



Video Server

IVS-100

User's Manual



Copyright

Copyright (C) 2004 PLANET Technology Corp. All rights reserved.

The products and programs described in this User's Manual are licensed products of PLANET Technology. This User's Manual contains proprietary information protected by copyright, and this User's Manual and all accompanying hardware, software, and documentation are copyrighted.

No part of this User's Manual may be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form by any means by electronic or mechanical. Including photocopying, recording, or information storage and retrieval systems, for any purpose other than the purchaser's personal use, and without the prior express written permission of PLANET Technology.

Declaration of Conformity

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.

Disclaimer

PLANET Technology does not warrant that the hardware will work properly in all environments and applications, and makes no warranty and representation, either implied or expressed, with respect to the quality, performance, merchantability, or fitness for a particular purpose.

PLANET has made every effort to ensure that this User's Manual is accurate; PLANET disclaims liability for any inaccuracies or omissions that may have occurred.

Information in this User's Manual is subject to change without notice and does not represent a commitment on the part of PLANET. PLANET assumes no responsibility for any inaccuracies that may be contained in this User's Manual. PLANET makes no commitment to update or keep current the information in this User's Manual, and reserves the right to make improvements to this User's Manual and/or to the products described in this User's Manual, at any time without notice.

If you find information in this manual that is incorrect, misleading, or incomplete, we would appreciate your comments and suggestions.

Trademarks

The PLANET logo is a trademark of PLANET Technology. This documentation may refer to numerous hardware and software products by their trade names. In most, if not all cases, these designations are claimed as trademarks or registered trademarks by their respective companies.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For AC Adaptor to avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Table of Contents

Overview	4
Package Contents	6
Physical Details	7
Hardware Installation	9
Logging in to Homepage.....	11
Before Operation	11
Access IVS-100 from the Internet Explorer for the first time.....	13
Logging in as an ordinary User.....	16
Logging in as an Administrator	16
Operating IVS-100.....	17
Control Panel Area	17
Advanced Function Area	20
Basic Setting	20
Application Setting	34
Trigger	45
Capture	46
RightMouseButton of ActiveX Control	47
View Menu.....	47
"Image Recording...-> Save as JPEG"	53
"Save Current Picture As ..."	60
Appendix A: Restore Factory Default Settings	62
Appendix B: Alarm I/O Connector.....	63
Appendix C: Troubleshooting & Frequently Asked Questions	65
Appendix D: PING IP Address	70
Appendix E: Bandwidth Estimation	71
Appendix F: Time Zone Table	72
Appendix G: DDNS Application.....	75

Overview

This user's guide explains how to operate IVS-100 from a computer. Basically, the user's guide is written to be read on the computer display. However, users might consider printing it out to access easily and read it before you operate IVS-100.

Introduction

Video Server is an inexpensive fully scalable surveillance technology. Because IVS-100 can be plugged in to your existing computer network infrastructure, you will potentially save thousands of dollars on unnecessary cabling.

IVS-100 is accessible via the LAN or Internet connection. Connect your Video Server directly to a computer network or DSL modem, and with a standard Web browser you get instant, on demand video streams. Within minutes you can set up IVS-100 to capture a video sequence to a PC. Live video image can be uploaded to a website for the world to see or made available only to select users on the network.

Features:

- PTZ camera control
- JPEG video compression
- Audio streaming
- Remote-Control via Internet Explorer
- Support statistic and dynamic IP address
- 16 Preset Points
- CF memory card reader
- Camera Utility
- On-line firmware upgrade

Application:

- Remote monitoring
- Surveillance

Minimum System Requirement

- **Microsoft Internet Explorer 6.0 or later**
- **VGA Monitor resolution 1024 x 768**
- **Pentium III 800MHz or above**
- **Memory Size: 128MB or above**
- **VGA card resolution: 800x600 or above**
- **Windows ME, 2000, XP, or 2003**

Package Contents

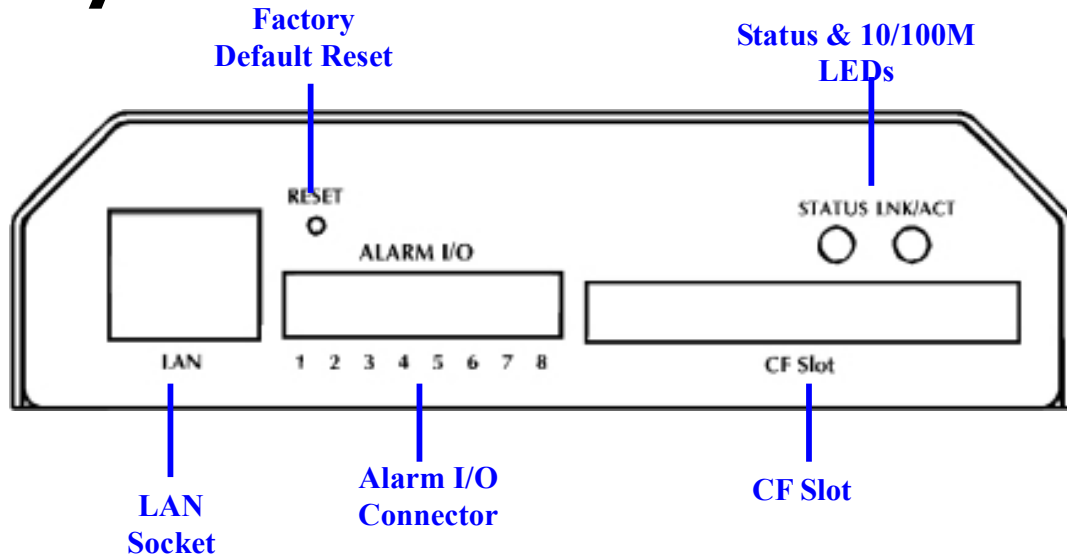
User can find the following items in the package:

- Planet IVS-100 Video Server x 1
- Power adapter x 1
- Terminator for Alarm I/O x 1
- Terminator for RS485 x 1
- Installation software and manual CD x 1

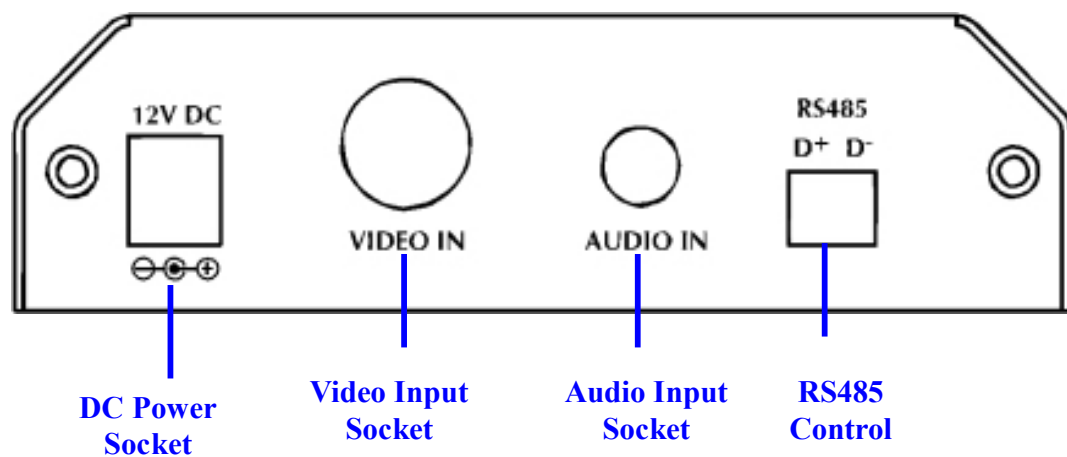
If any of the above items are missing, please contact your dealer immediately.

Note: *Using a power supply with a different voltage than the one included with IVS-100 will cause damage and void the warranty for this product.*

Physical Details



Front Panel of IVS-100



Rear Panel of IVS-100

LAN Socket

The LAN socket is an RJ-45 connector for connections to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built NWay protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 “straight through” cable to connect IVS-100 to a 100Mbps Fast Ethernet network switch or hub.

Alarm I/O Connector

IVS-100 provides a terminal block with 8 pins of connectors located on the center of the back panel. There are 3 pins for two alarm inputs and 5 pins are for alarm output. The I/O connectors are physical interface to sense and/or activate alarm signals to a variety of external sensors or alarms. Please refer to the Appendix B in this manual for more information.

CF Card Socket

The CF card socket is located on the right side of the back panel of IVS-100. User can plug a CF memory card into this socket to store the alarm or scheduled images. This is very useful to keep the evidence of alarms or scheduled images for reference.

Factory Default Reset

This button is hidden in the pinhole above the Alarm I/O connector. Please refer to the Appendix A in this manual for more information.

Microphone

IVS-100's has built-in an internal microphone. This microphone is also hidden in the pinhole above the Alarm I/O connector.

Status and 10/100M Ethernet LEDs

LED stands for Light-Emitting Diode. The Status and Ethernet LEDs are located on the right side of the back panel of IVS-100. The Status LED will turn green while system is booting up successfully.

Ethernet LED is used to indicate the status of Network connection. While not any connection to IVS-100, the LED will be off and flash orange while some one accesses this Video Server.

DC-in and Video-in Jack

The DC power input and video-in located on the back panel of Video Server. The input power is 12VDC. Note that supply the power to IVS-100 with standard power adapter included in package. Otherwise, the improper power adapter may damage the unit and result in danger. Install a video output device and connect it to video-in jack.

Audio-in Jack

Audio-in jack allows any device that could input audio. For example, microphone, CD player, etc.

RS485

This is for the P/T camera. After d+ and d- are correctly connected to P/T camera, users could control the camera by clicking the direction arrow on the web server of IVS-100

Hardware Installation

1. Attach video source to Video Server

To use Video Server, user must supply video signal to this device. Typical, user may utilize standard camera, doom camera, bullet camera, PT camera, Speed doom camera, or others as the video source. Connect the BNC terminal of camera to IVS-100's video input and make sure to power on your camera first.



2. Attach Audio source to Video Server (option)

If user needs not only video stream but also audio stream, then the audio source is attached to Video Server at the time. User may utilize line output of standard camera or audio amplifier, or others as the audio source. Connect the RCA terminal of audio device's line output to IVS-100's RCA input and make sure to power on your camera or audio device first.



3. Plug an Ethernet cable into Video Server

Connect an Ethernet cable to the LAN socket located on IVS-100's front panel and attach it to the network.



4. Connect the external power supply to Video Server

Connect the external power supply to the DC power connector attached on the extension cable from IVS-100. Note: use the power adapter, 12VDC, included in the package and connect the other end to wall outlet for AC power.



When you have installed IVS-100 well, the status LED will turn green. It means the system is booting up successfully. Furthermore, if you have a proper network connection, and access to IVS-100, the 10/100M LAN LED will flash orange

5. Connect RS485

When users would like to apply a camera with P/T 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 through Internet.



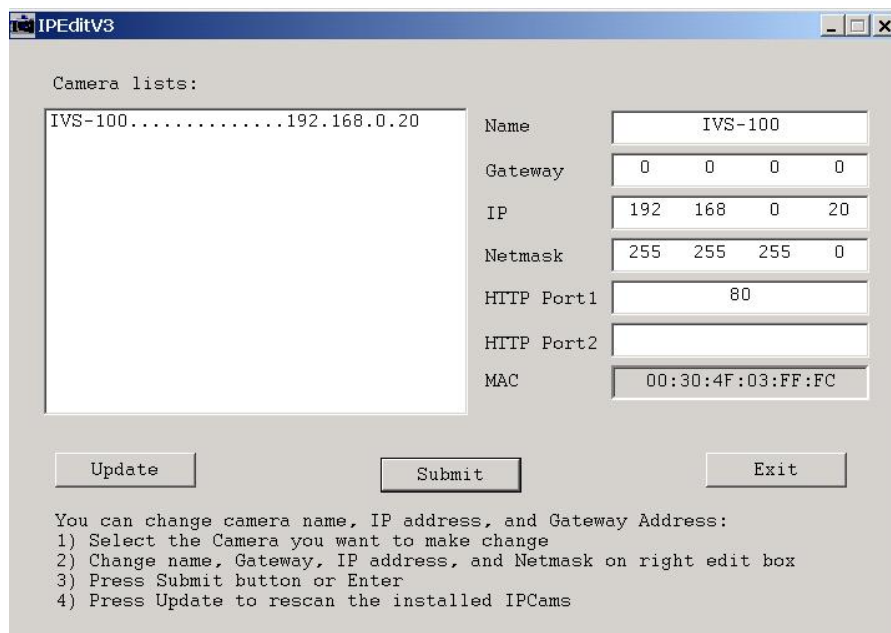
Logging in to Homepage

Before Operation

Install the IP Address of Video Server

When you installed your Video Server on your LAN environment, you may execute IPEditV3 to discover Video Server's IP address.

IPCam Finder Program (IPEditV3) is used to scan the Installed Video Server, setting IVS-100 Name, IP address settings.



Using your mouse to select any one of IVS-100 within your LAN environment, you can find out its IP address and other IP parameters as follows:

1. Edit the Name of this Video Server
2. Update the IP address of this Video Server. (192.168.0.20)
3. Update the Gateway Address. (0.0.0.0)
4. Update the Network Mask (255.255.255.0)

5. Default HTTP Port1 number is 80.
6. 'Submit' it.

After Submit, the IP information of this Video Server will be updated.

Install IVS-100 with an ADSL Router

If IVS-100 was installed on the LAN with an ADSL router, then IVS-100 can get a dynamic IP address from the DHCP server. However, if IVS-100 wants to be access from the WAN, IVS-100 IP address needs to be setup as fixed IP, also the Virtual Server function of ADSL router needs to be setup as follows:

1. Setup IVS-100 as Fixed IP, such as *192.168.0.20*.
2. Enter the administrator page of ADSL router. (Use zonet ASDL router as an example).
3. Enter the Virtual Server Page.
 - a. Setup the mapping of *HTTP Port (80)* to *192.168.0.20*.

Then IVS-100 can be access from WAN by the ADSL WAN IP Address.

First time uses IVS-100

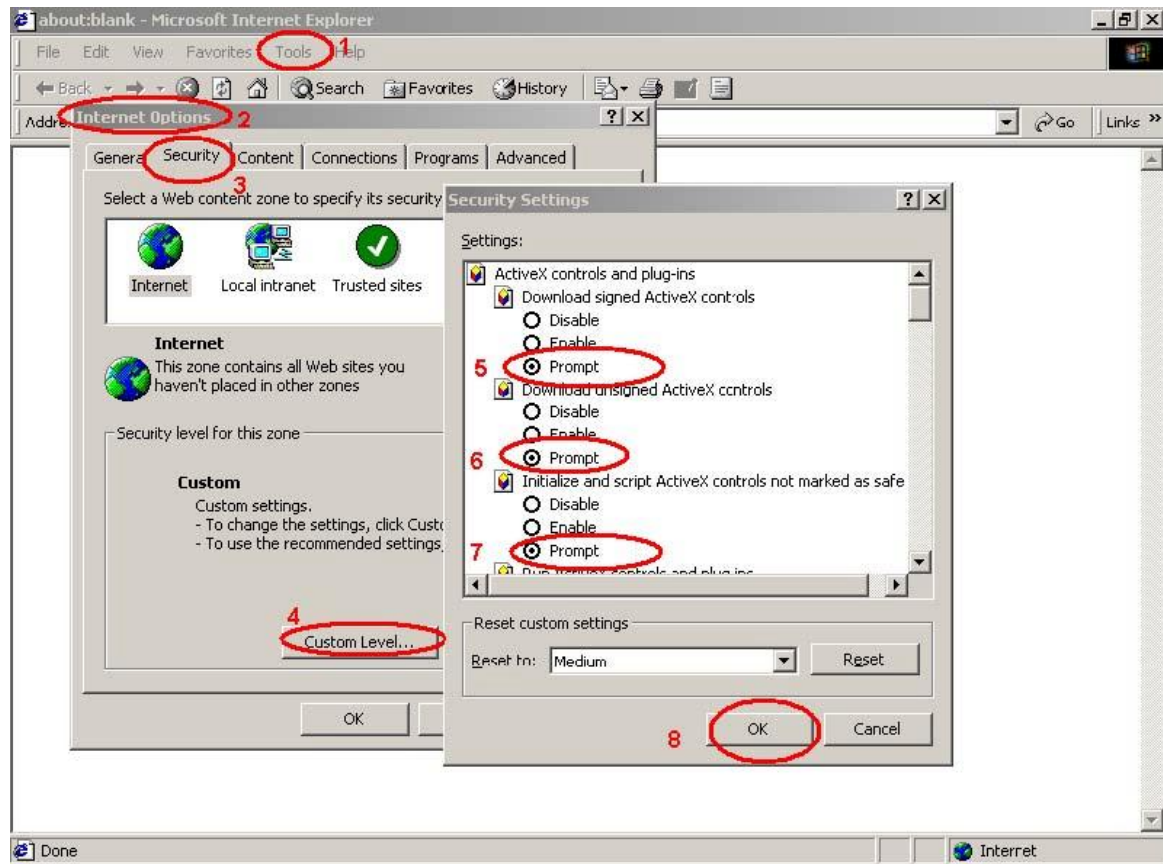
IVS-100 web page communicates with IVS-100 using an ActiveX control. The ActiveX control must be downloaded from IVS-100 and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use IVS-100, user must setup his IE browser as follows:

From your IE browse → "Tools" → "Internet Options..." → "Security" → "Custom Level...". please setup your "Settings" as follow.

Set the first 3 items

- *Download the signed ActiveX controls*
- *Download the unsigned ActiveX controls*
- *Initialize and script the ActiveX controls not masked as safe*

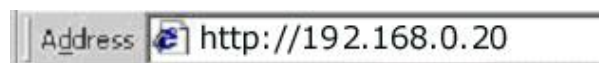
To Prompt



By now, you have finished your entire PC configuration for Video Server.

Access IVS-100 from the Internet Explorer for the first time

1. Start the web browser on the computer and type the IP address of IVS-100 you want to monitor as below:



The Login Window of IVS-100 is displayed:



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:

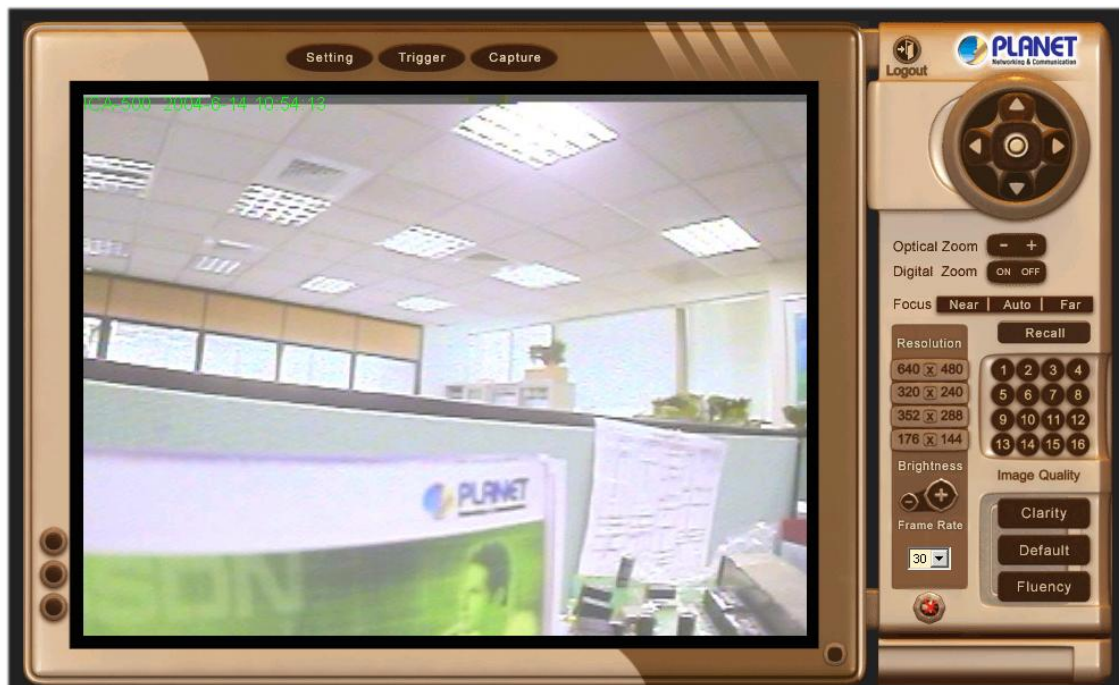
That's, type in “**admin**” on the “USERNAME” as a default name and leave PASSWORD textbox blank. Click “OK” button to start the main menu.

Now, you login to IVS-100 as a full-authorized administrator. You can enter “Setting” to change the password and setup “Administrator” or “User” authority. Please refer to “Setting” → “User” and “IP Filter”.

3. The IE Web Page will display the “Security Warning” window, select “Yes” to install and run the ActiveX control into your PC.



4. Display the image. After the ActiveX control was installed and ran, the first image will be displayed.



Logging in as an ordinary User

For ordinary user usage, "Setting", "Trigger", and "Capture" will be not available. On the right side of the screen, there are lots of controls and function buttons. If the administrator turns off "Remote camera control", then those control and function buttons will not be available as well.

For the rest of this user guide, it is assumed that the "Remote camera control" will be turned on for normal operation.

Logging in as an Administrator

If you log in IVS-100 as the Administrator, you can perform all the settings provided within the software. The Administrator may be logged in at any time, regardless of the number of the users being accessed.

Operating IVS-100

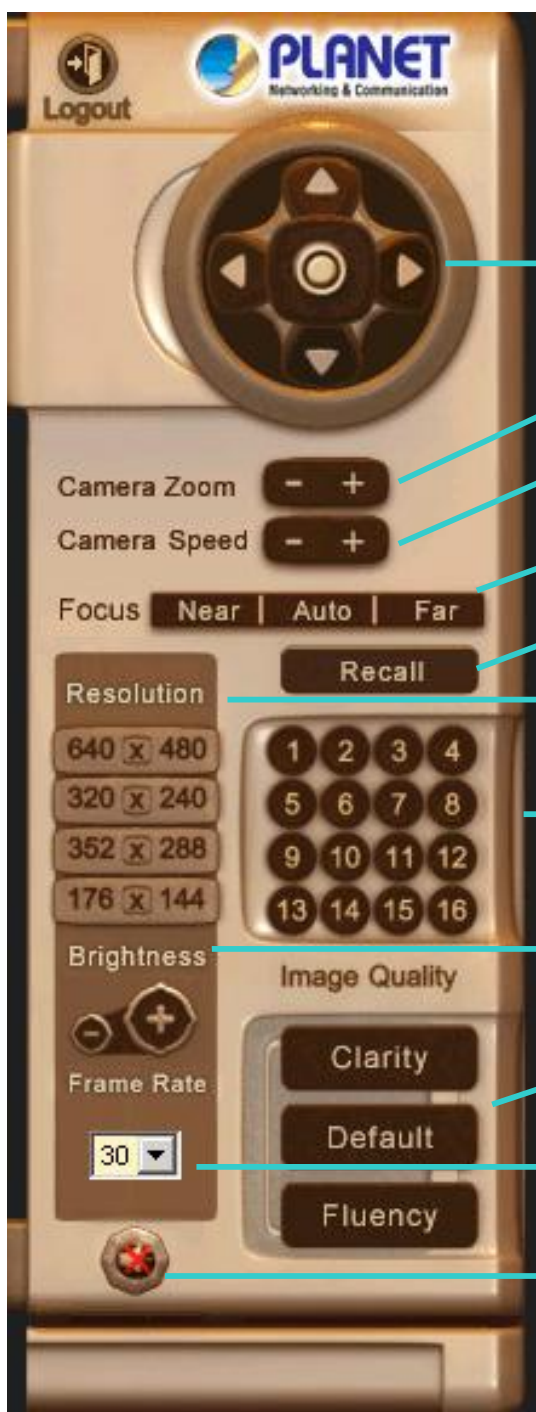
Start-up screen will be as follow no matter an ordinary users or an administrator.



Viewing Area: Images from IVS-100

Control Panel Area

Control Panel Area: Video Server Manipulation and image quality control



Note: * for PTZ camera only

1. Camera direction Up, Down, Left, Right, Home

*2.Canera Zoom

*3.Canera Speed

4. Adjust camera focus

5. Adjust camera focus Recall/Preset Mode

6. Video Resolution

7. Preset or Recall positions

8. Video Brightness adjustment positions

9. Frame rate adjustment via image quality

10. Frame rate adjustment directly

11. Audio On/Off

Item	Button	Meaning
1	Camera Direction	Control camera up/down/left/right and home position

2	Camera Zoom	Adjust camera optical zoom in/zoom out (Noted: PTZ camera available only)
3	Camera Speed	
4	Adjust Camera Focus	Adjust camera focus (Noted: PTZ camera available only)
5	Recall/Preset mode	Preset: set up camera fixed locations before operation Recall: Set camera position to preset location
6	Video Resolution	Adjust Video resolution Video Server provides 4 resolutions: 640x480, 352x288, 320x240, 176x144 For NTSC camera: 320x240 is suitable For PAL camera: 352x288 and 176x144 are suitable However, all resolution are available for NTSC and PAL camera
7	Preset or Recall positions	Preset or Recall camera 1~16 location(s) Ex. If you press 5, then the camera will move to preset location 5.
8	Video Brightness Adjustment	Adjust Camera video brightness
9	Image quality	Adjust image quality. Clarity: Video is better but frame rate may be slower Fluency: Video is not as good as Clarity but frame rate may be higher Default: System default value
10	Frame rate adjustment directly	Adjust video frame rate via giving a number directly
11	Audio On/Off	Turn on/off audio output function. Note: There's a Microphone hole on the back panel. You need to position the MIC hole face to the audio source to have better audio quality.

Advanced Function Area







Advanced function area: only available for administrator. It has contained three categories.

Setting	System Configuration
Trigger	Send out current message or setup activities
Capture	Capture current screen and save to HDD or other media

Setting menu consists of the Basic menu and the Application menu. The Basic menu is used for basic settings of IVS-100, and the Application menu is used for setting various applications according to individual. Click on each menu name to display its setting page.

Basic Setting

For the setting, you will see there are divided into two categories – Basic Setting and Application.

Basic Setting		
Symbol	Item	Action
	System	Define Frame Rate, Turn on/off "Remote camera control", and view system log file.
	Camera	Adjust camera parameters and set camera tour
	Network	Configure Network setting such as DHCP On/Off, DDNS and PPPoE
	User	Setup user name, password and login privilege
	IP Filter	Setup legal IP address of user login (This function should be used with function "User" respectively)
	Event	Define the event from Motion detection and sensors for security purpose



System: Define Frame Rate and Turn on/off “Remote camera control”

System Setting

Serial Number

Camera Name IVS-100

Default frame rate 30

Remote camera control ☒ ON ☐ OFF

Log View

SAVE CANCEL

Camera Name:

You can enter the name of this unit here. It's very useful to identify the specific device from multiple units.

Default frame rate:

You can set up frame rate here or via right-side control panel.

For example, set the frame rate to 5 FPS, then the image will be updated for 5 frames per second, the time interval can be checked by the time displayed on the image.

Remote camera control:

Turn on “Remote camera control”: users will be able to use right-side control panel vice versa.

Log:

User can check the log information of IVS-100, including the *Main Info*, *Appended Info*, *Operator IP*, *Operator MAC*, and *Time*.

Select the “View” button to check the log file.



Camera: Adjust Camera parameters

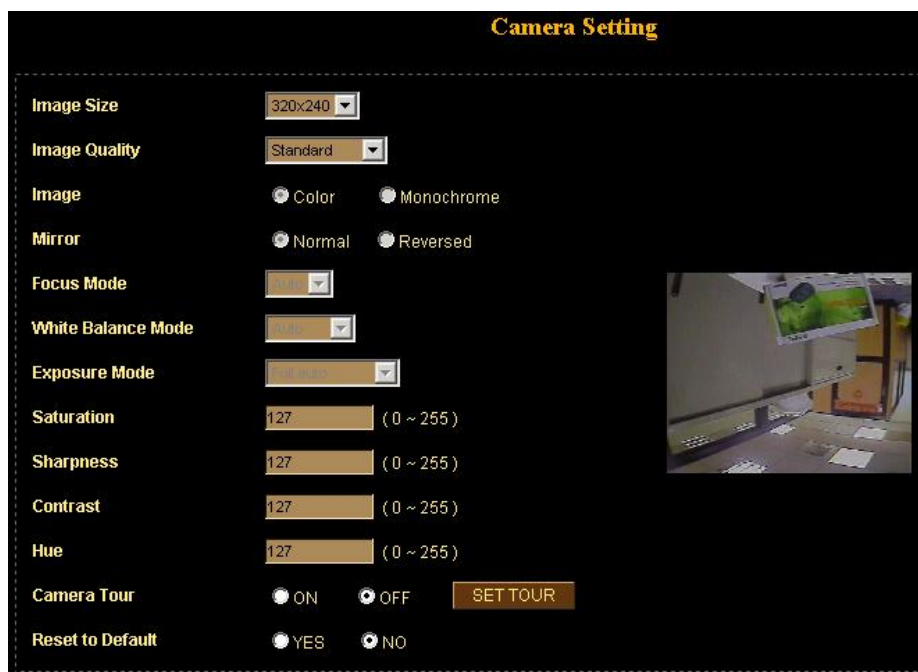


Image Size:

Video Server provides 4 resolutions:

- 176x144
- 320x240
- 352x288
- 640x480

Image Quality:

IVS-100 provide 3 quality setting,

Clarity: Video is better but frame rate may be slower

Fluency: Video is not as good as Clarity but frame rate may be higher

Default: System default value.

Note: The value on the list box display the current setting of the current image, when you make a new selection, the value on the list box will be changed until you save the new setting.

Image, Rotate, Mirror, Focus Mode, White Balance Mode:

These functions are available for PTZ Video Server, only. It's not functional for this model.

Saturation, Sharpness, Contrast, Hue:

To control the camera, key in these values respectively.

Camera Tour:

Camera Tour

Tour name:

Dwelling time: (1 to 3600sec)

Sequence:

1	<input type="text"/>	2	<input type="text"/>
3	<input type="text"/>	4	<input type="text"/>
5	<input type="text"/>	6	<input type="text"/>
7	<input type="text"/>	8	<input type="text"/>
9	<input type="text"/>	10	<input type="text"/>
11	<input type="text"/>	12	<input type="text"/>
13	<input type="text"/>	14	<input type="text"/>
15	<input type="text"/>	16	<input type="text"/>

Enable: ☐ A ☐ B ☐ C ☐ D ☐ E

Tour Name: The group name of the sequence of camera tour

Dwelling Time: The time period between every tour point.

Sequence: 16 points can be assigned. The tour point will also show the location name if you had entered the location name while preset the camera..

Enable: Which sequence group should be activated.

To use the camera tour function, user must preset some camera positions first. The maximum number of preset points is 16.

In the Camera Tour page, choose the one tour name from A to E. Fill the dwelling time and tour sequence by preset points, and then save these setting. You can repeat above procedure to set more camera tours.

Now, you could choose one of the camera tours and click "SAVE" button to enable it.

Reset to Default:

Restore the values of these pages to factory default value.



Network: Configure Network setting such as DHCP On/Off, DDNS and PPPoE

DHCP:

DHCP: Stands for Dynamic Host Configuration Protocol.

“*DHCP ON*” is default network setting of IVS-100, when a Video Server is joined into the LAN, it will issue the DHCP packets to request an IP address that is dynamically assigned by the DHCP server. If it can not get a DHCP address on a limited tries, IVS-100 will assigned a default IP address as the default IP address.

IP address, Subnet mask, Default gateway, Primary DNS, Secondary DNS:

If you turn DHCP OFF, then you need to enter those network parameters by yourself.

Note: User need to reboot IVS-100 to make this setting to take effect.

HTTP Port 1:

Users could assign the port number of http protocol, and the WAN users should follow the port number to login. If the http port1 is not assigned as 80, users have to add the port number in back of IP address. For example: <http://192.168.0.20:12000>. If the http port1 is assigned as 80, users do not have to add the port number in the back of IP address.

HTTP Port 2:

The function is the same as http port 1. It's the second choice of the port number.

Current implementation supports 2 HTTP port setting, the Http port 1 set to 80, the Http port 2 is not defined. The user can access the IVS-100 by

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

<http://xx.xx.xx.xx:xxxx/> to access the IVS-100.

Suggest keeping the Http port 1 as 80 to make sure the IVS-100 can be accessed by the default HTTP port setting access on the LAN. <http://xx.xx.xx.xx/>

If multiple IVS-100 is installed on the LAN, also required to be accessed from the WAN, then the Http port 2 can be changed as the virtual server port mapping to support multiple IVS-100.

Note: If you just want to reboot system without change anything. You could click SAVE button directly, then system will reboot again without any setting changed.

DDNS:

DDNS: Stands for Dynamic Domain Name Server

IVS-100 supports DDNS. DDNS allows IVS-100 to use an easier way to remember naming format rather than an IP address. The name of the domain is like the name of a person, and the IP address is like his phone number. On the Internet we have IP numbers for each host (computer, server, router, and so on), and we replace these IP numbers to easy remember names, which are organized into the domain name. As to ADSL 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. For more DDNS configuration, please consult your local dealer.

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 network over the Internet. The solution to the dynamic IP address problem comes in the form of a dynamic DNS service.

The Internet uses DNS servers to lookup domain names and translates them into IP addresses. Domain names, such as www.veo.com, are just easy to remember aliases for IP addresses. 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 and best of all they're free to use. Two such services you can use are www.no-ip.com and 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.

A DDNS service works by uploading your WAN IP address to its servers periodically. Your gateway-router may support DDNS directly, in which case you can enter your DDNS account information into your router and it will update the DDNS servers automatically when your IP address changes. Please consult your router's documentation for more information. If your router does not support DDNS, you can run a small client utility on any PC on your network, which will perform the updating. The client utility is usually provided for free by the service.

DDNS Setting

Enable DDNS ☐ ON ☒ OFF

Username

Password

Domain Name

HTTP Proxy

Proxy Username

Proxy Password

PPPoE:

PPPoE: Stands for Point-to-Point Protocol over Ethernet

A standard builds on Ethernet and Point-to-Point network protocol. It allows a local PC with xDSL or cable connects with broadband network. Also this local PC gets a dynamic IP address. For more PPPoE and Internet configuration, please consult your local dealer or ISP.

PPPoE Setting

Dial On Power Up ☐

User

Password

Send mail after dialed. ☐

Mail server

Username

Password ☐ Check Password

Sender email

Receiver email

Subject

SAVE **DIAL** **CANCEL** **BACK**

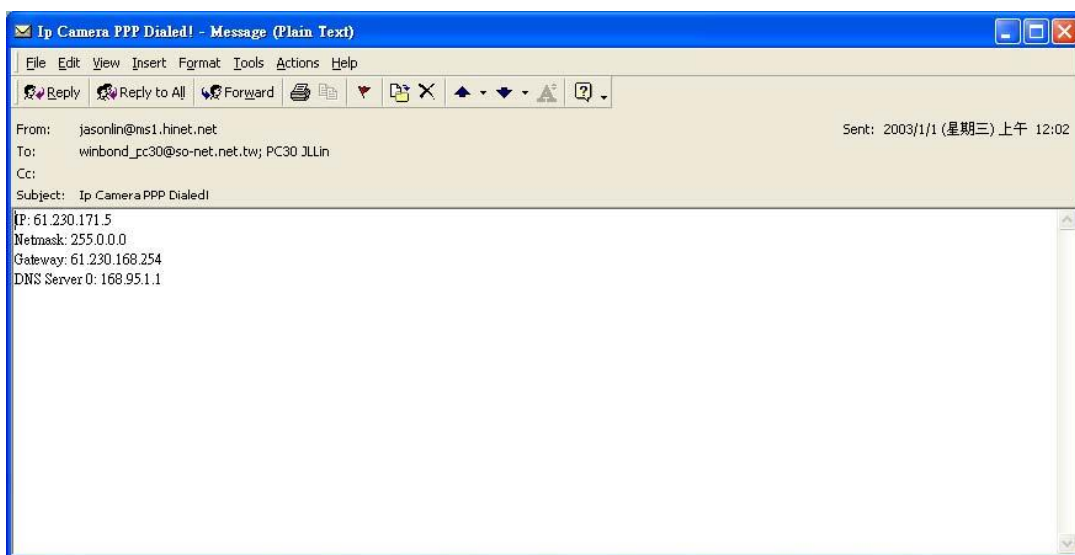
IVS-100 can directly connect to the ADSL, however, it should be setup on LAN environment to setup the PPPoE information, and then connect to the ADSL modem. Power on again, then IVS-100 will dial on to the ISP connect to the WAN through the ADSL modem.

The procedures are

- Connect to the LAN by DHCP or Fixed IP
- Access IVS-100, enter Setting ➔ Network.
- Check the radio button of "PPPoE Setting".
- If the ADSL Modem and Video Server were connected on a hub, after IVS-100 information were inputted, then you can press "Dial" to do the PPPoE dial.
- Input the "User" and "Password" fields by the account and password provided by the ISP.
- If the check box of "Send Mail after dialed" was checked, then the "MailServer" and "User on the MailServer" field need to be filled.
- If the mail server needs authentication, then the check box of "Password" needs to be checked, and password information need to inputted.

- Also the “Sender email”, “Receiver email” needs to be inputted.
- The “Subject” field can be modified too.
- Select “Save” to save the setting.

If the PPPoE option “Send mail after dialed”, then when PPPoE dialed up to ISP, a mail that contains the Dialup IP Address/Net mask/Gateway address/DNS Server address will be mailed to preset e-Mail address.





User: Setup user name, password and login privilege

User Setting

User ID	Username	Password	Access right
Administrator	<input type="text" value="admin"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 1	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 2	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 3	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 4	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 5	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 6	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 7	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 8	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 9	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>
User 10	<input type="text"/>	<input type="password"/>	<input type="text" value="Administrator"/>

You can set up to 10 different usernames and passwords. Although there are 10 sets only, you may have one group of people use one username and password to login. Every one set of username and password can be acted as an Administrator or just a normal user.

Select "Save" to save the setting.



IP Filter: Setup user login right (This function should be used with function “User” respectively).

You can enter 10 different user's IP address, which are allowing enter or disregarding by IVS-100.

You should configure “User” before “IP Filter”. Each “User” username and password matches with one “IP Filter” user.

IP Filter

Default policy

Allow ▼

User ID	IP From	To	Policy
User 1	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 2	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 3	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 4	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 5	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 6	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 7	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 8	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 9	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>
User 10	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<div style="border: 1px solid #ccc; padding: 2px 5px; background-color: #f0f0f0;">Allow ▼</div>

SAVE

CANCEL

Select “Save” to save the setting.

Function Notification

The page of user setting is very closely related to the IP filter settings. While the administrators are setting these two pages, they should notice that login authorities are not only based on the login names but also the range of IP addresses. Administrators could reject login users according to both login names and IP addresses. We setup several examples to explain the logical relations between login names and the IP policy. The users login in the name of "admin" have the most power. System will always accept no matter how IP filter setting was set.

-1-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Allow, login name1 comes from 192.168.0.A to B=Allow
That is, when the remote users login in the name of 12345 and come from the IP addresses 192.168.0.A to 192.168.0.B, login will be successful. If these users did not come from the IP addresses A to B, login access will be rejected.

-2-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Allow, login name1 comes from 192.168.0.A to B=Deny
That is, when the remote users login in the name of 12345 and come from the IP addresses 192.168.0.A to 192.168.0.B, login will be denied. If these users did not come from the IP addresses A to B, login access will be successful.

-3-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Deny, login name1 comes from 192.168.0.A to B=Allow
That is, when the remote users login in the name of 12345 and come from the IP addresses 192.168.0.A to 192.168.0.B, login will be successful. If these users did not come from the IP addresses A to B, login access will be rejected.

-4-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Allow, login name1 comes from 192.168.0.A to B=Allow
That is, login of all the login names will be rejected except the login name "admin".



Event: Define the event from Motion detection and sensors for security purpose.

Event Setting

Event ☐ Motion Detection ☐ Sensor 1 ☐ Sensor 2







SAVE **CANCEL**

You may install 2 different sensors or turn on motion detection for your security purpose.

By definition, If any motion detected or sensor has been activated, IVS-100 can issue a message or send a mail out to the person whose mail is assigned within SMTP.

Select "Save" to save the setting.

Application Setting

Application		
Symbol	Item	Action
	FTP Client	Setup IVS-100 as a client site and configure Server site in order to upload images to server
	FTP Server	Setup IVS-100 as a server site and allow remote sites to check memory space availability (Not available yet in this software version)
	SMTP	Setup Mail configuration
	Alarm 1	Setup Alarm Output 1 action via manual or event
	Alarm 2	Setup Alarm Output 2 action via manual or event
	Image Memory	Setup captured images storing naming configuration and provide any warning such as "Disk Full" (Not available yet in this software version)
	Alarm Buffer	Setup image saving actions in case of alarms activated (Not available yet in this software version)
	Schedule	Setup scheduled recording activities (Not available yet in this software version)
	Motion Detection	Setup motion detection area and sensor sensitivity
	Time Setting	Setup IVS-100 time configuration
	Popup	Setup event message while motion or sensors has been activated
	Firmware Upgrade	Firmware upgrade
	Factory Default	Recall IVS-100 factory default setting



FTP Client: Setup IVS-100 as a client site and configure Server site in order to upload images to server

When alarm was enabled, user can send the captured images to the pre-set FTP server.

FTP Client Setting

FTP server name: 192.168.0.124

User name: root

Password: *****

Remote path: /home

Image file name:

Suffix: ☐ None ☒ Date / Time ☐ Sequence number

Sequence No. clear: ☐ Yes ☒ No

Mode: ☐ Event ☒ Periodical sending 3 ☐ OFF

SAVE CANCEL

Entering server name and your login username and password, you will be able to upload those previous captured image to the FTP server. You can also send data to the server according to different situation such as by event or by period.

FTP server name:

Type the FTP server name to upload still images, or the IP address of the FTP server.

User name:

Type the user name for the FTP server.

Password:

Type the password for the FTP server.

Remote path:

Type the path to the destination.

Image file name:

Type the basic file name you want to assign to the images when sending to the FTP server.

Suffix:

Select the suffix to add to the file name.

None:

No suffix is added. The basic file name is assigned to the image to be sent to the FTP server.

Date/Time:

The date/time suffix is added to the file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits) and consecutive number (2 digits), thus 14-digit number is added to the file name.

Sequence number:

A consecutive number is added to the basic file name. A number of up to 10 digits between 0000000000 and 4294967295 is added to the file name.

Mode:

Send a captured image via three different situations – via event such as motion detected or sensor activated or sends it periodically.

Select “SAVE” to save the setting.



FTP Server: Setup Video Server as a server site and allow remote sites to check memory space availability. This function is currently not available yet. Please contact your local dealer for later upgrade information.



SMTP: Setup Mail configuration

When alarm was enabled, user can setup the mail to send the captured images to the pre-set mail address.

SMTP Setting

SMTP server name	<input type="text"/>
Username	<input type="text"/>
Password	<input type="checkbox"/> Check Password <input type="text"/>
Sender's Mail Box	<input type="text"/>
Receiver's Mail Box	<input type="text"/>
Subject	<input type="text" value="IP Camera Warning!"/>
Mode	<input checked="" type="radio"/> Event <input type="radio"/> Periodical sending <input type="radio"/> OFF

You may setup SMTP mail parameters for future event-message receiving such as motion detected or sensor activated.

SMTP server name:

Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

User name:

Type the user name for the SMTP server.

Password:

Type the password for the SMTP server.

Sender's e-mail address:

Type the sender's E-mail address.

Receiver's e-mail address:

Type the receiver's e-mail address. This address is used for reply mail. **Note:** you can key in multiple receiver's email address at the time.

Subject:

Type the subject/title of the E-mail up to 64 characters.

Mode:

Send a captured image via three different situations – via event such as motion detected or sensor activated or sends it periodically.

Select "SAVE" to save the setting.



Alarm 1: Setup Alarm Output 1 action via manual or event



Alarm out 1

Mode ☒ Manual ☐ Event

SAVE CANCEL

You can issue an alarm output action by manual or event.



Alarm 2: Setup Alarm Output 2 action via manual or event



You can issue an alarm output action by manual or event.



Image memory: Setup captured images storing naming configuration and provide any warning such as “Disk Full”. This function is currently not available yet. Please contact your local dealer for later upgrade information.



Alarm Buffer: Setup image saving actions in case of alarms activated. This function is currently not available yet. Please contact your local dealer for later upgrade information.



Schedule: Setup scheduled recording activities. There will have 6 preset recording schedules. This function is currently not available yet. Please contact your local dealer for later upgrade information.



Motion Detection: Setup motion detection area and sensor sensitivity

The motion detection is implemented by a patented software algorithm, it runs on IVS-100, due to a larger processing power of motion detection, the overall performance of Video Server will be degraded, the frame rate may be reduced.

Motion Detection

Enable Motion Detection ☒ YES ☐ NO

Sensitivity High

Area Left: 2613 Top: 5833 Right: 7670 Bottom: 8888

SAVE CANCEL

You can enable or disable motion detection. If you enable motion detection, you can also setup detection sensitivity from one of three sensitivity levels.

By dragging mouse position on the image, you can see a red-box area, which is the motion detection area according to your sensitivity.



Time Setting: Setup IVS-100 time configuration

You can setup IVS-100 time or make it synchronized with PC or remote server. Also, you may select your time zone in order to synchronize time locally.

Synchronize the time with PC's time:

This is the default time adjust mode, the check box of *"Synchronize with PC's time"* would be checked by default.

Press *"SAVE"* button to do the time synchronization with PC time.

After the *"SAVE"* button was set, IVS-100 time will be synchronized as PC's time. From the setting, the Server's time is the same as PC's time.

Change the time manually:

The following steps can change the time manually

1. Select the check box of *"User Input"*
2. Change the date according to the *"yyyy/mm/dd"* format.
3. Change the time according to the *"hh:mm:ss"* by 24 hours format.
4. Select the new time zone setting.
5. Select the *"Adjust"* button to adjust the time.

The time was changed by checking the *"Server: "* time field.

Get Time from a NTP server:

Select “NTP” Button

Key in the NTP server's IP address.

Press “SAVE” to activate it.

After IVS-100 gets the time from NTP server, it will update IVS-100's time field.



Popup: Setup event message while motion or sensors has been activated

When any one of alarms enabled, and one of them detected, then a message window will be displayed on the screen.

Pop-up Setting

Pop-up text

Alarm pop-up text

Display mode ☐ Administrator ☒ All users

Sensor 1 ☐ ON ☒ OFF _____

Sensor 2 ☐ ON ☒ OFF _____

Motion detection ☐ ON ☒ OFF _____

SAVE **CANCEL**

You can have output message in case of events activated such as sensors or motion detection to warn user.



Firmware upgrade

IVS-100 supports firmware upgrades (the software that controls the operation in IVS-100). Planet will supply the latest firmware version on the Planet Web site at: www.planet.com.tw.

Download the latest firmware file from Planet. Unzip this firmware file to binary file and store it into your PC. The file name should be **XXX.BIN** for IVS-100. Then follow the steps as bellows carefully:

1. Select "Firmware update"
2. The Firmware Upgrade menu will appear:



3. Select the Firmware binary file. (It must be make sure that the Firmware only apply to Video Server, once update, it will be burned into FLASH ROM of system.)
4. Once the firmware file was selected, select "Upload".



5. Press the “here” button to begin to upgrade firmware.



6. Press the “OK” button to continue.



The upgrade progress status information will be displayed on the screen.

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 IVS-100. Suggest that do not upgrade firmware via Wireless LAN due to high error rate possibly.

Please be aware that you should not turn off the power during updating the firmware and wait for finish message.

Once the upgrading process completed, IVS-100 will reboot the system automatically.

Note: please wait for 20 seconds, and then you can connect to Video Server again.



Factory Default: Recall IVS-100 factory default setting



The “*Factory Default*” button will restore to the factory default configuration, all information changed and saved on the flash will be lost, and restored to the factory default setting.

Check the “*Restore*” box, then click “*Reboot*” button. You will be prompt before restore to factory default setting.

Select “*OK*” to continue, or “*Cancel*” to abort it.

Trigger

You can send an image or output a trigger to control the alarm output, using Trigger section on the main page.

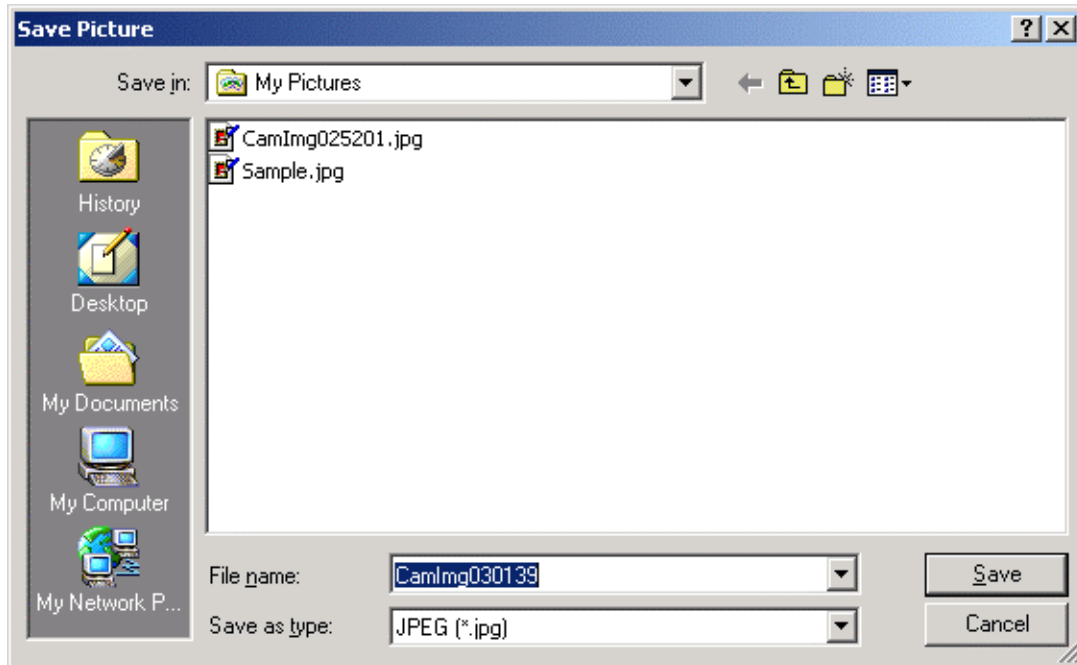


Action	Meaning
FTP	Upload a captured image to server
Mail	Mail captured image to specific mail address
CF Card Save	Save image to CF card (Not available yet in this software version)
Alarm 1	Enable Alarm output 1
Alarm 2	Enable Alarm output 2
Clear Alarm	Clear both alarm output status

Noted: This function is available for logging-in as an administrator only.

Capture

You can capture current image and save it to storage media. The image is saved in the JPEG format.



Noted: This function is available for logging-in as an administrator only.

RightMouseButton of ActiveX Control

On the view of video, the plug-in ActiveX control support a lot of functions by clicking the right mouse button. This feature only supports on the ActiveX control within Microsoft® Internet Explorer.

On the ActiveX control, right click the RightMouseButton, then a menu pop-up. This menu provides feature that are unique to the ActiveX control. These functions include

- “View”,
- “Splits”,
- “Rotate”,
- “Quality”,
- “Resolution”,
- “Image Recording...”,
- “Save Current Picture As ...”



View Menu

“Resizable”

Make the image is resizable, but “Actual size disable”, the “Splits” is supported on

this mode.

“Actual size”

Make the image show as the actual size, the “*Splits*” function does not work on this mode.

“StatusBar”

A status bar display on the bottom of the image.

“View”

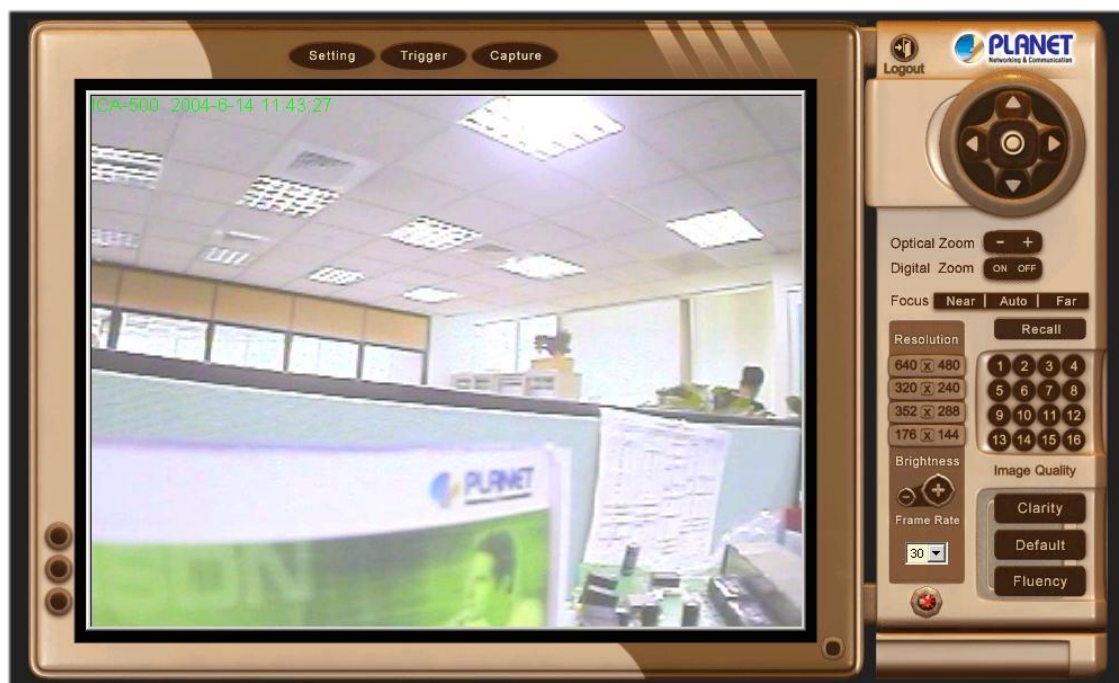
It makes the image resizable.



After the “*Resizable*” was selected, the border of the image changed to resizable border.



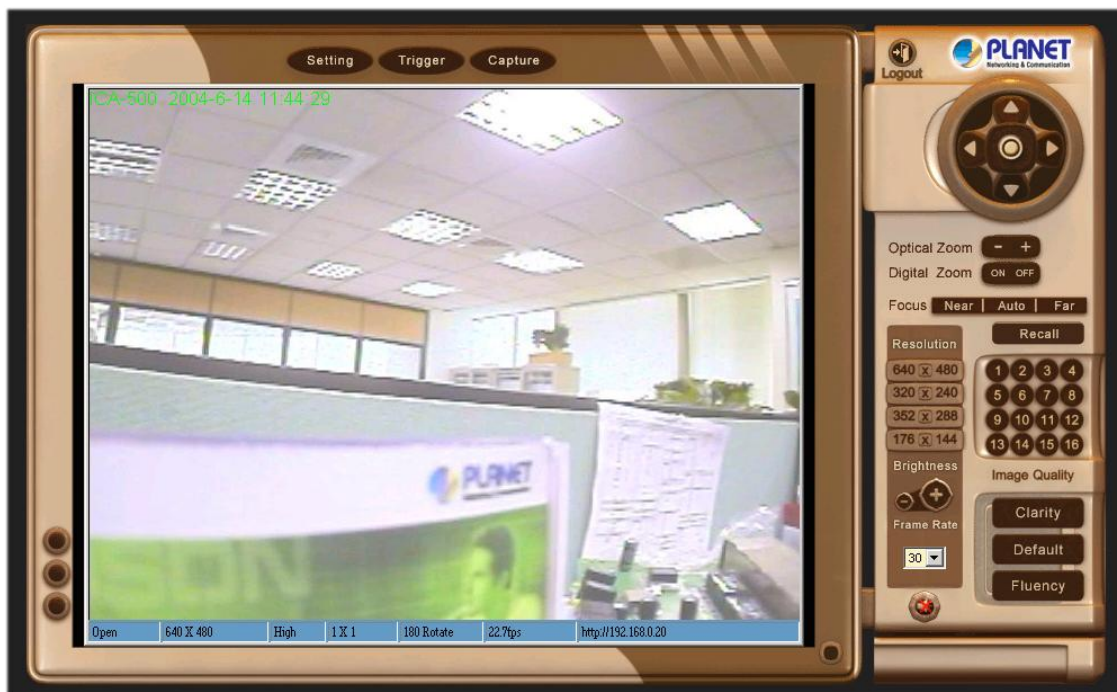
After the “*Actual size*” was selected, the image will displayed as the actual size, in this example, the image displays as a 640 x 480 pixels.



After the “*Statusbar*” was selected, a status bar will be displayed on the bottom of the image. It displays

- *Status*
Open/Close camera status

- **Resolution**
640x480, 320x240, 352x288, 176x144
- **Quality**
High/Low
- **Split**
1x1, 2x2, 3x3, 4x4
- **Rotate**
 - Normal: "Rotate 0", the default state.
 - Rotate: "Rotate 180", rotate the image by 180 degree; used on the camera was up side down mounted
- **Frame Rate**
- **URL**



"Split"

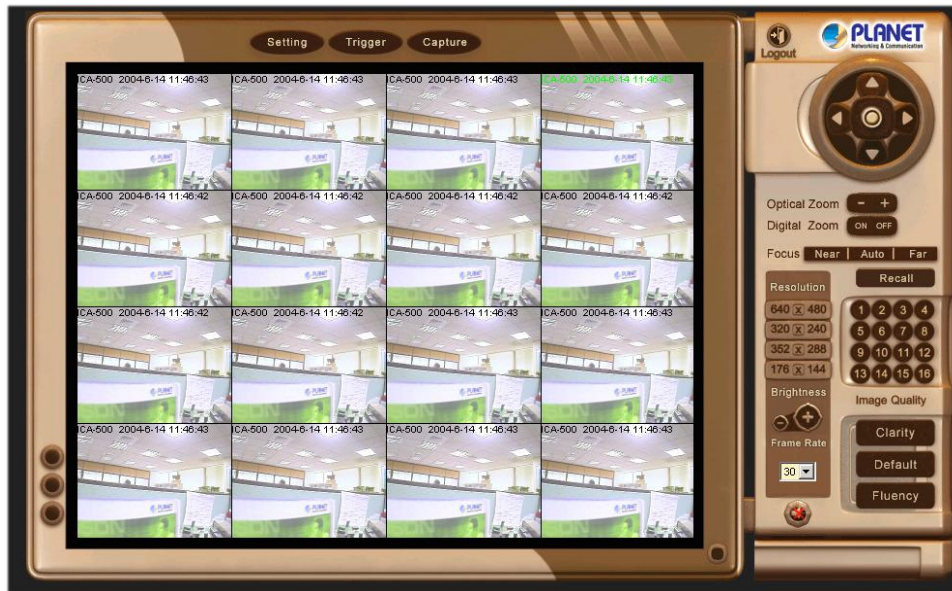


IVS-100 provides 4 setting for Window split, it can display different time frame images of the selected Video Server. The time string with green characters is the current displayed image.

4 type of *Split* window,

- 1 x 1 (*Default*)
- 2 x 2
- 3 x 3
- 4 x 4

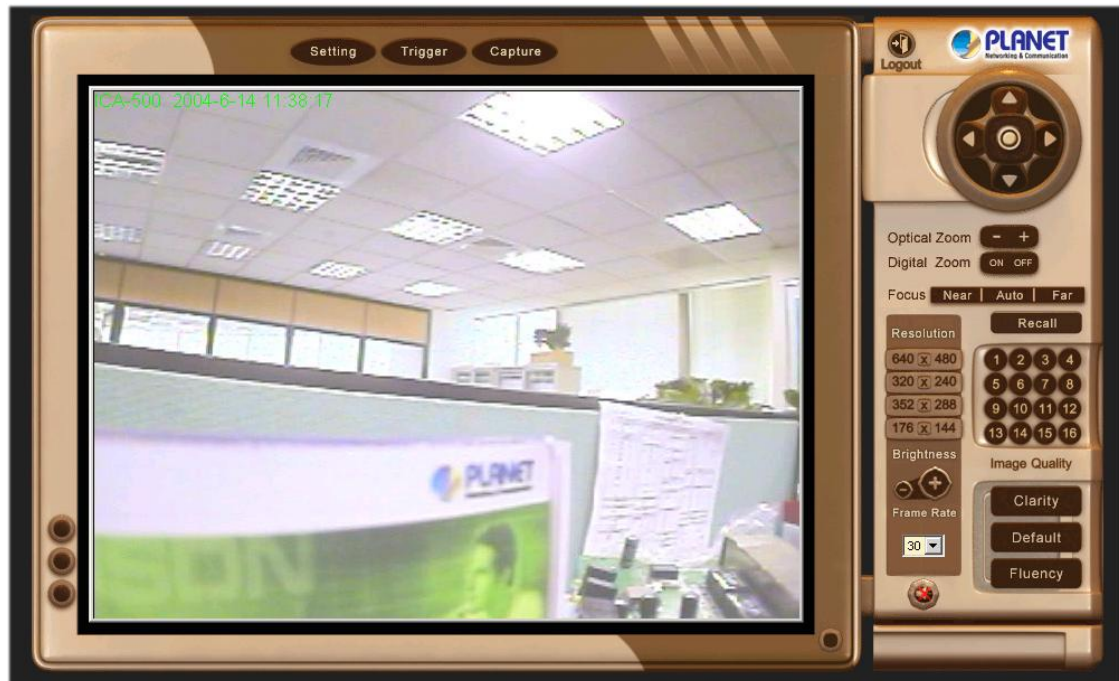
Note: The images on the split window are on the same camera, but with different time. It is useful on the low frame rate condition, and then user can check the images that are the recently got.



“Rotate”



After the “Rotate 180” was selected, the image displays up side down.



“Quality”

The control is the same as control panel's “Quality”.

“Resolution”

The control is the same as control panel's “Resolution”.

“Image Recording...-> Save as JPEG”

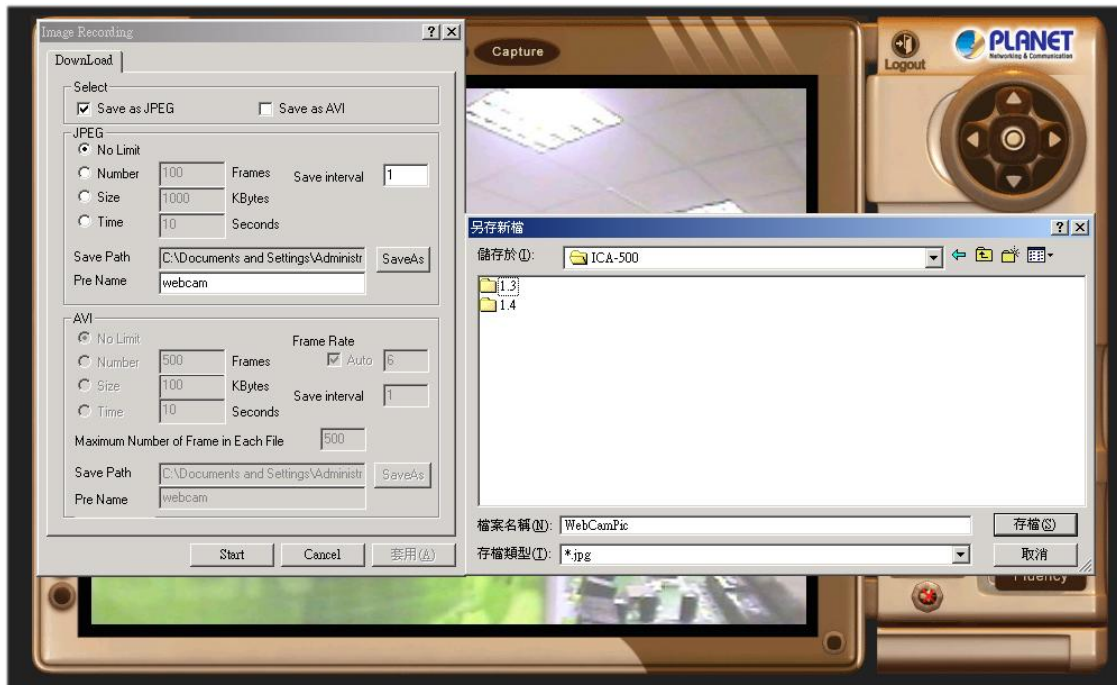
Select “Image Recording...”

The “Image Recording” pop-up window displays, select

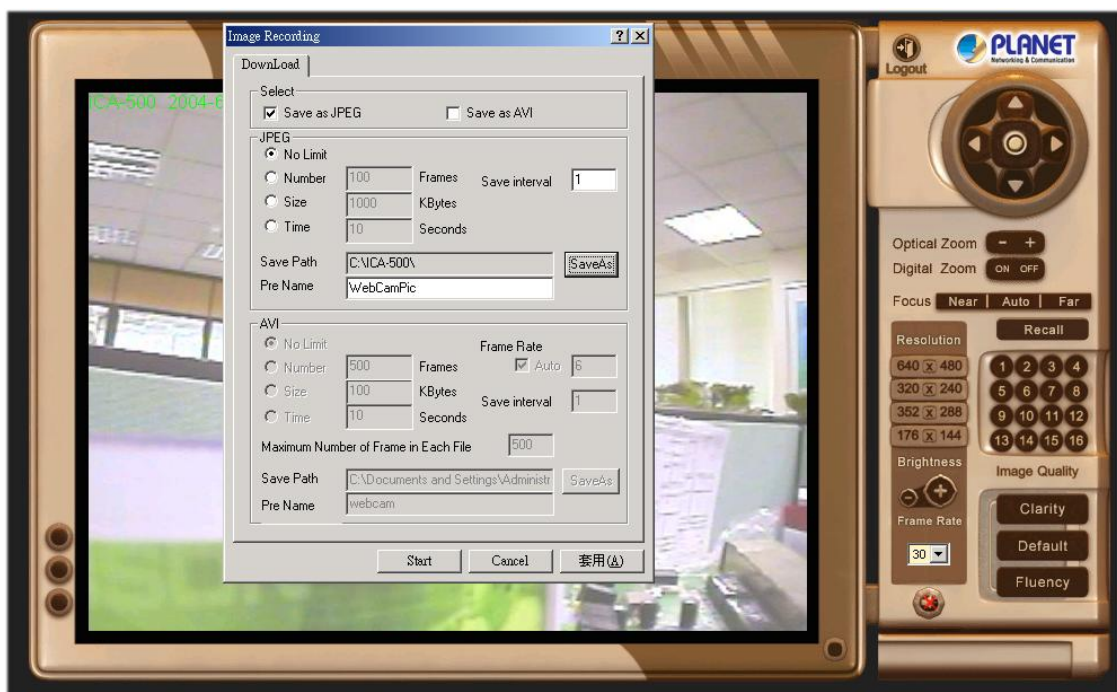
“Save as JPEG”

Input the “Download Number” for the number of images desire to be save, or “Download No Limit” to save the images continuous, until the “Stop Image Recording” is selected.

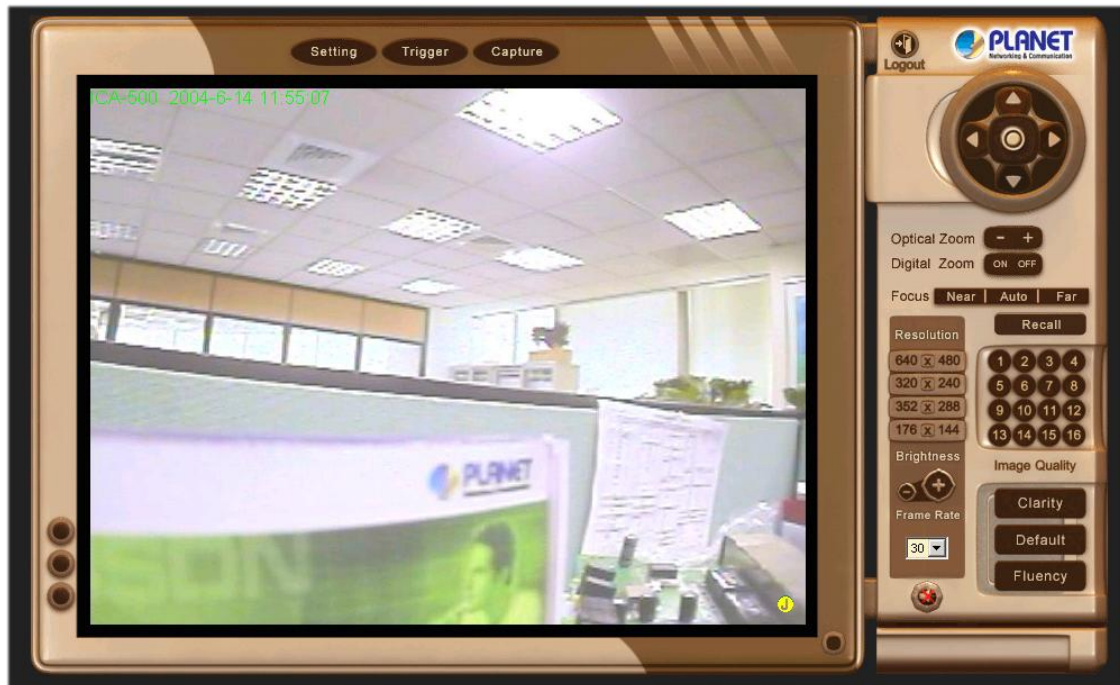
Select “SaveAs”, the pop-up window to select the save path and file name prefix, select “Save” to continue.



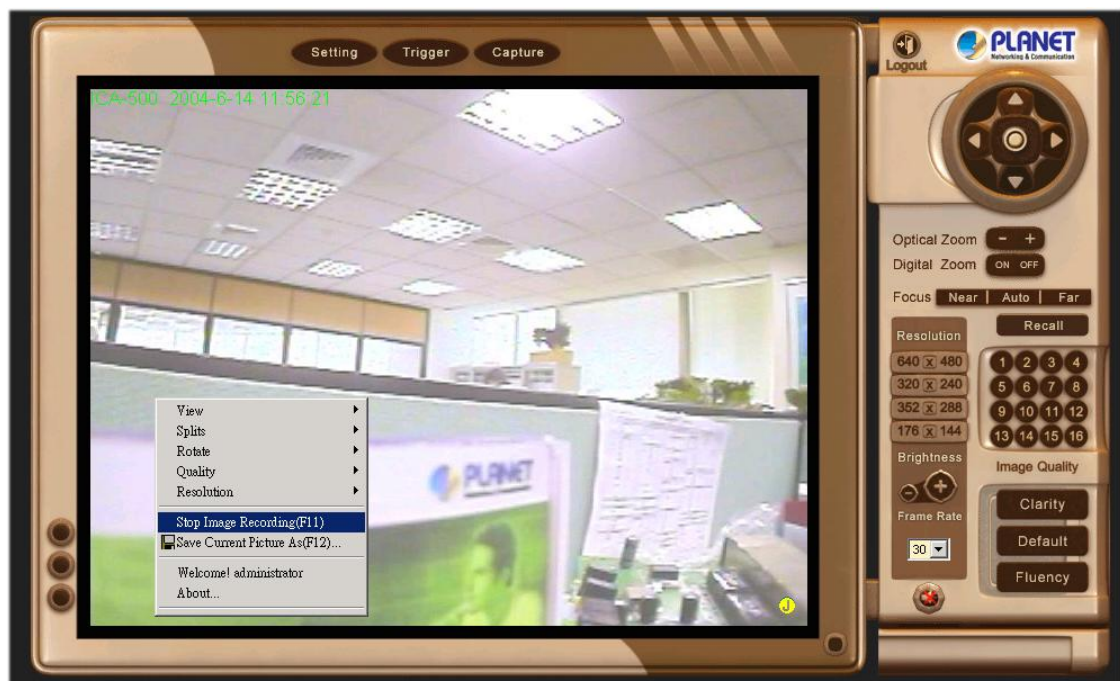
Select “*Start*” to do the images download and save as JPEG files into the local PC.



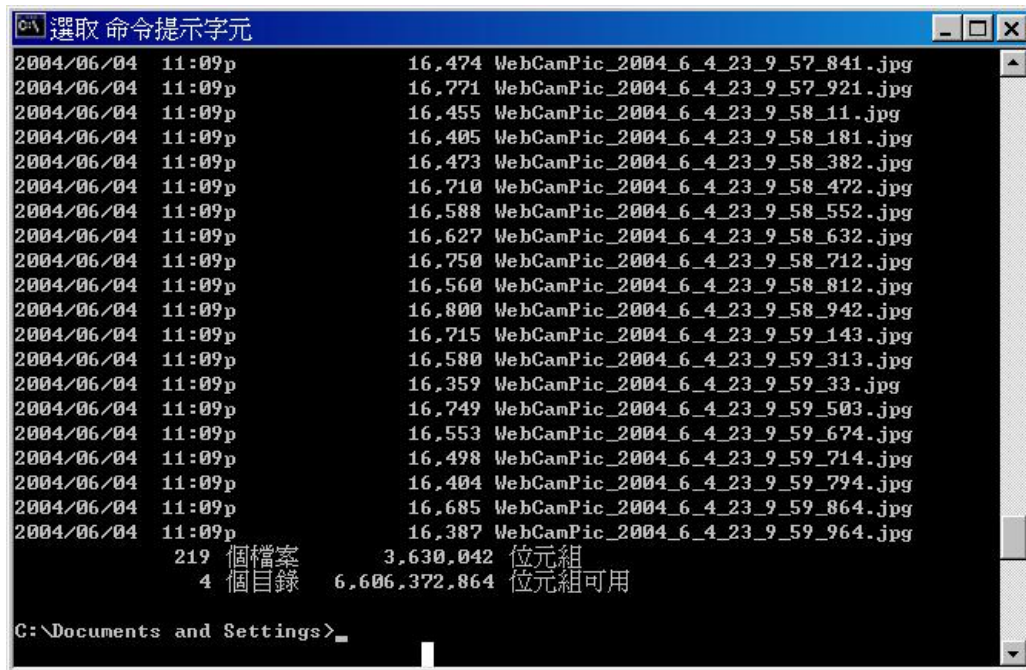
During the download and save as JPEG files process, the yellow mark will be displayed on the right-down position to indicate the saving as JPEG files operation.



Before the “*Download Number*” of images is reached, or “*Download No Limit*”, select “*Stop Image Recording*” to stop the image recording process.

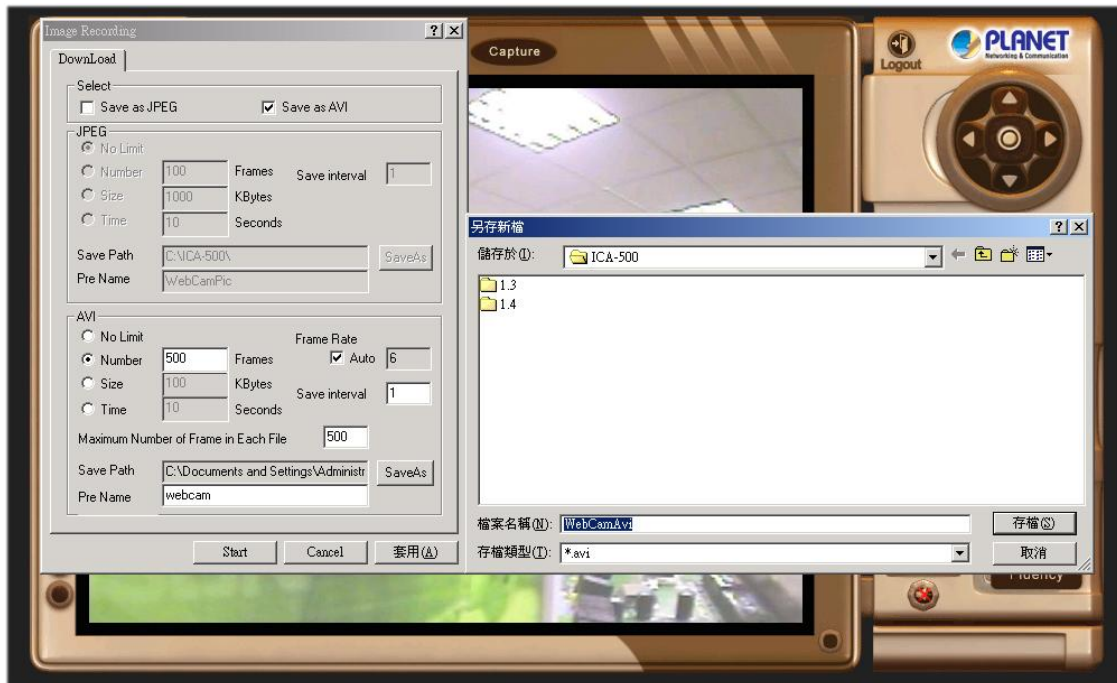


After “*Stop Image Recording*”, list the files, these files are named as file_name_prefixed_yyyy_mm_dd_hh_mm_ss_ms.jpg



“Image Recording...-> Save as AVI”

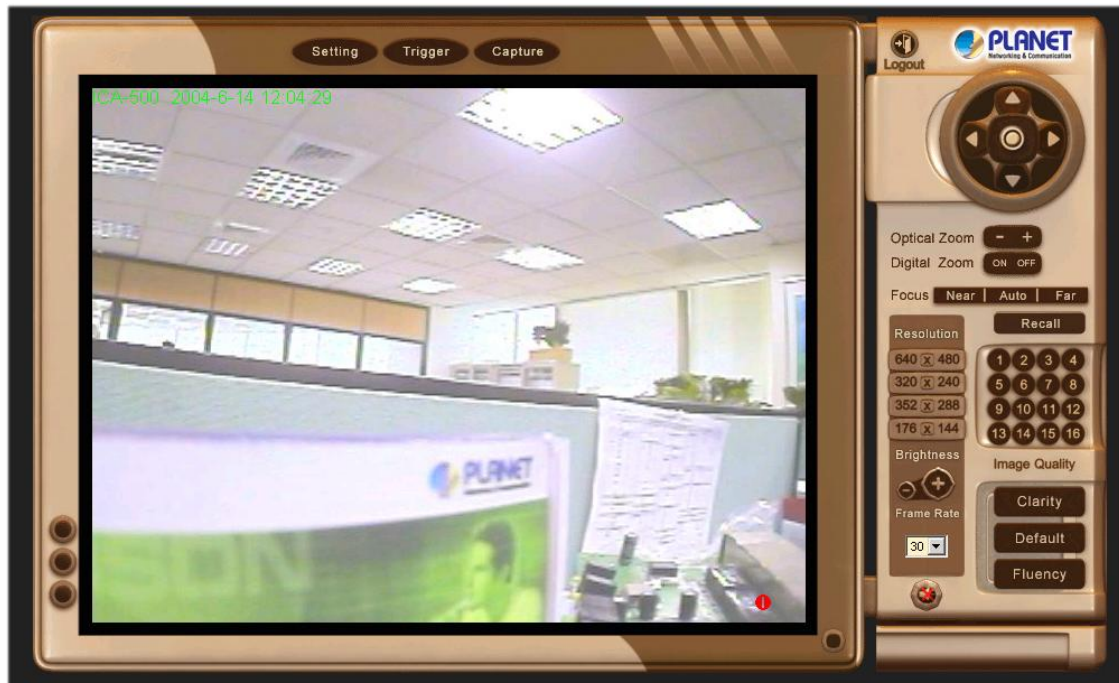
1. Select “Image Recording...”
2. The “Image Recording” pop-up window displays, select
3. “Save as AVI”
4. Input the “Avi Frame” and “Max Jpeg Num” on each AVI file, until the “Stop Image Recording” is selected. “Avi Frame” is the frame rate setting of the recorded AVI file.
5. For each AVI file, the maximum saved images in each file are specified in “Max Jpeg Num”, once the saves image on each AVI file are reached by this number, then a new AVI file will created to save the following images, until the “Stop Image Recording” is selected.
6. Select “SaveAs”, the pop-up window to select the save path and file name prefix, select “Save” to continue.



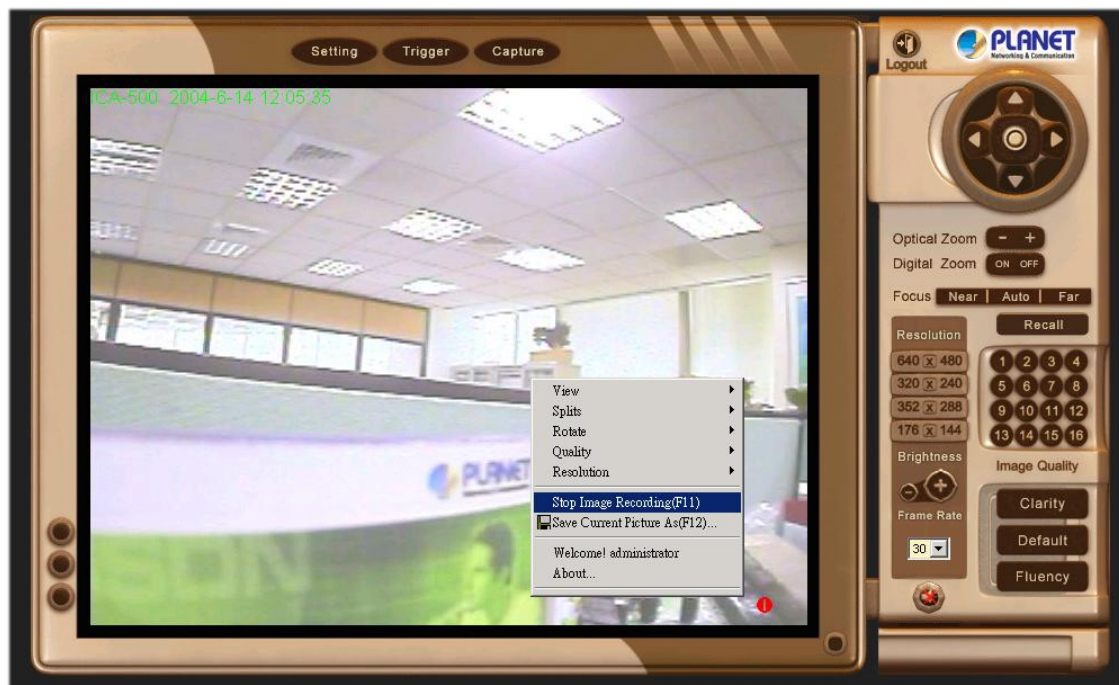
Select “*Start*” to start the AVI files recording.



During the AVI file recording, a red icon displays on right-down position of the image to indicate the AVI saving process.



Press the “*Stop Image Recording*” to stop the save as AVI process.



After the “*Stop Image Recording*”, list the file on the selected saved directory, the file were saved by the filename_prefix_date_time.avi.

```

命令提示字元
2004/06/04 11:14p <DIR> .
2004/06/04 11:14p <DIR> ..
2004/06/03 08:32p <DIR> Administrator
2004/05/21 09:39p <DIR> All Users
          0 個檔案          0 位元組
          4 個目錄      6,598,389,760 位元組可用

C:\Documents and Settings>dir
磁碟區 C 中的磁碟是 本機磁碟
磁碟區序號: 8CA9-D996

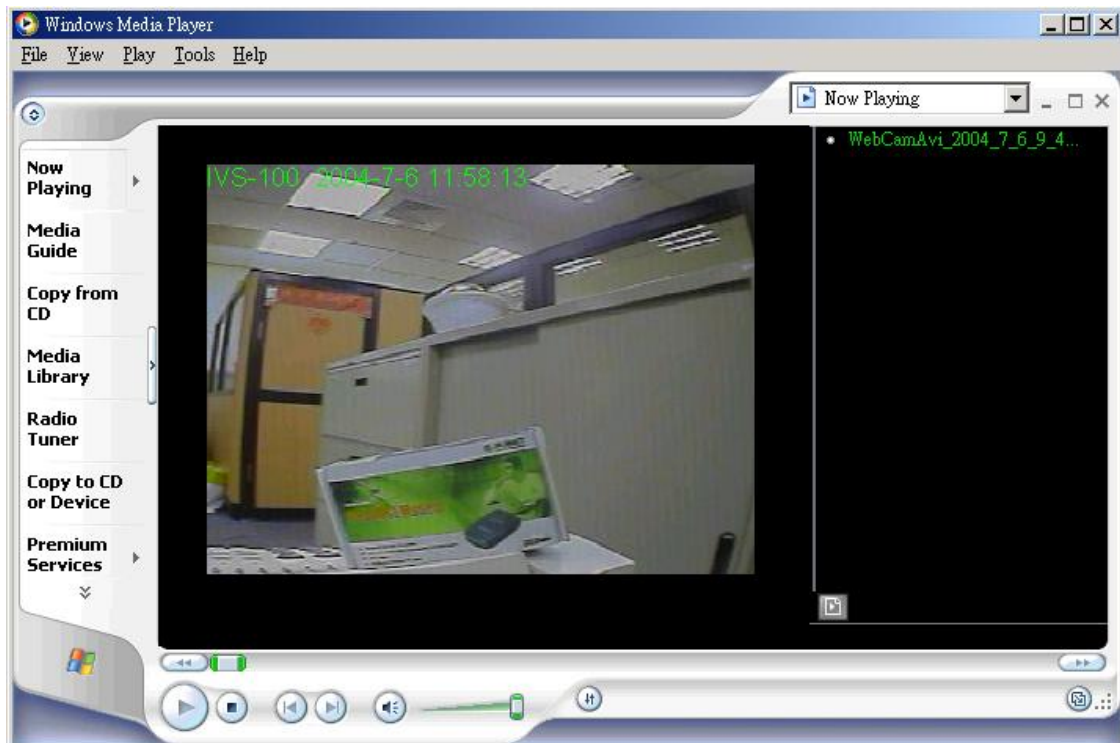
目錄: C:\Documents and Settings

2004/06/04 11:22p <DIR> .
2004/06/04 11:22p <DIR> ..
2004/06/03 08:32p <DIR> Administrator
2004/05/21 09:39p <DIR> All Users
2004/06/04 11:20p      2,910,550 WebCamAvi_2004_6_4_23_20_0_918.avi
2004/06/04 11:21p      1,534,568 WebCamAvi_2004_6_4_23_21_52_218.avi
2004/06/04 11:22p      1,225,582 WebCamAvi_2004_6_4_23_22_13_599.avi
2004/06/04 11:22p      1,426,898 WebCamAvi_2004_6_4_23_22_6_148.avi
          4 個檔案      7,097,598 位元組
          4 個目錄      6,591,229,952 位元組可用

C:\Documents and Settings>

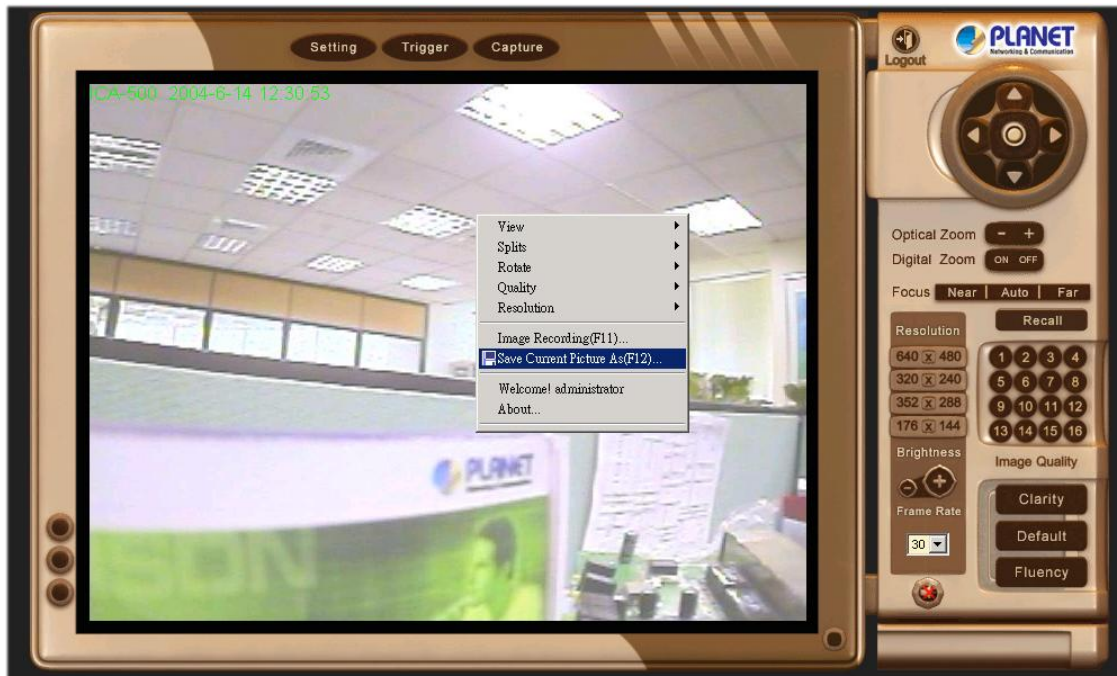
```

The AVI files can be display by the standard Windows Media Player, but it needs the DixectX 8.1 or higher version to be installed.

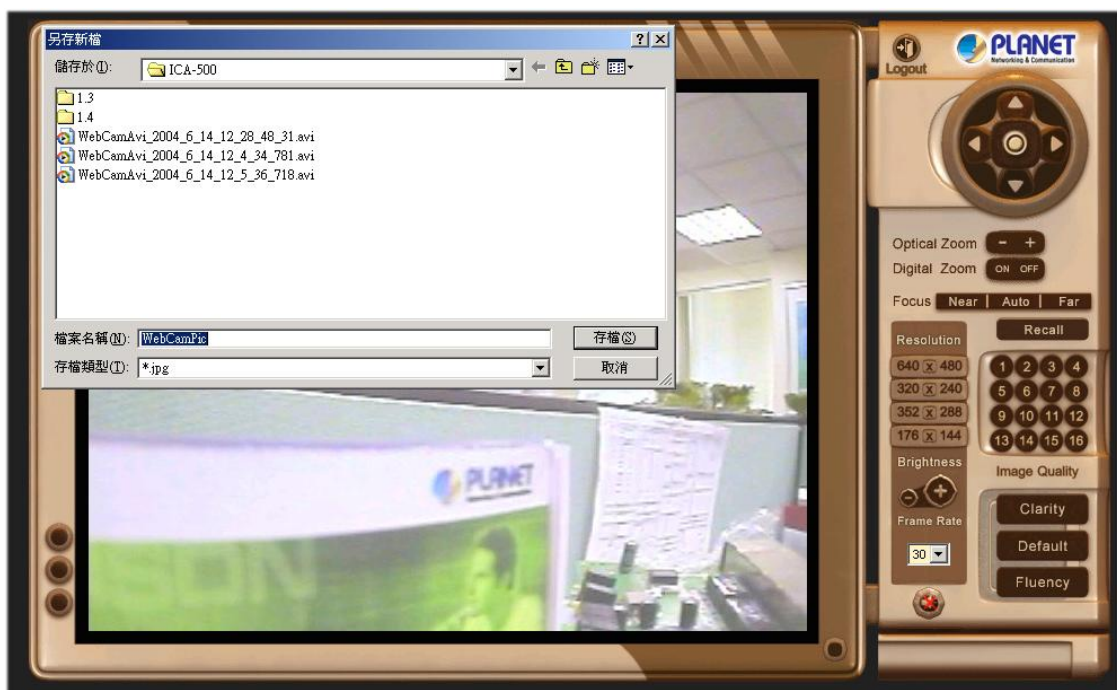


“Save Current Picture As ...”

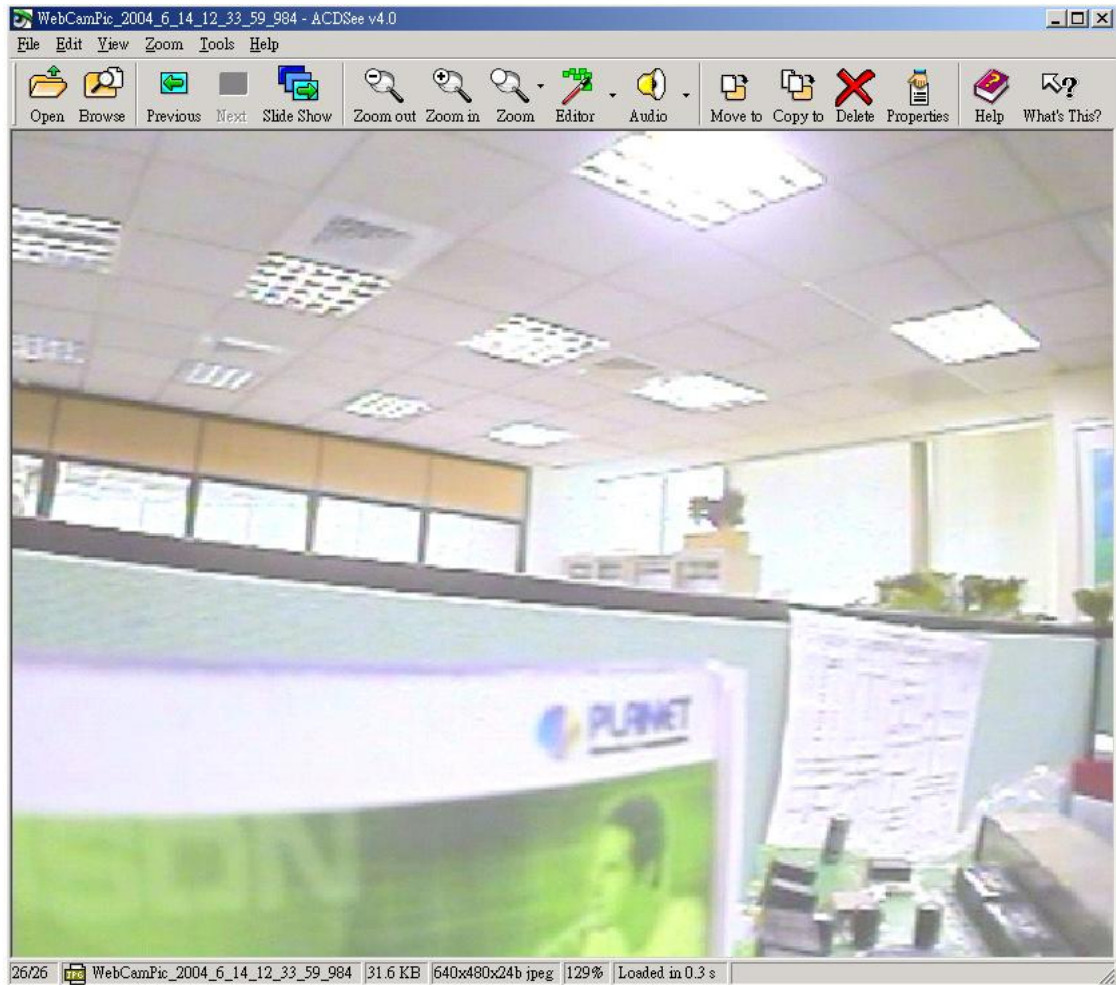
Use the “Save Current Picture As ...” to save the current display image into the local PC.



Input the saved “File name”, select “Save”



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



Appendix A: Restore Factory Default Settings

There is a button hidden in the pinhole above the Alarm I/O connector. It is used to restore the factory default settings. Sometimes restarting IVS-100 will make the system back to a normal state. If the system still got problems after reset, user can restore the factory default settings and install it again.

Restore IVS-100:

1. Power off IVS-100.
2. Insert the paper clip or other tool and press and hold the button down continuously.
3. Power on IVS-100 again.
4. Wait at least 8 seconds and release the tool. Then IVS-100 has been restored to default settings.



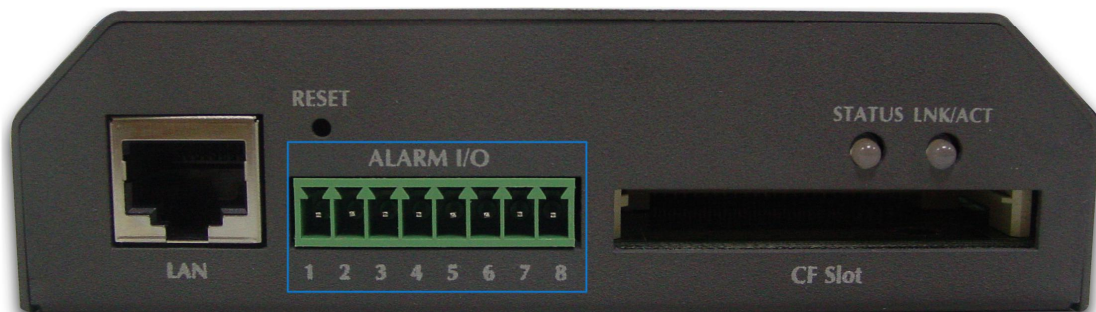
Note: Restoring the factory default setting will lose the all-previous settings forever. User needs to run the IP Finder program to search IVS-100 and configure it to let IVS-100 work properly again.

Appendix B: Alarm I/O Connector

Interfacing to the External I/O

An external sensor that senses physical changes in the area Video Server is monitoring can activate some features of IVS-100. 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.

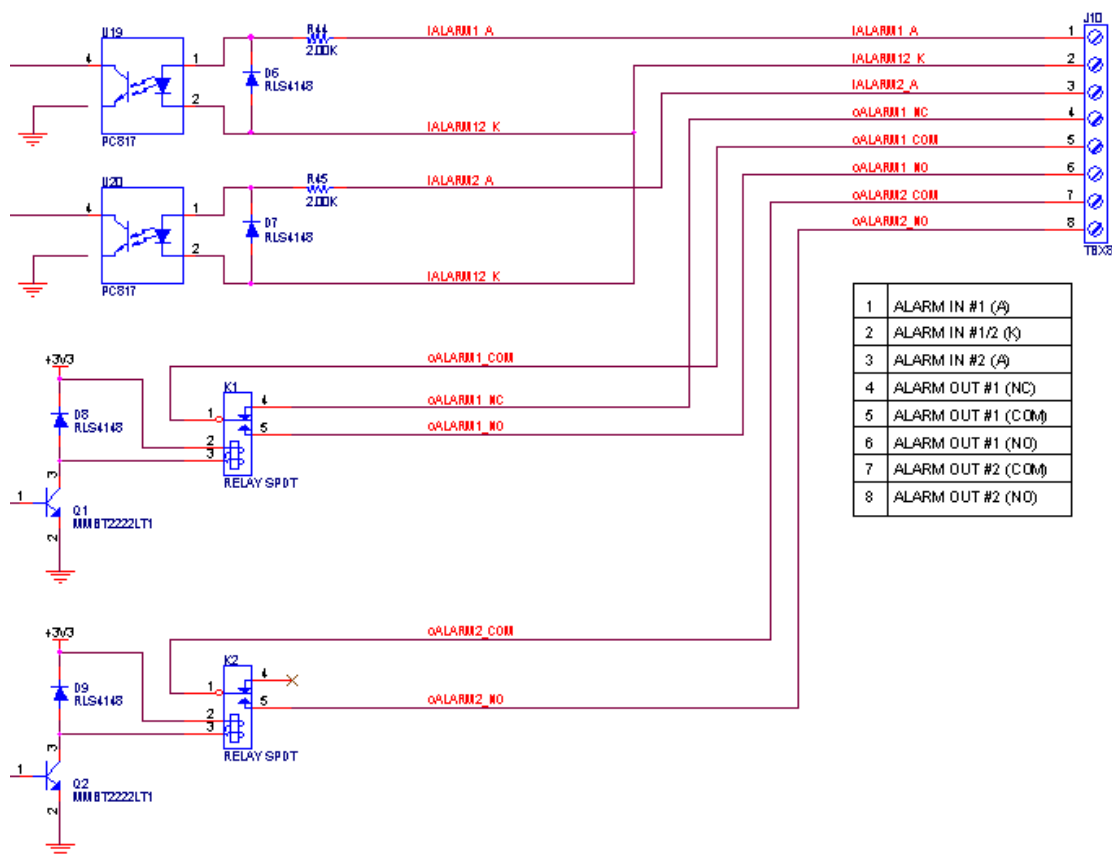
This Video Server provides a general I/O terminal block with two digital inputs and two outputs for device control. Pin 1 and 2 can be connected to an external sensor 1. Pin 2 and 3 can be connected to an external sensor 2. Both of the inputs, the voltage will be monitored from the initial state 'LOW'. The relay switch of pin 4, 5 and 6 can be used to turn on or off the external device. The relay switch of pin 7 and pin 8 can be used to turn on or off the external device. External Inputs/Outputs are working independently.



Pin	Function
1	Alarm Input #1 (A). Max 24VDC, 12mA.
2	Alarm Input #1/2 (K).
3	Alarm Input #2 (A). Max 24VDC, 12mA
4	Alarm Output #1 (NC). Max 24VDC, 1A
5	Alarm Output #1 (COM)
6	Alarm Output #1 (NO)
7	Alarm Output #2 (COM). Max 24VDC, 1A

8	Alarm Output #2 (NO)
---	----------------------

Explanation of External I/O Circuit Diagram Example



CAUTION!

- THE LOW VOLTAGE/CURRENT CIRCUITS AND HIGH VOLTAGE/ CURRENT CIRCUITS ARE IN IVS-100 CIRCUIT. THE QUALIFIED ELECTRICIAN SHOULD DO THE WIRING NOT BY YOU. INCORRECT WIRING COULD DAMAGE VIDEO SERVER. 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 VIDEO SERVER MAY RESULT IF A DEVICE IS CONNECTED TO THE EXTERNAL I/O THAT EXCEEDS ITS ELECTRICAL CAPABILITY.

Appendix C: Troubleshooting & Frequently Asked Questions

Question	Answer or Resolution
Features	
The video and audio codec is adopted in IVS-100.	IVS-100 utilizes JPEG compression to providing high quality images. JPEG is a standard for image compression and can be applied to various web browsers without the need to install extra software. The audio codec is ADPCM compression.
The maximum number of users access Video Server simultaneously.	The maximum number of users is depending on the total bandwidth accessed to Video Server from clients. The data throughout of Video Server is around 5~6Mbps. Therefore, the maximum number of connected clients is varying by settings of resolution and frame rate. Obviously, the performance of the each connected client will slow down when many users are logged on.
IVS-100 can be used outdoors or not.	IVS-100 is not weatherproof. It needs to be equipped with a weatherproof case for outdoors using. However, equipped with a weatherproof case will disable the audio function of Video Server.
Install Video Server	
Status LED does not light up.	<ul style="list-style-type: none"> • Check and confirm that the standard AC adaptor, included in packaged, is used. Secure the power connector and re powers it on again. • If the problem is not solved, IVS-100 might be faulty. Contact your dealer for further help.
The network cabling is required for IVS-100.	IVS-100 uses Category 5 UTP cable allowing 10 and/or 100 Base-T networking.
IVS-100 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. IVS-100 uses port 80(default) only. This port (or the port you specify from the Configuration screen if you change the default port) needs to be opened on the

	firewall.
The username and password for the first time or after factory default reset	Username = admin and leave password blank. 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 8 seconds when power on Video Server. 2. Reconfigure IVS-100.
Forgot the IP address of IVS-100.	Check IP address of Video Server by using the IP Finder program.
IP Finder program cannot find Video Server.	<ul style="list-style-type: none"> • Re power IVS-100 if cannot find the unit within 1 minutes. • Do not connect Video Server over a router. IP Finder program cannot detect Video Server. • If IP address is not assigned to the PC which running IP Finder program, and then IP Finder program cannot find Video Server. 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 Video Server.
Internet Explorer does not seem to work well with IVS-100	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 at: http://www.microsoft.com/windows/ie .
IP Finder program fails to save the network parameters.	<ul style="list-style-type: none"> • Don't leave any space in the name field. Use underline, "_", or dash, "-" to replace the space, " ". • Network may have trouble. Confirm the parameters and connections of IVS-100.
Access Video Server	
Cannot access the login page and other web pages of Video Server from Internet Explorer	<ul style="list-style-type: none"> • Another device or computer is already using maybe the IP Address of IVS-100. To confirm this possible problem, disconnect IVS-100 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 IVS-100 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 Video Server 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 Video Server 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 IVS-100, default=80, is forward to IVS-100's private IP address. • The port number assigned in your Video Server might not be available via Internet. Check your ISP for available port. • The proxy server may prevent you from connecting directly to Video Server, 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 Video Server from the Internet with the global IP address of the router and port number of Video Server. • Some routers reject the global IP address to access Video Server on the same LAN. Access with the private IP address and correct port number of Video Server. • When you use DDNS, you need to set Default Gateway and DNS server address. • If it's not working after above procedure, reset Video Server to default setting and installed it again. • If the problem is not solved, IVS-100 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 Video Server, a pop-up Security Warning window will appear to download ActiveX Controls. When using Windows NT, Windows 2000 or Windows XP, 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 IVS-100'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 " WebWatch Class ". 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 IVS-100's home page. Most likely, IVS-100 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 <i>unsigned</i> ActiveX controls.
IVS-100 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 IVS-100 to be accessible outside your LAN. • Make sure that IVS-100 isn't conflicting with any other web

	<p>server running on your LAN.</p> <ul style="list-style-type: none"> • Check the configuration of the router settings allow IVS-100 to be accessed outside your local LAN.
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. • When more than one client were viewing, the frame rate becomes slower. • Ethernet switching hub can smooth the frame rate especially in viewing on the Multi-Camera screen.
Blank screen or very slow video when audio is enabled.	<ul style="list-style-type: none"> • Your connection to IVS-100 does not have enough bandwidth to support a higher frame rate for the streamed image size. Try reducing the video streaming size to 176x144 or 320x240 and/or disabling audio. • Audio will consume 32 to 64 kbps. Disable audio to improve video. Your Internet connection may not have enough bandwidth to support streaming audio from IVS-100.
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, Zoom and Focus do 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 IVS-100. The image will refresh. • Other clients may be operating Pan/Tilt. • Pan/Tilt operation has reached the end of corner. • Turning off Remote Camera Control may lock the Pan/Tilt operation.
Pan/Tilt, Zoom and Focus do 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 Video Server	
The focus on IVS-100 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 performance of the Automatic Focusing feature (for PTZ model). Clean the lens with lens cleaner. Or adjust the camera focus manually (for PT model) • Manual focusing may be set. Press appropriate one of the Focus buttons at the operation panel (for PTZ model). • Blurred images may have been registered when registering or modifying the preset button or home position button. Adjust the focus in manual focusing again, or press the Auto Focus button (for PTZ model). • The image may be out of focus, if the object is too near, or depending on the zoom position. Move the object off Video Server, or adjust the zoom position (for PTZ model).

	<ul style="list-style-type: none"> • Some objects are difficult to focus on by Auto Focus button. Press the Auto Focus button and put it into operation again. When the objects are still out of focus, adjust the focus using manual focusing, or change the objects using Pan/Tilt operation or Zooming features (for PTZ model).
The color of the image is poor or strange.	<ul style="list-style-type: none"> • Adjust White Balance (for PTZ model). • 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 IVS-100 image display is incorrect. You need to adjust the image related parameters such as brightness, contrast, hue and saturation properly.
Image flickers.	<ul style="list-style-type: none"> • Wrong power line frequency makes images flicker. Make sure the NTSC or PAL format of your Video Server. • If the object is dark, the image will flicker. Make the condition around IVS-100 brighter.
Noisy images occur.	The video images might be noisy if IVS-100 is located in a very low light environment. Make the condition around IVS-100 brighter.
Miscellaneous	
How to Reboot IVS-100	If you just want to reboot system without change anything. Go to Network page and click SAVE button directly, then system will reboot again.
Can not play the recorded AVI file	Have installed Microsoft's® DirectX 9.0 or later and use the Windows Media Player 9 or later to play the AVI filed recorded by the ActiveX.

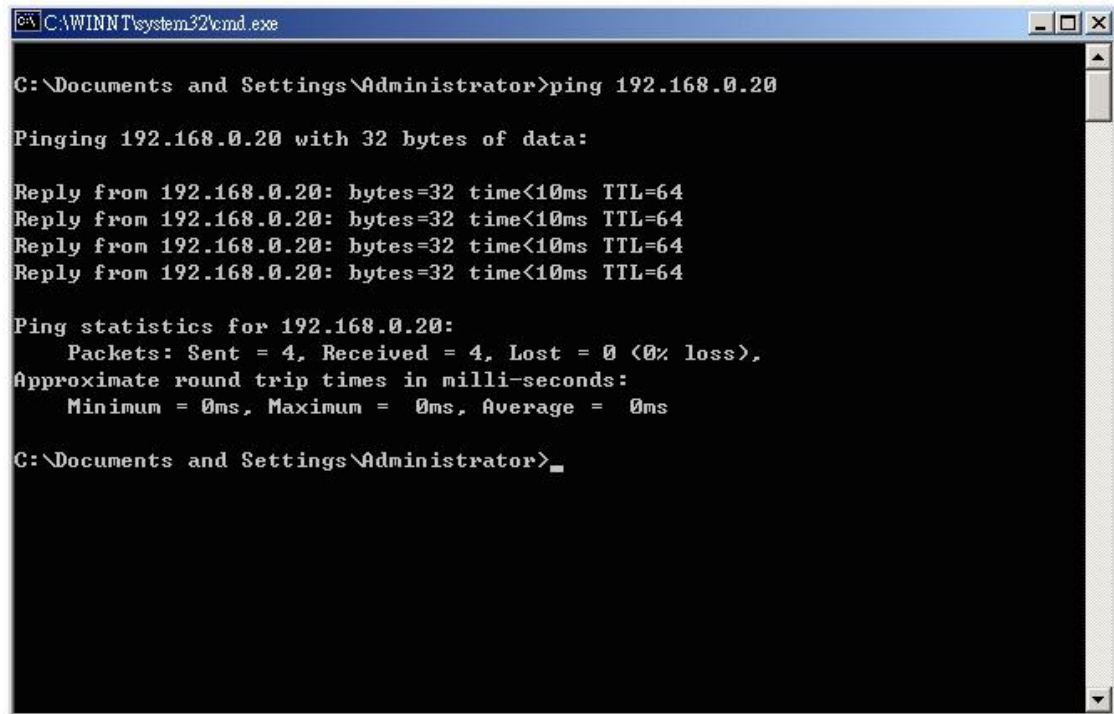
Appendix D: PING IP Address

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 Video Server installed or if the IP address conflicts with any other devices over the network.

If you want to make sure the IP address of Video Server, 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 IVS-100.

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



```
C:\WINNT\system32\cmd.exe

C:\Documents and Settings\Administrator>ping 192.168.0.20

Pinging 192.168.0.20 with 32 bytes of data:

Reply from 192.168.0.20: bytes=32 time<10ms TTL=64
Reply from 192.168.0.20: bytes=32 time<10ms TTL=64
Reply from 192.168.0.20: bytes=32 time<10ms TTL=64
Reply from 192.168.0.20: bytes=32 time<10ms TTL=64

Ping statistics for 192.168.0.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\Administrator>
```

If you want to detect any other devices conflicts with the IP address of Video Server, also can utilize the PING command but you must disconnect IVS-100 from the network first.

Appendix E: Bandwidth Estimation

The frame rate of video transmitted from IVS-100 depends on connection bandwidth between client and server and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements from your Video Server.

Image bandwidth is approximately equal to the average frame rate in frames per second multiplied by the average frame data size in kilobits. Frame data size, or the number of bits comprising a single video frame varies a great deal from depending on scene complexity, lighting conditions, camera noise, etc. The table shown below is reference figures. Actual results generated by IVS-100 may be varying.

Image Resolution	Average range of Data Sizes
176 x 144 (QCIF)	20 – 40k bit
320 x 240 (QVGA)	56– 92k bit
352 x 288 (CIF)	64 – 112k bit
640 x 480 (VGA)	160 – 320k bit

For example, streaming 2 fps of 320 x 240 video requires 112 to 184 kbps (kilobits per second). Therefore, with a 128K upload connection; you will typically see 3 to 6 frames per second with 176 x 144 resolution and 1 to 2 frames per second with 320 x 240 resolution without audio stream.

Note: Audio streaming also takes bandwidth around 32 kbps to 64kbps. Most ADSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while 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.

Appendix F: Time Zone Table

GMT stands for Greenwich Mean Time, which is the global time that all time zones are measured from.

(GMT-12:00) International Date Line West
(GMT-11:00) Midway Island, Samoa
(GMT-10:00) Hawaii
(GMT-09:00) Alaska
(GMT-08:00) Pacific Time (US & Canada); Tijuana
(GMT-07:00) Arizona
(GMT-07:00) Chihuahua, La Paz, Mazatlan
(GMT-07:00) Mountain Time (US & Canada)
(GMT-06:00) Central America
(GMT-06:00) Central Time (US & Canada)
(GMT-06:00) Guadalajara, Mexico City, Monterrey
(GMT-06:00) Saskatchewan
(GMT-05:00) Bogota, Lima, Quito
(GMT-05:00) Eastern Time (US & Canada)
(GMT-05:00) Indiana (East)
(GMT-04:00) Atlantic Time (Canada)
(GMT-04:00) Caracas, La Paz
(GMT-04:00) Santiago
(GMT-03:30) Newfoundland
(GMT-03:00) Brasilia
(GMT-03:00) Buenos Aires, Georgetown
(GMT-03:00) Greenland
(GMT-02:00) Mid-Atlantic
(GMT-01:00) Azores
(GMT-01:00) Cape Verde Is.
(GMT) Casablanca, Monrovia
(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague
(GMT+01:00) Brussels, Copenhagen, Madrid, Paris
(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb
(GMT+01:00) West Central Africa
(GMT+02:00) Athens, Istanbul, Minsk
(GMT+02:00) Bucharest
(GMT+02:00) Cairo
(GMT+02:00) Harare, Pretoria
(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius
(GMT+02:00) Jerusalem
(GMT+03:00) Baghdad
(GMT+03:00) Kuwait, Riyadh
(GMT+03:00) Moscow, St. Petersburg, Volgograd
(GMT+03:00) Nairobi

(GMT+03:30) Tehran
(GMT+04:00) Abu Dhabi, Muscat
(GMT+04:00) Baku, Tbilisi, Yerevan
(GMT+04:30) Kabul
(GMT+05:00) Ekaterinburg
(GMT+05:00) Islamabad, Karachi, Tashkent
(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
(GMT+05:45) Kathmandu
(GMT+06:00) Almaty, Novosibirsk
(GMT+06:00) Astana, Dhaka
(GMT+06:00) Sri Jayawardenepura
(GMT+06:30) Rangoon
(GMT+07:00) Bangkok, Hanoi, Jakarta
(GMT+07:00) Krasnoyarsk
(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
(GMT+08:00) Irkutsk, Ulaan Bataar
(GMT+08:00) Kuala Lumpur, Singapore
(GMT+08:00) Perth
(GMT+08:00) Taipei
(GMT+09:00) Osaka, Sapporo, Tokyo
(GMT+09:00) Seoul
(GMT+09:00) Yakutsk
(GMT+09:30) Adelaide
(GMT+09:30) Darwin
(GMT+10:00) Brisbane
(GMT+10:00) Canberra, Melbourne, Sydney
(GMT+10:00) Guam, Port Moresby
(GMT+10:00) Hobart
(GMT+10:00) Vladivostok
(GMT+11:00) Magadan, Solomon Is., New Caledonia
(GMT+12:00) Auckland, Wellington
(GMT+12:00) Fiji, Kamchatka, Marshall Is.
(GMT+13:00) Nuku'alofa

Appendix G: DDNS Application

1. Preface

If you have a Cable modem, xDSL, ISDN or Dialup, this is a great way to host your own **Web Server, FTP Server, Mail Server, Video Server** or other TCP/IP Service. Get your own domain like `www.yourname.com*`, `www.yourname.com.tw*` etc. (Note: This domain must be registered with Internic via registration authorities such as Network Solutions, DirectNIC, Register.com etc). A DDNS server automatically tracks your domain name's dynamic IP address.

Host your own **Web Server, FTP Server, Mail Server, Video Server** and much more no matter what your computer's IP address may be and even if you have dialup, DSL or cable modem internet connection where your computer's IP address changes all the time!! DDNS service supports all top level domain names including but not limited to .com, .net, .org, .to, .uk etc.

2. Ethernet Network Environment

Normally, DDNS services are only necessary for the users that could only obtain dynamic IP addresses. As to the users that could obtain the static valid IP address, they do not usually have to apply the DDNS service. Before we decide if DDNS is necessary for the users, we have to check what kind of Ethernet network environment we have to install our video server or IP camera on.

(1) Environment of Fixed Valid IP Network

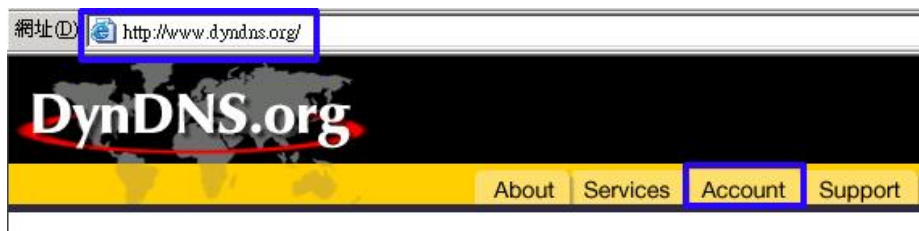
If users could obtain valid IP addresses, they could save the effort to apply DDNS service. Because the IP address in this environment is fixed, users could input the IP address or domain name of demo site directly in the IE browser.

(2) Environment of Dynamic IP Network

If users are under an environment of dynamic IP network (Dial-up ADSL), they have to apply a domain name in advance. Then apply DDNS service. Finally setup the necessary information of DDNS and PPPoE of IVS-100 or IP camera in order to let the outside administrator be able to access through Internet.

3. Application Steps—DDNS & Domain Name

- (1). Visit the following web site: <http://www.dyndns.org/> (Pink No.1)
- (2). Click “Account” (Pink No. 2)



- (3). After the columns show up at the left side, click “Create Account”.



- (4). Fill the application agreement and necessary information.
 - a. Input Name
 - b. E-mail input and confirmation
 - c. Password input and confirmation
 - d. Submit all the input information and finish creating an account

I have read and agree to the Acceptable Use Policy above: ☐

Username

Your username will be used to login to your account and make changes.

Username: [Input login name](#)

E-mail Address

The e-mail address you enter must be valid. Instructions to activate your account will be sent to the e-mail address provided. You must keep this address current and accounts with invalid e-mail addresses will be removed with no warning. We do not sell our list to anyone. Read more about our [privacy policy](#)

E-Mail Address: [Input e-mail address](#)

Confirm E-Mail Address: [Confirm e-mail address](#)

Password

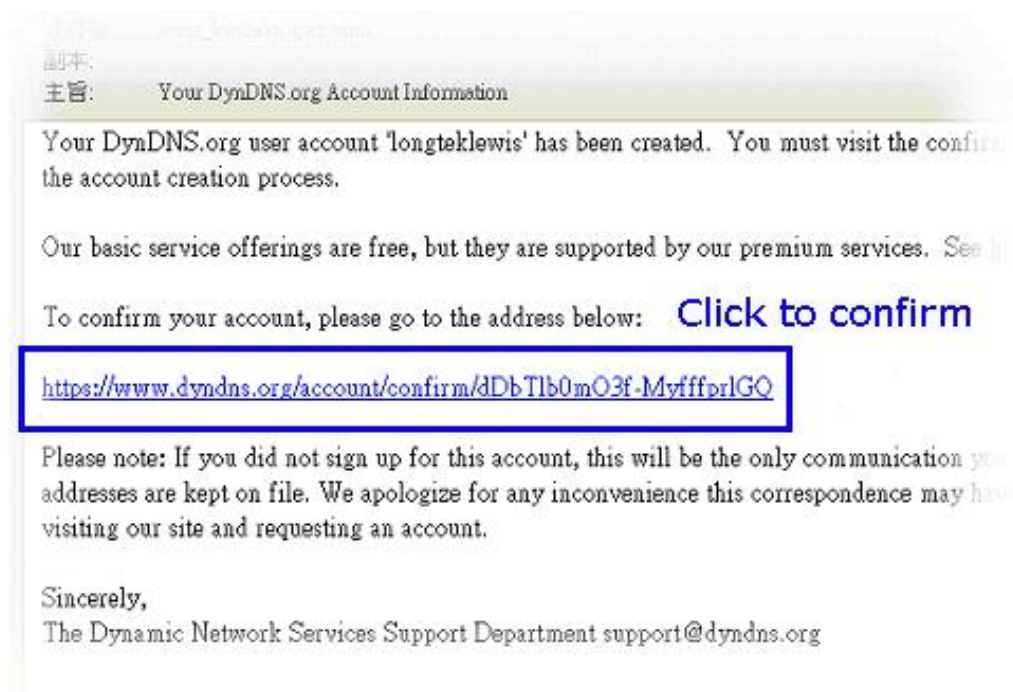
The password you enter will be used to access your account. It must be more than 5 characters and cannot be your username.

Password: [Input login password](#)

Confirm Password: [Confirm login password](#)

[Submit](#) [Create Account](#) [Reset Form](#)

- (5). Check your e-mail mailbox. There will be e-mail with a title "Your DynDNS.org Account Information ". Click the hyperlink address to confirm the DDNS service that you just applied. Then DDNS you applied activated.



- (6). Enter the web page <http://www.dyndns.org/> again. Input your username and password that you just applied to login administration interface of DDNS service.



- (7). If the correct username and password are input, you can see the following picture at the top-right of the login page.



- (8). Click the “Services”.



- (9). Click the “ Dynamic DNS ” and then click the “Add a host”.



- (10). We could create a domain name without any charge at this step. First, we

input the host name. (Pink No.1) Then we pick a domain that is easy to remember. (Pink No.2) Finally, click the "Add Host" to submit the domain name information. (Pink No.3)

The screenshot shows the 'New Dynamic DNS Host' form. The 'Hostname' field is highlighted with a pink box. The domain dropdown menu is open, showing a list of domains, with 'dyndns.org' highlighted by a pink box. The 'Add Host' button is also highlighted with a pink box. The form includes fields for 'IP Address', 'Enable Wildcard' (checkbox), and 'Mail Exchanger (optional)'. The footer contains copyright information: 'Copyright © 1999-2004 Dynamic Net Privacy Policy | Acceptable Use Policy'.

4. Setup the DDNS and PPPoE

At last, users have to enter the web page of video server or IP camera and setup the necessary information of DDNS and PPPoE after the application of DDNS service. Please check the user manual to access the DDNS and PPPoE pages. After saving the modification, restart the device. The external users could browse IVS-100 or IP camera by the input of their domain name.