CMP-NWIPCAM20

IP Network Camera

Wired

User Manual

Contents

1. Introduction 1
2. Package Content 1
3. System Requirement 1
4. Hardware Installation 2
   - 4.1. LED and Focusing 2
   - 4.2. Camera Ports 2
   - 4.3. Installation Procedure 4
5. Software Installation 5
6. Using the Administrator Utility 11
   - 6.1. General Setting 11
   - 6.2. Detail Setting 13
     - 6.2.1. Network Setting 13
     - 6.2.2. E-Mail Setting 15
     - 6.2.3. FTP Settings 16
     - 6.2.4. Date / Time Settings 17
     - 6.2.5. Resolution 18
     - 6.2.6. Advanced Setting 19
     - 6.2.7. Users 21
     - 6.2.8. Tools 22
     - 6.2.9. About 23
   - 6.3. Setting Wizard 23
7. Using the Camera Viewer 26
   - 7.1. Panel Introduction 26
   - 7.2. Camera Buttons 27
   - 7.3. Camera Status 28
   - 7.4. Control Buttons 28
   - 7.5. Video Recording 30
   - 7.6. Change Resolution 30
   - 7.7. View Four Cameras Simultaneously 31
   - 7.8. Viewer Utility Setting 33
     - 7.8.1. Setting 34
     - 7.8.2. Recording 34
     - 7.8.3. Status 37
     - 7.8.4. General 38
     - 7.8.5. About 40
   - 7.9. Playback 41

7.10. Rotate Video 43
8. Web Connection and Setup 44
8.1. Camera Setting 46
8.2. LAN Setting 48
8.3. E-Mail and FTP 50
8.4. Motion Detection 51
8.5. System 52
8.6. Status 55
8.7. Users 55
Frequently Asked Questions 56
9. Technical Specifications 58
10. Appendix A Router/Gateway Setup for Internet Viewing 59
11. Appendix B Viewing via UPnP in Windows XP 61
12. Appendix C Configure Windows 2003 Server 64

1. Introduction

Thank you for choosing the Internet Camera. This Internet Camera sends live video through 10/100Mbps 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 Internet 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 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 Internet Camera.

2. Package Content

- One Internet Camera
- One Power Adapter
- One Camera Stand
- One 100M 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 98 , ME , 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

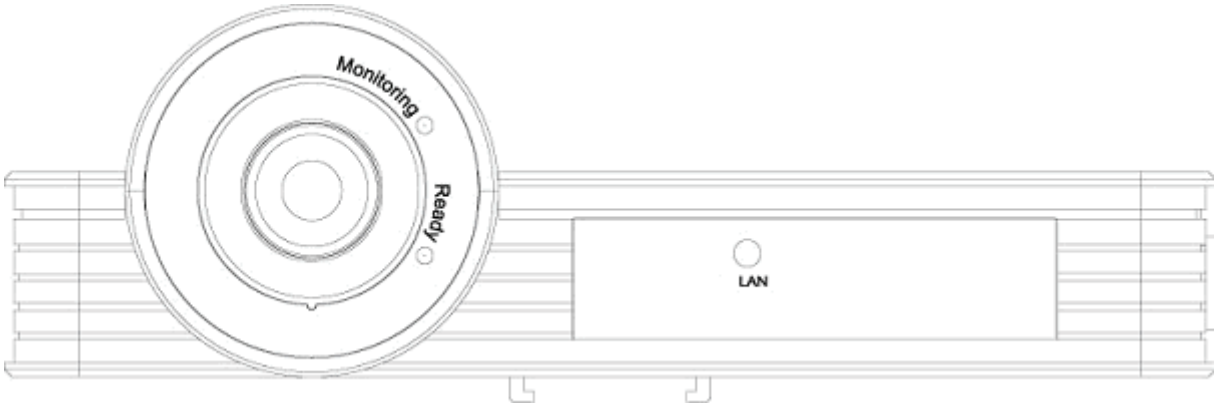
4. Hardware Installation

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 three LEDs indicating the camera status and networking status.

- **Monitoring**
  When someone is viewing the camera, the LED will flash.
- **Ready**
  When the camera is power on and ready for access, the LED will light.
- **LAN**
  When the Internet Camera is linking to wired network, the LED is lighting. The LED is flashing when video is transmitted or received through wired network.



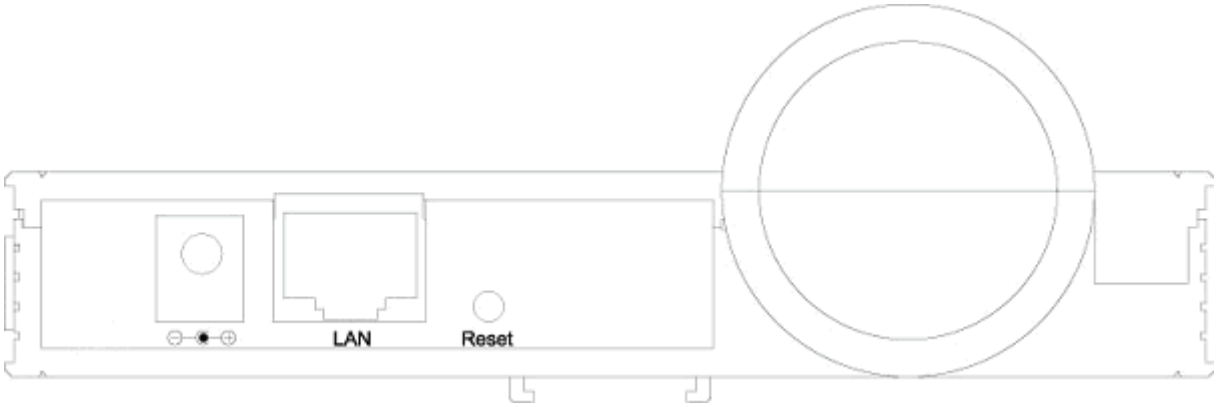
4.2. Camera Ports

The Camera features two 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.
- **Reset**
  1. If problems occur with your Internet Camera, press the reset button with a

pencil tip (for less than 2 seconds) and the Internet 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 Internet 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 Internet Camera package and verify all the items that are listed in 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 light.
4. Make sure that you have installed correct VGA driver and DirectX 9.0 or above.

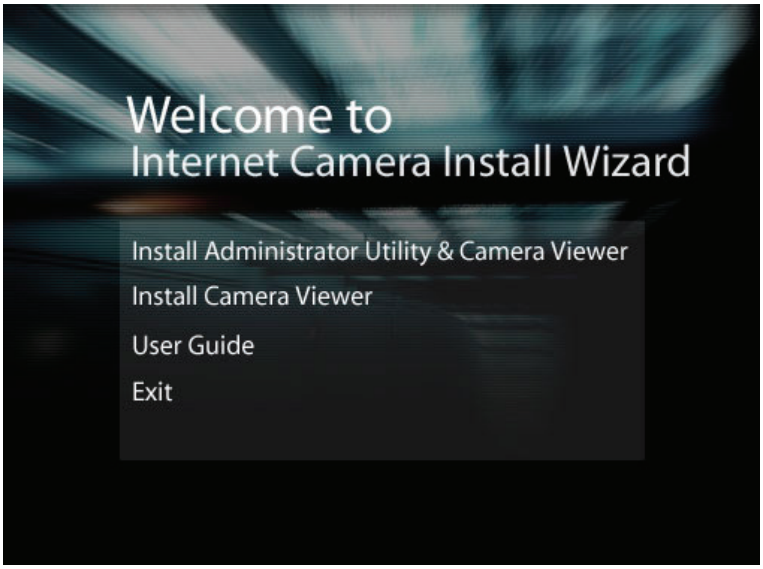
Note: It is highly recommended to use the power adapter shipped with the Internet Camera, do NOT use any other power adapter from any sources.

5. Software Installation

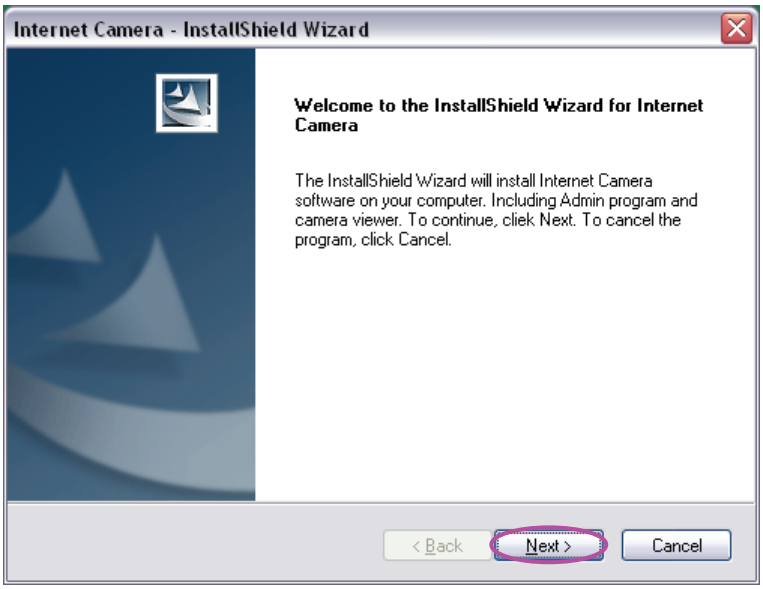
Follow the simple steps below to run the Install Wizard to guide you quickly through the Installation process. The following installation is implemented in Windows XP. The installation procedures in Windows 2000/Server 2003 are similar.

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.

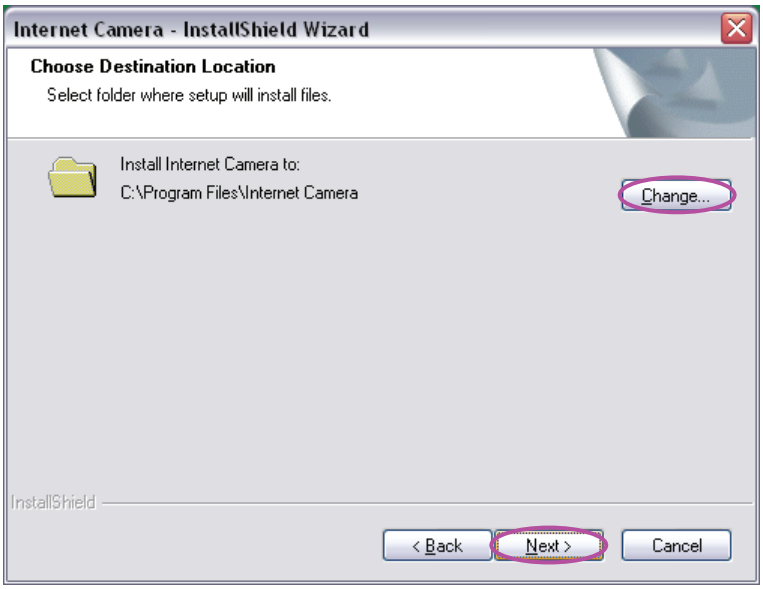
2. The Install Wizard will show four selections, select the program you want to install or click “Exit” to install the program later. The following installation steps are the demonstration of “Install Administrator Utility & Camera Viewer”.



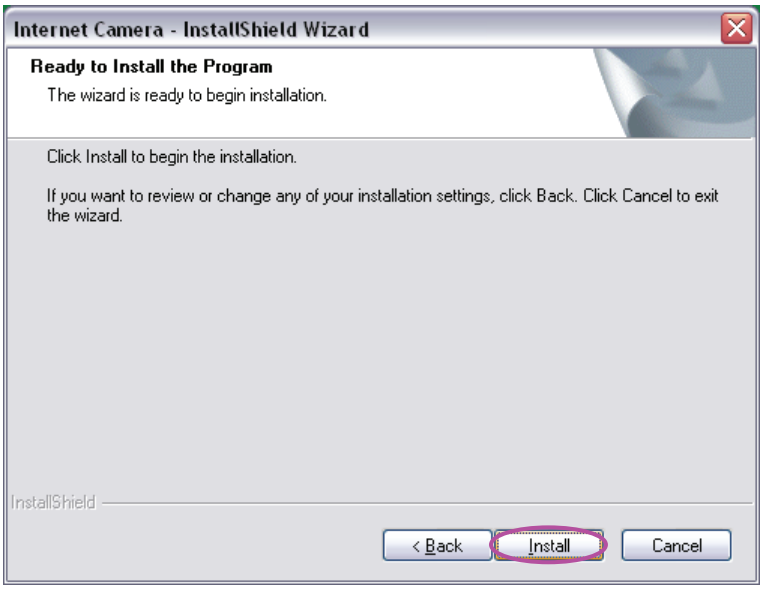
3. The system will start the installation procedures. Click “Next” to continue installation.



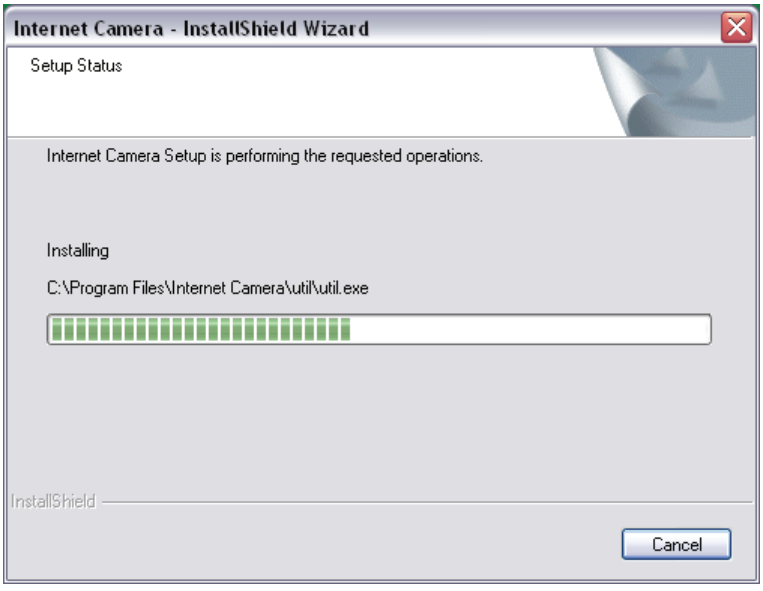
4. If you wish to install the software program in an alternate location, click “Change”; otherwise click “Next” to move on to the next step.



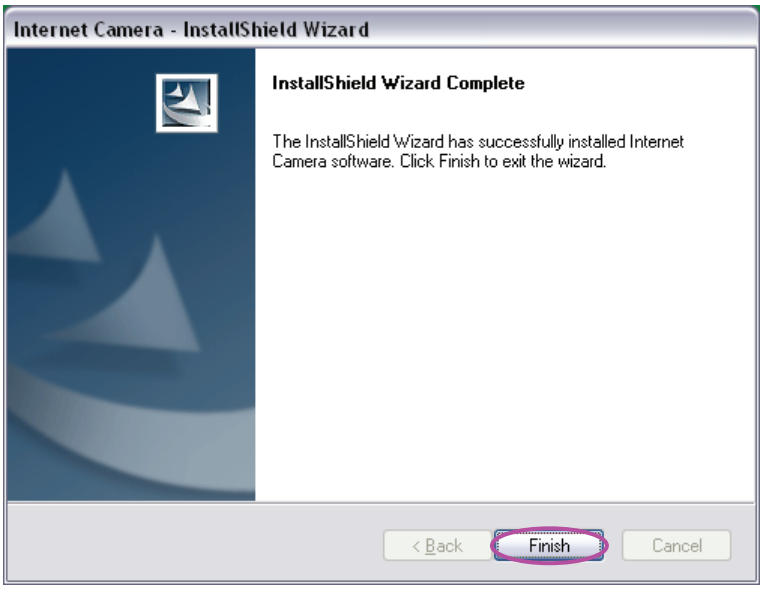
5. Click “Install” to start installing the program.



6. The system will install the program automatically.



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

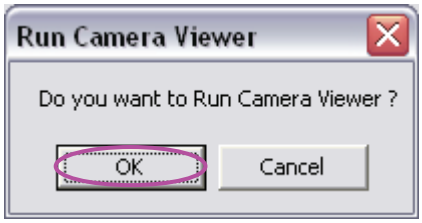


8. ”Administrator Utility“ will be run automatically after installation. On the Internet Camera first page, the cameras found in the network are listed in the left window. Choose the one you want to configure and click “Setting Wizard” to proceed.

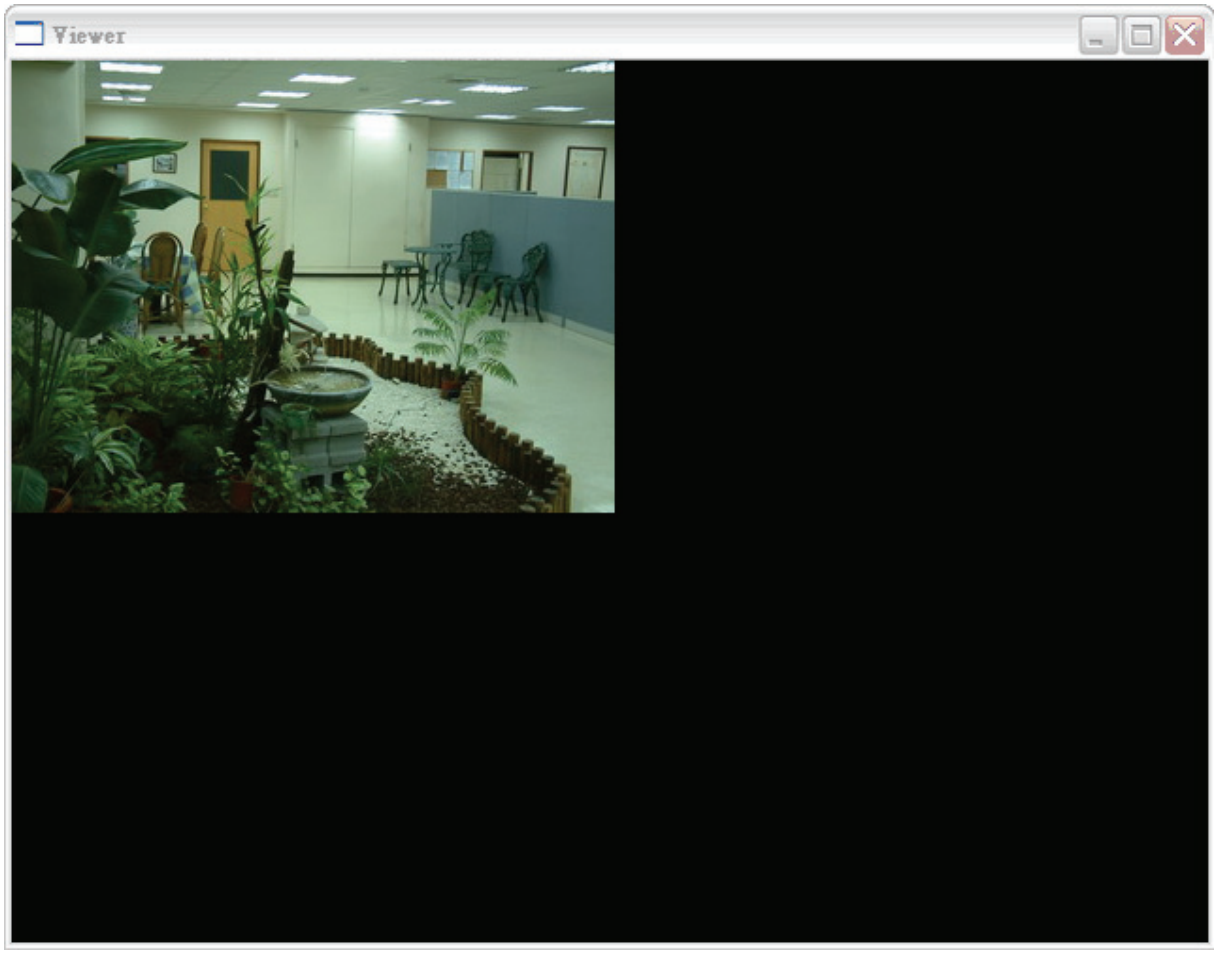
9. Please enter the default password “1234” and click “OK” to login to the IP setup page.

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

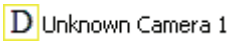
1. Click “Start”, select “Programs\IP Camera\Admin Utility” to run the utility.
2. double click the “IP Camera Admin” icon 

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 automatically.
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. M 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	
Internet Camera Name	The default camera name is “IC-XXX” (XXX=the last 3 numbers of MAC). 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.

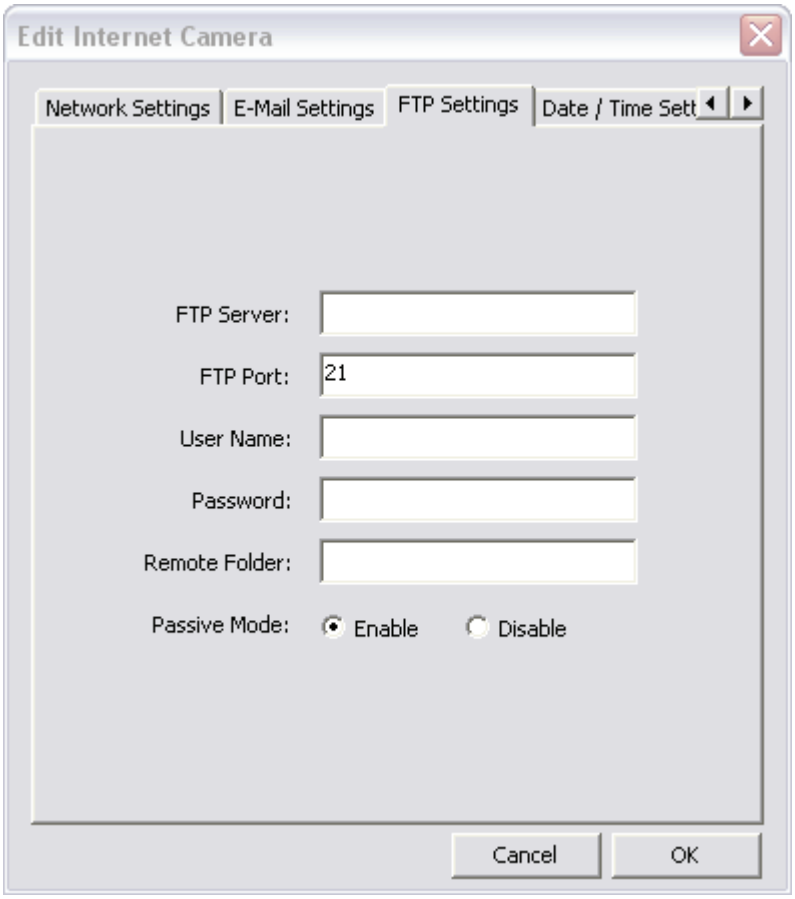
Network Setting	
Video Port	The Video Port is used to transmit or receive the video streaming in the network. The default port setting is “4321”. If you want to view the video from the camera, the port setting should be correct.
Web Port	This camera support web connection, the default web port is 80. 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. E-Mail Setting

E-Mail Setting	
Recipient E-Mail Address	This camera supports “Motion Detection” 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.
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.

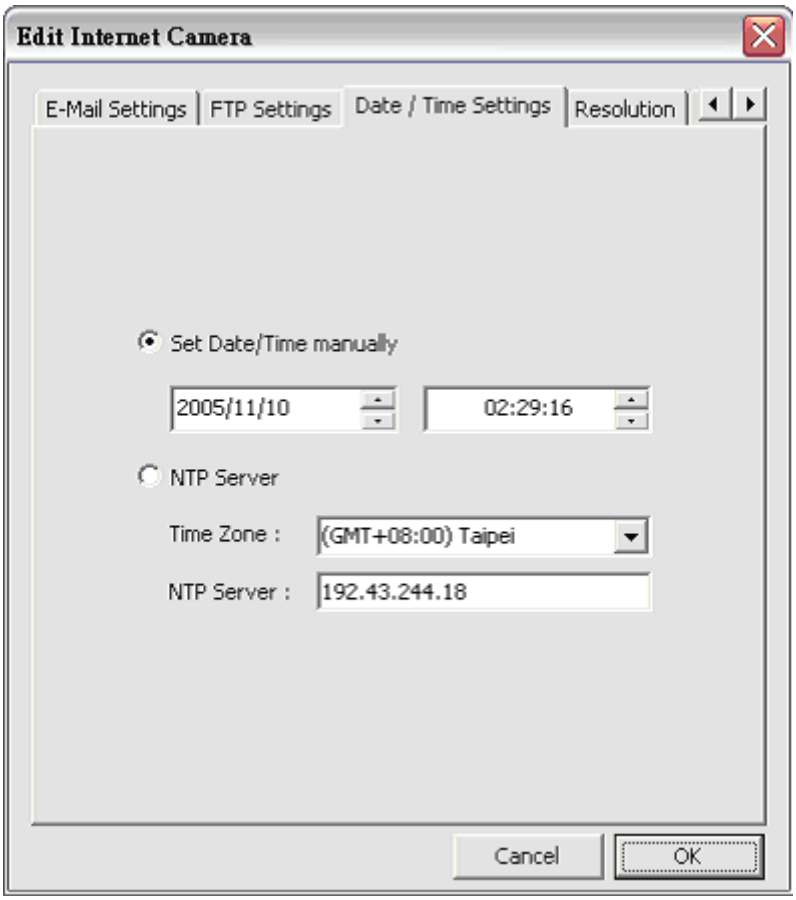
6.2.3. FTP Settings



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.

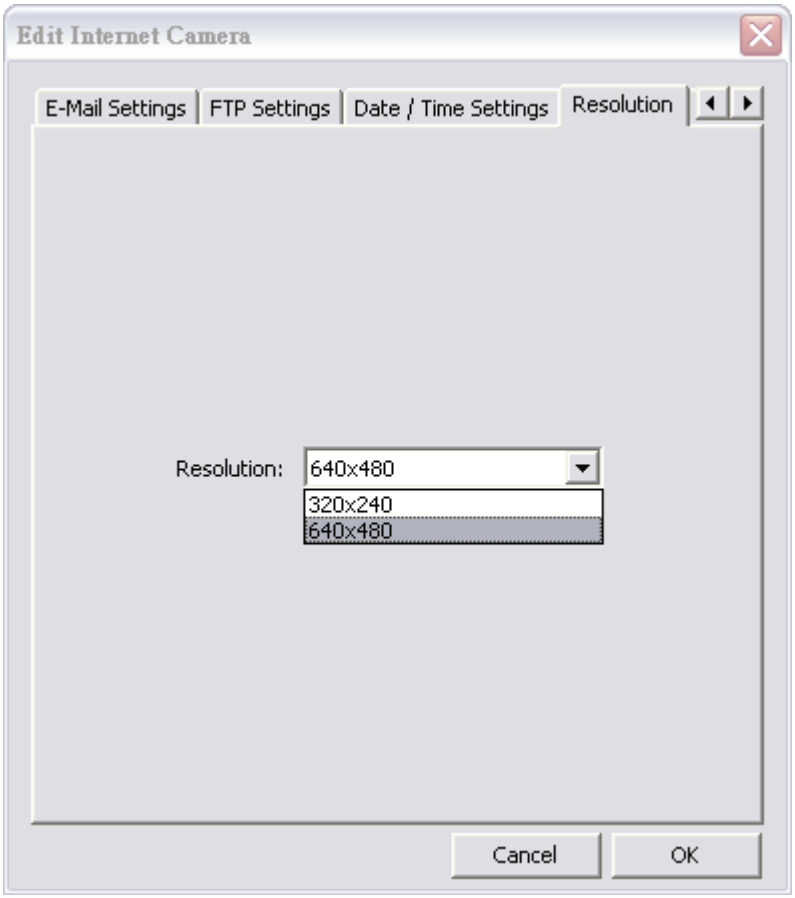
Passive Mode	If your Camera is under NAT, you usually need to enable this feature.

6.2.4. Date / Time Settings



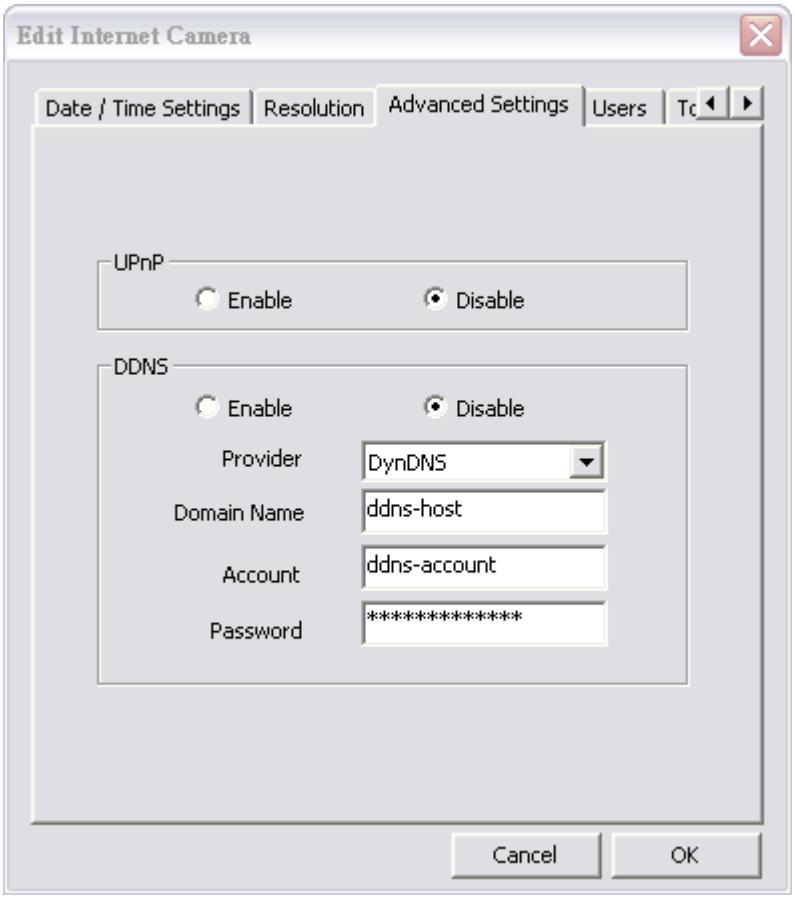
Date / Time Settings	
Set Date/Time manually	Set the current Date and Time.
NTP Server	Synchronize the Date and Time with NTP server.
Time Zone	Select the time zone that your camera put on.
NTP Server	Specify the IP Address of the NTP Server.

6.2.5. Resolution



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

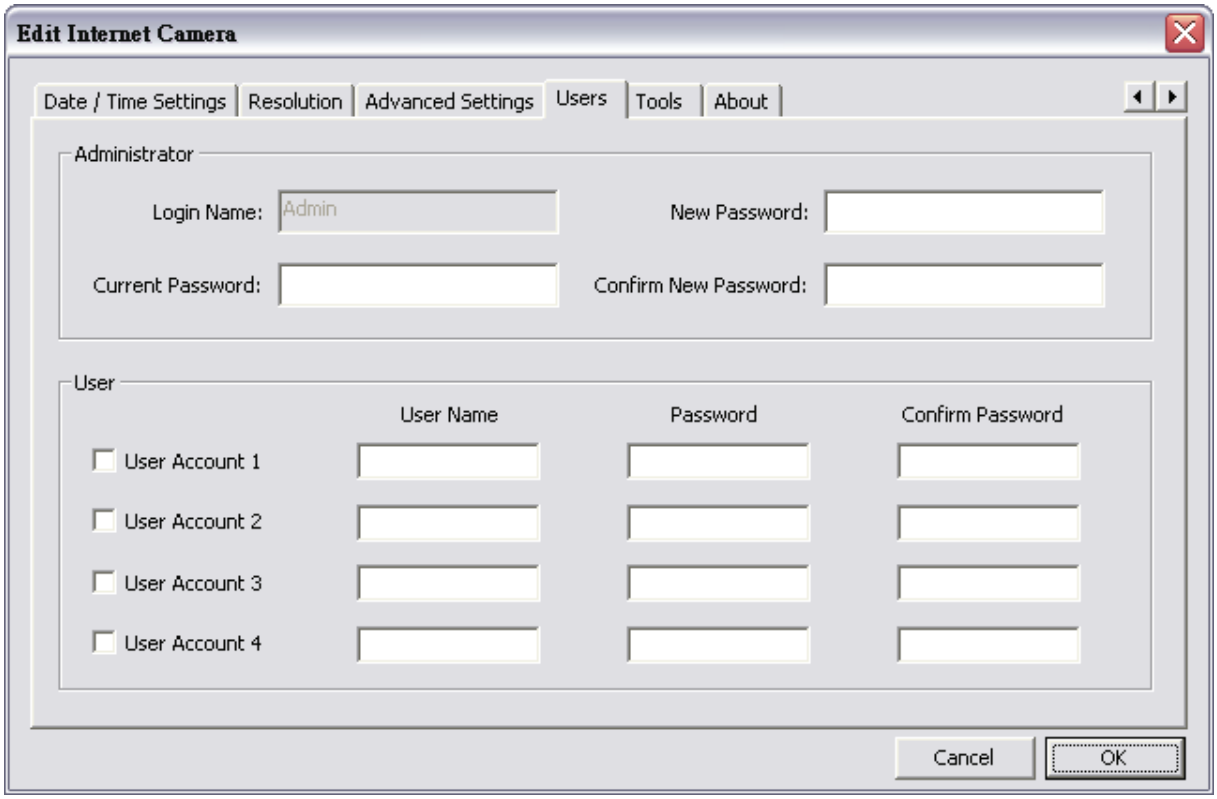
6.2.6. Advanced Setting



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.

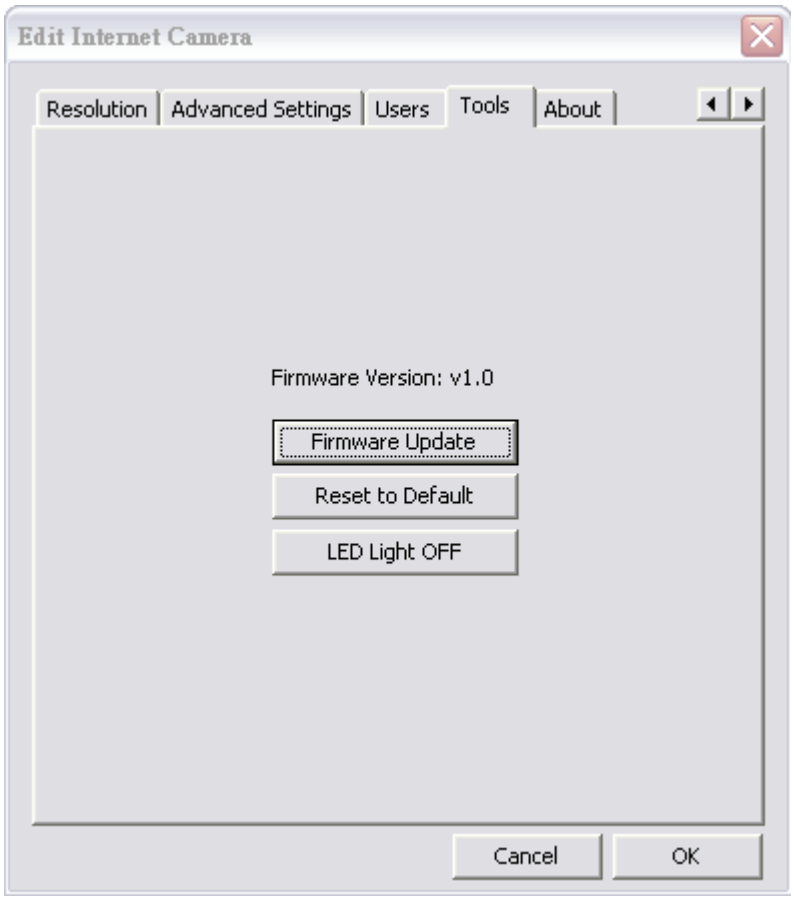
Provider	Several companies provide DDNS service. This camera supports the service from DynDNS who is one of the DDNS providers.
Domain Name	The domain name given by DynDNS is “registername.dyndns.com”. Enter the domain name that you register for the camera from DynDNS web site.
Account	Enter the login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

6.2.7. Users



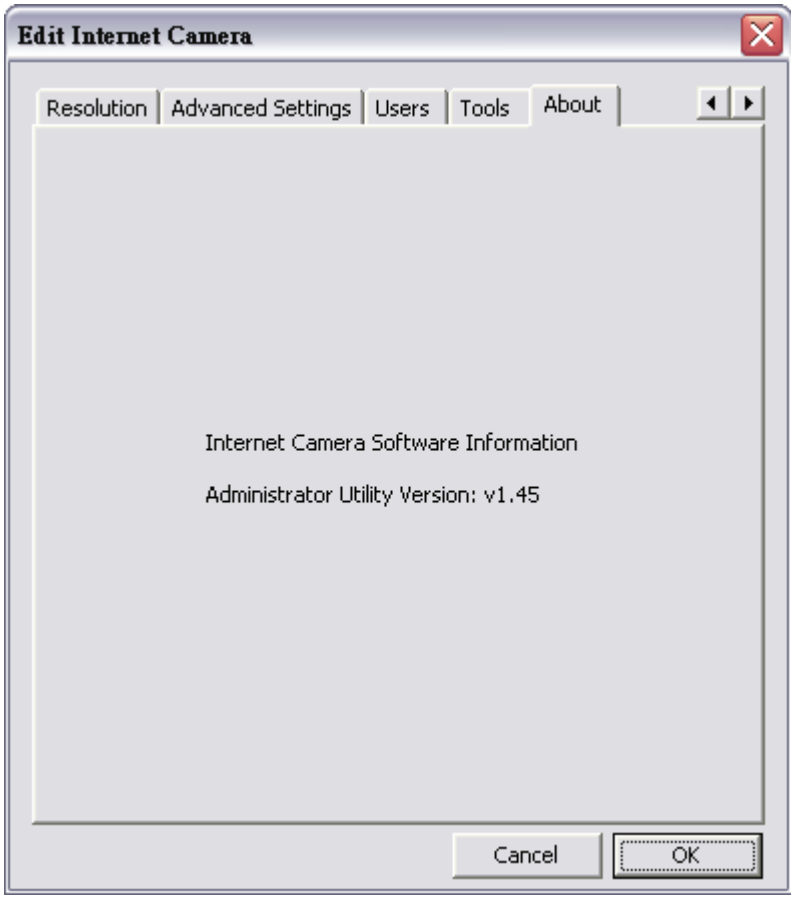
Users	
Administrator	Setting the password of Administrator account
Current Password	Enter the current password of the camera.
New Password	Enter the new password you want to use for the camera.
Confirm New Password	Retype the new password to confirm the setting.
User	Setting the user account and password.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

6.2.8. 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-XXX" (XXX=the last 3 numbers of MAC) IP Address: "192.168.2.3" Subnet Mask: 255.255.255.0 Administrator Name: "Admin" Password: "1234" Video Port: "4321" Web Port: "80"

6.2.9. 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	
Internet Camera Name	The default camera name is “IC-XXX” (XXX=the last 3 numbers of MAC). 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. Using the Camera Viewer

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

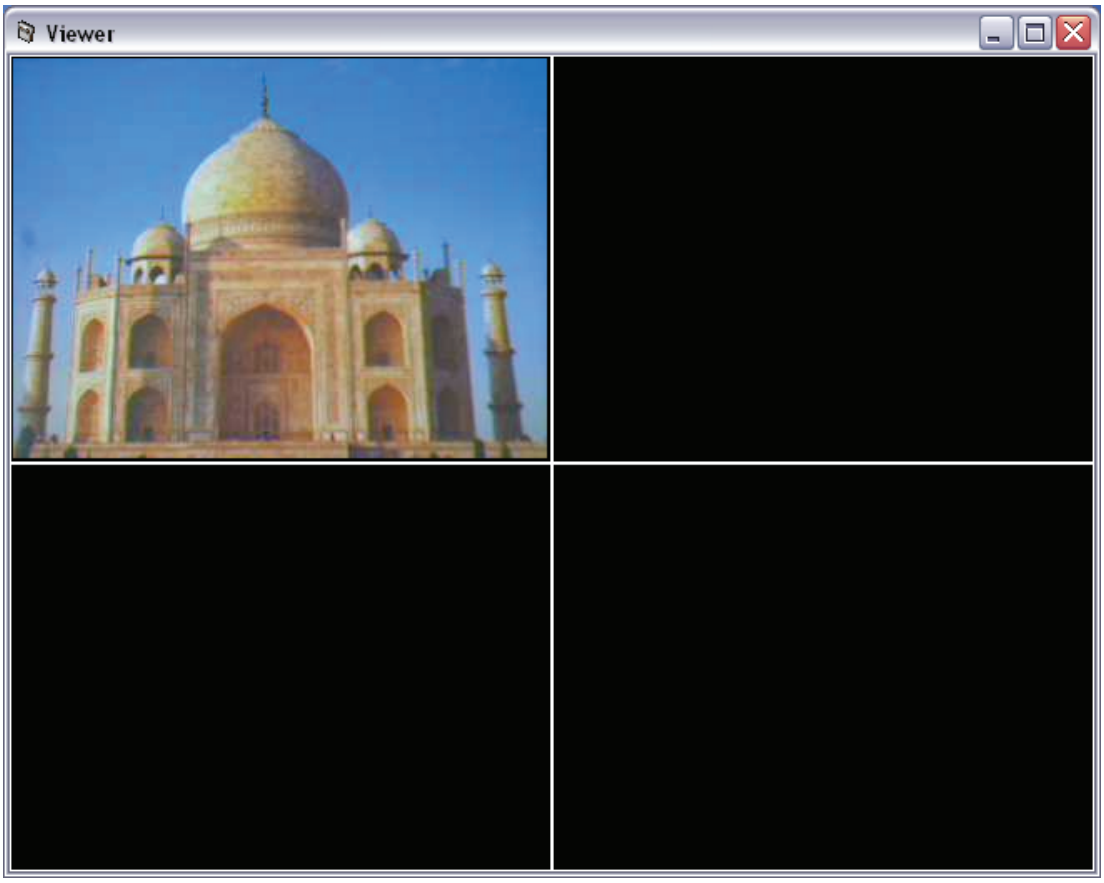
There are three ways to run the Camera Viewer Utility as follows.

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

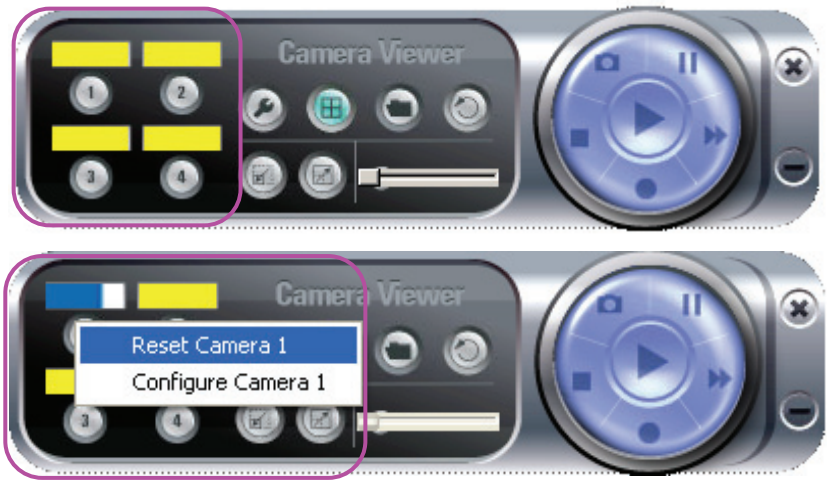
to run the utility.
3. Click “Setting Wizard” from Administrator Utility and follow the instructions in the utility.

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



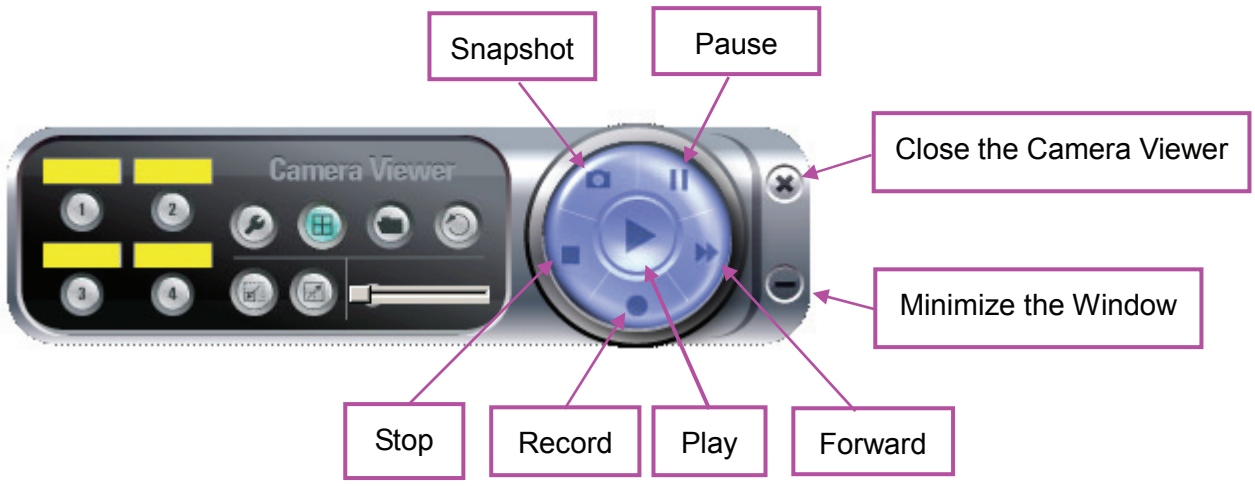
Camera Buttons	
Camera 	Click one of these four cameras will connect to the selected camera that you want to view and configure. If you want to remove the camera from the viewer, please **right click** the icon and select “Reset Camera x”. If you want to configure the camera, please **right click** the icon and select “Configure 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)
Record 	By clicking “Record” you can record video immediately. (You can set the directory for storing video files at the section 7.8.4)

7.5. Video Recording

This utility allows you record the video in AVI 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 viewer utility will start to record the video stream. You can assign the path in the setting dialog.(at section 7.8.4) Clicking “Stop” will stop recording.

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.

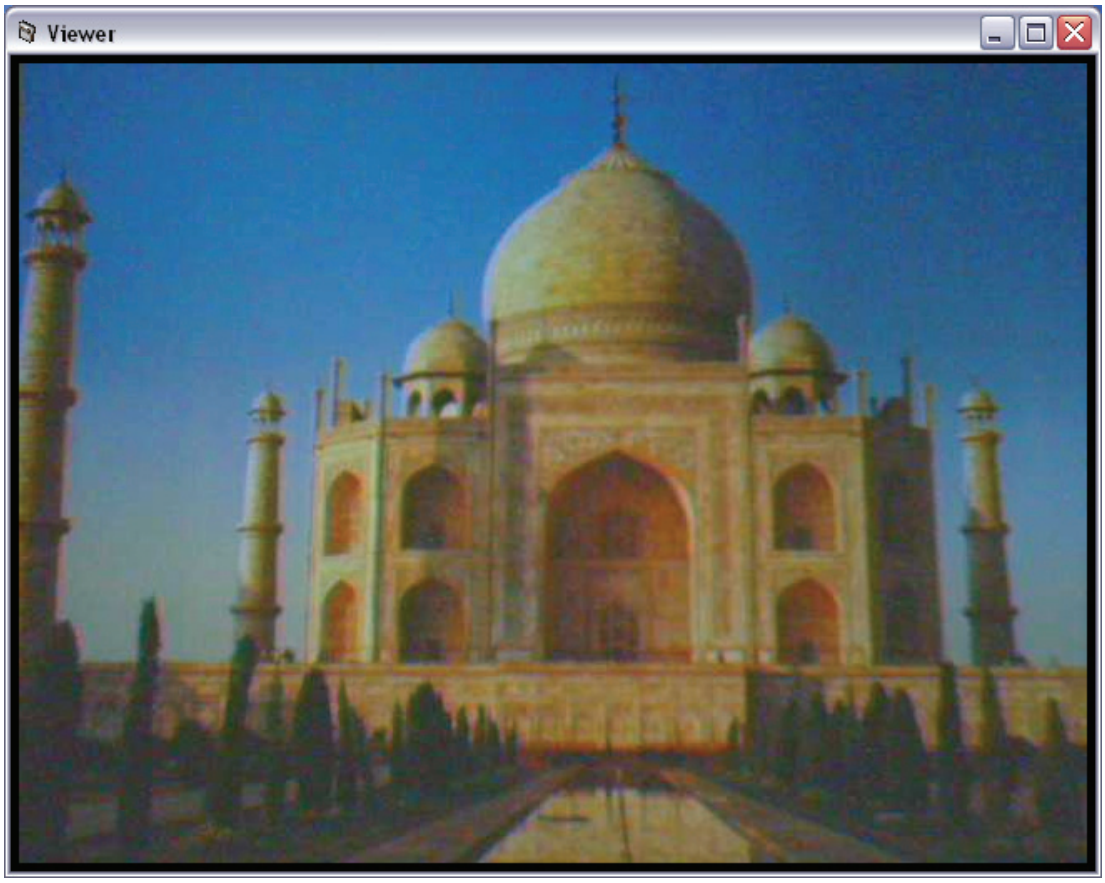
Schedule Recording

You can assign a schedule and let this viewer automatically recording the video stream. 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 “IPCamera_2004-10-8-23-56-40.avi” means it was recorded at 2004/10/8 23:56:40.

7.6. Change Resolution

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

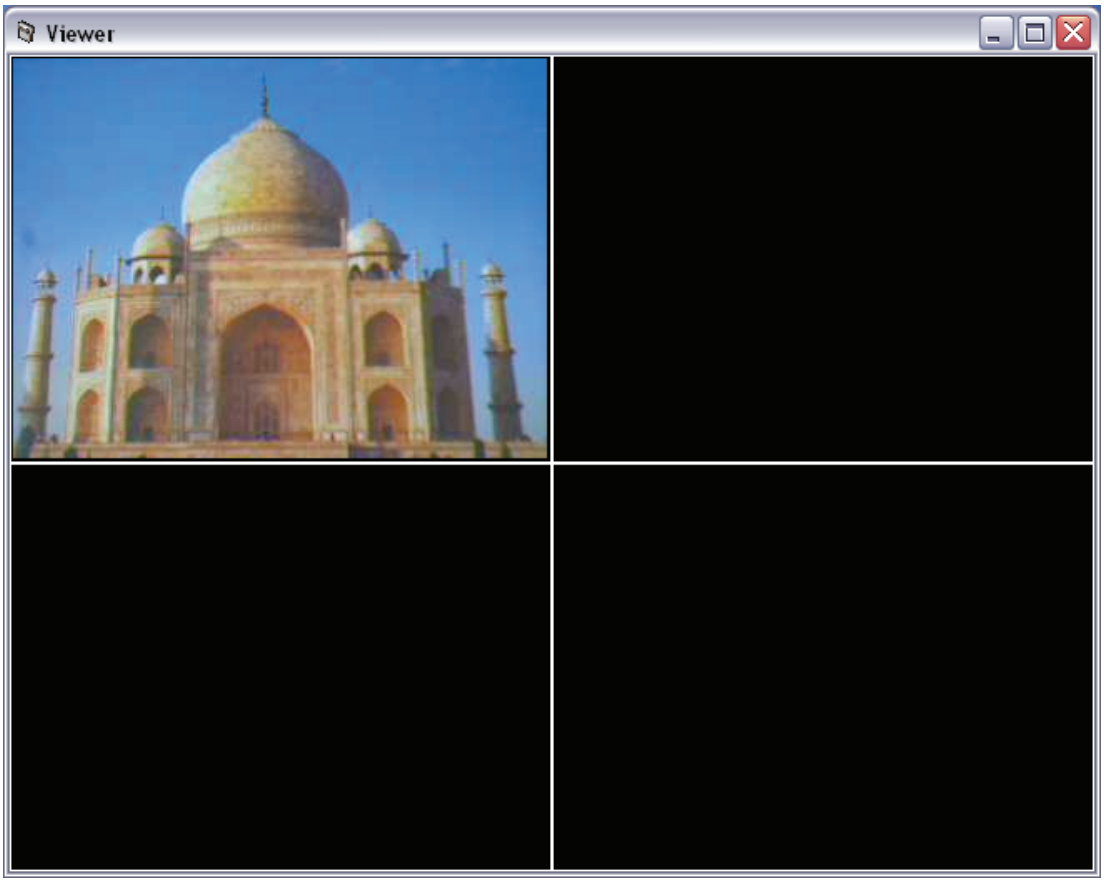
Note: Before changing the resolution of the Internet Camera, you have to select the Internet Camera by clicking the camera button first. If you change the resolution of an Internet Camera, other clients who are viewing the same Internet Camera simultaneously will also see the video with the changed resolution,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



Resolution	
VGA	Change the resolution to 640x480 (VGA) mode.
QVGA	Change the resolution to 320x240 (QVGA) mode.

7.7. View Four Cameras Simultaneously

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


Viewer

7.8. Viewer Utility Setting

Click the “Setting” button  , 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 “Internet Camera” (This camera only supports MJPEG).
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”.
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.

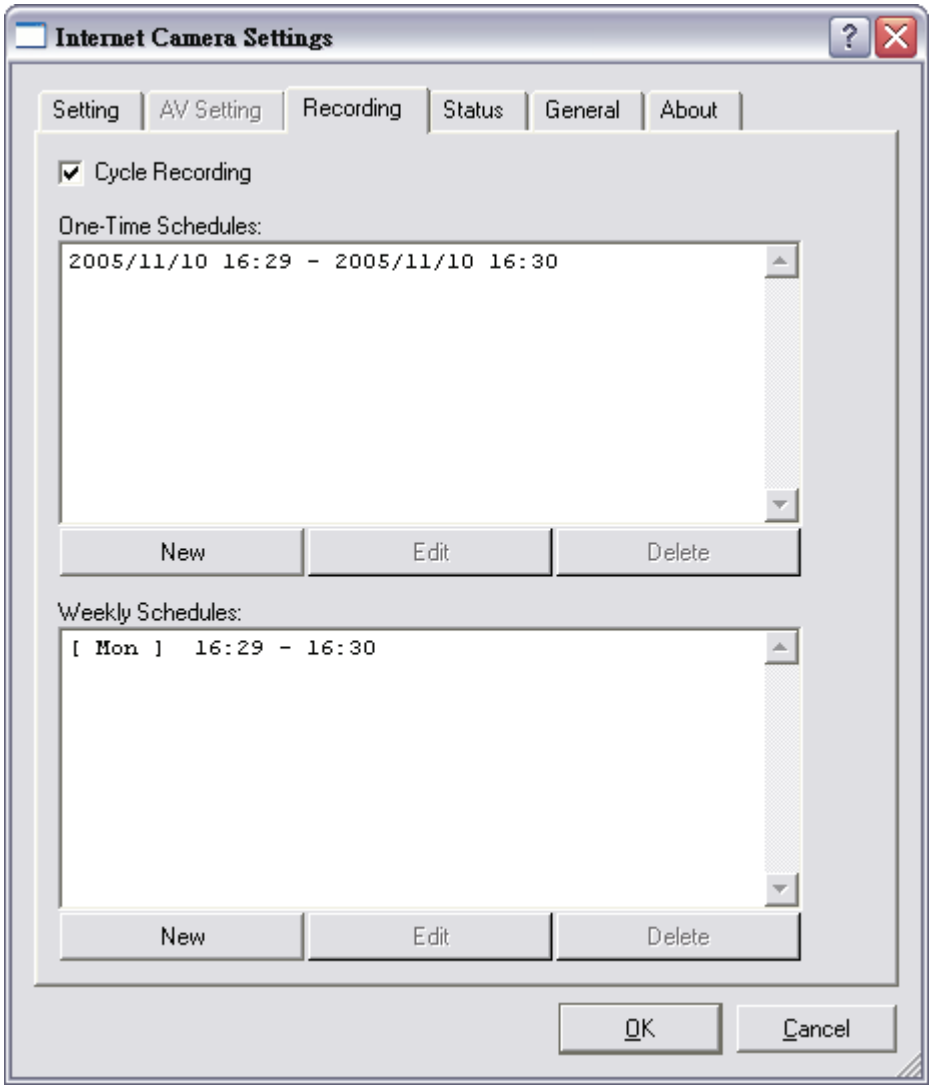
7.8.2. Recording

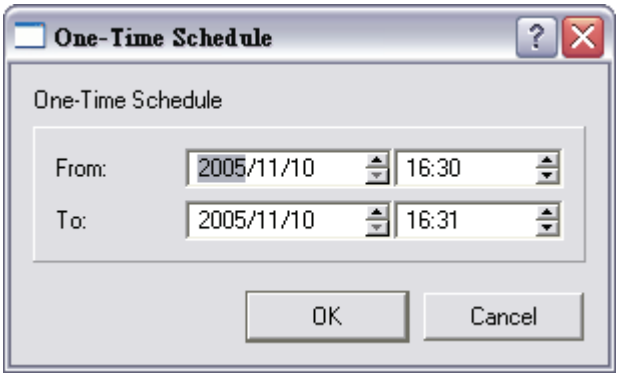
You can setup schedule for the recording here. This utility will record the video stream in the assigned file folder according to the schedule automatically. The recorded video files are AVI format.

Note:

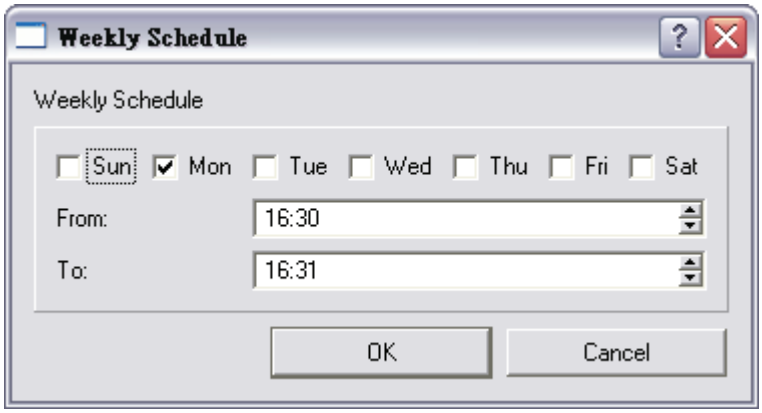
1. The utility will only start to record the video stream when this utility is running and is successfully connecting to the Internet camera in the beginning of the schedule.

2. The schedule setting of one-time or weekly schedule should not overlap, or the recording will fail.





One-Time Schedule



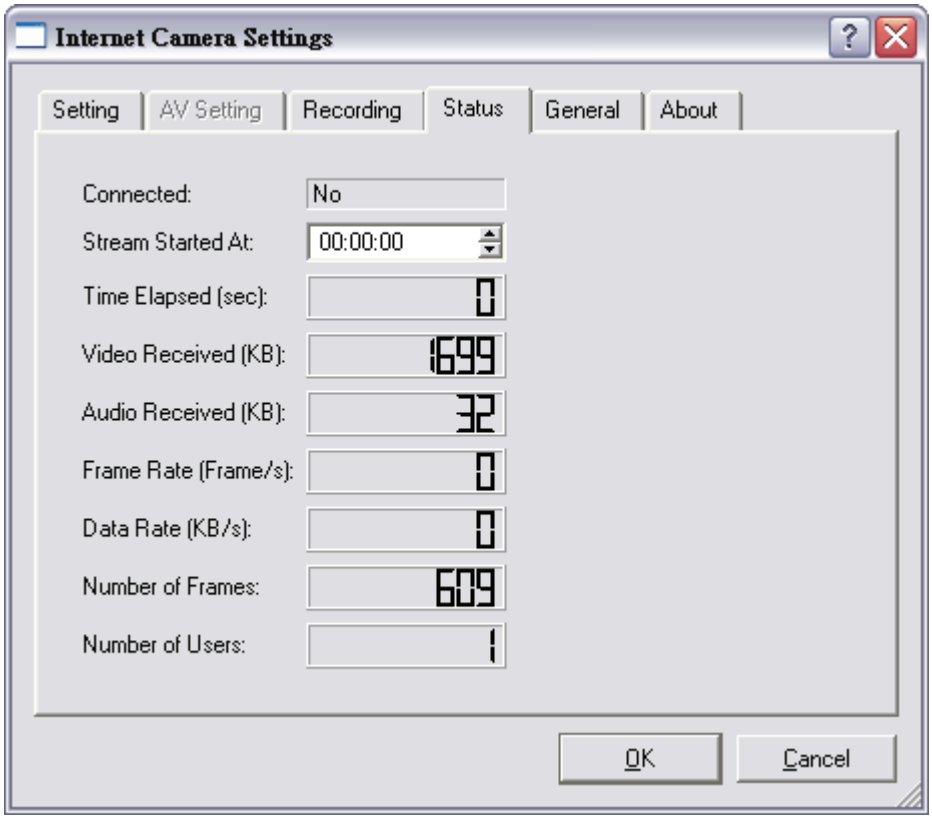
Weekly Schedule

Schedule	
Cycle Recording	Check this check box to enable cycle recording. When the Cycle Recording is checked 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.



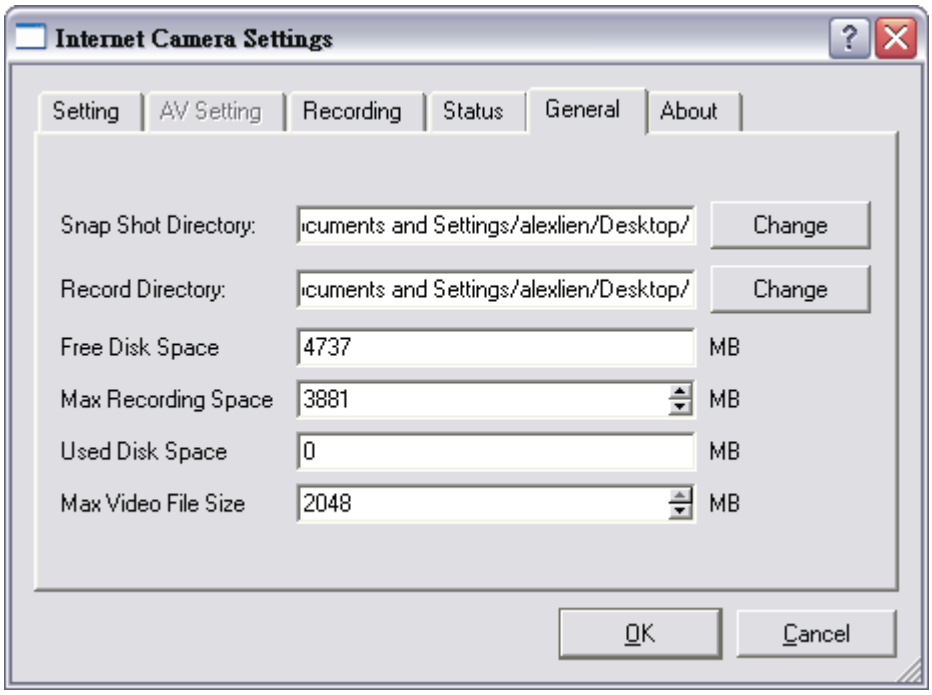
Status	
Connected	It displays “Yes” when the utility is connecting to the Internet Camera and displays “No” when the utility is not connecting to the Internet Camera.

Status	
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.

*Audio Received	The total size (Unit is KByte) of audio stream received during the current connection session between the utility and the Internet Camera. (**Reserved**)
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 total number of users that viewing this camera currently.

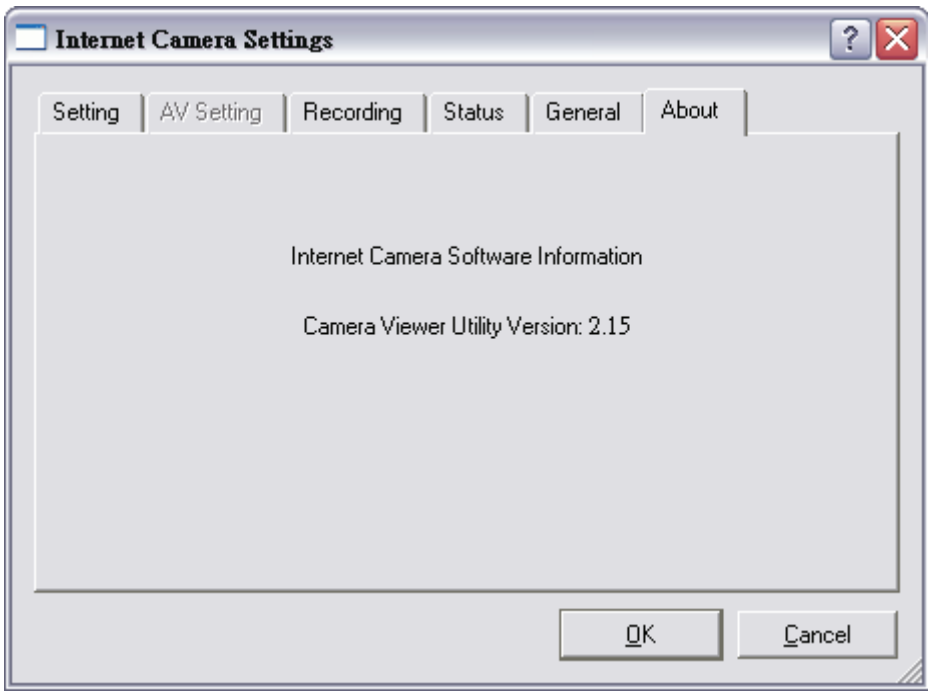
7.8.4. General

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\Internet Camera”.
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\Internet 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.

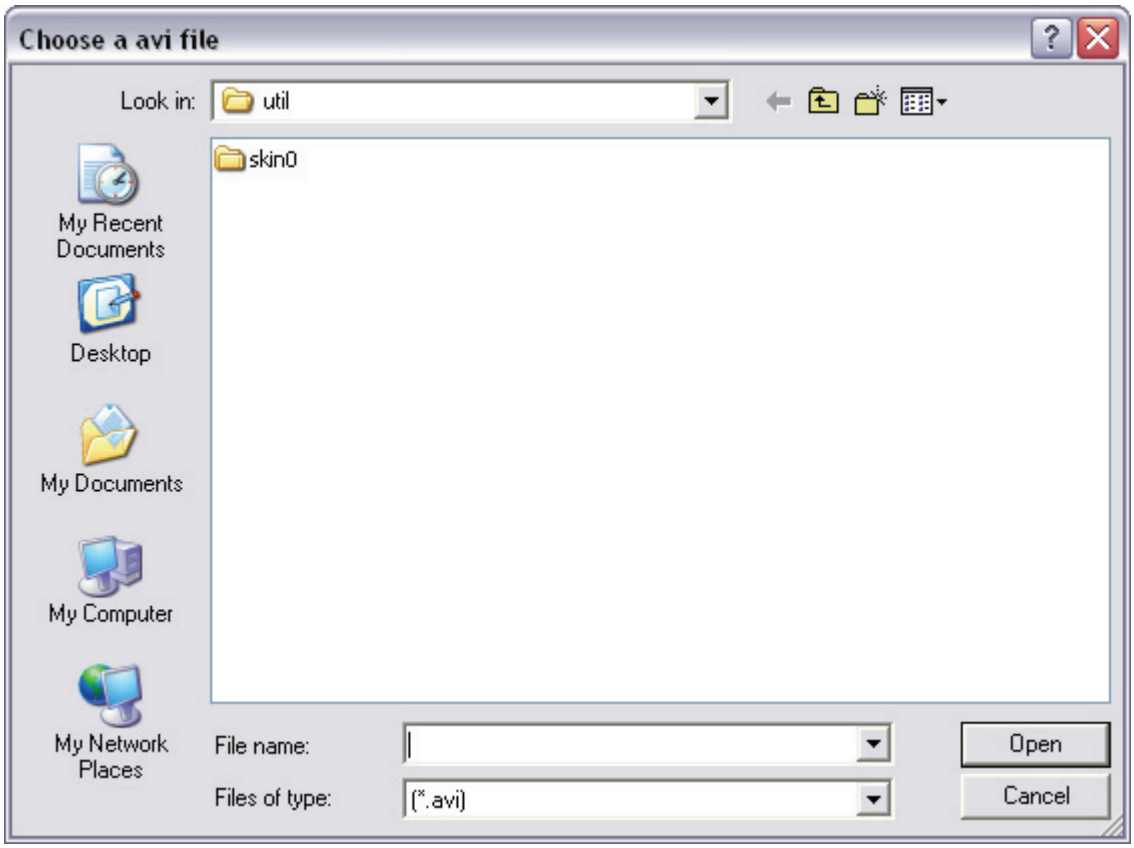
7.8.5. About



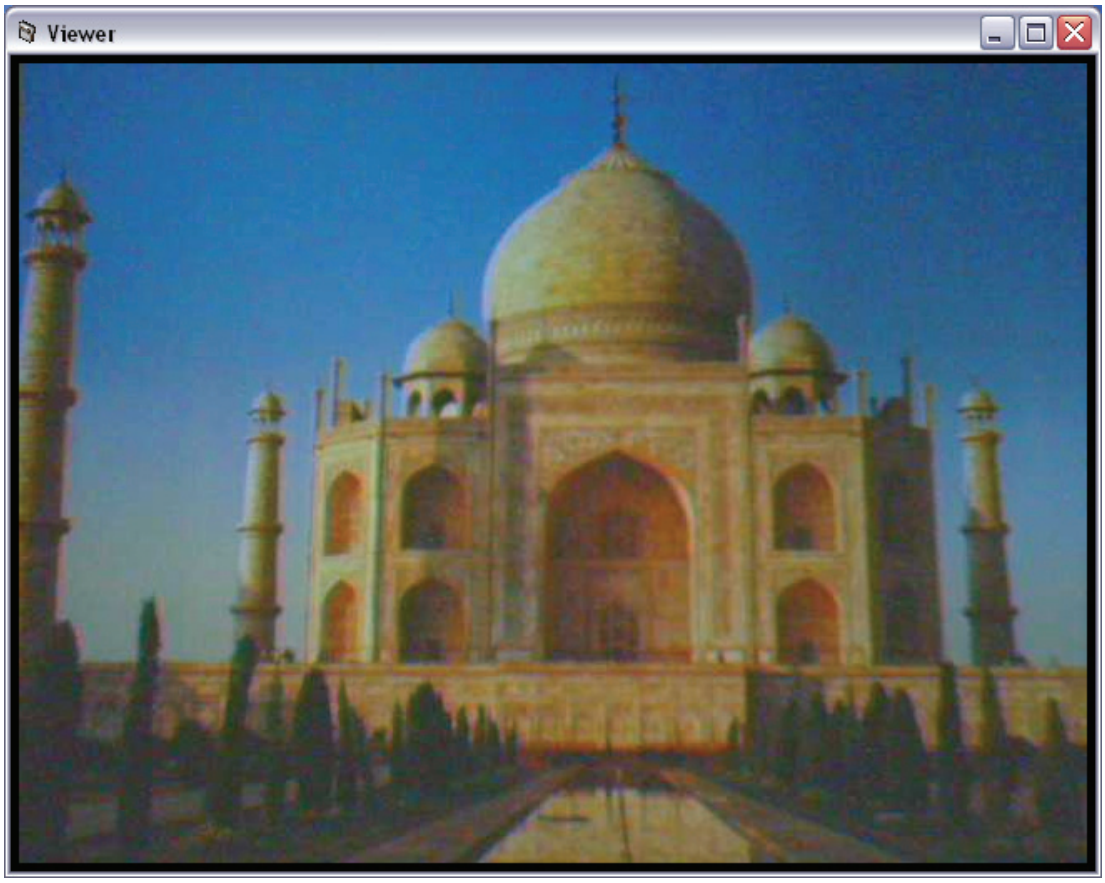
About	
Camera Viewer Utility Version	Display current Camera Viewer Utility Version.

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 180 of degree angle each time you click the “Rotate”  . With this function, you can view the live video with normal, and 180 degree angles counterclockwise.

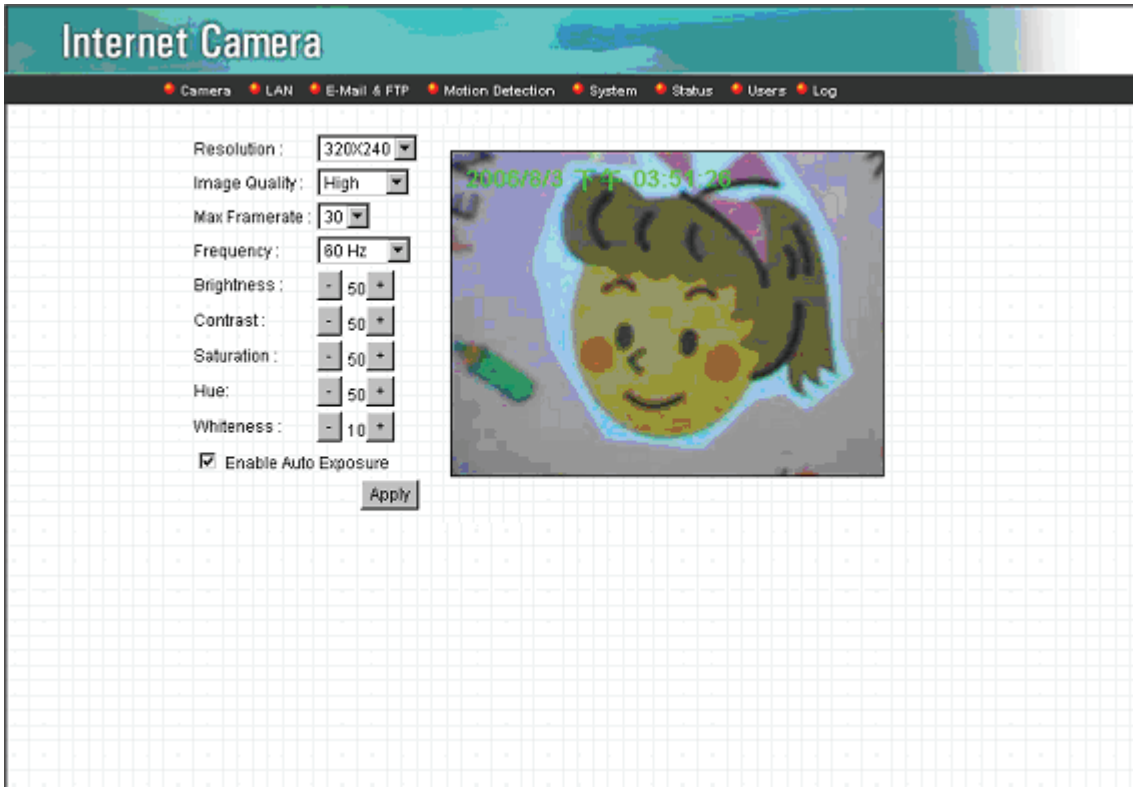
8. Web Connection and Setup

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, a dialog will appear to install the ActiveX plug in. Click install.

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.

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

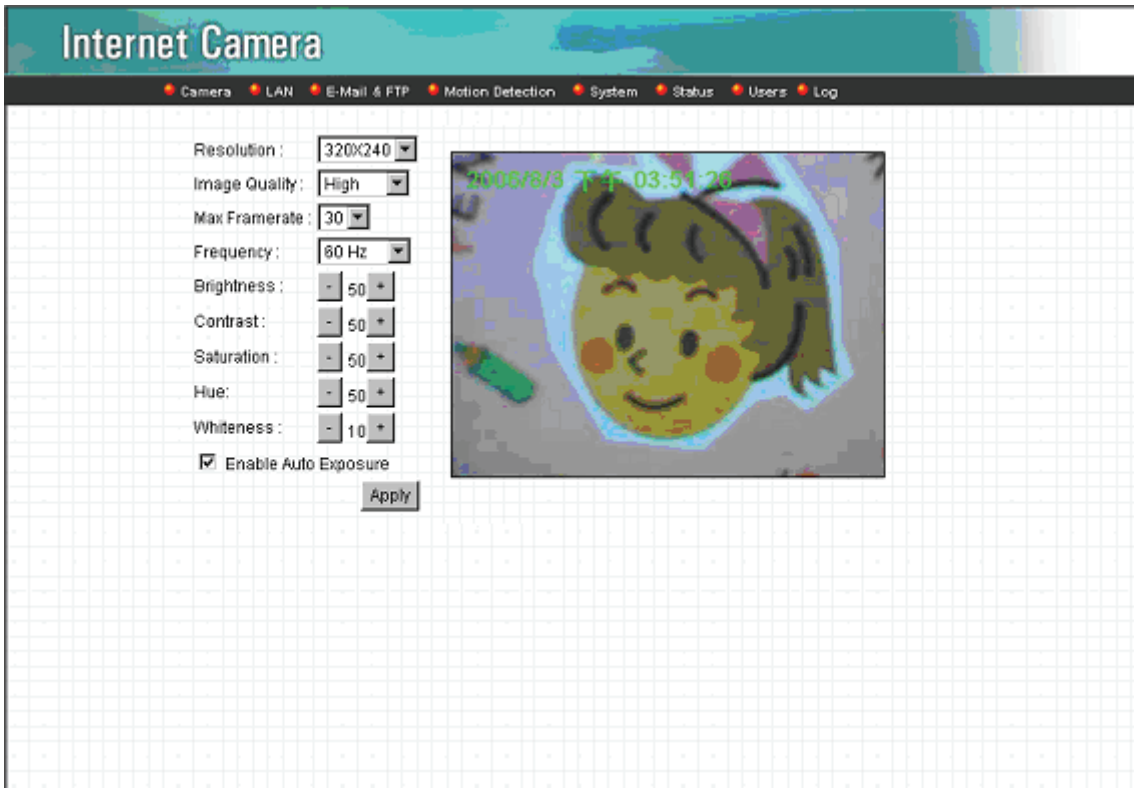
Motion Detection – Configure the Motion Detection Actions here.

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.

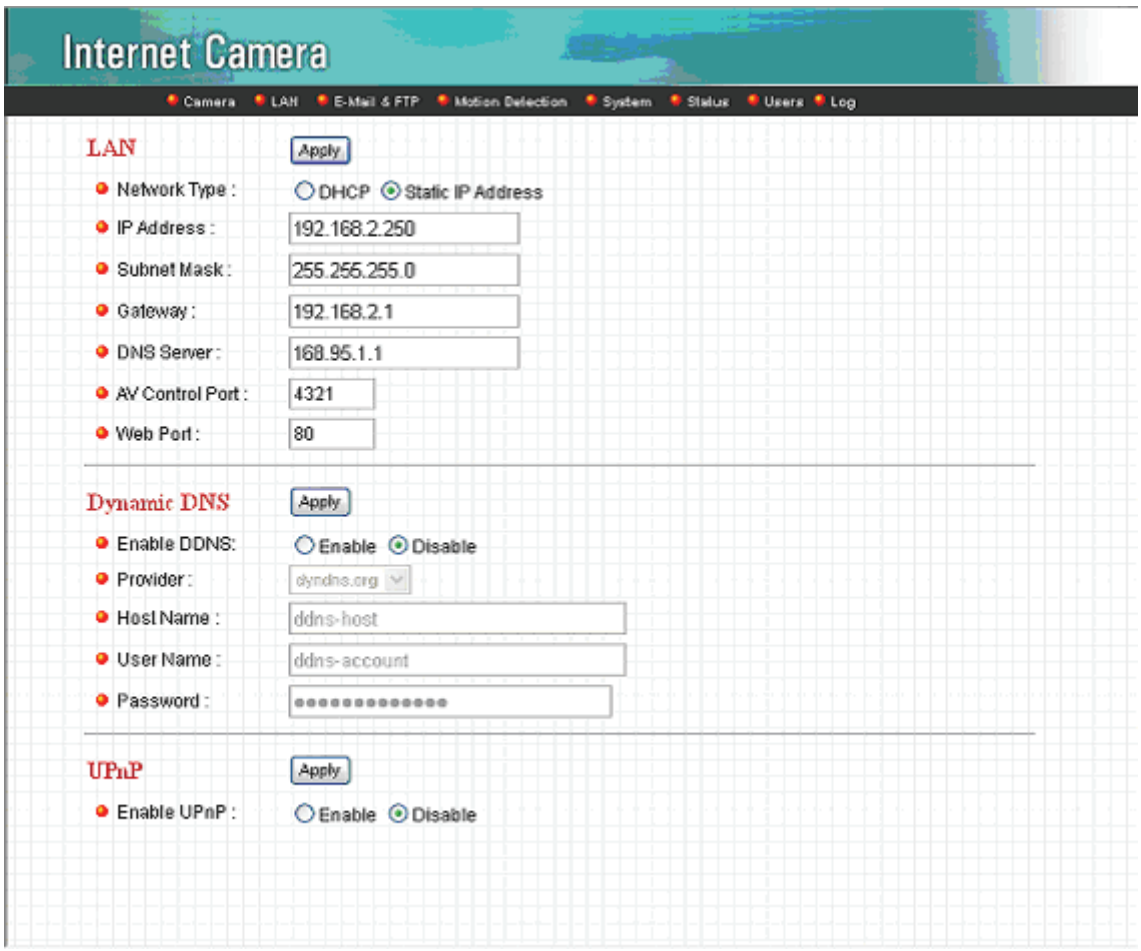
8.1. Camera Setting



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.
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

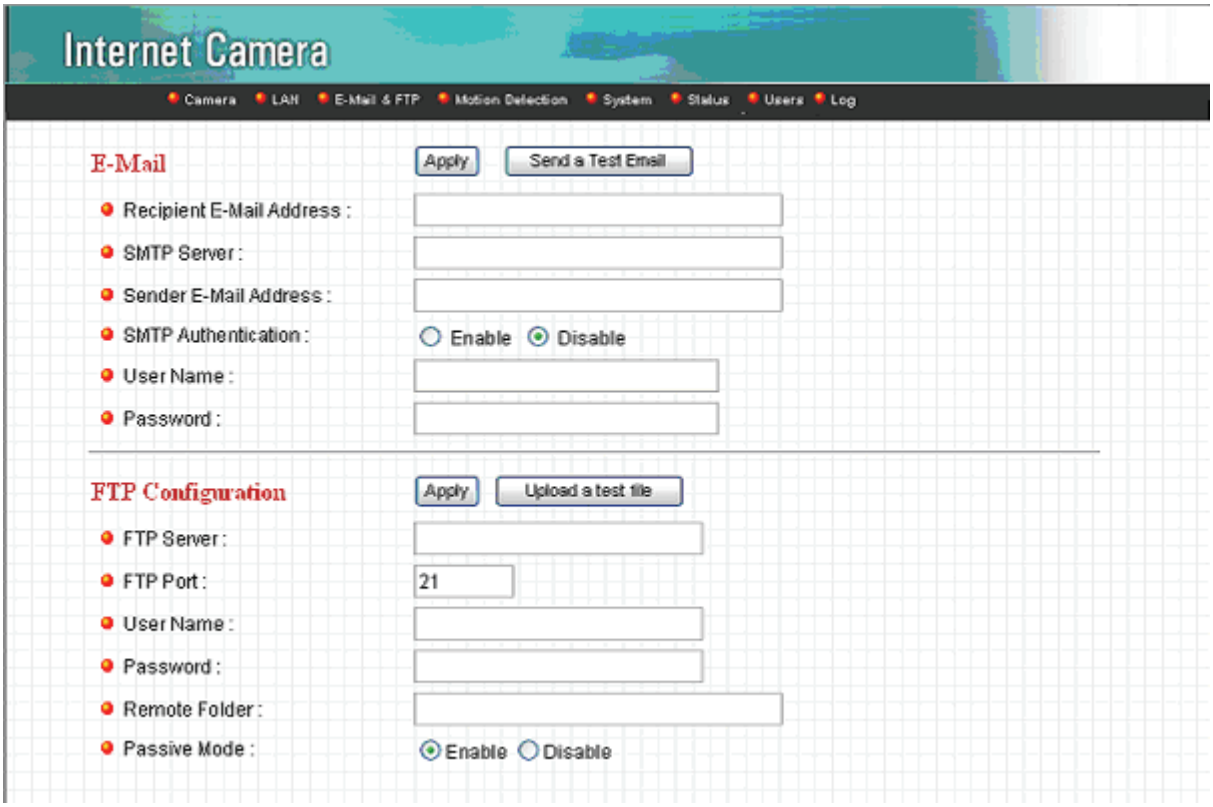
	same with the gateway used by the PCs on your LAN.
DNS Server	DNS Server (Domain Name Server) that translates names to IP addresses. Set the same DNS Server as the PCs on your LAN.
AV Control Port	The AV Control Port is used to transmit or receive the AV streaming in the network. The default port setting 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”.

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”.

8.3. 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.

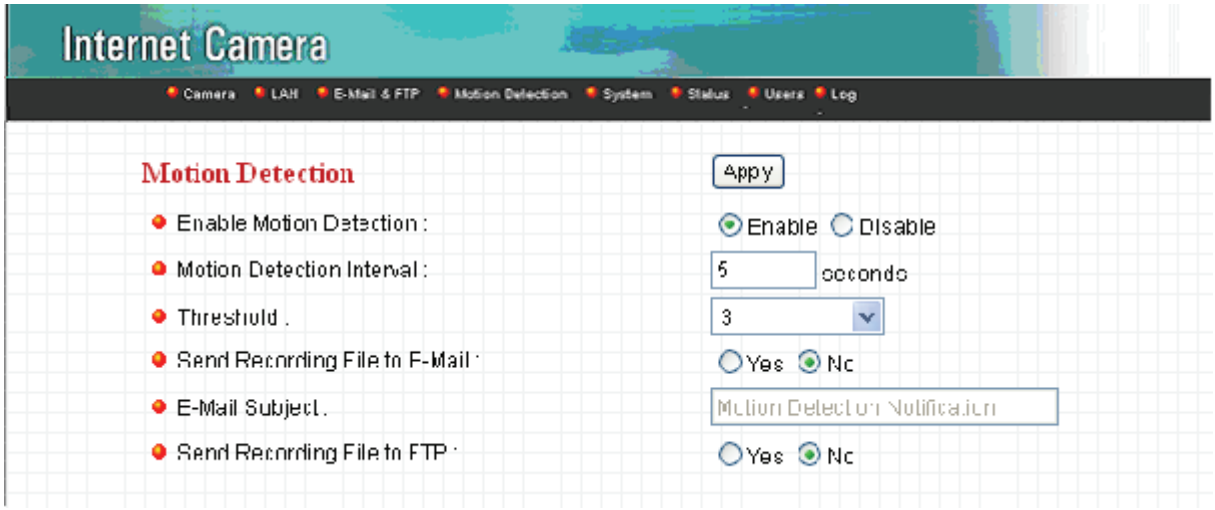


AV Server	
Recipient E-Mail Address	This camera supports “Motion Detection” function. Enter the E-Mail Account for receiving the pictures.
SMTP Server	Enter the SMTP Server for the E-Mail sending.
Sender E-Mail Address	Specified the e-mail address of the e-mail sender.
SMTP Authentication	Enable or Disable 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.

8.4. Motion Detection

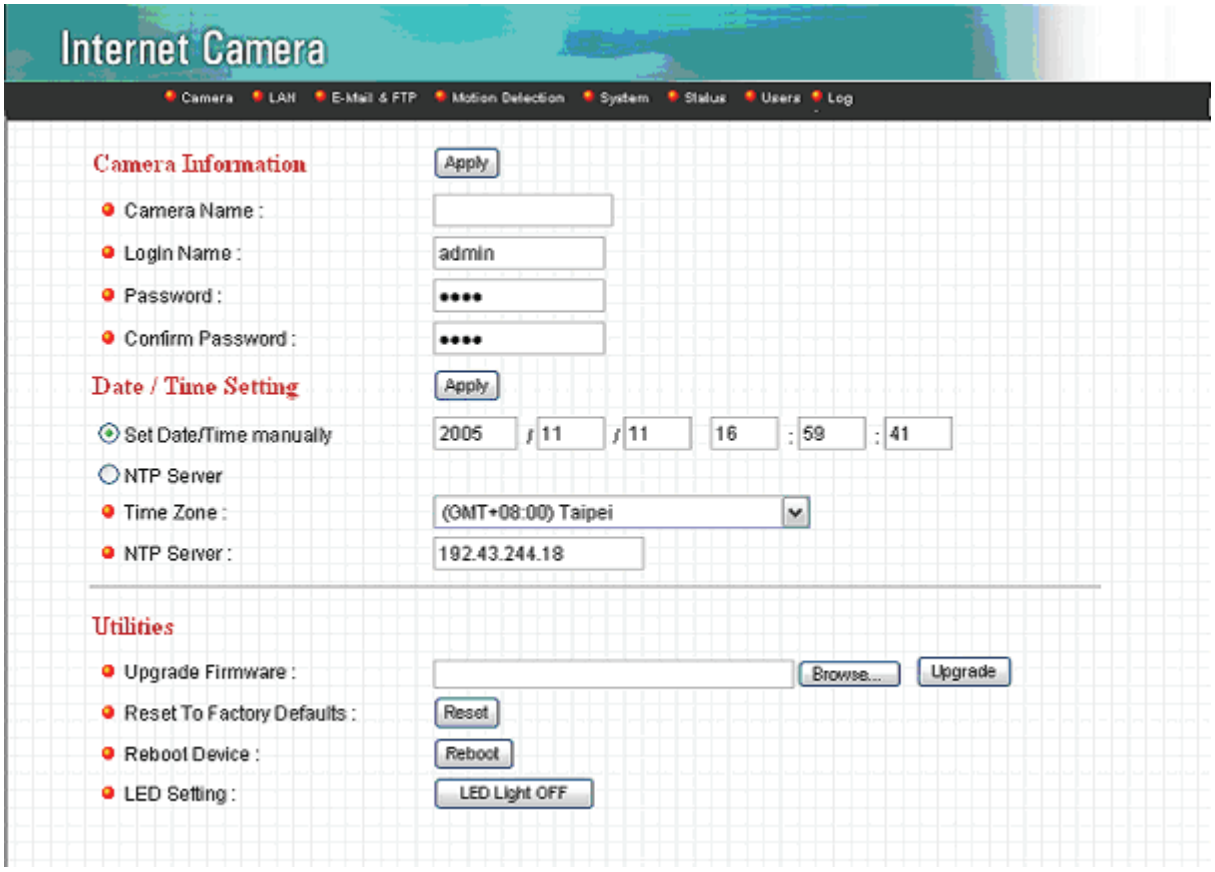
The “Motion Detection” allows users to setup the behavior of motion detection feature.



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.

8.5. 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 “IC-XXX” (XXX=the last 3 numbers of MAC). 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.

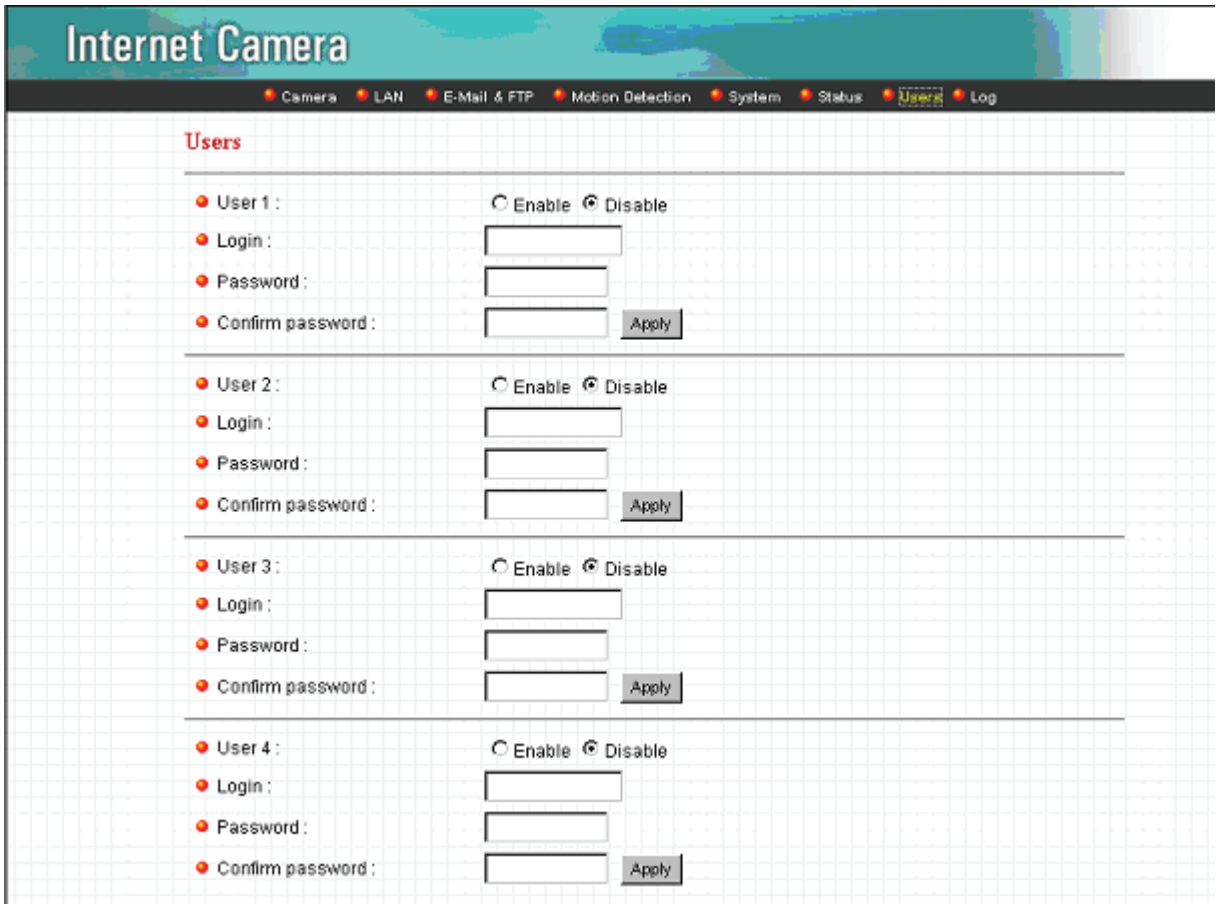
Upgrade Firmware	You can upgrade camera's firmware via this function. Press the browse button, find the correct firmware and press upgrade.
Reset to Factory Defaults	If you want to reset all the camera settings to default, click this button.
Reboot Device	To reboot the Internet Camera, click "Reboot".
LED Setting	There are four LEDs to indicate the status of Internet 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".

8.6. Status

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

8.7. 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.

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 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 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?

A: Adjust the Internet 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: 6.0 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: 320x240, 640x480

- **System Hardware**

LAN Connector: One RJ-45 port to connect to 10/100Mbps Ethernet
LED Indicator: Monitoring LED (Green), Ready LED (Amber), LAN LED (Green)
Power Supply: 12VDC, 0.5A

- **HTTP/Utility**

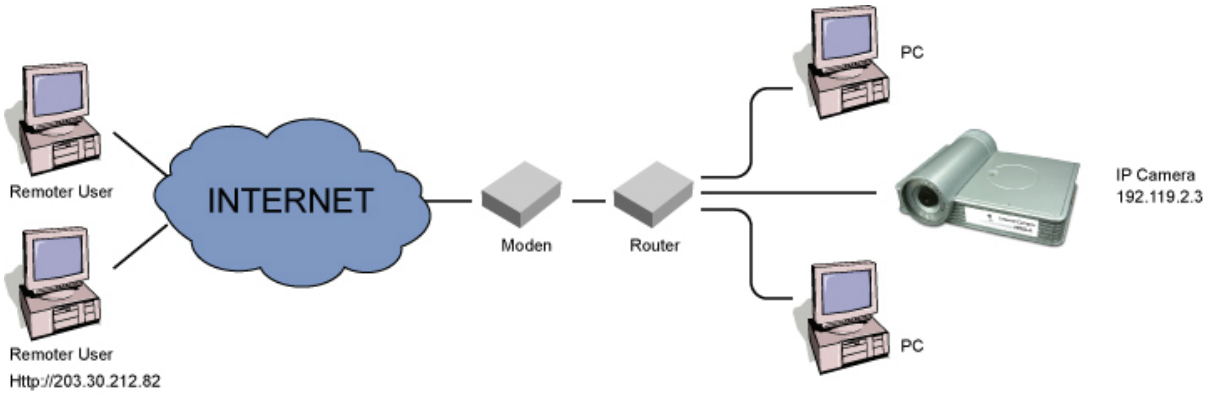
Includes easy-to-use Viewer & Recorder utility
Provides Admin utility & WEB browser Management
View multiple cameras simultaneously - Up to 4 cameras at a time
Manual/Schedule Record, Video Playback/Stop/Forward/Pause
Supports four additional user accounts for viewing camera
Support DDNS and UPnP functions
Supports Windows 2000/XP/2003
Firmware Upgradeable

- **EMI & Safety**

FCC, CE

10. 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

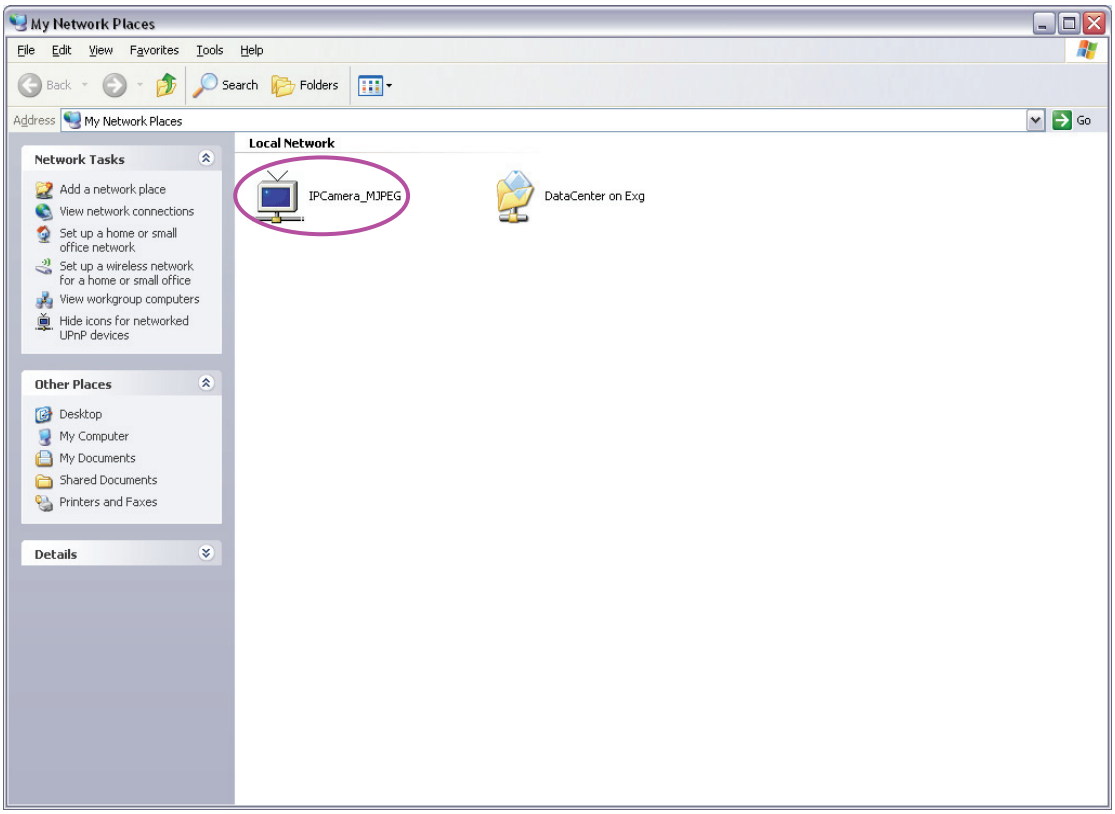
Name	Protocol	Port	LAN IP
Setup 1	TCP	80	192.168.2.3
Setup 2	TCP	4321	192.168.2.3
Setup 3	UDP	13364	192.168.2.3

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

11. Appendix B Viewing via UPnP in Windows XP

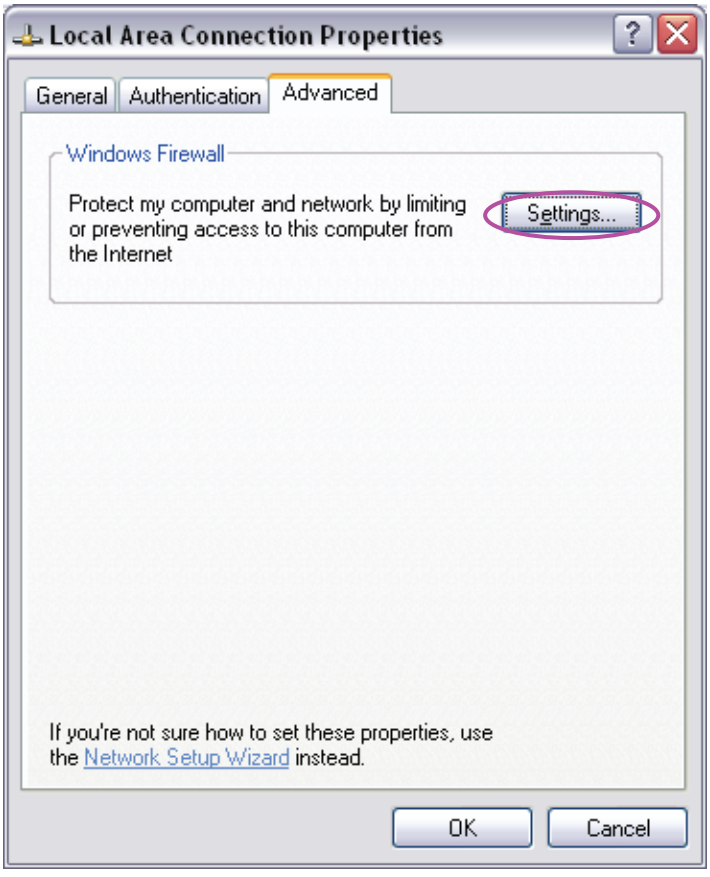
When the UPnP function is enabled, the camera can be detected by UPnP compliant system such as Windows XP. The camera will be displayed in the Neighborhood of Windows XP, so you can directly double click the camera or right click the camera and select “Invoke” to view the video through web browser.



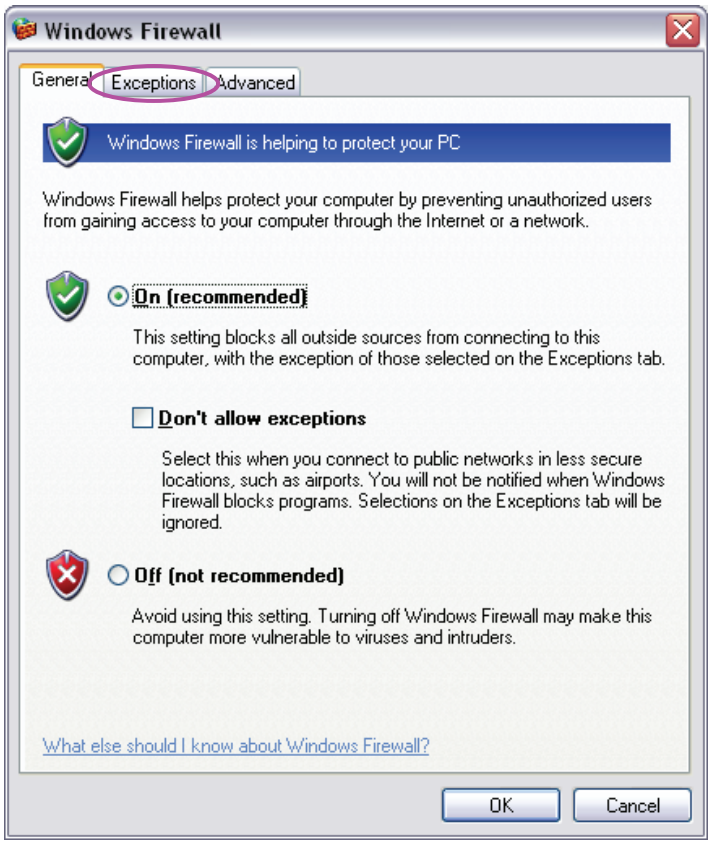
Enable UPnP in Windows XP SP2

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.

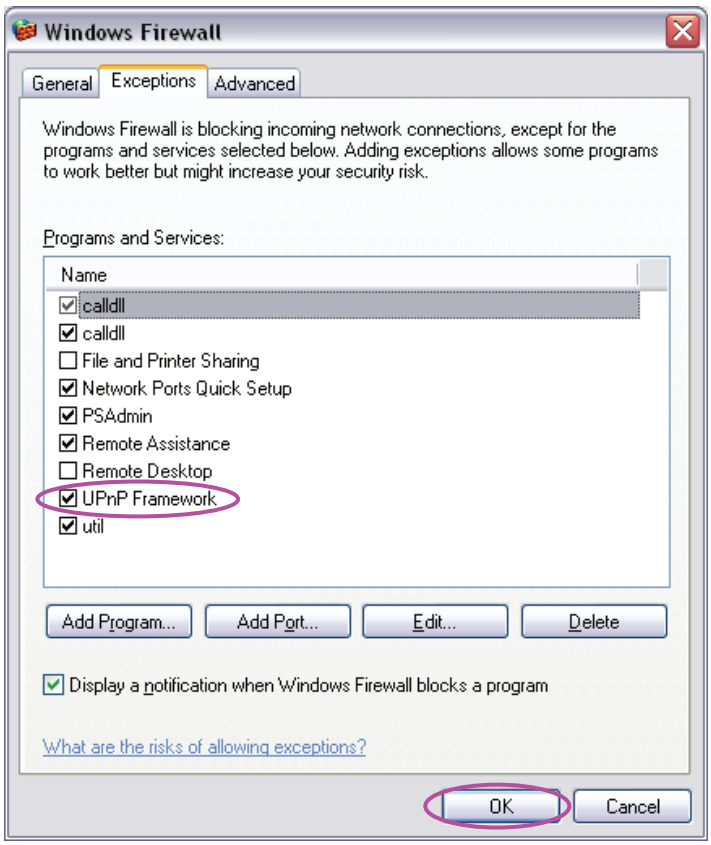
1. Go to "Start\Settings\Network Connections".
2. Right click the "Local Area Connection" and select "Properties".
3. In the "Local Area Connection Properties", select "Advanced" option menu and click "Settings".



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



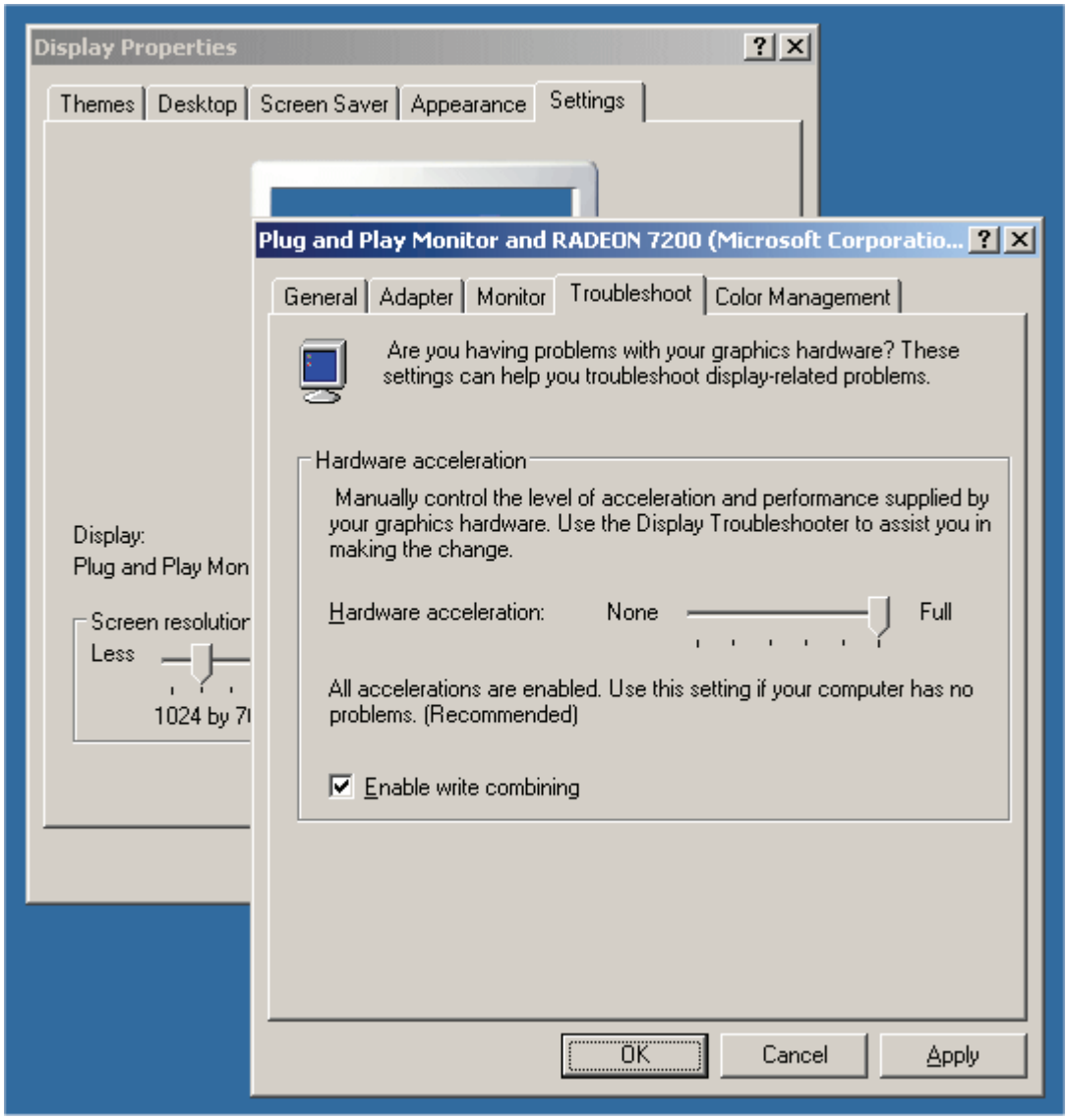
5. Enable “UPnP Framework” from the “Programs and Services list” and click “Ok”.



12. Appendix C Configure Windows 2003 Server

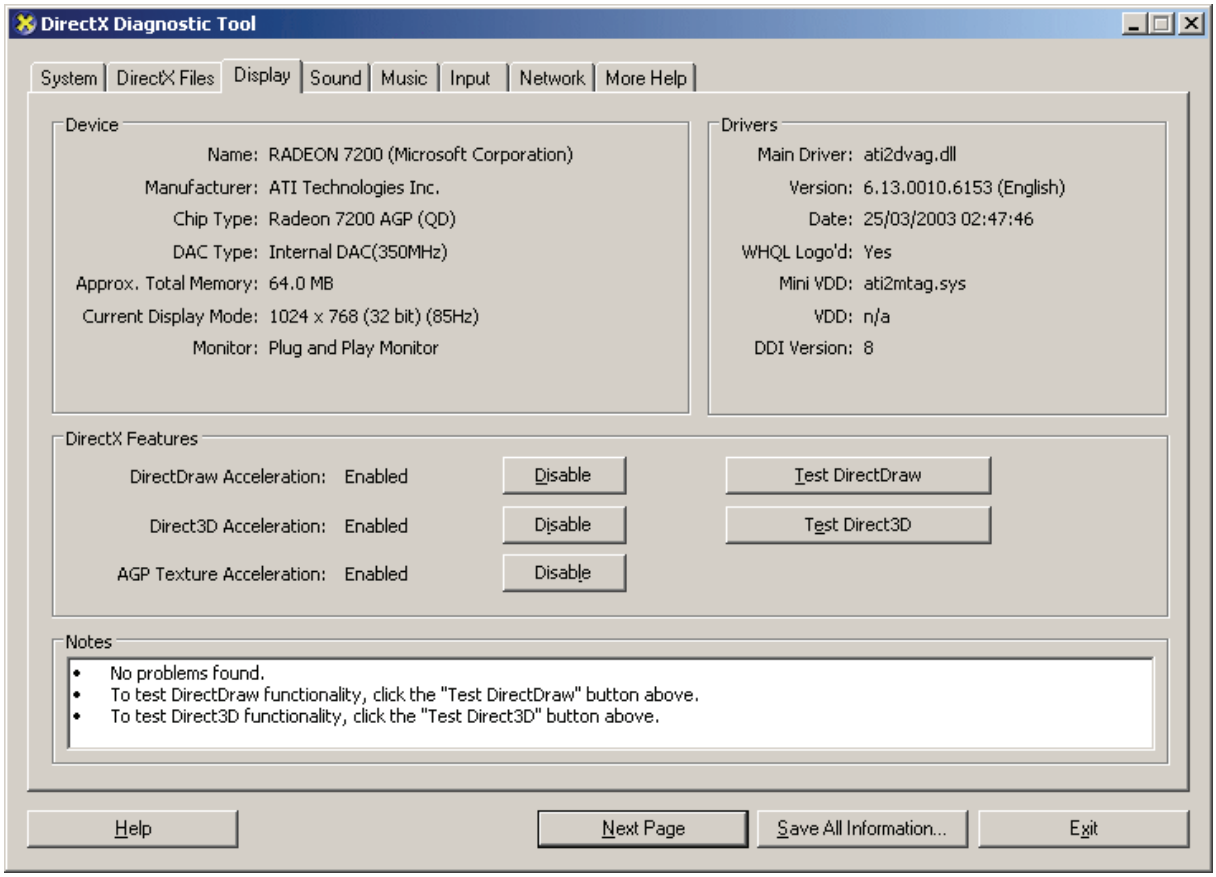
Graphics Hardware Acceleration and DirectX are disabled by default on a Server configuration to ensure maximum stability and uptime. But for any reason you need to enable them to use DirectX enabled applications this section will guide you through on how you can do it.

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.