User Manual

Mega-Pixel IP CAMERA

WARINGS

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

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	**CAUTION**	
	RISK OF ELECTRIC SHOCK DO NOT OPEN	

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

COPYRIGHT

Content

I. Preface

This is a progressive CCD Mega-Pixel IP camera with the web server built in. User can view real-time video via IE browser. It supports MPEG-4 & JPEG 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

- Mega-Pixel (HD960)
- Power over Ethernet
- True Day/ Night Function
- Mechanism IR Cut Filter available
- MPEG4/ MJPEG Compression Format
- 2-way audio
- Support Cell phone/PDA/3GPP
- Dual Streaming
- SDK for Software Integration
- Wireless available
- Free Bundle 36 Channel Recording Software

Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	System: 64MB Video: 16MB
Flash	32MB
Image Sensor	1/3” SONY Progressive scan M-Pixel CCD image sensor
Sensitivity	0.1 lux @ F=1.2
Lens Type	CS Mount

Support DC IRIS	Yes
I/O	1 in/ 1out (Relay)
RS-485	Yes
Video Out	BNC x 1 (Slider Switch, For Installation Only)
Microphone	Built-in
Audio Out	RCA x 1
Power over Ethernet	Yes, IEEE 802.3af
Power Consumption	LAN: DC 12V, 310mA
	WLAN: DC 12V, 550mA
ICR	Mechanism IR Cut Filter
Operating Temperature	-10 ℃ ~45 ℃
Dimensions (W×L×D)	58 x 65 x 131.5 mm
Weight	450g
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP , 3GPP
Wireless	802.11b/g
WEP	64/ 128 bit
System	
Video Resolution	MJPEG: 1280*960, 640* 480
	MPEG4: 640*480, 320*240, 160*120
Video adjustment	Brightness, Contrast, Saturation, Hue, Sharpness
Dual Streaming	Yes
CCD Setting	AES, Flicker-less, BLC, AGC, Day/ Night (Auto), AWB, DC Iris, Flip/Mirror, Slow Shutter
Image snapshot	Yes
Full screen monitoring	Yes
Compression format	MPEG-4/ MJPEG
Motion Detection	Yes, 3 different areas
Triggered Action	Mail, FTP, Alarm Out
Pre/ Post alarm	Yes, configurable
Security	Password protection
Firmware upgrade	HTTP mode, can be upgraded remotely

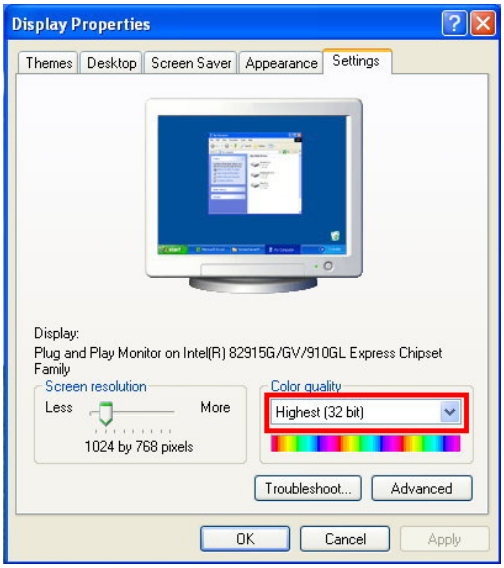
Simultaneous connection		Up to 10
Audio		Yes, 2-way (ADPCM)
Client system requirements		
OS		Windows 2000/ 2003, XP, Vista, Microsoft IE 6.0 or above
Hardware		
	Suggested	Intel-P4 2.0G, RAM：512MB, Graphic card：256MB
	Minimum	Intel-C 2.0G, RAM：512MB, Graphic card：128MB

III. Product Installation

A. Monitor Setting

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

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

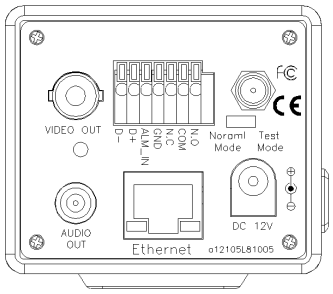


B. Hardware Installation

i. Connect power adaptor

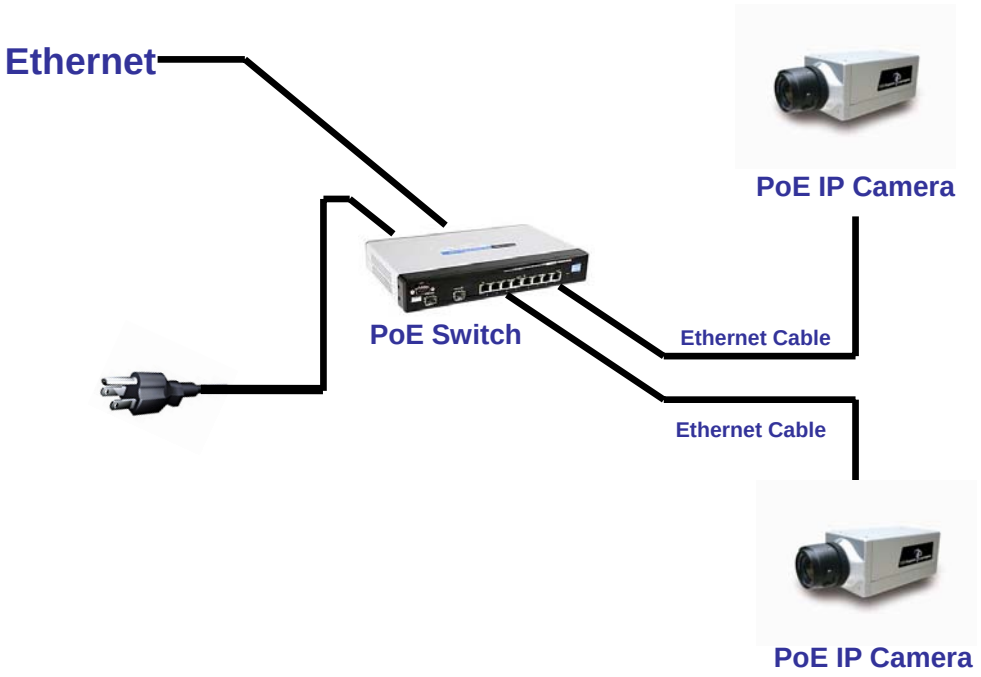
ii. Connect IP Cam to PC or network with Ethernet cable

iii. Back Panel Diagram



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. 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.

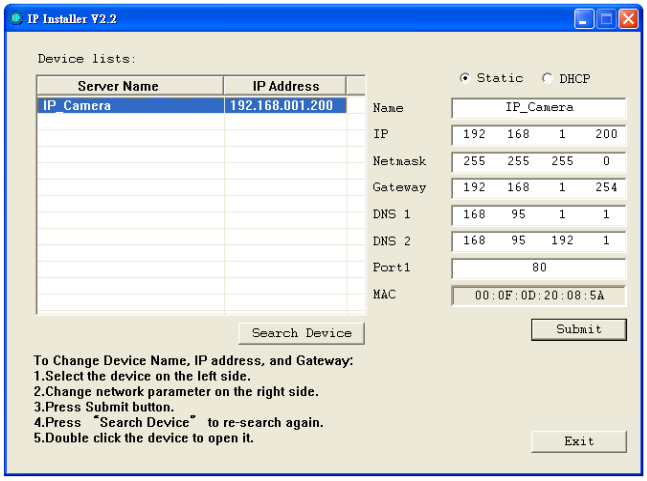
ii. IP installer supports two languages
   a. IPInstallerCht.exe：Chinese version
   b. IPInstallerEng.exe：English version

iii. There are 3 kinds of IP configuration.
   a. Fixed IP (Public IP or Virtual IP)
   b. DHCP (Dynamic IP)
   c. Dial-up (PPPoE)

iv. Execute IP Installer

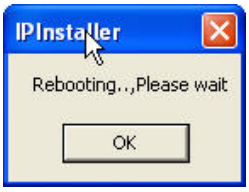
v. For Windows XP SP2 user, it may popup the following message box. Please click “Unblock”.

vi. IP Installer configuration:



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

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



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

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

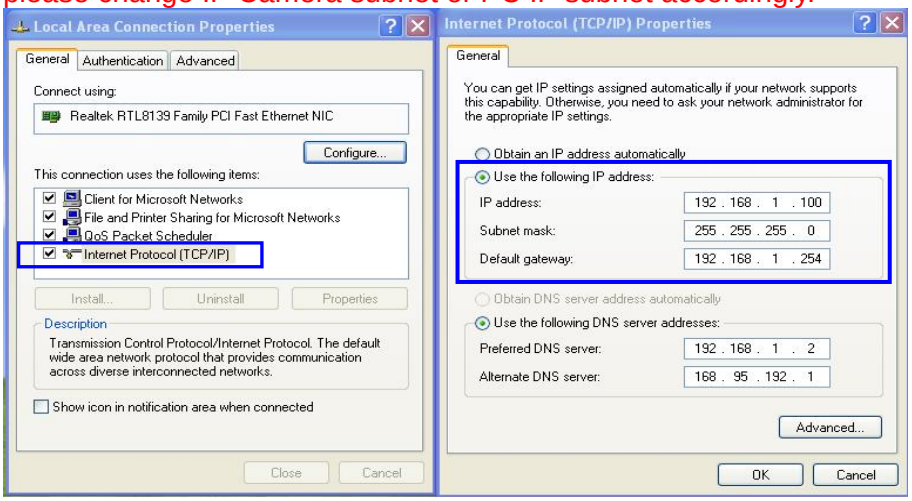
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

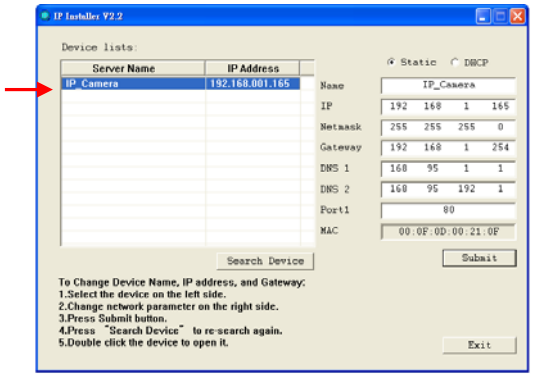
To Change PC IP address:

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

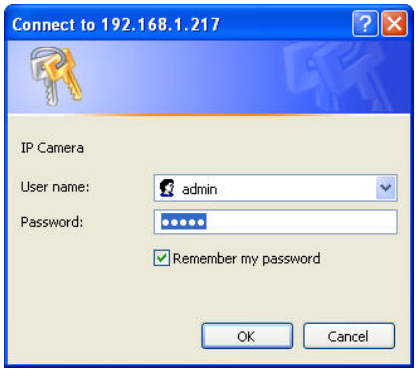
Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera subnet or PC IP subnet accordingly.



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



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



D. Install ActiveX control:

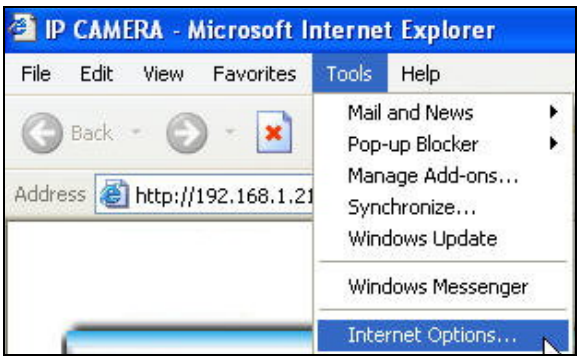
For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

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



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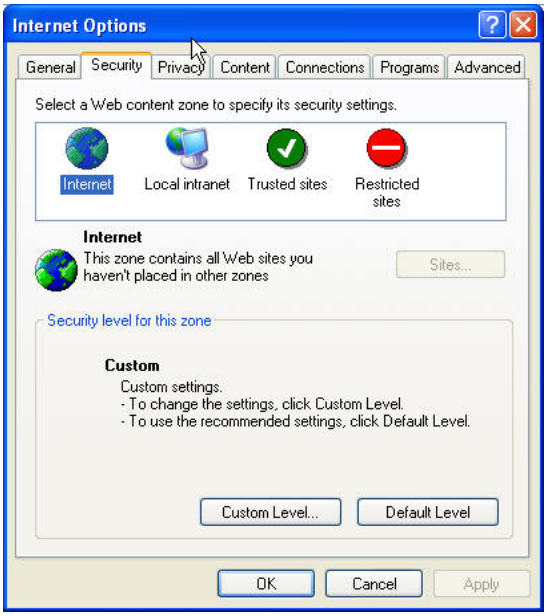

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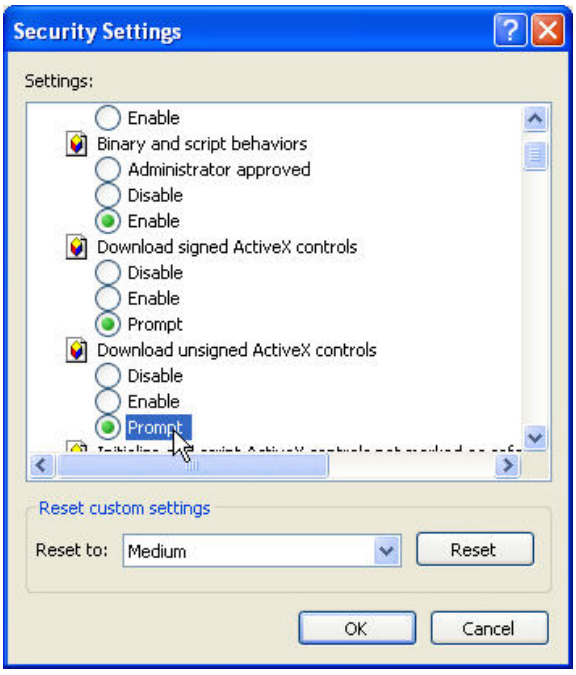

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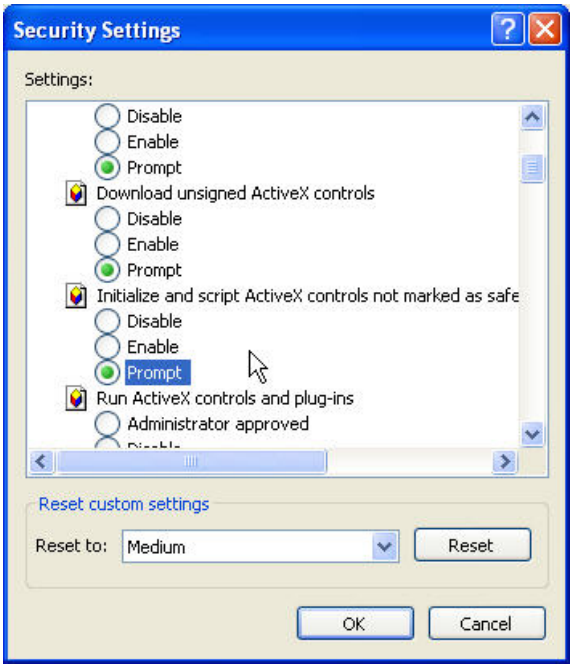
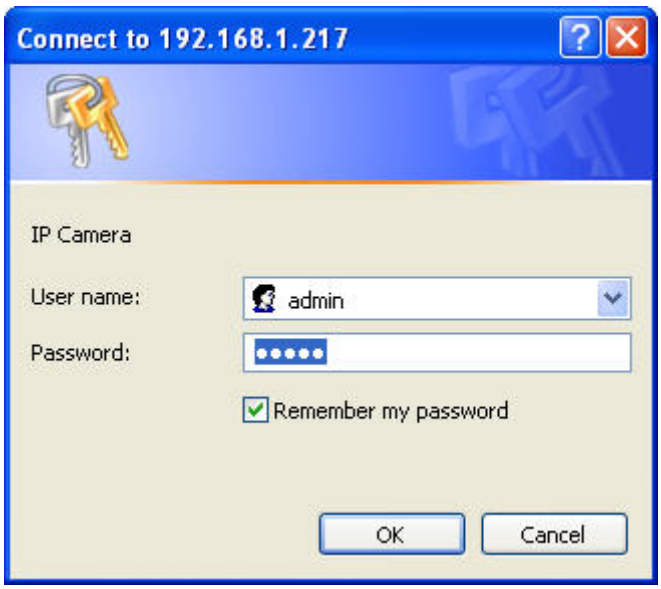


5

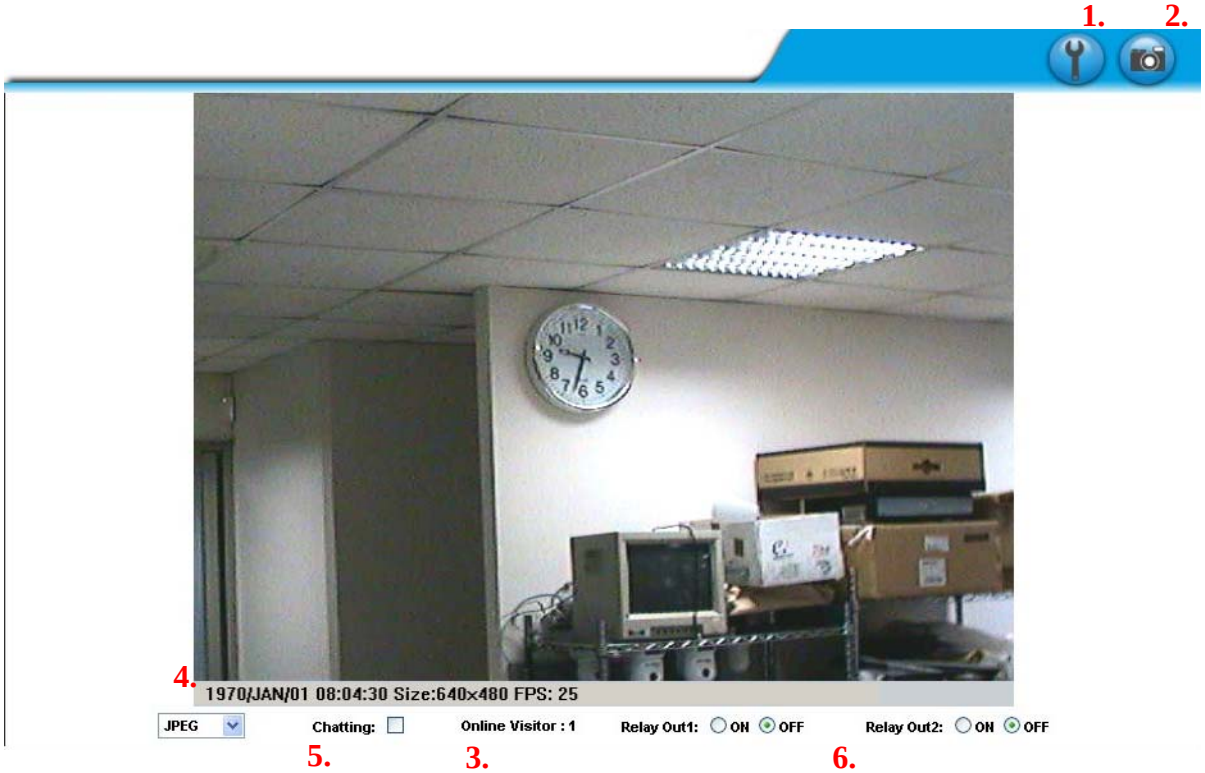
When popup the following dialogue box, click “Yes”.

IV. Live Video

Start a IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name and password. The default user name and password are “**admin**” and “**admin**”.



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



1.  ：Get into the administration page

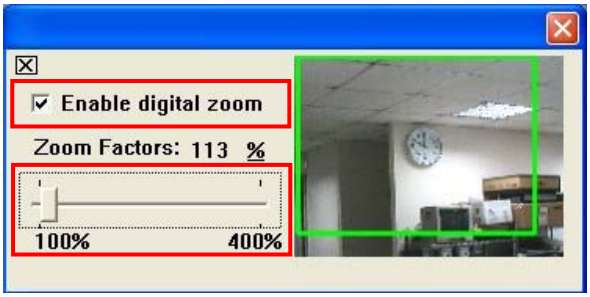
2.  ：Video Snapshot

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.
6. Control the relay which is connected to this camera.

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

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

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.
5. Zoom : Enable zoom-in and zoom-out functions. Select “Enable digital zoom” option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



V. Configuration

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

A.System

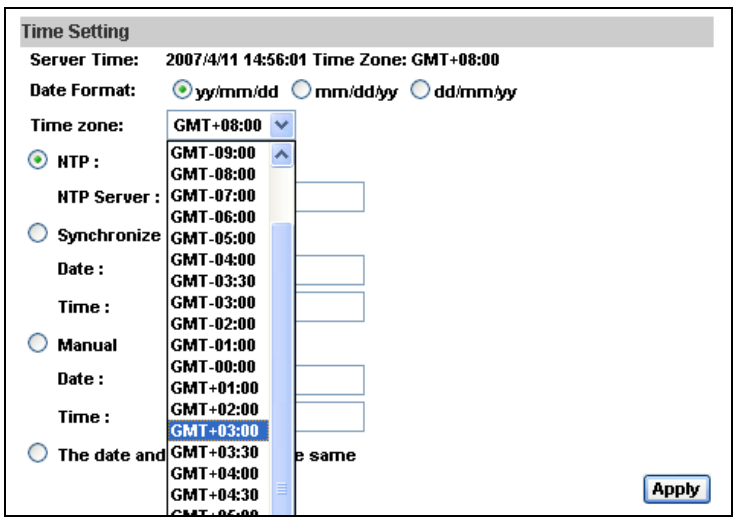
i、 System Information

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 Simplified Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.

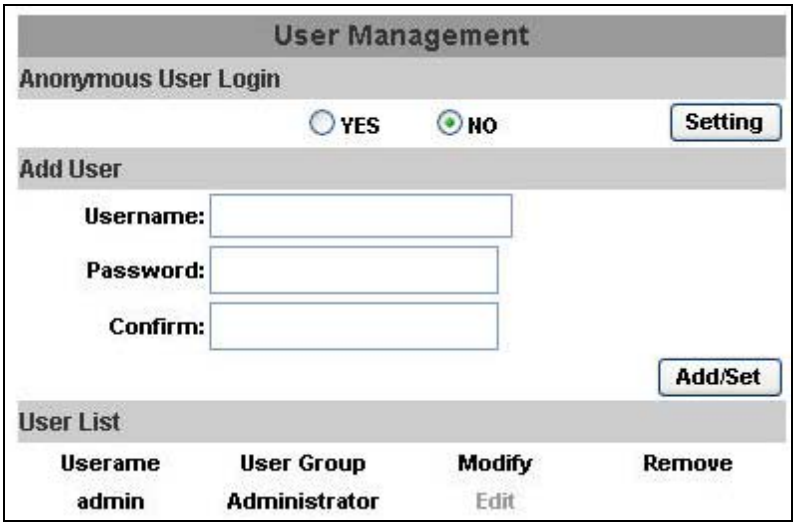
b. OSD Setting: select a position where date & time showing on screen.

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

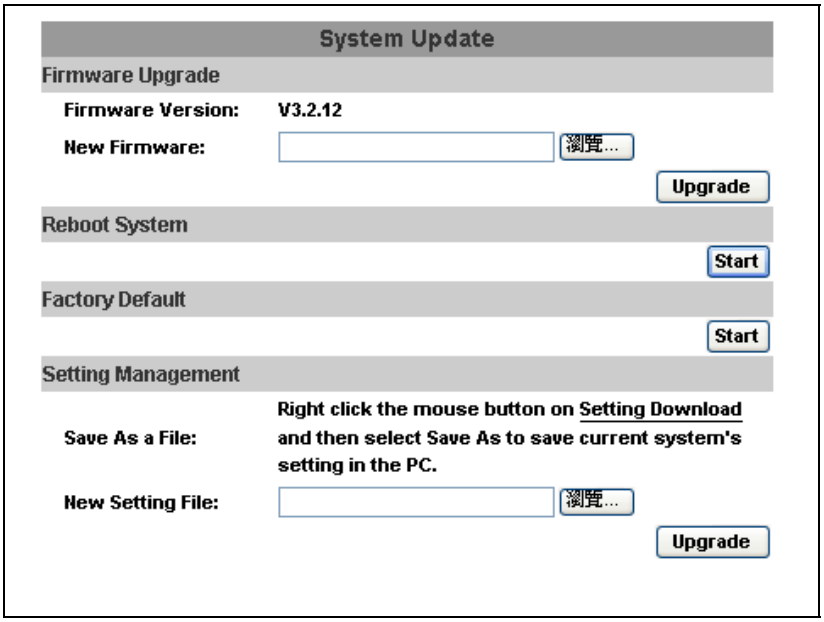
No：Need user name & password to access this IP camera

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 proceed.

b. Reboot system：re-start the IP camera

c. Factory default：delete all the settings in this IP camera.

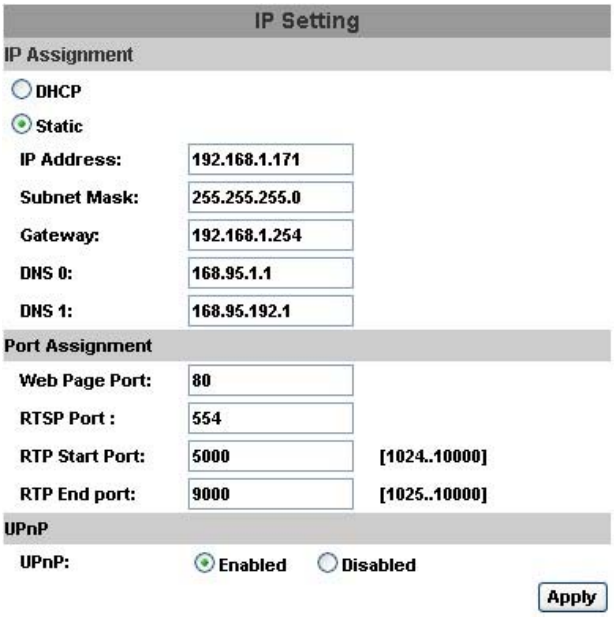
d. Setting Management：User may download the current setting to PC, or upgrade from previous saved setting.

   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.



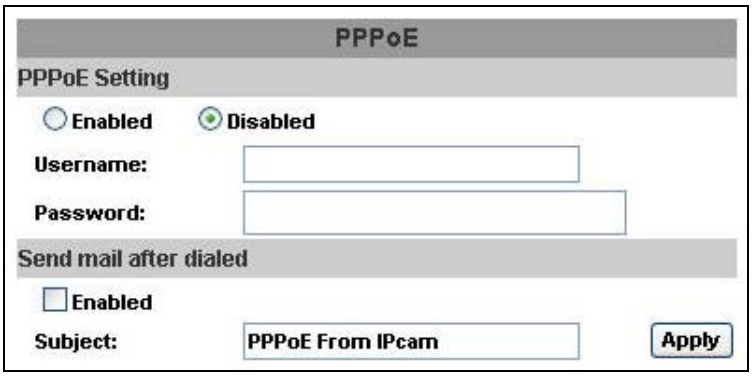
a. DHCP：Using DHCP, IP CAMERA will get all the network parameters automatically.

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.

d. UPnP : Enable or disable UPnP.

ii、 PPPoE：



Select “Enabled” to use PPPoE.

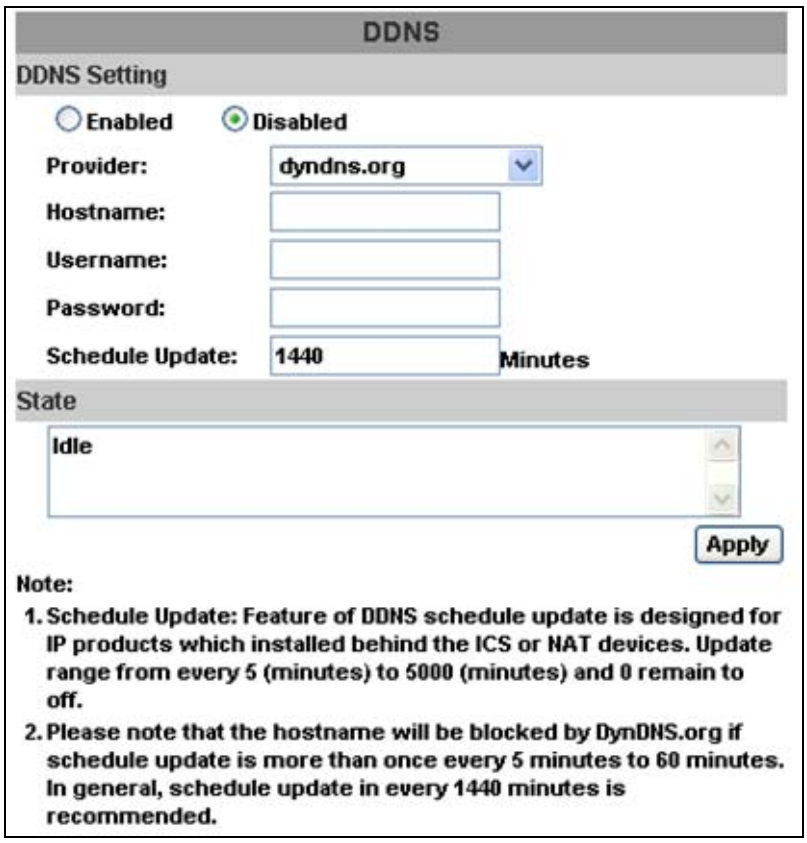
Key-in Username and password for the ADSL connection.

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：

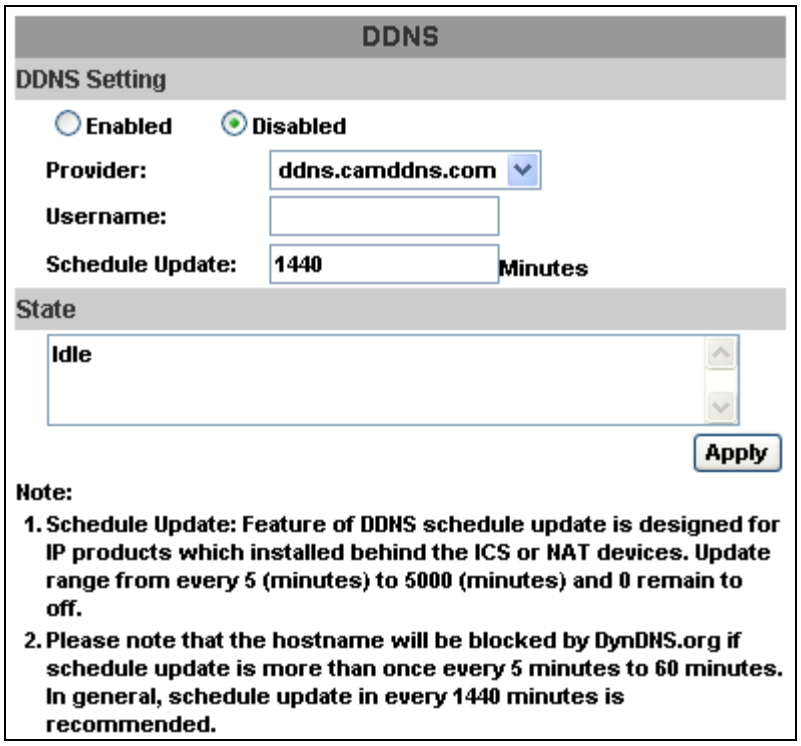
It supports DDNS (Dynamic DNS) service.

a. DynDNS：



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：



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

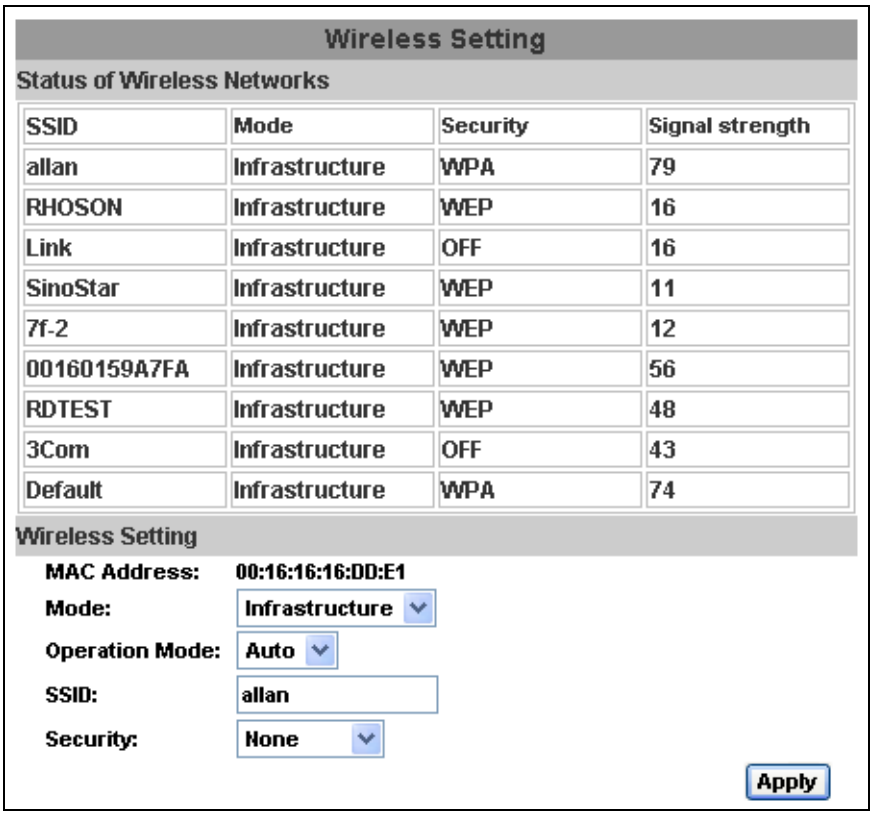
c. DDNS Status

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.



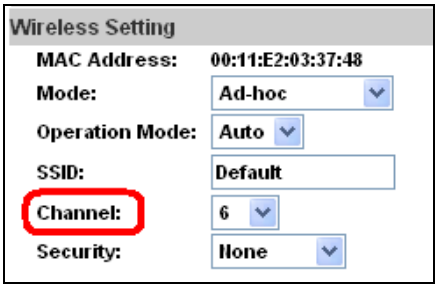
a. Status of Wireless Networks；

scan all wireless services.

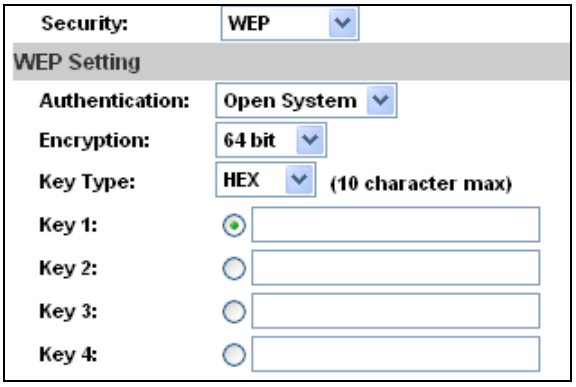
b. Wireless Setting：

1. **Mode**：There are Infrastructure and Ad-hoc two modes. 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 set to 1 as well.

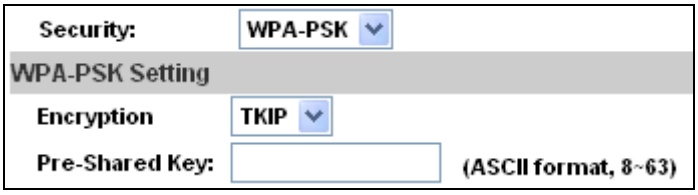


2. **SSID**：Based on AP setting.
3. **Channel**：This is only be used when the user selects Ad-hoc mode in order to avoid conflict.
4. **Security**：It supports “None”, “WEP”, “WPA-PSK” security encryption based on the setting of the Router.
5. **WEP**：



- 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.

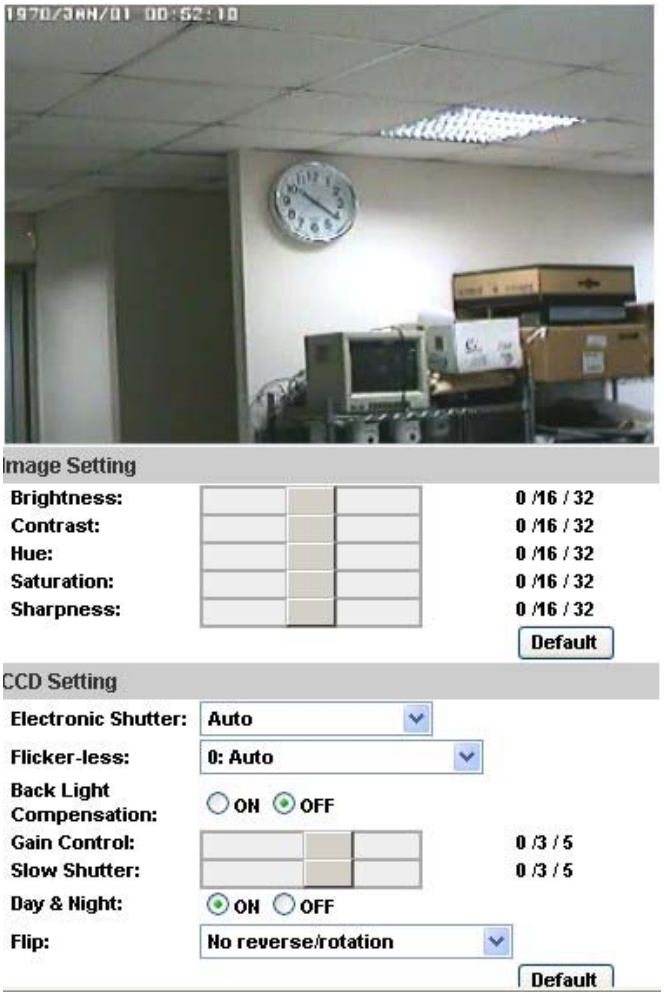
6. **WPA-PSK**：



- 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” and “Sharpness” to get clear video.

Electronic Shutter, Flicker-less, Back Light Compensation, Gain Control, Slow Shutter, Day & Night and Flip functions are adjustable as well in CCD setting.

ii、 Video Setting

JPEG Setting: Basic mode.

MPEG-4 Setting: Basic mode, Advanced mode, and 3GPP mode.

a. JPEG Setting：

1. Resolution：

   There are 2 resolutions to choose.

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

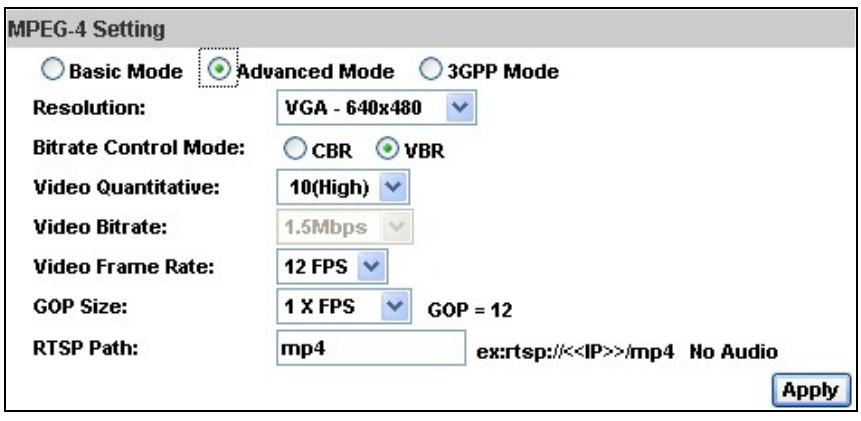
3. Video Frame Rate

   Picture display frame per second

   Max 30 frames/second (1280x960 Max FPS :15)

4. Access Name: RTSP output name

b. MPEG-4 Advanced Mode：



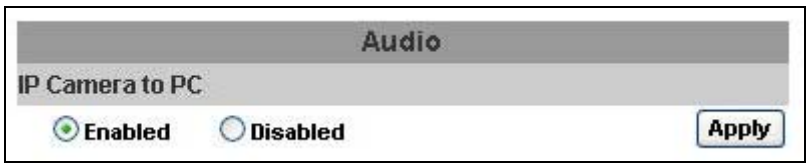
1. Resolution：
   There are 3 resolutions to choose.

2. Bitrate Control Mode
   There are CBR〔Constant Bit Rate〕 and VBR〔Variable Bit Rate〕to use.
   CBR：32Kbps~2Mbps – 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
   Max 30 frames/second (640x480 Max FPS :30)
4. GOP Size
   It means "Group of Pictures". The higher the GOP is, the better the quality is.
5. Access Name: RTSP output connecting route

iii、 Audio：

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

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



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

D.Event List

IP CAMERA provides multiple event settings.

i、 Event Setting

a. Motion Detection：

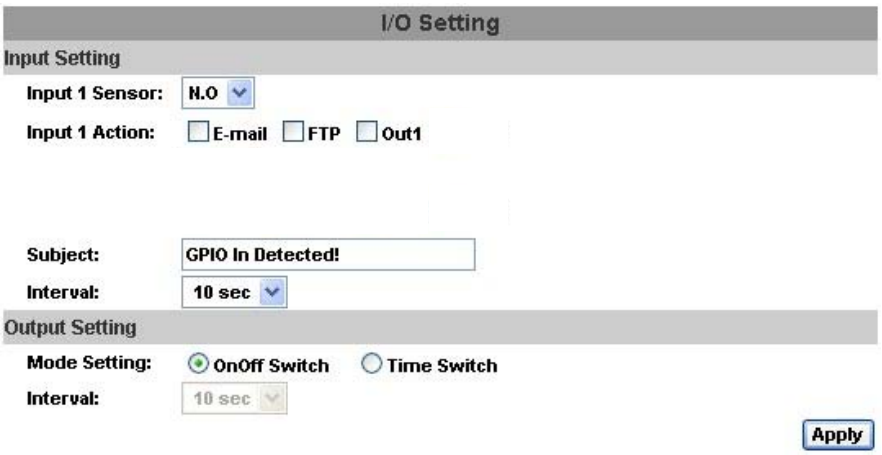
IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, and trigger the relay. To set up the motion area, click “Area Setting”. Using mouse to drag and draw the area. The same operation for area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

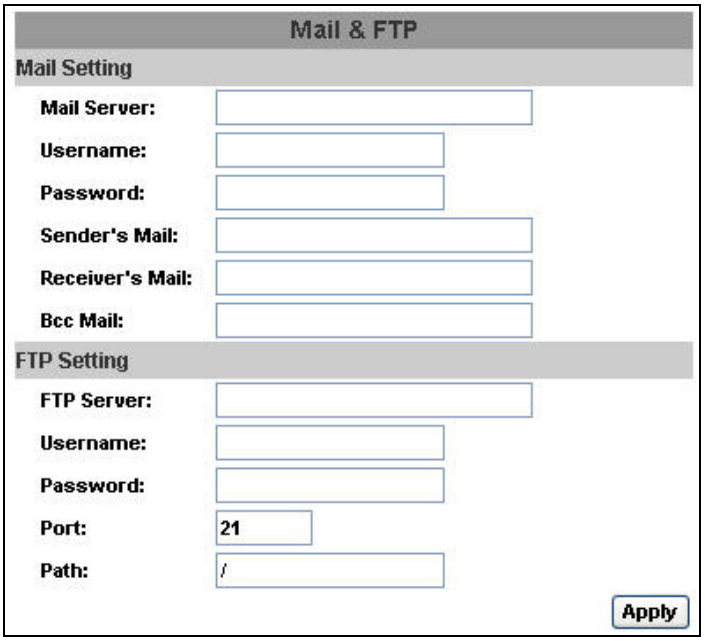
ii、 I/O Setting

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 and trigger the relay.

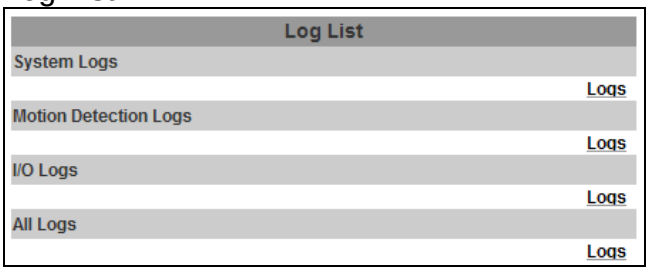


iii、 Mail & FTP

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



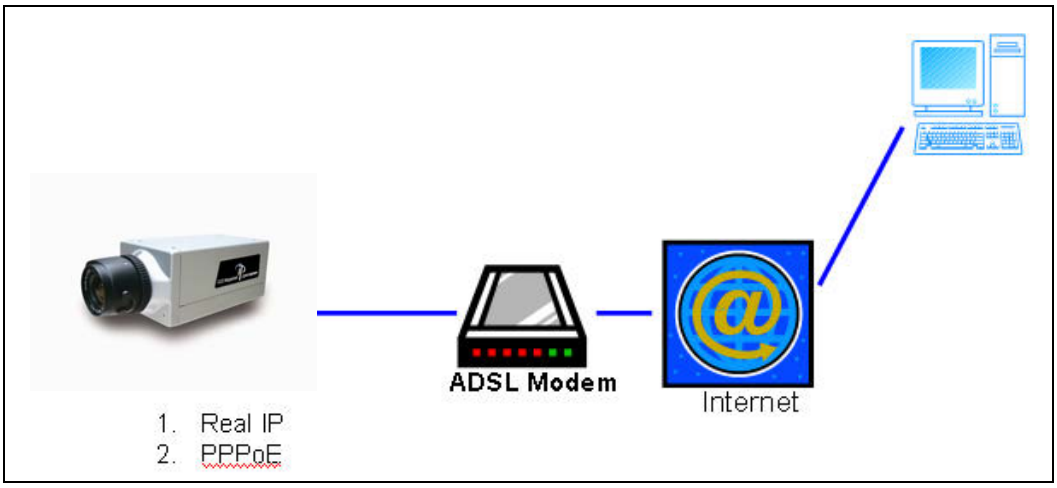
iv、 Log List



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.

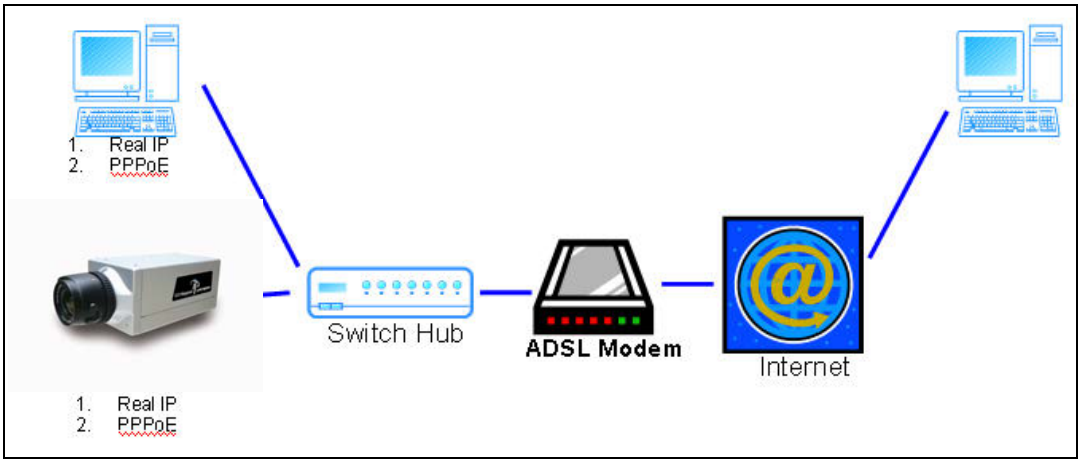
VI. Network Configuration

i、 Configuration 1：



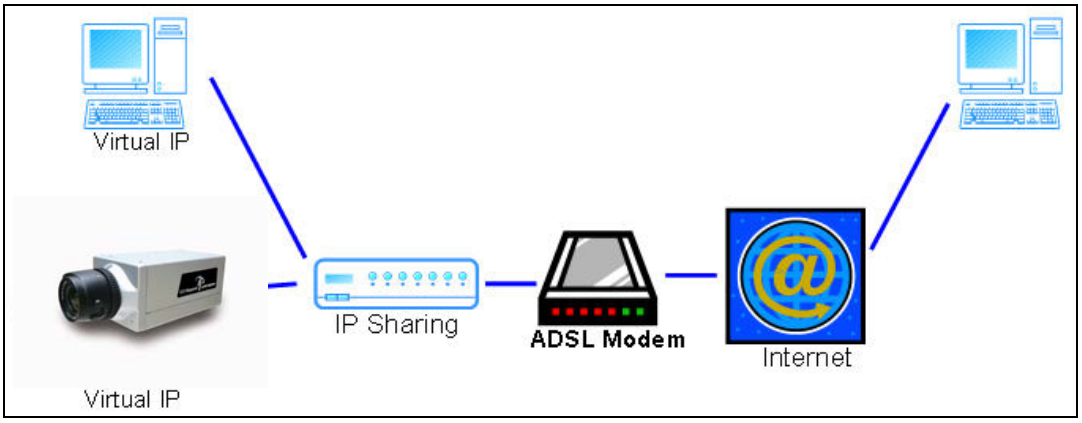
a. Internet Access：ADSL or Cable Modem
b. IP address：One real IP or one dynamic IP
c. Only IP CAMERA connects to the internet
d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

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：

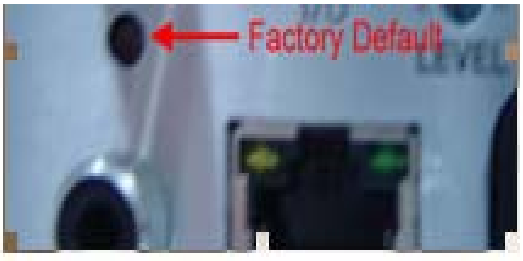


a. Internet Access：ADSL or Cable Modem
b. IP address：one real IP or one dynamic IP
c. IP CAMERA and PC connect to the internet
d. Device needed：IP sharing
e. Use virtual IP, set up port forwarding in IP sharing.

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)

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