



**SkyIPCam1747W  
Wireless N Night Vision Pan/Tilt  
Network Camera**

Model # AICN1747W

**User's Manual**

Ver. 1.0

<b>CHAPTER 1 .....</b>	<b>2</b>
<b>INTRODUCTION TO YOUR CAMERA.....</b>	<b>2</b>
1.1 Checking the Package Contents .....	2
1.2 Getting to Know Your Camera .....	3
1.3 Features and Benefits .....	5
1.4 System Requirement.....	6
<b>CHAPTER 2 .....</b>	<b>7</b>
<b>HARDWARE INSTALLATION .....</b>	<b>7</b>
2.1 Installing the Wall Mount Kit .....	7
2.2 Connecting the Camera to LAN/WLAN.....	8
2.3 Applications of the Camera .....	9
<b>CHAPTER 3 .....</b>	<b>10</b>
<b>SOFTWARE INSTALLATION .....</b>	<b>10</b>
3.1 Installing SkyIPCam Utility .....	10
3.2 Using SkyIPCam Utility.....	12
3.3 Viewing Images.....	16
<b>CHAPTER 4 .....</b>	<b>16</b>
<b>CONFIGURATION .....</b>	<b>19</b>
4.1 Using the Web Configuration .....	19
4.2 Basic Setup.....	19
4.3 Network Settings .....	22
4.4 Pan/Tilt Settings .....	28
4.5 Setting up Video & Audio .....	29
4.6 Event Server Configuration .....	32
4.7 Motion Detect.....	34
4.8 Event Configuration.....	35
4.9 Tools .....	39
4.10 Information.....	40
<b>CHAPTER 5 .....</b>	<b>41</b>
<b>USING SKYIPCAM ULTRAVIEW.....</b>	<b>41</b>
5.1 Starting the Program .....	41
5.2 Main Window and Item Feature .....	42
5.3 Accessing the Camera .....	45
5.4 Recording / Playing Video .....	50
5.5 Configuring the eMap View Setting.....	54
5.6 Configuring the System .....	59
5.7 Event Configuration.....	60
5.8 Changing System Language .....	63
5.9 Terminating Operation.....	64
<b>APPENDIX .....</b>	<b>65</b>
A.1 Specification .....	65
A.2 GPIO Terminal Application.....	67
A.3 Glossary of Terms .....	68
<b>TECHNICAL SUPPORT .....</b>	<b>73</b>

# CHAPTER 1

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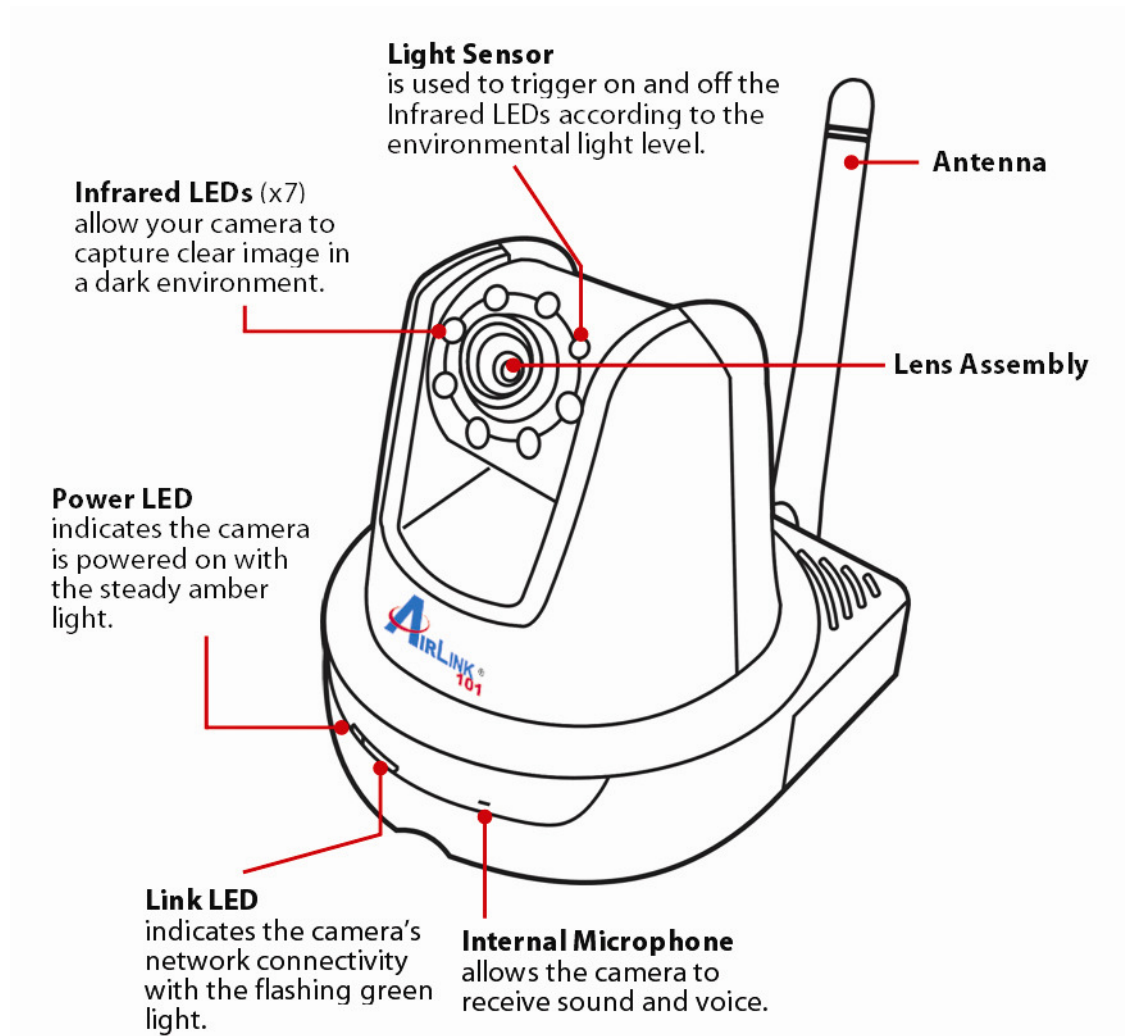
## INTRODUCTION TO YOUR CAMERA

### 1.1 Checking the Package Contents

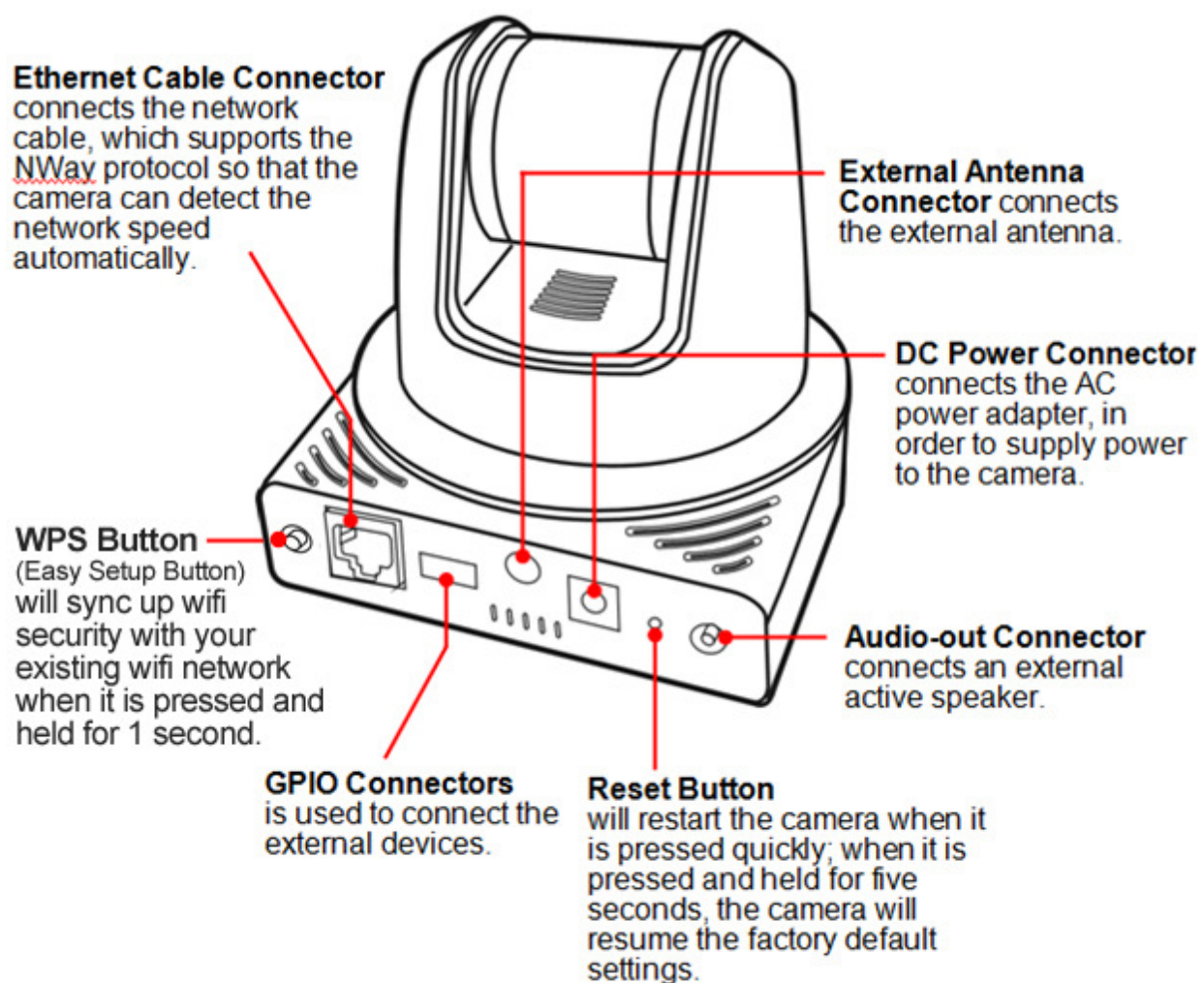
Check the items contained in the package carefully. You should have the following:

- One Wireless N Night Vision Pan/Tilt Network Camera
- One 2dBi Antenna
- One AC Power Adapter
- One Wall Mount Kit
- One GPIO Connector
- One Ethernet Cable (RJ-45 type)
- One Installation CD
- One Quick Installation Guide

## 1.2 Getting to Know Your Camera



**Front View**



### Rear View

## 1.3 Features and Benefits

### ■ MJPEG Codec Supported

The camera provides you with excellent images by the MJPEG codec technology, allowing you to adjust image size and quality, and bit rate according to the networking environment.

### ■ 2-way Audio Capability

The built-in microphone of the camera provides on-the-spot audio via the Internet, allowing you to monitor the on-site voice. In addition, you can connect an external speaker to the camera to talk to people at the camera view.

### ■ Day & Night Surveillance Supported

The seven Infrared LEDs around the standard lens assembly enable the camera to capture crystal clear images in dark environments or at night. When the Light Sensor detects the environmental light level as being too low, the camera captures the images in black & white mode using these infrared LEDs.

### ■ Optimal Viewing

With the pan/tilt functions, you can easily monitor everywhere via the camera by moving the camera lens to the left/right (165/165 degrees) or up/down (90/15 degrees). In addition, you can assign up to eight positions for the camera, enabling you to move the camera lens to the desired position quickly.

### ■ I/O Connectors Provided

The camera provides the I/O connectors on the rear panel (IN/OUT), which provide the physical interface to send and receive digital signals to a variety of external alarm devices. You can connect a special featured device, and then configure the settings and control the device from the **GPIO Trigger** window of Web Configuration.

### ■ Remote Control Supported

By using a standard Web browser or the complimentary software SkyIPCam UltraView application, the administrator can easily change the configuration of the camera via Intranet or Internet. In addition, the camera can be upgraded remotely when a new firmware is available. The users are also allowed to monitor the image and take snapshots via the network.

### ■ Multiple Platforms Supported

The camera supports multiple network protocols, including TCP/IP, SMTP e-mail, HTTP, and other Internet related protocols. Therefore, you can use the camera in a mixed operating system environment, such as Windows 7 and Windows XP.

### ■ Multiple Applications Supported

Through the remote access technology, you can use the cameras to monitor various objects and places for your own purposes. For example, babies at home, patients in the hospital, offices and banks, and more. The camera can capture both still images and video clips, so that you can keep the archives and restore them at any time.

## 1.4 System Requirement

### ■ Networking

- **LAN:** 10Base-T Ethernet or 100Base-TX Fast Ethernet.
- **WLAN:** IEEE 802.11b/g/n, data rate up to 150Mbps\*

### ■ Accessing the Camera using Web Browser

- **Supported Browsers\*:** Microsoft® Internet Explorer 6.0 or above; Apple Safari, Mozilla Firefox with JAVA plug-in
- **CPU:** Intel Pentium III 800MHz or above
- **RAM:** 512MB
- **Resolution:** 800x600 or above

### ■ Accessing the Camera using Software SkyIPCam UltraView

- **Platform:** Microsoft® Windows® 7, Vista and XP
- **Hard Disk:** 80GB or above
- **Resolution:** 1024x768 or above
- **Suggested Hardware Requirement\***
  - **1~8 cameras connected:** Intel Core 2 Duo; 2GB RAM
  - **9~32 cameras connected:** Intel Core 2 Quad; 4GB RAM

**NOTE** If you connect multiple cameras to monitor various places simultaneously, it is recommended that you use a higher end computer. Viewing multiple cameras on a lower end computer can cause performance issues.

\* It is recommended to use Internet Explore to view/manage the camera, because Safari and Mozilla Firefox may not support certain features, such as configuring motion detection or digital zoom, snapshot.

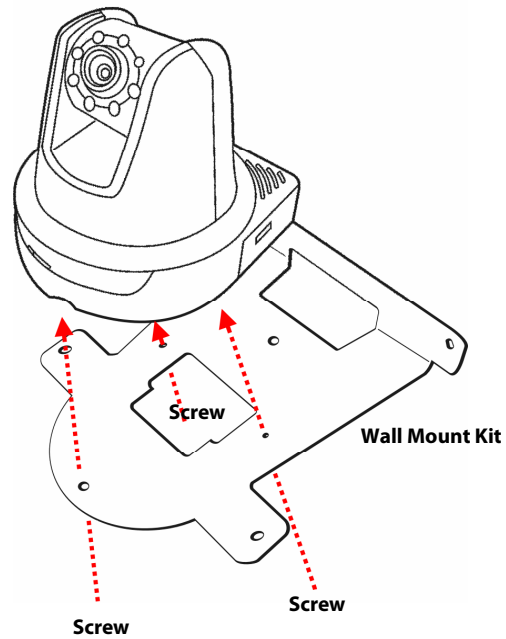
## CHAPTER 2

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# HARDWARE INSTALLATION

### 2.1 Installing the Wall Mount Kit

The camera comes with a Wall Mount Kit, which allows you to place your camera anywhere by mounting the camera through the three screw holes located in the base of the Wall Mount Kit.



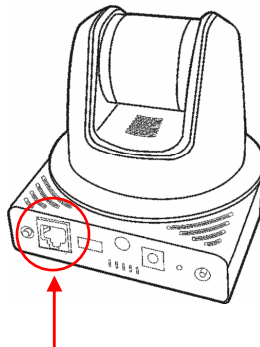


## 2.2 Connecting the Camera to LAN/WLAN

Use the provided Ethernet cable to connect the camera to your local area network (LAN).

When you connect the AC power adapter, the camera is powered on automatically. You can verify the power status from the Power LED on the front panel of the camera.

Once connected, the Link LED starts flashing green light and the camera is on standby and ready for use now.



Connecting the Ethernet Cable

If you use a wireless network in your application environment, you need to attach the included external antenna to the camera.

When the camera is powered on, the camera will automatically search any access point with "airlink101" SSID.



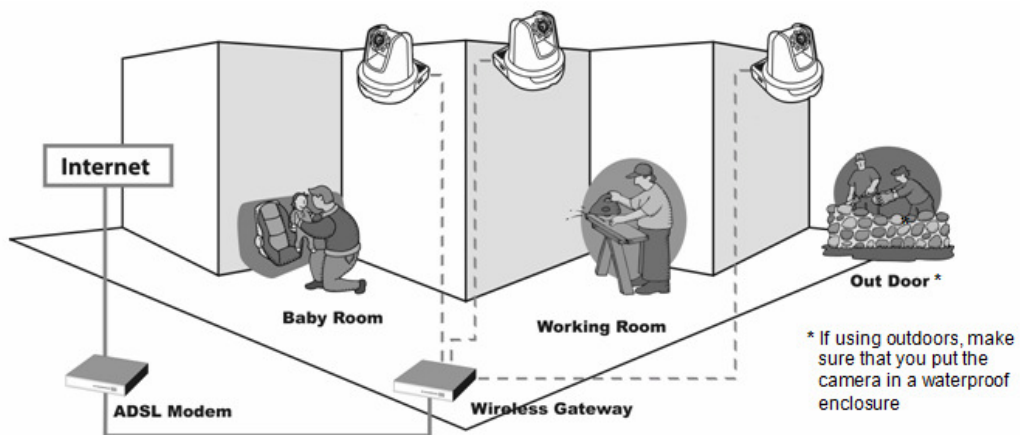
Connecting the External Antenna

## 2.3 Applications of the Camera

The camera can be applied in multiple applications, including:

- Monitor local and remote places and objects via Internet or Intranet.
- Capture still images and video clips remotely.
- Upload images or send email messages with the still images attached.

The following diagram explains some of the typical applications for your camera and provides a basic example for installing the camera.



### Home Applications

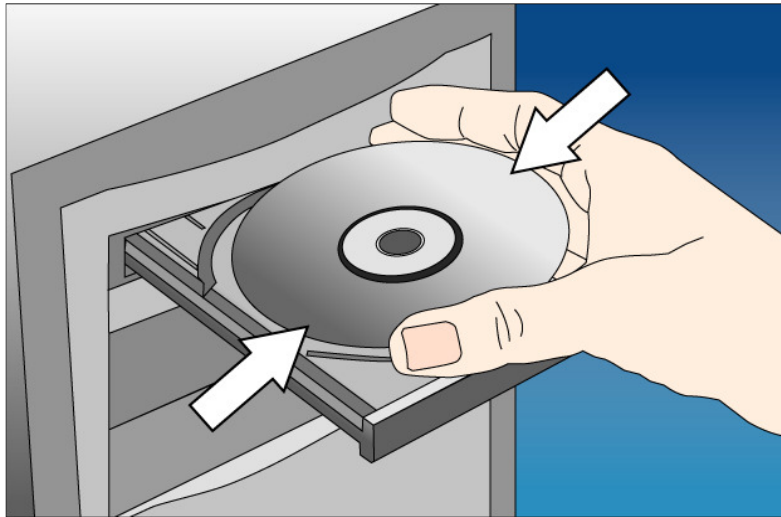
# CHAPTER 3

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## SOFTWARE INSTALLATION

### 3.1 Installing SkylPCam UltraView

**Step 1** Insert the provided CD into your computer's CD ROM drive.



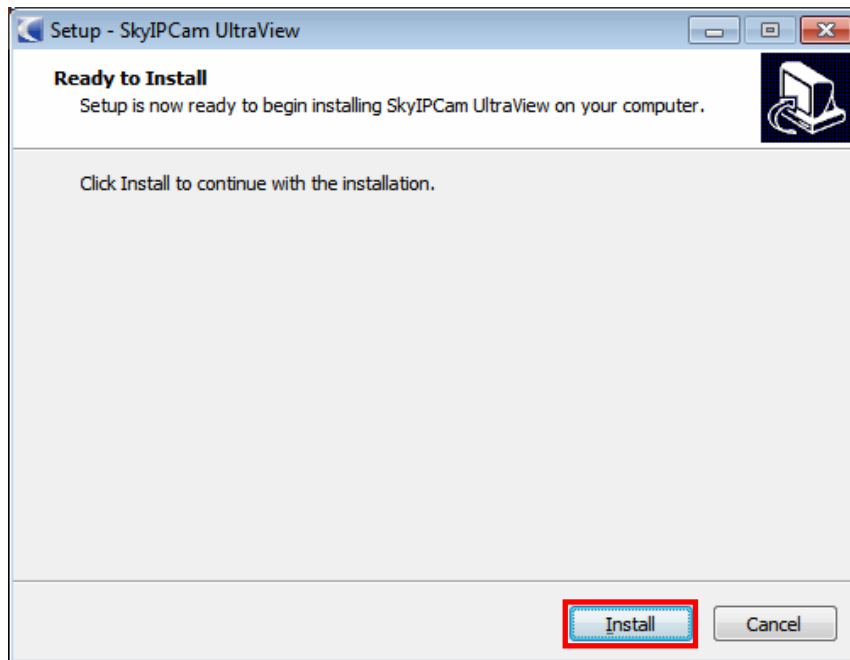
**Step 2** Click on **Install Utility and Software**.



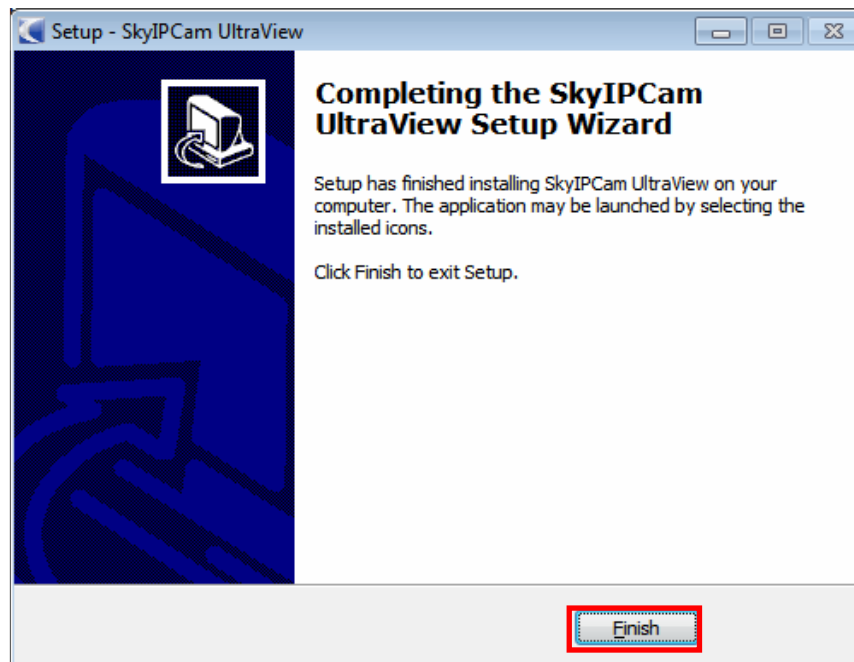
Note: If you do not see the autorun menu pops up on the screen, please go to your **CD-ROM drive > UltraView** folder > run "**Setup.exe**".

**Windows 7 and Vista users:** Please make sure you give permission to run the setup program.

**Step 3** Click **Install** to install the utility.



**Step 4** Click **Finish** when installation finishes.

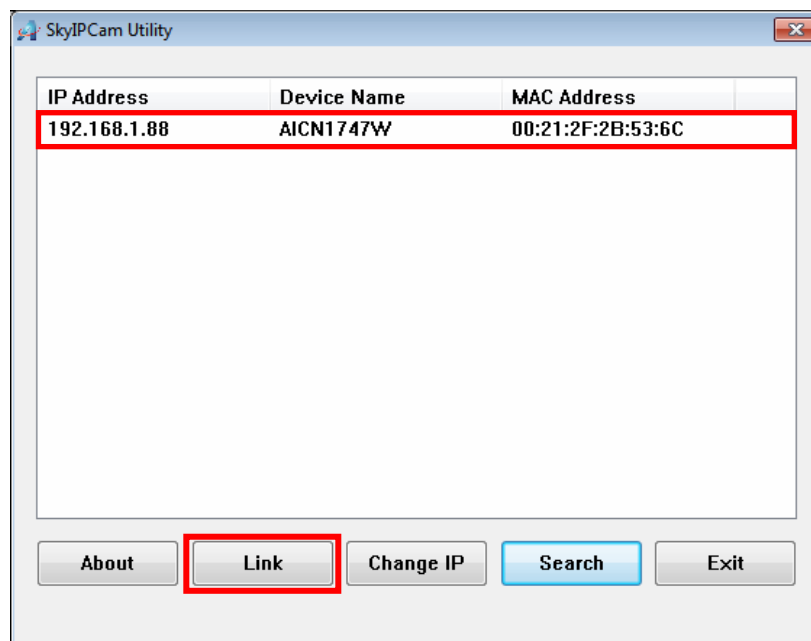


## 3.2 Configuring the Camera

**Step 1** Open **SkyIPCam Utility** by double clicking on its icon on your desktop.

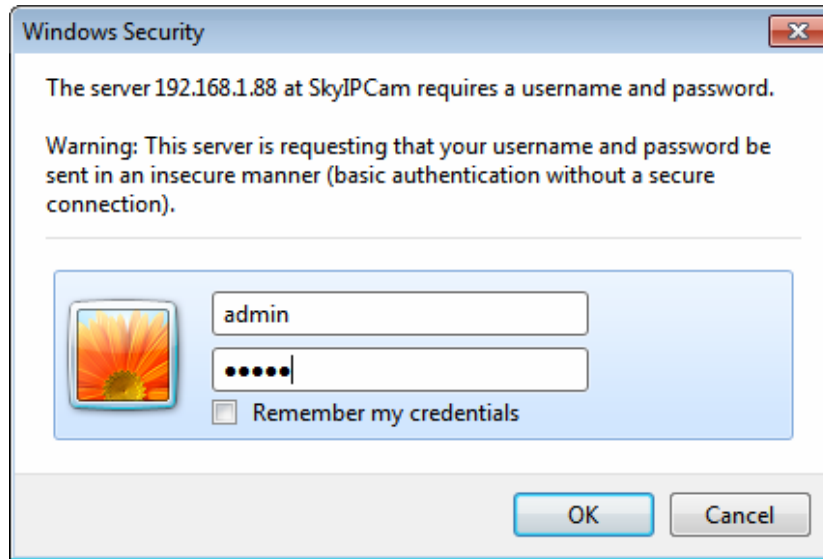


**Step 2** Click on **Search** to find the camera on your network. Select the Camera you wish to configure and click on **Link**.

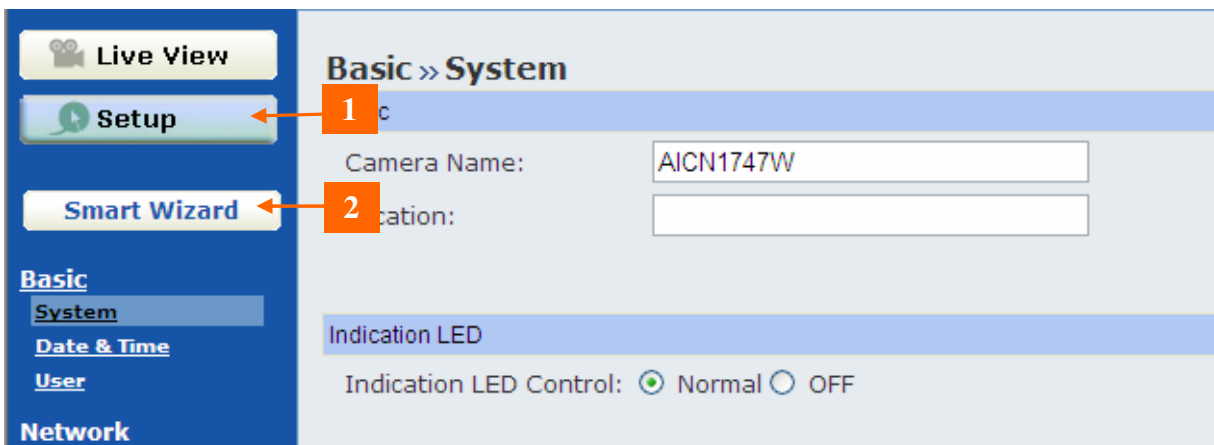


**Note** If the Camera you wish to configure does not show up in the utility, make sure the camera is properly connected to the same local network as your computer is, and the Green LED should be on. Click on **Search** to try again.

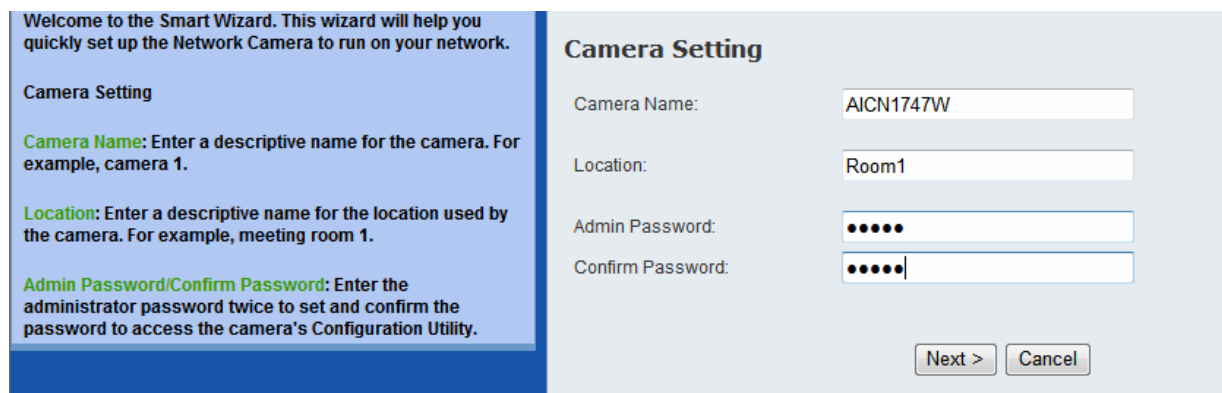
**Step 3** When you are prompted for the username and password, enter "**admin**" for both **Username** and **Password**, and click **OK**.



**Step 4** The camera viewing window will appear. Click on **Setup**, then click on **Smart Wizard**.



**Step 5** You may change the default **Camera Name** and enter a name for the **Location** if you like. Then enter "admin" for both **Admin Password** and **Confirm Password**. Click **Next**.



**Step 6** You can specify a static IP address to this camera by selecting **Static IP**, and enter IP, Subnet Mask, Default Gateway, Primary/Secondary DNS addresses here. If you are not sure how to configure Static IP Setting, please select **DHCP**. Click **Next**.

**IP Setting**

**DHCP:** Select this option when your network uses the DHCP server. When the camera starts up, it will be assigned an IP address from the DHCP server automatically.

**Static IP:** Select this option to assign the IP address for the camera directly.  
 - IP Address: For example, enter the default setting 192.168.2.240  
 - Subnet Mask: For example, enter the default setting 255.255.255.0  
 - Default Gateway: For example, enter the default setting 192.168.2.1  
 - Primary/Secondary DNS: Enter the DNS that are provided by your ISP.

**PPPoE:** Select this option when you use a direct connection via the ADSL modem. You should have a PPPoE account from your Internet service provider. Enter the user name and password in the following boxes. Please note that once the camera get an IP address from the ISP as starting up, it automatically sends a notification email to you. Therefore, when you select PPPoE as your connecting type, you have to set up the email configuration in next step .

**IP Setting**

DHCP

Static IP

IP:  .  .  .

Subnet Mask:  .  .  .

Default Gateway:  .  .  .

Primary DNS:  .  .  .

Secondary DNS:  .  .  .

PPPoE

User Name:

Password:

**Note** Be sure to enter Primary/Secondary DNS addresses assigned by your ISP if you set up Static IP for the camera so that the Email alert / FTP uploading can function properly.

**Step 7** If you would like to set up email alerts that you can receive in the future, enter your email information here. You can get this information from your Email Service Provider. You can set this up at a later time. Click **Next**.

**Email Setting**

**SMTP Server Address:** Enter the mail server address. For example, mymail.com.

**Port Number:** Enter the mail server port number.

**Sender Email Address:** Enter the email address of the user who will send the email. For example, John@mymail.com.

**Authentication Mode:** If the mail server needs to login, please select SMTP.

**Sender User Name:** Enter the user name to login the mail server.

**Sender Password:** Enter the password to login the mail server.

**Receiver #1 Email Address:** Enter the first email address of the user who will receive the email.

**Email Setting**

SMTP Server Address:

Port Number:

Sender Email Address:

Authentication Mode:  None  SMTP

Sender User Name:

Sender Password:

Receiver #1 Email Address:

Receiver #2 Email Address:

**Step 8** Enter the Network ID (SSID) of your wireless network, or click on **Site Survey** and select from the list. Select the **Authentication** and **Encryption**, and enter the security **Key** of your wireless network. This information is stored in your wireless AP/router. Click **Next**.

**Wireless Networking**

**Network ID(SSID):** To connect the camera to a specified access point, set a SSID for the camera to correspond with the access point's ESS-ID. To connect the camera to an Ad-Hoc wireless workgroup, set the same wireless channel and SSID to match with the computer's configuration. Click **Site Survey** to display the available wireless networks, so that you can easily connect to one of the listed wireless networks.

**Wireless Mode:** Select the type of wireless communication for the camera.  
 - Infrastructure  
 - Ad-Hoc

**Channel:** Select the appropriate channel from the pull-down list.

**Wireless Networking**

Network ID(SSID):

Wireless Mode:  Infrastructure  Ad-Hoc

Channel:

Authentication:

Encryption:  TKIP  AES

Pre-Shared Key:

**Note** You may contact the manufacturer of your wireless router/AP's to find out its SSID and wireless security settings.

**Step 9** Confirm your settings at this page. If everything is correct, click **Apply** to save the settings, then the camera will restart in 50 seconds.

**Confirm Settings**

Please confirm the configuration you have set up. When you confirm the settings, click **Apply** to finish the wizard and reboot the camera. Otherwise, click **prev** to go back to the previous step(s) and change the settings; or click **Cancel** to end the wizard and discard the changes.

Please note that the camera's IP Address will be updated if you changed the IP setting. This may cause the camera to lose the image screen. If this happens, use the supplied IP Finder software application to locate the camera's IP Address. Then, connect to the camera to resume the image screen.

**Confirm Settings**

Camera Name: AICN1747W  
 Location: Room1  
 IP Mode: Static  
 IP Address: 192.168.1.207  
 Subnet Mask: 255.255.255.0  
 Default Gateway: 192.168.1.1  
 Primary DNS: 4.2.2.1  
 Secondary DNS: 4.2.2.5  
 SMTP Server Address: email.com  
 Port Number: 25  
 Sender Email Address: user@email.com  
 Authentication Mode: SMTP  
 Sender User Name: user@email.com  
 Receiver #1 Email Address: test@abc.com  
 Receiver #2 Email Address:  
 ESSID: airlink101  
 Connection: Infrastructure  
 Channel: 6  
 Authentication: WPA2-PSK  
 Encryption: AES

**Step 10** After the camera is restarted, unplug the network cable from it. It will take around 1 or 2 minutes for the camera connecting to your wireless router/AP.

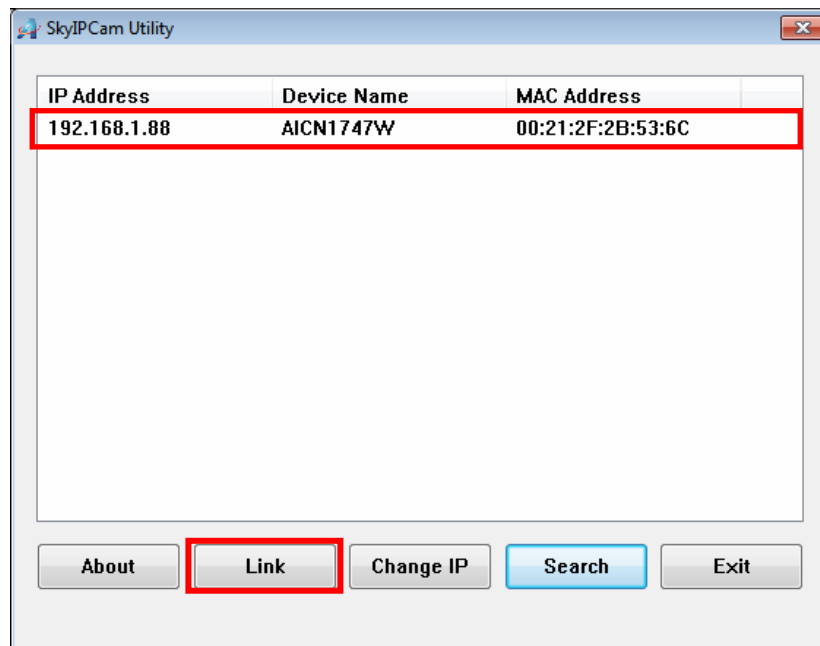
To make sure the wireless connection is successfully established, open the **SkyIPCam Utility** and click on **Search**. If the camera shows up in the list, it is connected to your wireless network successfully. If not, please verify the SSID and the wireless security settings you configured at **Step 8** are correct.



### 3.3 Viewing Images

#### *Method A > Access Camera from SkyIPCam Utility*

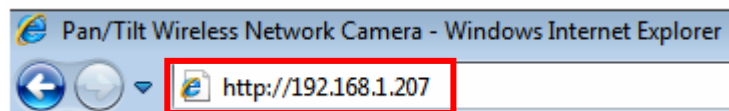
**Step 1A** Open Airlink101 SkyIPCam Utility, select the camera you wish to connect to and click on **Link** button. Go to **Step 3**.



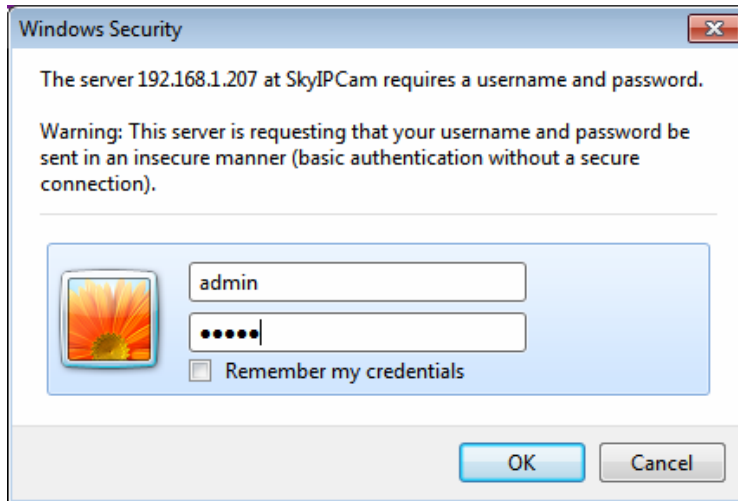
#### *Method B > Access Camera from Web Browser*

**Step 1B** If you assigned a static IP address for your camera (at Step 6, Chapter 3.2), you may open the Web Browser on your computer.

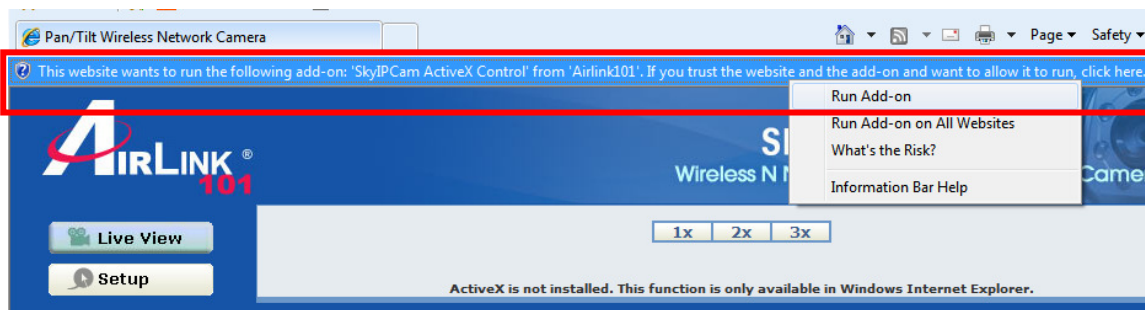
**Step 2B** Type the IP address of your camera in the Address bar, and press **Enter**.



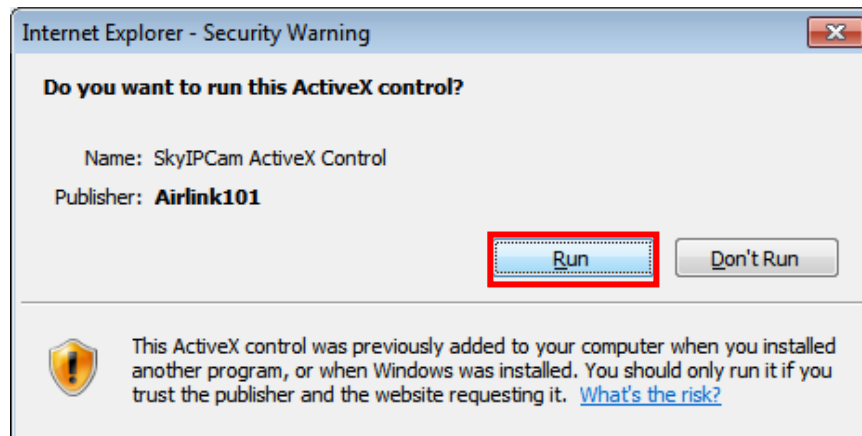
**Step 3** Enter administrator's username and password of the camera, then click **OK**. The default username and password are both "**admin**" if you did not make any change to it at Step 5, Chapter 3.2.



**Step 4 Internet Explorer User:** If this is the first time for your computer to view image from the web configuration page, you will be prompted to install the ActiveX Control. Click on the bar on top of the screen and click on **Run Add-on** or **Install ActiveX Control** (depends on different IE versions).



**Step 5** Click on **Run**, then you will be able to view the image.



**Note** If you are using Mozilla Firefox or Safari and you are not able to view any image, please make sure you have Java and Quick Time add-ons installed.

**Step 6** To get a clear view of images, you can simply rotate the camera's lens clockwise or counter-clockwise to adjust the focus.



# CHAPTER 4

## CONFIGURATION

### 4.1 Using the Web Configuration

You can access and manage the camera through the Web browser and the provided software application SkyIPCam UltraView. This chapter describes the Web Configuration, and guides you through the configuration of the camera by using the web browser.

To configure the camera, click **Setup** on the main page of Web Configuration. The Web Configuration will start from the **Basic** page.

### 4.2 Basic Setup

#### Basic >> System

The screenshot shows the 'Basic >> System' configuration page. The sidebar on the left contains the following menu items: Live View, Setup, Smart Wizard, Basic, System (highlighted), Date & Time, User, Network, Pan/Tilt, Video/Audio, and Event Server. The main content area is titled 'Basic >> System' and has a sub-menu 'Basic' with two text input fields: 'Camera Name' (containing 'AICN1747W') and 'Location'. Below these is an 'Indication LED' sub-menu with a radio button selection for 'Indication LED Control', where 'Normal' is selected and 'OFF' is unselected. At the bottom right are 'Apply' and 'Cancel' buttons.

The Basic menu contains three sub-menus that provide the system settings for the camera, such as the Camera Name, Location, Date & Time, and User management.

#### ■ Basic

- **Camera Name:** Enter a descriptive name for the camera.
- **Location:** Enter a descriptive name for the location used by the camera.

#### ■ Indication LED

This item allows you to set the LED illumination as desired. There are two options: **Normal** and **OFF**.

## Basic >> Date & Time

**Basic >> Date & Time**

Date and Time

TimeZone: (GMT-08:00) Pacific Time(US & Canada); Tijuana

Automatically adjust clock for daylight saving time changes

Synchronize with PC

Synchronize with NTP Server

NTP Server Address: 132.163.4.102 - North America

Update Interval: 6 hours

Manual

Date: 2011/02/01 (YYYY/MM/DD)

Time: 12:02:25 (hh:mm:ss)

Apply Cancel

### ■ Date & Time

- **TimeZone:** Select the proper time zone for the region from the pull-down menu.
- **Synchronize with PC:** Select this option and the date & time settings of the camera will be synchronized with the connected computer.
- **Synchronize with NTP Server:** Select this option and the time will be synchronized with the NTP Server. You need to select the proper IP address of the server and the update interval from the pull-down menu in the following two boxes.
- **Manual:** Select this option to set the date and time manually.

## Basic >> User

The screenshot shows the 'Basic >> User' configuration interface. It features a sidebar on the left with navigation options: Live View, Setup, Smart Wizard, Basic (System, Date & Time, User), Network, Pan/Tilt, Video/Audio, Event Server, Motion Detect, Event Config, Tools, and Information. The main content area is titled 'Basic >> User' and contains three sections: Administrator, General User, and Guest. Each section has input fields for Password, Confirm Password, User Name, and UserList, along with buttons for Modify, Add/Modify, and Delete.

### ■ Administrator

You can use this option to change administrator's password for your camera.

### ■ General User

- **User Name:** Enter the user's name you want to add to use the camera.

- **Password:** Enter the password for the new user.

When you are finished, click **Add/Modify** to add the new user to the camera. To modify the user's information, select the one you want to modify from **UserList** and click **Add/Modify**.

- **UserList:** Display the existing users of the camera. To delete a user, select the one you want to delete and click **Delete**.

### ■ Guest

- **User Name:** Enter the guest's name you want to add to use the camera.

- **Password:** Enter the password for the new guest.

- **UserList:** Display the existing guests of the camera. To delete a user, select the one you want to delete and click **Delete**.

**NOTE** A "General User" can access the camera and control the Function buttons of the camera's Web Configuration; a "Guest" can only view the live view image from the main page of the Web Configuration while accessing the camera. Only the "Administrator" is allowed to configure the camera through the Web Configuration.

## 4.3 Network Settings

The Network menu contains three sub-menus that provide the network settings for the camera, such as the IP Setting, DDNS Setting, IP Filter, and Wireless Network.

### Network >> Network

#### ■ IP Setting

This item allows you to select the IP address mode and set up the related configuration.

- **DHCP:** Select this option when your network uses the DHCP server. When the camera starts up, it will be assigned an IP address from the DHCP server automatically. It is recommended that you NOT use DHCP. You should instead use Static IP mode to set a static IP so that the IP address will never change and you will always know what it is.
- **Static IP:** Select this option to assign the IP address for the camera directly. You can use SkyIPCam Utility to obtain the related setting values.

<b>IP</b>	Enter the IP address of the camera. The default setting is <b>192.168.2.240</b> .
<b>Subnet Mask</b>	Enter the Subnet Mask of the camera. The default setting is <b>255.255.255.0</b> .
<b>Default Gateway</b>	Enter the Default Gateway of the camera. The default setting is <b>192.168.2.1</b> .
<b>Primary/</b>	DNS (Domain Name System) translates

<b>Secondary DNS</b>	domain names into IP addresses. Enter the Primary DNS and Secondary DNS that are provided by ISP. It is usually recommended that you input the Default Gateway of your network, which is the IP address of your router. Check with your router manufacturer for that information. <b>THIS IS MANDATORY IF YOU WANT TO USE THE FTP OR EMAIL OPTIONS</b>
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- **PPPoE:** Select this option when you use a direct connection via the ADSL modem. You should have a PPPoE account from your Internet service provider. Enter the **User Name** and **Password**. The camera will get an IP address from the ISP as starting up. If you are using a router, you will NOT use this option.

**NOTE** Once the camera gets an IP address from the ISP as starting up, it automatically sends a notification email to you. Therefore, when you select PPPoE as your connecting type, you have to set up the email or DDNS configuration in advance.

#### ■ **DDNS Setting**

With the Dynamic DNS feature, you can assign a fixed host and domain name to a dynamic Internet IP address. Select the **Enable** option to enable this feature. Then, select the Provider from the pull-down list and enter the required information in the **Host Name**, **User Name**, and **Password** boxes. Please note that you have to sign up for DDNS service with the service provider first. DDNS function on the camera is ONLY used if you are NOT using a NAT router and your camera has a public IP address. If you ARE using the camera with a NAT router, the camera's DDNS function will not work, and you will need to use the DDNS function in your router.

#### ■ **UPnP**

The camera supports UPnP (Universal Plug and Play), which is a set of computer network protocols that enable the device-to-device interoperability. In addition, it supports port auto mapping function so that you can access the camera if it is behind a NAT router or firewall. Select the **Enable** option to enable this feature.

#### ■ **Ports Number**

- **HTTP Port:** The default HTTP port is **80**. Some ISP's have port 80 blocked. If you are having problems, you can change it to some other port. The suggested port to be used is anything between 1024 to 65535



## Network >> IP Filter

The screenshot shows the 'Network >> IP Filter' configuration page. On the left is a navigation sidebar with buttons for 'Live View', 'Setup', 'Smart Wizard', and a menu for 'Basic', 'Network', 'IP Filter' (highlighted), and 'Wireless'. The main area has a header 'Network >> IP Filter' and a sub-header 'IP Filter'. It contains three rows of input fields: 'Start IP Address' with four boxes, 'End IP Address' with four boxes and an 'Add' button, and 'Deny IP List' with a dropdown arrow and a 'Delete' button.

The IP Filter setting allows the administrator of the camera to limit the users within a certain range of IP addresses to access the camera.

### ■ Start/End IP Address

Assign a range of IP addresses that are not allowed to access the camera by entering the Start IP address and End IP address. When you are finished, click **Add** to save the range setting. You can repeat the action to assign multiple ranges for the camera.

For example, when you enter 192.168.0.50 in Start IP Address and 192.168.0.80 in End IP Address, the users whose IP address located within 192.168.0.50 ~ 192.168.0.80 will not be allowed to access the camera.

### ■ Deny IP List

The list displays the range setting(s) of IP addresses that are not allowed to access the camera. To clear the setting, select a range of IP addresses from the list and click **Delete**.

## Network >> Wireless Setting

The camera supports WLAN while you use the wireless network. Select the **Enable** option to enable this feature.

**Network >> Wireless Setting**

Wireless

Enable

Network ID(SSID):

Wireless Mode:  Infrastructure  Ad-Hoc

Channel:

Authentication:

Encryption:  TKIP  AES

Pre-Shared Key:

The camera supports Wireless feature that can connect to your wireless network. Select the **Enable** option to enable this feature.

- **Network ID (SSID):** Keep the default setting of this option to connect the camera to any access point under the infrastructure network mode. To connect the camera to a specified access point, set a SSID for the camera to correspond with the access point's ESSID. To connect the camera to an Ad-Hoc wireless workgroup, set the same wireless channel and SSID to match with the computer's configuration.  
Click **Site Survey** to display the available wireless networks, so that you can easily connect to one of the listed wireless networks.
- **Wireless Mode:** Select the type of wireless communication for the camera: **Infrastructure** or **Ad-Hoc**.
- **Channel:** Select the appropriate channel from the list.
- **Authentication:** Select the authentication method to secure the camera from being used by unauthorized user: **Open**, **Shared-key**, **WPA-PSK**, and **WPA2-PSK**. The following table explains the four options:

<b>Open</b>	The default setting of Authentication mode, which communicates the key across the network.
<b>Shared-key</b>	Allow communication only with other devices with identical WEP settings.
<b>WPA-PSK/ WPA2-PSK</b>	WPA-PSK/WPA2-PSK is specially designed for the users who do not have access to network authentication servers. The user has to manually enter the starting password in their access point or gateway, as well as in each PC on the wireless network.

If you select **Open** or **Shared-key** as the Authentication mode, you need to complete the following settings:

Authentication:

Encryption:  None  WEP

Format:  ASCII  HEX

Key Length:  64 bits  128 bits

WEP Key 1

WEP Key 2

WEP Key 3

WEP Key 4

- **Encryption:** Select the **WEP** option to enable the data encryption feature to secure the camera within the wireless network.
- **Format:** Once you enable the Encryption feature, you need to determine the encryption format by selecting **ASCII** or **HEX**. ASCII format causes each character you type to be interpreted as an eight-bit value. Hex format causes each pair of characters you type to be interpreted as an eight-bit value in hexadecimal (base 16) notation.
- **Key Length:** Select the WEP key length you use: **64 bits** or **128 bits**.
- **WEP Key 1/2/3/4:** Enter the WEP key(s) in the following boxes. This must match the WEP key value configured for your wireless router/AP.

If you select **WPA-PSK** or **WPA2-PSK** as the Authentication mode, you need to complete the following settings:

Authentication:

Encryption:  TKIP  AES

Pre-Shared Key:

- **Encryption:** Select **TKIP** or **AES**. TKIP (Temporal Key Integrity Protocol) changes the temporal key every 10,000 packets to insure much greater security than the standard WEP security. AES (Advanced Encryption Standard) is used to ensure the highest degree of security and authenticity for digital information. This must match the encryption type configured for your wireless router/AP.
- **Pre-Shared Key:** Enter your wireless network key into the box, and this must match the Pre-shared key value configured for your wireless router/AP.

## Network >> Wireless >> WPS Setting

The screenshot shows the WPS Setting page. On the left is a navigation menu with options like Live View, Setup, Smart Wizard, Basic, Network, Network, IP Filter, Wireless, WPS, Video/Audio, Event Server, Motion Detect, Event Config, and Tools. The main content area has a breadcrumb 'Network · Wireless · WPS Setting' and a 'PROTECTED SETUP' header. A 'Reset To Unconfigured' button is present. The 'WPS' section is active, showing 'PIN Mode' selected. The 'PIN Code' is 00639392 and the 'Registrar ID(SSID)' is airlink101. A 'Site Survey' button is next to the SSID field. Below are 'Connect' and 'Cancel' buttons. At the bottom, the 'Device Status' is 'Device Idle'.

The camera supports WPS (WiFi Protected Setup™) feature that allows your camera to connect to the wireless network easily and safely without manually configuring the wireless security settings. **Please note that Your AP/Router must support WPS feature as well. If you are not sure, please refer to the manufacturer's manual of your AP/Router.**

Select either PIN or PBC mode to start the WPS session:

- **Select PIN Mode:**

- Step 1 Enter the SSID of the AP/Router you wish to connect to, or click **Site Survey** and select from the listed wireless networks.
- Step 2 Go to the WPS section of your AP/Router's web configuration page, then enter the PIN Code generated by the camera (in this case, "00639392") into the corresponding field. Please check your AP/Router's manufacturer's manual for more details.

- **Select PBC Mode (Recommended):**

- Step 1 Click on the Connect button on this page or push the WPS button on the backside of the camera.
- Step 2 Push the WPS hardware button on your AP/Router or the WPS software button in the web configuration page of your AP/Router.

Within 2 minutes, the camera will be wirelessly associated with your AP/Router.

## 4.4 Pan/Tilt Settings

The Pan/Tilt menu allows you to configure the pan/tilt functions of the camera.

### Pan & Tilt >> Pan & Tilt Settings

**Pan & Tilt >> Pan & Tilt Setting**

Pan & Tilt

Pan/Tilt Calibration:

Pan Steps:  (1~20) degrees

Tilt Steps:  (1~20) degrees

Auto Patrol Stay Time:  (1~999) sec(s)

Startup Preset:

- **Pan/Tilt Calibration:** Click **Calibration** to calibrate the position of the camera lens.
- **Pan Steps:** Set the changing range (1~20 degrees) when you click the Left/Right button.
- **Tilt Steps:** Set the changing range (1~20 degrees) when you click the Up/Down button.
- **Auto Patrol Stay Time:** Set the stay time (1~999 seconds) of each preset positions when the camera is patrolling.

## 4.5 Setting up Video & Audio

The Video & Audio menu contains three sub-menus that provide the video and audio settings for the camera.

### Video & Audio >> Camera



The screenshot displays the 'Video & Audio >> Camera' configuration page. On the left is a navigation menu with options like 'Live View', 'Setup', 'Smart Wizard', and various settings categories. The main area shows a live video feed of a computer setup with a timestamp '2011/02/01 12:37:12'. Below the feed are two main sections: 'Image Setting' and 'Overlay Setting'. The 'Image Setting' section contains three sliders for 'Brightness' (set to 50), 'Contrast' (set to 32), and 'Saturation' (set to 36), each with a '(0~100)' range and a 'Default' button. There are also checkboxes for 'Mirror' (Vertical and Horizontal) and radio buttons for 'Light Frequency' (50Hz, 60Hz, and Outdoor). The 'Overlay Setting' section has checkboxes for 'Include Date & Time' (checked) and 'Enable Opaque'. 'Apply' and 'Cancel' buttons are located at the bottom right of the settings area.

#### ■ Image Setting

- **Brightness:** Adjust the brightness level from 0 ~ 100.
- **Contrast:** Adjust the contrast level from 0 ~ 100.
- **Saturation:** Adjust the colors level from 0 ~ 100.  
Click **Default** to restore the default settings of the three options above.
- **Mirror:** Select the **Horizontal** option to mirror the image horizontally. Select the **Vertical** option to mirror the image vertically.
- **Light Frequency:** Select the proper frequency according to the camera's location: **50Hz**, **60Hz**, or **Outdoor**.

#### ■ Overlay Setting

- **Includes Date & Time:** Select this option to display the date & time stamp on the live view image.
- **Enable Opaque:** Select this option to set a black background to the displayed date & time stamp.

## Video & Audio >> Video

The screenshot shows a web interface for configuring video settings. On the left is a navigation menu with buttons for 'Live View', 'Setup', and 'Smart Wizard', and a list of categories: 'Basic', 'Network', 'Pan/Tilt', 'Video/Audio', 'Camera', 'Video', and 'Audio'. The 'Video' category is selected. The main area is titled 'Video & Audio >> Video' and contains the following settings:

- MJPEG**
- Video Resolution:** A dropdown menu set to 'VGA'.
- Video Quality:** A dropdown menu set to 'High'.
- Frame Rate:** Radio buttons for 'Auto' and 'Limited to 30 fps'. The 'Limited to 30 fps' option is selected.

At the bottom right of the settings area are two buttons: 'Apply' and 'Cancel'.

### ■ MJPEG

- **Video Resolution:** Select the desired video resolution from the three formats: **VGA**, **QVGA** and **QQVGA**. The higher setting (VGA) obtains better video quality while it uses more resource within your network.
- **Video Quality:** Select the desired image quality from five levels: **Lowest**, **Low**, **Medium**, **High**, and **Highest**.
- **Frame Rate:** Select **Auto** or a proper setting depending on your network status.

## Video & Audio >> Audio

The screenshot shows a web interface for configuring a camera's audio settings. On the left is a blue sidebar with navigation buttons: 'Live View', 'Setup', 'Smart Wizard', and a menu with 'Basic', 'Network', 'Pan/Tilt', 'Video/Audio' (expanded to show 'Camera', 'Video', and 'Audio'), and 'Audio'. The main area is titled 'Video & Audio >> Audio'. It features two sections: 'Camera Microphone In' with a checked 'Enable' checkbox, and 'Camera Speaker Out' with a checked 'Enable' checkbox and a 'Volume' input field containing the number '90'. 'Apply' and 'Cancel' buttons are located at the bottom right of the main area.

### ■ Camera Microphone In

Select the **Enable** option to enable the camera's audio function, so that you can receive the on-site sound and voice from the camera.

### ■ Camera Speaker Out

Select the **Enable** option to enable the camera's external speaker function, so that the connected speaker can play the sound and voice through the camera.

- **Volume:** Set the speaker's volume.



## 4.6 Event Server Configuration

The Event Server menu contains two sub-menus that allow you to upload images to FTP, and send emails that include still images.

When you complete the required settings for FTP, or Email, click **Test** to find out if the related configuration is correct or not. Once the camera connects to the server successfully, click **Apply**.

### Event Server Setting>> FTP

The screenshot shows the 'Event Server Setting >> FTP' configuration page. On the left is a blue sidebar with navigation buttons: 'Live View', 'Setup', 'Smart Wizard', and a list of menu items: 'Basic', 'Network', 'Pan/Tilt', 'Video/Audio', 'Event Server' (with sub-items 'FTP', 'Email', and 'Motion Detect'). The main area has a title bar 'Event Server Setting >> FTP' and a sub-header 'FTP'. Below are several input fields: 'Host Address' (empty), 'Port Number' (21), 'User Name' (empty), 'Password' (empty), 'Directory Path' (empty), and 'Passive Mode' (checked 'Enable'). At the bottom right are three buttons: 'Test', 'Apply', and 'Cancel'.

#### ■ FTP

- **Host Address:** Enter the IP address or domain name of the target FTP server. If you enter the domain name, you **MUST** configure DNS settings in Network / IP Setting first.
- **Port Number:** Enter the port number used for the FTP server.
- **User Name:** Enter the user name to login into the FTP server.
- **Password:** Enter the password to login into the FTP server.
- **Directory Path:** Enter the destination folder for uploading the images. For example, **/Test/**.
- **Passive Mode:** Select the **Enable** option to enable passive mode. If you are having trouble, you can enable/disable this mode.

## Event Server Setting >> Email

Event Server Setting >> Email

Email

SMTP Server Address:

Port Number:

Sender Email Address:

Authentication Mode:  None  SMTP

Sender User Name:

Sender Password:

Receiver #1 Email Address:

Receiver #2 Email Address:

### ■ Email

- **SMTP Server Address:** Enter the mail server address. For example, [mymail.com](#).
- **Sender Email Address:** Enter the email address of the user who will send the email. For example, [John@mymail.com](#).
- **Sender User Name:** Enter the user name to login the mail server.
- **Sender Password:** Enter the password to login the mail server.
- **Receiver #1 Email Address:** Enter the first email address of the user who will receive the email.
- **Receiver #2 Email Address:** Enter the second email address of the user who will receive the email.

## 4.7 Motion Detect

\*This function can only be configured in Windows Internet Explorer.

The Motion Detect menu contains the command and option that allow you to enable and set up the motion detection feature of the camera. The camera provides two detecting areas.

To enable the detecting area, select **Window 1** or **2** from the pull-down list, and then check **Enable**. When the detecting area is enabled, you can use the mouse to move the detecting area and change the area coverage.



- **Name:** Assign a name to the detecting area.
- **Threshold:** Move the slide bar to adjust the level for detecting motion. Make sure the threshold (the horizontal line) is low (sensitive) enough to come across the waves (appear when motion detected), so that the events (i.e, emailing snapshot, FTP uploading) you set up in **Event Config** will be triggered.

**NOTE** Sliding the Threshold bar to the right will decrease the sensitivity of motion detection; sliding the Threshold bar to the left will increase the sensitivity of motion detection.

## 4.8 Event Configuration

The Event Config menu contains five sub-menus that provide the commands to configure event profiles.

### Event Configuration >> General Setting

The screenshot shows a web interface for configuring event settings. On the left is a dark blue sidebar with navigation buttons: 'Live View' (with a camera icon), 'Setup' (with a gear icon), and 'Smart Wizard'. Below these are menu items: 'Basic', 'Network', 'Pan/Tilt', 'Video/Audio', 'Event Server', 'Motion Detect', 'Event Config' (highlighted), 'General' (highlighted), 'Schedule Profile', 'Motion Trigger', 'Schedule Trigger', and 'GPIO Trigger'. The main content area is titled 'Event Configuration >> General Setting' and has a 'General' sub-tab. It contains two configuration fields: 'Snapshot Subfolder:' with an empty text input box, and 'GPIO Trigger Out Retention Time Per Event:' with a text input box containing '20' and a unit label 'sec(s)'. At the bottom right of the main area are 'Apply' and 'Cancel' buttons.

- **Snapshot/Recording Subfolder:** You can assign a descriptive name for the subfolder to save the captured image/video files. Otherwise, leave this option blank to use the default setting.
- **GPIO Trigger Out Retention Time Per Event:** Limit the retention time of the GPIO Trigger Out function.

## Event Configuration >> Arrange Schedule Profile

This sub-menu displays the scheduled profile(s). To customize the profile, click **Add** and then enter a descriptive name for the profile in the prompt dialog window. After entering the profile name, click **OK** and the profile is added to the Schedule Profiles list. To delete the profile, select the profile in the list and click **Delete**.

The screenshot shows the 'Event Configuration >> Arrange Schedule Profile' window. The interface includes a sidebar with navigation options and a main configuration area. The main area features a list of schedule profiles, a form for editing a selected profile, and buttons for adding, deleting, and saving changes.

- **Profile Name:** Display the profile name that you select in the Schedule Profiles list.
- **Days:** Select the day(s) that you want to separately assign in the schedule profile. The day that has been assigned will be displayed with green color.
- **Time List:** Display the time period that you have assigned within the selected weekday. To assign the same time period to every day, click **Add this to all week days**; click **Delete this from all week days** to remove the selected time period from every day. Click **Delete** to remove the selected time period.
- **Start/End Time:** Enter the start and end time and then click **Add** to assign a time period within in the selected day.

## Event Configuration >> Motion Detection Trigger

Select the **Enable** option to enable the motion detection trigger function of the camera, so that you can set Trigger Out function or send captured images within the detecting area to the FTP server or email receiver. You have to configure corresponding settings, such as FTP server and email server, to enable this feature.

The screenshot shows a web interface for configuring motion detection triggers. On the left is a navigation menu with buttons for 'Live View', 'Setup', and 'Smart Wizard', and a list of menu items: 'Basic', 'Network', 'Pan/Tilt', 'Video/Audio', 'Event Server', 'Motion Detect', 'Event Config', 'General', 'Schedule Profile', 'Motion Trigger' (highlighted), 'Schedule Trigger', and 'GPIO Trigger'. The main content area is titled 'Event Configuration >> Motion Detect Trigger' and includes a subtitle 'Motion Detect Trigger (\*Please set the corresponding server setting first)'. It features an 'Enable' checkbox, a 'Schedule Profile' dropdown menu set to 'always', and an 'Action' section with three checkboxes: 'Trigger Out', 'Send Email', and 'FTP Upload'. At the bottom right of the main area are 'Apply' and 'Cancel' buttons.

- **Schedule Profile:** Select a schedule profile from the pull-down list.
- **Action:** Set the **Trigger Out** function or select the destination of the captured images: **Send Email**, or **FTP Upload**.

## Event Configuration >> Schedule Trigger

The screenshot shows the 'Event Configuration >> Schedule Trigger' page. On the left is a navigation menu with 'Event Config' expanded to show 'Schedule Trigger'. The main content area has two sections: 'Email Schedule' and 'FTP Schedule'. Each section has an 'Enable' checkbox, a 'Schedule Profile' dropdown (set to 'always'), and an 'Interval' field. For 'Email Schedule', the interval is 20 seconds. For 'FTP Schedule', the interval is 30 seconds/frame, with a radio button selected. There are 'Apply' and 'Cancel' buttons at the bottom right.

You can separately configure the schedule for trigger function of the camera by **Email**, or **FTP**. Select the **Enable** option on each item, and then select a **Schedule Profile** from the pull-down list and set the **Interval** time.

## Event Configuration >> GPIO Trigger

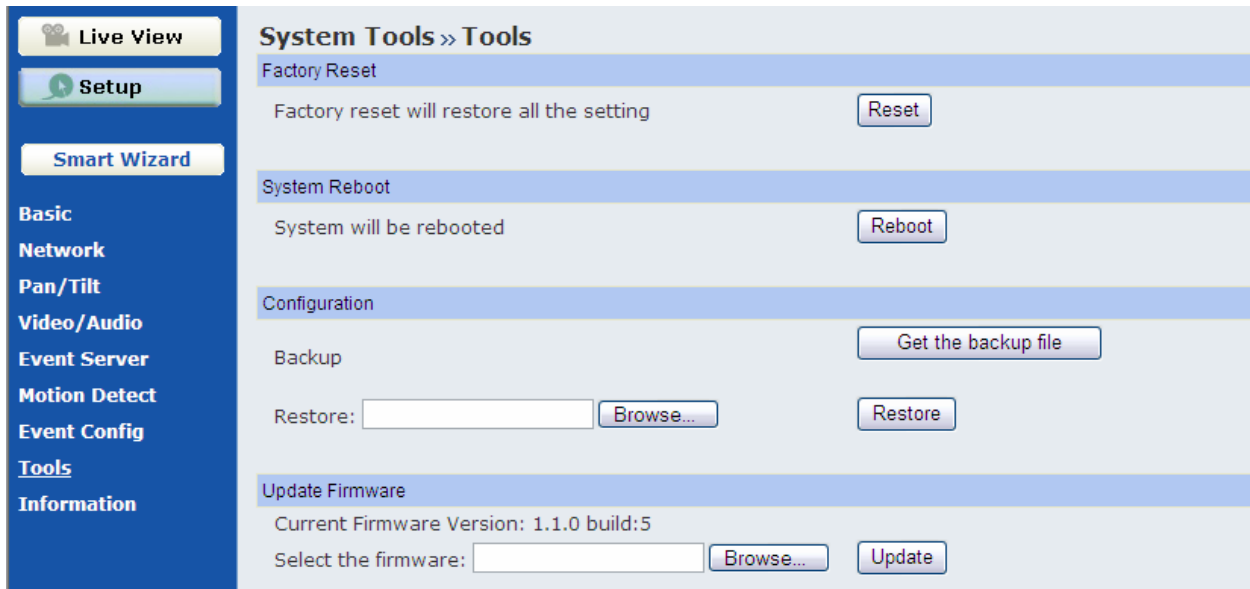
Select the **Enable** option to enable the GPIO trigger function of the camera, so that you can set Trigger Out function or send captured images within the detecting area to the FTP server or email receiver. You have to configure corresponding settings, such as FTP server and email server, to enable this feature.

The screenshot shows the 'Event Configuration >> GPIO Trigger' page. On the left is a navigation menu with 'Event Config' expanded to show 'GPIO Trigger'. The main content area has a 'GPIO Trigger' section with an 'Enable' checkbox, a 'Schedule Profile' dropdown (set to 'always'), and an 'Action' section with three checkboxes: 'Trigger Out', 'Send Email', and 'FTP Upload'. There are 'Apply' and 'Cancel' buttons at the bottom right.

- **Schedule Profile:** Select a schedule profile from the pull-down list.
- **Action:** Set the **Trigger Out** function or select the destination of the captured images: **Send Email**, or **FTP Upload**.

## 4.9 Tools

The Tools menu provides the commands that allow you to restart or reset the camera. You can also backup and restore your configuration, and upgrade the firmware for the camera.



### ■ Factory Reset

Click **Reset** to restore all factory default settings for the camera.

### ■ System Reboot

Click **Reboot** to restart the camera just like turning the device off and on. The camera configuration will be retained after rebooting.

### ■ Configuration

You can save your camera configuration as a backup file on your computer. Whenever you want to resume the original settings, you can restore them by retrieving the backup file.

- **Backup:** Click **Get the backup file** to save the current configuration of the camera.
- **Restore:** Click **Browse** to locate the backup file and then click **Restore**.

### ■ Update Firmware

This item displays the current firmware version. You can upgrade the firmware for your camera once you obtained a latest version of firmware.

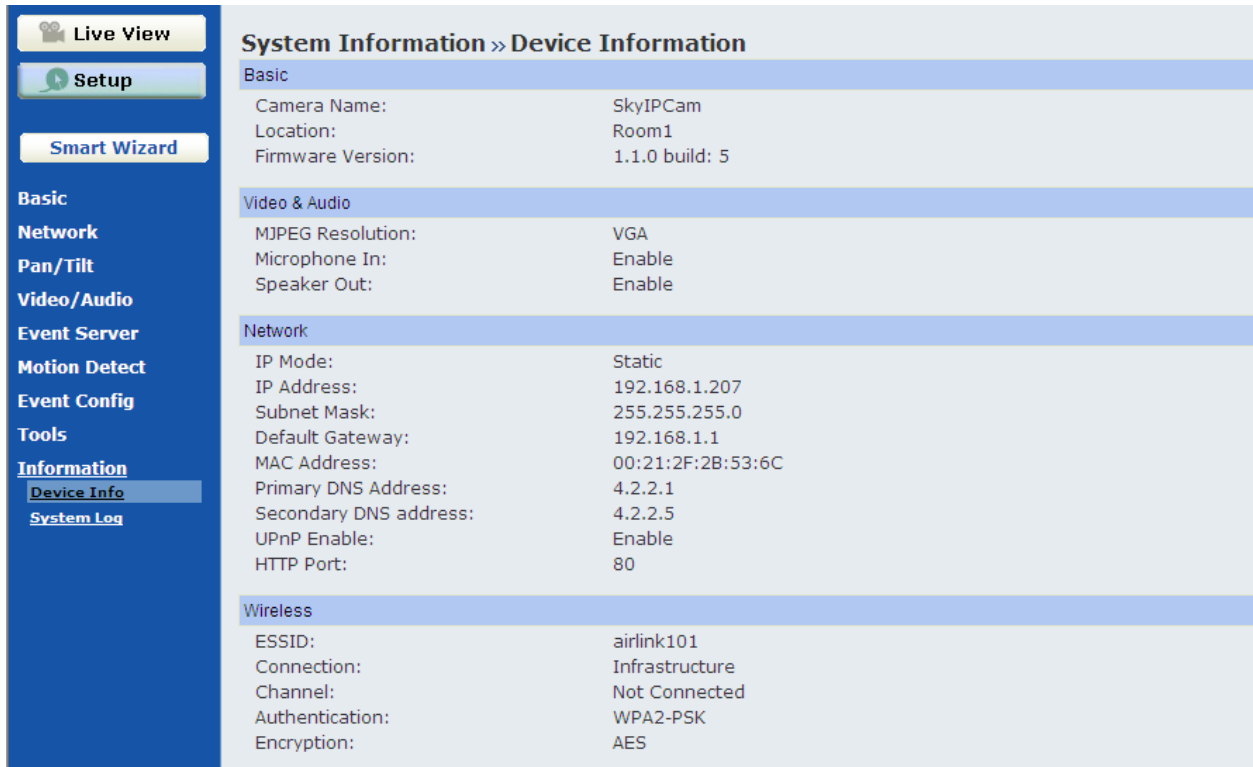
- **Select the firmware:** Click **Browse** to locate the backup file and then click **Update**.

**NOTE** Make sure to keep the camera connected to the power source during the process of upgrading firmware. Otherwise, the camera might be damaged because of failure of upgrading firmware.



## 4.10 Information

The Information menu displays the current configuration and events log of the camera.



**System Information >> Device Information**

Basic

Camera Name: SkyIPCam  
Location: Room1  
Firmware Version: 1.1.0 build: 5

Video & Audio

MJPEG Resolution: VGA  
Microphone In: Enable  
Speaker Out: Enable

Network

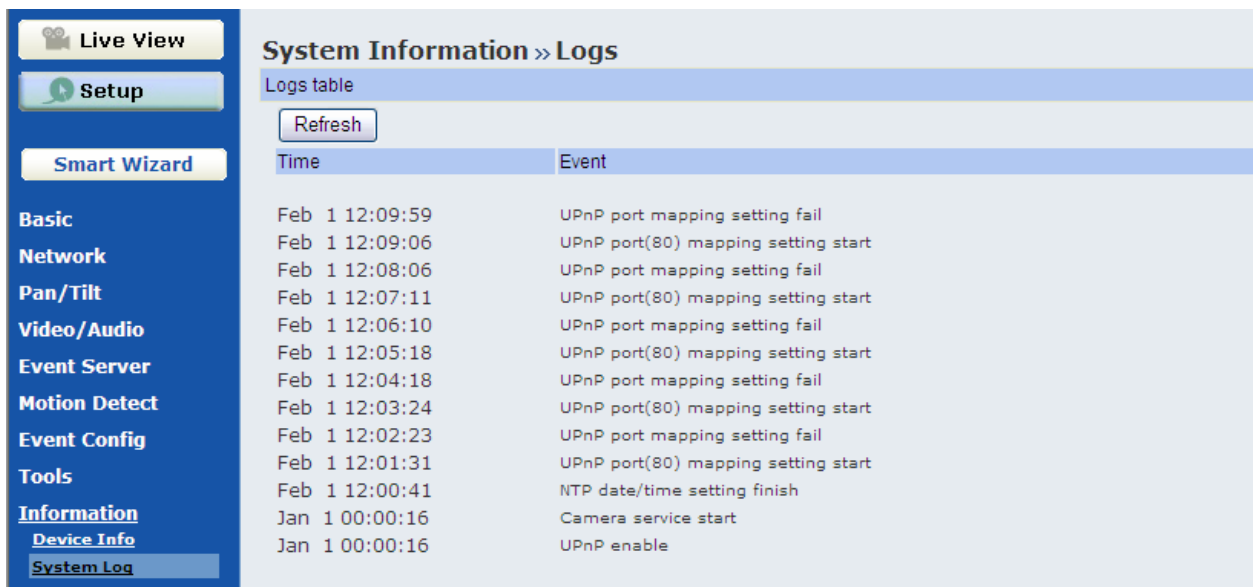
IP Mode: Static  
IP Address: 192.168.1.207  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.1.1  
MAC Address: 00:21:2F:2B:53:6C  
Primary DNS Address: 4.2.2.1  
Secondary DNS address: 4.2.2.5  
UPnP Enable: Enable  
HTTP Port: 80

Wireless

ESSID: airlink101  
Connection: Infrastructure  
Channel: Not Connected  
Authentication: WPA2-PSK  
Encryption: AES

### ■ Device Info

Display the Basic, Video & Audio, and Network settings of the camera.



**System Information >> Logs**

Logs table

Time	Event
Feb 1 12:09:59	UPnP port mapping setting fail
Feb 1 12:09:06	UPnP port(80) mapping setting start
Feb 1 12:08:06	UPnP port mapping setting fail
Feb 1 12:07:11	UPnP port(80) mapping setting start
Feb 1 12:06:10	UPnP port mapping setting fail
Feb 1 12:05:18	UPnP port(80) mapping setting start
Feb 1 12:04:18	UPnP port mapping setting fail
Feb 1 12:03:24	UPnP port(80) mapping setting start
Feb 1 12:02:23	UPnP port mapping setting fail
Feb 1 12:01:31	UPnP port(80) mapping setting start
Feb 1 12:00:41	NTP date/time setting finish
Jan 1 00:00:16	Camera service start
Jan 1 00:00:16	UPnP enable

### ■ System Log

The Logs table displays the events log recorded by the system.

# CHAPTER 5

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## USING SKYIPCAM ULTRAVIEW

### 5.1 Starting the Program

To start UltraView Pro, click **Start** → **(All) Programs** → **Airlink101 SkyIPCam UltraView** → **SkyIPCam UltraView**. Alternately, you can start the program by simply double-clicking the program icon on the desktop of your computer.



On the login window, enter the **User name/Password** and click **OK** to login. If this is the first time you start the program and login, use the default user name / password: *admin / admin*.

The image shows the login window for SkyIPCam UltraView. The window has a blue title bar with the text "SkyIPCam UltraView". The main area has a blue background with the text "SkyIPCam UltraView" in a large, white, sans-serif font. Below this, there is a white rounded rectangle containing the text "Please enter user name and password". There are two input fields: "User name:" with the text "admin" and "Password:" with the text "\*\*\*\*\*". Below the input fields are two buttons: "OK" and "Exit". At the bottom of the window, there is a copyright notice "SkyIPCam Ultraview Copyright © 2011 Airlink101" and the Airlink101 logo, which consists of a stylized "A" with a red swoosh and the text "AIRLINK 101".

**NOTE** For security purpose, you are highly recommended to change the default user name and password after login. For more information, see the *Configuring the System > User Management* section.

## 5.2 Main Window and Item Feature









When you start and login to UltraView, the Main window will display as below:












The Main window provides you with the information on operating the system, as well as the control panel such as the Quick Launch buttons, and so on.

**NOTE** UltraView Pro requires the resolution setting up to 1024 x 768. For best view of the application, you are recommended to configure the resolution setting to 1024 x 768 or higher; otherwise, it cannot be displayed on the screen when launching the program.

- 1 **Live View Window** displays the live video of the connected camera(s).
- 2 **Quick Launch Buttons** are located below the Live View Window, providing you with the following quick-launch functions:

Button	Function
	Click to select <b>Logout</b> or <b>Close</b> UltraView Pro.
	Click to select <b>Restore Recording Type</b> , <b>All Continuous Recording</b> , or <b>Stop All Recording</b> .
	Click and then select to display the <b>View Setting</b> window, switch to the <b>eMap View</b> window, or check the <b>Camera Status</b> .
	Click to display the Playback window.
	Click to display the Schedule Configuration window.
	Click to configure the event settings: <b>Event Server</b> , <b>Address Book</b> , and <b>Event Trigger</b> .
	Click to configure <b>Device Setting</b> and <b>Recording Setting</b> .
	Click to set the <b>Account</b> , <b>Language</b> , and <b>System Setting</b> ; or view the <b>Version</b> or the program.

**3 Camera View Mode** buttons in this area allow you to switch the camera view mode.




Button	Function
	Display the connected camera(s) in single camera view mode.
	Display the connected camera(s) in quad view mode.
	Display the connected camera(s) in 3 x 3 grid view mode.
	Display the connected camera(s) in 13-camera view mode using a split window. The first camera is displayed as the major view.
	Display the connected camera(s) in 17-camera view mode using a split window. The first camera is displayed as the major view.
	Display the connected camera(s) in N x N grid view mode, supporting up to 36 views (up to 32 cameras).
	Display the live view of the selected camera in full screen mode.
	Automatically switch the live view of each connected cameras in single camera view mode by 30 seconds*. Click once to start and click again to stop. * The auto-switch time is set as 30 seconds by default, which can be changed by clicking the  → <b>System Setting</b> and then change the value from the pull-down list of the <b>Auto Switch time interval</b> option.



**4 System Information** displays the system information, including the date and time, and the available storage space of the system.

**5 Live View Status** provides the status of live view mode, including **Camera List** and **eMap**.

- **Camera List** displays the status of the connected cameras. If multiple cameras are connected, you can switch to the live view of each camera by simply selecting the camera from the list.
- **eMap** allows you to select the desired camera to the view from the map easily. Please note that you have to set up the eMap for monitoring in advance.

**6 Camera Control Buttons** provides the control buttons that allow you to control the selected camera.

Button	Function
	<b>Talk On/Off.</b> Click to enable/disable the speaker function of the connected camera. This option is available only in single camera view mode.
	<b>Listen On/Off.</b> Click to enable/disable the microphone function of the connected camera. This option is available only in single camera view mode.
	If the connected camera features pan/tilt functions, you can use this control panel to set the preset positions (up to 8 positions). Once configured, you can move the camera lens to the desired position quickly. To set the preset positions, adjust the camera lens to the desired position using the Navigation buttons, and then select the position number (1~8) from the Set button. To move to the preset position, simply select the position

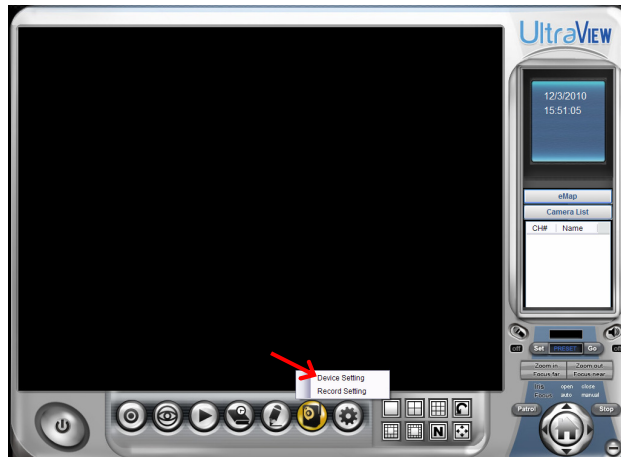
	number (1~8) from the Go button.
	Navigation Buttons (Left/Right/Up/Down/Home). If the connected camera features pan/tilt functions, the Navigation buttons allow you to move the camera lens position. Clicking the Home (center) button will move the camera lens to the assigned home position.
	The <b>Patrol/Stop</b> buttons are used to enable/disable the swinging function of the camera. Click <b>Patrol</b> to start patrolling through the preset positions once. Click <b>Stop</b> to stop patrolling.

## 5.3 Accessing the Camera

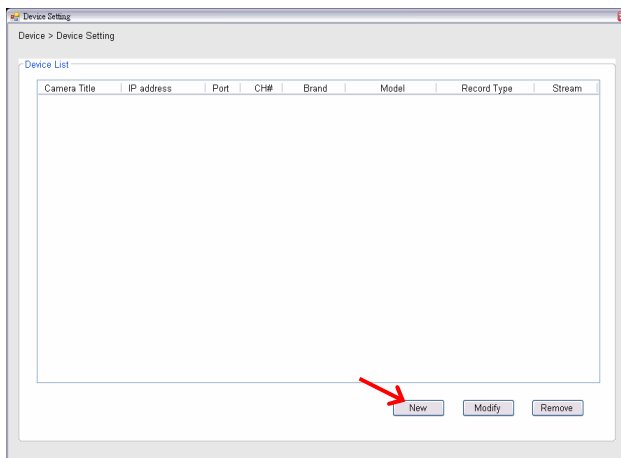
Before you can access the camera, you have to add the camera to the system.

### ■ Adding a Camera

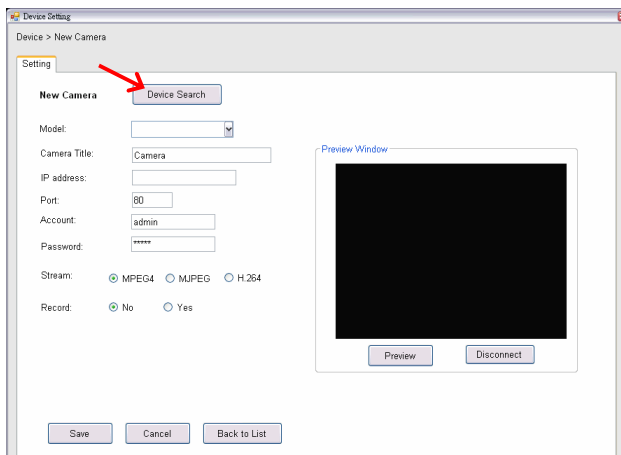
1. Click the  button and select **Device Setting** to display the Device Setting window.



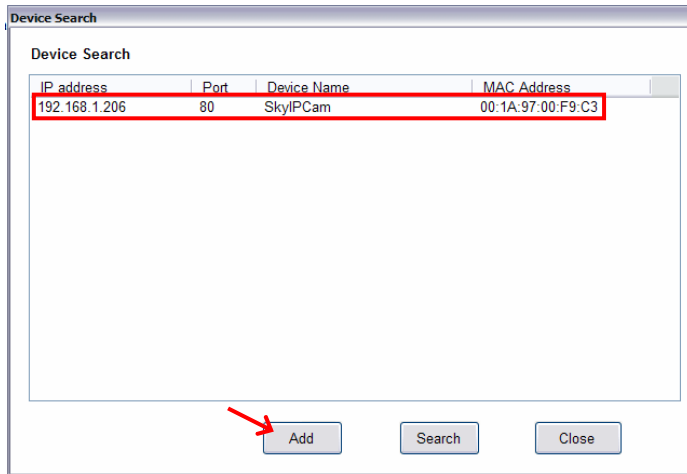
2. Click **New**.



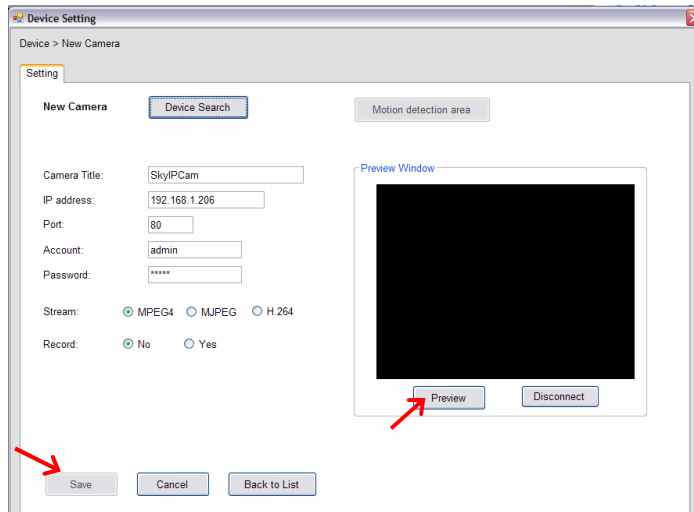
3. Click **Device Search** to search the camera(s) within your network.



- When search is finished, select the camera and click **Add**.



- The information of the camera will be displayed on the window. When completed, click **Preview** and then click **Save** to return to the Device Setting window. The added camera will be displayed in the Device List.

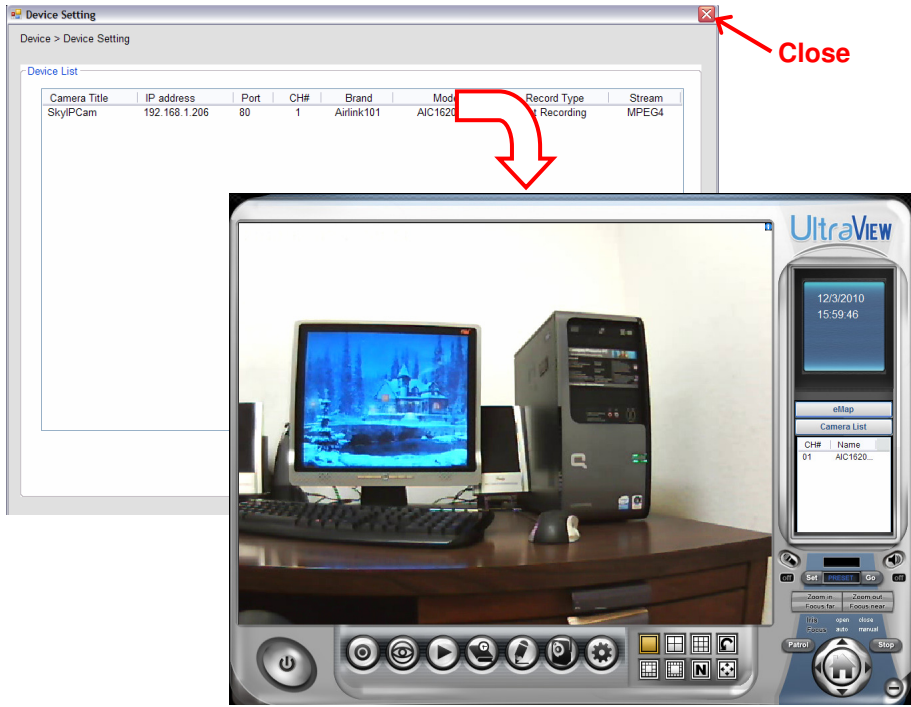


Option	Description
<b>Model</b>	Display the model name of the camera.
<b>Camera Title</b>	You have to assign a descriptive name for the camera.
<b>IP Address</b>	Display the IP address of the camera.
<b>Port</b>	Display the port path of the camera.
<b>Account</b>	Display the user name for accessing the camera.
<b>Password</b>	The password for accessing the camera will not be displayed.
<b>Stream</b>	Select the stream type as <b>MPEG4</b> , <b>MJPEG</b> , or <b>H.264</b> . (H.264 is not supported by this model)
<b>Record</b>	Select <b>Yes</b> or <b>No</b> to set up recording function of the camera.
<b>Preview</b>	This window allows you to preview the image of the

<b>Window</b>	camera. Click <b>Preview</b> to view the image; click <b>Disconnect</b> to stop previewing.
---------------	---

**TIP** You cannot set the motion detection area while adding the new camera. To set the motion detection area of the camera, select the desired camera and click the **Modify** button on the **Device Setting** window. See the following section for more information.

6. Close the Device Setting window and return to the Main window. The image of the camera will be displayed.



**TIP** When you add the camera and return to the Main window, the camera image will be displayed in full-screen mode by default. Press the ESC key on the PC keyboard to resume the Main window.

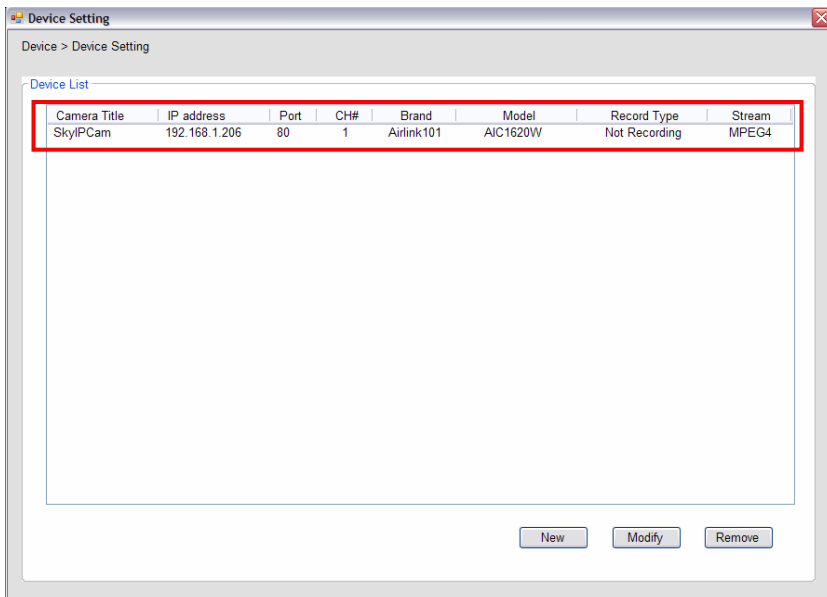
**NOTE** Divx/Xvid codec is required for viewing the image of camera. If the image cannot be displayed in the Live View/Preview window normally, click the following path to download and install the required component: <http://download.divx.com/divx/DivXInstaller.exe>



## ■ Editing / Deleting a Camera

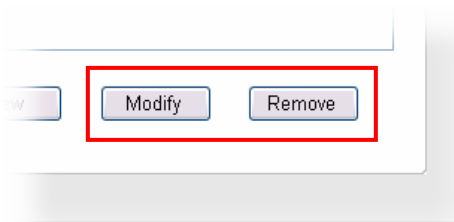
Since you have added camera(s) to the system, you can select one to edit or remove.

1. On the Device Setting window, the connected camera(s) will be displayed in the Device List.




2. **To delete the camera:** select the desired one and then click **Remove**. When prompted, click **Yes** and then select **OK** to confirm deletion.


**To change the configuration of the camera:** select the desired one and then click **Modify**. The Modify Camera window will appear that allows you to change the configuration of the camera. When completed, click **Save** and then select **OK** to return to the Device Setting window.

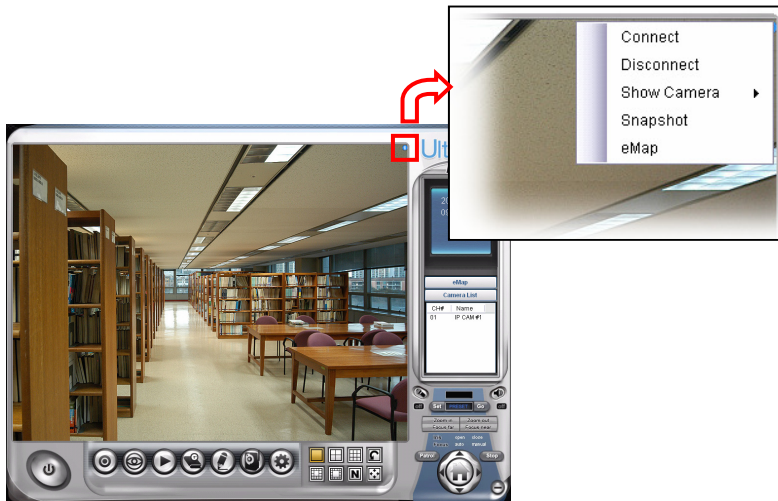


## ■ Viewing Image of the Camera

Since you have added camera(s) to the system, the image of the selected camera(s) will be displayed on the Live View Window automatically. You can view a maximum of 32 cameras simultaneously. Additionally, you can select one-camera or other view mode to display the video from the Camera View Mode buttons.

For example, if you use only one camera, select single camera view mode (  ), and the Live View Window will display the view as below. You can select the other modes according to your need.

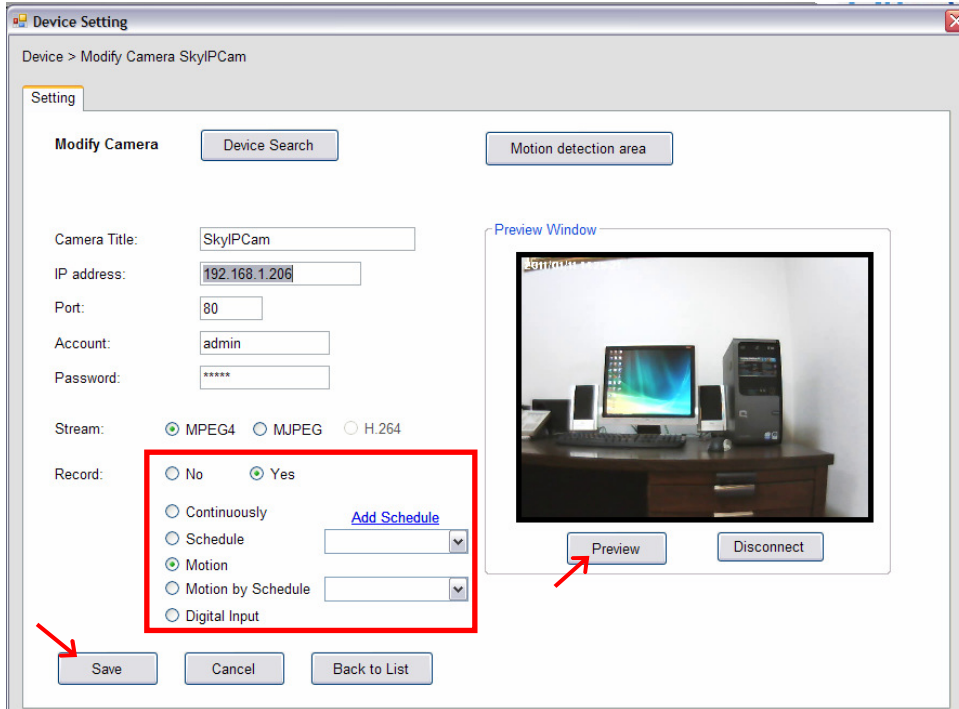
The **Information icon** (  ) on the top-right corner of the window provides you with the options to connect/disconnect the camera, select a camera to be displayed in the window, capture a still image of the camera live video, or switch to eMap mode. Click the Information icon to pop up the shortcut menu and select the desired option.




## 5.4 Recording / Playing Video

### ■ Enabling / Disabling Recording

Press **Preview** to activate the settings. While you are adding/editing the camera, you can enable the recording function for the camera by selecting the **Record** option. Click **Save** after you finish setting.




Alternately, you can set all cameras to start/stop recording when you connect multiple cameras. Click the  button and select **All Continuous Recording** to set all cameras to start recording, or select **Stop All Recording** to set all cameras to stop recording.



Since you have enabled the recording function of the camera, it will automatically start recording and save the video clips. The recording time of each file is set to 60 seconds by default.

## ■ Configuring the Recording Settings

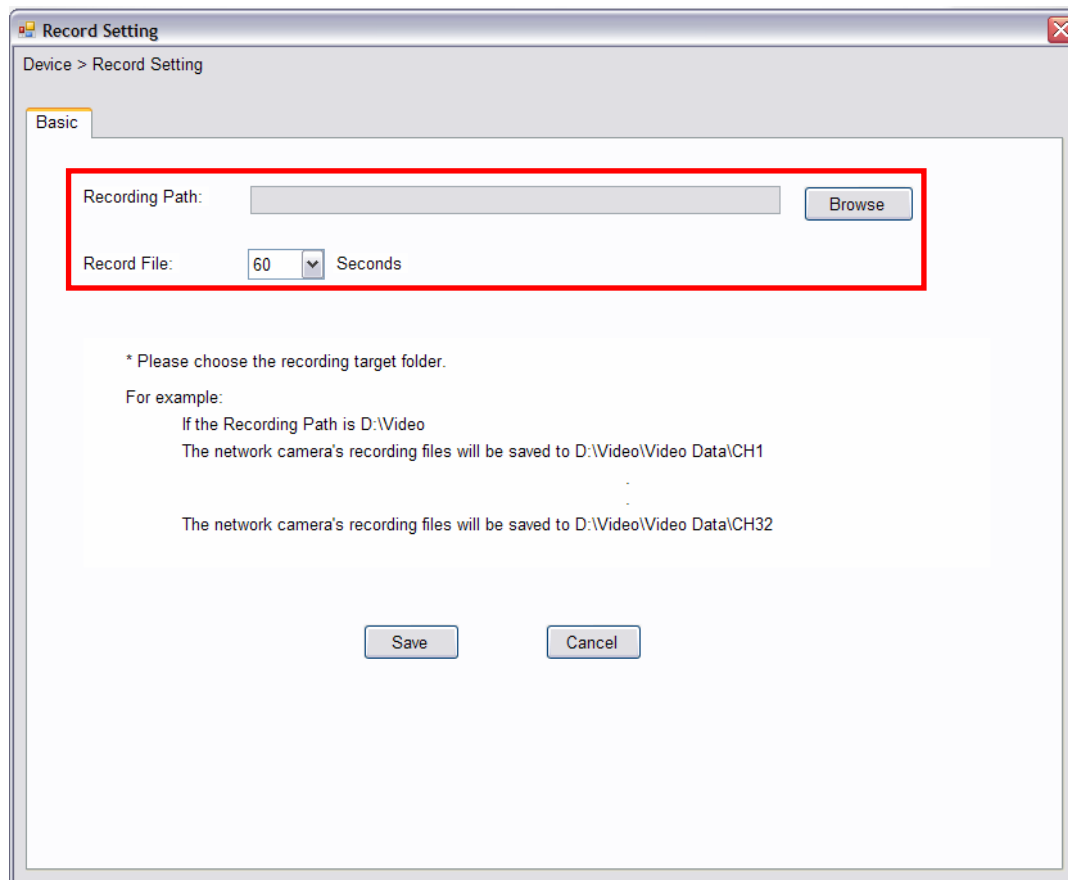
The default directory for saving the recorded video files is "C:\". You can change the target folder for saving the files in the **Record Setting** option.

1. Click the  button and then select **Record Setting**.



2. To assign the target folder for saving the recorded files, click the **Browse** button next to the **Recording Path** option, and then select the desired directory. When completed, click **Save**.


To change the time of recording, select the desired time setting from the **Record File** pull-down menu.

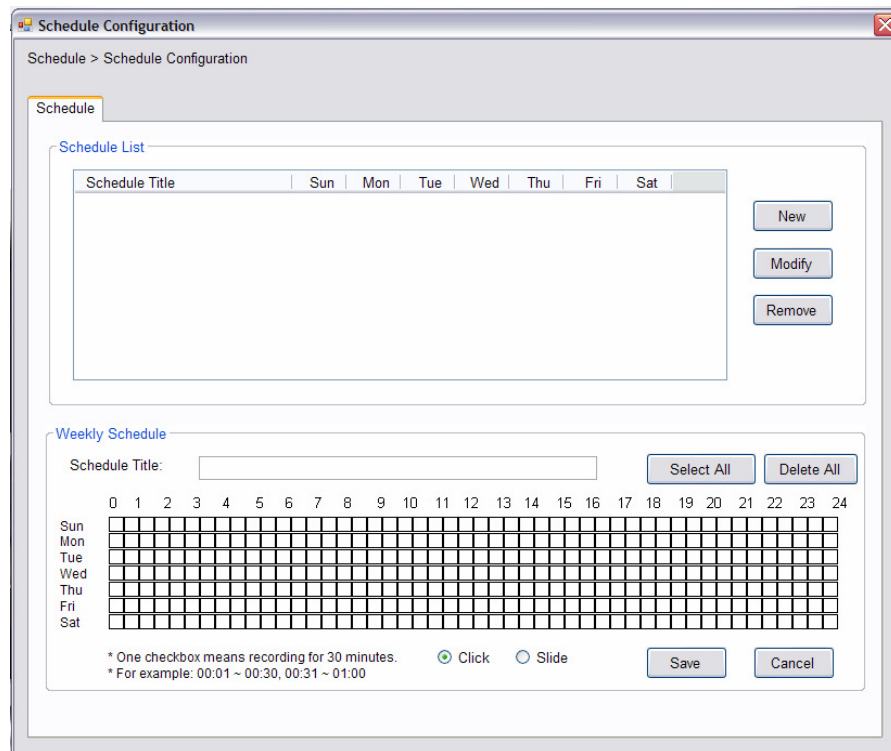


**NOTE** The system will automatically delete the oldest files (10%) when the size of recorded files is up to 90% of the storage space.

## ■ Setting up Schedule for Recording

The system features the schedule recording so that you can set up the schedule to record as you need.


Click the  button to display the Schedule Configuration window, which allows you to configure the recording schedule.



1. Click **New**, and then enter the Schedule Title.
2. Select the checkboxes below the Schedule Title to set the time to record video. One checkbox stands for 30 minutes of recording time. You can choose to assign the single checkbox repeatedly by using Click, or assign a period of time by using Slide. Alternately, you can quickly select/cancel the checkboxes by clicking **Select All** or **Delete All**.
3. When completed, click **Save**. The schedule profile will be added to the Schedule List.
4. To edit the schedule, select the desired schedule profile from the list, and then change the settings by using the **Modify** or **Remove** button.

## ■ Playback the Recording Files

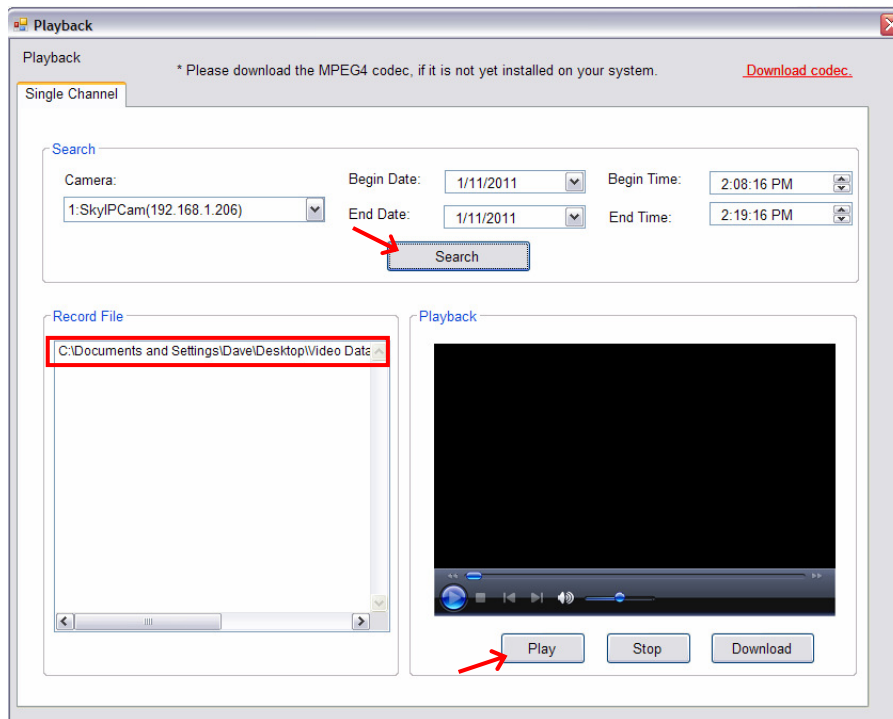
**NOTE** Divx/Xvid codec is required for the system to play the video files. If the video clips cannot be displayed in the Playback window normally, click the following path to download and install the required component: <http://download.divx.com/divx/DivXInstaller.exe>

1. Click the  button to display the Playback window.




2. On the Playback window, set the conditions for search, such as selecting the camera and setting the begin/end date and time. When the search condition has been set, click **Search**.

The search result will be displayed in the Record File list.



3. To playback the video clip, select the desired file and click **Play**.

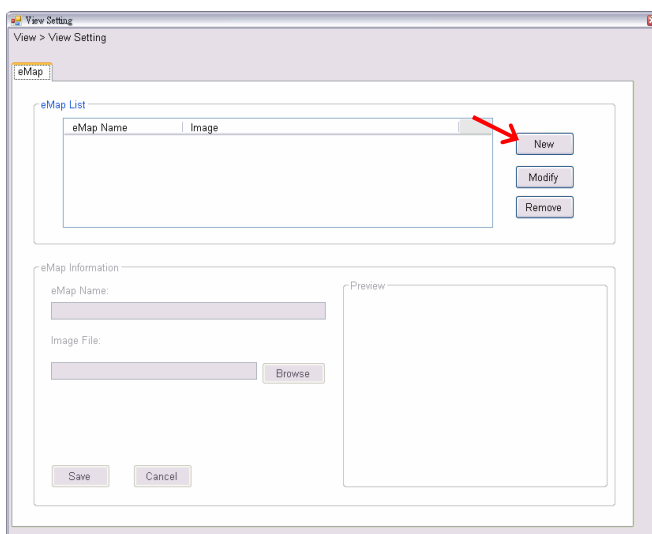
## 5.5 Configuring the eMap View Setting

Click the  button and select **View Setting** to configure the camera view setting of eMap mode.

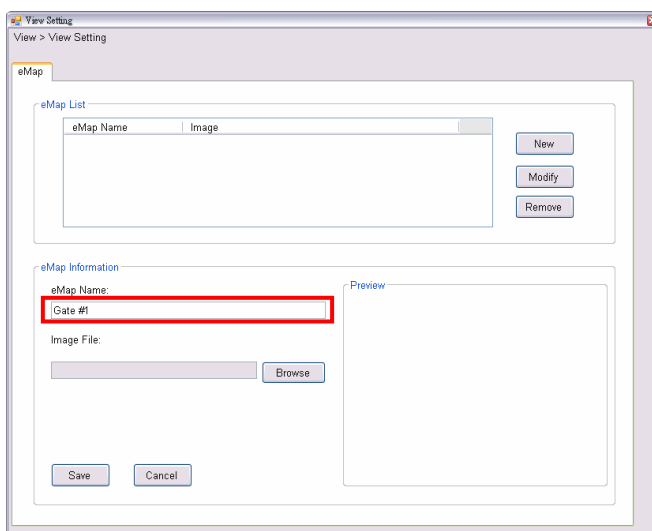


eMap refers to the geography and device scope of the UltraView Pro, which visually presents the devices in your security system. It uses a background of the area (e.g. a picture or a map) as the interface for monitoring.

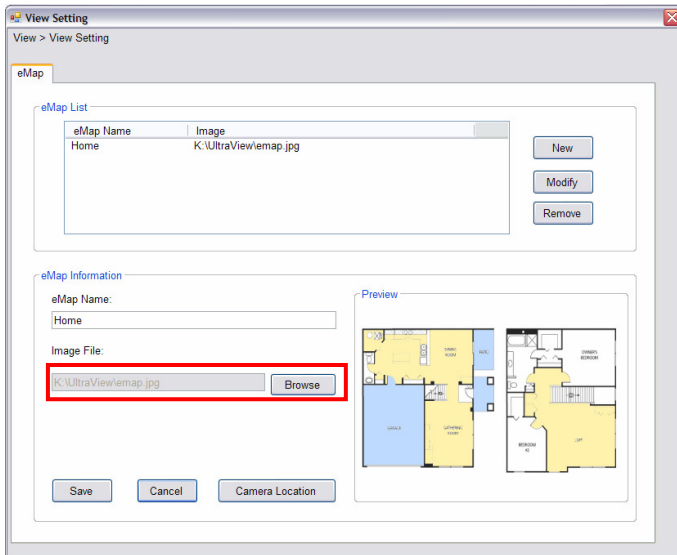
1. On the View Setting window, click **New**.



2. Enter the **eMap Name**.



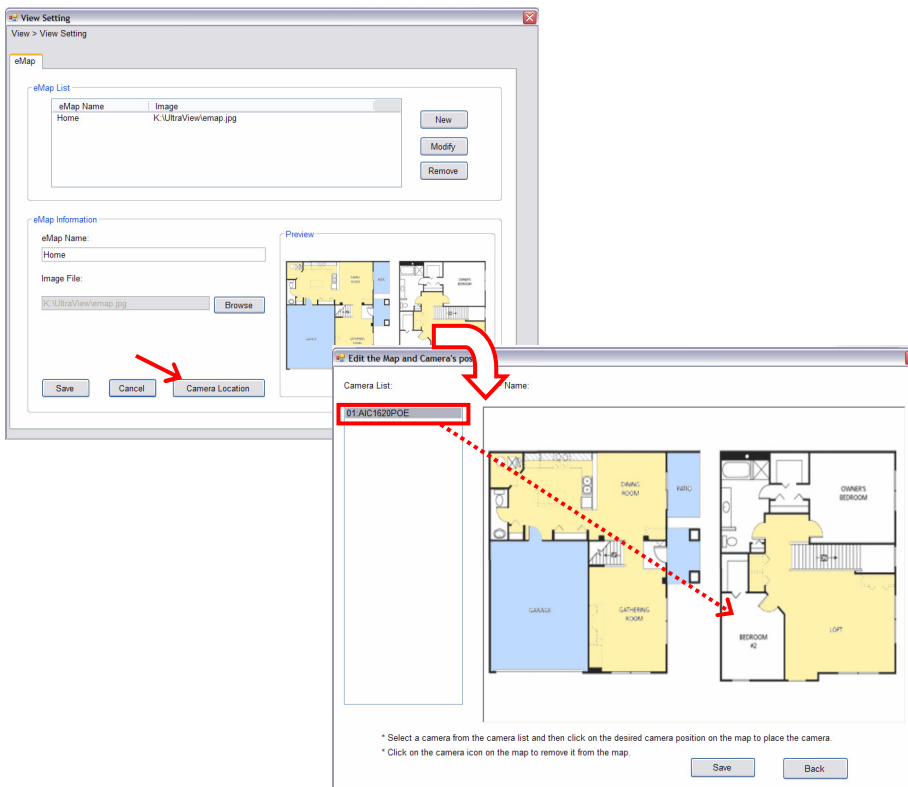
3. Click **Browse** to select a **Picture File** from your computer. The selected picture will be displayed in the Preview window.



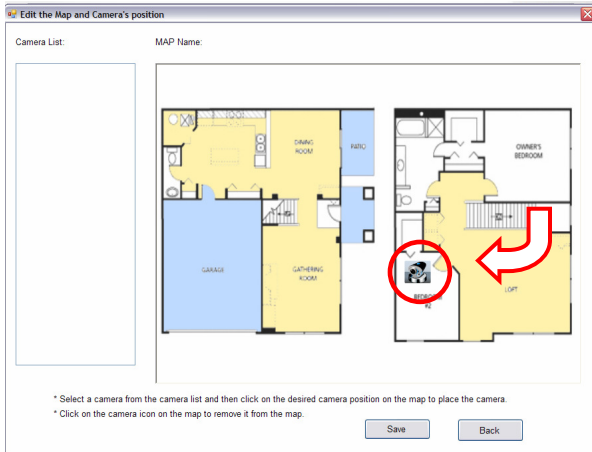
Click **Save** after you complete the settings.

4. On the following window, you can assign the camera position in the eMap.

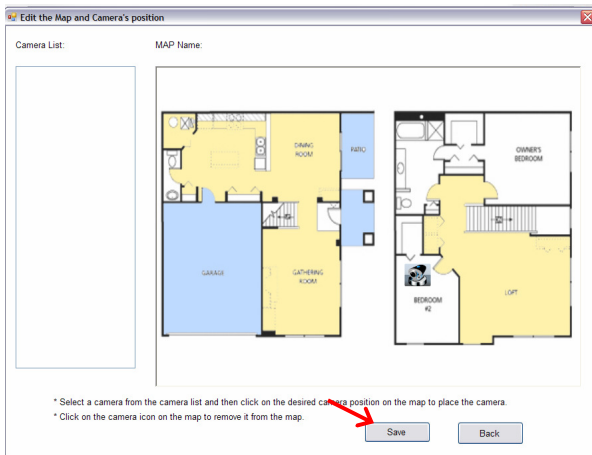
Click the **Camera Location** button to display the Edit window. Select the camera from the Camera List, and then click the mouse on the desired position of the map. The camera icon will be displayed on selected position of the map.






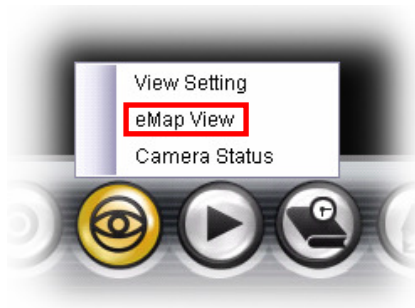


5. When completed, click **Save**. Click **Back** to go back to the Main window.

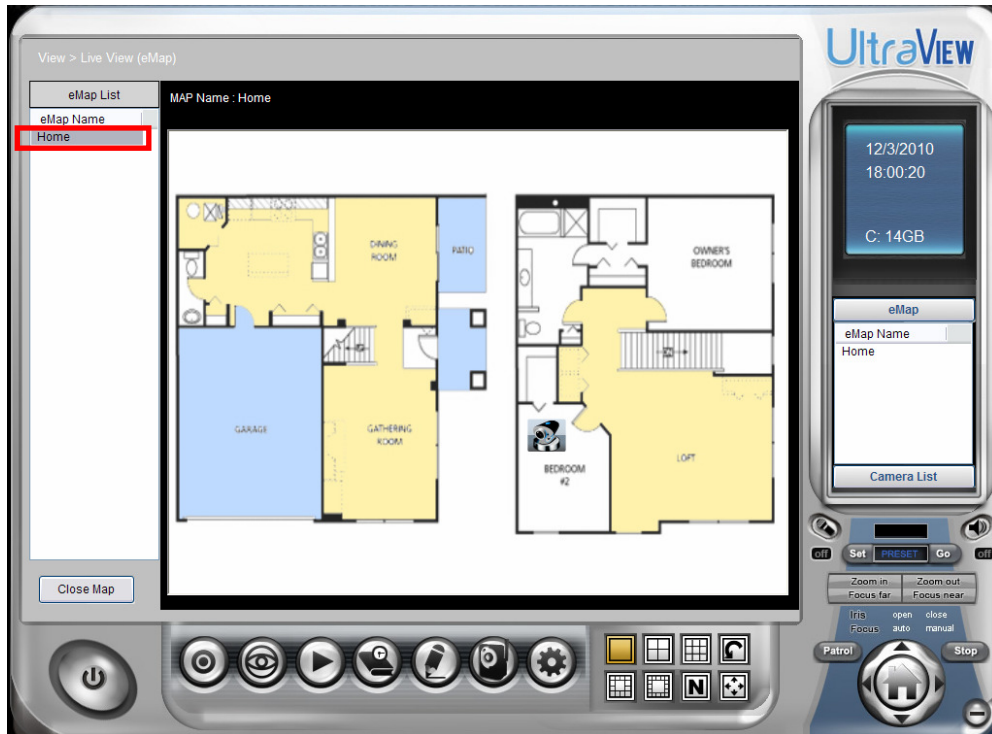


6. To view from eMap:

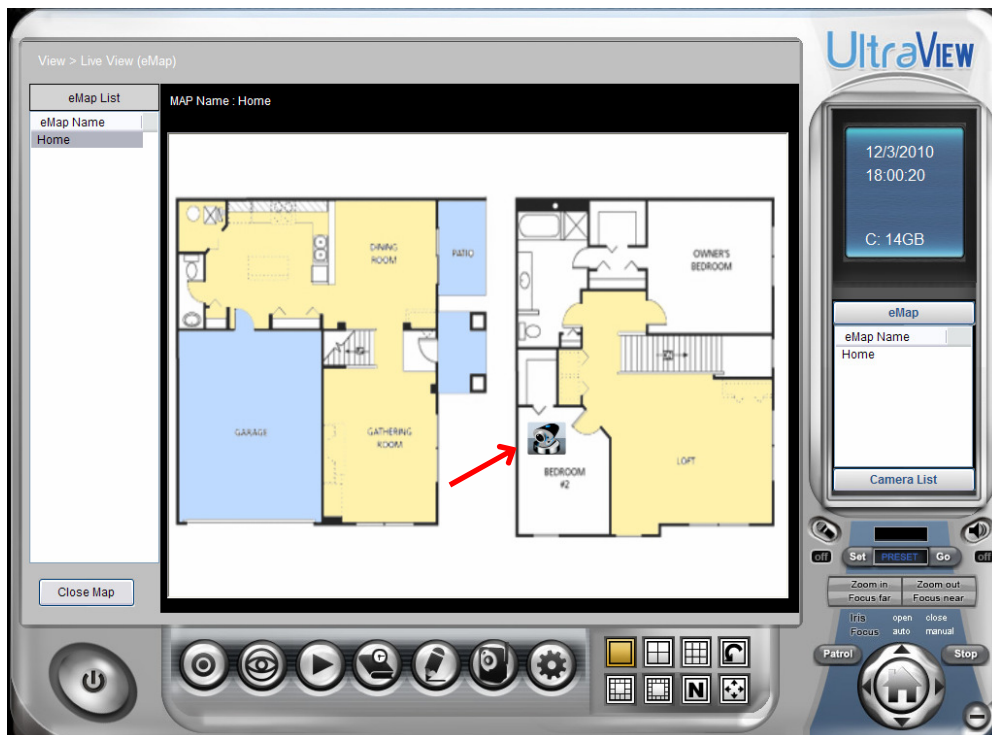
a. Click the  button and select **eMap View**.




- b. Select the map from the eMap Name list.



- c. Click the camera icon, the camera window will then pop up to display the image on the spot.




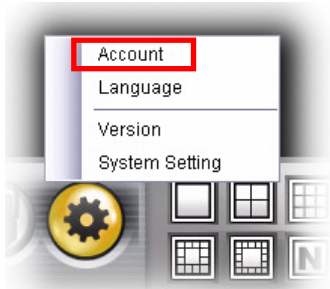
## ■ Editing / Deleting the eMap

1. Click the  button and select **View Setting**.
2. **To edit the eMap:** In the eMap List, select the desired map and click **Modify**.  
The map's information will be displayed, where you can change the map's information and then click **Save** when completed.
3. **To delete the eMap:** In the eMap List, select the desired one and click **Remove**.  
The selected map will be removed from the list.

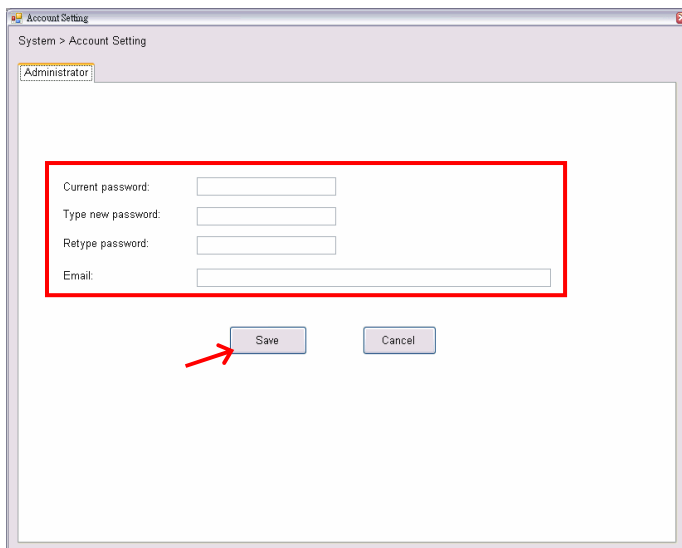
## 5.6 Configuring the System

### ■ User Management

Click the  button and select **Account** to change the administrator password for the UltraView software.




Enter the **Current password**, and then enter the new password twice (in the **Type new password** and **Retype password** boxes). When completed, click **Save**.

A screenshot of a dialog box titled 'Account Setting'. The dialog box has a title bar with 'System > Account Setting'. Below the title bar, there is a label 'Administrator' followed by a text input field. The main area of the dialog box contains four input fields: 'Current password:', 'Type new password:', 'Retype password:', and 'Email:'. A red rectangular box highlights these four input fields. At the bottom of the dialog box, there are two buttons: 'Save' and 'Cancel'. A red arrow points to the 'Save' button.

## 5.7 Event Configuration

### ■ Configuring Event Trigger



Click the  button and select **Event Trigger** to configure the trigger out function of the camera.



The 'Event Trigger' configuration window is divided into two main sections: 'Camera List' and 'Trigger Setting'.

**Camera List:** A table with columns 'C...', 'Name', 'IP address', and 'Port'. It contains one entry:

C...	Name	IP address	Port
1	AIC1620...	192.168.1.205	80


**Trigger Setting:** This section includes several options and input fields:

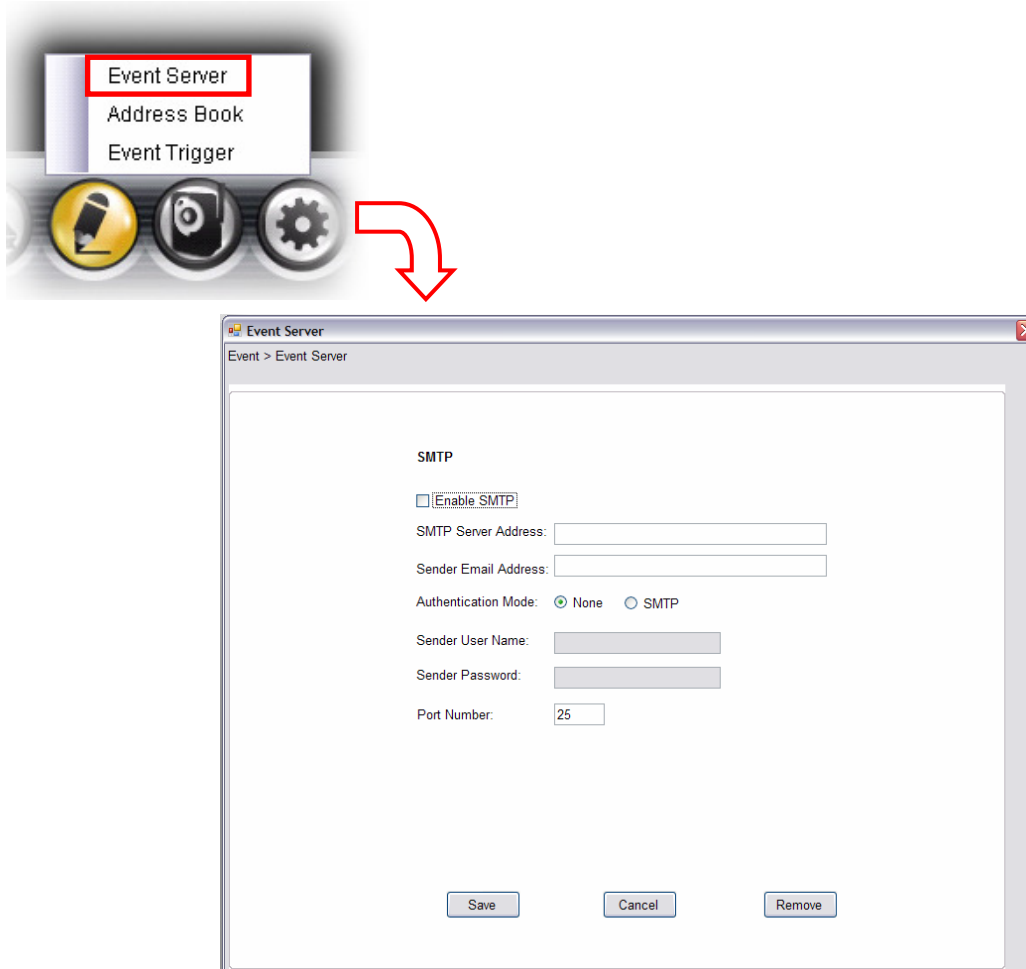
- SMTP: When selected, it enables the 'Address Book List' section, which contains a table with columns 'Name' and 'Email'.
- Subject: A text input field.
- Message: A larger text input area.
- Play Sound: When selected, it enables a 'Browse' button and a 'Test' button.
- eMap Popup: When selected, it enables a pull-down menu.

At the bottom of the window are 'Save' and 'Cancel' buttons.

1. On the Event Trigger window, select the desired camera from the Camera List.
2. Do one of the following:
  - **SMTP:** Select this option and enter the Subject and Message, the system will send an email message to the selected user(s) in the Address Book List.
  - **Play Sound:** Select this option select a sound file from the computer, so that the system will alarm by the sound while triggering out.
  - **eMap Popup:** Select this option and select the eMap profile from the pull-down menu. The camera view of the eMap will be displayed while triggering out.

## ■ Setting up Event Server

Click the  button and select **Event Server** to configure the SMTP server, so that you can send emails that include still images as notification.



Select the **Enable SMTP** option to start the email service of the system. When you enable the service, you have to complete the following settings.


- **SMTP Server Address:** Enter the mail server address.  
For example, mymail.com.
- **Sender Email Address:** Enter the email address of the user who will send the email. For example, John@mymail.com.
- **Authentication Mode:** Select **None** or **SMTP** according to the mail server configuration.
- **Sender User Name:** Enter the user name to login the mail server.
- **Sender Password:** Enter the password to login the mail server.
- **Port Number:** Enter the port number used for the email server.
- **SSL:** If the mail server requires an encrypted connection, you should check the **SSL** option.

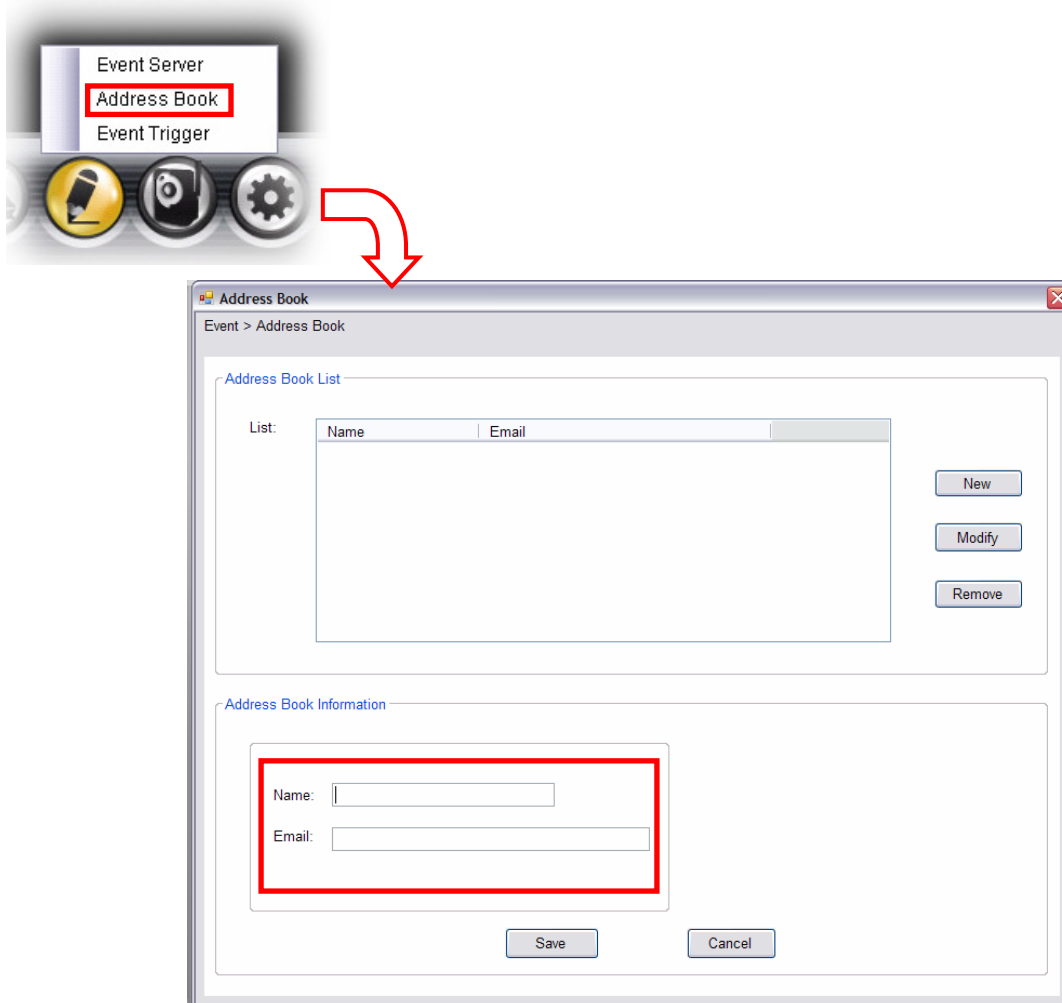
When completed, click **Save** and then select **OK**. The system will automatically start the Event Service.

**TIP** The status of Event Service is indicated by the  icon in the system bar.

## ■ Sending Email Notification




Click the  button and select **Address Book** to assign the user to the Address Book of the camera. The user will receive a real-time notification from the system while triggering out.

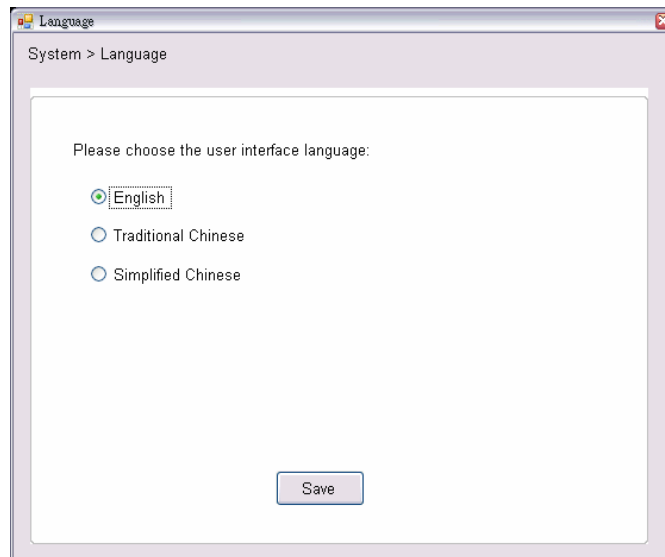
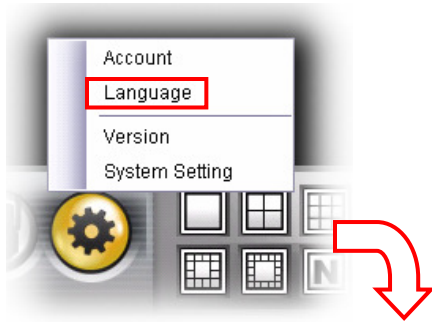


1. On the Address Book window, click **New**.
2. In the Address Book Information field, enter the **Name** and **Email** of receiver.
3. When completed, click **Save**. The receiver will be displayed in the Address Book List.
4. **To edit receiver:** In the Address Book List, select the desired receiver and click **Modify**. The receiver's information will be displayed, where you can change the receiver's information and then click **Save** when completed.
5. **To delete receiver:** In the Address Book List, select the desired receiver and click **Remove**. The selected user will be removed from the list.

## 5.8 Changing System Language

Click the  button and select **language** to change the displayed system language.

On the Language screen, select the preferred language (**English**, **Traditional Chinese**, or **Simplified Chinese**) and click **Save**.



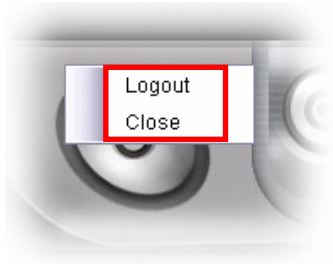


## 5.9 Terminating Operation

When you have finished operating, click the



button and select **Logout** to logout the system or **Close** to exit the program.



# APPENDIX

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## A.1 Specification

- **Image Sensor**
  - Sensor** 1/4" color CMOS
  - Resolution** 640x480
- **Video**
  - Compression** MJPEG
  - Video resolution** VGA/QVGA/QQVGA; 30fps max.
- **Audio**
  - Input** Built-in MIC
  - Output** Headphone output jack (Mono)
  - Codec** PCM
- **User Interface**
  - LAN** One RJ-45 port
  - Antenna** One external antenna
  - Reset** One reset button
  - WPS** One WPS button (EZ Setup Button)
  - GPIO** 1 in/1 out connectors
    - Input: active high: 9~40V DC; dropout: 0V DC
    - Output: close circuit current 70mA AC or 100mA DC maximum, 30 Ohm; open circuit voltage 240V AC or 350V DC maximum
  - LEDs** Power (amber); Link (green)
- **System Hardware**
  - Processor** ARM9 base
  - RAM** 32MB SDRAM
  - ROM** 4MB NOR Flash
  - Power** DC 12V
- **Communication**
  - LAN** 10/100Mbps Fast Ethernet, auto-sensed, Auto-MDIX
  - WLAN** IEEE 802.11b/g/n, data rate of up to 150Mbps\*
  - Protocol support** TCP/IP, UDP, ICMP, DHCP, NTP, DNS, DDNS, SMTP, FTP, PPPoE, UPnP
- **Pan/Tilt**
  - Pan** 165 degree (left) to 165 degree (right)
  - Tilt** 90 degree (up) to 15 degree (down)
- **Software**
  - OS Support** Windows 7/Vista/XP
  - Browser** Internet Explorer 6.0 or above  
Apple Safari 2 or above  
Mozilla Firefox 2.00 or above
  - Software** SkyIPCam UltraView for playback/recording/configuration features
- **Operating Environment**
  - Temperature** Operation: 0°C ~ 45°C

## **Humidity**

Storage: -15°C ~ 60°C

Operation: 20% ~ 85% non-condensing

Storage: 0% ~ 90% non-condensing

## ■ **EMI**

FCC Class B, CE Class B

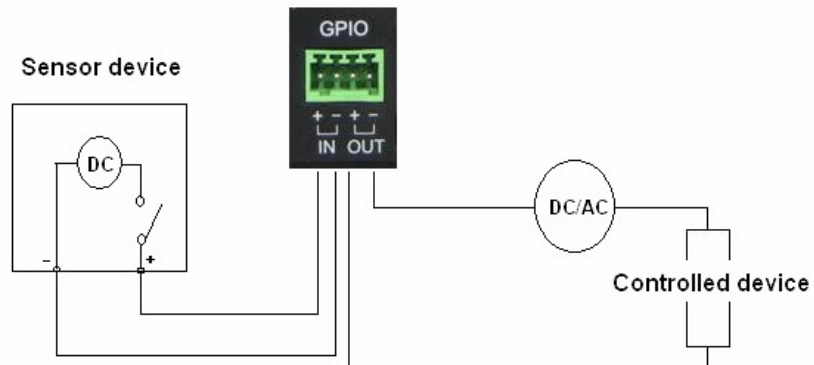
## A.2 GPIO Terminal Application

Typically used in association with programming scripts for developing applications for motion detection, event triggering, alarm notification via e-mail, and a variety of external control functions. The GPIO connectors are located on the rear panel of the camera, which provide the interface of connecting the sensor device (IN) and controlled device (OUT).

### Connector Pin Assignment

PIN	SPECIFICATION
IN	Active High voltage 9~40V DC; Dropout-out voltage 0V DC
OUT	Close circuit current 70mA AC or 100mA DC maximum, Output resistance 30 Ohm; Open circuit voltage 240V AC or 350V DC maximum

### Interface Schematic



## A.3 Glossary of Terms

### NUMBERS

**10BASE-T** 10BASE-T is Ethernet over UTP Category III, IV, or V unshielded twisted-pair media.  
**100BASE-TX** The two-pair twisted-media implementation of 100BASE-T is called 100BASE-TX.

### A

**ADPCM** Adaptive Differential Pulse Code Modulation, a new technology improved from PCM, which encodes analog sounds to digital form.

**AMR** AMR (Adaptive Multi-Rate) is an audio data compression scheme optimized for speech coding, which is adopted as the standard speech codec by 3GPP.

**Applet** Applets are small Java programs that can be embedded in an HTML page. The rule at the moment is that an applet can only make an Internet connection to the computer form that the applet was sent.

**ASCII** American Standard Code For Information Interchange, it is the standard method for encoding characters as 8-bit sequences of binary numbers, allowing a maximum of 256 characters.

**ARP** Address Resolution Protocol. ARP is a protocol that resides at the TCP/IP Internet layer that delivers data on the same network by translating an IP address to a physical address.

**AVI** Audio Video Interleave, it is a Windows platform audio and video file type, a common format for small movies and videos.

### B

**BOOTP** Bootstrap Protocol is an Internet protocol that can automatically configure a network device in a diskless workstation to give its own IP address.

### C

**Communication** Communication has four components: sender, receiver, message, and medium. In networks, devices and application tasks and processes communicate messages to each other over media. They represent the sender and receivers. The data they send is the message. The cabling or transmission method they use is the medium.

**Connection** In networking, two devices establish a connection to communicate with each other.

### D

**DHCP** Developed by Microsoft, DHCP (Dynamic Host Configuration Protocol) is a protocol for assigning dynamic IP addresses to devices on a network. With dynamic addressing, a device can have a different IP address every time it connects to the network. In some systems, the device's IP address can even change while it is still connected. It also supports a mix of static and dynamic IP addresses. This simplifies the task for network administrators because the software keeps track of IP addresses rather than requiring an administrator to manage the task. A new computer can be added to a network without the hassle of manually assigning it a unique IP address. DHCP allows the specification for the service provided by a router, gateway, or other network device that automatically assigns an IP address to any device that requests one.

**DNS** Domain Name System is an Internet service that translates domain names into IP addresses. Since domain names are alphabetic, they're easier to remember. The Internet however, is really based on IP addresses every time you use a domain name the DNS will translate the name into the corresponding IP address. For example, the domain name *www.network\_camera.com* might translate to *192.167.222.8*.

### E

**Enterprise network** An enterprise network consists of collections of networks connected to each other over a geographically dispersed area. The enterprise network serves the needs of a widely

	distributed company and operates the company's mission-critical applications.
<b>Ethernet</b>	The most popular LAN communication technology. There are a variety of types of Ethernet, including 10Mbps (traditional Ethernet), 100Mbps (Fast Ethernet), and 1,000Mbps (Gigabit Ethernet). Most Ethernet networks use Category 5 cabling to carry information, in the form of electrical signals, between devices. Ethernet is an implementation of CSMA/CD that operates in a bus or star topology.
<b><u>E</u></b>	
<b>Fast Ethernet</b>	Fast Ethernet, also called 100BASE-T, operates at 10 or 100Mbps per second over UTP, STP, or fiber-optic media.
<b>Firewall</b>	Firewall is considered the first line of defense in protecting private information. For better security, data can be encrypted. A system designed to prevent unauthorized access to or from a private network. Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially Intranets all messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.
<b><u>G</u></b>	
<b>Gateway</b>	A gateway links computers that use different data formats together.
<b>Group</b>	Groups consist of several user machines that have similar characteristics such as being in the same department.
<b><u>H</u></b>	
<b>HEX</b>	Short for hexadecimal refers to the base-16 number system, which consists of 16 unique symbols: the numbers 0 to 9 and the letters A to F. For example, the decimal number 15 is represented as F in the hexadecimal numbering system. The hexadecimal system is useful because it can represent every byte (8 bits) as two consecutive hexadecimal digits. It is easier for humans to read hexadecimal numbers than binary numbers.
<b><u>I</u></b>	
<b>Intranet</b>	This is a private network, inside an organization or company that uses the same software you will find on the public Internet. The only difference is that an Intranet is used for internal usage only.
<b>Internet</b>	The Internet is a globally linked system of computers that are logically connected based on the Internet Protocol (IP). The Internet provides different ways to access private and public information worldwide.
<b>Internet address</b>	To participate in Internet communications and on Internet Protocol-based networks, a node must have an Internet address that identifies it to the other nodes. All Internet addresses are IP addresses
<b>IP</b>	Internet Protocol is the standard that describes the layout of the basic unit of information on the Internet (the <i>packet</i> ) and also details the numerical addressing format used to route the information. Your Internet service provider controls the IP address of any device it connects to the Internet. The IP addresses in your network must conform to IP addressing rules. In smaller LANs, most people will allow the DHCP function of a router or gateway to assign the IP addresses on internal networks.
<b>IP address</b>	IP address is a 32-binary digit number that identifies each sender or receiver of information that is sent in packets across the Internet. For example 80.80.80.69 is an IP address. When you "call" that number, using any connection methods, you get connected to the computer that "owns" that IP address.
<b>ISP</b>	ISP (Internet Service Provider) is a company that maintains a network that is linked to the Internet by way of a dedicated communication line. An ISP offers the use of its dedicated communication lines to companies or individuals who can't afford the high monthly cost for a direct connection.

## J

### **JAVA**

Java is a programming language that is specially designed for writing programs that can be safely downloaded to your computer through the Internet without the fear of viruses. It is an object-oriented multi-thread programming best for creating applets and applications for the Internet, Intranet and other complex, distributed network.

## L

### **LAN**

Local Area Network a computer network that spans a relatively small area sharing common resources. Most LANs are confined to a single building or group of buildings.

## M

### **MJPEG**

MJPEG (Motion JPEG) composes a moving image by storing each frame of a moving picture sequence in JPEG compression, and then decompressing and displaying each frame at rapid speed to show the moving picture.

### **MPEG4**

MPEG4 is designed to enable transmission and reception of high-quality audio and video over the Internet and next-generation mobile telephones.

## N

### **NAT**

Network Address Translator generally applied by a router that makes many different IP addresses on an internal network appear to the Internet as a single address. For routing messages properly within your network, each device requires a unique IP address. But the addresses may not be valid outside your network. NAT solves the problem. When devices within your network request information from the Internet, the requests are forwarded to the Internet under the router's IP address. NAT distributes the responses to the proper IP addresses within your network.

### **Network**

A network consists of a collection of two or more devices, people, or components that communicate with each other over physical or virtual media. The most common types of network are:

**LAN** – (local area network): Computers are in close distance to one another. They are usually in the same office space, room, or building.

**WAN** – (wide area network): The computers are in different geographic locations and are connected by telephone lines or radio waves.

### **NWay Protocol**

A network protocol that can automatically negotiate the highest possible transmission speed between two devices.

## P

### **PCM**

PCM (Pulse Code Modulation) is a technique for converting analog audio signals into digital form for transmission.

### **PING**

Packet Internet Groper, a utility used to determine whether a specific IP address is accessible. It functions by sending a packet to the specified address and waits for a reply. It is primarily used to troubleshoot Internet connections.

### **PPPoE**

Point-to-Point Protocol over Ethernet. PPPoE is a specification for connecting the users on an Ethernet to the Internet through a common broadband medium, such as DSL or cable modem. All the users over the Ethernet share a common connection.

### **Protocol**

Communication on the network is governed by sets of rules called protocols. Protocols provide the guidelines devices use to communicate with each other, and thus they have different functions. Some protocols are responsible for formatting and presenting and presenting data that will be transferred from file server memory to the file server's network adapter Others are responsible for filtering information between networks and forwarding data to its destination. Still other protocols dictate how data is transferred across the medium, and how servers respond to workstation requests and vice versa. Common network protocols responsible for the presentation and formatting of data for a network operating system are the Internetwork Packet Exchange (IPX) protocol or the Internet Protocol (IP). Protocols that dictate the format of data for transfers over the medium include token-passing and Carrier Sense Multiple Access with Collision

Detection (CSMA/CD), implemented as token-ring, ARCNET, FDDI, or Ethernet. The Router Information Protocol (RIP), a part of the Transmission Control Protocol/Internet Protocol (TCP/IP) suite, forwards packets from one network to another using the same network protocol.

## R

### **RJ-45**

RJ-45 connector is used for Ethernet cable connections.

### **Router**

A router is the network software or hardware entity charged with routing packets between networks.

### **RTP**

RTP (Real-time Transport Protocol) is a data transfer protocol defined to deliver **live media** to the clients at the same time, which defines the transmission of video and audio files in real time for Internet applications.

### **RTSP**

RTSP (Real-time Streaming Protocol) is the standard used to transmit **stored media** to the client(s) at the same time, which provides client controls for random access to the content stream.

## S

### **Server**

It is a simple computer that provides resources, such as files or other information.

### **SIP**

SIP (Session Initiated Protocol) is a standard protocol that delivers the real-time communication for Voice over IP (VoIP), which establishes sessions for features such as audio and video conferencing.

### **SMTP**

The Simple Mail Transfer Protocol is used for Internet mail.

### **SNMP**

Simple Network Management Protocol. SNMP was designed to provide a common foundation for managing network devices.

### **Station**

In LANs, a station consists of a device that can communicate data on the network. In FDDI, a station includes both physical nodes and addressable logical devices. Workstations, single-attach stations, dual-attach stations, and concentrators are FDDI stations.

### **Subnet mask**

In TCP/IP, the bits used to create the subnet are called the subnet mask.

## T

### **(TCP/IP)**

Transmission Control Protocol/Internet Protocol is a widely used transport protocol that connects diverse computers of various transmission methods. It was developed by the Department of Defense to connect different computer types and led to the development of the Internet.

### **Transceiver**

A transceiver joins two network segments together. Transceivers can also be used to join a segment that uses one medium to a segment that uses a different medium. On a 10BASE-5 network, the transceiver connects the network adapter or other network device to the medium. Transceivers also can be used on 10BASE-2 or 10BASE-T networks to attach devices with AUI ports.

## U

### **UDP**

The User Datagram Protocol is a connectionless protocol that resides above IP in the TCP/IP suite

### **User Name**

The USERNAME is the unique name assigned to each person who has access to the LAN.

### **Utility**

It is a program that performs a specific task.

### **UTP**

Unshielded twisted-pair. UTP is a form of cable used by all access methods. It consists of several pairs of wires enclosed in an unshielded sheath.

## W

### **WAN**

Wide-Area Network. A wide-area network consists of groups of interconnected computers that are separated by a wide distance and communicate with each other via



common carrier telecommunication techniques.

**WEP**

WEP is widely used as the basic security protocol in Wi-Fi networks, which secures data transmissions using 64-bit or 128-bit encryption.

**Windows**

Windows is a graphical user interface for workstations that use DOS.

**WPA**

WPA (Wi-Fi Protected Access) is used to improve the security of Wi-Fi networks, replacing the current WEP standard. It uses its own encryption, Temporal Key Integrity Protocol (TKIP), to secure data during transmission.

**WPA2**

Wi-Fi Protected Access 2, the latest security specification that provides greater data protection and network access control for Wi-Fi networks. WPA2 uses the government-grade AES encryption algorithm and IEEE 802.1X-based authentication, which are required to secure large corporate networks.

## Technical Support

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\* Theoretical maximum wireless signal rate derived from IEEE standard 802.11 specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, mix of wireless products used, radio frequency interference (e.g., cordless telephones and microwaves) as well as network overhead lower actual data throughput rate. Compatibility with 802.11n devices from other manufactures is not guaranteed. Specifications are subject to change without notice. Photo of product may not reflect actual content. All products and trademarks are the property of their respective owners. Copyright ©2011 Airlink101®

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