Internet Camera

ICA-102/ICA-102W

User's Manual

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Revision

User's Manual for PLANET Internet Camera:

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Chapter 1
Introduction

As broadband communication gets more and more popular, it becomes easier to transfer video and audio through network. The ICA-102 family provides an advanced Internet Camera solution, supporting wired or wireless Ethernet networking. The ICA-102/102W can be placed wherever there is a wired/wireless LAN or an available xDSL/Cable modem connection, and the ICA-102 family also supports DDNS. Even when your gateway does not support DDNS, it can still co-operate with the ICA-102 family and provide live images to Internet users.

The ICA-102 family uses advanced MPEG-4 video compression technology. An advanced microcomputer is integrated into this camera to digitize live video, and then compress the video stream using MPEG-4. The high compression capabilities of MPEG-4 reduce network bandwidth requirements to amazingly low levels. With their Plug-N-Watch capability, a network administrator or system operator can seamlessly complete network deployment in just minutes!

ICA-102/ICA-102W Features

Features

- ***Standalone Design.***

  The ICA-102/102W Camera is a standalone system with built-in CPU and Video encoder. It requires only a power source and a connection to your LAN or Wireless LAN.

- ***Suitable for Home, Business or Public Facilities***.

  Whether for Home, Business or Public Facility surveillance, or just for entertainment and fun, the ICA-102/102W Camera has the features you need.

- ***Multi-Protocol Support.***

  Supporting TCP/IP networking, SMTP (E-mail), HTTP and other Internet related protocols; the ICA-102/102W can be easily integrated into your existing network.

- ***Easy Configuration.***

  A Windows-based Wizard is provided for initial setup. Subsequent administration and management can be performed using a standard web browser. The administrator can configure and manage the ICA-102/102W Camera via the LAN or Internet.

- ***Viewing/Recording Utility.***

  A user-friendly Windows utility is provided for viewing live video. For periods when you are absent, or for scheduled recording, this application also allows you to record video to an ASF file on your PC. The recorded files are in a standard Windows Media format, and thus usable by a wide variety of programs if required.

- ***Motion Detection.***

  This feature will send you an E-mail when motion is detected. The ICA-102/102W Camera will compare consecutive frames to detect changes caused by the movement of large objects. This function only works indoors due to the sensitivity of the CMOS sensor. If desired, a short video can be included as an attachment to the E-mail.

- ***Audio Support.***

With the built-in microphone or an external microphone attached, audio can be recorded with live images.

Internet Features

- ***User-definable HTTP port number***.

  This allows Internet Gateways to use “port mapping” so the ICA-102/102W Camera and a Web Server can share the same Internet IP address.

- ***DDNS Support.***

  In order to view video over the Internet, users must know the Internet IP address of the gateway used by the ICA-102/102W Camera. But if the Gateway has a dynamic IP address, DDNS (Dynamic DNS) is required. Since many existing Gateways do not support DDNS, this function is incorporated into the ICA-102/102W Camera.

- ***NTP (Network-Time-Protocol) Support.***

  NTP allows the ICA-102/102W Camera to calibrate its internal clock from an Internet Time-Server. This ensures that the time stamp on Video from the ICA-102/102W Camera will be correct.

Security Features

- ***User Authentication.***

  If desired, access to live video can be restricted to known users. Users will have to enter their username and password before being able to view the video stream. Up to 20 users can be entered.

- ***Password-Protected Configuration.***

  Configuration data can be password protected, so that it only be changed by the ICA-102/102W Camera Administrator.

Wireless Features (ICA-102W only)

- ***Standards Compliant.***

  The Wireless Router complies with the IEEE802.11g (DSSS) specifications for Wireless LANs.

- ***Supports both 802.11b and 802.11g Wireless Stations.***

  The 802.11g standard provides for backward compatibility with the 802.11b standard, so both 802.11b and 802.11g Wireless stations can be used simultaneously.

- ***Speeds to 54Mbps.***

  All speeds up to the 802.11g maximum of 54Mbps are supported.

- ***Wired and Wireless Network Support.***

  The ICA-102W Camera supports both wired and wireless transmission.

- ***WEP Support***.

  Full WEP support (64/128 Bit) on the Wireless interface is provided.

Package Contents

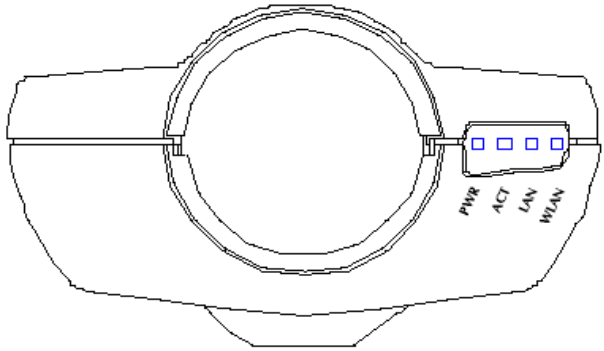
The following items should be included:

- Internet Camera unit
- Camera Stand
- Power Adapter
- CD-ROM
- Quick Installation Guide

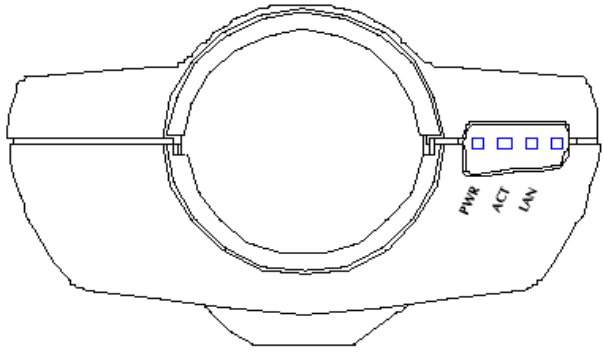
If any of the above items are damaged or missing, please contact your dealer immediately.

Physical Details

Front Panel



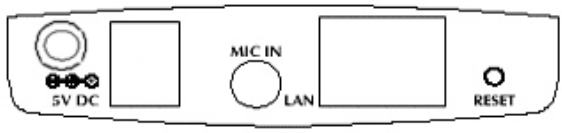
Front Panel of ICA-102W



Front Panel of ICA-102

Focus Ring	Normally, it is not necessary to adjust the focus. The default focus range is from 1 meter (3 feet) to infinity. If the image is not clear, try adjusting the focus.
Microphone	The built-in microphone is mounted on the front. There is also a connection for an external microphone on the rear. Connecting an external microphone will disable the built-in microphone.
Ready LED	**On** - Power on. **Off** - No power. **Blinking** - The *Ready* LED will blink during start up. This will take 15 to 20 seconds.
Active LED	**Off** - Idle. **Blinking -** Wireless/Ethernet Internet Camera is providing a live video stream to at least one viewer.
LAN LED	**On** - LAN port is connected to a hub or switch. **Off** - LAN port is not connected. **Blinking** - Data is being transmitted or received via the LAN port.
Wireless LED	**(Wireless Internet Camera only)** **On** - Wireless interface is active. **Off** - Wireless interface is not available. **Blinking** - Data is being transferred via the Wireless interface.

Rear Panel



Antenna	Attach the supplied antenna here. The antenna is adjustable; best results are usually obtained with the antenna positioned vertically.
Power Input	Connect the supplied power adapter here.
MIC In	If required, an external microphone can be attached here. Attaching a microphone here will disable the built-in microphone on the front. Microphones designed to be used with PCs are usually compatible with this microphone input.

LAN port	Use a standard LAN cable to connect your ICA-102/102W Camera to a 10/100BaseT hub or switch. **Note:** On the ICA-102/102W Camera, attaching the LAN cable will disable the Wireless interface. Only 1 interface can be active at any time.

Reset Button	This button has two (2) functions:
	• **Restore Default IP Address**. When pressed and released, the ICA-102/102W Camera will reset its IP address to the default value of 192.168.0.20.
	• **Restore Default IP Address, Administrator ID, and Administrator password**. When pressed and held or 3 seconds, the IP address, Administrator ID, and Administrator Password settings will be set to their default values.
	  • IP address: 192.168.0.20
	  • Administrator ID: admin
	  • Administrator Password: admin
	Note:
	After this procedure is completed, the Ready LED will blink three times to confirm that the reset was completed successfully.

Chapter 2

Installation

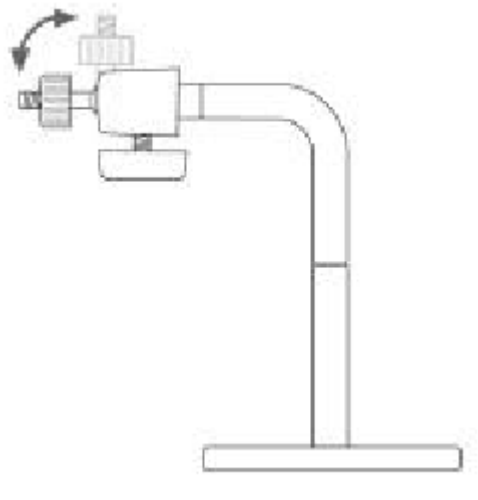
2

Requirements

	ICA-102	ICA-102W
Network Environment		
LAN	10/ 100M Ethernet	10/ 100M Ethernet IEEE 802.11g Wireless LAN
Monitoring System Recommended		
System Hard-ware	• CPU: Pentium IV, 450 MHz or above • Memory Size: 128 MB (256 MB recommended) • VGA card resolution: 800x600 or above	
System Requirement for Viewer & Recorder Application		
Support OS	Win 98 SE, Win 2000, Win Me, Win XP	
System Hardware	• CPU: Pentium III, 800 MHz or above • Memory Size: 128 MB (256 MB recommended) • VGA card resolution: 800x600 or above	

Connecting ICA-102 series to the Camera Stand

ICA-102 series comes with a camera stand accessory with a swivel ball screw head that can be attached to ICA-102 series' bottom screw hole. Attach the camera stand to ICA-102 series and station it for your application. There are three holes located in the base of the camera stand allowing ICA-102 series to be mounted on the ceiling or any wall securely.



Hardware Install Procedure

1.Connect an Ethernet cable

Connect one end of an Ethernet cable to the LAN port located on the ICA-102/102W rear panel and attach the other end to the network device (hub or switch). If you want to use wireless connection for ICA-102W, you can skip this step.

Note	**For the ICA-102W Camera, this disables the Wireless Interface, because only one interface can be active. The LAN interface is recommended for initial configuration.** **The default Wireless settings for the ICA-102W Camera are:** **Mode: Infrastructure** **ESSID: ANY** **WEP: Disabled**

2.Attach the external power supply

Connect the provided power adapter to the ICA-102's connector labeled "5VDC" on rear panel.

3.Check the LEDs

The PWR would flash for few seconds to detect network connection. The network indication LEDs (LAN or WLAN) would be on depending on which network type is available.

- The Ready LED will turn on briefly, and then start blinking. It will blink during startup, which takes 15 to 20 seconds.
  After startup is completed, the Ready LED should remain ON.
- The Active LED should be OFF.
  It will flash when anyone is viewing live video.
- Either the LAN LED OR the Wireless LED should be ON.

Chapter 3
Initial Setup

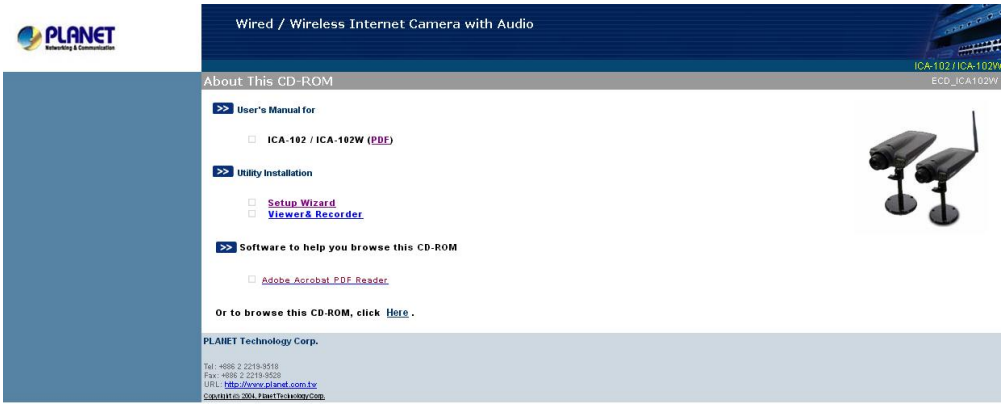
Preparation

The initial setup of ICA-102 series must be done through bundled Setup Wizard utility. Before starting installation, please ensure that:

- Your PC can establish a physical connection to the Internet Camera. The PC and the Internet Camera must be directly connected (using the LAN port on the Internet Camera) or on the same LAN segment. That is, the PC must be configured to an IP address and subnet mask in 192.168.0.x segment. For example: IP: 192.168.0.2, subnet mask: 255.255.255.0.
- The Internet Camera must be installed and powered ON.
- If the Internet Camera's default IP Address (192.168.0.20) is already used by another device, the other device must be turned OFF until the Internet Camera is allocated a new IP Address during configuration.

Procedures

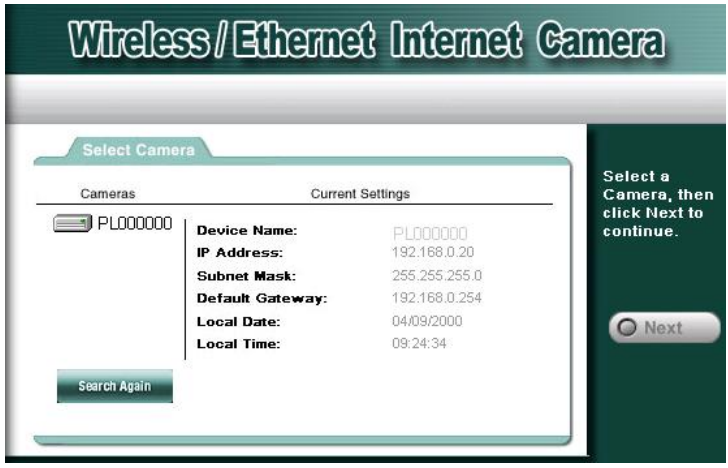
1. Insert the CD-ROM into the CD-ROM drive to initiate the auto run program. Once completed, a menu screen would appear as follow.



2. Click on **Setup Wizard** hyperlink to activate the initial setup.

   If the above screen is not shown, you can start the installation as follows.
   - Click on **Start Menu/ Run.**
   - Enter “D:\Utility\wizard.exe” in the appeared box, where “D” is the letter of your CD-ROM drive.
   - Click on “**OK**” button.
3. Once the wizard is activated, it would search available camera automatically.

4. The screen will list all cameras in your LAN. You can view their current settings by selecting respective Device Name from left panel. Choose the one you want to configure, click "**Next**".

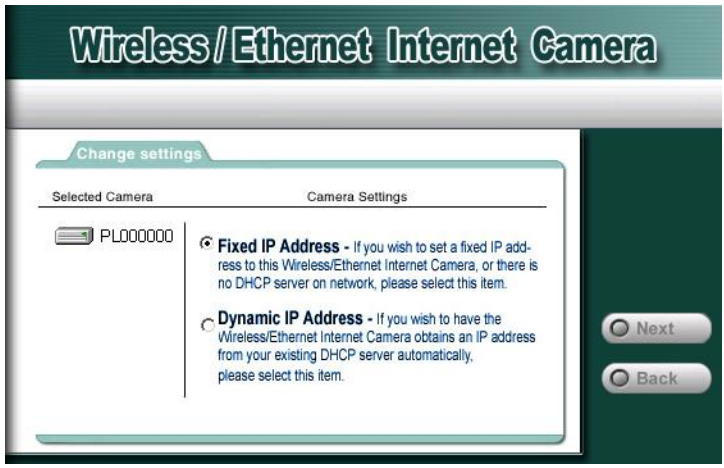


5. A password verification screen will pop up. Please key in administrator name and password for login. The default strings are admin/admin.

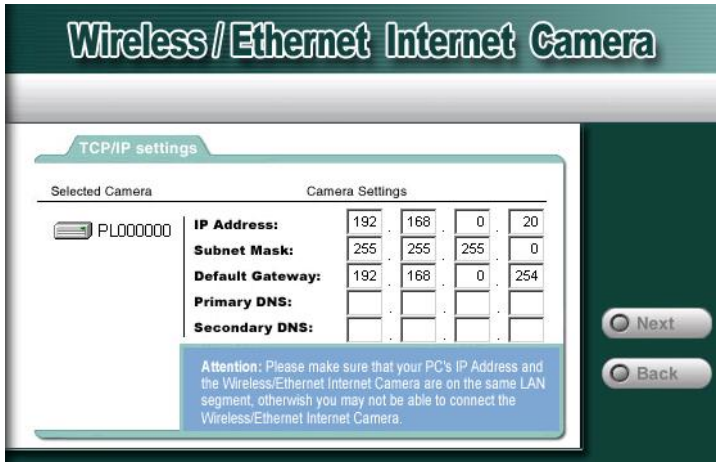
Note	**The Administrator ID and password can be set on the "User" screen of the Web interface. The Web interface can be accessed via the "Web UI" button on the final screen of the Wizard.**

6. In the next screen, you can select **"Fixed IP Address"** or **"Dynamic IP Address"**. **Fixed IP Address** is recommended, and can always be used. **Dynamic IP Ad-**

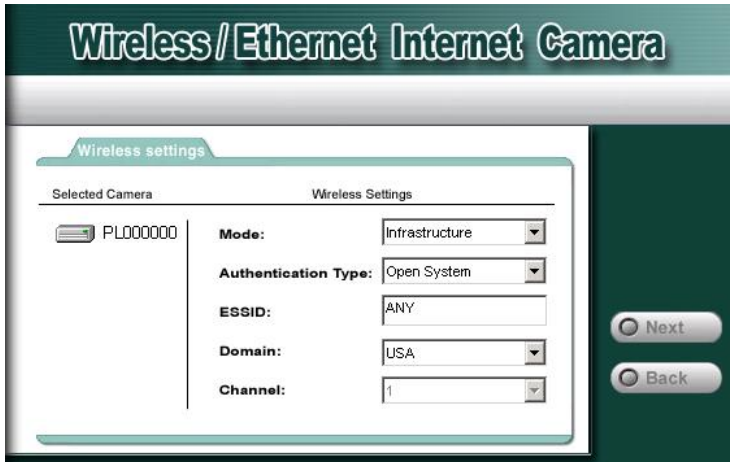
dress can only be used if your LAN has a DHCP Server. If you select **"Dynamic IP Address"**, please go to step 8.



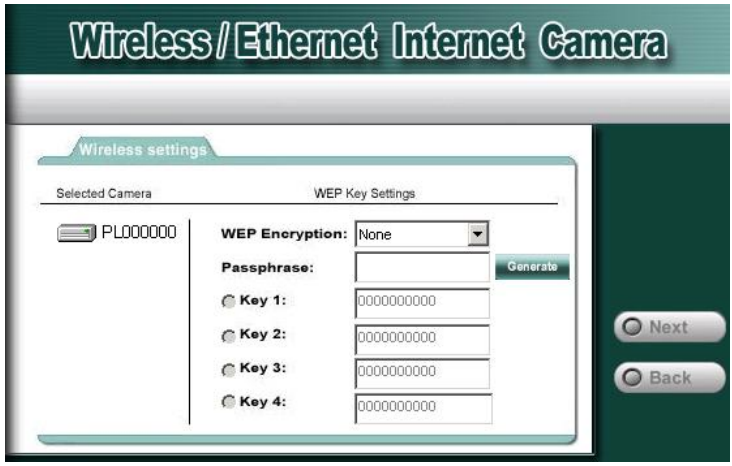
7. Enter the desired network settings: **IP Address, Subnet Mask, Default Gateway, Primary DNS** and **Secondary DNS**. Click **"Next"** to proceed.



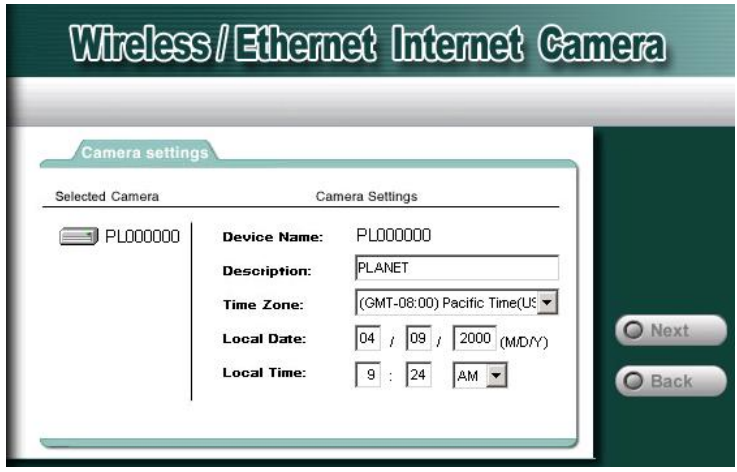
8. If you are using ICA-102, please skip to step 10. This screen allows you to configure wireless settings: **Mode, Authentication Type, ESSID, Domain,** and **Channel**. Enter appropriate values in each field, then click **"Next"**.



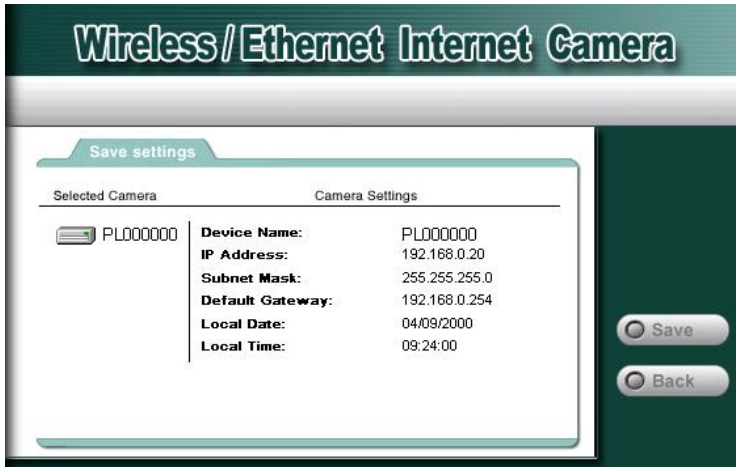
9. WEP key settings are used to secure your wireless connection. Enter the suitable settings in each field, and then click **"Next"**.



10. The next screen allows you to enter a suitable **Description**, and set the correct **Date**, **Time**, and **Time Zone**. Make any desired changes, and then click "**Next"** to continue.



11. The Save settings screen displays all the details of your camera. Click **"Save"** if all settings are correct, or click **"Back"** to modify incorrect values.



12. After saving all settings, the follow screen appears. You can click the "**Web UI"** to connect to the camera using your Web Browser, or click **"Exit"** to close Setup Wizard.

13. Click on **"Web UI"** to access the web interface of ICA-102 series. Please refer to chapter 4 for more information about web UI. Click on **"Exit"** to close Setup Wizard.

Chapter 4

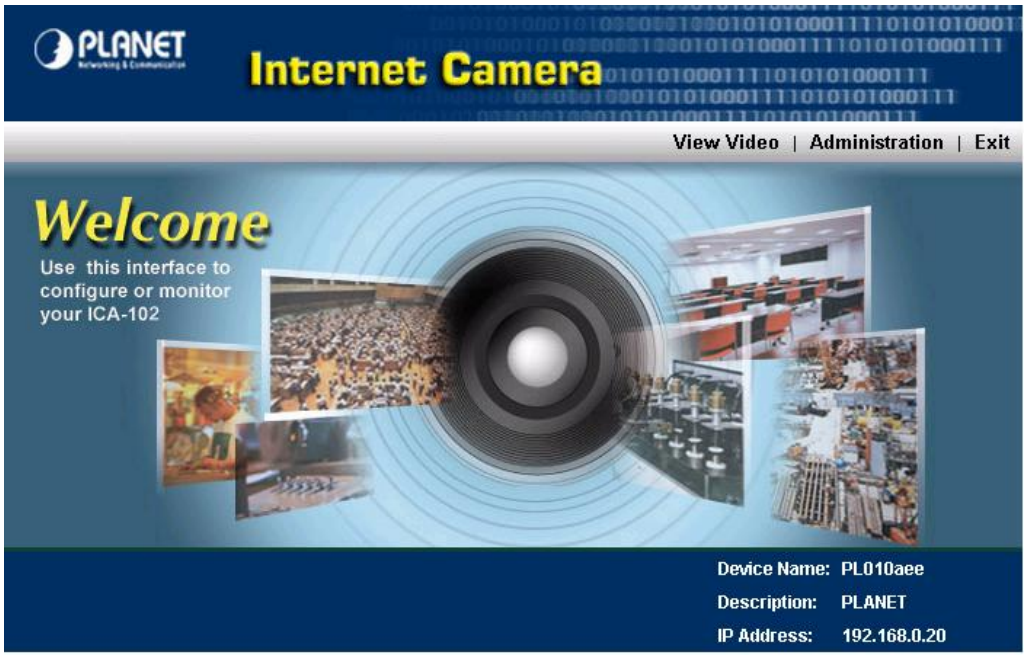
Web User Interface

Introduction

After finishing the initial setup of ICA-102 series, your camera is ready to use for all users in LAN. This chapter describes how to view live image and manage camera with web browser. The demonstration screens are from ICA-102W; the screens of ICA-102 are similar except some wireless settings.

Login

Activate the web browser; type “http://192.168.0.20” in the address box to access Welcome page of ICA-102 series. The lower right of the page shows information of Device Name, Description, and IP Address.



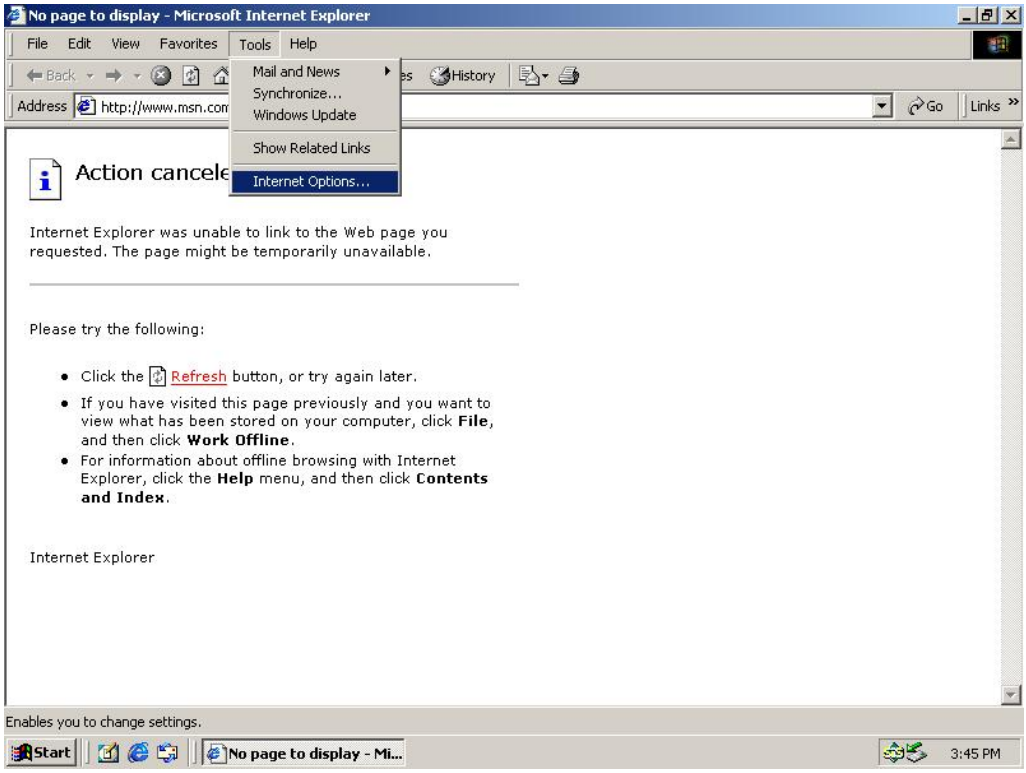
There are three options, which are available for all screens:

- **View Video**: view live images.
- **Administration**: access the management screens.
- **Exit**: close the current screen and terminate the connection to camera.

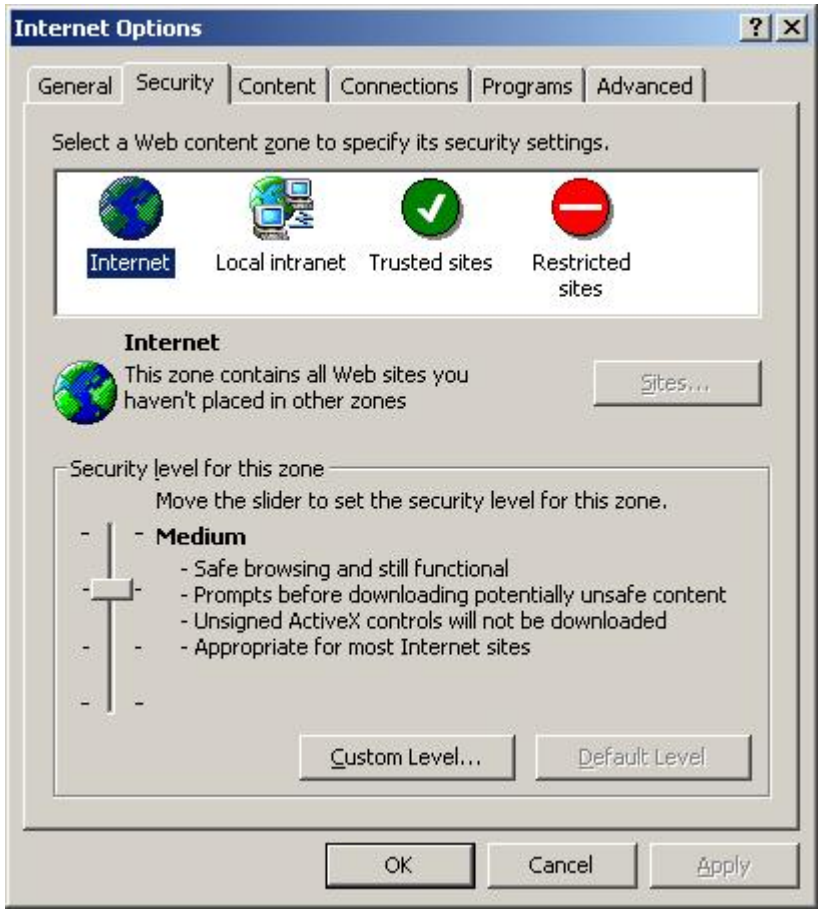
View Video

You can view live video via web browser by selecting **“View Video”** option. Please note that this option needs to download and install an ActiveX control “NetCamPlayer-web11g.ocx” to your computer. Please change the security settings of your browser with following procedures first.

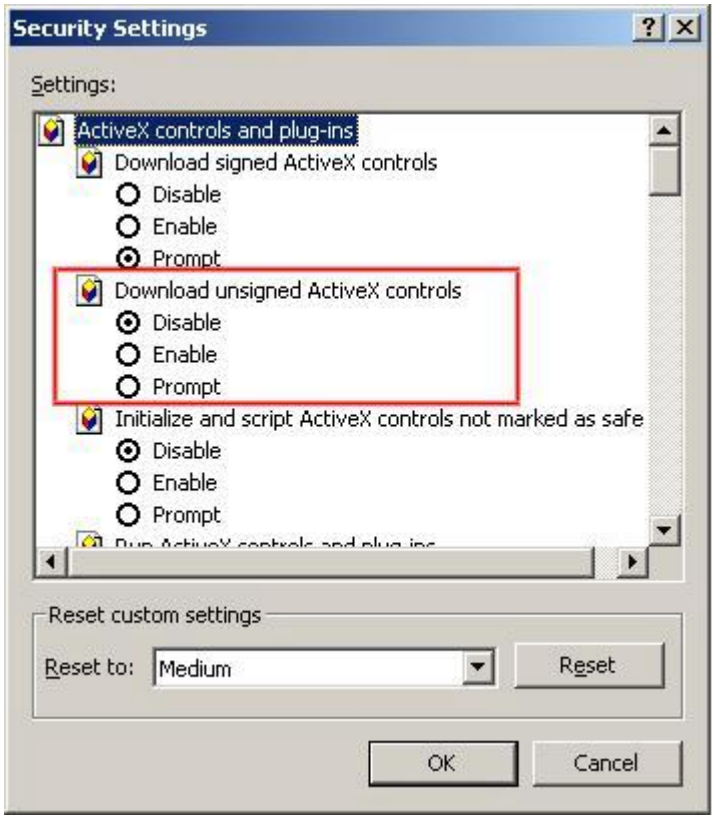
1. Click “Tools” from upper tool bar of browser, select “Internet Options…”.



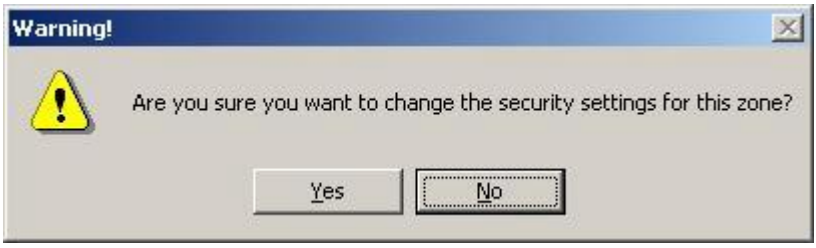
2. Select “Security” tab, choose “Internet” zone. Click “Custom Level…” button.



3. Find the settings of “Download unsigned ActiveX controls”, change the option to “Prompt”.



4. Click “OK” button.
5. Click “Yes” while Warning dialog box appears.



6. Click “Apply”, then “OK” button to finish the setting.

After the setting is done, a “Security Warning” dialog box would appear while you select “View Video”. Ensure the path and the ocx file name is correct, then click “Yes” to continue.

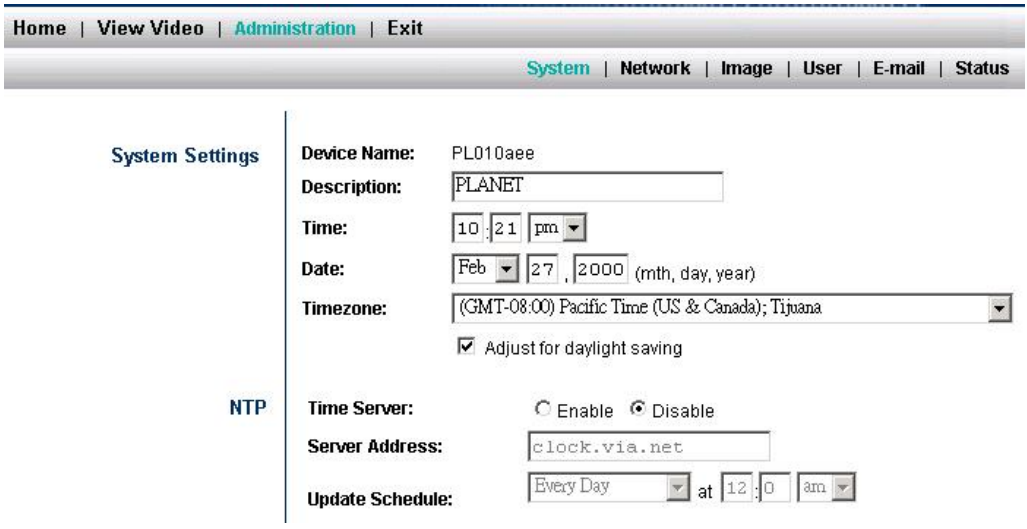
Once the installation is successfully finished, you will see the live video immediately.

Administration

Once you click “Administration” option, a dialog box will pop up. Please enter default username/password as admin/admin to access the management screens.

The management screens contain 5 sub-screens: System, Network, Image, User, E-Mail and Status.

System



System Settings:

Device Name:

This field displays the name of your ICA-102 series. It cannot be changed.

Description:

This field is used for entering a descriptive name for the location used by ICA-102 series.

Time:

Enter the current time.

Date:

Enter the current date.

Timezone:

Select the time zone where you are locating from the drop-down list. If you are in a daylight saving area, check the box in front of “Adjust for daylight saving”.

NTP:

Time Server:

Enable or disable the Time Server feature as required. If enabled, ICA-102 series will contact a Network Time Server at regular intervals and update its internal time.

Server Address:

Enter the Address of the Time Server in this field.

Note	**Please find below NTP server web address for your reference to set the timeserver.** http://www.eecis.udel.edu/~mills/ntp/clock1.htm http://www.eecis.udel.edu/~mills/ntp/clock2.htm

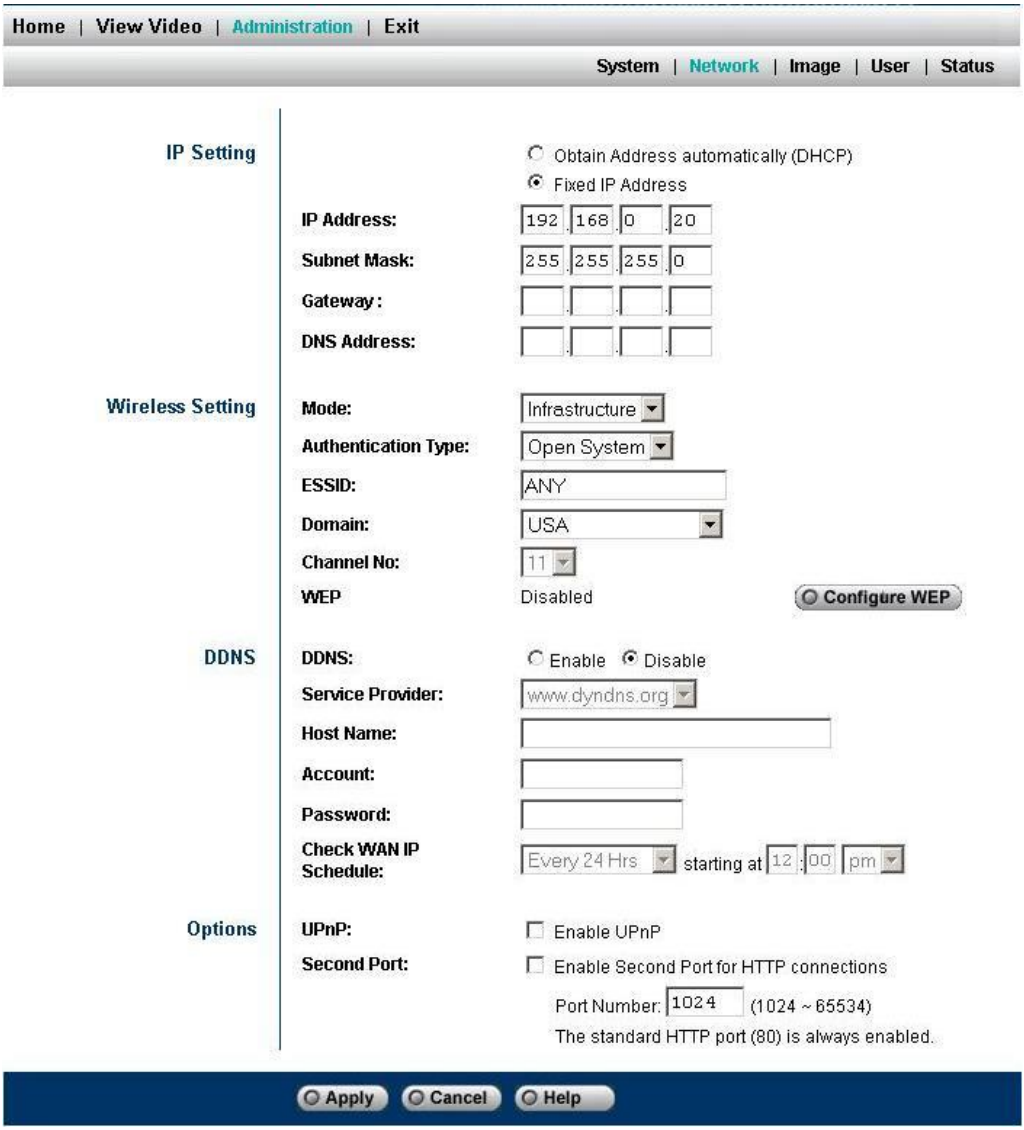
Update Schedule:

This option determines how often ICA-102 series synchronizes its time with time-server.

Apply/Cancel:

After making sure all settings in the System are correct, click on the **“Apply”** icon to store the settings for ICA-102 series. You can alternatively click on the **“Cancel”** icon to restore all settings to the values last saved to or retrieved from ICA-102 series.

Network



IP Setting:

There are two options to select from the IP setting.

Note	**Access to ICA-102 series is done through assigning a proper IP address. Please make sure to use a vacant IP address when you assign the IP address for ICA-102 series. This will prevent errors from occurring if the IP address is overlapped.**

Obtain Address Automatically (DHCP):

If your network already exists a DHCP server, you can select this option for ICA-102 series to get an IP address automatically.

Fixed IP Address:

You can select this option and directly enter the network settings.

The default settings are as follows:

· Default IP – 192.168.0.20

· Subnet Mask – 255.255.255.0

Wireless Setting: (ICA-102W only)

Mode:

Use this option to determine the type of wireless communication for ICA-102W. There are two choices of **Infrastructure,** and **Ad-hoc**. The default setting for the Connection Mode is Infrastructure.

Authentication Type:

Select appropriate authentication type, Open System or Shared Key, which matches with your current wireless network.

ESSID:

This field is used to setup which wireless network (ESSID: Extended Service Set ID) ICA-102W is to be connected for communication. The ESSID is a unique identifier shared among all points in a wireless network environment. The default ESSID is ANY, which will let ICA-102W connect to ANY access point under Infrastructure mode. To connect ICA-102W to a specific access point on the network, make sure to set ESSID of ICA-102W the same as the AP's ESSID for communication. Type any string up to 32 characters long (spaces, symbols, and punctuation are not allowed) in the ESSID box.

To connect ICA-102W to an Ad-hoc wireless workgroup make sure to set the same wireless channel and ESSID to match with the PC/Notebook wireless channel and ESSID for direct wireless communication under the Ad-hoc wireless workgroup.

Domain:

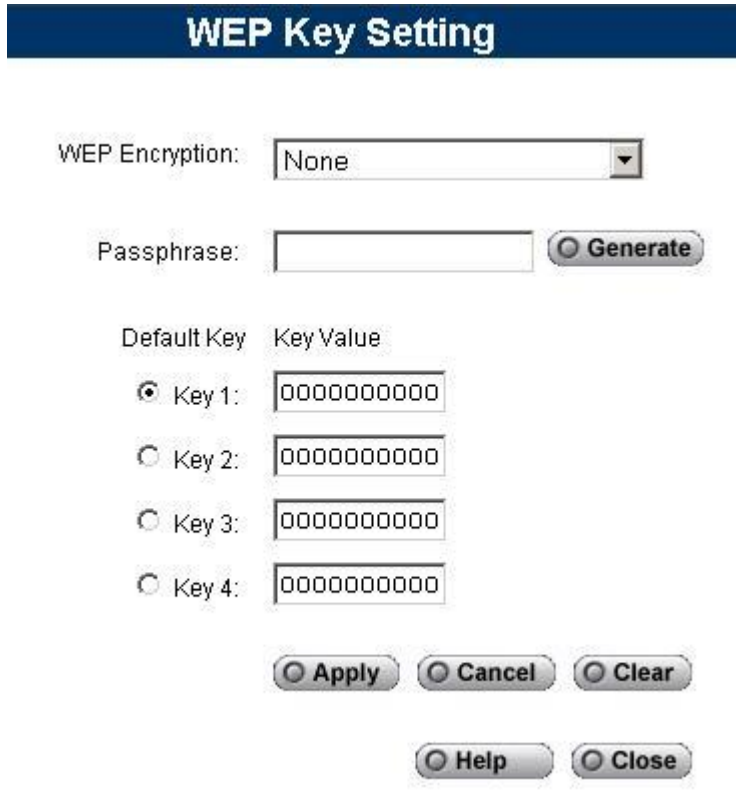
This option allows you to change the wireless domain of ICA-102W freely.

Channel No:

The pull down menu provides the wireless channel for communication. A "channel" is a range of frequencies to be used in communication between ICA-102W and Access Point in Infrastructure mode or ICA-102W and PC/Notebook in Ad-hoc mode. Select the appropriate channel from the drop-down list.

WEP:

The current WEP status is shown here. To configure WEP settings, please click "Configure WEP" button.



WEP Key Setting:

WEP Encryption:

Select the option used on your Wireless LAN.

None - This is the default setting. If selected, data is not encrypted before being transmitted.

64 Bit Keys - If selected, data is encrypted with the 64-bit default key you entered below.

128 Bit Keys - If selected, data is encrypted with the 128-bit default key you entered below.

Passphrase:

Enter a phrase in this field, then click “Generate” button. ICA-102W will generate 4 key values automatically.

Default Key:

Specify a key value as default WEP key.

Key Value:

If WEP Encryption is enabled, you must enter at least one key value. All transmissions are encrypted with Default Key. Other wireless stations must use the same key value in the same position of their key table. (It does not have to be selected as the default key.)

The other key values are optional, and are used only for decrypting data. This allows you to use different keys for transmitting and receiving, if required.

When inputting a key value, follow these rules:

- For 64 Bit Encryption, keys must be 10 characters.

- For 128 Bit Encryption, keys must be 26 characters.
  Keys must be entered in Hex characters, which are A ~ F, and 0 ~ 9

DDNS:

DDNS:

Enable or disable DDNS function.

Many Internet connections use a "Dynamic IP address", where the Internet IP address is allocated whenever the Internet connection is established.

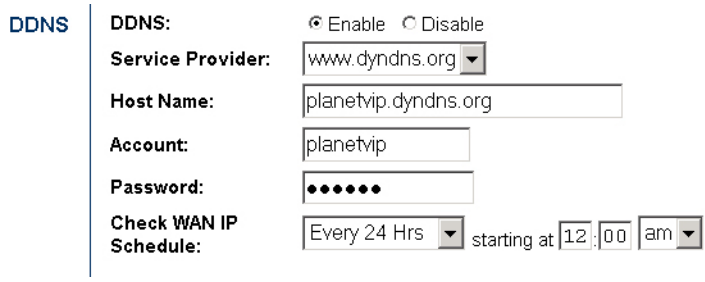
This means that other Internet users don't know the IP address, so can't establish a connection.

DDNS is designed to solve this problem, by allowing users to connect to your LAN using a domain name, rather than an IP address.

Please follow this procedure:

1) Register for the DDNS service with a supported DDNS service provider. You can then apply for, and be allocated, a Domain Name.

2) Enter and save the correct DDNS settings on the Network screen of the Wireless/Ethernet Internet Camera.



3) Operation is then automatic:

- The Wireless/Ethernet Internet Camera will then automatically contact the DDNS server whenever it detects that the Internet IP address has changed, and inform the DDNS server of the new IP address.
- Internet users can then connect to your LAN using the Domain Name allocated by the DDNS service provider.

Service Provider:

Choose a service provider from the list. ICA-102 series only supports DynDNS currently.

Host Name:

Enter the host name, which DDNS service provider assigned to you.

Account:

Enter the login name for your DDNS account.

Password:

Enter the password for your DDNS account.

Check WAN IP schedule:

This option determines how often ICA-102 series checks the WAN IP status.

Options:

UPnP:

If UPnP is enabled, ICA-102 series will broadcast its availability using UPnP. UPnP compatible systems such as Windows XP will then be able to detect the presence of ICA-102 series.

Second Port:

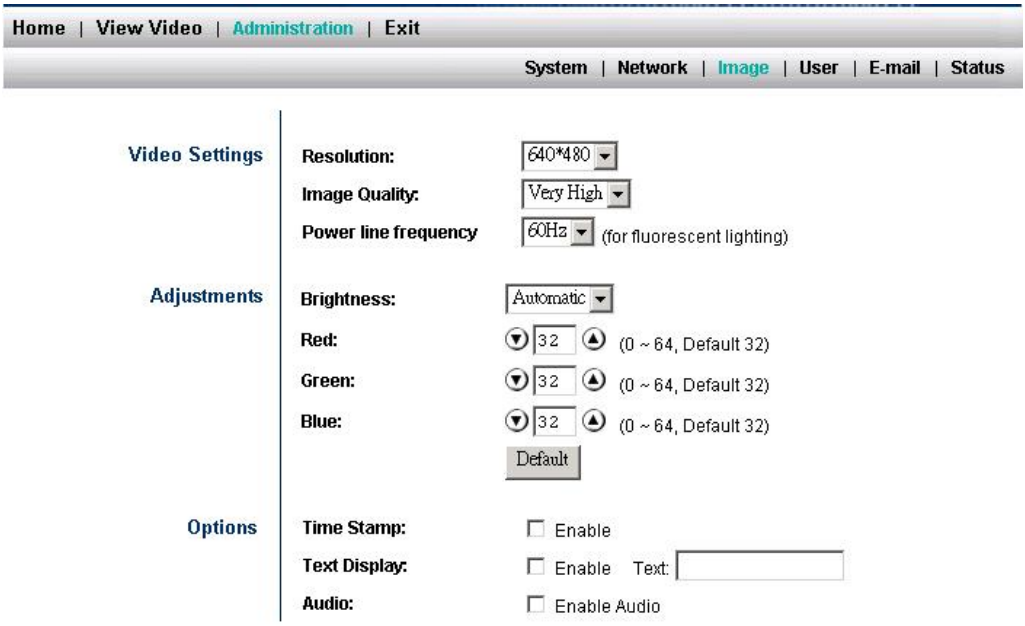
This option allows you to open a second port for ICA-102 series. The HTTP connections (using your Web Browser) can use the port number you specified below instead of the standard HTTP port 80. The configurable port range is 1024~65534.

Note	**Viewers need to know this port number in order to connect and view live Video, so you must inform viewers of the current port number.**

Apply/Cancel:

After making sure all settings in the System are correct, click on the **"Apply"** icon to store the settings for ICA-102 series. You can alternatively click on the **"Cancel"** icon to restore all settings to the values last saved to or retrieved from ICA-102 series.

Image



Video Settings:

Resolution:

Select the desired video resolution format ranging from **160x128, 320x240** (default) and **640x480.**

Image Quality:

Select the desired image quality with five levels from very low to very high. Lower image quality will generate more compact file size and use less bandwidth; vise-versa.

Power line frequency:

Please check your local electricity frequency and select proper value for ICA-102.

Adjustment:

Brightness:

Select Automatic or Manual as required.

If manual exposure is selected, an exposure value option will appear in the right. The default value is 32.

Red/Green/Blue:

Adjust the respective color settings with default setting at 32.

Default Button:

Click “Default” button to restore Exposure and Red/Green/Blue values back to default.

Options:

Time Stamp:

Enable this option, the current time can be shown on the video image.

Text Display:

Enable this option, and enter the text contents in the right. The string you entered will appear on the upper right of video image.

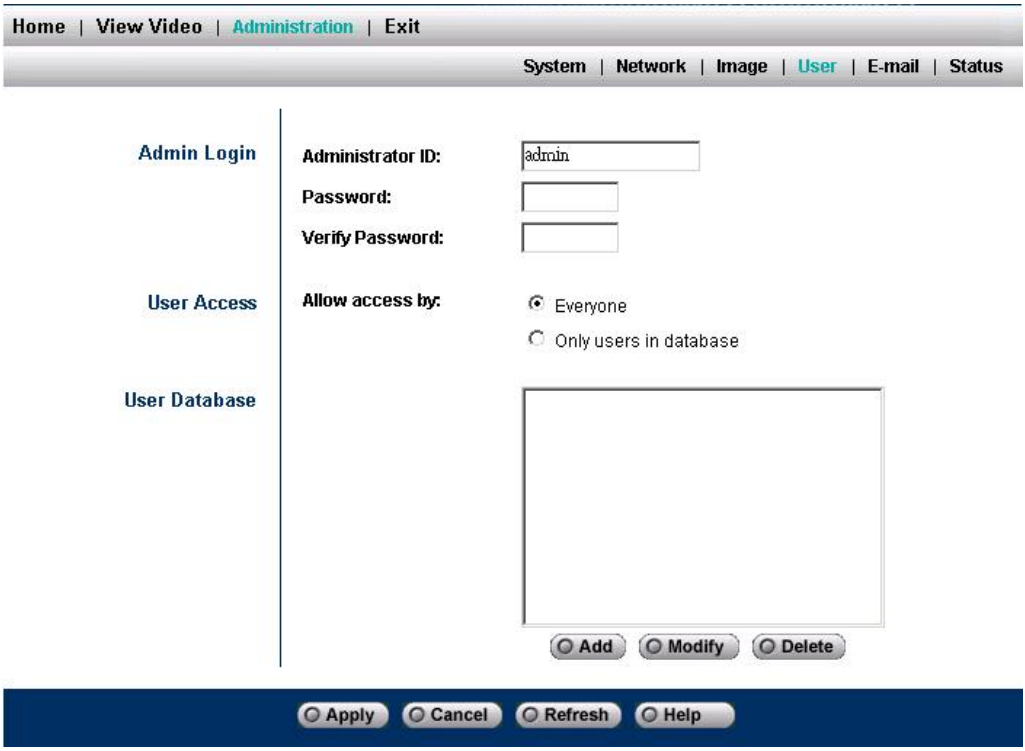
Audio:

Enable Audio function by selecting this option. Please note that this function requires an external microphone attached to the MIC IN port of ICA-102 series.

Apply/Cancel:

After making sure all settings in the Image are correct, click on the **“Save”** icon to store the settings for ICA-102 series. You can alternatively click on the **“Cancel”** icon to restore all settings to the values last saved to or retrieved from ICA-102 series.

User



Admin Login:

These fields are used for entering the Administrator ID along with the password to access the Administration settings. Be sure to enter the password twice to confirm the details, once in the Password field and again in the Verify Password field. The default settings for Administrator ID and Password are both admin.

User Access:

You can set the access privileges for users here. The default setting is “Allow access by everyone”. The alternative option is “Allow access by only users in database”. If you use this option, you have to add users in the database below.

User Database:

This displays all users you have entered into the User database. If you have not entered any users, this list will be empty. You can use the Add, Delete, and Modify buttons to manage the user database.

This screen is displayed when the Add or Modify button on the **User** screen is clicked. It is used to enter details of each user.

Add/Modify User:

User Name:

Enter the name for the user. Spaces, punctuation, and special characters must NOT be used in the name.

Also, names are case-insensitive (case is ignored), so you can NOT use 2 names with the same spelling and different case.

User Password:

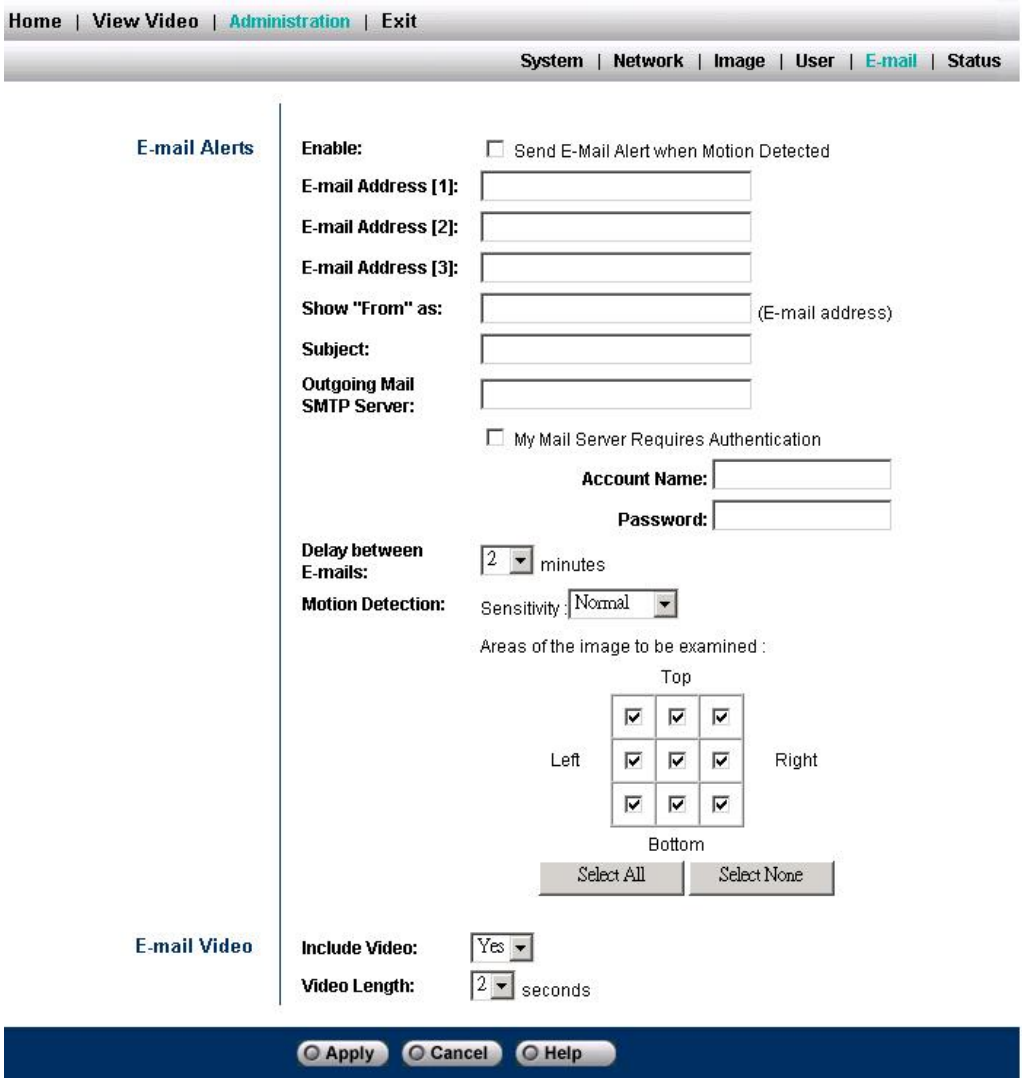
The password for the user above.

Confirm Password:

Re-enter the password, to ensure it is correct.

E-mail

The E-mail screen can use the E-mail feature to have an E-mail sent to you whenever motion is detected. Note that because of the sensitivity of the CMOS digitizer, the motion detection feature is not usable in situations where the level of illumination may change rapidly. In this situation, the change in light intensity will trigger the motion detection.



E-mail Alerts:

Enable:

Check the box to enable the E-Mail Alert feature. E-mails are sent when motion is detected.

Note	**Motion detection can be triggered by rapid changes in lighting condition, as well as by moving objects. For this reason, it should only be used indoors.**

E-mail Address:

Enter the E-mail address to be shown in the "To" field when the E-mail is received.

Show "From" as:

Enter the E-mail address to be shown in the "From" field when the E-mail is received.

Subject:

Enter the desired text to be shown as the "Subject" for the E-Mail when it is received. Subject cannot exceed 48 alphanumeric characters.

Outgoing Mail SMTP Server:

Enter the address of the SMTP (Simple Mail Transport Protocol) Server to be used to send E-Mail. If the SMTP Server requires a "login" in order to send mail, check the box My Mail Server Requires Authentication and enter your login name and password for the SMTP Server. (This is usually the same as the POP3 Server used to receive E-mail.)

Delay between E-mails:

Use this to ensure your E-mail inbox is not flooded with E-mail alerts. Select the desired time delay between E-mail alerts.

Motion Detection:

Sensitivity:

Select the desired option to suit your environment. If covering a large area, you usually need higher sensitivity, since a moving object will take only a small portion of the image.

Areas of the image to be examined:

Use the checkboxes to determine which areas of the image are examined for motion. You can also use the "Select All" and "Select None" buttons if desired.

E-mail Video:

Include Video:

Set to "yes" to include a short video in your E-mail alert.

Video Length:

Select the desired length. The size of the file depends on this setting, and also the Video size and degree of compression.

Status

The Status screen displays the detailed information of ICA-102W series, including System, Network, Wireless, Video and Log.

System:

Device Name:

This shows the name of the Wireless Internet Camera.

Description:

This shows the description of the Wireless Internet Camera, such as location.

F/W version:

The version of the current firmware installed.
You can upgrade the Firmware by clicking the **Upgrade Firmware** button. You need to obtain the firmware upgrade file first.

Upgrade Firmware:

This screen is displayed when you click the Upgrade Firmware button on the Status screen.

This screen allows you upgrade the Firmware (software) in your ICA-102/102W Camera. Before using this screen, your must download the upgrade file to your PC.

Please follow this procedure:

Click “Upgrade Firmware” button, a dialog box appears. Use “Browse” button to locate the upgrade file in your computer, then click “Start Upgrade” to start the upgrading.

Note	• **The upgrade may take several minutes.** • **When the upgrade is completed, the ICA-102/102W Camera will restart. This will cause any existing connections to be terminated. Any users viewing or recording the video will see this as an error.**

Note	**Do not interrupt the upgrading procedure during proceeding; or the inner component might be permanently damaged.**

Network:

MAC Address:

The current IP address of the Wireless/Ethernet Internet Camera.

IP Address:

The IP Address of the ICA-102/102W Camera.

Network Mask:

The network mask associated with the IP address above.

Gateway:

The IP Address of the remote Gateway associated with the IP Address above.

Wireless (ICA-102W Only):

Network Type:

It shows the Network Type currently is use (Ad-hoc or Infrastructure).

SSID:

This displays the wireless SSID.

Channel:

This shows the wireless channel currently used.

Encryption:

This shows if the WEP Encryption is Enabled or Disabled.

Video:

Resolution:

The image size of the video stream.

Current Viewers:

This shows how many viewers are currently viewing the Video stream.

Log:

ICA-102 series will record the system events here. You can use these logs for diagnosis.

Refresh:

Click “Refresh” button to renew the system log.

Restart:

Click “Restart” button to reboot your camera.

Restore Factory Defaults:

Click “Restore Factory Defaults” button to load default settings to camera.

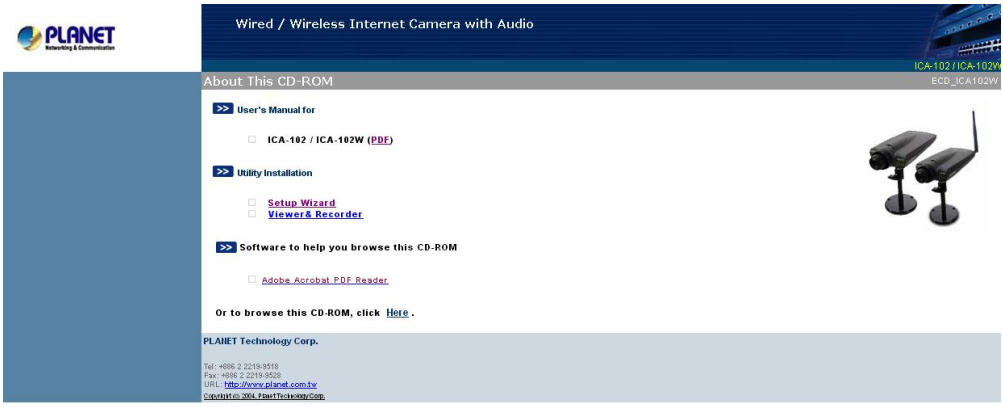
Chapter 5
Client Utility

5

Install Procedure

STEP 1

Insert the CD-ROM into the CD-ROM drive to initiate the autorun program. Once completed a menu screen will appear as follows:



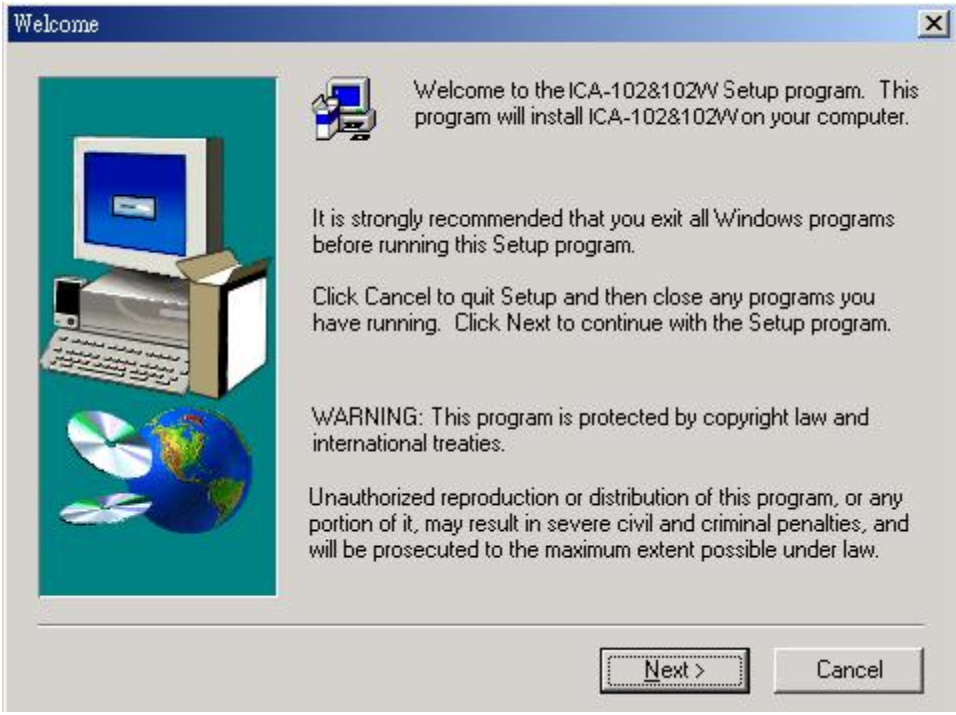
STEP 2

To install the Viewer & Recorder Application click on the **"Viewer & Recorder"** hyper-link to activate the installation procedure for the application program.
If the above screen is not shown, you can start the installation as follows.

1. Click on **Start Menu/ Run.**
2. Enter “D:\Utility\setup.exe” in the appeared box, where “D” is the letter of your CD-ROM drive.
3. Click on “**OK**” button.

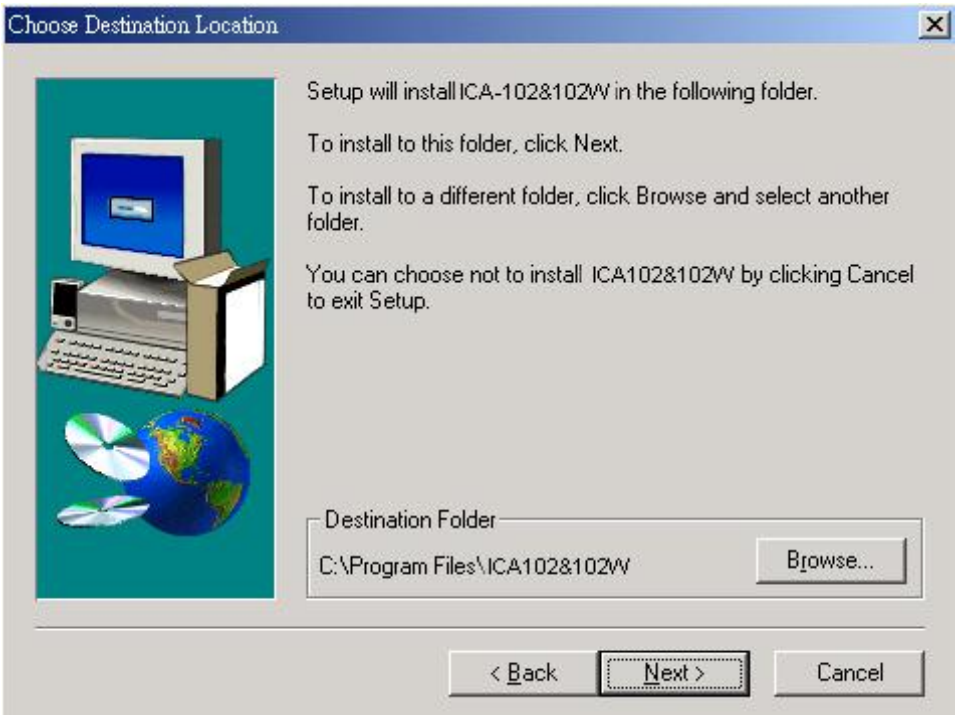
STEP 3

The Welcome screen will appear. Click on the **“Next”** button to proceed with the installation.



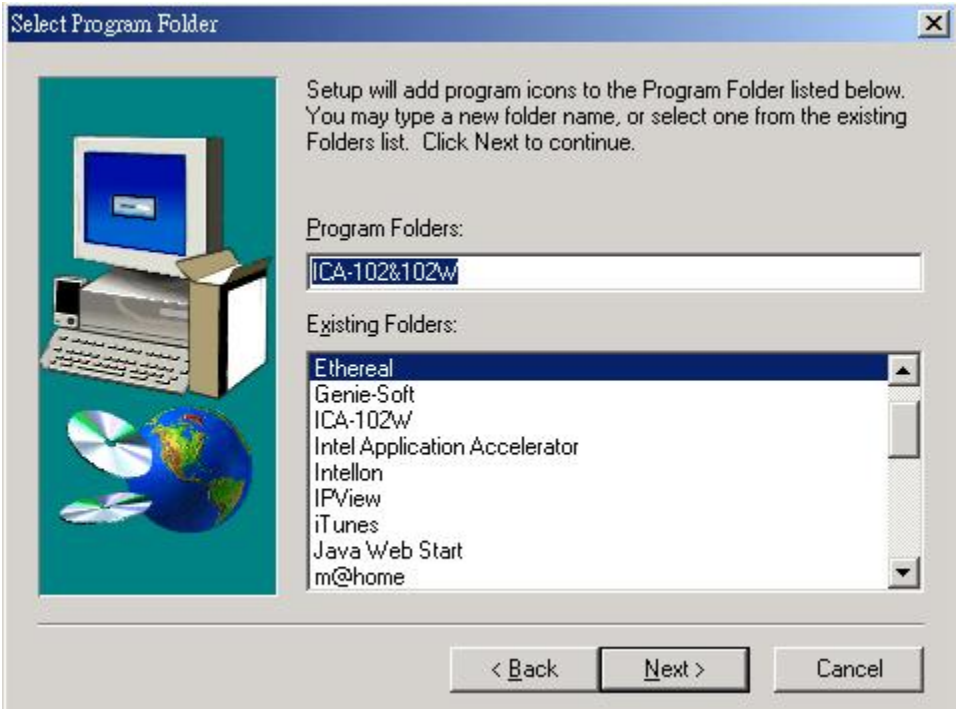
STEP 4

A "Choose Destination Location" screen appears, you may click on **"Next"** to accept the recommended destination location or click on **"Browse"** to select another location. After specifying the desired destination location, click on **"Next"** to proceed further.



STEP 5

The Select Program Folder prompt will appear providing information of where the application will be located, click on **"Next"** to continue. Click on **"Back"** can return to the previous screens.



STEP 6

A message box appears to inform you that an ActiveX plug-in has been installed to your computer..

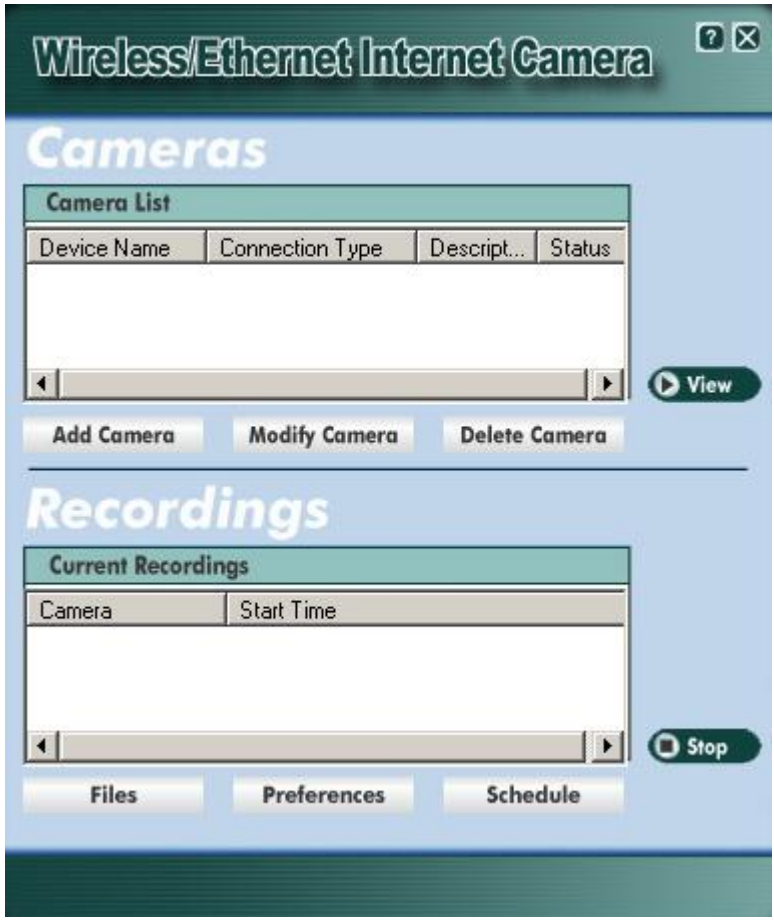
STEP 7

Once the setup is complete, the following message box pops up. Click “OK” button to close the screen.

Using Viewer & Recorder Utility

After successfully installing the utility, this icon,

, will be added to the desktop. Double click on it to launch the program.
Once the utility is executed, its main screen appears as follow.

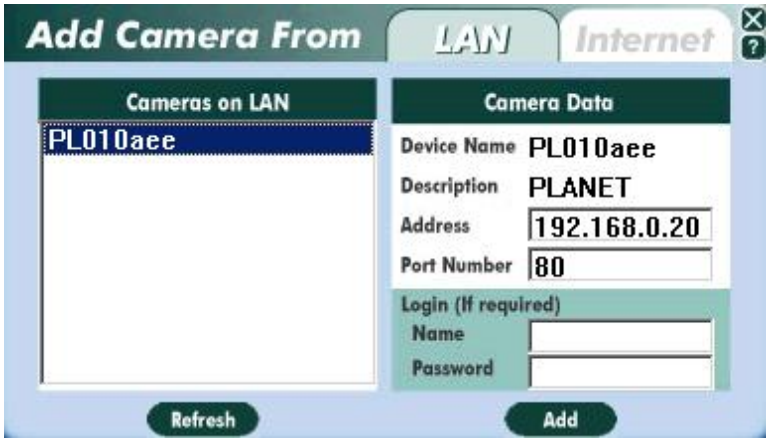


The Camera List displays all available ICA-102 series you have defined.

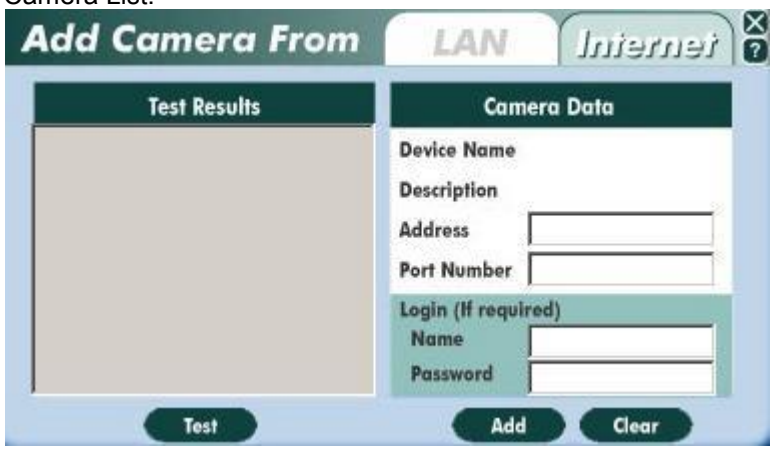
The Current Recordings lists scheduled recording activity in progress.

Add Camera

Click “Add Camera” button, the utility will search available cameras in LAN automatically. Once it finds the camera, the detailed information will be displayed. If the camera has enabled User Access control, you have to enter the authorized Name and Password in Login field. Then click “Add” button, the camera will be added to the Camera List immediately.



If you want to add a camera which located on Internet, click “Internet” tab and fill in the necessary information: IP address, port number, and login name/password (if required). Click “Test” button to check the connection to the camera, and click “Add” to add the camera to Camera List.



Modify Camera

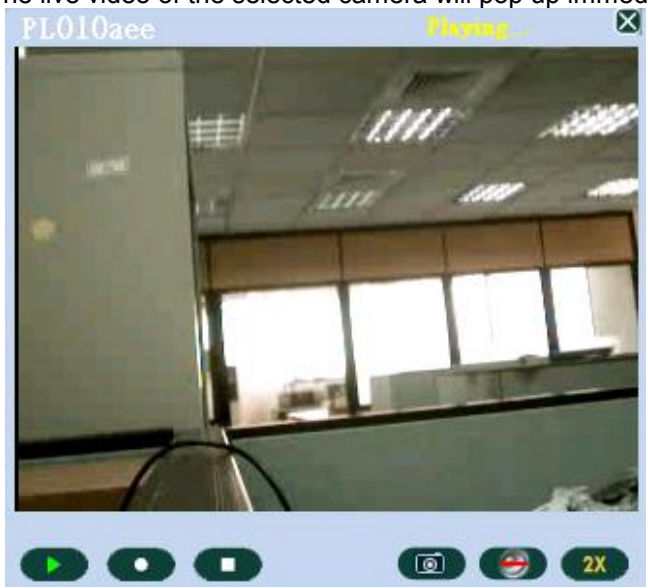
If a camera’s IP address or port number has been changed, you can use this option to rebuild the connection. Select an existing camera from Camera List, click “Modify Camera” button. After modifying, you can click “Test” button to check the connection. Click “Save” to save the changes.

Delete Camera

Select an existing camera from Camera List, click “Delete Camera” button to remove it from the list.

View

To view live video with utility, select an existing camera from Camera List, then click “View” button. The live video of the selected camera will pop up immediately.



Play - Use this to re-start viewing, after using the Stop button.

Record. Click this to start recording the current video stream. While recording, this button will be red. To stop recording, click the button again.

Stop. This will terminate the connection to the camera, halting both the viewing and the recording (if in progress).

Snapshot Click this to take a single JPEG “snapshot” image of the current video. You can use the “Preferences” to set the folder where these images are stored.

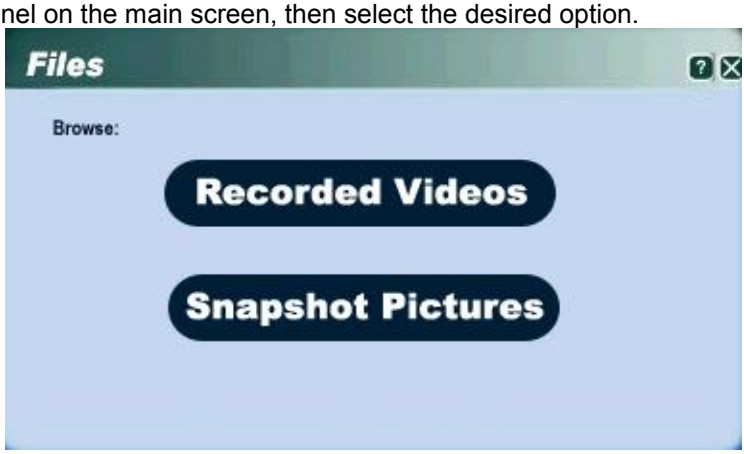
Audio. This can be used to select the Audio stream, which can be heard. (Only one audio stream can be selected at any time.) If the camera does not support audio, or if audio is disabled on the camera, this option is unavailable, and a red “X” will cover this icon.

2X - Clicking this will set the viewing image to double size. The icon will then change to the “1X” icon below.

1X - Clicking this will set the viewing image to standard size. The icon will then change to the “2X” icon above.

Files

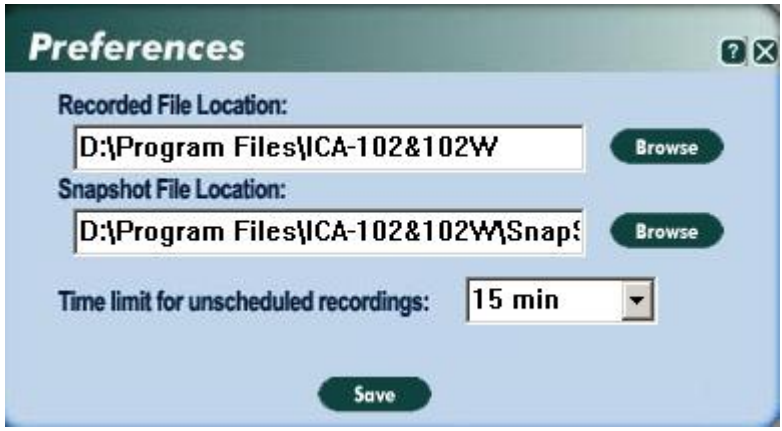
To view recorded video or snapshot (still image) pictures, click the Files button under the Files panel on the main screen, then select the desired option.



Select a file and click “Play”, your computer will use Media Player program to play the file. Select a file and click “Delete” to delete it. Click “Explore” button to open the folder, which stores these video files.

Preferences

To set recording preferences, click “Preferences” button. You can modify File Location and Time Limit here. The Time Limit sets the maximum time period of a recording session, which started by clicking button on the View screen.



Schedule Recordings

To schedule a recording session, click “Schedule” button. The screen displays all scheduled recordings.

Click “Add” button, and select desired parameters, and then click “Save” button. The new schedule will be added to the list immediately. To modify an existing schedule, select the schedule and click “Modify”. Change the parameters to desired values, then click “Save”. To delete an existing schedule, select the schedule and click “Delete” button. The record will be removed from list right away.

Appendix A

Frequently Asked Questions

Internet Camera Features
Q: What is an Internet Camera?
A: The Internet Camera is a standalone system connecting directly to an Ethernet or Fast Ethernet network. And ICA-102W also supports the wireless transmission based on the IEEE 802.11g standard. 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 or Internet via a web browser.
Q: What algorithm is used to compress the digital image?
A: ICA-102 series utilizes the MPEG-4 image compression technology providing high quality images for users. The high compression capabilities of MPEG-4 reduce network bandwidth requirements to amazingly low levels.
Q: What is the wireless transmission range for ICA-102W?
A: Generally the wireless distance can go up to 100 meters indoors and up to 300 meters outdoors. The number of walls, ceilings, or other objects that the wireless signals must pass through limits the range. Typical ranges vary depends on the types of materials and background Radio Frequency (RF) noise in your home or business and the configuration setting of your network environment.
Internet Camera Installation
Q: Can ICA-102 series be used outdoors?
A: ICA-102 series is not weatherproof. It needs to be equipped with a weatherproof case to be used outdoors, and it is not recommended.
Q: What network cabling is required for ICA-102 series?
A: ICA102 series uses Category 5 UTP cable allowing 10 Base-T and 100 Base-T networking.
Q: Can ICA-102 series be setup as a PC-cam on the computer?
A: No, ICA-102 series can be used only on Ethernet and Fast Ethernet network.
Q: Can ICA-102 series be connected on the network if it consists of only private IP addresses?
A: Yes, ICA-102 series can be connected to LAN with private IP addresses.
Q: Can ICA-102 series be installed and work if a firewall exists on the network?
A: Yes, you can use Second Port function to allow the traffic from Internet passing through firewall and access your ICA-102 series.

Appendix B
Trouble Shooting

B

Q: I cannot access the Internet Camera from a web browser.
A: If ICA-102 series do not respond, check the following: • Machine is properly installed, LAN or WLAN connection is OK, and it is powered ON. You can test the connection by using the "Ping" command: Open the MS-DOS window or command prompt window. Enter the command: ping 192.168.0.20 If no response is received, either the connection is not working, or your PC's IP address is not compatible with ICA-102 series' IP Addresses. (See next item.) • Ensure that your PC is using an IP Address within the range 192.168.0.1 to 192.168.0.254 (excluding 192.168.0.20). Also, the Network Mask should be set to 255.255.255.0 to match ICA-102 series. In Windows, you can check these settings by using *Control Panel-Network* to check the *Properties* for the TCP/IP protocol.
Q: The Viewer & Recorder utility does not list my ICA-102 series.
A: Please check the following: • ICA-102 series is installed, LAN connections are OK, it is powered ON and startup is complete. • Ensure that your PC and the Wireless/Ethernet Internet Camera are on the same network segment. (If you don't have a router, this must be the case.) • Ensure that your PC has the TCP/IP network protocol loaded. In Windows, using Control Panel-Network does this. If an entry for TCP/IP -> Network card is not listed, use Add - Protocol - Microsoft - TCP/IP to add it. You then need to select the new entry (TCP/IP -> Network card), click Properties, and configure the IP Address tab. • If your LAN has a DHCP Server, you can select "Obtain an IP Address automatically". • Otherwise, you must select "Specify an IP Address", and enter values for IP Address, Subnet Mask, and Gateway. All devices on your LAN must use compatible values. Remember that each device needs a unique IP Address, and the same Subnet Mask.
Q: Why does the Internet Camera work locally but not externally?
A1: Might be caused from the firewall protection. Need to check the Internet firewall with your system administrator. **A2:** The default router setting might be a possible reason. Need to double check if the configuration of the default router settings is required.
Q: Why do a series of broad vertical white lines appear through out the image?

A: A likely issue is that the CMOS sensor becomes overloaded when the light source is too bright such as direct exposure to sunlight or halogen light. You need to reposition the Internet Camera into a more shaded area immediately for the bright light will damage the CMOS sensor.
Q: There is bad focus on ICA-102 series, what should be done?
A: The focus might not be correctly adjusted for the line of sight. You need to adjust the focus manually by rotating the lens clockwise or counterclockwise..
Q: Noisy images occur. How can I solve the problem?
A1: The video images might be noisy if ICA-102 series is used in a very low light environment. To solve this issue you need more light.
Q: There is a poor image quality, how can I improve the image?
A1: A possible cause might be the incorrect display properties configuration for your desktop. You need to open the Display Properties on your desktop and configure your display to show at least 65’000 colors, for example at least 16-bit. **Note** **Applying only 16 or 256 colors on your computer will produce dithering artifacts in the image.** **A2:** The configuration on ICA-102 series image display is incorrect. You need to adjust the image related parameter to improve images such as exposure, and colors. Please refer to the Image section of Chapter 4 for detail information.
Q: There are no images available through the web browser?
A: The ActiveX might be disabled. If you are viewing the images from Internet Explorer make sure ActiveX has been enabled in the Internet Options menu. Alternatively, you can use the Viewer & Recorder utility for viewing the required images.

Appendix C

Specification

Model	ICA-102	ICA-102W
Hardware Specifications		
10/100M Ethernet port	1	
Wireless LAN	None	Built-in 802.11g wireless LAN module
IP assignment	Manually assigned, DHCP	
WEP encryption	None	64-bit, 128-bit
LED indicator	PWR, ACT, LAN	PWR, ACT, LAN, WLAN
Power requirement	DC 5V, 2A	
Audio support	Yes	
Dimension	164 x 88 x 53 mm	
Operating temperature	0 ~ 40 degree C	
Storage temperature	-10 ~ 70 degree C	
Humidity	5% ~ 95% non-condensing	
Video Specifications		
Image sensor	CMOS, 1/4 inch, VGA resolution	
Lens	Fixed focus	
Resolution	160 x 128, 320 x 240, 640 x 480	
Focus extension	70cm - ∞	
Compression	MPEG-4	
Management / Features		
Management	Web interface, Utility	
Additional Features	Image recording, NTP Support, Email auto send; System event log, Web or Utility firmware upgrade, Motion detection, DDNS, UPnP, Open second port, Time stamp, Real-time monitoring	