SOHO NETWORK CAMERA

USER MANUAL

MODEL 503792

INTELLINET
NETWORK SOLUTIONS

BRINGING NETWORKS TO LIFE

INT-503792-UM-0808-01

Contents

1. Introduction

Thank you for choosing the INTELLINET NETWORK SOLUTIONS SOHO Network Camera. This SOHO Network Camera sends live video through 10/100 Mbps wired network to a web browser or camera viewer across Internet anywhere in the world! This compact, self-contained unit lets you keep an eye on your home, your kids, and your workplace—whatever's important to you.

How does the Camera do all of this? Unlike standard "Web cams" that require an attached PC, the SOHO Network Camera can connect directly to a network. The MJPEG video compression produces a high quality, high frame-rate, 640 x 480 video stream.

The included 16-channel Camera Viewer utility lets you record the video to your local hard drive, "live" or on a predetermined schedule. Use the instructions in this Guide to help you integrate the Camera into your network. These instructions should be all you need to get the most out of the SOHO Network Camera.

2. Package Content

- One SOHO Network Camera
- One Power Adapter
- One Camera Stand
- One Category 5 Ethernet Cable, 1 m
- One Quick Installation Guide
- One CD (Including Manual/Utility/Driver)

If any of the above items are missing, please contact your supplier.

3. System Requirement

System requirement for PC, MAC or Notebook PC to access the SOHO Network Camera are:

- OS System: 2000, XP + SP2, Server 2003, Vista
- IE Version: 6.0.29 + SP2 or above
- CPU: Intel Pentium III 750MHz above or Intel Celeron 1GHz above
- Memory Size: 128MB (256MB recommended)
- DirectX 9.0 or above
- VGA card with fully DirectX 9.0 supported.
- VGA Card Resolution: 800 x 600 or above

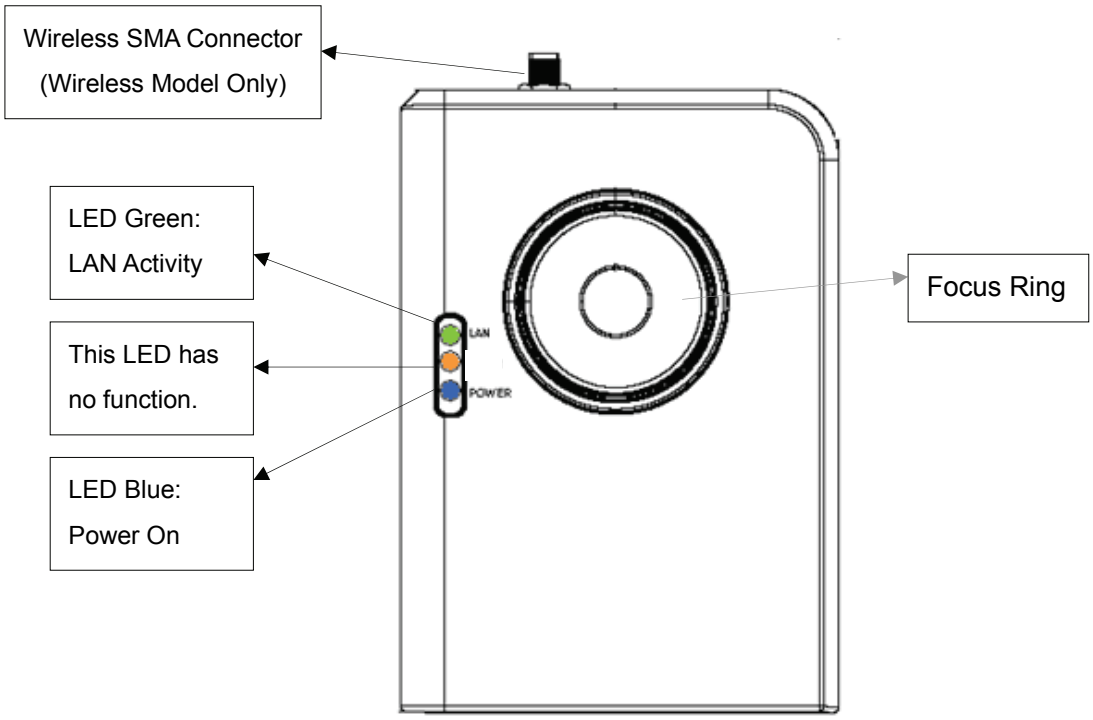
4. Hardware Installation

4.1. LED and Focusing

The Camera head and its focus ring allow you to modify the aim and focus of the Camera. To adjust the Camera's focus, rotate the dark focus ring.

There are four LEDs indicating the camera status and networking status.

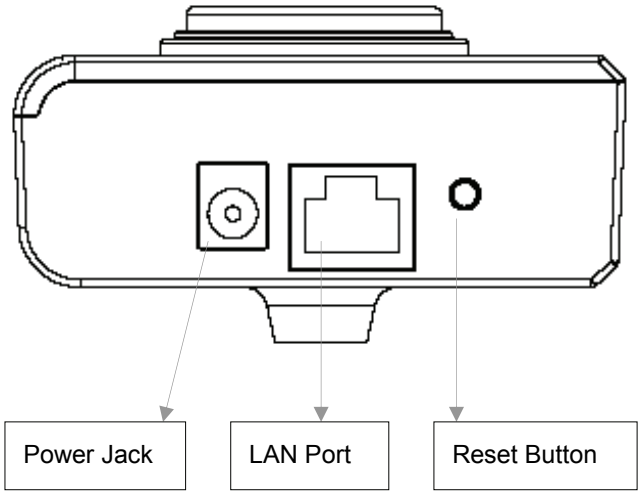
- **Power**
  When the camera is power on, the LED will light.
- **LAN**
  When the SOHO Network Camera is linking to wired network, the LED is lighting. The LED is flashing when video is transmitted or received through wired network.



4.2. Camera Ports

The Camera features three ports and a Reset button.

- **Power**
  The Power port is where you can connect the power adapter.
- **LAN**
  The LAN port is where you can connect the Ethernet network cable.
- **WLAN (Antenna Connector)**
  This round connection is standard Reverse SMA connector where any antennas with Reverse SMA connector can connect to the SOHO Network Camera..
- **Reset**
  1. If problems occur with your SOHO Network Camera, press the reset button with a pencil tip (for less than 2 seconds) and the SOHO Network Camera will re-boot itself, keeping your original configurations.
  2. If problems persist or you experience extreme problems or you forgot your password, press the reset button for longer than 5 seconds and the SOHO Network Camera will reset itself to the factory default settings (warning: your original configurations will be replaced with the factory default settings).



4.3. Installation Procedure

1. Unpack the SOHO Network Camera package and verify that all the items listed in Chapter 2 are provided.
2. Connect the SOHO Network Camera to your network by attaching the network cable from the switch/router to the UTP port of the SOHO Network Camera.
3. Connect the power adapter to the SOHO Network Camera and plug the power adapter in the power outlet. The SOHO Network Camera will be powered on. When the SOHO Network Camera is ready, the Ready LED will light.
4. Make sure that you have installed the correct VGA driver and DirectX 9.0 or above.

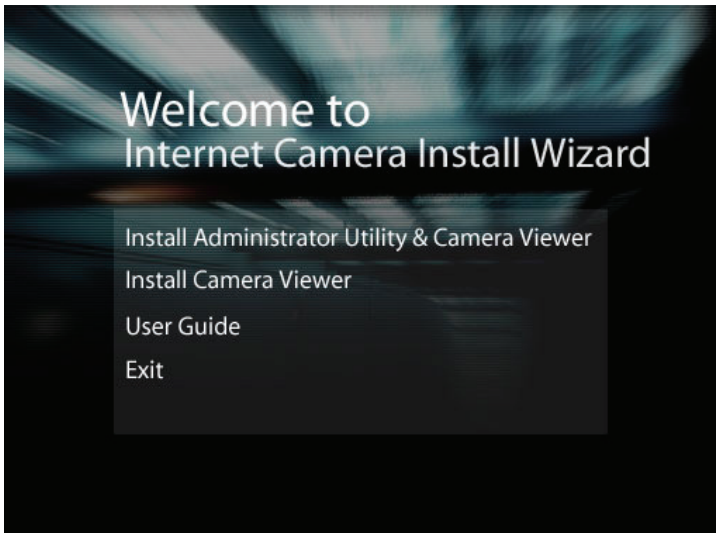
Note: It is highly recommended that you use the power adapter shipped with the SOHO Network Camera, do NOT use any other power adapter from any other sources.

5. Software Installation

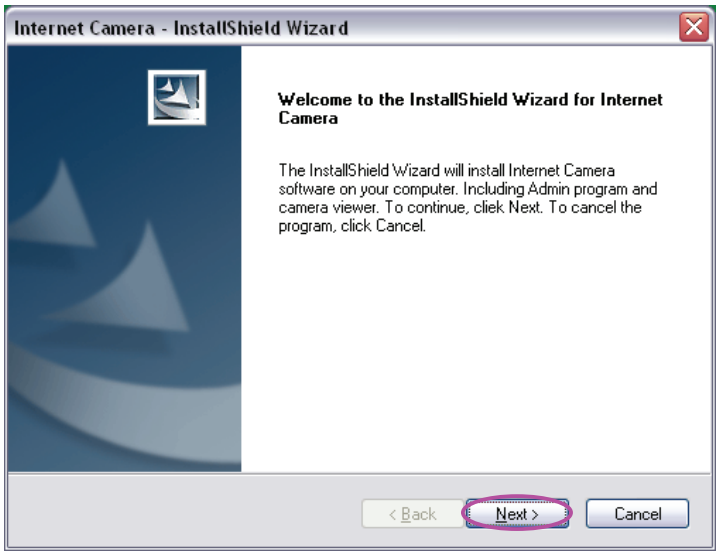
Follow the simple steps below to run the Install Wizard to guide you quickly through the Installation process. The following installation is implemented in Windows XP. The installation procedures in Windows 2000/Server 2003 and Vista are similar.

1. Insert the CD shipped along with the SOHO Network Camera into your CD-ROM drive. The “Autorun.exe” program should be executed automatically. If not, run “Autorun.exe” manually from “Autorun” folder in the CD.

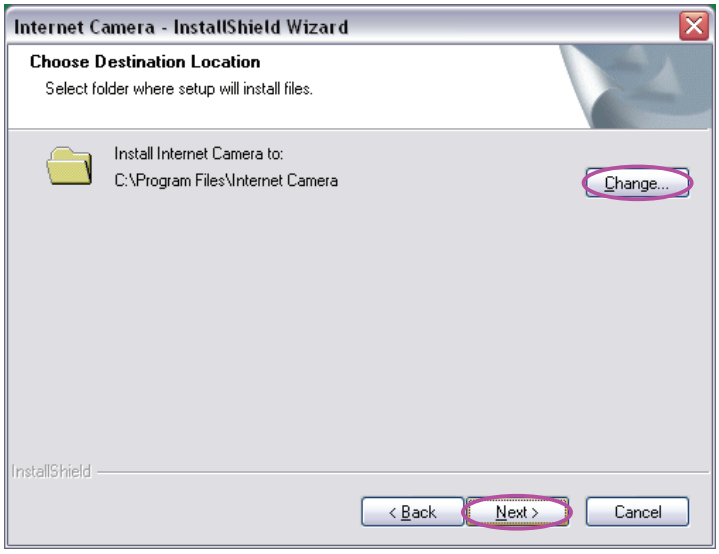
2. The Install Wizard will show four selections. Select the program you want to install or click “Exit” to install the program later. Select “Install Administrator Utility & Camera Viewer”.



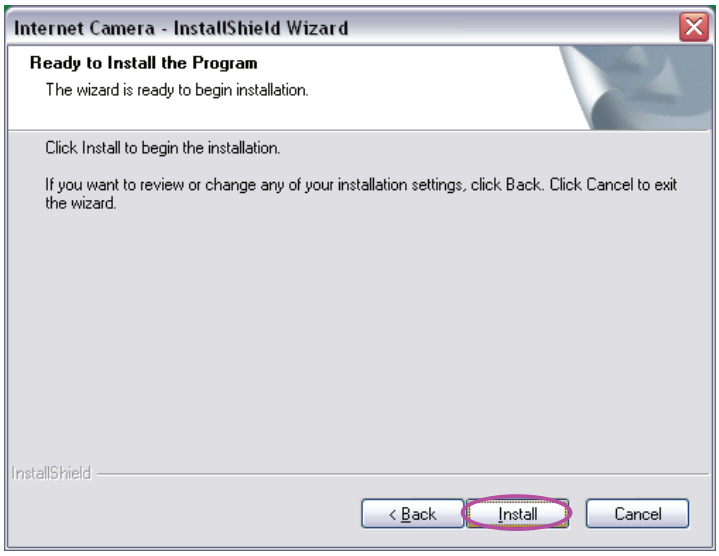
3. The system will start the installation procedures. Click “Next” to continue installation.



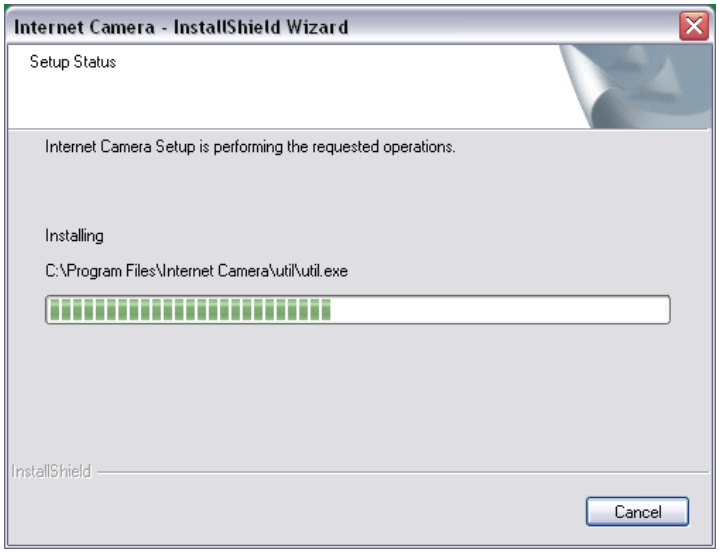
4. If you wish to install the software program in an alternate location, click “Change”; otherwise click “Next” to move on to the next step.



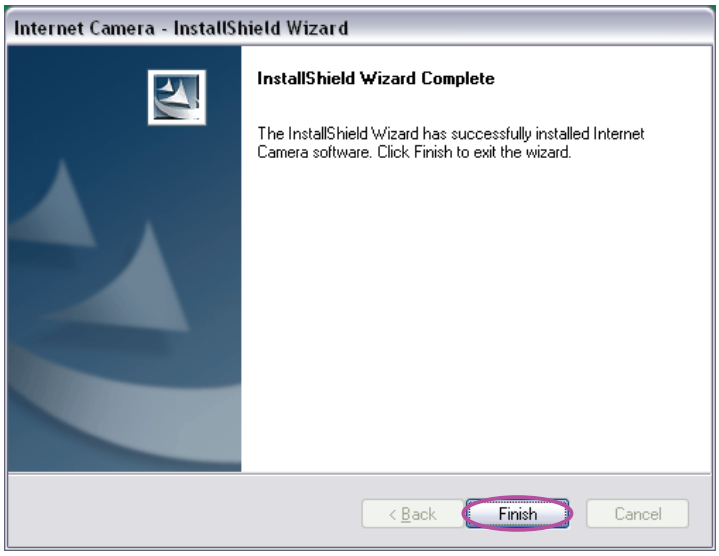
5. Click “Install” to start installing the program.



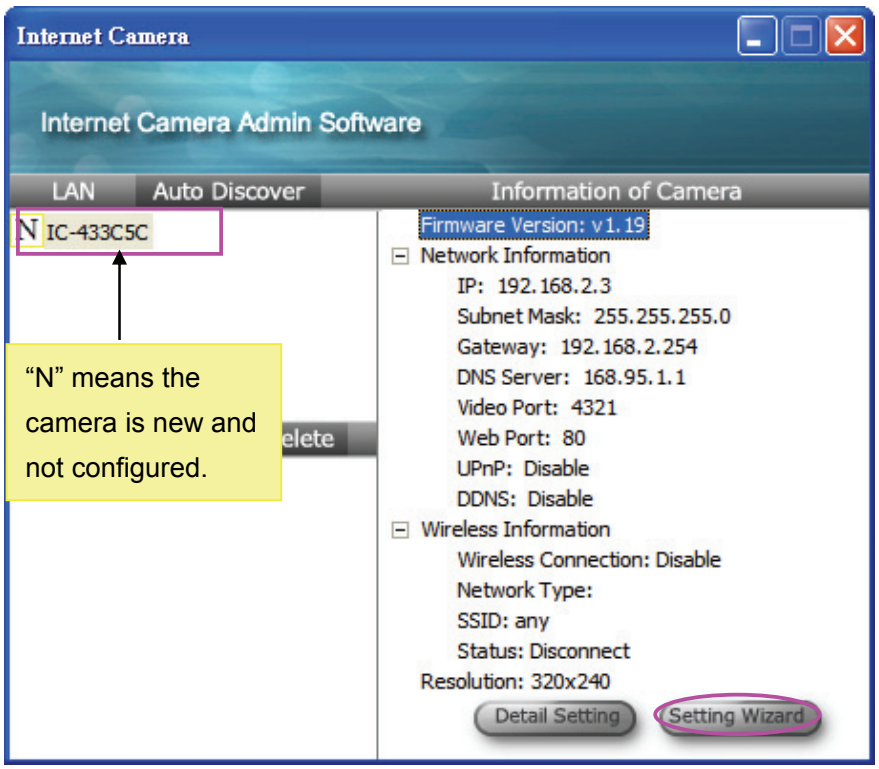
6. The system will install the program automatically.



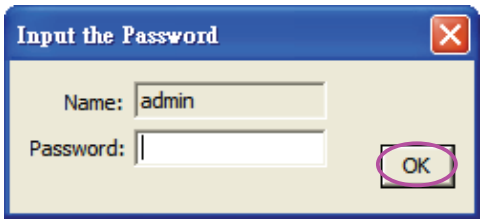
7. Click “Finish” to complete the software installation.



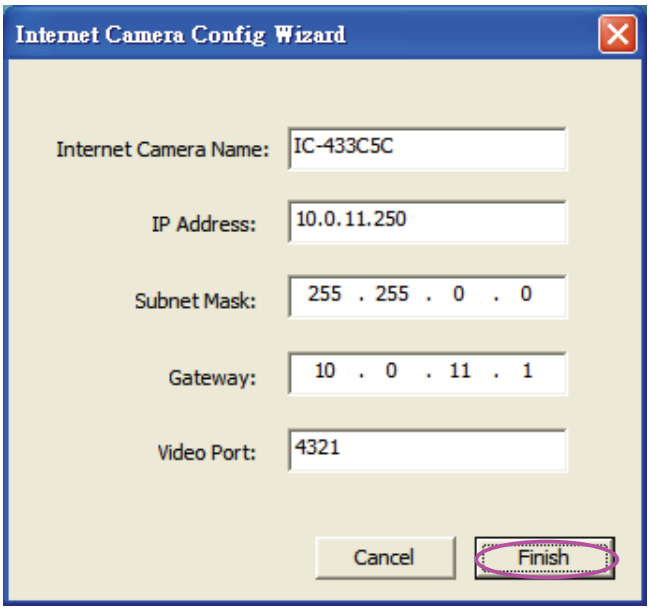
8. ”Administrator Utility“ will be run automatically after installation. On the SOHO Network Camera first page, the cameras found in the network are listed in the left window. Choose the one you want to configure and click “Setting Wizard” to proceed.



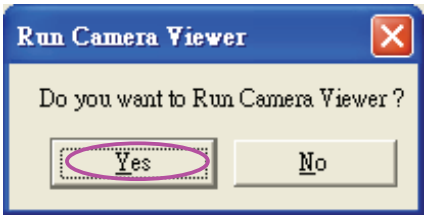
9. Please enter the default password “1234” and click “OK” to login to the IP setup page.



10. SOHO Network Camera is working through the network (TCP/IP Protocol). The IP address and subnet mask setting must be correct, or you cannot access to the camera. The wizard program will detect the IP address status of your network automatically and suggest a free IP address for the Camera. You can accept the suggested value or enter the value manually. If you enter the value manually, please be aware that the “Subnet Mask” must be the same for both the camera and the PC. Click “Finish” to apply the configuration.



11. This wizard will pop up a window to ask you if you want to run the “Camera Viewer” and see the video of the Camera immediately. Select “OK” to run “Camera Viewer”.



12. The “Camera Viewer” will show the video automatically. Congratulations, you can use the camera through the network to view the video from now on.

6. Using the Administrator Utility

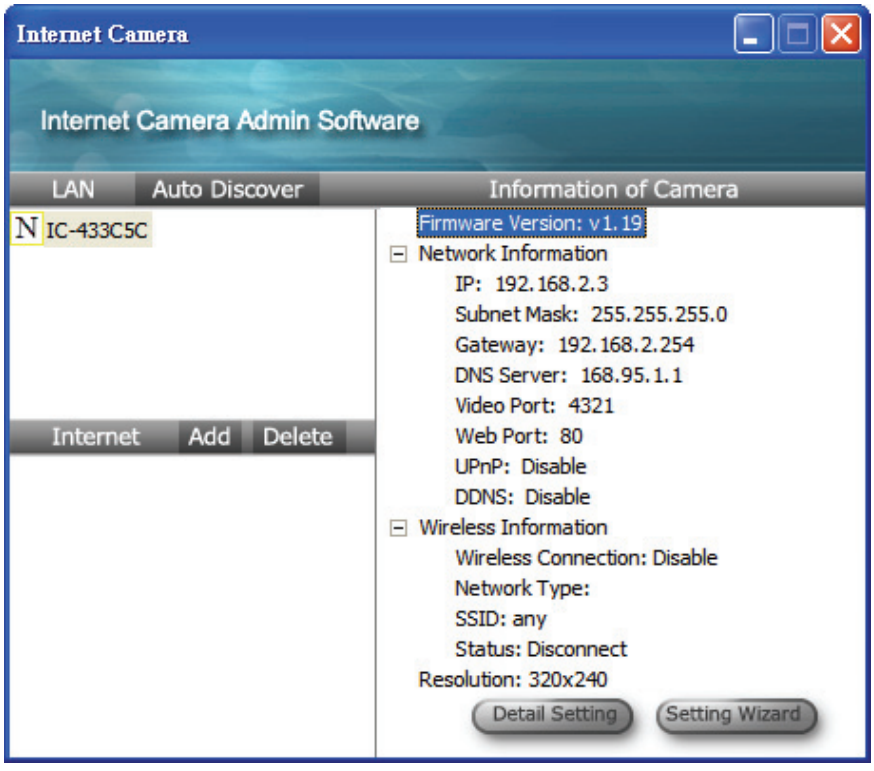
The Administrator Utility allows users to search and setup the cameras located within the Intranet or on the Internet. From the utility, users can view all the information of the selected camera; furthermore, it provides a setting wizard, which can guide users to add the camera to the network easily and promptly.

There are two ways to run the Administrator Utility as follows.

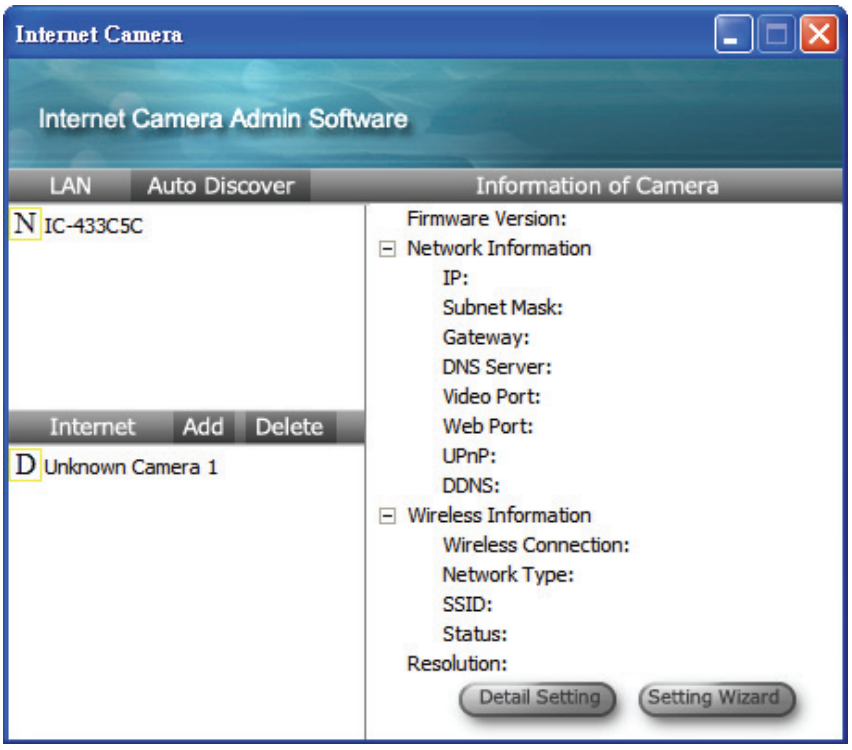
1. Click “Start”, select “Programs\IP Camera\Admin Utility” to run the utility.
2. Double click the “IP Camera Admin” icon 

to run the utility.

Once the utility is started, it will search all the cameras within the network. To do more settings, please refer to the description in the following sections.

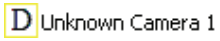


6.1. General Setting



LAN	
Auto Discover	Click the button will search the camera within the network.
Camera List	The list shows the camera name and the setup status of the camera. N It means the camera is in the default setting. It means the camera is configured before.

Internet	
Add	Click “Add” will appear a window for you to enter the IP Address of the camera on the Internet.
Delete	Click “Delete” to delete the camera from the list.
Camera List	The list shows the camera name and the connect status of the camera.

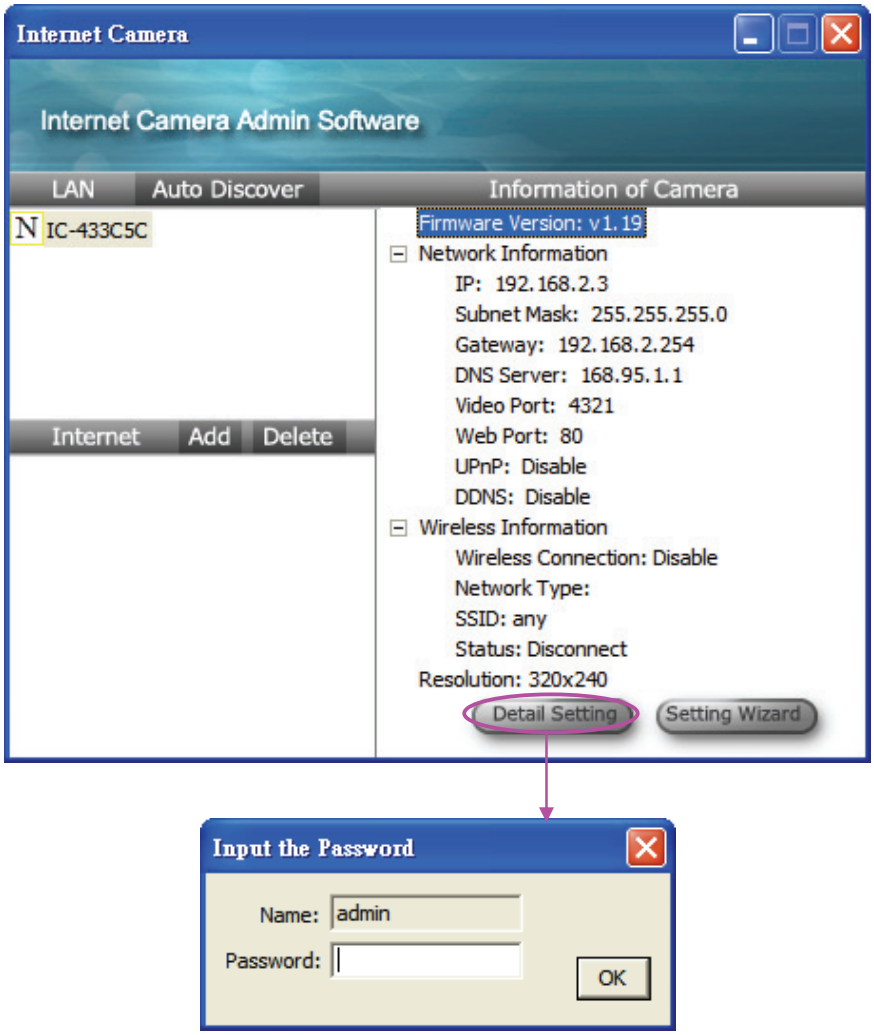
	 It means the camera is disconnected or not in the Internet.  It means the camera is connected.
Information of Camera	
Camera Information	It displays all information of the selected camera. The information includes Firmware Version, Network Information, IP Address, UPnP Setting, DDNS Setting, Resolution and E-mail setting, etc.
Camera Setting	
Detail Setting	Click “Detail Setting” to do more setting of the camera such as IP address, Resolution, password and firmware upgrade, etc.
Setting Wizard	Click “Setting Wizard” to setup the necessary setting for the camera.

6.2. Detail Setting

When you click the “Detail Setting”, a screen will pop up for you to enter the “Administrator Name” and “Password”. The default value is as follows.

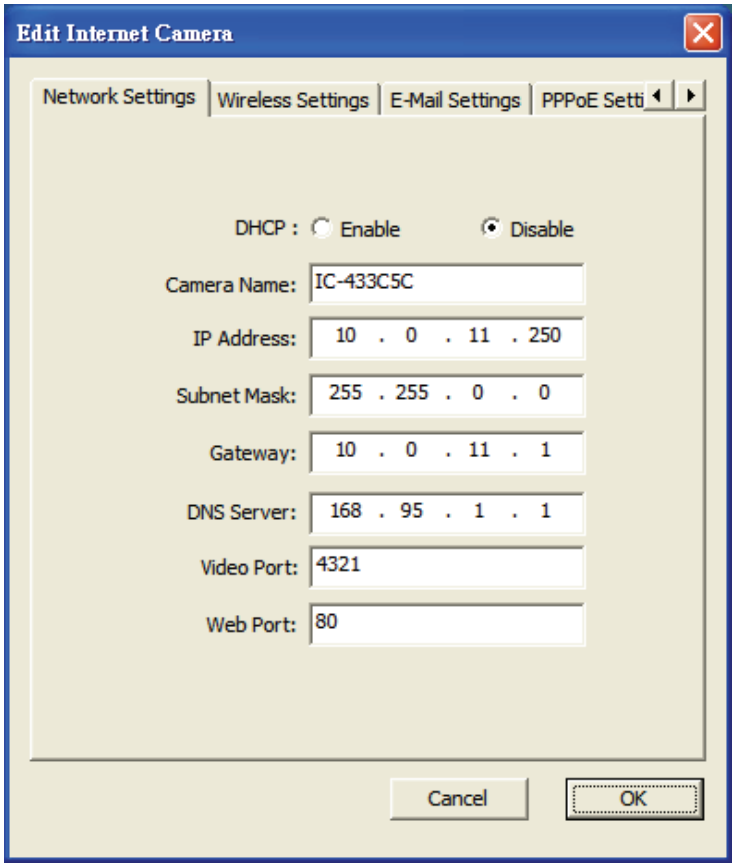
Name: “**Admin**”

Password: “**1234**”



If the name and password you enter are correct, you can start to setup the camera.

6.2.1. Network Setting

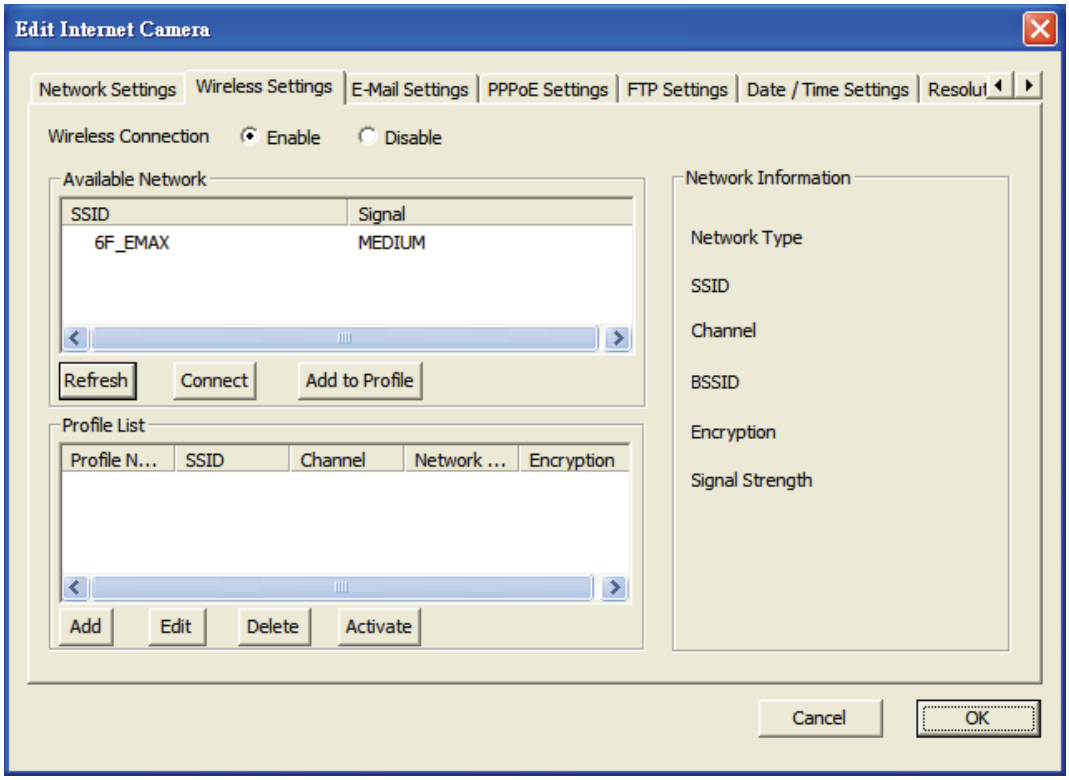


Network Setting	
SOHO Network Camera Name	The default camera name is “IC1500WG”. It is recommended to name a meaningful name for the camera.
IP Address	Enter an unused IP Address within the IP address range used on your LAN. If the IP Address of your LAN is from the 192.168.2.1 to 192.168.2.254, you can set an unused IP Address from the range for the camera, for example: 192.168.2.250.
Subnet Mask	The Subnet Mask field must match the subnet setting on your LAN. For example: 255.255.255.0.
Gateway	The Gateway is used to forward frames to destinations in a different subnet on the Internet. The Gateway setting must be the

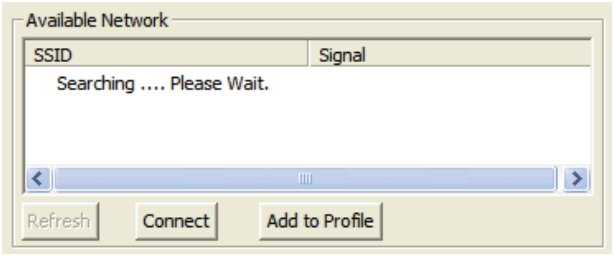
	same with the gateway used by the PCs on your LAN.
DNS Server	DNS Server (Domain Name Server) that translates names to IP addresses. Set the same DNS Server as the PCs on your LAN.

Network Setting	
Video Port	The Video Port is used to transmit or receive the video streaming in the network. The default port setting is “4321”. If you want to view the video from the camera, the port setting should be correct.
Web Port	This camera support web connection, the default web port is 80. Since the web server may use port 80, you can use a different port for the camera. If you change the web port from 80 to 8080, you must type http://192.168.2.3:8080 to connect the camera through the web browser.

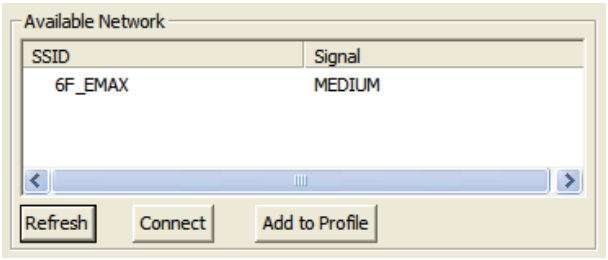
6.2.2. Wireless Settings (*Wireless Model Only)



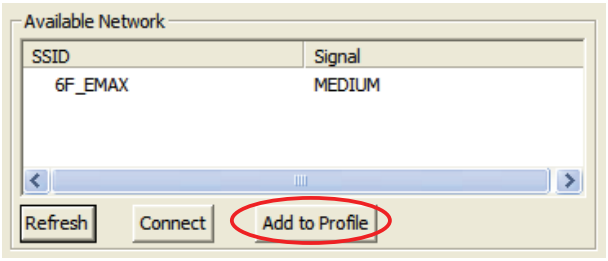
Utility will site survey automatically or you can press “Refresh” button to survey the AP router manually.

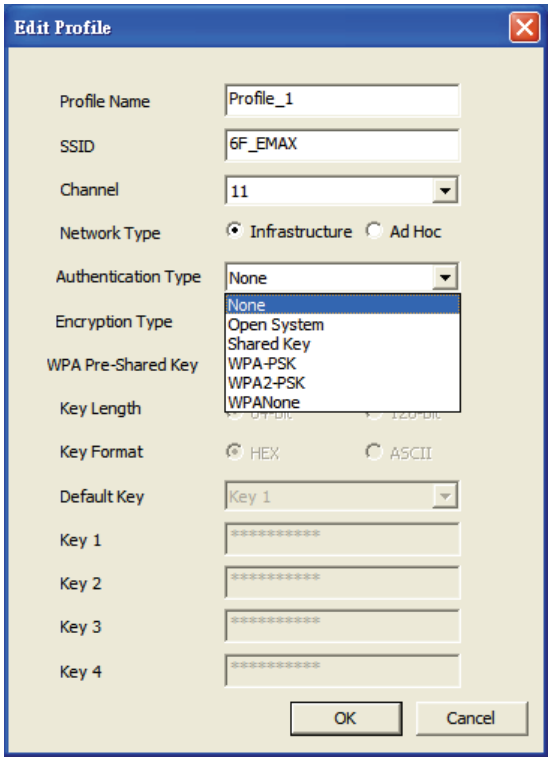


After site survey procedure, there will show existing AP SSID.



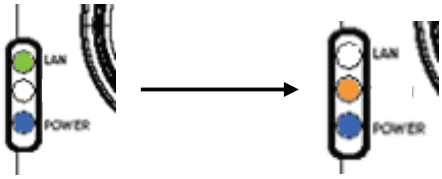
Then press “Connect” to connect AP router or press “Add to Profile” to configure the Wireless WEP and WPA encryption.



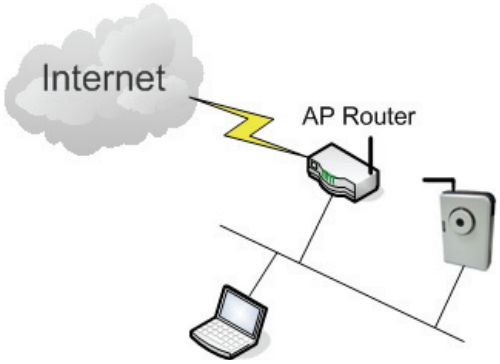


There are WEP(Open System/Shared Key) ,WPA-PSK,WPA2-PSK and WPANone encryption settings. You can choose one to match AP router wireless settings.

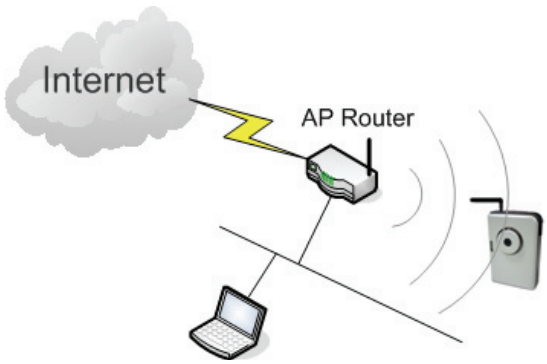
After set the profile, Please remove the LAN cable then IP Camera will connect to AP router automatically.



LED Status Diagram



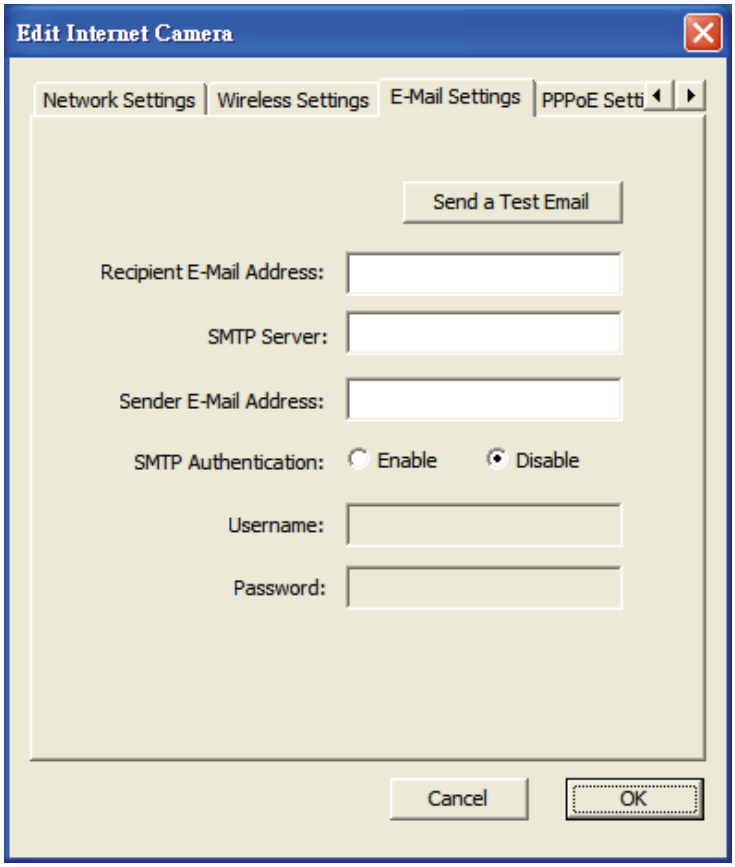
Wired Setting Environment



Wireless Setting Environment

You must configure the wireless settings from wired environment. Then you can remove the wired cable and start wireless connection.

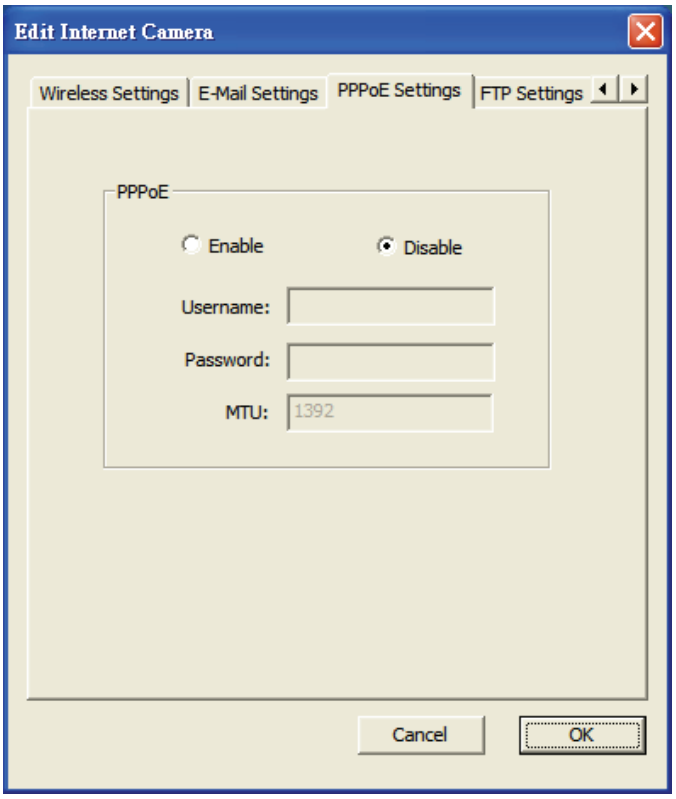
6.2.3. E-Mail Setting



E-Mail Settings	
Recipient E-Mail Address	This camera supports “Snap Shot” and “Motion Detection” functions. You can snapshot a picture and send the picture by E-Mail. Enter the E-Mail Account for receiving the picture.
SMTP Server	Enter the SMTP Server for the E-Mail sending.
Sender E-Mail Address	Specified the e-mail address of the e-mail sender.
Authentication	Enable or Disable the SMTP Authentication function
Username	When Authentication is enabled, input the SMTP Username.
Password	When Authentication is enabled, input the password.

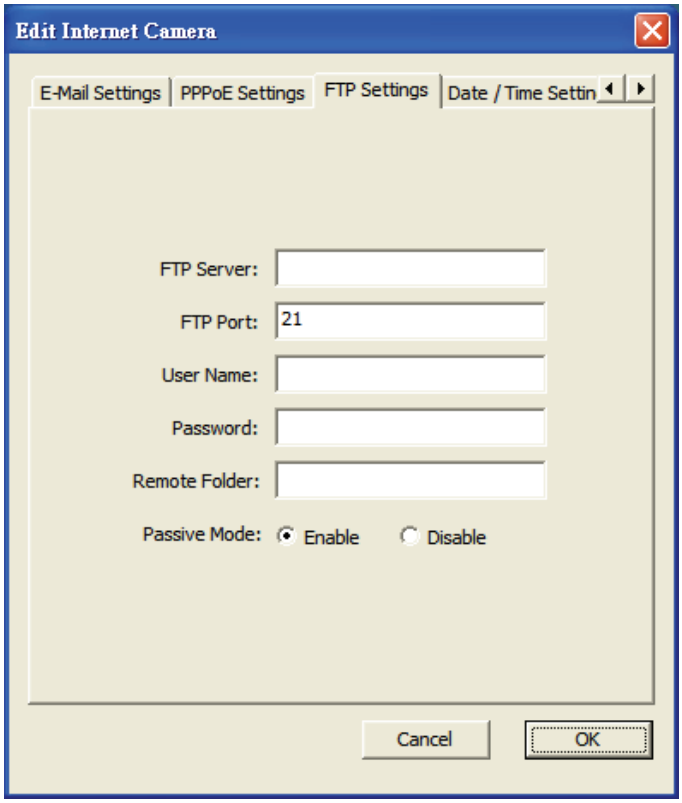
Send a Test Email	Press this button to send a test e-mail to your mailbox. You can use this function to test if your setting is correct.

6.2.4. PPPoE Settings



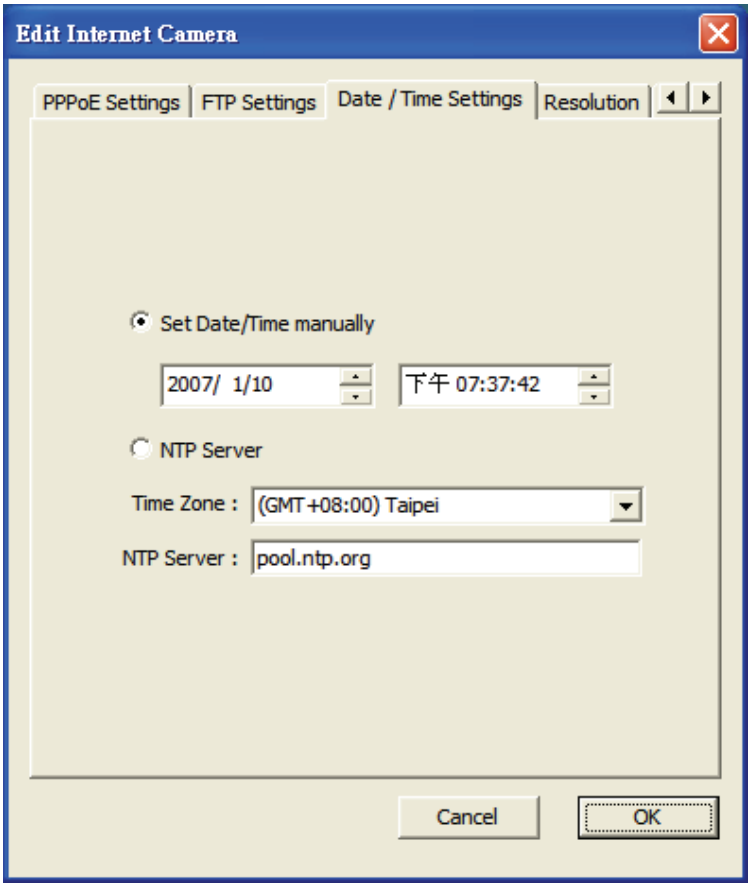
PPPoE Settings	
Enable/Disable	If enable the PPPoE function, IP Camera will use PPPoE for network connection first. The default value is “Disable”.
Username	Enter the Username of PPPoE connection.
Password	Enter the Password of PPPoE connection
MTU	A maximum transmission unit (MTU) is the largest size packet or frame, specified in octets (eight-bit bytes), that can be sent in a packet or frame based network such as the Internet.

6.2.5. FTP Settings



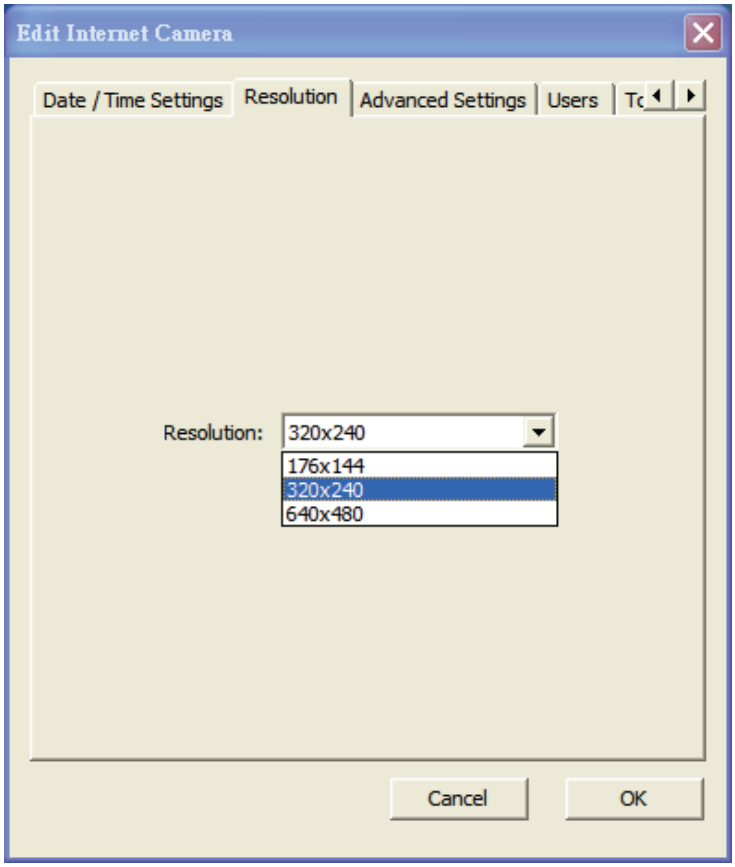
FTP Settings	
FTP Server	This camera supports “Motion Detection” functions. When Motion Detection event occurred, you can record the pictures to FTP server. Enter the FTP address for receiving the pictures.
FTP Port	Enter the port of the FTP server.
User Name	Specify the user account of ftp server.
Password	Specify the Password of your ftp account.
Remote Folder	Specify the folder of the ftp site that you want to store the video.
Passive Mode	If your Camera is under NAT, you usually need to enable this feature.

6.2.6. Date / Time Settings



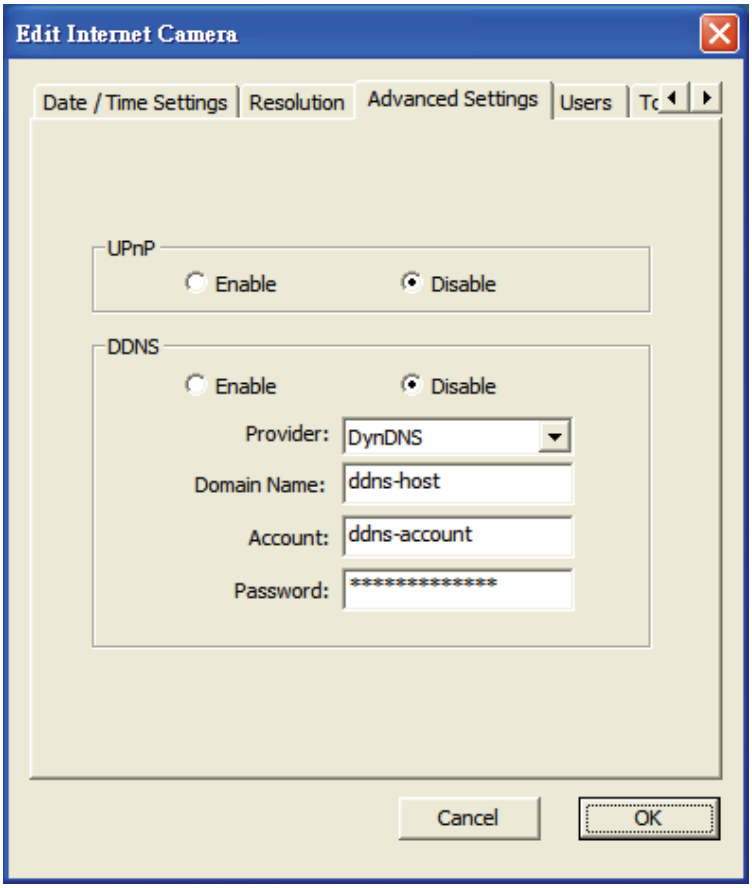
Date / Time Settings	
Set Date/Time manually	Set the current Date and Time.
NTP Server	Synchronize the Date and Time with NTP server.
Time Zone	Select the time zone that your camera put on.
NTP Server	Specify the IP Address of the NTP Server.

6.2.7. Resolution



Resolution	
Resolution	Select the desired video resolution format. Larger resolution requires more bandwidth. 640 x 480 is “VGA” format. 320 x 240 is “CIF” format. 176 x 144 is “QCIF” format.

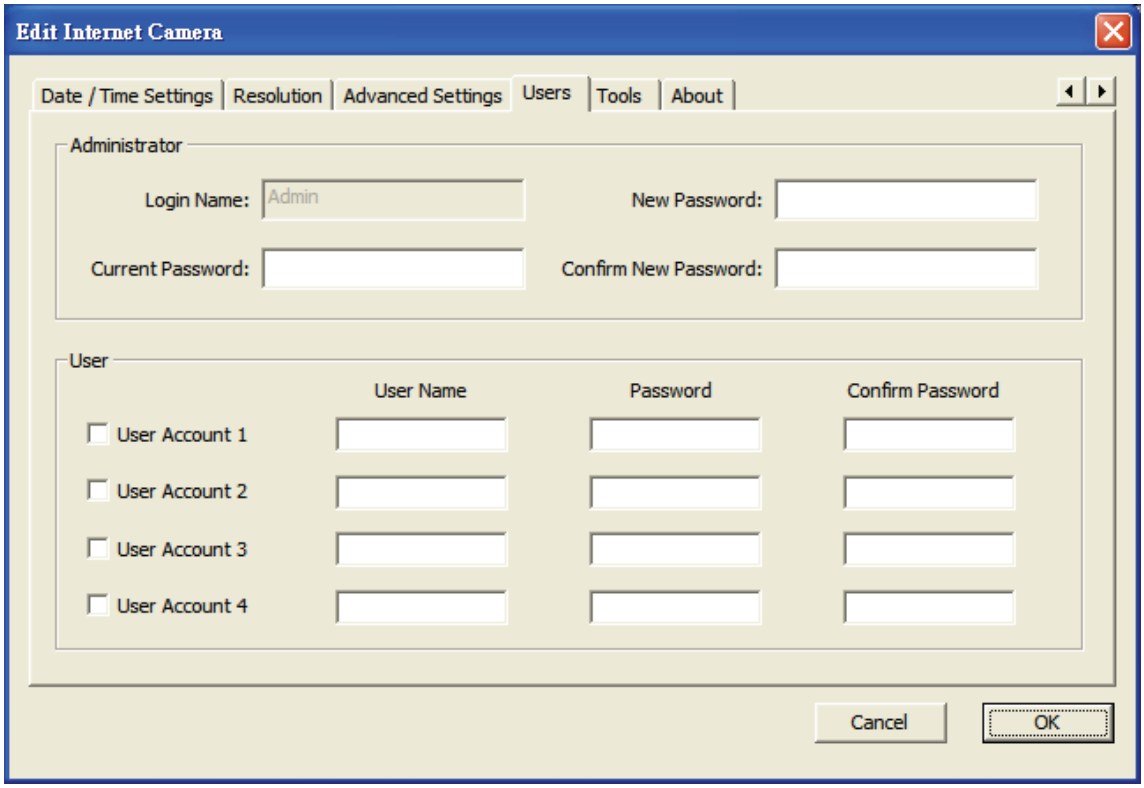
6.2.8. Advanced Setting



Advanced Settings	
UPnP	When the UPnP function is enabled, the camera can be detected by UPnP compliant system such as Windows XP. The camera will be displayed in the Neighborhood of Windows XP, so you can directly click the camera to view the video through web browser.
DDNS	Many internet connections use a "Dynamic IP address", where the Internet IP address is allocated dynamically whenever the Internet connection is established. Internet users should know the IP Address of the camera when they want to connect to the camera every time. DDNS is designed to solve this problem, by allowing users to connect to your LAN using a domain name, rather than an IP address.

Enable/Disable	Enable or disable DDNS function of the camera.
Provider	Several companies provide DDNS service. This camera supports the service from DynDNS who is one of the DDNS providers.
Domain Name	The domain name given by DynDNS is “registername.dyndns.com”. Enter the domain name that you register for the camera from DynDNS web site.
Account	Enter the login name for the DDNS service.
Password	Enter the password for the DDNS service.

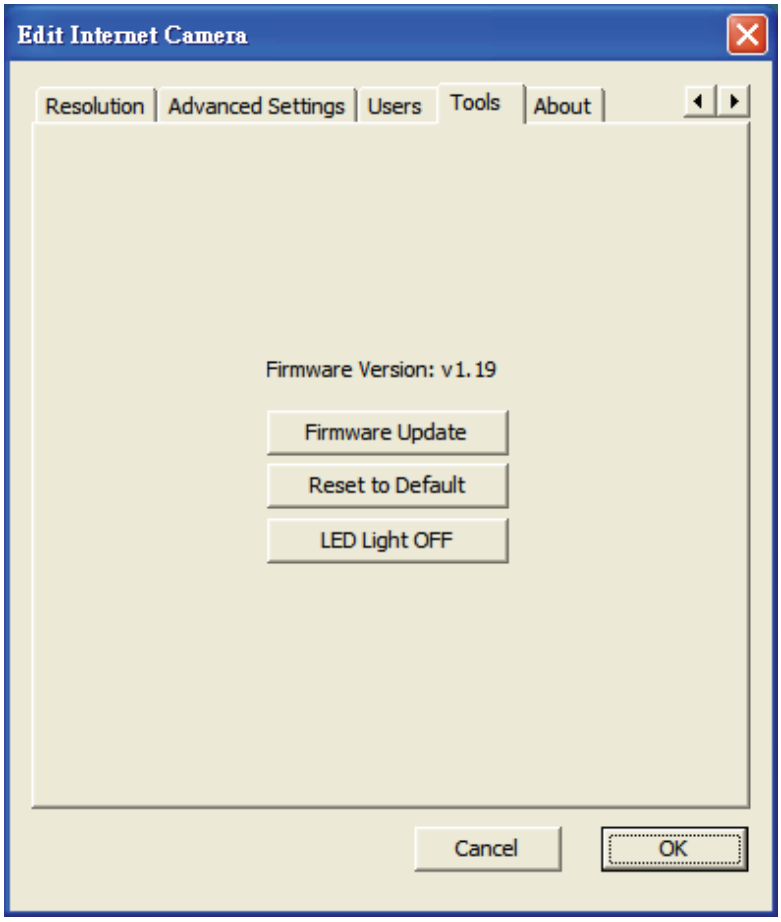
6.2.9. Users



Users	
Administrator	Setting the password of Administrator account

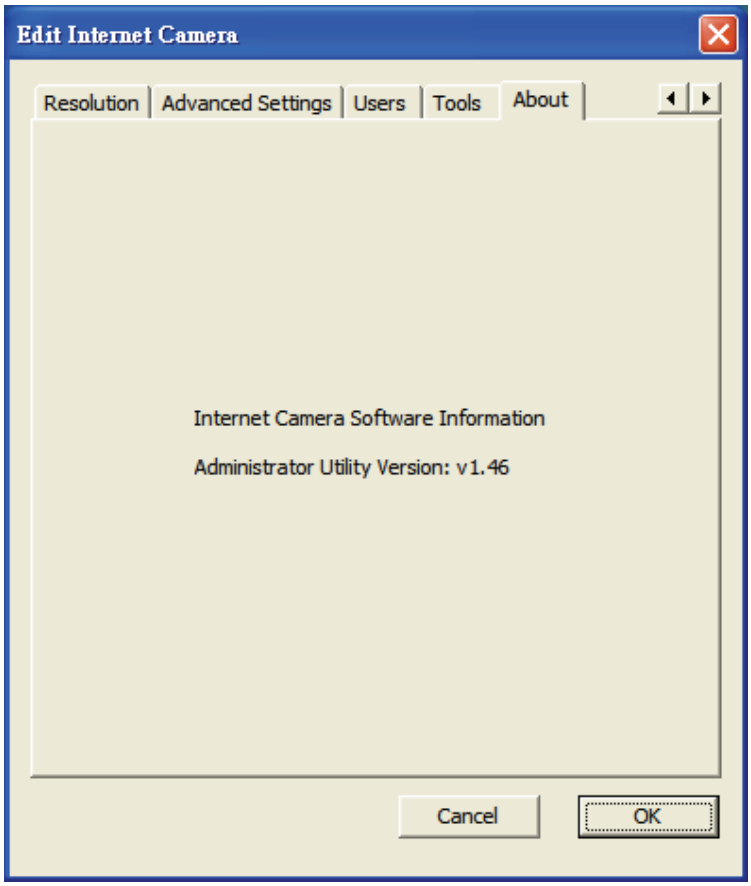
Current Password	Enter the current password of the camera.
New Password	Enter the new password you want to use for the camera.
Confirm New Password	Retype the new password to confirm the setting.
User	Setting the user account and password. Your camera can support 4 user account.

6.2.10. Tools



Tools	
Firmware Version	Display current firmware version.
Firmware Update	You can upgrade camera's firmware via this function. Press this button and select the correct firmware to upgrade.
Reset to Default	If you want to reset the camera, click this button. The default settings of the camera are as follows. Camera Name: "IC-XXXXXX" IP Address: "192.168.2.3" Subnet Mask: 255.255.255.0 Administrator Name: "Admin" Password: "1234" Video Port: "4321" Web Port: "80"

6.2.11. About



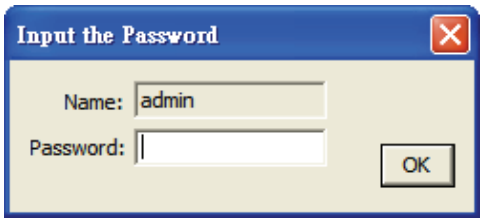
About	
Administrator Utility Version	Display current Administrator Utility Version.

6.3. Setting Wizard

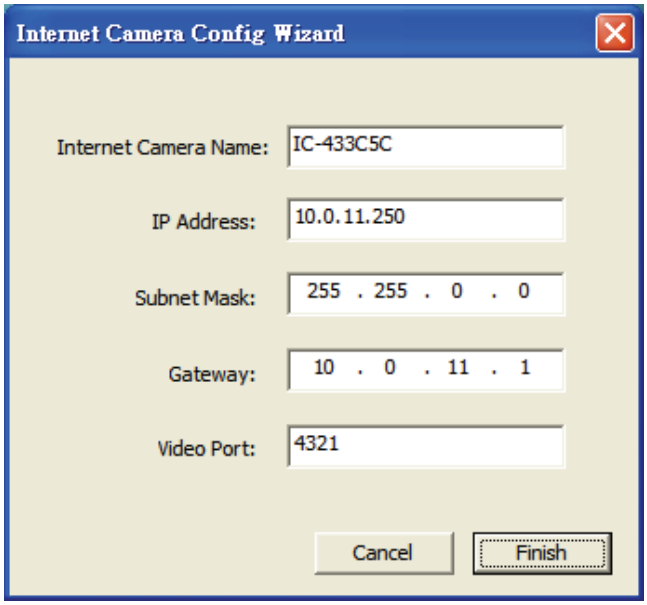
When you click the “Setting Wizard”, a screen will pop up for you to enter the “Administrator Name” and “Password”. The default value is as follows.

Name: “**Admin**”

Password: “**1234**”

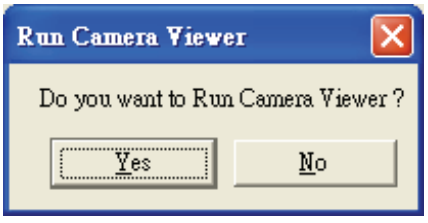


If the name and password you enter are correct, you can start to setup the camera.



Setting Wizard	
SOHO Network Camera Name	The default camera name is “IC1500Wg”. It is recommended to enter a meaningful name for the camera.

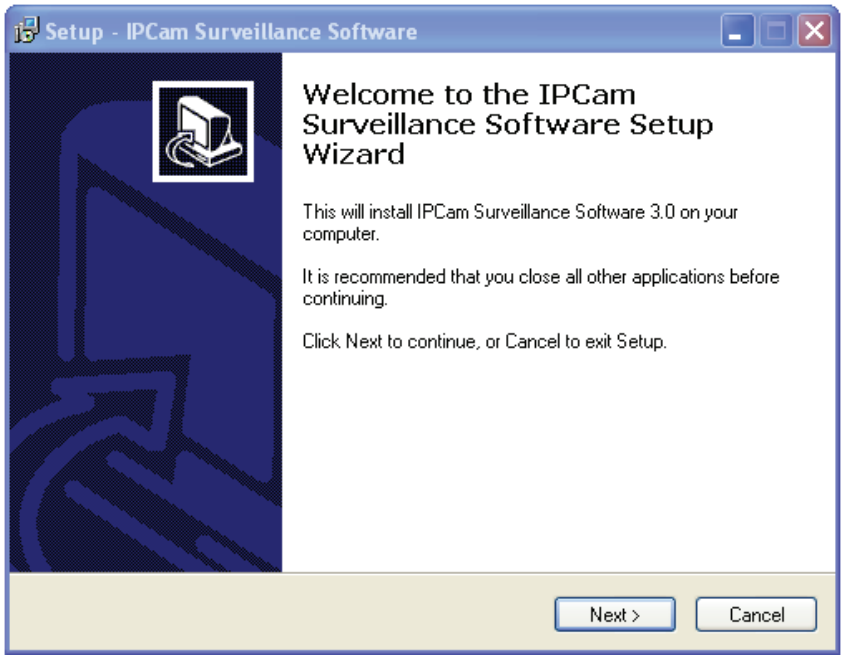
IP Address	The wizard will auto setup an available IP Address to the camera. For example: if the IP address of the network is 192.168.2.x, the wizard will search an unused IP Address from 192.168.2.1 to 192.168.2.250 and assign the camera an available IP Address. You are allowed to enter another IP Address to change the setting.
Subnet Mask	The wizard will auto search the Subnet Mask setting of the network and set the camera in the same Subnet Mask. You can enter another Subnet Mask to change the setting.
Gateway	The wizard will auto search the Gateway setting of the network and set the camera to use the same Gateway. You can enter another Gateway to change the setting.
Video Port	It defines the video stream port. The default value is “4321”.
Cancel	Click “Cancel” to stop wizard setting.
Finish	Click “Finish” to complete the camera setting.



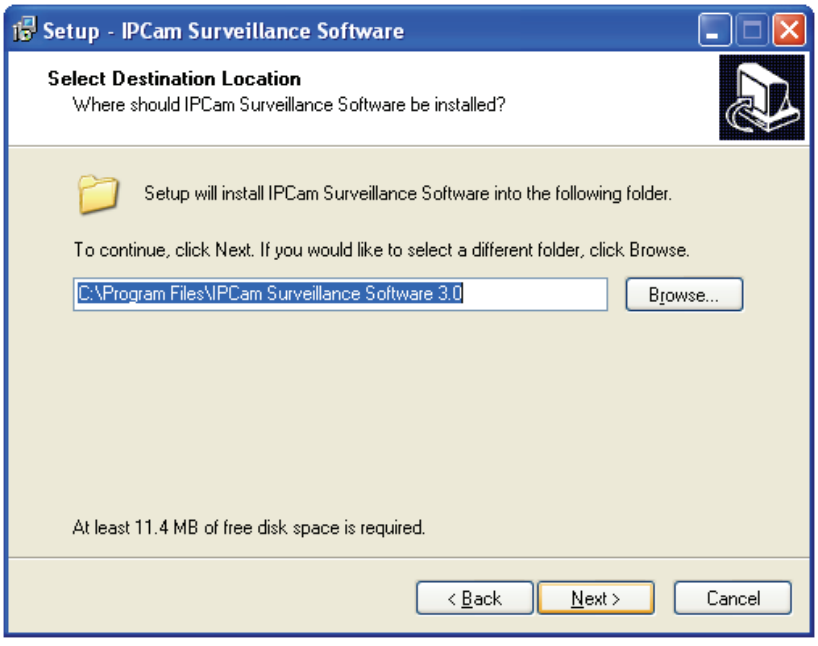
When you finish the camera setting, you can click “Ok” to run the “Camera Viewer” immediately or click “Cancel” to run the “Camera Viewer” later.

7. Installing the IP Camera Surveillance Software

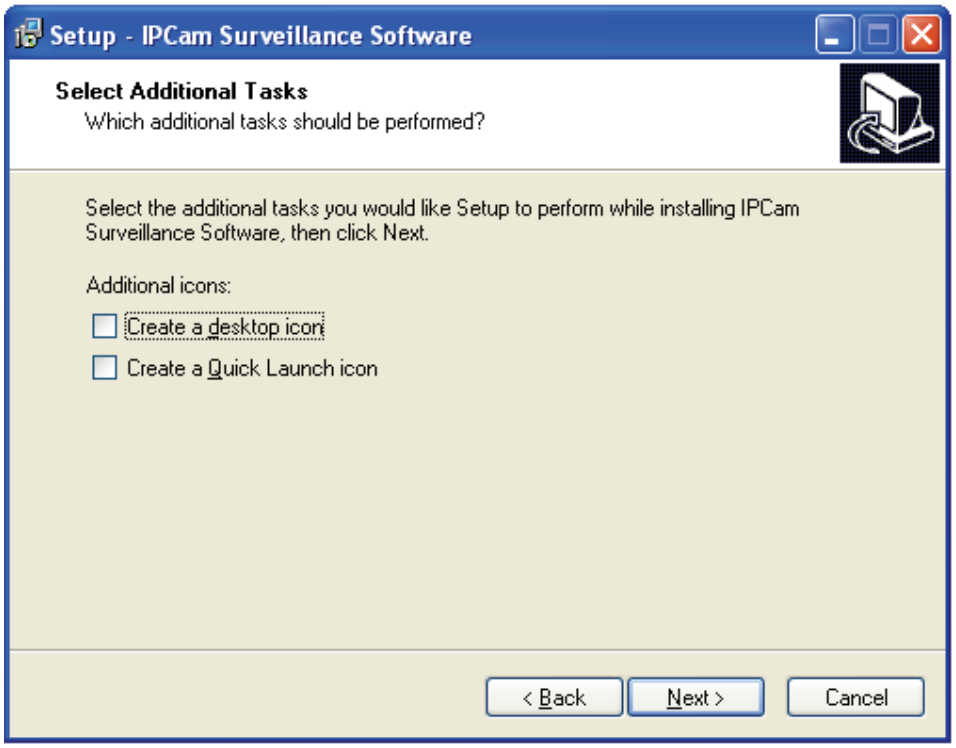
1. Double-click the setup file located on the supplied CD-ROM. When the following window appears, click "Next."



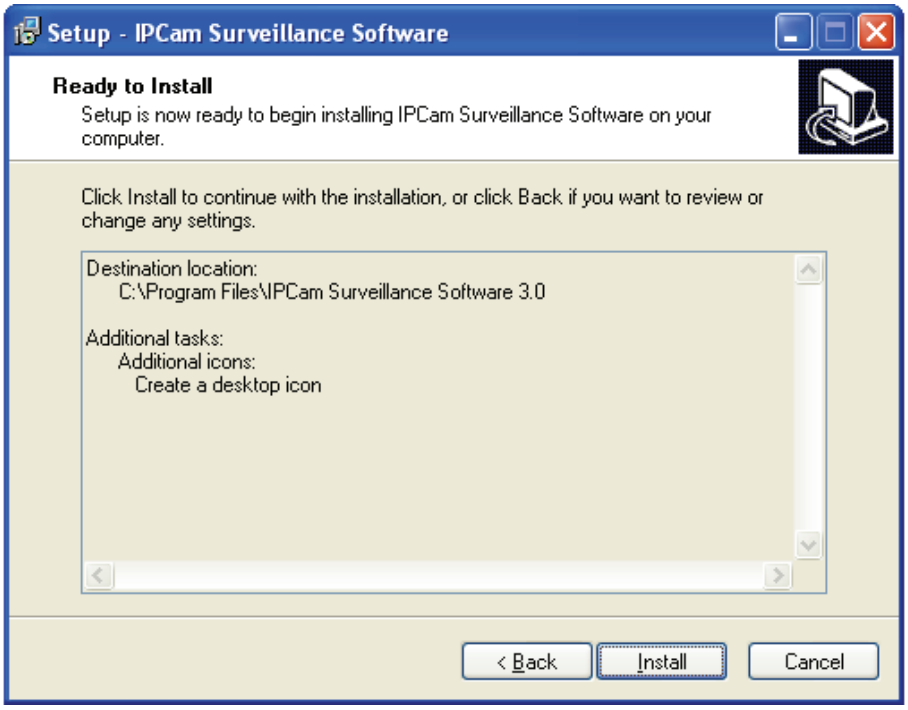
2. You can specify the destination folder of the software installation or you can just use the default folder, and click "Next" to continue.



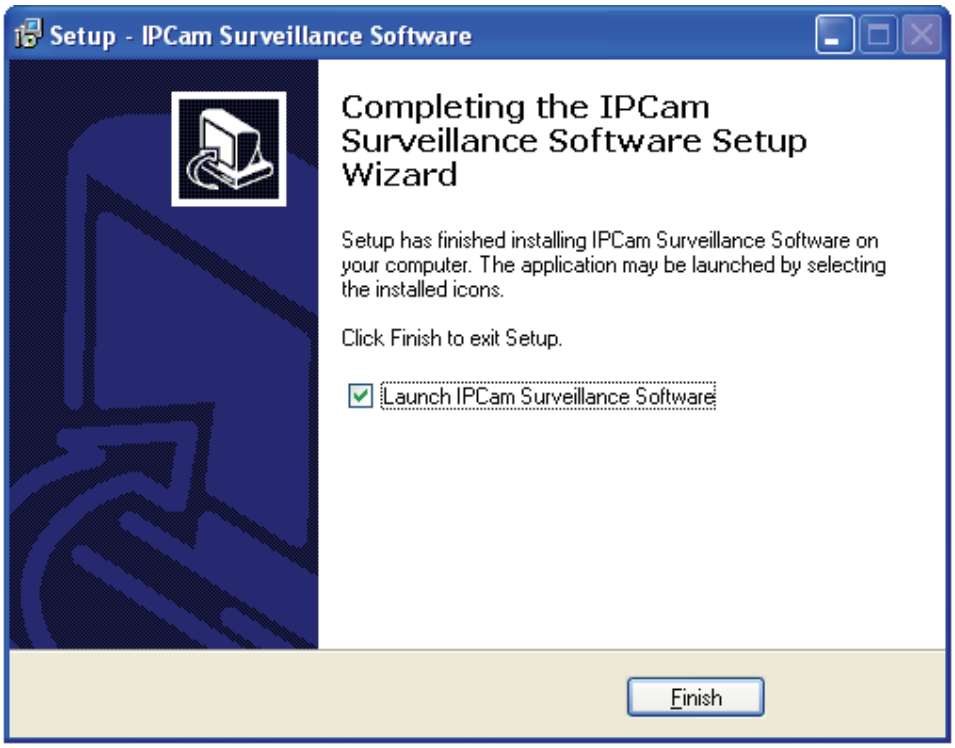
3. If you want the installation program to create a desktop icon or a quick launch icon for you, select the desired items and click "Next" to continue.



4. The next screen presents a summary of the installation options. Click "Install" to begin the installation process.



5. After the installation has finished, the following screen appears:



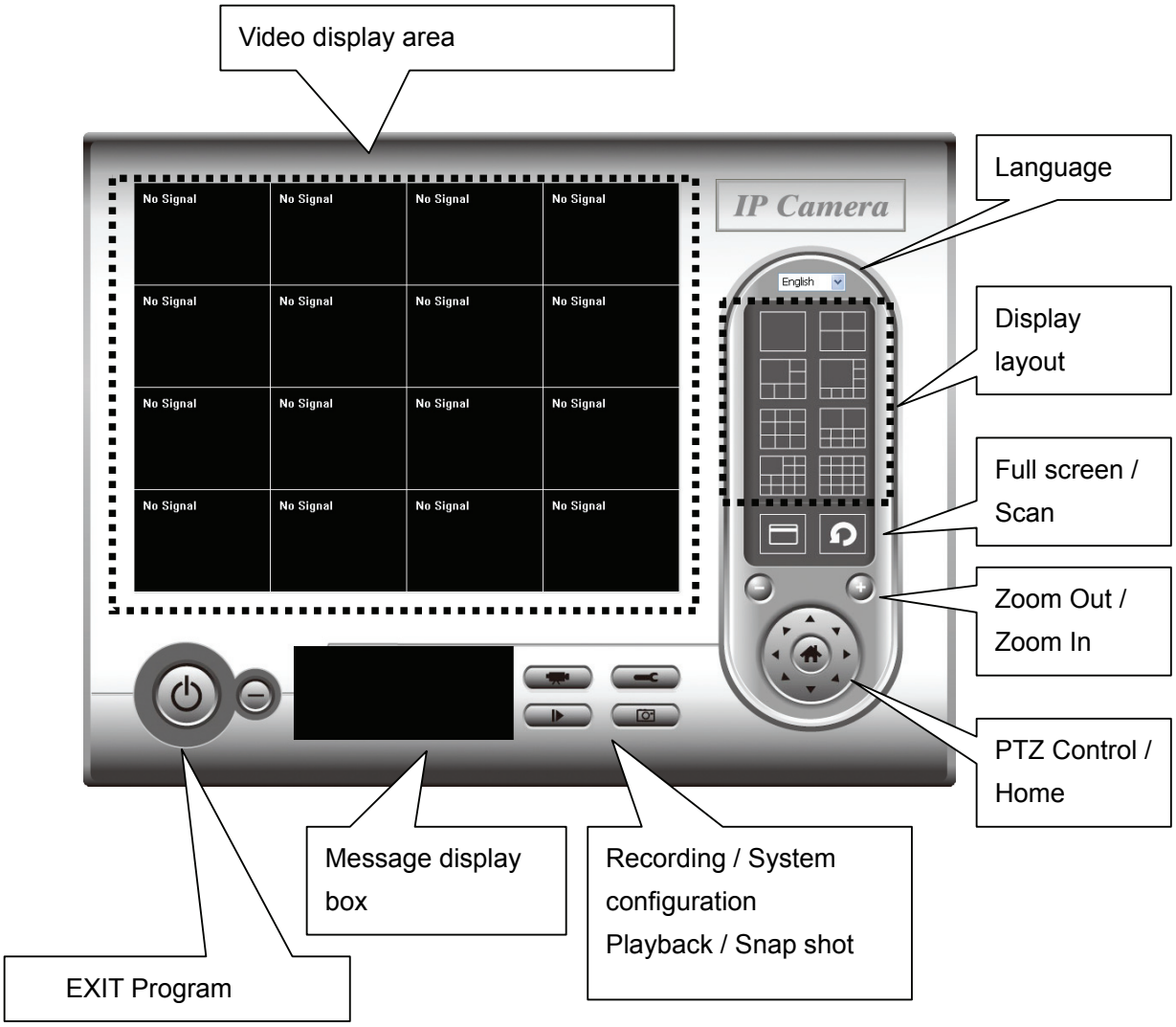
Click "Finish" to complete the installation.

7.1. Using the IP camera surveillance software

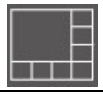
You can click the "IPCam Surveillance Software" icon from the desktop, quick launch bar, or start menu to start the IP camera surveillance software.

Before you start:
IP camera surveillance software will only work when your monitor's resolution is "1024 x 768". Change the resolution before you use IP camera surveillance software, or it won't start.

Here are descriptions for all components of the IP camera surveillance software:



Below is a description of the buttons and their functions.

Item	Description
Video display area	The image of all connected cameras will be displayed here.
Language	Select a language from this dropdown menu to change the display language.
Display layout 	There are eight kinds of available display layouts. Click a layout icon to change camera display layout.
Full screen	Click this button to switch to full screen mode and press

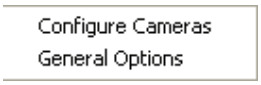
	"ESC" key to return to the normal mode.
Scan 	Click this button once to activate scan function (scan icon will become blue ); click again to stop scanning (scan icon will become white ).
Zoom out 	Zoom-out This function is only available for supported cameras. The SOHO Network Camera does not support this function.
Zoom In 	Zoom-in This function is only available for supported cameras. The SOHO Network Camera does not support this function.
PTZ control 	The PTZ function is only available for supported cameras. The SOHO Network Camera does not support this function.
Home 	Click this button to return the camera to "Home" (default) position. This function is only available for supported cameras.
Recording 	Start video recording.
Configure 	Software / camera configuration.
Playback 	Play back a recorded video file.
Snapshot 	Take a snapshot of the current camera image.
Message display	Displays all system messages ("camera is disconnected". etc.).
EXIT 	Terminates the IP camera surveillance software.
Minimize window 	Minimizes the IP camera surveillance software window.

Video display area	Displays the image of all cameras by the display layout you have selected.

7.2. Configure the IP Surveillance Software

1. Configure cameras

Before you use this IP camera surveillance software, you must configure the camera(s) you wish to connect. Click the "System configure" button  and a popup menu will appear:

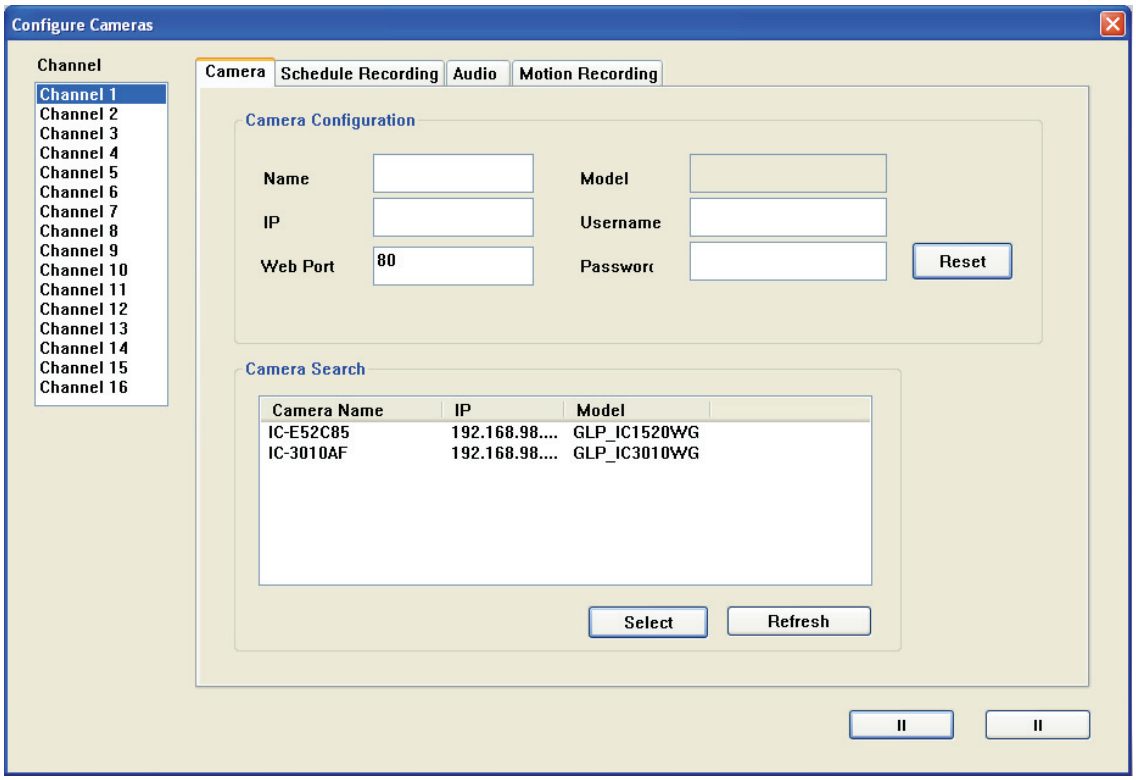


Select ‘Configure Cameras’:

Note: If you’re prompted by a windows security alert which asks you if you want to block "IPCamViewer" program, click "Unblock". Failure to do so may result in the IP camera surveillance software not functioning correctly.

2. Camera tab

On this tab you can configure all cameras you wish to connect. Up to 16 cameras can be connected simultaneously:



Here are the descriptions of all setting items:

Item	Description
Channel	Select the channel number you wish to set.
Camera Search	All cameras found on your local network will be displayed in the "Camera Search" box.
Select	Select a camera listed in the "Camera Search" box, and click ‘Select’ to fill all parameters of the selected camera in every camera configuration fields.
Refresh	Rescan all cameras on your local network. This function updates the list and always shows the current cameras found on your network.
Name*	Input the name of the camera here. Default value is the first 6 bytes of the camera’s MAC address. You can change the name of the camera so you can remember the camera’s location or purpose easily.
Model	Displays the model of the selected camera. This field can not be changed.
IP*	Input the IP address of the camera.
Username*	Input the user name of the camera.
Web Port*	Input the Web port of the camera. By default it’s "80".
Password	Input the password of the camera. Default value is ‘1234’.
Video Format**	Select the video encoding format of this camera: Select "MJPEG", not "MPEG4".
Reset	Clear all fields in ‘Camera Configuration’ section.
OK	Save settings in this tab.
Cancel	Discard all settings in this tab.

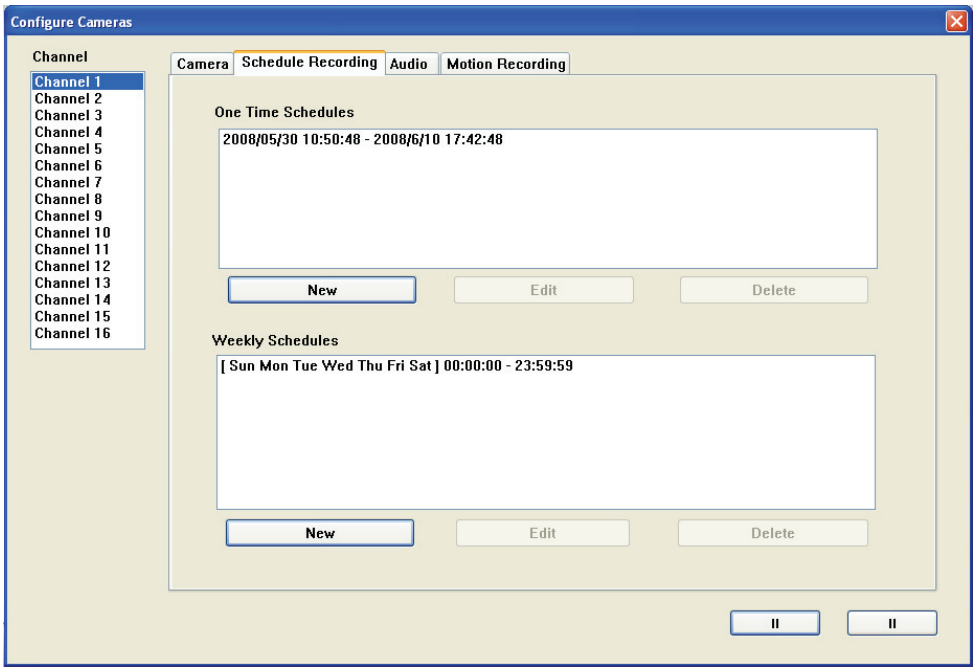
* It’s recommended to use the "Select" button to fill the content of this field.

** Only available for cameras that support this function.

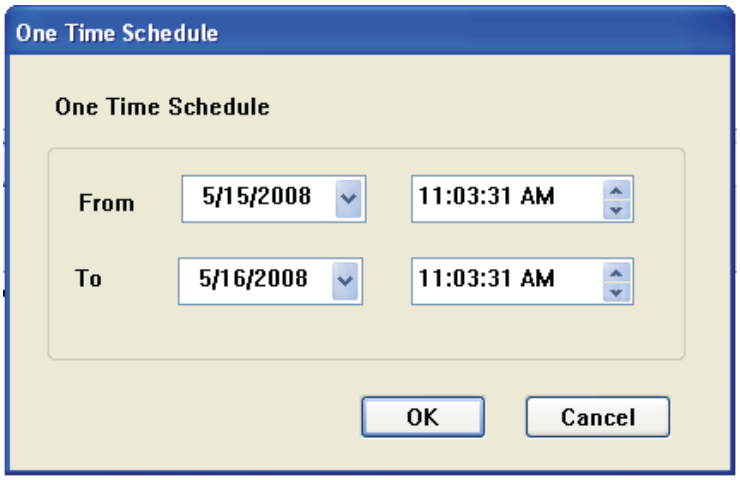
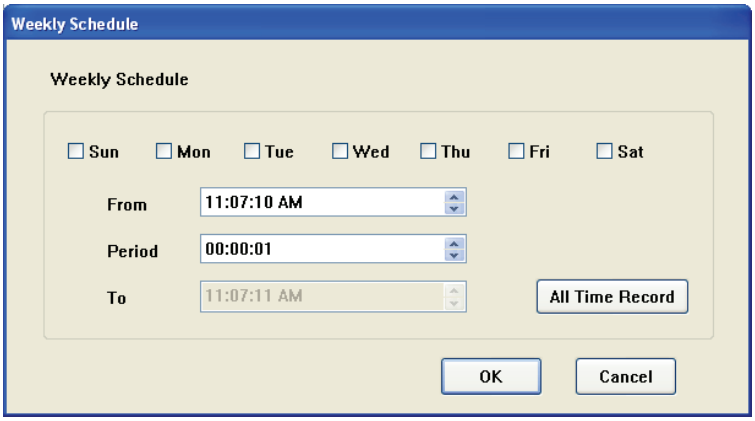
After you’ve set all channels you wish to set, click "OK" to save the settings. If everything’s correct, you’ll see the camera’s image in the IP camera surveillance software’s main menu:

3. Schedule Recording tab

On this tab, you can set up a scheduled video recording, so you can record the video captured by all cameras you have by a pre-defined schedule.



Find a description of all options on the next page:

Item	Description
Channel	Select the channel number you wish to set.
One Time Schedule	You can specify the one-time schedule for a selected camera; this schedule will be executed once only.
New (One Time Schedule)	Click this button and a new window will appear:  Specify the time duration of this one-time schedule (the date and time of "From" and "To"), then click "OK" to save the settings.
Edit	You can modify a scheduled recording item. Select a schedule in "One Time Schedules" list, and click the "Edit" button to edit the start and end time of this schedule.
Delete	Delete a selected schedule item.
New (Weekly Schedule)	Click this button and a new window will appear: 

	You can define a recording schedule that will be executed at the specified time of certain weekday(s) in a week. Check all weekdays that apply, and set the start time in the "From" field. You can set the duration of the video recording in the "Period" field (format is HH:MM:SS), and the end time will be calculated automatically and displayed in the "To" field. You can also click "All Time Record" to define a recording schedule that will be executed every weekday, from 12:00:00AM to 11:59:59PM. Click "OK" to save changes.
Edit	You can modify a scheduled recording item. Select a schedule in the "One Time Schedules" list, and click "Edit" button to edit the start and end time of this schedule.
Delete	Delete a selected schedule item.
OK	Save settings on this tab.
Cancel	Discard all settings on this tab.

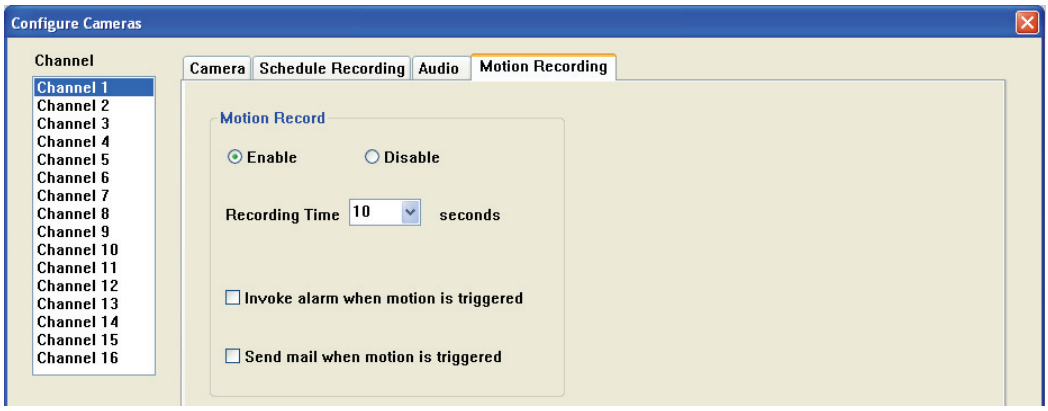
4. Audio tab

This menu has no function, as the 503792 SOHO Network Camera does not support audio.

5. Motion Recording tab

With this function activated, only motion captured by the camera will be recorded, so you don't have to waste hard disk storage space on images you don't need to pay attention to.

> ***WARNING:***
> ***This function should not be used to secure high-value items. Good-quality alarm sensors, e.g., IR based, will provide more reliable results.***



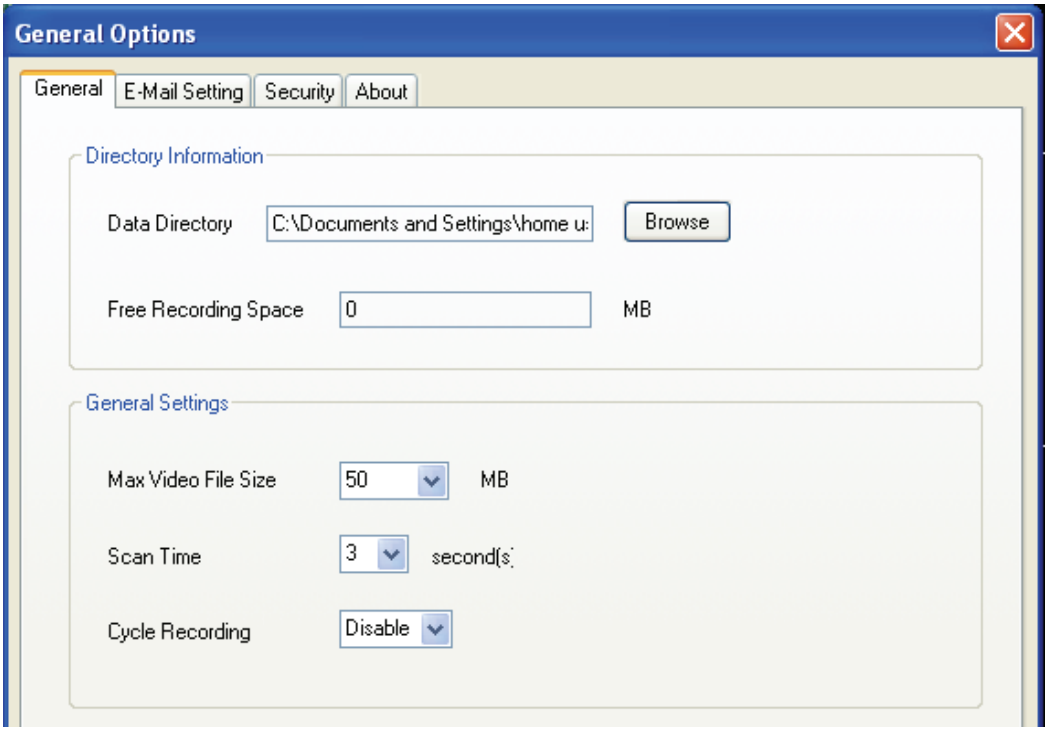
Below are the descriptions of the setup options:

Item	Description
Channel	Select the channel number you wish to set.
Enable	Enable the motion record function.
Disable	Disable the motion record function.
Recording Time	Select the time duration that the camera will record when a motion has been detected from the dropdown menu in seconds.
Invoke alarm when motion is triggered	Send an alarm when a motion has been detected by the camera.
Send mail when motion is triggered	Send an email to a pre-defined address when a motion has been detected by the camera.
OK	Save settings on this tab.
Cancel	Discard all settings on this tab.

7.3. General Settings

This menu gives you access to important settings of the 16-channel viewer.

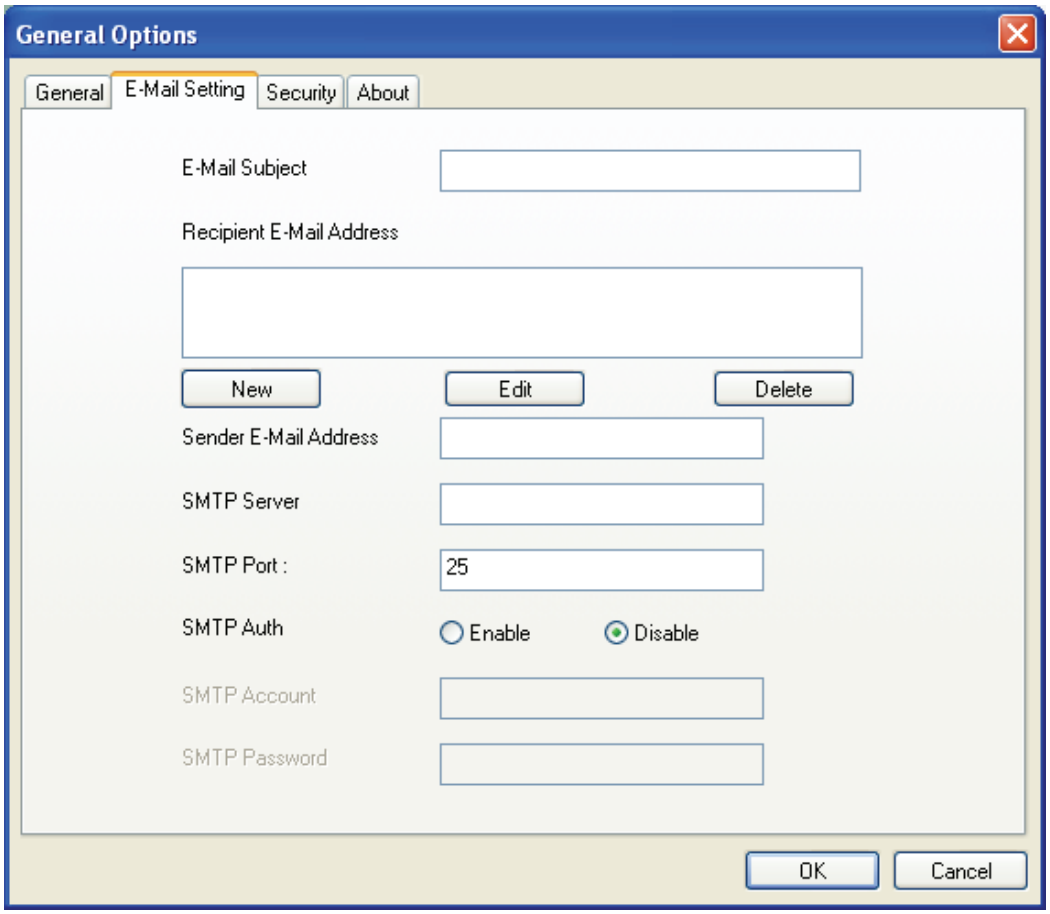
1. General tab



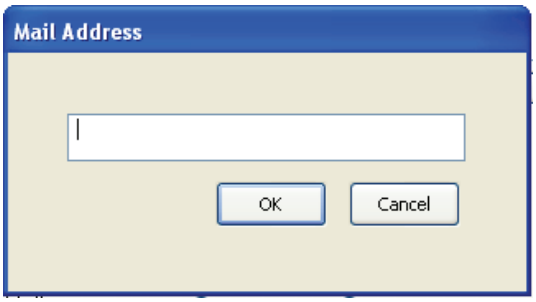
Item	Description
Data Directory	Set the directory (folder) you wish to store the recorded video and captured image. Click "Browse" to select a directory.
Free Recording Space	Displays the remaining storage space on the drive where the data directory is located.
Max Video File Size	Defines the maximum file size of a video file. The example shows 50 MB, which means that the camera viewer will create AVI videos in chunks of 50 MB.
Scan Time	Define the time period to pause between every camera switch when you activate "Scan" function.
Cycle Recording	You can decide the behavior when hard disk space is full: Disable: Do not overwrite recorded video files. Enable: Overwrite recorded video files.
OK	Save settings on this tab.
Cancel	Discard all settings on this tab.

2. E-Mail Setting tab

If you want to use the motion detection function and wish to get an e-mail that contains the image captured by the camera, set up your e-mail-related parameters here first.

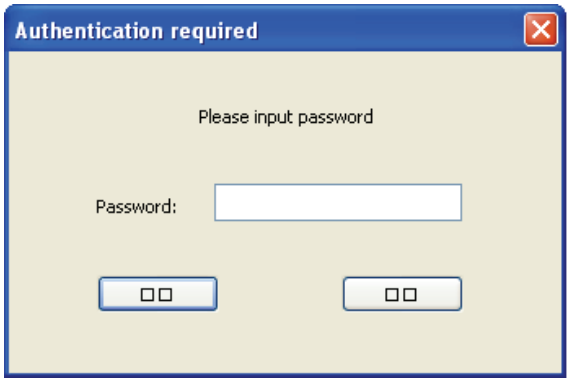


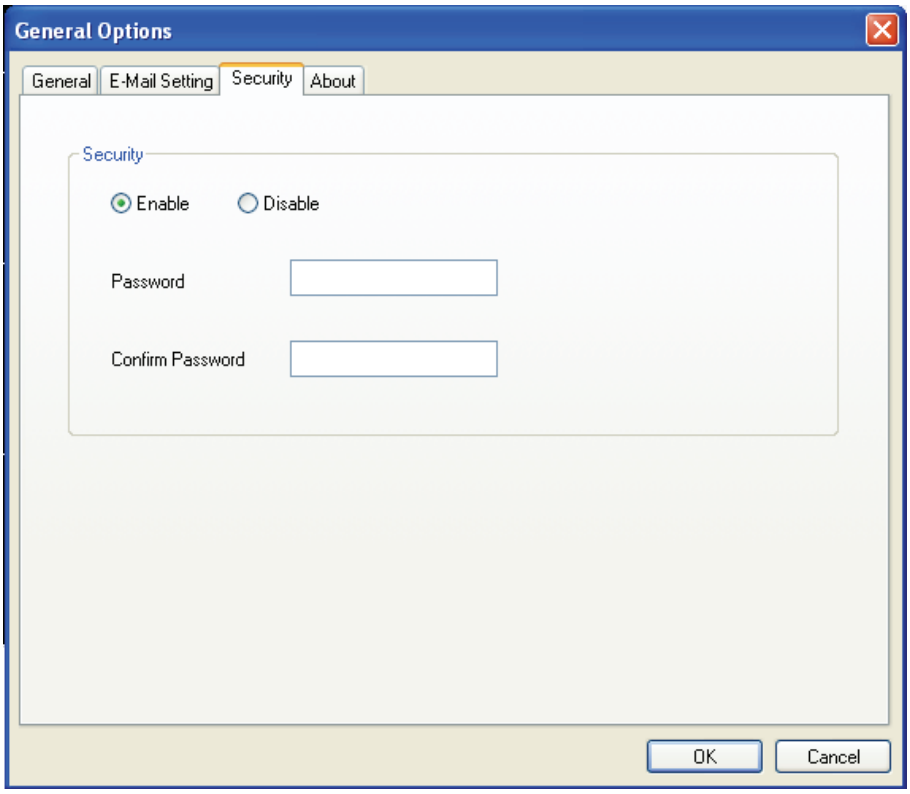
Find explanations about the options on the next page.

Item	Description
E-Mail Subject	Specify the subject of the e-mail.
Recipient E-Mail Address	All e-mail addresses you set.
New	Click this button and you'll be prompted to input the e-mail address. Click "OK" to save changes. 
Edit	Select an e-mail address from "Recipient E-Mail Address" box, and click "Edit" to edit the email address.
Delete	Delete the selected e-mail address.
Sender E-Mail Address	Specify the e-mail address of e-mail sender.
SMTP Server	Specify the IP address or host name of the SMTP server you wish to use. ISPs will only allow subscribers to use their SMTP server. If you don't know which SMTP server you should use, refer to the setting of your e-mail software or ask your ISP / network administrator.
SMTP port	Specify the port number of the SMTP server you wish to use. By default (and the setting of most of SMTP servers) it's '25'.
SMTP Auth	Select "Enable" if your SMTP server requires authentication, select "Disable" if it's not required. If you don't know if your SMTP server requires authentication, refer to the setting of your e-mail software or ask your ISP / network administrator.
SMTP Account	Input the SMTP account (username) of your SMTP server here. In most cases, it's the same as your POP3 username (the one you use to receive email). Refer to the setting of your e-mail software or ask your ISP / network administrator if you're not sure about this.
SMTP Password	Input the SMTP password of your SMTP server. In most cases, it's the same as your POP3 password (the one you use to receive email). Refer to the setting of your e-mail software or ask your ISP / network administrator if you're not sure about this.
OK	Save the settings on this tab.
Cancel	Discard all settings on this tab.

3. Security tab

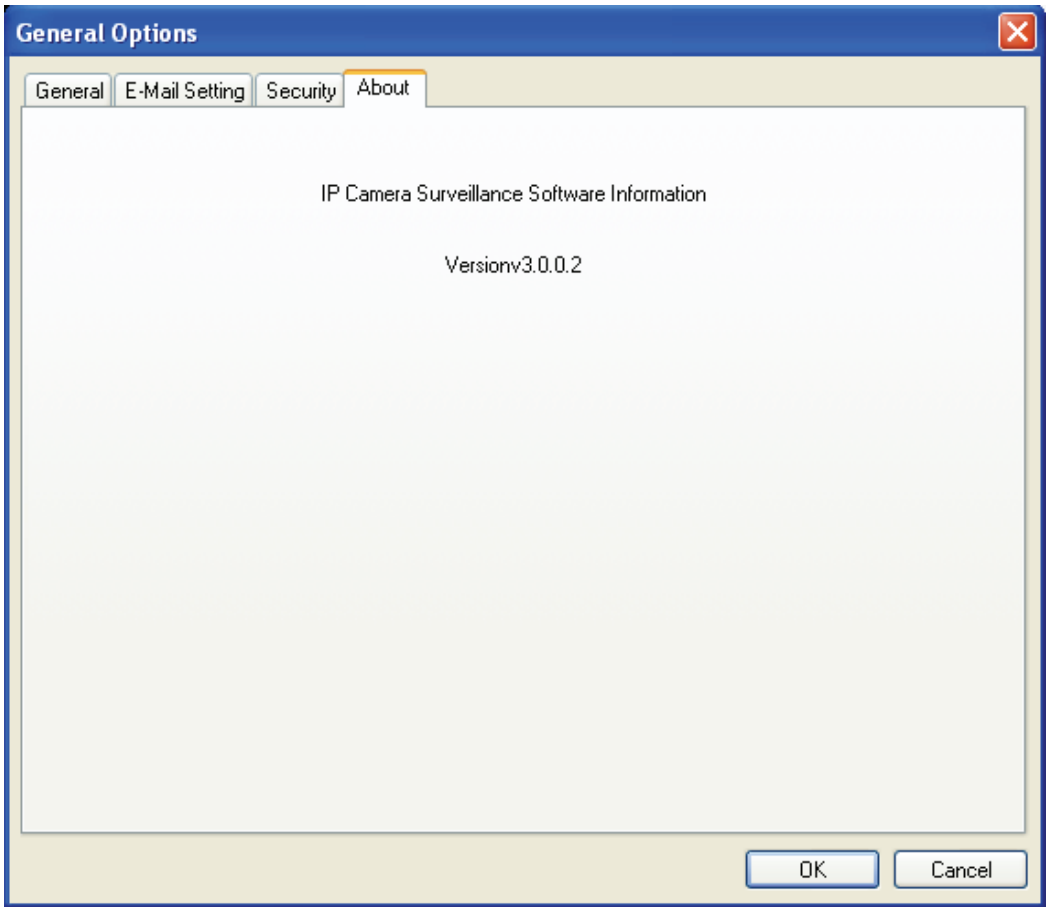
If you don’t want other people to access the SOHO Network Camera surveillance software, you can set a password to protect it. You’ll need to input the password every time you wish to use this IP camera surveillance software. The image below shows the password request window.





Enable or disable the password authentication and type in the password (re-enter it to confirm it) and click "OK."

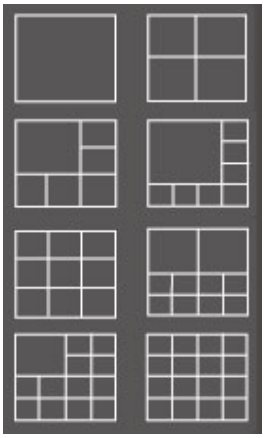
4. About tab



The software version is shown here. Be sure to write down the number and have it handy before contacting the technical support team.

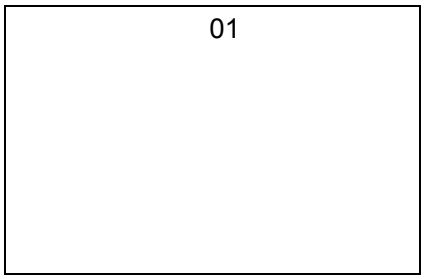
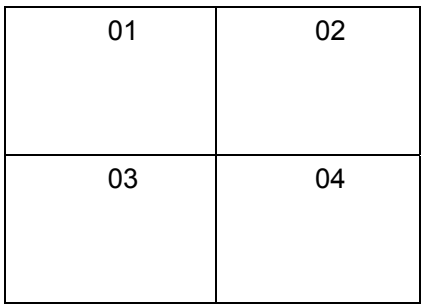
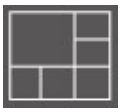
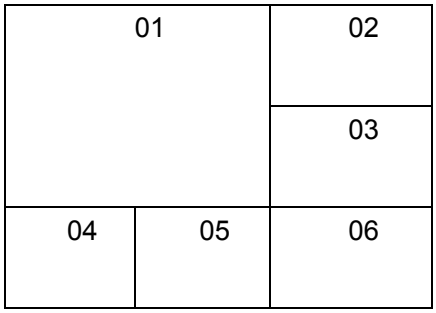
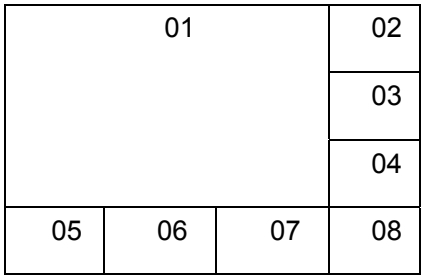
7.4. Change Display Layout

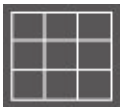
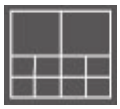
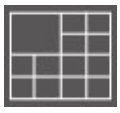
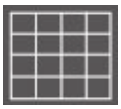
This IP camera surveillance software provides eight different layout styles. They are selectable via the control panel shown below:



Each of the designs displays a different amount of cameras. In order to get a full-screen view of a camera, click on the button as indicated below.

Find more detailed explanations about the different layouts on the next two pages.

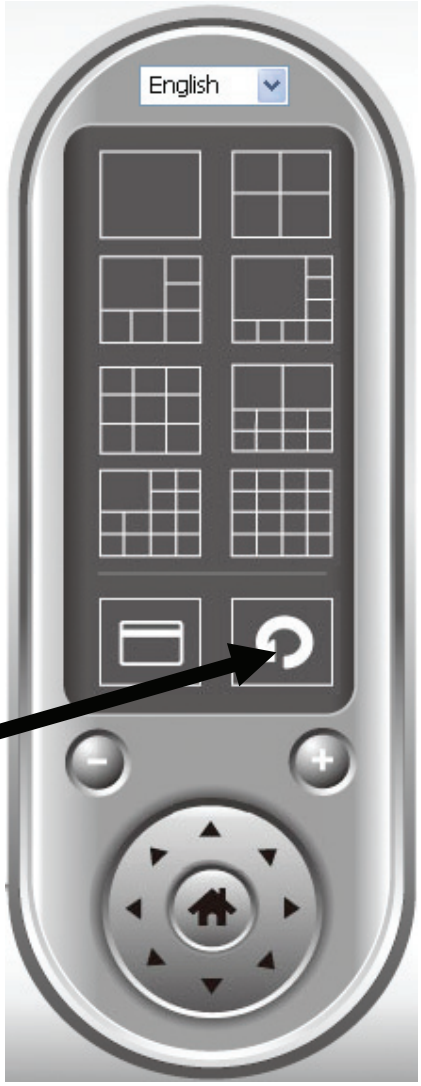
Layout style 1: 1 Camera only 	Displays the video of 1 camera only. 
Layout style 2: 4 Cameras 	Displays the video of up to 4 cameras. 
Layout style 3: 6 Cameras 	Displays the video of up to 6 cameras. 
Layout style 4: 8 Cameras 	Displays the video of up to 8 cameras. 

<table>
<tr>
<td>Layout style 5: 9 Cameras
  </td>
<td>Displays the video of up to 16 cameras.
<table>
<tr><td>01</td><td>02</td><td>03</td></tr>
<tr><td>04</td><td>05</td><td>06</td></tr>
<tr><td>07</td><td>08</td><td>09</td></tr>
</table></td>
</tr>
<tr>
<td>Layout style 6: 10 Cameras
  </td>
<td>Displays the video of up to 10 cameras.
<table>
<tr><td colspan="2">01</td><td colspan="2">02</td></tr>
<tr><td>03</td><td>04</td><td>05</td><td>06</td></tr>
<tr><td>07</td><td>08</td><td>09</td><td>10</td></tr>
</table></td>
</tr>
<tr>
<td>Layout style 7: 13 Cameras
  </td>
<td>Displays the video of up to 13 cameras.
<table>
<tr><td colspan="2" rowspan="2">01</td><td>02</td><td>03</td></tr>
<tr><td>04</td><td>05</td></tr>
<tr><td>06</td><td>07</td><td>08</td><td>09</td></tr>
<tr><td>10</td><td>11</td><td>12</td><td>13</td></tr>
</table></td>
</tr>
<tr>
<td>Layout style 8: 16 Cameras
  </td>
<td>Displays the video of up to 16 cameras.
<table>
<tr><td>01</td><td>02</td><td>03</td><td>04</td></tr>
<tr><td>05</td><td>06</td><td>07</td><td>08</td></tr>
<tr><td>09</td><td>10</td><td>11</td><td>12</td></tr>
<tr><td>13</td><td>14</td><td>15</td><td>16</td></tr>
</table></td>
</tr>
</table>

7.5. Scan function

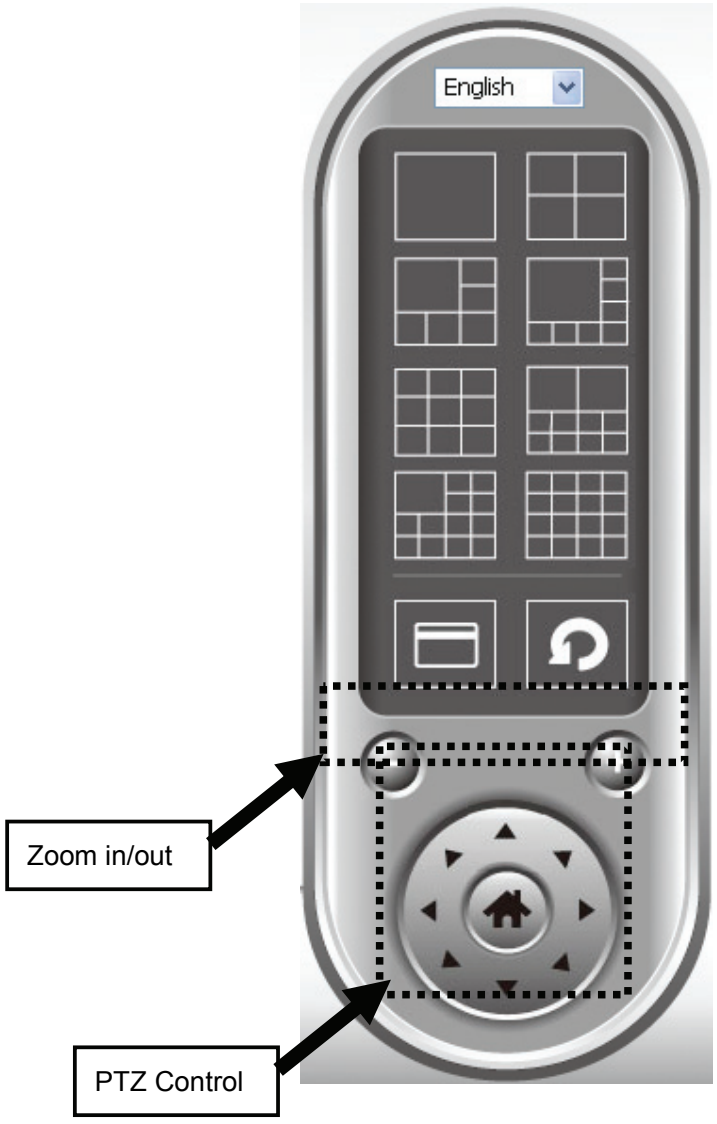
With this function you can periodically switch between the cameras that are set up in the software. The scan interval is defined in the general options.

Click the scan button once to activate the scan function (the scan icon will become blue); click it again to stop the scan (the scan icon will become white).



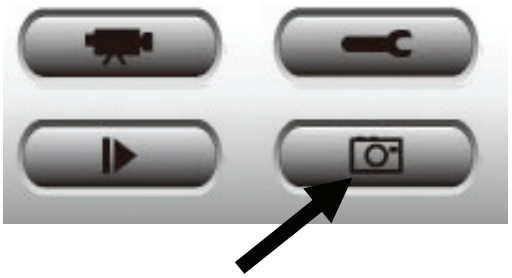
7.6. ZOOM and PTZ Controls

These functions are not supported by the SOHO Network Camera Model 503792. Don't be surprised if nothing happens when you click on any of these buttons.



7.7. Snapshot

You can take a snapshot of the selected camera by clicking the designated button shown below.



The snapshot images are saved in the data directory of the camera viewer as defined in the General Options section.

7.8. Recording

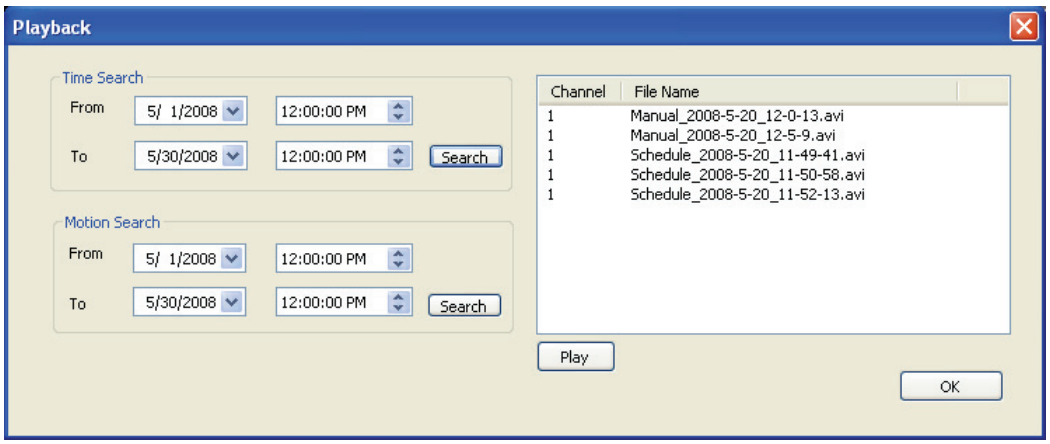
Click the button showing the video camcorder below to start the recording process. Recordings are split into chunks as defined in the General Options section.

To stop recording, click the button again.

7.9. Playback

You can play back all recorded video by clicking this button.

A new window will appear:



You have to locate the video file before you can play it. There are two ways of doing this: Time Search (search all video files which fall within a specific time period) and Motion Search (search all video files recorded by the motion detection function which fall in a specific time period).

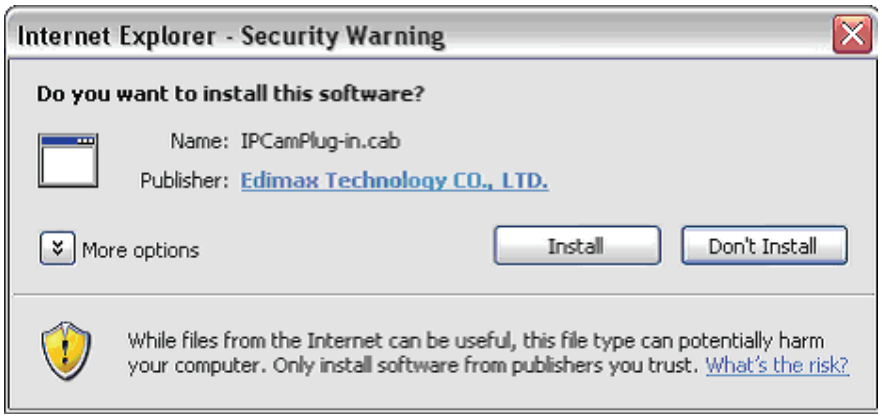
Define the start and end date / time of the time period you wish to search, and then click "Search". The search results are shown on the right. Select a video and click "Play" to begin playback.

8. Web Connection and Setup

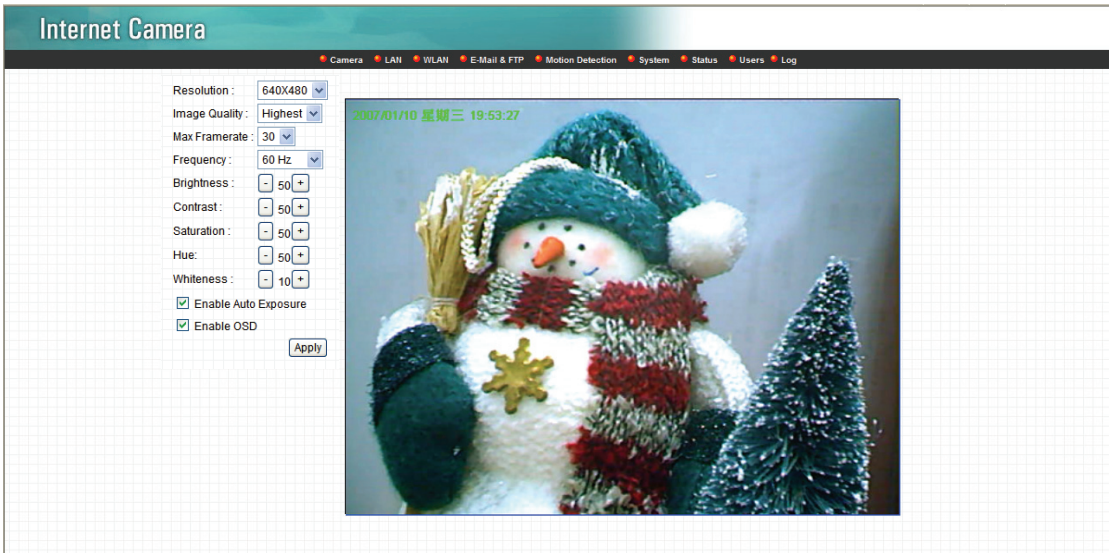
You can use the Web browser to connect the camera for viewing or setting. Open the web browser and enter the IP Address of the camera to establish a connection. The default IP Address of the camera is “**192.168.2.3**”.

When the welcome screen appears, enter the “Admin Name” and “Password”. The default values are:
Admin Name: “**admin**”
Password: “**1234**”

When the camera is connected, the browser will take you to the live video page. If you are viewing this camera at first time, the following dialog will appear to install the ActiveX plug in.



After installed the ActiveX plug-in, the video image will be shown up in the web screen directly.



The menu options for the web control screen are as follows.

Camera – View live video and adjust the video format from the menu.

LAN – Setup the camera LAN port functions in the menu.

WLAN – Setup the camera WLAN port functions in the menu.

E-Mail & FTP – Setup the E-Mail client and FTP client in the menu.

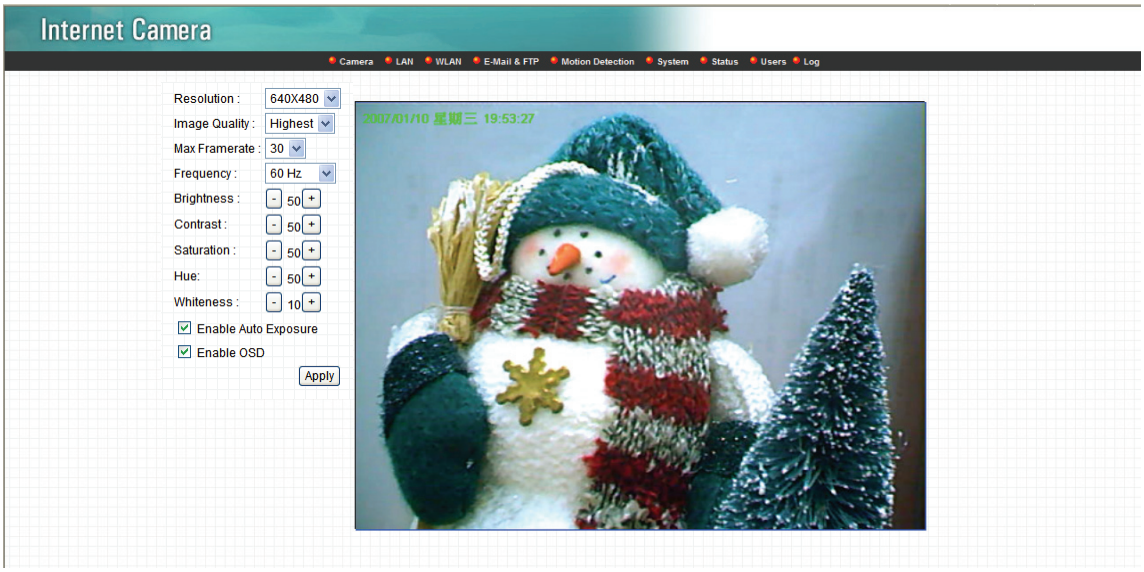
Motion Detection – Configure the Motion Detection Actions here.

System – Setup System utilities and settings in this menu.

Status – Shows the camera information and current status in this page.

Users – This camera support up to 4 user accounts. You can setup them in this menu.

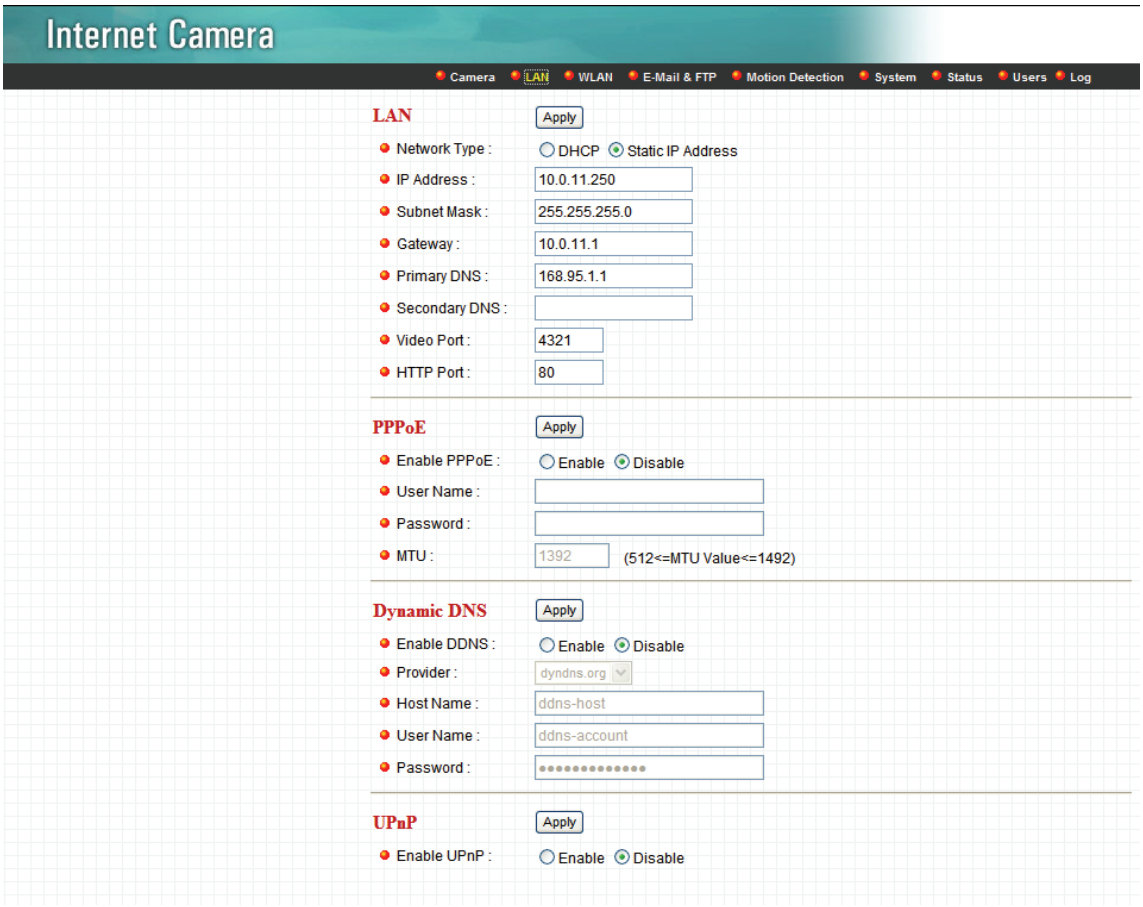
8.1. Camera Setting



Camera Setting	
Resolution	Select the desired video resolution format. Larger resolution requires more bandwidth. 640 x 480 is “VGA” format. 320 x 240 is “CIF” format. The default resolution is CIF format.
Image Quality	Adjust this property to control the video quality
Max Frame Rate	Set the video max frame rate. This camera can support at most 30 frames per second. Set the frame rate higher can get video more smooth. But will use more bandwidth.
Frequency	Adjust this property to fitting light frequency.
Brightness	You can adjust the brightness of the video. If the video is too dark, you can input the larger number in this text box. The video will be brighter. This value can be from 1 to 100.
Contrast	You can adjust the contrast by change the value. This value can be from 1 to 100.
Saturation	You can adjust the saturation by change the value. This value can

	be from 1 to 100.
Hue	You can adjust the hue by change the value. This value can be from 1 to 100.
Whiteness	You can adjust the white balance by change this value. This value can be from 10 to 30.
Enable Auto Exposure	You can enable Auto Exposure by check this box.
Enable OSD	You can enable or disable “Time Stamp” function in this item. When you disable “OSD” function, the “Time Stamp” will be hidden.
Apply	When you finish “AV Server” setting, click this button to validate the setting values.

8.2. LAN Setting



LAN	
Network Type	This camera can obtain IP via DHCP protocol or specified static IP Address to it..
IP Address	Enter an unused IP Address within the IP address range used on your LAN. If the IP Address of your LAN is from the 192.168.2.0 to 192.168.2.250, you can set an unused IP Address from the range for the camera, for example: 192.168.2.250.
Subnet Mask	The Subnet Mask field must match the subnet setting on your LAN. For example: 255.255.255.0.
Gateway	The Gateway is used to forward frames to destinations in a different subnet on the Internet. The Gateway setting must be the

	same with the gateway used by the PCs on your LAN.
DNS Server	DNS Server (Domain Name Server) that translates names to IP addresses. Set the same DNS Server as the PCs on your LAN.
Video Port	The AV Control Port is used to transmit or receive the AV streaming in the network. The default port setting is “4321”. If you want to view the video from the camera, the port setting should be correct.
Web Port	This camera support web connection, the default web port is 80. Since the web server may use port 80, you can use a different port for the camera. If you change the web port from 80 to 8080, you must type **http://192.168.2.3:8080** to connect the camera through the web browser.
Apply	When you finish the “LAN”, click “Apply”.

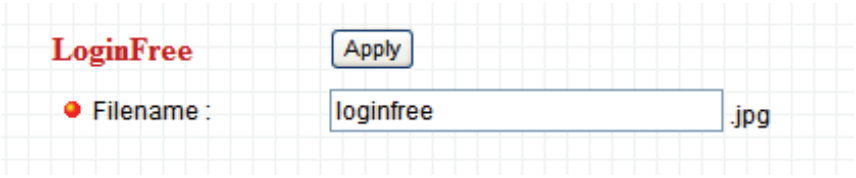
PPPoE	
Enable PPPoE	Enable or disable PPPoE function of the camera.
User Name	Enter the User Name for the PPPoE Connection.
Password	Enter the Password for the PPPoE Connection.
MTU	A maximum transmission unit (MTU) is the largest size packet or frame, specified in octets (eight-bit bytes), that can be sent in a packet or frame based network such as the Internet.
Apply	When you finish the “PPPoE” setting, click “Apply”.

Dynamic DNS	
Enable DDNS	Enable or disable DDNS function of the camera.
Provider	Several companies provide DDNS service. This camera supports the service from DynDNS company.

Domain Name	The domain name given by DynDNS is “registername.dyndns.com”. Enter the domain name that you register for the camera from DynDNS web site.
User Name	Enter the login name for the DDNS service.
Password	Enter the password for the DDNS service.
Apply	When you finish the “Dynamic DNS” setting, click “Apply”.

UPnP

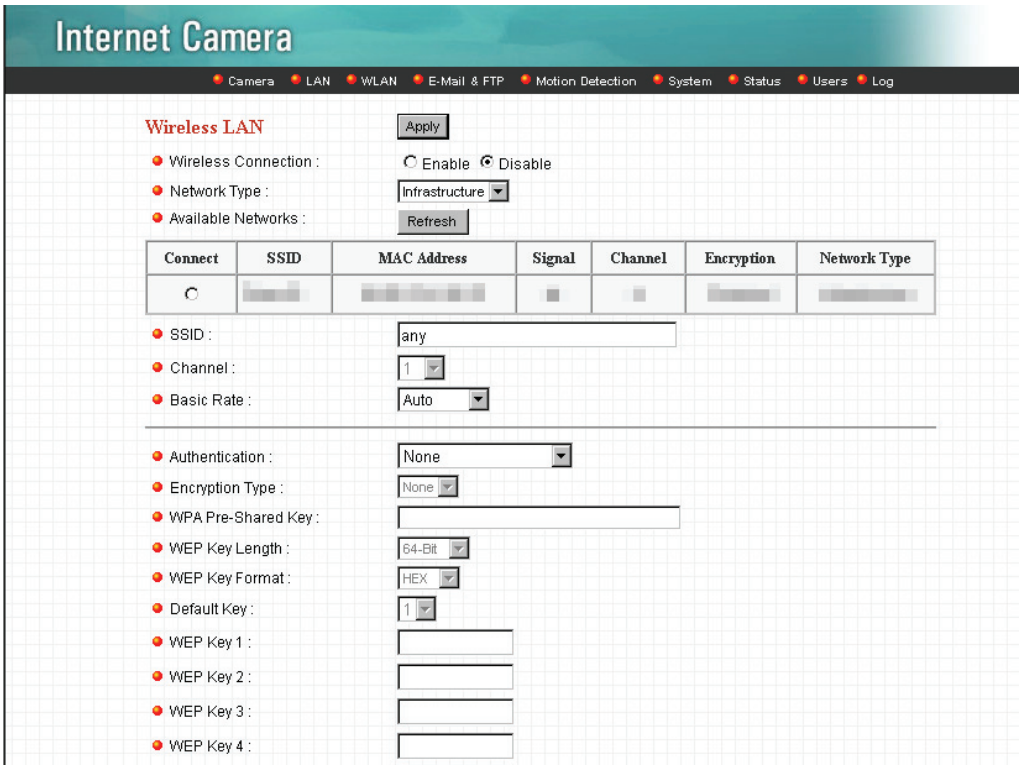
Enable UPNP	Enable or disable UPnP function of the camera.
Apply	When you finish the “UPnP” setting, click “Apply”.



LoginFree

Filename	The default value is “loginfree”. That’s mean user can get a snapshot image from Internet Explorer. The format is like: IP Camera will send a snapshot image to Internet Explorer. If user changed file name (Ex: “1234”), the URL must be changed to “http://192.168.2.3/1234.jpg”
Apply	When you finish the “UPnP” setting, click “Apply”.

8.3. WLAN



Wireless Setting

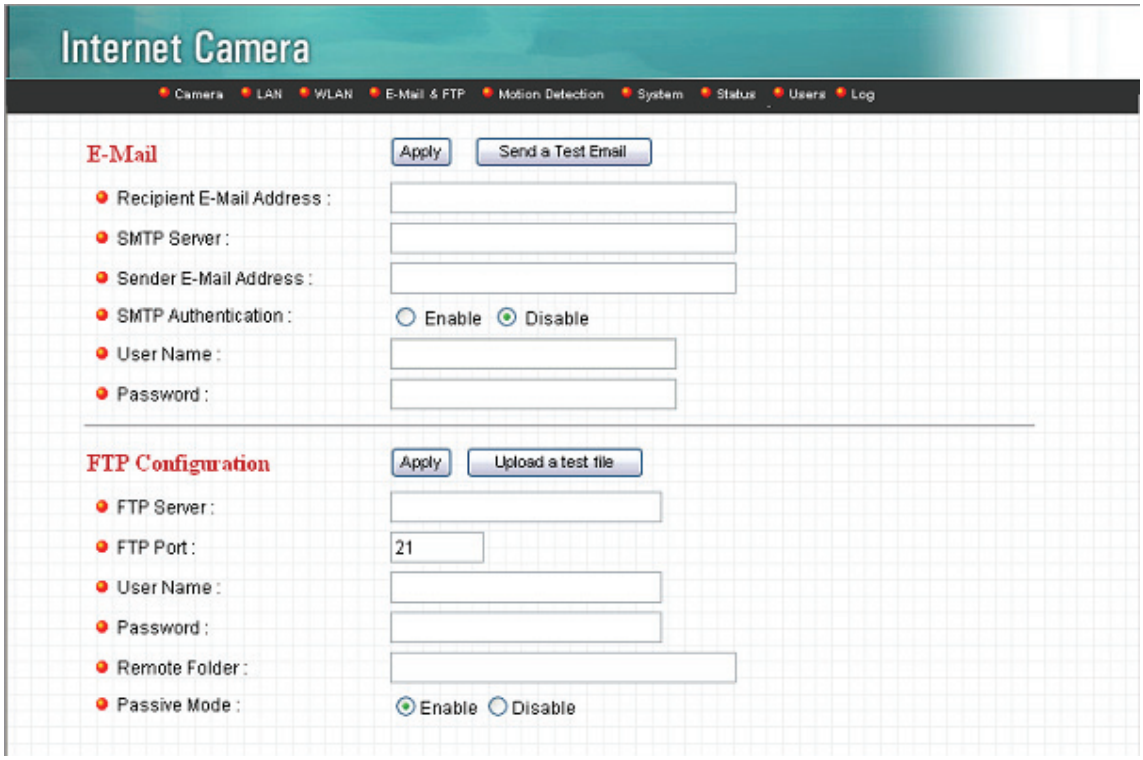
Wireless connection	Enable or disable the wireless function of the SOHO Network Camera. By default, the function is disabled.
Network Type	Infrastructure – This operation mode requires the presence of a Wireless LAN Access Point or Router. All communication is done via the Access Point or Router. Ad-Hoc – Select this mode if you want to connect to another wireless stations in the Wireless LAN network without through an Access Point or Router.
Available Networks	Select the networks listed below and click apply to connect to the specified network.
SSID	The SSID (up to 32 printable ASCII characters) is the unique name identified in a WLAN. The ID prevents the unintentional

	merging of two co-located WLANs. You may specify a SSID for the card and then only the device with the same SSID can interconnect to the card. If you want to add one of the networks nearby to the profile list, pull down the menu, all the networks nearby will be listed and you can add one of them to the profile list.
Channel	This setting is only available for Ad Hoc mode. Select the number of the radio channel used for the networking. The channel setting should be the same with the network you are connecting to.
Basic Rate	The camera will force to the data rate that you selected to transmit data.
Authentication and Encryption Type	Choose the authentication type you want to use. “None” means that you don’t want any encryption for wireless. “Open System” means that you can use WEP for encryption or not to encryption. When you select “Shared Key”, you must use WEP for encryption. The last option is “WPA-PSK”. When you select this authentication type, you can encryption your wireless with WPA-TKIP or WPA-AES.
WPA Pre-Shared Key	The WPA-PSK key can be from 8 to 64 characters and can be letters or numbers. This same key must be used on all of the wireless stations in the network.
WEP Key Length	You may select 64-bit or 128-bit to encrypt transmitted data. Larger key length will provide higher level of security, but the throughput will be lower.
WEP Key Format	Hexdecimal – Only “A-F“, “a-f“ and “0-9“ are allowed to be set as WEP key. ASCII – Numerical values, characters or signs are allowed to be WEP key. It is more recognizable for user.
Default Key	Select one of the keys (1~4) as the encryption key.

Key1 ~ Key4	The WEP keys are used to encrypt data transmitted in the wireless network. Fill the text box by following rules below. 64-bit – Input 10-digit Hex values (in the “A-F”, “a-f” and “0-9” range) or 5-digit ASCII characters (including “a-z” and “0-9”) as the encryption keys. For example: “0123456aef“ or “test1”. 128-bit – Input 26-digit Hex values (in the “A-F”, “a-f” and “0-9” range) or 13-digit ASCII characters (including “a-z” and “0-9”) as the encryption keys. For example: “01234567890123456789abcdef“ or “administrator”.
Apply	When you finish “WLAN” setting, click this button to validate the setting values.

8.4. E-Mail and FTP

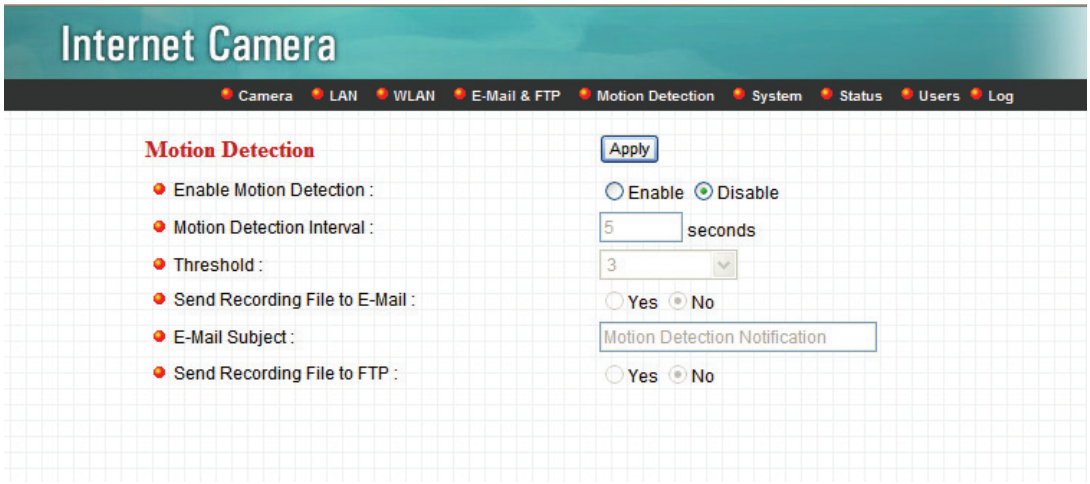
The “E-Mail & FTP” lets you setup E-Mail client and FTP client that camera can sent live video to your e-mail account or FTP server when Motion has been detected.



AV Server	
Recipient E-Mail Address	This camera supports “Motion Detection” function. Enter the E-Mail Account for receiving the pictures.
SMTP Server	Enter the SMTP Server for the E-Mail sending.
Sender E-Mail Address	Specified the e-mail address of the e-mail sender.
SMTP Authentication	Enable or Disable the SMTP Authentication function
Username	When Authentication is enabled, input the SMTP Username.
Password	When Authentication is enabled, input the password.
Send a Test Email	Press this button to send a test e-mail to your mailbox. You can use this function to test if your setting is correct.
FTP Server	This camera supports “Motion Detection” functions. When Motion Detection event occurred, you can record the pictures to FTP server. Enter the FTP address for receiving the pictures.
FTP Port	Enter the port of the FTP server.
User Name	Specify the user account of ftp server.
Password	Specify the Password of your ftp account.
Remote Folder	Specify the folder of the ftp site that you want to store the video.
Password	When Authentication is enabled, input the password.
Passive Mode	If your Camera is under NAT, you usually need to enable this feature.

8.5. Motion Detection

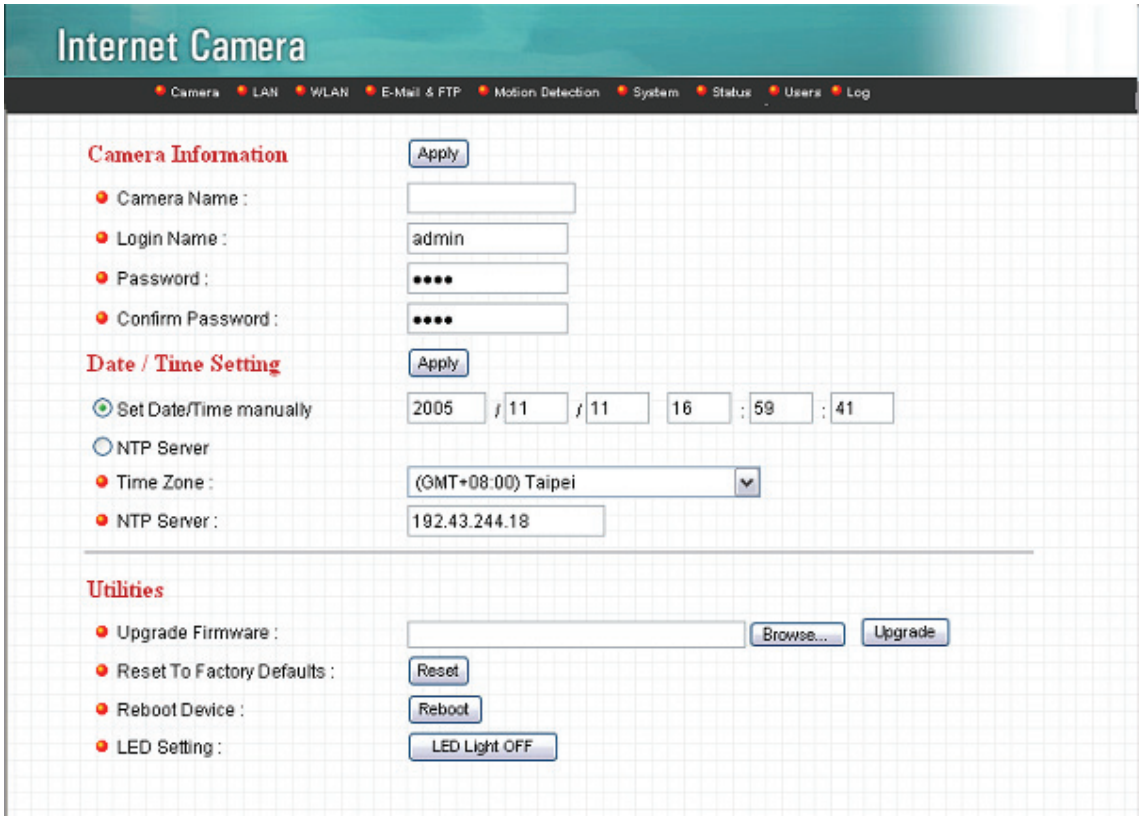
The “Motion Detection” allows users to setup the behavior of motion detection feature.



Motion Detection	
Motion Detection Enable	Enable or Disable the Motion Detection Function.
Next Event Detected Interval	Setup the interval between two events. For example, if you setup the interval to 5 seconds, the next event will start after this event finished + 5 seconds.
Threshold	Setup the sensitivity of motion detection.
Send Recording File to E-Mail	Select Yes to send the recorded video file to your e-mail account that you had specified at “E-Mail & FTP” menu.
E-Mail Subject	Specify the subject of motion detection notify e-mail.
Send Recording File to FTP	Select Yes to send the recorded video file to your FTP server that you had specified at “E-Mail & FTP” menu.

8.6. System

The “System” allows users to setup the camera’s parameters, like camera name, data/time setting. And also provide firmware upgrade and reset tools at this page.

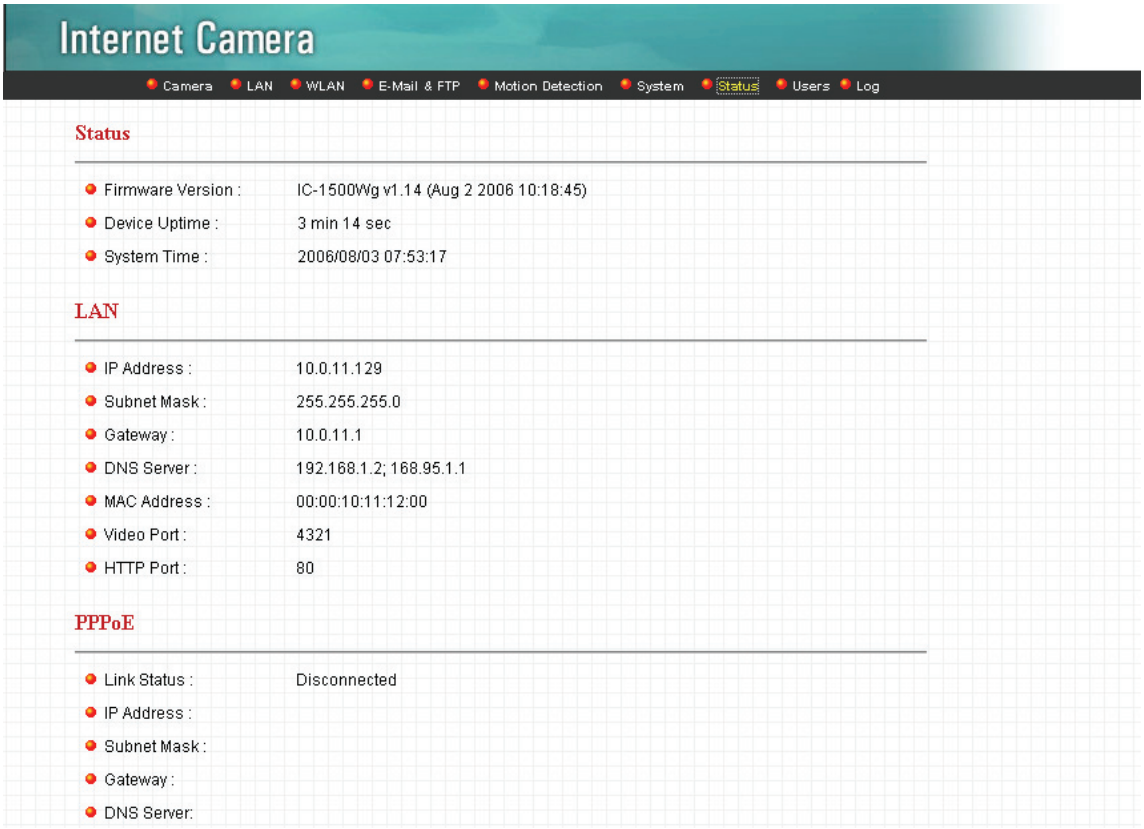


System	
Camera Name	The default camera name is “IC1500”. It is recommended to name a meaningful name for the camera.
Login Name	Setup your administrator account’s login name. Default name is “admin”
Password	Enter up to 4 digits password for the new user account.
Confirm Password	Enter the password again to confirm the setting.
Set Date/Time manually	Display the current Date and Time.

NTP Server	Synchronize the Date and Time with this NTP server.
Time Zone	Select the time zone that your camera put on.
NTP Server	Specify the IP Address of the NTP Server.
Upgrade Firmware	You can upgrade camera's firmware via this function. Press the browse button, find the correct firmware and press upgrade.
Reset to Factory Defaults	If you want to reset all the camera settings to default, click this button.
Reboot Device	To reboot the SOHO Network Camera, click "Reboot".
LED Setting	There are four LEDs to indicate the status of SOHO Network Camera. If you wan to secure the camera from noticing, you can turn off the LED light by clicking "LED Light OFF". To turn on the LED light, click "LED Light ON".

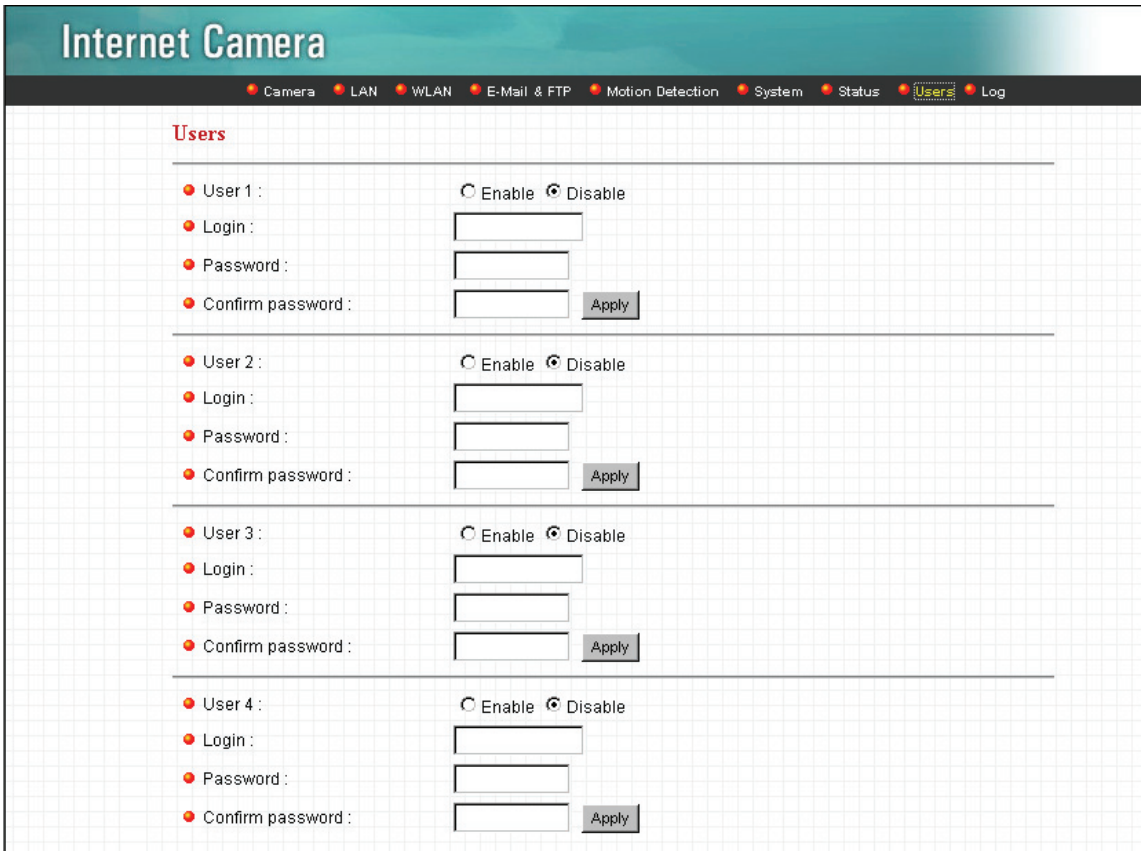
8.7. Status

The "Status" shows the current firmware version, uptime, system time and IP information of this camera.



8.8. Users

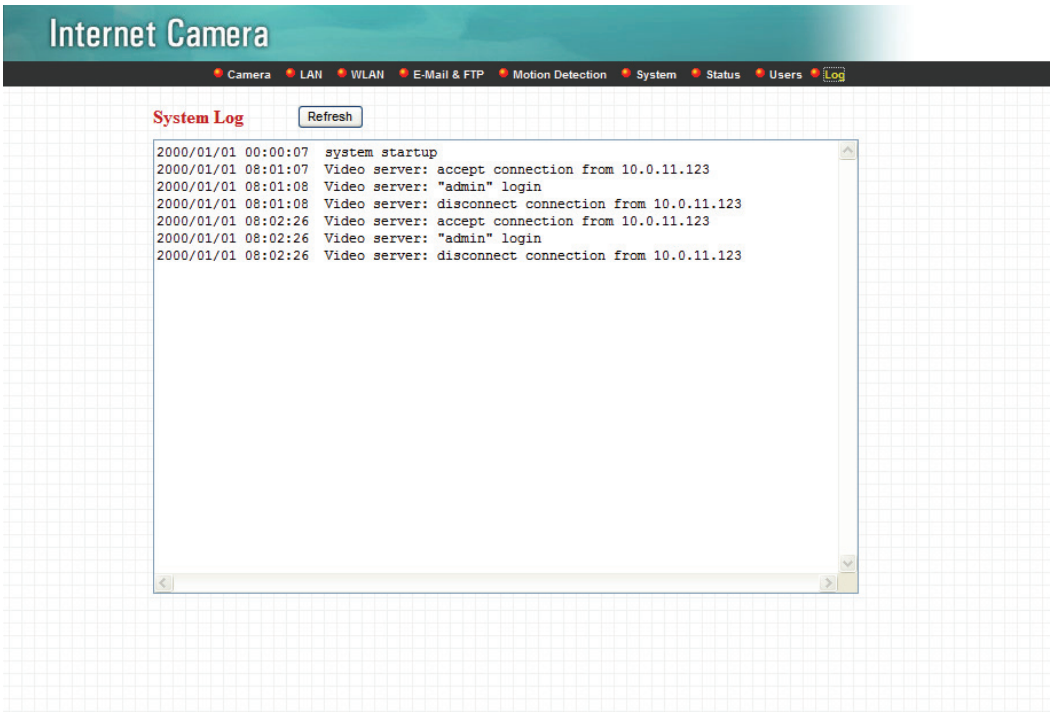
The “Users” allows users to add four user accounts which are able to view video from Camera Viewer and Web Management. These users, unlike Administrator, are not allowed to configure the camera.



User 1 / 2 / 3 / 4	
User #	Enable or Disable the user number #.
Login	Enter the the login name to the camera.
Password	Enter up to 4 digits password for the new user account.
Confirm Password	Enter the password again to confirm the setting.
Apply	Click “Apply” to save the user account setting.

8.9. Log

The “Log” allows users to monitor the device event and time. If you have trouble to use this device, the log file will help administrator to know the status of device.



Log	
Log screen	The screen will show event and event time of device.
Refresh	You can press “Refresh” button to refresh the log screen.

Frequently Asked Questions

Q1: What is an SOHO Network Camera?

A: The SOHO Network Camera is a standalone system connecting directly to an Ethernet or Fast Ethernet network. It is different from the conventional PC Camera; the SOHO Network Camera is an all-in-one system with built-in CPU and web-based solutions providing a low cost solution that can transmit high quality video images for monitoring. The SOHO Network Camera can be managed remotely, accessed and controlled from any PC/Notebook over the Intranet via a web browser or camera viewer.

Q2: What algorithm is used to compress the digital image?

A: The SOHO Network Camera utilizes MJPEG video compression technology to provide high quality images. MJPEG is a standard for video compression and can be applied to various application software.

Q3: Can I capture or record still images from the SOHO Network Camera?

A: Yes, you are able to capture or record still images with the snapshot function from the Camera Viewer application supplied with the SOHO Network Camera CD-ROM.

Q4: What network cabling is required for the SOHO Network Camera?

A: The SOHO Network Camera uses Category 5 UTP Twisted-pair cable allowing 10 Base-T and 100 Base-T networking.

Q5: Can the SOHO Network Camera be setup as a PC-cam on the computer?

A: No, the SOHO Network Camera is used only on Ethernet and Fast Ethernet network.

Q6: Can the SOHO Network Camera be connected on the network if it consists of only private IP Addresses?

A: Yes, the SOHO Network Camera can be connected to a LAN with private IP Addresses.

Q7: The focus on the SOHO Network Camera is bad, how can I correct it?

A: Adjust the SOHO Network Camera focus manually.

9. Technical Specifications

- **Video specification**

Max Resolution: 640 x 480 pixels
Sensor: 300K pixels 1/4" color CMOS sensor
Gain control: Automatic
Exposure: Automatic
White Balance: Automatic
Focal Length: 4.8 mm
Aperture: F=1.8

- **Image (Video Setting)**

Image compression: MJPEG Image Video
Digital 24-bit Color

Frame rate: 30fps@QVGA, 20fps@VGA
Video resolution: 176 x 144, 320x240, 640x480

- **System Hardware**

LAN Connector: One RJ-45 port to connect to 10/100Mbps Ethernet
Wireless: IEEE 802.11b/g(*Wireless Model Only)
LED Indicator: LAN LED (Green), WLAN LED (Amber), Power LED (Blue)
Power Supply: 12V / 1A (Wireless Model)
Power Supply: 12V / 0.4A (Wired Model)

- **HTTP/Utility**

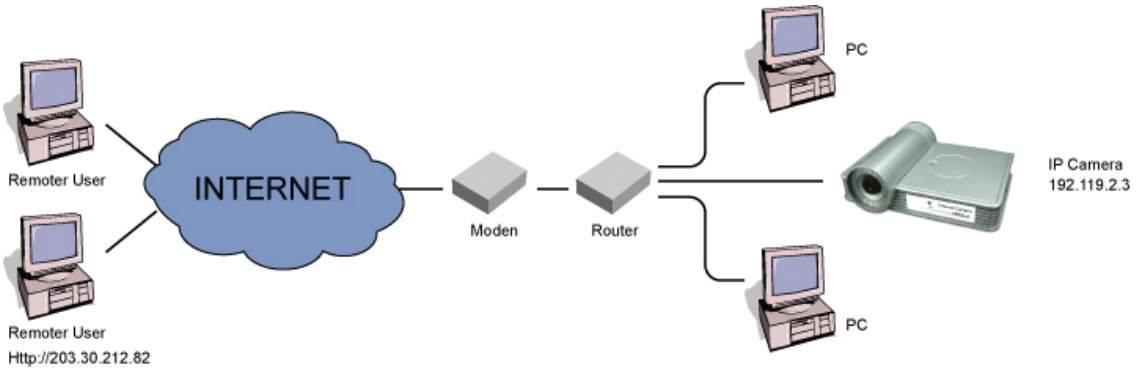
Includes easy-to-use Viewer & Recorder utility
Provides Admin utility & WEB browser Management
View multiple cameras simultaneously - Up to 16 cameras at a time
Manual/Schedule Record, Video Playback/Stop/Forward/Pause
Supports four additional user accounts for viewing camera
Auto sending Snap Shot by E-mail or FTP
Support DDNS and UPnP functions
Supports Windows 2000/XP/2003/Vista
Firmware Upgradeable

- **EMI & Safety**

FCC, CE!

10. Appendix A Router/Gateway Setup for Internet Viewing

To view SOHO Network Camera across the Internet, you have to make sure Router/Gateway has configured to pass incoming TCP/UDP connections from remote PC to the SOHO Network Camera. The Router/Gateway should set port forwarding or virtual server for the connections. Please see the illustration as below.



Router/Gateway Port Forwarding/Virtual Server Setup

Name	Protocol	Port	LAN IP
Setup 1	TCP	80	192.168.2.3
Setup 2	TCP	4321	192.168.2.3

Port Definition

Setup 1	It is the port of Web port. You have to configure the protocol to "TCP".
Setup 2	It is the port of Video port. You have to configure the protocol to "TCP".
Setup 3	It is the port for SOHO Network Camera and Administrator Utility communication. The protocol setting should be "UDP".

Viewing SOHO Network Camera via Web Browser

Setup 1/Setup 2	If you want to view the video via Web Browser, you have to ensure the Router/Gateway has configured setup1 and setup 2. If the web port is not default port "80", but changed to 8080. The remote user has to enter http://203.30.212.82:8080.

Viewing SOHO Network Camera via Camera Viewer Utility

Setup 2	If you want to use Camera Viewer Utility to view the camera, please make sure the Router/Gateway has configured setup2.

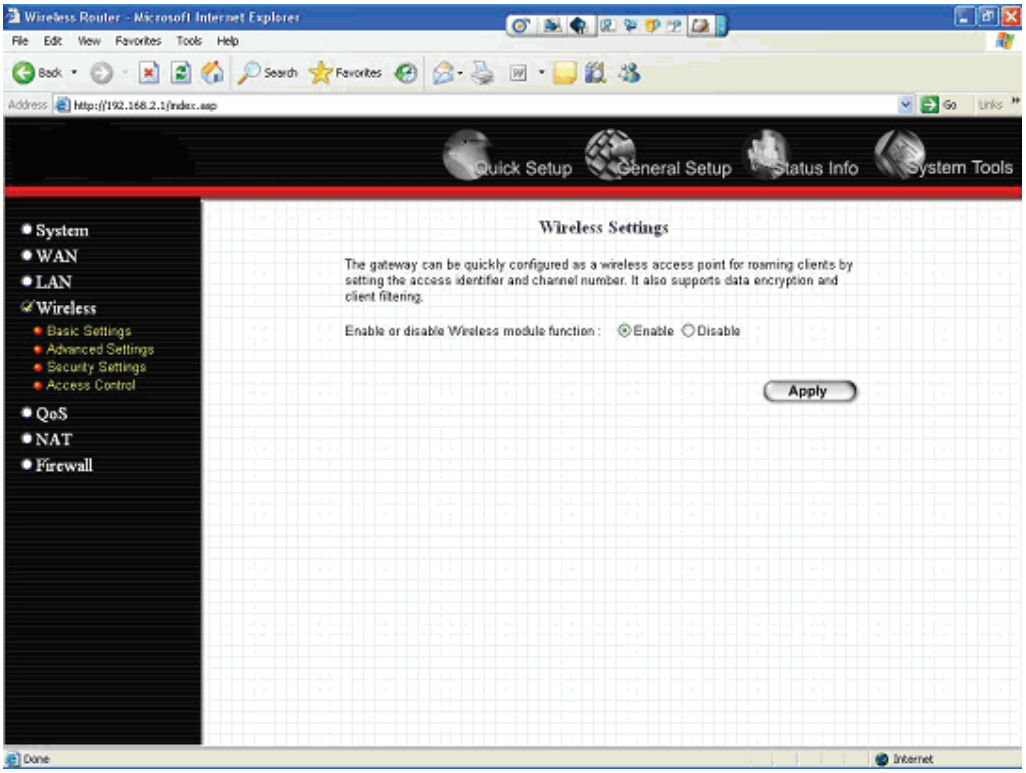
Setup SOHO Network Camera via Administrator Utility

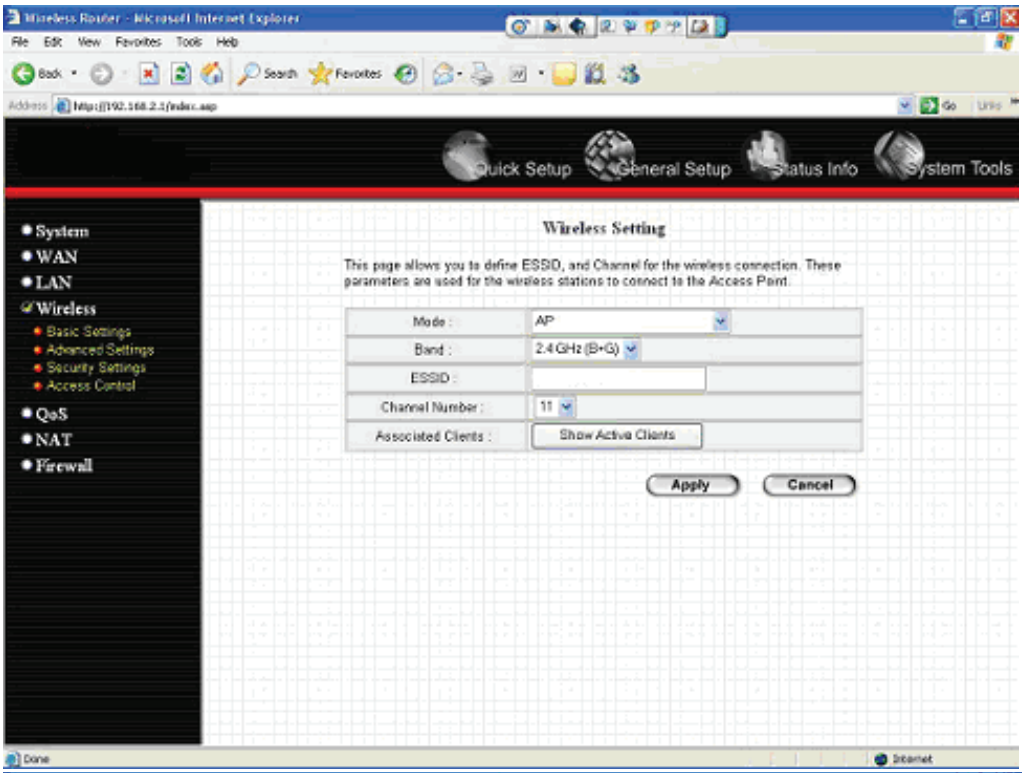
Setup 3	If you want to use Administrator Utility to configure the SOHO Network Camera via Internet, the Router/Gateway should configure setup 3.

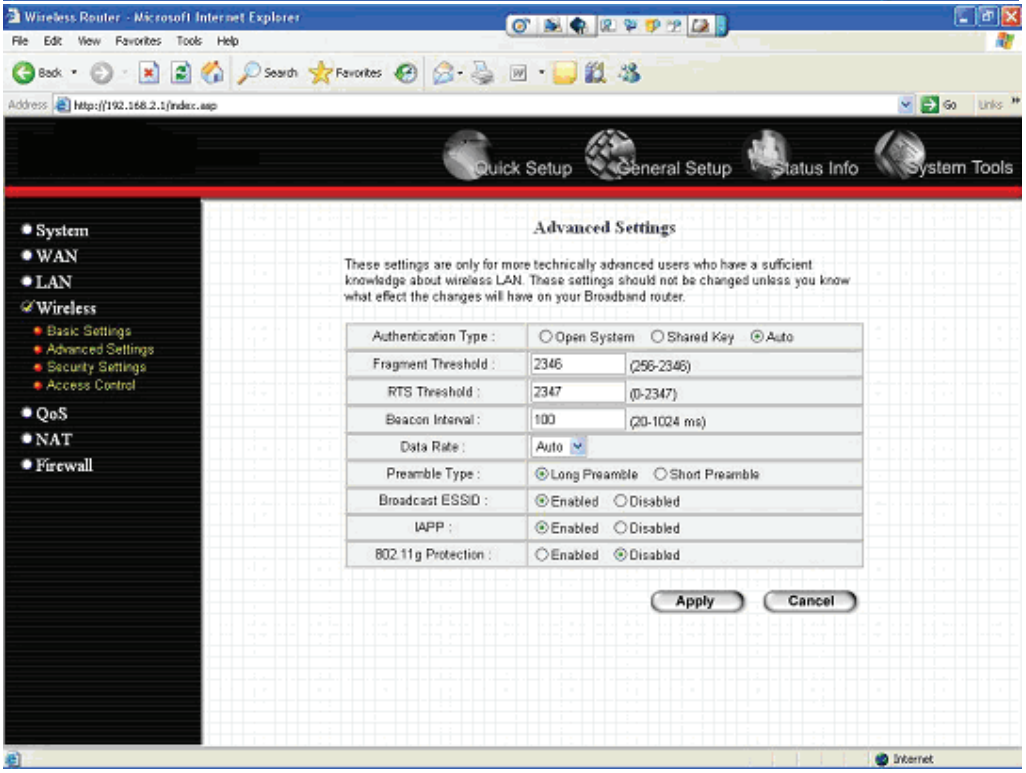
11. Appendix B Set up WLAN step by step

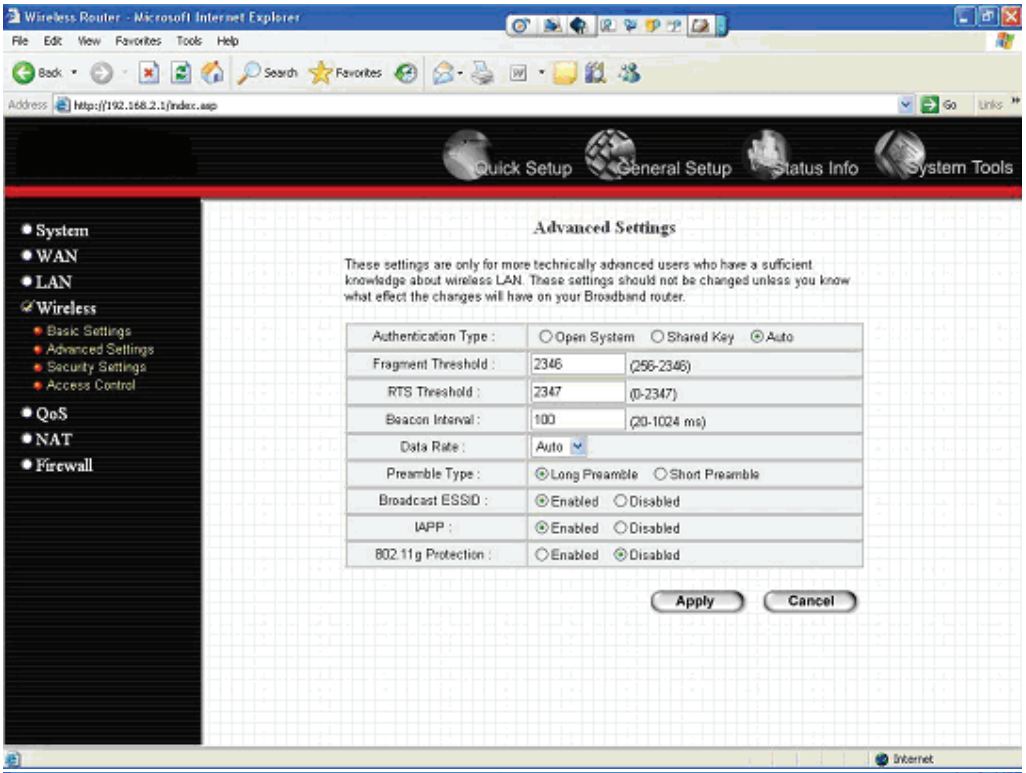
Please follow the procedures below:

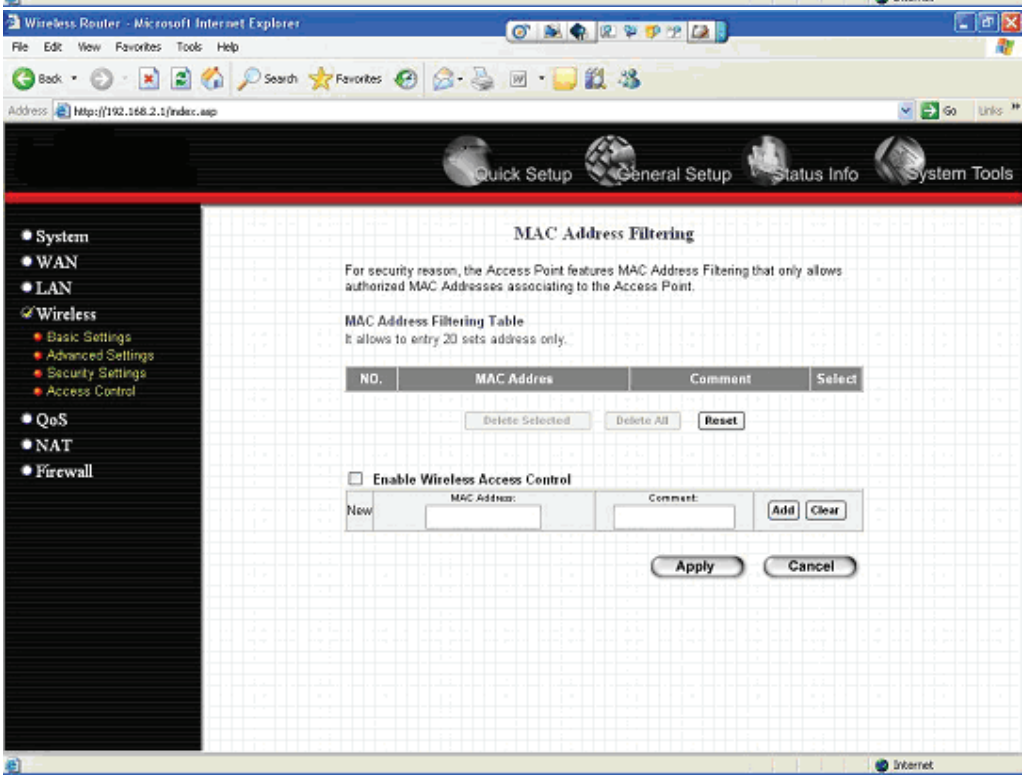
(1) Please Check you Router Wireless settings, Suggesting Open System (Disable security) first.



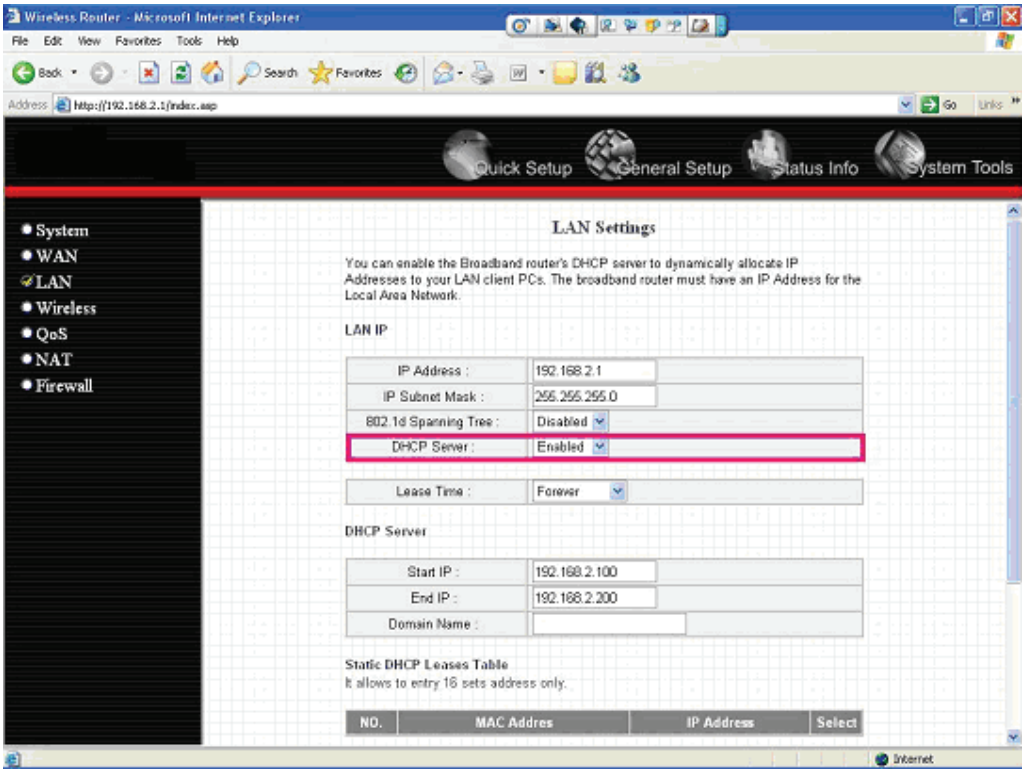

Wireless Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.2.1/index.asp
Go Links
Quick Setup
General Setup
Status Info
System Tools
System
WAN
LAN
Wireless
Basic Settings
Advanced Settings
Security Settings
Access Control
QoS
NAT
Firewall
Wireless Setting
This page allows you to define ESSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point.
Mode : AP
Band : 2.4 GHz (B+G)
ESSID :
Channel Number : 11
Associated Clients : Show Active Clients
Apply
Cancel
Done
Internet


Wireless Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.2.1/index.asp
Go Links
Quick Setup
General Setup
Status Info
System Tools
System
WAN
LAN
Wireless
Basic Settings
Advanced Settings
Security Settings
Access Control
QoS
NAT
Firewall
Advanced Settings
These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Broadband router.
Authentication Type : Open System Shared Key Auto
Fragment Threshold : 2346 (256-2346)
RTS Threshold : 2347 (0-2347)
Beacon Interval : 100 (20-1024 ms)
Data Rate : Auto
Preamble Type : Long Preamble Short Preamble
Broadcast ESSID : Enabled Disabled
IAPP : Enabled Disabled
802.11g Protection : Enabled Disabled
Apply
Cancel
Internet





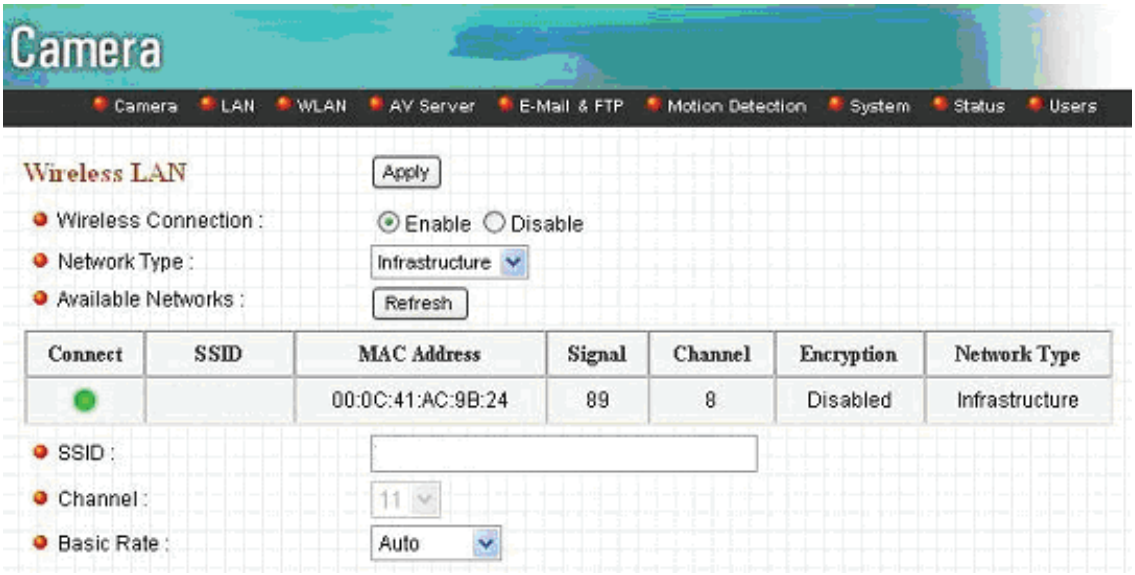
(2) Please turn on DHCP Server of the Router for this testing.



(3) Please reset the Wireless IP Camera settings to Factory Defaults by press the Reset button over 8 seconds.

(4) Please change your PC's IP address to 192.168.2.xx (which xx from 10 to 253), Netmask = 255.255.255.0

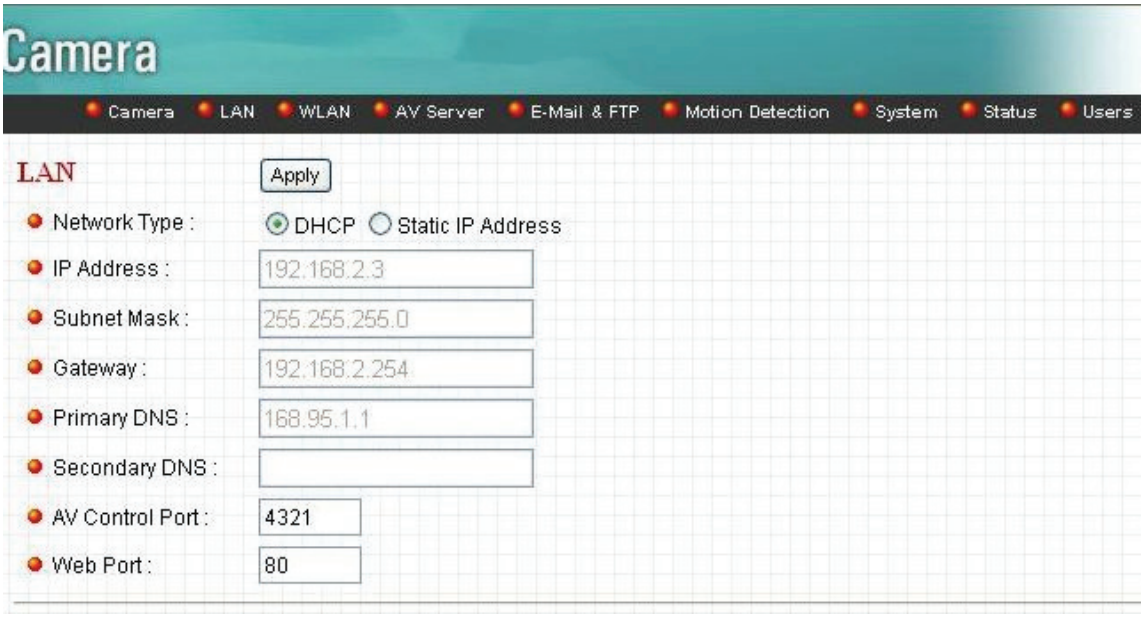
(5) Please go to Web-Config WLAN section of the Wireless IP Camera.
Press Refresh button until you find the SSID you want in the list first!
Then select the Connect column of the SSID you want and select the Enable button of Wireless Connection.
Press Apply button.



(6) Please go to the LAN section of Web-Config.

Select DHCP and press Apply button.

Then you could close this IE browser window now.



(7) Please UNPLUG the Ethernet Cable of the Wireless IP Camera now!

(8) Wait for seconds then the Wireless IP Camera should be linked with the Wireless Router.

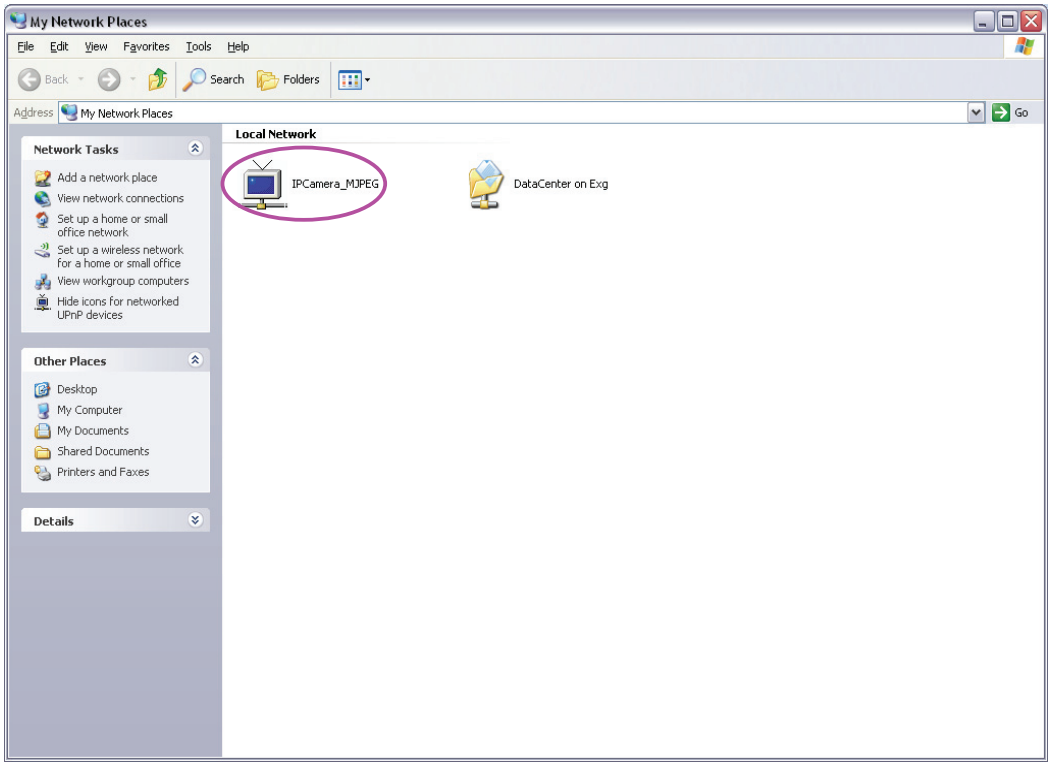
(9) Now you could let your PC to be connected with the Wireless Router.

(10) In this case, if your PC's DHCP Client IP is 192.168.8.101, then the Wireless IP Camera must be
192.168.8.100, because Wireless IP Camera was got IP early then your PC.

(11) You could go to the Web-Interface of the Wireless IP Camera.

12. Appendix C Viewing via UPnP in Windows XP

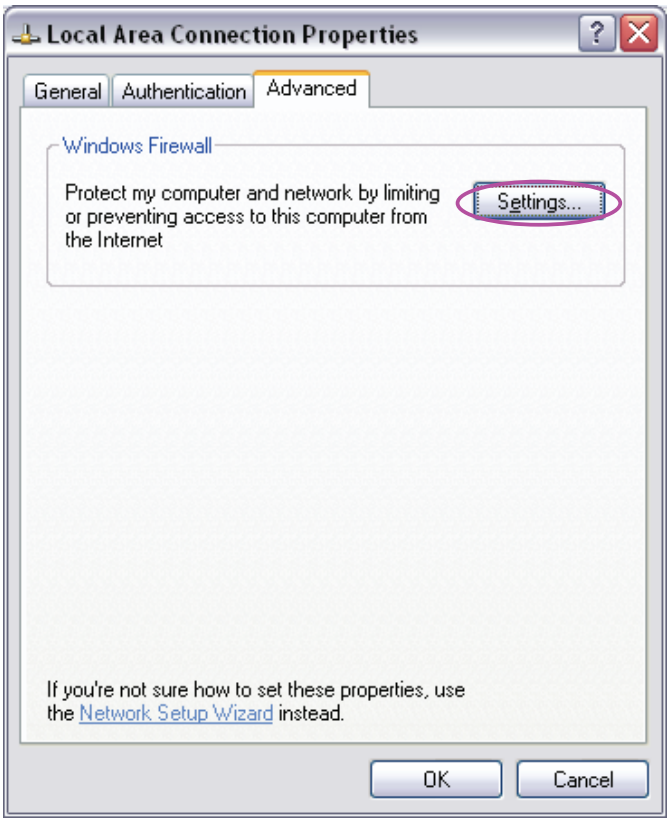
When the UPnP function is enabled, the camera can be detected by UPnP compliant system such as Windows XP. The camera will be displayed in the Neighborhood of Windows XP, so you can directly double click the camera or right click the camera and select “Invoke” to view the video through web browser.



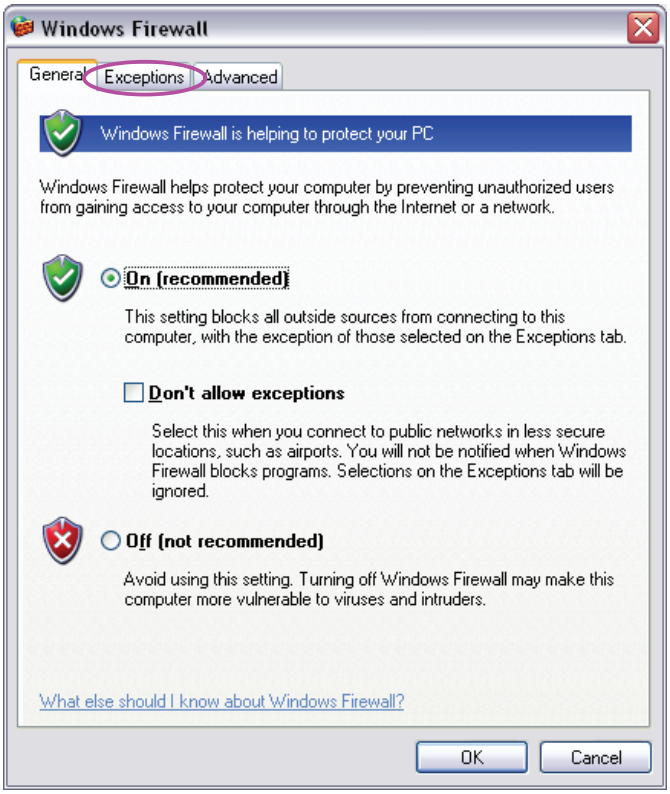
Enable UPnP in Windows XP SP2

If you can't find the camera in the Neighborhood of Windows XP SP2 or you have seen the following message when you double click the camera. You have to check if UPnP function is blocked by the firewall. Please follow the steps below to enable it.

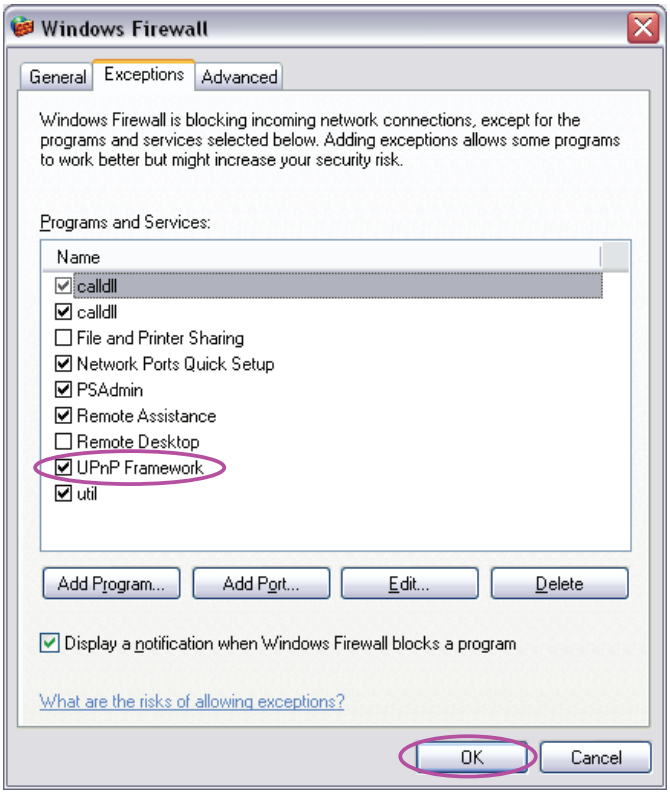
1. Go to "Start\Settings\Network Connections".
2. Right click the "Local Area Connection" and select "Properties".
3. In the "Local Area Connection Properties", select "Advanced" option menu and click "Settings".



4. The “Windows Firewall” screen will be popped up, select “Exceptions” option menu.



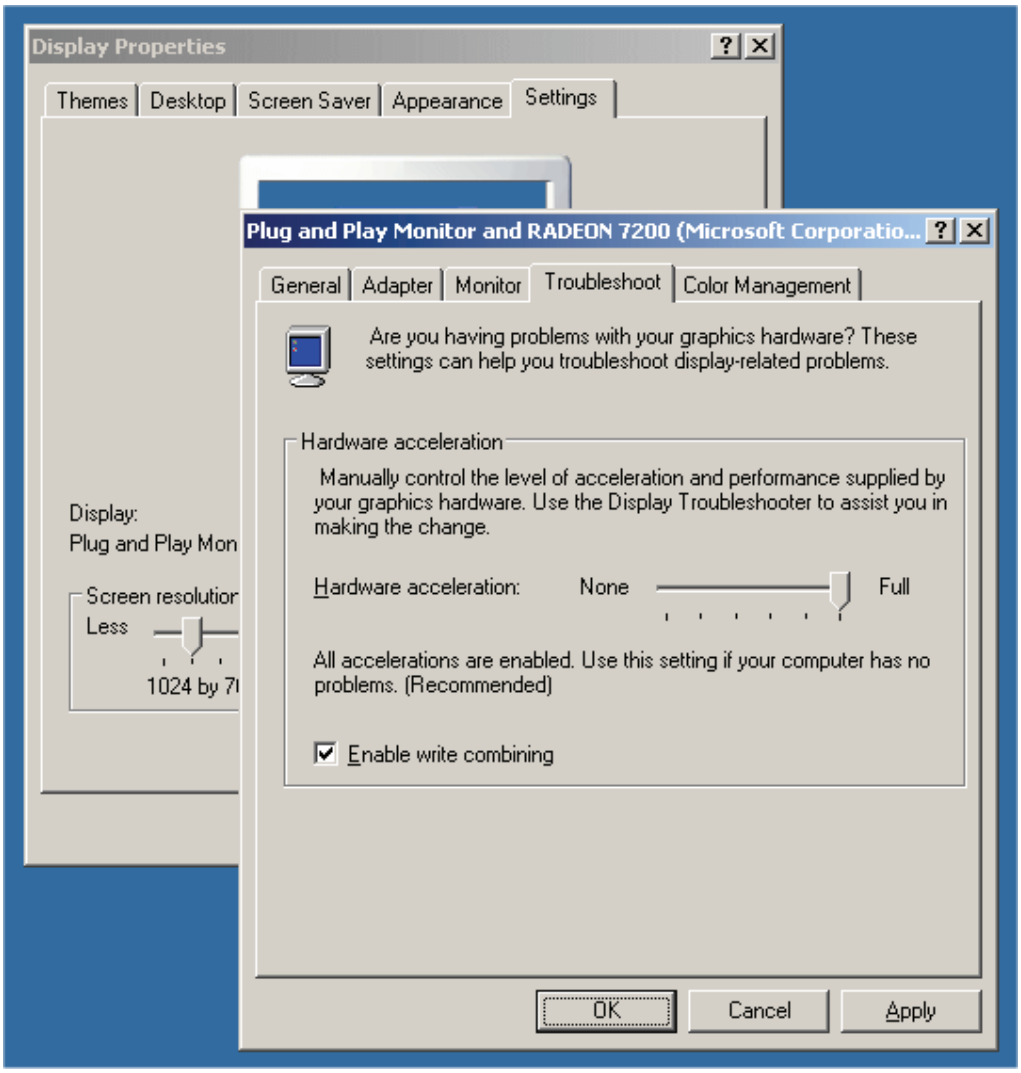
5. Enable “UPnP Framework” from the “Programs and Services list” and click “Ok”.



13. Appendix D Configure Windows 2003 Server

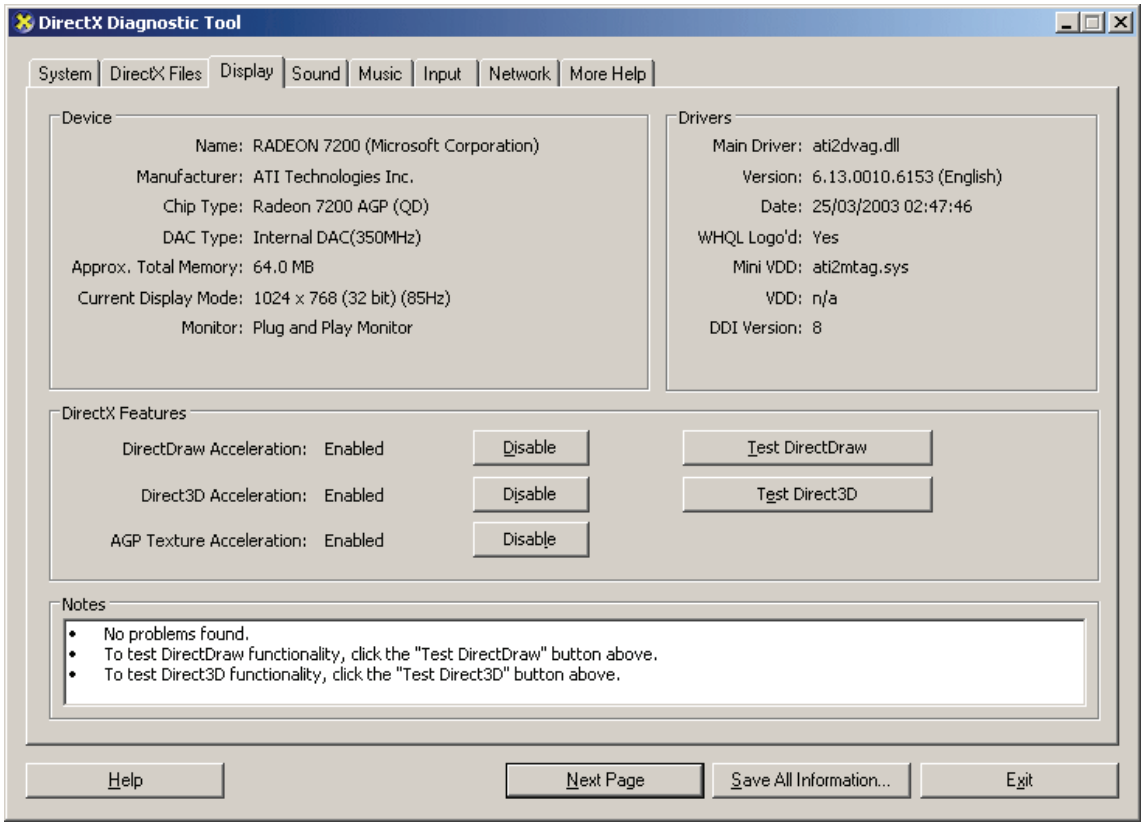
Graphics Hardware Acceleration and DirectX are disabled by default on a Server configuration to ensure maximum stability and uptime. But for any reason you need to enable them to use DirectX enabled applications this section will guide you through on how you can do it.

Enabling Graphics Hardware Acceleration



1. Simply right click anywhere on your desktop and select Properties -> Settings tab -> Advanced -> and finally, the Troubleshoot tab.
2. Now move the Hardware acceleration slider across to Full
3. Click OK
4. You may experience a monitor black out for a few seconds, this is normal.

Enabling DirectX



5. go to Start -> Run -> and type dxdiag followed by enter. You will get a dialog box asking if you want to allow dxdiag to access the internet to check for valid WHQL certificates - click on Yes.

6. Let's click on the Display tab, now click on all three boxes to enable DirectDraw, Direct3D and AGP Texture Acceleration.

BRINGING NETWORKS TO LIFE

INTELLINET NETWORK SOLUTIONS™ offers a complete line
of active and passive networking products.
Ask your local computer dealer for more information or visit

www.intellinet-network.com