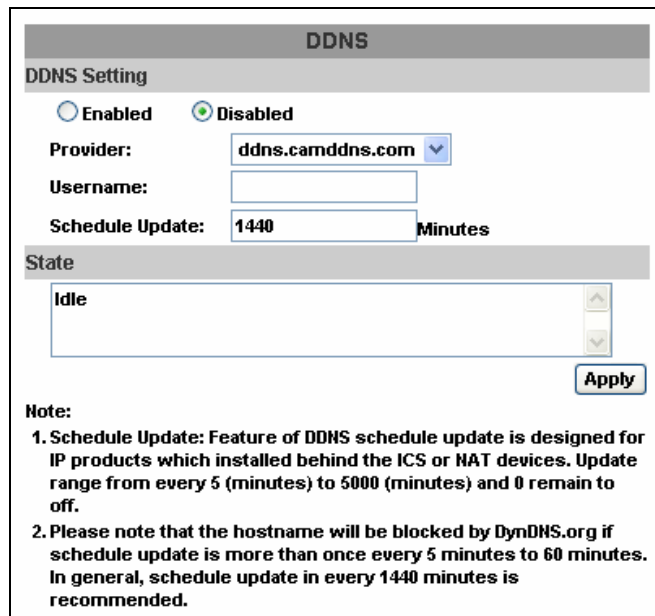


**Note:**

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: ddns.camddns.com

Username:

Schedule Update:  Minutes

**State**

Idle

**Apply**

**Note:**

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Please enable this service
2. Key-in user name
3. IP Schedule update is default at 1440 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 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

Camera

2007/10/21/18:18:18



Image Setting

Brightness:

0

▼

Contrast:

0

▼

Hue:

0

▼

Saturation:

0

▼

Default

Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video.

### 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:

D1 - 720x480

▼

Quality:

Standard

▼

Video Frame Rate:

30 FPS

▼

Video Format:

MPEG4

▼

Video Orientation:

☐ Flip

☐ Mirror

Access Name:

rtsp://<<IP>>/

1. Resolution :

There are 4 resolutions to choose.

		NTSC	/	PAL
D1	–	720×480	/	720×576
4CIF	–	704×480	/	704×576
CIF	–	352×240	/	352×288
QCIF	–	176×120	/	176×144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

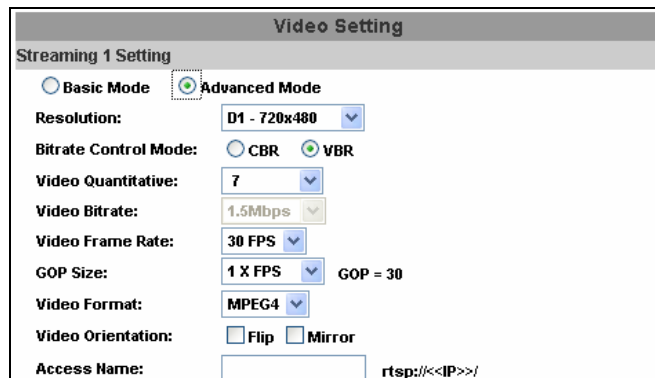
The higher the quality is, the bigger the file size is. Also not good for internet transmitting

3. Video Format : MPEG4 or JPEG

4. Video Orientation : Flip or Mirror

5. Access Name: RTSP output name

b. Streaming 1 Advanced Mode :



**Video Setting**

**Streaming 1 Setting**

☐ Basic Mode ☒ Advanced Mode

Resolution: D1 - 720x480

Bitrate Control Mode: ☐ CBR ☒ VBR

Video Quantitative: 7

Video Bitrate: 1.5Mbps

Video Frame Rate: 30 FPS

GOP Size: 1 X FPS GOP = 30

Video Format: MPEG4

Video Orientation: ☒ Flip ☐ Mirror

Access Name: rtsp://<<IP>>

1. Resolution :

There are 4 resolutions to choose.

		NTSC	/	PAL
D1	–	720×480	/	720×576
4CIF	–	704×480	/	704×576
CIF	–	352×240	/	352×288
QCIF	–	176×120	/	176×144

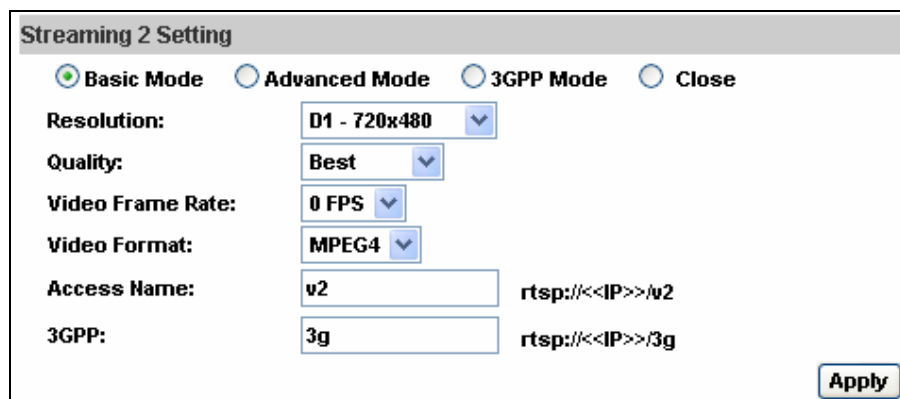
2. Bitrate Control Mode

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

CBR : 64Kbps~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. Video Orientation : Flip or Mirror
  7. Access Name: RTSP output connecting route
- c. Streaming 2 Basic Mode :



**Streaming 2 Setting**

☒ Basic Mode
 ☐ Advanced Mode
 ☐ 3GPP Mode
 ☐ Close

Resolution: D1 - 720x480  
 Quality: Best  
 Video Frame Rate: 0 FPS  
 Video Format: MPEG4  
 Access Name: v2      rtsp://<<IP>>/v2  
 3GPP: 3g      rtsp://<<IP>>/3g

**Apply**

1. Resolution :  
There are 4 resolutions to choose.
 

		NTSC	/	PAL
D1	–	720x480	/	720x576
4CIF	–	704x480	/	704x576
CIF	–	352x240	/	352x288
QCIF	–	176x120	/	176x144
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 Format : MPEG4 or JPEG
4. Access Name: RTSP output connecting route
5. 3GPP: 3GPP output name

d. Streaming 2 Advanced Mode :

Streaming 2 Setting

☐ Basic Mode
 ☒ Advanced Mode
 ☐ 3GPP Mode
 ☐ Close

Resolution: D1 - 720x480

Bitrate Control Mode: ☒ CBR ☐ VBR

Video Quantitative: 7

Video Bitrate: 128Kbps

Video Frame Rate: 5 FPS

GOP Size: 1 X FPS GOP = 5

Video Format: MPEG4

Access Name: v2 rtsp://<<IP>>/v2

3GPP: 3g rtsp://<<IP>>/3g

Apply

1. Resolution :

There are 4 resolutions to choose.

	NTSC	/	PAL
D1	– 720x480	/	720x576
4CIF	– 704x480	/	704x576
CIF	– 352x240	/	352x288
QCIF	– 176x120	/	176x144

2. Bitrate Control Mode

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

CBR : 64Kbps~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

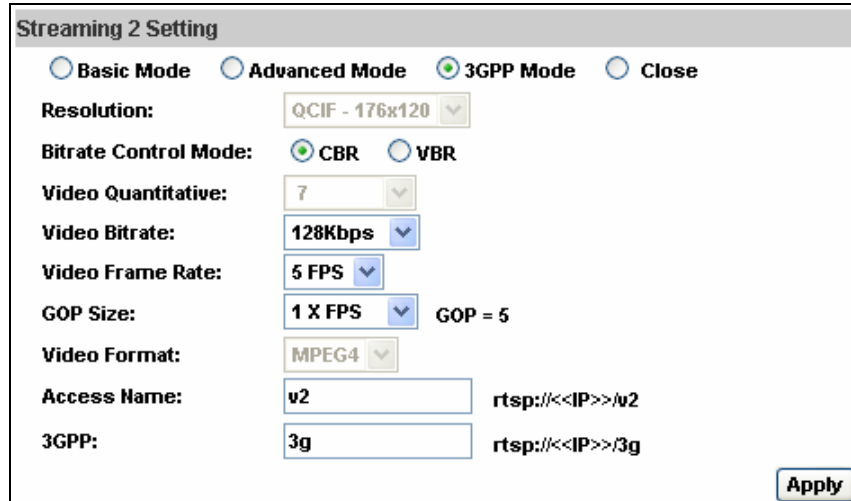
It means "Group of Pictures". The higher the GOP is, the better the quality is.

5. Video Format : MPEG4 or JPEG

6. Access Name: RTSP output name

7. 3GPP: 3GPP output name

e. Streaming 2, 3GPP mode:



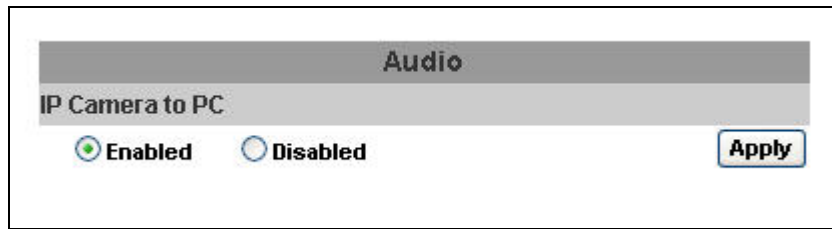
**3GPP mode suggest setting: QCIF, lower than 128kbps, 5FPS, GOP= 1x FPS or 2x FPS, MPEG4 format**

1. Fix Resolution :  
QCIF – 176x120 / 176x144
2. Bitrate Control Mode  
There are CBR [ Constant Bit Rate ] and VBR [ Variable Bit Rate ] to use.  
CBR : 64Kbps~4Mbps (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. Access Name: RTSP output name
7. 3GPP: 3GPP output name

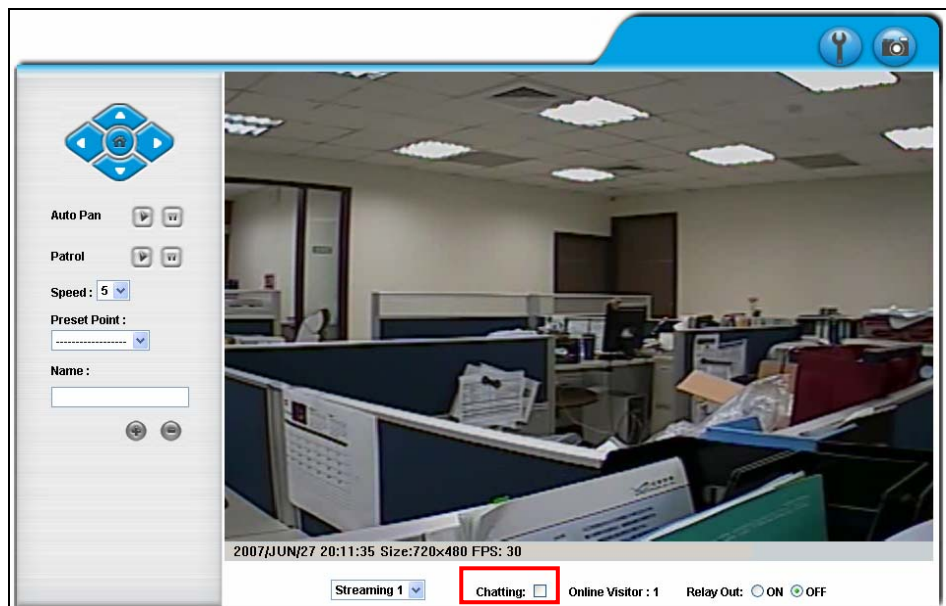
iii. Audio :

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 mic 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 mic 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 video to some specific mail addresses, transmit the video to remote ftp server, 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 Time Setting : Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered

c. 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.**

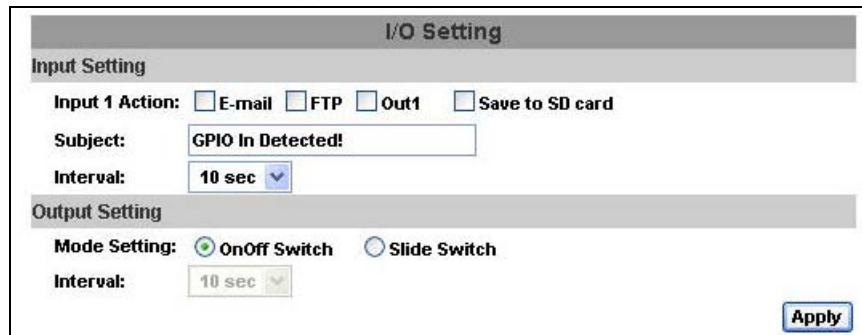
d. Network IP check:

Whenever 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 recorded on SD card is fixed with 30 seconds.**

ii. I/O Setting

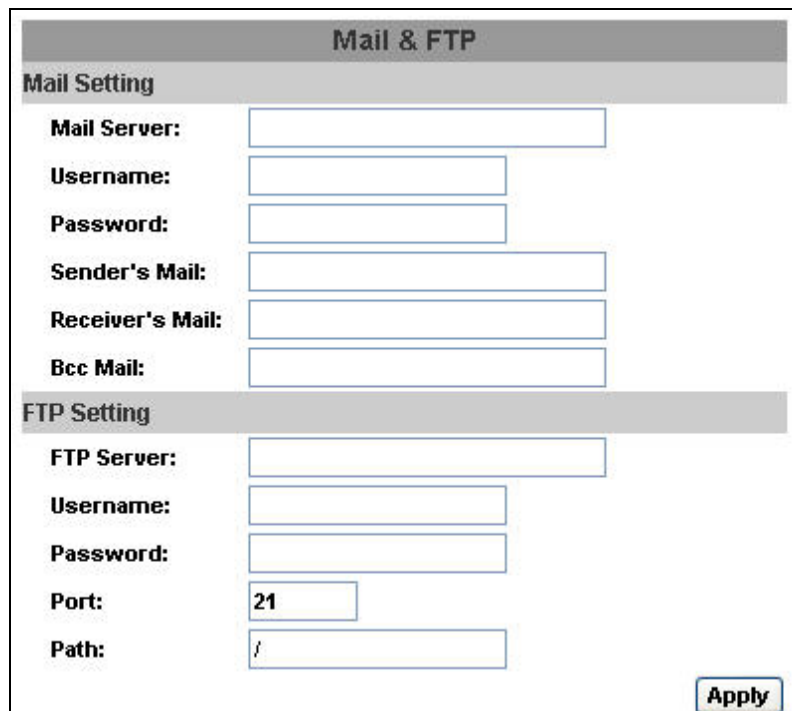
IP Camera supports 1 Input/ 1 Output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.



The I/O Setting interface is divided into two sections: Input Setting and Output Setting. In the Input Setting section, there are four checkboxes for 'Input 1 Action': E-mail, FTP, Out1, and Save to SD card. Below these is a 'Subject' text field containing 'GPIO In Detected!' and an 'Interval' dropdown menu set to '10 sec'. The Output Setting section has a 'Mode Setting' with two radio buttons: 'OnOff Switch' (selected) and 'Slide Switch'. Below this is another 'Interval' dropdown menu set to '10 sec'. An 'Apply' button is located at the bottom right of the form.

iii. Mail & FTP

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



The Mail & FTP configuration interface is divided into two sections: Mail Setting and FTP Setting. The Mail Setting section includes five text input fields for 'Mail Server', 'Username', 'Password', 'Sender's Mail', and 'Receiver's Mail', followed by a 'Bcc Mail' field. The FTP Setting section includes five text input fields for 'FTP Server', 'Username', 'Password', 'Port' (with '21' entered), and 'Path' (with '/' entered). An 'Apply' button is located at the bottom right of the form.



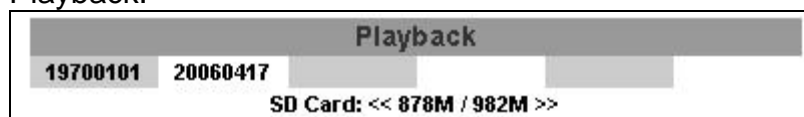
iv. SD card

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.

2006/04/17			Del
Time	Video	Event Type	
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"/>

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.

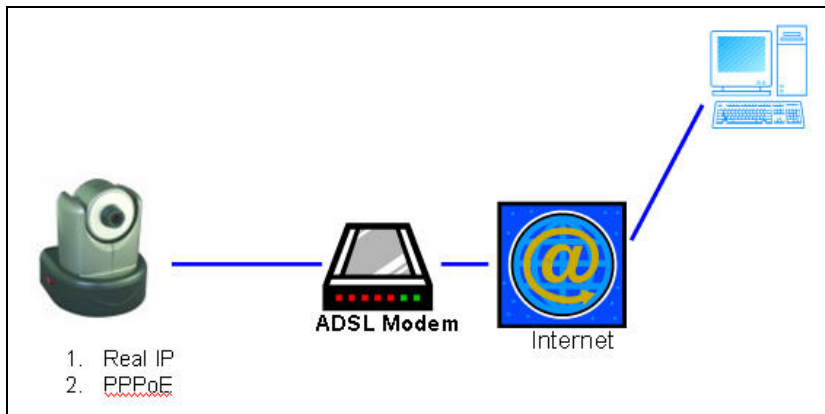
v. Log List

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.

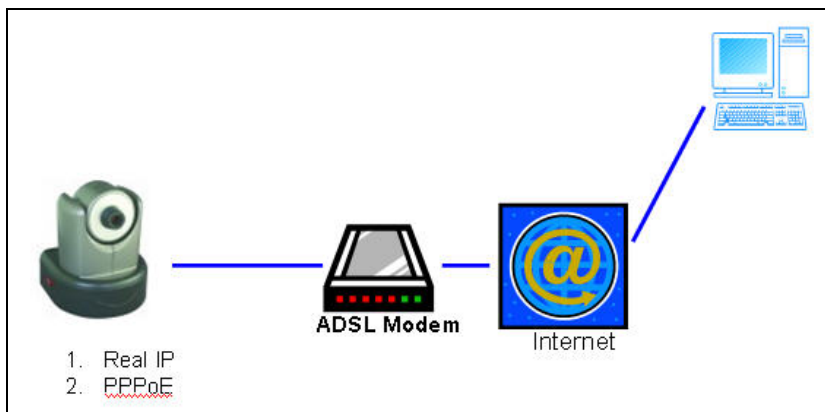
## VI. Network Configuration

### i 、 Configuration 1 :



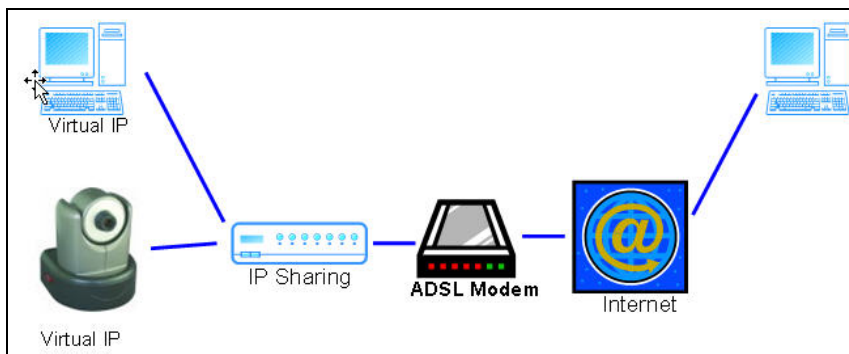
- a. Internet Access : ADSL or Cable Modem
- b. IP address : One real IP or one dynamic IP
- c. Only IP Camera connects to the internet
- d. For fixed real IP, set up the IP into IP Camera. For dynamic IP, start PPPoE.

### 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.

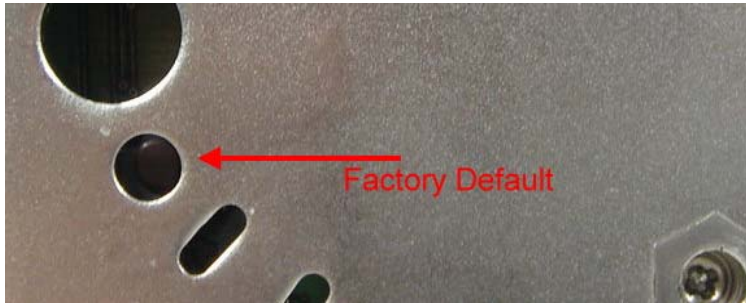
iii 、 Configuration 3 :



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