

Wireless Internet Camera

Quick Installation Guide

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Introduction

Thank you for the purchase of the Wireless Internet Camera connecting directly to an Ethernet or Fast Ethernet network and also supported by the wireless transmission based on the IEEE 802.11b standard. It is different from the conventional PC Camera, the Wireless Internet Camera is a standalone system with built-in CPU and web-based solutions providing a low cost solution that can transmit high quality video images for monitoring. The Wireless Internet Camera can be managed remotely, accessed and controlled from any PC/Notebook over the Intranet or Internet via a web browser. The simple installation procedures and web-based interface offers easy integration to your network application environments coupled with many applications such as remote monitoring for a cost-effective solution.

System Requirement

Wireless Internet Camera

Network:

Local Area Network: 10Base-T Ethernet or 100Base TX Fast Ethernet

Wireless Local Area Network: IEEE 802.11b Wireless LAN

Recommended PC or Notebook to Access the Wireless Internet Camera

Web Browser:

System requirement:

- CPU: Pentium II, 266 MHz or above
- Memory Size: 32 MB (64 MB recommended)
- VGA card resolution: 800x600 or above
- Internet Explorer 5.0 or above (ActiveX & JAVA Mode – Image View for Windows OS and JAVA Mode – Image View for other OS)
- Netscape 6.0 or above (JAVA Mode – Image View)

IPView Application:

Support OS: Win 98, Win 98 SE, Win 2000, Win Me, Win XP

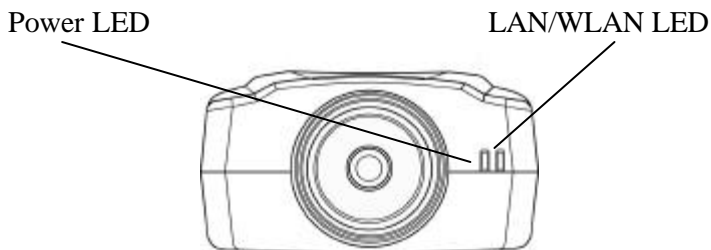
System requirement for IPView:

- CPU: Pentium III, 450 MHz or above
- Memory Size: 128 MB (256 MB recommended)
- VGA card resolution: 800x600 or above

Physical Description

This section describes the features and benefits of the Wireless Internet Camera

Front Panel



Power LED

The Power LED is positioned on the right side of the Wireless Internet Camera's lens while facing the Wireless Internet Camera. Steady blue confirms the Wireless Internet Camera is powered on.

Note:

There are three settings for the Power LED to control the light illumination for monitoring purpose from Normal / Off / Dummy. *Please refer to the Web Configuration section for detailed information and usage in the User's Guide.*

LAN/WLAN LED

The LAN/WLAN LED is positioned on the right side of the Wireless Internet Camera's lens while facing the Wireless Internet Camera. It is located right of the Power LED

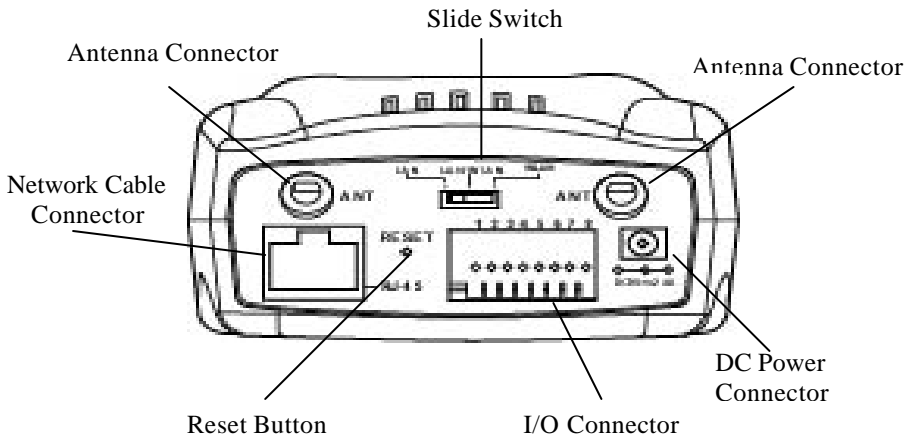
Steady orange confirms good connection to LAN or WLAN connectivity.

Dependent on the data traffic the LED will begin to flash to indicate that the Wireless Internet Camera is receiving/transceiving from/to the LAN or WLAN network.

Note:

There are three settings for the LAN/WLAN LED to control the light illumination for monitoring purpose from Normal / Off / Dummy. Please refer to the Web Configuration section for detailed information and usage in the User's Guide.

Rear Panel



Network Cable Connector

The Wireless Internet Camera's rear panel features an RJ-45 connector for connections to 10Base-T Ethernet cabling or 100Base-TX Fast Ethernet cabling (which should be Category 5 twisted-pair cable). The port supports the NWay protocol, allowing the Wireless Internet Camera to automatically detect or negotiate the transmission speed of the network.

DC Power Connector

The DC power input connector is located on the Wireless Internet Camera's rear panel and is labeled DC 5V with a single jack socket to supply power to the Wireless Internet Camera. Power will be generated when the power supply is connected to a wall outlet.

Reset Button

Reset will be initiated when the reset button is pressed once and Power LED begins to flash.

Factory Reset will be initiated when the reset button is pressed continuously for three seconds or when Power LED begins to light up. Release the reset button and the Power LED will begin to flash indicating the Wireless Internet Camera is changing to factory reset. When factory reset is completed the Wireless Internet Camera will be set to default on channel 11 and EES-ID is set as "NULL String" (This default setting will let the Wireless Internet Camera connect to ANY access point on the infrastructure network). The IP address will also return to the default setting as 192.168.0.20.

Slide Switch

The slide switch permit user's to determine the type of network communication media for the Wireless Internet Camera and is positioned on the rear panel. The three settings are as follows:-

- LAN (Local Area Network)
- LAN/WLAN (Local Area Network/Wireless Local Area Network)
- WLAN (Wireless Local Area Network)

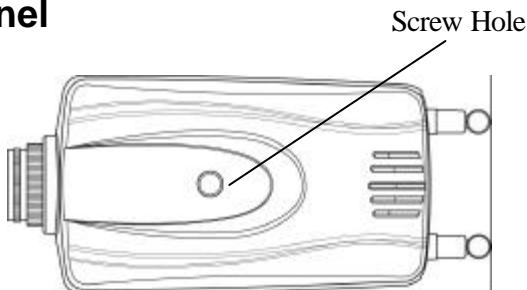
I/O Connector

There are four I/O connectors, two for input and two for output situated on the rear panel. The I/O connectors provide the physical interface to send and receive digital signals to a variety of external alarm devices. *Please refer to the User's Guide appendix for detailed information.*

Antenna Connector

There are two SMA type antenna connectors located at the rear panel of the Wireless Internet Camera providing connection for two high sensitivity antenna included with the device.

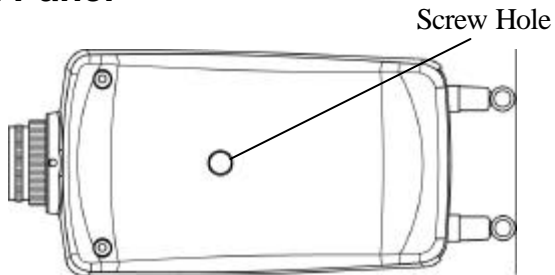
Top Panel



Screw Hole

Located on the top panel of the Wireless Internet Camera the screw hole is used to connect the camera stand onto the Wireless Internet Camera by attaching the screw head on the camera stand into the screw hole of the Wireless Internet Camera.

Bottom Panel



Screw Hole

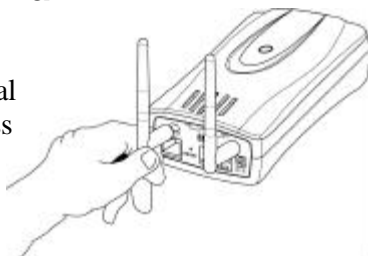
Located on the bottom panel of the Wireless Internet Camera the screw hole is used to connect the camera stand onto the Wireless Internet Camera by attaching the screw head on the camera stand into the screw hole of the Wireless Internet Camera.

Hardware Installation

This section describes the Hardware installation procedure for the Wireless Internet Camera.

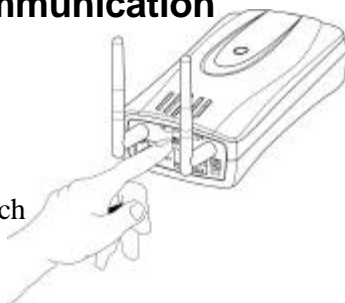
1 Attach Wireless Antenna

From the rear panel of the Wireless Internet Camera screw the 2 external Antenna that came with the Wireless Internet Camera into the antenna connector..



2 Configure Network Communication

From the rear panel of the Wireless Internet Camera select the desired Network communication for the Wireless Internet Camera from the Slide Switch. Position the Slide Switch to the setting required either LAN or LAN/WLAN position.



Please refer to the Physical Description section for detailed information.

3 Connect an Ethernet cable

Connect an Ethernet cable to the network cable connector located on the Wireless Internet Camera's rear panel and attach it to the network.



4 Attach the external power supply

Attach the external power supply to the DC power input connector located on Wireless Internet Camera's rear panel and is labeled DC 5V and connect it to your local power supply.



Note:

Confirm power source is supplied from the LED indicators label Power is illuminated.

Software Installation

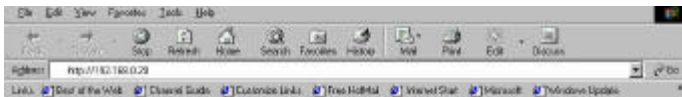
This section describes the Software installation procedure of the Wireless Internet Camera for Web Configuration and IPView application.

Web Configuration

The Wireless Internet Camera must be configured through its built-in Web-based Configuration.

Extensive knowledge of LAN will be helpful in setting up the Wireless Internet Camera

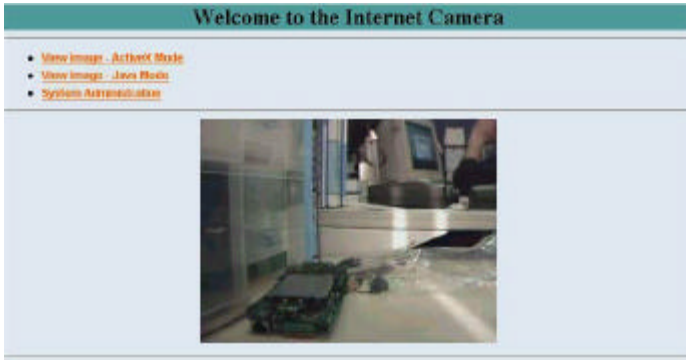
From the web browser enter the default IP address to access the Welcome screen of the Wireless Internet Camera to configure your Wireless Internet Camera type `http ://192.168.0.20` in the address box. The number is the default IP address of your Wireless Internet Camera. Press Enter.



Note:

The PC's IP address must correspond with the Wireless Internet Camera's IP address in the same segment for the two devices to communicate.

The Welcome screen will appear with a still image as illustrated below. Select **“System Administration”** to configure the Wireless Internet Camera.



There will be several options in the systems menu bar to choose from to set your Wireless Internet Camera. You need to select **“System”** to continue.

In the **System** screen as illustrated below you are required to input key details to set-up the Wireless Internet Camera and they are as follow:

System Settings

System

System Name:

Location:

Admin ID:

Admin Password:

Console Password:

➤ Assignments

➤ Manually Assign

ID Address:

Subnet Mask:

Default Gateway:

➤ Assign Automatically Using

DHCP

BOOTP

TFTP

PPPoE

Service Name:

Unit ID:

Password:

DNS IP Address

1:

2:

Wireless Interface

Connection Mode: Infrastructure 802.11 Ad-hoc Ad-hoc

Network Name: (SSID)

Wireless Channel:

Recognition WEP Key: ➤ ASCII HEX

Console WEP Key:

L2L Control: Normal OFF Dynamic

Loading Address From:

Open Second Port

Yes No

1: Web Server - Default 80

2: Thunder Bridge - Default 8451

Click on **“Home”** to return to Welcome Screen

IP Assignment:

Important Information

Access to the Wireless Internet Camera is done through assigning a proper IP address. Please make sure to use a vacant IP address when you assign the IP address for the Wireless Internet Camera. This will prevent errors from occurring if the IP address is overlapped.

There are two options to select from the IP Assignment either **Manually Assign** or **Assign Automatically Using**.

Manually Assign

You can click “**Manually Assign**” and directly enter the IP address.

The default settings are as follows:

- Default IP – 192.168.0.20
- Subnet Mask – 255.255.255.0
- Default Gateway – 0.0.0.0

Assign Automatically Using

If your network is using RARP, BOOTP or DHCP server you can click “**Assign Automatically Using**” and click on “**RARP**”, “**BOOTP**” or “**DHCP**”. Under this setting the Wireless Internet Camera will automatically assign an IP address from RARP, BOOTP or DHCP server. Each time the Wireless Internet Camera starts up be sure the RARP, BOOTP or DHCP server is setup as assign a static IP to your Wireless Internet Camera.

If your application requires direct connection from an ADSL modem through the Wireless Internet Camera's RJ-45 LAN port and you also have an ISP PPPoE account. Click on **“PPPoE”** option and enter the Service Name, User ID and Password into the respective fields.

The Wireless Internet Camera will get an IP address from the ISP each time the Wireless Internet Camera starts up.

Wireless Interface:

Connection Mode:

Use the Connection Mode to determine the type of wireless communication for the Wireless Internet Camera. There are three choices of **Infrastructure mode**, **802.11 Adhoc mode** and **Adhoc mode**. The default setting for the Connection Mode is Infrastructure.

Note:

Keep in mind after setting the Wireless Interface make sure to check the Slide Switch on the rear panel is positioned to either LAN/WLAN or WLAN setting for the wireless communication to take effect.

Network Name:

This field is used to setup which wireless network (ESS-ID Extended Service Set ID) the Wireless Internet Camera is to be connected for communication. The ESS-ID is a unique identifier shared among all points in a wireless network environment.

The default Network Name is blank space (NULL String), this default setting will let the Wireless Internet Camera connect to ANY access point under the infrastructure network mode.

To connect the Wireless Internet Camera to a specific access point on the network make sure to set the ESS-ID of the Wireless Internet Camera to correspond with the access point's ESS-ID for communication. Type any string up to 32 characters long (spaces, symbols, and punctuation are not allowed) in the Network Name box.

To connect the Wireless Internet Camera to an Ad-hoc wireless workgroup make sure to set the same wireless channel and ESS-ID to match with the PC/Notebook wireless channel and ESS-ID for direct wireless communication under the Ad-hoc wireless workgroup (ad-hoc and 802.11 ad-hoc modes).

Note :

The Wireless Internet Camera ad-hoc mode supports two modes (802.11 ad-hoc mode and proprietary ad-hoc mode). Which option of the ad-hoc mode required depends on the operation of your Wireless Internet Camera. It depends on which ad-hoc mode is supported by your wireless card driver on the PC/Notebook. Some driver supports both modes, however, some driver support only one of the modes. The names of each ad-hoc mode may not be consistent between each wireless card vendor therefore you may need to try each of the ad-hoc mode (802.11 mode and proprietary mode) and select the mode that can communicate with each other.

Wireless Channel:

The pull down menu provides the wireless channel for communication. A "channel" is a range of frequencies to be used in communication between the Wireless Internet Camera and Access Point in infrastructure mode or the Wireless Internet Camera and PC/Notebook in Ad-hoc mode. Select the

appropriate channel from the list provided depending on the regulatory region which the unit is sold. The default setting is at channel 11.

Encryption WEP Key:

Wireless network communications are easily intercepted. WEP (Wired Equivalent Privacy) is an encryption method specified by the IEEE 802.11b standard to make any intercepted communications extremely difficult to interpret by unauthorized parties.

To enable WEP Encryption, first decide which WEP key format will be applied. Click on ASCII or HEX check box to select input format as ASCII format or HEX format, and then input WEP key. To Confirm the WEP key you must enter the data once again in the Confirm WEP Key field.

On the Confirm WEP Key field, input the same characters as the Encryption Code field.

Make sure the Encryption Code is the same with the access point's encryption code that the Wireless Internet Camera is to be connected under Infrastructure mode. Your PC/Notebook's encryption code also needs to be setup the same with the Wireless Internet Camera's encryption code under either Infrastructure mode or Ad-hoc mode.

The default setting for the Encryption Key is Disable therefore, to secure the wireless transmission be sure to Enable the Encryption Key by entering the relevant data.

Note:

Carefully input Encryption Code, any error setting will cause communication link to fail.

Save/Cancel:

After making sure all settings in the System are correct, click on the **“Save”** icon to store the settings for the Wireless Internet Camera. You can alternatively click on the **“Cancel”** icon to restore all settings to the values last saved to or retrieved from the Wireless Internet Camera.

Once the configuration is completed click on **“Home”** to return to the Welcome screen and select the desired Viewing Image either through ActiveX Mode or Java Mode as described in the User’s Guide.

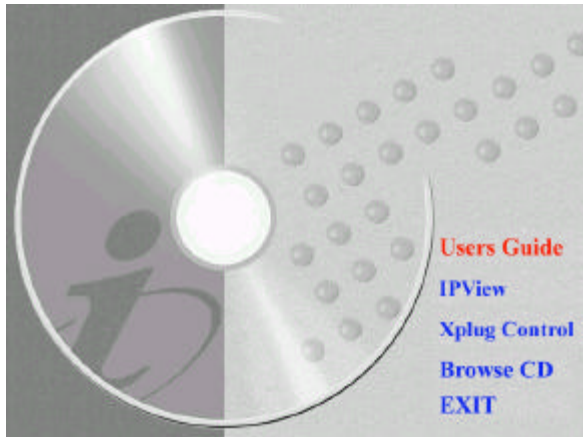
Then position the Wireless Internet Camera to the desired location appropriately for your purpose. Followed by the adjustment of the Wireless Internet Camera focus, done manually by turning the lens clockwise or anti-clockwise to the desired image quality.

Please refer to the appendix for detailed information regarding Adjust Internet Camera Focus and Replacing the Lens in the User’s Guide.

IPView Application Installation

Installation

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

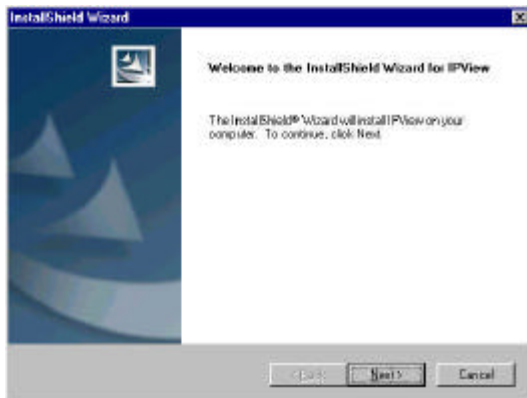


To install the IPView application click on the **"IPView"** button to activate the installation procedure for the application program.

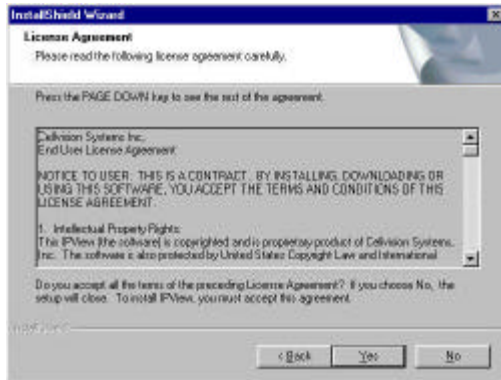
Once executed a prompt will appear requesting the input of the desired language selection. Make the desired selection and click on **“OK”** to continue.



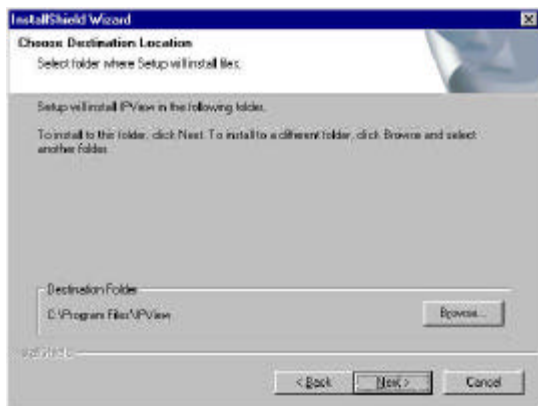
The Welcome screen will appear. Click on the **“Next”** button to proceed with the installation.



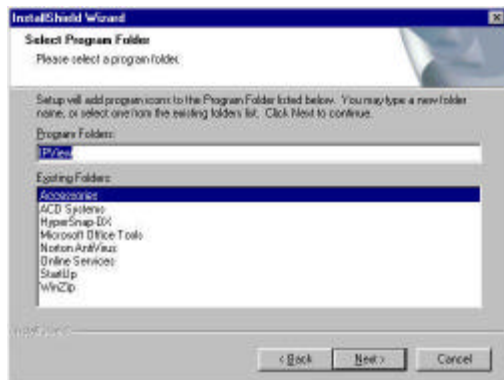
The License Agreement prompt will appear as below. Read the details carefully and click on the “Yes” icon to continue with the installation procedure.



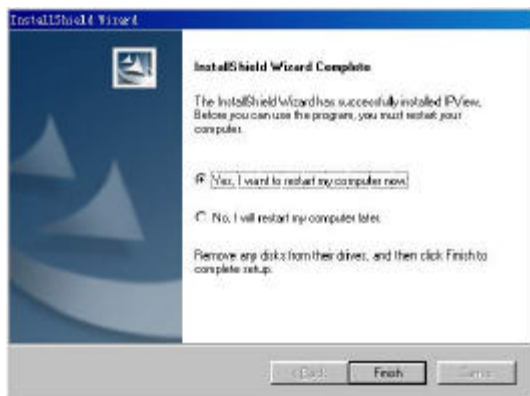
A prompt will appear and in the Destination Location dialog box, you may click on “Next” to accept the recommended destination location or click on “Browse” to select another location. After specifying the desired destination location, click on “Next” to proceed further.



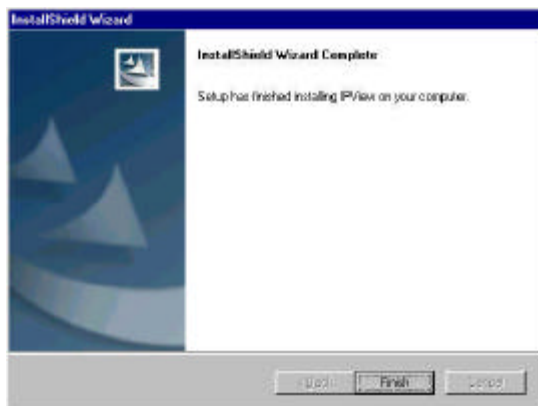
The Select Program Folder prompt will appear providing information of where the IPView application will be located, click on “**Next**” to continue. If you wish to modify your settings, click on “**Back**” to return to the previous screens.



Please wait until one of the two dialog box to appear, select either *“Yes, I want to restart my computer now”* and click on the **“Finish”** icon to restart the computer to complete the installation procedure.

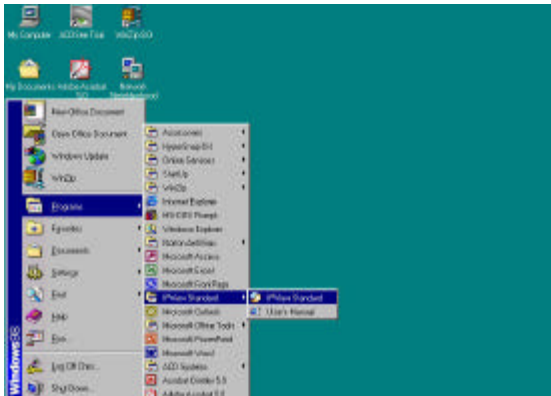


or click on the **“Finish”** icon to complete the installation procedure



After successfully installing the IPView, the application program for the Wireless Internet Camera is automatically installed to \Programs\Files Directory.

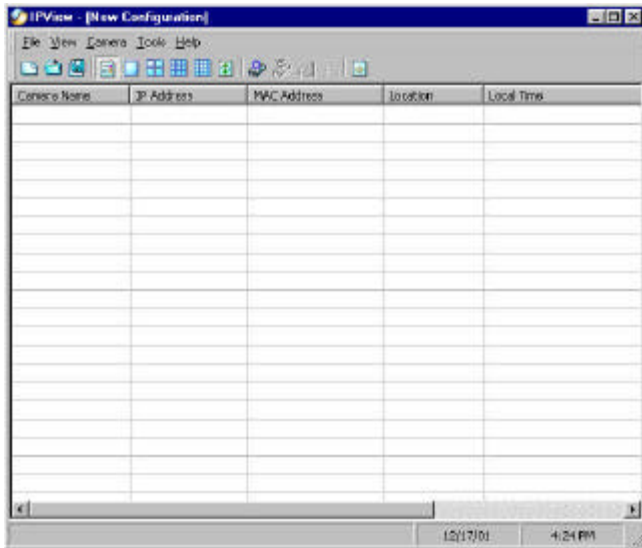
To start running the IPView click on windows **Start Menu/Programs/IPView/IPView**



Once IPView is executed a Login prompt will appear, you must enter the default User Name: **admin** into the respective field and click on “**OK**” to log into the application.



Once login, the IPView application is executed and the IPView interface will appear as follows in the default List View format:



Please refer to the User's Guide for detailed information regarding IPView application.

Appendix

A Specification

Video specification

Resolution:	640 x 480 pixel
Sensor:	1/3" color CMOS sensor
Gain control:	Automatic
Exposure:	Automatic
White Balance:	Automatic
Shutter:	Electronics 1/60 ~ 1/15000 sec
Minimum Illumination:	2.5lux@F1.4, 3000K color
Focal Length:	6.0 mm
Aperture:	f=1.8
Focus Extent:	20 cm -
Lens mounting:	Fixed board lens, CS-mount type

Image (Video Setting)

Image compression:	JPEG
Frame rate:	30fps@QSIF, 20fps@SIF, 3fps@VGA
Compression Rate selection:	5 level (Very Low, Low, Medium, High, Very High)
Frame rate setting:	1, 5, 7, 15, 20, auto (depends on the video format)
Video resolution:	160x120, 320x240, 640x480
Brightness control:	Range 1- 128
Contrast control:	Range 1- 128
Hue control:	Range 1- 128

Hardware Interface

LAN Connector:	One RJ-45 port to connect to 10/100Mbps Ethernet, auto-sensed
Wireless LAN:	Built-in 802.11b wireless LAN module (Wi-Fi compliant)
Generic I/O Port:	Four I/O ports, two for input and two for output Total 8-pin: Pin 1 Input Port (1) Pin 2 Input Port (1) Pin 3 Input Port (2) Pin 4 Input Port (2) Pin 5 Output Port (1+) Pin 6 Output Port (1-) Pin 7 Output Port (2+) Pin 8 Output Port (2-)

Note:

The output voltage is DC 5V and maximum current is 100mA.

LED Indicator:	Power LED (Blue) LAN/WLAN Activity LED (Orange)
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Note:

LED three mode setting can be changed by software. (Normal / Off / Dummy)

Power Supply:	DC 5V/2.4A, switching type
Power Communication:	6.5 Watt (1300mA x 5V)
Slide Switch:	LAN/LAN&WLAN/WLAN
Antenna Connector:	2 connectors

Communication Support

Communication: There will be three modes available, selected by slide switch on the rear panel

- ◆ 10/100Mbps Ethernet only
- ◆ 10/100Mbps Ethernet and 802.11b wireless LAN.
- ◆ 802.11b wireless LAN only

Encryption: 64 bit, 128 bit or OFF

Communication protocol: HTTP, FTP, TCP/IP, UDP, ARP, ICMP, BOOTP, RARP, DHCP, PPPoE

Browser Support

System requirement:

CPU: Pentium II, 266 MHz or above

Memory Size: 32 MB (64 MB recommended)

VGA card resolution: 800x600 or above

- Internet Explorer 5.0 or above (ActiveX & JAVA Mode – View Image for windows OS and JAVA Mode –View Image for other OS)
- Netscape 6.0 or above (JAVA Mode –View Image)

IPView Application

Support OS: Win 98, Win 98 SE, Win 2000, Win Me, Win XP

System requirement for IPView:

CPU: Pentium III, 450 MHz or above

Memory Size: 128 MB (256 MB recommended)

VGA card resolution: 800x600 or above

Operating environment

Operating temperature: 5°C ~ 50°C
Storage temperature: -25°C ~ 50°C
Humidity: 5% ~ 95% non-condensing

EMI

FCC, CE, VCCI