



**Network Surveillance Camera**

**NSC 3615 / NSC 3621**

**User Manual**



Date	Version	Description	Author
2007.01.24	2.0.0	First release	IPCAM team

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## Package Contents

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- NSC3615-



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Leadtek Surveillance Camera

- NSC3615-



-NSC3621-



## Accessories

Software CD:



Ethernet cable:

**-NSC3615- / -NSC3621**



Power Adaptor:

**-NSC3615-**



-NSC3621-



SPK-MIC-PWR 3-in-1 cable

-NSC3621-



speaker

MIC

power

Mounting Rack:



Please unpack the product package with caution; inspect the items closely. If you find any damaged item, please contact your local distributor immediately. Also, please keep the box and packing material for future use in the event of future shipments.

## Introduction

### **High-quality, high efficiency video & audio transmission via IP network**

The network surveillance camera allows you to view live video over internet. Your control center can be set up anywhere with internet access without being restricted by locations. Surveillance video is processed by the most up-to date compression technology and transmitted in MPEG-4 compression format, whose transmission efficiency and video quality remain uncompromised by the network, minimizing the lagging of live surveillance video. In addition, wireless LAN is also supported. The wireless model makes the network usage more handy without the hassle of cable installation.

### **Great usability in every surveillance aspect**

The network surveillance camera's ease of use begins with its web-based user



interface, using Microsoft Internet Explorer to browse the live video or the provided Windows client Surveillance Management Center(SMC) that offers many additional benefits: its user interface can display video up to 9 camera servers at the same time. Recording can also be done simultaneously and you can use it to view recorded video from the archive and backup your recorded file with audio.

### **Unparalleled surveillance functions where nothing slips through your watch**

The network surveillance camera's motion detection function sends out the alarm when any movement of any object occurring on the scene is detected, which makes it ideal for home and after-hour facility security. 16 preset positions can be programmed and the auto-cruise function will make the tour accordingly as if you were taking the patrol rounds in person.

You can also program the cameras to take snapshots or record video when the alarm is triggered by the event. These snapshots can be transmitted via FTP or email. Event recording is done by a client PC on the network as the camera sends snapshot in JPEG format as part of the responses to the triggered event.

### **Optional centralized management software for large scale surveillance services**

The software suite performs as a central control station on a client PC that controls, manages, and monitors up to 9 network surveillance camera server units over the network at the same time. You can talk to your surveillance camera just by a click on the managed camera to start 2-way audio conversation. The flexible and diversified SMC offer you handy surveillance solution on Windows platform.

# Key Features

## Surveillance Camera NSC3615 / NSC3621

- ✓ Compact color CMOS / CCD camera
- ✓ Manual / Auto Pan and Tilt functions (Specified models)
- ✓ MPEG-4 / H.263 video and G.711 audio compression
- ✓ Internet connection compatible with Ethernet
- ✓ Support audiovisual transmission and recording
- ✓ A client viewer is able to simultaneously access multiple cameras located at different sites
- ✓ Built-in Web server for remote surveillance on network
- ✓ Complete remote surveillance and management PC software

## Bundled Windows Client Surveillance and Management Center

### *Display*

Resolution	H.263(CIF , QCIF), MPEG-4(D1, VGA, QVGA, CIF, QCIF)
Image Quality	28 level
Channel	1/4/9 (with multiple camera connections)
Connection Indication	Video, Audio and Recording
Caption	Camera number, IP Address, Frame Per Second

### Easy Recorder/Player

Instant record and playback video manually

### Camera Operation

Camera Connection	Up to 9 cameras
Camera Scan	Search cameras in network
Camera Configuration	Network / Video parameters

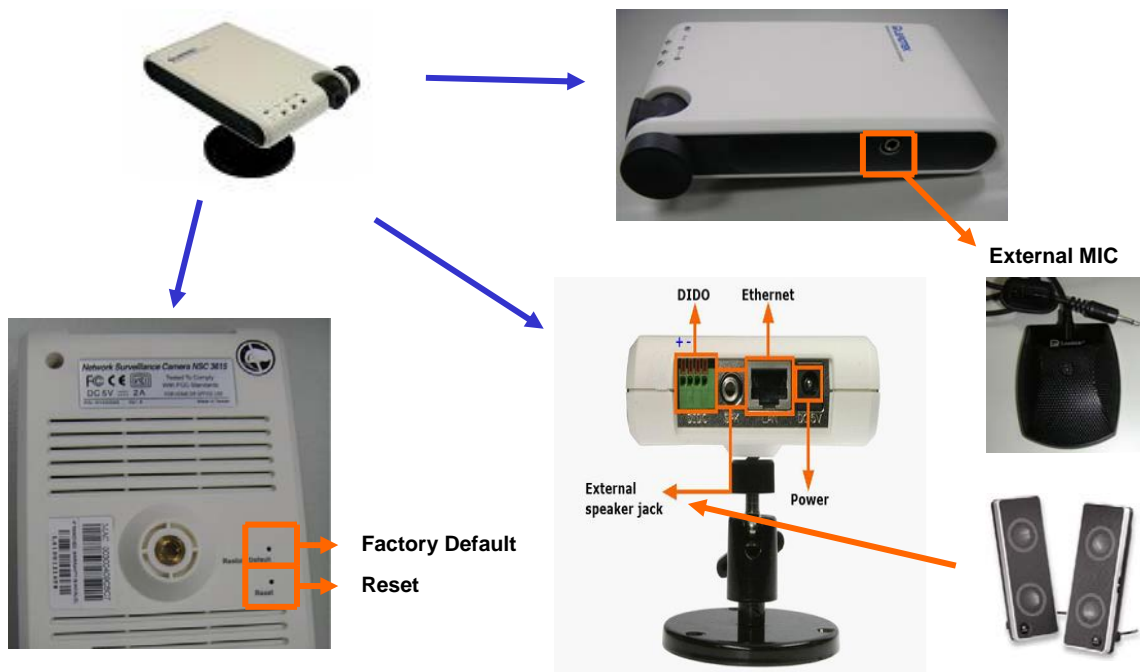
### Event Record Setting

Mode	Manual / Event / Scheduler
------	----------------------------

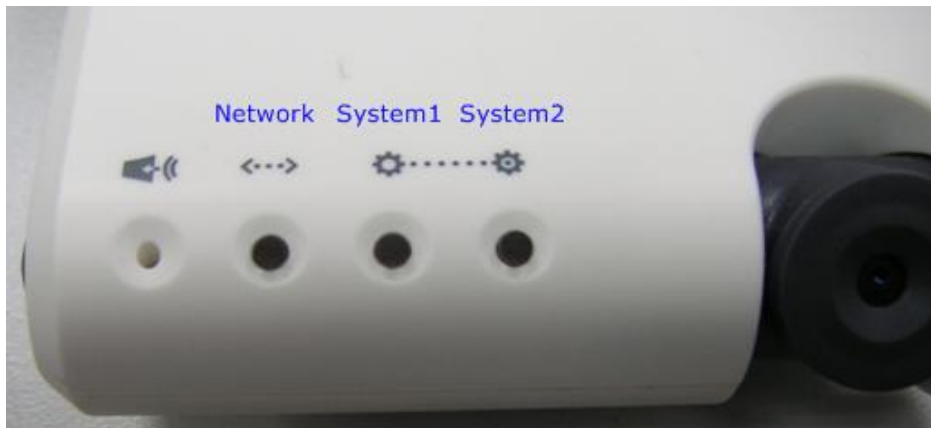
## Connections and Functions

Both NSC3615 / NSC3621 equip with 1DI / 1DO connector and PC compatible mono microphone and speaker. You can also find 2 pinholes (NSC3615: rear view / NSC3621: back side view of bottom) on surveillance camera. One is **Factory Default** and the other one is **Reset**. **Factory Default** brings all camera setting to factory default setting and **Reset** triggers a warm system reboot when the pinhole is pushed by a needle for 2 seconds (and release afterwards).

### - NSC3615 -



## LED Indication



Network LED : BLUE

- OFF : network link down or service unavailable
- ON : network link is up
- Blinking : in/out traffic on going

System 1 LED : YELLOW

- No RTP packet traffic
- RTP received from remote peer (periodic flashing, 0.5 second on, 0.5 second off)

System 2 LED : YELLOW

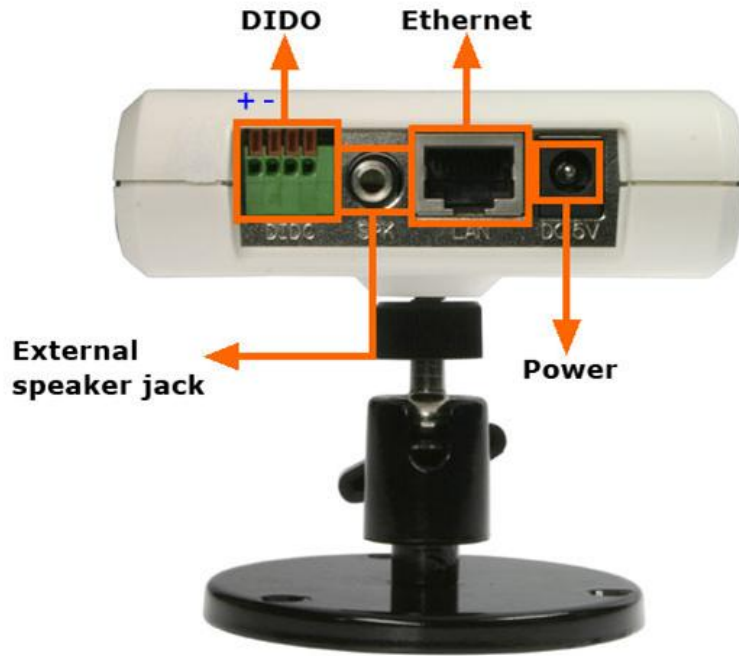
- OFF : Do not register to SIP server
- Blinking : 4 times per second
- ON : register to SIP server OK

## DIDO Connector

The first pinhole pair is for DI connectors and second one is for DO device connectors. Beware of the polarity of DI device(+ :first pinhole on the left, - :2nd pinhole from the left, both are for DI device connectors). You don't need to care about polarity for DO device since there is a relay equipped on those 2 pinholes connections (from right hand side). The hardware specification of DI device is as the following. Connect customer-tailored DIDO device with care and make sure devices won't overload surveillance camera's DIDO interface.

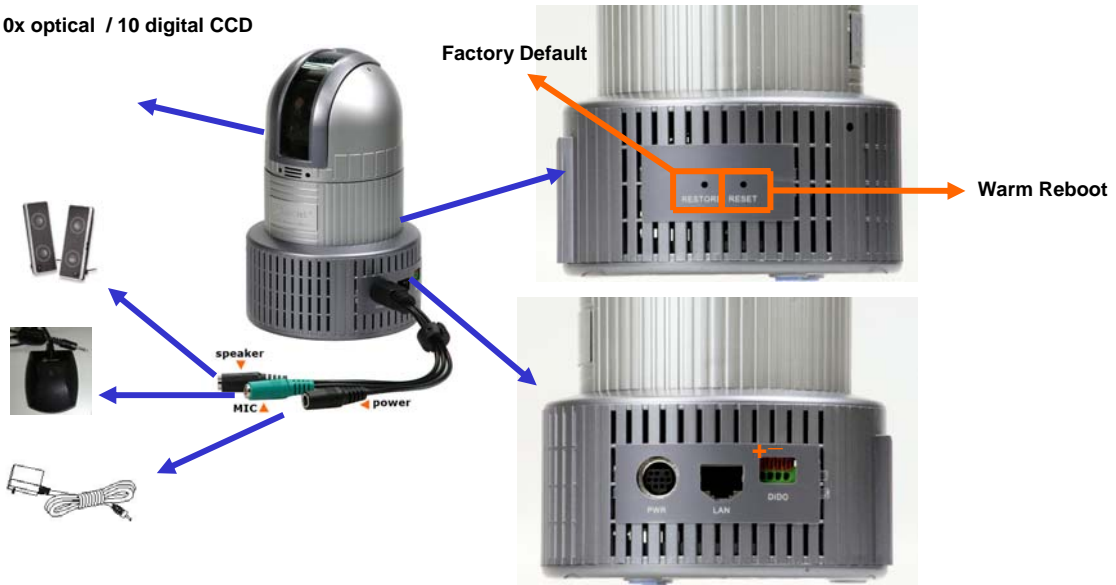
DI : **0 ~ 12V**(with 5V logic trigger) / **20 mA**(minimum)  
DO: **30VDC** / **1A**





## - NSC3621 -

10x optical / 10 digital CCD



## DIDO Connector

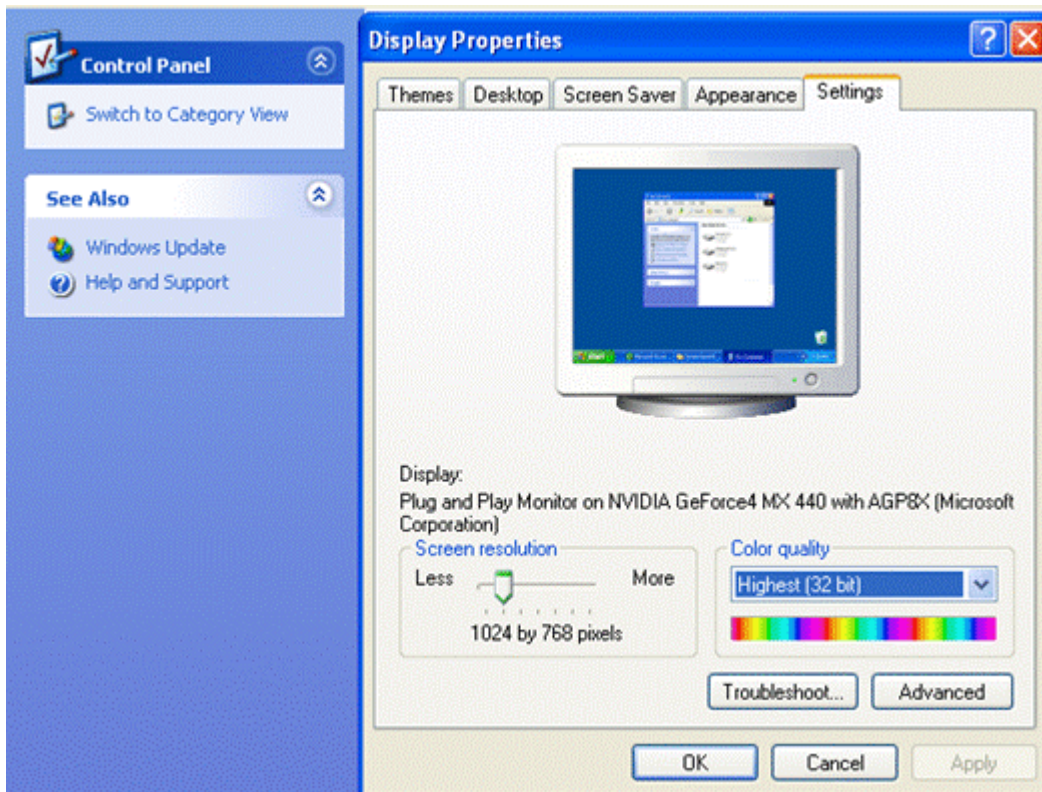
Same as NSC3615 DIDO interface.

DI : **0 ~ 12V**(with 5V logic trigger) / **20 mA**(minimum)  
DO: **30VDC / 1A**

## System Requirement

Before you give surveillance camera a shot, please check setting of your notebook / PC and see if following requirement is proper.

- Windows XP with service pack 2 installed or DirectX 9.0 installed
- Best Screen Resolution : 1024x768
- Color Quality : full color (32 bit)



# Hardware Installation

- NSC3615 -



-NSC3621-



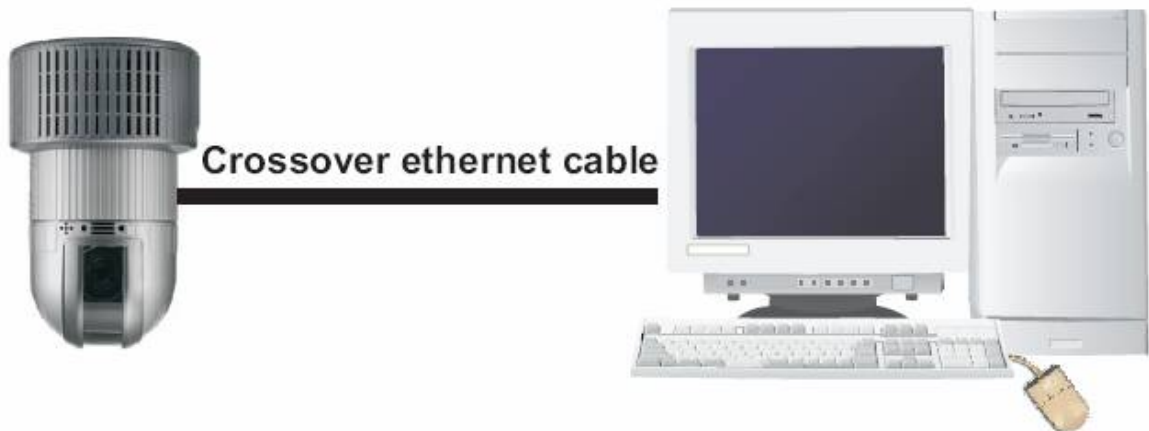
## Software Installation

Follow the procedures describe bellows to do a quick installation setup / test.

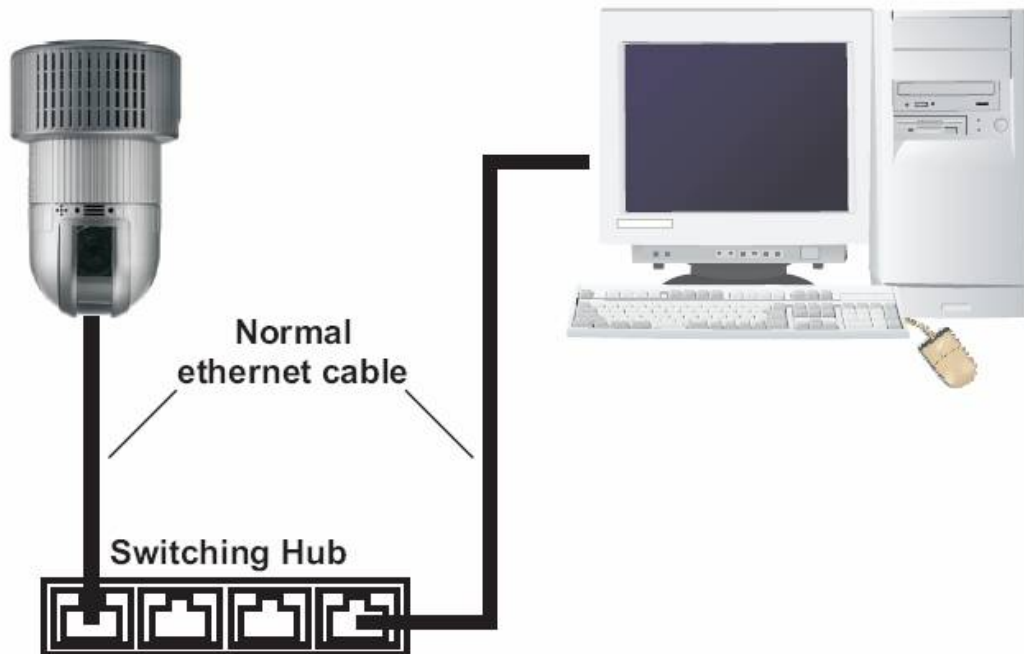
### 1. Device Connection:

Connect your surveillance camera to PC (NSC3621 is taken as an example)

- i) Use crossover ethernet cable:



ii) Connect devices with ethernet hub / switch (normal RJ-45 cable)



2. Configure your PC to the same subnet segment of surveillance camera.

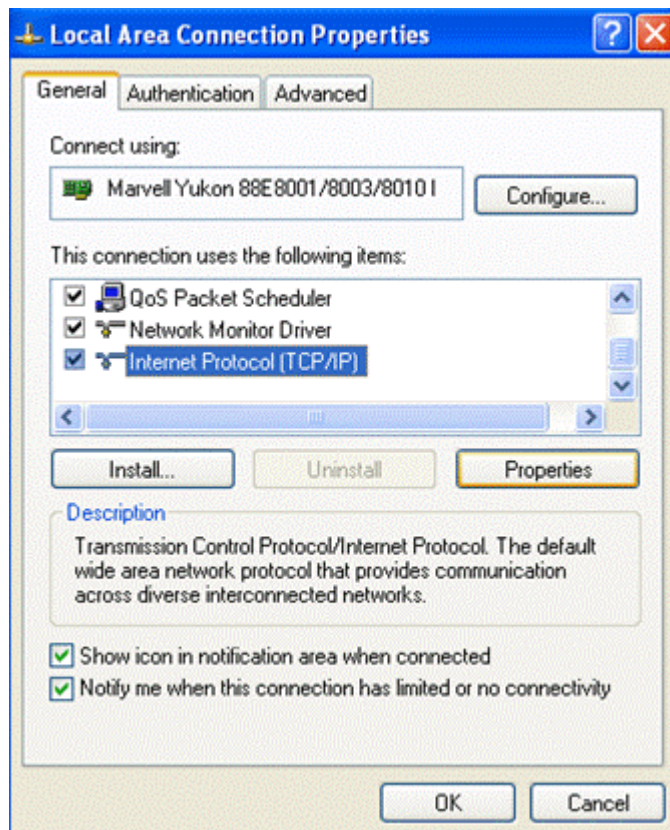
i) The camera's default IP is 192.168.0.100. We need to change our PC's network setting first in order to connect to the camera.

PS: if you don't know how to reset surveillance camera to factory default, please refer to **Factory Default Setting** section of Appendix FAQ part.

- ii) Clicks windows **Control Panel** → **Network Connections** → **Local Area Connection**, click mouse right button and then click **Properties**

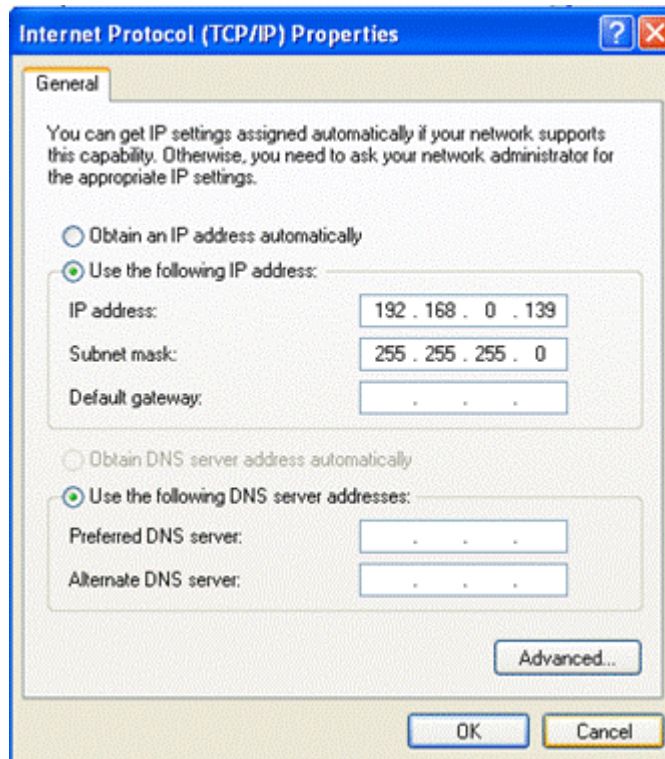


- iii) Chooses **Internet Protocol (TCP/IP)**, and then click **Properties**



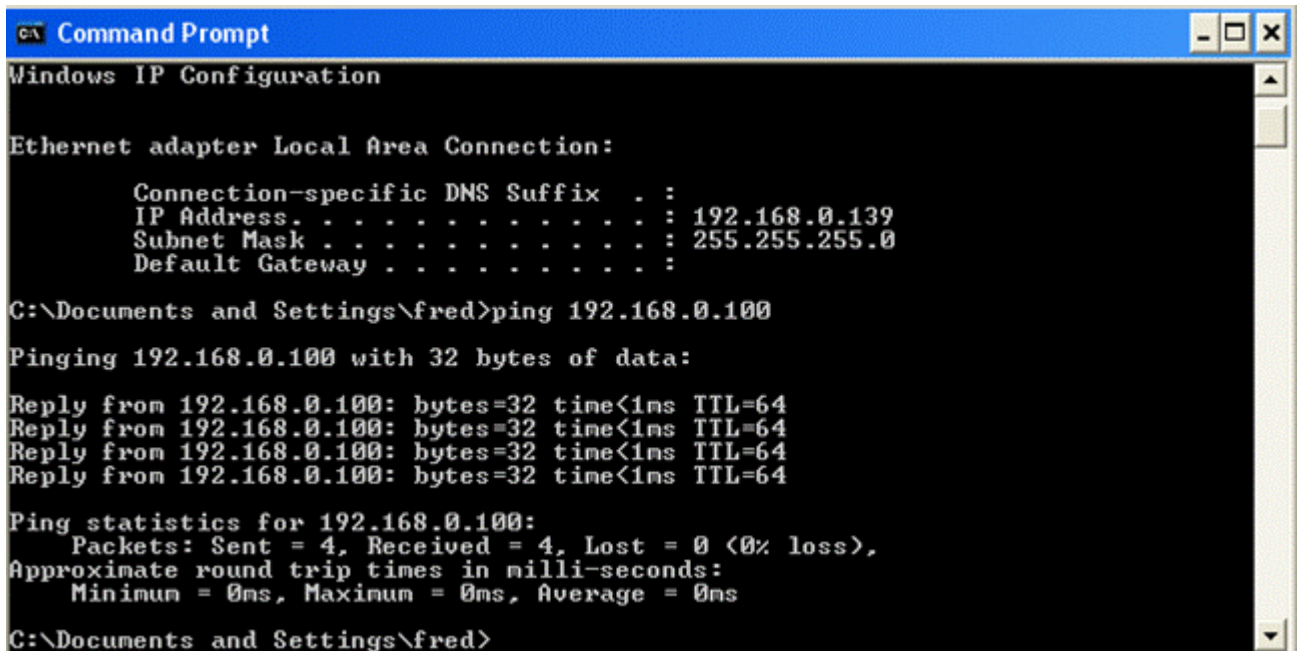
- iv) Chooses **Use the following IP addresses**, field, and input IP address with **192.168.0.139**, subnet mask with **255.255.255.0**, and then click **OK**.





v) Verify the on-line status of your surveillance camera. Please follow the procedure bellows

- a) Start **Program** → **Accessories** → **Command Prompt** .A DOS command shell screen will appear and shows "C:\>".
- b) Type **ipconfig** and press Enter.
- c) check if you can get the response from surveillance camera.



```
CA Command Prompt
Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . :
    IP Address . . . . . : 192.168.0.139
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

C:\Documents and Settings\fred>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

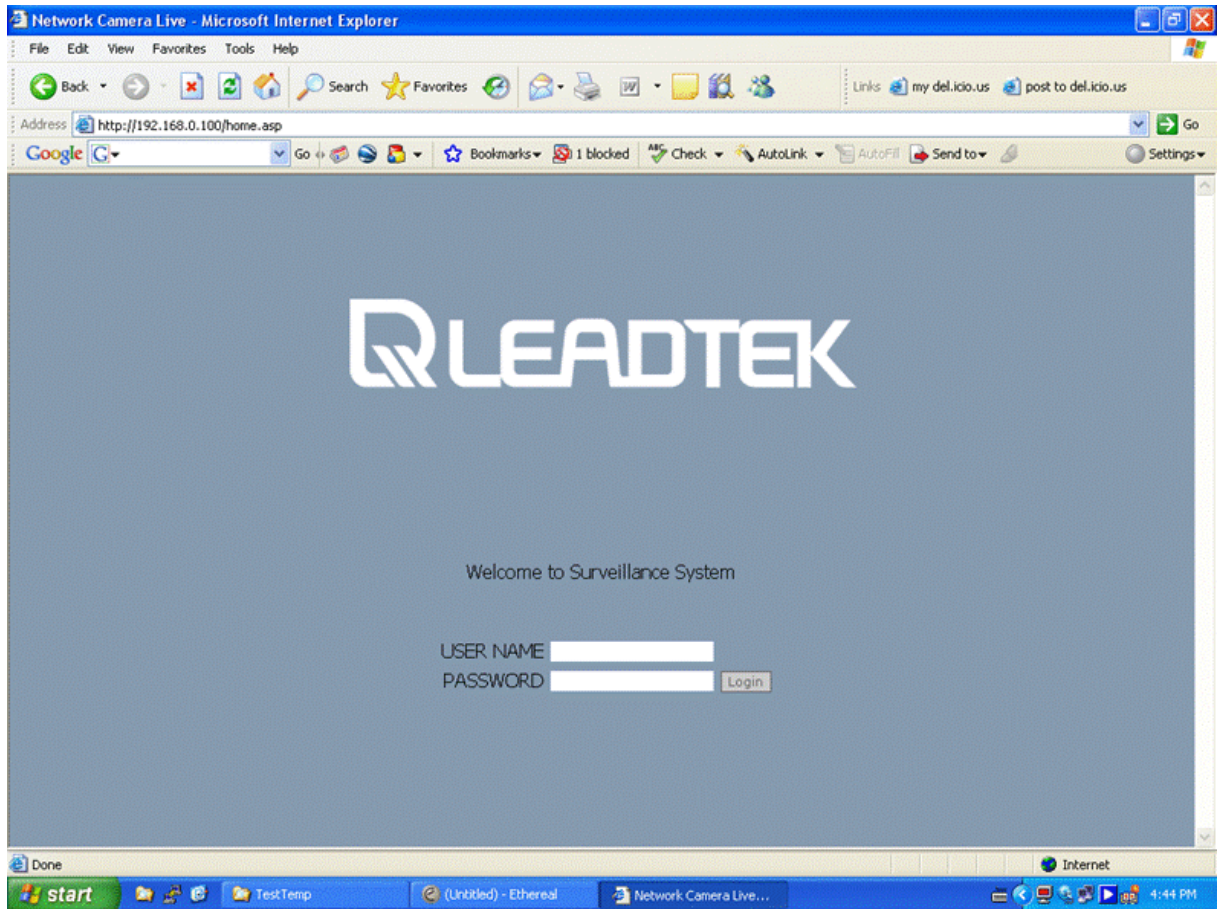
C:\Documents and Settings\fred>
```

d) Type **ping 192.168.0.100** and press Enter. If the screen shows **Reply from 192.168.0.100...** it means the hardware installation is complete.

### 3. Connect to camera

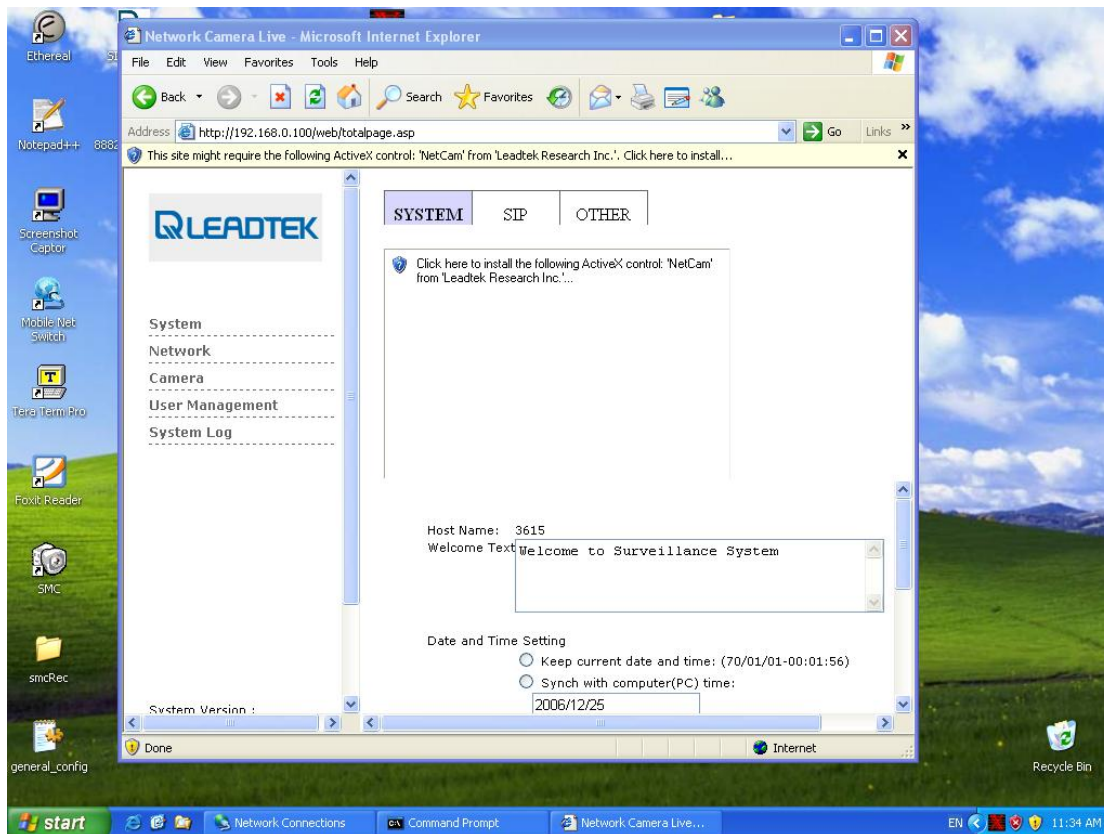
- i) Launches Microsoft Internet Explorer and type URL: <http://192.168.0.100>, then you shall see the home page like bellows.





- ii) The default username/ password is **admin / admin**, after you login to web you can get the video and find the system version on the lower-left corner

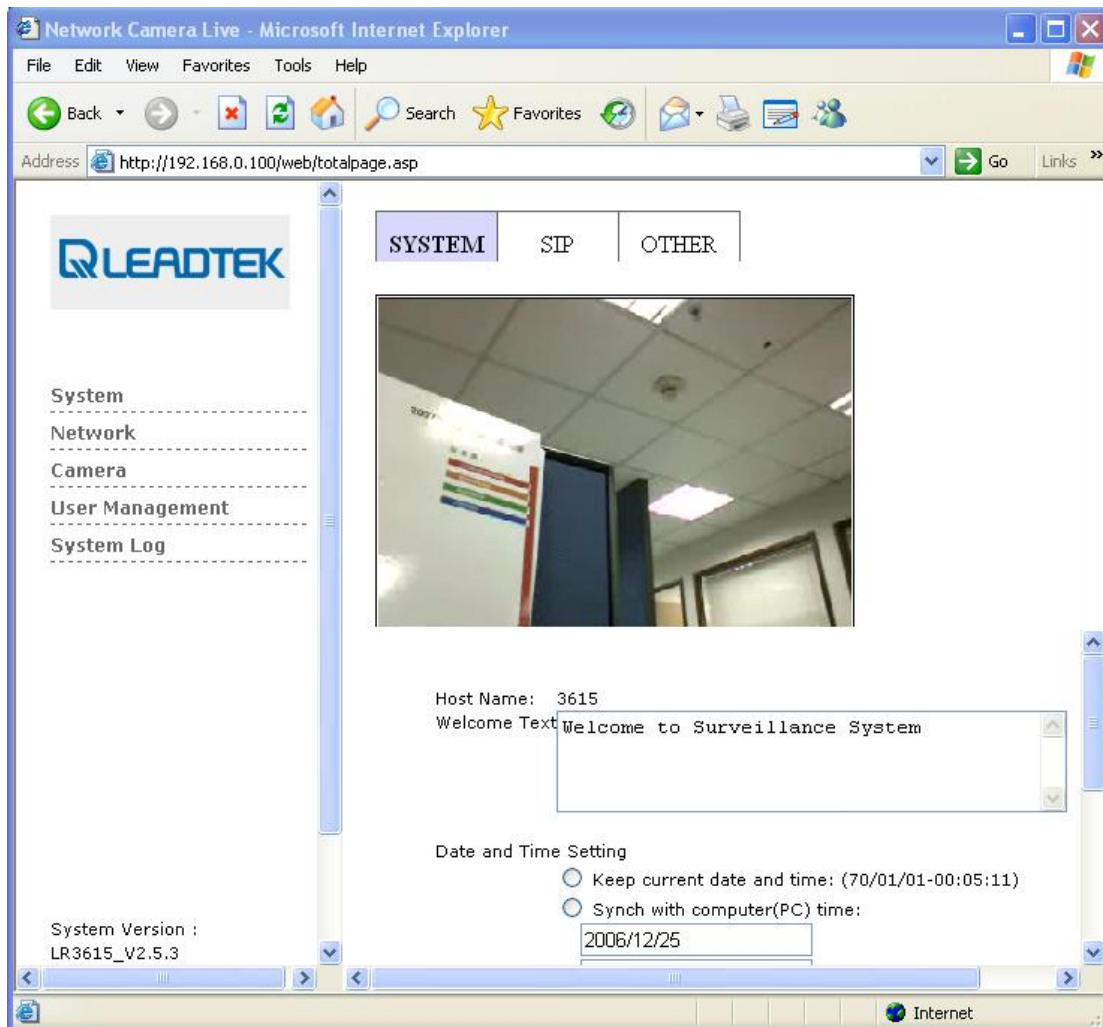
For the very first time, IE will ask for user to download a video / audio decoder (a.k.a. ActiveX control) plug-in. Beware of the reminding message on upper-left corner of IE. Right click on the warning message and allow the plug-in to be installed in your PC.



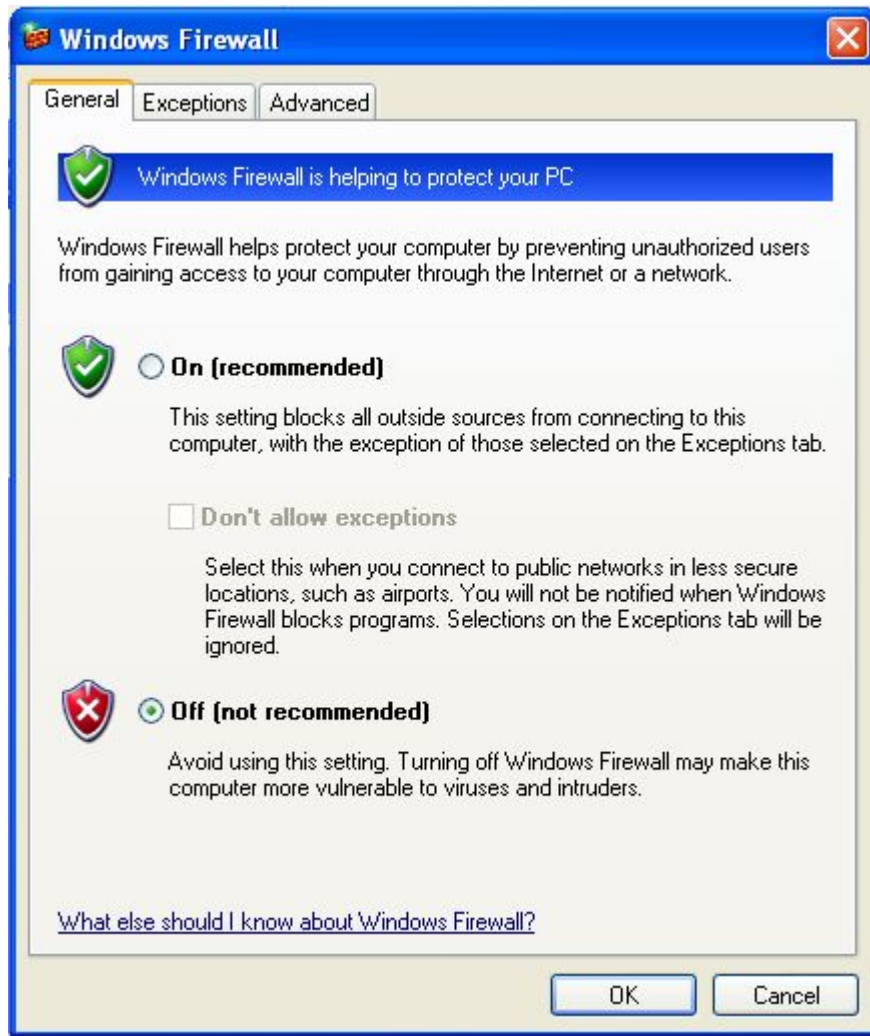
Click the **Install** button to start installation of decoder plug-in. The live video will be displayed on IE after the plug-in automatically installed.

In some case, your local PC may turn on the firewall option and the following warning message will pop up. Remember to click **Unblock** to allow the in-coming packet and avoid firewall protection.



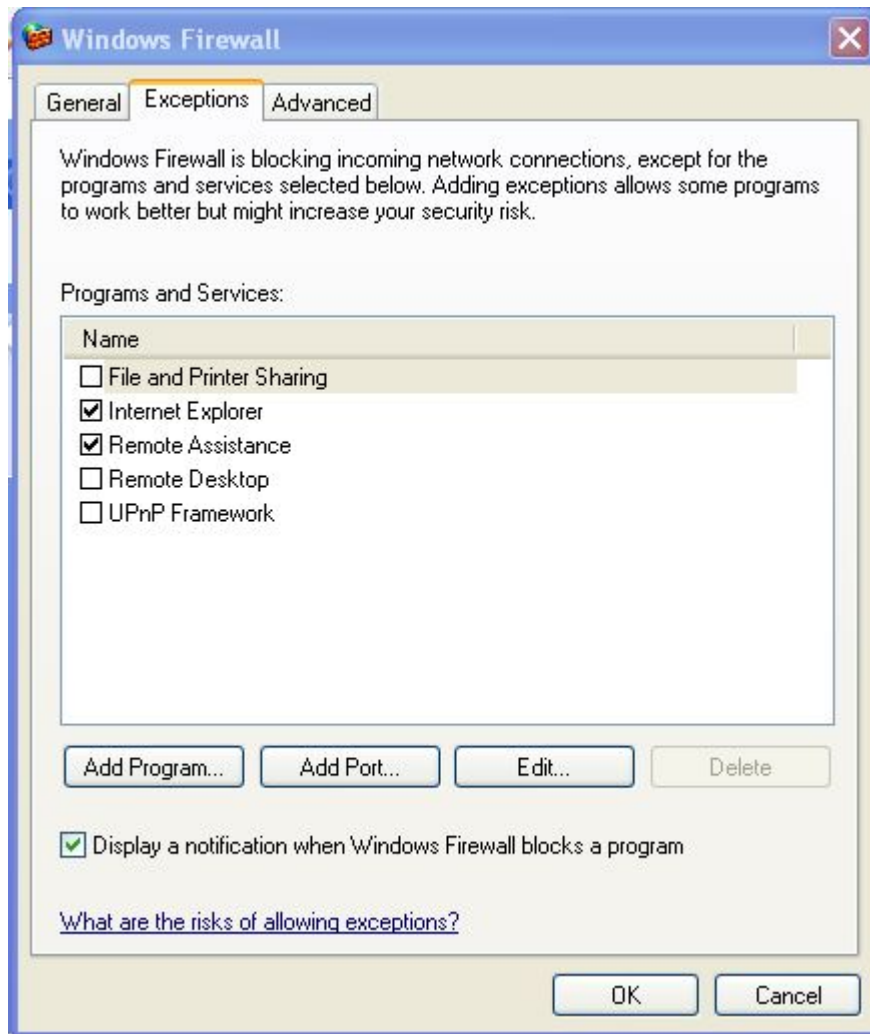


Note: In order to turn off the firewall protection, you can refer to **Control Panel → Windows Firewall → General** and turn off the Windows Firewall and permit the incoming network packets (audio or video media packets)



Otherwise, you can discriminately allow specific application and automatically unblock the firewall protection.



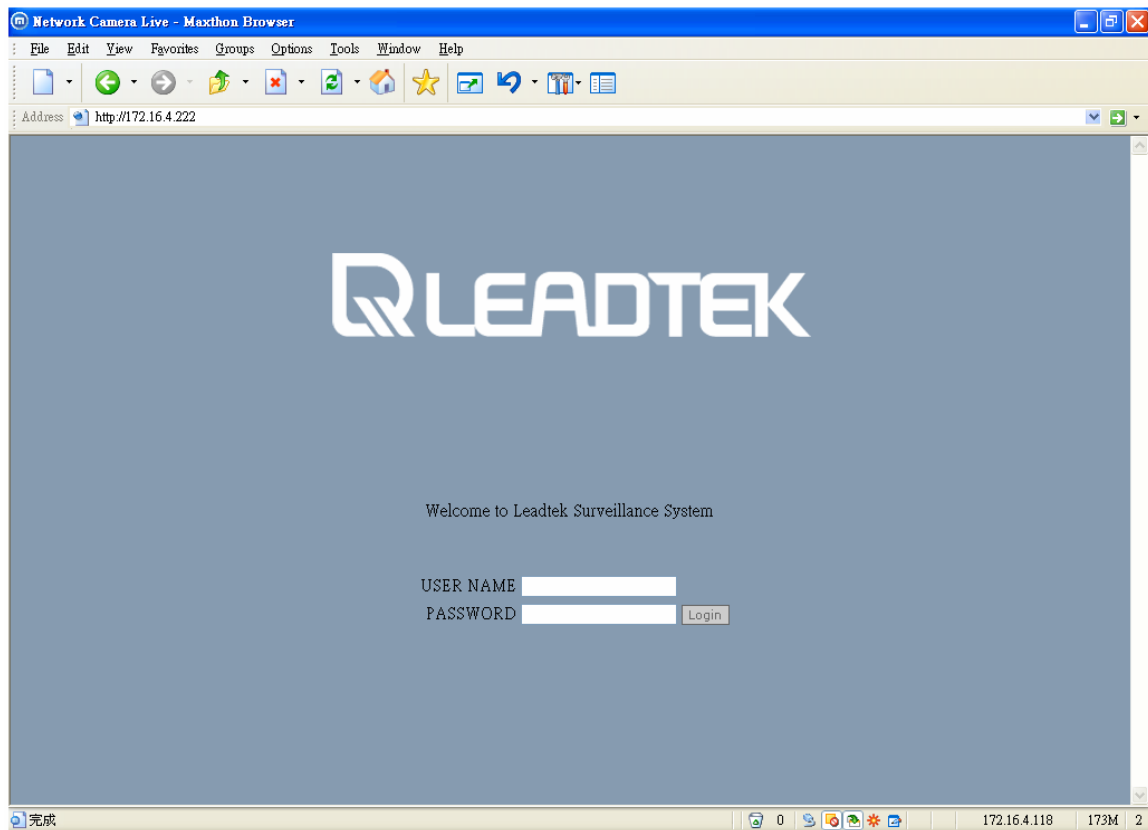


You can check current firewall protection option of your network setting. If the network connection icon comes with a lock sign, that means the network interface is firewall protected by Windows Firewall.



## Login

Each surveillance camera includes a web interface system. As long as you know the camera's IP, you can launch IE and access the camera's IP. Logon to the web server and the following login screen will appear:

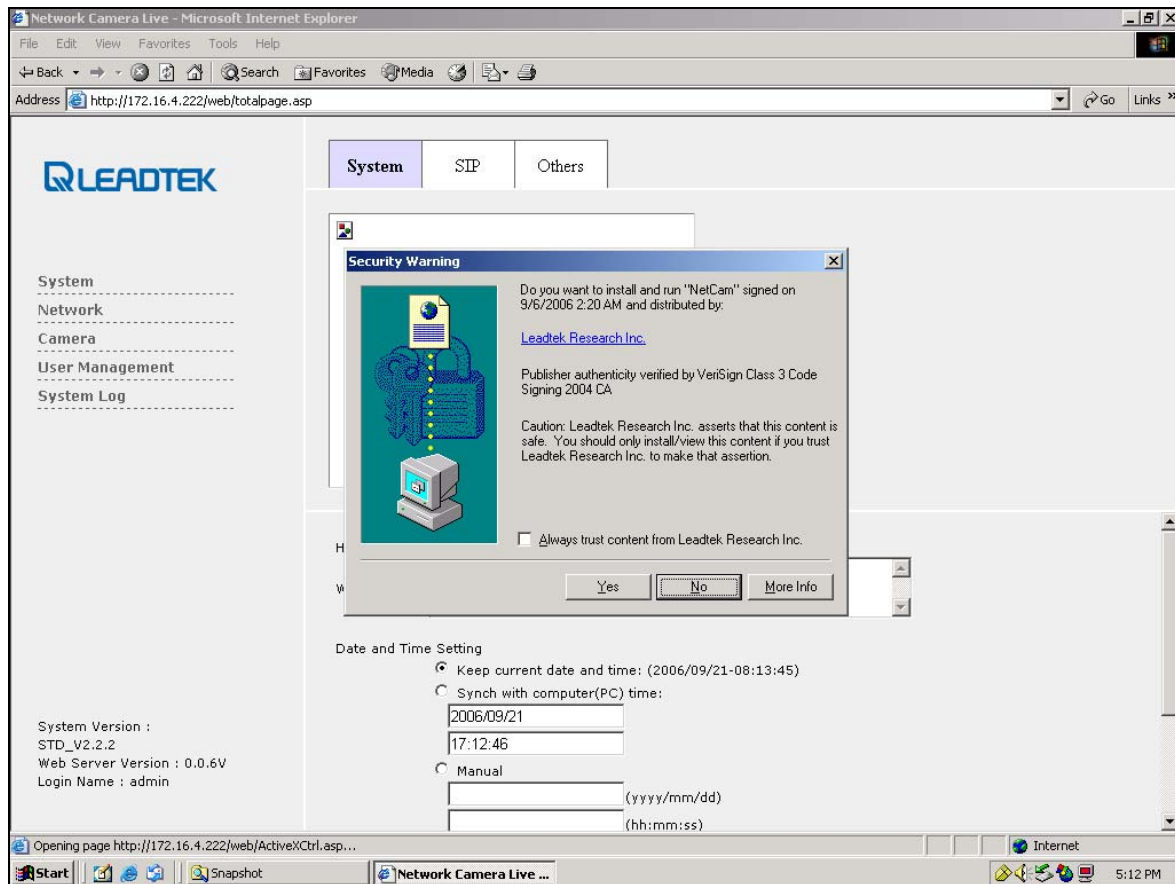


In above screen, user name and password are required for user authentication. The factory default setting is **admin**. Please enter **admin** in user name field and **admin** in password field, and then press **Login** button to enter the system, the appearing screen will show in the next page.

**Note : The default IP address of IPCAM is 192.168.0.100 .**

## Download ActiveX Control

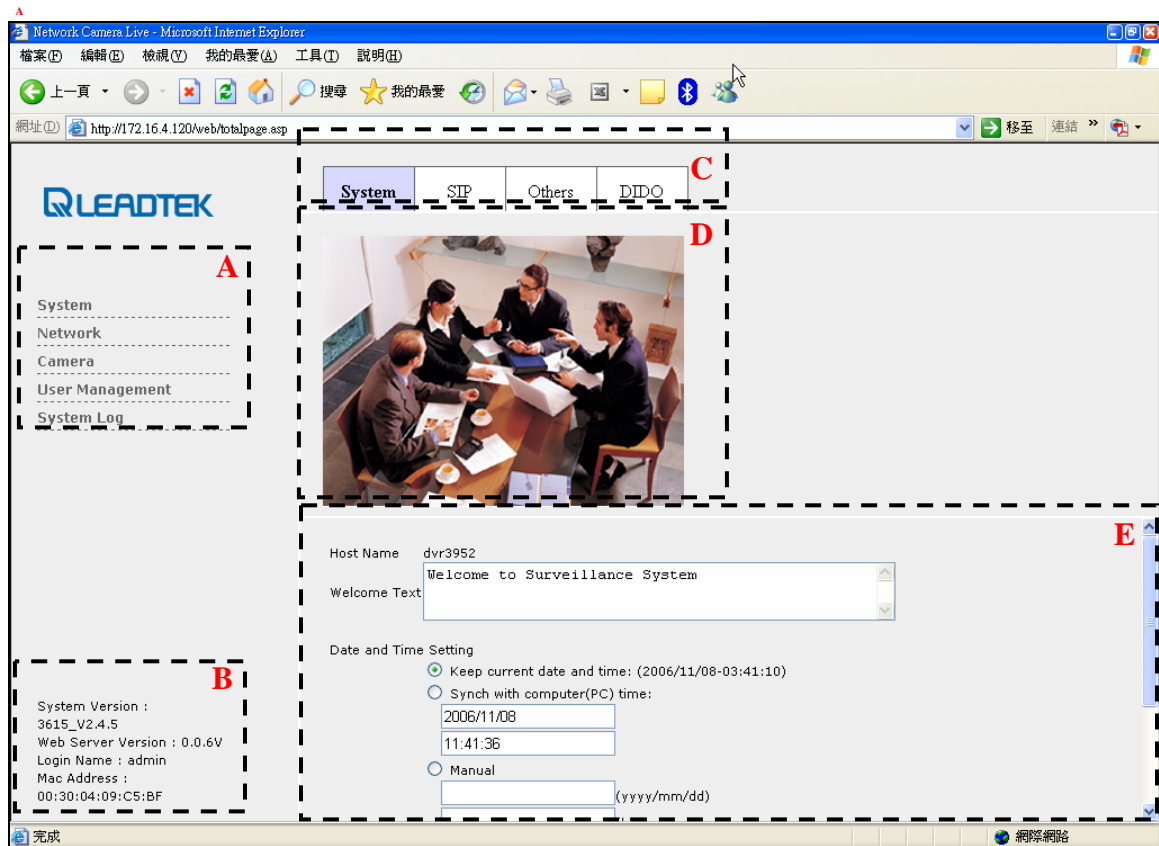
When you use IE to connect the web first time, the system will ask you to download an Active control. To download an ActiveX control will take about one minute and the screen below will be displayed. Just press the "Yes" button to install...





## Overlook

Then the screen will appears as below:



**A: Menu:** There are several items in the left column for you to choose: **System**, **Network**, **Camera**, **User Management**, and **System Log**.

**B: Version Information :** Will list for users to know the detail information as following .

- ✓ System Version
- ✓ Web Server Version
- ✓ Login Name
- ✓ MAC address

```
System Version :
3615_V2.4.5
Web Server Version : 0.0.6V
Login Name : admin
Mac Address :
00:30:04:09:C5:BF
```

**C: Sub menu:** There are several sub- items in each menu item. It can be switched by mouse click to each menu tab.

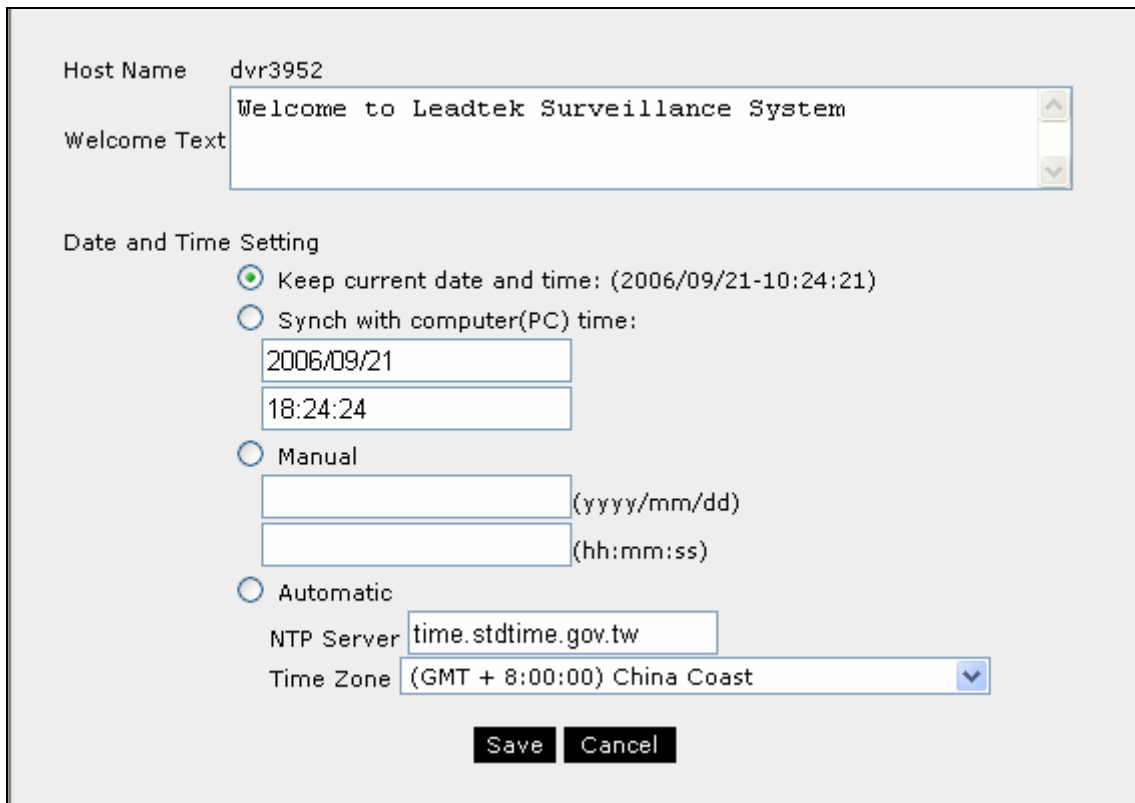
**D: Live Video:** After you installed the ActiveX control, you will see the live video

**E: Setting page :** In each item, you can see and modify server configuration.

# System

In following screen, you may see 3 different sheets for **System**, **SIP** and **Other** configuration and can be switched by mouse click to each tabs.

## System



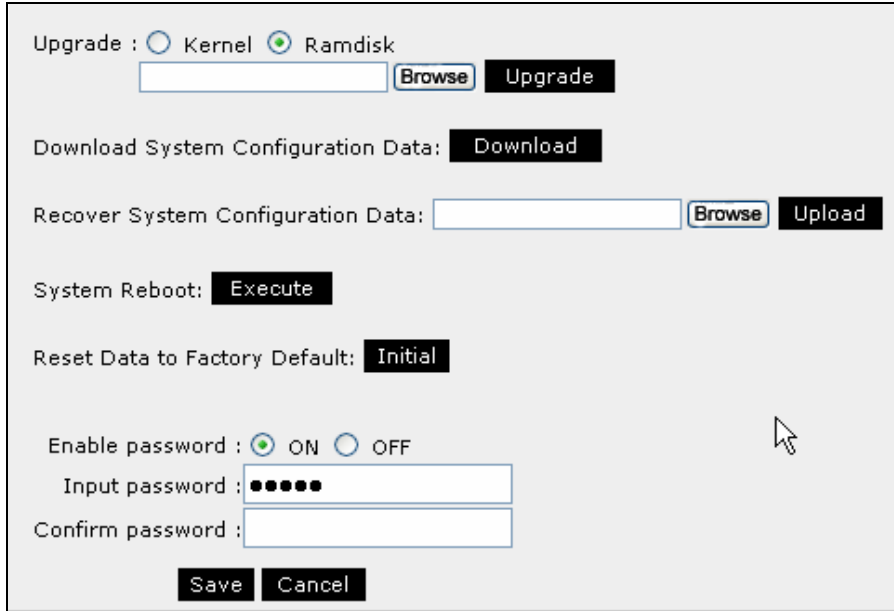
<b>Host Name</b>	Enter host camera name.
<b>Welcome Text</b>	Set your own welcome message in the login window.
<b>Date and Time Setting</b>	<ol style="list-style-type: none"> <li>1. You can choose to keep current date and time.</li> <li>2. You can choose to set the time synchronizing with computer (PC) time.</li> <li>3. You can choose to set the time manually.</li> <li>4. You can choose to set the time automatically via SNTP server (e.g. clock.stdtime.gov.tw) and select Time zone.</li> </ol>

## SIP

SIP Phone Name	<input type="text" value="88660520010"/>
IP Cam Sip Port	<input type="text" value="5060"/>
SIP Server	<input type="text" value="203.160.252.153"/>
Server Port	<input type="text" value="5060"/>
Register Timer	<input type="text" value="1200"/>
Domain Name	<input type="text" value="ipcam.gvscnet.net"/>
Proxy Domain	<input type="text" value="ipcam.gvscnet.net"/>
User Name	<input type="text" value="88660520010"/>
Password	<input type="text" value="88660520010"/>
Stun Detect	<input type="radio"/> ON <input checked="" type="radio"/> OFF
Stun Server IP	<input type="text" value="203.160.252.157"/>
Stun Server Port	<input type="text" value="3478"/>
Stun Enable HB	<input checked="" type="radio"/> ON <input type="radio"/> OFF
Stun HB Interval	<input type="text" value="30"/>
Sip Register	<input type="radio"/> ON <input checked="" type="radio"/> OFF

<b><i>SIP Phone Name</i></b>	SIP Phone Number
<b><i>IP Camera SIP Port</i></b>	Surveillance camera's listen port for SIP invite
<b><i>SIP Server</i></b>	SIP Server IP (optional)
<b><i>Server Port</i></b>	SIP Server listen port (optional)
<b><i>Register Timer</i></b>	SIP Server register timer (second)
<b><i>Domain Name</i></b>	Domain Name of SIP Server
<b><i>Proxy Domain</i></b>	Proxy Domain of SIP Server
<b><i>User Name</i></b>	SIP server registered user name
<b><i>Password</i></b>	SIP server registered user password
<b><i>Stun Detect</i></b>	Enable STUN detection or not
<b><i>Stun Server IP</i></b>	Stun Server IP
<b><i>Stun Server Port</i></b>	Stun Server Port
<b><i>Stun Enable HB</i></b>	Enable sending keep alive packet or not
<b><i>Stun HB Interval</i></b>	The interval of Sending keep alive packet to STUN server
<b><i>SIP Register</i></b>	Register to SIP server or not

## Others



<b><i>Upgrade</i></b>	<ol style="list-style-type: none"> <li>1. Choose "<b>Kernel</b>" or "<b>Ramdisk</b>" to upgrade</li> <li>2. Click "Browse..." to choose a valid kernel or ramdisk.</li> <li>3. Press "<b>Upgrade</b>" to start upgrade.</li> </ol>
<b><i>Download system Configuration Data</i></b>	Click " <b>Download</b> " button to get a current status configuration
<b><i>System Reboot</i></b>	Press " <b>Execute</b> " button to perform a soft reboot
<b><i>Reset Data to Factory Default</i></b>	Press " <b>Initial</b> " button to enable this function. It will revert its configuration to factory default setting.
<b><i>Enable Password</i></b>	The password is saved for viewing of surveillance camera audio/video sources. If the option is enabled, client shall provide the password and being authenticated by surveillance camera.
<b><i>Input Password</i></b>	Password for live video viewing.
<b><i>Confirm Password</i></b>	Confirm password for live video viewing.

## DIDO

DI Enable :  ON  OFF

DI Type :

IM Notify IP :

IM Notify Phone Number :

IM Notify :

DO Notify :

SMTP Send :

FTP Send :

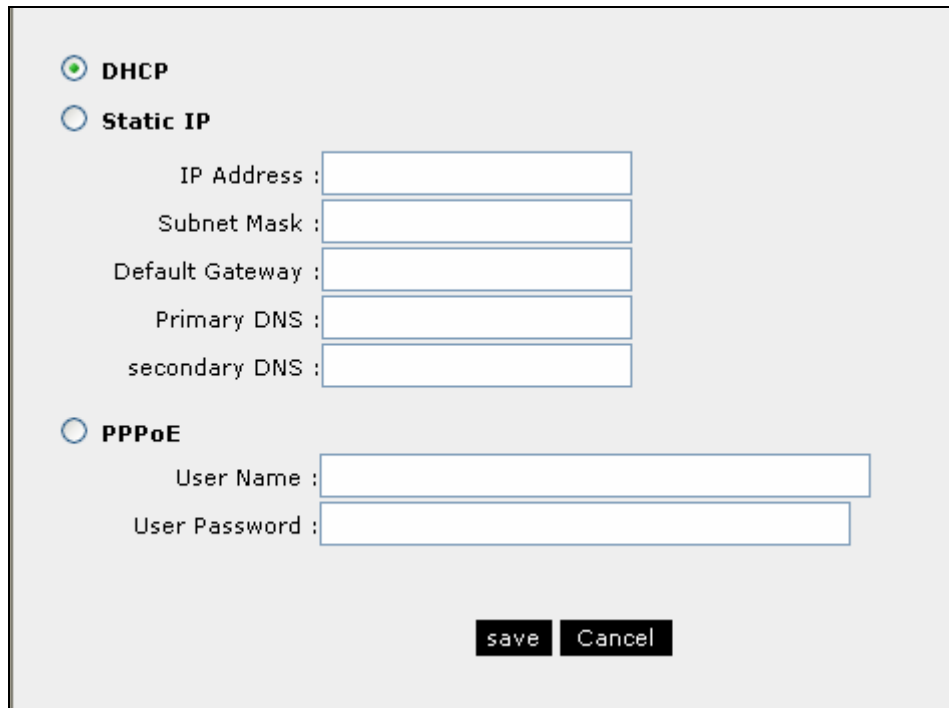
DO Type :

<b>DI Enable</b>	Enable Device Input device use
<b>DI Type</b>	Select for <b>RISE</b> or <b>FALL</b> type of DI(trigger edge).
<b>IM Notify IP</b>	Notify which IP address will be notified after DI triggered . <b>*SMC will take action on behalf of this configuration .</b>
<b>IM Notify Phone Number</b>	Notify which number will be notified after DI triggered . <b>*SMC will take action on behalf of this configuration .</b>
<b>IM Notify</b>	Enable IM Notify or not. <b>*SMC will take action on behalf of this configuration .</b>
<b>DO Notify</b>	Enable if DO will be triggered by DI.
<b>SMTP Send</b>	Enable snapshot sending by e-mail(triggered by DI)
<b>FTP Send</b>	Enable snapshot sending by FTP (triggered by DI)
<b>DO Type</b>	Configuration for DO trigged type( <b>RISE</b> or <b>FALL</b> )

# Network Control

In following screen, you may see 3 different sheets for **IP**, **FTP** and **SMTP** configuration and can be switched by mouse click to each tabs.

## IP

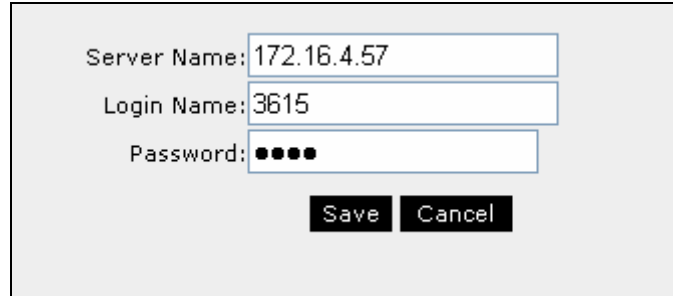


**DHCP**  
 **Static IP**  
 IP Address :   
 Subnet Mask :   
 Default Gateway :   
 Primary DNS :   
 Secondary DNS :   
 **PPPoE**  
 User Name :   
 User Password :

<b>DHCP</b>	DHCP mode for acquiring an IP from DHCP server
<b>Static IP</b>	Assign and arrange IP setting on your plan. Including the IP address / Subnet Mask / Default gateway / Primary DNS / Secondary DNS settings
<b>PPPoE</b>	Especially for ADSL users who can set their account and password to get online.

☆ Need to **RESTART** the IPCAM after modifying the Network configurations .

## FTP

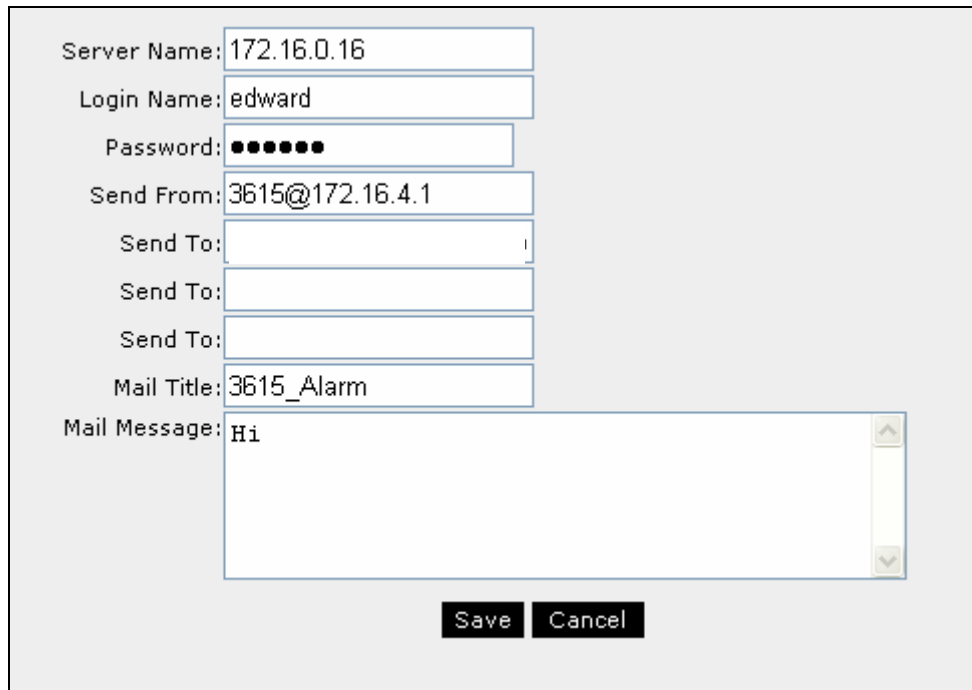


Server Name: 172.16.4.57  
Login Name: 3615  
Password: ●●●●  
Save Cancel

<b><i>Server Name</i></b>	FTP Server IP or Domain Name
<b><i>Login Name</i></b>	Login account for FTP server
<b><i>Password</i></b>	Login password for FTP server

Note: This setting is effective when a snapshot sending is triggered by surveillance camera.

## SMTP



<b><i>Server Name</i></b>	SMTP Server IP or Domain Name
<b><i>Login Name</i></b>	SMTP mail account
<b><i>Password</i></b>	Password for the SMTP mail account
<b><i>Send From</i></b>	Sender information
<b><i>Send To</i></b>	Receiver email address
<b><i>Send To</i></b>	The 2 <sup>nd</sup> Receiver
<b><i>Send To</i></b>	The 3 <sup>rd</sup> Receiver
<b><i>Mail Title</i></b>	Subject of the email
<b><i>Mail Message</i></b>	Mail content. User could write the message inside the text area.

Note: This setting is effective when a snapshot sending is triggered by surveillance camera.



## DDNS

DDNS Client Enable :  ON  OFF

DDNS Alias :

DDNS Username :

DDNS Password :

DDNS Uptimer :

DDNS Fuptimer :

DDNS System ID :

<b><i>DDNS Client Enable</i></b>	Enable DDNS Client Support .
<b><i>DDNS Alias</i></b>	Alias DNS name
<b><i>DDNS Username</i></b>	DDNS service account username
<b><i>DDNS Password</i></b>	DDNS service password
<b><i>DDNS Uptimer</i></b>	DDNS Uptimer setting
<b><i>DDNS Fuptimer</i></b>	DDNS Fuptimer setting
<b><i>DDNS System ID</i></b>	System ID of DDNS, please use DYNDNS_DYNAMIC

Note: For DDNS account subscription, please visit <http://www.dyndns.org> and subscribe the service for your surveillance camera.

## RTP Port

Rtp port range from  to

<b><i>RTP Port range form</i></b>	Allow users to specify the RTP port range to send media stream from surveillance camera
-----------------------------------	---

*☆ Please consult IT/MIS staff before you make modification of this configuration.*

# Camera

## Camera

Resolution :	640x480 ▾	Bitrate Control :	Manual ▾
Bitrate :	512 K ▾	Frame Rate :	25 ▾
Update Cancel			
Brightness :	100 ▾	Contrast :	15 ▾
Saturation :	15 ▾	HUE :	50 ▾
Auto WB :	ON ▾	AE :	ON ▾
Colortemp :	6500 K ▾	Rotation :	Normal ▾
Update Cancel			

<b>Resolution</b>	Adjust the resolution of the image (Restart required)
<b>Bit rate</b>	Control the available bandwidth.
<b>Frame Rate</b>	Choose the number of maximum frames to be sent by surveillance in frame per second
<b>Brightness</b>	Adjust the brightness of the image.
<b>Contrast</b>	Adjust the contrast of the image
<b>Saturation</b>	Adjust the color saturation level of the image.
<b>HUE</b>	Adjust the hue of the image.
<b>Auto WB</b>	Adjust the white balance of the onscreen image.
<b>AE</b>	Adjust the Auto Exposure of the image.
<b>Color temperature</b>	Color temperature
<b>Rotation</b>	Image rotation in 180 degree(image flip/ upside down)

## Encode Type

Audio Type :  g711 a-law  g711 mu-law  
Video Type :  mpeg4  h263

<b><i>Audio Type</i></b>	Configure audio encode type sent by surveillance camera. <ul style="list-style-type: none"><li>- G.711 a-law</li><li>- G.711 mu-law</li></ul>
<b><i>Video Type</i></b>	Configure video encode type sent by surveillance camera. <ul style="list-style-type: none"><li>- MPEG4</li><li>- H.263</li></ul>

# User Management Control

In following screen, administrators could add/modify/delete extra login accounts to Manage/View the website contents .

No.	User ID	Group	Edit	Del	Privilege Control
0	admin	Administrator	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Set</a>
1	jerry	Manager	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Set</a>
2	fred	Guest	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Set</a>

[New User](#)

<b><i>New User</i></b>	Press New User button to add users
<b><i>Edit</i></b>	Edit user's privilege control
<b><i>Delete</i></b>	Delete users
<b><i>Set</i></b>	Set user's privilege control

## Set

There are 3 levels of user privilege control in Leadtek network surveillance camera:  
**Administrator, Manager, Guest**

Each group users are authorized with different web page management permissions.

User ID : admin

Privilege:

System       Network

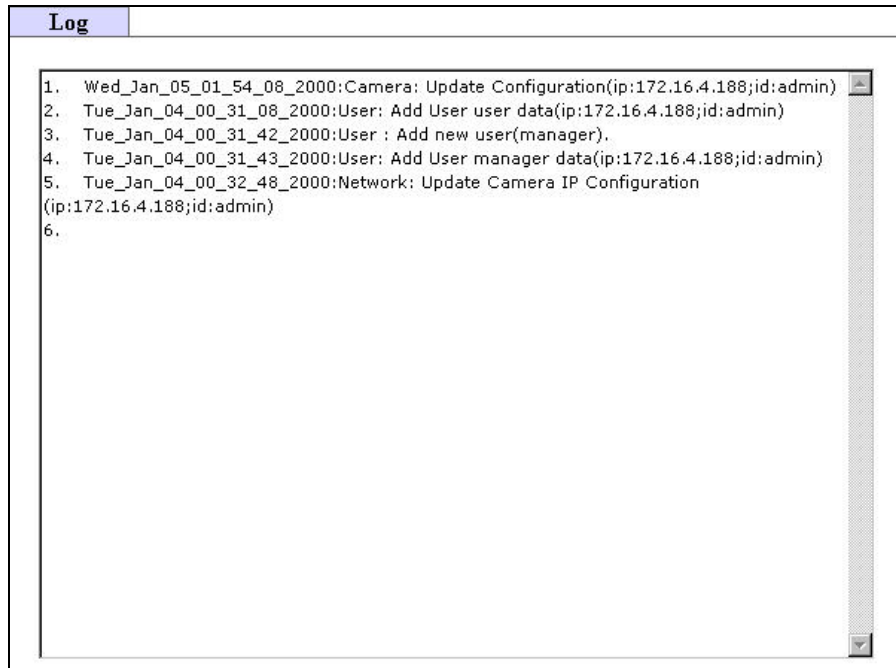
Camera       User Management

System Log

[Save](#) [Cancel](#)

# System Log

The system log book keeps system operating history in a cyclic way. The newest log record will over write the oldest log record.



# Restore to factory default

If the system is up and running, you can push factory default button through pinhole of surveillance camera (marked as **Restore default**, the **Reset** is used to perform a warm system reboot). The firmware will recover the setting to factory default. The following configuration is the firmware factory default setting:

## Default IP Setting

**IP mode:** Fixed IP

**IP address:** 192.168.0.100

**Subnet mask:** 255.255.255.0

## Webs Default User Account

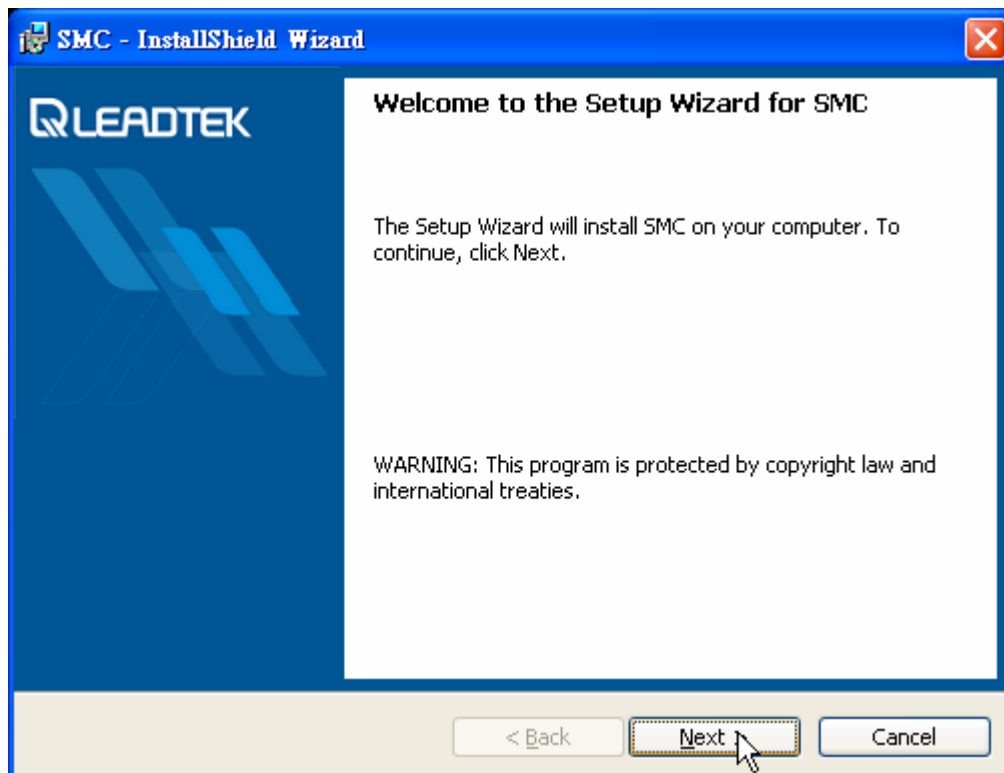
**Username:** admin

**Password:** admin

## How to use SMC ?

# Install Surveillance Management Center

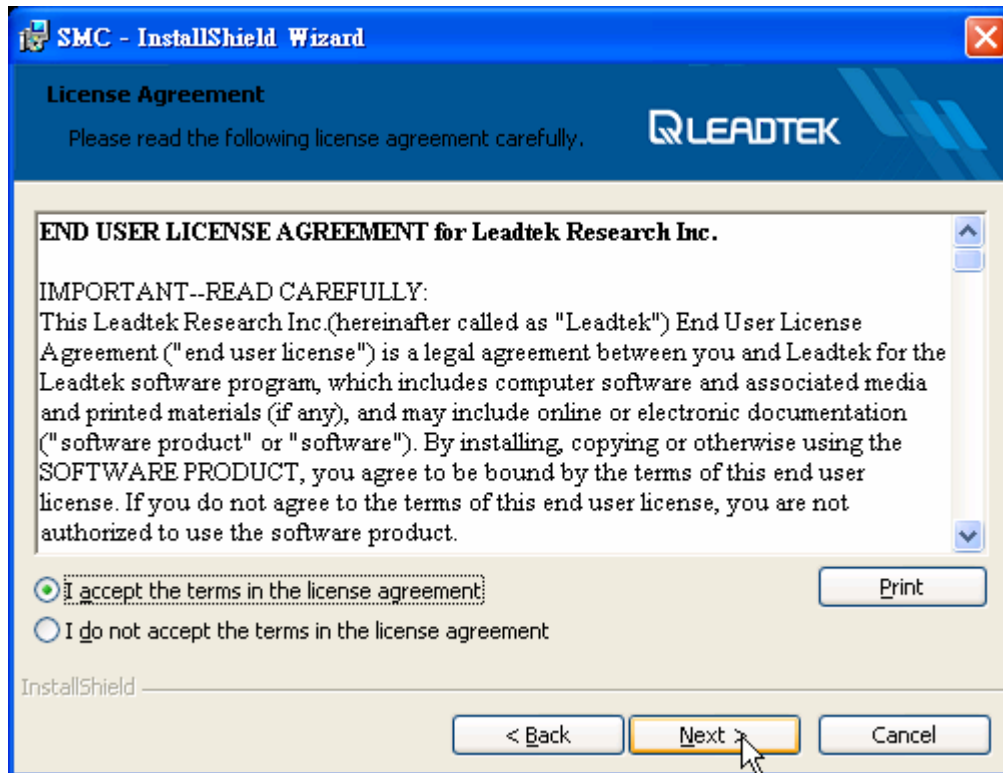
While inserting the **Video Surveillance Software Pack** CD into the CD-ROM , the program will self running with the following window .



In above screen, SMC stands for Surveillance Management Center , specially designed for the Leadtek Surveillance products .You may take advantage of the software to control and manage Leadtek Surveillance products .

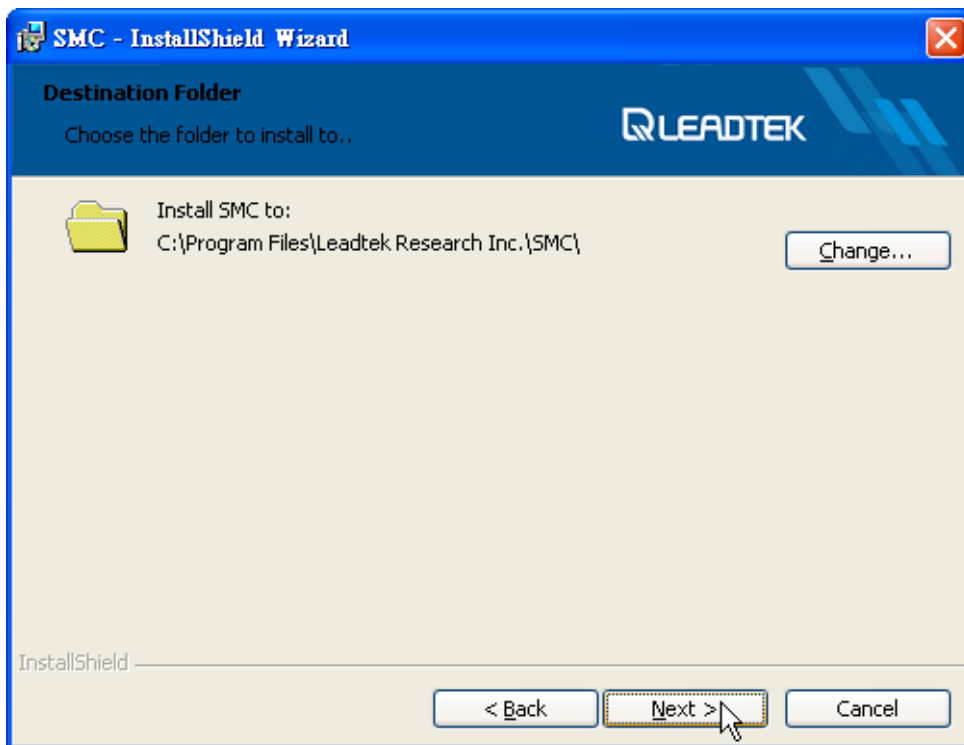
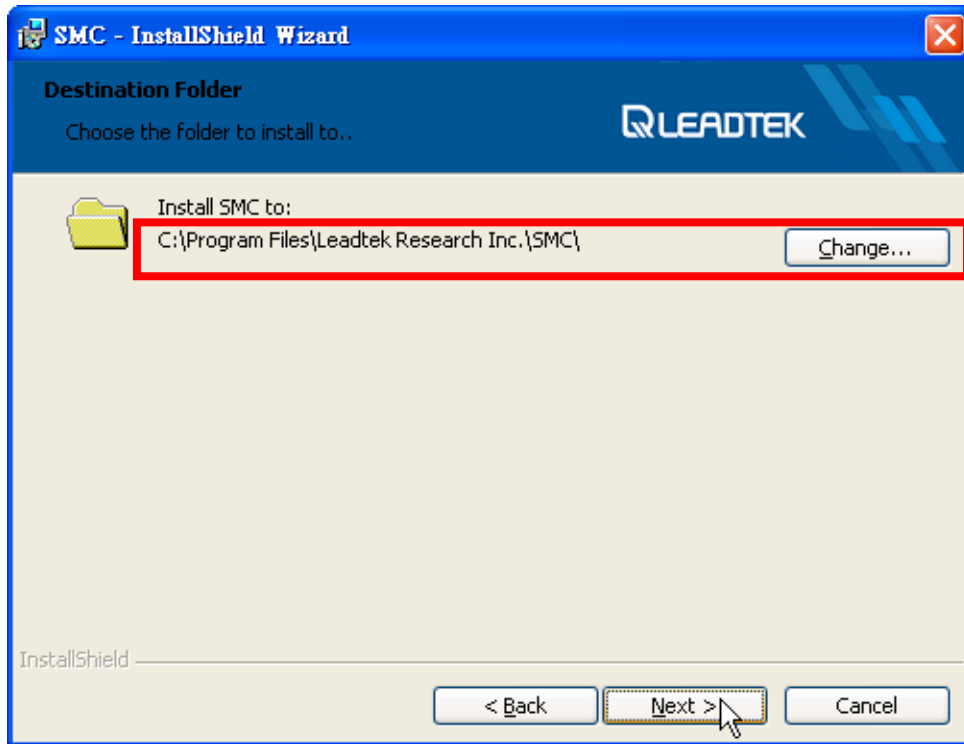
Press **Next** for continuing the install process .



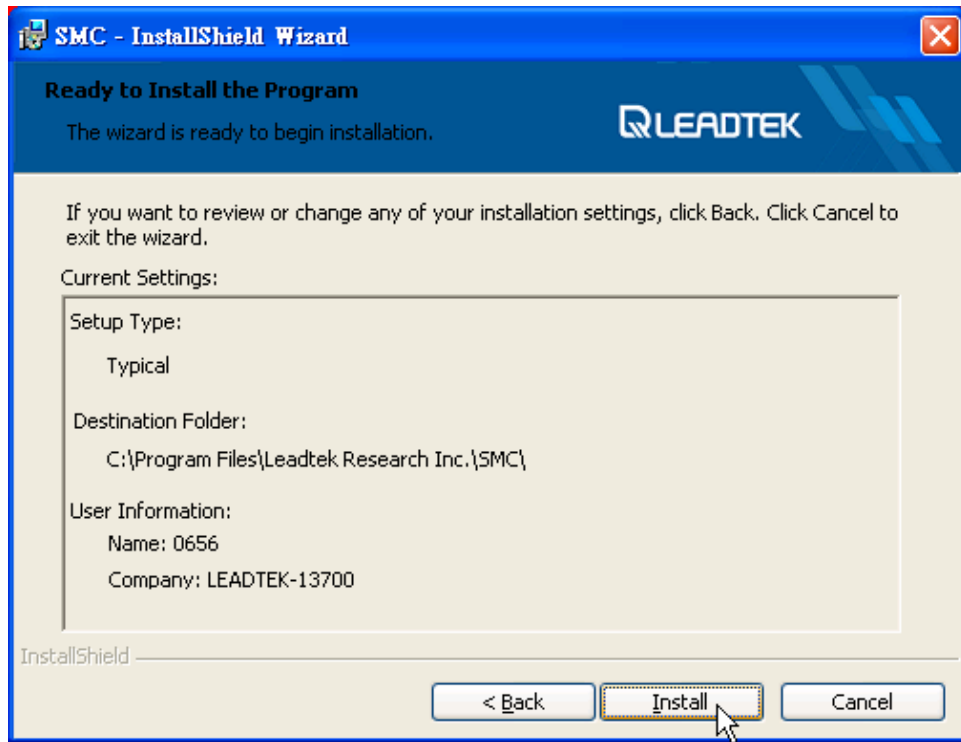


Please read the EULA carefully. Leadtek SMC is legally used for the Leadtek Surveillance Products and well-protected by the Copyright law.

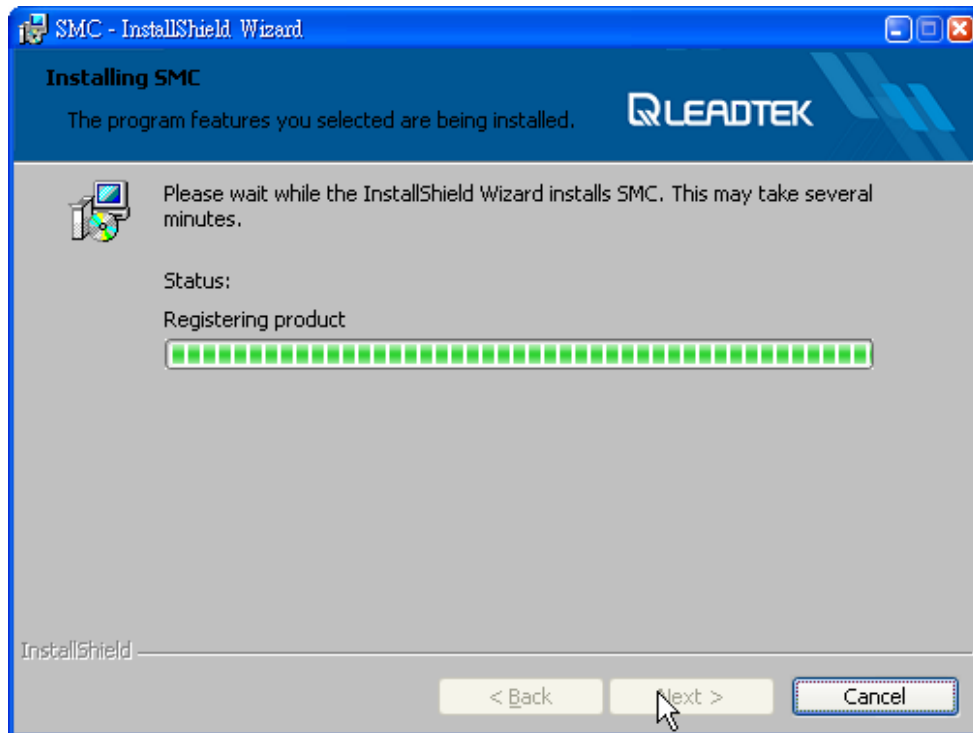
Press **Next** for continuing the installation process.



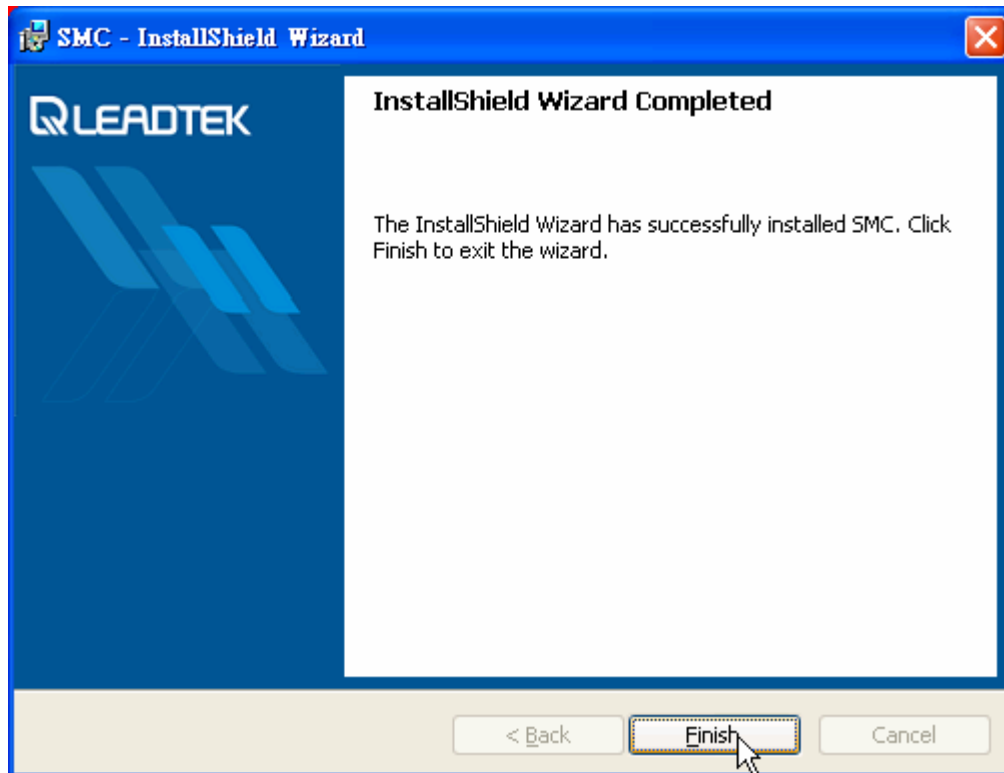
Click the button marked by RED color and choose an installation folder or click **Next** to stay the default installation folder to continue the installation process.



Click the **Install** to start the installation of SMC.



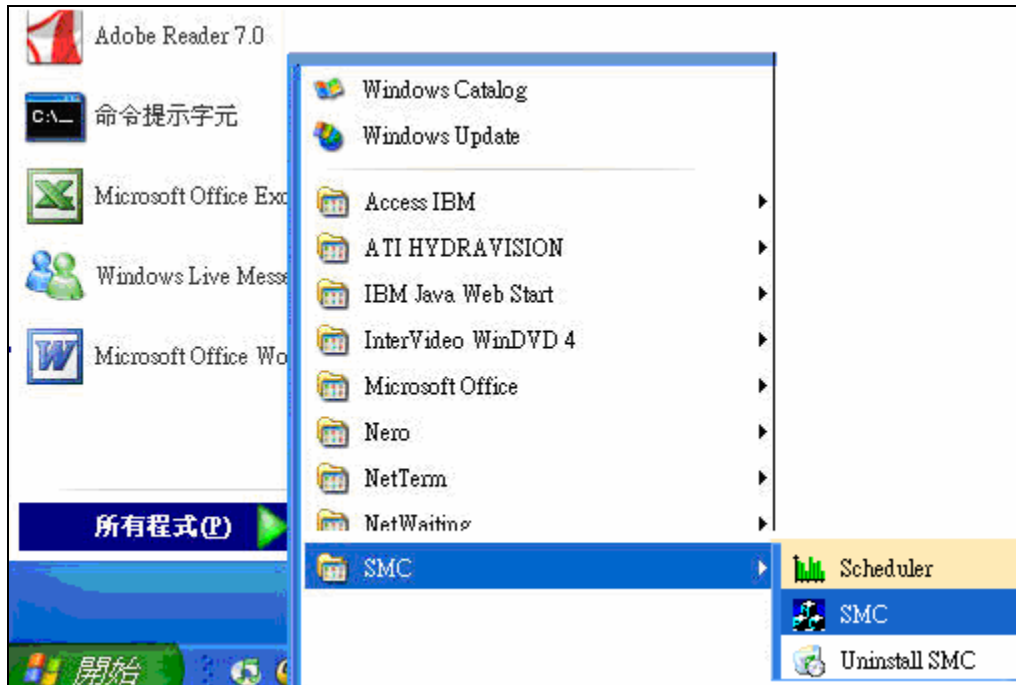
You will see the installation progress from the green progress bar. While finished, please press **Finish** when installation is complete.



## Launching the SMC / Scheduler

You will see the 3 item added into the list of program files . SMC , Scheduler and the Uninstaller .

- ✓ SMC : Surveillance Management Center main program
- ✓ Scheduler : SMC scheduler controlling service
- ✓ Uninstaller : shortcut to uninstall SMC



Click the SMC to launch the SMC .

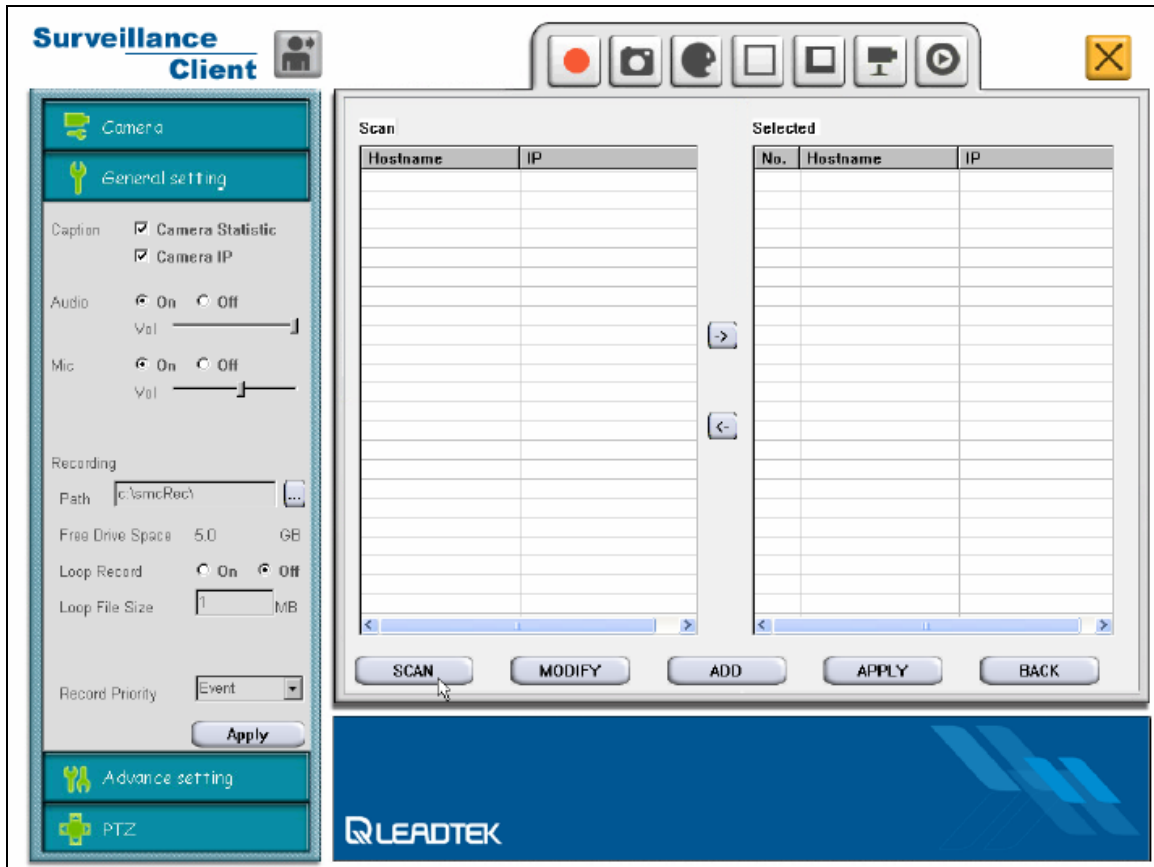
☆There will be a shortcut added to your desktop . Try to find an icon listed there to quick launching the SMC .

## Finding Surveillance Cameras

When first launching the SMC , SMC will launch the **ADD CAMERA** function for users to find surveillance devices in the same LAN segment.

There are five buttons below the grids and each one has its own definition for **ADD** camera .

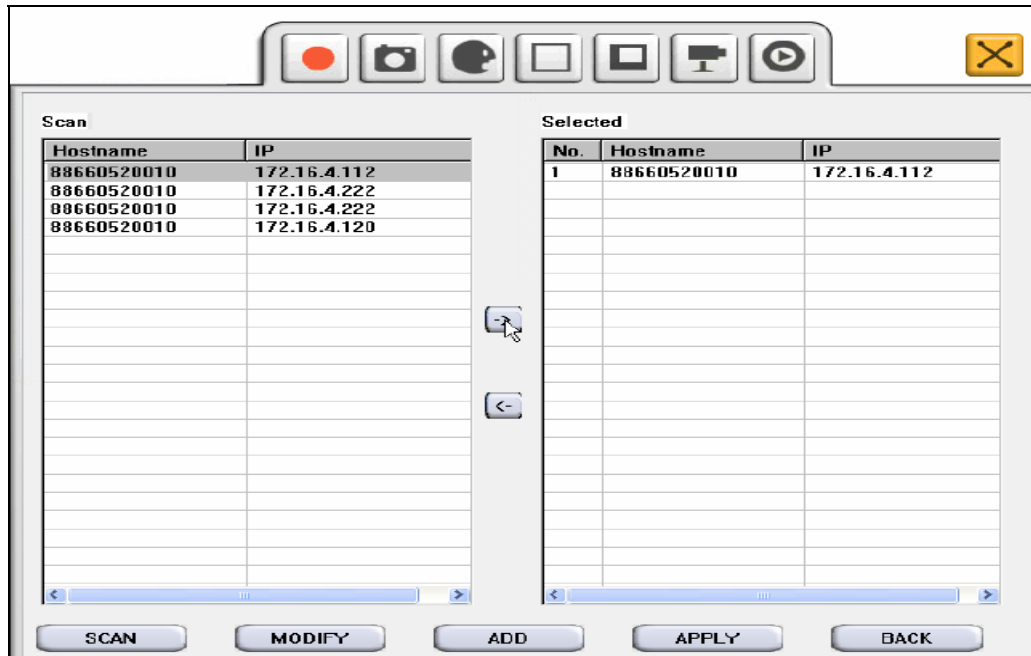
- ✓ **SCAN** : Used for searching the Surveillance Cameras under the same subnet .
- ✓ **MODIFY** : Change the selected cameras properties .
- ✓ **ADD** : Add a new camera with your own selection / setting.
- ✓ **APPLY** : Apply the configuration now and start to monitor from the selected cameras .
- ✓ **BACK** : Back to the monitor of surveillance .



## SCAN

The **SCAN** function is designed for the camera search when you install multiple cameras under the same LAN . Leadtek surveillance cameras are detectable by Leadtek Surveillance Management Center.

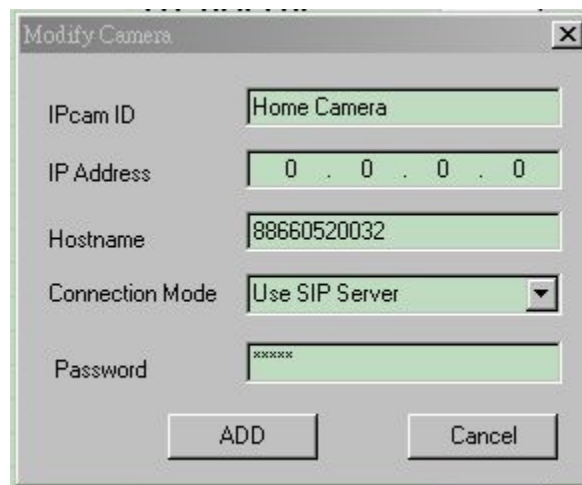
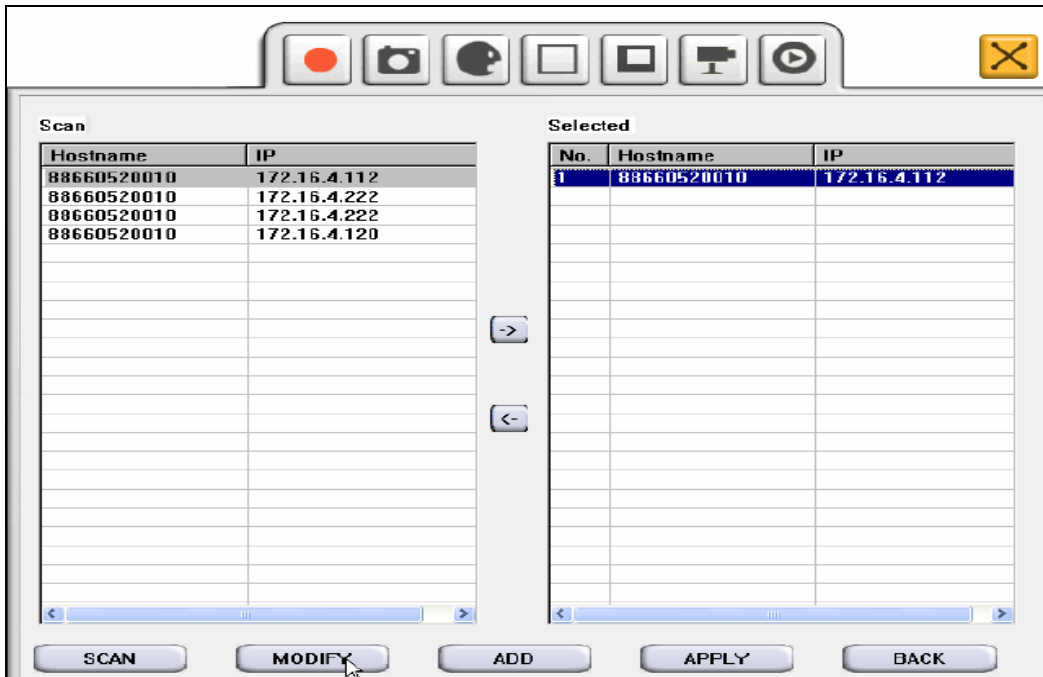




## MODIFY

SMC provides 2 modes to make live connections to surveillance camera. One is P2P (peer-to-peer) and the other is **Using SIP Server**. The scanned camera list is all for P2P mode. Each surveillance camera comes with a default **Hostname** which is just a name keeper for user's reference in P2P mode. Users can offer nickname in the field of **IPcam ID** to keep track of his camera. The nickname will be displayed on screen text overlay of SMC. If the live connection is made via P2P mode (SIP server not involved), you can also use the **Hostname** as the second nickname to become more easily to remember. Click the selected camera and click the **MODIFY** button to modify the setting.

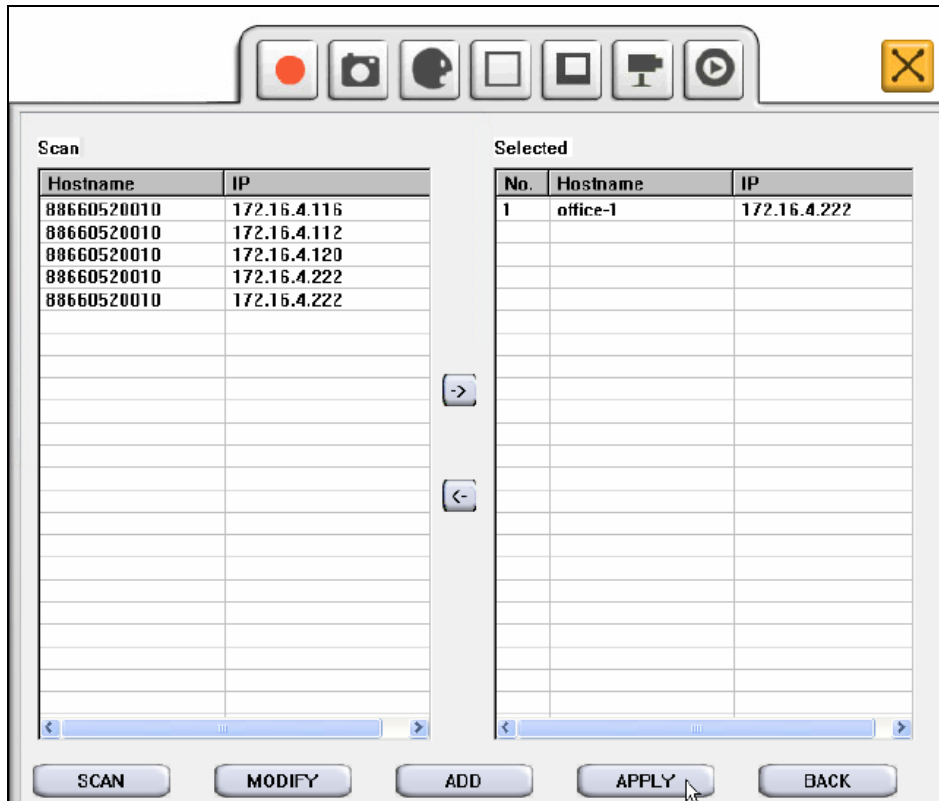




If the live connection is made via SIP proxy server, you shall select **Use SIP Server** in **Connection Mode** field. Note that you shall also offer the correct SIP proxy server IP in the **IP Address** field so that SMC will refer to that designated SIP server for specified surveillance camera(via phone number of **Hostname**). The **Password** field is mandatory and shall be learned and given in advance so that live video can be displayed in SMC. Otherwise, you may just receive a short video clip to ask for password authentication.

Press **ADD** to complete the modification.

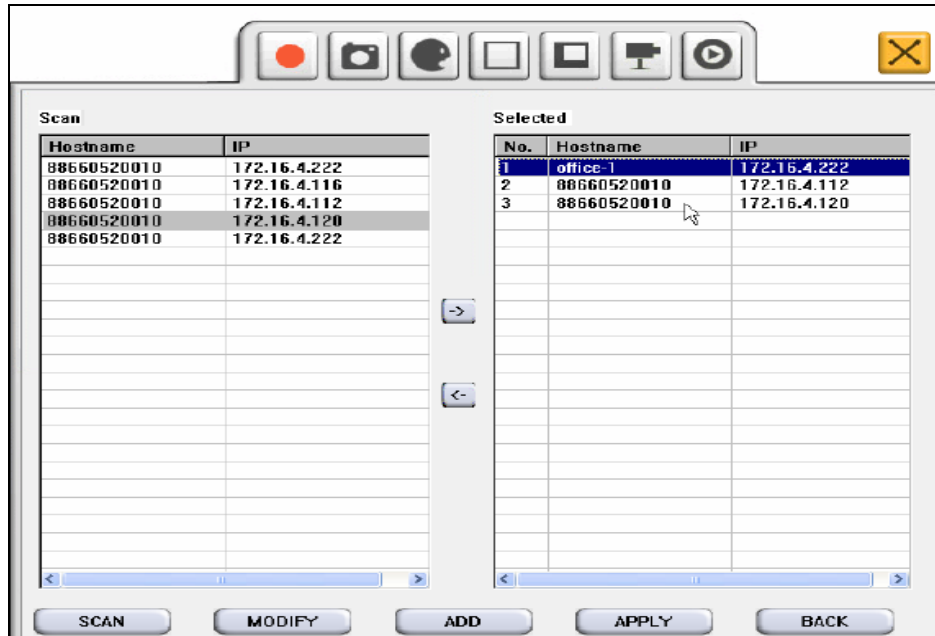
## APPLY



Press **APPLY** to start the monitoring all the selected surveillance cameras on the right panel.

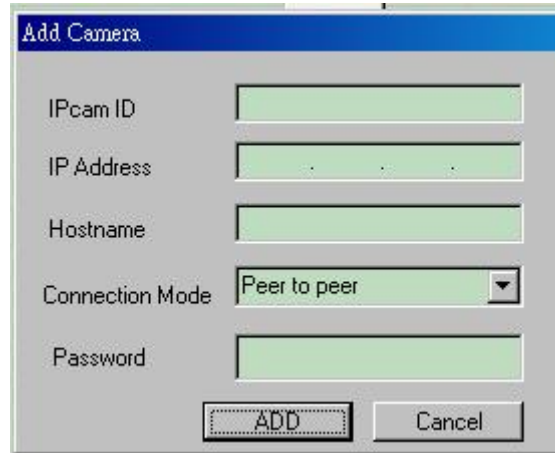


**BACK**



Under **ADD CAMERA** mode , press **BACK** anytime to go back the monitor screen which displays the camera selected previously .

## ADD



You won't often use the **ADD** function to add the same LAN cameras unless you have the **Use SIP Server** connection mode or you have an surveillance camera installed with a permanent public IP address.

- ✓ **IPcam ID** : you can input a nickname of his surveillance camera
- ✓ **IP Address** : the surveillance camera's IP address(Peer to peer), a all zero shall be given for SIP proxy mode(Use SIP Server)
- ✓ **Hostname** : surveillance camera's SIP phone number(Use SIP Server) or nickname (P2P mode)
- ✓ **Connection Mode** : Choose the connection type between :
  - Peer to Peer
  - Use SIP Server
- ✓ **Password** : If remote view permission password is enabled, you shall provide the viewing password here when making the connection in advance. Otherwise, a privacy screen will be displayed. The viewing password is authenticated each time by the surveillance camera when a remote client requests remote camera viewing .

After finishing filling up mandatory fields, press **ADD** to complete the camera adding process.

Add Camera

IPcam ID: NSC3615 at front door

IP Address: 0 . 0 . 0 . 0

Hostname: 88660520018

Connection Mode: Use SIP Server

Password: xxxxxx

ADD Cancel

☆ If surveillance camera viewing password is enabled and **Password** is not provided before **ADD**, the input password will pop up and authentication is required to view live video.

Surveillance Client

Camera

General Settings Image Network

Resolution: CIF

Video mode: VBR

BitRate: 256K

Frame Rate: 16 fps

Quality: [Slider]

Password: [Input] OK

NetCam Info.

IpCAM ID	NetCam
Model Name	LR3615
SIP register	0
User Online	1
Date/time	10th-Jan-2007
Sys. Uptime	1 mins
Hardware ver.	V2.5.3

Apply

General setting

Advance setting

PTZ

LEADTEK

Input password

The Password can be provided after **APPLY**. You can input the password of designated surveillance camera by selecting Input password screen ( an green



outline around the video block ), input the password on **Camera→General Setting→Password** (on left hand side panel) and click **OK** to authenticate user password.

## Basic Operation

With a simple command bar above the SMC, you may control with the surveillance cameras easily., i.e. Record/Snapshot/Change Layout/Full Screen etc. Here is the introduction of the command bar .



### Recording



The **Record** button is set for manually recording . While you want to record some video clips for special use , you can press the button directly . The monitor will display with a RED mark of **REC** to show the recording has been started .

Press again to stop the manual recording ☆.



☆ The recorded files will be stored at PC software side , i.e. if users install the SMC in a PC/Laptop , the PC/Laptop will store the video clips until the disk space has been run out of .

## Snapshot



The **Snapshot** button is set for manually image capture . While you want to take a monitor shot from the displaying view , press the button directly then the snapshot has been taken and stored into the local drive.

## Send Voice



You can use Leadtek surveillance cameras to start a 2-way audio conversation. While you want to have a 2-way communication with 1 selected camera , click the screen to set focus to it (green circled ) and press the **SendVoice** button to start the talk ☆.

You can start a 2-way audio with one specific surveillance camera. If the surveillance camera 2-way audio talk is busy, the second audio talk invitation will fail and a warning message "**Audio line is busy , try later**" will display to indicate audio line busy condition.



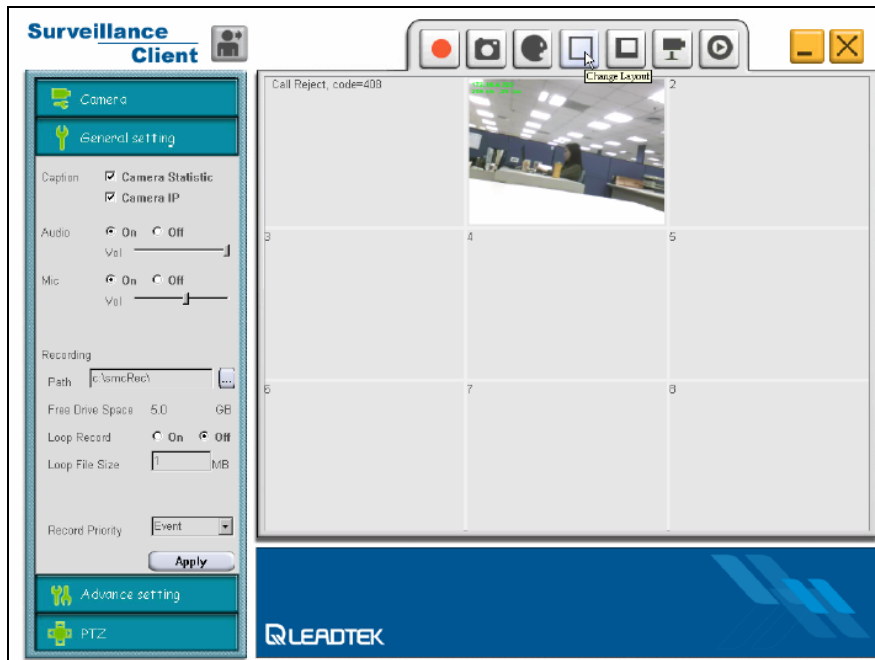
☆PC/Laptop should got microphone device to enable the **SendVoice** function ; also the surveillance camera should have the speaker installed before starting the talk ..



## Change Layout



Leadtek Surveillance Cameras can be installed to many places . For the monitoring convenience , SMC can support up to 9 cameras' view at the same time ☆ . Press the button to toggle the layout view from 1/4/9 and back to the single view .



☆ It depends on the hardware performance . CPU/RAM should be considered before viewing the cameras .

## Full Screen

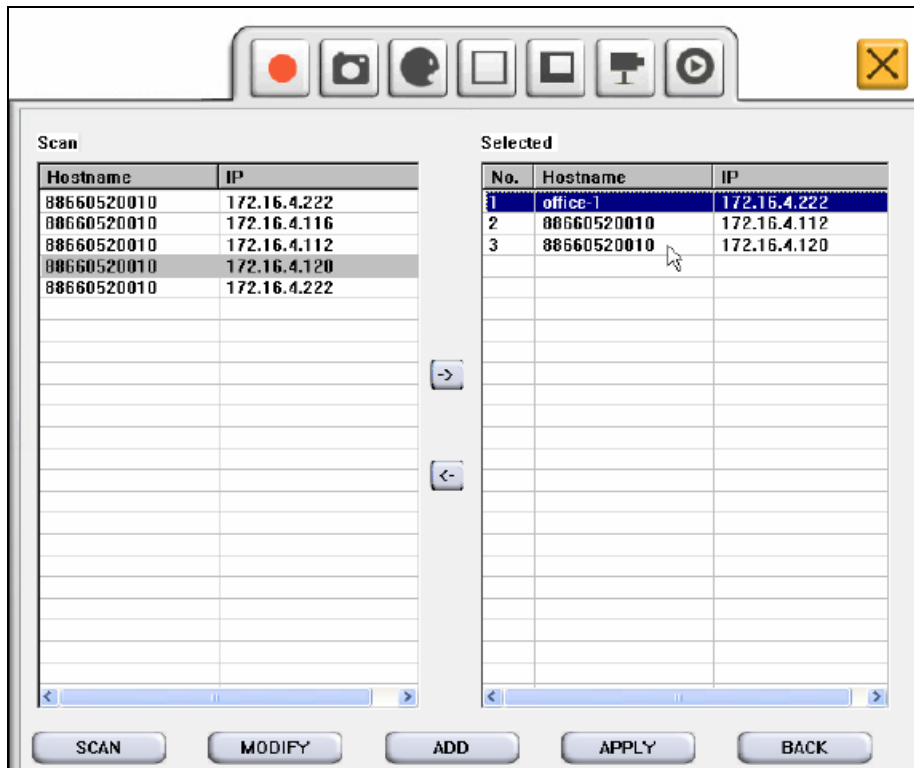


Press the button to view the video in full screen.

## Add Camera



Press the button will bring you back to the first window just like you launch the SMC .



## File Viewer



The **FileViewer** function is for browsing the Recorded files and Snapshot pictures . Press the button and you can have the following window pop-up.



After the filter criteria has been decided , press Search to get the result . No matter what type you filtered, press **View** to have the file displayed at the right area or deleted with pressing the **Delete**.

Filter By: Snapshot

Start Time: 2005/ 1/ 1

End time: 2006/ 9/21

Search

Name	Date
r320-194314.bmp	20/3/06 11:43
r320-194554.bmp	20/3/06 11:45
r320-203224.bmp	20/3/06 12:32
r320-203245.bmp	20/3/06 12:32
r320-21203.bmp	20/3/06 13:20
r426-17950.bmp	26/4/06 9:9
r426-17955.bmp	26/4/06 9:9
r428-135011.bmp	28/4/06 5:50
r428-135012.bmp	28/4/06 5:50
r52-15403.bmp	2/5/06 7:40
r52-154015.bmp	2/5/06 7:40
r620-122233.bmp	20/6/06 4:22
r74-165914.bmp	4/7/06 8:59
r918-161918.bmp	18/9/06 8:19
r921-192216.bmp	21/9/06 11:22
r921-192219.bmp	21/9/06 11:22
r921-192222.bmp	21/9/06 11:22
r921-192426.bmp	21/9/06 11:24
r921-193044.bmp	21/9/06 11:30
r921-193046.bmp	21/9/06 11:30

View Delete

Surveillance Client

Filter By: All

Start Time: 2005/ 1/ 1

End time: 2006/ 9/22

Search

Name	Date
r320-194314.bmp	20/3/06 11
r320-194554.bmp	20/3/06 11
r320-203224.bmp	20/3/06 12
r320-203245.bmp	20/3/06 12
r320-21203.bmp	20/3/06 13
r426-17950.bmp	26/4/06 9:9
r426-17955.bmp	26/4/06 9:9
r428-135011.bmp	28/4/06 5:5
r428-135012.bmp	28/4/06 5:5
r52-15403.bmp	2/5/06 7:40
r52-154015.bmp	2/5/06 7:40
r620-122233.bmp	20/6/06 4:2
r74-165914.bmp	4/7/06 8:59
r918-161918.bmp	18/9/06 8:1
r921-192216.bmp	21/9/06 11
r921-192219.bmp	21/9/06 11
r921-192222.bmp	21/9/06 11
r921-192426.bmp	21/9/06 11
r921-193044.bmp	21/9/06 11
r921-193046.bmp	21/9/06 11
r31-16947.avi	1/3/06 8:9
r36-161421.avi	6/3/06 8:14
r320-194317.avi	20/3/06 11

172.168.4.222  
262 kb, 20 fps

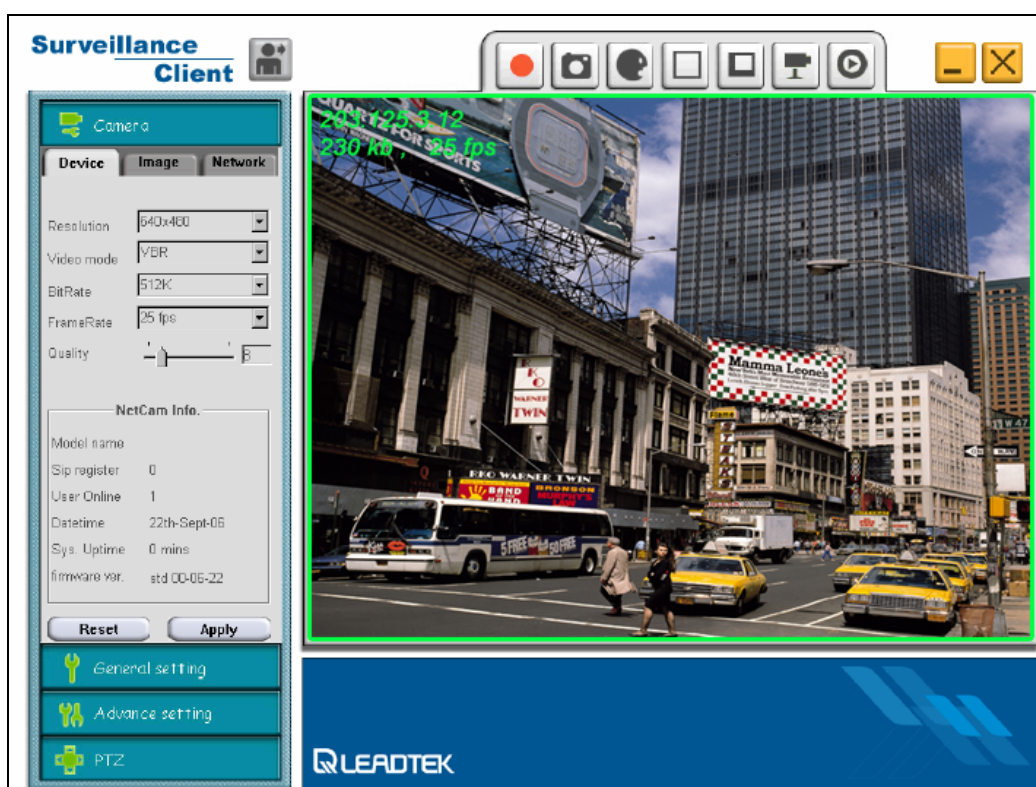
Play/Pause forward Step Stop Back

View Delete

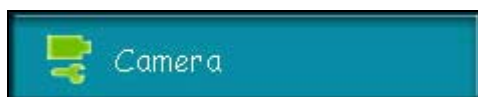
# Advanced Operation

For more detailed instruction of SMC , we will take 3 parts to show you how to do .

- ✓ **Camera** : For knowing/controlling the Surveillance camera basic information , i.e. Device Info , Image control and Ethernet configuration
- ✓ **General Setting** : Surveillance Camera Caption , Audio/MIC control and Recording path and also the record priority .
- ✓ **Advanced Setting** : You can set the Motion Detect / DDO and STUN here.
- ✓ **PTZ** : For the PTZ capable camera features



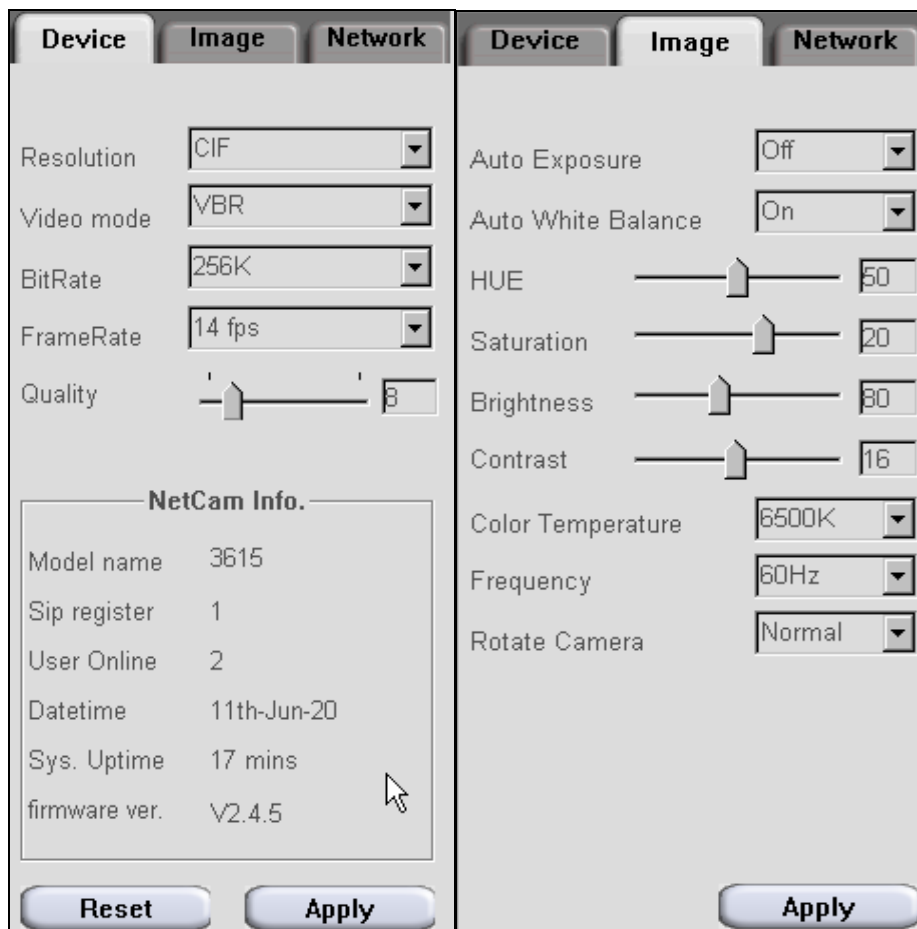
## Camera



You can click the monitor screen and set focus to it , then click to the left side button for **Camera** setting . We will have the following picture to know the basic information of a surveillance camera .

No matter what setting has been modified , press **Apply** to have the configuration enabled .

### a. Device & Image



<b><i>Resolution</i></b>	Adjust the resolution of the image (Restart required)
<b><i>Bit rate</i></b>	Control the available bandwidth.
<b><i>Frame Rate</i></b>	Choose the number of frames to be displayed in a second.
<b><i>Brightness</i></b>	Adjust the brightness of the image.
<b><i>Contrast</i></b>	Adjust the contrast of the image
<b><i>Saturation</i></b>	Adjust the color saturation level of the image.
<b><i>HUE</i></b>	Adjust the HUE of the image.
<b><i>Auto White Balance</i></b>	Adjust the white balance of the onscreen image for ON/OFF.
<b><i>Auto Exposure</i></b>	Adjust the Auto Exposure of the image for ON/OFF.
<b><i>Color temperature</i></b>	Color temperature - 2850K - 4300K - 6500K
<b><i>Frequency</i></b>	50MHz or 60MHz for AC power frequency.
<b><i>Rotate Camera</i></b>	Image rotation if needed while IPCAM is on desktop or attached to ceiling.

b. **Network**

<b><i>DHCP</i></b>	DHCP mode for requiring an IP from DHCP server
<b><i>Static IP</i></b>	You can configure IP setting of surveillance camera. Including the IP address / Subnet Mask / Default gateway / Primary DNS / Secondary DNS settings
<b><i>PPPoE</i></b>	Especially for ADSL users who can set their account and password to get online.

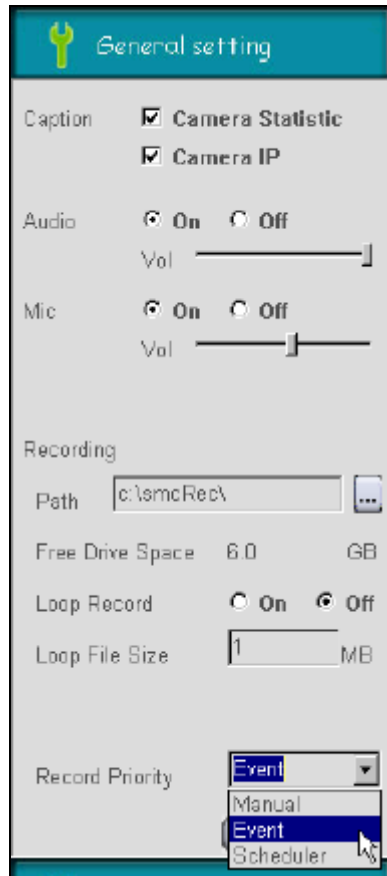
## General Setting



You can enable/disable the screen caption to a surveillance camera and also the Audio/MIC's on/off .

As to the Recording , you may define the recording path to store the manual recording and the schedule recording . Due to the video clip file size is often huge, please check **Free Drive Space** of you local disk storage☆.

☆ If there's not enough Free Drive Space , please change the Recording Path to see if there's enough space at other system disk .



For the Record Priority , you can define which kind of recording will be prior than any others.

- ✓ **Manual** : Recording is enable by Record the top of the SMC
- ✓ **Event** : Record is triggered by the Motion Detection
- ✓ **Scheduler** : Recording is enabled by Scheduler.

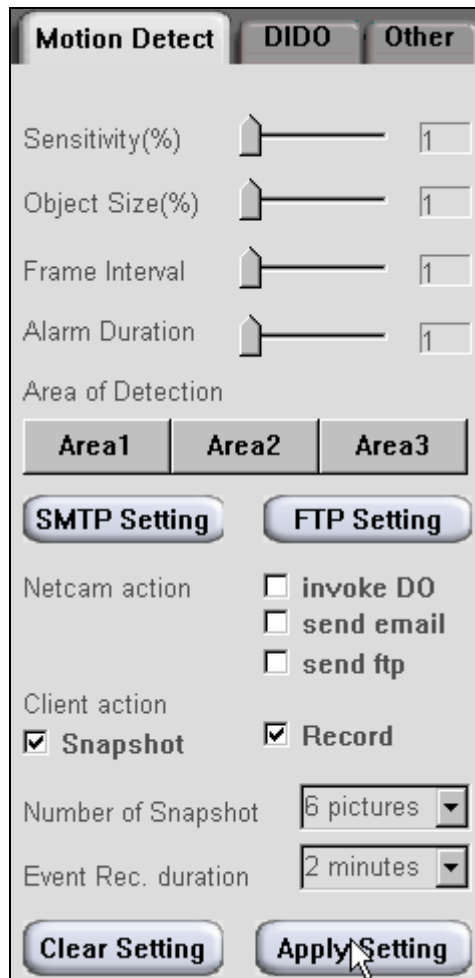
## Advance Setting



You may have Motion Detect or DIDO setting for their security . Before the **Motion Detect** secure area setting, some parameters need to be set and pre-defined before starting the Motion Detect/DIDO.

### c. **Motion Detect**



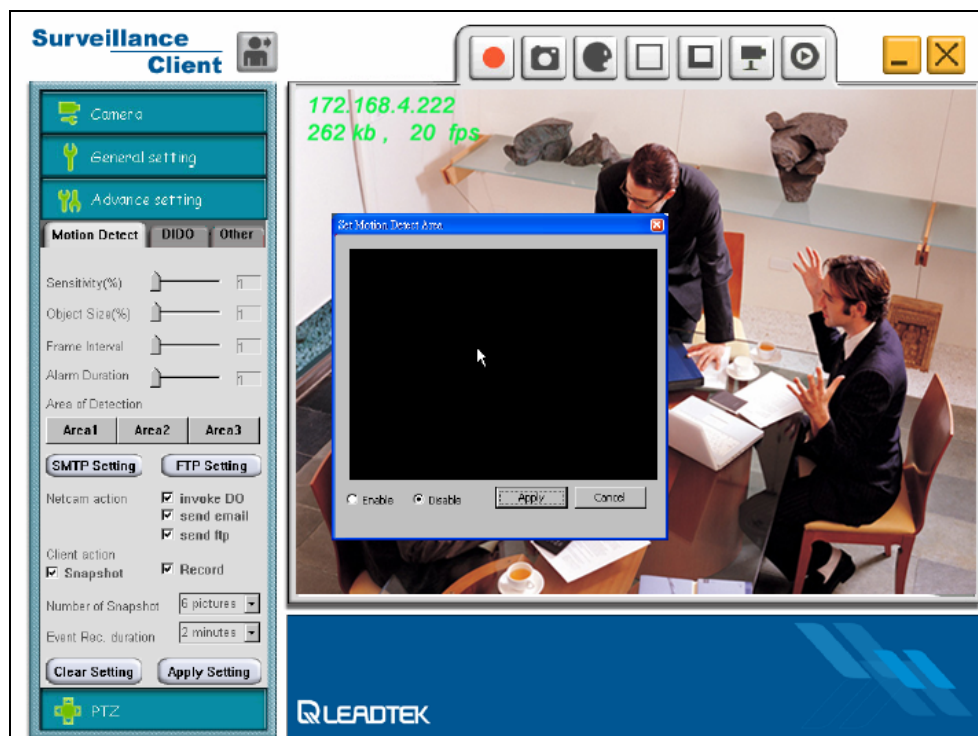


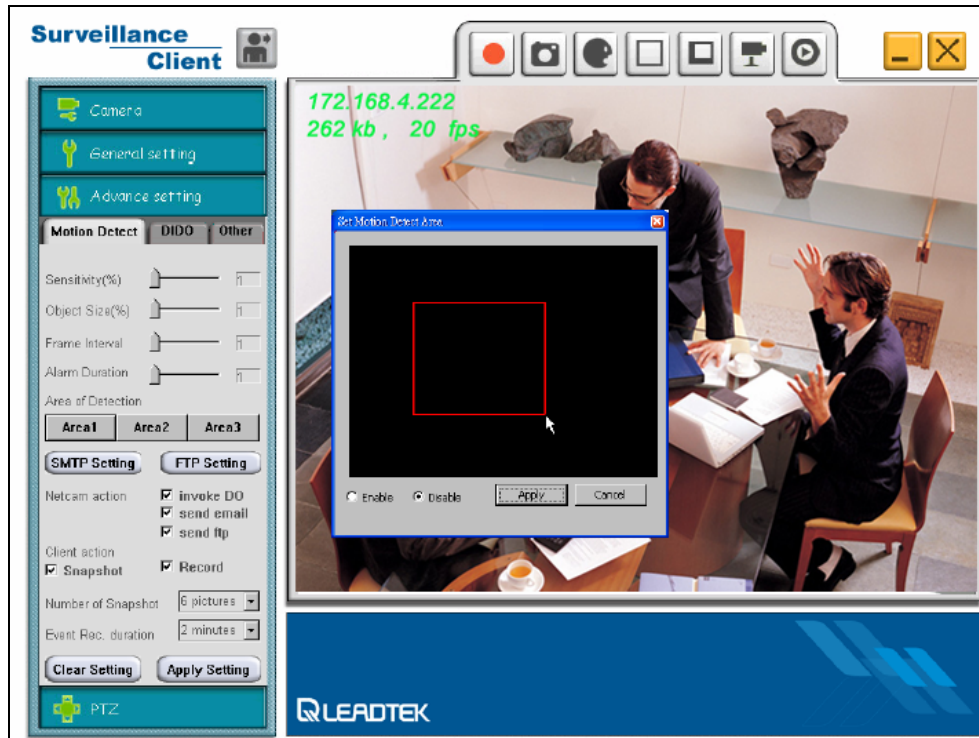
- ✓ **Sensitivity (%)**: This parameter determines the sensitivity of embedded motion detector algorithm. The higher the value, the more sensible to the motion object change.
- ✓ **Object size (%)** : This parameter determines the pixel change percentage of motion interest area. If more pixels(vs configured value) are justified and declared as changed by embedded motion detector algorithm, motion is reported by the device.
- ✓ **Frame Interval** : the number of required video frames in a row to confirm the motion condition. The smaller the value, the higher motion probability.
- ✓ **Alarm Duration** : This parameter specifies period of interval to start next motion detection. If one motion event is confirmed and declared, it is required to wait for the time specified by this parameter so that the next motion event can be start to detect.
- ✓ **Area of Detection** : Define the detection area ; 3 areas , each one needs to be defined separately ☆ .
- ✓ **SMTP Setting** : Configure the SMTP for sending out the captured image from surveillance camera ☆.
- ✓ **FTP setting** : Configure the FTP for transferring the captured images from surveillance camera ☆.
- ✓ **NetCam Action** : Invoke DO/send email/send ftp
- ✓ **Client Action** : Snapshot / Recording Setting

- ✓ **Number of Snapshot** : While enable the Client Action with Snapshot , set the Number of Snapshot to define the alarm pictures amount .
- ✓ **Event Rec. duration** : After the time of duration set , the alarm will be cleared and wait for another trigger point .

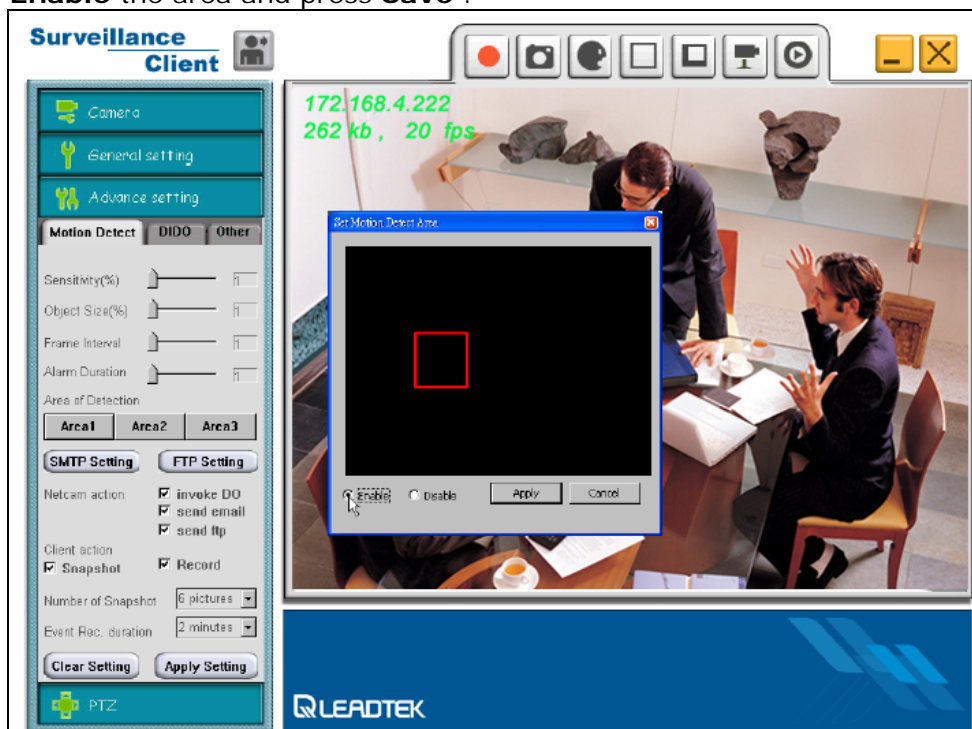
☆ **How to define an area of Detection ?**

1. Press **AREA1** and see the black window jump out
2. Click the black screen , drag and drop with an area in red line to mark the area of motion detection.





3. Enable the area and press **Save** .



☆ How to define SMTP to send the image via email ?

SMTP Setting

SMTP Server: mail.leadtek.com.tw

Username: UserA

Password: \*\*\*\*\*

Send From: Gloria

Send To: Receiver1

Send To 2: Receiver2

Send To 3:

Subject: Warning !! Triggered Alarm from Came

Message: Attached images are for reference.

20 characters max.

OK Cancel

1. Press **SMTP** button and have the SMTP setting window.
2. Fill in with proper information. Here we only provide an example for input texts.

☆ **How to define FTP to send the images up to a FTP Server?**

FTP Setting

Server: ftp.leadtek.com.tw

User: admin

Password: \*\*\*\*

OK Cancel

1. Press **FTP** button and have the **FTP** setting window.
2. Fill in with proper information . Here we only provide an example for input texts.

d. **DIDO**

The screenshot shows a software configuration window with three tabs: "Motion Detect", "DIDO", and "Other". The "Other" tab is active. The window is divided into two main sections: "DI" and "DO".

- DI Section:**
  - Enable:** A dropdown menu set to "ON".
  - Type:** A dropdown menu set to "Low".
  - Netcam action:** Three checkboxes: "invoke DO", "send email", and "send ftp", all of which are currently unchecked.
- DO Section:**
  - Type:** A dropdown menu set to "Low".

An "Apply" button is located at the bottom center of the window.

- ✓ DI / **Enable**: ON/OFF for DI
- ✓ DI / **Type** : Low / Raising for trigger mode .
- ✓ DI / **IPCAM Action** : Define what action will be done if DI triggered .
- ✓ DO / **Type** : Low / Raising for action mode .

e. Other

**Motion Detect** **DIDO** **Other**

Using SIP Server

SIP Phone

SIP Server

SIP Port

STUN Detect

STUN Server

STUN Port

Select PC Network Interface

VERSION: 09-15

- ✓ **Using SIP Server** : ON/OFF for using the SIP Server
- ✓ **SIP Phone** : SIP Phone number
- ✓ **SIP Server** : SIP Server IP Address
- ✓ **SIP Port** : SIP Server port used ( often 5060 )
- ✓ **STUN Detect** : ON/OFF for using the STUN Server
- ✓ **STUN Server** : STUN Server IP Address
- ✓ **STUN Port** : STUN Server port used ( often 3478 )
- ✓ **Select PC Network Interface** : If multi network cards , users need to define which one for the connection .
- ✓ **Version** : SMC version

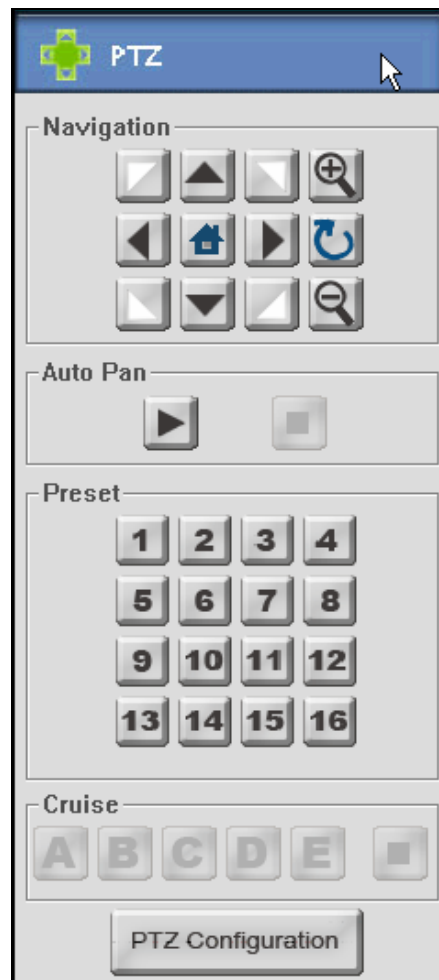
## PTZ



For advanced model with the surveillance devices, Leadtek offer models for supporting the Pan/Tilt/Zoom features . If you also buy the PTZ series camera, then after **SCAN** from the Surveillance Management Center ( SMC ) , the PTZ camera can be also **ADD** into the camera list and to be monitored at the same time .

### Standard Operation













Leadtek PTZ surveillance camera offers a standard operation panel and advanced configuration panel for users . And for standard operation, there are 4 areas for different control which are:



☆ If a non-PTZ IPCAM was selected , the PTZ Panel won't be activated .



While the PTZ models being selected, the Navigation control panel can help users to do the manually control with the Pan, Tilt and Zoom features.

Symbol	Description
	Control the direction of UP-LEFT
	Control the direction of UP
	Control the direction of UP-RIGHT
	Control the direction of LEFT
	Control the RESET TO DEFAULT POSITION (HOME position) <i>*Both direction and the focus.</i>
	Control the direction of RIGHT
	Control the direction of DOWN-LEFT
	Control the direction of DOWN
	Control the direction of RIGHT-DOWN
	Control the ZOOM OUT
	Control the ZOOM IN
	Reset the Zoom to the default.


☆ Each button can be pressed only once in and remain state of disable for 1 sec . Due to the transmission quality is limited by the network bandwidth , so users can do the PTZ control once a second . If users want to move faster , please adjust the SPEED control to the HIGH .



## b. Auto Pan



PTZ camera is able to do the automatically pan with the lowest speed . This feature is designed for users can do the surveillance and move gently via the

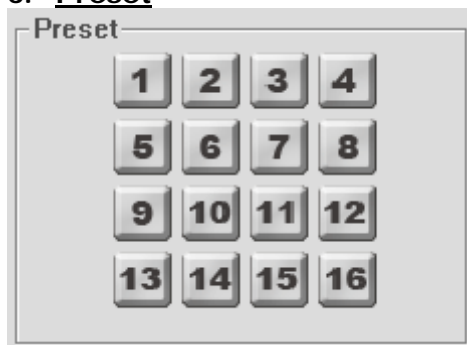
horizontal, visible angle of the PTZ camera. To start the Auto pan, press the  button .



While the **Auto Pan** has been activated, the button state will switched to the

pressed mode and a **STOP** button () will be enabled. While the **Auto Pan** has been started, please press the **STOP** to terminate the control .

## c. Preset



**Preset** are the position sets which you may pre-define the spots for the regular surveillance. Each preset can define its viewing angle and focus, a **Preset Name** is also included.

If you already define a Preset Name, a tooltip will pop-up while you roll the mouse over the Preset buttons, just like the following picture.



## d. Cruise



Cruise is the set of Presets. Each cruise can contain 16 presets in it . If you did not define the cruise at the beginning ,then the cruise button cannot be press just like the above figure .



*\* Cruise has been defined, the cruise button will be enable.*

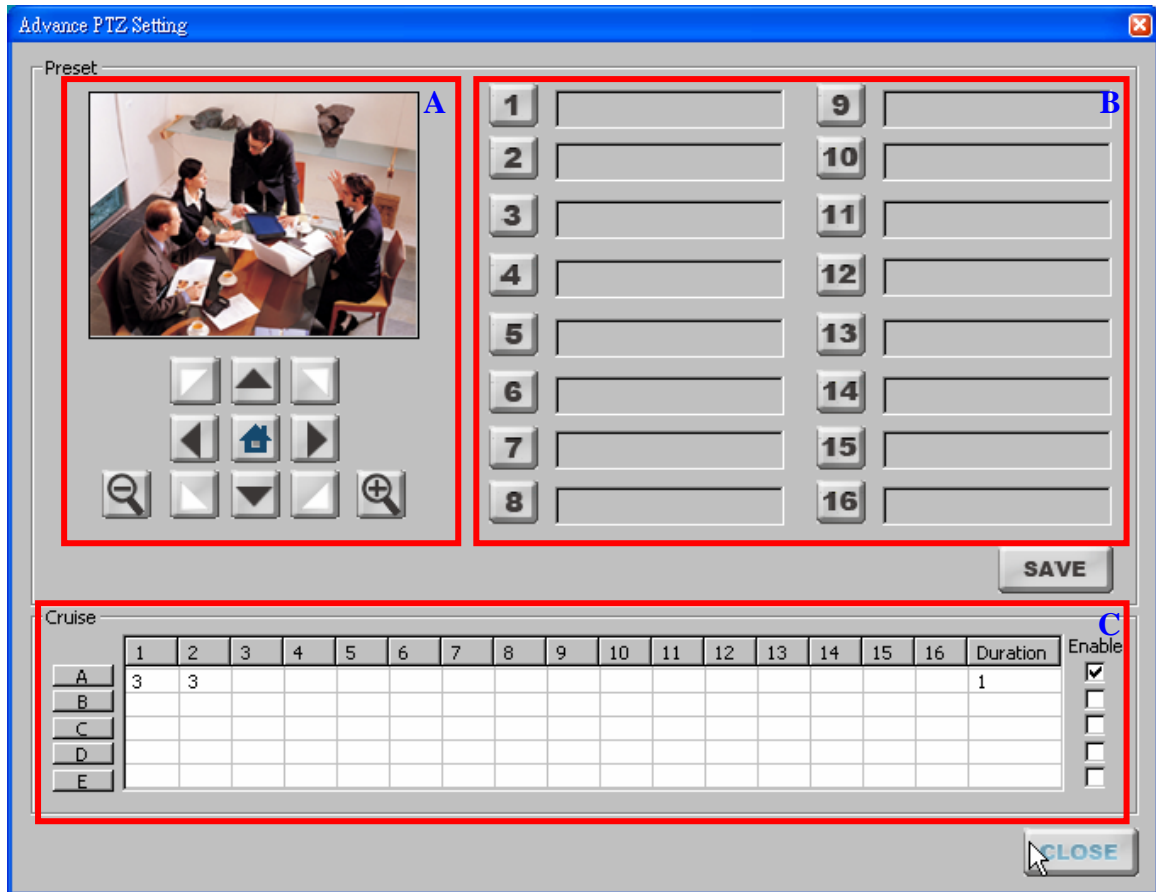


*\* Cruise has been activated, then the STOP button will be enabled for you to stop.*

## PTZ Configuration



In the main panel of PTZ control, SMC allows you to do the manually control from the functions listed within the panel , such as Navigation , **Auto Pan** , **Preset** navigation and cruise surveillance . For advanced configuration for the **Presets** and **Cruises** , press the **PTZ Configuration** button .

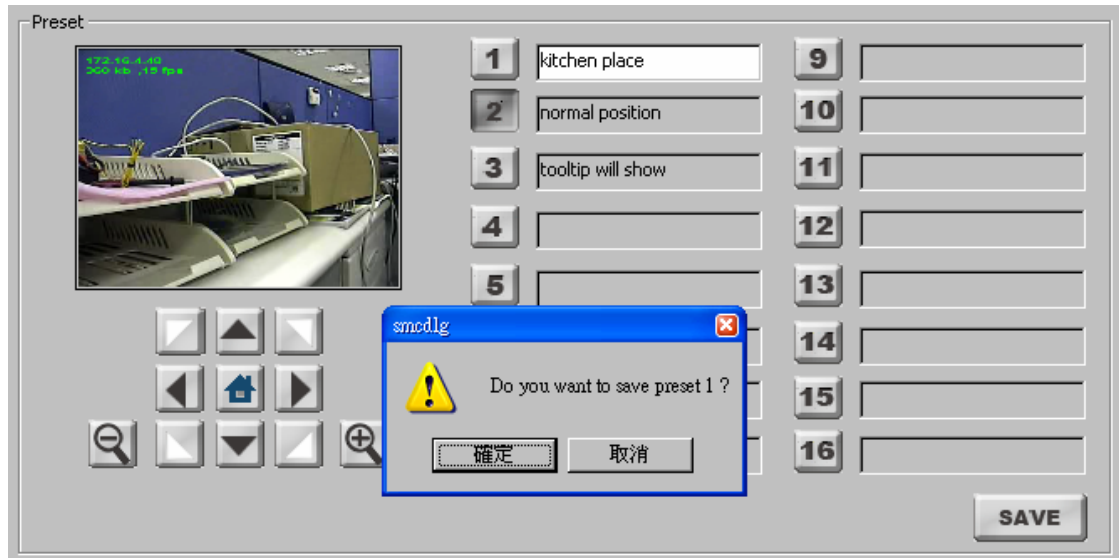


**A : Preset Navigation Area**

- You may have a clearly view for what angle of the surveillance camera will be seen from the preset .
- If you are not satisfied with the originally setting , you could adjust the view angle and also the focus as wish .

**B : Preset Define Area**

- There are 16 presets for you to do the presets.
- Press the # of the preset and start the **Preset Navigation** adjustment ( view angle and the focus adjust ) , the **Preset Name** can be also added in at this moment.
- To **SAVE**, please press the **SAVE** button below or click another **Preset** to define next.
- Press the **OK** to confirm the modification, or **CANCEL** to ignore that.

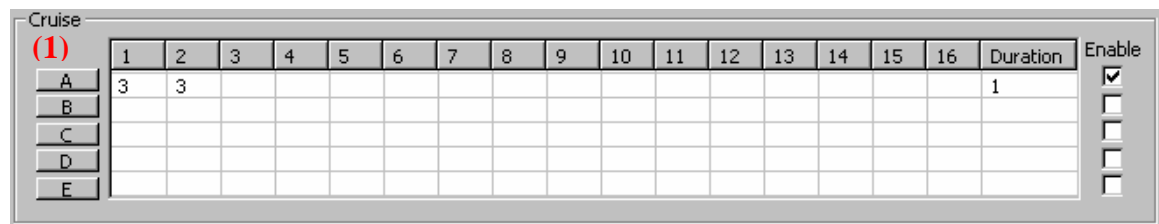


### C : Cruise Define Area

The way to define the cruise will count on a process which start with the cruise set ( A,B,C,D and E ) .

[STEP 1 ]

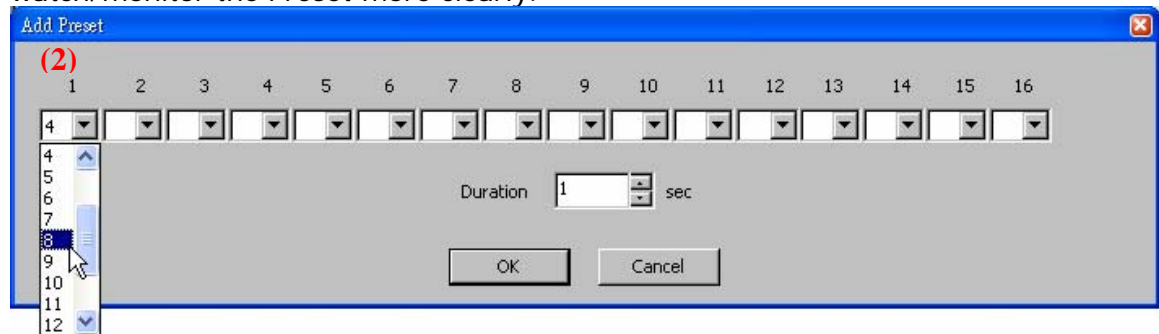
If now we are trying to configure the Cruise A and after configuration, activate it is a must. Press **A** button that just is located in the Cruise panel.



[STEP 2]

After pop-up with the Add Preset window, try to choose which cruise route that you would like define.

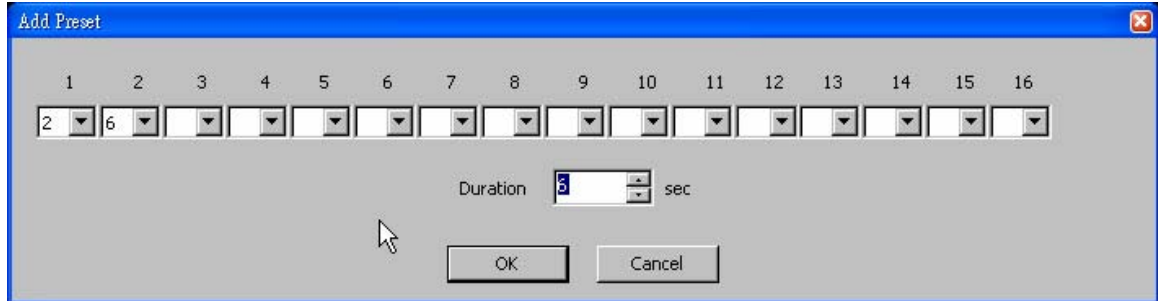
The Duration here defines the pause time between 2 presets for users to watch/monitor the Preset more clearly.



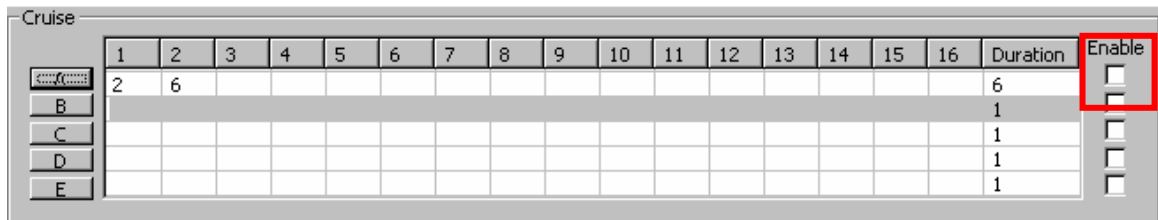
☆ If not required, the 16 presets don't need to be defined completely . 2 Presets can be a Cruise if users activate the Cruise right beside the row by checking it .

[STEP 3]

Here we define the Preset 2 and 6 for the Cruise A and the Duration time is 6 seconds. Press OK to finish the Press adding.



Now you may see the Cruise A has been filled with some information we've just defined few minutes ago. But it is not enable yet.



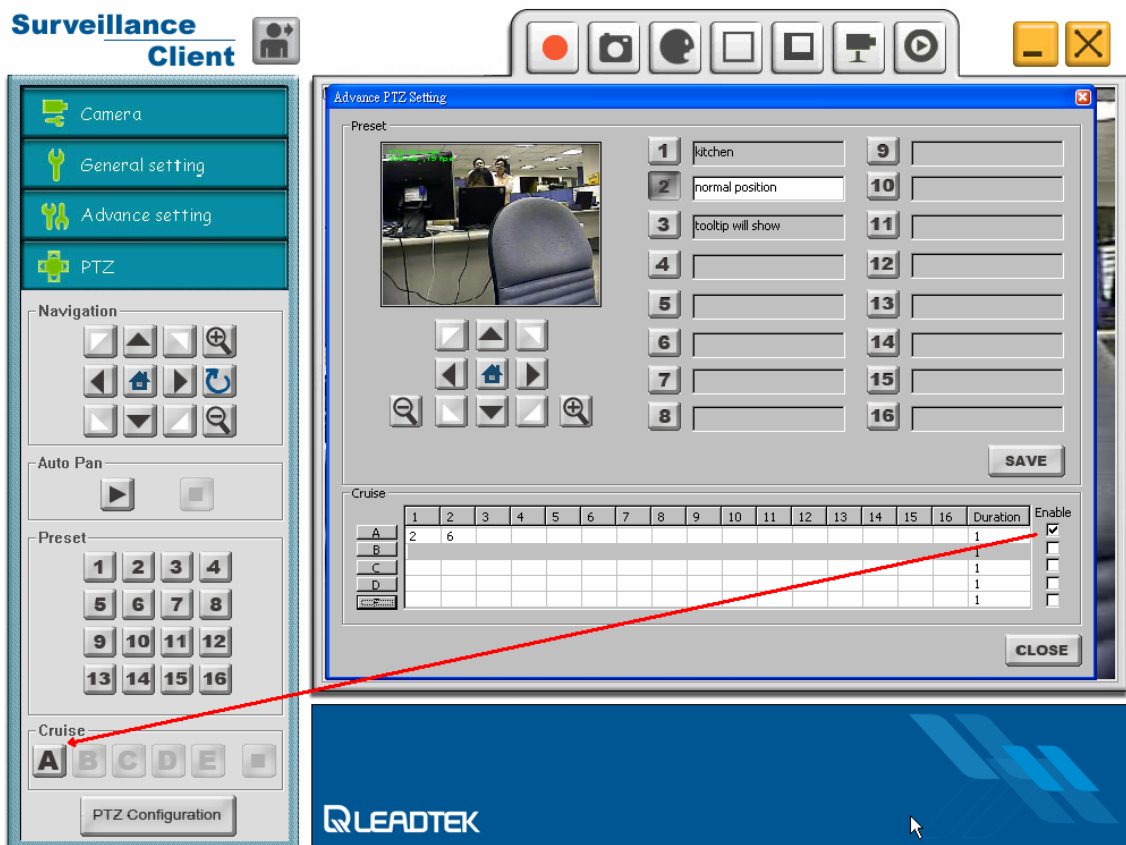
Be noticed with what is going to do next.

We need to **Enable** what we've done for the Cruise set, i.e. if users did not activate the cruise, the standard operation panel won't have a activated button for users to execute the cruise surveillance.



\* The message above show you to confirm the modification of activating **Cruise A** . Press **OK** to save or **CANEL** to ignore the change.

What will be changed in the front panel after press CLOSE? The picture below can tell you what's going on after this.



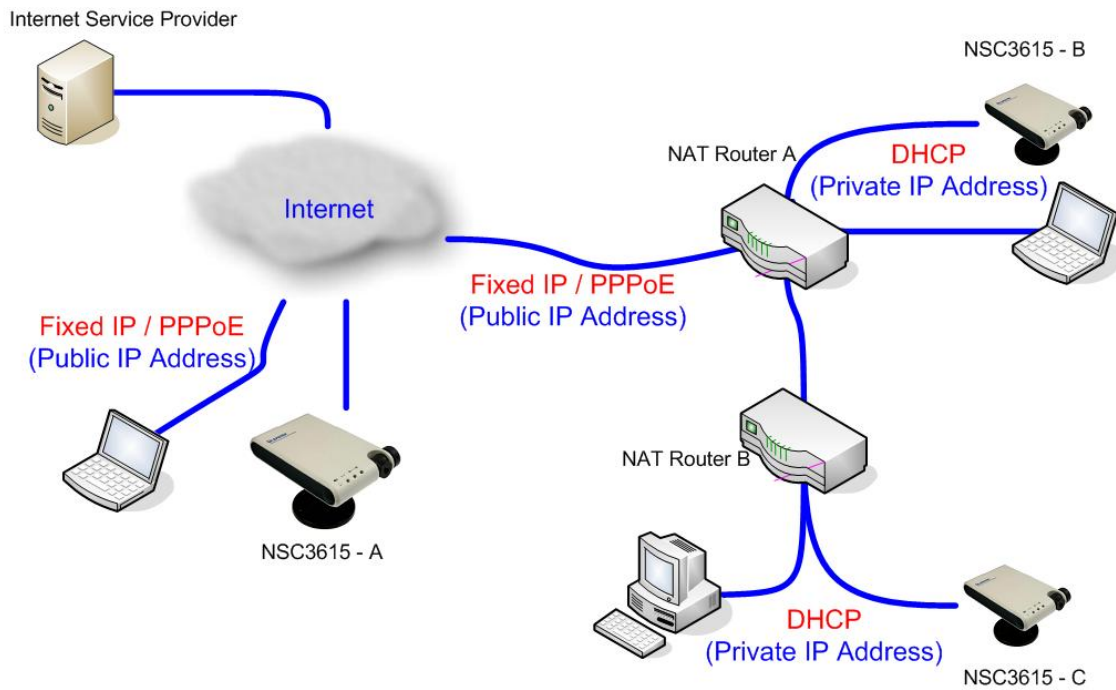
## Using Camera with a Router

If users connect their own surveillance camera and / or PC to a router to access Internet, the router automatically assign IP address to each device. Those IP addresses assigned by the router are under private IP address range (depicted in the following figure).

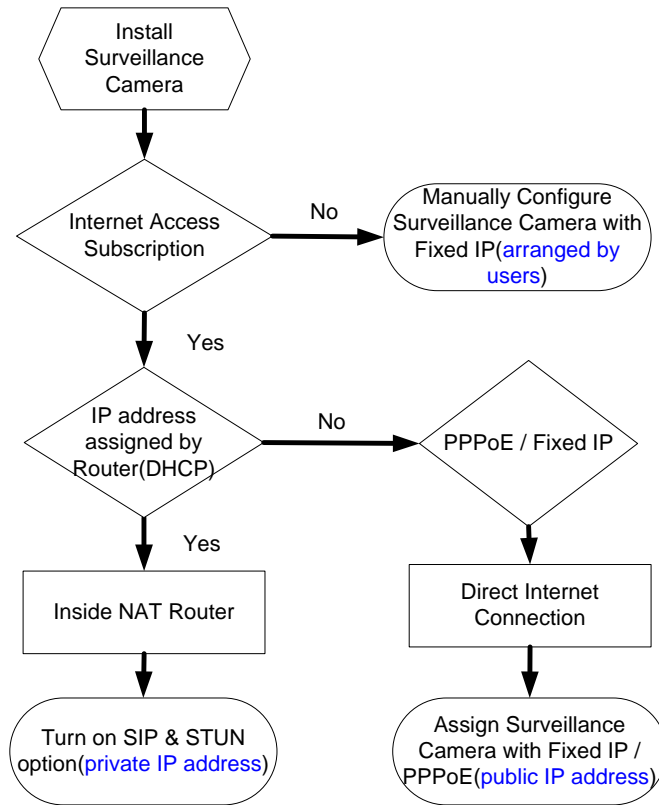
Private IP address range:

- 10.0.0.0 - 10.255.255.255 : private IP address range
- 172.16.0.0 - 172.31.255.255 : private IP address range
- 192.168.0.0 - 192.168.255.255 : private IP address range

- 169.254.0.0 - 169.254.255.255 ( DHCP link failure address setting)
- 0.0.0.0 : invalid IP address



Follow up the flow chart and justify your Internet subscription from ISP. Three networking modes are deduced and proper IP address assignment should be given accordingly.



## A. DHCP(private IP address):

Configure your surveillance camera with DHCP mode from web page **Network** → **IP**

**Save** and **reboot** your surveillance camera to make the setting effective.

**DHCP**

**Static IP**

IP Address :

Subnet Mask :

Default Gateway :

Primary DNS :

secondary DNS :

**PPPoE**

Note: If you want to access your LAN(behind NAT router) from Internet, make sure your **STUN** and **SIP** option are both turned on(both Windows client and surveillance camera) in order pass media packets through routers.

**Procedure to Turn on SIP and STUN Option:**



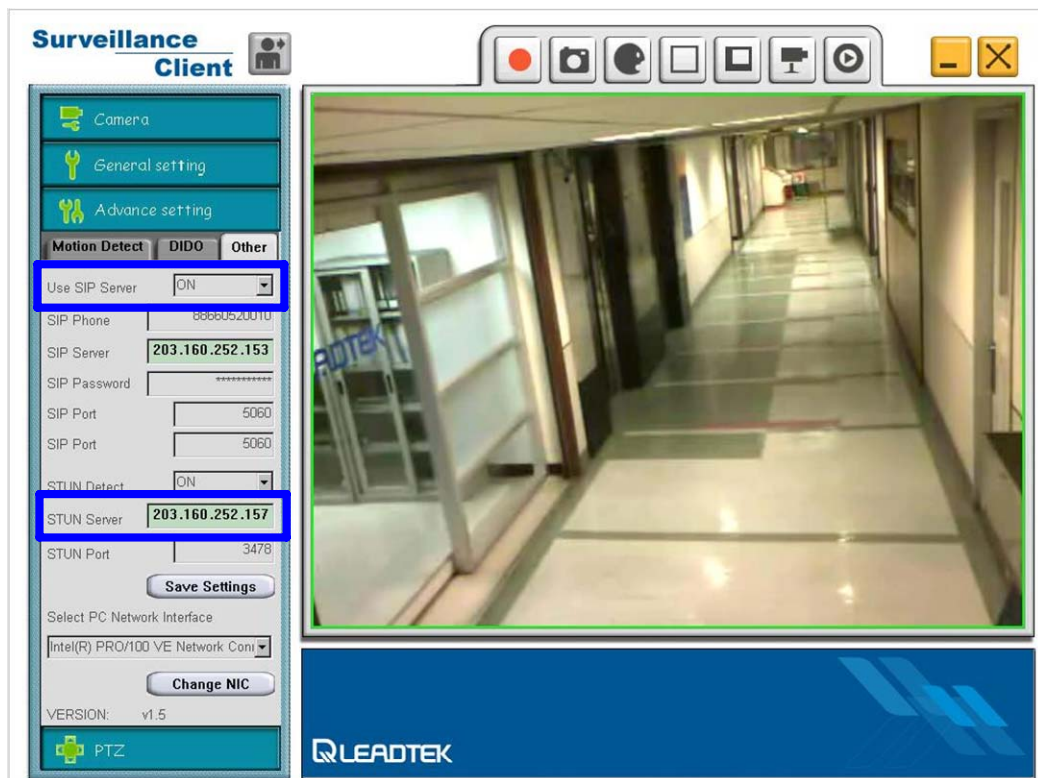
## I. SIP and STUN Option on SMC:

### SIP Option:

If you are making an SIP proxy connection to surveillance camera, make sure you have already configured SIP proxy setting of SMC itself. The SIP proxy setting can be modified from **Advance Setting** → **Other** . Make sure **Using SIP Server** option is **ON**. You need to restart SMC to make the new SIP proxy setting to be effective.

### STUN Option:

From **Advance Setting** → **Other**, make sure **STUN Detect** is **ON**.



Note : For SIP Phone / SIP Server / SIP port / STUN Server / STUN Port parameter settings, you can contact VoIP service provider and subscribe a account to use. Please contact [ipcamfae@leadtek.com.tw](mailto:ipcamfae@leadtek.com.tw) for further detail.

## II. SIP and STUN Option in Surveillance Camera:

### SIP Option:


Log on to surveillance web page. From webpage **System** → **SIP**, ensure **Sip Register** option is **ON**.

### STUN Option:

From webpage **System** → **SIP**, ensure **Stun Detect** option is **ON**.

Note : For SIP Phone / SIP Server / SIP port / STUN Server / STUN Port / Stun Enable HB parameter settings, you can contact VoIP service provider and subscribe a account to use. Please contact [ipcarnfae@leadtek.com.tw](mailto:ipcarnfae@leadtek.com.tw) for further detail. **The following snapshot is just an example setting for demo purpose only. You shall not input the setting to their own surveillance camera.**

SIP Phone Name :	88660520018
IPCam Sip Port :	5060
SIP Server :	203.160.252.153
Server Port :	5060
Register Timer :	60
Domain Name :	203.160.252.153
Proxy Domain :	203.160.252.153
User Name :	88660520018
Password :	003004




- System -----
- Network -----
- Camera -----
- User Management -----
- System Log -----

System Version :  
LR3615\_V2.5.3

SYSTEM

SIP

OTHER



Stun Detect :       ON  OFF

Stun Server IP :   

Stun Server Port :

Stun Enable HB :    ON  OFF

Stun HB Interval :

Sip Register :       ON  OFF

## B. Static IP or PPPoE(public IP address):

Fill the network **PPPoE** account/password provided by your ISP from web page **Network** → **IP**. **Save** and **reboot** your surveillance camera. Surveillance camera will boot up and dial-up to Internet with PPPoE account(a public IP address).

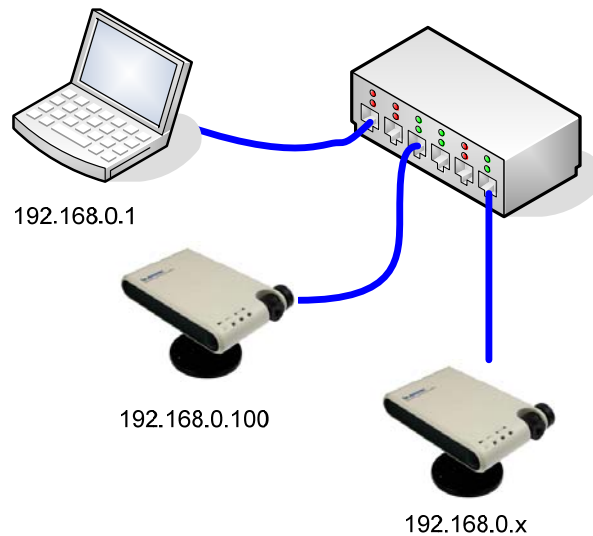
## PPPoE

User Name : leadtek\_pppoe  
User Password : ●●●●●●●●

Note : The example snapshot is just an example. You shall input the setting of your PPPoE account given by your ISP.

## C. Without Internet Access(arranged by users):

If you have no Internet access link, they can manually configure their networking device and make sure each device IP address is unique and is of a same subnet. The following network scenario is a quick example.



PC Setting:

IP address : 192.168.0.1  
Subnet mask : 255.255.255.0

Surveillance Camera Setting:

IP address : 192.168.0.100  
Subnet mask : 255.255.255.0

Available IP address range : 192.168.0.2 ~ 192.168.0.254 (exclude 192.168.0.100)

From web page **Network** → **IP**

**Static IP**

IP Address :	192.168.0.100
Subnet Mask :	255.255.255.0
Default Gateway :	192.168.0.1
Primary DNS :	192.168.0.1
secondary DNS :	192.168.0.1

# Appendix

## Installing Scan Utility

The following procedures guide you through the steps of scan utility installation and operation:

Step 1 : Visit WinPcap and download WinPcap version 3.1 from the website:

<http://www.winpcap.org/>

Step 2 : Install **WinPcap** version 3.1(Installer for Windows / WinPcap\_3\_1.exe).

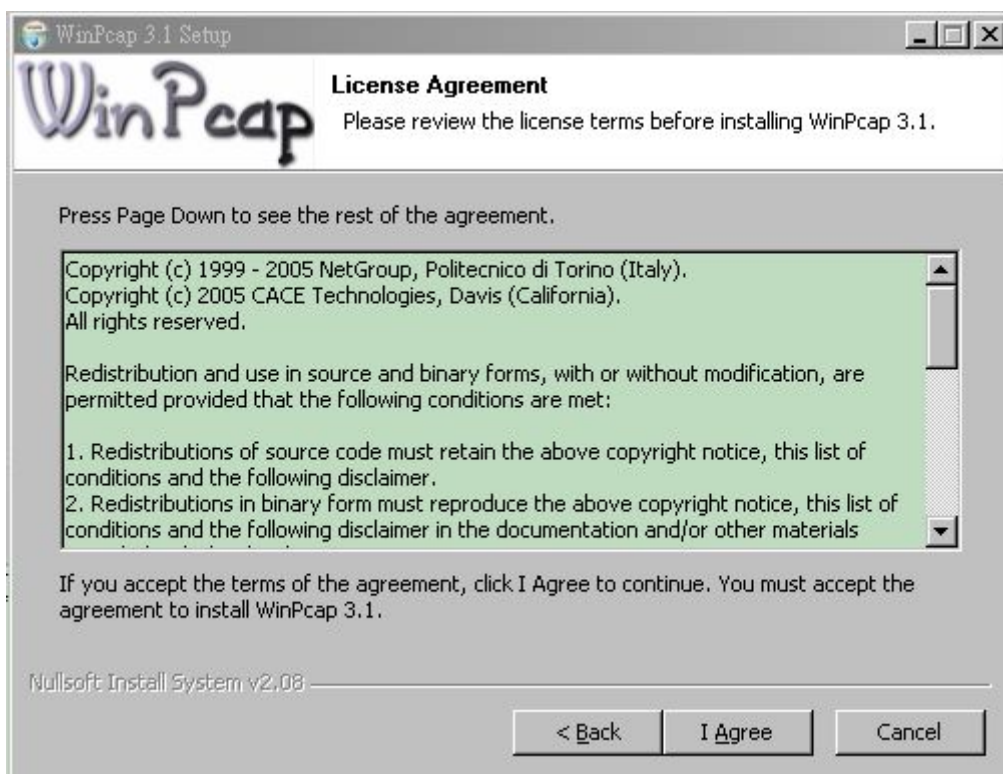
i) Double click WinPcap\_3\_1.exe icon.



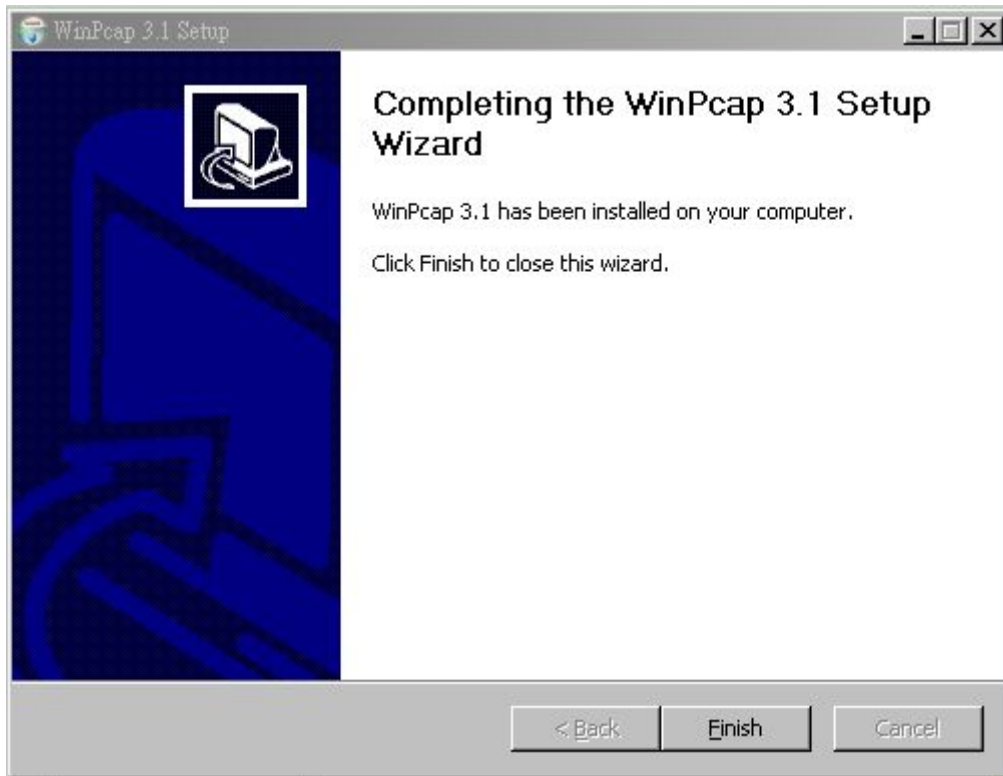
ii) Click **Next** to continue.



iii) Click **I Agree** to continue.



iv) Click **Finish** to complete installation.



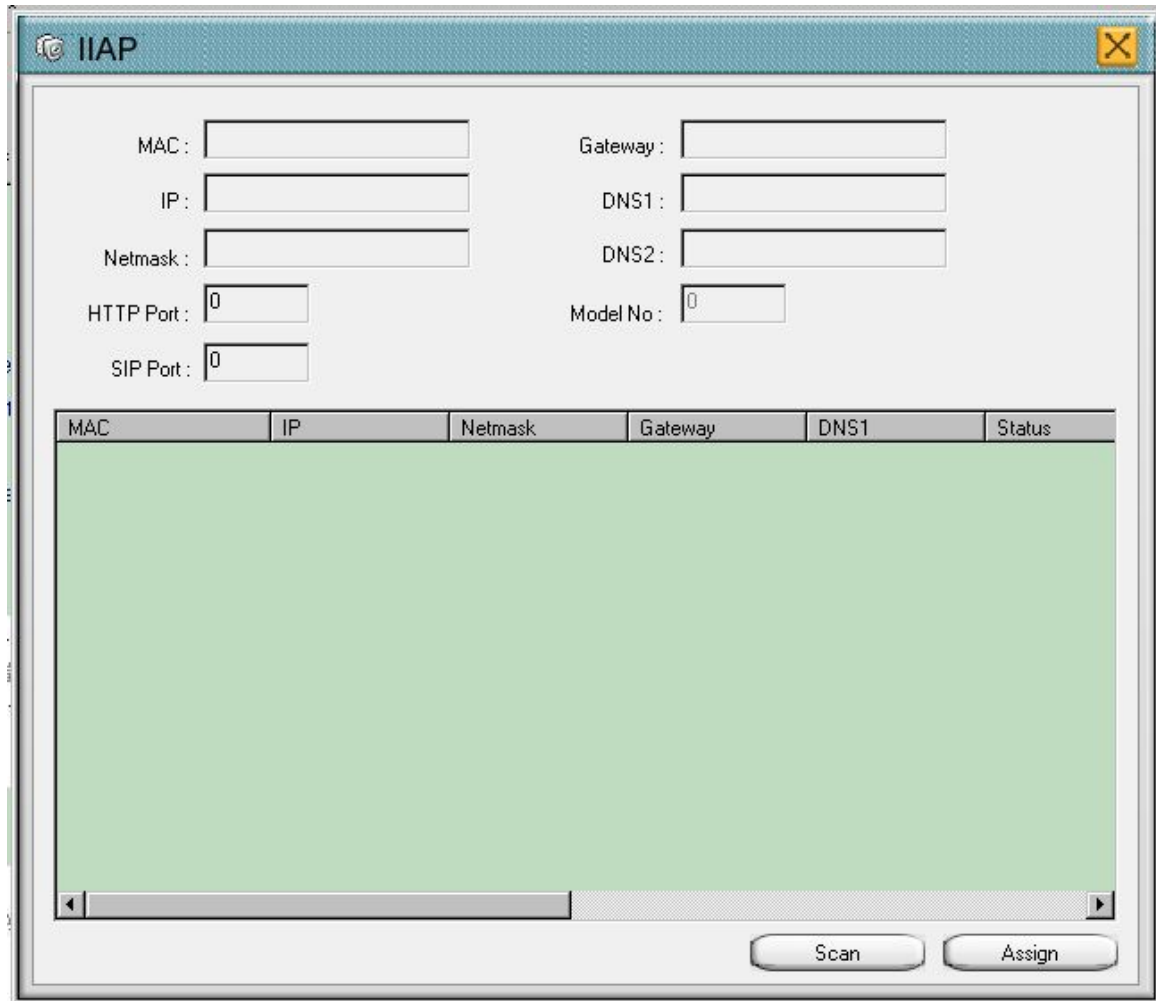
Step 3 : Launch Scan Utility and Assign new IP address to surveillance camera

- i) Double click the scan utility **iiap.exe**



- ii) Click **Scan** button to send out scan packet to the LAN.





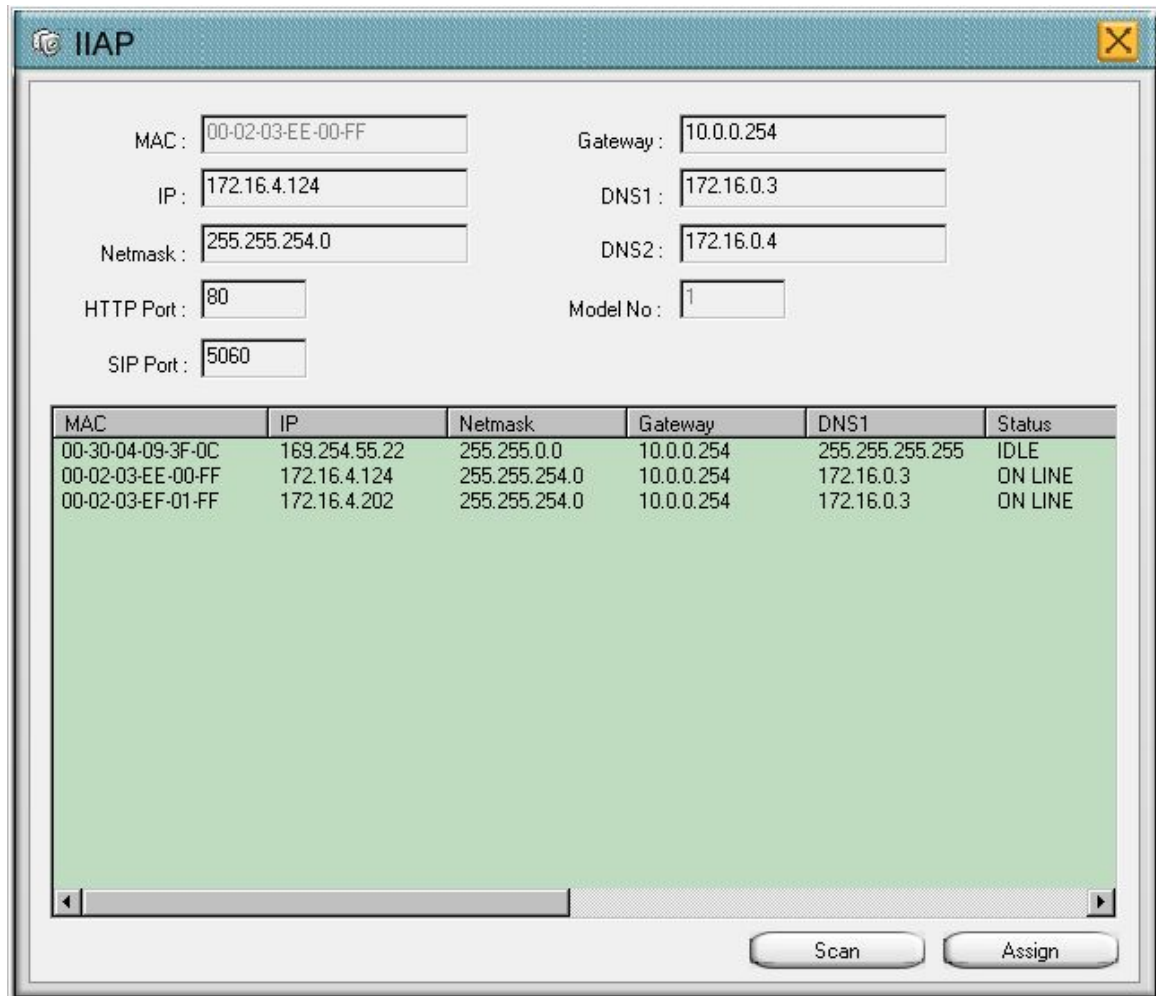
The IIAP utility window contains the following fields:

- MAC:
- IP:
- Netmask:
- HTTP Port:
- SIP Port:
- Gateway:
- DNS1:
- DNS2:
- Model No:

MAC	IP	Netmask	Gateway	DNS1	Status

Buttons:

- iii) The found devices will be displayed on lower panel of utility program. The **Status** field shows you whether the device is **ON LINE**(configured in same subnet) or **IDLE**(not configured properly in the same subnet). If you want to modify the network setting of specific device, click the item to select the interested device. The detail network setting of the device will be displayed on upper part fields. Modify the necessary fields and click **Assign** to change designated device network setting. If network setting assignment is successful, a confirmation message box will pop up to indicate this. Upon a successful **Assign** operation, assigned surveillance device will accept your designated network setting and reboot itself to be effective right away. The default IP network mode will be changed to Fixed IP mode after reboot(manually assigned by user's).



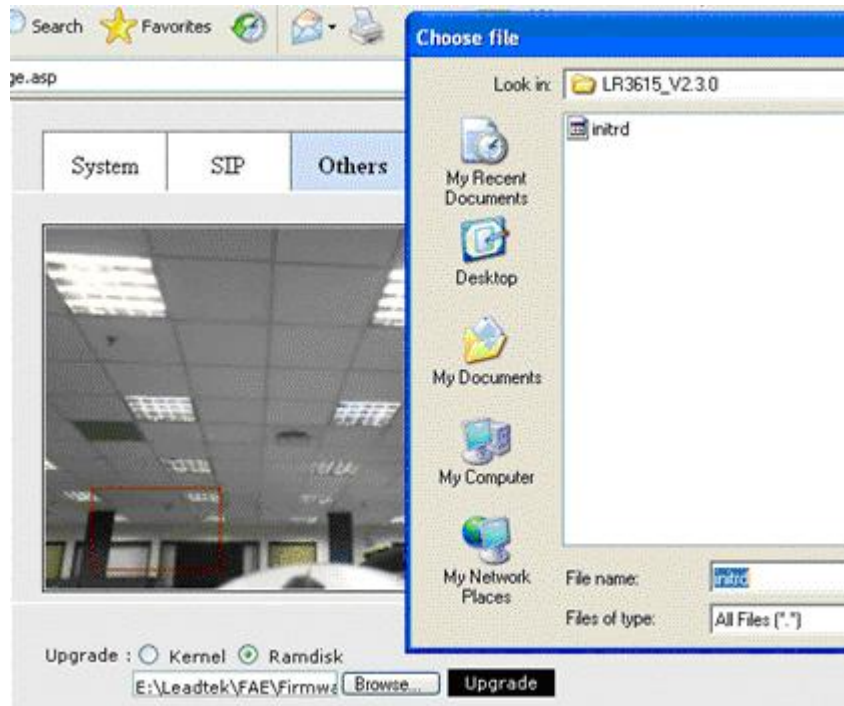
☆The standalone scan utility mentioned here can look up all the cameras in the same subnet(within same router boundary). The SMC scan function just find those camera located in the same subnet with SMC. If surveillance camera's IP address setting is not properly configured with SMC. The Status field will be IDLE and the connection to the surveillance camera via SMC may fail due to improper network setting in surveillance camera. Check your surveillance network setting and justify whether the setting is of a same subnet of SMC.

## Firmware Upgrade

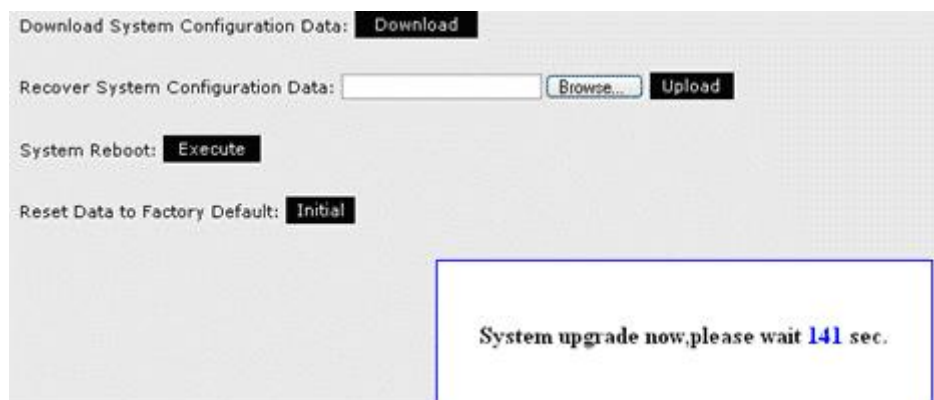
Surveillance camera firmware can be upgraded via Microsoft Internet Explorer. Prepare the firmware file and follow the procedure as the following:

- 1) Login on to web, and click **System** → **Others** page.
- 2) Ensure **Ramdisk** radio button is selected. Click **Browse** button to choose the firmware file and then click **Upgrade** button to kick start firmware upgrade procedure.





3) A message box pops up and a down counter shows the remaining time left of the whole upgrade procedure. The surveillance camera will reboot itself automatically when the upgrade procedure is done.



4) The surveillance camera rolls back its configuration to factory default when this procedure is done.

Note: Depends on firmware version to be upgraded, surveillance camera may reboot itself with factory default or maintain its original setting.

Note: Check the NSC3615 LED to ensure the surveillance camera reboot itself properly.

## Frequently Asked Questions

# Network Configuration

Category : IPCAM / Installation / General

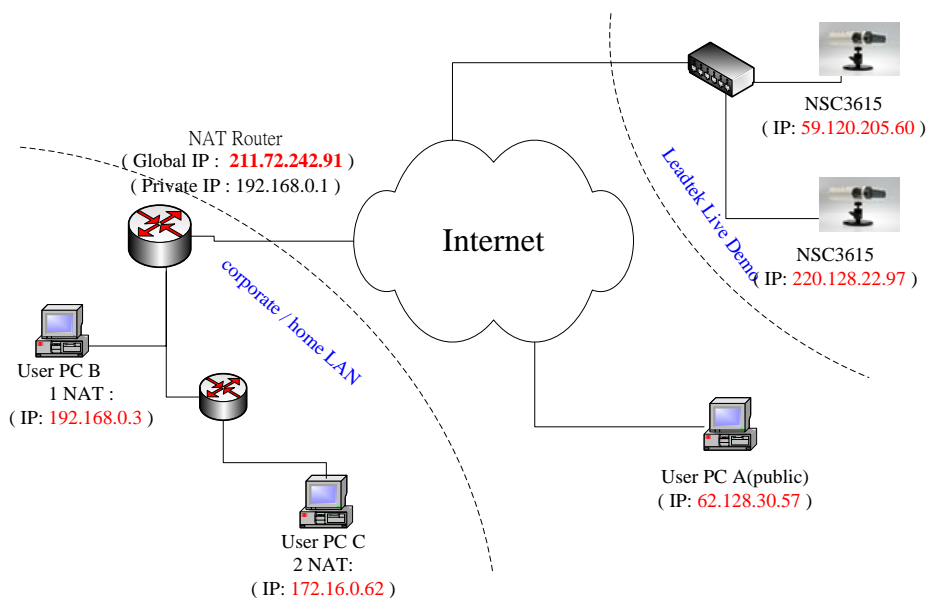
Question:

How can I determine my network setting / configuration ?

Answer:

You shall verify what kind of your user PC network access point are you in(public/private IP address).

The following figure is an example. Justify your network access point(User PC A /B/C)



If you do not know your IP address of PC / notebook, enter the command as the snapshot to find out:

```
C:\>ipconfig

Windows IP Configuration

Ethernet adapter 區域連線:

    Connection-specific DNS Suffix  . : leadtek.com.tw
    IP Address. . . . .                : 172.16.4.5
    Subnet Mask . . . . .              : 255.255.254.0
    Default Gateway . . . . .          : 172.16.5.254

C:\>
```

If the "IP Address" field displayed is included in the following range, your PC is located in a private LAN

Private IP address range:

- 10.0.0.0 - 10.255.255.255 : private IP address range
- 172.16.0.0 - 172.31.255.255 : private IP address range
- 192.168.0.0 - 192.168.255.255 : private IP address range
- 169.254.0.0 - 169.254.255.255 ( DHCP link failure address setting)
- 0.0.0.0 : invalid IP address

If you have direct Internet access(e.g. IP address 61.128.30.57) without an firewall or NAT router installed, you possibly can directly link to Leadtek IPCAM live demo site(IP address : 220.128.220.97, etc on the figure above) and get a real-time live view.

From dos shell command, you can input "tracert" command and see how your packet goes to Internet. Take our IPCAM Internet live demo as an example, you can find out how many router hop are there and thus learn your network configuration.

### **3 Router to Internet Case**

Local PC → 192.168.129.254(Router 1/private IP address)  
→172.16.5.254(Router 2/private IP address)  
→172.16.1.253(Router 3/private IP address)→ ...

```

c:\ 命令提示字元
C:\Documents and Settings\0946>tracert 220.128.220.97

Tracing route to 220-128-220-97.HINET-IP.hinet.net [220.128.220.97]
over a maximum of 30 hops:

  0  <1 ms    <1 ms    <1 ms    192.168.129.254
  1  <1 ms    <1 ms    <1 ms    172.16.5.254
  2  <1 ms    <1 ms    <1 ms    router2.leadtek.com.tw [172.16.1.253]
  3  *          *          ^C
C:\Documents and Settings\0946>

```

### Direct Internet Connection Case

Local PC → 211.72.242.254(Router 1/public IP address)  
 →168.95.82.202(Router 2/public address) → ...

```

c:\ 命令提示字元
C:\Documents and Settings\0946>tracert 220.128.220.97

Tracing route to 220-128-220-97.HINET-IP.hinet.net [220.128.220.97]
over a maximum of 30 hops:

  0  35 ms    35 ms    36 ms    211.72.242.254
  1  35 ms    34 ms    35 ms    tp-s2-c76r5.router.hinet.net [168.95.82.202]
  2  35 ms    35 ms    34 ms    211.22.34.210
  3  35 ms    34 ms    35 ms    tp-e4-c12r2.router.hinet.net [210.65.200.129]
  4  36 ms    36 ms    34 ms    tp-e4-c76r2.router.hinet.net [211.22.36.181]
  5  35 ms    35 ms    35 ms    h213.s85.ts.hinet.net [168.95.85.213]
  6  54 ms    53 ms    53 ms    220-128-220-97.HINET-IP.hinet.net [220.128.220.97]
  7

Trace complete.

C:\Documents and Settings\0946>

```



# Surveillance Management Center



## **Version Information**

**Category : SMC / Installation / General**


### ***Question:***


How can I find out the version information of Windows client (Surveillance Management Center, a.k.a. SMC) ?


### ***Answer:***

Please refer to SMC "Advance Setting" → " Other"

## Surveillance Client

 Camera

 General setting

 Advance setting

**Motion Detect**   **DIDO**   **Other**

Using SIP Server:

SIP Phone:

SIP Server:

SIP Port:


STUN Detect:

STUN Server:

STUN Port:

Select PC Network Interface

VERSION: 10-31

 PTZ

## SIP Configuration

**Category : SMC / Configuration / General**

***Question:***

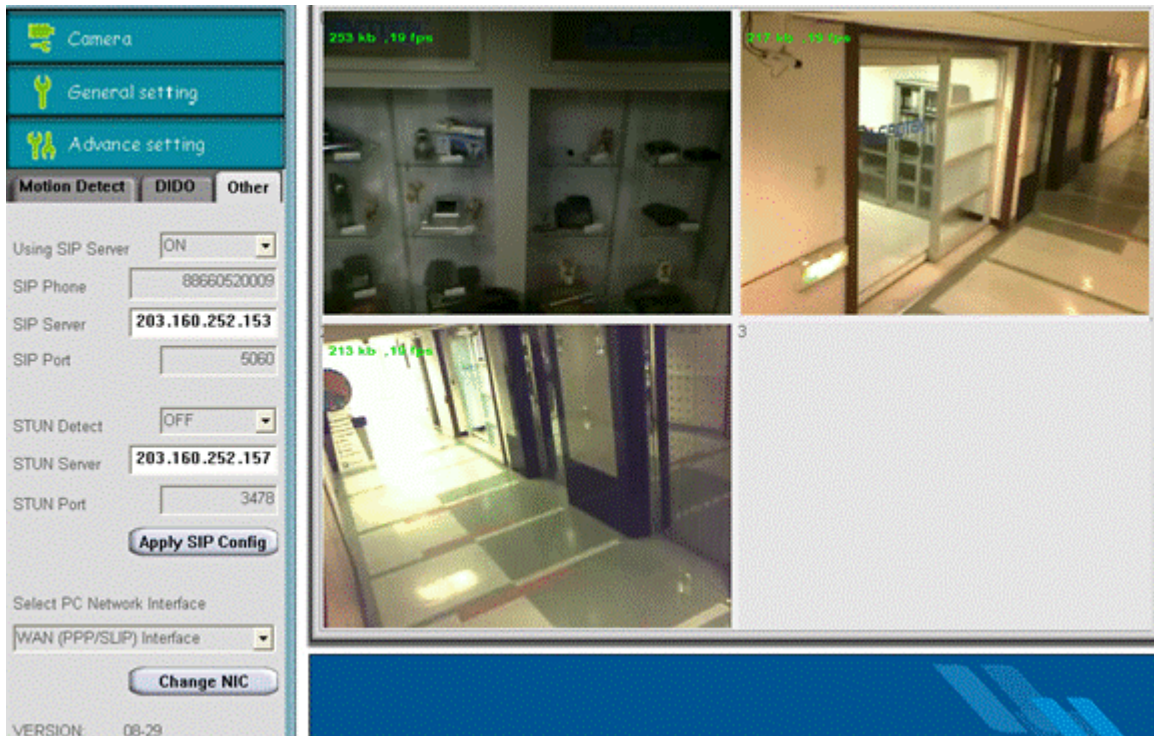
How to verify SIP connection mode for A/V transmission in NSC3615 (Peer-to-peer or SIP proxy) ? How do I configure SIP connection mode on SMC?

***Answer:***

SMC supports 2 mode of SIP connection, i.e. peer-to-peer or via SIP proxy. A SIP phone number shall be pre-configured before make the SIP call to IPCam server. For a peer-to-peer mode, the IP address of target IPCam shall be designated before launching IPCam connection.

If you are making an SIP proxy connection to IPCam server, make sure you have already configured SIP proxy setting of SMC itself. The SIP proxy setting can be modified from "Advance Setting" → "Other" Make sure "Using SIP Server" option is "ON". You need to restart SMC to make the new SIP proxy setting to be effective.





## Motion Detection

Category : SMC / Operation / General

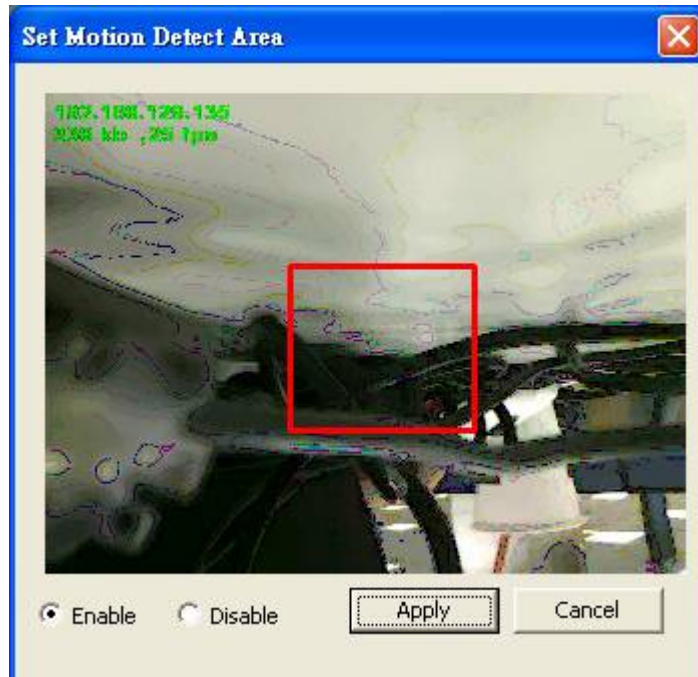
### **Question:**

How do I configure the Motion Detection of IPCAM ?

### **Answer:**

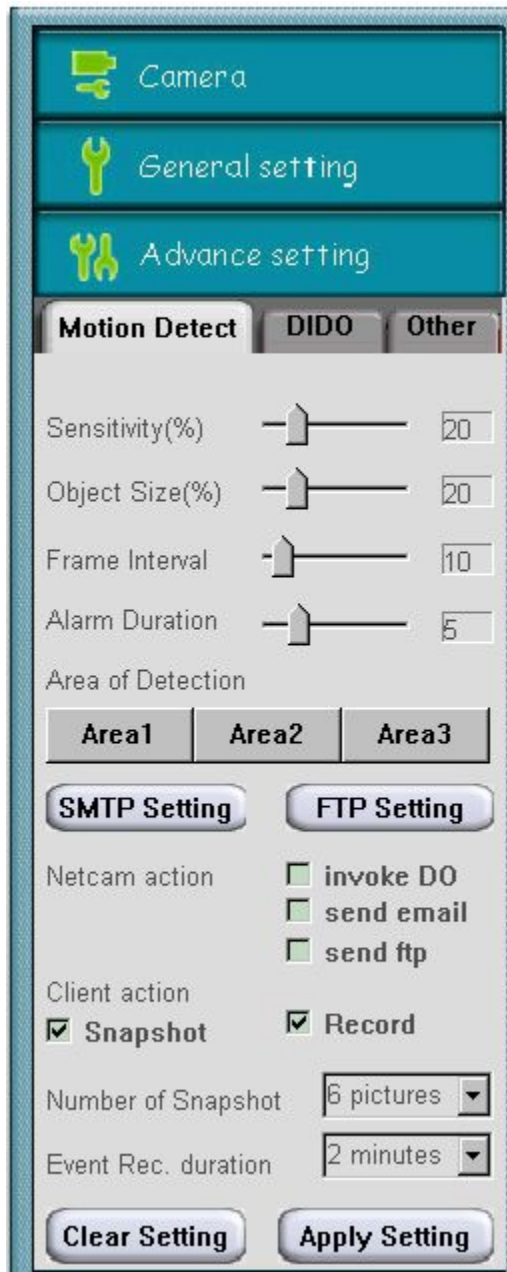
Configure motion detection from "Advanced Setting" → "Motion Detection" → "Area 1"

Use the mouse to make the selection of motion detection block and apply the "Enable" radio button.



The rest of the setting determines what actions will be taken by SMC(snapshot, record) or IPCam device(send snapshot by email or FTP, trigger DO) when motion alarm triggered.





Four parameters (Sensitivity / Object Size / Frame Interval / Alarm Duration) need to be configured before turning on the motion detection function.

- Sensitivity:

This parameter determines the sensitivity of the embedded motion detector algorithm. The higher the value, the more sensitive to the motion object change.

- Object Size:

This parameter determines the pixel change percentage of motion interest area. If more pixels(vs configured value) are justified and declared as changed by embedded motion detector algorithm, motion is reported by the device.

- Frame Interval:

The frame interval check the number of required video frames in a row to confirm the motion condition. The smaller the value, the higher motion probability.

- Alarm Duration:

The "Alarm Duration" parameter specifies period of interval to start next motion detection. If one motion event is confirmed and declared, it is required to wait for the time specified by "Alarm Duration" so that the next motion event can be start to detect.

The motion detection parameters are configured via Windows client SMC. The surveillance camera will save the setting in its own permanent storage and start performing the motion monitoring task. The parameters will be still effective after a device reboot.

## **Video Quality Setting**

**Category : SMC / Configuration / General**

***Question:***

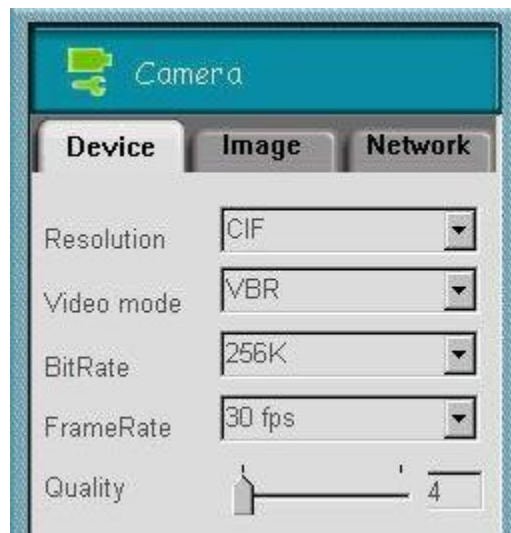
How can I configure the IPCAM to get the best of video quality ? What factors may dominate the video quality of IPCAM performance ?

***Answer:***

The following configurable parameters have dominant effects on user video quality feeling:

- Video Resolution
- Video Mode
- Bit Rate
- Frame Rate
- Quality

Those parameters are closely linked and there is a tradeoff between setting of each parameters. For example, there is no guaranteed setting to satisfy user (Bit Rate, Frame Rate, Quality) setting under desired video resolution. The final effect also needs to take complexity of live image coding into account. For example, a big scene change will take more bitstream to reconstruct the image frame and thus more network bandwidth is required.



## 1) Video Resolution:

The actual video resolution configured determines the viewable image delivered by the surveillance camera.

CIF : 352 x 288  
QCIF : 176 x 144  
VGA : 640 x 480  
QVGA : 320 x 240  
D1 : 702 x 480



The higher resolution configuration makes surveillance camera codec engine to pump out more bitstream data for reconstruction of image frame in Windows client.

## 2) Video Mode

Leadtek surveillance camera supports 2 video mode for rate control, i.e. Variable Bit Rate (VBR) and Constant Bit Rate(CBR). The VBR setting honors the frame rate and quality setting and thus pump out as much as bitstream to satisfy those 2 parameter setting(frame rate , quality). As dramatic scene change in surveillance camera side, you will observe the running video bit-rate is going up(mostly out of user bit rate control) to maintain the better frame rate and quality setting. The CBR setting honors the bit rate setting and thus frame rate and quality setting are sacrificed to maintain the consistent network bandwidth usage.

## 3) Video Bit Rate

The video bit rate describes / places an upper bound limit on how much video bitstream will be generated by codec engine. This parameter is cross-related to video mode setting. Please also refer to video mode setting for details.

## 4) Frame Rate

The frame rate parameter describes / places an upper bound limit on how much video frame per second are generated by surveillance codec engine. The actual frames received in Windows side may be lower than user's configuration due to network packet loss, congestion , computing power of PC and etc.

## 5) Video Quality

The quality parameter describes the quantization level of MPEG-4 macro block. User may observe the block / mosaic effect of video image if the parameter setting is high. The lower the video quality value the finer block will be observed on image reconstruction.

Configuration Setting:



Video Resolution / Video Mode / Bit Rate / Frame Rate / Video Quality  
Scene without moving object

- CIF / VBR / 256 k / 30fps / 4

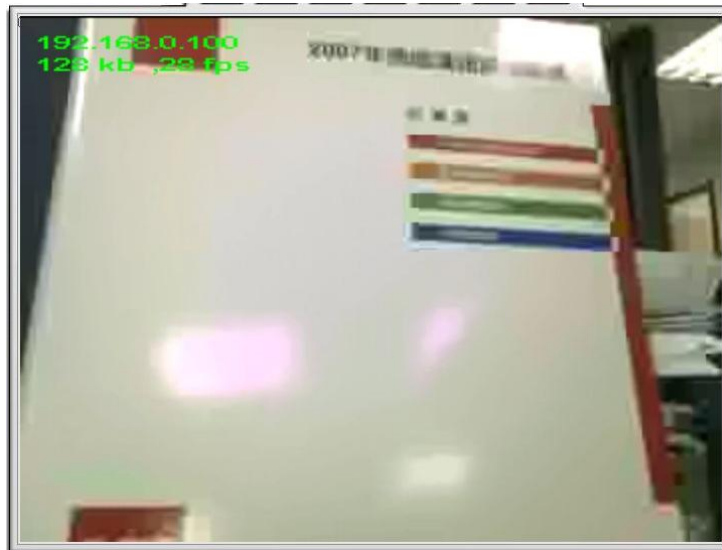
Running bitrate 214 k/ 28 fps



- CIF / VBR / 256 k / 30fps / 31

Running bit rate 138k / 28 fps

The blocked image will be observed on the image.



Scene with moving object

- CIF / CBR / 256 k / 30fps / 4

Running bit rate 284k / 8fps

The actual running frame rate is lower than 30 fps due to the constraint of available network bandwidth.

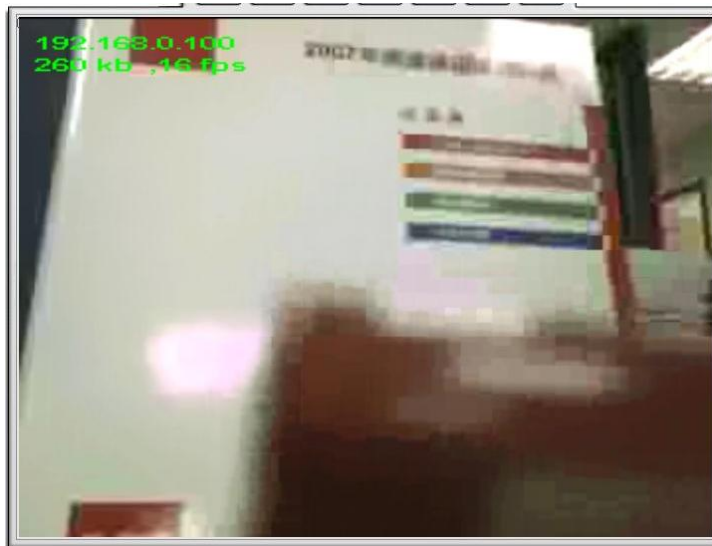


- CIF / CBR / 256 k / 30fps / 31



Running bit rate 260 k / 16 fps

The video quality is lower and thus the network bandwidth requirement is less. The side effect of this is the poor video quality (mosaic effect on moving object)



- CIF / VBR / 256 k / 30fps / 4

Running bit rate 926 k / 28 fps

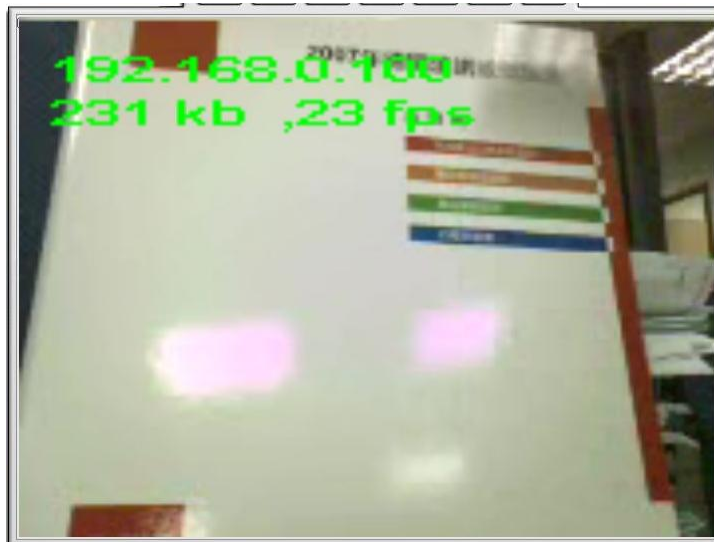
The VBR setting ensures a better video quality and thus over bandwidth traffic is the result.



- QCIF / CBR / 256 K / 30fps / 4

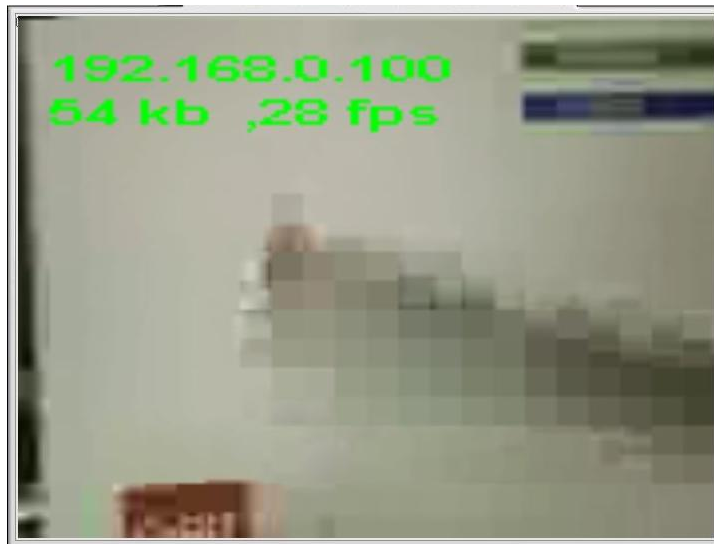
Running bit rate 231 k / 23 fps

The viewable region is less than CIF and network usage is also less.



- QCIF / CBR / 256 K / 30fps / 31

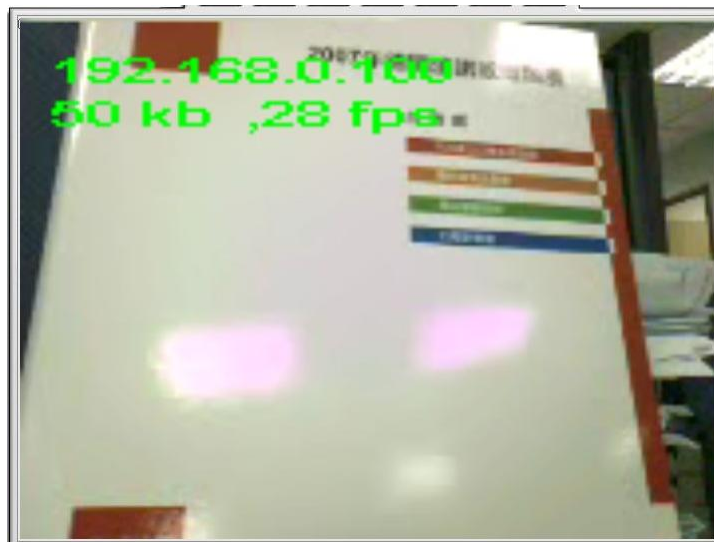
Running bit rate 54 k / 28 fps



- QCIF / VBR / 256 K / 30fps / 4

Running bit rate 50 k / 28 fps

The actual network bandwidth usage is less due to QCIF resolution.



- QCIF / VBR / 256 K / 30fps / 31

Running bit rate 59 k / 28 fps

The poor video quality setting make the text a little fuzzy.



## Bandwidth Usage

Category : IPCAM / Connection / General

### *Question:*

What's the network bandwidth requirement of each IPCAM connection?  
How can I estimate or configure the video parameters to get a better video quality and performance ?

### *Answer:*

If you have an ADSL network connection to surf the internet, please ensure your available bandwidth before configure you surveillance camera video quality parameters.

The bit rate configuration in surveillance camera shows how much network bandwidth is reserved for each client connection.

For example, your ADSL network bandwidth is 512K/1M. The surveillance camera is installed in your home. That means your upstream bandwidth is 512kbps for your surveillance camera. Ensure your surveillance camera video mode is CBR so that you can better



estimate the network usage. The surveillance camera will not run over your ADSL bandwidth capacity. If your video mode configuration is VBR, the surveillance camera may pump out more than what your ADSL line can afford. The packet loss will occur and poor video quality will be observed in Windows client side.

Case 1 : surveillance camera video parameter setting:

- i) CIF / CBR / bit rate 256 k
- ii) 3 active client connections on the go

bottom line video bandwidth usage will be  $256 \text{ k} * 3 = 768 \text{ k}$   
If G.711 audio codec is also enabled for each connection, an extra 64k for each connection shall be included in final bandwidth usage.

$(\text{Video } 256\text{k} + \text{audio } 64\text{k}) * 3 = 960 \text{ k}$

## Surveillance Camera

## Dynamic Domain Name Service

**Category : IPCAM / Configuration / General**

### ***Question:***

How can I find out IPCAM IP address if I my IPCAM connect to Internet via PPPoE mode?

### ***Answer:***

Please subscribe an account from [www.dyndns.org](http://www.dyndns.org) and use the DDNS client service in NSC3615 . You shall be able to use the registered domain name to visit your NSC3615.

Configure the DDNS setting from webpage "Network" → "DDNS"

### **DDNS Client Enable :**

Enable or disable the usage of DDNS client function. If this function is enabled, users can access the device by FQDN specified by the registered DDNS Alias bellows.

### **DDNS Alias :**

the dynamic domain name used for your registration from [www.dyndns.org](http://www.dyndns.org)

### **DDNS Username :**

Account username subscribed from registered DDNS alias name

### **DDNS Password :**

Account password subscribed from registered DDNS alias name

DDNS Client Enable :  ON  OFF

DDNS Alias :

DDNS Username :

DDNS Password :

DDNS Uptimer :

DDNS Fuptimer :

DDNS System ID :

## Factory Default Setting

Category : / IPCAM / Installation / NSC3615

### **Question:**

What's the factory default setting of NSC3615? How can I reset NSC3615 to factory default ?

### **Answer:**

- NSC3615 Factory Default Setting:

Fixed IP mode :

IP address : 192.168.0.100

Subnet mask : 255.255.255.0

Default admin account :

Username : admin

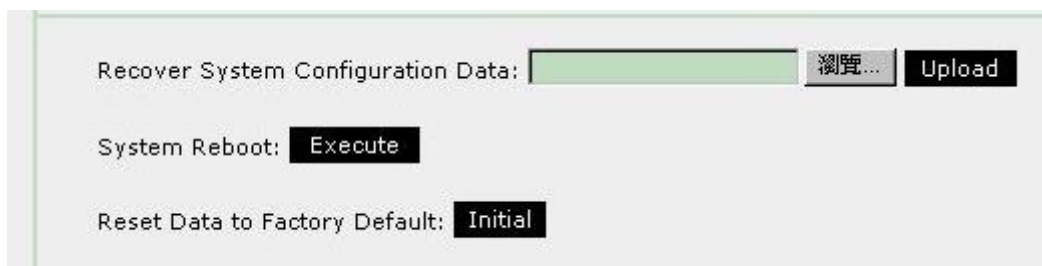
Password : admin

- Roll back to Factory Default

### By Webpage :

Use IE and login to IPCam server. Follow the instructions shown below:

Webpage : System→Others→Reset Data to Factory Default



### By Hardware push button :

Push the button underneath (marked "Restore Default") the pinhole at the bottom of NSC3615 case.





## Version Information

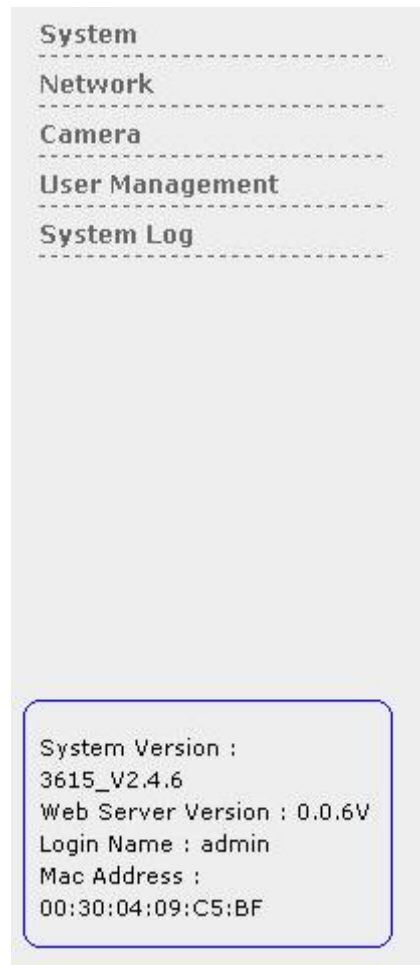
**Category : IPCAM / Installation / General**

***Question:***

How can I find out NSC3615 firmware version information and ethernet MAC address?

***Answer:***

- 1) log on to web server
- 2) Refer to left-hand side of main webpage as shown belows



**Video Decoder Plug-in**

## **ActiveX Control Download**

**Category : IPCAM / Operation / General**

***Question:***

How do I know the video NSC3615 video decoder is not installed in my local PC ?

***Answer:***

If the local PC does not install SMC software or video decoder is not installed in the PC, the IE will pop up the message and ask user to download the ActiveX control for the very first time.

***ActiveX Control Download Indication :***

***A) When a red cross appeared at the top-left hand corner of the ActiveX viewer(IE), what can I do?***

- i) Make sure your local PC specification meets the bottom line requirement of SMC
- ii) Go to browser's Internet options→under Security tab→Internet→Custom Level. Set the security level to Medium-High (default) and check settings for ActiveX control and plug-ins, make sure none is disabled, change them to "Prompt". Close the IE browser, and refer to IPCam webpage again.

If there is still a red cross appeared at the top-left hand corner of the activex viewer, verify 2 system files are installed in local PC(msvc71.dll, msvcp71.dll in c:\windows\system32 folder).

***B) while opening the webpage, a banner appeared on the top of the page saying the browser had blocked the unsafe component, what can I do?***

- i) Right-click on the banner, and select the option to unblock it.
- ii) If the unblock option does not exist, go to browser's Internet options → Security tab → Internet → Custom Level. Set the security level to Medium-High (default) and check settings for ActiveX control and plug-ins, make sure none is disabled, change them to "Prompt". Close the browser, and re-open the page.

***C) when no image is coming through, what can I do?***

- i) Make sure your IPCam is in the same subnet as your local PC.
- ii) Make sure your firewall and port-blocking antivirus programs are turned off.

- iii) Go to the Start Menu, Run dxdiag, click on the Display tab, make sure DirectX is enabled(DirectX9).

## Remove Old ActiveX Controls

Category : IPCAM / Operation / General

### *Question:*

How do I uninstall the old video decoder of NSC3615 ?

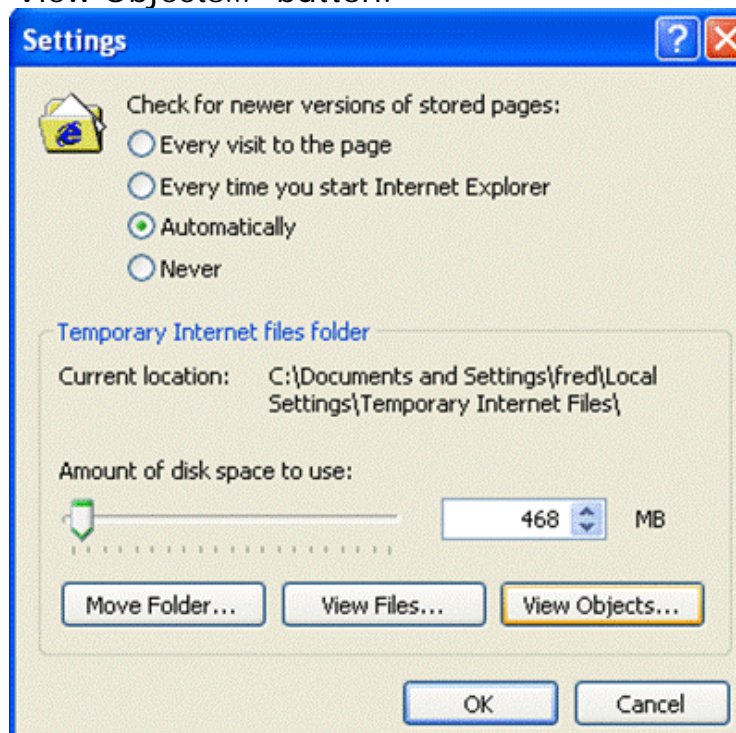
1. Launch Internet Explorer and Click "Internet Options..."



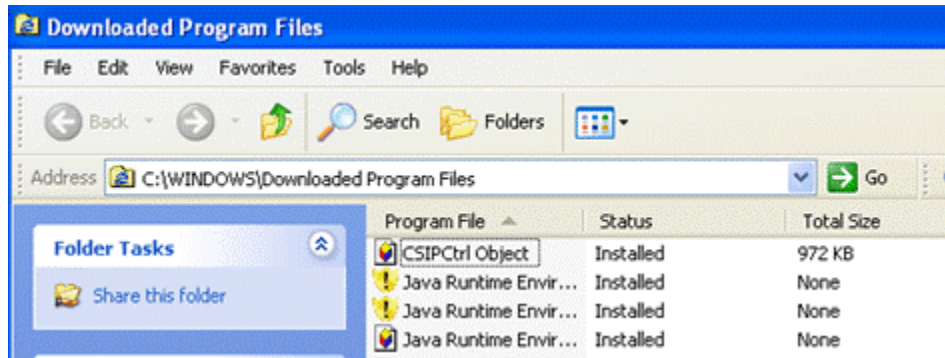
2. Click "Setting..." button.



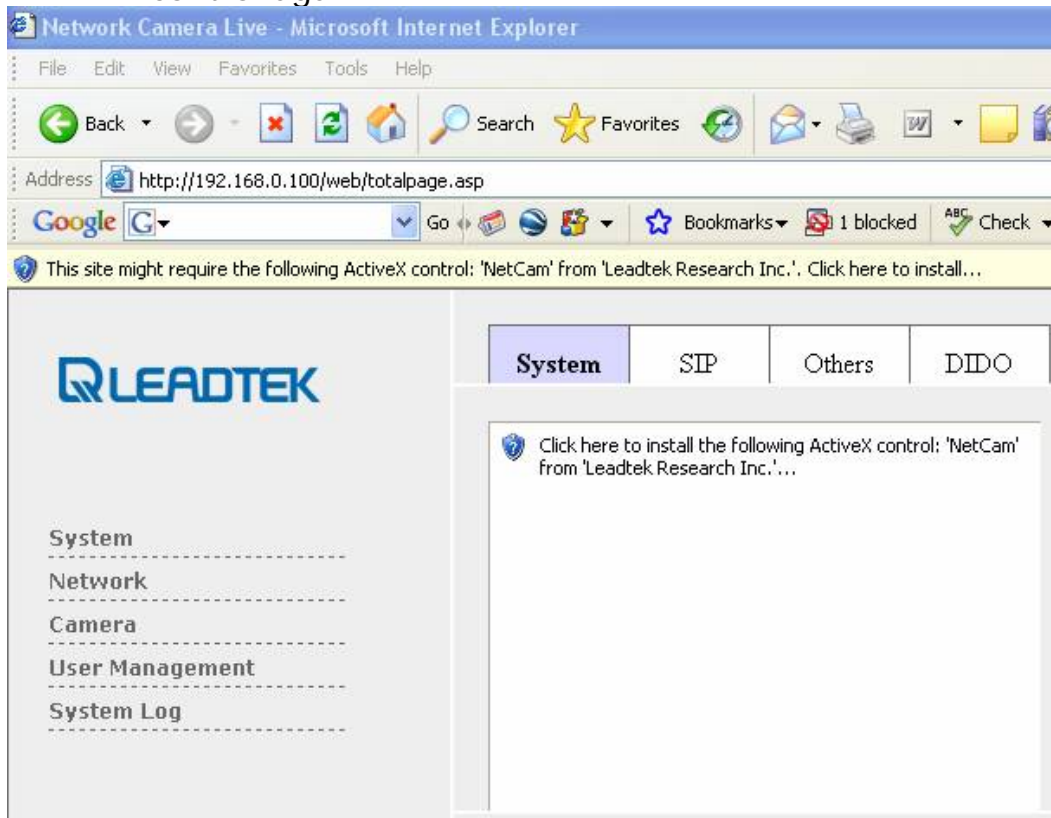
3. Click "View Objects..." button.



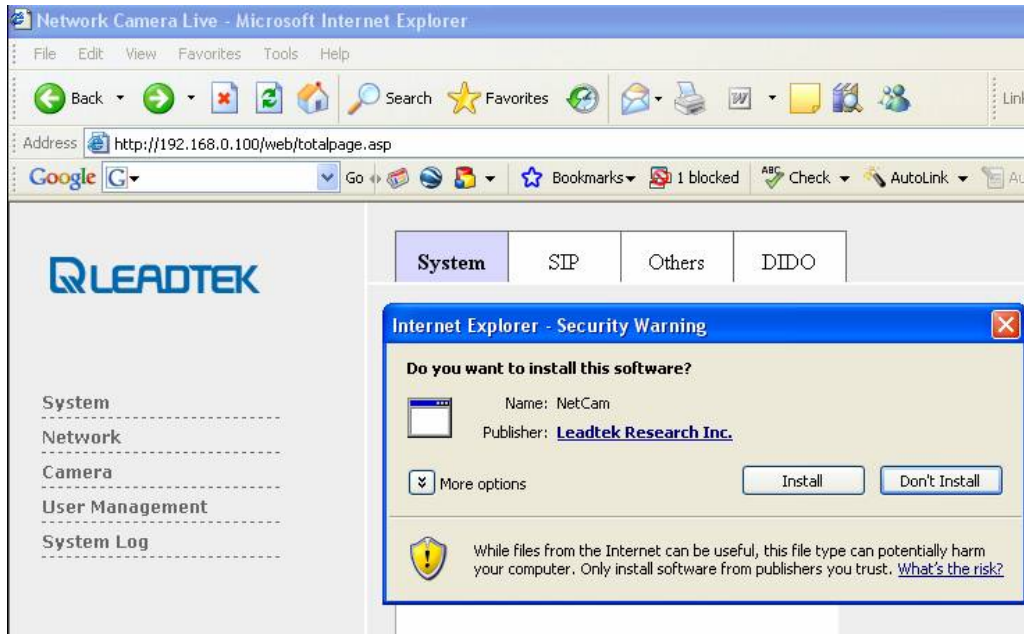
i. Select the item "CSIPCtrlObject" and press "delete" key.



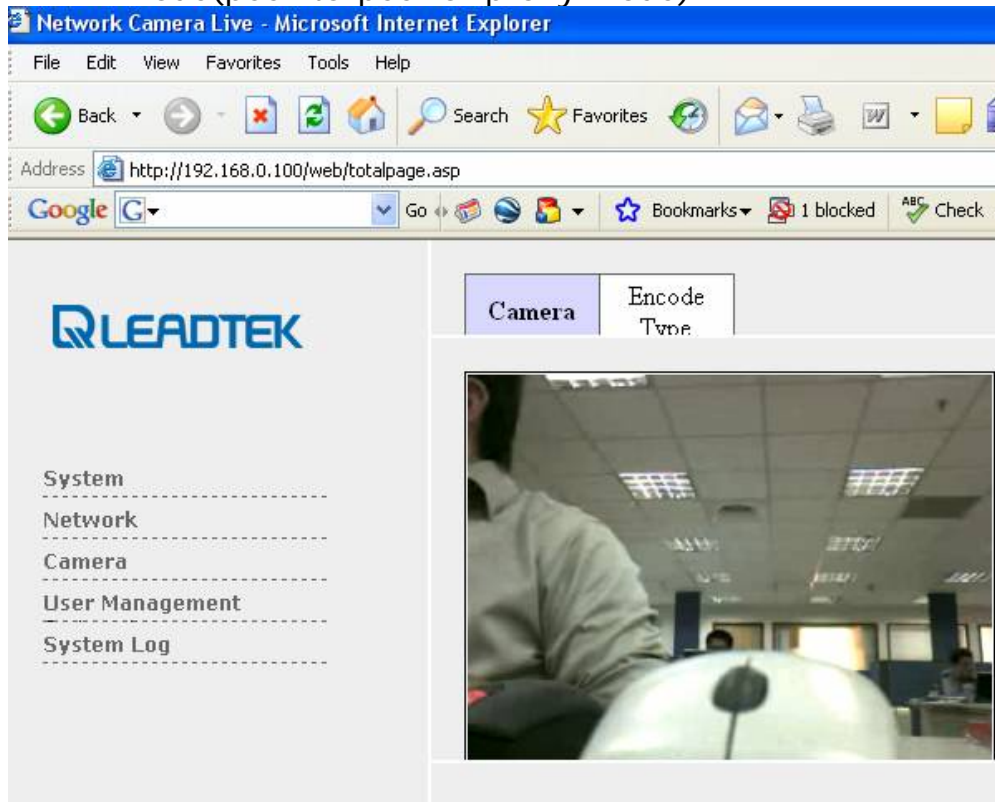
- ii. Restart IE and Login to web again, then you will be asked to install a new ActiveX. Answer "Yes" to download ActiveX control again.







- iii. Check your webpage setting and clarify the SIP connection mode(peer-to-peer or proxy mode).



## Network Settings

# Bandwidth Configuration

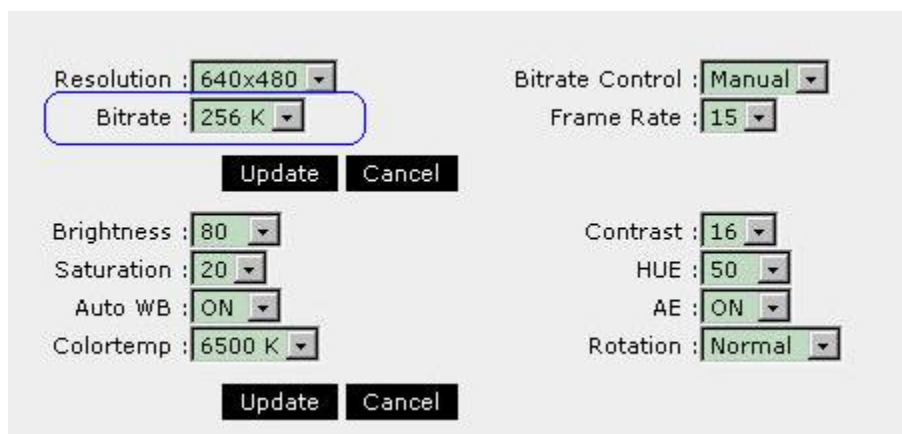
Category : IPCAM / Connection / General

### Question:

What's the network bandwidth usage in IPCAM? How do I configure IPCAM bandwidth setting properly?

### Answer:

You can control the network bandwidth of each connection by web page. Please refer to webpage "Camera" and set the "Bitrate" option. This option will place an upper limit on video codec rate control. For example, a Windows client connection with audio(G.711A) and video as the following example. The network bandwidth usage of that connection is around 320K(i.e. 256K + 64K) . If 10 client connections to IPCam server are made, there shall be 10\*320 K network bandwidth available. Otherwise, the packet loss or traffic congestion will be occurred. Ensure your available network bandwidth before setting the bandwidth to the proper value to gain the best network performance.



The screenshot displays two sections of the IPCAM configuration interface. The top section is for video settings, with 'Resolution' set to 640x480 and 'Bitrate' set to 256 K. The 'Bitrate' dropdown is highlighted with a blue circle. 'Bitrate Control' is set to 'Manual' and 'Frame Rate' is set to 15. Below these are 'Update' and 'Cancel' buttons. The bottom section is for image settings, with 'Brightness' at 80, 'Saturation' at 20, 'Auto WB' set to 'ON', and 'Colortemp' at 6500 K. On the right side of this section, 'Contrast' is 16, 'HUE' is 50, 'AE' is 'ON', and 'Rotation' is 'Normal'. It also has 'Update' and 'Cancel' buttons.



## Web Configuration

### SIP Connection Mode

Category : IPCAM / Configuration / General

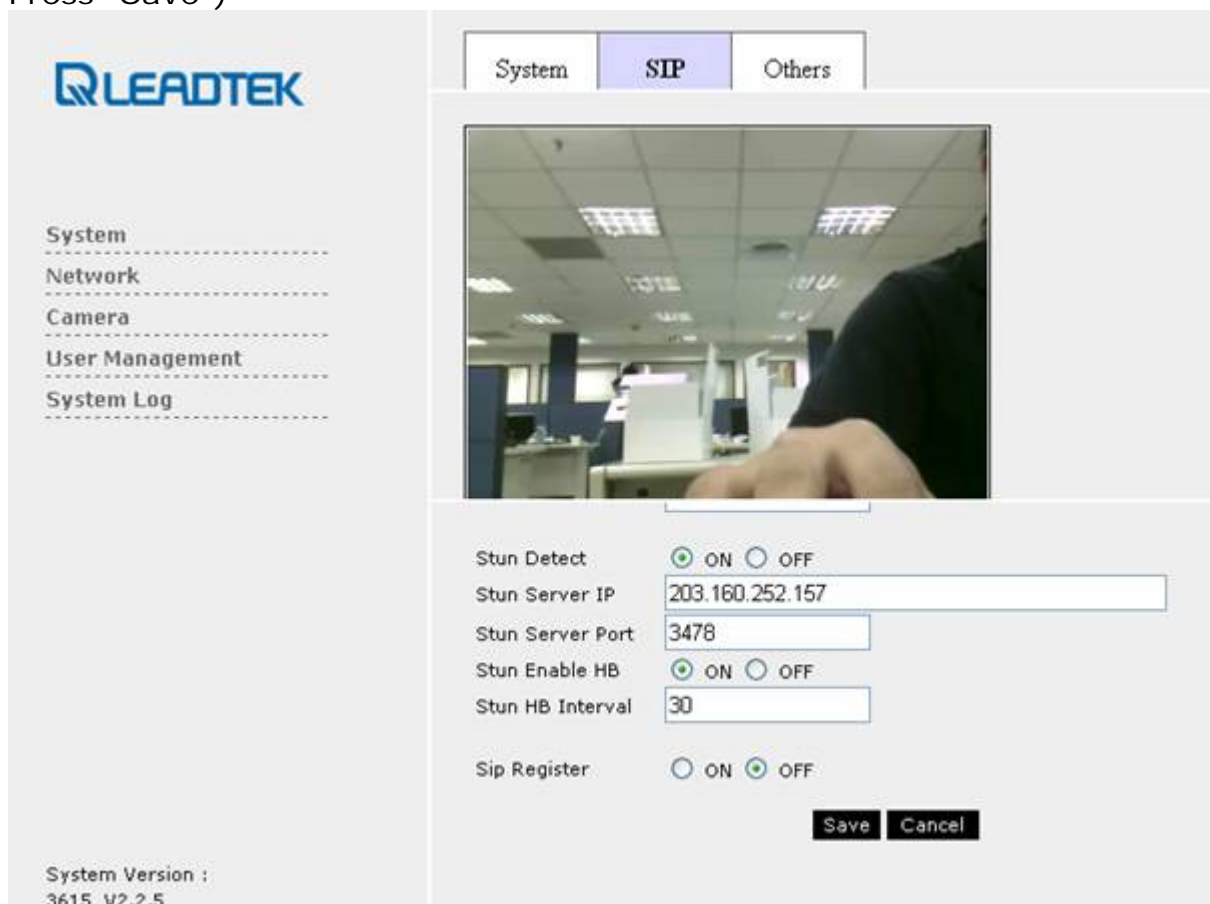
#### *Question:*

How do I configure NSC3615 SIP connection mode on web?

#### *Answer:*

1) peer-to-peer

Ensure the SIP configuration : SIP Register is OFF ( Select OFF and Press "Save")



2) SIP Proxy Mode

Ensure the "SIP Register" option is "ON" and also check SIP Server IP address, SIP port configuration are proper.

## Codec Select

**Category : IPCAM / Configuration / General**

### **Question:**

Can I select audio / video codec used in NSC3615? How to do it?

### **Answer:**

NSC3615 supports multiple audio / video codec type. The default setting is G.711A(audio) and H.263(video). The Codec configuration can be reconfigured from Camera→Encode Type

Remember to reboot the device so that new codec setting will be effective.



Audio Type :  g711 a-law  g711 mu-law  
Video Type :  mpeg4  h263