



501583 IP Camera

User Manual

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1. Introduction

Thank you for choosing the Internet Camera. This Camera sends live video through the Internet to a web browser or camera viewer 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 Internet Camera can connect directly to a network. The Motion JPEG video compression produces a high quality, high-frame rate, 640 x 480 video stream.

The included Camera Viewer utility lets you record the video stream 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 Internet Camera.

2. Package Content

- One Internet Camera
- One Power Adapter
- One Camera Stand
- One 100cm. Category 5 Ethernet Cable
- 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 Internet Camera are:

- OS System: Windows 98SE, Me, NT, 2000, XP, Server 2003
- CPU: Intel Pentium III 750MHz above or Intel Celeron 1GHz above
- Memory Size: 128MB (256MB recommended)
- VGA Card Resolution: 800 x 600 or above

4. Hardware Installation

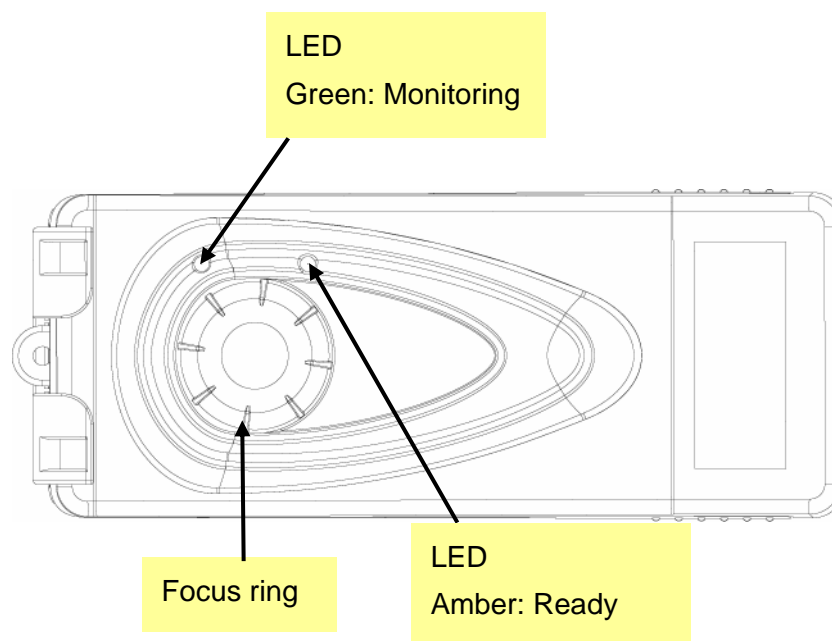
4.1. LED and Focusing

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 two LEDs indicating the camera status.

Monitoring: When someone is viewing the camera, the LED will light.

Ready: When the camera is power on and ready for access, the LED will light.



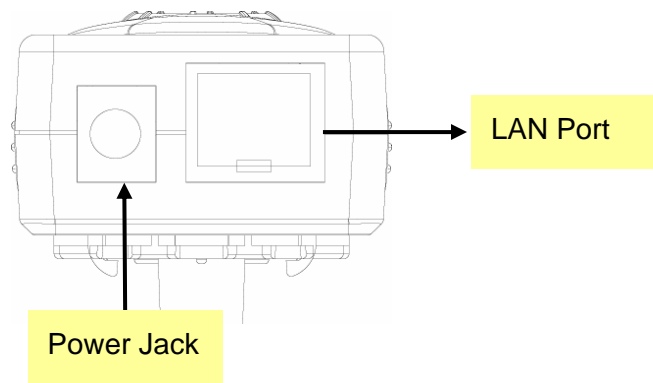
4.2. Camera Ports

The Camera features two ports and a Reset button.

Power: The Power port is where you will connect the power adapter.

LAN: The LAN port is where you will connect the Ethernet network cable.

Reset: The Reset button is what you will press if you need to reset the Camera to factory default settings. Insert a paper clip into the hole. Then press the button and hold it in for five seconds.



4.3. Installation Procedure

1. Unpack the Internet Camera package and verify that all the items listed in the Chapter 2 are provided.
2. Connect the Internet Camera to your network by attached the network cable from the switch/router to the UTP port of the Internet Camera.
3. Connect the power adapter to the Internet Camera and plug the power adapter to power outlet. The Internet Camera will be powered on. When the Internet Camera is ready, the Ready LED will show orange color.

Note: It is highly recommended to use the power adapter shipped with the Internet Camera, do NOT use any other power adapter from any sources.

5. Software Installation

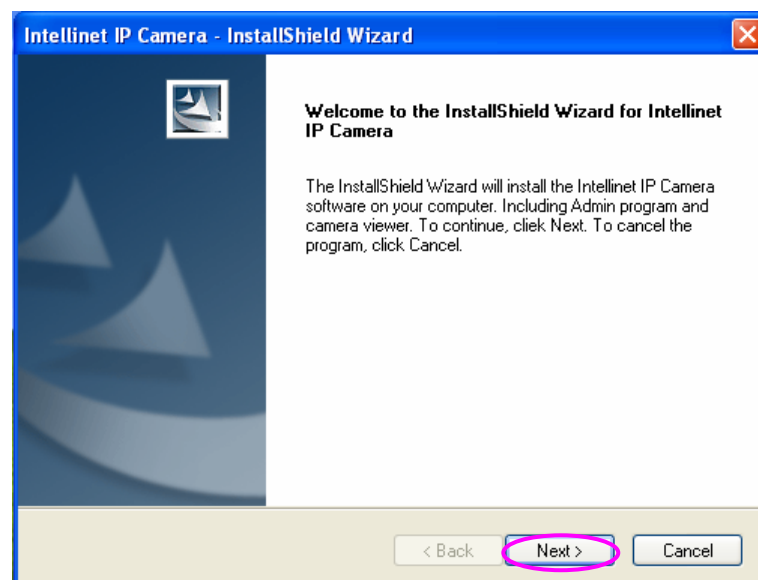
Follow the simple steps below to run the Install Wizard to guide you quickly through the Installation process. The following installation is implemented in Windows XP. The installation procedures in Windows 98SE/Me/2000/Server 2003 are similar.

1. Insert the CD shipped along with the Internet 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.

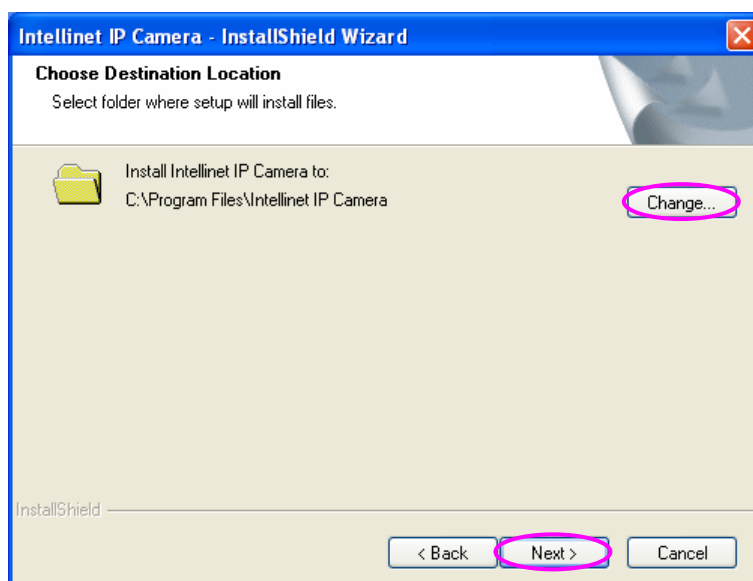
2. The Install Wizard will show four selections, select the program you want to install or click “Exit” to install the program later. The following installation steps are the demonstration of “Install Administrator Utility & Camera Viewer”.



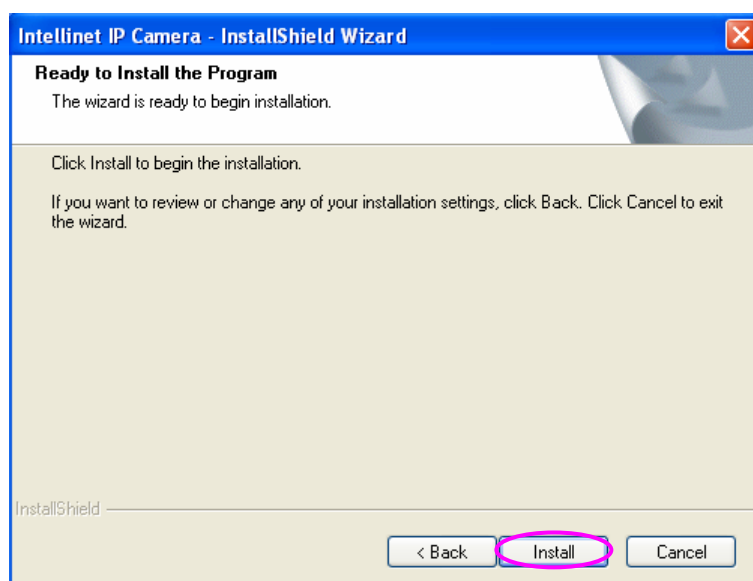
3. The system will start the installation procedures. Click “Next” to continue installation.



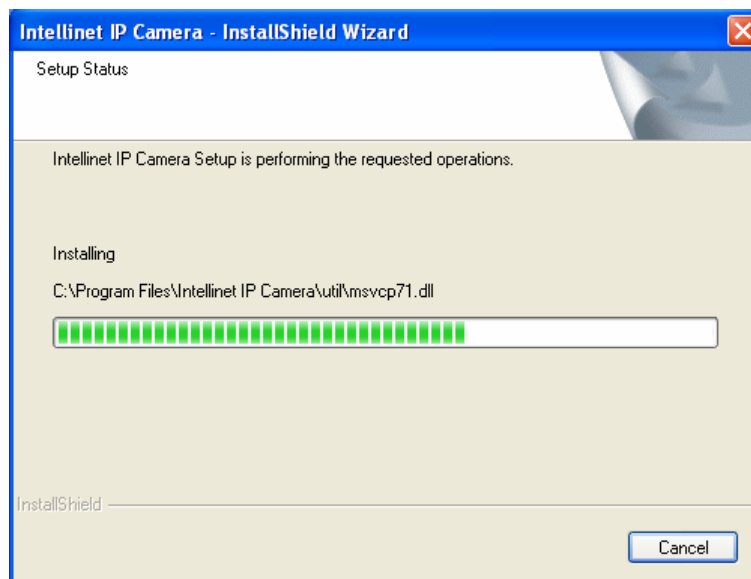
4. If you wish to install the software program in an alternate location, click “Change”; otherwise click “Next” to move on to the next step.



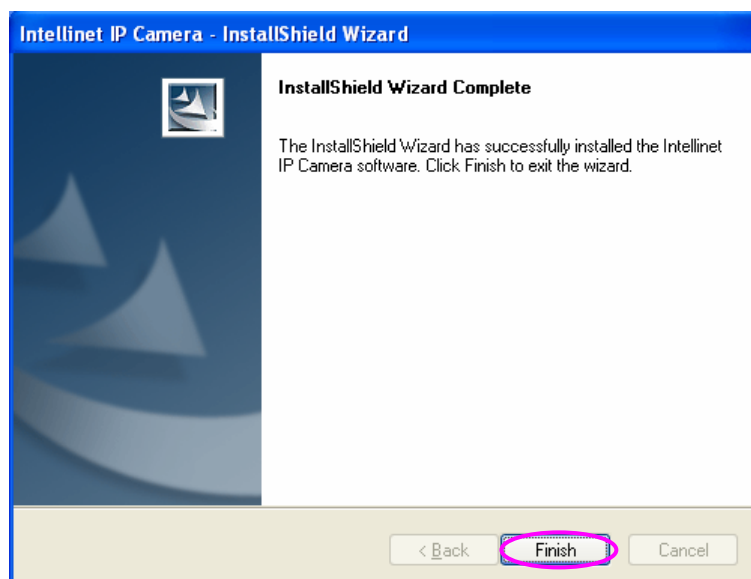
5. Click “Install” to start installing the program.



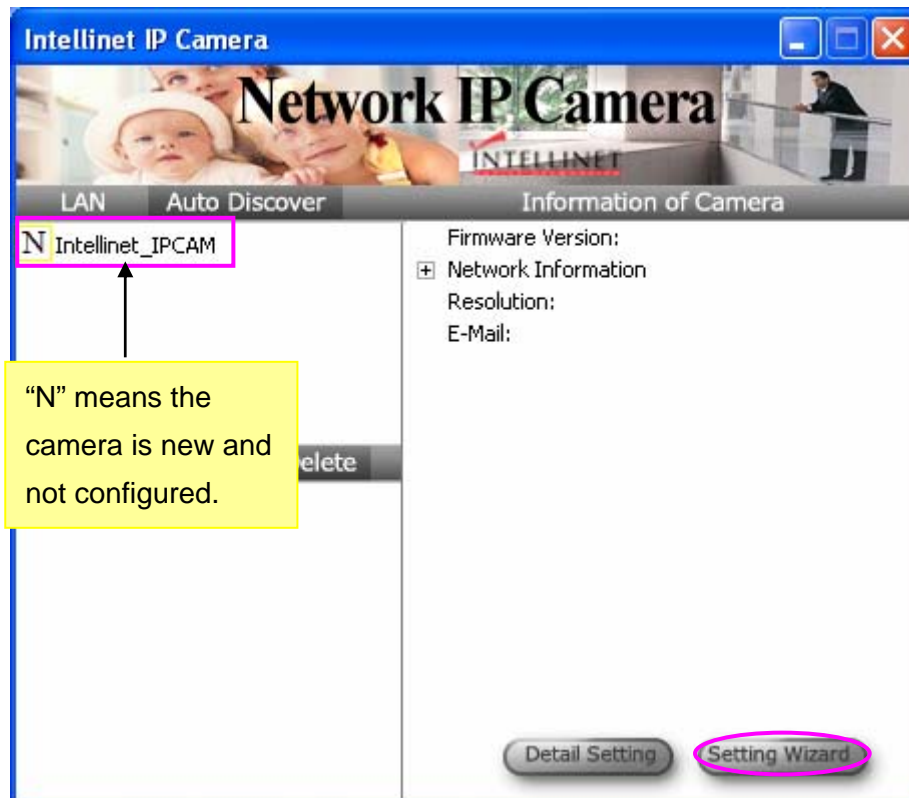
6. The system will install the program automatically.



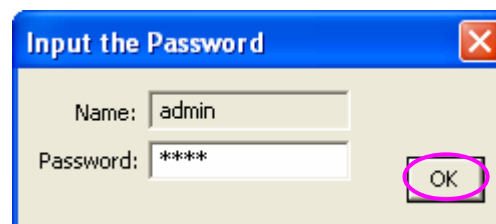
7. Click "Finish" to complete the software installation.



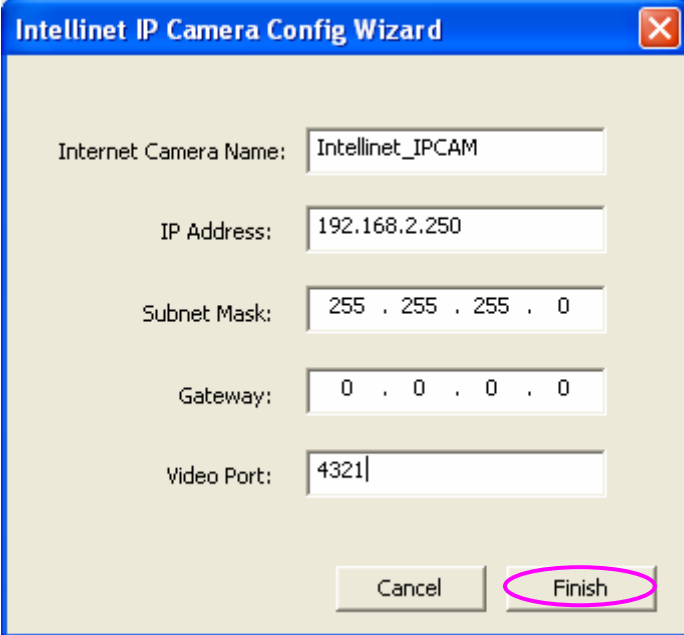
8. When the installation is completed. The system will auto run "Administrator Utility". On the Internet Camera first page, the cameras found in the network are listed in the left window. Choose the one you want to configure and click "Setting Wizard" to proceed.



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



10. Internet Camera is working through the network (TCP/IP Protocol). The IP address 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.

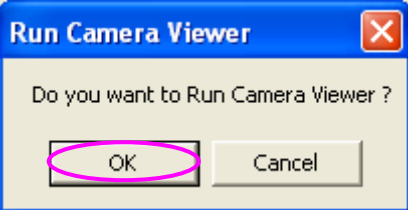


The image shows a Windows-style dialog box titled "Intellinet IP Camera Config Wizard". It contains several input fields for network configuration. The "Internet Camera Name" field is filled with "Intellinet_IPCAM". The "IP Address" field is filled with "192.168.2.250". The "Subnet Mask" field is filled with "255 . 255 . 255 . 0". The "Gateway" field is filled with "0 . 0 . 0 . 0". The "Video Port" field is filled with "4321". At the bottom right, there are two buttons: "Cancel" and "Finish". The "Finish" button is circled in pink.

Internet Camera Name:	Intellinet_IPCAM
IP Address:	192.168.2.250
Subnet Mask:	255 . 255 . 255 . 0
Gateway:	0 . 0 . 0 . 0
Video Port:	4321

Buttons: Cancel, Finish

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”.

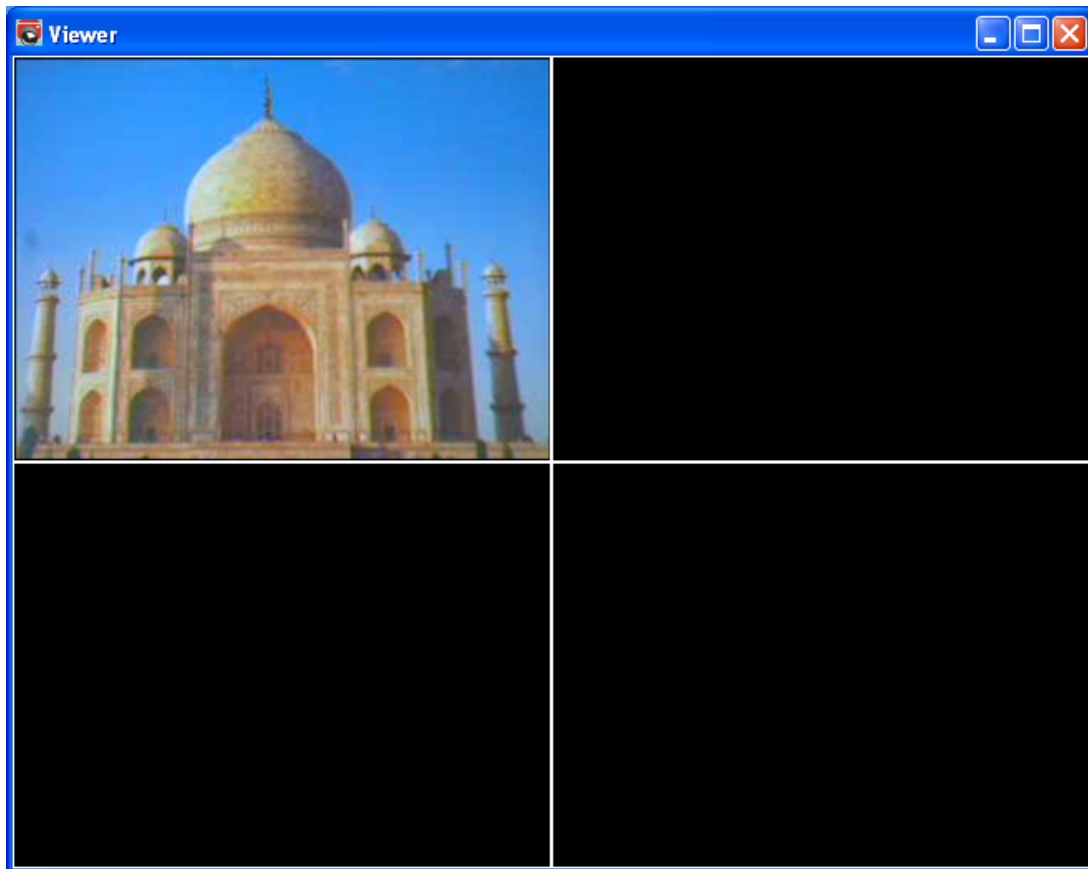


The image shows a small Windows-style dialog box titled "Run Camera Viewer". It contains a question: "Do you want to Run Camera Viewer ?". Below the question are two buttons: "OK" and "Cancel". The "OK" button is circled in pink.

Do you want to Run Camera Viewer ?

Buttons: OK, Cancel

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.

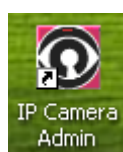


6. Using the Administrator Utility

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.

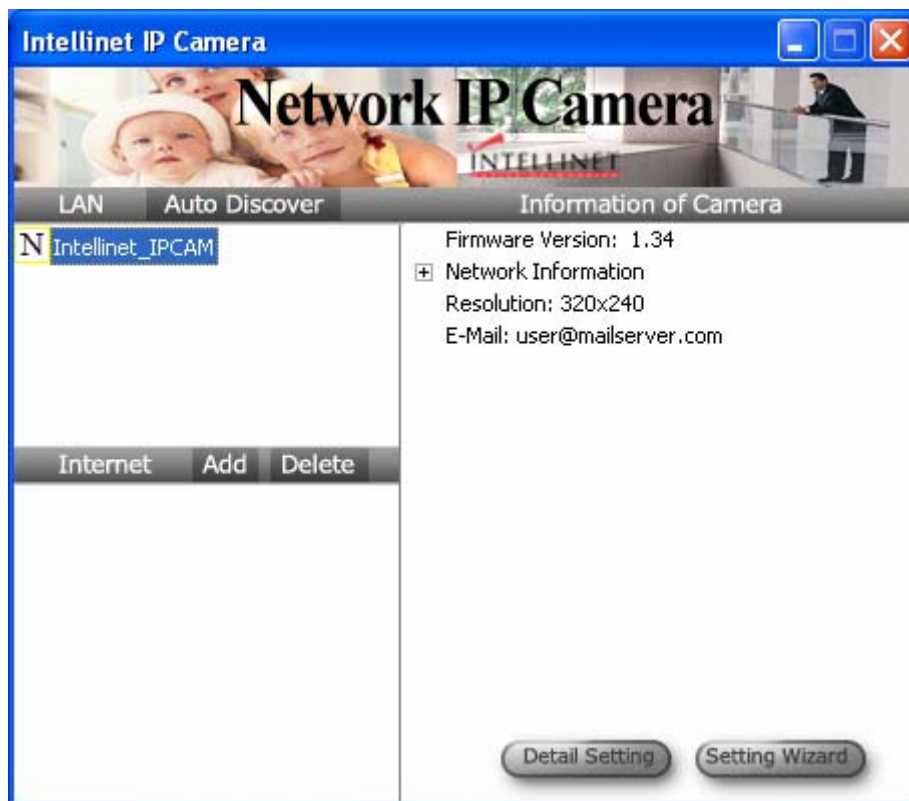
There are two ways to run the Administrator Utility as follows.

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

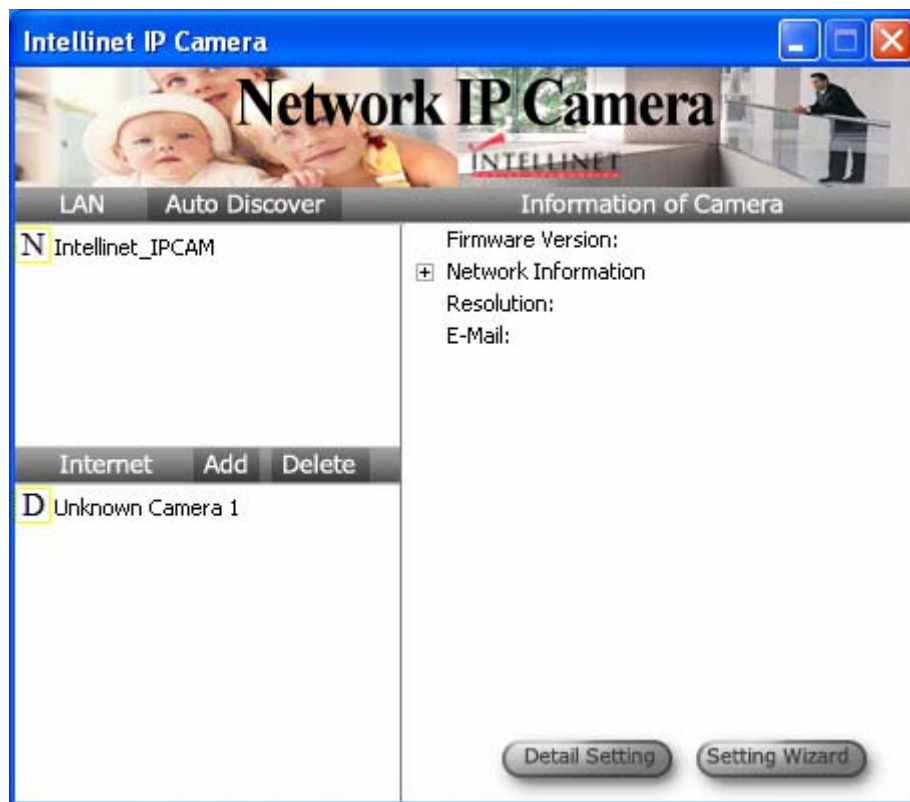


2. Click the “IP Camera Admin” icon to run the utility.

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 automatically.

Camera List The list shows the camera name and the setup status of the camera.

 Intellinet_IPCAM It means the camera is in the default setting.



 Intellinet_IPCAM 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.

Internet

Camera List	The list shows the camera name and the connect status of the camera.  Unknown Camera 1 It means the camera is disconnected or not in the Internet.  Intellinet_IPCAM 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.
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Camera Setting

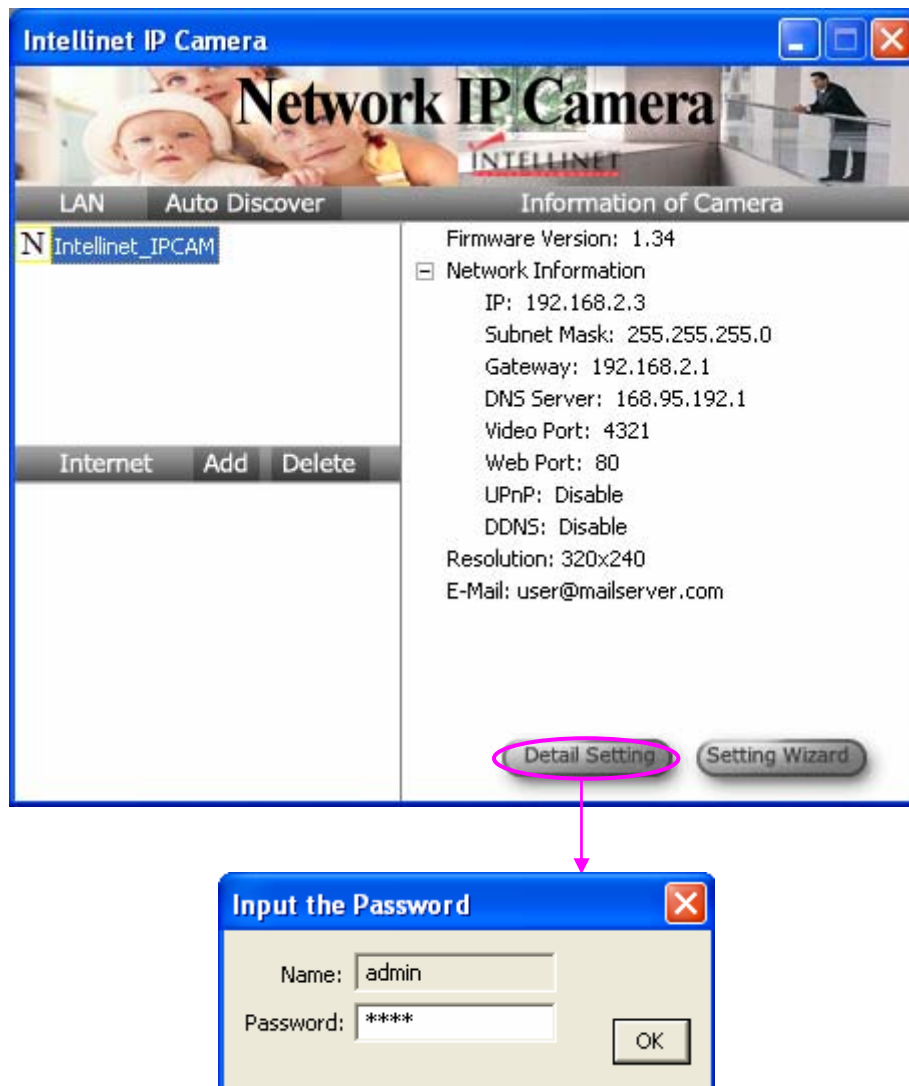
Detail Setting	Click “Detail Setting” to do more setting of the camera such as IP address, Resolution, password and firmware upgrade, etc.
Setting Wizard	Click “Setting Wizard” to setup the necessary setting for the camera.

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.

Edit Intellinet IP Camera

Network Setting | E-Mail Setting | Resolution | Advanced Setting

Internet Camera Name:

IP Address:

Subnet Mask:

Gateway:

DNS Server:

Video Port:

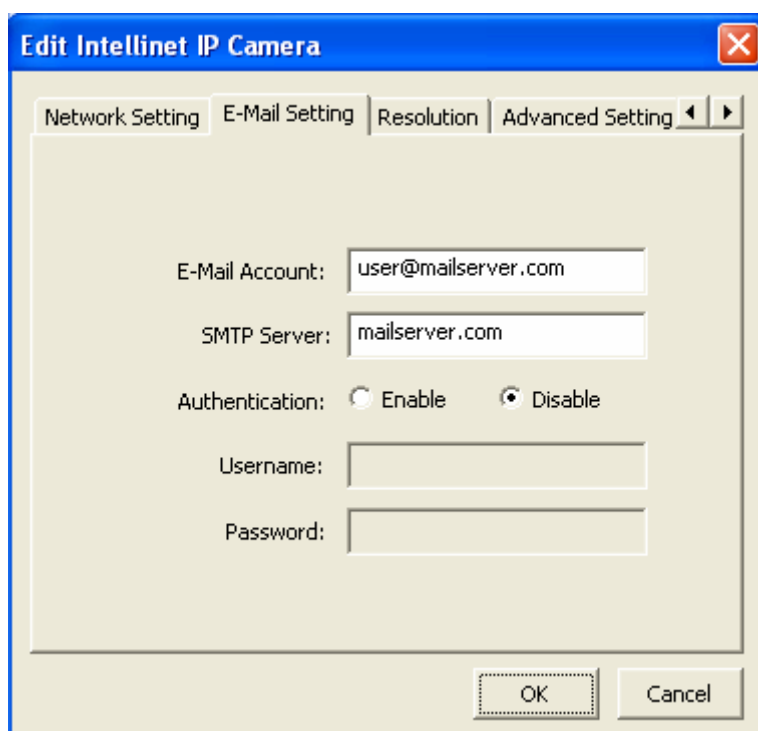
Web Port:

Network Setting

Internet Camera Name	The default camera name is "Intellinet_IPCAM". 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.



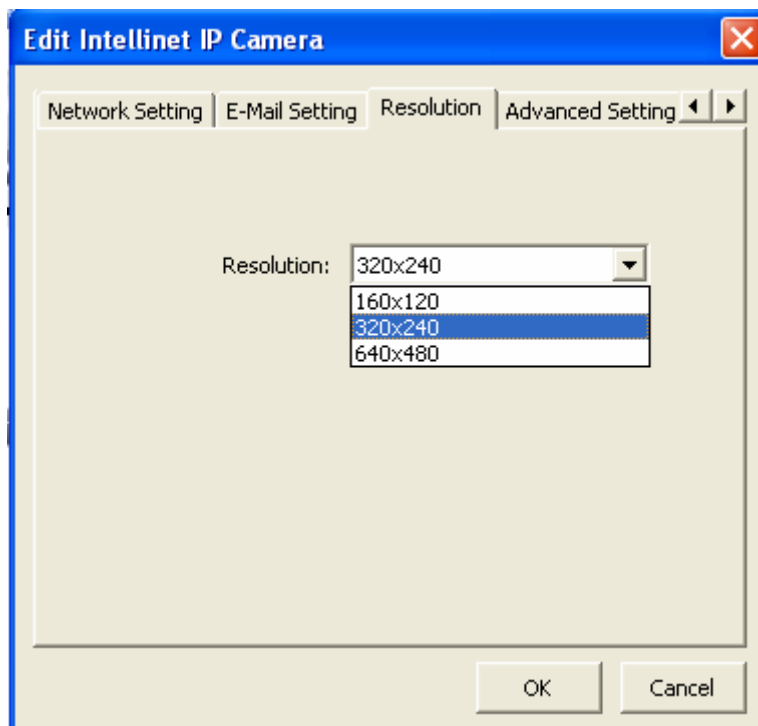
E-Mail Setting

E-Mail Account	This camera supports “Snap Shot” function. 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.
Authentication	Enable or Disable the SMTP Authentication function

E-Mail Setting

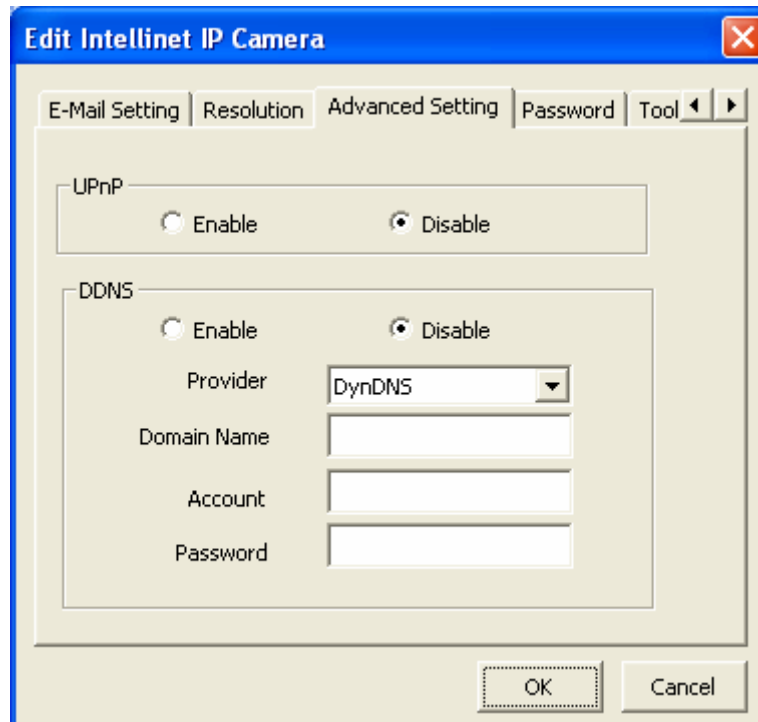
Username When Authentication is enabled, enter the SMTP Username.

Password When Authentication is enabled, enter the password.



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.

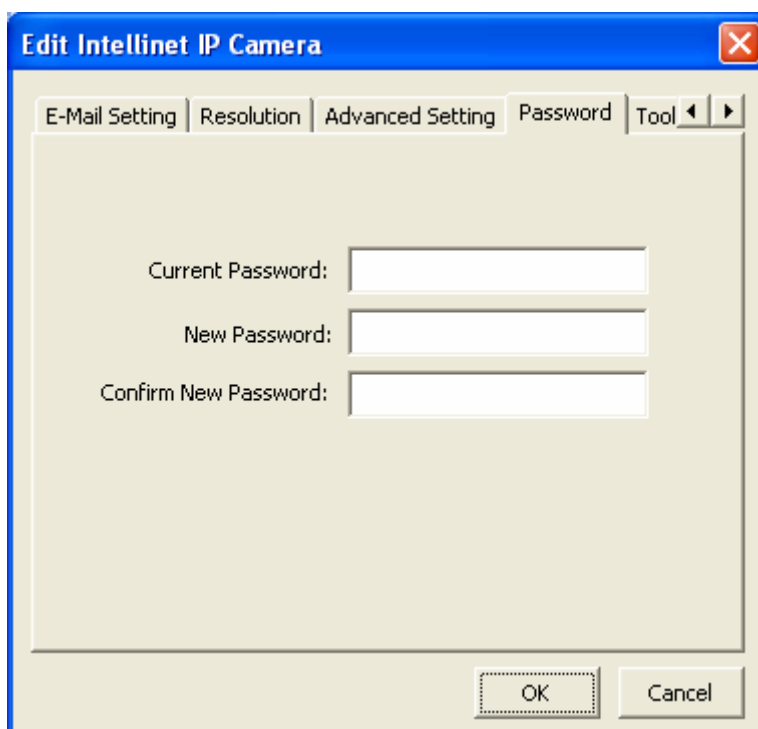


Advanced Setting

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.

Advanced Setting

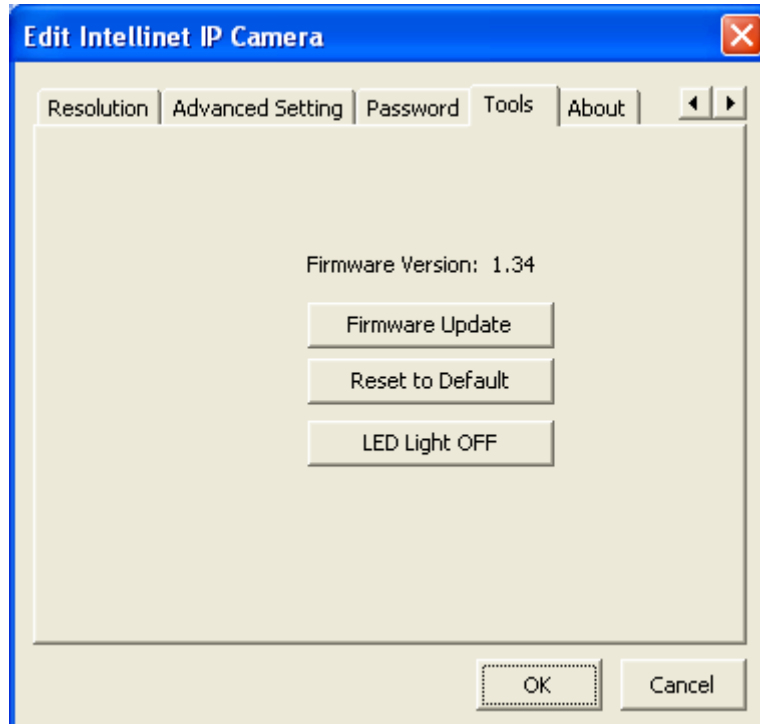
Domain Name	The domain name given by DynDNS is "registername.dyndns.com". Enter the domain name that you register for the camera from DynDNS web site.
Account	Enter the login name for the DDNS service.
Password	Enter the password for the DDNS service.



The screenshot shows a Windows-style dialog box titled "Edit Intellinet IP Camera". It has a blue title bar with a close button (X) in the top right corner. Below the title bar is a tabbed interface with five tabs: "E-Mail Setting", "Resolution", "Advanced Setting", "Password", and "Tool". The "Password" tab is currently selected. The main area of the dialog is light beige and contains three text input fields. The first field is labeled "Current Password:", the second is labeled "New Password:", and the third is labeled "Confirm New Password:". At the bottom right of the dialog are two buttons: "OK" and "Cancel".

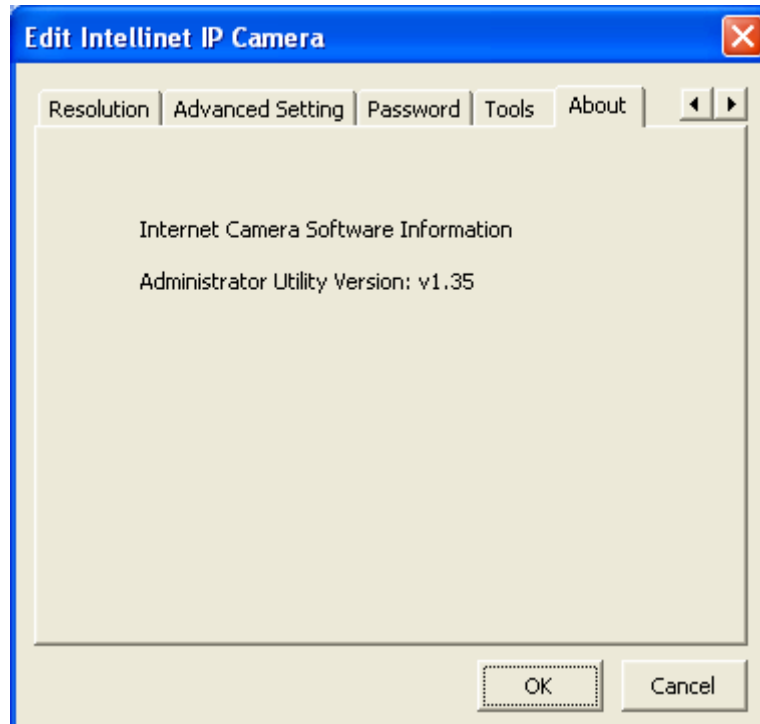
Password

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.



Tools

Firmware Version	Display current firmware version.
Firmware Update	Click "Firmware Update" to update new firmware for the camera. You have to wait for a while for the firmware upgrade.
Reset to Default	<p>If you want to reset the camera, click this button. The default settings of the camera are as follows.</p> <p>Camera Name: "IPCamera_MJPEG"</p> <p>IP Address: "192.168.2.3"</p> <p>Subnet Mask: 255.255.255.0</p> <p>Administrator Name: "Admin"</p> <p>Password: "1234"</p> <p>Video Port: "4321"</p> <p>Web Port: "80"</p>
LED Light ON/OFF	When this button shows "LED Light OFF", press it will turn off the led on camera. When it shows "LED Light ON", press it will turn on the led on camera.



Tools

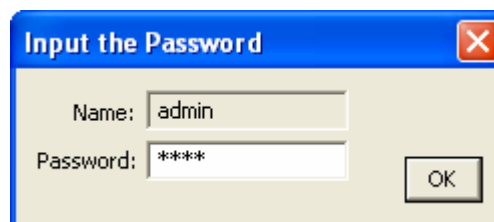
Administrator Utility Display current version of administrator utility.
Version

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.



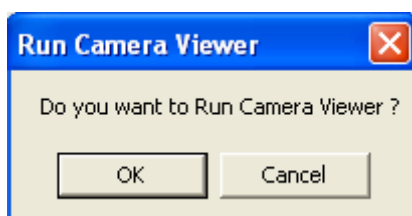
The image shows a Windows-style dialog box titled "Intellinet IP Camera Config Wizard". It has a blue title bar with a red close button. The main area is light beige and contains five labeled input fields: "Internet Camera Name:" with the text "Intellinet_IPCAM", "IP Address:" with "192.168.2.250", "Subnet Mask:" with "255 . 255 . 255 . 0", "Gateway:" with "0 . 0 . 0 . 0", and "Video Port:" with "4321". At the bottom right are two buttons: "Cancel" and "Finish".

Setting Wizard

Internet Camera Name	The default camera name is "Intellinet_IPCAM". It is recommended to enter a meaningful name for the camera.
IP Address	<p>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 192.168.2.250 to 192.168.2.0 and assign the camera an available IP Address.</p> <p>You are allowed to enter another IP Address to change the setting.</p>
Subnet Mask	<p>The wizard will auto search the Subnet Mask setting of the network and set the camera in the same Subnet Mask.</p> <p>You can enter another Subnet Mask to change the setting.</p>
Gateway	<p>The wizard will auto search the Gateway setting of the network and set the camera to use the same Gateway.</p> <p>You can enter another Gateway to change the setting.</p>

Setting Wizard

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. Using the Camera Viewer

The Camera Viewer Utility allows users to view video from up to four cameras. It also allows users to manual/schedule record video and playback the recording file. The status of camera viewing such as frame rate, video received, and etc. are also recorded in time.

There are three ways to run the Camera Viewer Utility as follows.

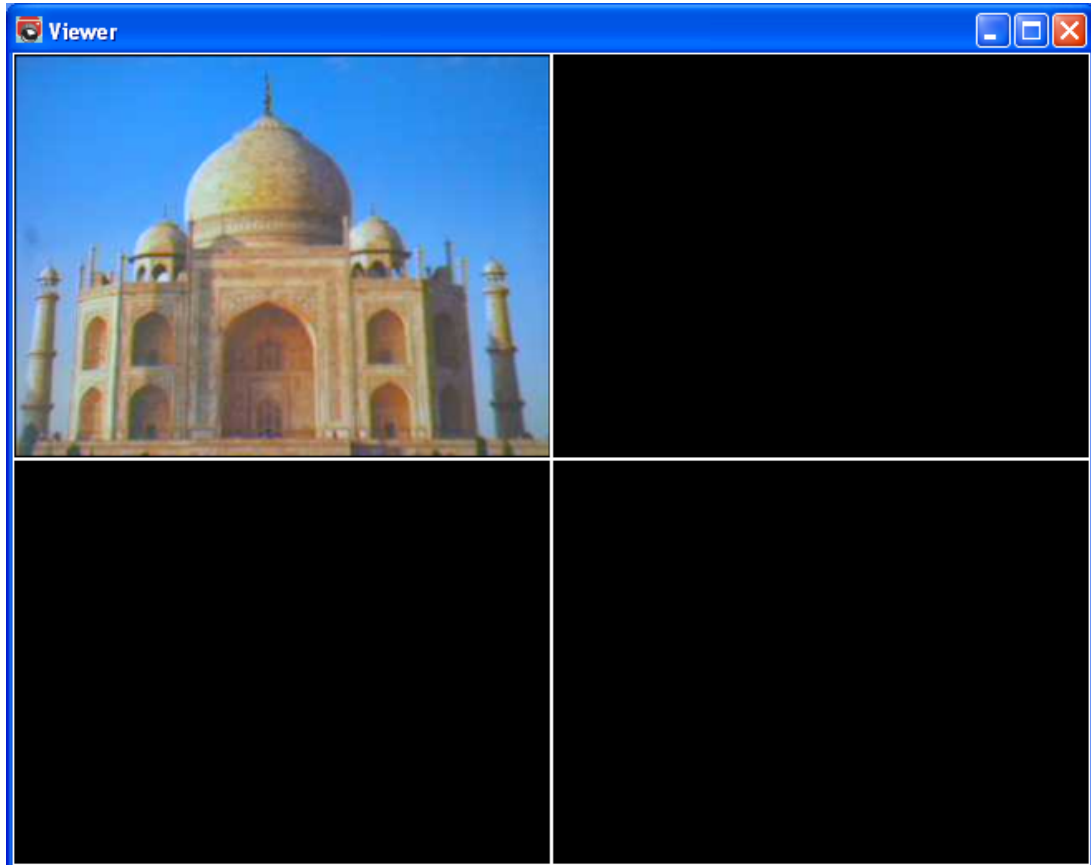
1. Click "Start", select "Programs\IP Camera\Camera Viewer" to run the utility.



2. Click the "IP Camera Viewer" icon to run the utility.
3. Click "Setting Wizard" from Administrator Utility and follow the instructions in the utility.

7.1. Panel Introduction

In the beginning when you start the Camera Viewer, you would see a Control Panel and a four division Viewer window.



7.2. Camera Buttons





Camera Buttons

Camera



Click one of these four cameras will connect to the selected camera that you want to view and configure. If you want to remove or reset the camera setting from the viewer, please right click the icon and select “Reset Camera x” or “Cancel Camera x”.

7.3. Camera Status

There is a status bar shown different color to indicate the status of each Internet Camera.



Camera Status

Yellow

It means that there is no camera set to connect.

Blue

It means that the camera is connected and playing the live video.

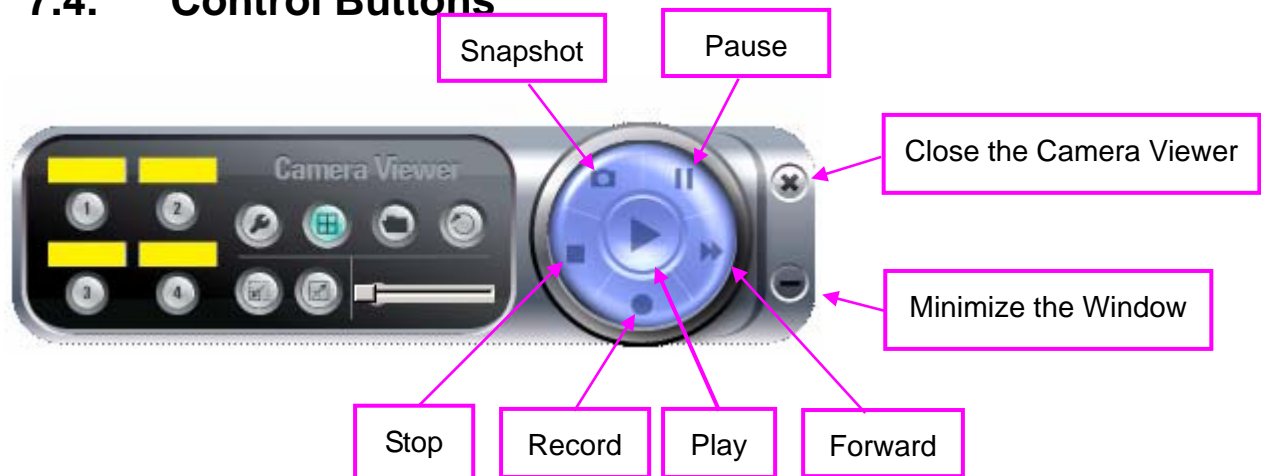
Pink

It means that the camera is not connected now.

Red

It means that the camera is recording.

7.4. Control Buttons



Control Buttons

Play



The “Play” button is an intelligent play user-interface. In the normal display mode and the Internet Camera is disconnected, clicking on the “Play” can make the viewer connect to the Internet Camera. In the playback mode, clicking on the “Play” can play the video in the normal speed.

Stop



The “Stop” button is an intelligent play user-interface. In the normal display mode and the Internet Camera is connected, clicking on the “Stop” can make the viewer disconnect the camera. In the playback mode, clicking on the “Stop” can stop playing the video.

Pause



The “Pause” button provides you a way to pause the current video display. When the displaying video is paused, click on the “Play” again to resume the video display.

Forward



The “Forward” button to forward the speed of display when playback the recording file. Click the button at a time will increase the playing speed one time.

Snapshot



Click “Snapshot” will make the viewer to take a snapshot of the video and save the picture as a bitmap file in the hard disk. (You can set the directory for storing these bitmap files at the Section 7.8.4)

Control Buttons

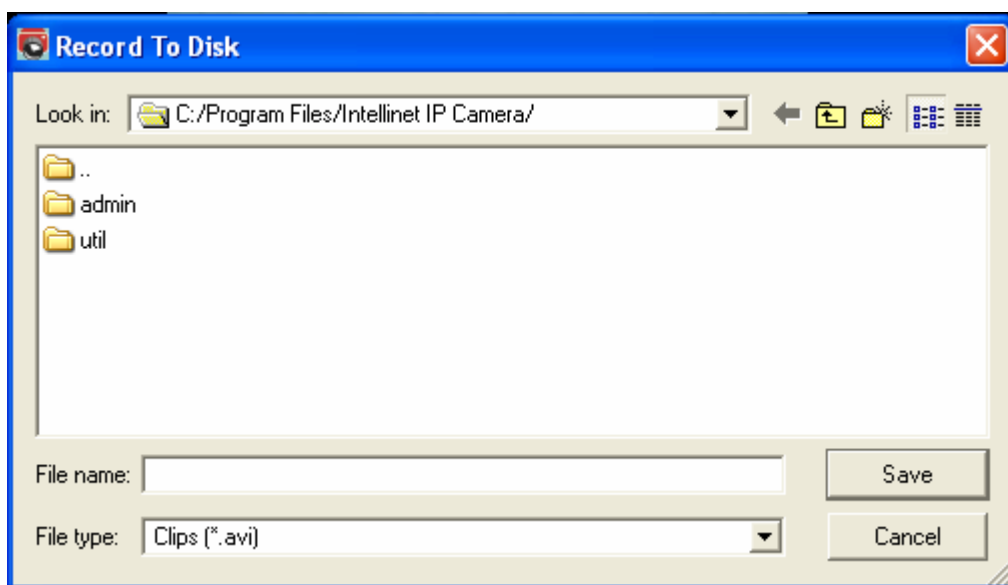
Record

By clicking on “Record” you can record video immediately.



7.5. Video Recording

This utility allows you record the video in AVI format files. There are two ways of video recording – Manual Recording and Schedule Recording.



Manual Recording

You can manually record the video stream into an assigned video file.

Click “Record”, then the “Record to Disk” window will pop up. Assign the path and file name that you want to save and click “Save”, then the viewer utility will start to record the video stream. If you want to stop recording, click “Stop”.

Note: Before manual recording, you have to click the camera button to select the Internet Camera that you want to record first and make sure that the viewer is successfully connecting to the Internet Camera.

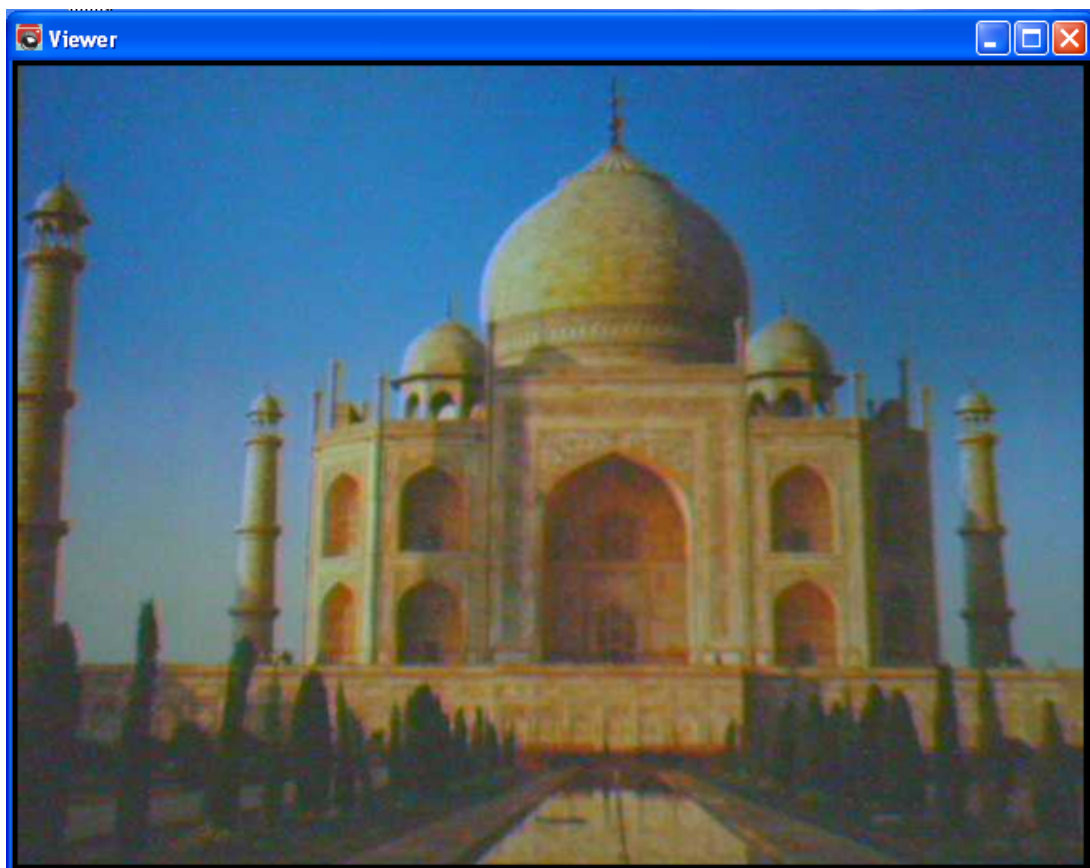
Schedule Recording

You can assign a schedule and let this viewer automatically recording the video stream into video files. Please refer to Section 7.8 to see how to setup schedule for the recording. The file name of the recorded video file is the start time of recording. For example, the file name "Intellinet_IPCAM_2005-06-28-02-04-00.avi" was started to record at 2005/6/28 02:04:00.

7.6. Change Resolution

The Internet Camera supports two resolution, 640x480 (VGA) and 320x240 (CIF). You can change the resolution of each Internet Camera by clicking the resolution button.

Note: Before changing the resolution of the Internet Camera, you have to select the Internet Camera by clicking the camera button first. If you change the resolution of an Internet Camera, other clients that are viewing the same Internet Camera simultaneously will also see the video with the changed resolution, too.



Resolution

VGA

Change the resolution to 640x480 (VGA) mode.



CIF

Change the resolution to 320x240 (CIF) mode.

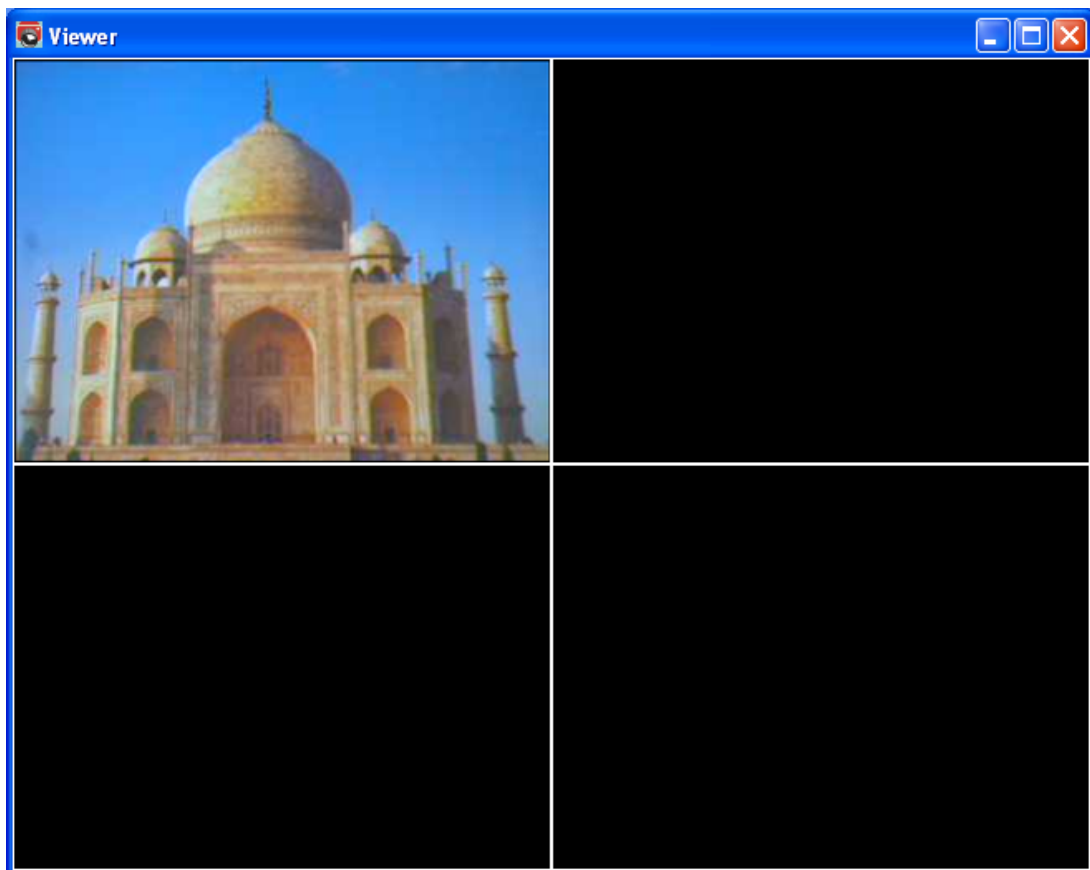


7.7. View Four Cameras Simultaneously


Click the four division button



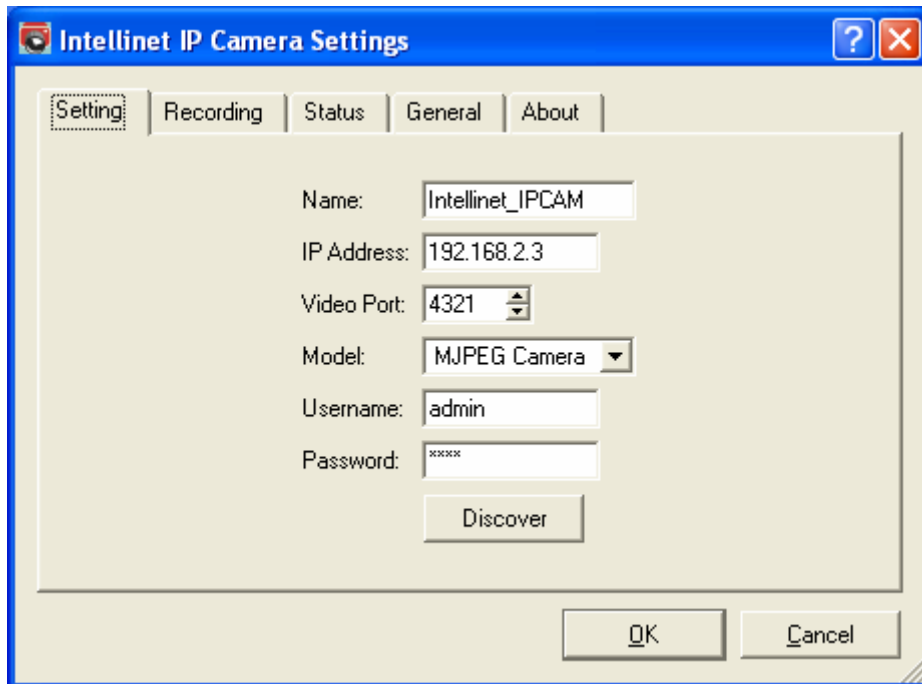
can view the 4 cameras simultaneously in a four-division window. When



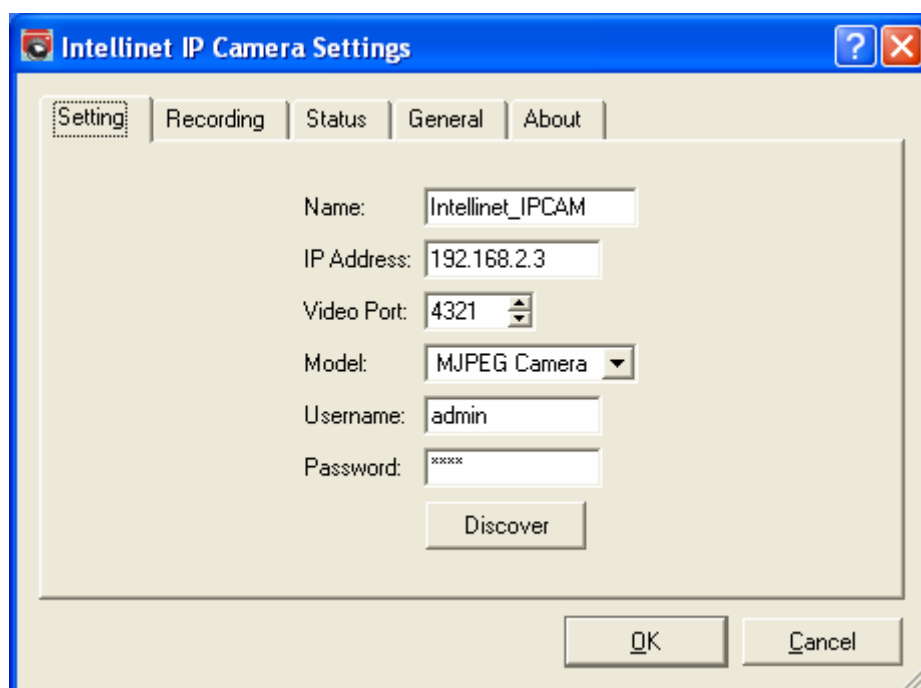
7.8. Viewer Utility Setting

Click the “Setting” , then the setting window of the Internet Camera will pop up.

Note: When you want to change the settings such as IP Address, Video Port, etc. in the “Setting” option, you must disconnect the Internet Camera first by clicking the “Stop”.



7.8.1. Setting



Setting

Name	It is not required to fill the camera name for connecting camera. It is for users to identify the camera.
IP Address	IP address/Domain name of the Internet Camera.
Video Port	The number of service port used by the Internet Camera.
Model	Select "MJPEG Camera" (This camera only supports Motion JPEG).
Username	The user name for login into the Internet Camera. By default, the user name is "admin".
Password	The password for login into the Internet Camera. By default, the password is "1234".

Setting

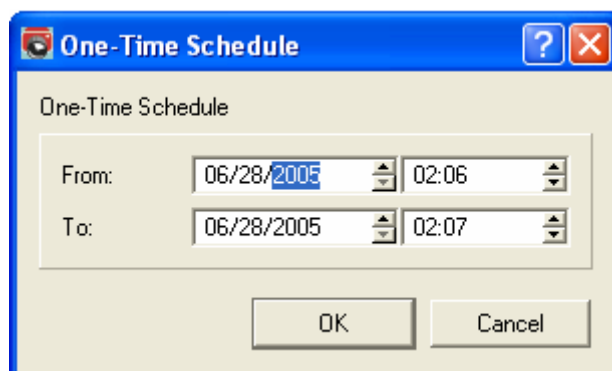
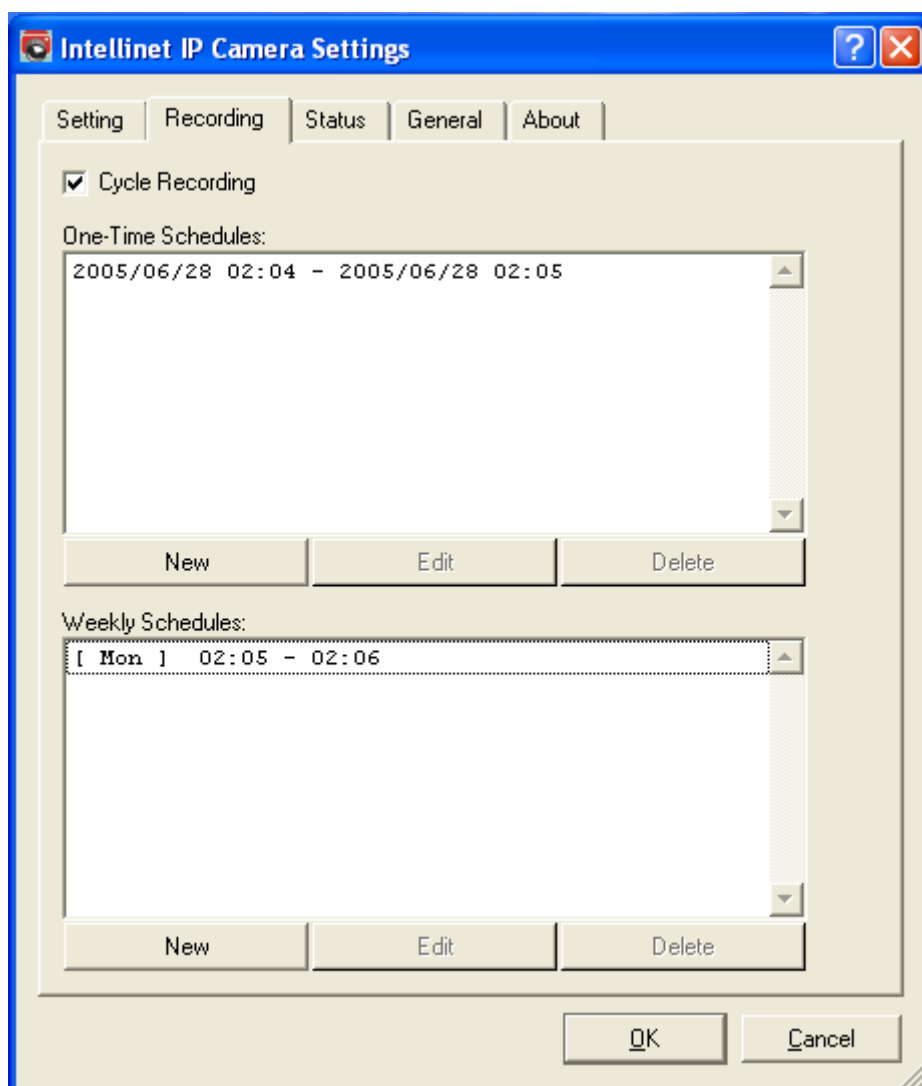
Discover Click “Discover”, then camera auto-discover windows will pop up. The window will show all the discovered cameras on LAN environment for you to select.

7.8.2. Recording

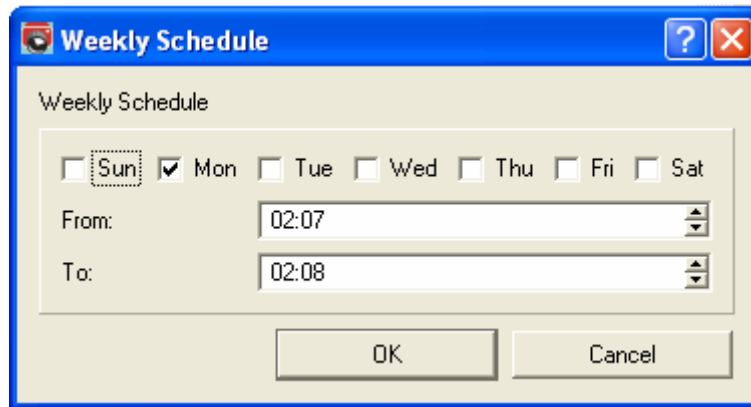
You can setup schedule for the recording here. This utility will record the video stream in the assigned file folder according to the schedule automatically. The recorded video files are AVI format.

Note:

1. The utility will only start to record the video stream when this utility is running and is successfully connecting to the Internet camera in the beginning of the schedule.
2. The schedule setting of one-time or weekly schedule should not overlap, or the recording will fail.



One-Time Schedule



Weekly Schedule

Schedule

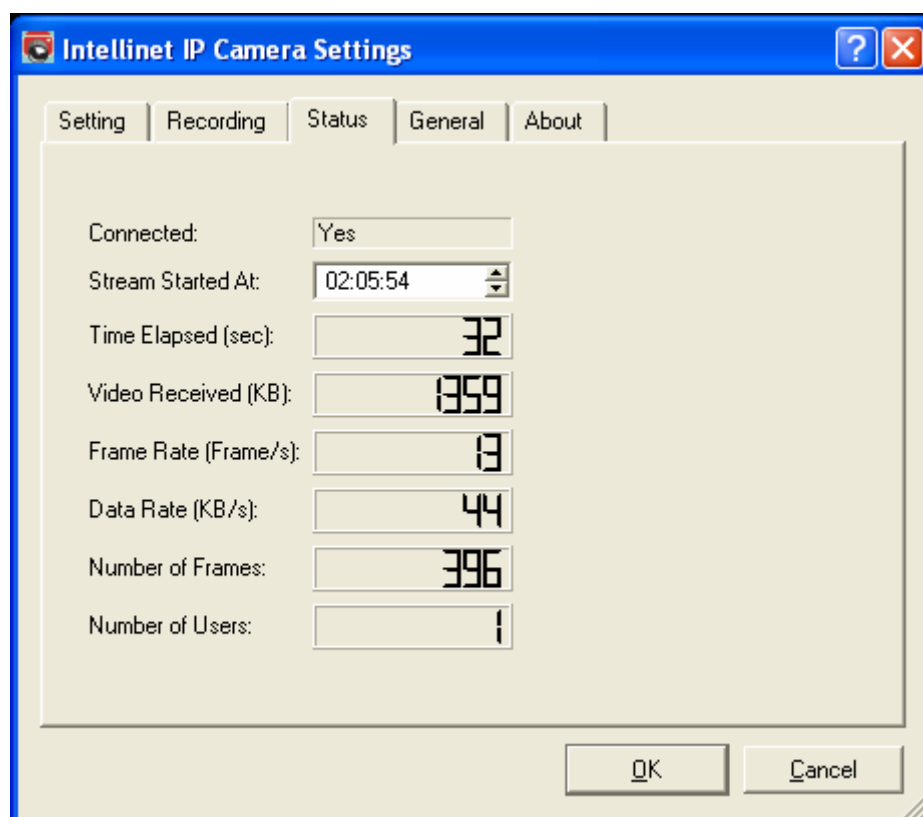
Cycle Recording	Select this item to enable cycle recording. When the Cycle Recording is enabled and the storage usage has already reached the maximum reserved storage space, the utility will automatically delete the oldest recorded video file and use the space to store the newly recorded video stream.
One-Time Schedule	You can assign a range of time and the utility will automatically record the video stream only during the period of time. The default time is 2 minutes later from the current time.
Weekly Schedule	You can assign the days in a week and the period of time in a day when you want to record the video stream. The utility will automatically record the video stream during the periods of time every week again and again.

Schedule

New	Click "New" to add a new recording schedule.
Edit	Select an existing schedule in the schedule list and click "Edit" to edit the schedule.
Delete	Select an existing schedule in the schedule list and click "Delete" to delete the schedule.

7.8.3. Status

You can see the current status information of the connection session between the utility and the Internet Camera.



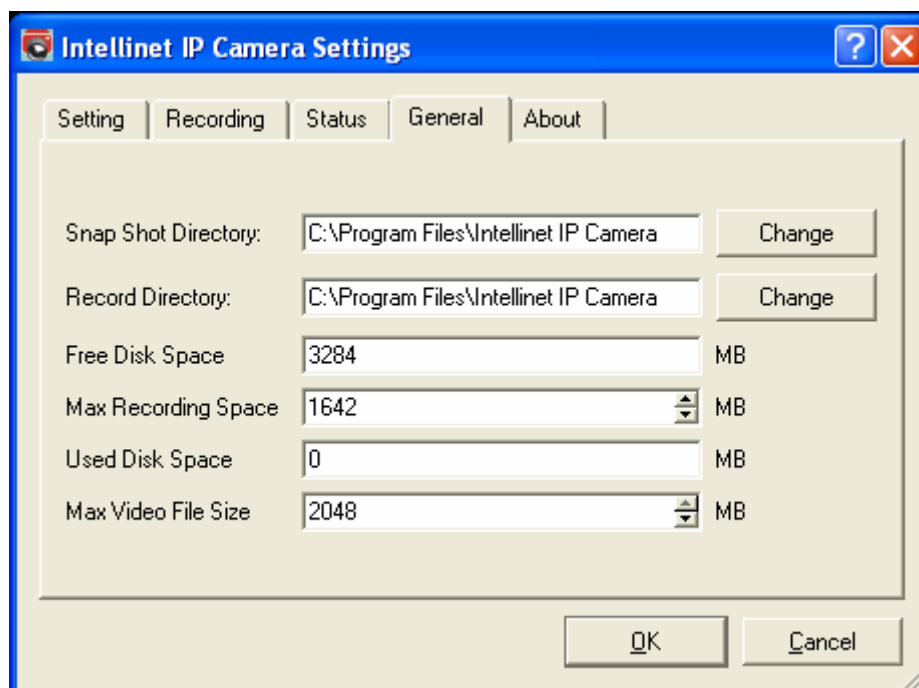
Status	
Connected	It displays “Yes” when the utility is connecting to the Internet Camera and displays “No” when the utility is not connecting to the Internet Camera.
Stream Started At	The beginning time of the current connection session between the utility and the Internet Camera.
Time Elapsed	The elapsed time of the current connection session between the utility and the Internet Camera.
Video Received	The total size (Unit is KByte) of video stream received during the current connection session between the utility and the Internet Camera.

Status

Frame Rate	The frame rate (frame per second) of the current video download speed from the Internet Camera to the utility.
Data Rate	The data rate (KByte per second) of the current video download speed from the Internet Camera to the utility.
Number of Frames	The total number of video frames received during the current connection session between the utility and the Internet Camera.
Number of Users	The number of users that viewing the image of this camera.

7.8.4. General

You can manage storage usage for this Internet Camera here.



General

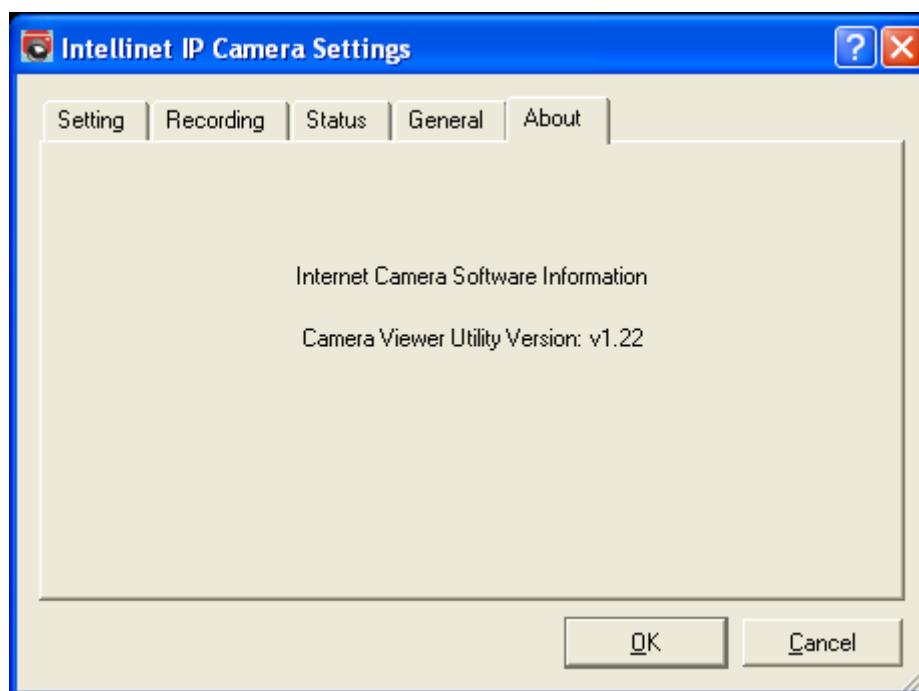
Snap Shot Directory	This lets you assign the directory where bitmap files will be stored when you click "Snapshot" to take pictures. The default folder is where the software program is installed, for example: "C:\Program Files\Intellinet IP Camera".
---------------------	---

General

Record Directory	This lets you assign the directory where the recorded video files will be stored. The default folder is where the software program is installed, for example: "C:\Program Files\Intellinet IP Camera".
Free Disk Space	The current free disk space of the hard drive where is assigned to save recording files.
Max Recording Space	You can reserve a disk space to store the recorded video and snapshot files. If the space is run out, a message will pop up to remind you.
Used Disk Space	The current used disk space for saving the recording file.
Max Video File Size	This let you assign a maximum size of each video file. The upper bound of this value is 2 GB per file.

7.8.5. About

You can see the version of utility here.

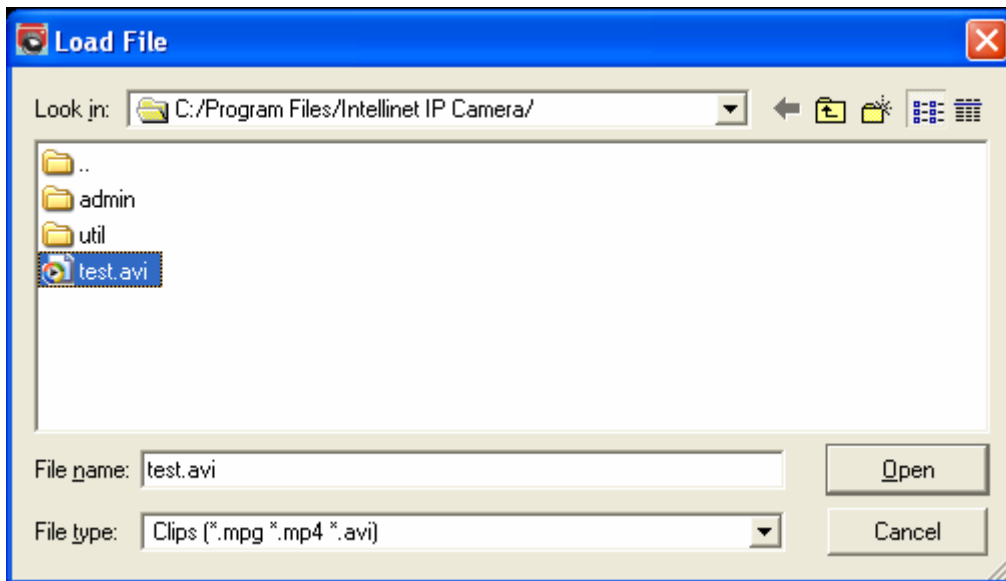


About

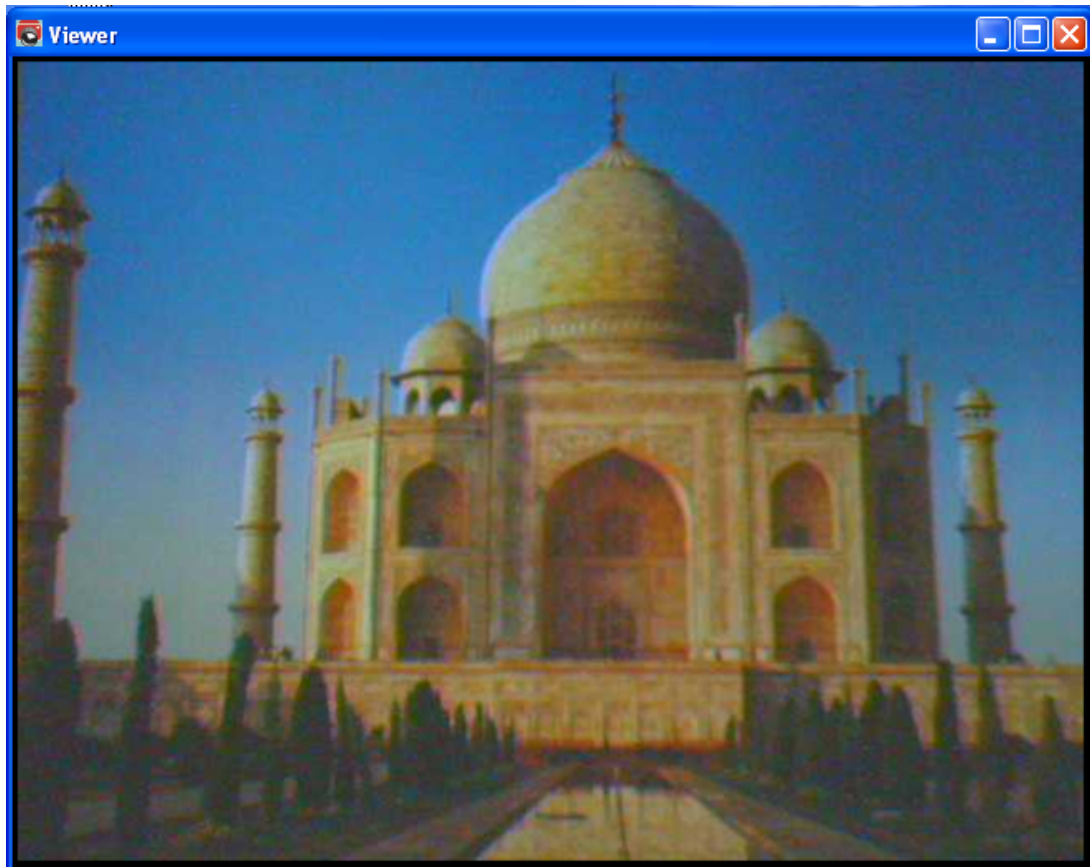
Camera Viewer Utility This is the version number of viewer utility.
Version

7.9. Playback

Click the “Open File” and a “Load File” window will be popped up. Select the file that you want to play.



The viewer will start to play the selected video file.



Playing Control

Play



When the video playback is in Stop state, just click “Play” and the viewer will play the video file from the beginning point. When the video playback is in Pause state, just click “Play” and the viewer will play the video file from the current pause point. When the viewer is playing with fast speed, just click “Play” to let the viewer play with the normal speed.

Pause



When the recorded video is playing, you can click “Pause” to freeze the playback. If you want the viewer to continue playing from the current pause point, just click “Play”.

Stop



When the viewer is playing, you can click “Stop” to stop the playback. If you want the viewer to play again, just click “Play” and the viewer will play the video file from the beginning point.

Playing Control


Forward

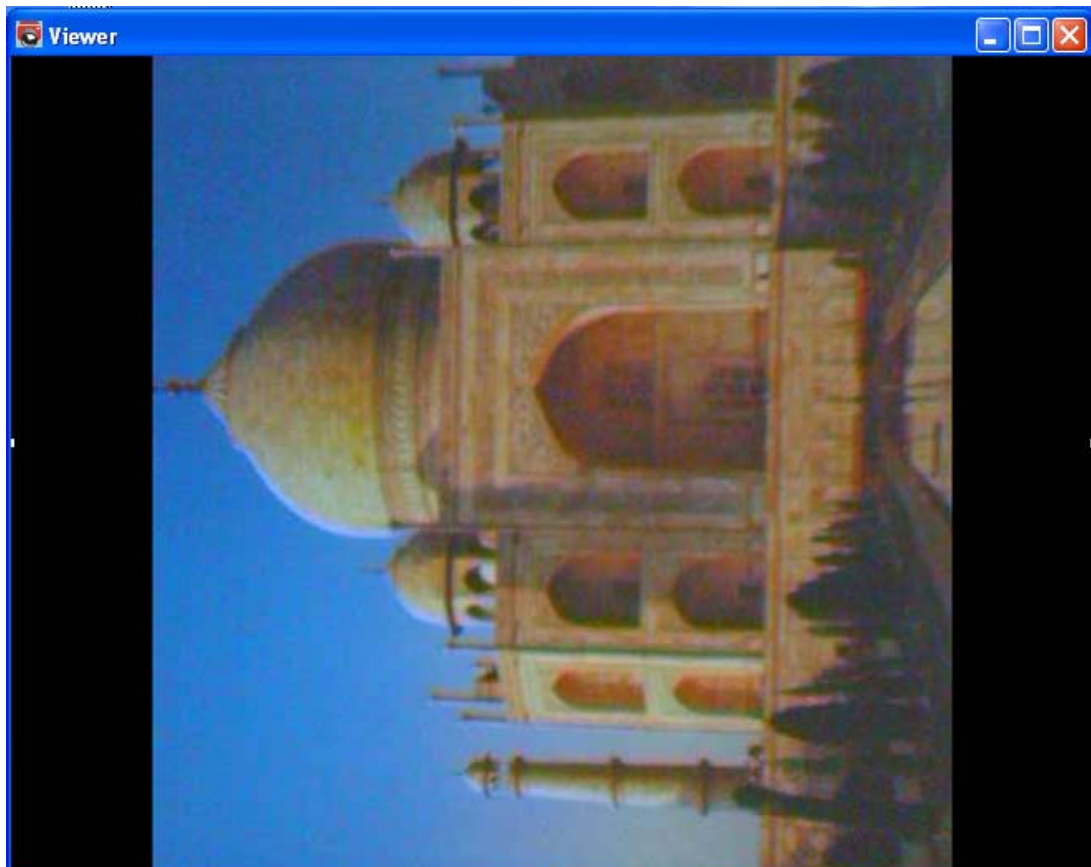


If you want the viewer to play the video file in a faster speed when the viewer is playing the video file, just click “Forward” and the viewer will double the playing speed. If you want the viewer play with the normal speed when the viewer is playing with fast speed, just click “Play”.

7.10. Rotate Video

Rotate function lets you rotate the video frame 90 of degree angle counterclockwise each time

you click the “Rotate” . With this function, you can view the live video with normal, 90 degree, 180 degree and 270 degree angles counterclockwise. Below is the video with 90 of degree angle counterclockwise rotation.



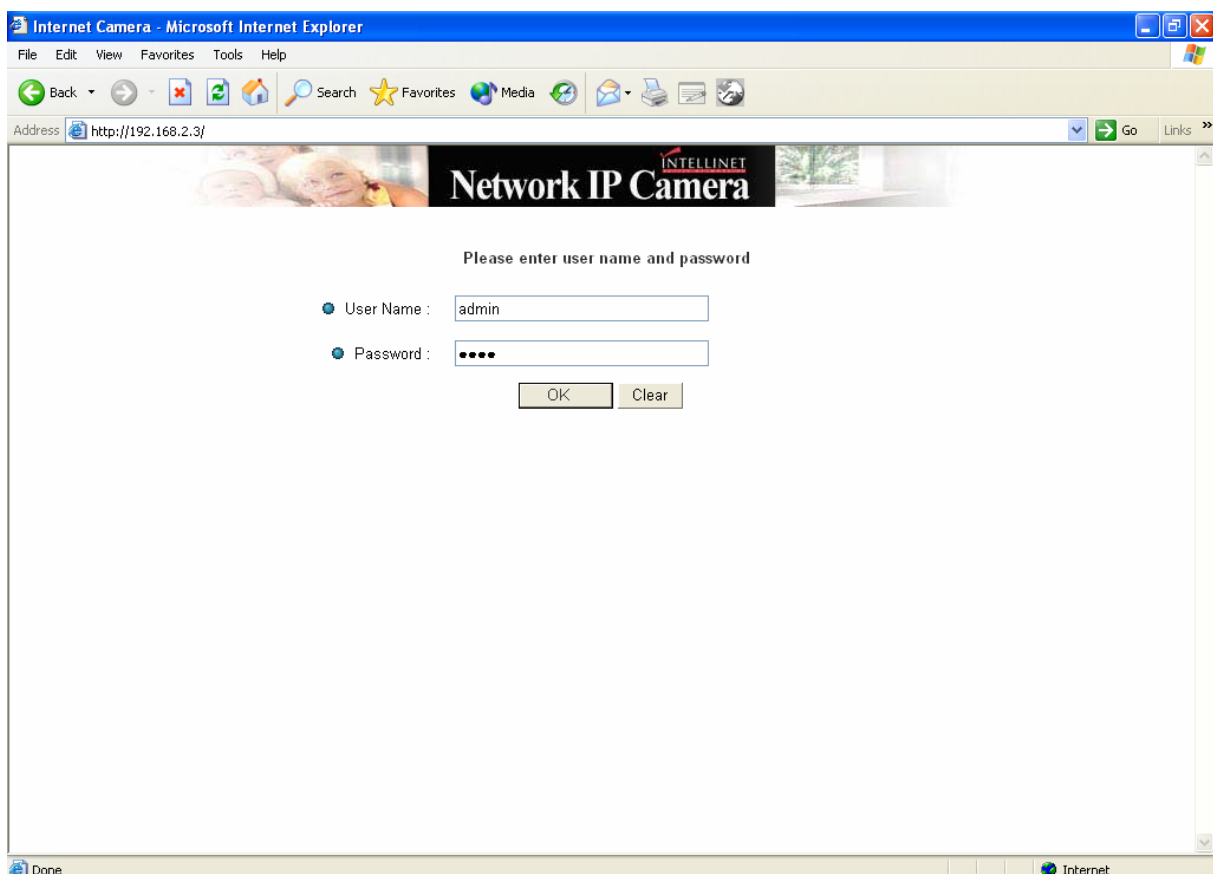
8. Web Connection and Setup

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**”



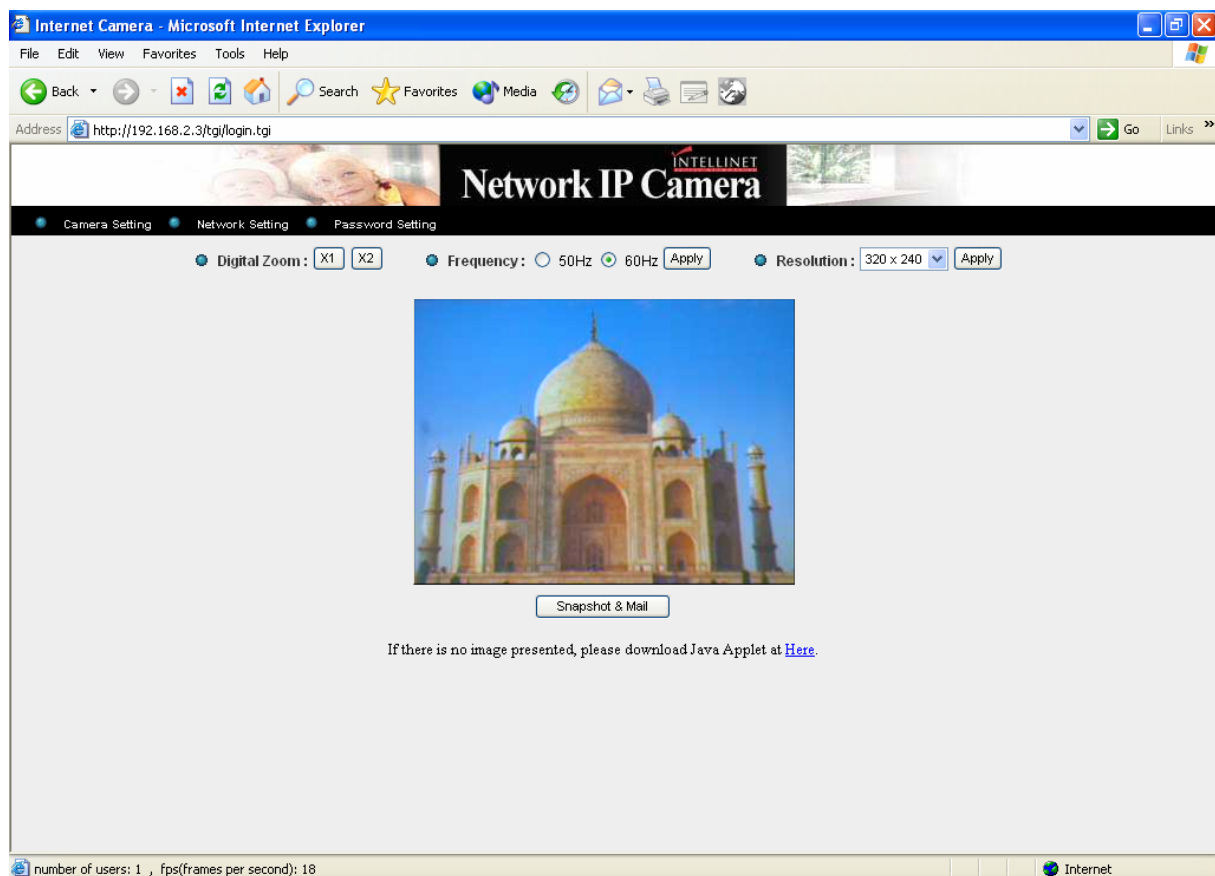
When the camera is connected, the video image will be shown up in the web screen directly. The menu options for the web control screen are as follows.

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

Network Setting – Setup the camera functions in the menu.

Password Setting – Up to four sets of user name and password can be set here.

8.1. Camera Setting



Camera Setting

Digital Zoom

It allows you to zoom in or zoom out the video size.

Click “x2”, the image size in the display area will be magnified 2 times to the original size. In 640x480 resolution, only central area of the screen will be magnified two times. Click “x1”, the image size in the display area will be minified to the original size.

Frequency

Select the line frequency (50 or 60MHz) to improve the viewing quality under the fluorescent light.

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.

Camera Setting

Snapshot & Mail

If you want to snapshot a picture for the current video, click this button. The system will send the picture to the E-Mail account you set up in the “E-Mail Setting” immediately.

Apply

Click “Apply” to validate “Frequency” or “Resolution” setting.

8.2. Network Setting

The screenshot shows the 'Network IP Camera' web interface in a Microsoft Internet Explorer browser window. The address bar shows 'http://192.168.2.3/tgi/login.tgi'. The interface has a navigation bar with tabs: 'Camera Setting', 'Network Setting', and 'Password Setting'. The main content area is divided into several sections, each with an 'Apply' button:

- Change Admin Password:** Fields for 'Current Password', 'New Password', and 'Confirm Password'.
- Email Setting:** Fields for 'E-Mail Add' (user@mailserver.com), 'SMTP Server' (mailserver.com), 'SMTP Auth' (radio buttons for 'Enable' and 'Disable', with 'Disable' selected), 'SMTP Account', and 'SMTP Password'.
- IP Information:** Fields for 'IP Address' (192, 168, 2, 3), 'Subnet Mask' (255, 255, 255, 0), 'Gateway' (192, 168, 2, 1), 'DNS Server' (168, 95, 192, 1), 'Video Port' (4321), and 'Web Port' (80).
- DDNS Service:** Fields for 'Enable' (radio buttons for 'Enable' and 'Disable', with 'Disable' selected), 'Provider' (dropdown menu showing 'DynDNS'), 'Domain Name', 'Account', and 'Password'.
- Camera Information:** Fields for 'Camera Name' (Intellinet_IPCAM) and 'Firmware' (IP Camera Version 1.34).
- UPNP:** Fields for 'Enable' (radio buttons for 'Enable' and 'Disable', with 'Disable' selected).
- Maintenance:** Buttons for 'Reset to Defaults' and 'LED Light OFF'.

Change Admin Password

Current Password

Enter current password.

New Password

Specify the new password you want to change to.

Confirm Password

Enter the new password again for confirmation.

Change Admin Password

Apply	When you finish the "Change Admin Password", click "Apply".
-------	---

E-Mail Setting

E-Mail Address	Set up the E-Mail account as the receiver for the snapshot picture.
SMTP Server	Specify the SMTP mail server for sending E-Mail.
SMTP Auth	Enable or Disable the SMTP Authentication function.
SMTP Account	When Authentication is enabled, enter the SMTP Username.
SMTP Password	When Authentication is enabled, enter the password.
Apply	When you finish the "E-Mail Setting", click "Apply".

IP Information

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 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.

IP Information

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 “IP Information”, click “Apply”.

Camera Information

Camera Name The default camera name is “IPCamera_MJPEG”. It is recommended to name a meaningful name for the camera.

Firmware Display the current firmware version of the camera.

Apply When you finish the “Camera Information”, click “Apply”.

DDNS Service

Enable/Disable 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.

Account Enter the login name for the DDNS service.

Password Enter the password for the DDNS service.

Apply When you finish the “DDNS Service” setting, click “Apply”.

UPnP

Enable/Disable Enable or disable UPnP function of the camera.

Apply When you finish the “UPnP” setting, click “Apply”.

Maintenance

Reset to Defaults

To reset the camera to factory default, click “Apply”. Then, follow the instruction of the screen to complete the process. The factory defaults are as follows.

Camera Name: “IPCamera_MJPEG”

IP Address: “192.168.2.3”

Subnet Mask: 255.255.255.0

Administrator Name: “Admin”, Password: “1234”

Video Port: “4321”, Web Port: “80”

LED Light ON/OFF

When this button shows “LED Light OFF”, press it will turn off the led on camera. When it shows “LED Light ON”, press it will turn on the led on camera.

8.3. Password Setting

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

The screenshot shows a web browser window titled "Internet Camera - Microsoft Internet Explorer". The address bar displays "http://192.168.2.3/cgi/login.tgi". The page header features the "Network IP Camera" logo and navigation tabs for "Camera Setting", "Network Setting", and "Password Setting". The main content area is titled "User 1" and contains three input fields: "User Name", "Password", and "Confirm Password", followed by an "Apply" button. This structure is repeated for "User 2" and "User 3". "User 4" is partially visible at the bottom, showing only the "User Name" field. The browser's status bar at the bottom indicates "Done" and "Internet".

User Name	Up to four sets of user name and password can be added. Enter the user name to be 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 add the user account.

9. Frequently Asked Questions

Q1: What is an Internet Camera?

A: The Internet Camera is a standalone system connecting directly to an Ethernet or Fast Ethernet network. It is different from the conventional PC Camera; the Internet 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 Internet 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 Internet Camera utilizes JPEG image compression technology to provide high quality images. JPEG is a standard for image compression and can be applied to various web browser and application software.

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

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

Q4: What network cabling is required for the Internet Camera?

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

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

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

Q6: Can the Internet Camera be connected on the network if it consists of only private IP

Addresses?

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

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

A1: Adjust the Internet Camera focus manually.

Q8: There are no images available through the web browser.

A1: The Java Applet might be disabled, it usually happens in Windows XP SP2 and Windows Server 2003. If you are viewing the images from Internet Explorer make sure Java Applet has been enabled in the Internet Options menu (Select Advanced option and then Microsoft VM). To download the free software, please surf <http://java.com/en/index.jsp>.

10. 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: 6.0 mm

Aperture: F=1.8

■ Image (Video Setting)

Image compression: Motion-JPEG Image Video

Digital 24-bit Color

Frame rate: 30fps@CIF, 20fps@VGA

Video resolution: 320x240, 640x480

■ System Hardware

LAN Connector: One RJ-45 port to connect to 10/100Mbps Ethernet

LED Indicator: Monitoring LED (Green), Ready LED (Orange)

Power Supply: 7VDC~7.5VDC, 0.5A

■ HTTP/Utility

Includes easy-to-use Viewer & Recorder utility

Provides Admin utility & WEB browser Management

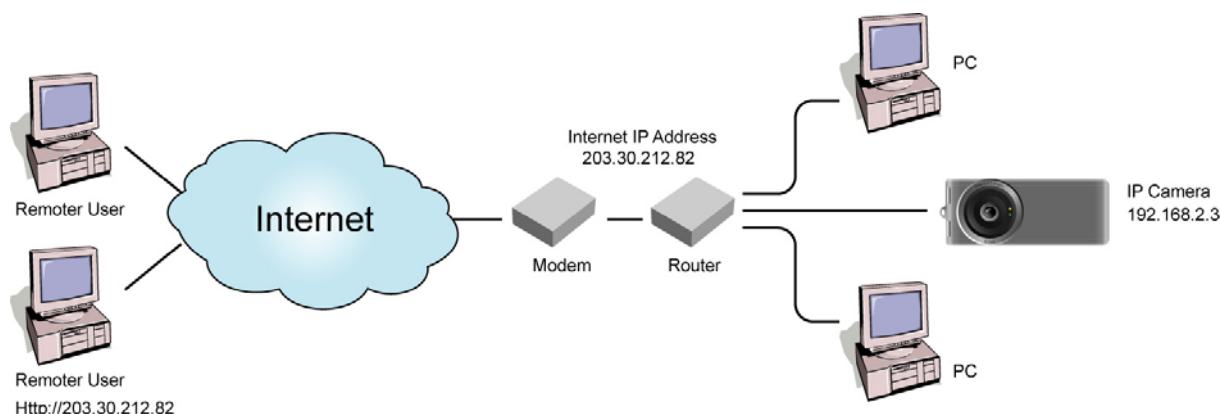
View multiple cameras simultaneously - Up to 4 cameras at a time
Manual/Schedule Record, Video Playback/Stop/Forward/Pause
Supports four additional user accounts for viewing camera
Auto sending Snap Shot by E-mail
Supports Windows 98SE/ME/NT/2000/XP/2003
Firmware Upgradeable

■ **EMI & Safety**

FCC, CE, C-Tick, VCCI

Appendix A Router/Gateway Setup for Internet Viewing

To view Internet Camera across the Internet, you have to make sure Router/Gateway has configured to pass incoming TCP/UDP connections from remote PC to the Internet 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
Setup 3	UDP	13364	192.168.2.3
Setup 4	UDP	15973	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 Internet Camera and Administrator Utility communication. The protocol setting should be "UDP".
Setup 4	It is the port for Internet Camera and Camera Viewer Utility communication. The protocol setting should be "UDP".

Viewing Internet 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 Internet Camera via Camera Viewer Utility

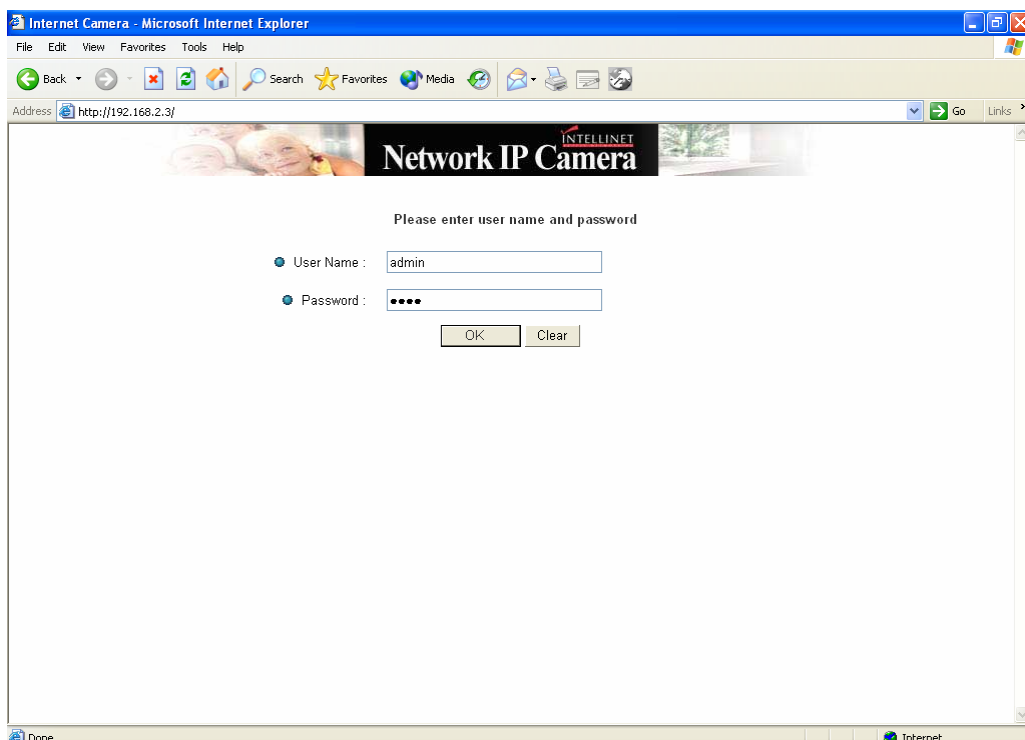
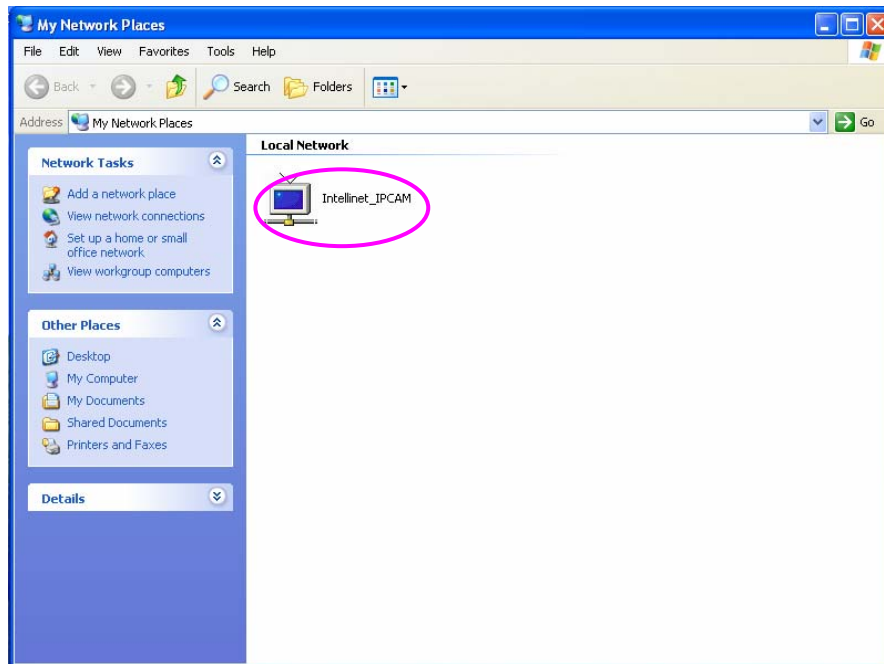
Setup 2/Setup 4 If you want to use Camera Viewer Utility to view the camera, please make sure the Router/Gateway has configured setup2 and setup 4.

Setup Internet Camera via Administrator Utility

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

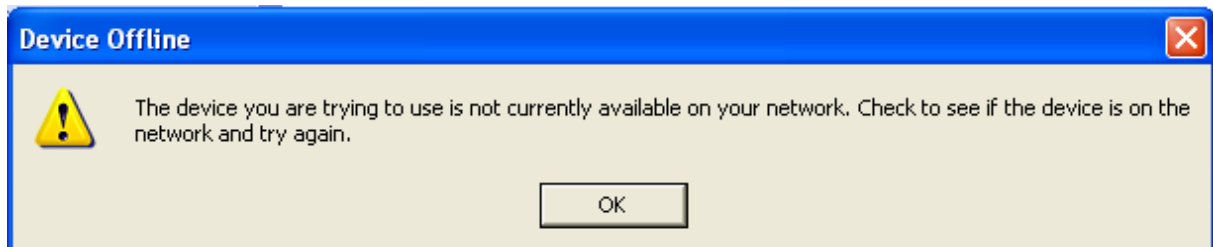
Appendix B Viewing via UPnP in Windows XP

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.

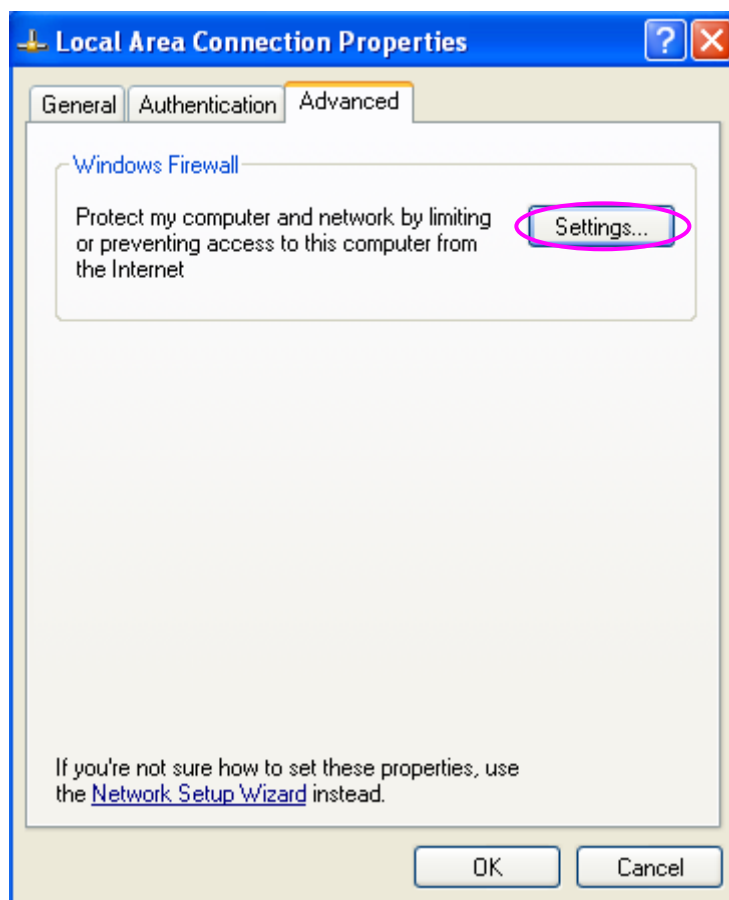


Enable UPnP in Windows XP SP2

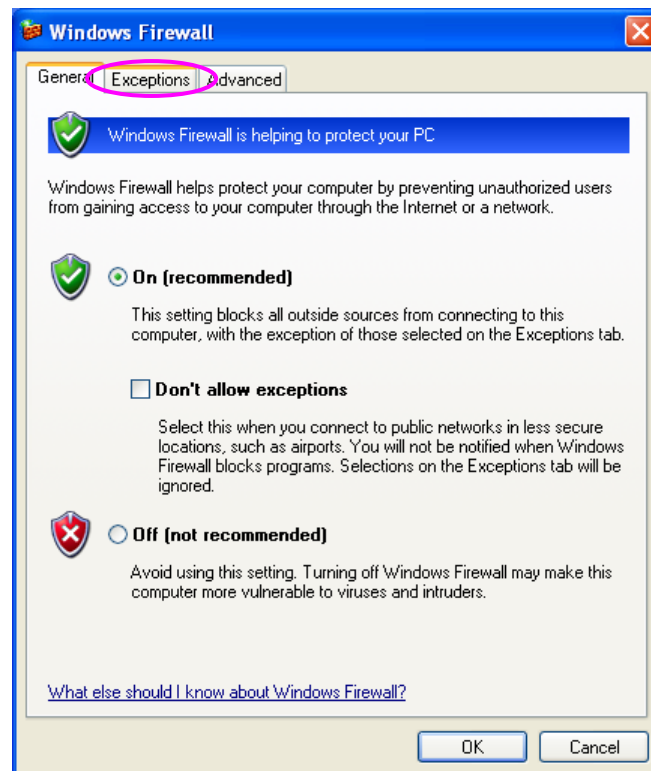
If you can't find the camera in the Neighborhood of Windows XP SP2 or you have seen the following message when you double click the camera. You have to check if UPnP function is blocked by the firewall. Please follow the steps below to enable it.



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”.

