



BC-5010

5-Mega Pixel Box Type
PoE IP Camera

User's Manual



www.airlive.com



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- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.



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1

Overview

This user's guide explains how to operate this camera from a computer. A user should read this manual completely and carefully before you operate the device.

1.1 Introduction

AirLive BC-5010 is a standalone system that can be connected directly to an Ethernet or Fast Ethernet network.

Equipped with a powerful 5 Mega pixel color CMOS sensor, the camera allows you to capture a wider field of view which is up to 2592 x 1920 resolution. With supporting for latest H.264 technology, you can record streaming video that utilizes high quality H.264 images to your hard drive, enables motion detection and setups automated e-mail alerts for security.

The camera supports external DC-Iris lens. It also provides the power and control signals which is required to adjust the DC-Iris. The DC-Iris connector (4-pin) is on the side panel of the camera. You can attach any standard DC-Iris lens for specific purpose, such as outdoor applications with water-proofed enclosure. In addition, the camera can attach a variety of external devices for your specific purposes through the GPIO connectors.

Compared to the conventional PC camera, this camera features a built-in CPU and web-based solutions that can provide a cost-effective solution to transmit the real-time high-quality video images and sounds synchronously for monitoring. The camera can be managed remotely, so that you can use a web browser to access and control it from any desktop/notebook computer over the Intranet or Internet.

With IEEE802.3af PoE (Power over Ethernet) standard, the camera provides you more flexibility of camera installation according to your application. The camera can be powered by the Ethernet, so that you can place the camera anywhere without a power outlet support.

Note: This product does not come with lens. It must be purchased separately.

1.2 Features

This manual will illustrate the steps of how to setup and operate this IP camera, so you'll also soon be enjoying the benefits of these product features:

- ☐ Easy installation with setup wizard
- ☐ UPnP device discovery and NAT router transversal for easy installation
- ☐ Dynamic IP Service, DIPS®, to search your IP camera from Internet easily
- ☐ 0.2Lux Minimum Illumination at F1.2
- ☐ Support iSCSI, WDR enhanced
- ☐ DC IRIS and IR-CUT Removable(ICR)
- ☐ H.264 High Profiles, MPEG4/MJPEG Compression Format
- ☐ 5 Mega-Pixel high resolution sensor, Support up to 2592x1920 resolution
- ☐ Multiple Profiles Supported(H.264, MPEG4, MJPEG, and 3GPP)
- ☐ HTTP/RTSP protocols selectable
- ☐ 3GPP for 3G mobile remote application
- ☐ 15 fps for 5 Mega-pixel mode
- ☐ 25 fps for 3 Mega-pixel mode
- ☐ 30 fps for 1080P mode
- ☐ Optional dual band wireless-N with AirLive X.USB
- ☐ Digital zoom
- ☐ Support external microphone
- ☐ Audio line out
- ☐ Two-way audio
- ☐ Intelligent motion detection up to 3 zones
- ☐ Image transmission using an FTP or e-mail for event
- ☐ DDNS and PPPoE
- ☐ Multi-channel control software for surveillance application
- ☐ On-line firmware upgrade
- ☐ Digital I/O connectors and RS-485 supported
- ☐ 802.3af PoE support (wired model only)
- ☐ SD/SDHC Slot and USB slot for local storage
- ☐ Compatible with ONVIF standard

1.3 Product Specification

| Model | | BC-5010 |
|--------|---------------------------|--|
| Camera | Camera Type | Indoor Box Type |
| | Image Sensor | 1/2.5" 5 Mega Pixel Color CMOS Sensor |
| | Sensor Resolution | 2592 X 1920 |
| | Lens Type | C/CS Mount Lens Support |
| | | Removable Lens |
| | Night Vision | Built-In Removable IR Cut Filter |
| | Max IR Distance | None |
| | Minimum Illumination | 0.2 LUX |
| | Mechanical IR-Cut Filter | Yes |
| | Auto Iris | DC-Iris Support |
| | Viewing Angle | Depend on lens |
| | Pan/Tilt Control | None |
| | Analog Video Out | Yes |
| Video | Video Compression | H.264 High/Main/Baseline Profile, MPEG4 Simple Profile and MJPEG |
| | Video Profile | 38 |
| | Resolution and Frame Rate | 15 fps @ 2592 X 1920 |
| | | 25 fps @ 2048 x 1536 |
| | | 30 fps @ 1920 x1080 |
| | | 30 fps @ 1280 x 1024 |
| | | 30 fps @ 1280 x960 |
| | | 30 fps @ 1280 x 720 |
| | | 30 fps @ 720 x 480 |
| | | 30 fps @ 640 x 480 |
| | | 30 fps @ 320 x 240 |
| | | 30 fps @ 176 x 144 |
| | Streaming | Multi-profile streaming |
| | | Streaming over UDP, TCP, or HTTP |
| | | M-JPEG streaming over HTTP (for non IE browser) |
| | | 3GPP mobile view |
| | | Configurable frame rate and bandwidth |
| | | Support both CBR and VBR |
| | ROI | Yes |

| | | |
|-----------------------|---------------------|---|
| | Image Processing | AE, AWB |
| | | Saturation, brightness, sharpness, contrast, Hue |
| | | Mirror/Flip |
| | | Text, time and date OSD |
| | Digital Zoom | 10X |
| Audio | Audio Encoder | G711 u-law |
| | | AMR |
| | Audio Streaming | Two-way |
| | Audio Input/Output | speaker port and microphone port |
| Network | Ethernet | One RJ45 Port; IEEE 802.3u Compliant 10/100 Mbps Fast Ethernet with Auto-MDIX |
| | PoE | IEEE802.3af |
| | Wireless | Optional |
| | Supported Protocols | TCP/IP, IPV6, UDP, ICMP, DHCP, NTP, DNS, DDNS, SMTP, FTP, HTTP, HTTPs, Samba, PPPoE, UPnP, Bonjour, RTP, RTSP, RTCP, DLNA, ONVIF, iSCSI |
| | Security | Password protection |
| | | IP filter |
| | | HTTPS |
| | Users | Up to 20 simultaneous users |
| LED and Button | Power LED | Amber Color |
| | Link/Act. LED | Green Color |
| | Reset Button | Reboot and Factory Default (Push and Hold Over 5 Sec) |
| General | Network Processor | DSP Base |
| | System ROM | 128MByte NAND Flash |
| | System RAM | 128Mbyte DDR2 SDRAM |
| | Power Supply | DC12V |
| | Power Consumption | 4 Watts Max. |
| | Connector | RJ-45 10BaseT/100BaseTX |
| | | 12V DC power jack |
| | | Microphone/Speaker jack |
| | | DIDO |
| | | Reset button |
| | Environment | Operation: Temp: -5°C ~ 55°C Humidity: 20% ~ 85% non-condensing |

| | | |
|---------------------------|-----------------------------------|--|
| | | Storage: Temp: -15°C ~ 60°C Humidity: 0% ~ 90% non-condensing |
| | SD card slot | SD/SDHC |
| | Dimension | 135 * 65 * 65 mm |
| System Integration | Software | CamPro Express 64, CamPro Professional |
| | | Search & Installation- IP Wizard II |
| | Event Triggers | Motion detection |
| | | External input via DI interface |
| | Motion Detection | 3 |
| | Event handler | FTP or NAS file upload |
| | | E-mail alert |
| | | HTTP, and TCP notification |
| | | DO (digital output) alarm |
| | | SD/USB file upload |
| | UPNP | Yes |
| | Application Programming Interface | ONVIF 2.0 |
| | | Open API for software integration |
| | | SDK |
| | Video Buffer | Pre- and post- alarm buffering |
| | Alarm Events | File upload via FTP or email |
| | | Notification via email, HTTP, and TCP |
| | | External output activation |
| | | Save to SD card/USB |
| | Continuous recording | Yes |
| Viewing System | OS | Windows® XP, Vista, 7 |
| | Browser | IE 7.0 or later, Firefox 2.0 or later, Safari, Google Chrome |
| | Cell Phone | With 3GPP player |
| | Video Player | VLC, Quick Time, Real Player, Core Player |

1.4 System Requirement

For normal operation and viewing of the network camera, it's recommended that your system meets these minimum requirements for proper operation:

| Item | Requirements |
|------------------------|---|
| CPU | Pentium-4 2.0 GHz or higher |
| VGA Monitor resolution | 1280 x 1024 or higher |
| Memory Size | 512MB or more |
| Operating System | Window XP, Vista or Windows 7 |
| Recorded File Playback | Microsoft Media Player 11.0 or later |
| Web Browser | Microsoft Internet Explorer 7.0 or above; Apple Safari 2 or above; Mozilla Firefox 2.00 or above; Google Chrome |

Note: If you connect multiple cameras to monitor various places simultaneously, you are recommended to use a computer with higher performance.

2

Package Contents and Installation

2.1 Package Content

A user can find the following items in the package as below:

1. AirLive BC-5010 is the main part of the product with **Camera Mount Kit**.

Note: The lens is optional. For further information about the lens, please check with your installer.

2. Power Adapter: 12V DC electric power output to BC-5010.

3. User's Manual CD provides installation software, application program, important information and instructions for operating the Network Camera.

4. Quick Setup Guide provides important information and instructions for installing this device.

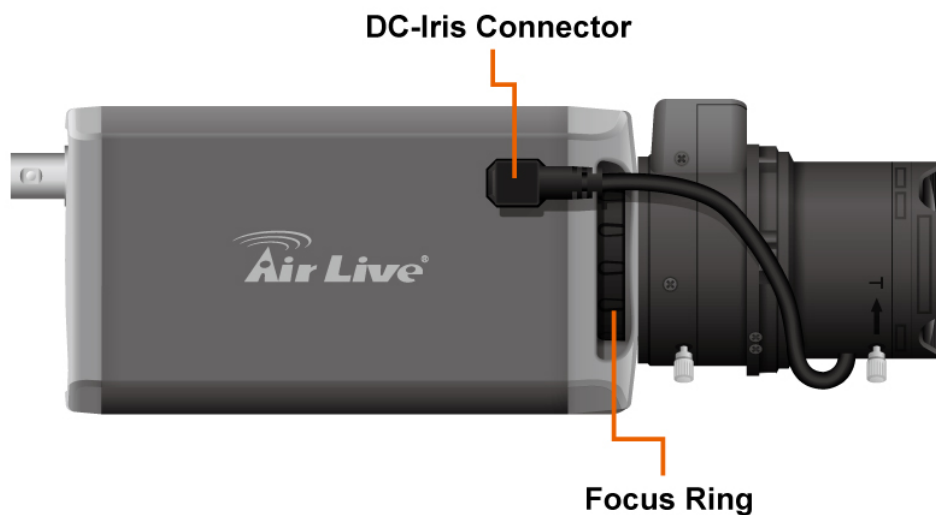
If any of the above items are missing, please contact your dealer immediately.

Note: 1.) Using a power supply with a different voltage than the one included with the Network Camera will cause damage and void the warranty for this product.

2.) This product does not come with lens. It must be purchased separately.

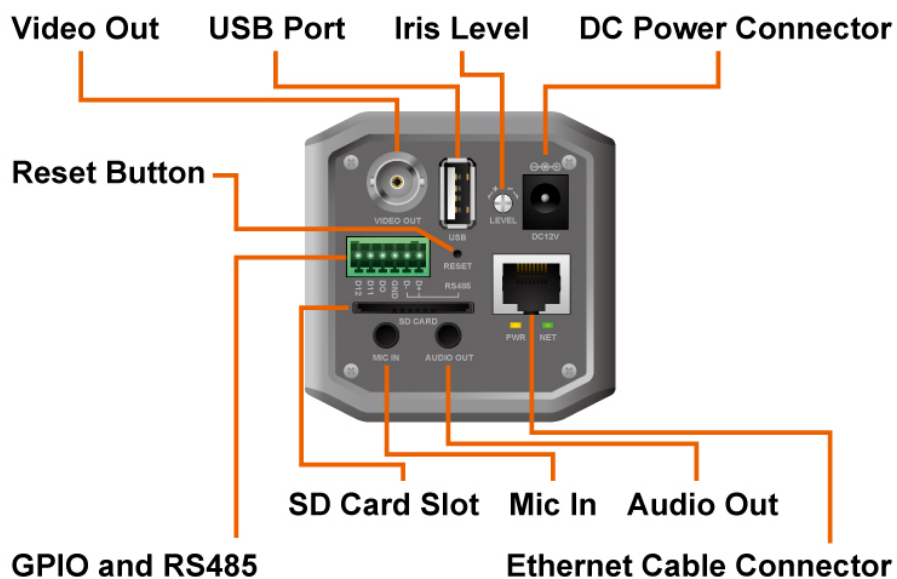
2.2 Connections

Front / Top / Side Panel



1. **DC-iris Connector:** It allows you to attach the DC-Iris lens (optional).
2. **C and CS Lens Focus Ring:** You can adjust C and CS lens focus ring to fit your lens type.

Back Panel



1. RJ45 LAN socket: Connect to PC or Hub/Switch.

For connections to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built N-Way protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 cable to connect the Network Camera to a 100Mbps Fast Ethernet network switch or hub.

In the LAN socket, there are two LEDs embedded:

LAN LED (green color)

This LED will be flashing while network accessing via Ethernet.

Power (orange color)

This LED is used to indicate whether DC power is on or not. In addition, this LED will be flashing while the wireless accessing of the Camera.

2. GPIO/RS-485: Connect to a local keyboard controller.

- DI/ DO: Connect to sensor in and alarm out devices

Cable for I/O connectors:

| PIN | | SPECIFICATION |
|-----|-----------------|--|
| 1 | RS-485 D+ | Compliant to RS-485 |
| 2 | RS-485 D- | |
| 3 | Ground (Common) | GND |
| 4 | GPIO Out | Close circuit current maximum: 70mA AC or 100mA Output resistance: 30 ohm Open circuit voltage maximum: 240V AC or 350V DC |
| 5 | GPIO In #1 | Action high voltage: 9~40 VDC |
| 6 | GPIO In #2 | Dropout voltage: 0 VDC |

3. DC-in Jack: The input power is 12VDC.

Note that supply the power to the Network Camera with the power adapter included in package.

4. Audio I/O Connectors

- **MIC in (audio in):** Connect a microphone to the network camera.
 - **Audio out:** Connect a loud speaker to the network camera. This function is for voice alerting and two-way audio.
5. **Iris Level:** It is used only when the DC-Iris lens is connected to the camera. This screw-knob allows you to adjust the brightness of the video images from the DC-Iris lens.
6. **SD Card Slot:** SD Card Slot allows you to insert a memory card for expansion of storage.
7. **USB Port:** USB Port connects external USB device, such as flash drive or USB wireless adapter.
8. **BNC connector:** BNC connector can connect monitor to check camera focus and video quality.
9. **Reset Button:** This button is used to restore all the factory default settings. Sometimes restarting the device will make the system back to a normal state. However, if the system still has problems after restart, user can restore the factory default settings and install it again.

Restore the device:

- 1.) Press the button down continuously.
- 2.) Hold the button at least 5 seconds and release it. Then the device has been restored to default settings and reboot again.

Note: Restoring to the factory default settings will lose all the previous settings included IP address forever. User needs to run the IPWizard II program to search the device and configure it to let the device work properly again.

2.3 Connections Mounting the Camera

1. Attaching the Wall Mount Kit

The Wall Mount Kit that is provided in the package has a swivel ball screw head, so that you can attach it to the screw hole on the camera's top (or bottom) panel.

After attaching the camera to the Wall Mount Kit, the camera can be mounted on the wall or ceiling securely through the three screw holes on the base of the Wall Mount Kit.

Fix the camera to ceiling with the three supplied screws.



2. Connecting to LAN

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



3. Connect the external power supply to Camera

Connect the attached power adapter to the DC power jack of the camera.

Note: Use the 12VDC power adapter, included in the package, and connect it to wall outlet for AC power.

Once you have installed the camera well and powered it on, the power LED (orange) will turn on later. When the power LED turned on, it means that the system is booting up successfully. Furthermore, if you have a proper network connection and access to the camera, the LAN LED (green) will flash.

4. Replacing the Lens Assembly

The camera is designed with a CS- mount, allowing you to install any standard C or CS lens that are commonly used in the surveillance application.

■ Installing the Lens Assembly

To install new lens assembly, follow the instructions below:

1. Remove the protective cap.
2. Fit the C or CS lens onto the CS-mount ring and screw it in clockwise.
3. Plug the cable to the DC-Iris connector on the side panel of the camera.



When you use a DC-Iris lens on your camera, you can adjust the brightness of the video image through the Iris Level screw-knob on the back panel of the camera.

■ C and CS Lens Focus Adjustment

You can adjust C and CS lens focus ring to fit your lens type.



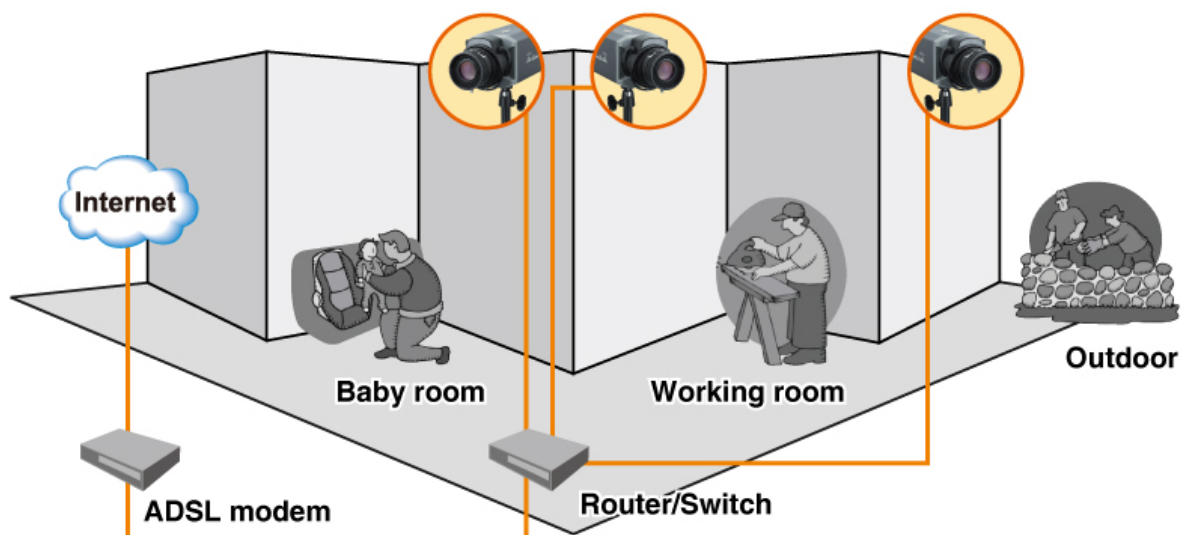
4. Applications of the Camera

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 one of the typical applications for your camera and provides a basic example for installing the camera.



Home Applications of the Internet Camera

2.4 Connect AirLive X.USB for wireless function (Optional)

You can add wireless function to your BC-5010 by connecting the optional AirLive X.USB, 11a/b/g/n wireless USB dongle. Simply plug AirLive X.USB in the USB slot of the back panel to enable the wireless function. Please refer to section 5.1.6 for detail wireless settings.

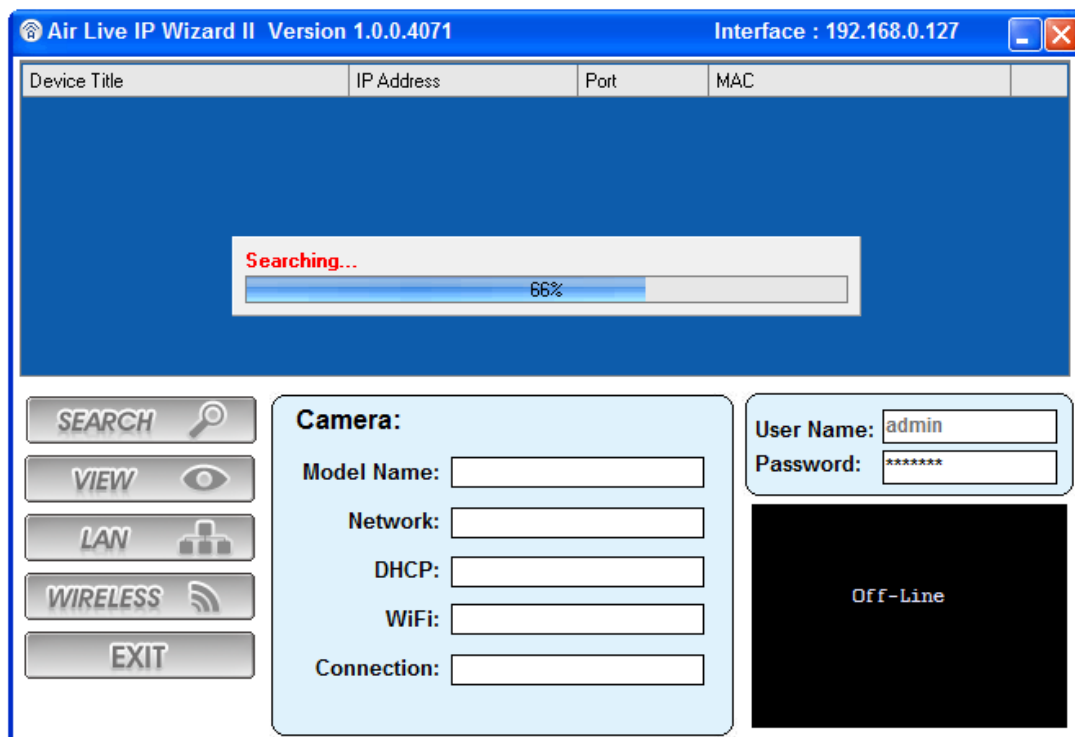


2.5 Connect to IP Camera

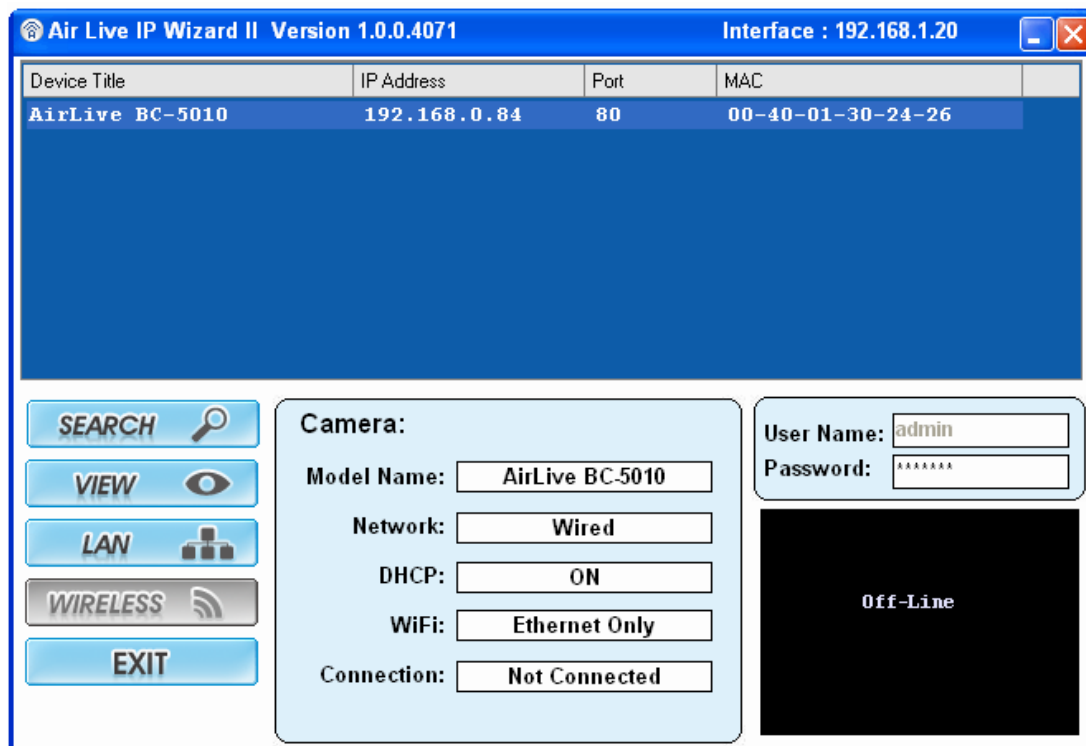
1. Insert the bundle CD into your PC/Laptop.
2. Auto Run Screen then shows up; click "Install Software → "IPWizard II" to install the configuration tool software.



3. After completing installation, run the configuration tool software.



4. The Software scans the network and finds the IP Camera and then lists them in the dialog box.



5. If the Camera's IP address is in the same IP segment as your LAN, select the founded IP Camera and double click on the item. Then, the default browser will show up and connect to the IP camera's Web automatically.

3

Using IP Camera via Web Browser

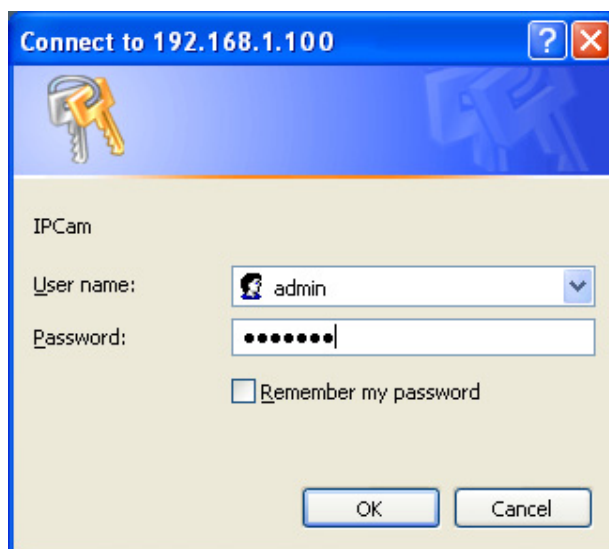
3.1 Windows

Using Web Browser

1. Open your web browser, and enter the IP address or host name of the IP camera in the Location / Address field of your browser.

Note: If you only want to view the video without accessing Setting screen, enter “http://<IP>/index2.htm” as your web URL.

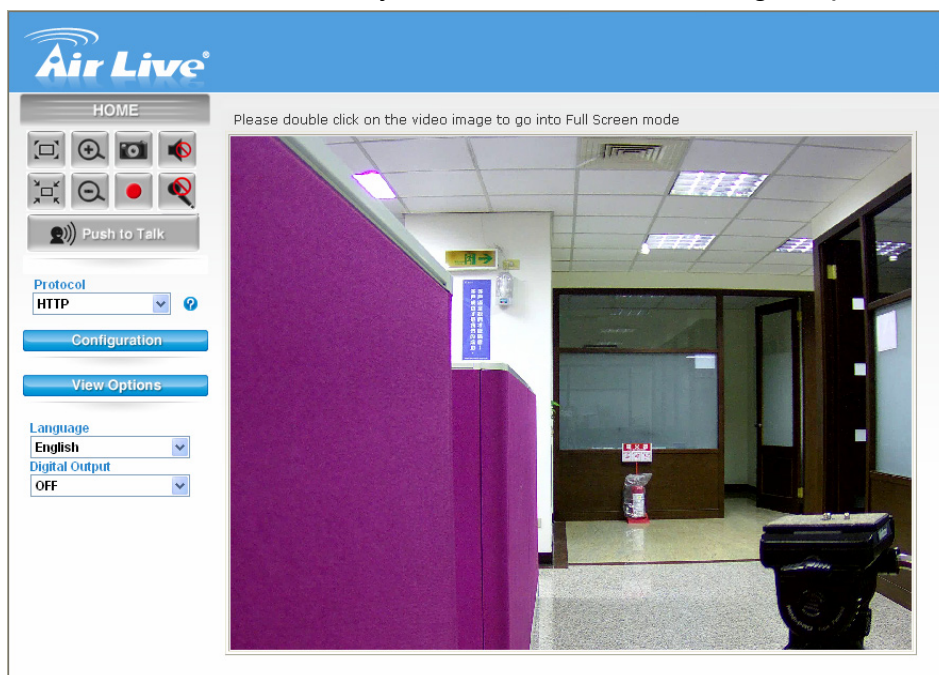
2. Use the default account “**admin**” and default password “**airlive**”.



Note: The default user name “**admin**” and the password “**airlive**” are set at the factory for the administrator.

3. According your browser’s security setting, the IE Web Page may prompt the “Security Warning” window. If so, select “Yes” to install and run the ActiveX control into your PC. Otherwise, the system will load the ActiveX silently.
4. After the ActiveX control was installed and ran, the first image will be displayed.
5. The monitor image will be displayed in your browser. In the left side of main configuration

is “Configuration”. For more details, you can check the following chapters.



4

Operating IP Camera via Mobile Phone

4.1 Using IP Camera via iPhone

You can access to your IP camera via your iPhone. Please follow the setting process below. Then you can see the live view via iPhone.

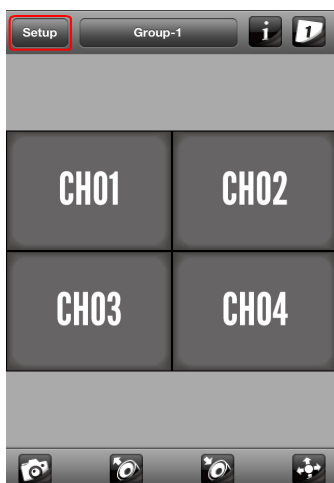
1. Download AirLive CamPro Mobile from APP store



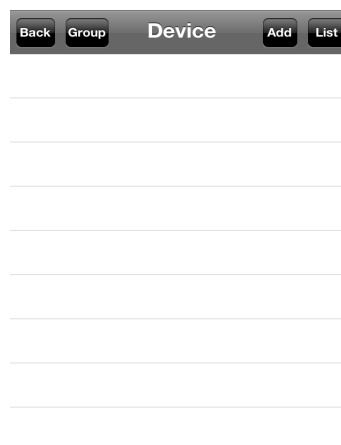
2. Execute AirLive CamPro Mobile



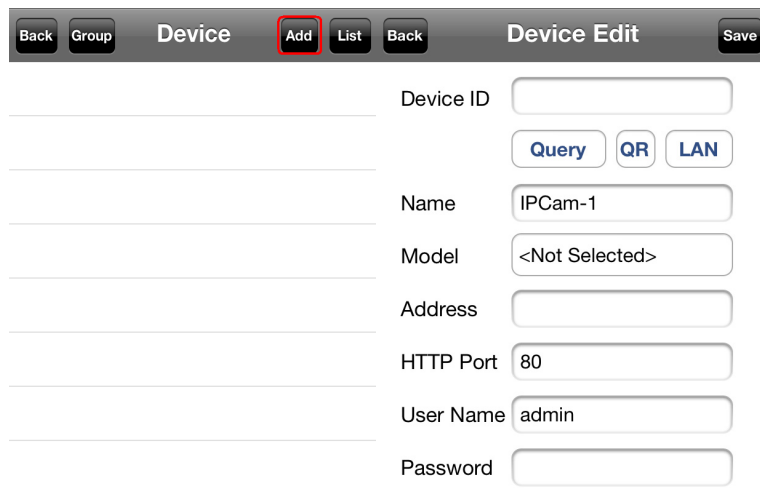
3. Click Setup button.



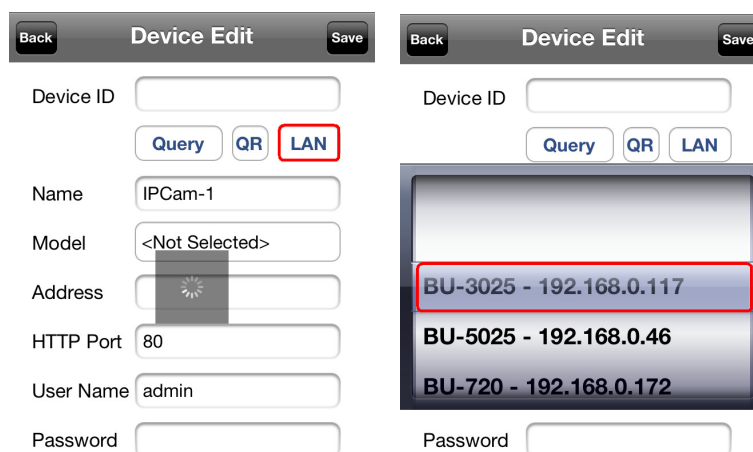
4. Setup page appears



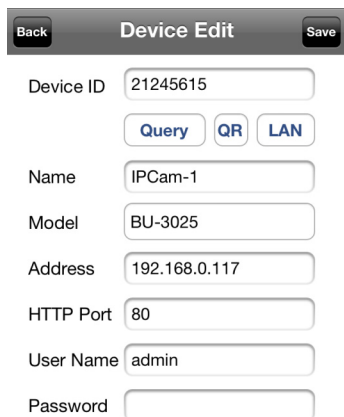
5. Click Add button.



6. Click LAN button and select the camera.



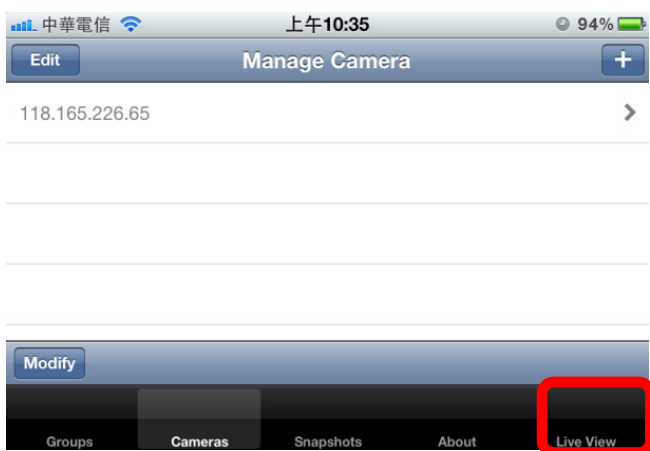
7. Model, Address, HTTP Port info appear on the page.



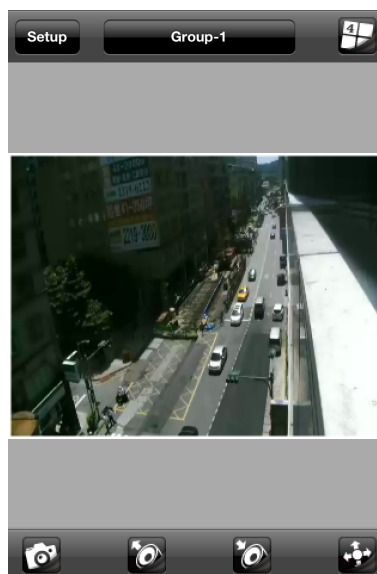
8. Key-in Username and Password then click OK button.



9. Click Live View button



10. The video appears on the main screen.



Notes: App for Android will be available in 11/2013.

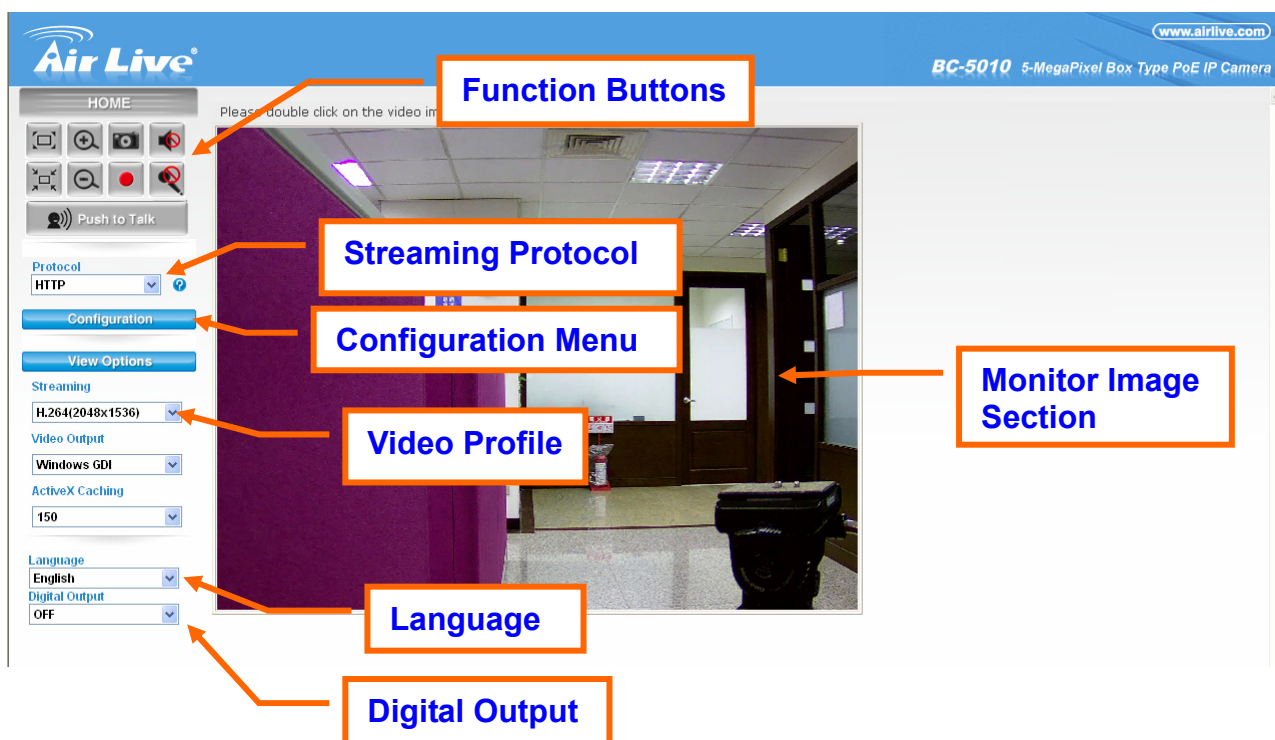
Note: The image is continuous snapshots, not video. Thus, live image can't be recorded here.

5

Configuration of Main Menu

In the left side of main configuration is **Configuration**. For more details, please check the following Chapters.









In the left side, you can control Live View in your main Browser. The functions include **Function Buttons**, **Streaming Protocol**, **Video Profile**, **Monitor Image Section**, **Language** and **Digital Output**.



5.1 Live View

1. Function Buttons

You can use the function buttons to control the camera's audio, video, and zoom functions.

-  : Original screen to full Screen
-  : Full screen to original screen
-  : Enlarge the image of the camera digitally.
-  : Reduce the image of the camera digitally.
-  : Snapshot
-  : Record video
-  : Click to mute/unmute the microphone of the camera. When it is unmuted, you receive the on-site sound/voice where the camera is installed.
-  : Click to enable/disable the speaker of the camera. When it is enabled, you can broadcast your sound/voice through the camera.

NOTE The button is available only when the microphone function is enabled from **Configuration > Audio** of Web Configuration.

NOTE The button is available only when the speaker function is enabled from **Configuration > Audio** of Web Configuration.

When you click the button, the **Pan** window and **Zoom IN/OUT** bar will appear on the left-top of Live View Window. You can enlarge the video image digitally by sliding the Zoom IN/OUT bar, and select the area of the image to display by moving the Pan window.



2. Monitor Image Section

The image from BC-5010 is shown here.

3. Streaming

Select to transmit and record the video using H.264 (MPEG4), or MJPEG compression.

4. Video Output

User can select proper streaming protocol according to networking environment.

5. Active X Caching

The buffer of Active X. If the bandwidth is limited, you can adjust to higher value but the higher value causes more latency.

6. Language

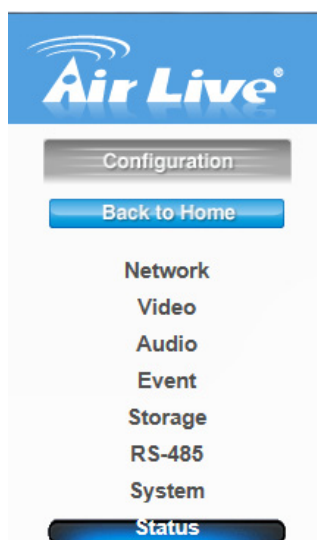
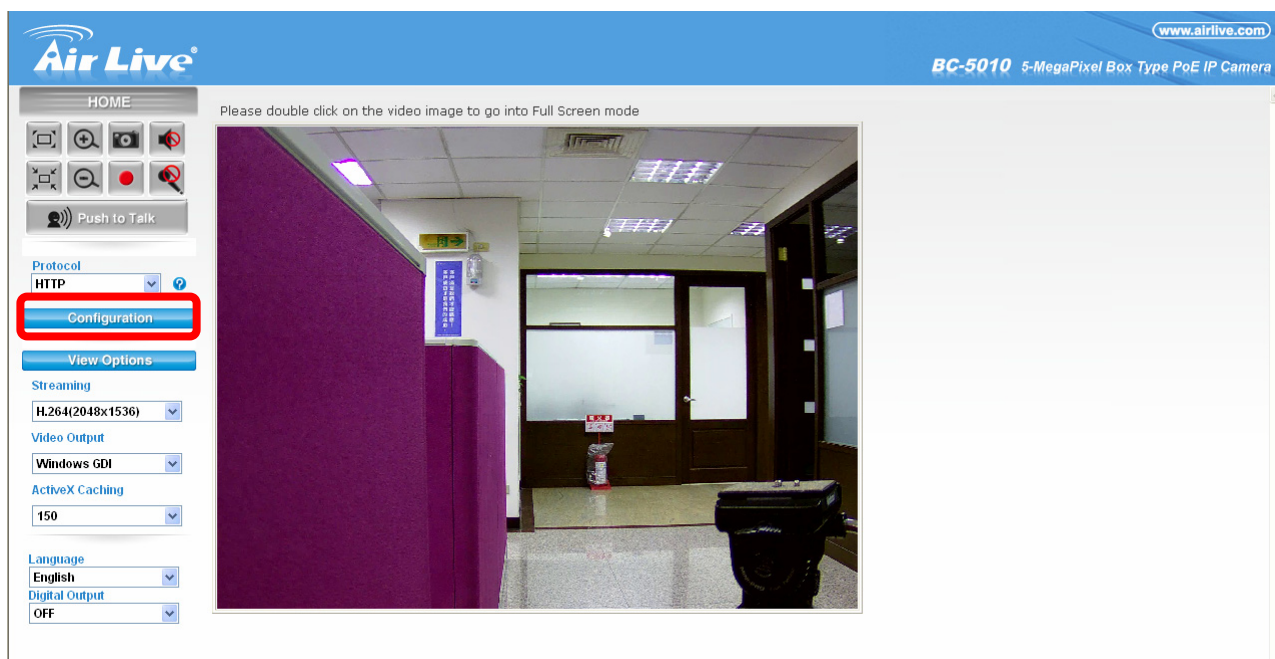
The device can provide multiple languages to meet user's requirement.

7. Digital Output

This IPCAM allows you to trigger on/off the GPIO output manually.

5.2 Configuration

This function is only for the Administrator. In the left side of main configuration, you can see Configuration including below.




| Item | Action |
|---------|--|
| Network | The Network menu contains the networking related settings for the camera, such as the IP Setting, DDNS Setting, IP Filter, etc. For more detail information, you can refer to Chapter 6. |
| Video | Configure bit rate and frame rate of video profiles, camera parameters, day & night. For more detail information, you can refer to Chapter 7. |
| Audio | Configure audio parameters. For more detail information, you can refer to Chapter 8. |
| Event | Configure the event setting. For more detail information, you can refer to Chapter 9. |
| RS-485 | Configure RS485 Setting. For more detail information, you can refer to Chapter 10. |
| System | The system menu provides “Devices Settings, Account, Management Ports, Firmware and Maintenance”. For more detail information, you can refer to Chapter 11. |
| Status | The Status menu provides the current status of the camera, including the basic information, audio/video settings, networking configuration, and system logs. For more detail information, you can refer to Chapter 12. |

6

Configuration-Network

Click the **Network** to display the sub-menus including **General**, **UPnP/Bonjour/ QoS**, **IP Filter**, **IP Notification**, **iSCSI**.

 Network

General
UPnP/Bonjour/QoS
IP Filter
IP Notification
iSCSI

LAN Interface

☐ DHCP IPv4
☒ DHCP IPv4/IPv6
☐ Static IPv4/IPv6

IP Address(IPv4) : 192.168.0.97

IP Address(IPv6) :

Prefix Length :

Subnet Mask : 255.255.255.0

Gateway : 192.168.0.254

Primary DNS : 192.168.0.254

Secondary DNS : 0.0.0.0

HTTP Port : 80

RTSP Port : 554

RTSP over HTTP Tunnel Port : 8554

RTP Data Port : 5556

Multicast

☐ Enable Multicast
 Multicast Group Address : 239.128.1.99
 Multicast Video Port : 5560
 Multicast RTCP Video Port : 5561
 Multicast Audio Port : 5562
 Multicast RTCP Audio Port : 5563
 Multicast TTL[1~255] : 15

PPPoE

☐ Enable PPPoE
 User Name :
 Password :

DDNS

☐ Enable DDNS
 Provider : DynDNS.com
 Host Name :
 User Name :
 Password :

6.1 General

LAN Interface:

This field allows you to select the IP address mode and set up the related configuration. The avail options include: **DHCP IPv4**, **DHCP IPv4/IPv6**, and **Static IPv4/IPv6**.

- DHCP IPv4**: 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.
- DHCP IPv4/IPv6**: DHCP for IPv6 enables the DHCP server to pass the configuration parameters (e.g. the IPv6 network addressed) to the IPv6 nodes, which offers the capability of automatic allocation of reusable network addresses and additional configuration flexibility. Select this option if your network supports DHCP IPv6 protocol. When the camera starts up, it will be assigned an IP address from the DHCP server automatically.
- Static IPv4/IPv6**: Select this option to assign the IP address for the camera directly. You can use IPFinder to obtain the related setting values.

| | |
|-------------------------------|--|
| IP Address (IPv4/IPv6) | Enter the IP address of the camera. The default setting is 192.168.1.100 . |
| Subnet Mask | Enter the Subnet Mask of the camera. The default setting is 255.255.255.0 . |
| Default Gateway | Enter the Default Gateway of the camera. The default setting is 192.168.1.254 . |
| Primary/Secondary DNS | DNS (Domain Name System) translates domain names into IP addresses. Enter the Primary DNS and Secondary DNS that are provided by ISP. |
| HTTP Port | The default HTTP port is 80 . |
| RTSP Port | The default RTSP Port (Real Time Streaming Protocol) is 554 . |
| RTP Data Port | 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. The default RTP Data Port is 5556 . |

Enable Multicast: Select this option to enable the multicast function of the camera, and then complete the following settings so that you can deliver information from your camera to a set of receivers.

- **Multicast Group Address:** Assign a category of IP addresses to receive the information from the camera.
- **Multicast Video Port:** Assign a multicast port for video in the text box. The default port is **5560**.
- **Multicast RTCP Video Port:** Assign a multicast port for RTCP (real-time transport control protocol) video in the text box. The default port is **5561**.
- **Multicast Audio Port:** Assign a multicast port for audio in the text box. The default port is **5562**.
- **Multicast RTCP Audio Port:** Assign a multicast port for RTCP (real-time transport control protocol) audio in the text box. The default port is **5563**.
- **Multicast TTL:** Set the value from 1 to 255. TTL (time to live) is used to specify the time to live in the IP header so that the system is able to decide whether or not the packet has been in the network too long and should be discarded.


Enable 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.

NOTE 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 or DDNS configuration in advance.

Enable DDNS: Select this option to enable DDNS service of the camera. With the Dynamic DNS feature, you can assign a fixed host and domain name to a dynamic Internet IP address. To set up the DDNS, select the **Provider** from the pull-down menu and then enter the required information in the **Host Name**, **User Name**, and **Password** text boxes.

NOTE You have to sign up for DDNS service with the service provider before configuring this feature.

6.2 UPnP/Bonjour/QoS

 Network

General **UPnP/Bonjour/QoS** IP Filter IP Notification iSCSI

UPnP

☒ Enable Discovery

☐ Enable Port Mapping

Bonjour

☒ Enable Discovery

QoS

☒ Enable QoS

☐ Audio ☒ Video ☐ Both

Video DSCP : (0-63)

Audio DSCP : (0-63)

1. UPnP: The camera supports UPnP (Universal Plug and Play), which is a set of computer network protocols that enable the device-to-device interoperability. Select the **Enable Discovery** option to enable the feature.

In addition, it supports port auto mapping function so that you can access the camera if it is behind an NAT router or firewall. Select the **Enable Port Mapping** option to enable the feature.

2. Bonjour: The devices with Bonjour will automatically broadcast their own services and listen for services being offered for the use of others. Select the **Enable Discovery** option and, if your browser with Bonjour, you can find the camera on your local network without knowing its IP address.

The Apple Safari is already with Bonjour. You can download the complete Bonjour for Internet Explorer browser from Apple's web site by visiting <http://www.apple.com/bonjour/>.

3. QoS: QoS (quality of service) is the ability to provide different priority to different applications or data flows.

- **Video DSCP:** Assign the DSCP (DiffServ Code Point) of the stream video from the camera by setting the value from 0 to 63.

- **Audio DSCP:** Assign the DSCP (DiffServ Code Point) of the stream audio from the camera by setting the value from 0 to 63.

6.3 IP Filter

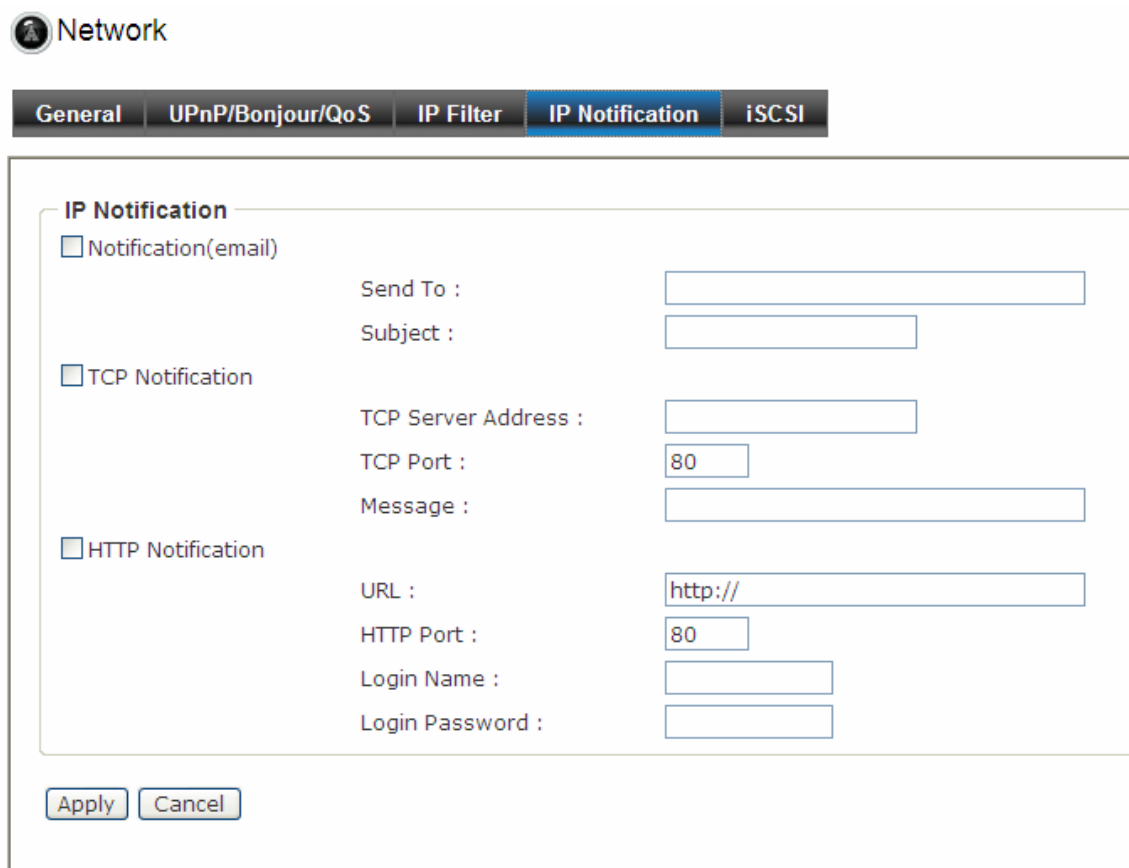
The IP Filter setting allows the administrator of the camera to limit the users within a certain range of IP addresses to access the camera. Select the **Enable Filter** option and assign the range of IP addresses that are allowed to access the camera in the **Accept IP Address** field; or assign the range of IP addresses that are blocked to access the camera in the **Deny IP Address** field.

For example, when you enter **192.168.0.50/192.168.0.80** in **Start/End IP Address** of **Accept IP Address** and then click **Add**, the user whose IP address located within **192.168.0.50 ~ 192.168.0.80** will be allowed to access the camera. On the other hand, if you enter the IP range in **Start/End IP Address** of **Deny IP Address** and then click **Add**, the user whose IP address located within the range will not be allowed to access the camera.

To remove the assigned range of IP addresses for IP Filter, select the setting in the **Accept/Deny IP List** and then click **Delete**.

6.4 IP Notification

In case the IP address is changed, system is able to send out an email to alert someone if the function is enabled.



The screenshot shows the 'Network' configuration page with the 'IP Notification' tab selected. The 'IP Notification' section contains three sub-sections: 'Notification(email)', 'TCP Notification', and 'HTTP Notification'. Each sub-section has several input fields for configuration. The 'Notification(email)' section has 'Send To' and 'Subject' fields. The 'TCP Notification' section has 'TCP Server Address', 'TCP Port' (set to 80), and 'Message' fields. The 'HTTP Notification' section has 'URL' (set to http://), 'HTTP Port' (set to 80), 'Login Name', and 'Login Password' fields. At the bottom of the form are 'Apply' and 'Cancel' buttons.

1. Notification (e-mail):

If enable this function, then the “**Send to**” and “**Subject**” fields need to be filled.

- **Send To:**

Type the receiver’s e-mail address. This address is used for reply mail.

- **Subject:**

Type the subject/title of the E-mail.

2. TCP Notification:

If enable this function, then the “**TCP Server**“, “**TCP Port**”, and “**Message**” fields need to be filled.

- **TCP Server:**

Type the server name or the IP address of the TCP server.

- **TCP Port:**

Set port number of TCP server.

- Message:

The message will be sent to FTP server.

3. HTTP Notification:

If enable this function, then the fields below need to be filled.

- URL:

Type the server name or the IP address of the HTTP server.

- HTTP Login name:


Type the user name for the HTTP server.

- HTTP Login Password:

Type the password for the HTTP server.

6.5 iSCSI

Enable the iSCSI and key-in server IP address and Port number. The disk of the server will be storage in IP cam setting.

 Network

| General | UPnP/Bonjour/QoS | IP Filter | IP Notification | iSCSI |
|--|------------------|-----------|-----------------|-------|
| <p>iSCSI</p> <p><input type="checkbox"/> Enable iSCSI <input type="radio"/> Initiator</p> <p>IP Address: <input type="text"/></p> <p>Port: <input type="text" value="3260"/></p> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> | | | | |

6.6 Wireless

When you insert AirLive X.USB to BC-5010 USB port, the wireless page will appear. After enabling the wireless function, please choose your wireless SSID and key in security key, then click **Apply** button to save the settings. When you complete the setting, please unplug the internet cable and search BC-5010 again by AirLive IP Wizard II.

Note: Make sure that plug power adapter to power on BC-5010.

Network

General
Wireless
UPnP/Bonjour/QoS
IP Filter
IP Notification
iSCSI

Wireless

☒ Enable

| Survey : | ESSID | MAC | Channel | Mode | Signal | Encryption | |
|----------|---------------------------|-------------------|---------|----------------|--------|------------|----------------|
| | RTL8186-default | 00:E0:4C:81:86:33 | 1 | Infrastructure | 61% | NO | Refresh Choose |
| | ASMT-6F-AP | 68:92:34:4A:31:F1 | 2 | Infrastructure | 16% | YES | Choose |
| | Active-Semi International | 00:11:95:F5:BA:38 | 6 | Infrastructure | 11% | YES | Choose |
| | CHT Wi-Fi Auto | FC:75:16:8C:66:50 | 6 | Infrastructure | 12% | YES | Choose |

MAC : 00:4F:62:2D:4A:A9
SSID : IPCam
BSSID : 00:E0:4C:81:86:34

Interface:
☐ Wired(Ethernet) Only
☒ Both LAN and Wireless

Wireless Mode:
☒ Infrastructure
☐ Ad-Hoc

Channel: 6 - 2.437GHz

Security Mode: WPA/WPA2

Key:

Wireless Interface


☒ DHCP
☐ Static

IP Address : 0.0.0.0

7

Video Settings

Click the **Video** to display the sub-menus including **Video Profile**, **Exposure**, **Image**, **WDR**, **Overlay** settings of the camera.

 Video


Video Profile

Exposure

Image

WDR

Overlay

ROI: Disable 

Main Stream

Video Resolution: 2048x1536 (3M)

Main Stream: H264


High Profile

Frame Rate: Auto

25 fps

Rate Control: Video Quality (VBR)

Very High

Bitrate (CBR): 1500 kbps 

GOP: 1

Second Stream

☒ Enable Second Stream

Video Resolution: 640x480 (VGA)

Second Stream: MJPEG

Video Quality: Very High

Frame Rate: Auto

30 fps

Mobile View

☒ Disable

☐ 3GPP without Audio

☐ 3GPP with Audio

Apply

Cancel

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7.1 Video Profile

1. **ROI:** ROI means Region of Interest. When the main stream is set to High Resolution, user can select specified region for monitoring, for this will saving the bandwidth if there are too many collision on the network.

2. **Main Stream & Second Stream:** To adjust the camera to capture images in several resolutions (up to 2592 x 1920 @ 15fps) in **H.264**, **MPEG4**, or **MJPEG** format.

- **Video Resolution:** Select the desired resolution that you can view on PC from the Video Resolution pull-down menu: up to 2592 x 1960 if High Resolution is selected.

You also need to select a proper setting of **Frame Rate**.

Please note that higher settings in **video resolution** and **Frame Rate** obtain better video quality while it uses more resource within your network.

- **Rate Control:** Set the proper image quality by selecting **Video Quality** or **Bitrate**, and then select the desired settings from the pull-down menu:

- **Video Quality:** Select **Very Low**, **Low**, **Normal**, **High**, or **Very High** from the pull-down menu.
- **Bitrate:** Set a proper value (in kbps) depending on your network status.

3. **Mobile View** (Not supported by MPEG4): The camera supports 3GPP specification. Select the **Disable** option to disable this feature. Otherwise, select **3GPP Without Audio** or **3GPP With Audio** to transfer the video clips without or with audio.

If you use a mobile phone that supports 3GPP, you can also view the real-time streaming image captured by the camera on your phone (with the default player on the phone) by entering the RTSP link:

[rtsp://\(IP address of the camera\)/3gp](rtsp://(IP address of the camera)/3gp)

NOTE Your mobile phone and the service provider must support 3GPP function. Please contact your service provider when you are failed to use this service.

7.2 Exposure


1. **Exposure Setting:** There are two options (Auto and Manual) to select. When you select Manual mode, you can adjust Exposure Value, Exposure Time and Gain settings of the day and night mode.

2. Others

- **Modes:** There are three modes (Indoor, Outdoor, and Auto) to fit your environment
- **Auto White Balance:** You can enable or disable the function.
- **Auto Iris:** When you attach a DC-Iris lens with the auto Iris function, select **ON/OFF** to enable/disable the feature.
- **IR-Cut:** IR-Cut filter is used for the camera to produce true color images, which avoids the color deviation for the captured images effectively. Select **Auto**, **Always ON**, **Always OFF**, or **Schedule** (and then set the period by entering From/To time) for the function.

Video

Video Profile
Exposure
Image
WDR
Overlay



Exposure Setting

Exposure Mode
Auto

Others

Mode:
☐ indoor
☐ outdoor
☒ Auto

Auto White Balance:
Enable

Auto Iris:
☒ DC Iris Lens
☐ Manual Lens

IR-Cut:
☐ Auto
☒ AlwaysON
☐ AlwaysOFF

From: 00 : 00 To: 23 : 59 Day

Apply
Cancel

7.3 Image

1. Image Setting

- **Brightness:** Adjust the brightness level from 0~255.
- **Contrast:** Adjust the contrast level from 0~255.
- **Saturation:** Adjust the colors level from 0~255.
- **Sharpness:** Adjust the sharpness level from 0 ~ 100.

TIP: Click **Default** to restore the default settings of the three options above.


2. Others

- **Mirror:** Select **Vertical** to mirror the image vertically, or select **Horizontal** to mirror the image horizontally.
- **Power Line Frequency:** Select the proper frequency according to the camera's location to reduce the flicker: **NTSC/60Hz** or **PAL/50Hz**.
- **Video Output:** You can enable or disable video output of BNC connector.



Video Profile
Exposure
Image
WDR
Overlay

Image Setting



Brightness:
←
→
 128 [0..255]

Contrast:
←
→
 128 [0..255]

Saturation:
←
→
 128 [0..255]

Sharpness:
←
→
 128 [0..255]

Default

Others

Mirror: ☐ Vertical ☐ Horizontal

Power Line Frequency: ☒ NTSC/60Hz ☐ PAL/50Hz

Video Output: ☐ ON ☒ OFF

Apply
Cancel

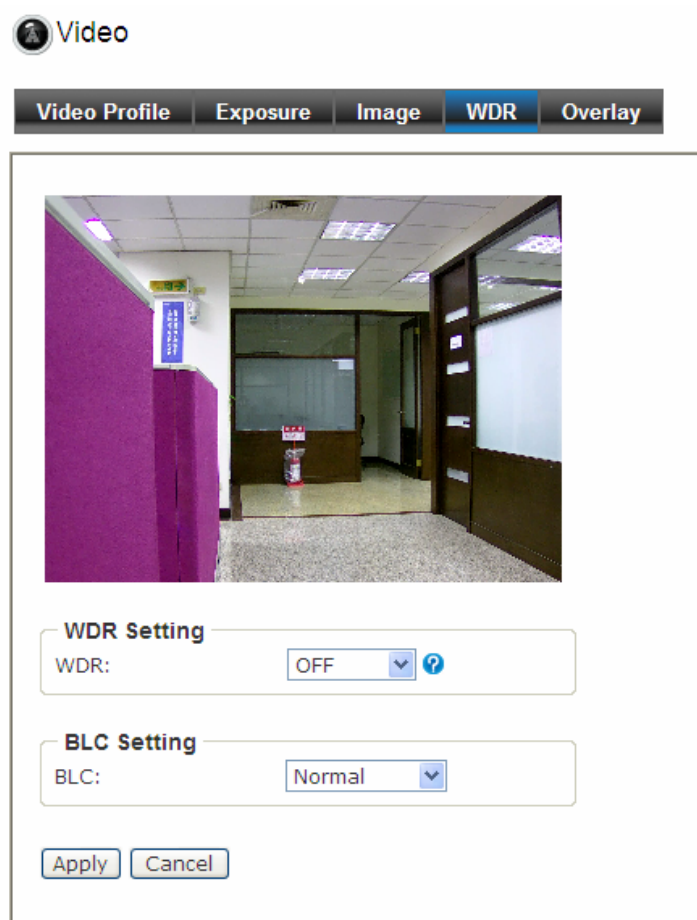
7.4 WDR

1. WDR Setting

You can adjust WDR level to fix your backlight environment.


2. BLC Setting

You can adjust BLC level to fix your backlight environment.

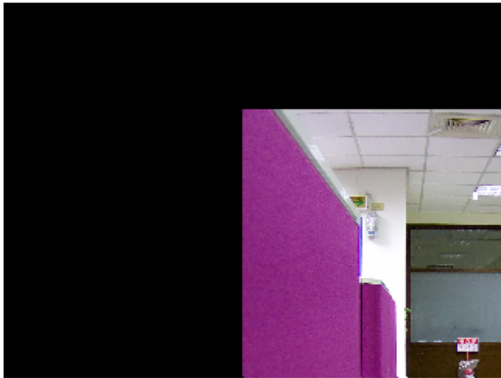


7.5 Overlay

This option is used to set the image overlay and mask feature of the camera.

 Video

Video Profile Exposure Image WDR **Overlay**



Overlay Setting

☐ Enable Time Stamp ☐ Transparent

☐ Enable Text Display

☐ Enable Image Overlay ☐ Transparent ☒ ☐ ☐

☒ Default Logo

☐ User Define Image

Bitmap/JPG/JPEG Only Maximum Size: 160x128

1. Overlay Setting

- **Enable Time Stamp:** Select this option to display the date & time information on the live view image.
- **Enable Text Display:** Select this option and enter your heading text in the box to display the text information on the live view image. You can set the displayed text in transparent mode by selecting the **Transparent** option.
- **Enable Image Overlay:** Select **Default Logo** or **User Define Image** to display the image overlay on the live view image.

You can set the displayed image in transparent mode by selecting the **Transparent** option and select the background color as white or black.

- **User Define Image:** When you select **User Define Image**, you can click **Browse** to select the image file from your computer and then click **Update** to apply the setting.

NOTE The width and height of the input overlay graphic should be multiple of 4 at a maximum size of 160x128, and in JPG or BMP (24-bit RGB) format.

8

Audio

Click the **Audio** to display the sub-menus including **Audio Setting**.

 Audio

Audio Setting

Microphone

☐ Enable Microphone

Volume:

Speaker

☐ Enable Speaker

Gain:

Recording File

You can upload one audio file in WAV(MONO, 8KHz) format for playback during an event action. The file must be smaller than 100KB in size.



8.1 Audio Setting

- 1. Microphone:** Select the option to enable the camera's audio in function, so that you can receive the on-site sound and voice from the camera.
- 2. Speaker:** Select the option to enable the camera's audio out function, so that the connected speaker can play the sound and voice through the camera.
- 3. Recording File:** You can upload audio file for event action.

9

Event

Click the **Event** to display the sub-menus including **Event**, **Event Schedule**, **Motion Detection**.

Event

Event Schedule

Motion Detection

Media Format

☐ One Snapshot

☒ H.264 Video

Pre Event:

0

▼

Second

Post Event:

5

▼

Second

FTP Server

☐ Enable

SMTP Server

☐ Enable

Samba Server

☐ Enable

TCP Server

☐ Enable

HTTP Server

☐ Enable

Apply

Cancel

9.1 Event

1. Media Format: Select **One Snapshot** to send the alert message with one still image captured by the camera, or select **H264 Video** to send the alert message with one video clip recorded by the camera.

You can set the attachment that is captured in **Pre Event** or **Post Event** time when the event has been triggered.

2. **FTP Event Server:** Select **Enable** to enable the FTP server for the camera.

- **FTP Server:** Enter the IP address of the target FTP server.
- **Port:** 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.
- **File Path Name:** Enter the destination folder for uploading the images. For example, **/Test/**.
- **Enable Passive Mode:** Select the **Enable** option to enable passive mode.
- **Test FTP:** When done, click the button to test the FTP server.

NOTE Due to the network environment, the camera may not upload number of images that you set.

3. **SMTP Event Server:** Select **Enable** to enable the SMTP server for the camera.

- **SMTP Mail Server:** Enter the mail server address.
For example, airlive.com.
- **Port:** Assign the SMTP port in the text box. The default SMTP port is **25**.
- **Sender Email Address:** Enter the email address of the user who will send the email.
For example, airlive@airlive.com.
- **Receiver #1/#2 Email Address:** Enter the first/second email address of the user who will receive the email.
- **Subject:** Enter the subject of the message for the event.
- **My Mail Server Requires Authentication:** Select the option according to the mail server configuration.
- **User Name:** Enter the user name to login the mail server.
- **Password:** Enter the password to login the mail server.
- **Test SMTP:** When done, click the button to test the SMTP server.
- **SSL Encryption:** If the mail server requires an encrypted connection, you should select the SSL option.

NOTE Due to the network environment, the camera may not upload number of images that you set.

4. **TCP Server:** Select **Enable** to enable the TCP server for the camera.

- **TCP Server Address:** Enter the IP address of the TCP server.
- **TCP Port:** Set port number of TCP server

NOTE Due to the network environment, the camera may not upload number of images that you set.

5. **HTTP Event Server:** Select **Enable** to enable the Http server for the camera.

- **URL:** Enter the IP address of the HTTP server.
- **HTTP Port:** Set port number of HTTP server.
- **User Name:** Enter the user name to login into the HTTP server.
- **Password:** Enter the password to login into the HTTP server.

NOTE Due to the network environment, the camera may not upload number of images that you set.

9.2 Event Schedule

This menu is used to specify the schedule of Event or Schedule Trigger and activate the some actions provided by this device. Where the Schedule Trigger will be activated by user-define interval without event happened.

Follow the steps below to set up the Event Schedule for the camera:

Select **Enable** and enter the **Event Name**.

Select the **Trigger** by: **Motion Detection**, **Digital Input 1**, or **Digital Input 2**.

Select the **Action** when triggered:

- **Enable FTP:** The camera will upload the attachment to FTP when triggered.
- **Enable EMAIL:** The camera will send the attachment to the assigned receiver when triggered.
- **Enable Samba:** The camera will transfer the attachment to the network storage when triggered.
- **Enable TCP:** The camera will send instant message to the TCP server when triggered.
- **Enable HTTP:** The camera will send instant message to the HTTP server when triggered.
- **GO Preset:** The camera will move to the preset position when triggered. Please note that the function is available only when a RS-485 device, such as an external camera stand with rotation function, is connected to the camera.

- **Enable SD CARD:** The camera will store the attachment to the SD card when triggered.
- **Enable USB:** The camera will store the attachment to the USB flash drive when triggered.
- **Trigger digital output:** The camera will trigger the connected device on the camera's output for 1~60 seconds (according to the setting of the pull-down menu).
- **Audio File Playback:** The camera will play voice file when triggered.

When done, click **Add**. The event profile will be added to the Event list.

TIP To change/remove the event profile, select the desired profile from the Event list and then click **Modify/Delete**.

1

Event

Event

Event Schedule

Motion Detection

Event Schedule

Event:

☐ Enable

Event Name:

Trigger

☐ Motion Detection

☐ Digital Input 1

Low

☐ Digital Input 2

Low

Schedule Time

☐ Enable

☒ Sun

☒ Mon

☒ Tue

☒ Wed

☒ Thu

☒ Fri

☒ Sat

☒ Always

☐ From

00

 :

00

 To

23

 :

59

 hh:mm

Action

☐ Enable FTP

☐ Enable EMAIL

☐ GO Preset

01

☐ Enable Samba(Net Storage)

☒ Enable SD CARD

☒ Enable USB

☐ Enable TCP

☐ Enable HTTP

☒ Trigger digital output for

01

 seconds

☒ Audio File Playback

Add

Modify

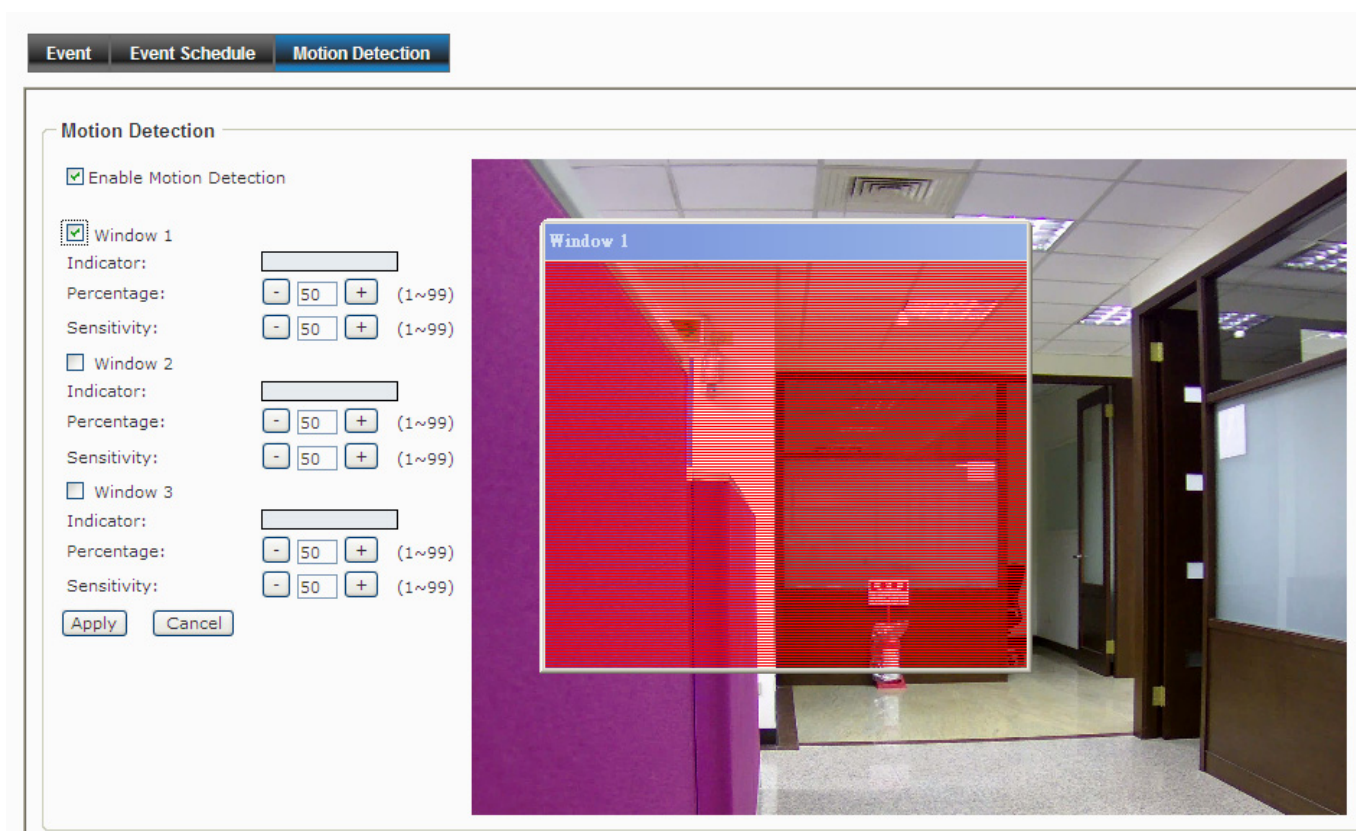
Delete

9.3 Motion Detection

The Motion Detection option contains the commands and settings that allow you to enable and set up the motion detection feature of the camera. The camera provides three detecting areas.

Follow the steps below to set up the Motion Detection function for the camera:


1. Select **Enable Motion Detection**.
2. Select **Window 1/2/3**. When the detecting area is enabled, you can use the mouse to move the detecting area and change the area coverage.
3. Set the **Percentage** and **Sensitivity** (1~99) for detecting motion to record video.
4. When done, click **Apply** to save the settings and activate the motion detection function.



10

RS-485

Click the **RS-485** to display the sub-menus including **RS-485 Settings**, **RS-485 PTZ**.

 RS-485

RS-485 Settings

RS-485 PTZ

RS-485

☒ **Enable RS-485**

☒ Use Pelco-D
 ☐ Use Pelco P

Address: (Pelco-D:0~254 Pelco-P:1~32)

☐ Use Custom Protocol

Port Setting

Baud Rate:

2400 bps

Data Bits:

8

Parity:

None

Stop Bit:

1

Custom Commands

Home :

Test

Up :

Test

Down :

Test

Left :

Test

Right :

Test

Command Name

Hexadecimal Message

Extended Command 1 :

Test

Extended Command 2 :

Test

Extended Command 3 :

Test

Extended Command 4 :

Test

Extended Command 5 :

Test

Apply

Cancel

10.1RS-485 Settings


The RS-485 option provides the control settings for external device through the I/O port. Select **Enable RS-485** and complete the required settings to activate the RS-485 function of the camera.

Use Pelco-D: Select this option and then select an Address. When you enable the RS-485 function of the camera, you will be able to use the RS-485 Buttons on the live view screen to control the camera.

Use Custom Protocol: Select this option to configure the commands protocol manually. When you select this option, you need to complete the required settings of **Port Setting**. You can click **Test** to test each command that you have assigned. In the **Extended Command 1~5** string boxes, you can customize more buttons and settings for your needs. Please note that the setting values in the **Command Name** string boxes should be from the connected external device (please refer to the manual of the connected device).

10.2 RS-485 PTZ

You can enable RS-485 PTZ function when you have Pan/Tilt Head.


 RS-485

RS-485 Settings
RS-485 PTZ

RS-485 PTZ

☐ Enable RS-485 PTZ

PTZ Preset



Preset: Home Go To

Description: Home

Submit

PAN Speed:

1

TILT Speed:


1

Apply
Cancel

11

System

Click the **System** to display the sub-menus including **Device Settings**, **Account**, **Management Ports**, **Firmware**, **Maintenance**.

 System

Device Settings
Account
Management Ports
Firmware
Maintenance

DIPS

DIPS (Dynamic IP Service):
☐ Enable
☒ Disable

Device ID (for DIPS):

Information

Camera Name:

Location:

Indication LED

Control:
☒ ON
☐ OFF

Date & Time

Camera Date & Time:
02/07/2013 23:02:22

TimeZone:

☐ DayLight Saving

☐ Don't Modify

11.1 Device Settings

Use this menu to perform the principal settings of the device.

1. DPS

- **DIPS (Dynamic IP Service):**

To enable or disable the DIPS® (Dynamic IP Service) function.

- **Device ID (for DIPS):** It's a unique number of each device for identification and this ID is used for DIPS. This function now is reserved for future use.

2. Information: The information of Camera Name and Location.

3. Indication LED: This item allows you to set the LED illumination as desired. The available options include: Normal and OFF.

4. Date and Time: Enter the correct date and time for the system.

- **Time Zone:** Select the proper time zone for the region from the pull-down menu.

- **DayLight Saving:** Select this option if the Daylight Saving Time is used in your location.

Daylight Saving means a period from late spring to early fall, and during the period many countries will set their clocks ahead of normal local time by one hour to give more daytime light in the evening.

- **Don't Modify:** Select this option to set the date and time as system's default settings.

- **Synchronize with NTP Server:** Select this option and the time will be synchronized with the NTP Server. You need to enter the NTP Server Address of the server and set the Update Interval.

- **Manual:** Select this option to set the date and time manually.

- **Synchronize with PC:** Select this option and the date & time settings of the camera will be synchronized with the connected computer.

11.2 Account

1. Admin

To prevent unauthorized access to the camera's Web Configuration, you are strongly recommend to change the default administrator password. Type the administrator password twice and then click **Modify** to set and confirm the password.

2. Users

- **User Name/Password/Confirm Password:** Enter the user's name you want to add to use the camera. Then, enter the password twice for the new user. When done, click Add to add the new user for the camera.
- **User List:** Display the existing users of the camera. To delete a user, select the one you want to delete and click **Delete**.

-

3. Guest

- **User Name/Password/Confirm Password:** Enter the user's name you want to add to use the camera. Then, enter the password twice for the new user. When done, click Add to add the new user for the camera.
- **UserList:** Display the existing guests of the camera. To delete a user, select the one you want to delete and click **Delete**.

NOTE The "Users" can access the camera and control the Function buttons of the camera's Web Configuration; the "Guest" can only view the live view image from the Main screen of the Web Configuration while accessing the camera. Only the "Admin" is allowed to configure the camera through the Web Configuration.

Device Settings
Account
Management Ports
Firmware
Maintenance

Viewer Login
☐ Anonymous
☒ Only users in database
Save

Admin
Password:
Confirm Password:
Modify

Users
User Name :
Password :
Confirm Password:
User List :
Add
Delete

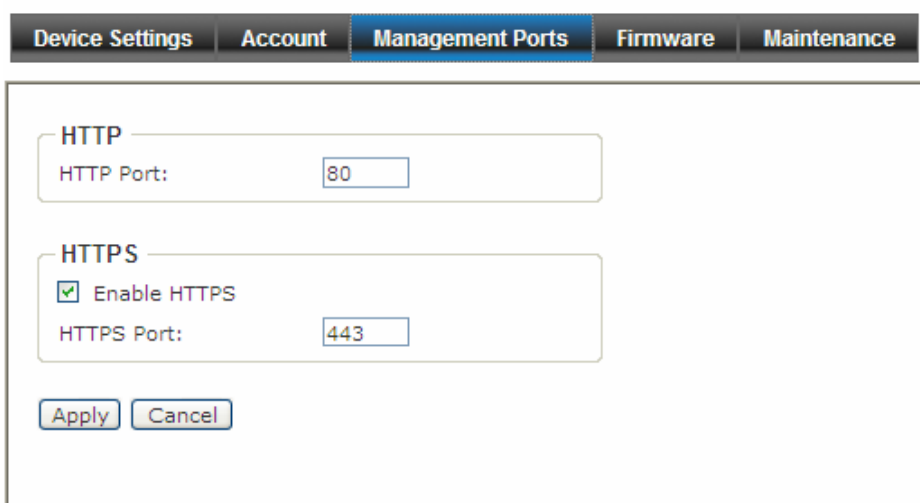
Guest
User Name :
Password :
Confirm Password:
Guest List :
Add
Delete

11.3 Management Ports

1. **HTTP:** To define HTTP Ports. The default HTTP port is **80**

2. **HTTPS:** Select the **Enable HTTPS** option to enable HTTPS, which is a secure protocol to provide authenticated and encrypted communication within your network.

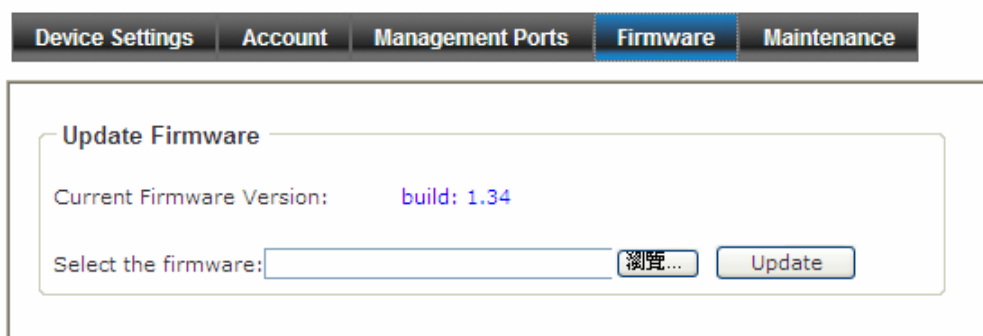
- **HTTPS Port:** Assign a HTTPS port in the text box. The default HTTPS port is **443**.



11.4 Firmware

1. **Update Firmware:** You can upgrade the firmware for your camera once you obtained a latest version of firmware.

- **Current Firmware Version:** This item displays the current firmware version.
- **Update:** Click **Browse** to locate the backup file on your PC and then click **Update**.



11.5 Maintenance

1. **Factory Reset:** Click **Reset** to restore all factory default settings for the camera.
2. **System Rebooted:** Click **Reboot** to restart the camera just like turning the device off and on. The camera configuration will be retained after rebooting.
3. **Configuration Backup/Restore:** 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 the button to save the current configuration of the camera.
 - **Restore:** Click **Browse** to locate the backup file on your PC and then click **Restore**. You can also click **Restore from SD CARD Device** if the backup file is saved in the inserted SD card.

Warning!!!

The download firmware procedure cannot be interrupted. If the power and/or network connection are broken during the download procedure, it might possibly cause serious damage to the device.

Strongly suggest that DO NOT upgrade firmware via Wireless LAN due to high error rate possibly and don't allow any other clients to access this unit during updating procedure. Be aware that you should not turn off the power during updating the firmware and wait for finish message.

Furthermore, the firmware upgrade procedure always is risk and do not try to upgrade new firmware if it's not necessary.

Device Settings
Account
Management Ports
Firmware
Maintenance

Factory Reset

Factory reset will restore all the settings to factory default

Factory reset will restore all the settings to factory default (Excluding Network Setting)

System rebooted

Configuration Backup

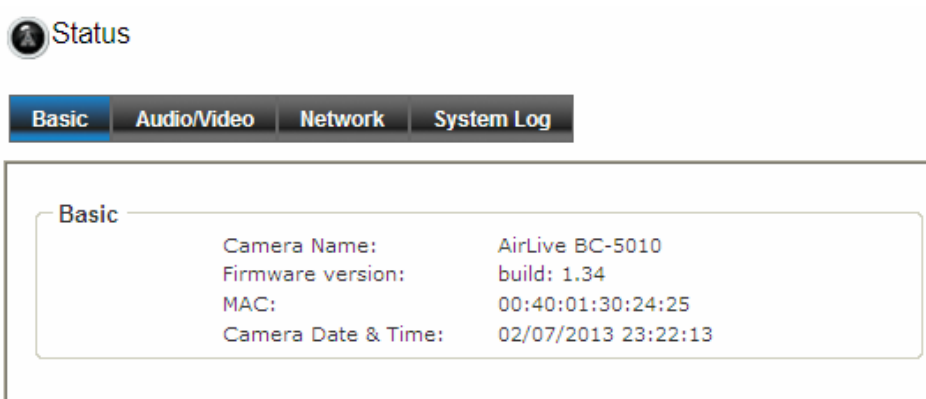
Configuration Restore

Select the configuration file to restore:

12

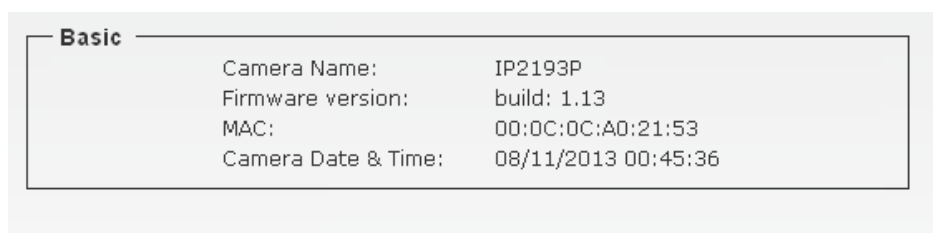
Status

Click the **Status** to display the sub-menus including **Basic**, **Audio/Video**, **Network**, **System Log**.



12.1 Basic

Basic information includes Camera Name, Firmware version, MAC, Camera Date & Time.



12.2 Audio/Video

1. Video

- H.264**: Video Resolution/Video Quality/Frame Rate
- MJPEG**: Video Resolution/Video Quality/Frame Rate
- Mobile View**: 3GPP (Enable/Disable)

2. Audio: Microphone In, Microphone Gain and Speaker Out

| | | |
|--------------------|-------------------|-------------------|
| H.264 | Video Resolution: | 1920x1080 (1080P) |
| | Video Quality: | Very High |
| | Frame Rate: | 25 fps |
| MJPEG | Video Resolution: | 320x240 (QVGA) |
| | Video Quality: | Very High |
| | Frame Rate: | 30 fps |
| Mobile View | 3GPP Enable: | Disable |
| Audio | Microphone In: | Disable |
| | Microphone Gain: | +10 dB |
| | Speaker Out: | Disable |

12.3 Network

1. Wired Interface

| | |
|-------------------------------|---|
| IP Mode | DHCP or Static |
| IP Address (IPv4/IPv6) | IP address of the camera. The default setting is 192.168.1.100 . |
| Subnet Mask | Subnet Mask of the camera. The default setting is 255.255.255.0 . |
| Gateway | Gateway of the camera. The default setting is 192.168.1.254 . |
| Primary/Secondary DNS | DNS (Domain Name System) translates domain names into IP addresses. Enter the Primary DNS and Secondary DNS that are provided by ISP. |
| MAC | A media access control address (MAC address) is a unique identifier assigned to network interfaces for communications on the physical network segment. |

2. Wireless Interface

| | |
|--------------------|---|
| Status | Status of LAN and Wireless |
| IP Address | IP address of the camera. |
| Subnet Mask | Enter the Subnet Mask of the camera. The default setting is 255.255.255.0 . |
| Gateway | Gateway of the camera. The default setting is 192.168.1.254 |
| MAC | A media access control address (MAC address) is a unique identifier assigned to network interfaces for communications on the physical network segment. |

| | |
|---------------------------|-----------------------|
| Wired Interface | |
| IP MODE: | DHCP IPv4/IPv6 |
| IP Address(IPv4): | 192.168.2.110 |
| IP Address(IPv6): | |
| Subnet Mask: | 255.255.255.0 |
| Gateway: | 192.168.2.1 |
| Primary DNS: | 192.168.2.1 |
| Secondary DNS: | 0.0.0.0 |
| MAC: | 00:0C:0C:A0:21:53 |
| Wireless Interface | |
| Status: | Both LAN and Wireless |
| IP Address: | 0.0.0.0 |
| Subnet Mask: | 0.0.0.0 |
| Gateway: | 0.0.0.0 |
| MAC: | 00:00:00:00:00:00 |

12.4 System Log

You can check the usage log of IP camera here. In this page, you can click:

1. First page / Final page: Jump to first / final page of log.
2. Previous / Next: Jump to previous or next page of log.
3. Remove: Clear log.

You'll be prompted for confirmation.

Syslog

☐ Enable remote log

IP Address:

Port:

Log List

| Item | Date and Time | Event |
|------|---------------------|---|
| 1. | 08/10/2013 22:56:37 | Sync with NTP server: [2013/08/10 22:56:37] |
| 2. | 08/10/2013 16:56:35 | Sync with NTP server: [2013/08/10 16:56:35] |
| 3. | 08/10/2013 10:56:33 | Sync with NTP server: [2013/08/10 10:56:33] |
| 4. | 08/10/2013 08:15:35 | [EVENT MGR]: Trigger Digital Output Action |
| 5. | 08/10/2013 08:15:34 | [VA MGR]:Trigger By Face Detection |
| 6. | 08/10/2013 04:56:31 | Sync with NTP server: [2013/08/10 04:56:31] |
| 7. | 08/09/2013 22:56:29 | Sync with NTP server: [2013/08/09 22:56:29] |
| 8. | 08/09/2013 22:13:49 | [EVENT MGR]: Trigger Digital Output Action |
| 9. | 08/09/2013 22:13:49 | [VA MGR]:Trigger By Face Detection |
| 10. | 08/09/2013 21:43:44 | [EVENT MGR]: Trigger Digital Output Action |
| 11. | 08/09/2013 21:43:44 | [VA MGR]:Trigger By Face Detection |
| 12. | 08/09/2013 21:38:45 | [EVENT MGR]: Trigger Digital Output Action |
| 13. | 08/09/2013 21:38:45 | [VA MGR]:Trigger By Face Detection |
| 14. | 08/09/2013 21:23:43 | [EVENT MGR]: Trigger Digital Output Action |
| 15. | 08/09/2013 21:23:42 | [VA MGR]:Trigger By Face Detection |
| 16. | 08/09/2013 21:11:49 | [EVENT MGR]: Trigger Digital Output Action |
| 17. | 08/09/2013 21:11:48 | [VA MGR]:Trigger By Face Detection |
| 18. | 08/09/2013 21:07:09 | [EVENT MGR]: Trigger Digital Output Action |
| 19. | 08/09/2013 21:07:08 | [VA MGR]:Trigger By Face Detection |
| 20. | 08/09/2013 20:55:51 | [EVENT MGR]: Trigger Digital Output Action |

13

Appendix

A. Alarm I/O Connector

Some features of the Camera can be activated by the external sensor that senses physical changes in the area Camera is monitoring. These changes can include intrusion detection or certain physical change in the monitored area. For examples, the external sensor can be a door switch or an infrared motion detector. These devices are customer provided, and are available from dealers who carry surveillance and security products. Electrically, they must be able to provide a momentary contact closure.

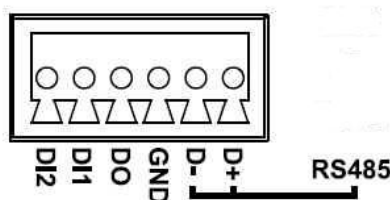
This Camera provides wires for general I/O terminal and RS485 interface as below:

Cable for I/O connectors:

| PIN | | SPECIFICATION |
|-----|-----------------|--|
| 1 | RS-485 D+ | Compliant to RS-485 |
| 2 | RS-485 D- | |
| 3 | Ground (Common) | GND |
| 4 | GPIO Out | Close circuit current maximum: 70mA AC or 100mA Output resistance: 30 ohm Open circuit voltage maximum: 240V AC or 350V DC |
| 5 | GPIO In #1 | Action high voltage: 9~40 VDC |
| 6 | GPIO In #2 | Dropout voltage: 0 VDC |

User can refer to the schematic below to make a proper connection between I/O connector and external sensor and output device.

Explanation of External I/O Circuit Diagram:



CAUTION!

- THE LOW VOLTAGE/CURRENT CIRCUITS AND HIGH VOLTAGE/ CURRENT CIRCUITS ARE IN THE NETWORK CAMERA CIRCUIT. THE QUALIFIED ELECTRICIAN SHOULD DO THE WIRING NOT BY YOURSELF. INCORRECT WIRING COULD DAMAGE NWTWORK CAMERA. YOU COULD RECEIVE THE FATAL ELECTRIC SHOCK.
- THE EXTERNAL I/O IS NOT CAPABLE OF CONNECTING DIRECTLY TO DEVICES THAT REQUIRE LARGE AMOUNTS OF CURRENT. IN SOME CASES, A CUSTOM INTERFACE CIRCUIT (CUSTOMER PROVIDED) MAY HAVE TO BE USED. SERIOUS DAMAGE TO NETWORK CAMERA MAY RESULT IF A DEVICE IS CONNECTED TO THE EXTERNAL I/O THAT EXCEEDS ITS ELECTRICAL CAPABILITY.

B. Frequently Ask Questions

| Question | Answer or Resolution |
|--|--|
| Features | |
| The video and audio codec is adopted in the device. | The device utilizes H.264, MPEG4 and JPEG triple compression to providing high quality images. Where H.264 and MPEG4 are standards for video compression and JPEG is a standard for image compression. The audio codec is defined as AMR for 3GPP and G.711 for RTSP streaming. |
| The maximum numbers of users access the device simultaneously. | The maximum number of users is limited to 20. However, it also depends on the total bandwidth accessed to this device from clients. The maximum data throughput of the device is around 20~25Mbps for UDP mode and 10Mbps for HTTP mode. Therefore, the actual number of connected clients is varying by streaming mode, settings of resolution, codec type, frame rate and bandwidth. Obviously, the performance of the each connected client will slow down when many users are logged on. |
| The device can be used outdoors or not. | The device is not weatherproof. It needs to be equipped with a weatherproof case for outdoors using. However, equipped with a weatherproof case might disable the audio function of the device. |

| Install this device | |
|---|--|
| Status LED does not light up. | <ul style="list-style-type: none"> • Check and confirm that the DC power adaptor, included in packaged, is used. Secure the power connector and re-power it on again. • If the problem is not solved, the device might be faulty. Contact your dealer for further help. |
| The network cabling is required for the device. | The device uses Category 5 UTP cable allowing 10 and/or 100 Base-T networking. |
| The device will be installed and work if a firewall exists on the network. | If a firewall exists on the network, port 80 is open for ordinary data communication. The HTTP port and RTSP port need to be opened on the firewall or NAT router. |
| The username and password for the first time or after factory default reset | Username = admin and leave password airlive . Note that it's all case sensitivity. |
| Forgot the username and password | <p>Follow the steps below.</p> <ol style="list-style-type: none"> 1. Restore the factory default setting by press pressing and holding down more than 3 seconds on the device. 2. Reconfigure the device. |
| Forgot the IP address of the device. | Check IP address of device by using the IPWizard II program or by UPnP discovery. |
| IPWizard II program cannot find the device. | <ul style="list-style-type: none"> • Re-power the device if cannot find the unit within 1 minutes. • Do not connect device over a router. IPWizard II program cannot detect device over a router. • If IP address is not assigned to the PC which running IPWizard II program, then IPWizard II program cannot find device. Make sure that IP address is assigned to the PC properly. • Antivirus software on the PC might interfere with the setup program. Disable the firewall of the antivirus software during setting up this device. • Check the firewall setting of your PC or Notebook. |
| Internet Explorer does not seem to work well with the device | Make sure that your Internet Explorer is version 6.0 or later. If you are experiencing problems, try upgrading to the latest version of Microsoft's Internet Explorer from the Microsoft webpage. |
| IPWizard II program fails to save the network parameters. | • Network may have trouble. Confirm the parameters and connections of the device. |
| UPnP NAT Traversal | |
| Can not work with NAT router | • Maybe NAT router does not support UPnP function. Please check user's manual of router and turn on UPnP function. |

| | |
|---|---|
| | <ul style="list-style-type: none"> • Maybe UPnP function of NAT router is not compatible to the IP camera. Please contact your dealer to get the approval routers list. |
| Some IP cameras are working but others are failed | <ul style="list-style-type: none"> • Maybe too many IP cameras have been installed on the LAN, and then NAT router is out of resource to support more cameras. You could turn off and on NAT router to clear out of date information inside router. |
| Access this device | |
| Cannot access the login page and other web pages of the Network Camera from Internet Explorer | <ul style="list-style-type: none"> • Maybe the IP Address of the Network Camera is already being used by another device or computer. To confirm this possible problem, disconnect the Network Camera from the network first, and then run the PING utility to check it out. • Maybe due to the network cable. Try correcting your network cable and configuration. Test the network interface by connecting a local computer to the Network Camera via a crossover cable. • Make sure the Internet connection and setting is ok. • Make sure enter the IP address of Internet Explorer is correct. If the Network Camera has a dynamic address, it may have changed since you last checked it. • Network congestion may prevent the web page appearing quickly. Wait for a while. <p>The IP address and Subnet Mask of the PC and Network Camera must be in the same class of the private IP address on the LAN.</p> <ul style="list-style-type: none"> • Make sure the http port used by the Network Camera, default=80, is forward to the Network Camera's private IP address. • The port number assigned in your Network Camera might not be available via Internet. Check your ISP for available port. • The proxy server may prevent you from connecting directly to the Network Camera, set up not to use the proxy server. • Confirm that Default Gateway address is correct. • The router needs Port Forwarding feature. Refer to your router's manual for details. • Packet Filtering of the router may prohibit access from an external network. Refer to your router's manual for details. • Access the Network Camera from the Internet with the global IP address of the router and port number of Network Camera. • Some routers reject the global IP address to access the Network Camera on the same LAN. Access with the private IP address and correct port number of Network Camera. • When you use DDNS, you need to set Default Gateway and DNS server address. • If it's not working after above procedure, reset Network Camera to default setting and installed it again. • If the problem is not solved, the Network Camera might be faulty. |

| | |
|---|--|
| | Contact your dealer for further help. |
| Image or video does not appear in the main page. | <ul style="list-style-type: none"> • The first time the PC connects to Network Camera, a pop-up Security Warning window will appear to download ActiveX Controls. When using Windows XP, or Vista, log on with an appropriate account that is authorized to install applications. • Network congestion may prevent the Image screen from appearing quickly. You may choose lower resolution to reduce the required bandwidth. |
| Check the device's ActiveX is installed on your computer | Go to C:\Windows\Downloaded Program Files and check to see if there is an entry for the file " IPCamera Control ". The status column should show "Installed". If the file is not listed, make sure your Security Settings in Internet Explorer are configured properly and then try reloading the device's home page. Most likely, the ActiveX control did not download and install correctly. Check your Internet Explorer security settings and then close and restart Internet Explorer. Try to browse and log in again. |
| Internet Explorer displays the following message: "Your current security settings prohibit downloading ActiveX controls". | Setup the IE security settings or configure the individual settings to allow downloading and scripting of ActiveX controls. |
| The device work locally but not externally. | <ul style="list-style-type: none"> • Might be caused from the firewall protection. Check the Internet firewall with your system or network administrator. The firewall may need to have some settings changed in order for the device to be accessible outside your LAN. • Make sure that the device isn't conflicting with any other web server running on your LAN. • Check the configuration of the router settings allow the device to be accessed outside your local LAN. • Check the bandwidth of Internet connection. If the Internet bandwidth is lower than target bit rate, the video streaming will not work correctly. |
| The unreadable characters are displayed. | Use the operating system of the selected language. Set the Encoding or the Character Set of the selected language on the Internet Explorer. |
| Frame rate is slower than the setting. | <ul style="list-style-type: none"> • The traffic of the network and the object of the image affect the frame rate. The network congestion causes frame rate slower than the setting. • Check the bandwidth of Internet connection. If the Internet bandwidth is lower than target bit rate, the video streaming will not work correctly. • Ethernet switching hub can smooth the frame rate. |
| Blank screen or very | • Your connection to the device does not have enough bandwidth to |

| | |
|--|--|
| slow video when audio is enabled. | <p>support a higher frame rate for the streamed image size. Try reducing the video streaming size to 160x120 or 320x240 and/or disabling audio.</p> <ul style="list-style-type: none"> • Audio will consume 32 kbps. Disable audio to improve video. Your Internet connection may not have enough bandwidth to support streaming audio from the device. |
| Image Transfer on e-mail or FTP does not work. | <ul style="list-style-type: none"> • Default Gateway and DNS server address should be set up correctly. • If FTP does not work properly, ask your ISP or network administrator about the transferring mode of FTP server. |
| Pan/Tilt does not work. (including Click to Center and Preset Positioning) | <ul style="list-style-type: none"> • Click [Refresh] on the Internet Explorer when the communication stops with the device. The image will refresh. • Other clients may be operating Pan/Tilt. • Pan/Tilt operation has reached the end of corner. |
| Pan/Tilt does not work smoothly. | <p>There may be a slight delay when you are using the Pan/Tilt feature in conjunction with streaming audio and video. If you find that there is a significant delay while panning or tilting the camera, try disabling the audio streaming and/or reducing the video streaming size.</p> |
| Video quality of the device | |
| The focus on the Camera is bad. | <ul style="list-style-type: none"> • The lens is dirty or dust is attached. Fingerprints, dust, stain, etc. on the lens can degrade the image quality. |
| The color of the image is poor or strange. | <ul style="list-style-type: none"> • Adjust White Balance. • To insure the images you are viewing are the best they can be, set the Display property setting (color quality) to 16bit at least and 24 bit or higher if possible within your computer. • The configuration on the device image display is incorrect. You need to adjust the image related parameters such as brightness, contrast, hue and sharpness properly. |
| Image flickers. | <ul style="list-style-type: none"> • Wrong power line frequency makes images flicker. Make sure the 50 or 60Hz format of your device. • If the object is dark, the image will flicker. Make the condition around the Camera brighter. |
| Noisy images occur. | <p>The video images might be noisy if the device is located in a very low light environment. Make the condition around the camera brighter or turn the White-light LED on.</p> |
| Miscellaneous | |
| Can not play the recorded ASF file | <p>Have installed Microsoft®'s DirectX 9.0 or later and use the Windows Media Player 11.0 or later to play the AVI filed recorded by the Device.</p> |

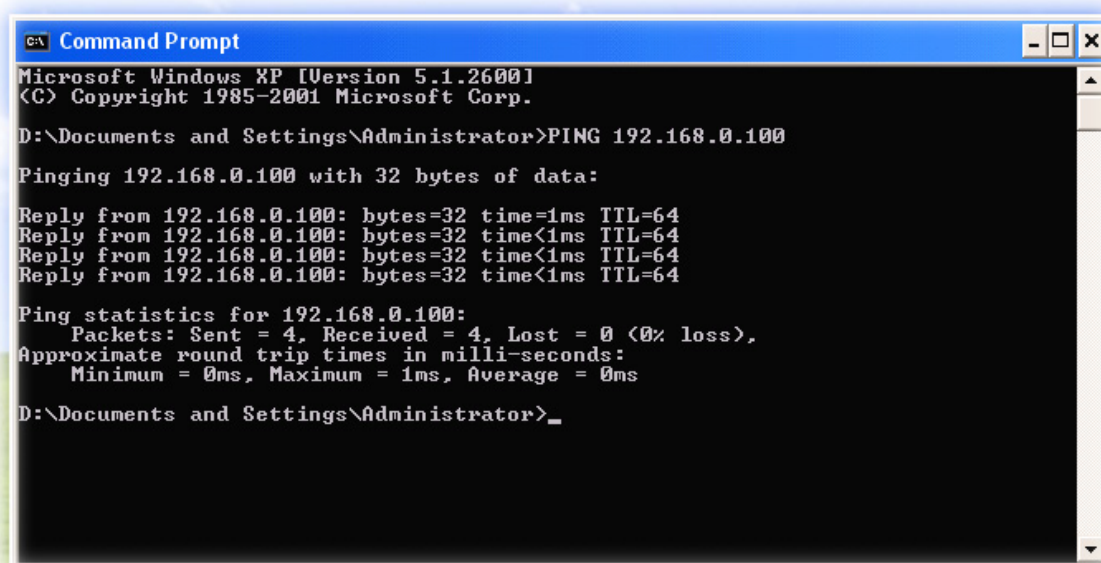
C. Ping IP Address

The PING (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm Network Camera installed or if the IP address conflicts with any other devices over the network.

If you want to make sure the IP address of Network Camera, utilize the PING command as follows:

- Start a DOS window.
- Type ping x.x.x.x, where x.x.x.x is the IP address of the Network Camera.

The replies, as illustrated below, will provide an explanation to the problem.



```
C:\ Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\Documents and Settings\Administrator>PING 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time=1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

D:\Documents and Settings\Administrator>_
```

If you want to detect any other devices conflicts with the IP address of Network Camera, also can utilize the PING command but you must disconnect the Network Camera from the network first.

D. Bandwidth Estimation

The frame rate of video transmitted from the device depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements from your device.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the device may be varying.

| Image Resolution | Average range of data sizes for JPEG mode | Average bit rate for MPEG4 mode | Average bit rate for H.264 mode |
|-------------------|---|---------------------------------|---------------------------------|
| 160 x 120 (QQVGA) | 3 ~ 6k byte per frame | 64kbps~256kbps @ 30fps | 32kbps~192kbps @ 30fps |
| 320 x 240 (QVGA) | 8 ~ 20k byte per frame | 256kbps~768kbps @ 30fps | 192kbps~512kbps @ 30fps |
| 640 x 480 (VGA) | 20 ~ 50K byte per frame | 512kbps~2048kbps @ 30fps | 384kbps~1536kbps @ 30fps |
| 1280x1024 (SXGA) | 100 ~ 200k byte per frame | NA | 512kbps~3076kbps @ 15fps |

Note: Audio streaming also takes bandwidth around 32kbps. Some xDSL/Cable modem upload speeds could not even reach up to 128 kbps. Thus, you may not be able to receive good quality video while also streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

E. Configure Port Forwarding Manually

The device can be used with a router. If the device wants to be accessed from the WAN, its IP address needs to be setup as fixed IP address, also the port forwarding or Virtual Server function of router needs to be setup. This device supports UPnP traversal function. Therefore, user could use this feature to configure port forwarding of NAT router first. However, if user needs to configure port forwarding manually, please follow the steps as below:

Manually installing the device with a router on your network is an easy 3-step procedure as following:

- (1) Assign a local/fixed IP address to your device
- (2) Access the Router with Your Web browser
- (3) Open/Configure Virtual Server Ports of Your Router

(1) Assign a local/fixed IP address to your device

The device must be assigned a local and fixed IP Address that allows it to be recognized by the router. Manually setup the device with a fixed IP address, for example, *192.168.0.100*.

(2) Access the Router with Your Web browser

The following steps generally apply to any router that you have on your network. The WN-300R is used as an example to clarify the configuration process. Configure the initial settings of the router by following the steps outlined in the router's **Quick Installation Guide**.

If you have cable or DSL service, you will most likely have a dynamically assigned WAN IP Address. 'Dynamic' means that your router's WAN IP address can change from time to time depending on your ISP. A dynamic WAN IP Address identifies your router on the public network and allows it to access the Internet. To find out what your router's WAN IP Address is, go to the **Status** screen on your router and locate the WAN information for your router. As shown on the following page the WAN IP Address will be listed. This will be the address that you will need to type in your web browser to view your camera over the Internet. Be sure to uncheck the **Reset IP address at next boot** button at the top of the screen after modifying the IP address. Failure to do so will reset the IP address when you restart your computer.



Your WAN IP Address will be listed here.

Note: Because a dynamic WAN IP can change from time to time depending on your ISP, you may want to obtain a Static IP address from your ISP. A Static IP address is a fixed IP address that will not change over time and will be more convenient for you to use to access your camera from a remote location. If you could not get a Static IP address from your ISP, the DIPS™ or DDNS is a solution alternatively. Please refer to Appendix G for more information.

(3) Open/set Virtual Server Ports to enable remote image viewing

The firewall security features built into the router and most routers prevent users from accessing the video from the device over the Internet. The router connects to the Internet over a series of numbered ports. The ports normally used by the device are blocked from access over the Internet. Therefore, these ports need to be made accessible over the Internet. This is accomplished using the **Virtual Server** function on the router. The Virtual Server ports used by the camera must be opened through the router for remote access to your camera. Virtual Server is accessed by clicking on the **Advanced** tab of the router screen.

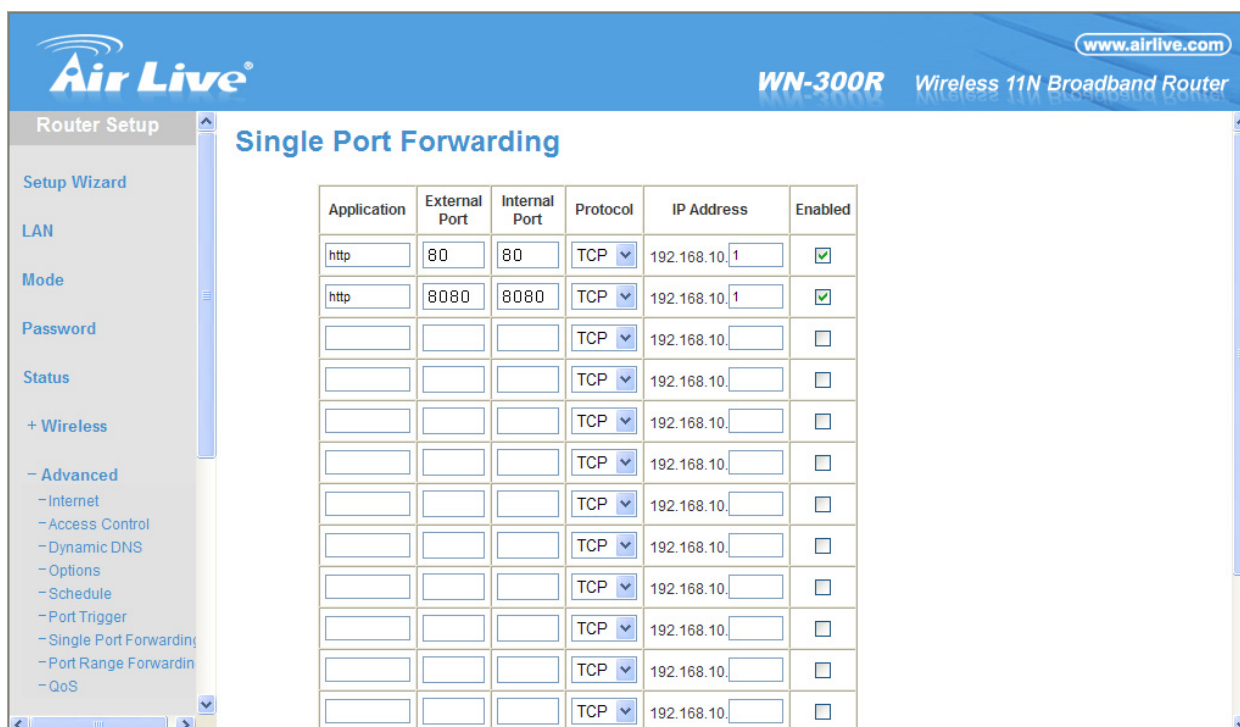
Follow these steps to configure your router's Virtual Server settings

- Click **Enabled**.
- Enter a unique name for each entry.

- Select **Both** under **Protocol Type (TCP and UDP)**
- Enter your camera's local IP Address (e.g., **192.168.1.100**, for example) in the **Private IP** field
- If you are using the default camera port settings, enter **80** into the **Public** and **Private Port** section, click **Apply**.
- **Scheduling** should be set to **Always** so that the camera images can be accessed at any time.

A check mark appearing before the entry name will indicate that the ports are enabled

Important: Some ISPs block access to port 80. Be sure to check with your ISP so that you can open the appropriate ports accordingly. If your ISP does not pass traffic on port 80, you will need to change the port the camera uses from 80 to something else, such as 8080. Not all routers are the same, so refer to your user manual for specific instructions on how to open ports.



| Application | External Port | Internal Port | Protocol | IP Address | Enabled |
|-------------|---------------|---------------|----------|--------------|-------------------------------------|
| http | 80 | 80 | TCP | 192.168.10.1 | <input checked="" type="checkbox"/> |
| http | 8080 | 8080 | TCP | 192.168.10.1 | <input checked="" type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |
| | | | TCP | 192.168.10. | <input type="checkbox"/> |

Enter valid ports in the **Virtual Server** section of your router. Please make sure to check the box on this line to enable settings. Then the device can be access from WAN by the router's WAN IP Address.

By now, you have finished your entire PC configuration for this device.

F. Power Line Frequency

| COUNTRY | VOLTAGE | FREQUENCY | COMMENTS |
|-----------------------------|-----------|-----------|---|
| Argentina | 220V | 50 Hz | *Neutral and line wires are reversed from that used in Australia and elsewhere. |
| Australia | 230V* | 50 Hz | *Outlets typically controlled by adjacent switch. Though <i>nominal</i> voltage has been officially changed to 230V, 240V is within tolerances and commonly found. |
| Austria | 230V | 50 Hz | |
| Brazil | 110/220V* | 60 Hz | *127V found in states of Bahia, Paran? (including Curitiba), Rio de Janeiro, S 綫 Paulo and Minas Gerais (though 220V may be found in some hotels). Other areas are 220V only, with the exception of Fortaleza (240V). |
| Canada | 120V | 60 Hz | |
| China, People's Republic of | 220V | 50 Hz | |
| Finland | 230V | 50 Hz | |
| France | 230V | 50 Hz | |
| Germany | 230V | 50 Hz | |
| Hong Kong | 220V* | 50 Hz | |
| India | 230V | 50 Hz | |
| Italy | 230V | 50 Hz | |
| Japan | 100V | 50/60 Hz* | *Eastern Japan 50 Hz (Tokyo, Kawasaki, Sapporo, Yokohoma, and Sendai); Western Japan 60 Hz (Osaka, Kyoto, Nagoya, Hiroshima) |
| Malaysia | 240V | 50 Hz | |
| Netherlands | 230V | 50 Hz | |
| Portugal | 230V | 50 Hz | |

| | | | |
|--------------------------|-------|-------|---|
| Spain | 230V | 50 Hz | |
| Sweden | 230V | 50 Hz | |
| Switzerland | 230V | 50 Hz | |
| Taiwan | 110V | 60 Hz | |
| Thailand | 220V | 50 Hz | |
| United Kingdom | 230V* | 50 Hz | *Outlets typically controlled by adjacent switch. Though <i>nominal</i> voltage has been officially changed to 230V, 240V is within tolerances and commonly found. |
| United States of America | 120V | 60 Hz | |

G. 3GPP

To use the 3GPP function, in addition to previous section, you might need more information or configuration to make this function work.

Note that to use the 3GPP function, it strongly recommends to install the Networked Device with a public and fixed IP address without any firewall protection.

RTSP Port:

Port 554 is the default for RTSP service. However, sometimes, some service providers change this port number for some reasons. If so, user needs to change this port accordingly.

Dialing procedure:

1. Choose a verified player (PacketVideo or Realplayer currently)
2. Use the following URL to access:

`rtsp://host/stream1`

Where *host* is the host name or IP address of the camera.

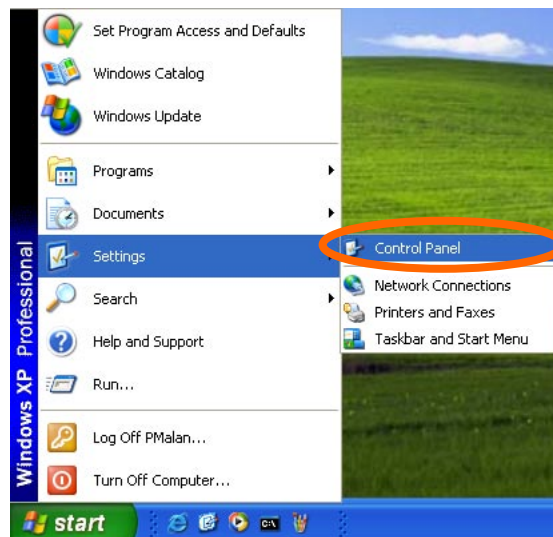
Compatible 3G mobile phone:

Please contact your dealer to get the approved list of compatible 3G phone.

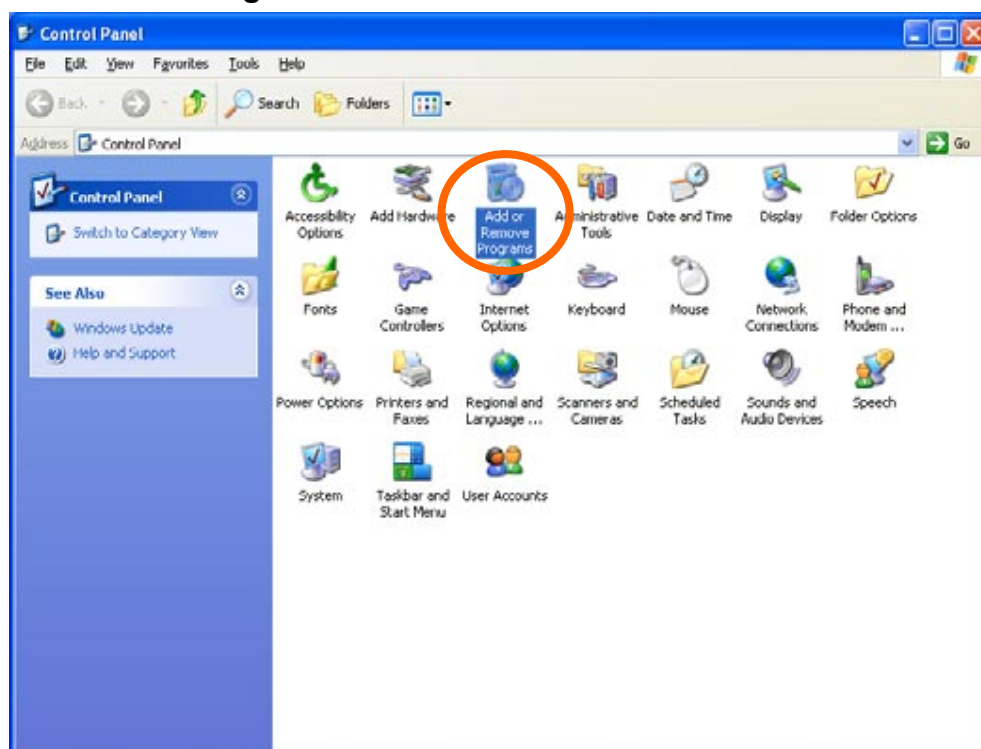
H. Enable UPnP of Windows XP

Use the following steps to enable UPnP settings only if your operating system of PC is running Windows XP.

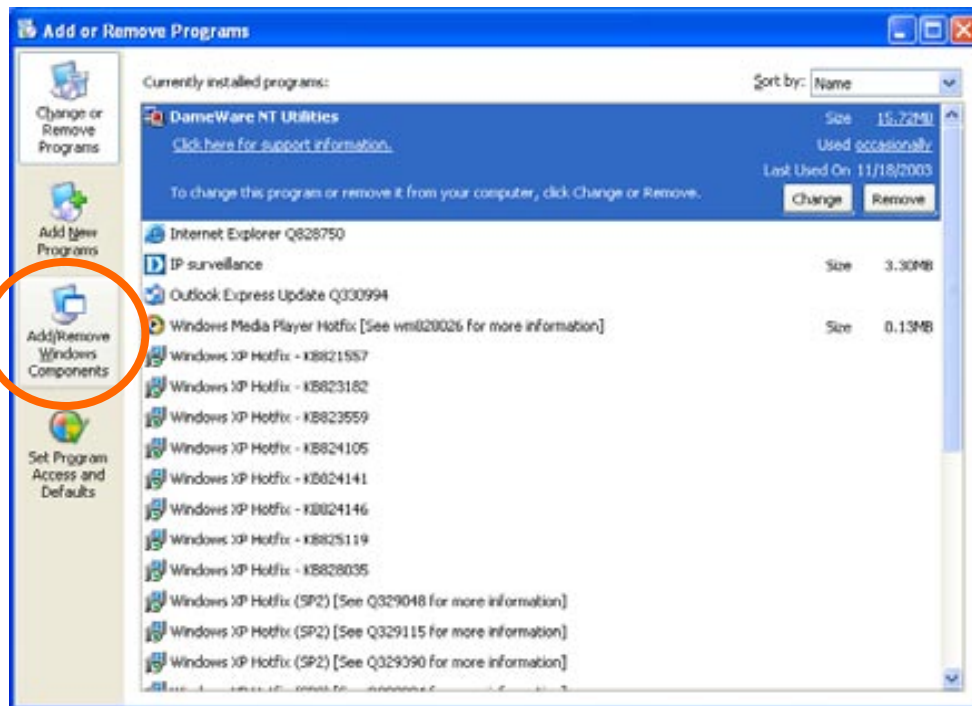
Go to **Start > Settings**, and then click **Control Panel**



Click **Add or Remove Programs**

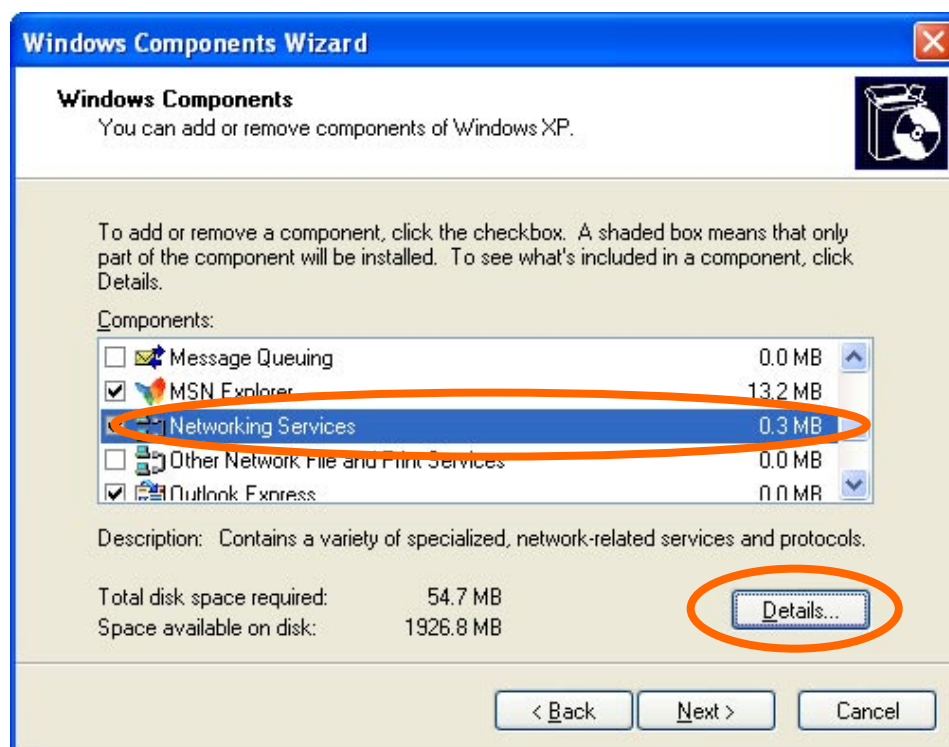


Click **Add/Remove Windows Components**

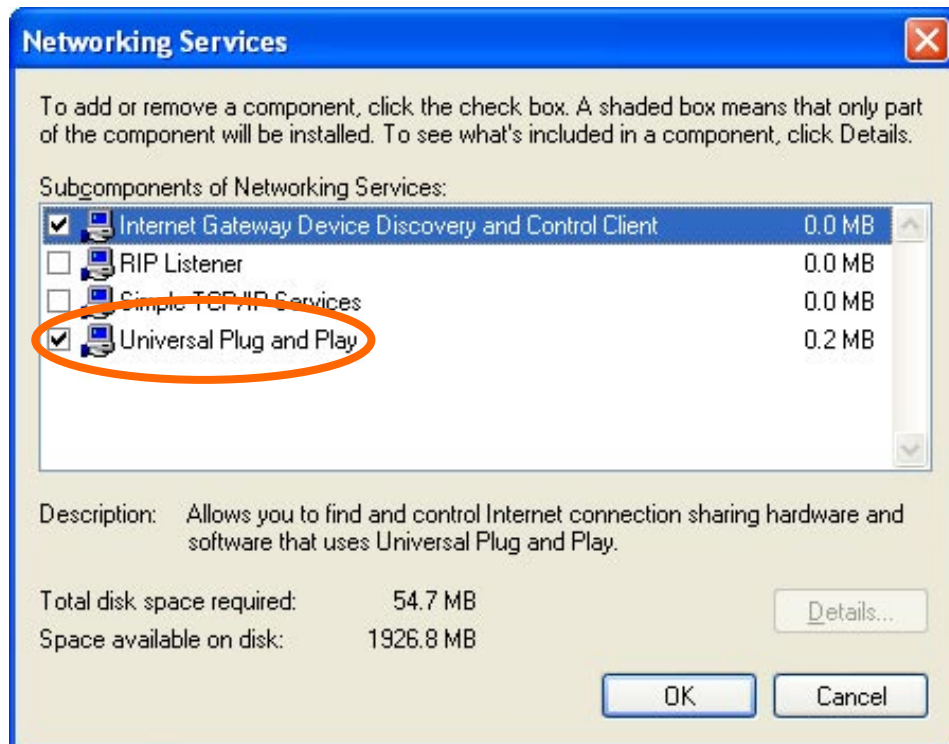


The following screen will appear:

Select **Networking Services**, and then click **Details**



Select **Universal Plug and Play**, and then click **OK**



Click **Next**

