

User Manual

Megapixel 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

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

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I. Preface

This IP Camera is a 720P real time IP camera with the web server built in. User can view real-time video via IE browser. IP Camera supports simultaneously H.264, Motion JPEG & MPEG4 video compression and dual streaming which provides smooth and high video quality. The video can be stored in the Micro SD card and played back remotely. With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

II. Product Specifications

Main Features:

- HD 720P Real Time
- Digital Noise Reduction
- Digital Wide Dynamic Range
- Shutter Speed adjustable
- Sense Up adjustable
- IR-Cut filter (Option)
- Power over Ethernet available
- H.264/ M-JPEG / MPEG4 compression
- Micro SD card backup
- Support iPhone/iPad/Android
- Triple Streaming
- SDK for Software Integration
- Free Bundle 36 ch recording software

HLC-36BM Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	128MB
Flash	16MB
Image sensor	1/4" Megapixel CMOS sensor
Lens Changeable	Yes, CS Mount
Sensitivity	1.0 Lux@F1.4
Support DC IRIS	Yes
Shutter Time	1 / 5 ~ 1 / 10,000 sec
ICR	Mechanism IR cut Filter

I/O	1 D.I / 1 D.O
RS-485	Yes
Audio	G.711(64K) and G.726(32K,24K) audio compression Input : Mic Built-in Output: 3.5mm phone jack, Support 2-way.
Power over Ethernet	Yes
Power	12V DC Power consumption Max : 2.4W PoE Power consumption Max : 2.88W
Operating Temperature	-10°C ~ 45°C
Dimensions	125 x 53 x 60 (mm)
Weight	400g
Network	
Ethernet	10/ 100 Base-T
Network Protocol	IPv6, IPv4, HTTP, HTTPS, SNMP, QoS/DSCP, Access list, IEEE 802.1X, RTSP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMBA, Bonjour
System	
Video Resolution	1280x800@30fps, 1280x720@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps, 176x144@30fps
Video Adjust	Brightness, Contrast, Hue, Saturation, Sharpness, Shutter Speed adjustable, AGC, Sense-Up, D-WDR, Flip, Mirror, Noise reduction
Triple Streaming	Yes
Image snapshot	Yes
Full screen monitoring	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

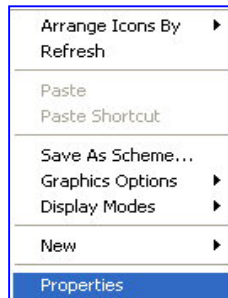
Video format	AVI, JPEG
Video playback	Yes
Delete files	Yes
Client System requirement	
OS	Windows 7, 2000, XP, 2003, Microsoft IE 6.0 or above, Chrome, Safari, Firefox
Mobile Support	iOS 4.3 or above, Android 1.6 or above.
Hardware Suggested	Intel Dual Core 2.53G, RAM: 1024MB, Graphic card: 128MB

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

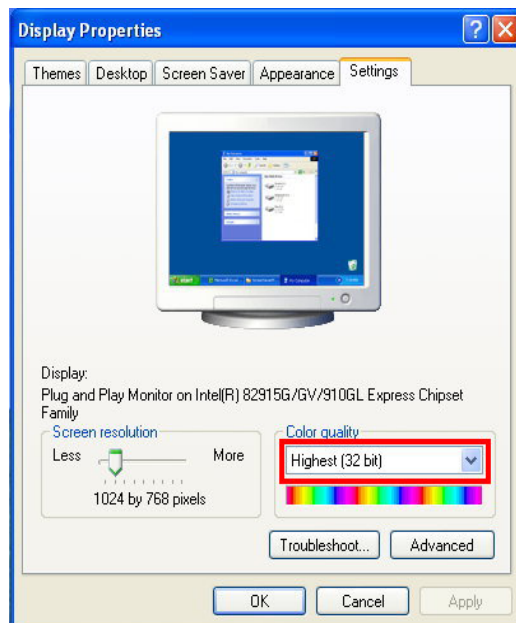
III. Product Installation

A. Monitor Setting

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



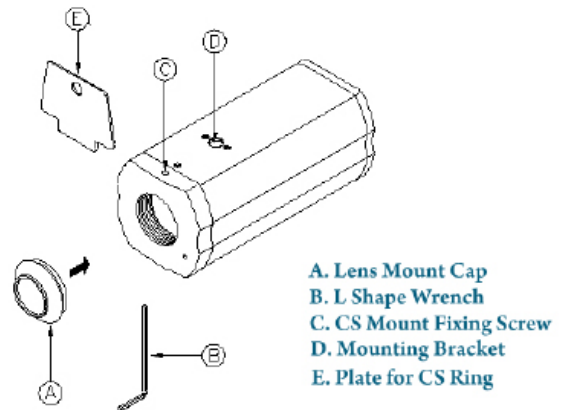
2. Change color quality to highest (32bit).



B. Hardware Installation

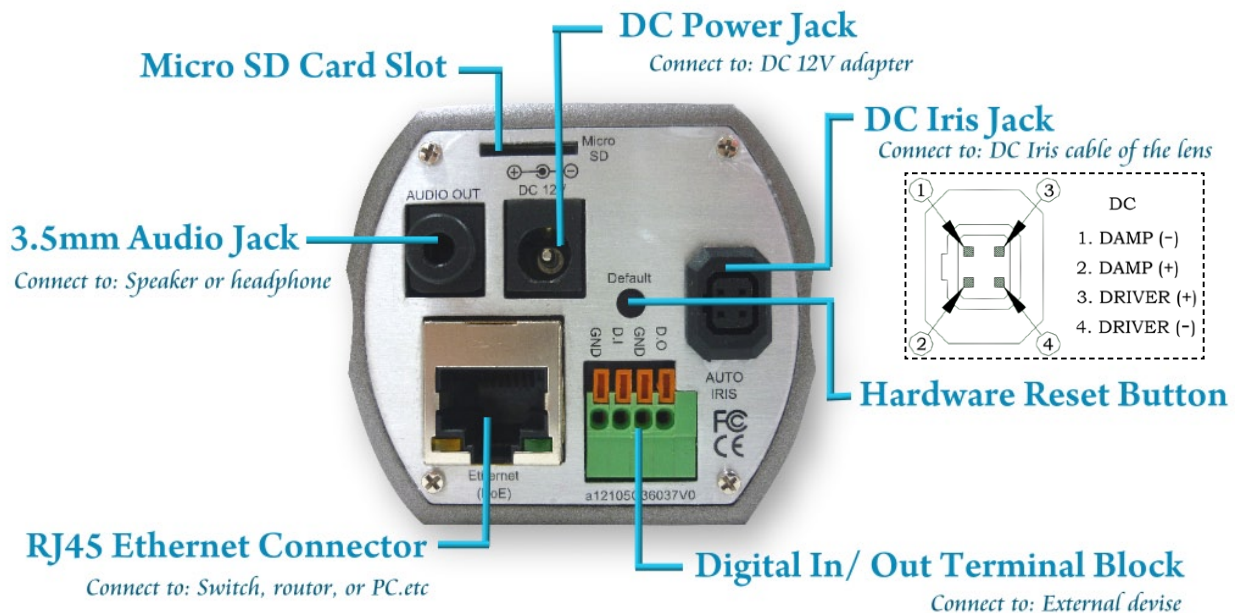
1. Box Camera Construction

The standard type is CS-mount lens. If you use C-mount lens, please apply the CS-C conversion ring.



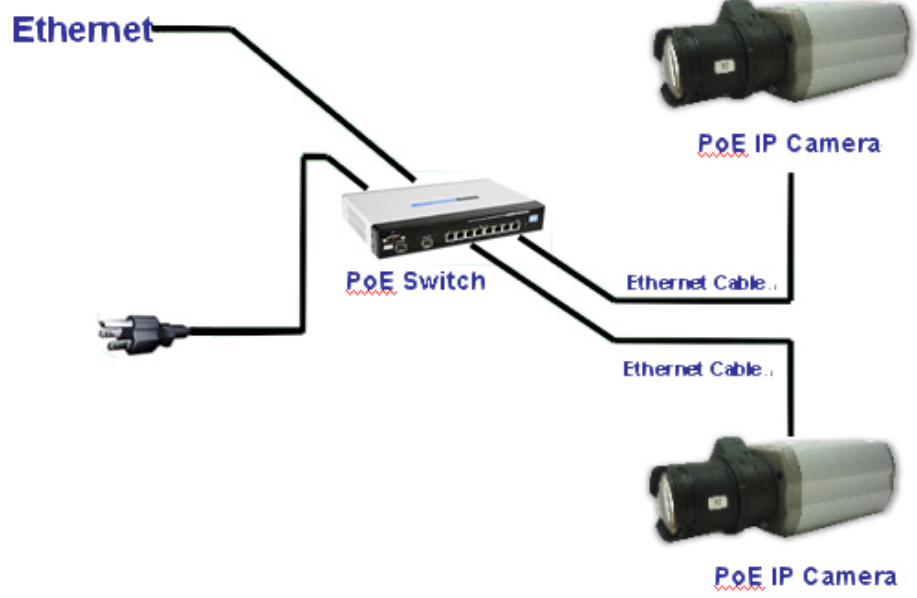
2. Connector Instruction

The back panel of camera is as below. Plug in the power adaptor, and connect the IP camera to PC or network. Set up the network configurations according to the network environment. About I/O setting, please refer to chapter VII in User Manual: "[I/O Configuration](#)" for detail.



3. PoE (Power Over Ethernet)(Optional) **802.3at, 30.0W 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.

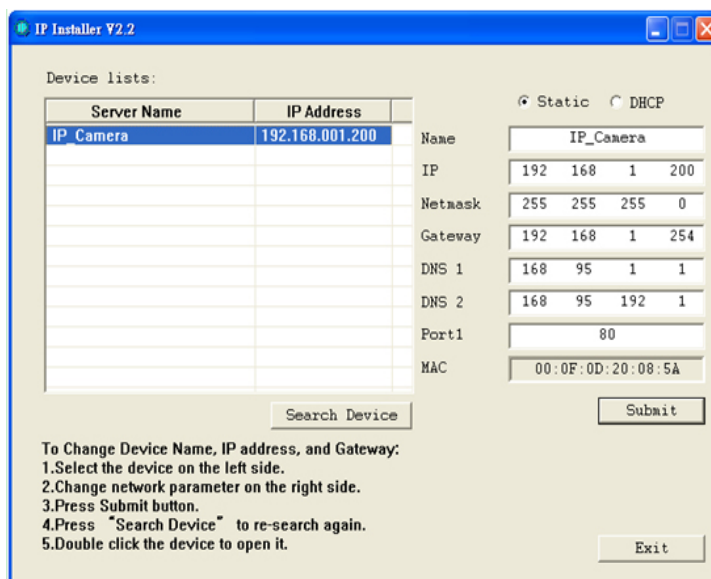


C. IP Assignment

1. You can use the software “IP Installer” to assign the IP address of IP Camera. The software is in the attached CD.
2. There are two language versions of IP installer. Choose one as your need:
IPInstallerCht.exe: Chinese version
IPInstallerEng.exe: English version
3. There are 3 kinds of IP configuration.
 - a. Fixed IP (Public IP or Virtual IP)
 - b. DHCP (Dynamic IP)
 - c. Dial-up (PPPoE)
4. Execute IP Installer
5. For Windows XP SP2 user, the following message box may pop up. Please click “Unblock”.



6. IP Installer configuration:



7. IP Installer will search for all IP Cameras connected on Lan. Click “Search Device” to refresh the result list.
8. Click one of the IP Camera listed on the left side. The network configuration of this IP camera shows on the right side. You may change the “name” of the IP Camera as your preference (eg: Office, warehouse). Change the parameter and click “Submit” . It will apply the change and reboot the Device.



9. Please make sure that the IP address of your PC and IP Camera are on the same subnet.

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

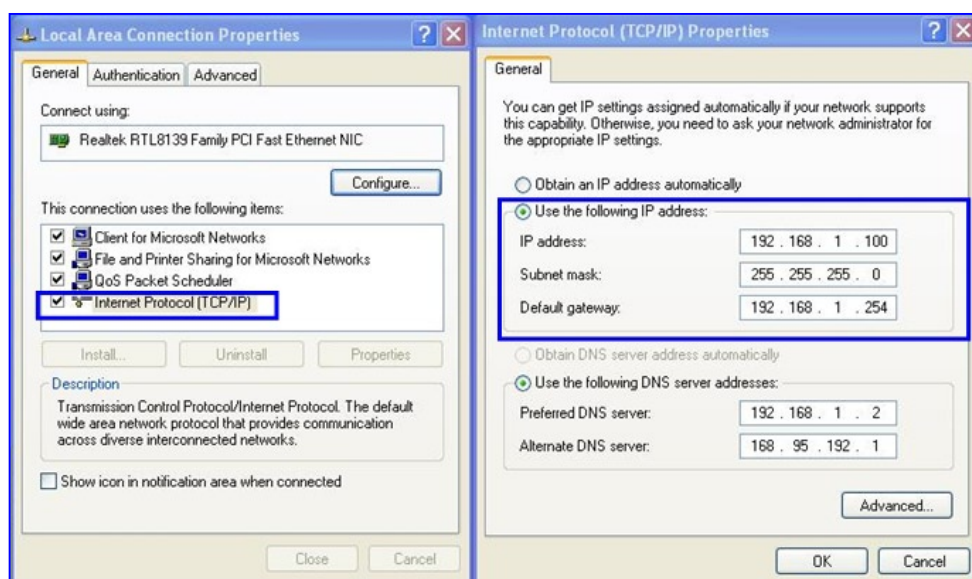
Different Subnets:

IP CAM IP address: 192.168.2.200

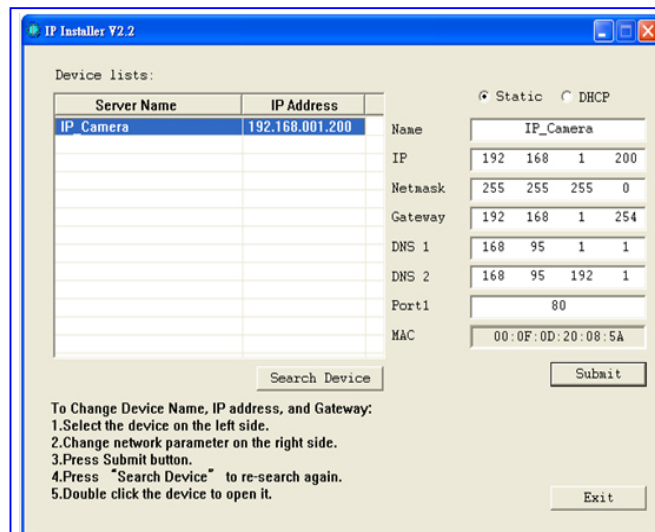
PC IP address: 192.168.1.100

To Change PC IP address:

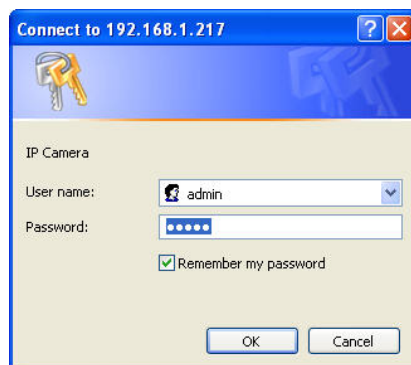
Control Panel→Network Connections→ Local Area Connection Properties→ Internet Protocol (TCP/IP) → Properties



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



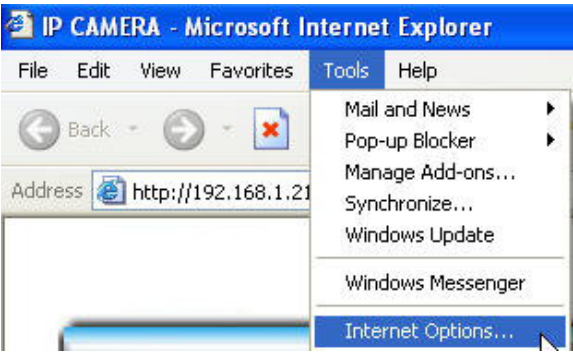
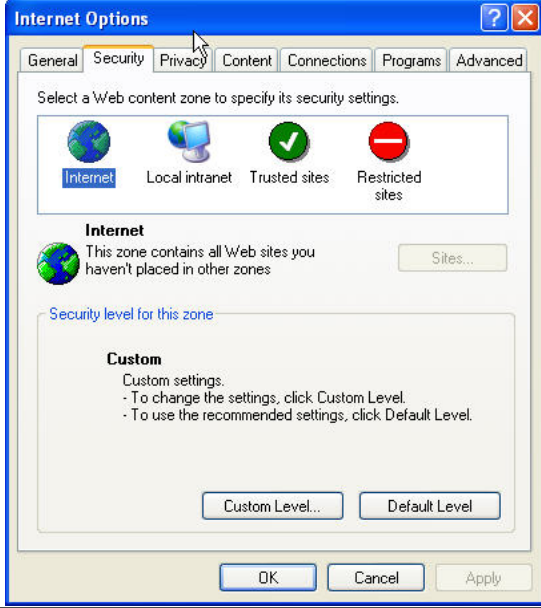
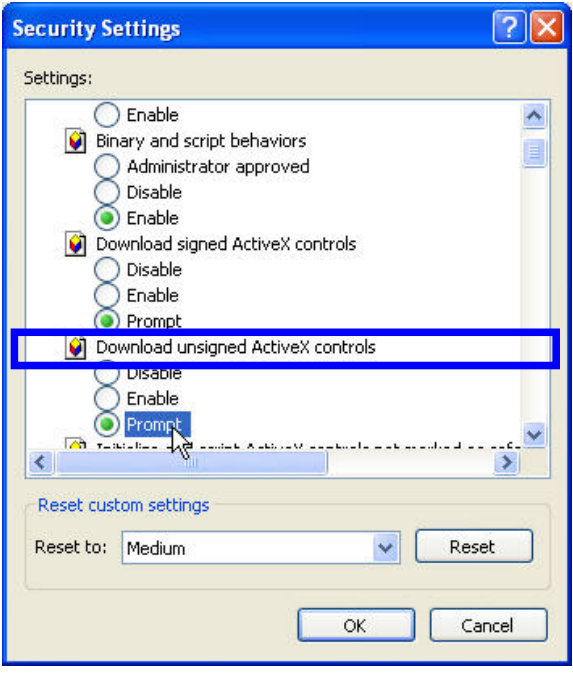
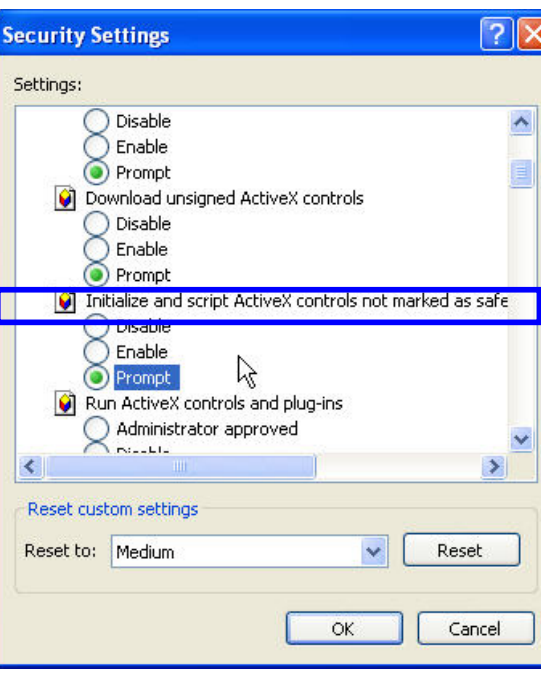
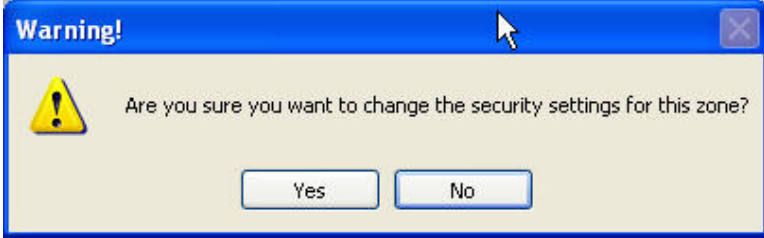
11. If you link to the IP Camera successfully, there pops a box asking you to log in. Please key in the default user name "admin" and password "admin" when you link to the IP Camera for the first time. You can revise the user name and password later. Please refer to Chapter V: "A.2. [User Management](#)".



D. Install ActiveX control

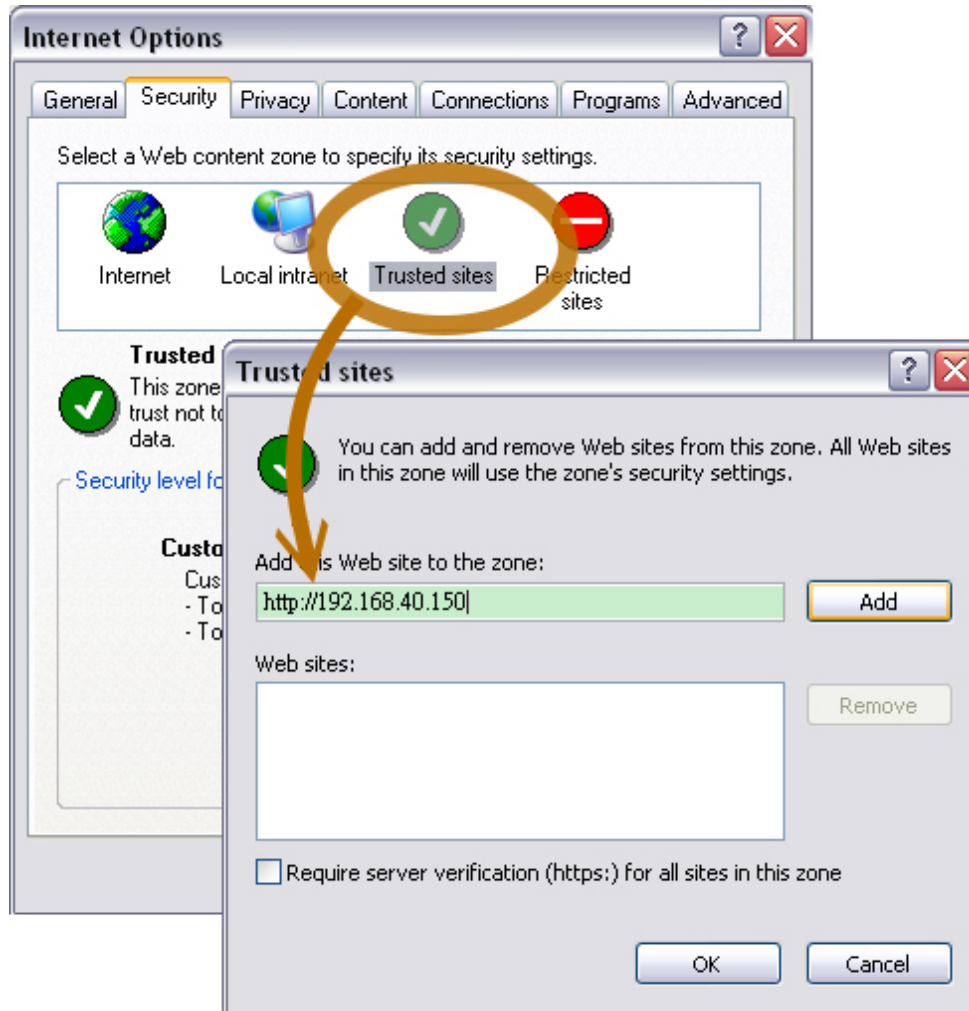
For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

1. If the installation failed, please check the security setting for the IE browser.
 - a. IE → Tools → Internet Options → Security Tab → Custom Level → Security Settings → Download unsigned ActiveX controls → Select "Enable" or Prompt.
 - b. IE → Tools → Internet Options → Security Tab → Custom Level → Initialize and script ActiveX controls not marked as safe → Select "Enable" or Prompt.

<p style="text-align: center;">1</p> 	<p style="text-align: center;">2</p> 
<p style="text-align: center;">3</p> 	<p style="text-align: center;">4</p> 
<p style="text-align: center;">5</p> <p style="text-align: center;">When popup the following dialogue box, click “Yes”.</p> 	

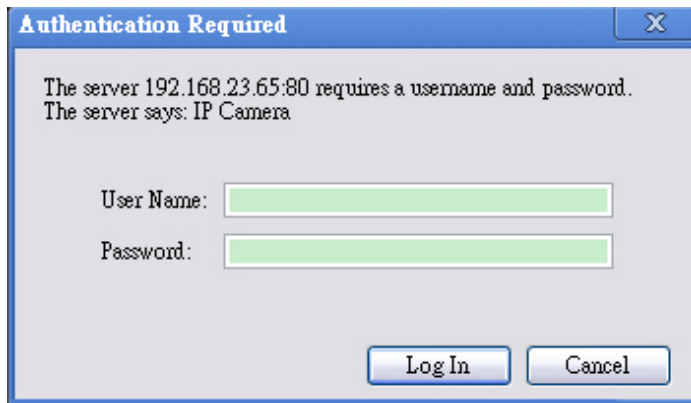
2. You can choose another way. Go to: IE→Tools → Internet Options... → Security Tab → Trusted sites → Add the IP address and click "OK".

In the site list you can key one single IP address or a LAN address. For example, if you add "192.168.21.*", all the IP address under .21 LAN will be regarded as trusted sites.

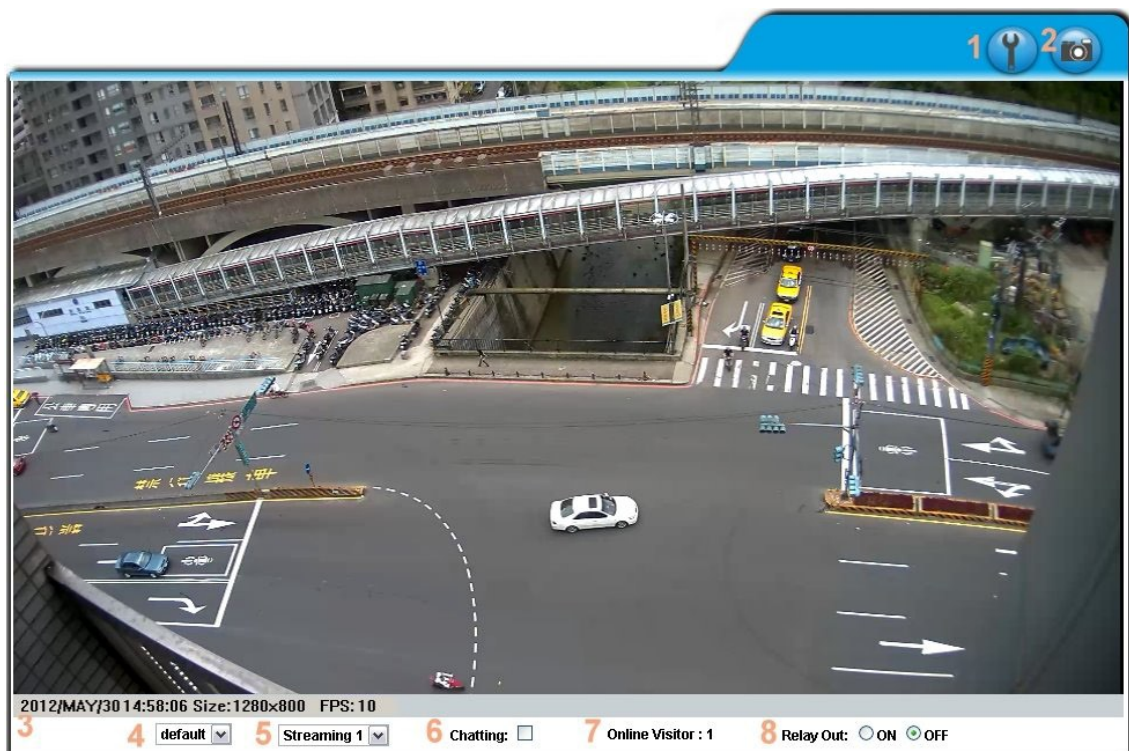


IV. Live Video



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 the IP Camera is connected successfully, it shows the following program interface.



Double-click the video to switch to full screen view. Press “Esc” or double-click the video again back to normal mode.

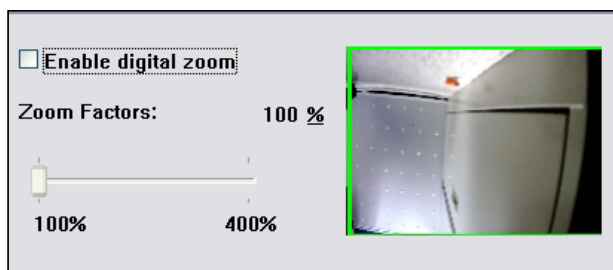
1.  : Get into the administration page
2.  : Video Snapshot

3. Show system time, video resolution, and video refreshing rate
4. Adjust image, 1/2x, 1x, 2x
5. Select video streaming source (If in "Video Setting" the streaming 2 setting is closed, this option will not appear here.)
6. IP Camera supports 2-way audio. Click the "Chatting" check box, then you can use microphone connected to the PC to talk to the Camera side.
7. Show how many people connect to this IP camera.
8. Tick the Relay out "ON" box to trigger the relay output for testing. Tick "Off" to stop triggering.

S_napshot	Null
R_eCORD Start	100
M_ute	200
F_ull Screen	300
Z_oom	400
F_rameBuffmSec	500


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 off the audio. Click again to turn on it.
 The "mute" button does not affect the playback recording video. As long as the "IP Camera to PC" option in the audio setting is enabled, all the audio will be recorded into the playback video even you click "mute" in the live page.
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.

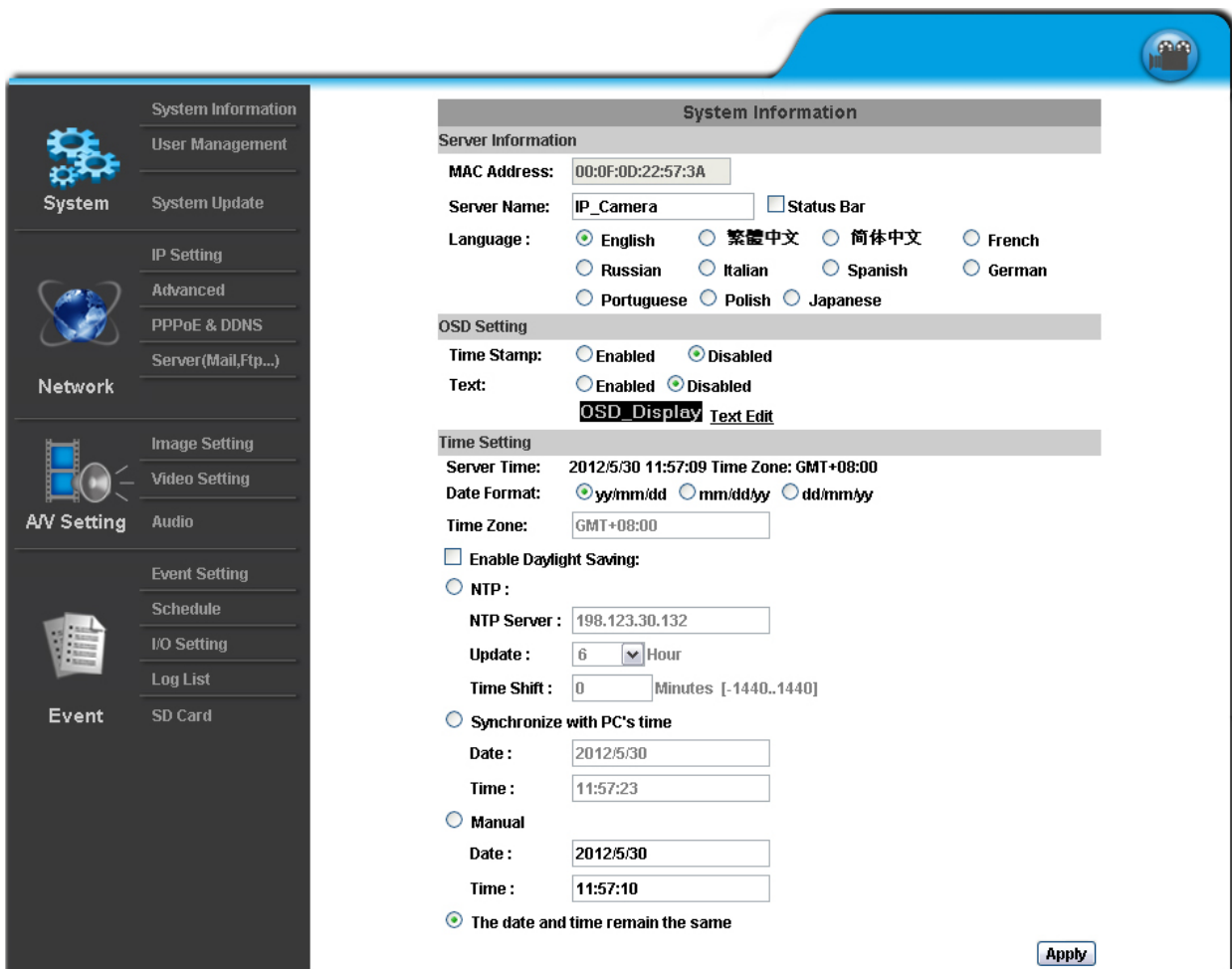


6. Frame Buffm Sec: Build a buffm to accumulate several video frame and play at a regular intervals. This function can make video smooth-going when the Network speed is slow and lag. If you select "100", the interval between every frame is fixed to 100 mSec. The slower the Network is, the bigger value should be selected. The default value is null.

V. IP Camera Configuration

Click  to get into the administration page as below.

Click  to back to the live video page.



The screenshot displays the configuration web interface for an IP camera. On the left is a dark sidebar menu with icons and labels for various settings: System (gears), Network (globe), A/V Setting (film strip and speaker), and Event (document). The main content area is titled "System Information" and is divided into several sections:

- Server Information:** Includes fields for MAC Address (00:0F:0D:22:57:3A), Server Name (IP_Camera), and a checkbox for Status Bar.
- Language:** A list of radio buttons for selecting the interface language: English (selected), 繁體中文, 简体中文, French, Russian, Italian, Spanish, German, Portuguese, Polish, and Japanese.
- OSD Setting:** Includes radio buttons for Time Stamp (Disabled selected) and Text (Disabled selected), with a link to "OSD_Display Text Edit".
- Time Setting:** Shows the current Server Time (2012/5/30 11:57:09) and Time Zone (GMT+08:00). It includes options for Date Format (yy/mm/dd selected), Time Zone (GMT+08:00), and a checkbox for "Enable Daylight Saving".
- NTP:** Includes a radio button for "NTP" (selected), with fields for NTP Server (198.123.30.132), Update interval (6 Hour), and Time Shift (0 Minutes).
- Synchronize with PC's time:** Includes radio buttons for "Synchronize with PC's time" (selected), "Manual", and "The date and time remain the same". It has fields for Date (2012/5/30) and Time (11:57:10).

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

A. System

1. System Information

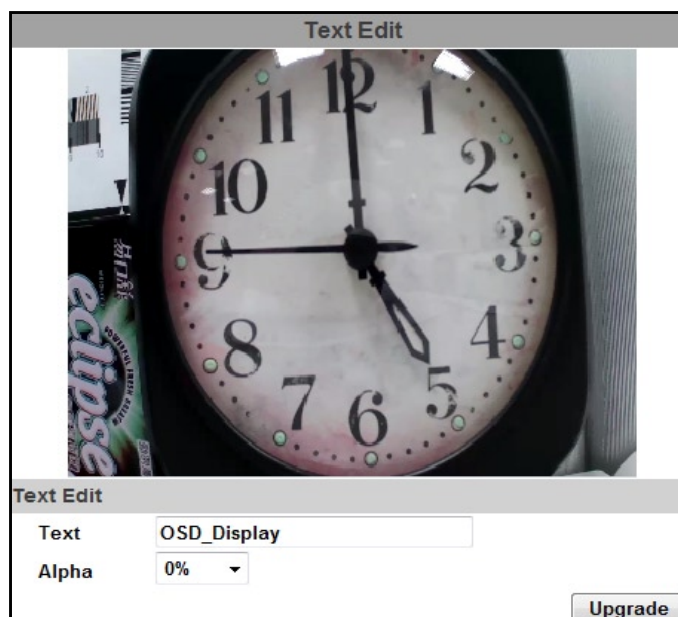
- a. Server Information: Set up the camera name, select language, and set up the camera time.
 - (i) Server Name: This is the Camera name. This name will show on the IP Installer.
 - (ii) Select language: There are 11 languages to choose from. When you change the language, it will show the following dialogue box for confirmation.



- 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 Alpha of text. Finally, click Upgrade button to reserve the setting.



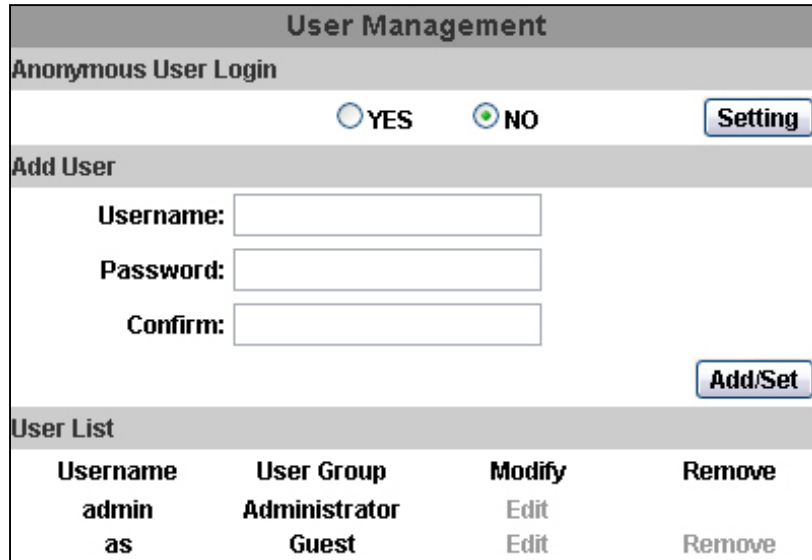
c. Server time setting: Select options to set up time - “NTP”, “Synchronize with PC’s time”, “Manual”, “The date and time remain the same”.

Note: To synchronize with the NTP Server, please set the IP camera up on the WAN instead of LAN.

Time Setting				
Server Time:	2011/11/28 18:48:45 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:	<input type="text" value="GMT+08:00"/>			
<input checked="" type="checkbox"/> Enable Daylight Saving:				
	Month	Week	Day of Week	Time
DST Start:	<input type="text" value="Mar"/>	<input type="text" value="2nd"/>	<input type="text" value="Sun"/>	<input type="text" value="12 am"/>
DST End:	<input type="text" value="Nov"/>	<input type="text" value="1st"/>	<input type="text" value="Sat"/>	<input type="text" value="12 am"/>
<input type="radio"/> NTP :				
NTP Server :	<input type="text" value="198.123.30.132"/>			
Update :	<input type="text" value="6"/> Hour			
Time Shift :	<input type="text" value="0"/> Minutes [-1440..1440]			
<input type="radio"/> Synchronize with PC's time				
Date :	<input type="text" value="2011/11/28"/>			
Time :	<input type="text" value="18:44:11"/>			
<input type="radio"/> Manual				
Date :	<input type="text" value="2011/11/28"/>			
Time :	<input type="text" value="18:43:47"/>			
<input checked="" type="radio"/> The date and time remain the same				

2. User Management

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



The screenshot shows the 'User Management' interface. It has three main sections: 'Anonymous User Login', 'Add User', and 'User List'. The 'Anonymous User Login' section has radio buttons for 'YES' and 'NO', with 'NO' selected, and a 'Setting' button. The 'Add User' section has input fields for 'Username:', 'Password:', and 'Confirm:', and an 'Add/Set' button. The 'User List' section is a table with columns for 'Username', 'User Group', 'Modify', and 'Remove'.

Username	User Group	Modify	Remove
admin	Administrator	Edit	
as	Guest	Edit	Remove

a. Anonymous User Login:

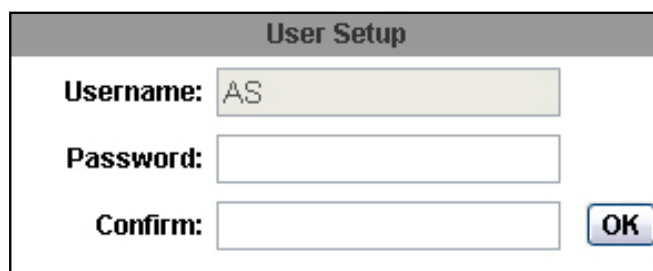
Yes: anonymous login is allowed

No: Username & password are required to access this IP camera

b. Add user:

Type the user name and password, then click "Add/Set". The guest user can only browse the live video page and is not allowed to enter the configuration page.

c. Click "edit" or "delete" in the user list to modify them. The system will ask you to key in the password in the pop-up window before you edit the user information.



The screenshot shows the 'User Setup' interface. It has three input fields: 'Username:' with the value 'AS', 'Password:', and 'Confirm:'. There is an 'OK' button.

3. System update:



The screenshot shows a web interface titled "System Update" with four main sections:

- Firmware Upgrade:** Shows "Firmware Version: V1.0.0". Under "New Firmware:", there are two buttons: "選擇檔案" (Select File) and "未選擇檔案" (No file selected). An "Upgrade" button is located at the bottom right of this section.
- Reboot System:** A "Start" button is located at the bottom right.
- Factory Default:** A "Start" button is located at the bottom right.
- Setting Management:** Includes a "Save As a File:" label and a text instruction: "Right click the mouse button on Setting Download and then select Save As to save current system's setting in the PC." Below this, there are two buttons: "選擇檔案" (Select File) and "未選擇檔案" (No file selected). An "Upgrade" button is located at the bottom right.

- a. To update the firmware online, click "Browse..." to select the firmware. Then click "Upgrade" to proceed.

Note: The firmware upgrade might be accompanied by the changing of some setting and function, and the setting options might become different to the user manual that you're reading now.

- 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.
- (i) 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
 - (ii) Upgrade from previous setting:
Browse → search previous setting → open → upgrade → Setting update confirm → click [index.html](#) to return to main page

B. Network

1. IP Setting
 - a. IP Assignment

IP Setting	
IP Assignment	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address:	<input type="text" value="192.168.40.150"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
Gateway:	<input type="text" value="192.168.40.254"/>
DNS 0:	<input type="text" value="168.95.1.1"/>
DNS 1:	<input type="text" value="168.95.192.1"/>

IP Camera supports DHCP and static IP.

- (i) DHCP: Using DHCP, IP CAMERA will get all the network parameters automatically.
 - (ii) Static IP: Please type in IP address, subnet mask, gateway, and DNS manually.
- b. IPv6 Assignment

IPv6 Assignment	
<input checked="" type="checkbox"/> IPv6 Enabled:	
<input checked="" type="checkbox"/> Manually setup the IPv6 address:	
IPv6 Address/Prefix:	<input type="text" value="::"/> /
	<input type="text" value="64"/>
IPv6 Gateway:	<input type="text" value="::"/>
IPv6 DNS:	<input type="text" value="::"/>
DHCPv6:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
IPv6 Address:	fe80::20f:dff:fe00:284d

IPv6 is a newer numbering system that provides a much larger address pool than IPv4, which accounts for most of today's Internet traffic. You can set up IPv6 manually by key in Address, Gateway, and DNS, or enable DHCP to assign the IP automatically.

c. Port assignment

Port Assignment	
Web Page Port:	<input type="text" value="80"/>
HTTPS Port:	<input type="text" value="443"/>

HTTPS Setting

- (i) Web Page Port: setup web page connecting port and video transmitting port (Default: 80)
- (ii) HTTP Port: setup HTTPS connecting port (Default: 443)

d. UPnP (Universal Plug and play)

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"/>

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.”

(i) UPnP Port Forwarding:

When the camera is installed under a router, Enable UPnP Port Forwarding to let the router open ports so that the video streams can be sent out from a LAN. Set Web Port, Http Port, and RTSP port, and make sure your router supports UPnP/TM and the function has been activated.

(ii) Note: UPnP must be enabled on your computer. Please follow the procedure to activate UPnP.

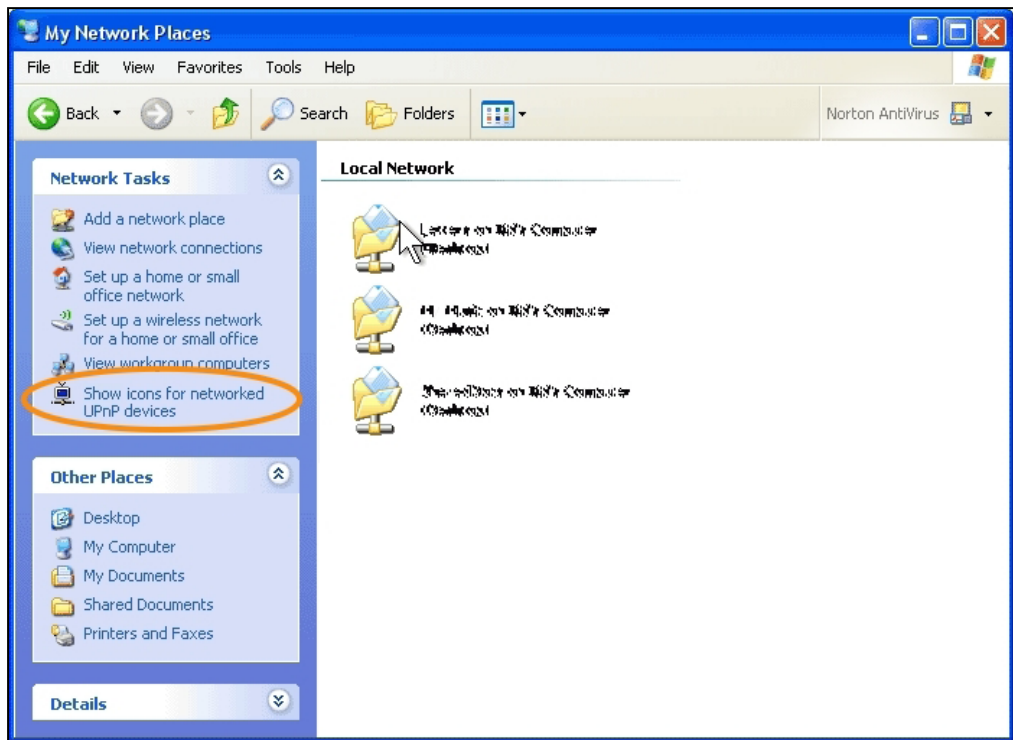
<Approach 1>

- Open the Control Panel from the Start Menu
- Select Add/Remove Programs
- Select Add/Remove Windows Components and open Networking Services section
- Click Details and select UPnP to setup the service
- The IP device icon will be added to “MY Network Places”
- User may double click the IP device icon to access IE browser

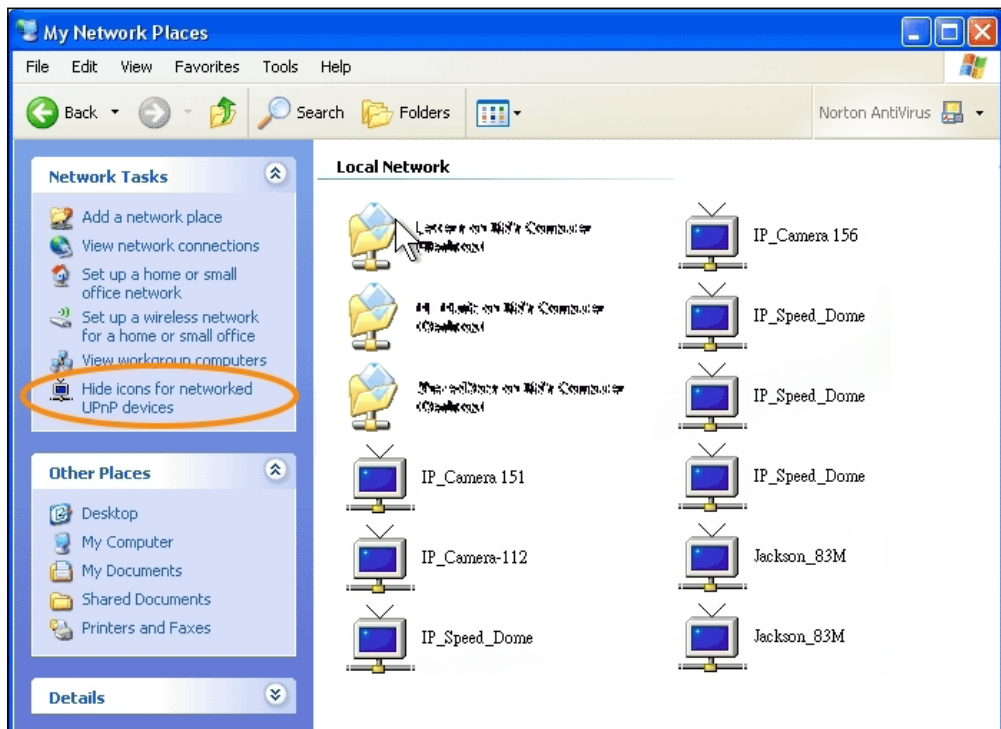
<Approach 2>

- Open "My Network Space", and click "Show icons for networked UPnP devices" in the tasks column on the left of the page.

Windows may ask your confirmation for enabling the components.
Click "Yes".



- Now you can see the IP device under the LAN. Double-click the icon to access the camera via web browser. To disable the UPnP, click "Hide icons for networked UPnP devices" in the tasks column.



e. RTSP setting

RTSP Setting		
RTSP Server:	<input checked="" type="radio"/> Enabled	<input type="radio"/> Disabled
RTSP Authentication:	Disable ▾	
RTSP Port :	554	
RTP Start Port:	5000	[1024..9997]
RTP End port:	9000	[1027..10000]

If you have a media player that supports RTSP protocol, you can use it to receive the video streaming from IP camera. The RTSP address can be set for two streamings respectively. Please jump to Chapter V-C: "[Video Setting](#)". There're setting field for RTSP address of two streamings.

- (i) RTSP Server: enable or disable
- (ii) RTSP Authentication:

"Disable" means everyone who knows your camera IP Address can link to your camera via RTSP. No username and password are required.

Under "Basic" and "Digest" authentication mode, the camera asks the user to give username and password before allows accessing. The password are transmitted as clear text under basic mode, which provides a lower level of security than under digest mode.

Make sure your media player supports the authentication schemes.

- (iii) RTSP Port: setup port for RTSP transmitting (Default: 554)
- (iv) 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 Setting (Based on the RTSP Server)		
Streaming 1:		
IP Address:	234.5.6.78	[224.3.1.0 ~ 239.255.255.255]
Port:	6000	[1 ~ 65535]
TTL:	15	[1 ~ 255]
Streaming 2:		
IP Address:	234.5.6.79	[224.3.1.0 ~ 239.255.255.255]
Port:	6001	[1 ~ 65535]
TTL:	15	[1 ~ 255]

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 "Force Multicast RTP via RTSP" in your media player. Then key in the RTSP path of your camera: "rtsp://(IP address)" to receive the multicast.

g. ONVIF

ONVIF		
ONVIF:	<input checked="" type="radio"/> v1.02	<input 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

(i) Choose your ONVIF version and settings.

Under ONVIF connection, the video will be transmitted by RTSP. Be sure to enable the RTSP server in IP setting, or you're not able to receive the video via ONVIF.

(ii) RTSP Keepalive:

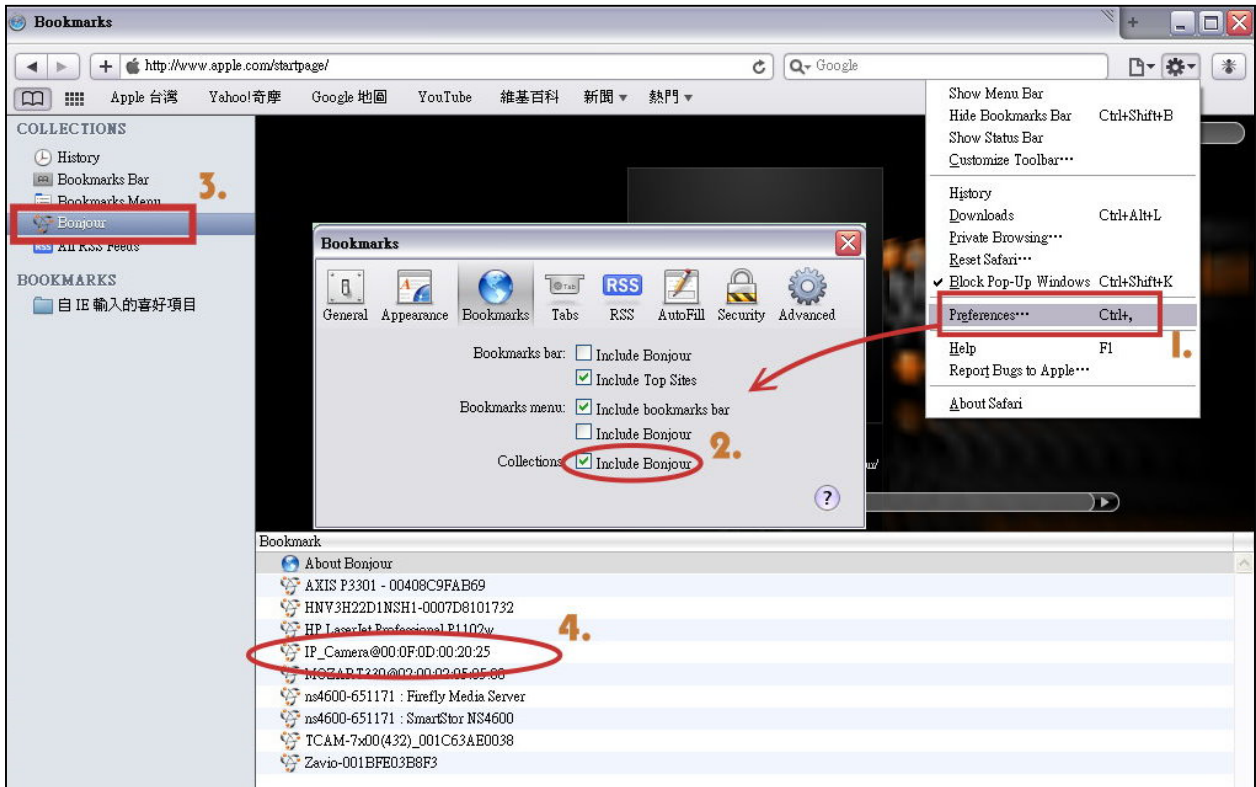
When the function is enabled, the camera checks once in a while if the user who links to the camera via ONVIF still keeps connecting. If the connection had been broken, the camera stop transmitting video to user.

h. Bonjour

Bonjour		
Bonjour:	<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
Bonjour Name:	<input type="text" value="IP_Camera"/>	@00:0F:0D:00:28:4D

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

The web browser "Safari" also has Bonjour function. Tick "Include Bonjour" in the bookmark setting, and you can see the IP camera appearing under the bonjour category. Click the icon to connect the IP camera.



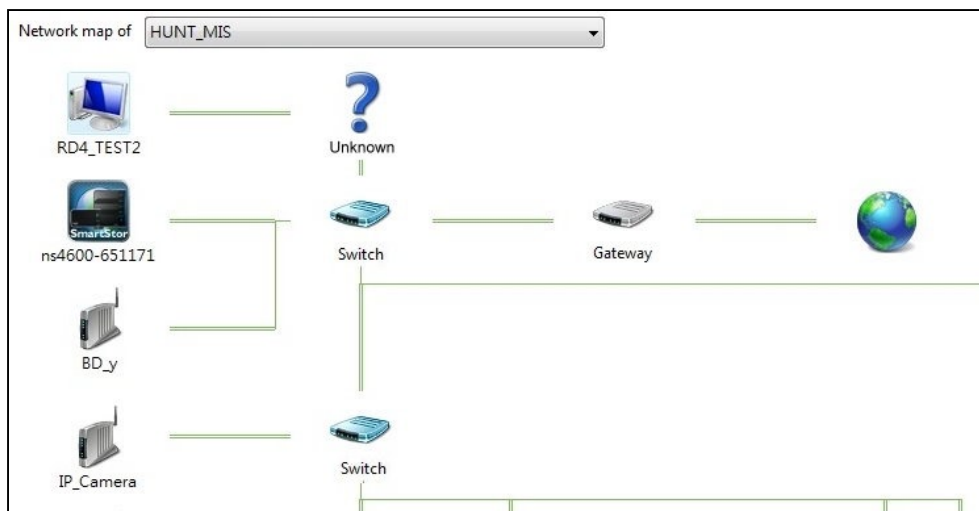
i. LLTD



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.

In the computer running Windows Vista or Windows 7, you can find LLTD through the path:

Call out the Control Panel → Network and Internet → Network and Sharing Center → Click "See full map".



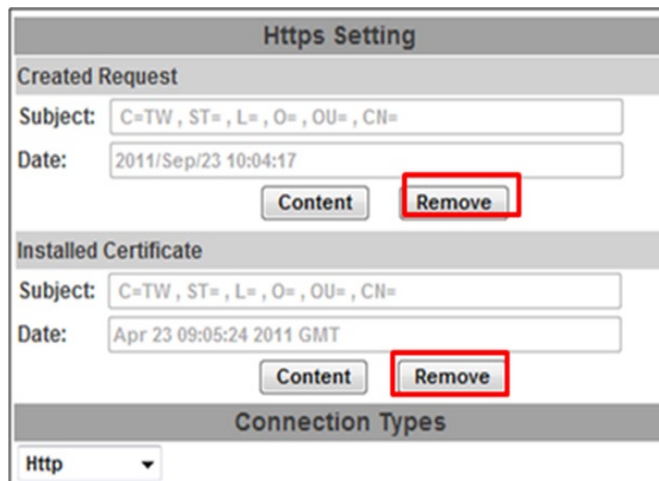
2. Advanced

- a. **Https (Hypertext Transfer Protocol Secure):** Https can help protect streaming data transmission over the internal on the higher security level. You can select the connection type. "Https" means user cannot connect the camera via Http protocol. The Https path will be: "https://(IP address)". If you select "Http & Https", both the Http and Https path can be used to access the camera.



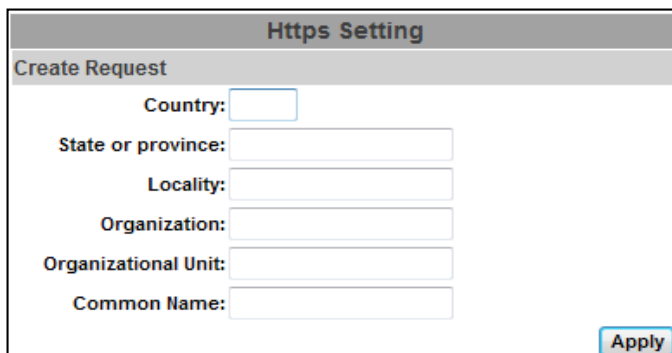
The screenshot shows a dropdown menu titled "Connection Types". The menu is open, showing three options: "Http&Https" (selected), "Http", and "Https".

- (i) **Remove the existing setting:** Before setting new request, please remove old secure identification. Select "Http" connection type and click "Remove".



The screenshot shows the "Https Setting" dialog box. It has two sections: "Created Request" and "Installed Certificate". Each section has a "Subject" and "Date" field, and "Content" and "Remove" buttons. The "Remove" buttons in both sections are highlighted with a red box. At the bottom, there is a "Connection Types" dropdown menu set to "Http".

- (ii) **Created Request:** Setting the secure identification and apply it.



The screenshot shows the "Https Setting" dialog box, specifically the "Create Request" section. It contains several input fields: "Country:", "State or province:", "Locality:", "Organization:", "Organizational Unit:", and "Common Name:". An "Apply" button is located at the bottom right.

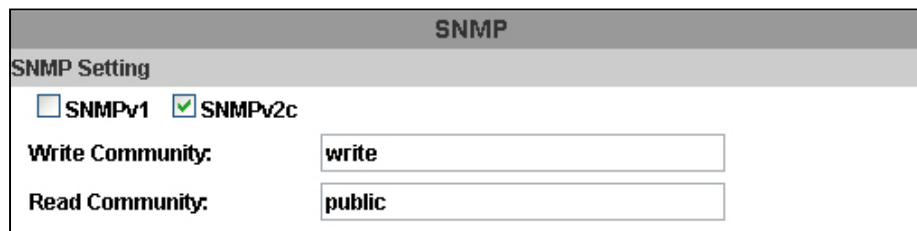
- (iii) There are two ways to set Certificate- Install Signed Certificate or Create Self-Signed Certificate.



b. SNMP(Simple Network Management Protocol)

SNMP provides a simple framework for administering networked hardware. To manage the IP camera, you have to prepare a MIB browser or similar tools first. SNMPv1, SNMPv2c, and SNMPv3 can be enabled simultaneously.

- (i) SNMPv1 and SNMPv2:



The term "Community name" in SNMPv1 and SNMPv2c can be roughly regarded as key. The person who has the community name has the authority to read or edit the information of IP camera via SNMP.

Tick the box to enable SNMPv1 or SNMPv2c protocol, and specify the community name for write(read and write) and read(read-only). The user who use read community name to access the IP camera cannot modify any data of this camera.

(ii) SNMPv3:

<input checked="" type="checkbox"/> SNMPv3	
Write Security Name:	<input type="text" value="write"/>
Authentication Type:	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password:	<input type="password" value="....."/>
Encryption Type:	<input checked="" type="radio"/> DES <input type="radio"/> AES
Encryption Password:	<input type="password" value="....."/>
Read Security Name:	<input type="text" value="public"/>
Authentication Type:	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password:	<input type="password" value="....."/>
Encryption Type:	<input checked="" type="radio"/> DES <input type="radio"/> AES
Encryption Password:	<input type="password" value="....."/>

For data security reason, the authentication and encryption assurances are added when developing SNMPv3. The user has to give not only the security name(the same as "community name" in v1&v2c, or sometimes we call it "context name") but the password in order to access the IP camera. Please set security name, authentication type, authentication password, encryption type, encryption password of write and read respectively. The password must be 8~64 bits in length.

Different from in SNMPv1 and v2c, the user have to create a account when using SNMPv3. In the account parameters, key in the security name and password you set in the camera to get accessing.

(iii) SNMPv1/SNMPv2 Trap:

<input checked="" type="checkbox"/> SNMPv1/v2c Trap	
Trap Address:	<input type="text" value="192.168.40.159"/>
Trap Community:	<input type="text" value="public"/>
Trap Event:	<input type="checkbox"/> Cold Start <input checked="" type="checkbox"/> Setting Changed <input checked="" type="checkbox"/> Network Disconnected <input type="checkbox"/> V3 Authentication Failed <input type="checkbox"/> SD Insert/Remove
	<input type="button" value="Apply"/>

Trap is a mechanism that allows the a managed device to send messages to manager instead of waiting passively for polling from the manager. Specify the trap event. When those events happen, the camera will send the ring message to the Trap Address, which is usually the manager's IP address. Trap Community means the community that can receive the trap message.

- Cold Start: The camera starts up or reboots.
- Setting changed: The SNMP setting is changed.
- Network Disconnected: The network connection was broken down. (The camera will send trap messages after the network being connected again)
- V3 Authentication Failed: A SNMPv3 user account tries to get authentication but failed. (Due to incorrect password or community)
- SD Insert / Remove: A Micro SD card is inserted or removed.

c. Access List

IP FILTER

IP ADDRESS FILTER Setting

Enable ip address filter

IPv4 Setting:

allow deny

range address: -

IPv4 List:

No.	IP Address	Filter	Action
1	192.168.50.159	allow	<input type="button" value="remove"/>
2	192.168.50.151-192.168.50.161	deny	<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

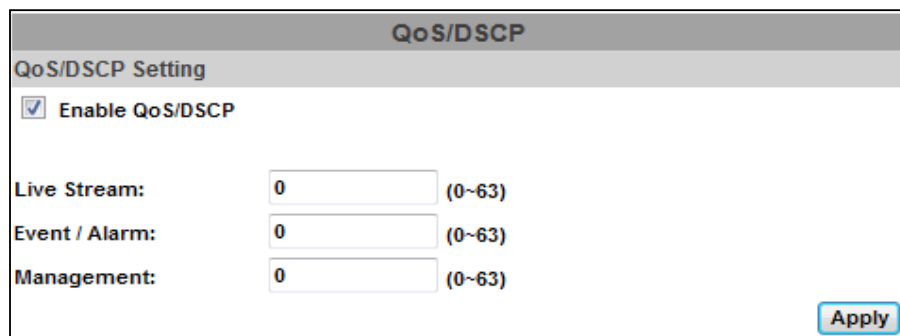
Admin ip address:

You can deny a IP address or a range of IP address so that they cannot access the IP camera. Tick the "enable" box, key in the IP address you want to deny, select "deny" then click "Add" to add it to the list.

You can also choose to deny a range of IP address but allow one or several IP address of them. Take the picture above for example, IP address 192.168.50.151~161 are not allowed to connect to the camera, but only

192.168.50.159 can access. **Note: In the list "allow" condition must be ranked before "deny" condition.** For example, if we exchange the sequence, set "Deny: 192.168.50.151~192.168.50.161" for the first item and "Allow: 192.168.50.159" for the second item in the list, the IP "192.168.50.159" turns out to be denied by the camera because the "deny" condition has the priority according to our ranking way.

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.

The number 0~63 for Live Stream, Event / Alarm, and Management represent the ratio that the bandwidth is divided. For example, if you set 5, 10, and 20 for the three items, then the bandwidth of the three item is 5:10:20. There is no difference between setting "0, 0, 0" or "63, 63, 63" because under these two setting the three items will get equal bandwidth (1/3).

The three stream control the protocols respectively:

- Live Stream (Video and audio) : RTP / RTSP
- Event/Alarm : FTP / SMTP / SAMBA / SIP
- Management : HTTPS / HTTP / SNMP

Note: The "Management" stream handles both the live view and the setting area of the web page on which the data is transferred via http/https protocol. If you prefer to distribute more bandwidth when using the web browser to access the camera, please adjust the Management stream.

e. IEEE 802.1x

IEEE 802.1x/EAP-TLS

IEEE 802.1x Setting

Enable IEEE 802.1x

Eapol version: v1 v2

Identity:

Private key password:

CA certificate:

Status:

Client certificate:

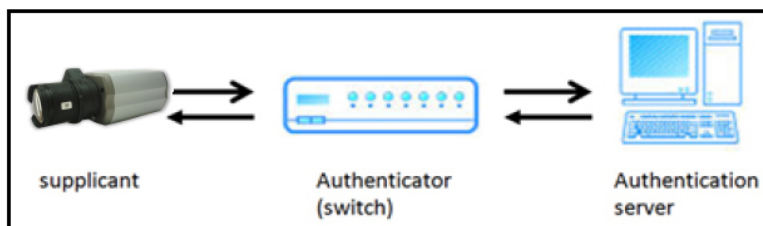
Status:

Client private key:

Status:

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.

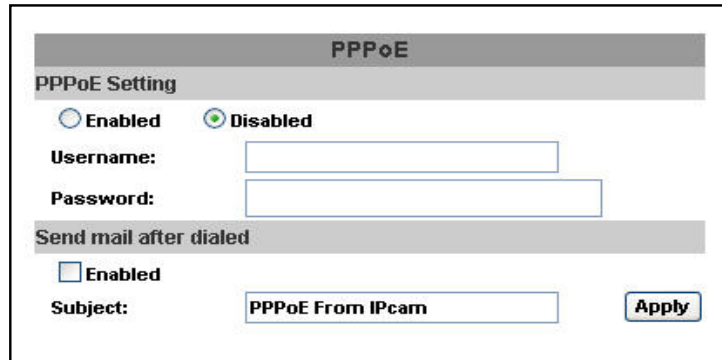
The EAPOL protocol support service identification and optional point to point encryption over the local LAN segment.



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.

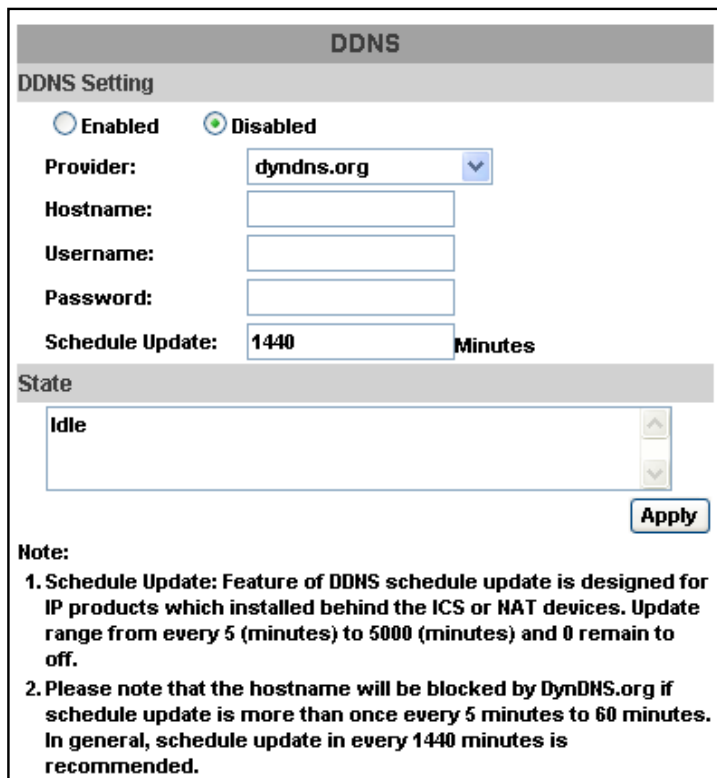
3. PPPoE & DDNS

- a. 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 Server settings.



The screenshot shows the PPPoE configuration page. At the top is the title 'PPPoE'. Below it is the 'PPPoE Setting' section with two radio buttons: 'Enabled' (unselected) and 'Disabled' (selected). There are two text input fields for 'Username:' and 'Password:'. Below that is the 'Send mail after dialed' section with a checkbox for 'Enabled' (unchecked) and a text input field for 'Subject:' containing 'PPPoE From IPcam'. An 'Apply' button is located at the bottom right.

- b. DDNS:



The screenshot shows the DDNS configuration page. At the top is the title 'DDNS'. Below it is the 'DDNS Setting' section with two radio buttons: 'Enabled' (unselected) and 'Disabled' (selected). There is a dropdown menu for 'Provider:' set to 'dyndns.org'. Below are text input fields for 'Hostname:', 'Username:', and 'Password:'. There is a text input field for 'Schedule Update:' set to '1440' with the unit 'Minutes' to its right. Below that is the 'State' section with a dropdown menu set to 'Idle'. An 'Apply' button is located at the bottom right. A 'Note:' section follows, containing two paragraphs of text.

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.

It supports DDNS (Dynamic DNS) service.

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

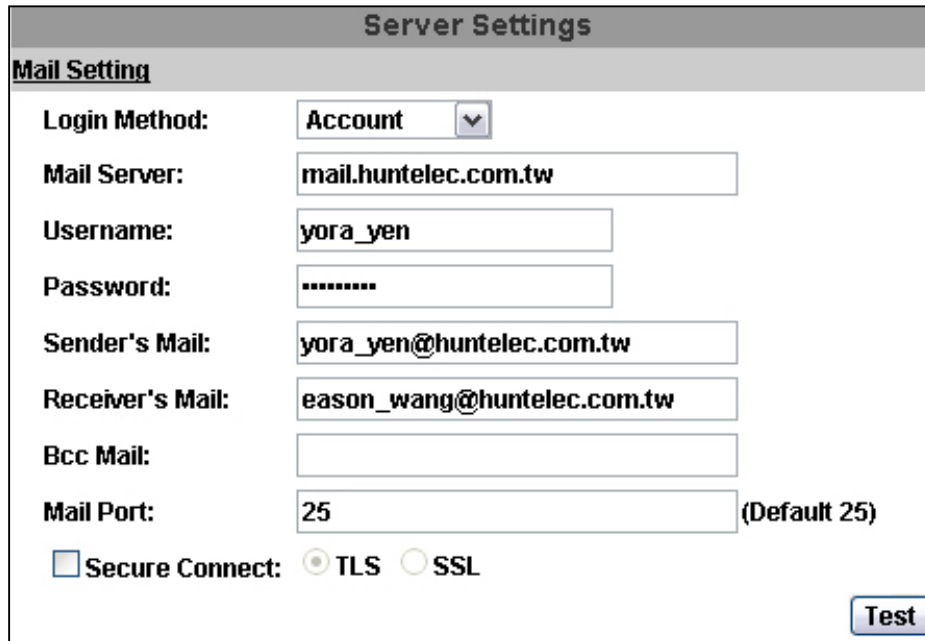
(vi) DDNS Status

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

4. Server setting

The settings of Email, FTP and SAMBA are used when the event happens, schedule snapshot executes, or the alarm input is triggered. Select the item to display the detailed configuration options. You can configure either one or all of them.

a. Mail Setting:

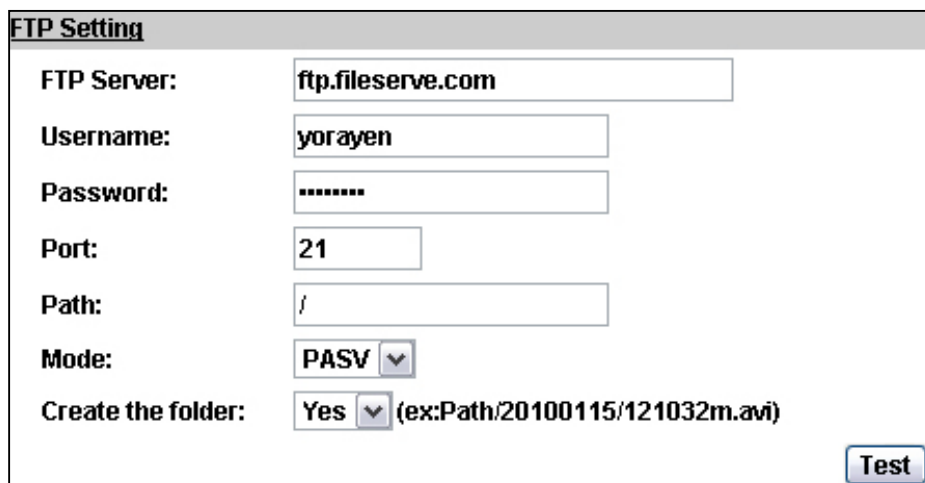


The screenshot shows the 'Mail Setting' window within the 'Server Settings' interface. It contains the following fields and options:

- Login Method:** Account (dropdown menu)
- Mail Server:** mail.huntelec.com.tw
- Username:** yora_yen
- Password:** (masked with dots)
- Sender's Mail:** yora_yen@huntelec.com.tw
- Receiver's Mail:** eason_wang@huntelec.com.tw
- Bcc Mail:** (empty field)
- Mail Port:** 25 (Default 25)
- Secure Connect:** TLS SSL
- Test** button

Set up the server address and account information of your e-mail. Click "Apply" to save the setting, then use "Test" button to test the server connection. A message box will tell you "OK!" if it works, and a test e-mail will be sent to receiver's mail address.

b. FTP:



The screenshot shows the 'FTP Setting' window within the 'Server Settings' interface. It contains the following fields and options:

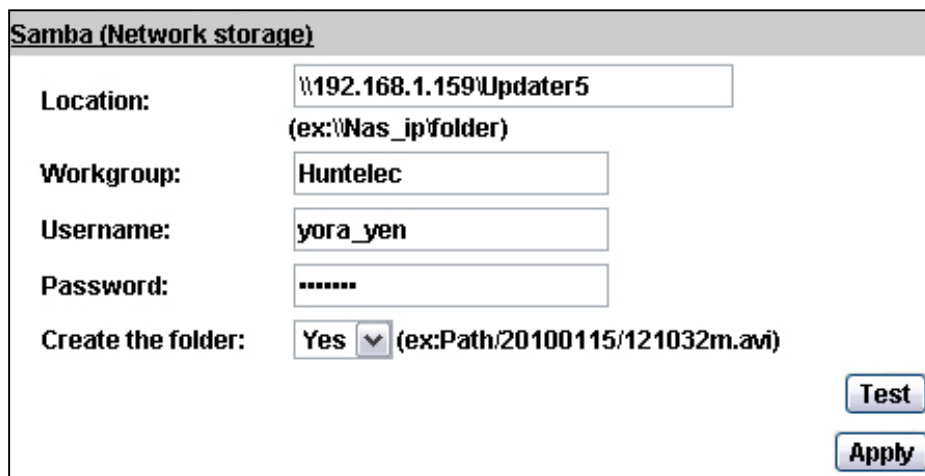
- FTP Server:** ftp.fileserve.com
- Username:** yorayen
- Password:** (masked with dots)
- Port:** 21
- Path:** /
- Mode:** PASV (dropdown menu)
- Create the folder:** Yes (dropdown menu) (ex:Path/20100115/121032m.avi)
- Test** button

Set up the server address and account information of your FTP. Click "Apply" to save the setting, then use "Test" button to test the server

connection. A message box will tell you “OK!” if it works, and a test file will be uploaded to FTP space.

In PORT mode, the FTP server builds the connection to the user's data port actively. However, from the user-side firewall's standpoint, the action of connecting from FTP server is often considered to be dangerous and should be blocked. In PASV mode, the problem is solved: The FTP server waits for the data transmission connection built by the user. Make sure that the server supports the mode you select.

c. Samba:



Samba (Network storage)

Location:
(ex: \\Nas_ip\folder)

Workgroup:

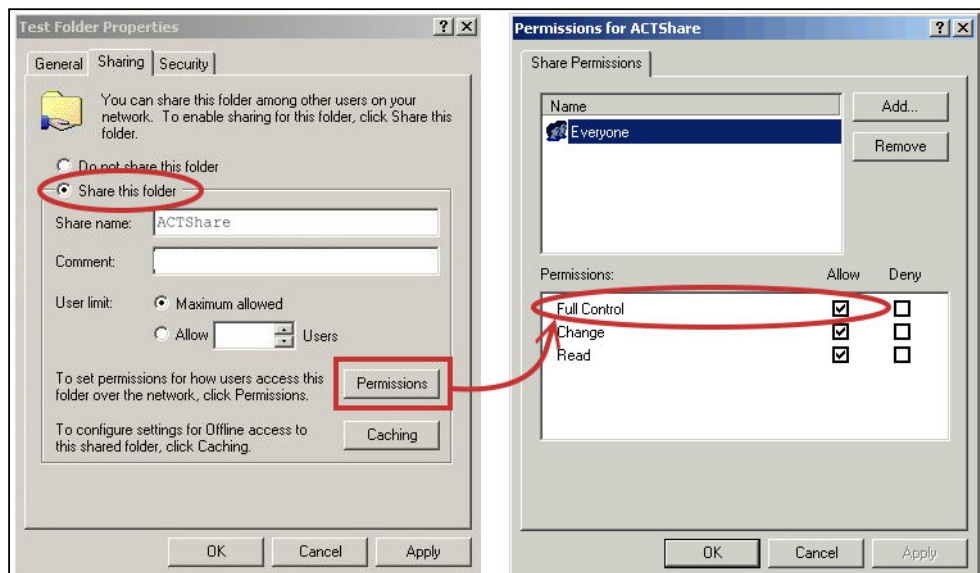
Username:

Password:

Create the folder: (ex: Path/20100115/121032m.avi)

Select this option to send the media files via a network neighborhood when an event is triggered. Click “Apply” to save the setting, then use “Test” button to test the server connection. A message box will tell you “OK!” if it works, and a test document will be created in the location.

If the test failed, check the sharing setting of your location folder. The folder properties must be “shared” and the permissions must be “Full Control” as the picture.



Test Folder Properties (Sharing tab):

- Do not share this folder
- Share this folder
- Share name:
- Permissions button highlighted with a red box.

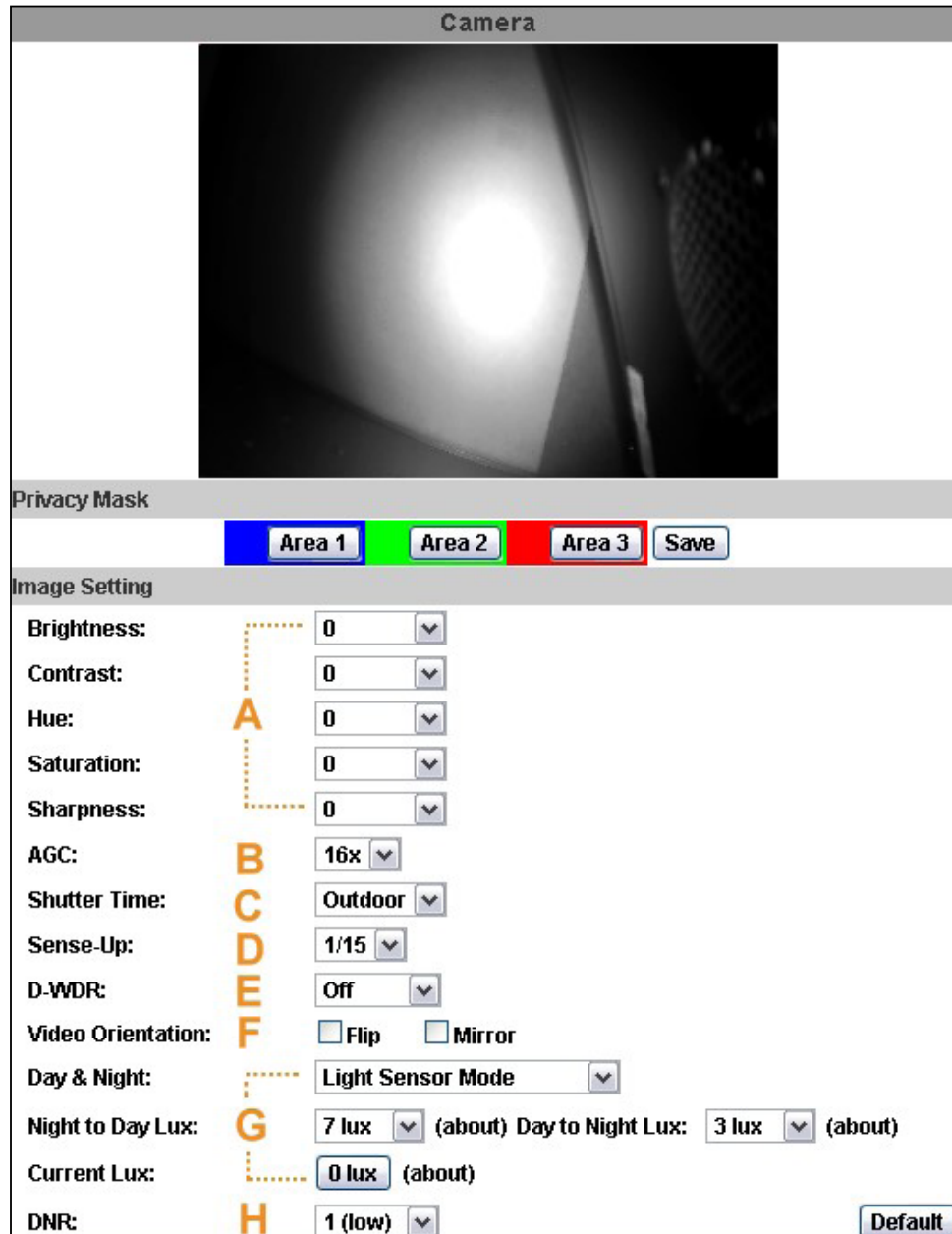
Permissions for ACTShare (Share Permissions tab):

Permissions:	Allow	Deny
Full Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 'Full Control' row is circled in red, and a red arrow points from the 'Permissions' button in the first dialog to this row.

C. A/V Setting

1. Image Setting



For the security and privacy purpose, there are three areas can be setup for privacy mask. Click Area button first and drag an area on the above image, and remember to save your setting. The masked area will not show on both the live view and recording.

Please refer to the details below for Image setting:

- a. Brightness, Contrast, Hue, Saturation, Sharpness can be adjusted here.
- b. AGC: Automatic gain control. The sensitivity of camera can adjust with the environmental light. Enable this function and the brighter image can be got under dim light, but the level of noise may also increase.

- c. Shutter Time: Choose as the location of your camera or fixed shutter time. The shorter the shutter time is, the less light the camera receives and the image becomes darker.
- d. Sense-Up: This function increases the sensitivity of camera to get brighter image at night. The bigger the value you select, the slower the shutter speed becomes so that the image will get brighter, and moving subjects might be blurred.
- e. D-WDR: Digital wide dynamic range. This function enables the camera to reduce the contrast in the view to avoid the dark zones resulting from over and under exposure.
- f. Video Orientation: Flip or mirror the image as your requirement.
- g. Day & Night: The camera can detect the light level of environment. If you choose "Light Sensor Mode", the image will be turned to black and white at night in order to keep clear. To set light sensor mode, appoint a lux standard of switching D/N here. Current lux value is provided for reference. Under "Times Mode" the switch time of Color / Black and white is according to the given time. You can also control it by choosing "Color" or "B/W" .
- h. DNR: Digital noise reduction. This function is able to filter the noise and blur from the image and show a clearer view. "3D" and "2D" are two different denoising approaches. 3D denoise analyzes successive pictures to detect the noise places while 2D denoise analyzes only single picture.

2. Video Setting

a. Video System Setting:

Choose the Video System, NTSC or PAL.

b. Basic Mode of Streaming 1 and Streaming 2:

Video Setting		
Video System:	NTSC ▼	
Streaming 1 Setting		
<input checked="" type="radio"/> Basic Mode	<input type="radio"/> Advanced Mode	
Resolution:	1280x800 ▼	
Quality:	High ▼	
Video Frame Rate:	30 FPS ▼	
Video Format:	H.264 ▼	
RTSP Path:	<input type="text"/> ex:rtsp://IP_Address/ Audio:G.711	
Streaming 2 Setting		
<input checked="" type="radio"/> Basic Mode	<input type="radio"/> Advanced Mode	<input type="radio"/> Close
Resolution:	640x480 ▼	
Quality:	Standard ▼	
Video Frame Rate:	30 FPS ▼	
Video Format:	JPEG ▼	
RTSP Path:	v2 <input type="text"/> ex:rtsp://IP_Address/v2 Audio:G.711	

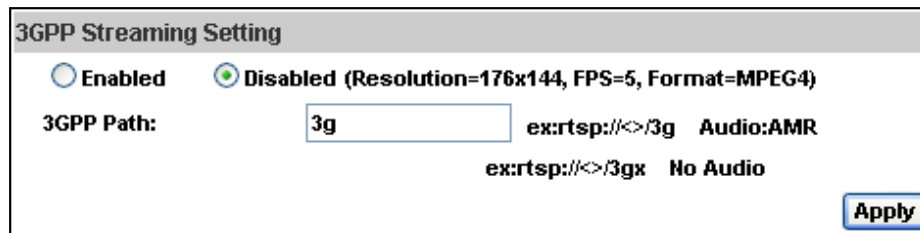
- (i) Resolution: 1280x800, 1280x720, 1280x720, 640x480, 320x240, or 176x144
- (ii) Quality: The higher the quality is, the bigger the file size is. It might affect Internet transmitting speed if the file gets too large.
- (iii) Video Frame Rate: The video refreshing rate per second. The max value is affected by the input resolution you choose.
- (iv) Video Format: H.264, MPEG4, or M-JPEG
- (v) RTSP Path: Set the RTSP output connecting route

c. Advanced Mode of Streaming 1 and Streaming 2:

Streaming 1 Setting	
<input type="radio"/> Basic Mode <input checked="" type="radio"/> Advanced Mode	
Resolution:	1280x800
Bitrate Control Mode:	<input checked="" type="radio"/> CBR <input type="radio"/> 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
Streaming 2 Setting	
<input type="radio"/> Basic Mode <input checked="" type="radio"/> Advanced Mode <input type="radio"/> Close	
Resolution:	640x480
Quality:	Standard
Video Frame Rate:	30 FPS
Video Format:	JPEG
RTSP Path:	v2 ex:rtsp://IP_Address/v2 Audio:G.711

- (i) Resolution: 1280x800, 1280x720, 1280x720, 640x480, 320x240, or 176x144
- (ii) Bitrate Control Mode: In CBR(Constant Bit Rate) mode, the bitrate keeps consistent all over the video. In VBR(Variable Bit Rate) mode, the bitrate changes with the complexity extent of the video data. VBR provides a better compression way and the file may be smaller. However, the VBR file size cannot be predicted.
- (iii) Video Quantitative: The quality parameter of VBR. You can choose 1~10 compression rate
- (iv) Video Bitrate: The quality parameter of CBR. You can choose 32kbps~8Mkbps. The higher the value is, the higher the image quality is.
- (v) Video Frame Rate: The video refreshing rate per second. The max value is affected by the input resolution you choose.
- (vi) GOP Size: It means “Group of Pictures”. The higher the GOP is, the better the quality is.
- (vii) Video Format: H.264, MPEG4, or M-JPEG
- (viii) RTSP Path: RTSP output connecting route

d. 3GPP Streaming mode:



The rtsp here is separated from the rtsp setting in the "IP SETTING". 3GPP Streaming can still work even you select "disabled" in the rtsp server option of IP Setting.

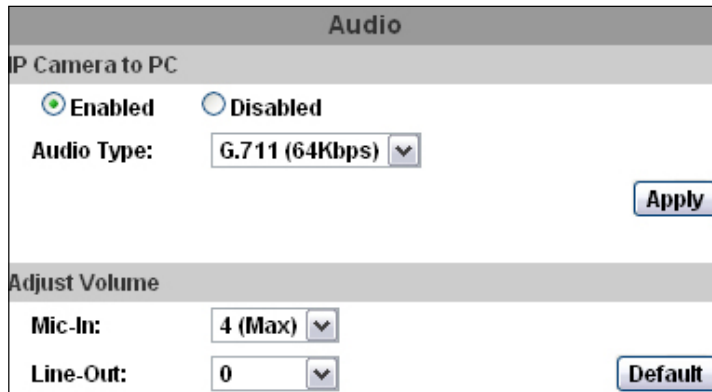
3GPP mode fixed setting: 176x144 resolution, 5FPS, Video compression: MPEG4, Audio compression: AMR.

- (i) Enable or Disable 3GPP Streaming
- (ii) 3GPP Path: 3GPP output connecting route. If the IP address of your camera is 192.168.40.150, and you key in "3g" in the column, the 3GPP path will be rtsp://192.168.40.150/3g.

3. Audio:

IP Camera supports 2-way audio. Audio can be received by the built-in mic in the IP camera and transmitted to remote PC. User can also send audio from remote PC mic to IP Camera's external speaker.

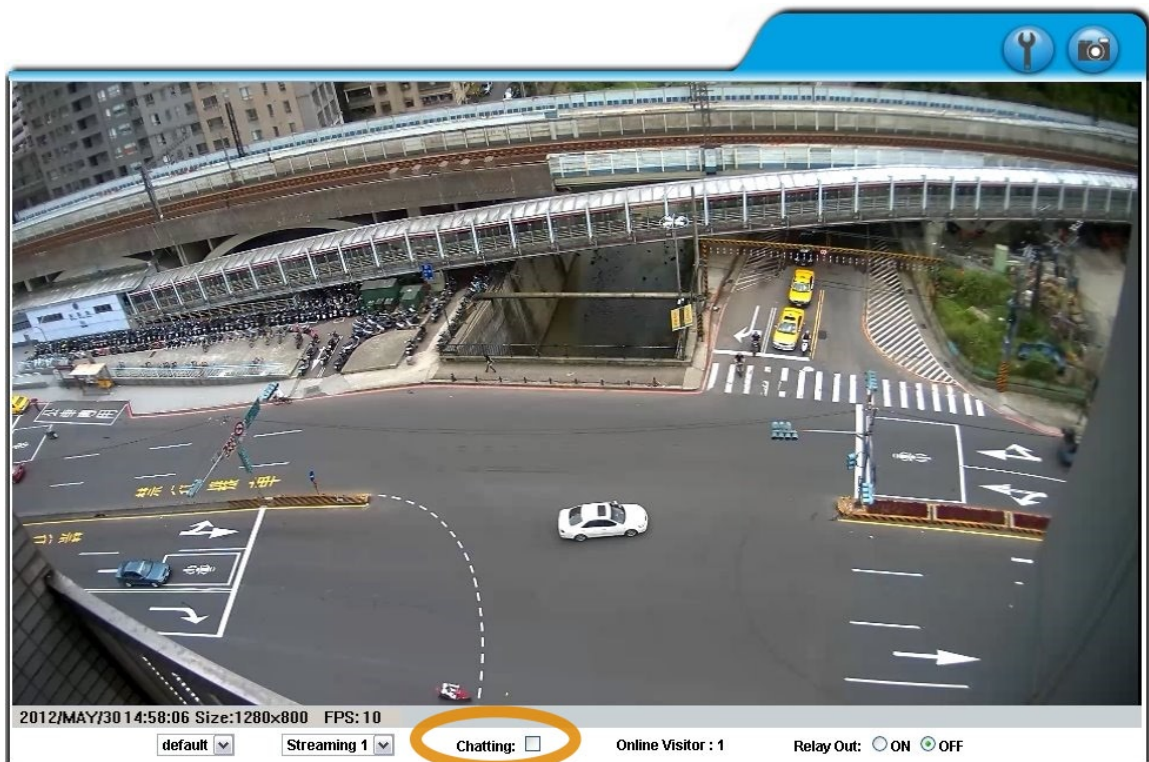
a. IP Camera to PC



To receive Audio from IP camera, select "Enable" to start this function. The Audio compression format can be chosen from 3 options. You can also adjust the volume of 2-way audio.

b. PC to IP Camera

Tick "chatting" box in the browsing page, then your voice can be propagated from PC to camera.



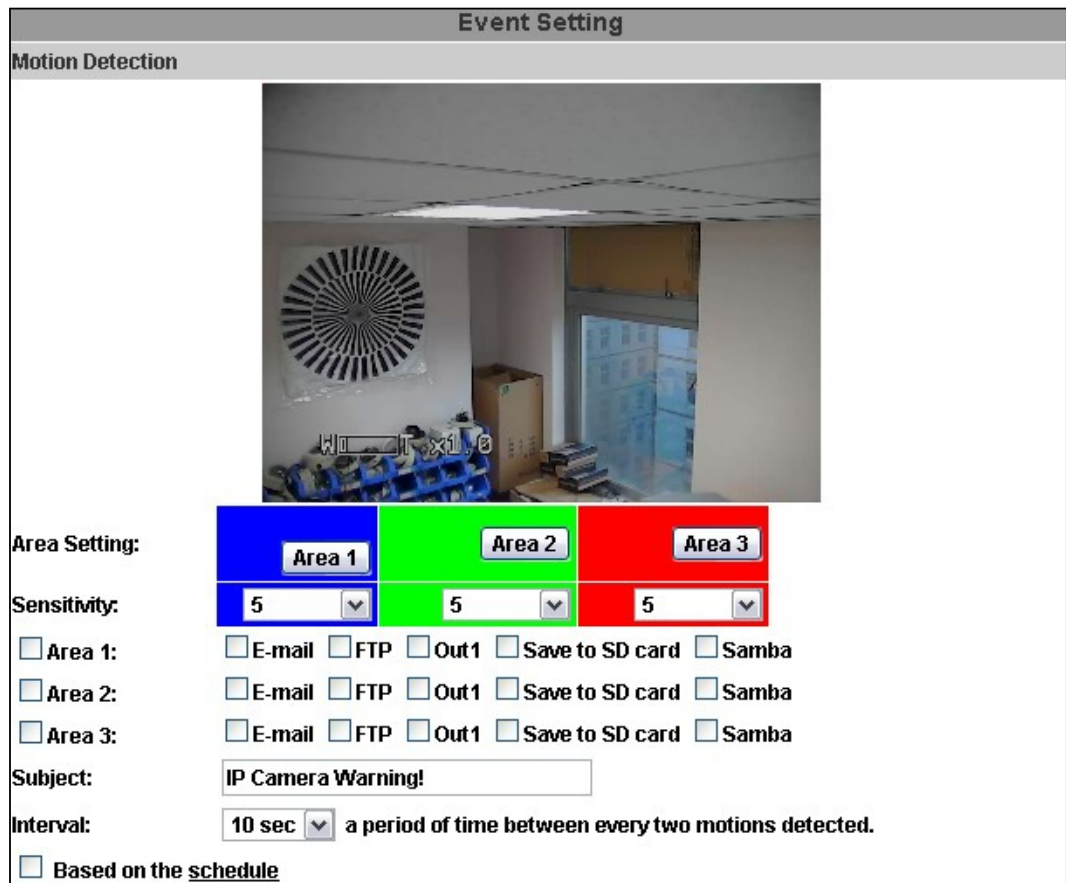
If "Chatting" and "Save to SD card" are enabled simultaneously, the sound quality might be affected and becomes not smooth.

D. Event List

IP Camera provides multiple event settings.

1. Event Setting

a. Motion Detection



Event Setting

Motion Detection

Area Setting: **Area 1** **Area 2** **Area 3**

Sensitivity: **5** **5** **5**

Area 1: E-mail FTP Out1 Save to SD card Samba

Area 2: E-mail FTP Out1 Save to SD card Samba

Area 3: E-mail FTP Out1 Save to SD card Samba

Subject:

Interval: **10 sec** a period of time between every two motions detected.

Based on the schedule

IP CAMERA allows 3 areas motion detection. When motion is detected, it can send video to some specific mail addresses, trigger the output device, or save video to remote FTP / Micro SD card / Samba. To set up the motion area, click "Area Setting". Using mouse to drag and draw the area.

- Interval:

For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.

- Based on the schedule:

When the option box is ticked, only during the selected schedule time the motion detection is enabled. That is, for example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even the camera detects motion during 11:00~12:00 on Monday.

b. Record File

Record File	
File Format:	AVI File(with Record Time Setting) ▼

Choose one of the format, AVI or JPEG .

c. Record Time Setting

Record Time Setting			
Pre Alarm:	5 sec ▼	Post Alarm:	5 sec ▼

Set up the video recording time for Pre Alarm and Post Alarm when motion is detected, I/O, or other devices is triggered.

Note: Pre/Post Alarm record time is base on record time setting and restricted to IP Cam built-in Ram memory. If the quantity of data is too huge or video quality too high, recording frame might drop or decrease on post alarm recording time.

d. Network Dis-connected

Network Dis-connected	
Dis-connected:	<input type="checkbox"/> Save to SD card

To avoid video loss, the camera will start to save the video to Micro SD card when it detect no network connection. The video recording will continuously be saved into Micro SD card and divided into every 10 minutes a file until the network is reconnected successfully. The oldest file will be deleted if the capacity of Micro SD card is full.

This function is only enabled under wire connection.

e. Network IP check:

Network IP Check	
IP Check:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
IP Address:	www.google.com
Interval:	30 sec ▼
IP Check:	<input type="checkbox"/> Save to SD card

Key in the target IP address and interval. The camera checks once in a while according to the setting interval time that if itself can linked to the target IP address. If connection failed, the camera starts to save the video to Micro SD card.

2. Schedule

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

■ With schedule setup.

Snapshot

Enabled Disabled

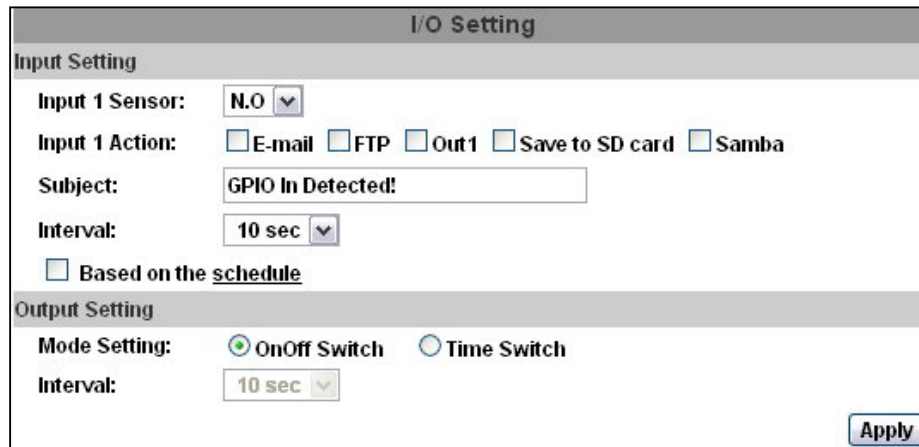
Snapshot: E-mail FTP Save to SD card Samba

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

File Name:

- a. Schedule: After complete the schedule setup, the camera data will be recorded according to the schedule setup.
- 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.

3. I/O Setting



a. Input Setting:

IP Camera supports input and output. When the input condition is triggered, it can trigger the relay, send the video to mail addresses /FTP server / SAMBA.

- Interval:

For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.

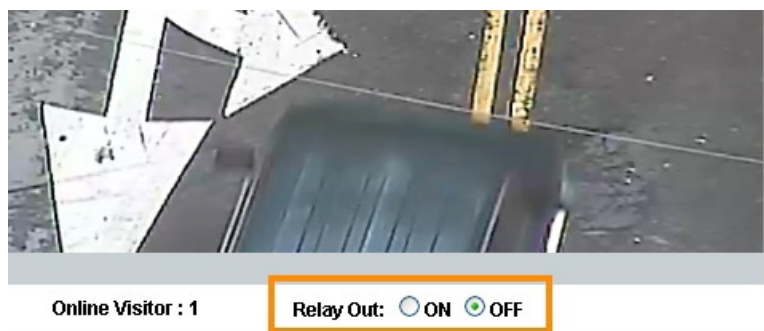
- Based on the schedule:

When the option box is ticked, only during the selected schedule time the I/O is enabled. That is, for example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even the camera detects input signal during 11:00~12:00 on Monday.

b. Output Setting:

The output mode affect the DO or relay out duration.

- (i) OnOff Switch: The camera triggers the external devise and lasts for 10 seconds. You can turn off the alarm manually by click "off" at the right bottom of the live video page.



- (ii) Time Switch: The camera triggers the external devise and lasts for certain of time according to the interval setting, and the user is not allowed to break off the alarm manually.

4. 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.

System Log
[2012/07/03 16:22:39] 192.168.40.159 login by admin.
[2012/07/03 11:54:22] 192.168.40.132 login by admin.
[2012/07/02 19:08:52] 192.168.40.132 login by admin.
[2012/07/02 18:24:50] 192.168.40.132 login by admin.
[2012/07/02 14:37:05] 192.168.40.132 login by admin.
[2012/07/02 14:18:26] 192.168.40.132 login by admin.
[2012/07/02 09:00:25] 192.168.40.132 login by admin.
[2012/06/29 19:51:34] Streaming 2 going to Close.
[2012/06/29 19:51:34] Streaming 1 Video bitrate going to 5000 Kbps.

5. 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"/>

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.

The oldest file will be deleted if the Micro SD card is full.

Playback

No SD card

SD Management

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

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

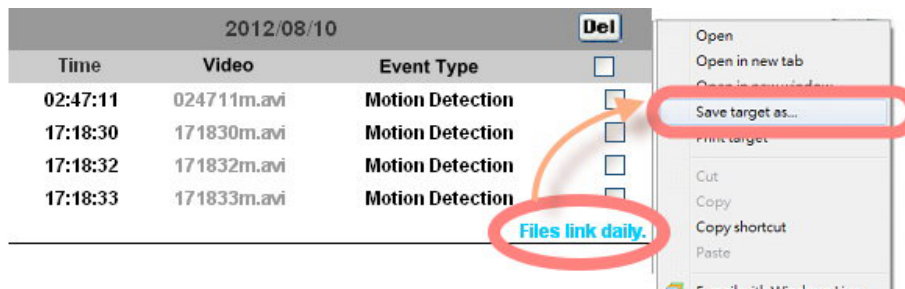
Note : The use of the SD card will affect the operation of the IP Camera slightly, such as affecting the frame rate of the video.

c. Copy to PC

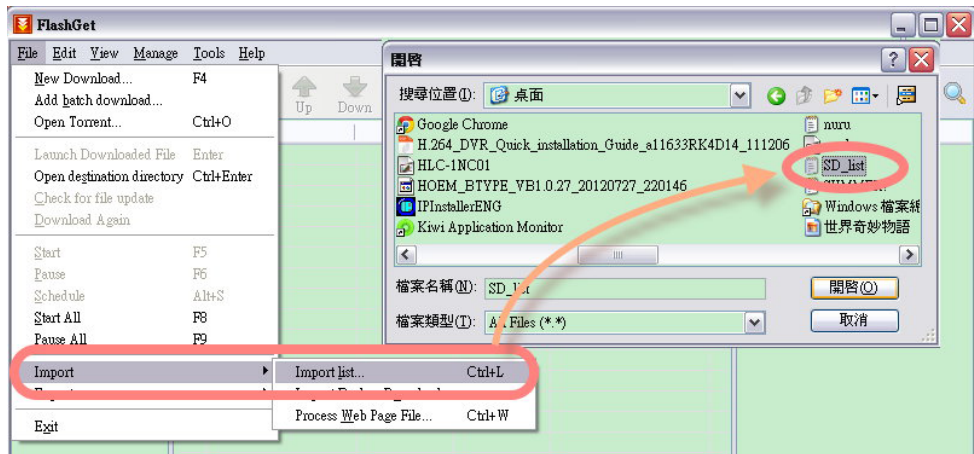
You can insert the Micro SD card to PC and read the files directly, or use FlashGet instead to download the files from IP camera. (In this way you do not need to pull out Micro SD card from the camera.)

To use FlashGet for downloading the image and video data from the Micro SD card, please follow the steps:

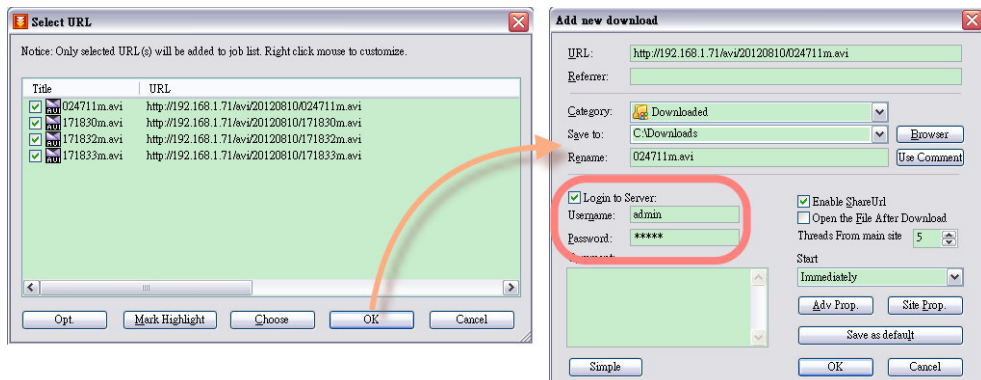
- (i) Enter the data list and right-click "Files link daily", select "save target as..." to save the link list to PC.



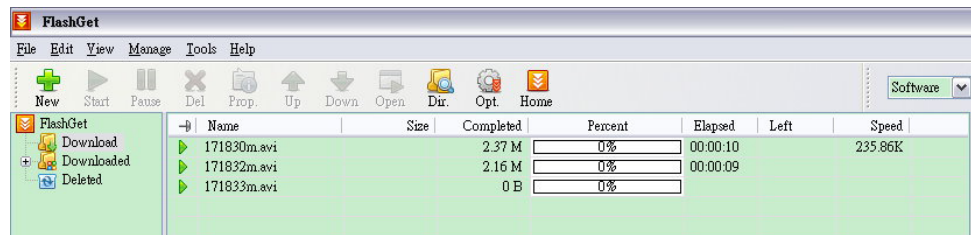
- (ii) Open FlashGet, select "File" → "Import" → "Import list", and find the link list file you just saved. The file name may be called "SD_list".



- (iii) FlashGet will show you the link list, and you can tick the files you want to copy to your PC. Give the directory path in the new download window, and remember to enable "Login to Server": key in the IP Camera username and password.



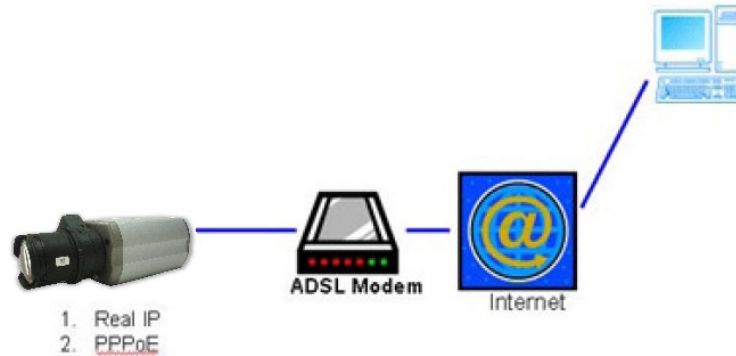
(iv) Click OK to start download.



- FlashGet is a free software that can be downloaded from FlashGet official website. The example above is based on FlashGet ver.1.9.6.

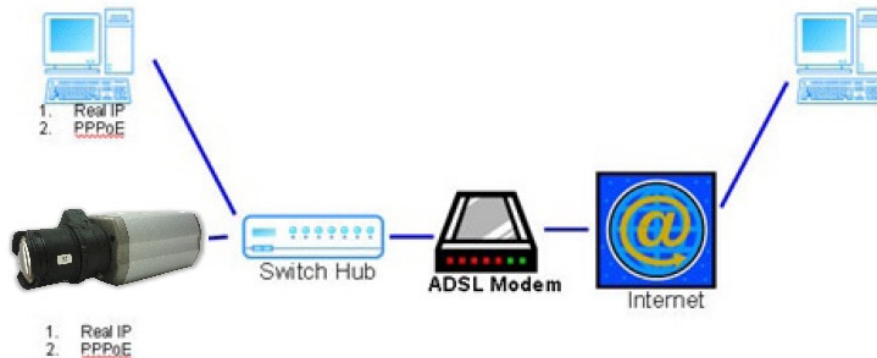
VI. Network Configuration

- Configuration 1:



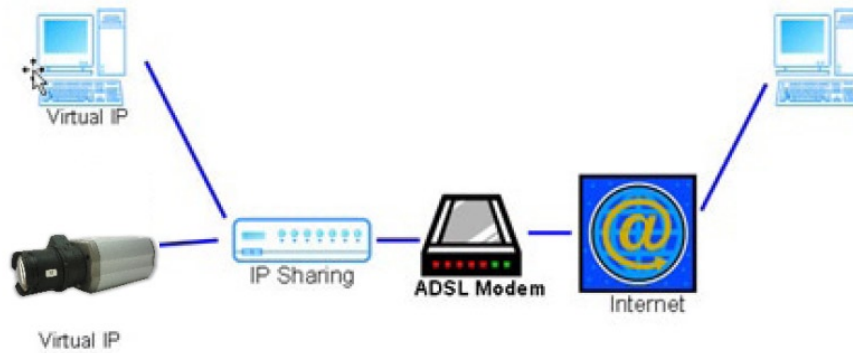
- Internet Access: ADSL or Cable Modem
- IP address: One real IP or one dynamic IP
- Only IP Camera connects to the internet
- For fixed real IP, set up the IP into IP Camera. For dynamic IP, start PPPoE.

- Configuration 2:



- Internet Access: ADSL or Cable Modem
- IP address: More than one real IP or one dynamic IP
- IP Camera and PC connect to the internet
- Device needed: Switch Hub
- For fixed real IP, set up the IP into IP Camera and PC. For dynamic IP, start PPPoE.

- Configuration 3:

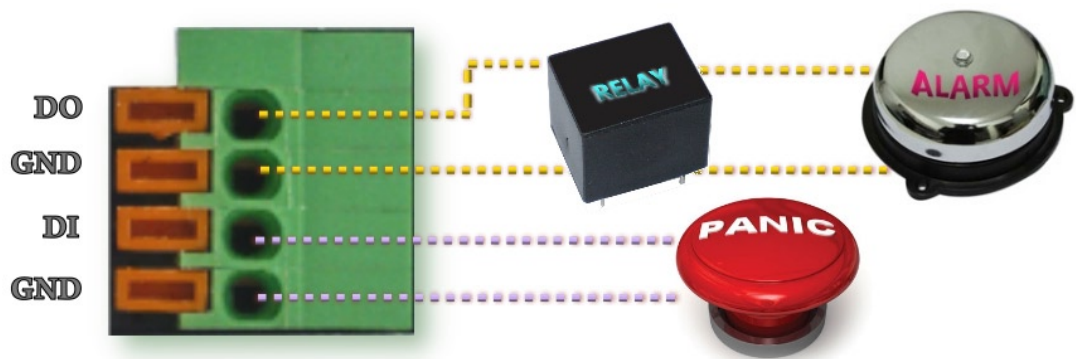


- a. Internet Access: ADSL or Cable Modem
- b. IP address: one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: IP sharing
- e. Use virtual IP, set up port forwarding in IP sharing.

VII. I/O Configuration

1. I/O Connection

- a. Please connect the GND & DO pin to the external relay (buzzer) device.
Please connect the GND & DI pin to the external trigger device.



b. I/O PIN definition

- GND (Ground): Initial state is LOW
- DO (Digital Output): DC 5V
- DI (Digital Input): Max. 50mA, DC 5V

2. I/O Setup

- a. Click I/O Setting from the system setup page via IE, and check "Out1" to enable I/O signal.

I/O Setting	
Input Setting	
Input 1 Sensor:	N.O
Input 1 Action:	<input checked="" type="checkbox"/> E-mail <input checked="" type="checkbox"/> FTP <input type="checkbox"/> Out1 <input type="checkbox"/> Save to SD card <input checked="" type="checkbox"/> Samba
Subject:	GPIO In Detected!
Interval:	10 sec
<input type="checkbox"/> Based on the <u>schedule</u>	
Output Setting	
Mode Setting:	<input checked="" type="radio"/> OnOff Switch <input type="radio"/> Time Switch
Interval:	10 sec

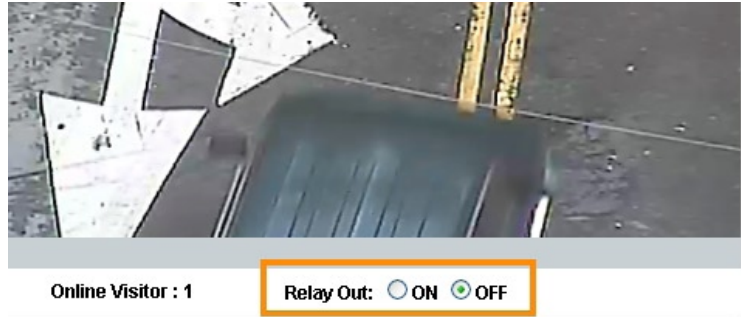
b. Output Test

After the external input and output hardware is installed, you can use the "Relay Out" button on the live video page to test if DO / Relay Out works.

(i) OnOff Switch mode:

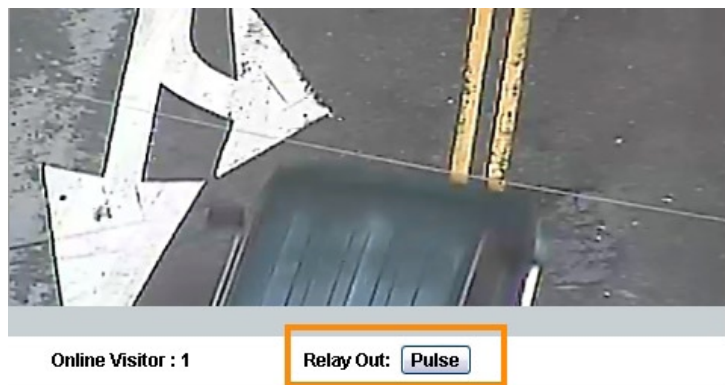
Click "ON", the camera will trigger the external output device for 10

seconds. For example, your alarm buzzer will continuously ring for 10 seconds. After 10 seconds the buzzer stops ringing, or you can manually break off the output signal by clicking "OFF".



(ii) Time Switch mode:

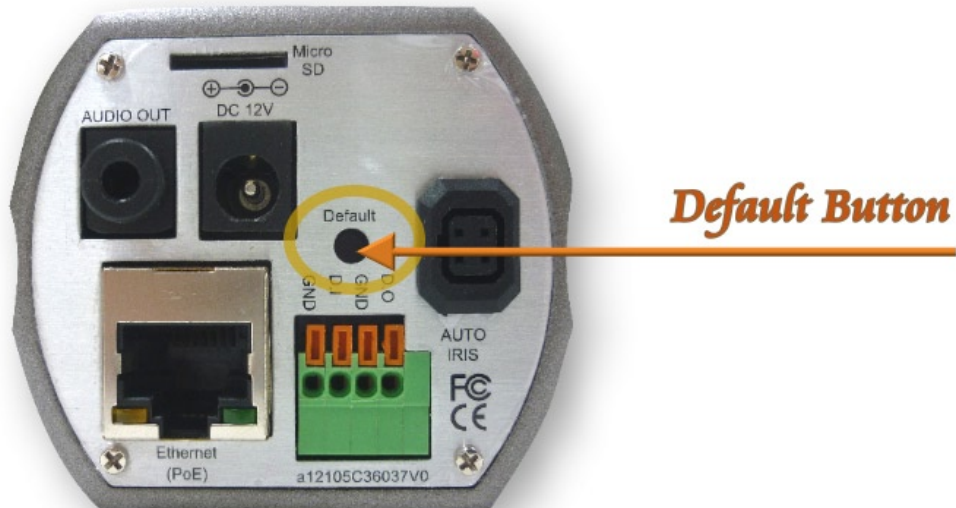
Click "Pulse", the camera will trigger the external output device for several seconds, The duration length is according to the "interval" setting in Output Setting.



VIII. Factory Default

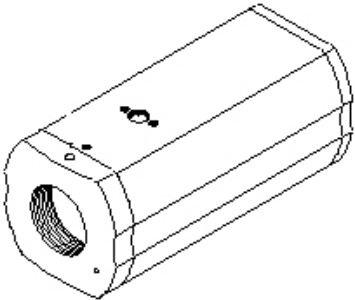
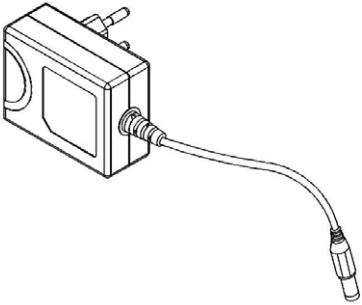

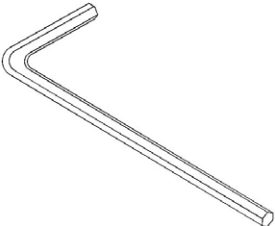
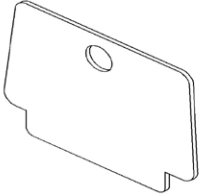
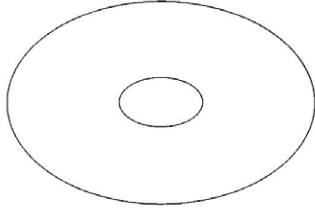
If you forget your password, please follow the steps to revert back to default value.

- Remove the power and ethernet cable. Press and hold the button as the picture below.



- Connect power to the camera again, and do not release the button during the system booting.
- It will take around 30 seconds to boot the camera.
- Release the button when camera finishes proceed.
- Plug in the ethernet cable. Re-login the camera using the default IP (<http://192.168.1.200>), and user name (admin), password (admin).

IX. Package Contents

IP Camera	Adaptor	Quick Installation Guide
		
Hex Wrench	Plates for turning the CS ring	CD
		

- Adaptor: AC100-240V DC12V/1A
- The CD includes User manual and software tools.

X. Micro SD Card Compatibility

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
	SDHC	class10	4GB
	SDHC	class10	8GB
	SDHC	class10	16GB
	SanDisk	SDHC	class4
SDHC		class4	8GB
SDHC		class4	16GB
SDHC		class4	32GB