



VS-100

H.264 PoE Video Server

User's Manual



www.airlive.com



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1

Overview



■ 1.1 Introduction

The VS-100 is an inexpensive fully scalable surveillance technology. Because the Video Servers can be plugged into your existing local area network infrastructure, you will potentially save thousands of dollars on unnecessary cabling.

The device is accessible via the LAN or Internet connection. Connect your Video Server directly to a local area network or xDSL modem, and with Microsoft® Internet Explorer you get instant, on demand video streams. Within minutes you can set up the device to capture a video sequence to a PC. The live video can be uploaded to a website for the world to see.

■ 1.2 Product Features and Specification

Feature Summary

- Upgrade your CCTV camera to network-enabled camera
- Support up to D1 resolution
- Multiple H.264, Motion JPEG and MPEG-4 video streams
- Support 802.3af Power over Ethernet function
- One MicroSD slot for store video clips locally
- Support RS-485, Digital Input and Digital Output for additional control
- UPnP and setup wizard for easy installation
- Addition 12V DC output for powering camera
- 64 channel surveillance software

Specification

Model Name	VS-100
Video Encoder	H.264, MPEG4 and Motion JPEG simultaneously (Tri-encoders)
Video Profile	9 profiles simultaneously - H.264 4CIF / CIF / QCIF - MPEG4 4CIF / CIF / QCIF - M-JPEG 4CIF / CIF / QCIF
Frame Rate	Up to 30fps for all profiles
Image Setting	De-interlace (4CIF resolution) De-noise Brightness, sharpness, contrast, color Text, time and date overlay
Streaming	Simultaneously multi-profile streaming Streaming over UDP, TCP, or HTTP Multicast streaming M-JPEG streaming over HTTP Supports 3GPP mobile surveillance Controllable frame rate and bandwidth Constant and variable bit rate (MPEG4 / H.264)

Audio	
Audio Encoder	RTSP: G.711 64kbps, G.726 32kbps 3GPP: AMR
Audio Streaming	One-way or two-way
Audio Input	Built-in or external microphone
Audio Output	Line level out
Network	
Supported Protocols	TCP, UDP, HTTP, SMTP, FTP, NTP, DNS, DDNS, DHCP, ARP, Bonjour, UPnP, RTSP, RTP, RTCP, PPPoE, 3GPP, ICMP, IGMP, SAMBA
Security	Password protection, IP address filtering, user access log
Users	20 simultaneous unicast users Two-level user privilege
Ethernet	10/100M auto negotiation
System Integration	
Alarm Triggers	Intelligent video motion detection and external input
Motion Detection	10-zone video motion detection
Alarm Events	File upload via FTP or email Notification via email, HTTP, and TCP External output activation Go to PTZ preset position Audio alerting output
Video Buffer	Pre- and post- alarm buffering
General	
Power Supply	12V DC external power adapter
Power Consumption	4W
Connectors	RJ-45 10BaseT/100BaseTX , DC jack 1 alarm input and 1 output RS485 External MIC in Audio line out Video out Micro SD card 12V DC output (400mA max.)
Operating Temperature	0°C ~ 40°C
Operating Humidity	20% ~ 80% (non-condensing)
Dimension	125X90X31mm (HXWXD)

Viewing System	
OS	Windows® XP, Vista
Browser	IE 6.0 or latter, Firefox 2.0 or later, Safari
Cell Phone	With 3GPP player
Video Player	VLC, Quick Time, Real Player, Core Player
Software	
Bundled NVR Program	CamPro Express 64, CamPro HD

■ 1.3 System Requirement

- Microsoft Internet Explorer 6.0 or later
- Microsoft Media Player 11.0 or later (to playback recorded file)
- VGA Monitor resolution 1024 x 768 or higher
- Pentium-4 2.0 GHz or higher
- Memory Size: 512MB or more
- Windows XP, Vista

2

Package Contents and Installation

■ 2.1 Package Contents

User can find the following items in the package as below:

- **VS-100** is the main element of the product.
- **Power Adapter** dedicates 12V DC electric power output to Video Server.
- **Power cable for external camera** to supply 12VDC power to external camera.
- **A/V Cable** is for audio line output (white cable) and video output (yellow cable).
- **User's Manual CD** provides important information and instructions for operating the Video Server.
- **Quick Start Guide** provides important information and instructions for installing this device.

Note: 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.

■ 2.2 Hardware Overview

Front Side



LAN Socket

The LAN socket is a RJ-45 connector 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 “straight through” cable to connect the Video Server to a 100Mbps Fast Ethernet network switch or hub. Note that, in case you need to connect the device to PC or notebook directly, you should use “cross-over” cable instead.

Video-in Jack

You can Install 1 video camera and connect it to video-in jack.

12VDC-Out Jack

The output power is 12VDC. This is used to supply 12VDC power to one external camera. The output power is 12VDC/400mA maximum.

DI/DO/RS485 and DI/DO Connector

The Video Server provides a terminal block with 6 pins of connectors for DIDO and RS485. Please refer to the Appendix B in this manual for more information.

Bottom Side



Audio in Jack

Audio in (microphone) jack allows an external microphone attached to this device.

Micro SD Card Slot

User can insert a micro SD card into this slot for event recording.

Status LEDs

The Status LED will turn green while system is booting up successfully.

This LED is also used to indicate the status of Network connection. The LED will flash green while some one accesses this Video Server.

12VDC-in Jack

The input power is 12VDC. Note that supply the power to the Video Server with standard power adapter included in package. Otherwise, the improper power adapter may damage the unit and result in danger.

Factory Default Reset

This button is hidden in the pinhole. This button is used to restore the all factory default settings. Sometimes restarting the Video Server will make the system back to a normal state. If the system still got problems after restart, user can restore the factory default settings and install it again. To restore the device, please follow the steps below:

1. Insert the paper clip or other tool and press and hold the button down continuously.
2. Hold it at least 5 seconds and release the tool. Then the device has been restored to default settings and reboot again.

Note: Restoring the factory default setting will lose the all 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.

Audio/Video Output Jack

Audio/Video-out Jack allows this device to output audio and video signal. Use the attached A/V cable to connect A/V device where white cable is for audio and yellow cable is for video.

■ 2.3 Hardware Installation

1. Attach video source to Video Server

To use this device, user must supply video source to this device first. Typical, user may utilize box camera, doom camera, bullet camera, P/T/Z camera, Speed doom camera, or others as the video source. Connect the BNC terminal of camera to the device's video input and make sure to power on these cameras first. Otherwise, the operation may be incorrect.



2. Attach external microphone to Video Server (option)



If user needs not only video stream but also audio stream, then an external microphone should be attached to Video Server. Connect an external microphone to the Video Server's audio input.

3. Plug an Ethernet cable into Video Server

Connect an Ethernet cable to the LAN socket located on the device's panel and attach it to the network.



4. Connect RS485 (option)

When users would like to apply a camera with P/T/Z function, they usually need to connect their communication port (for camera control) through RS485. After RS-485 was correctly connected to D+ and D-, the remote users could control the camera movement through Internet.

5. Connect an external power supply to Video Server



Connect an external power supply to the 12VDC power in connector of the Video Server.
Note: Use the power adapter, 12VDC, included in the package and connect the other end to wall outlet for AC power.

Once you have installed the Video Server well, the status LED will turn orange. It means the system is booting up successfully. Furthermore, if you have a proper network connection, and access to the Video Server, the LED will flash green

6. Connect the DC power to one external camera from Video Server (option)



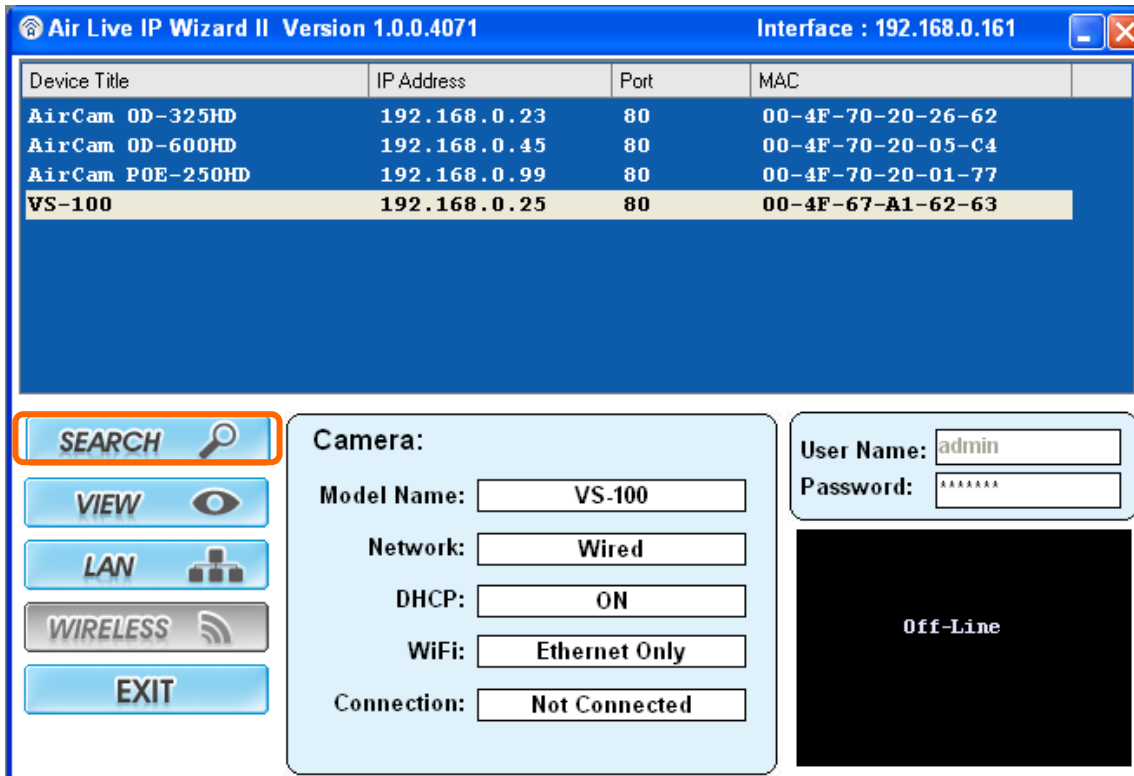
The Video Server can provide 12VDC out to supply one external camera. Note that the output current is 400mA maximum.

7. Done

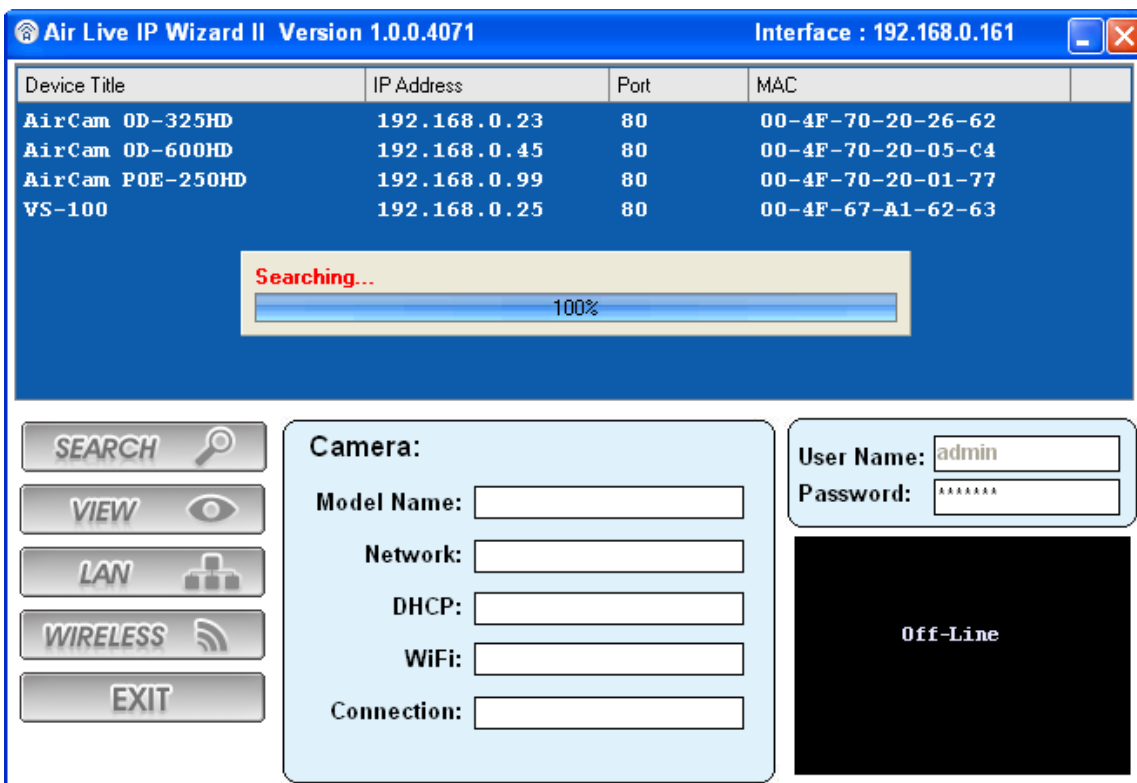
■ 2.4 Search and Set up by IPWizard II

When you installed the Camera on a LAN environment, you have two easy ways to search your Cameras by IPWizard II or UPnP discovery. Here is the way to execute IPWizard II to discover Camera's IP address and set up related parameter in a Camera.

Search

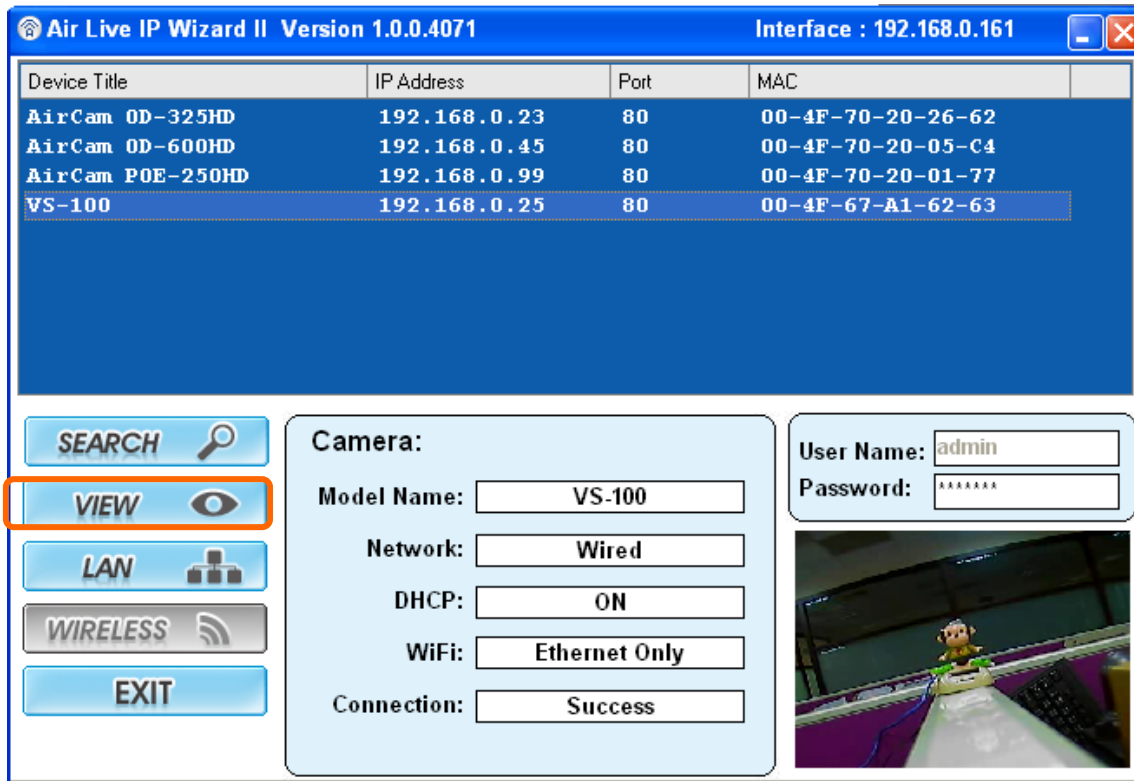


When launch the IPWizard II, a searching window will pop up. IPWizard II is starting to search Network Cameras on the LAN. The existed devices will be listed as below.





View


If IPWizard II finds network devices, View button will be available. Please select the device you want to view and click the View button. Then you could see the video from camera directly. Furthermore you could double click the left button of mouse to link to the network device by browser.




Device Title	IP Address	Port	MAC
AirCam OD-325HD	192.168.0.23	80	00-4F-70-20-26-62
AirCam OD-600HD	192.168.0.45	80	00-4F-70-20-05-C4
AirCam POE-250HD	192.168.0.99	80	00-4F-70-20-01-77
VS-100	192.168.0.25	80	00-4F-67-A1-62-63

SEARCH 

VIEW 

LAN 

WIRELESS 

EXIT

Camera:

Model Name: VS-100

Network: Wired


DHCP: ON

WiFi: Ethernet Only

Connection: Success

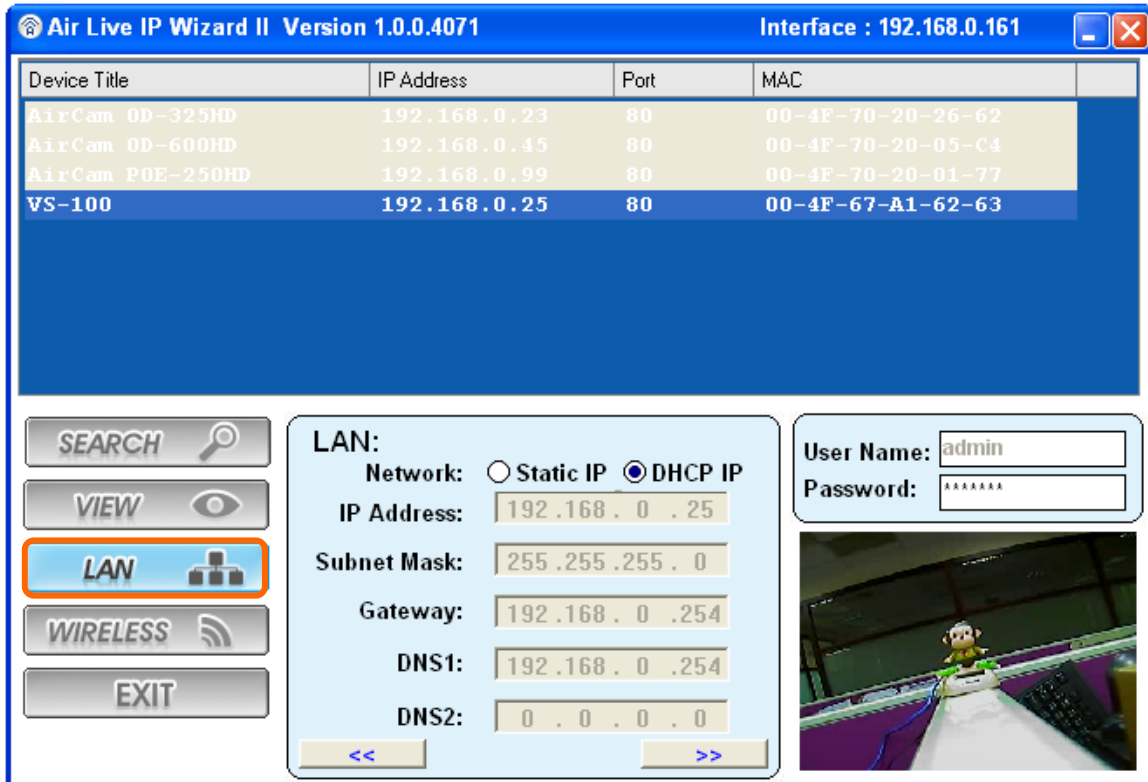
User Name: admin

Password: *****

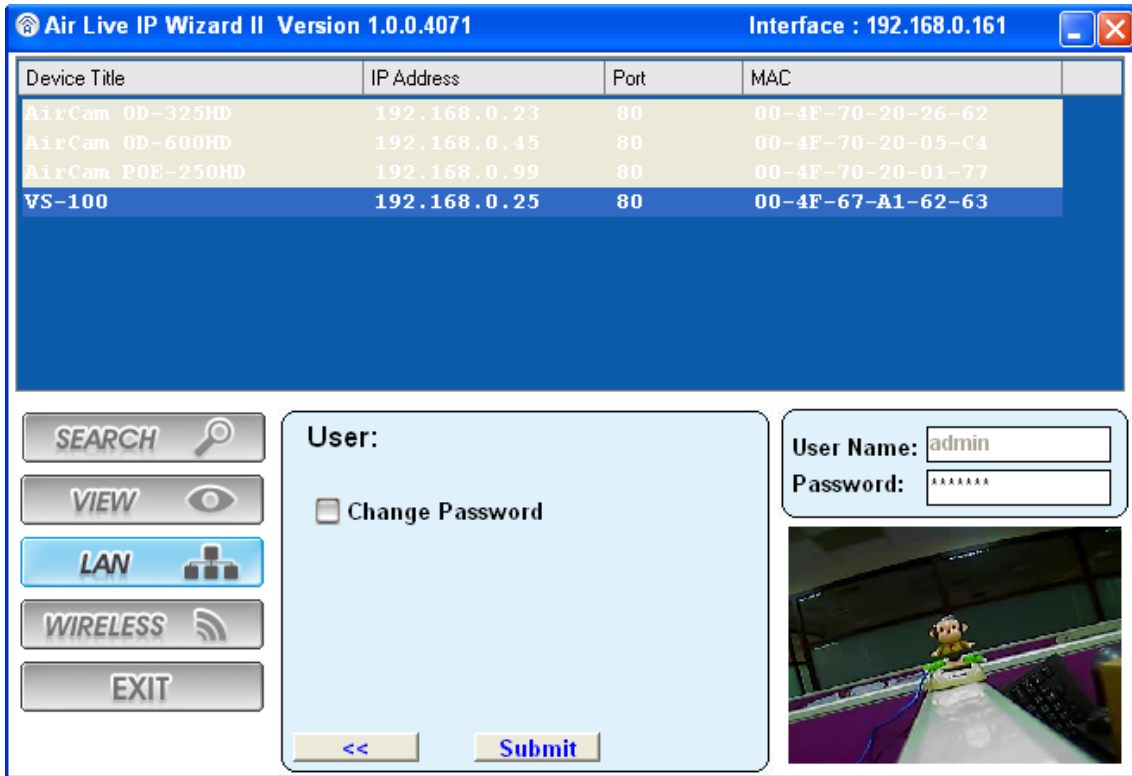


LAN

In case you want to change the IP related parameters of wired interface, please select the device you want to configure and click the LAN button. Relative settings will be carried out as below.

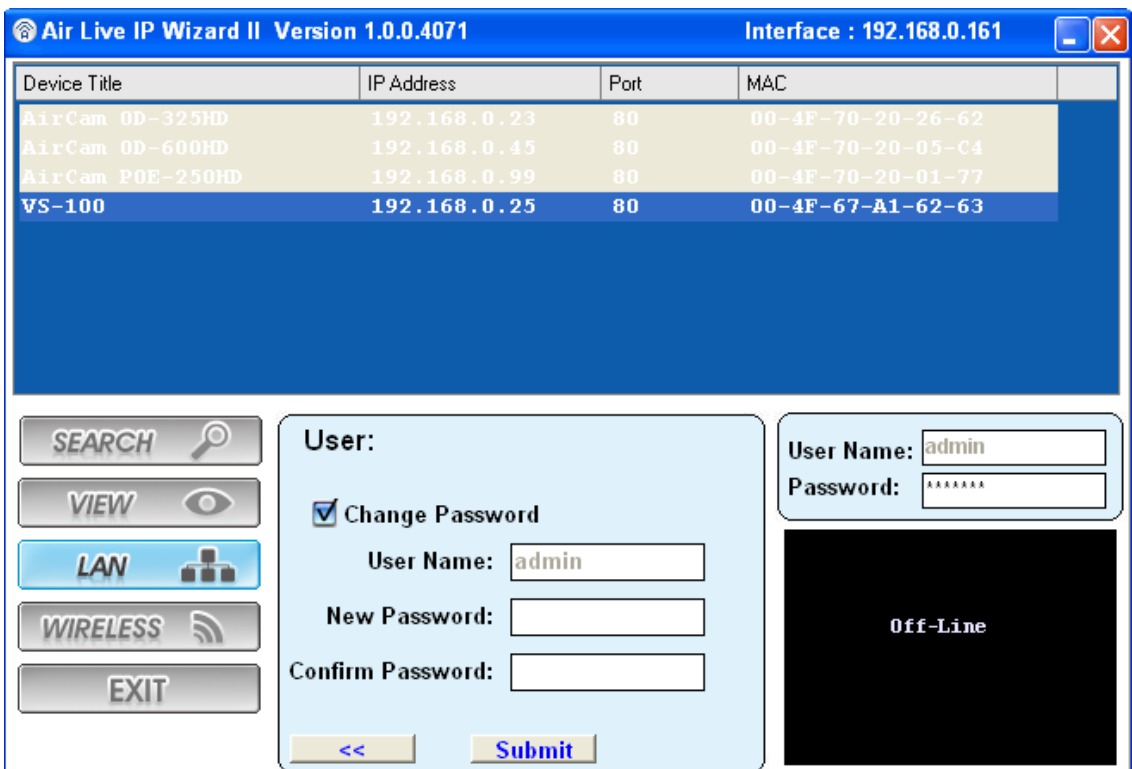


You could modify the relative settings of the selected device. Click "<<" button will quit the LAN setting procedure and click ">>" button will move to next page as below.



In case, you do not want to change username and/or password, then just click “Submit” button to perform your setting accordingly. Click “<<” button will go back to previous page.

If you like to change username and/or password of the device, just click the check button. Then, the related fields will show up as below.



After keying in new username and password, click “Submit” button to perform your setting accordingly. Click “<<” button will go back to previous page.

Wireless

VS-100 does not support wireless function.

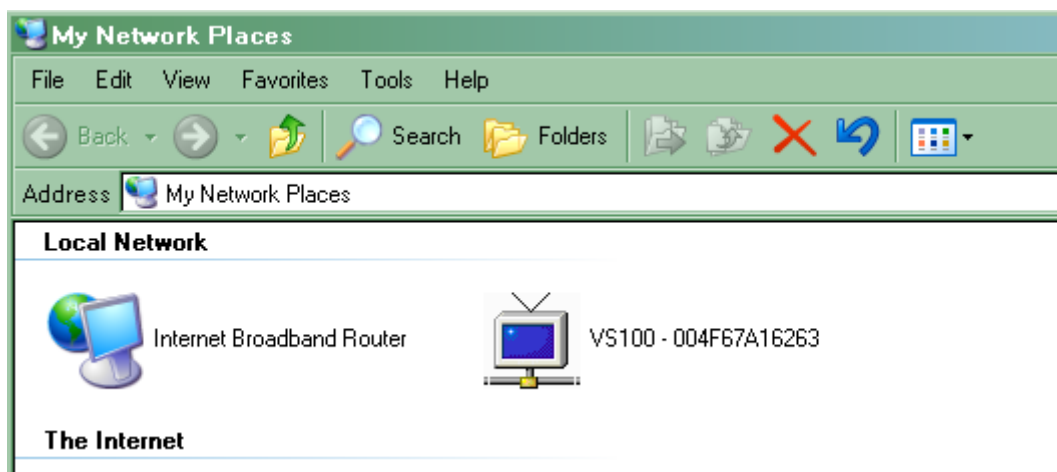
■ 2.5 Using UPnP of Windows® XP or Vista

UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows XP or Vista, of your PC is UPnP enabled, the Network Camera will be very easy to be found.

Please refer to Appendix J to enable UPnP settings only if your operating system of PC is running Windows XP.

Note: Windows 2000 does not support UPnP feature.

To discover your device, go to your Desktop and click My Network Places.



Click the targeted Device. Then Internet Explorer will connect to this Network Camera automatically.

3

Remote Access to VS-100

■ 3.1 Router

Once installed, the device is accessible on your LAN. To access the device from the Internet you must configure your broadband router to allow incoming data traffic to the device. If the device is installed on the LAN with a router, then it may get a dynamic IP address from the DHCP server. However, if the device wants to be accessed from the WAN, its IP address needs to be setup as fixed IP, also the port forwarding or Virtual Server function of router needs to be setup.

However, if your NAT router supports UPnP feature, it can be very easy to achieve NAT traversal automatically. To do this, enable the NAT-traversal feature, which will attempt to automatically configure the router to allow access to the camera.

Installing the device with an UPnP router on your network is an easy 3–step procedure:

1. Enable UPnP option of your NAT router
2. Enable UPnP NAT traversal option of the Network Camera (default)
3. Access your Network Camera by you public IP address

(1) Enable UPnP option of your NAT router

To use UPnP IGD function (NAT traversal), you need to make sure the UPnP function is enabled in your router. Most new home routers should support this function. Some of routers are default enable and others are not. Please check user's manual of your NAT router for detail.

(2) Enable UPnP NAT traversal option of the Network Camera

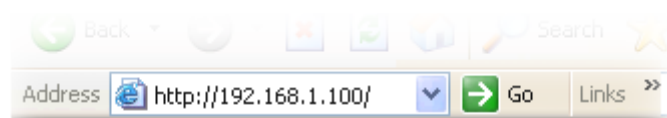
Refer to Setting → Network → UPnP page for detail NAT traversal setting. Note that this option is default enabled.

(3) Access your Network Camera by DIPS

Refer to **Setting** → **System** → **System** page for detail DIPS information.

■ 3.2 Access the VS-100 via Internet Explorer

1. Start the web browser on the computer and type the IP address of the Network Camera you want to monitor as below:



The Login Window of the Camera is prompted:



2. Type in your login name and password under “USERNAME” and “PASSWORD” textbox. For the first time use (default value), input the

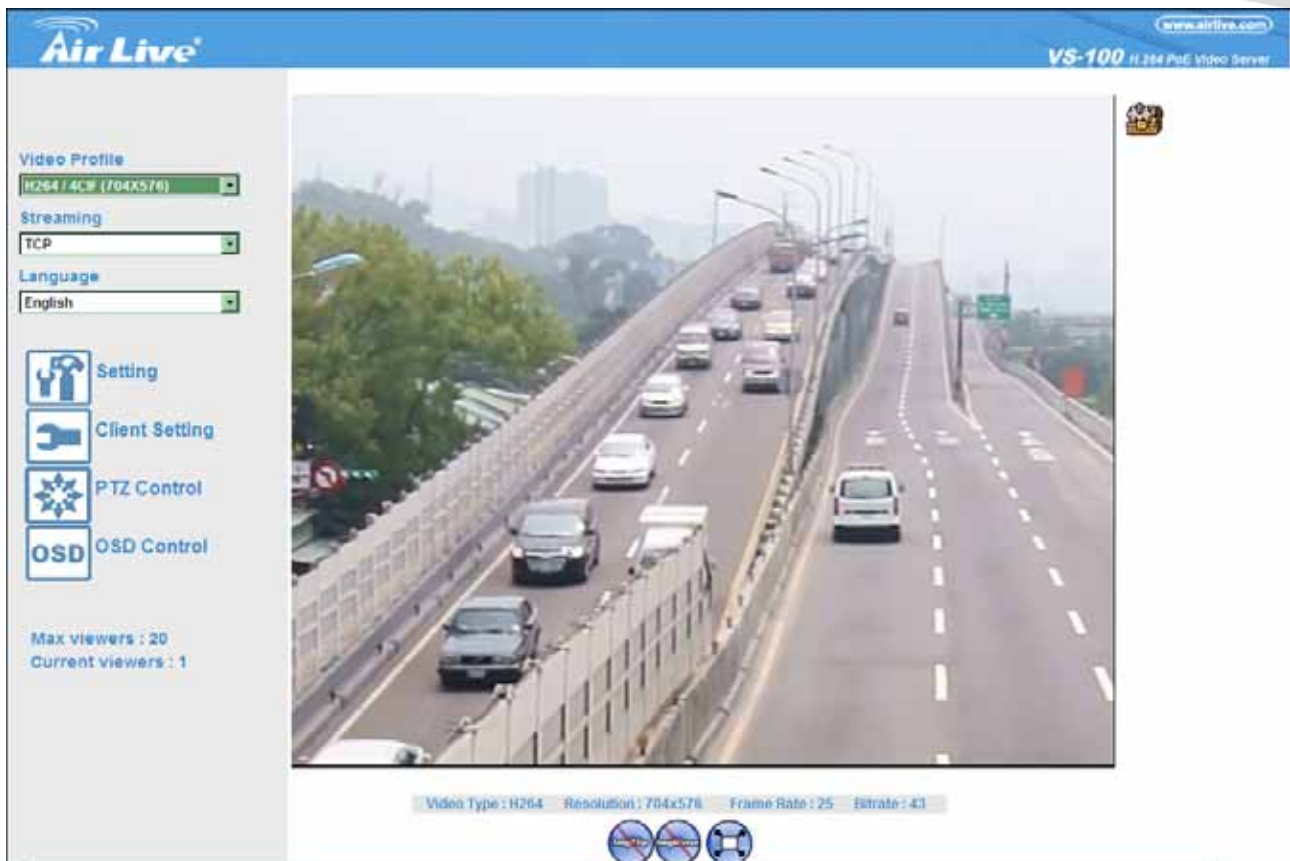
User Name: **admin**

Password: **airlive**

That's, type in “**admin**” on the “USERNAME” as a default name and type in “**airlive**” on the PASSWORD textbox. Click “OK” button to start the main menu.

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.



■ 3.3 Logging in as an User

If you log in the Camera as an ordinary User, “Setting” function will be not accessible.

■ 3.4 Logging in as an Administrator

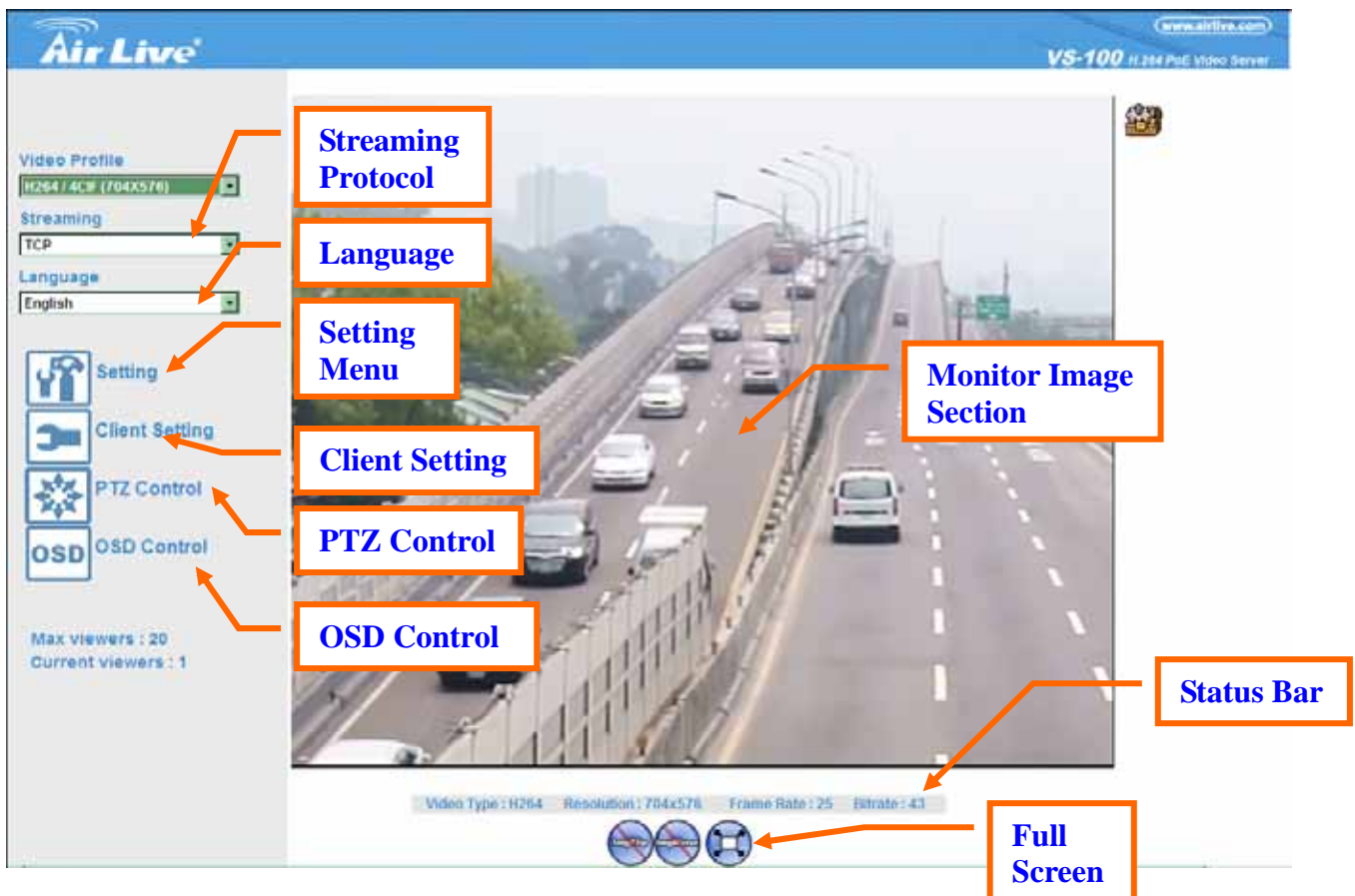
If you log in the Network Camera as the Administrator, you can perform all the settings provided within the device.

4

Operating the Video Server

4.1 Live View

Start-up screen will be as follow no matter an ordinary users or an administrator.



4.1.1 Monitor Image Section

The image shot by the Network Camera is shown here. The date and time are displayed at the top of the window.

4.1.2 Video Profile

The Network Camera support multi-profile for both MPEG4 and JPEG simultaneously. User can chose the proper and/or preferred profile here.

4.1.3 Streaming Protocol

User can select proper streaming protocol according to networking environment.

4.1.4 Language

The device could provide multiple languages to meet customer's requirement.

4.1.5 2-Way Audio

The device supports 2-way audio function. User can chose to enable or disable this function by toggling the icon below.



: Disable audio uploading function.



: Enable audio uploading function.

4.1.6 Full Screen

Enlarge video to full screen display.



: Enlarge video to full screen display. Press "ESC" key to disable this function.

4.1.7 Status Bar

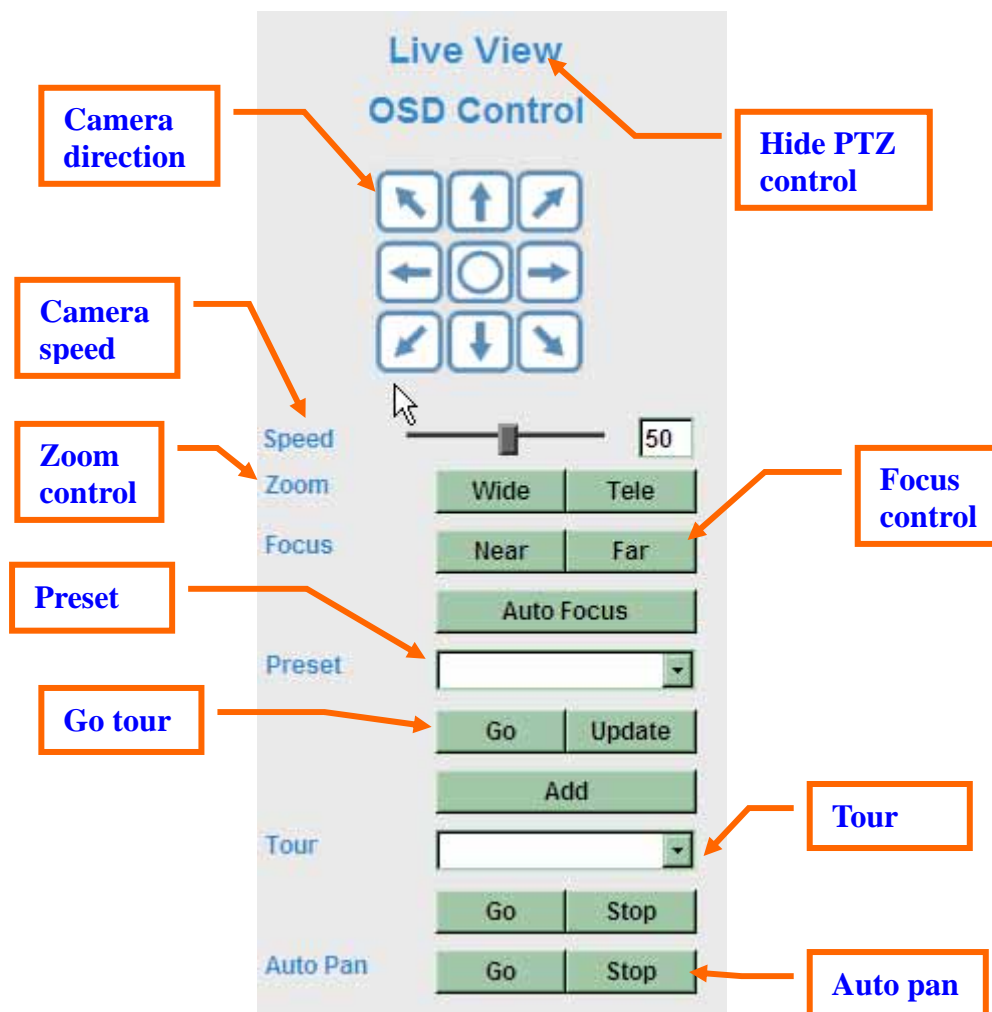
Show information of the connected device, such as encoder format, image resolution, frame per second, and bitrate.

4.1.8 Client Setting

Some collections of client related functions for user's easy use.

4.1.9 PTZ Control

Click to display the following control panel:



■ **Hide PTZ control:**

Click the icon will hide the PTZ control function.

■ **Camera direction:**

Control camera up/down/left/right and home position.

■ **Zoom control:**

Press **WIDE** to zoom out, and press **TELE** to zoom in.

■ **Focus control:**

To focus on a nearby object, press **NEAR**. To focus on a distant object, press **FAR**. By pressing ONE PUSH AF, the focus is set to the optimum position automatically.

■ **Camera speed:**

Choose the speed of Pan and Tilt.

■ **Preset:**

Add/Update the preset positions or go to one of these positions.

■ **Tour:**

Select one of the camera tours. Camera tour is comprised by series of preset locations.

■ **Go tour:**

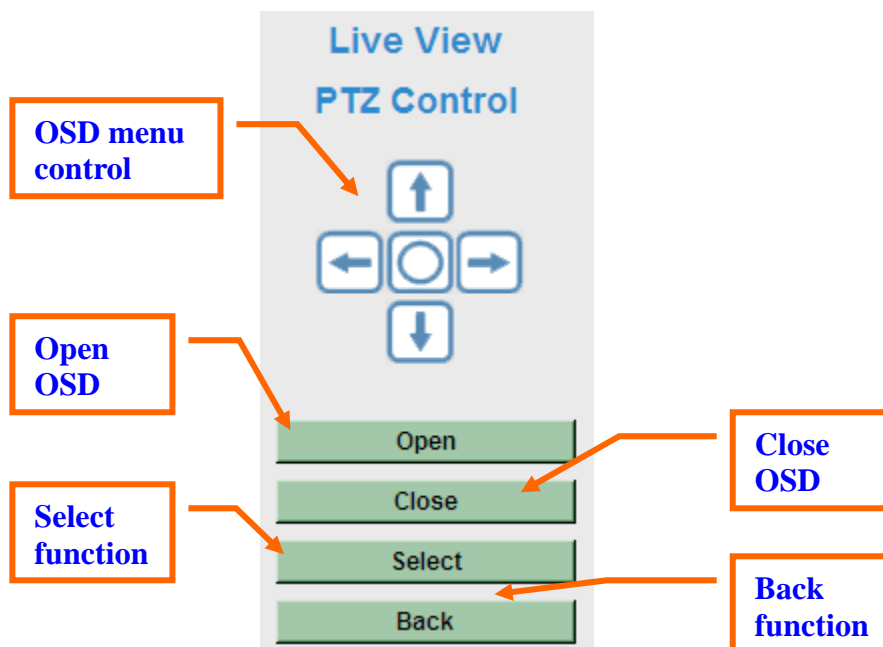
Execute the selected camera tour.

■ **Auto Pan:**

Execute the auto pan of camera. While auto pan is running, the camera will swing the camera automatically.

4.1.10 OSD Control

Click to display the following control panel:



■ **OSD menu control:**

Control OSD menu up/down/left/right.

■ **Open:**

Open OSD function.

■ **Close:**

Close OSD function.

■ **Select:**

Select/change the option in the OSD menu.


■ **Back:**

Back to upper level in the OSD menu.

■ **Exit:**

Exit this OSD page and return to home page.

4.1.11 ActiveX Control

The plug-in ActiveX control supports a lot of functions by clicking the  button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.

On the ActiveX control icon, click the Left Mouse Button, then a menu pop-up. This menu provides features that are unique to the ActiveX control. These features include:

- “Digital Zoom”,
- “Record”,
- “Snapshot”,
- “Voice”,
- “Statistics”,
- “About”

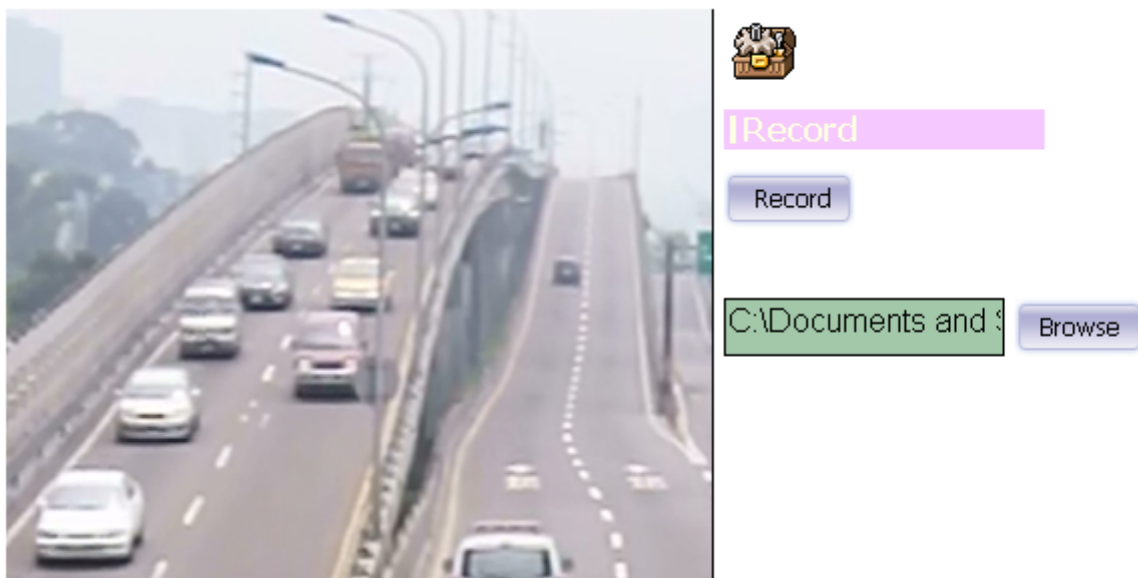


■ Digital Zoom



Click **Digital Zoom** to activate this function as above. User can drag or scale the box over the video to adjust zoom ratio and position.

■ Record

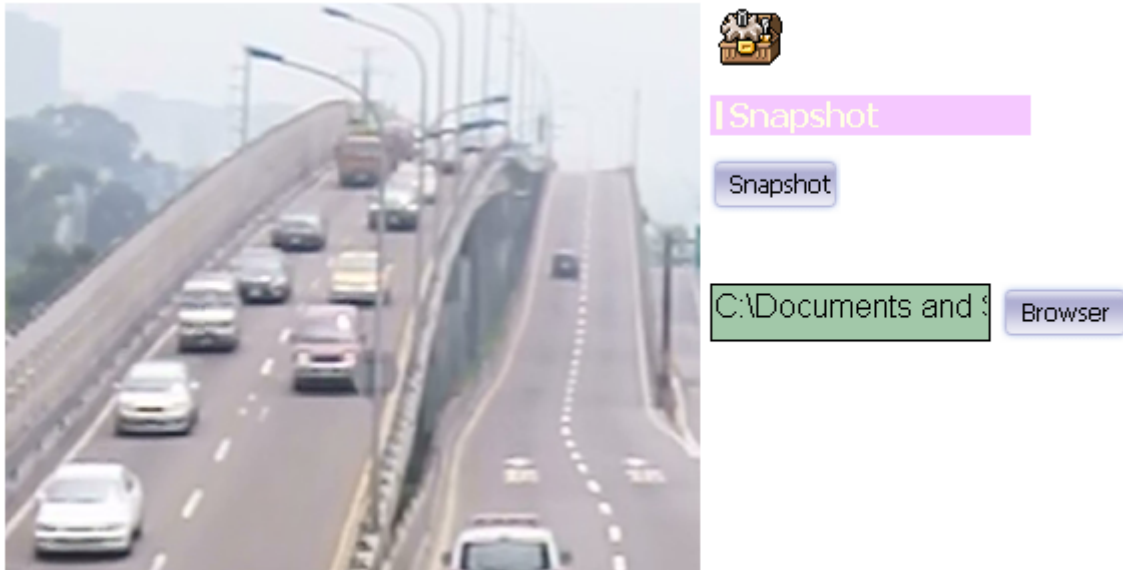


Click **Record** to activate this function. Press **Record** button to start recording. The video file is saved as ASF format into your local PC. While you want to stop it, press **Stop** to stop recording. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

After stop recording, list the files, this file is named as Video_yyyymmddhhmmss.avi

The ASF files can be display by the standard Windows Media Player, but it needs the DirectX 9.0 or later version to be installed.

■ Snapshot

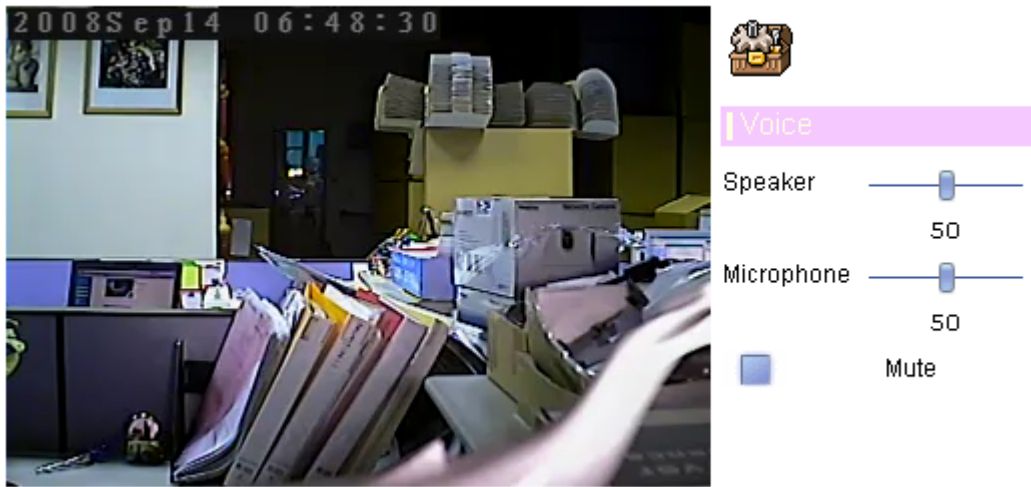


Click **Snapshot** to activate this function. Press **Snapshot** button to take a picture. The image file is saved as JPEG format into your local PC. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

If you like to retrieve the saved image, select the file to display the saved image by using any one of graph editing tools.

■ Voice

Click **Volume** to activate this function. There are two control bars for speaker and microphone volume respectively. Scroll these control bars to adjust the audio attribute. Check the volume mute will mute the speaker output.



■ **Statistics**

Click **Statistics** to activate this function. A window will popup to show the statistics information of the streaming status. **Note** that this information is the statistics between the device and your local PC.



■ **About**



Click **About** to show this ActiveX information.

■ 4.2 Administrating the Video Server

4.2.1 System Setting

This function is only available for user logged into Network Camera as administrator.

Click on each menu name to display its setting page.

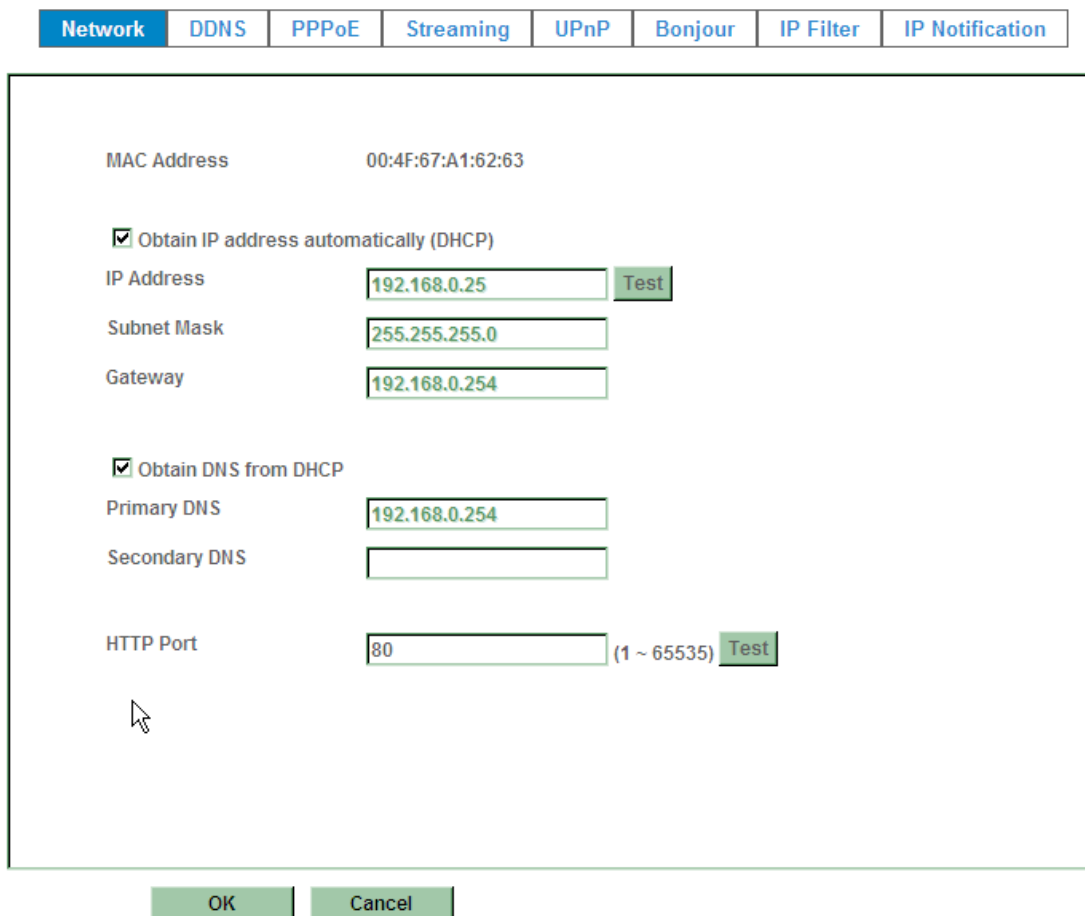
Item	Action
Network	Configure Network settings such as DHCP, DDNS, 3GPP, PPPoE and UPnP
Camera	Adjust camera parameters, position, and set camera tour
System	Configure system information, date & time, maintenance, and view system log file.
Video	Configure bit rate and frame rate of video profiles
Audio	Configure audio parameters
User	Setup user name, password and login privilege
E-Mail	Setup E-Mail configuration
Object Detection	Setup Object detection
Storage	Status and configuration of SD card
Recording List	Files list inside the SD Card
Event Server	Setup FTP/TCP/HTTP/SAMBA server for event
Event Schedule	Configure the schedule while event triggered

4.2.1.1 Network: Configure Network settings

Use this menu to configure the network to connect the device and the clients.

■ Network

This section provides the menu for connecting the device through Ethernet cable.



Network DDNS PPPoE Streaming UPnP Bonjour IP Filter IP Notification

MAC Address 00:4F:67:A1:62:63

Obtain IP address automatically (DHCP)

IP Address Test

Subnet Mask

Gateway

Obtain DNS from DHCP

Primary DNS

Secondary DNS

HTTP Port (1 ~ 65535) Test

OK Cancel

■ MAC address:

Displays the Ethernet MAC address of the device. Note that user can not change it.

■ Obtain an IP address automatically (DHCP):

DHCP: Stands for Dynamic Host Configuration Protocol.

Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically. If this device can not get an IP address within limited tries, the device will assign a default IP address, 192.168.1.100, by itself as the default IP address.

■ IP address, Subnet mask, and Gateway:

If you do not select **Obtain an IP address automatically**, then you need to enter these network parameters manually.

■ Obtain DNS from DHCP:

DNS: Stands for Domain Name System.

Enable this checked box when a DHCP server is installed on the network and provide DNS service.

■ Primary DNS and Secondary DNS:

If you do not select **Obtain DNS from DHCP**, then you need to enter these parameters manually.

■ HTTP Port:

The device supports two HTTP ports. The first one is default port 80 and this port is fixed. This port is very useful for Intranet usage. The second HTTP port is changeable. Users could assign the second port number of http protocol, and the WAN users should follow the port number to login. If the http port is not assigned as 80, users have to add the port number in back of IP address. For example: <http://192.168.0.100:8080>.

Therefore, the user can access the device by either

<http://xx.xx.xx.xx/>, or

<http://xx.xx.xx.xx:xxxx/> to access the device.

If multiple devices are installed on the LAN and also required to be accessed from the WAN, then the **HTTP Port** can be assigned as the virtual server port mapping to support multiple devices.

Click “OK” to save and enable the setting.

4.2.1.2 DDNS service

DDNS: Stands for Dynamic Domain Name Server

Your Internet Service Provider (ISP) provides you at least one IP address which you use to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it's likely to change periodically. Just how often it changes, depends on

your ISP. A dynamic IP address complicates remote access since you may not know what your current WAN IP address is when you want to access your device over the Internet. One of the possible solutions to the dynamic IP address problem comes in the form of a dynamic DNS service.

A dynamic DNS service is unique because it provides a means of updating your IP address so that your listing will remain current when your IP address changes. There are several excellent DDNS services available on the Internet. One such service you can use is www.DynDNS.org. You'll need to register with the service and set up the domain name of your choice to begin using it. Please refer to the home page of the service for detailed instructions or refer to Appendix G for more information.

If your device is connected to xDSL directly, you might need this feature. However, if your device is behind a NAT router, you will not need to enable this feature because your NAT router should take care of this job. As to xDSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP server, then the Dynamic Domain Name Server is necessary.

Network	DDNS	PPPoE	Streaming	UPnP	Bonjour	IP Filter	IP Notification
---------	-------------	-------	-----------	------	---------	-----------	-----------------

DDNS	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Server Name	<input type="text" value="dyndns.org"/>
DDNS Host	<input type="text"/> (1 ~ 30 Digits)
User Name	<input type="text"/> (< 22 Digits)
Password	<input type="text"/> (< 22 Digits)

OK	Cancel
----	--------

- **DDNS:**

To enable or disable the DDNS service here.

- **Server name:**

Choose the built-in DDNS server.

- **DDNSHost:**

The domain name is applied of this device.

- **User name:**

The user name is used to log into DDNS.

- **Password:**

The password is used to log into DDNS.

4.2.1.3 PPPoE

PPPoE: Stands for Point to Point Protocol over Ethernet

A standard builds on Ethernet and Point-to-Point network protocol. It allows your device with xDSL or cable connects with broadband network directly, then your device can dial up and get a dynamic IP address. For more PPPoE and Internet configuration, please consult your dealer or ISP.

The device can directly connect to the xDSL, however, it should be setup on a LAN environment to program the PPPoE information first, and then connect to the xDSL modem. Power on again, then the device will dial on to the ISP connect to the WAN through the xDSL modem.

The procedures are

- Connect to a LAN by DHCP or Fixed IP
- Access the device, enter **Setting → Network → PPPoE** as below

Network	DDNS	PPPoE	Streaming	UPnP	Bonjour	IP Filter	IP Notification
---------	------	--------------	-----------	------	---------	-----------	-----------------

PPPoE	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
User Name	<input type="text"/> (< 65 Digits)
Password	<input type="text"/> (< 65 Digits)
IP Address	<input type="text"/> (readonly)
Subnet Mask	<input type="text"/> (readonly)
Gateway	<input type="text"/> (readonly)
Status	<input type="text"/> (readonly)

OK	Cancel
----	--------

■ **PPPoE:**

To enable or disable the PPPoE service here.

■ **User name:**

Type the user name for the PPPoE service which is provided by the ISP.

■ **Password:**

Type the password for the PPPoE service which is provided by the ISP.

■ **IP address, Subnet mask, and Gateway (read only):**

Shows the IP information got from PPPoE server site.

■ **Status:**

Shows the Status of PPPoE connection.

4.2.1.4 Streaming

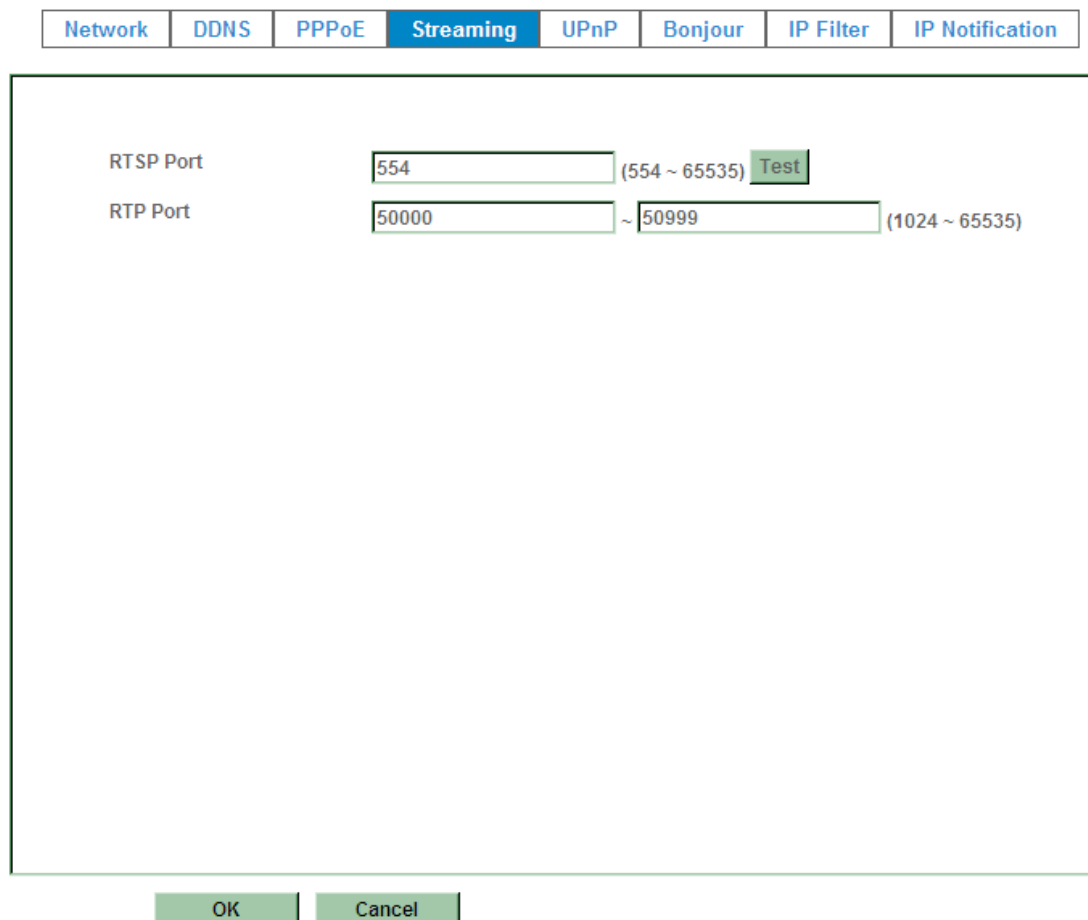
RTSP is a streaming control protocol, and a starting point for negotiating transports such as RTP, multicast and Unicast, and for negotiating codecs. RTSP can be considered a "remote control" for controlling the media stream delivered by a media server. RTSP servers typically use RTP as the protocol for the actual transport of audio/video data.

■ RTSP Port:

Choose the RTSP port. The RTSP protocol allows a connecting client to start a video stream. Enter the RTSP port number to use. The default value is 554.

■ RTP Port:

Specify the range of transmission port number of video stream. The default range is 50000 to 50999. User can specify a number between 1024 and 65535.



The screenshot shows a configuration window with a tabbed interface. The 'Streaming' tab is selected. The window contains two main sections: 'RTSP Port' and 'RTP Port'. The 'RTSP Port' section has a text input field containing '554', a range indicator '(554 ~ 65535)', and a 'Test' button. The 'RTP Port' section has two text input fields: the first contains '50000' and the second contains '50999', with a tilde '~' between them. A range indicator '(1024 ~ 65535)' is positioned to the right of the second input field. At the bottom of the window are 'OK' and 'Cancel' buttons.

4.2.1.5 UPnP

UPnP is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled Video Server. If your operating system is UPnP enabled, the device will automatically be detected and a new icon will be added to “My Network Places.” If you do not want to use the UPnP functionality, it can be disabled. In addition; this device also provides UPnP IGD function for NAT traversal easily. Use NAT traversal when your device is located on an intranet (LAN) and you wish to make it available from the other (WAN) side of a NAT router. With NAT traversal properly configured, all HTTP traffic to an external HTTP port in the NAT router will be forwarded to the device.

- **UPnP:**

To enable or disable the UPnP service here.

- **Friendly Name:**

Shows the friendly name of this device here.

- **UPnP NAT Traversal**

When enabled, the device will attempt to configure port mapping in a NAT router on your network, using UPnP™. **Note** that UPnP™ must be enabled in the NAT router first.

- **Port Range:**

The port range will open in NAT router.

- **External IP address:**

Show the IP address and port for WAN access through Internet. If NAT traversal is configured successfully, user can use this IP address and port to access this device. The external IP address is not shown in case NAT traversal function is failed.

Network DDNS PPPoE Streaming **UPnP** Bonjour IP Filter IP Notification

UPnP Disable Enable

Friendly Name VS-100 - 004F67A16263 (readonly)

UPnP NAT Traversal Disable Enable

Port Range 32768 ~ 65535 (1 ~ 65535)

External IP Address (readonly)

OK Cancel

4.2.1.6 IP Filter

You can enter different user's IP address which are allowing enter or denying by the device.

■ IP Filter:

To enable or disable the IP filter function here.

■ IP Filter Policy:

Choose the filter policy where is denying or allowing.

Network	DDNS	PPPoE	Streaming	UPnP	Bonjour	IP Filter	IP Notification
---------	------	-------	-----------	------	---------	-----------	-----------------

IP Filter Disable Enable

IP Filter Policy Deny Allow

Filter IP List

Filter IP	<input style="width: 90%;" type="text"/>
<input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="DeleteAll"/>	

4.2.1.7 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.

- **SMTP 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.

Network	DDNS	PPPoE	Streaming	UPnP	Bonjour	IP Filter	IP Notification
<p>SMTP Notification(email) <input checked="" type="radio"/> Disable <input type="radio"/> Enable</p> <p>Send To <input type="text"/> (< 129 Digits)</p> <p>Subject <input type="text" value="IP notification"/> (< 65 Digits)</p> <p>TCP Notification <input checked="" type="radio"/> Disable <input type="radio"/> Enable</p> <p>TCP Server <input type="text"/> (< 65 Digits)</p> <p>TCP Port <input type="text"/> (1 ~ 65535)</p> <p>Message <input type="text"/> (< 65 Digits)</p> <p>HTTP Notification <input checked="" type="radio"/> Disable <input type="radio"/> Enable</p> <p>URL <input type="text" value="http://"/> (< 61 Digits)</p> <p>HTTP Login Name <input type="text"/> (< 22 Digits)</p> <p>HTTP Login Password <input type="text"/> (< 22 Digits)</p> <p>Proxy Address <input type="text"/> (< 129 Digits)</p> <p>Proxy Port <input type="text"/> (1 ~ 65535)</p> <p>Proxy Login Name <input type="text"/> (< 22 Digits)</p> <p>Proxy Login Password <input type="text"/> (< 22 Digits)</p> <p style="text-align: center;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </p>							

■ **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.

■ **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.

- **Proxy Address:**

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

- **Proxy Port:**

Set port number of Proxy.

- **Proxy Login name:**

Type the user name for the HTTP Proxy.

- **Proxy Login Password:**

Type the password for the HTTP Proxy.

- **Custom parameter:**

User can set specific parameters to HTTP server.

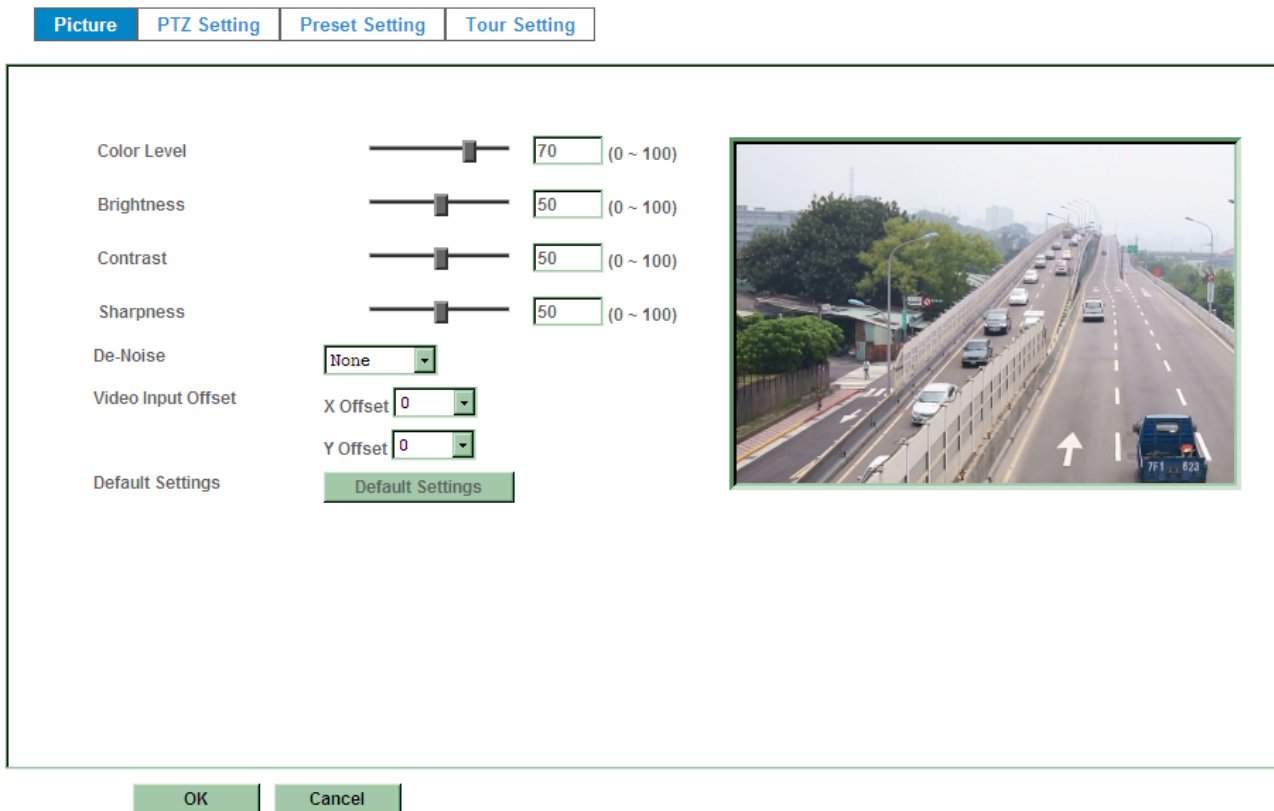
- **Message:**

The message will be sent to HTTP server.

4.2.2 Camera: Adjust Camera parameters

Use this menu to set the functions of the camera parameters of the device.

4.2.2.1 Picture



- **Color Level:**

Large value will be colorful.

- **Brightness:**

Large value will brighten camera.

- **Sharpness:**

Large value will sharpen camera.

- **Contrast:**

Large value will contrast camera heavily.

- **De-Noise:**

De-Noise can remove or lower unwanted noise and preserve fine details and edges.

- **Video Input Offset:**

Use to adjust start point of captured video.

- **Default Settings:**

Restore to factory image settings.

4.2.2.2 PTZ Setting

- **Camera Protocol:**

This device can connect to a PTZ camera or speed dome camera and controls them thru RS485 interface.

- **Camera Address:**

This is the camera ID set in PTZ camera or speed dome camera. Note that please DO NOT change the default value if unnecessary. If so, user needs to check and set value properly for both sides.

- **Baud rate:**

This is the communication speed between network module and speed dome camera. Note that please DO NOT change the default value if unnecessary. If so, user needs to check and set value properly for both sides.

Picture **PTZ Setting** Preset Setting Tour Setting

Camera Protocol	Pelco-D
Camera Address	1
Baud rate	9600
OSD Control	Default
OSD Open	ff,id,00,07,00,37,checksum
OSD Close	ff,id,00,07,00,37,checksum
OSD Select	ff,id,00,07,00,3d,checksum
OSD Back	ff,id,00,07,00,3d,checksum
OSD Up	ff,id,00,07,00,38,checksum
OSD Down	ff,id,00,07,00,39,checksum
OSD Left	ff,id,00,07,00,3a,checksum
OSD Right	ff,id,00,07,00,3b,checksum

OK Cancel

■ **OSD Control:**

Choose the corresponding model for OSD control

■ **OSD Open:**

Control commands for Open function.

■ **OSD Close:**

Control commands for Close function.

■ **OSD Select:**

Control commands for Select function.

■ **OSD Back:**

Control commands for Back function.

- **OSD Up:**

Control commands for Up function.

- **OSD Down:**

Control commands for Down function.

- **OSD Left:**

Control commands for Left function.

- **OSD Right:**

Control commands for Right function.

4.2.2.3 Preset Setting

This page provides the edit tool to modify or delete the “Preset Setting” item by item.

Picture PTZ Setting **Preset Setting** Tour Setting

Preset Number	Preset Name	Home Position

Preset List	
Preset Number	<input type="text"/>
Preset Name	<input type="text"/>
Home Position	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
<input type="button" value="Modify"/> <input type="button" value="Delete"/>	

4.2.2.4 Tour Setting

Up to 128 positions can be preset, and the camera can be programming to move to the preset position sequentially.

Picture
PTZ Setting
Preset Setting
Tour Setting

Tour Number	Tour Name	Running	Sequence	Preset Name	Wait Time

Tour Name	<input style="width: 95%;" type="text"/>
Running	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
<input type="button" value="Add"/> <input type="button" value="Modify"/> <input type="button" value="Delete"/>	

■ **Tour Name:**

The group name of the sequence of camera tour. The maximum number of camera tour is 16.

■ **Running:**

Enable or disable this camera tour.

■ **Preset:**

Set the sequence of the tour. Maximum 16 points can be assigned. The selected preset position is added in the Sequence list from 1 to 16.

■ **Wait Time:**

Type a period of time during which the camera is to stay at each preset point, between 0 to 36000 seconds.

To use the camera tour function, user must preset some camera positions first.

4.2.3 System: Configure and maintain system

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

4.2.3.1 System:

System
Date & Time
Maintenance

DIPS (Dynamic IP Service) Disable Enable

Device ID (for DIPS) Test

Device Title (0 ~ 30 Digits)

Software Version 5.a.2.5703

Network LED Enable Disable

Power LED Enable Disable

Log Reload

```

Nov 8 20:15:02 VS-100 syslog.info syslogd started: BusyBox v1.1.3
Nov 8 20:15:02 VS-100 user.notice kernel: klogd started: BusyBox v1.1.3 (2011.04.24
Nov 8 20:15:02 VS-100 user.notice kernel: Linux version 2.6.14 (root@tomhost.domain
Nov 8 20:15:02 VS-100 user.warn kernel: CPU: FA626id(wb) [66016261] revision 1 (ARM
Nov 8 20:15:02 VS-100 user.warn kernel: Machine: Faraday GM8180
Nov 8 20:15:02 VS-100 user.warn kernel: Memory policy: ECC disabled, Data cache wri
Nov 8 20:15:02 VS-100 user.debug kernel: On node 0 totalpages: 32768
Nov 8 20:15:02 VS-100 user.debug kernel:   DMA zone: 24064 pages, LIFO batch:7
Nov 8 20:15:02 VS-100 user.debug kernel:   Normal zone: 0 pages, LIFO batch:1
Nov 8 20:15:02 VS-100 user.debug kernel:   HighMem zone: 8704 pages, LIFO batch:3
Nov 8 20:15:02 VS-100 user.warn kernel: CPU0: D VIPT write-back cache
Nov 8 20:15:02 VS-100 user.warn kernel: CPU0: I cache: 32768 bytes, associativity 4

```

OK
Cancel

■ **Device Title:**

You can enter the name of this unit here. It's very useful to identify the specific device from multiple units. The information will be shown on IPWizard once the device is found.

- **Software Version:**

This information shows the software version of the device.

- **Network LED:**

To turn on or off Network LED.

- **Power LED (Wireless LED):**

To turn on or off Power LED (wireless LED if WLAN model).

- **Log:**

User can check the system log information of the device, including the Main Info, Appended Info, Operator IP, and so on ...

- **Reload:**

Click this button; user can refresh the log information of the device.

4.2.3.2 Date & Time

You can setup the device or make it synchronized with PC or remote NTP server. Also, you may select your time zone in order to synchronize time locally.

System
Date & Time
Maintenance

Server Date & Time

PC Time

Adjust

Synchronize with PC
 Manual setting : Date : - - Time : : :
 Synchronize with NTP

NTP Server

NTP Sync. Interval

Timezone

Daylight Saving Disable Enable

Daylight Saving StartTime : :

Daylight Saving StopTime : :

Daylight Saving Offset : :

■ **Server Date & Time:**

Displays the date and time of the device.

■ **PC Time:**

Displays the date and time of the connected PC.

■ **Adjust:**

- **Synchronize with PC:**

Click this option to enable time synchronization with PC time.

- **Manual setting:**

Click this option to set time and date manually.

- **Synchronize with NTP:**

Click this option if you want to synchronize the device's date and time with those of time server called NTP server (Network Time Protocol).

- **NTP Server:**

Type the host name or IP address or domain name of the NTP server.

- **NTP sync. Interval:**

Select an interval between 1 and 23 hours at which you want to adjust the device's time referring to NTP server

- **Time zone:**

Set the time difference from Greenwich Mean Time in the area where the device is installed.

- **Daylight Saving:**

Disable or enable the daylight saving adjustment.

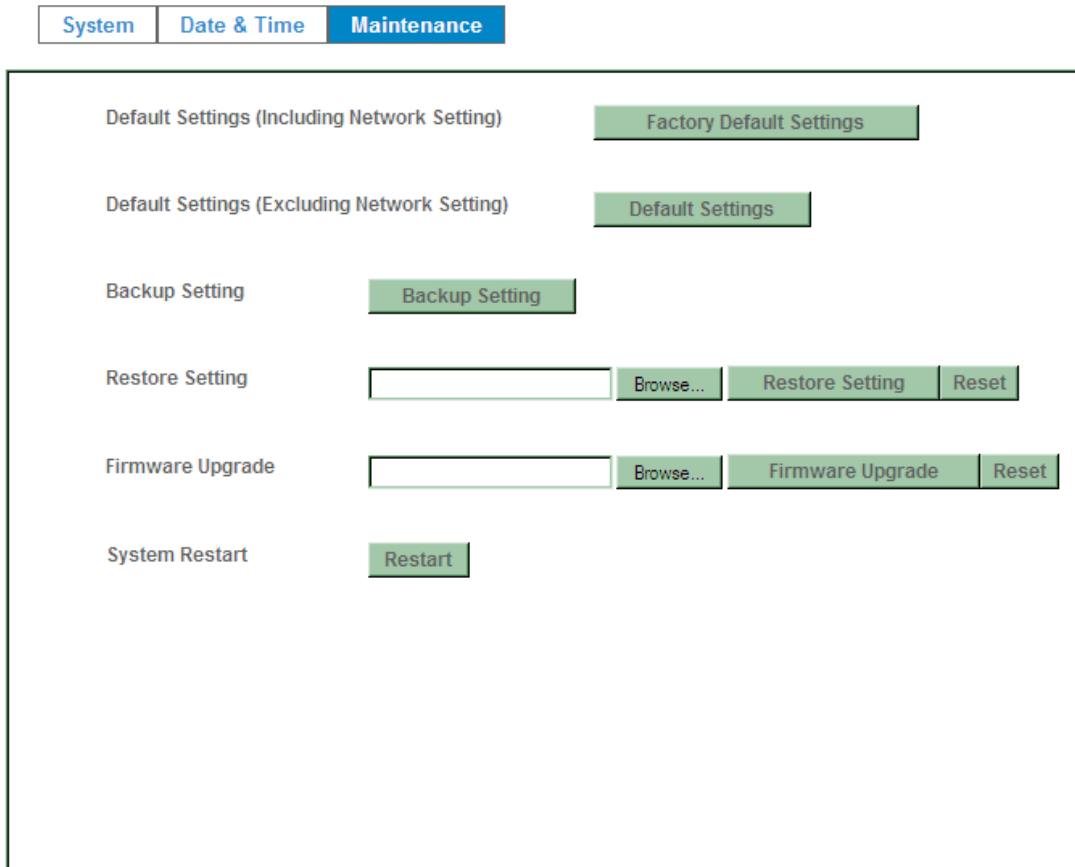
4.2.3.3 Maintenance

- **Hard Factory Default (Include the network setting):**

Recall the device hard factory default settings. Note that click this button will reset all device's parameters to the factory settings (including the IP address).

- **Factory Default (Except the network setting):**

The unit is restarted and most current settings are reset to factory default values. This action will not reset the network setting.



■ Backup Setting:

To take a backup of all of the parameters, click this button. If necessary, it will then be possible to return to the previous settings, if settings are changed and there is unexpected behavior.

■ Restore Setting:

Click the “**Browse**” button to locate the saved backup file and then click the “**Restore Setting**” button. The settings will be restored to the previous configuration.

System	Date & Time	Maintenance
Default Settings (Including Network Setting)		Factory Default Settings
Default Settings (Excluding Network Setting)		Default Settings
Backup Setting	Backup Setting	
Restore Setting	<input type="text"/>	Browse... Restore Setting Reset
Firmware Upgrade	<input type="text"/>	Browse... Firmware Upgrade Reset
System Restart	Restart	

■ Firmware Upgrade:

The device supports new firmware upgrade (the software that controls the operation in the device). Please contact your dealer for the latest version if necessary.

Download the latest firmware file from our website or your dealer. Unzip this firmware file to binary file and store it into your PC. Then follow the steps as bellows carefully:

1. Close all other application programs which are not necessary for firmware update.
2. **Make sure that only you access this device while firmware updating.**
3. Disable Motion Detection function.
4. Click "**Browse**" button. Select the Firmware binary file. (**Note that it must make sure that the Firmware only applies to this device, once update, it will be burned into FLASH ROM of system.**)
5. Once the firmware file was selected, click "**Firmware Upgrade**" button.

6. The upgrade progress information will be displayed. Once the uploading process completed, the device will reboot the system automatically.

7. Please wait for timer countdown, and then you can use IPWizard to search the device again.

Warning!!! The download firmware procedure can not 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 **shall 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.

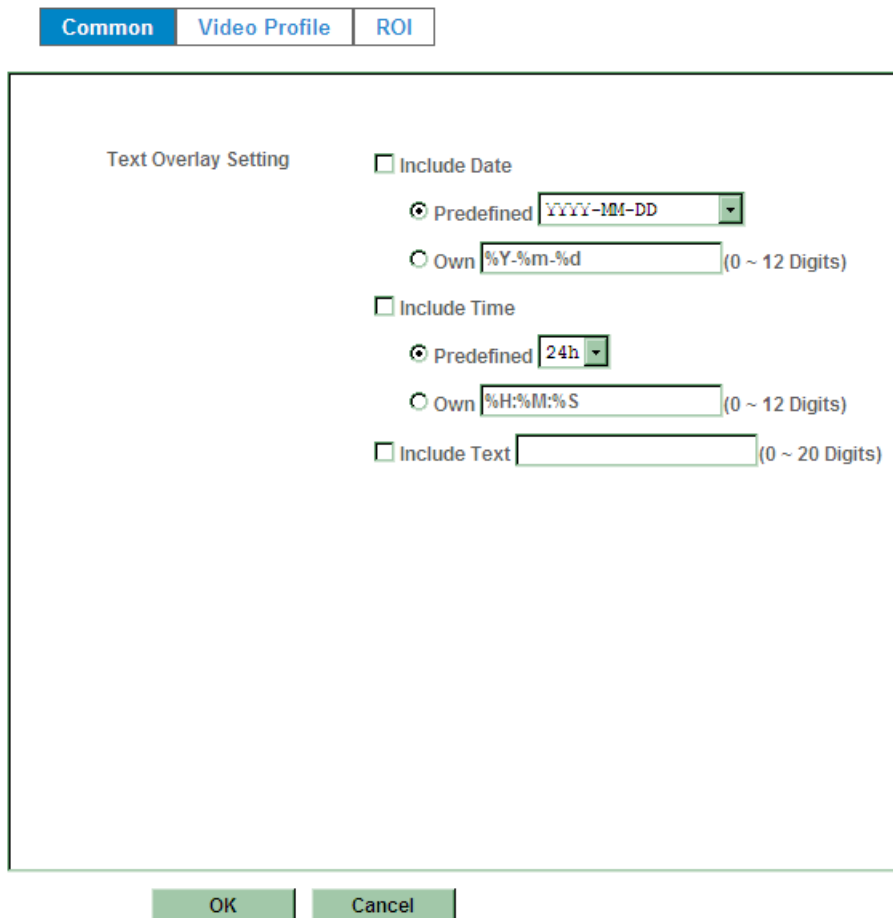
■ System Restart:

The device is restarted without changing any of the network settings. It means the IP address of the device will not change after firmware upgrade.

4.2.4 Video: Configure profile

This device provides 9 video profiles as below to support different request to each client simultaneously. Each user can choose his preferred video profile as his request independently.

4.2.4.1 Common



Common Video Profile ROI

Text Overlay Setting

Include Date

Predefined

Own (0 ~ 12 Digits)

Include Time

Predefined

Own (0 ~ 12 Digits)

Include Text (0 ~ 20 Digits)

OK Cancel

■ Text Overlay Setting:

There are some important information can be embedded into image, including date, time, and/or text.

4.2.4.2 Video Profile

Common
Video Profile
ROI

Video Type	Resolution	Rate Control	Quality	Bitrate	Max Frame Rate	GOP Control	ROI	Multicast
h264	4cif	vbr	75	2048	30	30	no	no
h264	cif	vbr	90	1024	30	30	no	no
h264	qcif	vbr	90	128	30	30	no	no
mpeg4	4cif	vbr	75	2048	30	30	no	no
mpeg4	cif	vbr	90	1024	30	30	no	no
mpeg4	qcif	vbr	90	128	30	30	no	no
mjpeg	4cif	vbr	90	2048	30	1	no	no
mjpeg	cif	vbr	90	1024	30	1	no	no
mjpeg	qcif	vbr	90	128	30	1	no	no
h264	cif	vbr	90	1024	30	30	yes	no
h264	cif	vbr	90	1024	30	30	yes	no

Video Type	<input type="text" value="h264"/>
Resolution	<input type="text" value="4cif"/>
Rate Control	<input checked="" type="radio"/> Quality <input type="text" value="75"/> <input type="radio"/> Bitrate <input type="text" value="2048"/> K bps 384 ~ 4096
Max Frame Rate	<input type="text" value="30"/>
GOP Control	<input type="text" value="30"/>
Multicast	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Multicast Video	IP Address <input type="text" value="239.198.97.181"/> Port <input type="text" value="0"/> (0 means auto, 1024 ~ 65534)
Multicast Audio	IP Address <input type="text" value="239.198.97.181"/> Port <input type="text" value="0"/> (0 means auto, 1024 ~ 65534)
Time to live	<input type="text" value="1"/> (1 ~ 255)

OK
Cancel

■ **Video Type:**

Video codec of the selected video profile.

■ **Resolution:**

Resolution of the selected video profile.

■ **Rate Control:**

Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between low to high bandwidth based on different resolutions. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value can reach the better quality but of course will consume higher bandwidth.



- **Max Frame Rate:**

Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second as possible. User need to set reasonable max frame rate versus video quality under the limited bandwidth.

- **GOP Control:**

Defines the Intra/Inter-frame (I/P) ratio of this profile. For example, set the GOP to 30, then the video stream will have one Intra-frame every 30 frames.

- **Multicast Video:**

IP address and port for multicast video streaming of the selected profile.

- **Multicast Audio:**

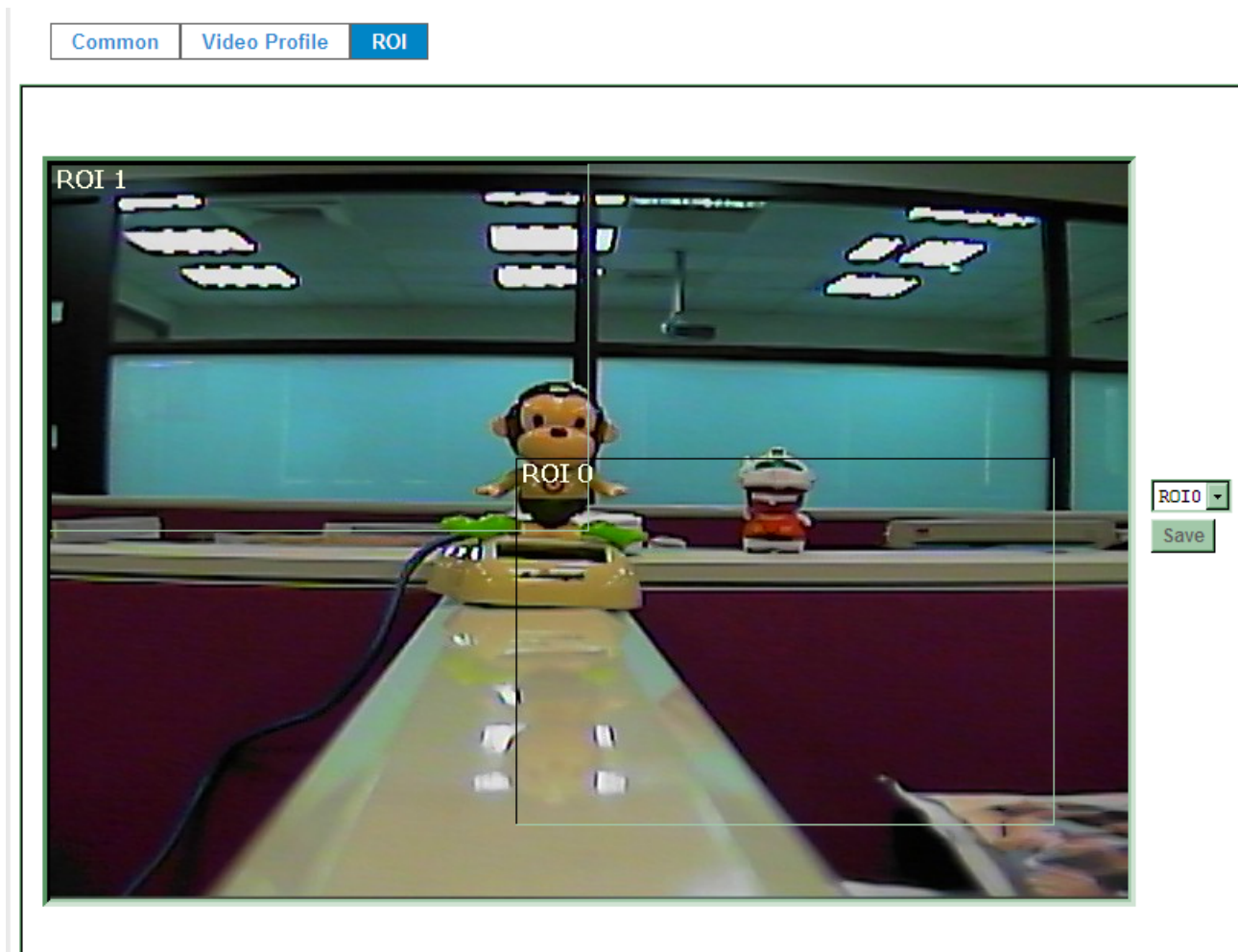
IP address and port for multicast audio streaming of the selected profile.

- **Always Enable Multicast:**

Multicast streaming is always enabled or by request.

4.2.4.3 ROI

ROI stands for Region of Interest. It can help user to save the valuable bandwidth in some application. For example, user can record the SXGA video stream from the LAN and access the ROI video stream from the WAN for some critical area.



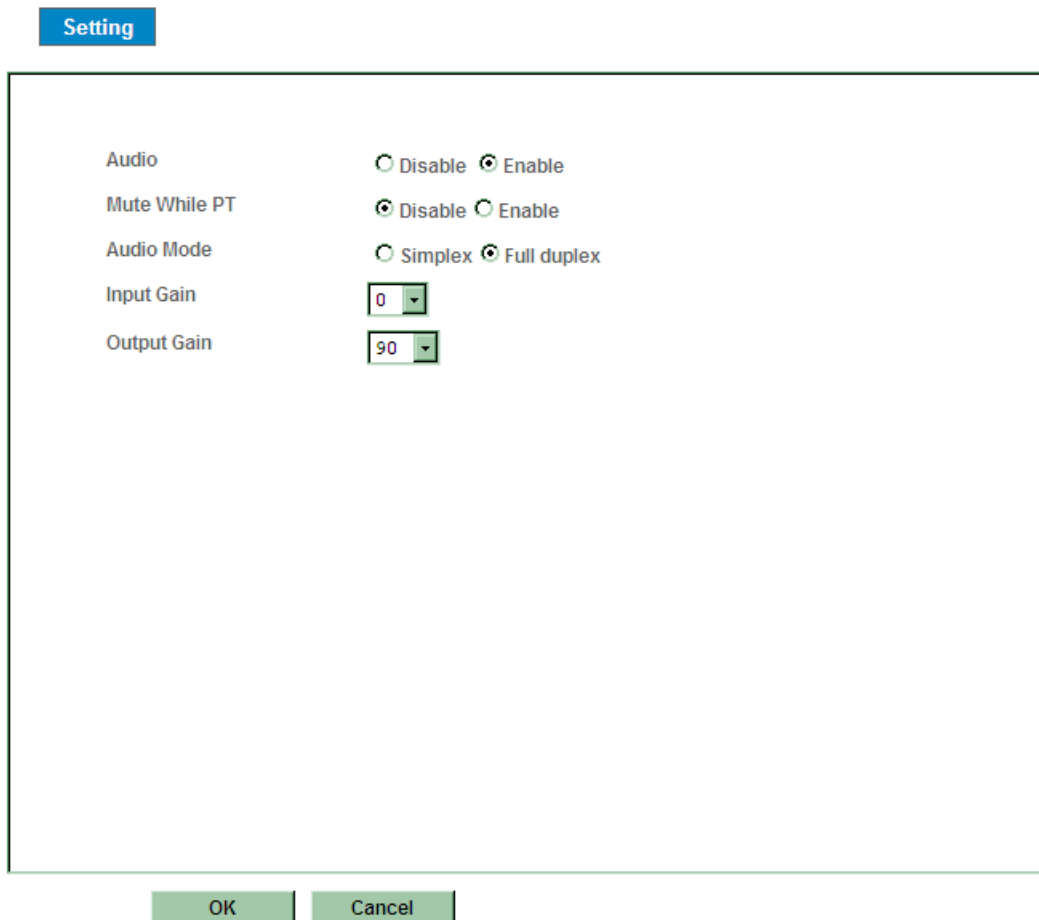
- **ROI 0/1 Area**

Drag and Drop the rectangles over the live video for determining the interested areas. The resolution is CIF for every ROI rectangle.

- **Save**

Click on this button for saving the settings.

4.2.5 Audio: Audio parameters



Setting

Audio Disable Enable

Mute While PT Disable Enable

Audio Mode Simplex Full duplex

Input Gain

Output Gain

OK Cancel

- **Audio:**

To enable or disable audio function

- **Mute While PT:**

Mute the audio while pan and/or tilt motion

- **Audio Mode:**

To select Simplex or Full duplex (2-way audio) mode

- **Input Gain:**

To adjust gain of input audio

- **Output Gain:**

To adjust gain of output audio

4.2.6 User: Manage user name, password and login privilege

Use this menu to add, update, or remove the usernames and passwords of the Administrator and viewer.

Setting

Viewer Login Anonymous Only users in database

User Name	Access Right	PTZ Control
admin	administrator	yes

User List	
User Name	<input type="text"/> (1 ~ 20 Digits)
Password	<input type="text"/> (0 ~ 20 Digits)
Verify Password	<input type="text"/> (0 ~ 20 Digits)
Access Right	<input type="radio"/> Administrator <input checked="" type="radio"/> Viewer
PTZ Control	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
<input type="button" value="Add"/> <input type="button" value="Modify"/> <input type="button" value="Delete"/>	

■ **Viewer login:**

Select “Anonymous” to allow any one viewing the video once connected. Otherwise, only users in database can view the video after login.

■ **Access right:**

Administrator can access every function in this device. However, Viewers only can view the video and access limited function.

Add, update, and remove of Users account:

Manage the user’s account of viewer user.

■ **PTZ Control:**

Allow PTZ control function or not.

4.2.7 E-Mail: Setup E-Mail configuration

You may setup SMTP mail parameters for further operation of Event Schedule. That's, if users want to send the alarm message out, it will need to configure parameters here and also add at least one event schedule to enable event triggering.

Setting

SMTP Server	<input type="text"/>	(< 129 Digits)	<input type="button" value="Test"/>
SMTP Port	<input type="text" value="25"/>	(1 ~ 65535)	
SSL	<input checked="" type="radio"/> Disable <input type="radio"/> Enable		
SMTP Authentication	<input checked="" type="radio"/> Disable <input type="radio"/> Enable		
Authentication User Name	<input type="text"/>	(< 65 Digits)	
Authentication Password	<input type="text"/>	(< 22 Digits)	
E-mail From	<input type="text"/>	(< 129 Digits)	
E-mail To	<input type="text"/>	(< 129 Digits)	
E-mail Subject	<input type="text"/>	(< 65 Digits)	

- **SMTP Server:**

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

- **Test:**

Send a test mail to mail server to check this account is available or not.

- **SMTP Port:**

Set port number of SMTP service.

■ SMTP Authentication:

Select the authentication required when you send an e-mail.

Disable: if no authentication is required when an e-mail is sent.

Enable: if authentication is required when an e-mail is sent.

■ Authentication User name:

Type the user name for the SMTP server if Authentication is Enable.

■ Authentication Password:

Type the password for the SMTP server if Authentication is Enable.

■ E-mail To:

Type the receiver's e-mail address.

■ E-mail From:

Type the sender's E-mail address. This address is used for reply e-mails.

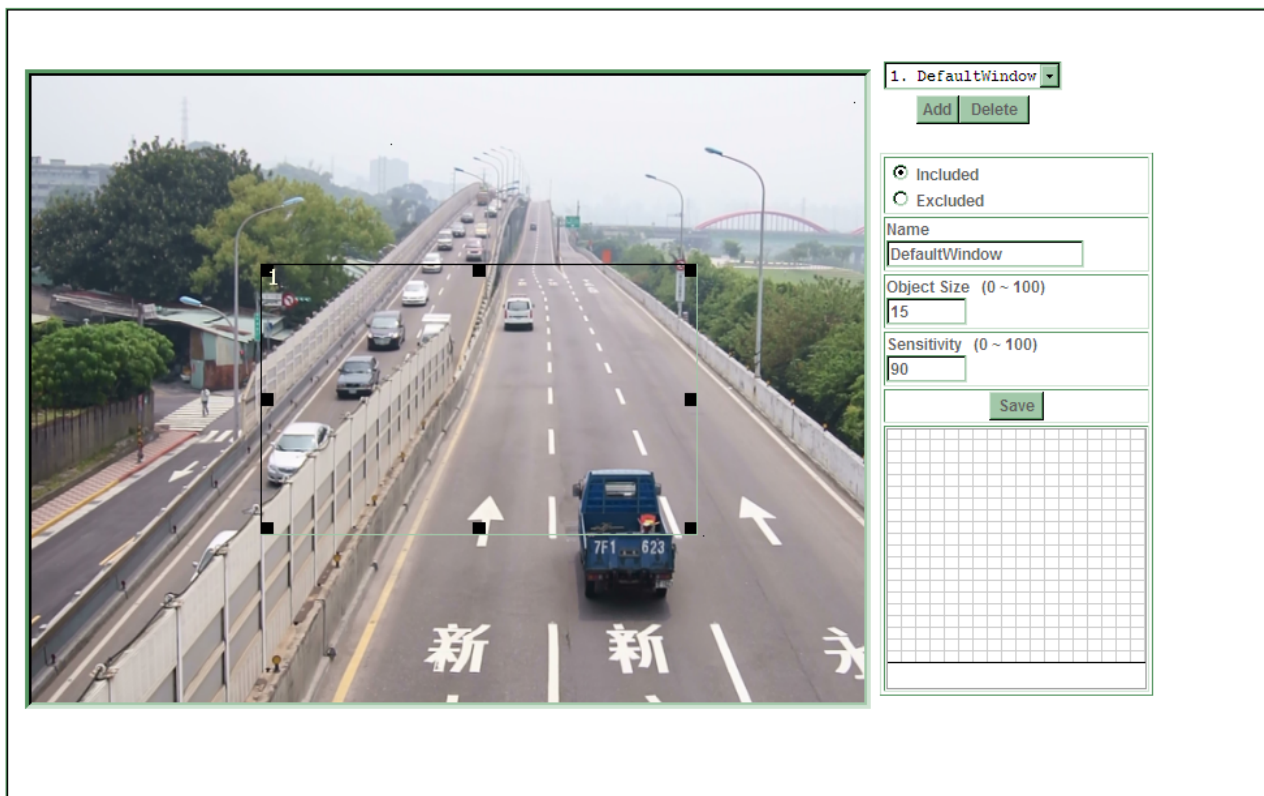
■ E-mail Subject:

Type the subject/title of the e-mail.

4.2.8 Object detection: Setup Object detection

Use this menu to specify motion detection window 1 to window 10 and set the conditions for detection while observing a captured image.

Motion Detection



■ **Add and Del:**

To add or delete the motion windows. User can specify up to 4 Included and/or Excluded windows to monitor the video captured by this device. By dragging mouse on the image, you can change the position and size of the selected motion window accordingly.

■ **Included or Excluded Window:**

These windows can be specified as Included or Excluded type.

Included windows target specific areas within the whole video image

Excluded windows define areas within an Include window that should be ignored (areas outside Include windows are automatically ignored)

- **Name:**

Name of the specified motion window.

- **Object Size:**

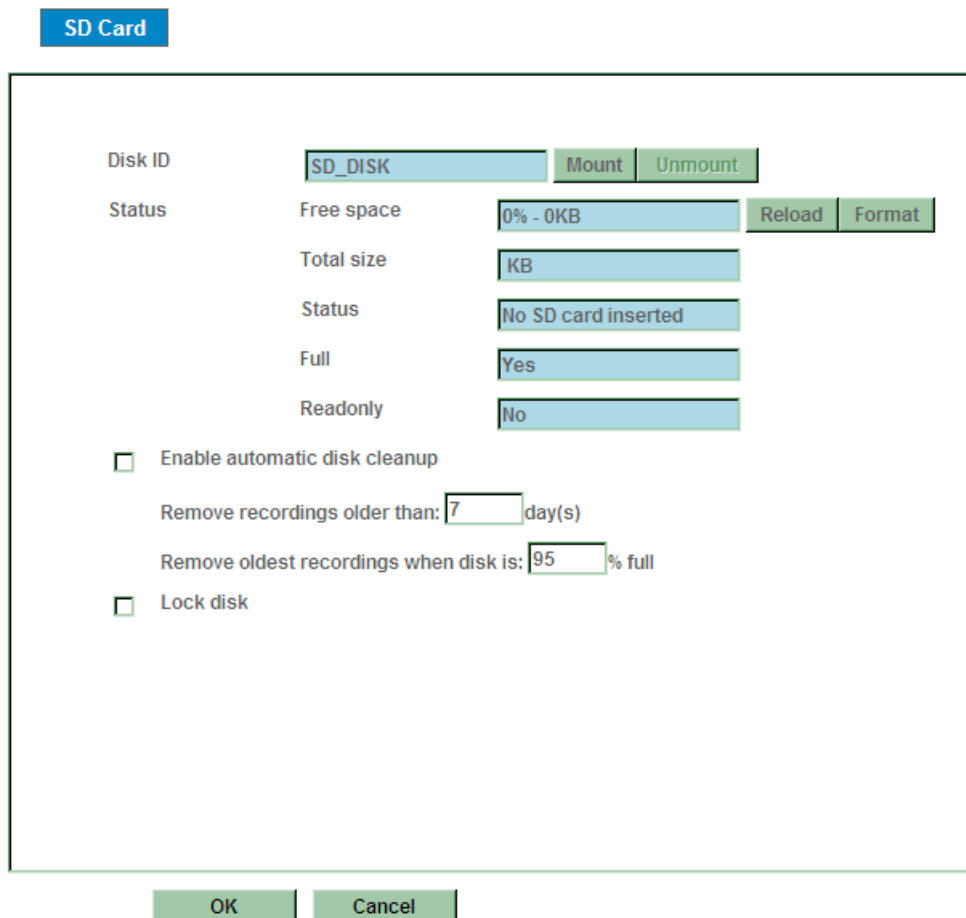
Define the object size of motion detection. The higher object size will only larger objects trigger motion detection. The lower object size will even small objects trigger motion detection too. Generally speaking, the smaller size will be easier to trigger event.

- **Sensitivity**

Define the sensitivity value of motion detection. The higher value will be more sensitivity.

4.2.9 Storage: Status and configuration of SD card

This page shows the status of attached SD card. You may setup related parameters to manage the attached SD card also.



The screenshot shows a window titled "SD Card" with the following configuration options:

Disk ID	SD_DISK	Mount	Unmount	
Status	Free space	0% - 0KB	Reload	Format
	Total size	KB		
	Status	No SD card inserted		
	Full	Yes		
	Readonly	No		
<input type="checkbox"/>	Enable automatic disk cleanup			
	Remove recordings older than:	7	day(s)	
	Remove oldest recordings when disk is:	95	% full	
<input type="checkbox"/>	Lock disk			

At the bottom of the window are "OK" and "Cancel" buttons.

- **Enable automatic disk cleanup:**

Delete old recorded files while the conditions are reached as below.

- **Remove recordings order than:**

Delete old files by days.

- **Remove oldest recordings when disk is:**

Delete old files by left capacity.

4.2.10 Recording List: Files list inside the SD Card

This page shows the files list information. User may play or delete the selected file.

Recording List

Date	File	Trigger by	Size
------	------	------------	------

4.2.11 Event Server: Setup FTP/TCP/HTTP/SAMBA server configuration

4.2.11.1 FTP Server

You may setup FTP parameters for further operation of Event Schedule. That's, if users want to send the alarm message to an FTP server, it will need to configure parameters here and also add at least one event schedule to enable event triggering as SMTP.

FTP Server
TCP Server
HTTP Server
SAMBA Server

Name	FTP Server	FTP Port	FTP Path

Name	<input type="text"/>	(< 22 Digits)
FTP Server	<input type="text"/>	(< 65 Digits) Test
FTP Login Name	<input type="text"/>	(< 22 Digits)
FTP Login Password	<input type="password"/>	(< 22 Digits)
FTP Port	<input type="text" value="21"/>	(1 ~ 65535)
FTP Path	<input type="text"/>	(< 65 Digits)
FTP Passive Mode	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	

Add
Modify
Delete

- **Name:**

User can specify multiple FTP paths as wish. Therefore, user needs to specify a name for each FTP setting.

- **FTP Server:**

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

- **Test:**

Check the FTP server whether this account is available or not.

- **FTP Login name:**

Type the user name for the FTP server.

- **FTP Login Password:**

Type the password for the FTP server.

- **FTP Port:**

Set port number of FTP service.

- **FTP Path:**

Set working directory path of FTP server.

- **FTP Passive Mode:**

Select passive or active mode connecting to FTP server.

4.2.11.2 TCP Server

In addition to send video file to FTP server, the device also can send event message to specified TCP server.

FTP Server TCP Server HTTP Server SAMBA Server

Name	TCP Server	TCP Port
Name	<input type="text"/>	(< 22 Digits)
TCP Server	<input type="text"/>	(< 65 Digits) <input type="button" value="Test"/>
TCP Port	<input type="text"/>	(1 ~ 65535)

■ **Name:**

User can specify multiple TCP servers as wish. Therefore, user needs to specify a name for each TCP server setting.

■ **TCP Server:**

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

■ **TCP Port:**

Set port number of TCP server.

4.2.11.3 HTTP Server

The device also can send event message to specified HTTP server.

FTP Server
TCP Server
HTTP Server
SAMBA Server

Name	Proxy Address
Name	<input type="text" value=""/> (< 22 Digits)
URL	<input type="text" value="http://"/> (< 129 Digits) Test
HTTP Login Name	<input type="text" value=""/> (< 22 Digits)
HTTP Login Password	<input type="text" value=""/> (< 22 Digits)
Proxy Address	<input type="text" value=""/> (< 129 Digits)
Proxy Login Name	<input type="text" value=""/> (< 22 Digits)
Proxy Login Password	<input type="text" value=""/> (< 22 Digits)
Proxy Port	<input type="text" value=""/> (1 ~ 65535)

Add
Modify
Delete

■ **Name:**

User can specify multiple HTTP servers as wish. Therefore, user needs to specify a name for each HTTP server setting.



- **URL:**

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

- **Test:**

Check the HTTP server whether it is available or not.

- **HTTP Login name:**

Type the user name for the HTTP server.

- **HTTP Login Password:**

Type the password for the HTTP server.

- **Proxy Address:**

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

- **Proxy Login name:**

Type the user name for the HTTP Proxy.

- **Proxy Login Password:**

Type the password for the HTTP Proxy.

- **Proxy Port:**

Set port number of Proxy.

4.2.11.4 Samba Server

The device also can send video stream to specified SAMBA server.

FTP Server
TCP Server
HTTP Server
SAMBA Server

Name	SAMBA Server	SAMBA Path

Name	<input type="text"/>	<small>(< 22 Digits)</small>
SAMBA Server	<input type="text"/>	<small>(< 65 Digits) Test</small>
SAMBA Login Name	<input type="text"/>	<small>(< 22 Digits)</small>
SAMBA Login Password	<input type="text"/>	<small>(< 22 Digits)</small>
SAMBA Path	<input type="text"/>	<small>(< 65 Digits)</small>

Add
Modify
Delete

■ **Name:**

User can specify multiple HTTP servers as wish. Therefore, user needs to specify a name for each HTTP server setting.

■ **SAMBA Server:**

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

■ **Test:**

Check the SAMBA server whether this account is available or not.

■ **SAMBA Login name:**

Type the user name for the SAMBA server.

■ **SAMBA Login Password:**

Type the password for the SAMBA server.

■ **SAMBA Path:**

Set working directory path of SAMBA server.

4.2.12 Event Schedule: Configure the event schedule

4.2.12.1 Setting

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.

Setting
Record

Name	Enable	Type	Weekday	Start	Duration	Trigger by Prefix	Action

Name

Enable

Yes No

Type

Event Trigger Schedule Trigger, Interval (Seconds)

Enable Time

Sun Mon Tue Wed Thu Fri Sat
 Start from : , Duration : ((max 168:00 hours))

Trigger by

Sensor Motion Area

Record File Prefix

(0 ~ 20 Digits)

Action

Go Preset Tour
 Voice Alert, Duration (0~86400 Seconds)
 Alarm Out, Duration (0~86400 Seconds)
 Send FTP
 Send TCP
 Send HTTP
 Send E-Mail

Add
Modify
Delete

■ **Name:**

Name of the Event or Schedule.

■ **Enable:**

Enable or disable this Event or Schedule.

■ **Type:**

Event trigger or Schedule trigger.

■ **Enable Time:**

Define the feasible time slot.

■ **Trigger by:**

Select the triggered sources.

■ **Action:**

Define the actions once event triggered.

■ **Example 1:**

Send file to FTP server by motion triggered always:

- a. Select event trigger
- b. Enable time: start from 00:00 to 24:00 every day
- c. Trigger by: Motion Area (Added in Object Detection page)
- d. Action: Send FTP (Add in Event Server -> FTP Server page)

Setting
Record

Name	Enable	Type	Weekday	Start	Duration	Trigger by Prefix	Action
Name	<input type="text" value="Send_to_FTP"/>						
Enable	<input checked="" type="radio"/> Yes <input type="radio"/> No						
Type	<input checked="" type="radio"/> Event Trigger <input type="radio"/> Schedule Trigger, Interval <input type="text" value="60"/> (Seconds)						
Enable Time	<input checked="" type="checkbox"/> Sun <input checked="" type="checkbox"/> Mon <input checked="" type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input checked="" type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input checked="" type="checkbox"/> Sat Start from <input type="text" value="0"/> : <input type="text" value="0"/> , Duration <input type="text" value="24"/> : <input type="text" value="0"/> ((max 168:00 hours))						
Trigger by	<input type="checkbox"/> Sensor <input type="text" value="Active"/> <input type="checkbox"/> Motion Area <input type="text" value="DefaultWindow"/>						
Record File Prefix	<input type="text"/> (0 ~ 20 Digits)						
Action	<input type="checkbox"/> Go <input checked="" type="radio"/> Preset <input type="text" value=""/> <input type="radio"/> Tour <input type="text" value=""/> <input type="checkbox"/> Voice Alert, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Alarm Out, Duration <input type="text" value="5"/> (0~86400 Seconds) <input checked="" type="checkbox"/> Send FTP <input type="text" value="FTP-01"/> <input type="checkbox"/> Send TCP <input type="text" value=""/> <input type="checkbox"/> Send HTTP <input type="text" value=""/> <input type="checkbox"/> Send E-Mail						

Add
Modify
Delete

■ **Example 2:**

Send file to E-Mail server by motion triggered from Friday 18:00 to Saturday 06:00

- a. Select event trigger.
- b. Enable time: start from Friday 18:00 and keep work in 12 hours, so it will stop on Saturday 06:00.
- c. Trigger by : Motion Area (Added in Object Detection page)
- d. Action : Send e-mail (Add in E-Mail page)
 - To email address: You need to input the receiver email address.
 - Subject: You could specify the email subject.
 - Message: You could specify the email content.

Setting
Record

Name	Send_to_E-Mail
Enable	<input checked="" type="radio"/> Yes <input type="radio"/> No
Type	<input checked="" type="radio"/> Event Trigger <input type="radio"/> Schedule Trigger, Interval <input type="text" value="60"/> (Seconds)
Enable Time	<input checked="" type="checkbox"/> Sun <input checked="" type="checkbox"/> Mon <input checked="" type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input checked="" type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input checked="" type="checkbox"/> Sat Start from <input type="text" value="0"/> : <input type="text" value="0"/> , Duration <input type="text" value="24"/> : <input type="text" value="0"/> ((max 168:00 hours))
Trigger by	<input type="checkbox"/> Sensor <input type="text" value="Active"/> <input type="checkbox"/> Motion Area <input type="text" value="DefaultWindow"/>
Record File Prefix	<input type="text"/> (0 ~ 20 Digits)
Action	<input type="checkbox"/> Go <input checked="" type="radio"/> Preset <input type="radio"/> Tour <input type="checkbox"/> Voice Alert, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Alarm Out, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Send FTP <input type="text" value="FTP-01"/> <input checked="" type="checkbox"/> Send TCP <input checked="" type="checkbox"/> Send HTTP <input checked="" type="checkbox"/> Send E-Mail To email address <input type="text" value="user02@airlive.com"/> Subject <input type="text" value="Motion Detected"/> Message <input type="text" value="Motion Detected"/> <input checked="" type="checkbox"/> Attached file <input type="checkbox"/> Send SD <input checked="" type="checkbox"/> Send Samba

Add
Modify
Delete

■ **Example 3:**

Enable Voice Alert every 10-minute during 18:00 to 24:00 from Monday to Friday.

- a. Type: Select schedule trigger and interval is 10-minute.
- b. Enable time: Select Monday to Friday, and set start time from 18:00 and keep work in 6 hours.
- c. Trigger by: You do not need to choose it, because this will be triggered every minute
- d. Action: Voice Alert

Setting Record

Name	Enable	Type	Weekday	Start	Duration	Trigger by	Prefix	Action																																																															
<table border="1"> <tr> <td>Name</td> <td colspan="8">Voice_Alert</td> </tr> <tr> <td>Enable</td> <td colspan="8"><input checked="" type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td>Type</td> <td colspan="8"> <input type="radio"/> Event Trigger <input checked="" type="radio"/> Schedule Trigger, Interval <input type="text" value="60"/> (Seconds) </td> </tr> <tr> <td>Enable Time</td> <td colspan="8"> <input checked="" type="checkbox"/> Sun <input checked="" type="checkbox"/> Mon <input checked="" type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input checked="" type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input checked="" type="checkbox"/> Sat Start from <input type="text" value="0"/> : <input type="text" value="0"/> , Duration <input type="text" value="24"/> : <input type="text" value="0"/> ((max 168:00 hours)) </td> </tr> <tr> <td>Trigger by</td> <td colspan="8"> <input checked="" type="checkbox"/> Sensor <input type="text" value="Active"/> <input type="checkbox"/> Motion Area <input type="text" value="DefaultWindow"/> </td> </tr> <tr> <td>Record File Prefix</td> <td colspan="8"><input type="text"/> (0 ~ 20 Digits)</td> </tr> <tr> <td>Action</td> <td colspan="8"> <input type="checkbox"/> Go <input checked="" type="radio"/> Preset <input type="text" value=""/> <input type="radio"/> Tour <input type="text" value=""/> <input checked="" type="checkbox"/> Voice Alert, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Alarm Out, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Send FTP <input type="text" value="FTP-01"/> <input checked="" type="checkbox"/> Send TCP <input type="text" value=""/> <input checked="" type="checkbox"/> Send HTTP <input type="text" value=""/> <input type="checkbox"/> Send E-Mail </td> </tr> </table>									Name	Voice_Alert								Enable	<input checked="" type="radio"/> Yes <input type="radio"/> No								Type	<input type="radio"/> Event Trigger <input checked="" type="radio"/> Schedule Trigger, Interval <input type="text" value="60"/> (Seconds)								Enable Time	<input checked="" type="checkbox"/> Sun <input checked="" type="checkbox"/> Mon <input checked="" type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input checked="" type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input checked="" type="checkbox"/> Sat Start from <input type="text" value="0"/> : <input type="text" value="0"/> , Duration <input type="text" value="24"/> : <input type="text" value="0"/> ((max 168:00 hours))								Trigger by	<input checked="" type="checkbox"/> Sensor <input type="text" value="Active"/> <input type="checkbox"/> Motion Area <input type="text" value="DefaultWindow"/>								Record File Prefix	<input type="text"/> (0 ~ 20 Digits)								Action	<input type="checkbox"/> Go <input checked="" type="radio"/> Preset <input type="text" value=""/> <input type="radio"/> Tour <input type="text" value=""/> <input checked="" type="checkbox"/> Voice Alert, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Alarm Out, Duration <input type="text" value="5"/> (0~86400 Seconds) <input type="checkbox"/> Send FTP <input type="text" value="FTP-01"/> <input checked="" type="checkbox"/> Send TCP <input type="text" value=""/> <input checked="" type="checkbox"/> Send HTTP <input type="text" value=""/> <input type="checkbox"/> Send E-Mail							
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<input type="button" value="Add"/> <input type="button" value="Modify"/> <input type="button" value="Delete"/>																																																																							

4.2.12.2 Record

User can choose the type of record file for event or schedule application.

Setting
Record

Record File Type

JPEG
 AVI - JPEG
 AVI - H264

Record File Prefix (0 ~ 20 Digits)

JPEG Picture Numbers Auto One

Pre Trigger Duration (0 ~ 20 Seconds)

Best Effort Duration (1 ~ 60 Seconds)

Max File Size (256 ~ 3072 Bytes)

OK
Cancel

■ **Record File Type:**

Choose AVI or JPEG file format.

■ **Record File Prefix:**

Define the prefix of recorded filename.

■ **JPEG Picture Numbers:**

Define the picture numbers of JPEG to be sent out.

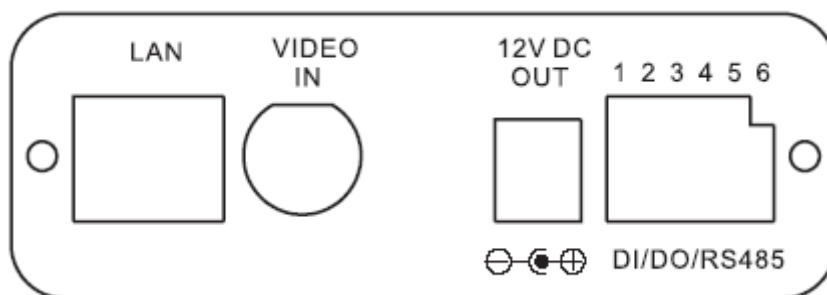
A

Appendix A: Alarm I/O Connector

■ A.1 Interfacing to the External I/O

Some features of the Video Server can be activated by an external sensor that senses physical changes in the area device 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 device provides a general I/O terminal block with one digital input and one output for device control. Pin 2 and 3 can be connected to an external sensor. The input voltage will be monitored from the initial state 'LOW'. If the external sensor need 12VDC power, it can connect to Pin1 (50mA maximum). The Alarm Output of pin 3 and 4 can be used to turn on or off the external device. Pin 5 and 6 are the D+ and D- of RS485 respectively.

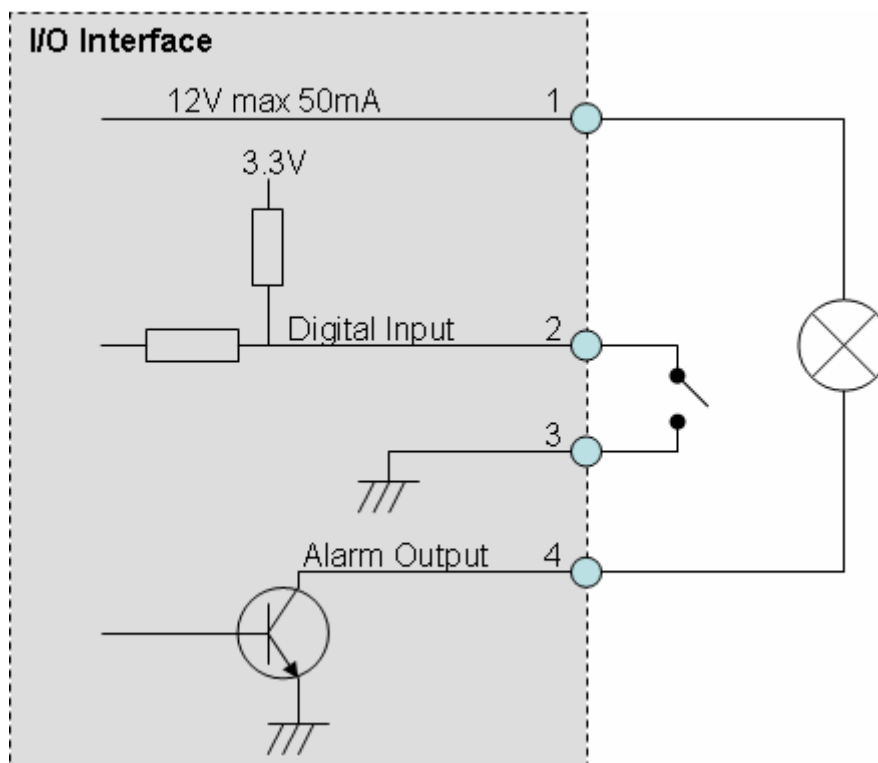


Pin	Function
1	12VDC power supply (50mA maximum)
2	Digital Input
3	GND
4	Alarm Output

5	D+ terminal of RS485
6	D- terminal of RS485

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

■ A.2 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

Appendix B: FAQ

Question	Answer or Resolution
Features	
<p>The video and audio codec is adopted in the device.</p>	<p>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/G.726 for RTSP streaming.</p>
<p>The maximum number of users access the device simultaneously.</p>	<p>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.</p>
<p>The device can be used outdoors or not.</p>	<p>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.</p>
Install this device	
<p>Status LED does not light up.</p>	<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.
<p>The network cabling is required for the device.</p>	<p>The device uses Category 5 UTP cable allowing 10 and/or 100 Base-T networking.</p>
<p>The device will be installed and work if a</p>	<p>If a firewall exists on the network, port 80 is open for ordinary data communication. The HTTP port and RTSP</p>

firewall exists on the network.	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 password = airlive . Note that it's all case sensitivity.
Forgot the username and password	Follow the steps below. 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.	<ul style="list-style-type: none"> • Network may have trouble. Confirm the parameters and connections of the device.
UPnP NAT Traversal	
Can not work with NAT router	<ul style="list-style-type: none"> • Maybe NAT router does not support UPnP function. Please check user's manual of router and turn on UPnP function. • Maybe UPnP function of NAT router is not compatible to the IP camera. Please contact your dealer to get the approval routers list.

<p>Some IP cameras are working but others are failed</p>	<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.
<p>Access this device</p>	
<p>Cannot access the login page and other web pages of the Network Camera from Internet Explorer</p>	<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.

	<ul style="list-style-type: none"> • 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.
<p>Image or video does not appear in the main page.</p>	<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.
<p>Check the device's ActiveX is installed on your computer</p>	<p>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.</p>
<p>Internet Explorer displays the following message: "Your current security settings prohibit downloading ActiveX controls".</p>	<p>Setup the IE security settings or configure the individual settings to allow downloading and scripting of ActiveX controls.</p>

<p>The device work locally but not externally.</p>	<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.
<p>The unreadable characters are displayed.</p>	<p>Use the operating system of the selected language. Set the Encoding or the Character Set of the selected language on the Internet Explorer.</p>
<p>Frame rate is slower than the setting.</p>	<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.
<p>Blank screen or very slow video when audio is enabled.</p>	<ul style="list-style-type: none"> • Your connection to the device does not have enough bandwidth to support a higher frame rate for the streamed image size. Try reducing the video streaming size to 160x120 or 320x240 and/or disabling audio. • 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.
<p>Image Transfer on e-mail or FTP does not work.</p>	<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.
<p>Pan/Tilt does not work. (including Click to Center and Preset Positioning)</p>	<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.	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.
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.	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.
Miscellaneous	
Can not play the recorded ASF file	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.

C

Appendix C: PING IP Address

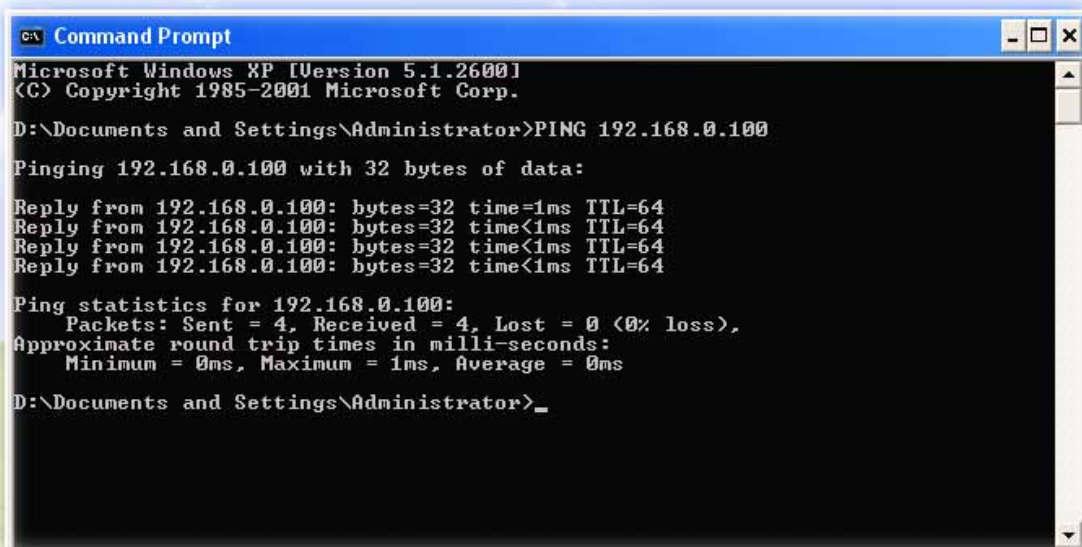
The PING (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm Network Camera installed or if the IP address conflicts with any other devices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



```
CA 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

Appendix 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

Appendix E: 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	

 F

Appendix F: 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/mpeg4/media.3gp
```

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.