

User Manual

IP CAMERA





WARNINGS

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

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	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.		

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I. Preface

This is a 1/2.7" 2M CMOS IP camera with the web server built in. User can view real-time video via IE browser. It supports H.264, JPEG and MPEG4 video compression which provides smooth and high video quality. The video can be stored in the Micro 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

- 1/2.7" 2M CMOS Sensor
- Digital Noise Reduction
- Digital Wide Dynamic Range
- Shutter Speed adjustment
- Sense Up adjustment
- Power over Ethernet available (Option)
- H.264/ JPEG / MPEG4 compression
- Micro SD card backup
- DI/DO
- Support iPhone/ Android/ Symbian /Blackberry/Mac
- Triple Streaming
- SDK for Software Integration
- Free Bundle 36 Channel Recording Software

Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	256MB
Flash	16MB
Image sensor	1/2.7" 2M CMOS sensor
Lens Type	4.2mm @ F1.6
Sensitivity	1.0 Lux @ 25fps

Shutter Time	1 / 5 ~ 1 / 10,000 sec	
Audio	G.711(64K) and G.726(32K,24K) audio compression Input : Mic built-in Output : 3.5mm phone jack, Support 2-way audio	
IO	DI / DO	
Power over Ethernet	Optional	
Operating Temperature	0°C~40°C	
Dimensions	59mm x 93.7(mm)x 45.5(mm)	
Weight	240g	
Network		
Ethernet	10/ 100 Base-T	
Network Protocol	HTTP, HTTPS, SNMP, QoS/DSCP, Access list, IEEE 802.1X, RTSP, TCP/IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMBA	
Wireless (Optional)		
	Wireless	802.11 n/b/g
	Security	WEP,WPA-PSK,WPA2-PSK
System		
Video Resolution	1920x1080@25fps, 1280x720@25fps, ,640x480@30fps, 320x240@30fps, 176x144@30fps	
Triple Streaming	Yes	
CMOS setting	Brightness, Contrast, Hue, Saturation, Sharpness, AGC, Shutter Speed adjustment, Sense-Up, D-WDR, Flip, Mirror, Noise reduction	
Image snapshot	Yes	
Full screen monitoring	Yes	
Zoom	Yes	
Privacy Mask	Yes, 3 different areas	
Compression format	H.264/ M-JPEG/ MPEG4	
Video bitrates adjust	CBR, VBR	
Motion Detection	Yes, 3 different areas	
Triggered action	Mail, FTP, Save to SD card, DO, SAMBA	

Pre/ Post alarm	Yes, configurable	
Security	Password protection, IP address filtering, HTTPS encrypted data transmission, 802.1X port-based authentication for network protection, QoS/DSCP	
Firmware upgrade	HTTP mode, can be upgraded remotely	
Simultaneous connection	Up to 10	
Micro SD card management		
Recording trigger	Motion Detection, IP check, Network break down (wire only), schedule, DI	
Video format	AVI, JPEG	
Video playback	Yes	
Delete files	Yes	
Web browsing requirement		
OS	Windows 7, 2000, XP, 2003, Microsoft IE 6.0 or above	
Hardware	Suggested	Intel Dual Core 2.53G, RAM: 1024MB, Graphic card: 128MB
	Minimum	Intel-C 2.8G, RAM: 512MB, Graphic card: 64MB

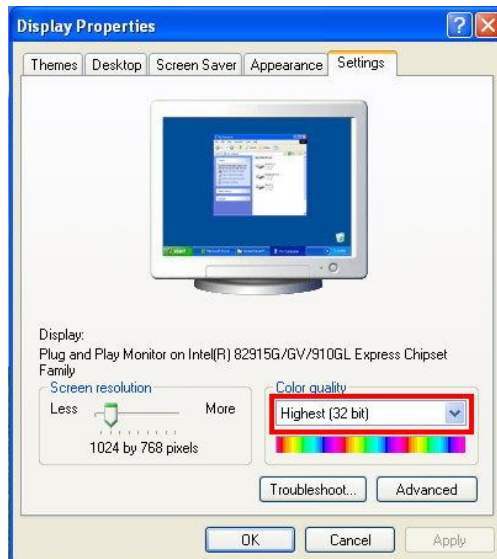
III. Product Installation

A. Monitor Setting

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



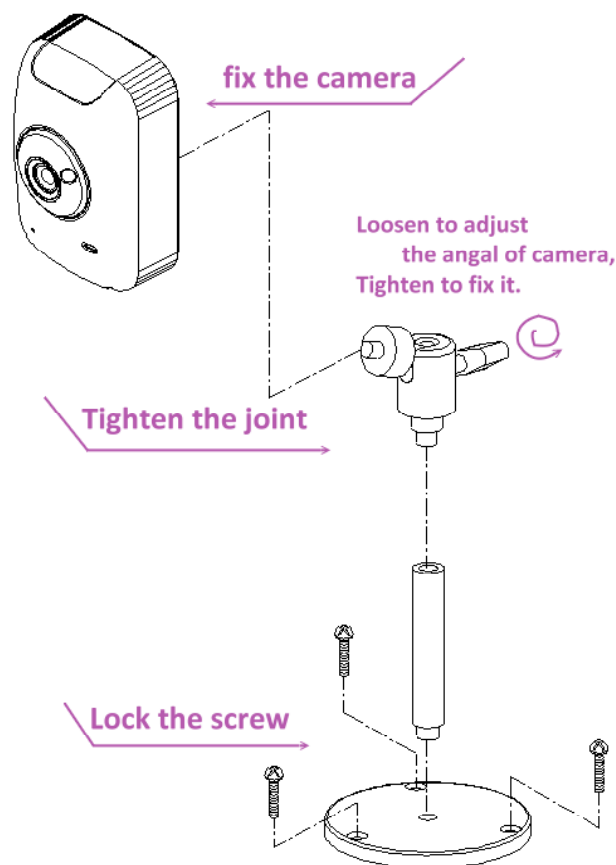
- ii. Change color quality to highest (32bit).



B. Hardware Installation Assignment

i. Camera Construction

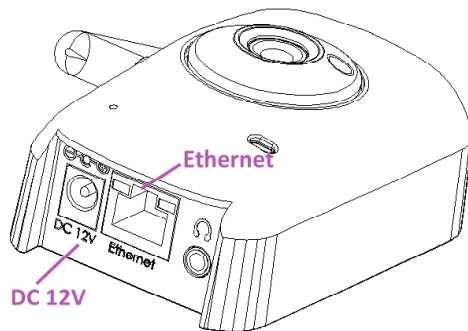
Please refer to the picture for camera installation. Use the screws to lock the bracket to the wall or ceiling, and then connect the camera to the bracket. There's a knob on the back of the bracket. Loosen the knob and you can adjust the angle of camera. Tighten it to fix the angle.



ii. Connect power adaptor.

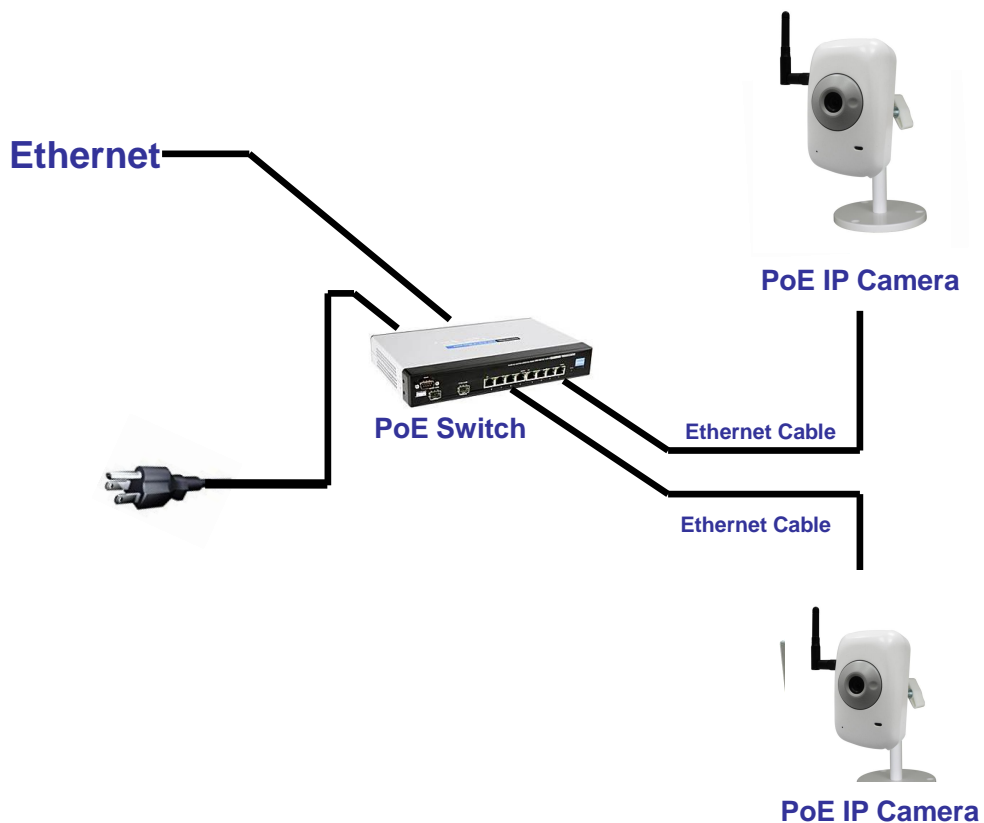
Connect IP Cam to PC or network with Ethernet cable.

Set up the network configurations according to the network environment. For further explanation, please refer to chapter VI, "Network Configuration for IP CAMERA".



- iii. PoE (Power Over Ethernet)(Optional) **802.3af, 15.4W PoE Switch is recommended**

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that used for network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.

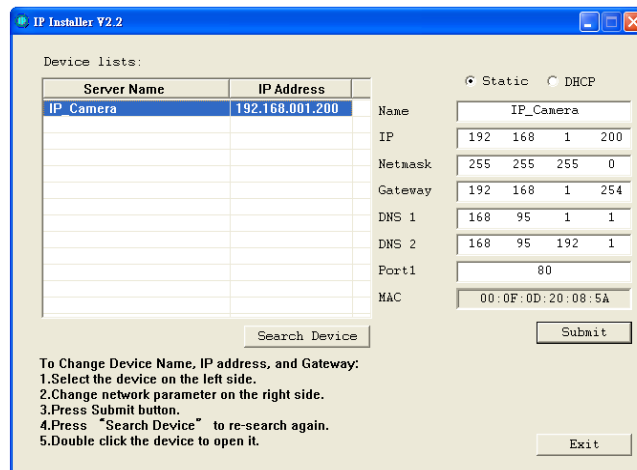


C. IP Assignment

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



- vi. IP Installer configuration:



- vii. IP Installer will search all IP Cameras connected on Lan. The user can

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



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

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

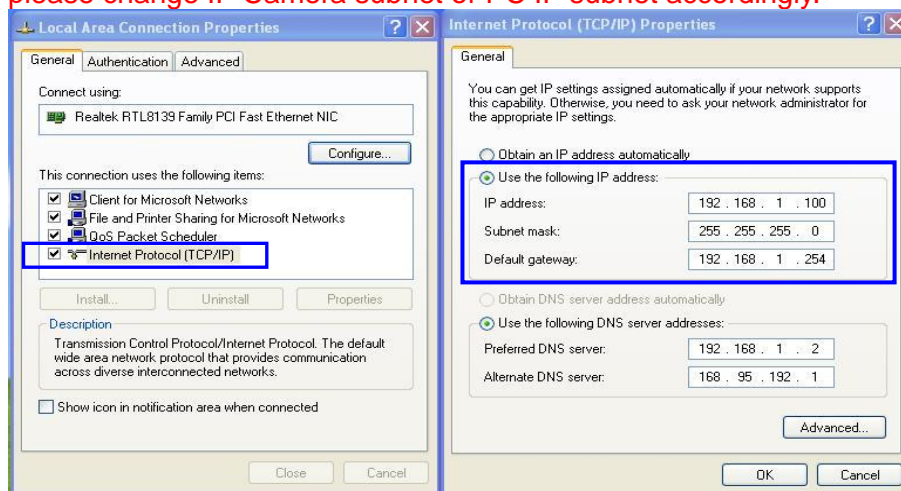
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

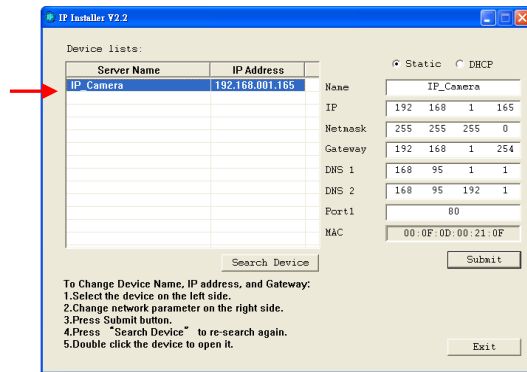
To Change PC IP address:

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

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



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

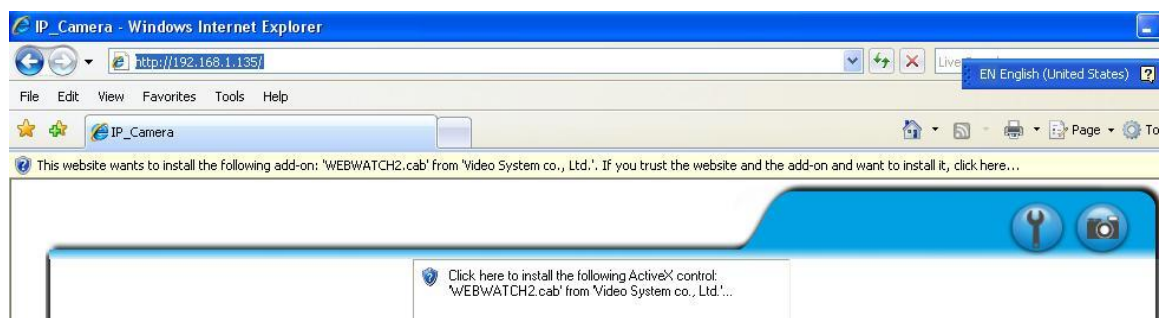


- xi. Then, please key in the default “user name: admin” and “password: admin”.



D. Install ActiveX control:

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



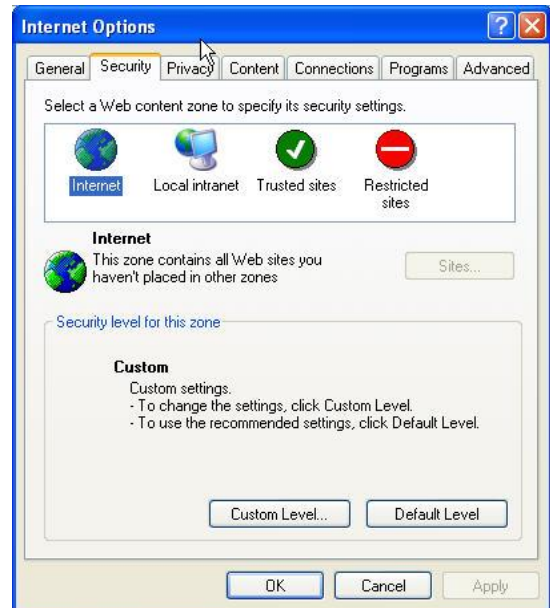
If the installation failed, please check the security setting for the IE browser.

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

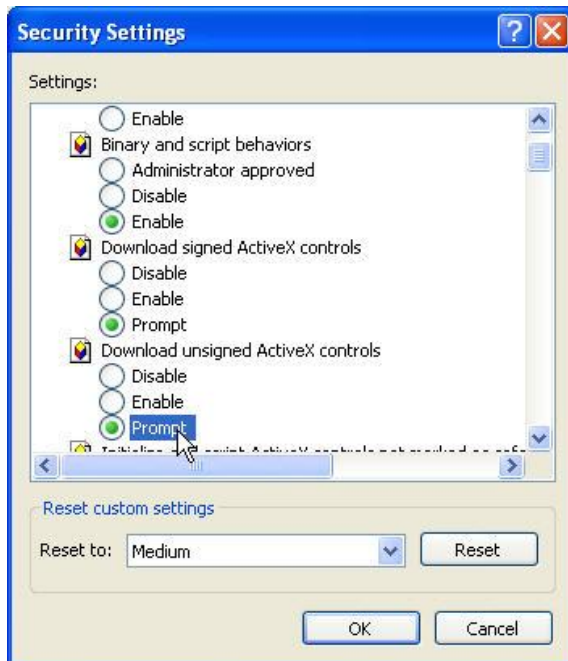
1



2



3

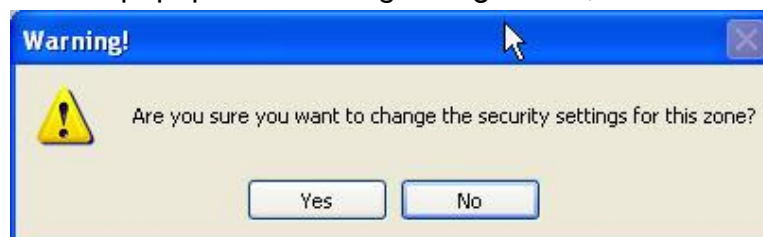


4



5

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

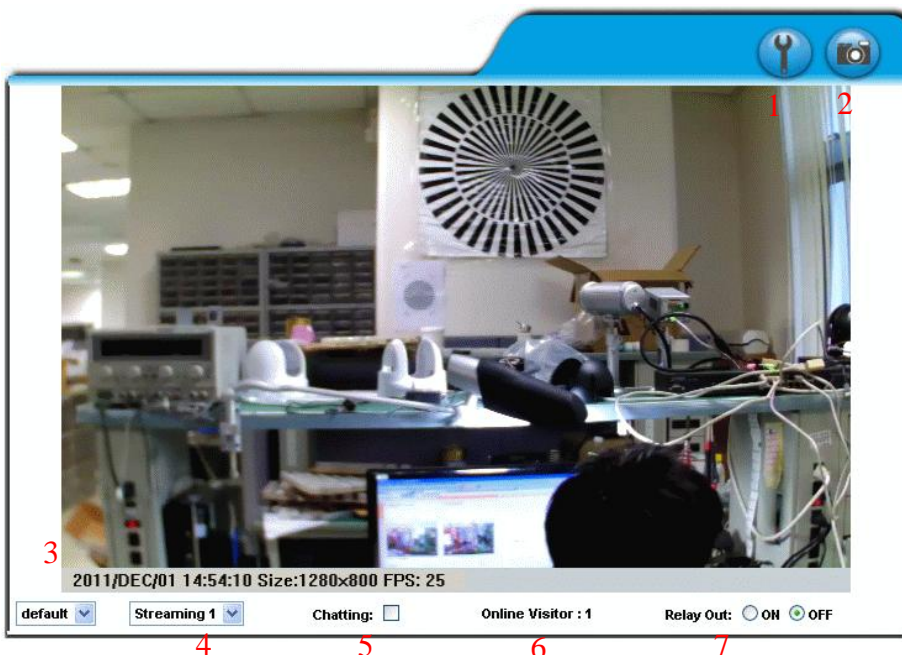




IV. Live Video

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



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



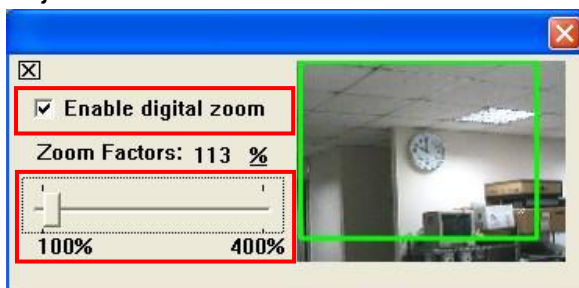
1.  : Get into the administration page
2.  : Video Snapshot
3. Show system time, video resolution, and video refreshing rate
4. Select video streaming source **(When streaming 2 setting in 『Video Setting』 is closed, this function will not display)**
5. IP Camera supports 2-way audio. Click the “Chatting”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

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.




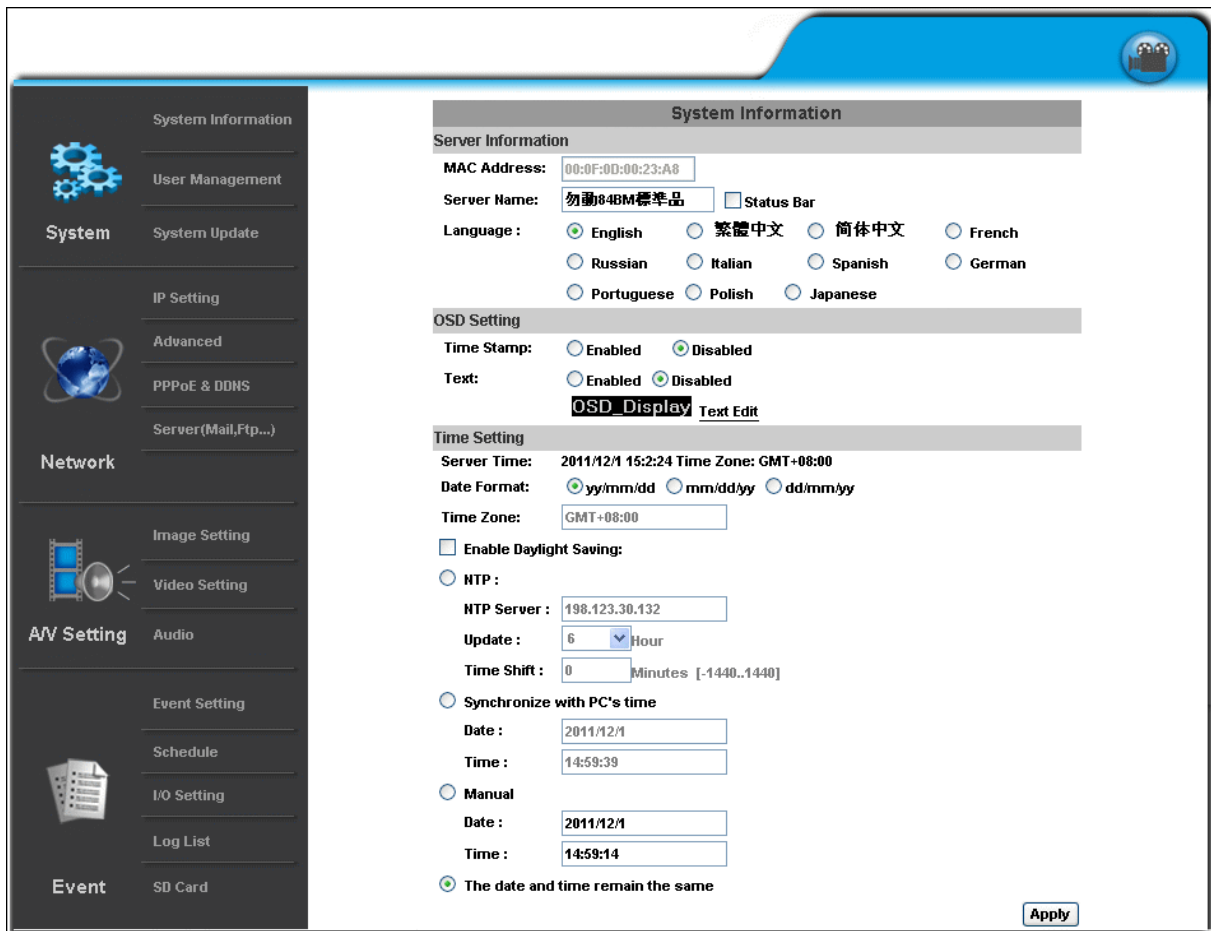
V. Configuration



Click  to get into the administration page.



Click  to go back to the live video page.



The screenshot displays the configuration web interface for an IP camera. On the left is a navigation sidebar with categories: System (containing System Information, User Management, System Update), Network (containing IP Setting, Advanced, PPPoE & DDNS, Server(Mail,Ftp...)), A/V Setting (containing Image Setting, Video Setting, Audio), and Event (containing Event Setting, Schedule, I/O Setting, Log List, SD Card). The main content area is titled 'System Information' and includes the following sections:

- Server Information:**
 - MAC Address: 00:0F:0D:00:23:A8
 - Server Name: 勿動48M標準品 Status Bar
 - Language: English 繁體中文 简体中文 French Russian Italian Spanish German Portuguese Polish Japanese
- OSD Setting:**
 - Time Stamp: Enabled Disabled
 - Text: Enabled Disabled
 - OSD_Display [Text Edit](#)
- Time Setting:**
 - Server Time: 2011/12/1 15:24 Time Zone: GMT+08:00
 - Date Format: yy/mm/dd mm/dd/yy dd/mm/yy
 - Time Zone: GMT+08:00
 - Enable Daylight Saving:
 - NTP :
 - NTP Server : 198.123.30.132
 - Update : 6 Hour
 - Time Shift : 0 Minutes [-1440..1440]
 - Synchronize with PC's time
 - Date : 2011/12/1
 - Time : 14:59:39
 - Manual
 - Date : 2011/12/1
 - Time : 14:59:14
 - The date and time remain the same

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

A. System

i. System Information

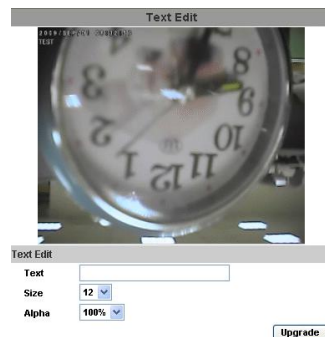
- a. Server Information: Set up the camera name, select language, and set up the camera time.
 1. Server Name : This is the Camera name. This name will show on the IP Installer.
 2. Select language : There are English, Traditional Chinese, and Simplified Chinese to select. When change, it will show the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



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



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



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

Time Setting

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

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

Time zone: GMT+08:00

NTP :
 NTP Server :

Synchronize
 Date :
 Time :

Manual
 Date :
 Time :

The date and time are the same

ii . User Management

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

User Management

Anonymous User Login

YES NO

Add User

Username:

Password:

Confirm:

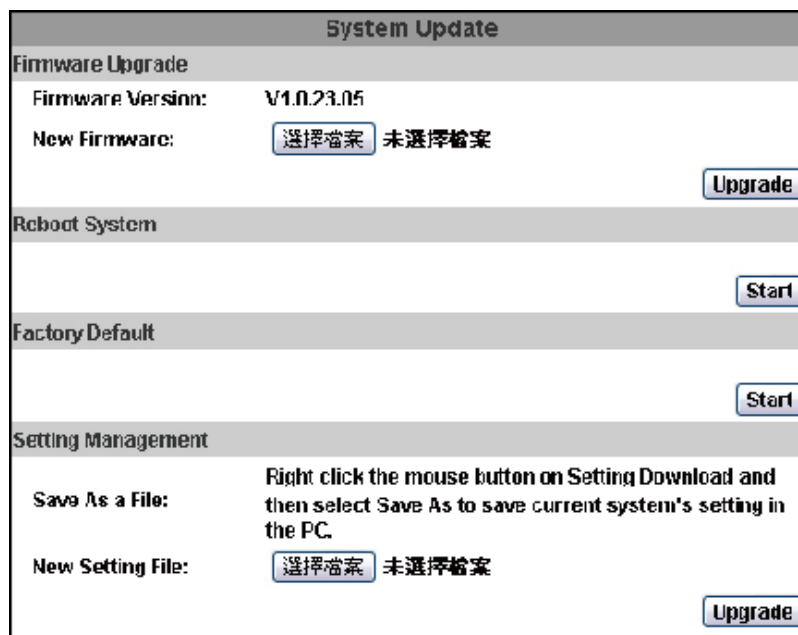
User List

Username	User Group	Modify	Remove
admin	Administrator	Edit	

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

IP Setting	
IP Assignment	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address:	<input type="text" value="192.168.1.202"/>
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"/>
Port Assignment	
Web Page Port:	<input type="text" value="80"/>
HTTPS Port:	<input type="text" value="443"/> <small>HTTPS Setting</small>
UPnP	
UPnP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
UPnP Port Forwarding:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
External Web Port:	<input type="text" value="80"/>
External https Port:	<input type="text" value="443"/>
External RTSP Port:	<input type="text" value="554"/>

- a. DHCP : Using DHCP, IP Camera will get all the network parameters automatically.
- b. Static IP : Please type in IP address, subnet mask, gateway, and DNS manually.
- c. Port Assignment: user may need to assign different port to avoid conflict when setting up IP assignment.
 1. Web Page Port: setup web page connecting port and video transmitting port (Default: 80)
 2. HTTPS Port: setup port for HTTPS transmitting (Default: 443)

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

Rtsp Setting		
Rtsp Server:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
RTSP Port :	<input type="text" value="554"/>	
RTP Start Port:	<input type="text" value="5000"/>	[1024..9997]
RTP End port:	<input type="text" value="9000"/>	[1027..10000]
Multicast Setting (Based on the Rtsp Server)		
Streaming 1:		
IP Address:	<input type="text" value="234.5.6.78"/>	[224.3.1.0 ~ 239.255.255.255]
Port:	<input type="text" value="6000"/>	[1 ~ 65535]
TTL:	<input type="text" value="15"/>	[1 ~ 255]
Streaming 2:		
IP Address:	<input type="text" value="234.5.6.79"/>	[224.3.1.0 ~ 239.255.255.255]
Port:	<input type="text" value="6001"/>	[1 ~ 65535]
TTL:	<input type="text" value="15"/>	[1 ~ 255]
ONVIF		
ONVIF:	<input type="radio"/> v1.02 <input checked="" type="radio"/> v1.01 <input type="radio"/> Disabled	
Security:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
RTSP Keepalive:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	

e. RTSP setting

1. RTSP Server: enable or disable
2. RTSP Port: setup port for RTSP transmitting (Default: 554)
3. RTSP Start and End Port: in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTSP Start and End Port.

f. Multicast Setting (Based on the RTSP Server)

Multicast is a bandwidth conservation technology. This function allow several user to share the same packet sent from IP camera. To use Multicast, appoint IP Address and port here. TTL means the life time of packet, The larger the value is, the more user can receive the packet.

To use Multicast, be sure to enable the function "Receive Multicast" in your media player.

g. ONVIF

Choose your ONVIF version and settings.

Bonjour	
Bonjour:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Bonjour Name:	<input type="text" value="IP_Camera"/> @00:0F:0D:00:28:B8
LLTD (Link Layer Topology Discovery)	
LLTD:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled

h. Bonjour

This function enable MAC systems to link to this IP camera. Key in the name here.

i. LLTD

If your PC supports LLTD, enable this function then you can check the connection status, properties, and device position(like IP address) of this IP Camera in the network map.

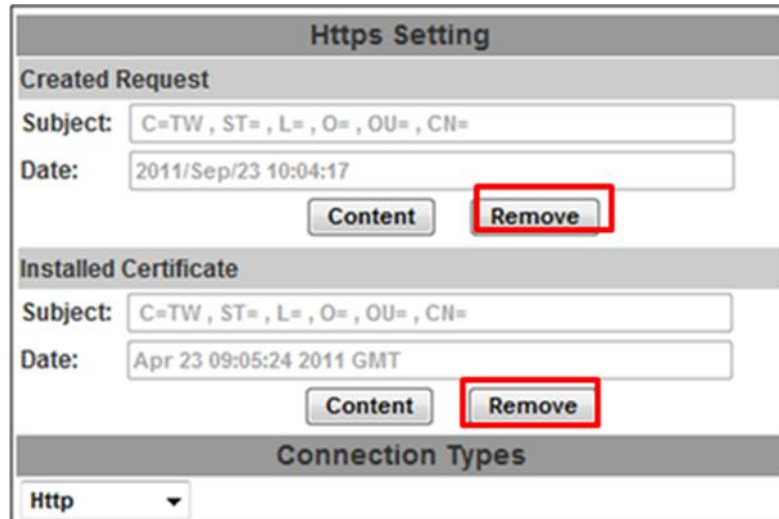
Enable or disable RTSP server first and can setup RTSP port and the start and end port of RTP

ii - Advanced :

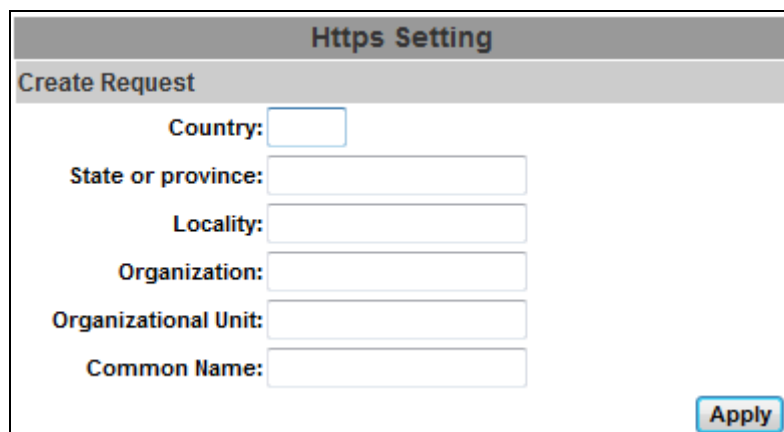
- a. Htts (Hypertext Transfer Protocol Secure) : Htts can help protect streaming data transmission over the internal on the higher security level.

Https Setting	
Created Request	
Subject:	<input "="" type="text" value="C=TW, ST=, L=, O=, OU=, CN="/>
Date:	<input type="text" value="2011/Sep/22 08:26:18"/>
	<input type="button" value="Content"/> <input type="button" value="Remove"/>
Installed Certificate	
Subject:	<input "="" type="text" value="C=TW, ST=, L=, O=, OU=, CN="/>
Date:	<input type="text" value="Apr 23 09:05:24 2011 GMT"/>
	<input type="button" value="Content"/> <input type="button" value="Remove"/>
Connection Types	
	<input type="text" value="Http&Https"/>

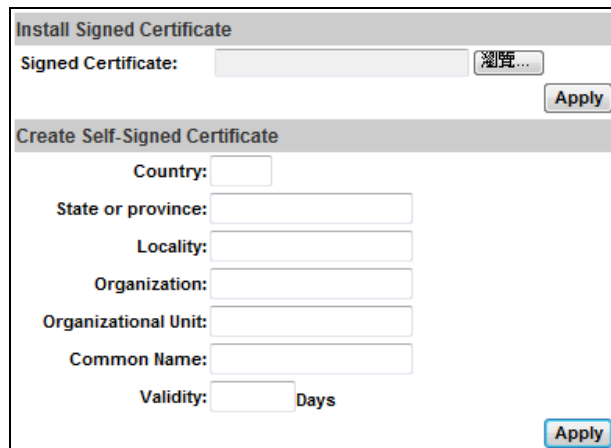
Https setting : Before setting new request, please remove old secure identification identification at Http connection type.



1. Created Request: remove secure identification in Created request mode. There is a warning message showing. Please set "Yes" to remove secure identification.
2. Setting the secure identification and apply it.



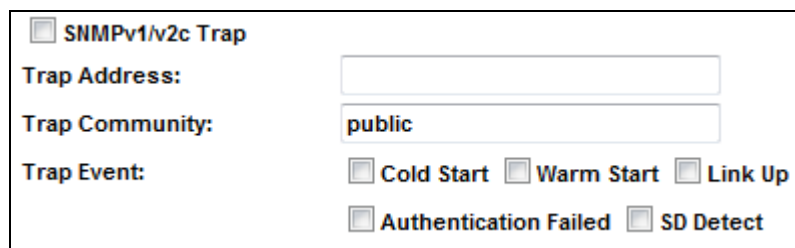
3. Installed Certificate: remove Certificate in .Installed Certificate mode. There will be a warning message to check again.
4. There are two ways to set Certificate- Install Signed Certificate and Create Self-Signed Certificate.



The screenshot shows two sections of a web interface. The top section, titled "Install Signed Certificate", has a "Signed Certificate:" label followed by a text input field and a "浏览..." (Browse...) button. Below this is an "Apply" button. The bottom section, titled "Create Self-Signed Certificate", contains several input fields: "Country:", "State or province:", "Locality:", "Organization:", "Organizational Unit:", and "Common Name:". There is also a "Validity:" label followed by a text input field and the word "Days". An "Apply" button is located at the bottom right of this section.

b. SNMP(Simple Network Management Protocol) :

1. Enable SNMPv1 or SNMPv2 and write the name of Write Community and Read Community.
2. Enable SNMPv3, please set Security Name, Authentication Type, Authentication Password, Encryption Type, Encryption Password of Write mode and Read mode.
3. Enable SNMPv1/SNMPv2 Trap can detect the Trap server. Please set what event need to detect.



The screenshot shows a configuration form for "SNMPv1/v2c Trap". It starts with a checked checkbox labeled "SNMPv1/v2c Trap". Below this are three main sections: "Trap Address:" with an empty text input field; "Trap Community:" with a text input field containing the word "public"; and "Trap Event:" with five checkboxes: "Cold Start", "Warm Start", "Link Up", "Authentication Failed", and "SD Detect".

- c. Access list : "Enable IP address filter" can set IP address which can allow or deny to this camera. There are two options, single and range, for user to set the IP address.

IP FILTER

IP ADDRESS FILTER Setting

Enable ip address filter

IPv4 Setting:

allow deny

address:

IPv4 List:

No.	IP Address	Filter	Action
1			<input type="button" value="remove"/>
2			<input type="button" value="remove"/>
3			<input type="button" value="remove"/>
4			<input type="button" value="remove"/>
5			<input type="button" value="remove"/>
6			<input type="button" value="remove"/>
7			<input type="button" value="remove"/>
8			<input type="button" value="remove"/>
9			<input type="button" value="remove"/>
10			<input type="button" value="remove"/>

Allow admin ip address always access this device

Admin ip address:

- d. QoS/DSCP(Quality of Server/Differentiated Services Code-point) : DSCP specifies a simple mechanism for classifying and managing network traffic and provide QoS on IP networks. DSCP is a 6-bit in the IP header for packet classification purpose. Please define the reserve for Live Stream, Event / Alarm and Management.

QoS/DSCP

QoS/DSCP Setting

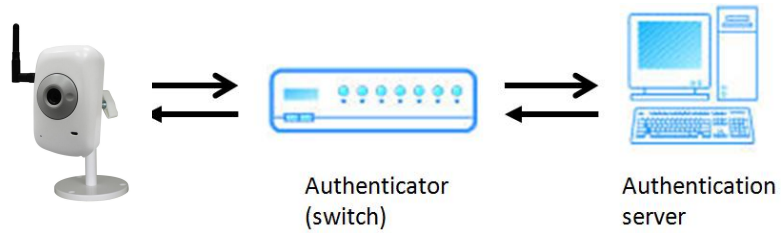
Enable QoS/DSCP

Live Stream: (0~63)

Event / Alarm: (0~63)

Management: (0~63)

- e. IEEE 802.1x : IEEE 802.1x is an IEEE standard for port-based Network Access Control. It provides an authentication mechanism to device wishing to attach to a LAN or WLAN. The EAPOL protocol support service identification and optional point to point encryption over the local LAN segment.



Please check what version of the authenticator and authentication server support. This camera supports EAP-TLS method. Please enter ID, password issued by the CA, then upload related certificates.

IEEE 802.1x/EAP-TLS

IEEE 802.1x Setting

Enable IEEE 802.1x

Eapol version: v1 v2

Identity:

Private key password:

Apply

CA certificate: **Upload**

Remove

Status:

Client certificate: **Upload**

Remove

Status:

Client private key: **Upload**

Remove

Status:

iii 、 PPPoE :

PPPoE

PPPoE Setting

Enabled Disabled

Username:

Password:

Send mail after dialed

Enabled

Subject: **Apply**

Select “Enabled” to use PPPoE.

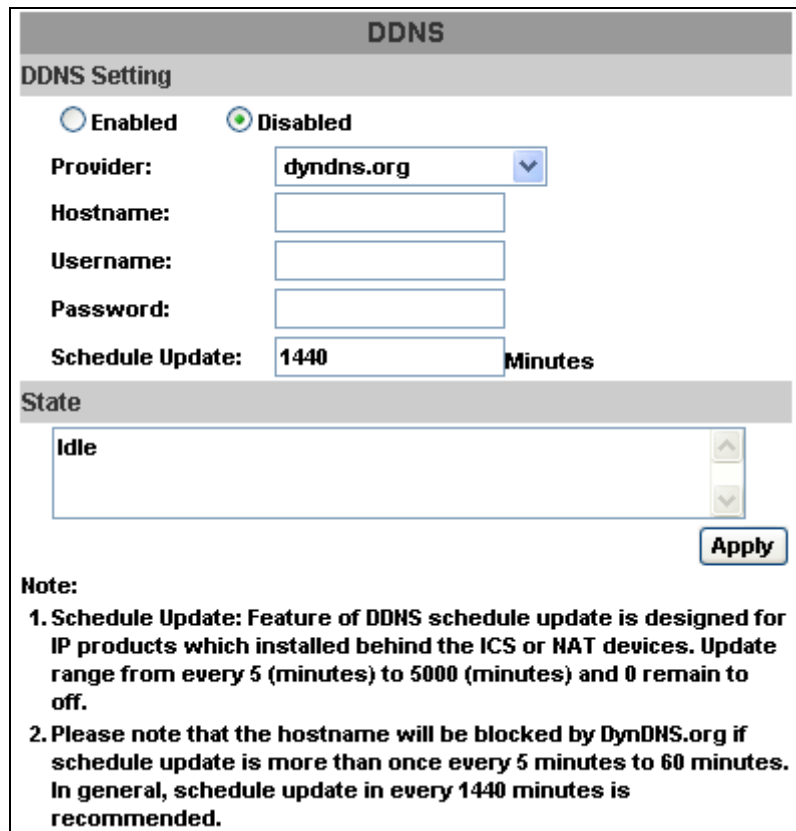
Key-in Username and password for the ADSL connection.

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.

iv、DDNS :

It supports DDNS (Dynamic DNS) service.

a. DynDNS :



DDNS

DDNS Setting

Enabled Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update: Minutes

State

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Enable this service
2. Key-in the DynDNS server name, user name, and password.
3. Set up the IP Schedule update refreshing rate.
4. Click “Apply”
5. If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

b. Camddns service :

DDNS

DDNS Setting

Enabled Disabled

Provider: ▼

Username:

Schedule Update: Minutes

State

Idle

Note:

1. **Schedule Update:** Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

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

c. DDNS Status

1. Updating : Information update
2. Idle : Stop service
3. DDNS registration successful, can now log by
<http://<username>.ddns.camddns.com> : Register successfully.
4. Update Failed, the name is already registered : The user name has already been used. Please change it.
5. Update Failed, please check your internet connection : Network connection failed.
6. Update Failed, please check the account information you provide : The server, user name, and password may be wrong.

v · Server Setting

There are three choices of server types available: Email, FTP and SAMBA. Select the item to display the detailed configuration options. You can configure either one or all of them.

Server Settings	
Mail Setting	
Login Method:	Account <input type="button" value="v"/>
Mail Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Sender's Mail:	<input type="text"/>
Receiver's Mail:	<input type="text"/>
Bcc Mail:	<input type="text"/>
Mail Port:	25 (Default 25)
<input type="checkbox"/> Secure Connect:	<input checked="" type="radio"/> TLS <input type="radio"/> SSL
FTP Setting	
FTP Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Port:	21
Path:	/
Mode:	PORT <input type="button" value="v"/>
Create the folder:	Yes <input type="button" value="v"/> (ex:Path/20100115/121032m.avi)
Samba (Network storage)	
Location:	<input type="text"/> (ex:\\Nas_ip\folder)
Workgroup:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Create the folder:	Yes <input type="button" value="v"/> (ex:Path/20100115/121032m.avi)

vi · 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.

Wireless Setting	
MAC Address:	00:11:E2:03:37:48
Mode:	Ad-hoc ▼
Operation Mode:	Auto ▼
SSID:	Default
Channel:	6 ▼
Security:	None ▼

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

Security:	WEP
WEP Setting	
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 : The length of key is decided here. In the 64bit encryption, the HEX key should include 10 characters while ASCII key includes 5 characters. In the 128bit encryption, the HEX key should include 26 characters while ASCII key includes 13 characters.
- Key Type : There are HEX and ASCII. When HEX is selected, user only can key in hexadecimal characters(0~9, A~F, a~f). If ASCII is selected, user can key in any alphabet letter and number as the key.
- Key 1~4: Type the key here. The length and type of the key have to match your settings above.

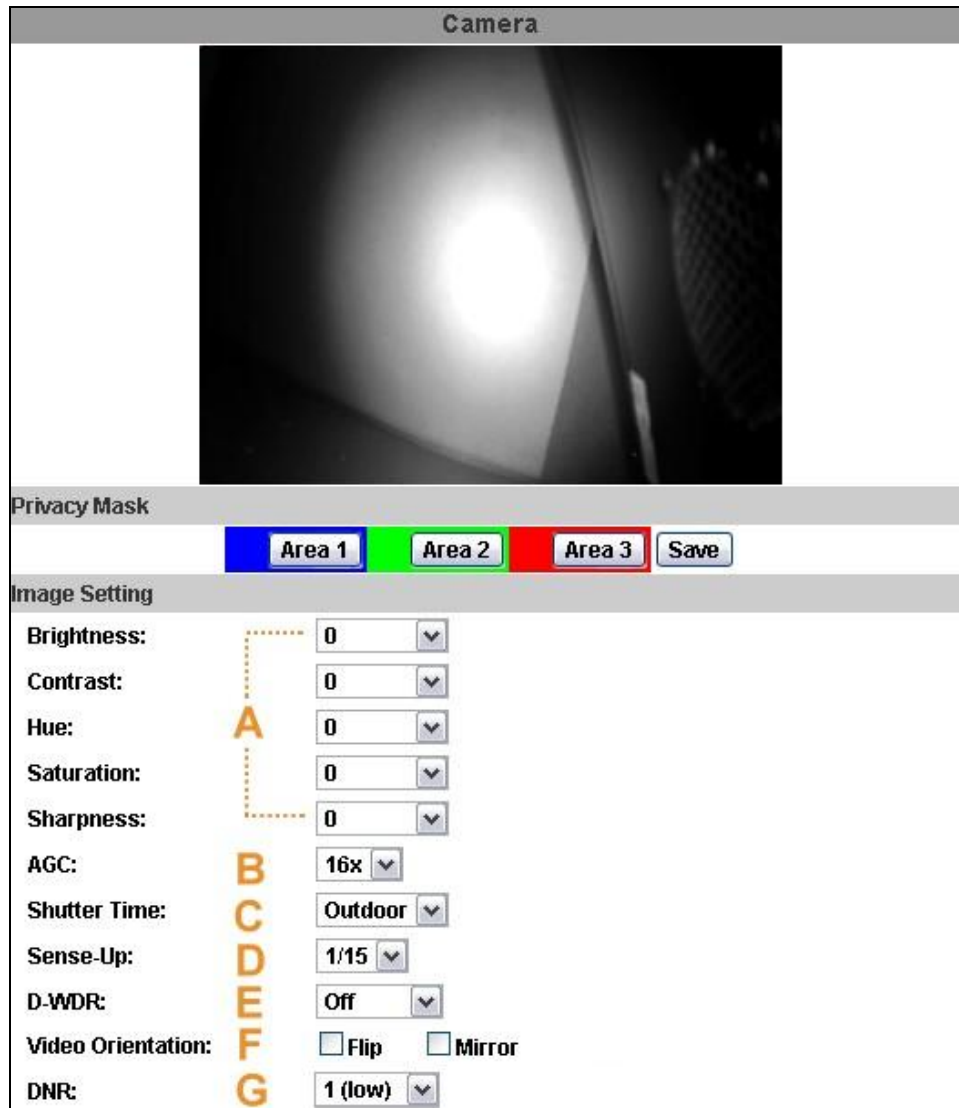
6. **WPA-PSK :**

Security:	WPA-PSK
WPA-PSK Setting	
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



For the security purpose, there are three areas can be setup for privacy mask. Click Area button first and pull an area on the above image.

Finally, click Save button to reserve the setting.

Please refer to the details below for Image setting:

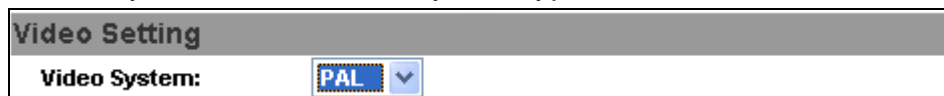
- Brightness, Contrast, Hue, Saturation, Sharpness can be adjusted here.
- AGC: The sensitivity of camera can adjust with the environmental light in order to avoid the images too light or too dark.
- Shutter Time: You can use "Outdoor" or "Indoor" option, or fix it from

1/30 to 1/1000.

- d. Sense-Up: increase the sensitivity of camera to get brighter image at night.
- e. D-WDR : Enable the function to reduce the contrast of background with foreground(ex. people).
- f. Video Orientation: Flip, mirror, or rotate the image as your requirement.
- g. DNR: Adjust this option to reduce the noise.

ii 、 Video Setting

User may select the camera system type,

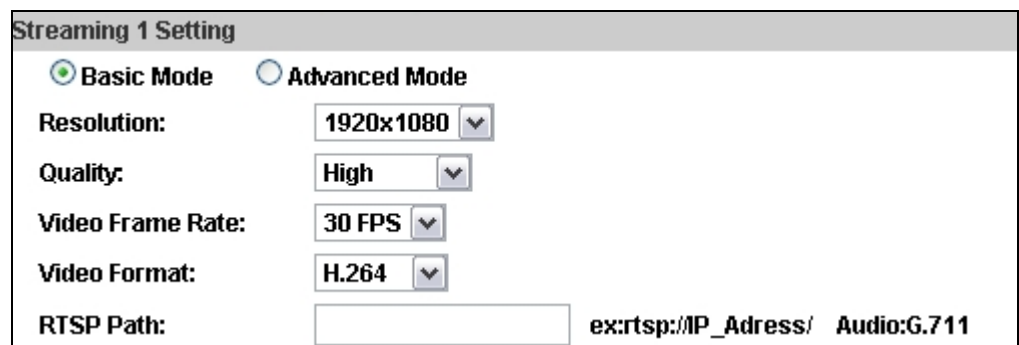


Streaming 1 Setting: Basic mode and Advanced mode

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 5 resolutions can be chosen.
1920x1080, 1280x720, 640x480, 320x240, 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 Frame Rate : The video refreshing rate per second.
4. Video Format : H.264, MPEG4 or M-JPEG

5. RTSP Path: RTSP output name

b. Streaming 1 Advanced Mode :

Streaming 1 Setting

Basic Mode **Advanced Mode**

Resolution: 1920x1080 ▾

Bitrate Control Mode: CBR VBR

Video Quantitative: 7 ▾

Video Bitrate: 2Mbps ▾

Video Frame Rate: 30 FPS ▾

GOP Size: 1 X FPS ▾ GOP = 30

Video Format: H.264 ▾

RTSP Path: ex:rtsp://IP_Address/ Audio:G.711

1. Resolution :

There are 5 resolutions can be chosen.

1920x1080, 1280x720, 640x480, 320x240, 176x144

2. Bitrate Control Mode

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

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

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

3. Video Frame Rate

The video refreshing rate per second.

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

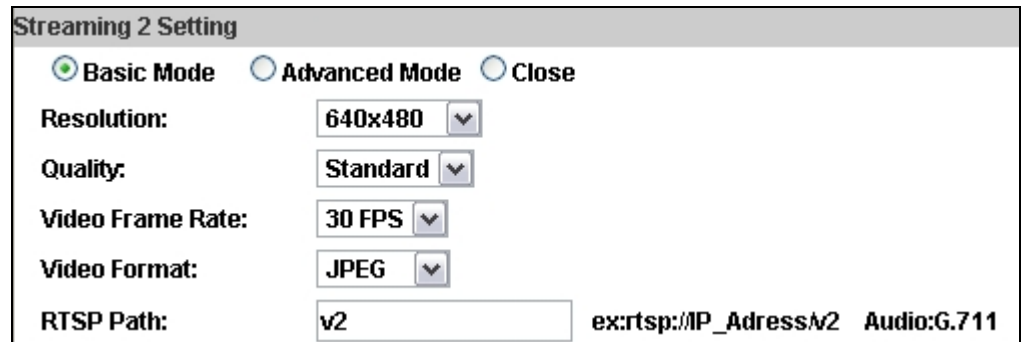
4. GOP Size

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

5. Video Format : H.264, MPEG4 or M-JPEG

6. RTSP Path: RTSP output connecting route

c. Streaming 2 Basic Mode :



The screenshot shows the 'Streaming 2 Setting' dialog box with 'Basic Mode' selected. The settings are: Resolution: 640x480, Quality: Standard, Video Frame Rate: 30 FPS, Video Format: JPEG, and RTSP Path: v2. The example RTSP path is 'ex:rtsp://IP_Address/v2' and the audio format is 'Audio:G.711'.

1. Resolution :

There are 5 resolutions can be chosen.

1920x1080, 1280x720, 640x480, 320x240, 176x144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

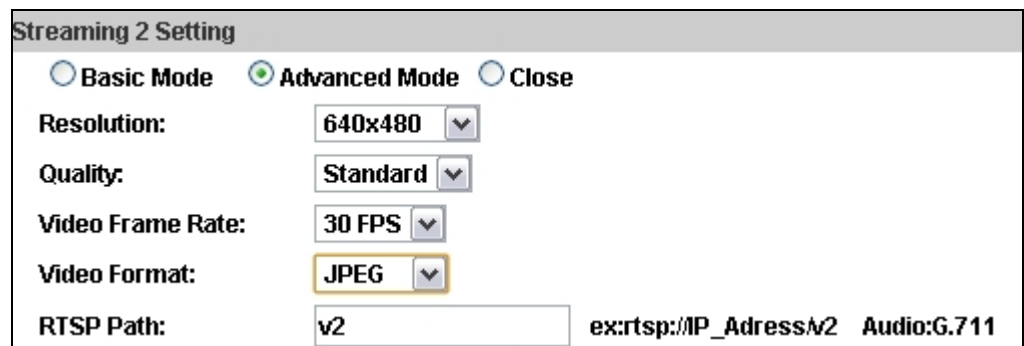
The higher the quality is, the bigger the file size is. Also not good for internet transmitting

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

4. Video Format : H.264, MPEG4 or M-JPEG

5. RTSP Path: RTSP output connecting route

d. Streaming 2 Advanced Mode :



The screenshot shows the 'Streaming 2 Setting' dialog box with 'Advanced Mode' selected. The settings are: Resolution: 640x480, Quality: Standard, Video Frame Rate: 30 FPS, Video Format: JPEG, and RTSP Path: v2. The example RTSP path is 'ex:rtsp://IP_Address/v2' and the audio format is 'Audio:G.711'.

1. Resolution :

There are 5 resolutions can be chosen.

1920x1080, 1280x720, 640x480, 320x240, 176x144

2. Quality :

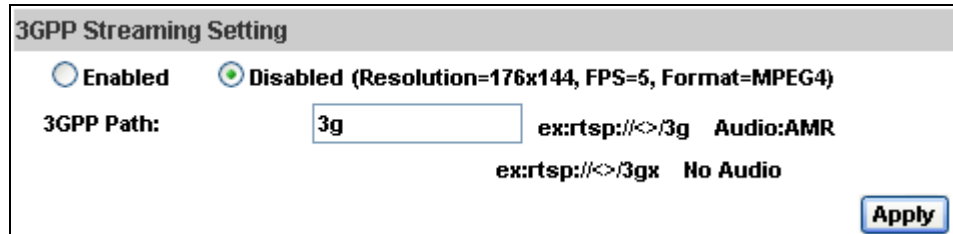
There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

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

3. Video Frame Rate : The video refreshing rate per second.
4. Video Format : H.264, MPEG4 or M-JPEG
5. RTSP Path: RTSP output connecting route

e. 3GPP Streaming mode:



The screenshot shows a dialog box titled "3GPP Streaming Setting". It contains two radio buttons: "Enabled" (unselected) and "Disabled (Resolution=176x144, FPS=5, Format=MPEG4)" (selected). Below the radio buttons is a text field labeled "3GPP Path:" containing the value "3g". To the right of the text field are two lines of text: "ex:rtsp://</>/3g Audio:AMR" and "ex:rtsp://</>/3gx No Audio". An "Apply" button is located in the bottom right corner of the dialog box.

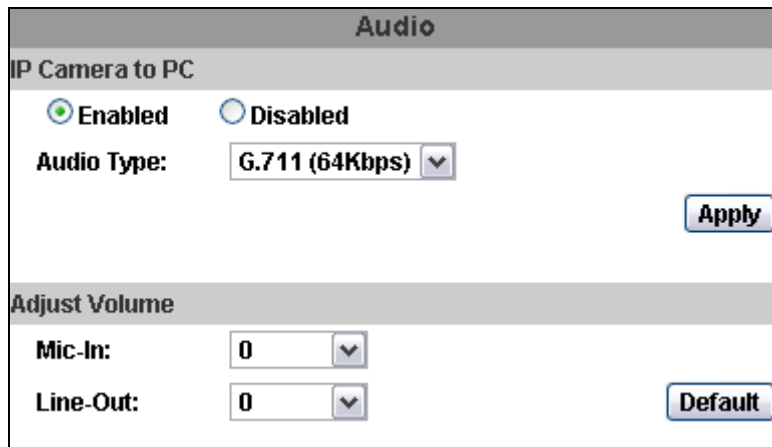
3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format

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

iii 、 Audio :

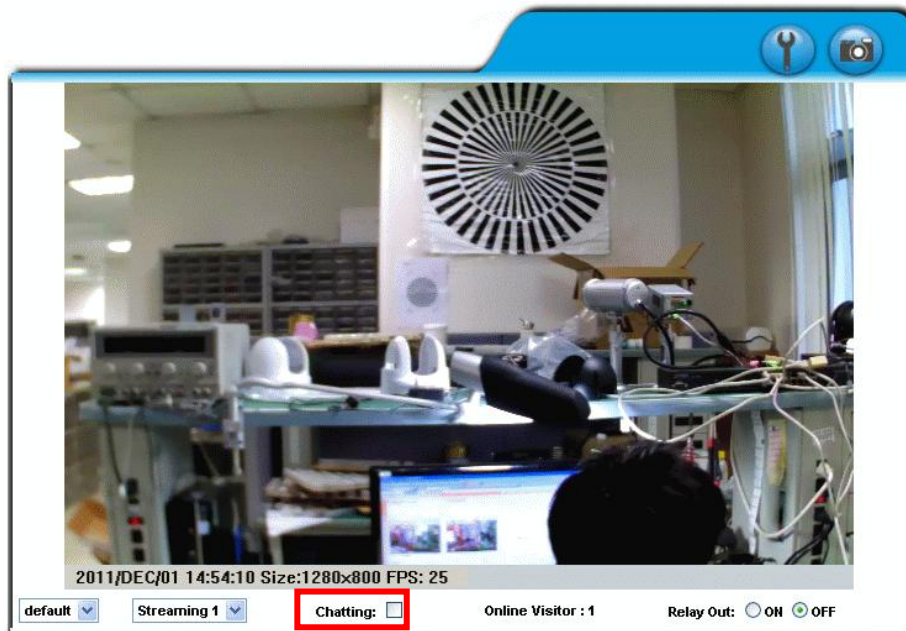
IP CAMERA supports 2-way audio. User can send audio from IP Camera Built-in mic to remote PC; User can also send audio from remote PC to IP Camera's external speaker.

- a. Audio from IP camera built-in mic to local PC: select "Enable" to start this function and also can select the audio type.



The screenshot shows a dialog box titled "Audio". It is divided into two sections. The first section, "IP Camera to PC", contains two radio buttons: "Enabled" (selected) and "Disabled" (unselected). Below the radio buttons is a dropdown menu labeled "Audio Type:" with the value "G.711 (64Kbps)" selected. An "Apply" button is located in the bottom right corner of this section. The second section, "Adjust Volume", contains two dropdown menus: "Mic-In:" with the value "0" and "Line-Out:" with the value "0". A "Default" button is located in the bottom right corner of this section.

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

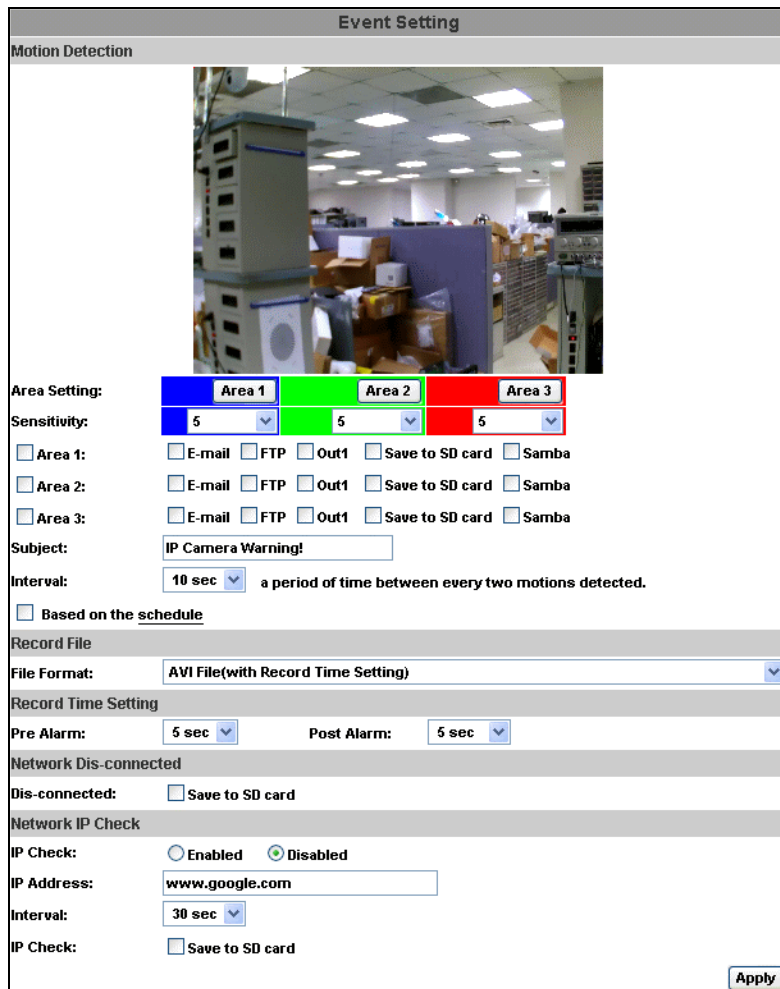


The Audio will not be smooth when enable SD card recording function simultaneously.

D.Event List

IP CAMERA provides multiple event settings.

i. Event Setting



a. Motion Detection :

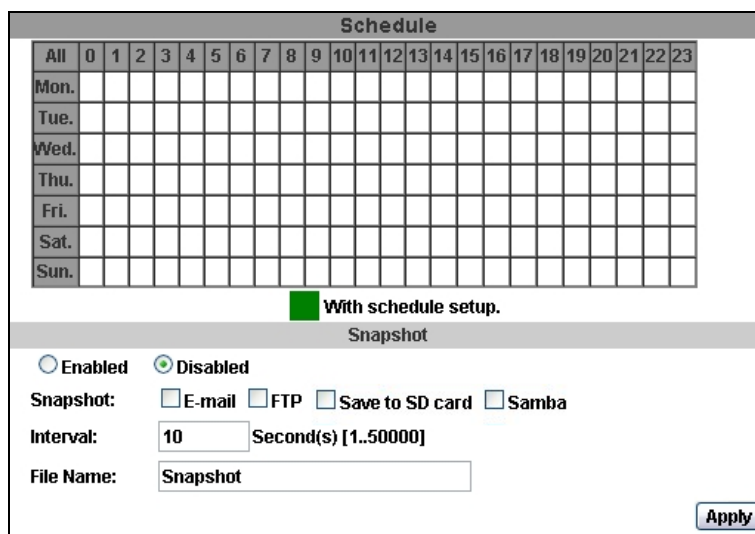
IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local Micro SD card. To set up the motion area, click “Area Setting”. Using mouse to drag and draw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

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

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

1. AVI File (With Record File Setting)
 2. Multi-JPEG (With Record File Setting), only with JPEG compression format.
 3. Single JPEG (Single File with Interval Setting)
- c. Record Time Setting :
- Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered.
- Note: Pre/Post Alarm record time is base on record time setting and IP Cam built-in Ram memory. Limited by IP Cam built-in Ram Memory, When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.
- d. Network Dis-connected
- When the network is down, it will save the video to local SD card.
This function is only enabled under wire connection.
- e. 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 \ Schedule



Schedule		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
All																									
Mon.																									
Tue.																									
Wed.																									
Thu.																									
Fri.																									
Sat.																									
Sun.																									

With schedule setup.

Snapshot

Enabled Disabled

Snapshot: E-mail FTP Save to SD card Samba

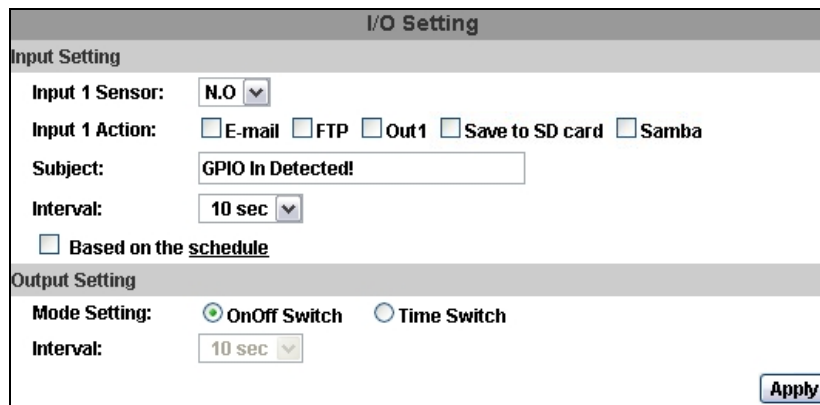
Interval: Second(s) [1..50000]

File Name:

- a. Schedule: After complete the schedule setup, the camera data will

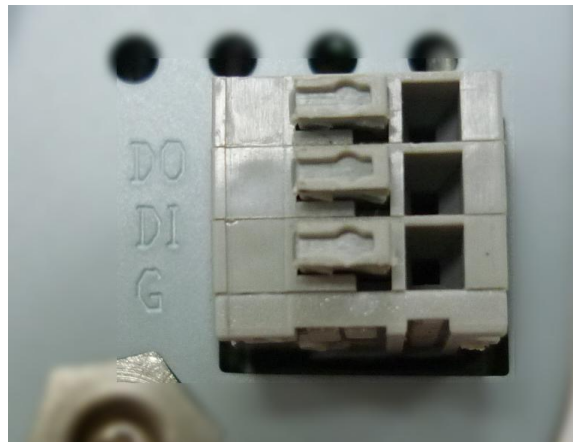
- b. Snapshot: After enable the snapshot function, user can select the storage position of snapshot file, the interval time of snapshot and the reserved file name of snapshot.
- c. Interval: The interval between two snapshots.

iii 、 I/O Setting



The screenshot shows the 'I/O Setting' web interface. It is divided into two main sections: 'Input Setting' and 'Output Setting'.
Input Setting:
- 'Input 1 Sensor:' is set to 'N.O'.
- 'Input 1 Action:' has five checkboxes: 'E-mail', 'FTP', 'Out1', 'Save to SD card', and 'Samba'.
- 'Subject:' is 'GPIO In Detected!'.
- 'Interval:' is '10 sec'.
- There is an unchecked checkbox for 'Based on the schedule'.
Output Setting:
- 'Mode Setting:' has two radio buttons: 'OnOff Switch' (selected) and 'Time Switch'.
- 'Interval:' is '10 sec'.
An 'Apply' button is located at the bottom right of the form.

- a. Input Setting:
IP Camera supports input and output. When the input condition is triggered, it can send the video to some specific mail addresses, transmit the video to remote FTP server, trigger the relay, save video to local SD card or to SAMBA.
- b. Output Setting:
"OnOff Switch" means the camera executes the action when triggered.
"Time Switch" means the camera executes the action according to the interval you choose after triggered.
- c. Use the terminal block on the back of camera for I/O connection. Connect the external input device to DI and G(Ground), and connect the external output device to DO and G(Ground).



- d. The relay out can be switch on and off on the live video page.



iv 、 Log List

Log List	
System Logs	Logs
Motion Detection Logs	Logs
I/O Logs	Logs
All Logs	Logs

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、Micro SD card

a. Playback

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



Click the date listed on this page, and it shows the list of the video. 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".

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

1 2 3 4 5

b. SD Management

Choose "The 1st day" means the recoding file will be keep one day. Example: It is five o'clock now. Choose "The 1st day". The files will be kept from five o'clock yesterday to five o'clock today.

Playback

No SD card

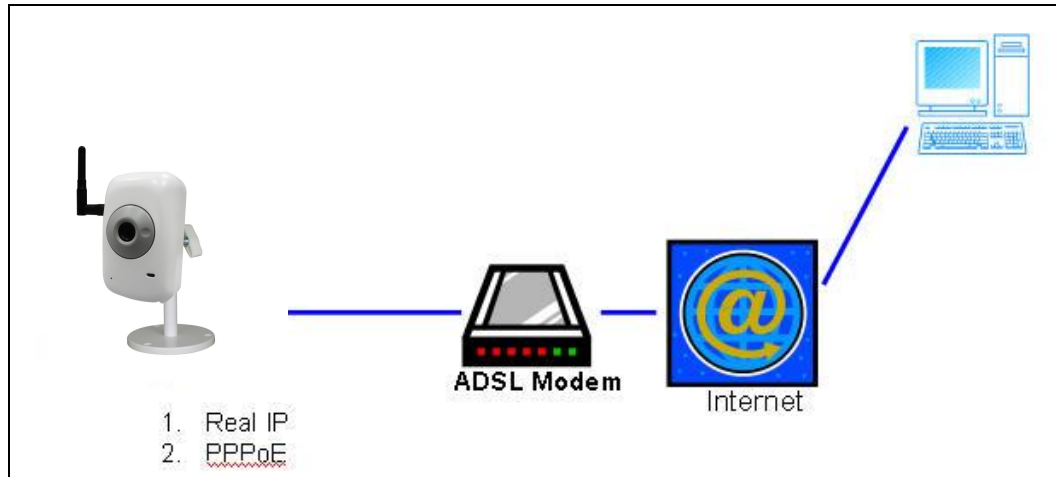
SD Management

Auto Deletion: Off (Keep 1/ 2/ 3/ 4...days) Apply

- Off
- The 1st day
- The 2nd day
- The 3rd day
- The 4th day
- The 5th day
- The 6th day
- The 7th day
- The 8th day
- The 9th day
- The 10th day
- The 15th day
- The 20th day
- The 25th day
- The 30th day

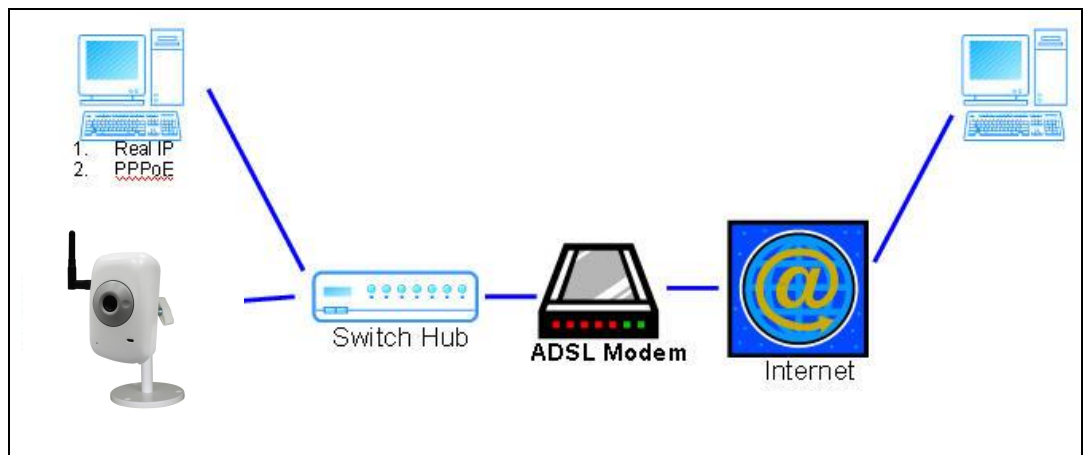
VI. Network Configuration

i. Configuration 1 :



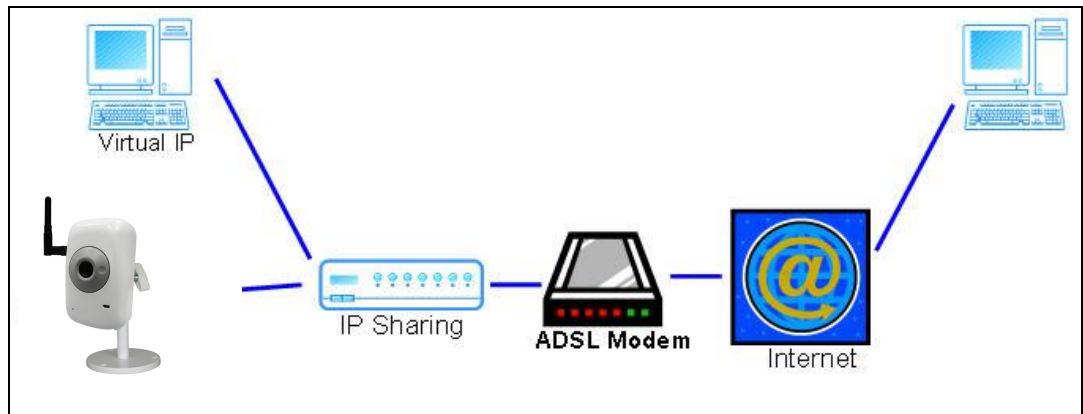
- a. Internet Access : ADSL or Cable Modem
- b. IP address : One real IP or one dynamic IP
- c. Only IP CAMERA connects to the internet
- d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

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 \ CD title (User manual, IP installation Utility)

IX. Micro SD Card

The following is the Micro SD Card recommended:

Transcend	SDHC class4	16GB
	SDHC class4	32GB
	SD class4	16GB
	SD class4	32GB
	SDHC class6	4GB
	SDHC class6	8GB
	SDHC class6	16GB
	SD class6	4GB
	SD class6	8GB
	SD class6	16GB
SanDisk	SDHC class4	4GB
	SDHC class4	8GB
	SDHC class4	16GB