XtendLan

Video Server

XL-IVS2000
XL-POE2000

User's guide

The information presented in this publication has been carefully prepared and is believed to be correct at the time of publication. However, no responsibility will be assumed for any inaccuracies. Specifications are subject to change without notice.

FC **Compliance Statement**

CAUTION: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

FCC CE

Owner's Record

The model and serial number are located at the bottom. Record these numbers in the spaces provided below.
Refer to these numbers whenever you call upon your dealer regarding this product.
Model No. XL-IVS2000   Serial No. _____

WARNING:
To prevent fire or shock hazard, do not expose the unit to rain or moisture.
For AC Adapter
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Important Notice

1. The XL-IVS2000 is for indoor use.   Beware the salty moisture air will be corrosive to both metal electronic parts.
2. The XL-IVS2000 is not weatherproof. You should consider the environmental specifications that are included in this manual. If you want to use your Video Server outdoors, you should equip the Video Server with a weatherproof case to protect it from water, moisture, or extreme temperatures (higher or lower than the specification). For XL-IVS2000 cleaning, gently wipe the outside with a clean dry cloth.
3. Be sure to use the DC power adapter or POE switch that is provided with the Video Server. Connecting a XL-IVS2000 to other power source will cause damage to the Video Server and connected camera.
4 .Beware the Power output is 12V DC, 1.5A (max.), don't connect to any cameras or equipments with different power requirement
5. Be gentle in handling the XL-IVS2000. It's all metal case is small but tough and heavy, take care not to drop it to any glass surface or break any fragile properties.
6. If the XL-IVS2000 does not operate properly, please contact XtendLan or local distributors for service. Do not disassemble the product or the warranty may be voided.
7. Camera surveillance laws differ for each country. Please contact local authorities first to avoid any surveillance law violations and to apply for authorized purposes, if necessary.

Manufacturer	XtendLan
Manufacturer Part #	XL-IVS2000
Product Description	Video Server

GENERAL INFORMATION

MANUFACTURER	XtendLan
MANUFACTURER PART NUMBER	XL-IVS2000
PRODUCT SERIES	XtendLan
PRODUCT NAME	**XL-IVS2000 Video Server**
MARKETING INFORMATION	THE XL-IVS2000 Video Server is an Ethernet-based digital media server, by connecting to video sources and audio source to distribute compressed live video and audio into Intranet-Internet through Ethernet connection. It is a stand-alone device with built-in Web Server which allows users to access and manage by IE browser from anywhere with Intranet-Internet connection to the Video Server, XL-IVS2000 Video Server contains image compression chipset that is capable of delivering standard MJPEG real-time video and audio into limited network bandwidth. It uses the industry-standard JPEG compression format and features digital output for local monitoring and recording. In addition, its built-in PPPoE auto-dial capability can connect ADSL broadband automatically and accessed through unique homepage provides by DDNS service. The XL-IVS2000 Video Server makes remote video/ audio monitoring easy and affordable.
PRODUCT TYPE	Digital Surveillance/ Network (IP) Video Server

VIDEO & AUDIO

VIDEO RESOLUTION	640 X 480 @ 25 fps (max.) CIF: 352 X 288 @ 30fps (max.) 320 X 240 @ 30 fps (max.) QCIF: 176 X 144 @ 30fps (max.)
COMPRESSION FORMAT	**MJPEG**, baseline compliant (YCbCr422) Image quality (compression rate) Approx. 1/5 to 1/60 The compression rate is based on an image of 24 bits/picture element (8 bits for each R, G and B).
CONTROL MODES	Brightness, Contrast, Saturation, Hue, Sharpness, Compression/Quality
COLOR SUPPORT	Color, B/W. BNC Connector
AUDIO SUPPORT	Yes, Microphone Jack

NETWORK & COMMUNICATION

CONNECTIVITY TECHNOLOGY	Ethernet Cable, RJ-45
PROTOCOLS	TCP/IP; ARP; ICMP; HTTP; SMTP; DDNS; PPPOE, DHCP
SPECIAL FEATURES	Motion Detection, AVI Recording, Alarm notification by e-mail/ FTP

STORAGE

INTERNAL MEMORY	16Mb Flash, 64Mb SDRAM

INTERFACES/PORTS

INTERFACES PORTS	1 X RJ-45; 1 X BNC; 1 X Microphone Jack; RS-232C/RS-485; DI/DO; DC in; DC out;

POWER DESCRIPTION

INPUT VOLTAGE	24V DC, 2.5A, Power on Ethernet (**POE Switch** is XL-POE2000 only)
OUTPUT VOLTAGE	12V DC, 1.5A
POWER CONSUMPTION	10W (max.)

ENVIRONMENTAL CONDITIONS

TEMPERATURE Operating: 5°C (40°F) to 50°C (122°F);
Storage: 0°C (32°F) to 60°C (140°F)

HUMIDITY Operating: 10 to 80% Non-Condensing;
Storage: 20 to 95% Non-Condensing

PHYSICAL CHARACTERISTICS

DIMENSIONS 22mm Height X 75 mm Width X 108 mm Length

SHIPPING DIMENSIONS 65 mm Height X 138 mm Width X 185 mm Length

WEIGHT 275g

SHIPPING WEIGHT 0.5 kg

MISCELLANEOUS

PACKAGE CONTENTS XL-IVS2000 Video Server CD-ROM (Utility Programs and Quick User's Guide); AC Adapter; UTP Cable

SYSTEM REQUIREMENT Web browser **Internet Explorer** Ver. 5.0 or higher (Available OS: Windows 98/98SE/ Me/ NT4.0/ 2000/ XP)
Hardware environments
Windows
CPU: Pentium III 500 MHz or higher (Pentium IV, 1 GHz or higher recommended)
RAM: 256 MB or more
Display size: 800 x 600 (1024 × 768 recommended)
, True Color or more

XL-IVS2000 with POE switch – XL-POE2000

Notes, Cautions, and Warnings

There are two levels of special notation used in this manual. They are:

WARNING: If the actions indicated in a "WARNING" are not complied with, injury or major equipment damage could result. A warning statement typically describes the hazard, it's possible effect, and the measures that must be taken to reduce the hazard.

CAUTION: If the action specified in the "CAUTION" is not complied with, damage to your equipment could result.

NOTE: A "NOTE" provides supplementary information, emphasizes a point or procedure, or gives a tip for easier operation.

NOTE: When calling with a camera-related question, please have the serial number of the camera. The serial numbers can be seen on bottom of the camera.

Application Questions

If you have an application question, you can contact the local distributors for your region:

Applications Internet E-Mail Address

If you have access to the Internet, you can send application questions by e-mail to:

sales@xtendlan.com

This method also enables you to attach a file, such as a portion of image, to your message.

NOTE: Please attach the serial number of the camera.

XTENDLAN on Demand Web Page

If you have access to the Internet, you can view XTENDLAN's web page at the following address:

http://www.xtendlan.com

The web site contains sales, customer service, and technical support information.

About the Supplied Manuals

Names of Manuals

The following manuals are supplied with this unit

QIG

The Quick Installation Guide describes the basics and functions of the parts of the camera, the installation and connections of the camera, etc. Be sure to read it before operating the camera.

 (stored in the CDROM, this document)

The User's Guide describes the setup of the camera and the operations from the Web browser. To open the Quick User's Guide, see "Using the CD-ROM Manuals" below.

The supplied CD-ROM disc includes the Quick User's Guides for the XL-IVS2000 (English versions).

Using the CD-ROM Manuals

The supplied CD-ROM disc includes the s

for XL-IVS2000 Video Server.

CD-ROM System Requirements

The following are required to access the supplied CD-ROM disc.

• Computer: PC with MMX Pentium 166 MHz or faster CPU
• Installed memory: 64 MB or more
• CD-ROM drive: × 8 or faster
• Monitor: Monitor supporting resolution of 800 × 600 or higher

When these requirements are not met, access to the CD-ROM disc may be slow, or not possible at all

Preparations

The Adobe Acrobat Reader Version 5.0 or later must be installed on your computer in order to use the User's Guide contained in the CD-ROM disc. If Adobe Acrobat Reader is not installed, it may be downloaded from the following URL:

http://www.adobe.com/products/acrobat/readstep.html

Reading the manual in the CD-ROM

To read the Quick User's Guide contained in the CD-ROM disc, do the following.

1 Insert the supplied CD-ROM disc into your CD-ROM drive.

2 Wait for Autorun start and CD menu appear on screen. (note)

3 Double-click the "Quick user's Guide" to read.

A PDF file of the Quick User's Guide opens. If you lose the CD-ROM disc or become unable to read its content, for example because of a hardware failure, contact a XTENDLAN service representative.

Note:

If you have turn off the Autorun of your CDROM, CD menu won't start automatically, you must start it manually.

Overview
Features

Video/ Audio monitoring via the network

You can monitor high-quality live video with audio from the video/audio source using the Web browser on the computer connected to the 10BASE-T or 100BASE-TX network. The maximum frame rate is 30 FPS

for the XL-IVS2000 Video Server

depend on network bandwidth. You can also manage the monitored video through the Web browser to select the compression/ video quality and resolutions, also control the brightness/ contrast/ sharpness/ hue of the image that you want to view. **Multiple clients' concurrent access** with user account/ password protection control unauthorized access of your privacy. .

Motion Detection

Software Real-Time Motion Detection. Three levels sensitivity. E-Mail the Detected Images to preset e-Mail address. FTP the Detected Images to preset FTP server.

Available Web browser

IE only (ActiveX Control) save the current image local PC. ActiveX controls: ActiveX controls support full functions, including the Right Mouse Button Menu control.

AVI Recording

Record AVI or JPEG images on to hard disk for future viewing.

Camera Control

Layout :1x1, 2x2, 3x3, 4x4.

User Management

User Management for Add User, Delete User, Change Password. Administrator, privileged user to change any settings. General users, view images only.

DVR : recording & motion detect

You can use Clairvoyant **DSS** software to monitor/ record 4 cameras simultaneously with motion detect/ alarm notification. You can even broadcast 4 channels camera images in streaming video format to public, the number of images is limited only by the bandwidth of your internet connection. **DSS** software support both Java and ActiveX, users can view 4 channels images using the Web browser on the computer. All recorded video can playback on DSS screen or export to standard AVI format video that can be viewed without **DSS** software.

POE (Power on Ethernet)

Optional POE switch available

Supplied Accessories

When you unpack, check that all the supplied accessories are included.

Video Server (1)

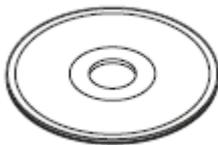**AC power adaptor (Option)**
AC Adapter Input - 100-250 VAC,
           50-60 Hz
        Output - DC 24V, 2.5A

POE Switch (XL-POE2000)

CD-ROM (including the Utility Program and User's Guide) (1)

Installation Manual (1)

Ethernet UTP cable – straight (1)
Ethernet Standard (straight-through) Cable: 5 foot (1.5 m) direct cable, RJ-45 connectors

DC cable (1)
3 foot (1 m) cable, DC plug to DC plug, connecting 12V DC outlet of Video Server to CCTV Camera DC inlet.

FlatTop Screw (1)
To fix Video Server onto CCTV Camera

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Location and Functions of Parts and Connections

Slider Seat

Slider
CCTV SEAT FOR FLATTOP SCREW

Slider
FLATTOP SCREW
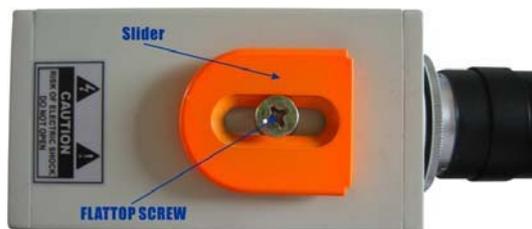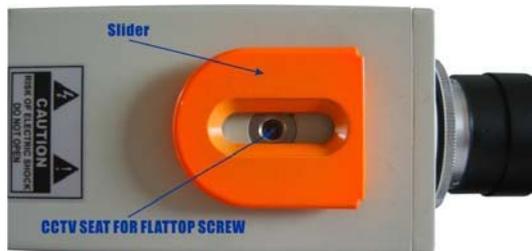
1 NETWORK interface (LAN)

Please use straight UTP cable to connect camera and HUB/ Switch/ NAT Router/ ADSL Modem.

Please use cross UTP cable to connect camera to PC/Notebook LAN port.

2 Power Inlet

Plug the AC adapter equipped with Video Server (DC 24V, 2.5A).

Never use other power adapter or you will damage the camera and even cause danger.

Note:
Please make sure you are using the correct power adapter before you plug it into the Video Server DC inlet.

3 Power Outlet

Connect CCTV camera 12V DC inlet to Video Server DC outlet by **DC cable** equipped with Video Server

Note:
Please un-plug and plug the power adapter at circumstances that Video Server fails to respond. (May be caused by abnormal network environment), mostly the Video Server will back to normal again.
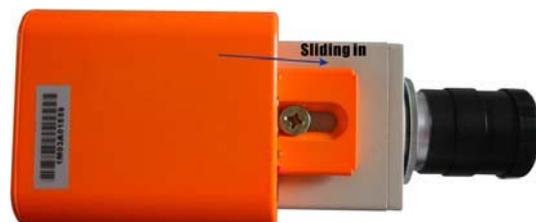
4 Led indicators

Power: red led lights on to indicate the power is on.

Link: green led lights on to indicate camera LAN port is connected to network correctly.

Tx.: Flash when transmitting packets

5 Connect to CCTV

Option Power in 24V (max.)/2.5A
BNC Cable
12V/ 2A Out
Power over Ethernet Cable in

Sliding in

6 Connect to POE

POE Switch

12~24V DC max. 80m AMP UTP

To LAN

24V DC/2.5A in

7 Connect to mike.

RS-232C
Rx   Tx

GND

Microphone
Jack

Optional DI/DO

Slider fixing screws

Assigning the IP Address to the XL-IVS2000 Video Server

To connect the camera to a network, you need to assign a new IP address to the XL-IVS2000 Video Server. Before assigning the IP address, connect the **XL-IVS2000 Video Server** to a computer or a network. To connect to the computer, use a commercially available Ethernet cable (cross cable). To connect to the network, use Ethernet cable (straight cable) in supplied kit.

You can assign the IP address in two ways:

• Using the utility program stored in the supplied CD-ROM

For details on the operations, see "Assigning the IP Address Using the Utility Program" on following page.

• Using the ARP (Address Resolution Protocol) commands

Open the DOS window on the computer and enter the specified ARP commands.

*For details on the operations, see "**Assigning the IP Address to the Camera Using ARP Commands**" in the **Reference User's Guide** stored in the supplied CD-ROM.*

For determining the IP address to be assigned to the camera, consult your system administrator.

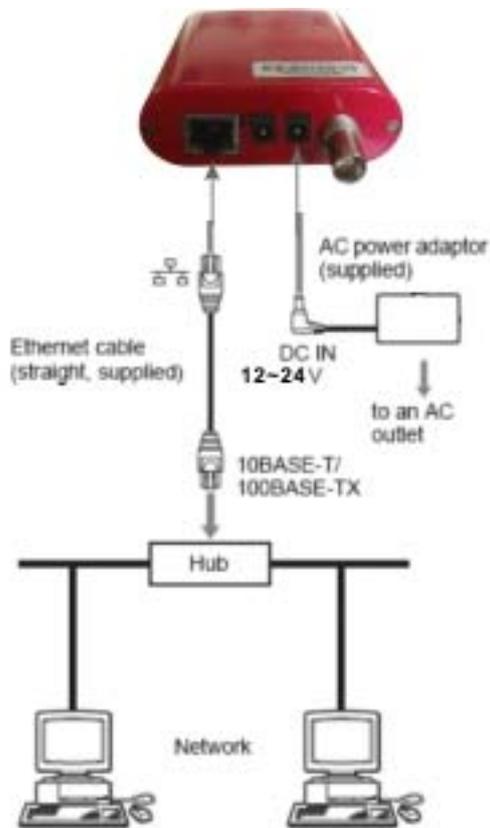## Connecting the XL-IVS2000 Video Server to a Computer

XL-IVS2000 (Rear)
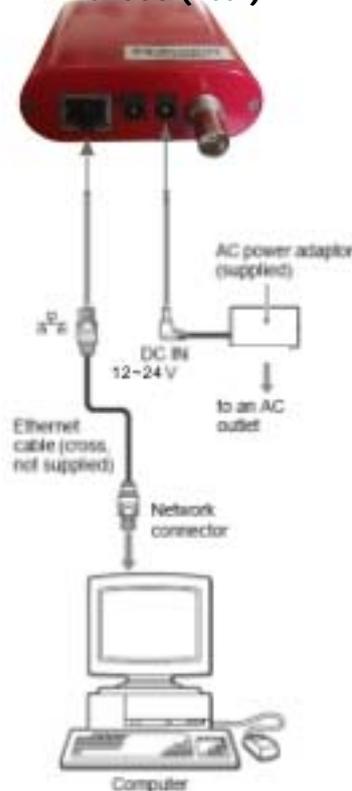
1 Using a commercially available Ethernet cable (cross-over), connect the RJ-45 port of the XL-IVS2000 Video Server to the network connector of a computer.

2 Connect the AC power adaptor by connecting the 24V DC connector of the XL-IVS2000 Video Server to an AC outlet.

Connecting the XL-IVS2000 Video Server to a Local Network

XL-IVS2000 (Rear)

1 Using the Ethernet cable (straight) comes with

XL-IVS2000 Video Server, connect the RJ-45 port to a hub in the network.

2 Connect the AC power adaptor by connecting the 24 V DC connector of the

XL-IVS2000 Video Server to an

AC outlet.

Assigning the IP Address Using the Utility Program

1 Insert the supplied CD-ROM disc into your CD-ROM drive.

2 Double-click the "IP Edit" button in the CD-ROM Autorun screen

3 Start the IPEditV3 Program.

4 Press "Update" button will detect all the XL-IVS2000 Video Servers connected on the local network and list them on the left window.

5 Click on the camera you want to assign a new IP address in the list. The network settings for the selected XL-IVS2000 Video Server are displayed. Type in the new IP in "IP" field.

6 To access the XL-IVS2000 Video Server images, just double click the XL-IVS2000 Video Server on the left window.

7 The User authorization required is set to "No" as default, please must remember and write down the Administrator password before you enable authorization.
The default password of "administrator" is "winbond"

8 Confirm that all items are correctly set, then click "Submit".

Connecting the XL-IVS2000 Video Server to Internet
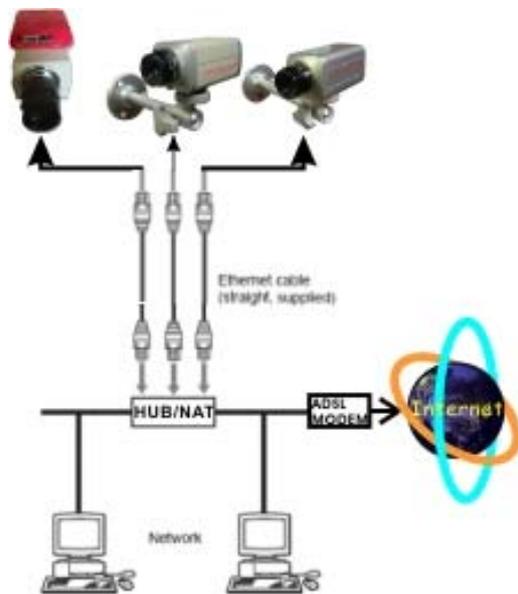
1 Be sure your internet access type, and ask your ISP if they provide you with public IP address. (*some ISP provide user with private IP address that will not be able to visit from internet*)

2 If your internet access type is ADSL or lease line (fixed IP) with public IP address, please use the Ethernet cable (straight)

comes with the XL-IVS2000

Video Server, connect the

XL-IVS2000 Video Servers to a

hub/ NAT router or directly to ADSL modem. (Note)

3 If your internet access type is Cable/DHCP with public IP address, please use the Ethernet cable (straight) comes with

XL-IVS2000 Video Server.

Server, connect the

XL-IVS2000 Video Servers

to a NAT router. (Note)

4 Reference the cable connections in previous page

Note:

If you have more than one

XL-IVS2000 Video Servers,

Make sure your ISP provides you with equivalent number of public IP addresses, If not please use NAT router instead of HUB.

Please reference more details in Reference User's Guide.

Appendix

A. IPEditV3 – Utility to find XL-IVS2000 Video Server

Unpacking the XL-IVS2000 white box, you will find a CD marked
"XL-IVS2000 **Utility CD**" Insert this supplied CD-ROM disc into your
CD-ROM drive to start software installation.

Note: Before start **IPEditV3**, please follow instructions in previous sections to
connect XL-IVS2000 Video Server with power adapter and your local network.
        Make sure the led on the XL-IVS2000 Video Server all light properly
and the computer you are using is connected to the same network of XL-
IVS2000 Video Server.
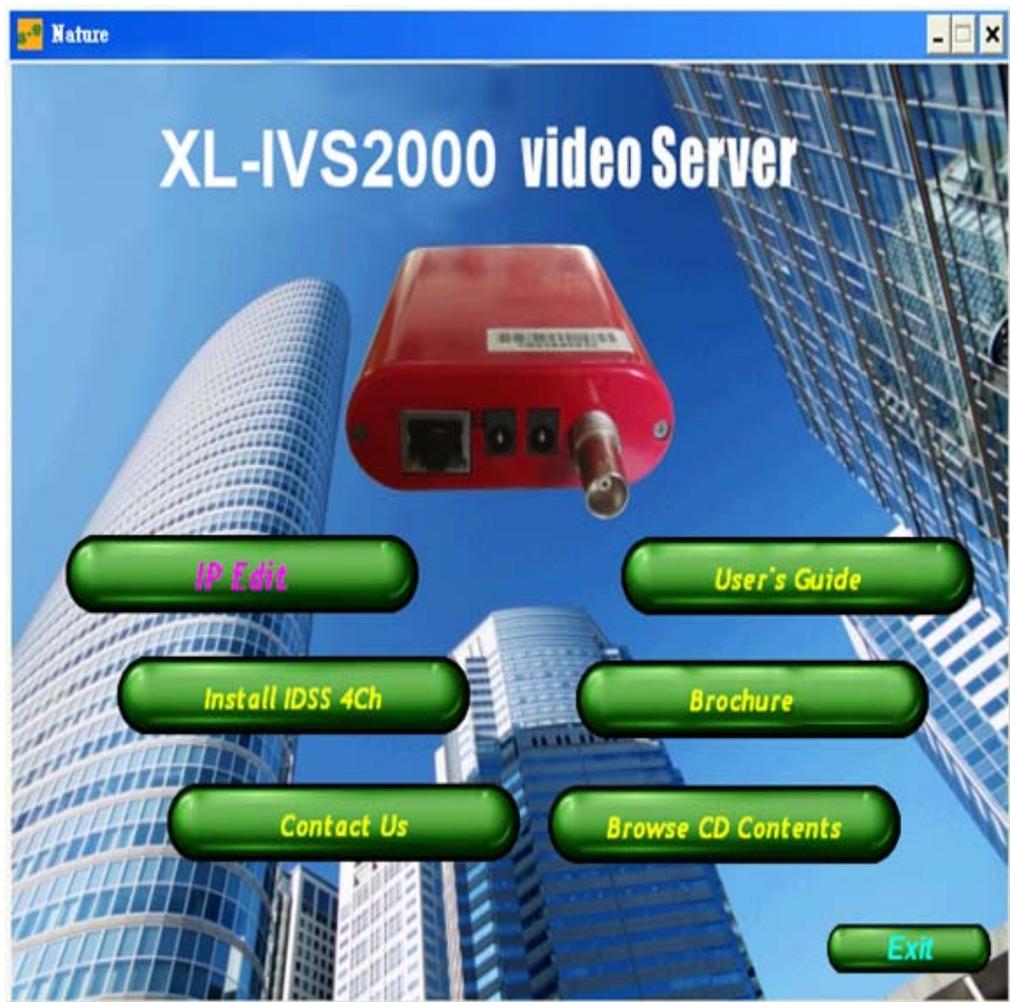
I. XL-IVS2000 Video Server Find **UTILITY**

   a.   Execute "**IPEditV3**" program on CD,
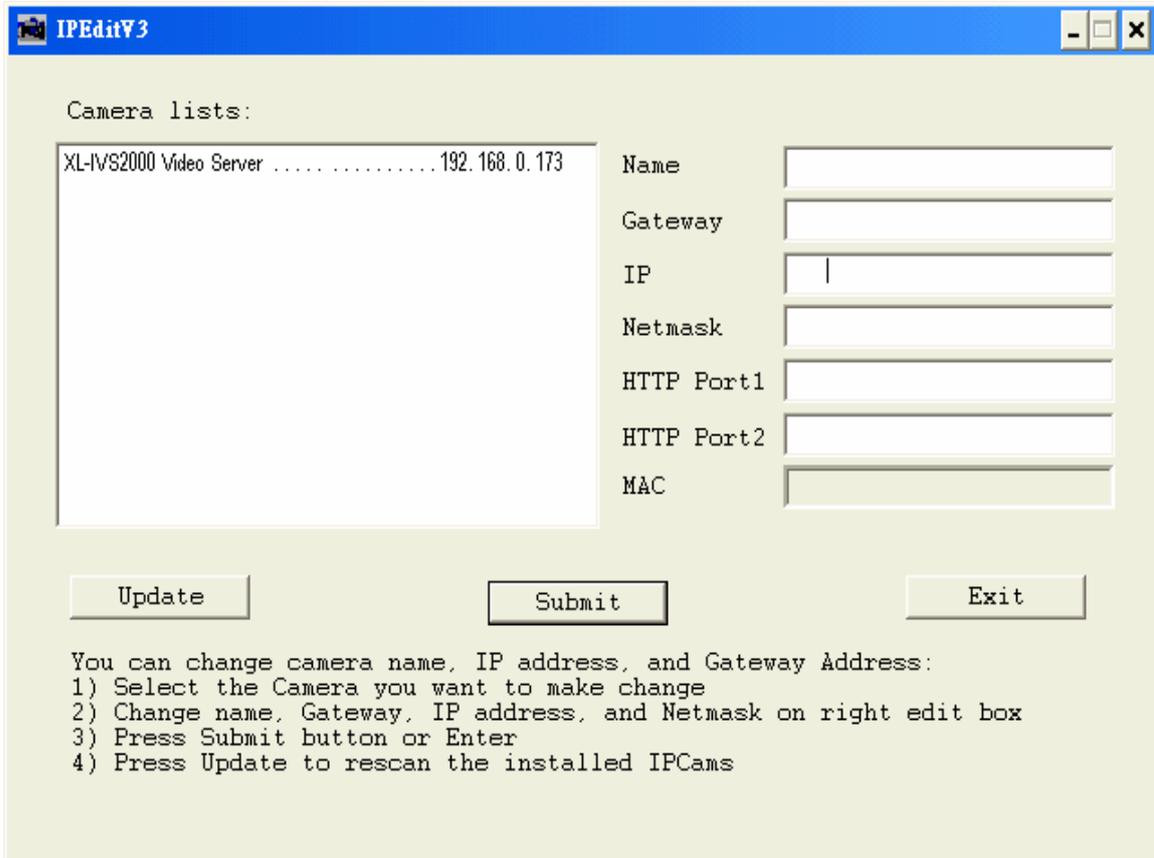
b. Press "**Update**" button to search XL-IVS2000 Video Server in your network. All XL-IVS2000 Video Servers in your network will list in left window.
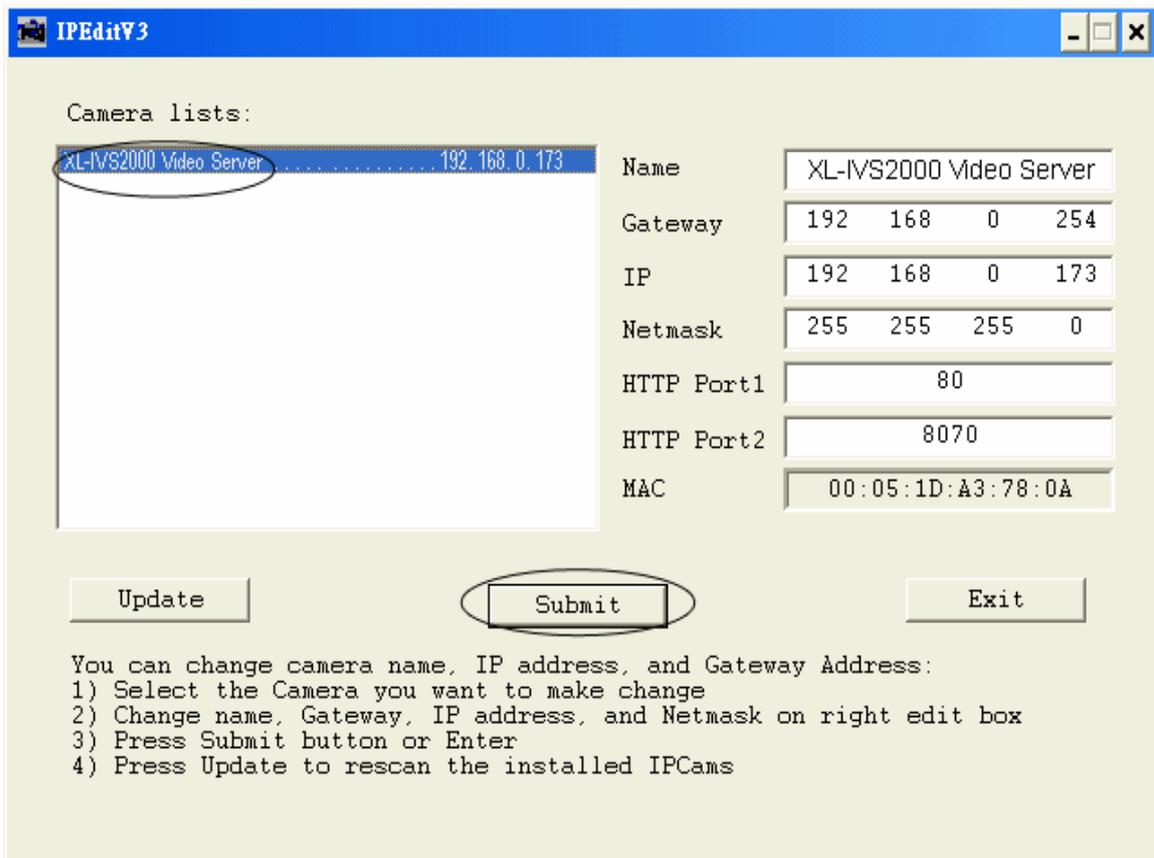
Select the XL-IVS2000 Video Server you want to setup, change the

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right hand side settings according to your network environment.
Double click on the XL-IVS2000 Video Server listed in left window, will open
   IE browser and bring up the video.
c. The default IP address of XL-IVS2000 Video Server is using DHCP
   client to get IP from local DHCP server, please change to proper IP
   settings that match your subnet and network environment.   Remember
   to press "**Submit**" button after you have done all necessary settings.
d. Press "**Exit**" button to exit "**IPEditV3**" program.

II. Use browser to view camera image
a. Double click on the XL-IVS2000 Video Server listed in left window, will
   open IE browser and bring up the video.
   Or type in the IP address of your XL-IVS2000 Video Server you just set
   by "**IPEditV3**" program, into browser address field, example:
   http://192.168.0.173 .

First you may see a dialog window, ask you to input password before
access Video.   The default settings disable the authorization
function, so you will not be asked to input password first time you
access **XL-IVS2000 Video Server's** Video.

WARNING:

Please must remember the **administrator password** carefully,
write down the **administrator password** in your notebook, and
save it in proper place that you will never loss it, or you may
need to send your XL-IVS2000 Video Server back to your
dealer or qualified service center for rebuilding firmware.

**b.** Login as "**Administrator**"

After password confirmed, for a short period of time (depend on the computer hardware) Video image will be shown on browser page.
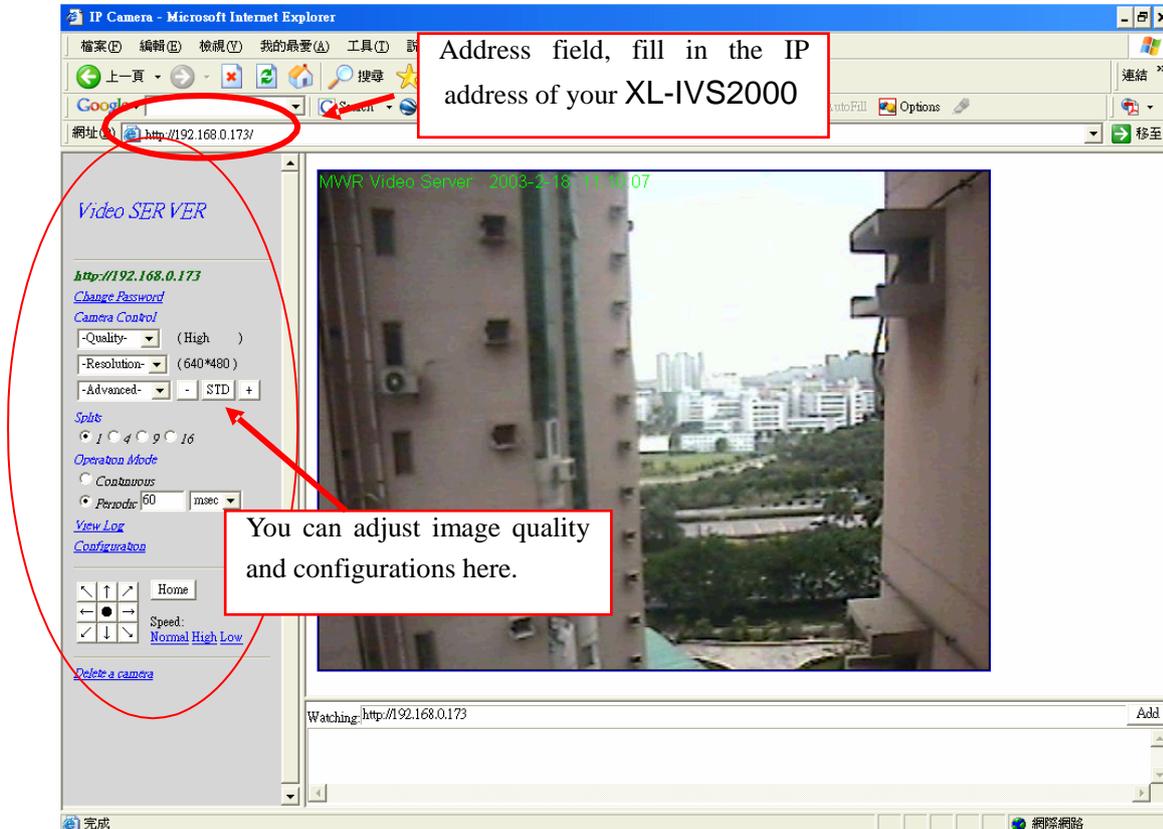
Note:
Due to the different security settings of your PC systems, ActiveX program (Video) may not be able to start, if the image won't start after 10 secs, or below messages appears, please try to solve it following the steps on next section.
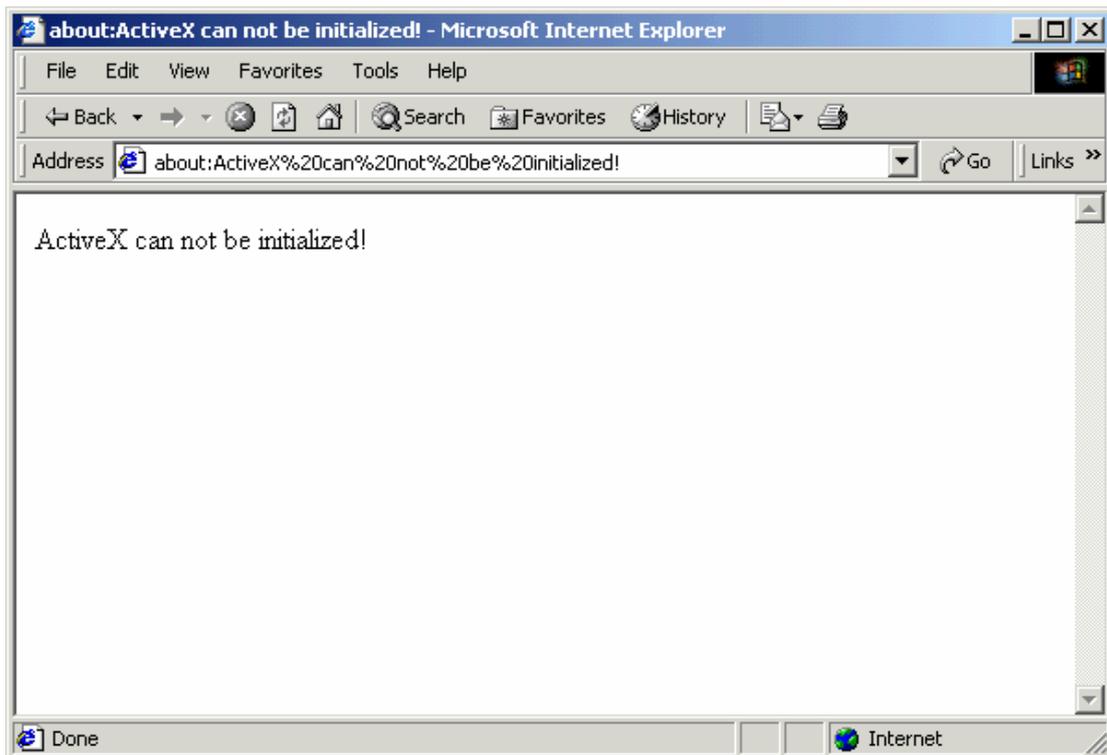
III. Install the ActiveX plug-in before you can see Video

XL-IVS2000 Video Server supports **Microsoft™ Internet Explorer** which accepts **ActiveX™** programs.

Step 1：Double-click IE browser icon on desktop, the browser window will pop-up on screen.
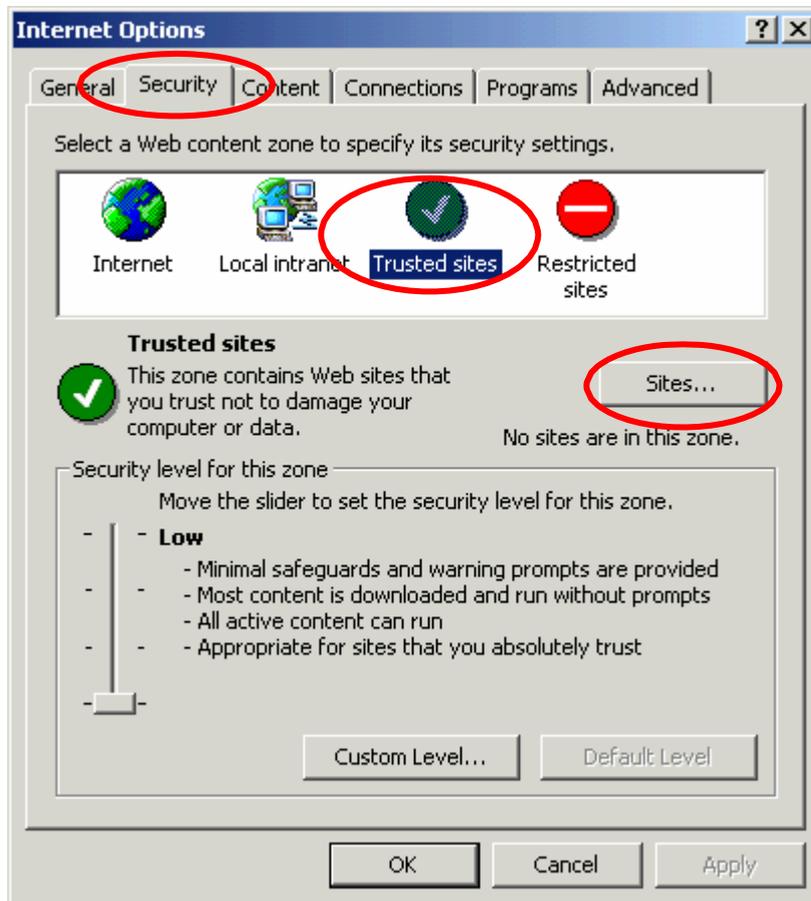
Note:
The below step 2 may not be necessary for some PC systems with different Windows OS and security settings, you may skip it and do it after you failed using IE to browse video.

Step 2: Add the XL-IVS2000 Video Server IP into **TRUST LIST** of your IE browser,
a. Click "**Tools**" => "**Internet Options**" on the tool-bar of IE.
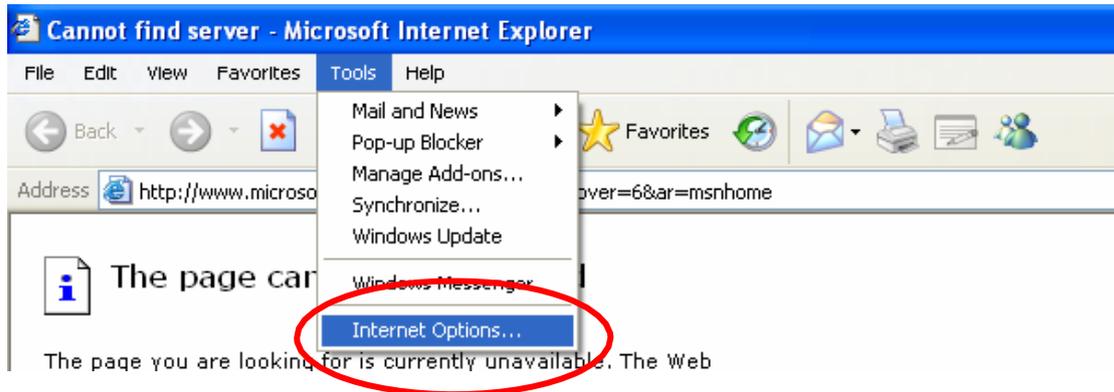
b. Then please select "**Security**" => "**Trusted sites**" => "**Sites**"

c. To input the IP of your XL-IVS2000 Video Server into the field "**Add this web site to the zone**" and click "**Add**" button. Don't forget to un-check "**Require server verification (https:) for all sites in this zone**" then click "**OK**" to continue.

Type the IP of your
XL-IVS2000 Video Server
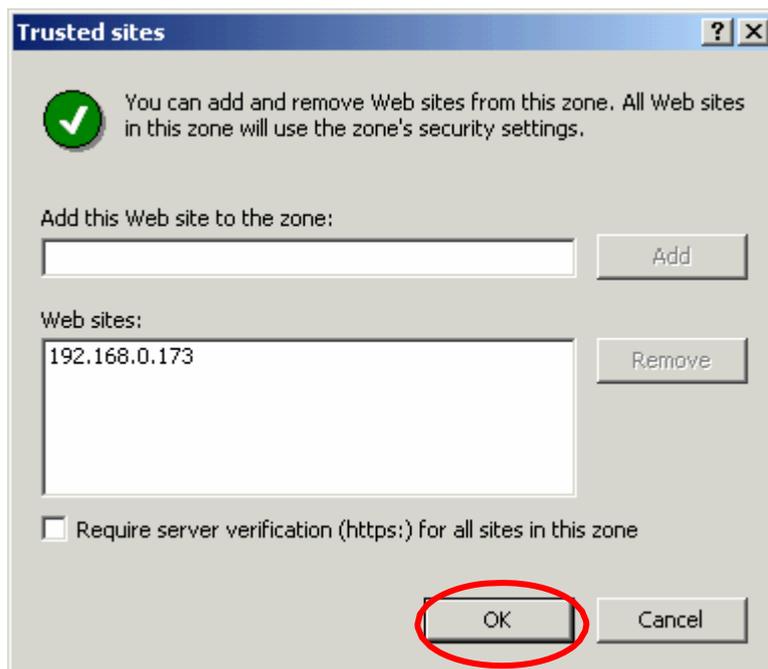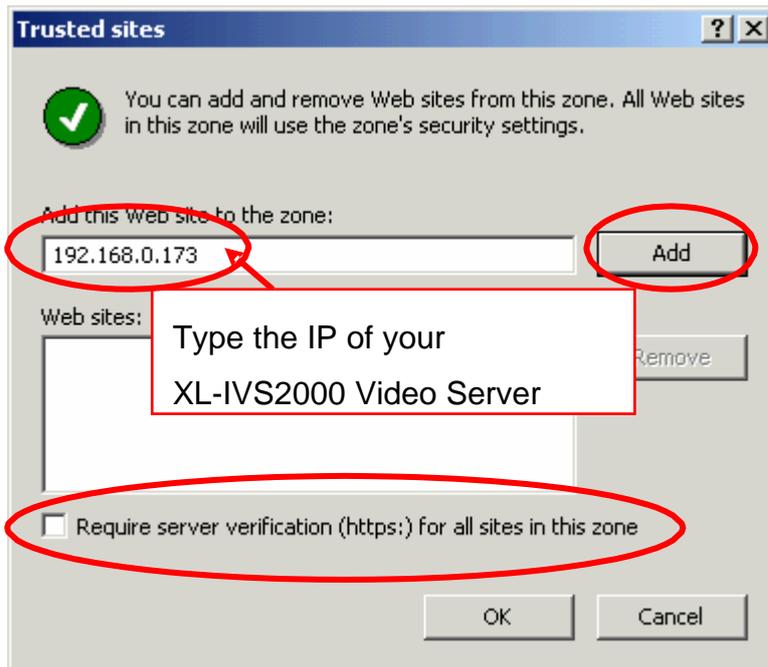
d. And then please press "**Custom Level**" to **enable the items related to ActiveX control** then click "**OK**" to continue.

enable the items related to ActiveX control.
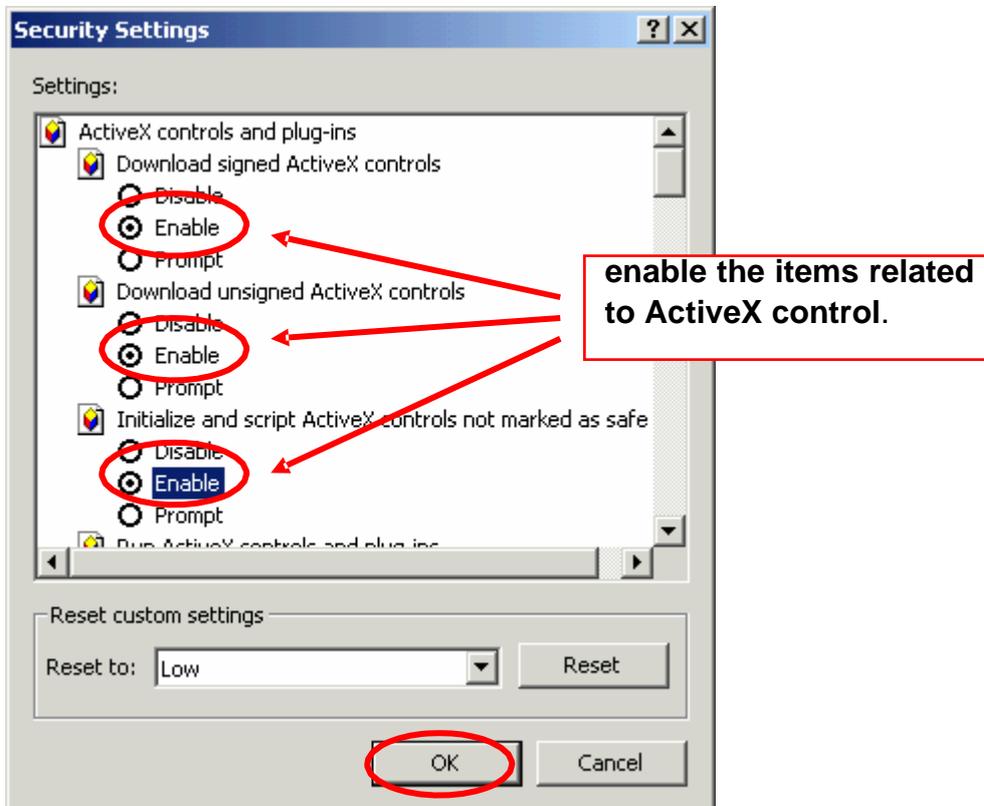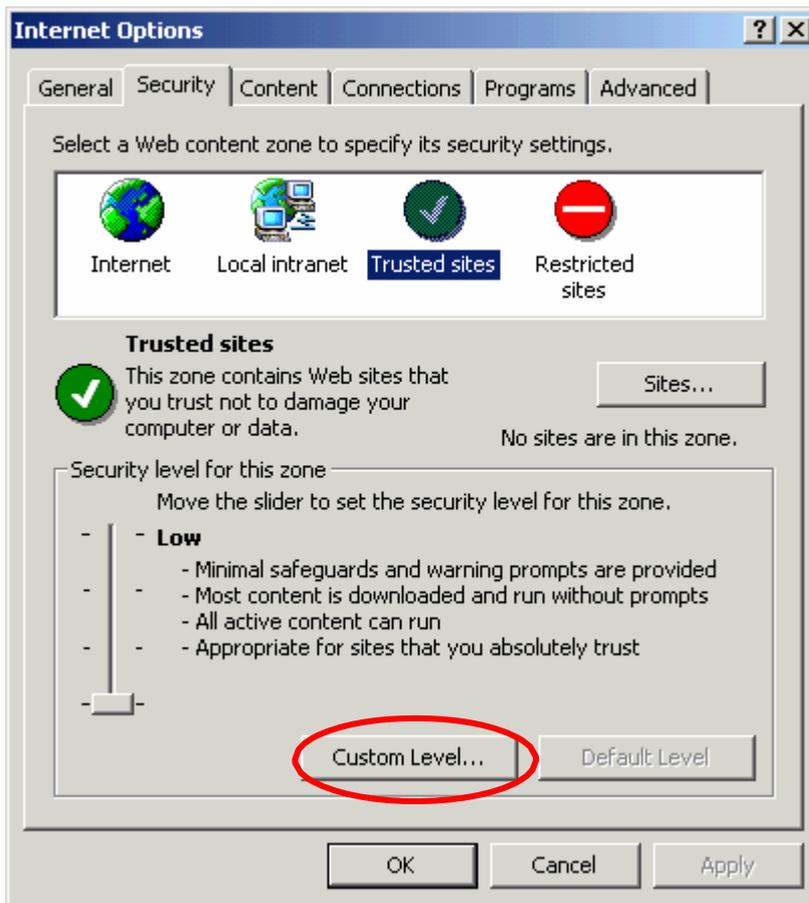
e. Remember to close and then restart IE browser to apply all the settings.

Step 3：Type the IP address of your XL-IVS2000 Video Server into IE "**Address**" field, IE will prompt a message as below, please check the box of "**Do not show this message again.**" and then click "**OK**".


Step 4：Click "**Information Bar**" of IE, then click "**Allow Blocked Content**" to install

the ActiveX program into system.
Note:
If you don't install the ActiveX program, it will not be allowed to see the video or do remote surveillance.

Step 5： Windows™ system will ask again for security warning. Please click

"**Yes**" to allow the ActiveX running the active content in Internet Explorer.
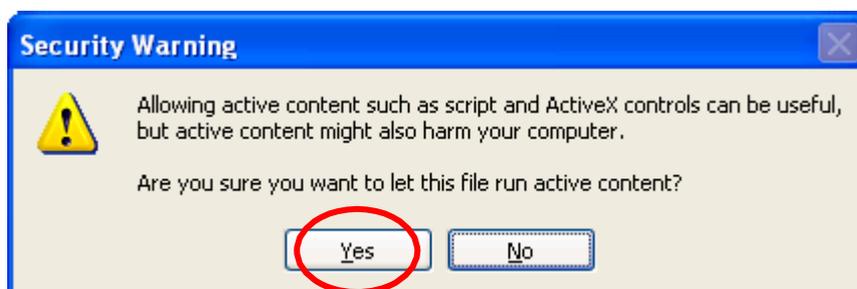
Step 6：Internet Explorer will ask again for the ActiveX program was interacting

in IE, please click "**Yes**" to continue installation.
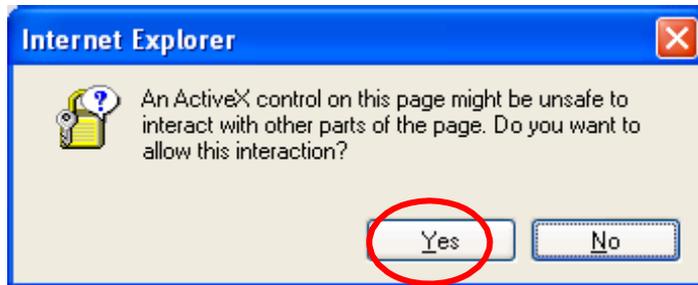
Step 7：We can see the video on IE after all above steps.

B. Configuration and Settings

Only the administrator can select the "**Configuration**", the ordinary user accounts don't have this privilege to access this function.

Below screen is the main menu of configuration setting, will appear when the administrator selects the "Configuration" on the main window.

Click here Configuration menu will appear
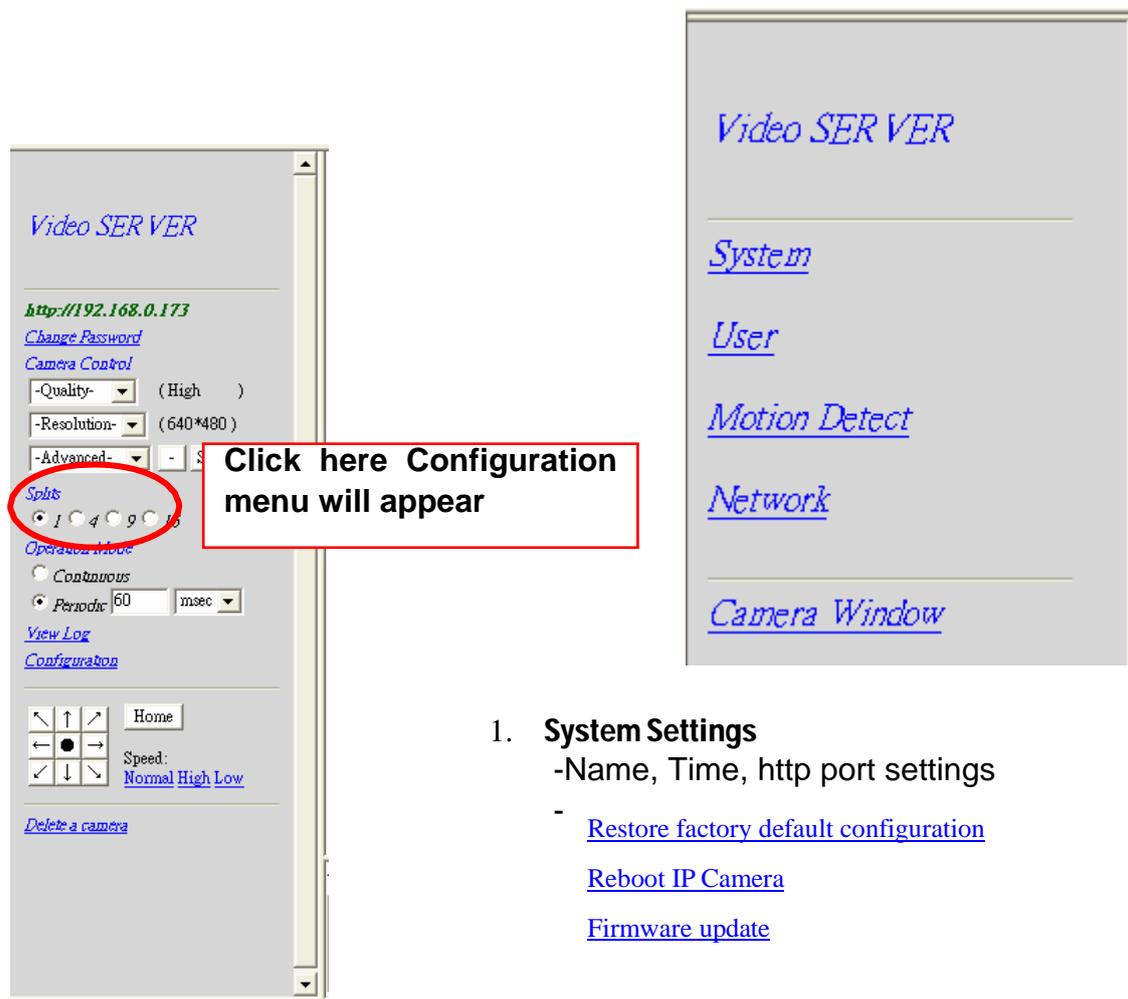
1. **System Settings**
   -Name, Time, http port settings
   - Restore factory default configuration
     Reboot IP Camera
     Firmware update

2. **Camera Control**
- Quality , Resolution , Splits settings, view log, delete a camera
3. **User**
- To add / delete user, change password;
- To enable/disable user authorization check.
- Add User.
- Change Password.

- Delete User Account.

4. **Motion Detection**
- Enable/Disable motion detection.
- Motion detected mail setting.
- Motion detected FTP setting.

5. **Network**
- Network connection setting.
- DHCP – setting the IP dynamically.
- Fixed IP – setting the IP manually.
- Connect to ADSL by PPPoE.

I. System Setting

I-1. Camera Name
The camera name can be set on the "**Camera Name**" field, and select
"**change**" to summit it .

I-2. Camera's time
Select "**NTP**" button
Key in the Sever address: **http://www.org.ntp.org**
Press "**adjust**" to activate.

After XL-IVS2000 Video Server get the time from NTP sever, it will update the

Camera's time field.
Select "**Input new time**" button and click on "**Synchronize with PC″s time**"
Key in "**mm/dd/yyyy**" format into "**Date**" field , and "**hh:mm:ss**" by 24hours format
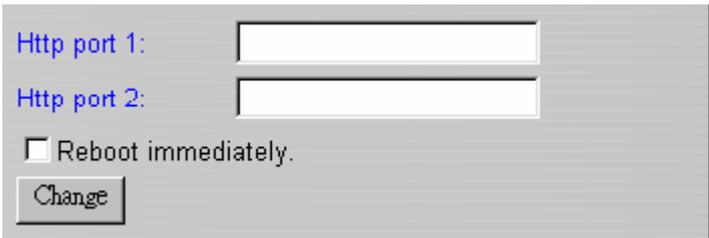into "**Time**" filed, then select the "**Adjust**" button to adjust the time.

I-3. Web Server Port Number

The XL-IVS2000 Video Server supports 2 HTTP port settings. The HTTP

"Port 1" is set to 80 the HTTP "Port 2" is set to 8080. The user can access the

XL-IVS2000 Video Server by

http://xx.xx.xx.xx/
or
http://xx.xx.xx.xx:8080/

Http port 1: [   ]
Http port 2: [   ]
☐ Reboot immediately.
[Change]

to access the XL-IVS2000 Video Server, It is required to keep the HTTP

"Port 1" as 80 to make sure the XL-IVS2000 Video Server can be accessed

by IP without the needs to add special number, access **XL-IVS2000 Video Server** by http://server IP/.

If multiple **XL-IVS2000 Video Servers** are installed on the LAN, to be accessed from the WAN, the HTTP "Port 2" needs to be changed according to the virtual server port mapping to support multiple **XL-IVS2000 Video Servers**.

CAUTION:
Never modify Port 1 and port 2 at the same time, it will make permanent damage to you video server that you will not be able to access you video server anymore.   Please must keep port 1 as 80, and modify port 2 if required.

II.   Camera Control

On the IE Browser, right mouse click on the video to activate a pop-up menu. You can then change the camera settings accordingly.

II-1. Quality Setting

The XL-IVS2000 Video Server provides 2 image quality settings.

Note:
The value next to "**quality**" field displays the current setting of quality.
When you make a new selection, the value will be changed to accordingly.

II-2. Resolution Setting

XL-IVS2000 Video Server provides 4 resolutions,

   640 X 480
   320 X 240
   352 X 288
   176 X 144

Please select the desired resolution from the "**Resolution**" field.
Note:

The value next to "**Resolution**" field displays the current setting of resolution setting.   When you make a new selection, the value will be changed to accordingly.

II-3. Camera Advanced Adjust

XL-IVS2000 Video Server provides the following advanced image settings,

Brightness
Contrast
Saturation
Hue
Sharpness

To control the image settings, use the *"+"* to increase, "-" to decrease, or *"***STD***"* to return to default value.

II-4. Split Setting

XL-IVS2000 Video Server provides 4 modes for split windows to display

different time frame images of the selected XL-IVS2000 Video Server. The time string with green characters is the current displayed image.

4 modes of Split window,
1 x 1 (Default)
2 x 2
3 x 3
4 x 4

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

II-5. Operation Mode

Continuous Mode: The XL-IVS2000 Video Server will always try to capture the

image as fast as possible. This is the default setting.

Periodic Mode: ms (mill-second) or s
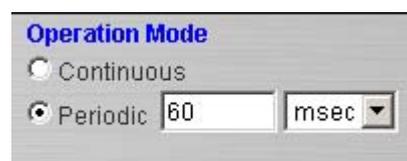
(second) can be set. The value set here must be greater than 0.
Ex.: Setting the periodic mode to 5 seconds will update the image every 5 seconds.
The time interval can be checked by the time displayed on the images.

III. User Management

III-1. Current User
If you are logging in for the first-time, the user name in the "**Current User list**" section should display "**administrator**" only.

III-2. Account Management
User authorization required:
Checking the "**Yes**" check box will enable the user check when accessing the XL-IVS2000 Video Server. The Login window will prompt for the User name and Password.

If the "**No**" check box is checked, then the user check will not be enabled. All users can access the XL-IVS2000 Video Server directly with the administrator privilege . Login window will not prompt.

Caution!
Before you enable the **User authorization**, please remember to change the administrator password, and store the password in a save place, forget the password will not be remediable,

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certified service personnel is required to reload the firmware.

Add a user or change password:
Enter a new user name and password to create a new user account, or enter an existing user account, then set a new password to replace the old password.
Confirm by clicking on the" **Set/Change**" button to create the account or change password.
After submitting, the "**Current User List**:" would display the newly created user accounts. In this example: "**user**".

III-3. Delete Account
Select the user account from the "**Username**" field.
Click the "**Delete**" button to delete the selected user account.   Confirmation window will prompt, select "**OK**" or "**Cancel**".
If clicking the "**OK**" the selected user account will be deleted from the "**Current User List**". In this example, the "user" account will be removed.

IV. Motion Detection

IV-1. Motion Detection Enable/ Disable
Check the "**Enable**" to activate motion detection,   If the "**Enable**" check box is not checked, the motion detection send mail function will not be enabled.
Select the "**Sensitivity**", select "**High**" or "**Middle**" and "**Low**".

Remember click "**Save Settings**" button to activate setting selected.

IV-2. Motion detected mail function (mail setting)
When motion detection is enabled, the user can setup the mail function to send the motion-detected images to the preset mail address. The procedures are as follow:
1. Motion Detect set to "**Enable**" state.
2. Setup the "**Mail Server**", "**Username**" and "**Password**". (must check the box if password is required)

Mail Setting (for sending images detected)
Mail server
Username
☐ Password
Sender email
Receiver email
Subject   IP Camera Warning!
☐ Send mail when motion detected.

FTP Setting (for uploading images detected)
Ftp server
Username
Password
Account
Upload path   /
☐ Upload images when motion detected.

3. Enter the sender's email address in "**Sender email**" field and the recipient's email address in the "**Receiver email**" field.
4. The user can change the "**Subject**" field.
5. If the mail server needs authentication, check the "**Password**" check box, enter the password; otherwise leave the "Password" field blank.
6. Check the "**Send mail when motion detected**" check box to enable the operation. If the check box is not checked, the motion detected send mail function will not be enabled.
7. Confirm by selecting "**Save Setting**" option to save the settings.

IV-3. Motion detected message on the main window.
When the motion detection is enabled, and a motion detected, a message will be displayed at the bottom of main window.

IV-4. FTP uploads when motion detected.
The motion-detected images can also be uploaded to FTP server. The procedures are as follow:
1. Enter the IP address or domain name of the "**FTP Server**".
2. Enter the "**Username**" and "**Password**" of the FTP server.
3. Certain FTP servers need an "**Account**" field.   Leave it blank if it is not required.
4. Enter the "**Upload Path**" upload path (folder) information for saving the images.
5. Confirm by selecting "**Save Setting**" option to save the settings.

V. Network Setup

V-1. Manual Setting
Fixed IP address:

Manually assign a unique IP address to each XL-IVS2000 Video Server. The procedures are as follow:
1. Check the "**Manually**" check box.
2. Enter the "**IP Address**", "**Subnet Mask**", "**Default gateway**", and the "**DNS1**", "**DNS2**", 'DNS3" formation.

3. Select "**Reboot immediately**" to reboot the XL-IVS2000 Video Server to allow these settings to take effect.
Automatically by DHCP:
The "**Automatically by DHCP**" is the default network setting of XL-IVS2000 Video Server.

When a XL-IVS2000 Video Server is joined into the LAN, it will issue the

DHCP packets to request an IP address which is dynamically assigned by the
DHCP server. If it is unable to get a DHCP address on a limited tries, the

XL-IVS2000 Video Server will assign a default IP address such as

"169.254.xx.xx".

V-2. Connect to ADSL by PPPoE mode.

The XL-IVS2000 Video Server can directly connect to the ADSL.   Power

on the XL-IVS2000 Video Server and it will dial up and connect to the ISP

via the ADSL modem.
The setup procedures are as follow:
1. Connect to the LAN by DHCP or Fixed IP

2. Access the XL-IVS2000 Video Server and click "**Configuration**" =>

   "**Network**"
3. Enter PPPoE Configuration
4. checkt the "**Dial on power Up**" check box.

5. If the ADSL Modem and XL-IVS2000 Video Server are already connected,

   after the PPPoE information entered, you can select the "**Save
   and Dial Now**" option to do the PPPoE dial.
6. Enter the "**Username**" and "**Password**" fields with the account and password
   provided by the ISP. If the "**Send Mail after dialed**" check box is checked, the
   mail will be automatically sent when connected to the ISP.
7. If the mail server needs authentication, the *"***Password***"* check box needs to

be checked and password information, entered.
8. Enter the sender's email address in the "**Sender email**" field and recipient's email address in the "**Receiver email**" field.
9. The "**Subject**" field can be modified.
10. Confirm by clicking on the "**Save**" button to save the settings.

If the XL-IVS2000 Video Server and ADSL modem are connected by a hub,

the administrator can select "**Dial Now**" to perform the connect operation.

If the XL-IVS2000 Video Server and ADSL modem are connected directly, we

suggest to perform dial-up connection following the below steps:

To power off the XL-IVS2000 Video Server, To

connect to the ADSL modem,

To power-up the XL-IVS2000 Video Server,

The XL-IVS2000 Video Server start dialing automatically.

Once connect to ISP, mail the IP address information to the preset e-mail address.

After 10 times of failed try connections, XL-IVS2000 Video Server will

abort the dialing operation, user can reconnect XL-IVS2000 **Video**

Server to LAN, access it, to find the cause.
Note:
If the PPPoE option "**Send Mail after dialed**" is selected, after PPPoE dials up connect to ISP, a mail contains the WAN Address / Net mask / Gateway

address / DNS Server address will be mailed to preset the e-Mail address.

VI. Delete a Camera

XL-IVS2000 Video Server can support view of multiple IP-Cams or XL-IVS2000

Video Servers, you can add a new one into this WebPage by input another XL-

IVS2000 Video Server address (ex.: http://192.168.0.50) _____

on the "**Watching**" field. Also new added cameras can be removed by select the

XL-IVS2000 Video Servers, then press *"**Delete a camera**"* to remove it from the

Webpage.

VII. Snapshots

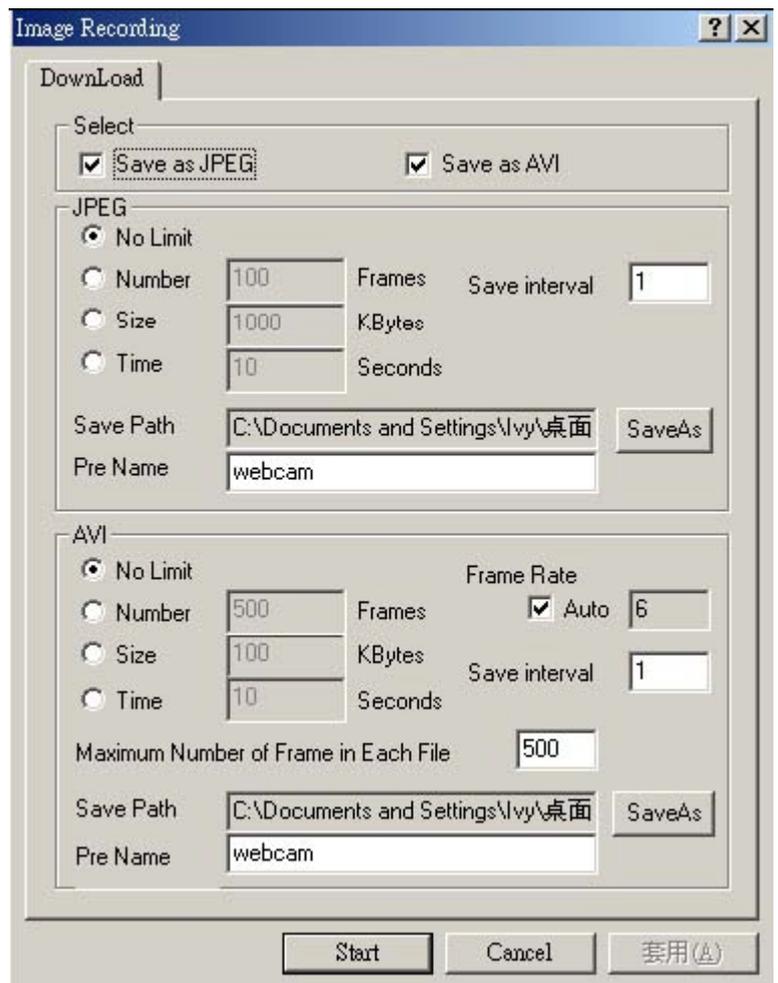The user can capture single pictures by F12.

VIII. Image Recording

VIII-1. Save as JPEG

1. Select "**Image Recording (F11)**"
2. The "**Image Recording**" pop-up window displays. Check the "**Save as JPEG**" check box.
3. Enter the "**Download Number**" to save the desired number of images, or "**Download No Limit**" to save the images continuously, until the "**Stop Image Recording**" is selected.
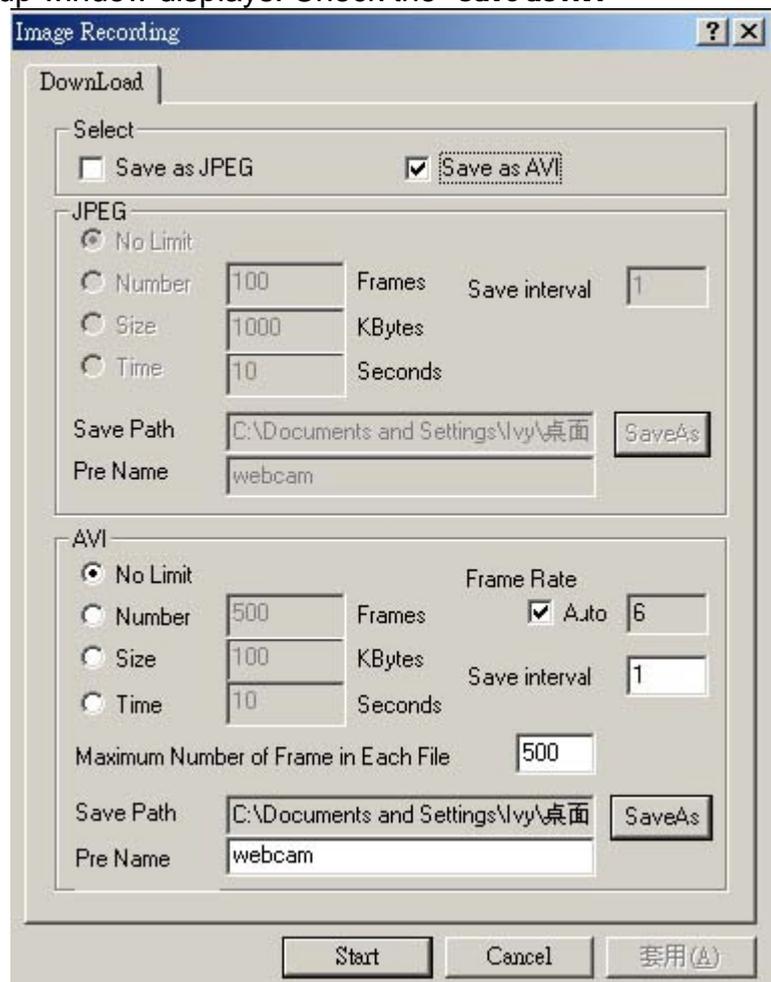
4. Click on the "**Save As**" button and a pop-up window displays to select the save path and file   name prefix.
Select "**Save**" to continue.
5. Click on the "**Start**" button to perform the image download process and save the JPEG files into the local PC.

Note:

During the downloading and saving process, a yellow mark displayed on the right-down position to indicate the saving process.

Before the "**Download Number**" of images is reached, or you may selected "**Download No Limit**", click on "Stop Image Recording" to stop image recording process.

After the "**Stop Image Recording**", list the files on the selected saved path, these files are named as

file_name_prefixed_yyyy_mm_dd_hh_mm_ss_ms.jpg

VIII-2. Save as AVI

1. Select "**Image Recording (F11)**"
2. The "**Image Recording**" pop-up window displays. Check the "**Save as AVI**" check box option.
3. Enter the "**Time**", "**Number**" or "**Size**" on each AVI file, until the "**Stop Image Recording**" is selected. "**Frame Rate**" is the frame rate setting of the recorded AVI file.
4. Selecting the "**No Limit**" check box will save the video file until the "**Stop Image Recording**" is selected.
5. For each AVI file, the maximum number of images that can be saved in each file are specified in "**Max Jpeg Num**" Once the images that can be saved in each AVI file are reached by this number, a new AVI file will be created to save the remaining images, until the "**Stop Image**

Recording" is selected.

6. Click on the "**Save As**" button and a pop-up window displays to select the save path and file name prefix.   Select "**Save**" to continue.

Note:
   During the AVI file recording, a red icon displays on right-down position of the image to indicate the AVI saving process.
   After the "**Stop Image Recording**", list the files on the selected saved path, these files are named as **filename_prefix_date_time.avi**.
   The AVI files can be played by any standard Windows Media Player program, but they require the DixectX 8.1 or higher version software driver installed.

VIII-3. Save Current Picture As…

1. Click on the "**Save Current Picture As (F12)**" option to save the current image into the local PC.
2. Enter the name you wish to save as into the "**File name**" field. Click on "**Save**".

IX. Accessing XL-IVS2000 Video Server over the Internet

If your home or office LAN is connected to the Internet through a high speed (broadband) Internet connection, with at least 128 kbps upload bandwidth, you can access your cameras via the web browser from anywhere through the Internet. To do this you will need to:

1. Know your WAN (Internet) IP address. This is the IP address that your Internet Service Provider provides you to access the Internet. It may be static (always the same) or dynamic (can change from time to time).
2. Make sure the two ports used by the camera (80 & 8080) are forwarded by your router or gateway to the camera.

3. Make sure your XL-IVS2000 Video Server default gateway is set to the

   LAN (local) IP address of your router/gateway.

IX-1. WAN IP Address

The WAN IP address that your Internet Service Provider provides you so that you can access the Internet is very different from the LAN or local IP address that your PCs and cameras are using to connect to your local network.   Your WAN or Internet IP address is visible to the outside world (Internet) whereas your local addresses are not. To find your home or office network from the Internet you must know your WAN IP address.

Your WAN IP address is stored by your gateway router, which uses it to

connect to the Internet. All the devices on your network connect to the Internet via your gateway router. You can find your current WAN IP address by checking your router status page. There are also various websites such as **http://www.whatismyip.nl/** **or** **http://www.whatismyip.us/**, which will tell you the IP address that you are currently using to access the Internet.

Note: terminology

The term gateway is used generically to define a device that connects a local network to the Internet. A gateway may be a router, a PC running software which allows it to act as a gateway such as a proxy server, or some other devices. Most home networks use a NAT (Network Address Translation) router as a gateway. The term gateway router refers to such a device.

Static versus Dynamic IP address

The IP address (or addresses) that your ISP provided you will either be static, which means it never changes, or dynamic, meaning it will

change periodically. Dynamic addresses present an additional challenge when trying to locate your network from the Internet since your address may have changed since the last time you checked it. How often your dynamic address changes varies from one service provider to another. Also, any time you reboot your cable or DSL
modem, you are likely to get a new address when reconnecting.
The solution to the ever-changing IP address is known as DDNS or dynamic domain name service. A DDNS will allow you to find your network by a domain name, such as **DynDNS**, **ZONEDIT**, **no-ip.com**, rather than needing to know the IP address.

IX-2. Network Address Translation (NAT)

Most home routers and business firewalls today perform something called NAT or Network Address Translation. NAT translates your external or WAN IP address into an internal address inside your gateway router. What it means is, you can think of your router as being divided into two halves, the LAN side (inside) and the WAN side (outside or Internet side). When a connection request arrives at your router from the Internet, it will not get any farther than the WAN side unless you have specifically instructed your router to pass this type of request to a specific device on your LAN. This process is know as port forwarding or port redirecting.

IX-3. Port Forwarding

All the TCP/IP (Internet) networking uses software ports. Ports can be thought of as channels on your television. By default, all webpage traffic is on

channel (port) 80. By default, the XL-IVS2000 Video Server uses port 80 to

deliver its web page to your browser and port 1600 to send video. Therefore, both of these *channels* (ports) must be open (not blocked by your outer/firewall)

to incoming traffic in order to connect XL-IVS2000 Video Server from the

Internet.

Also, these two ports must be forwarded or redirected to the camera's LAN IP address by your gateway router. Your router's setup software should provide a utility for port forwarding or redirecting. **Router configuration** contains setup help for some popular home networking gateway routers currently on the market.

Note:

Forwarding ports to your XL-IVS2000 Video Server does not pose any additional

security risk to your LAN. Before setting up port forwarding, it is best

to configure your XL-IVS2000 Video Server to use a static LAN IP since

your port forwarding setup will need to be updated if the video server's LAN IP address changed.

IX-4. Default Gateway

Devices (PCs, IP cameras/Servers, etc.) on your network connect to the Internet via gateway.   For most home networks, a NAT type router serves as the gateway.

For office LANs, the gateway may be a PC running gateway software. To access any devices on your network from Internet, it must know the LAN IP

address of your gateway. If your XL-IVS2000 Video Server is set up to use

DHCP, then it will retrieve this information automatically from your router. However, if you have configured your camera to use a static IP address, you must be sure that you have set the correct gateway IP address in order to

connect your XL-IVS2000 Video Server to the Internet.

If your XL-IVS2000 Video Server is now live on the Internet, browsing your

XL-IVS2000 Video Server from the Internet is the same as browsing on

your LAN except that you must enter your WAN IP address instead of the LAN IP address.

X.   Network Utilities

Microsoft Windows includes various network information utilities to determine

network configurations. To determine your IP address and network settings, follow the steps below, it's depending on your operating system.

X-1. Determining your IP Address and Network Settings
Windows 98/Me:
1. Click on **Start** => **Run** and type "**command**" and then press ENTER
2. In the MS- DOS window, type "**winipcfg**" and then press ENTER
3. This will display your network card's Adapter Address, IP Address, Subnet Mask, and Default Gateway.
More information regarding **WINIPCFG** can be obtained by typing"**winipcfg /?**" at the MS -DOS prompt.
Note:
**WINIPCFG** is located in the **C:\Windows** folder.

Windows 2000/XP:
1. Click on **Start** => **Run** and type"**command**" and then press
2. ENTER
2. In the MS- DOS window, type "**ipconfig**" and then press ENTER
3. This will display your network card's IP Address, Subnet Mask, and Default Gateway.
More information regarding **IPCONFIG** can be obtained by typing "**ipconfig /?**" at the MS - DOS prompt.
Note:
IPCONFIG is located in the **C:\Windows\System32** folder.
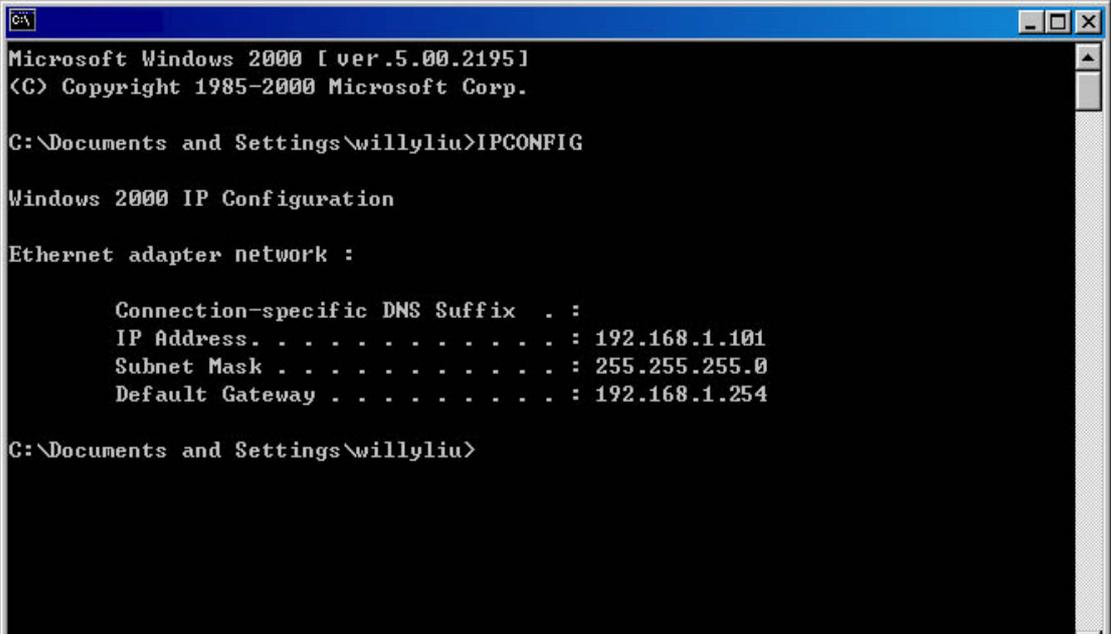
```
Microsoft Windows 2000 [ ver.5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\Documents and Settings\willyliu>IPCONFIG

Windows 2000 IP Configuration

Ethernet adapter network :

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . : 192.168.1.101
        Subnet Mask . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . : 192.168.1.254

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

X-2. Using PING

PING is a very useful utility for checking to see if a XL-IVS2000 Video Server

is responding or checking to see if an IP address is available. In Windows 98/Me, PING is located in **C:\Windows**. In Windows 2000/XP, PING is located in **C:\Windows\System32**.

Windows 98/Me/2000/XP:
1. Click on Start =>Run and type"**command**" and then press ENTER
2. In the MS- DOS window, type "**ping XXX.XXX.XXX.XXX**" and then press ENTER

(Where **XXX.XXX.XXX.XXX** is your XL-IVS2000 Video Server IP address) For

example, if your XL-IVS2000 Video Server uses the IP address of

192.168.0.173, you would type in: **ping 192.168.0.173**

3. If there is a XL-IVS2000 Video Server, PC or other network devices

online using this address you will see:
Pinging **192.168.0.173** with 32 bytes of data:
Reply from **192.168.0.173**: bytes=32 time<1ms TTL=128
Reply from **192.168.0.173**: bytes=32 time<1ms TTL=128
Reply from **192.168.0.173**: bytes=32 time<1ms TTL=128
Reply from **192.168.0.173**: bytes=32 time<1ms TTL=128
Ping statistics for **192.168.0.173**:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

If there is NO response on this address you'll see
Pinging **192.168.0.173** with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for **192.168.0.173**:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

This indicates that the address is available for use. However, there could still be a device which is currently offline which is configured to use the address. In order to be certain, make sure all your network devices are on and connected to network when checking for address availability.

X-3. IPEdit

IPEDIT.EXE is used to scan the Installed XL-IVS2000 Video Servers and set

the XL-IVS2000 Video Server Name and IP Address.

XI. Router Configuration

The following section describes the initial configuration of the router and port forwarding for some of the most common routers from 3Com, Belkin, D-Link, Linksys, Microsoft, NETGEAR, Proxim, Siemens, and SMC.

In order to access the XL-IVS2000 Video Servers from the Internet, you'll need

to configure your router to use ports 80 and 1600 (default settings).

Port 80 is used for accessing the XL-IVS2000 Video Server's homepage and

Port 1600 is used for authentication and video streaming. If your Internet Service Provider blocks ports 80/1600, you'll need to reconfigure your

XL-IVS2000 Video Server and router to other ports such as 81/1601,

82/1602, etc. To change the port settings of the XL-IVS2000 Video Server,

please Refer to **Appendix B-I-3**.

Follow the steps below to configure your router, depending on the router manufacturers and models. If your router model is not listed below, please contact your router manufacturer for further assistance in configuring your router.

XI-1.   3Com (http://www.3com.com)
OfficeConnect Cable/DSL Gateway - [3C857-US]
OfficeConnect Wireless Cable/DSL Gateway - [3CRWE52196]
1. Log into your router.
2. On the main page, select Firewalls on the left side of the page.
3. Select the Virtual Servers tab at the top of the page.
4. Click New on the right side of the page to open the Virtual Server Settings
   dialog box.

5. Type in the XL-IVS2000 Video Server's IP Address in the Server IP Address
   text box. (Find the XL-IVS2000 Video Server's IP Address by using **IPEditV3**.
   please Refer to **Appendix A**).

6. Under Local Service, select Custom.

7. Under Custom Service Name, type XL-IVS2000 Video Server.

8. Under Specify Custom Service Ports, type in: 80, 1600.

9. Click Add to save the settings. The XL-IVS2000 Video Server should now

    be configured to work with your router and be accessible from the
    Internet.

XI-2. Belkin (http://www.belkin.com)
Wireless Cable/DSL Gateway Router - [F5D6230-3]
1. Log into your router.
2. On the main page, select Virtual Server on the left side of the page under
    the Security section.
3. Enter the following information on the page:
    Line #1:

    Private IP: Type in the XL-IVS2000 Video Server 's IP address.

    Private Port: 80
    Type: TCP
    Public Port: 80
    Line #2:

    Private IP: Type in the XL-IVS2000 Video Server 's IP address.

    Private Port: 1600
    Type: TCP
    Public Port: 1600

4. Click Enter to save the settings. The XL-IVS2000 Video Server should now

    be configured to work with your router and be accessible from the
    Internet.

54g Wireless DSL/Cable Gateway Router - [F5D7230 -4]
1. Log into your router.
2. On the main page, select Firewall on the left side of the page.
3. Under Firewall, select Virtual Servers.
4. Enter the following information on the page:
    Line #1:

    Private IP: Type in the XL-IVS2000 Video Server's IP address.

    Private Port: 80

Type: TCP
Public Port: 80
Line #2:

Private IP: Type in the XL-IVS2000 Video Server 's IP address.

Private Port: 1600
Type: TCP
Public Port: 1600

5. Click Apply changes to save the settings. The XL-IVS2000 Video Server
   should now be configured to work with your router and be accessible from
   the Internet.

XI-3 D-Link (http://www.dlink.com)
DI -604/DI-614+/DI-624
1. Log into your router.
2. On the main page, click on Advanced at the top of the page.
3. On the left side of the page, click on Virtual Server. Note: Make sure DMZ
   host is disabled. If DMZ is enabled, it will disable all Virtual Server entries.
4. Enter the following information on the page:
   Enabled/Disabled: Enabled

   Name: XL-IVS2000 Video Server

   Private IP: Type the XL-IVS2000 Video Server's IP address, for example:

   192.168.0.173
   Protocol Type: TCP
   Private Port: 80
   Public Port: 80
   Schedule: Always
5. Click Apply to save the settings.
6. Enter the following information on the page:
   Enabled/Disabled: Enabled

   Name: XL-IVS2000 Video Server

   Private IP: Type the XL-IVS2000 Video Server's IP address, for example:

   192.168.0.1733
   Protocol Type: TCP
   Private Port: 1600
   Public Port: 1600
   Schedule: Always

7. Click Apply to save the settings. The XL-IVS2000 Video Server should now

   be configured to work with your router and be accessible from the
   Internet.

DI-714
1. Log into your router.
2. On the main page, click on Advanced Settings at the top of the page.
3. Click on Virtual Server Settings on the left side of the page.

4. Enter the XL-IVS2000 Video Server's IP address into the Internal IP field. Under

   Service, select All and then click Submit to save your settings. The XL-IVS2000

   Video Server should now be configured to work with your

   router and be accessible from the Internet.

DI-714P+
1. Log into your router.
2. On the main page, click on Advanced at the top of the page.
3. On the left side of the page, click Virtual Server.
4. Enter the following information on the page:
   For ID #1:
   Service Port: 80

   Server IP: Type in the XL-IVS2000 Video Server's IP address, for

   example: 192.168.0.173
   Enabled/Disabled: Enabled
   For ID #2:
   Service Port: 1600

   Server IP: Type in the XL-IVS2000 Video Server's IP address, for

   example:192.168.0.173
   Enabled/Disabled: Enabled

5. Click Apply to save your settings. The XL-IVS2000 Video Server should now

be configured to work with your router and be accessible from the
Internet.

XI-4.　Linksys (http://www.linksys.com)
EtherFast Cable/DSL Router - [BEFSR41]
Instant Broadband EtherFast Cable/DSL Firewall Router with 4-Port
Switch/VPN EndPoint – [BEFSX41]

Wireless Access Point Router with 4-Port Switch - Version 2 - [BEFW11S4]

1. Log into your router.
2. On the router's main page, click on Advanced at the top of the page.
3. On the next page, click on Forwarding.
4. Enter the following information on the page:

Line #1: Customized Applications: XL-IVS2000 Video Server

Ext. Port: 80 to 80
Protocol: TCP

IP Address: Type in the XL-IVS2000 Video Server's IP address, for

example: 192.168.1.173
Enable: Checked in
Line #2: Customized Applications: IP-Box
Ext. Port: 1600 to 1600
Protocol: TCP

IP Address: Type in the XL-IVS2000 Video Server's IP address, for

example: 192.168.1.173
Enable: Checked in

5. Click on Apply to save the settings. The XL-IVS2000 Video Server

should now be configured to work with your router and be accessible from the Internet.

C.   IDSS 4 Channels Digital Surveillance Software installation

(Demo Version, auto stop 1 hour after execution)

Click on "**Install IDSS 4Ch**" or "**Setup.exe**" to begin IDSS 4 Channels Digital Surveillance Software installation
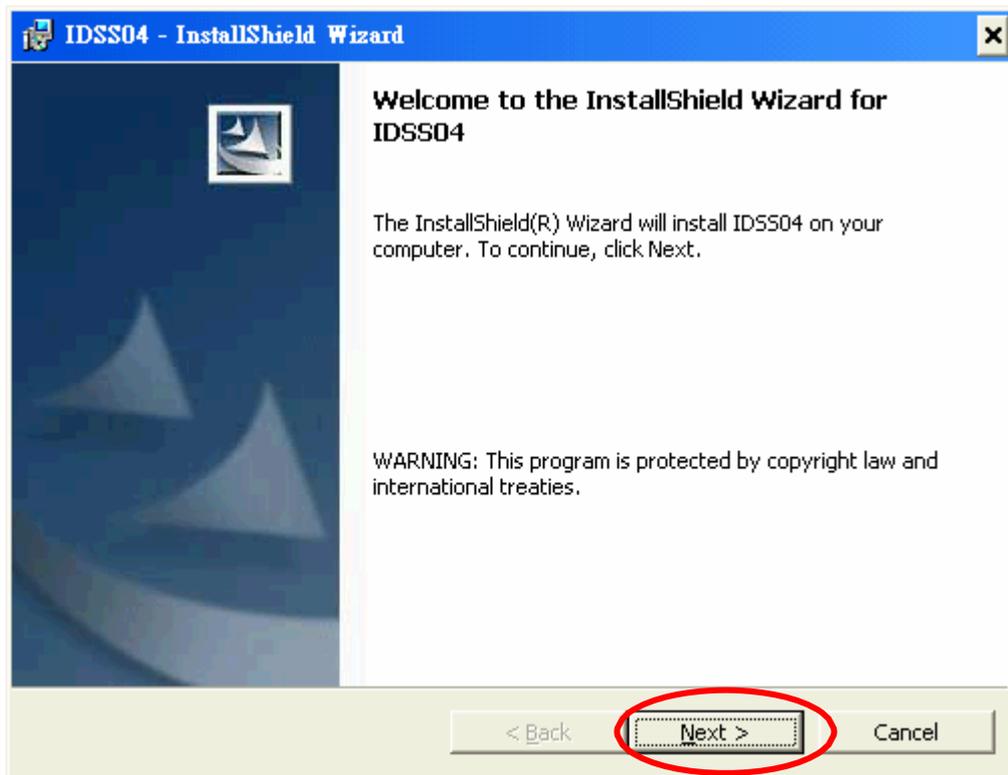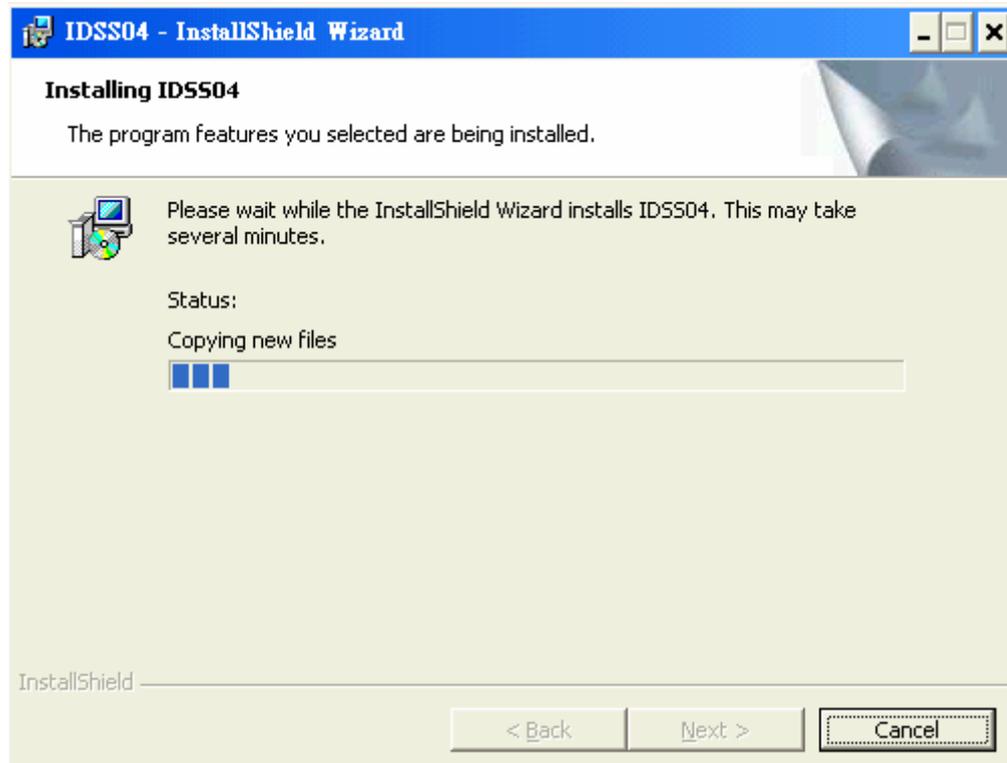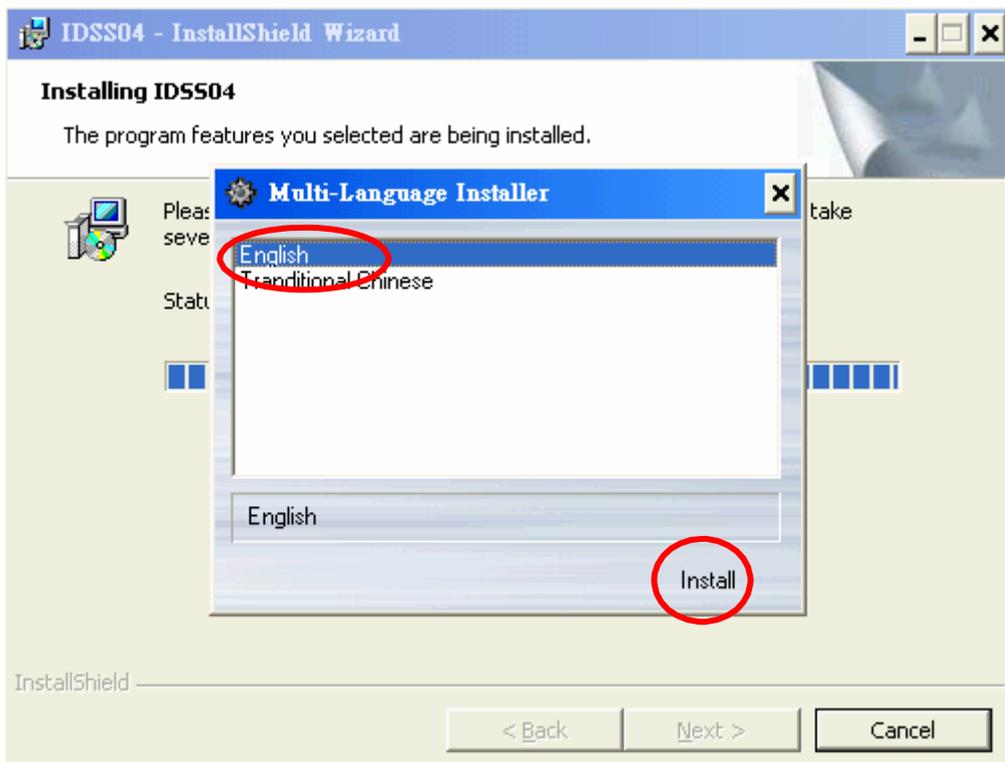
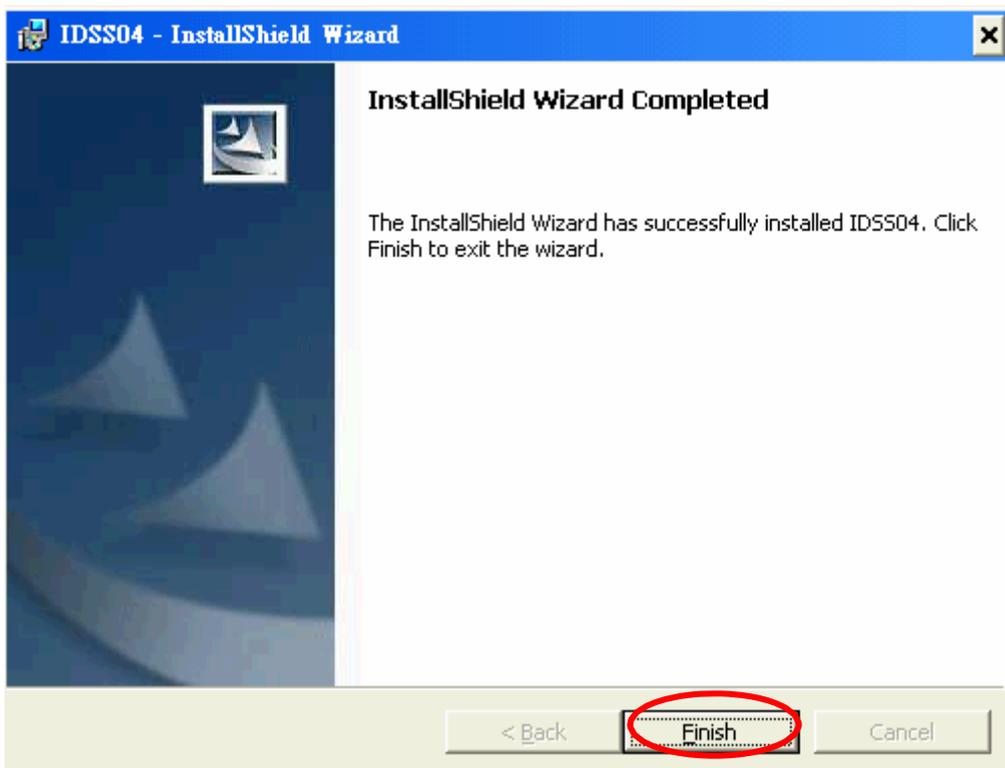When you see the following screen, please press "**Next**"
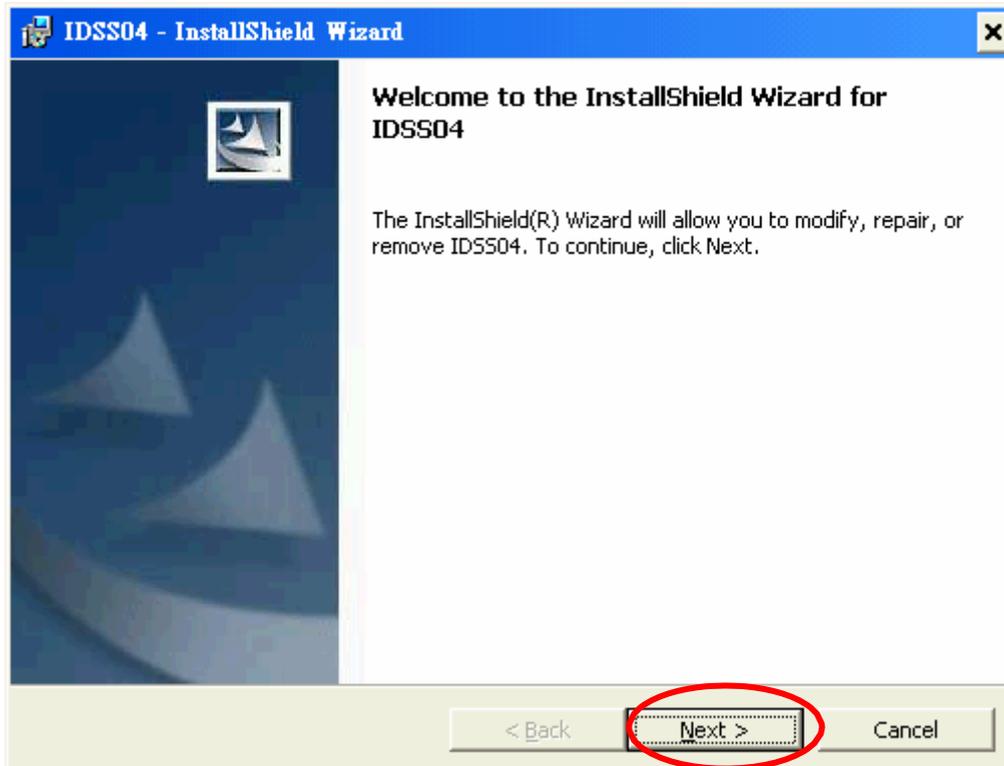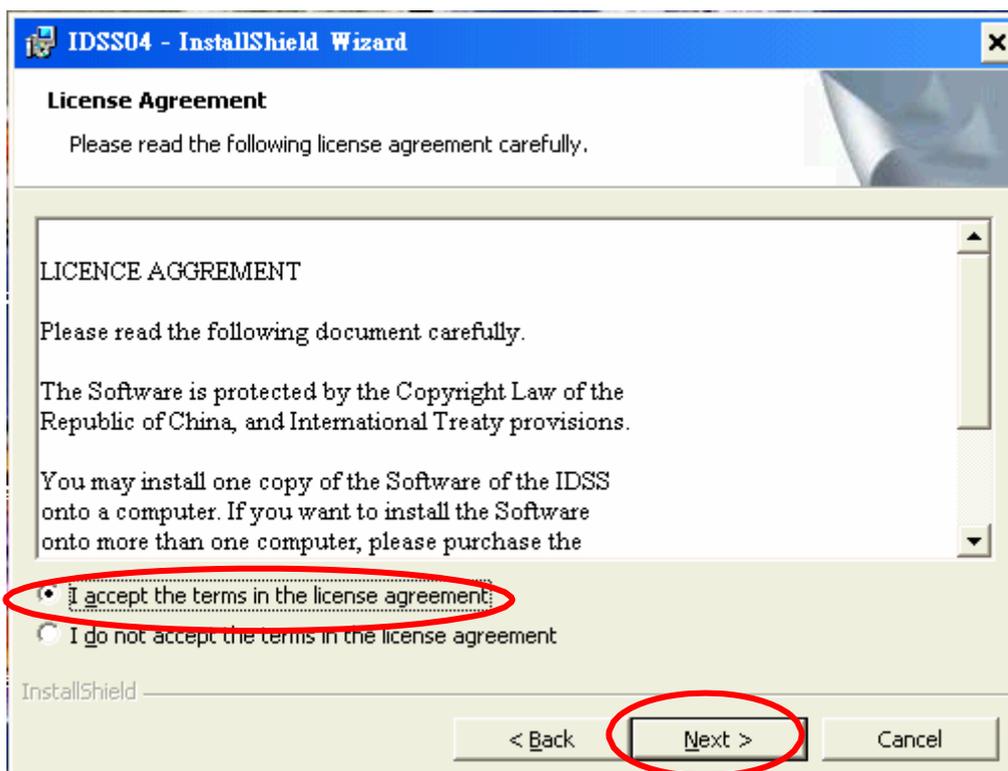
Please read License Agreement carefully and click on "**I accept the terms in the license agreement**" and press "**Next**" button continue installation.
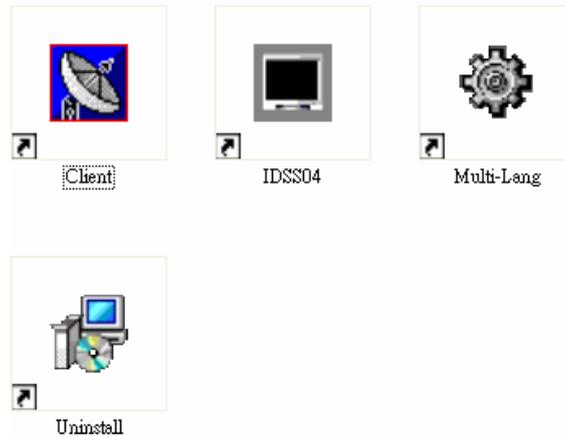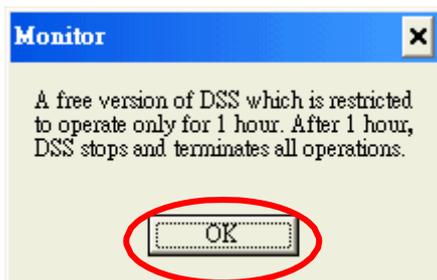
Please choose language and press "**Install**".

Finished IDSS 4 Channels Digital Surveillance Software installation by pressing "**Finish**"

II**.** After installation, you will find ![IDSS04 icon] icon appears on your desktop, and IDSS04 folder created in your program folder.


III. Click on ![IDSS04 icon] icon to start IDSS 4 Channels Digital Surveillance Software.

Free Version, will stop automatically 1 hour after execution.

IV. Click on "**Tool**" icon to input XL-IVS2000 Video Server IP address and

User Name/ **password** (default is **administrator**/ **winbond**).
Press "**Apply**" button to gain video image 1 displayed on screen.
You may add maximum 4 cameras information here and view/recording 4 camera images in one screen.
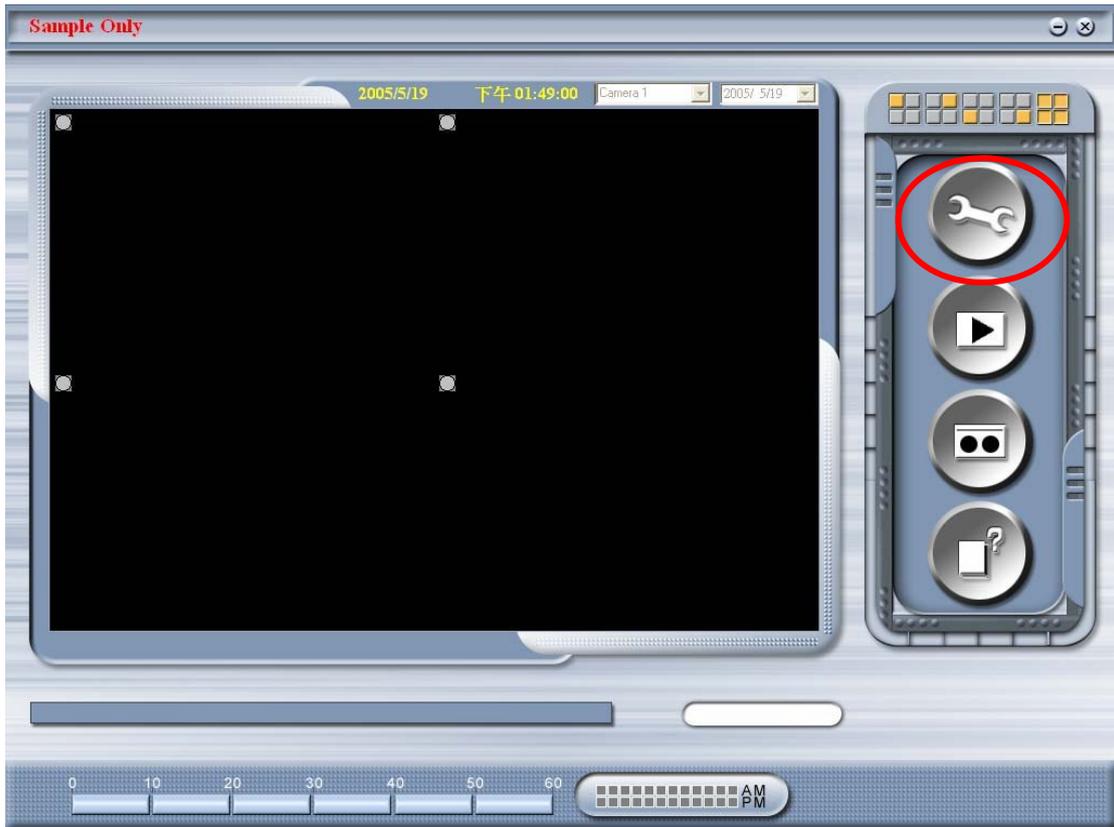
V. IDSS support "**movement detection**" (motion detection), schedule recording, web server, etc..

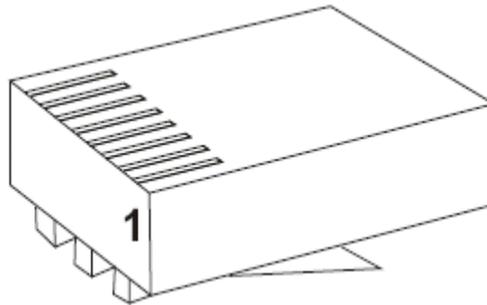Please read IDSS online software manual by pressing lower right button for more detail descriptions.

Note:

The IDSS in CD is a free version, which limits the continuous recording for 1 hour
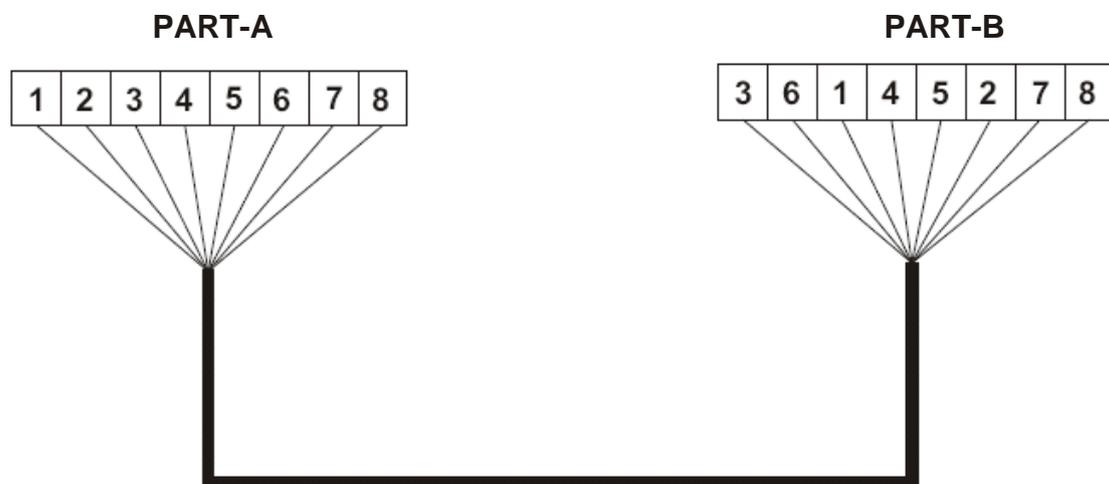
D. Cross Ethernet Cable Making Tip

I. LAN Plug
   Pin : 1 ~ 8

II. LAN Cable

PART-A

1	2	3	4	5	6	7	8

PART-B

3	6	1	4	5	2	7	8

III. Connection Method
   a. Connect LAN Cable Part-A and LAN plug by order as one to one .
   b. Connect to LAN cable Part-B & Part-A , Replace order No.1 & 3 , No. 2 & 6 .
   c. Connect LAN cable Part-B No. 3 to LAN plug No. 1 and connect the next by
      order.