

# Network Video Server **Model WB4**

## Operating Instructions

### WEB BROWSER + MOBILE PHONE VIEWER.



Please read this manual before using and save this manual for future reference.

#### **Video Web Server Quick Installation Guide**

##### **Package content:**

1. 1 Unit **Video Web Server**
2. 1 AC Adapter
3. Manual

##### **Installation**

By Default the network setting on this Video Web Server are as follows:

1. IP Address: 192.168.1.252
2. Subnet: 255.255.255.0
3. Gateway: 192.168.1.1
4. Port: 80
5. ID: admin
- 6: Password: admin

Connect the power adapter to the unit

Connect the CCTV Camera to the Video IN port

To be able to see it through internet or Local Network, do following:

##### **Connect it to the Router and DSL/Cable modem.**

**This connection will allow you to monitor from Local Network or from Internet up to 15 Users at the same time. To make this connection: Use Cat5 Network cable to connect from this Video Web Server unit to the Router/Hub/Switch. If your local network using same IP setup like 192.168.1.xxx, then you are ready to go. From local computer, just type in 192.168.1.252 (IP for VBOX-I4) in the internet explorer. If you want to see it from Internet, you need to go to the Router setup (refer to the router manual) and do Port Forwarding for port 80 to the IP 192.168.1.252. And then from internet explorer, type in the Internet IP address.**

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## 1. Product Introduction

### 1.1 Getting to know the network video server

#### 1.1.1 Main features

Using the video server integrated web server, Motion JPEG, up to 15 frames per second, can be displayed.

Pan/Tilt operation can move the lens horizontally 120° and downside 45°. This movable lens allows you to see the situation in the wide room where the object is. It can adjust the angle easily from the web browser.

Using Multi-Camera screen you can simultaneously view up to four cameras at various location. Clicking on each Camera Name switches to the Single Camera screen from the Multi-Camera screen.

The video server allows the 15 users to view the image simultaneously.

Authentication window requires you to enter the administrator/general user ID and password.

I/O connector consists of the digital input/output terminal. The alarm/timer trigger can activate the Image Transfer feature which can send the images via e-mail or FTP (File Transfer Protocol).

### 1.1.2 System Requirements

The PC and the network must meet the following technical specifications for the video server to work properly.

Item	Description
Operating System	Microsoft Windows 98, Windows 2000, Windows ME , Windows NT® 4.0, Windows XP, Window VISTA.
Network Protocol	TCP/IP network protocol installed. (HTTP, FTP, SMTP, TCP, UDP, IP, ARP, ICMP)
CPU	Pentium® II 300 MHz or greater
Interface	10/100 Mbps Ethernet card and category 5 cables for your network connection
Web Browser	Internet Explorer 5.0 or later/Netscape Navigator® 4.7

## 1.2 Video Server Feature Locations

### 1.2.1 Front View



Power Indicator:

No	Name	Bright	Drown	Remark
1	Tx	Send data	Vacancy	
2	Link	Set up link	Cut	
3	Video1	Selected	Vacancy	
4	Video2	Selected	Vacancy	
5	Video3	Selected	Vacancy	
6	Video4	Selected	Vacancy	
7	Status	State show	State show	
8	Alarm	I/O alarm	I/O in gear	
9	Power	Power supply in gear	Power supply cut	

## 1.2.2 Rear View



DC IN jack: 12v 1A

Video4: No. 4 input BNC。

Video3: No. 3 input BNC。

Video2: No. 2 input BNC。

Video1: No. 1 input BNC。

I/O Connector: RS232/RS485

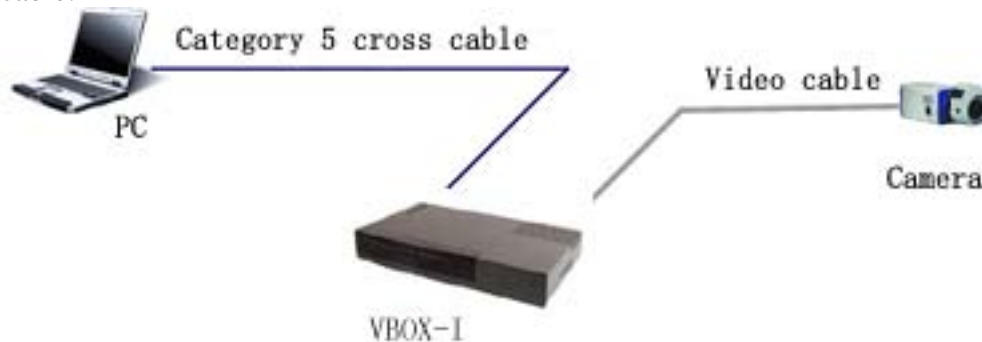
10 Base-T: Ethernet Indicator

## 1.3 Video server Installation

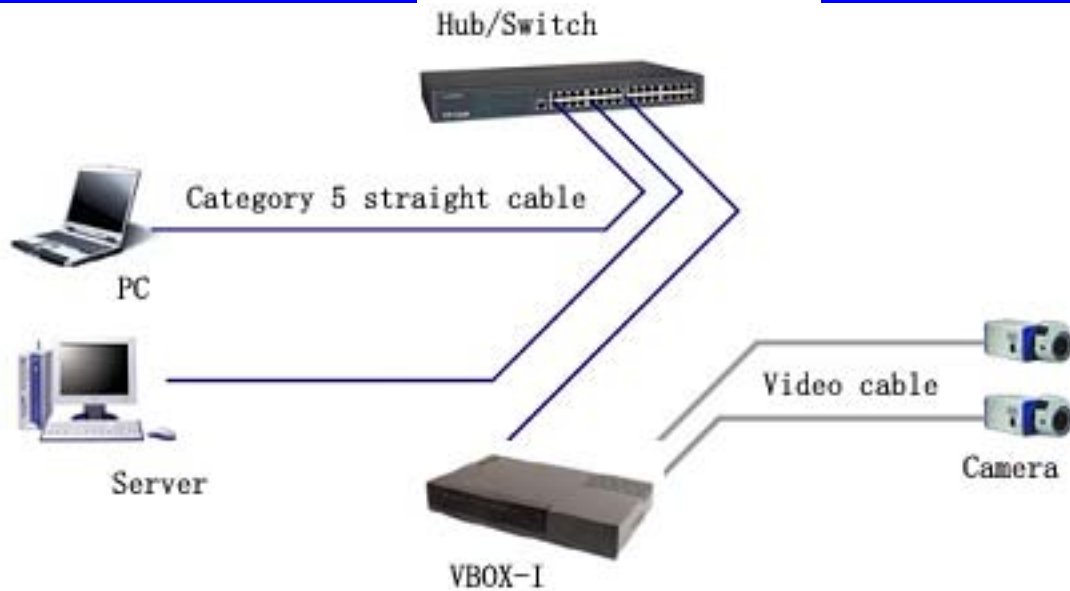
This section explains how you can install the video server. Video server has a integrated web server. Various types of networking are available.

### 1.3.1 Connecting the Cable and the Power Supply

1.Connection of the video server to the PC or network device is made with category 5 cable.

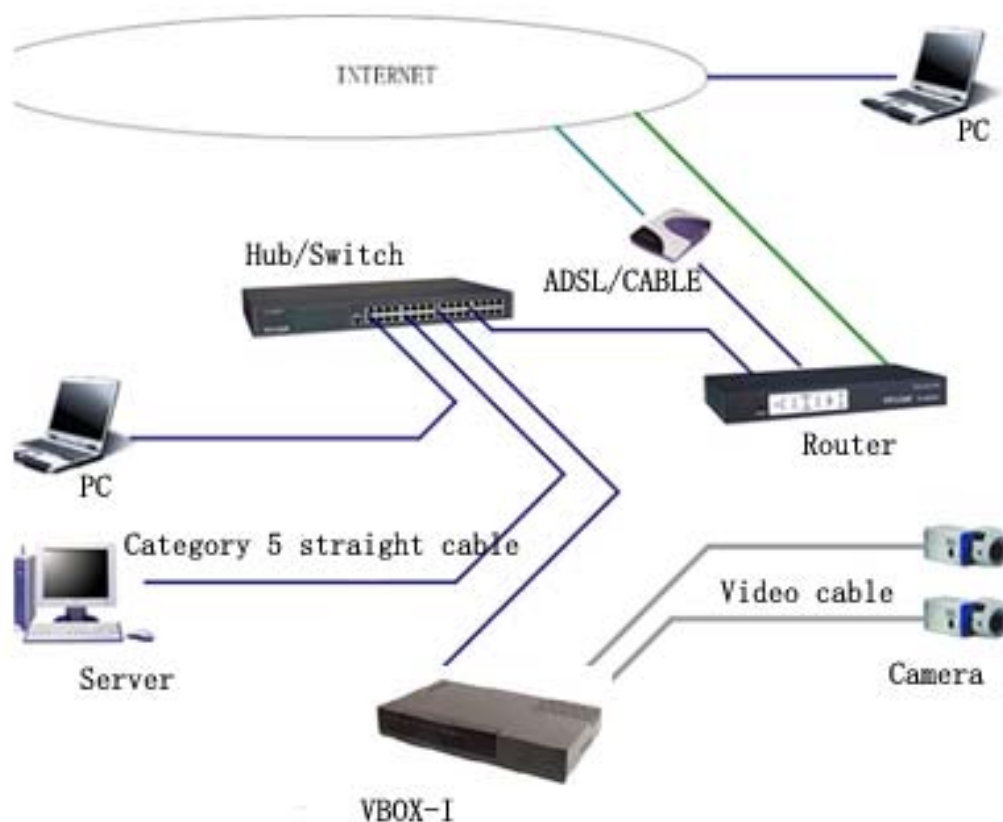


2.Hub Connection needs category 5 straight cable and PC Connection needs category 5 cross cable.



### 3.LAN (Intranet)、Internet Connection with Ethernet Switching Hub

Video server can be installed on the LAN. Video server can be accessed through the Internet.



### 1.3.2 Confirming the Video Server Setting

To confirm if the Video Server is configured correctly, please access to Top Page. If the Top Page appears, your Network Configuration is completed.

1. Start up the web browser.
2. Enter "http://IP address: Port No." in the address field and press [Enter]. Top Page appears.

### 1.3.3 Setting Network Parameters

IP Network: PC, Video Server and other IP devices can establish the network. Each device has an unique IP address of their own..

#### Note

#### MAC address

Ethernet defines a 48-bit addressing scheme. Ethernet hardware manufacturers purchase blocks of Ethernet addresses and assign them in sequence to their Ethernet interface hardware. No two hardware interfaces have the same Ethernet address. Ethernet address is sometimes called hardware addresses, physical addresses, Media Access Control (MAC) addresses, or layer 2 addresses. MAC address is used in this manual.

#### ActiveX Controls

If you are using Internet Explorer the first time the PC connects to the Video Server, a pop up Security Warning window will appear. The window requests your permission to download ActiveX Controls (OCX file) used to display motion video. Please allow the file to be installed. It is required and will not cause any problems with other applications on the PC.

### 1.3.4 Use ARP to assign IP

#### Attention before assign IP:

Confirm the Video Server connected the web correctly, then cut off the power.

Get a single IP address from network manager

MAC address: Each VBOX-I4 Video Server a single MAC address, MAC address is a 12byte figure, it is singed on the bottom of the VBOX-I4 camera (such as 000ce8xxxxxx)

In the following example, the PC IP address is 192.168.1.6, the IP address of WB4 Video Server is assigned 192.168.1.61, MAC address is 000ce8000001, Do not use the IP address demonstrated here, please consult with network manager before you assign the IP address.

The IP address of WB4 ideo Server must have the same subnet mask with PC.

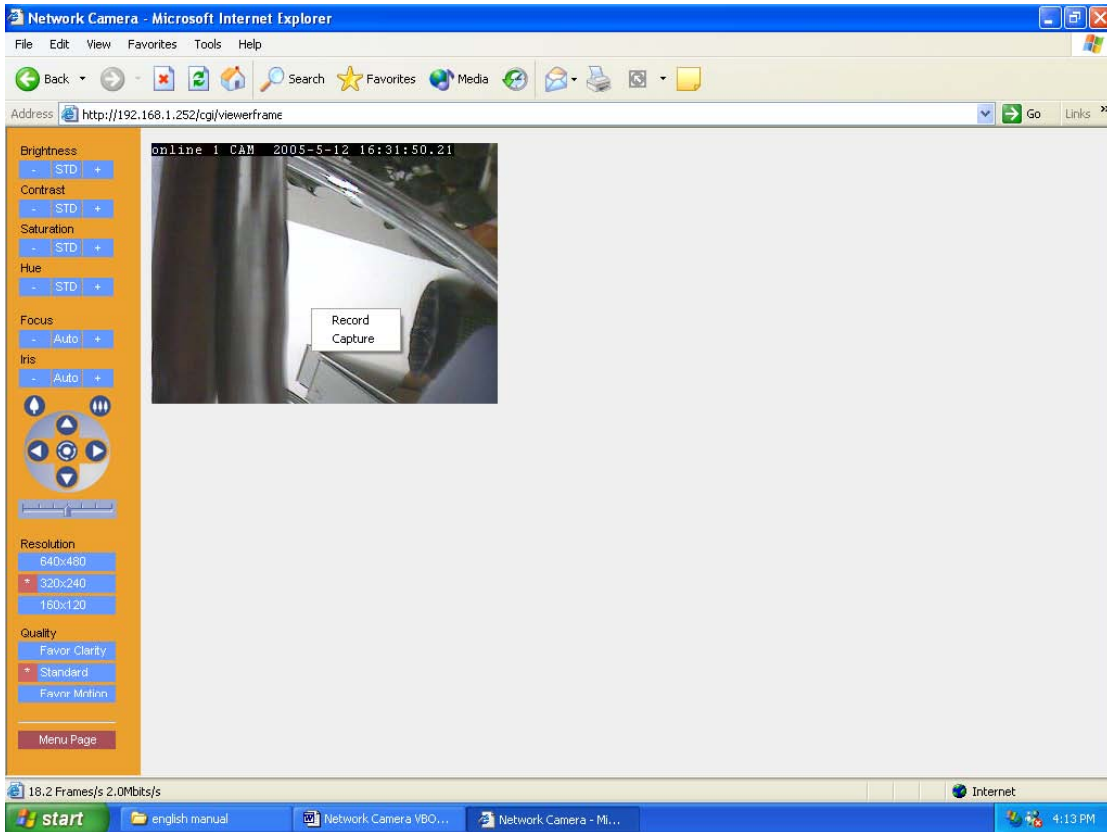
In this example, the IP of PC is 192.168.1.6, the IP of Video Server is 192.168.1.61, subnet mask is 255.255.255.0, if the subnet mask of PC is 255.255.255.128 or more high, this domain does not cover 192.168.1.61, so this assignment does not become effective.

1. In windows, open the DOS, press <Start-order-appendix-command hint> to operate the DOS
2. Eliminate ARP list: type <arp -d>192.168.
3. set up ARP list, type the order <arp -s 192.168.1.61 00-0c-e8-00-00-01>
4. PING: type the order <ping -t 192.168.1.61>
5. Open the electrical power of Network Camera again
6. Press Ctrl-c to stop when PING has passed, and type the order <arp -d> to eliminate ARP list
7. Type "Exit" to quit DOS

```
C:\>exit
```

```
C:\>arp -d C:\>arp -s 192.168.1.61 00-0c-e8-00-00-01 C:\>ping -t
192.168.1.61 Pinging 192.168.1.61 with 32 bytes of data: Request timed out.
Request timed out. Request timed out. Reply from 192.168.1.61: bytes=32
time=5ms TTL=255 Reply from 192.168.1.61: bytes=32 time=4ms TTL=255 Reply
from 192.168.1.61: bytes=32 time=4ms TTL=255 Reply from 192.168.1.61:
bytes=32 time=4ms TTL=255 Ping statistics for 192.168.1.61: Packets: Sent
= 7, Received = 4, Lost = 3 (42% loss), Approximate round trip times in
milli-seconds: Minimum = 4ms, Maximum = 5ms, Average = 2ms Control-C ^C
C:\>arp -d
```

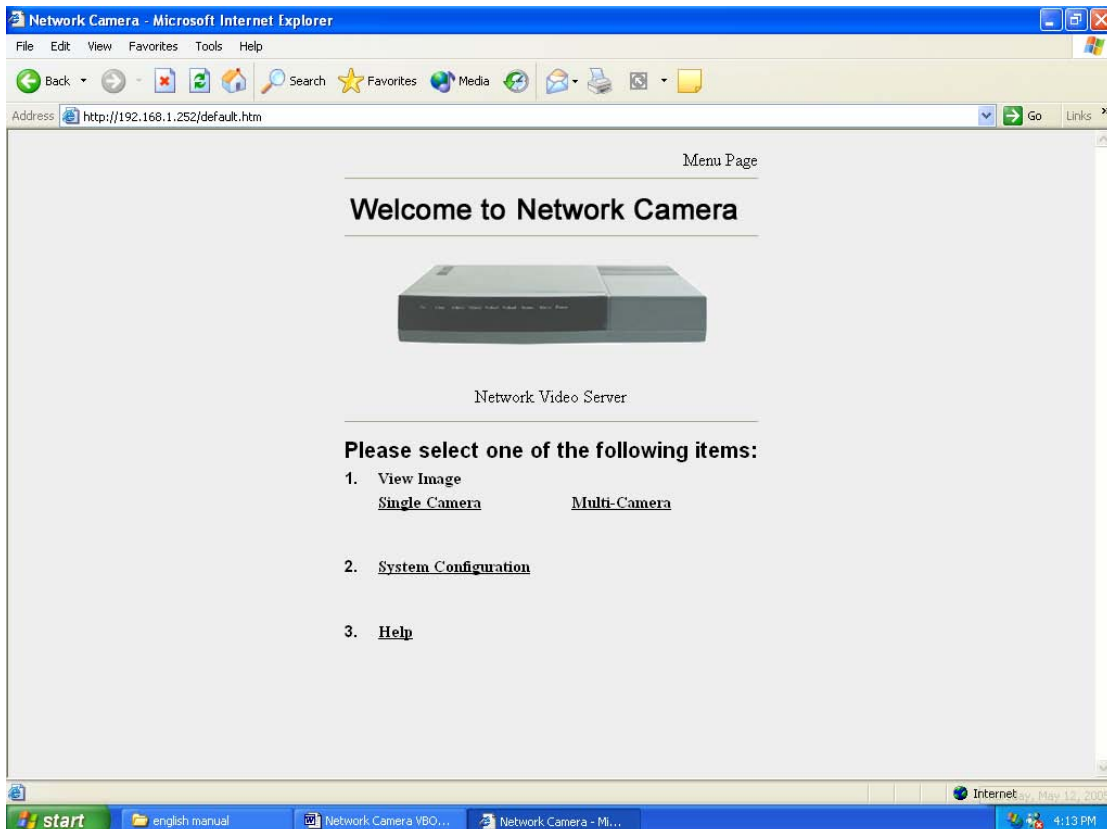
## Record



## 2. Video server Screen and Setup window

### 2.1 Video server Menu Page

The Top Page enables you to access to the Top View Image screen (Single Camera/Multi-Camera screen). Authentication window can set password for the link at.



### 1. View Image

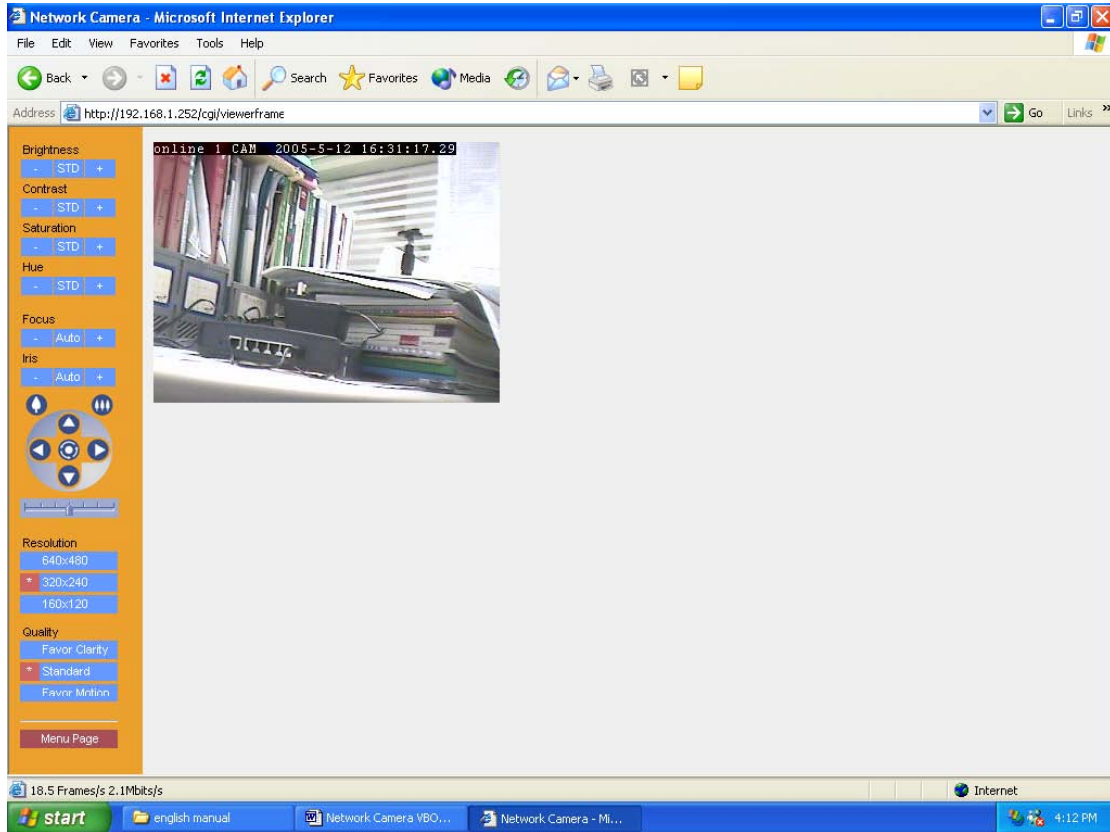
## 2. System Configuration

## 3. Help

### 2.2 Viewing the Top View Image screen

The Top View Image screen consists of Single Camera and Multi-Camera screen.

Single Camera screen

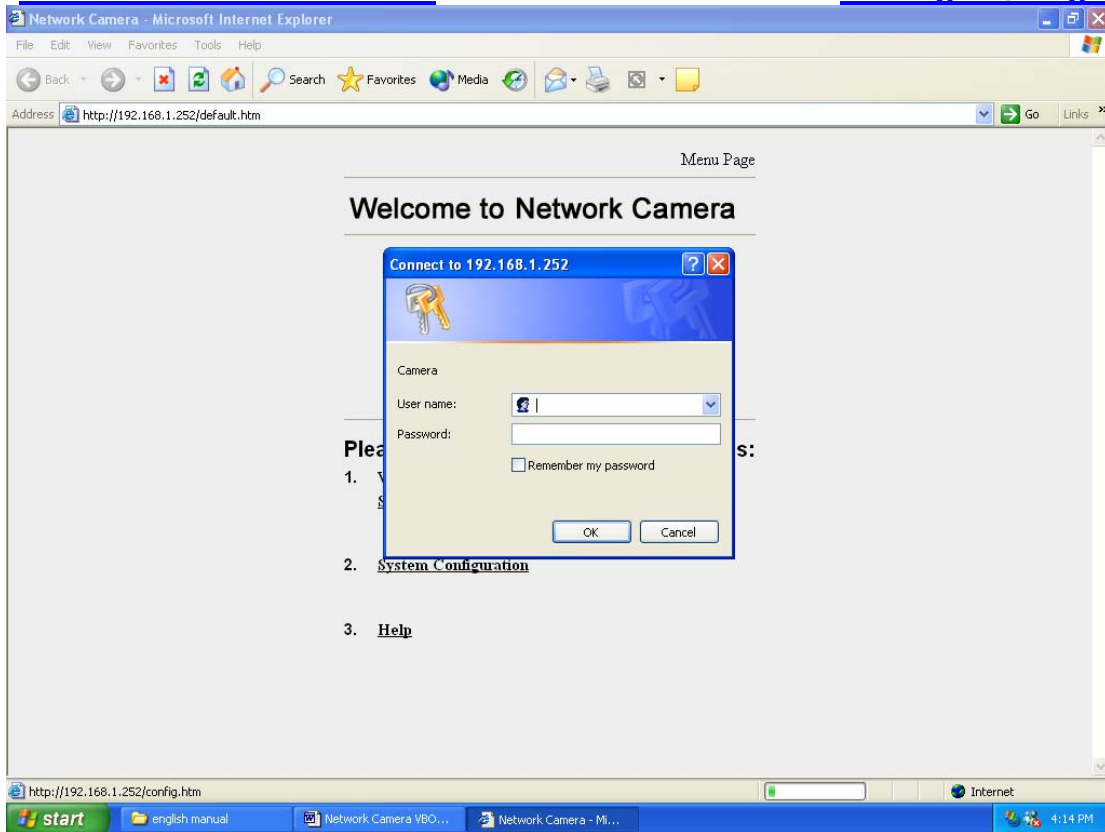


Single Camera can move the lens by the Pan/Tilt operation. Pan/Tilt operation allows you to see the situation in the wide room where the object is.

Item	Description
Brightness	Brightness control has 17 steps including
Contrast	Contrast control has 9 steps including
Saturation	Saturation control has 9 steps including
Hue	Hue control has 17 steps including
Pan/Tilt	Click the arrow to operate the Pan/Tilt.
Resolution	Selects 640 x 480, 320 x 240 (default) or 160 x 120.
Image quality	Favor clarity/Standard/Favor motion
Image size	x 1 (default) or x 2

### 2.3 Setup window—System Configuration

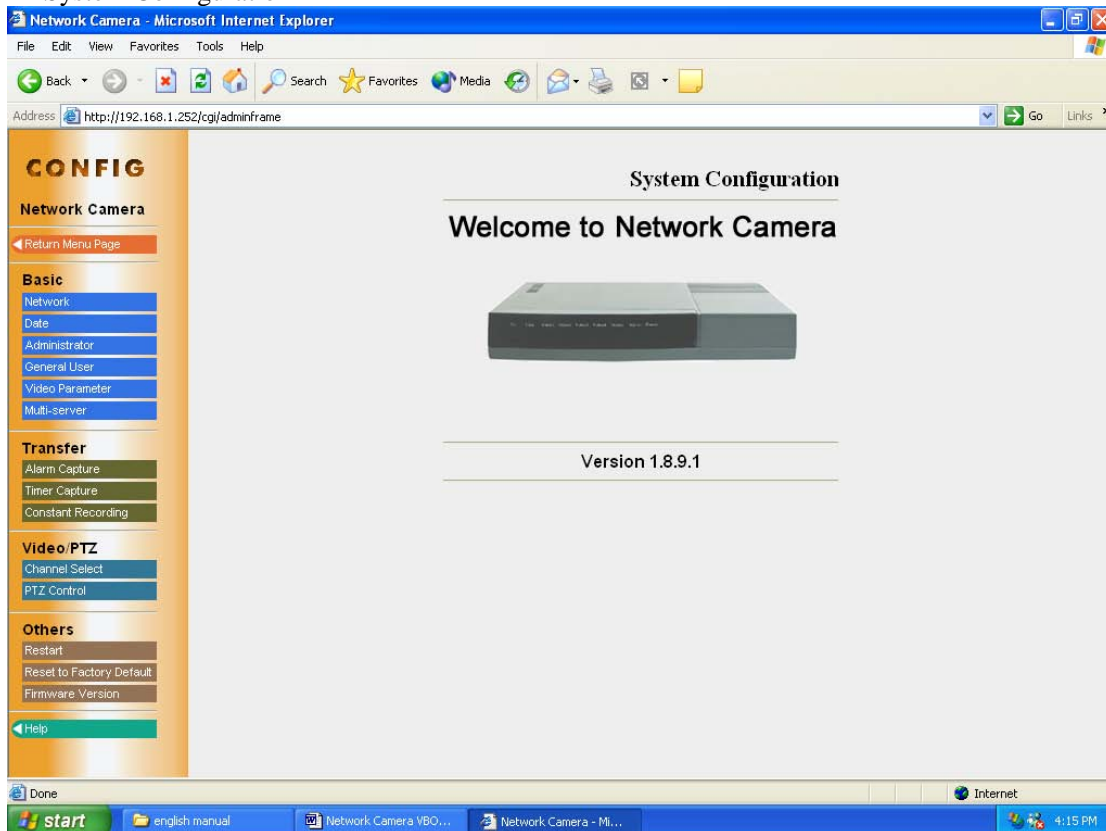
Setup Page controls all features of the video server. The authentication window can keep the network security. It enables only administrator to access the Setup Page by entering ID and Password.



**User: admin**

**Password: admin**

### System Configuration



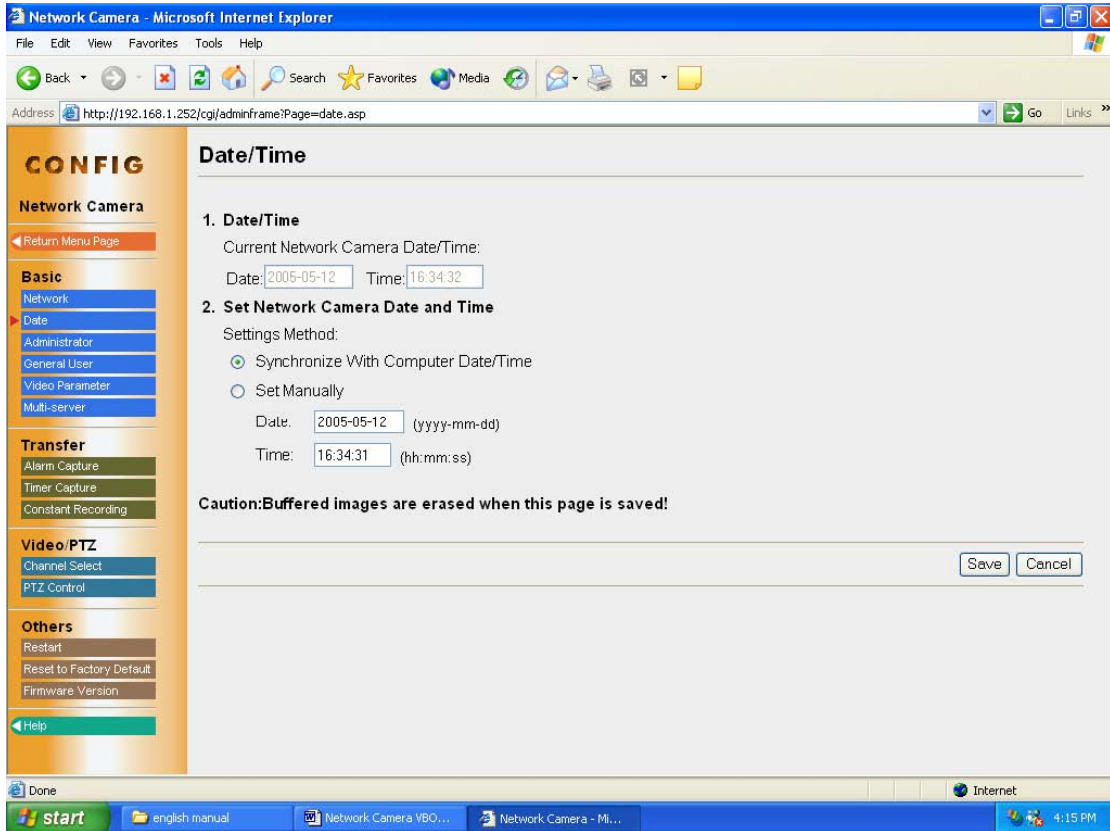
Basic Setup	Network		Configures the network setting
		Date	Sets the network Date and Time
		Administrator	Sets administrator ID and password for the security.
		General User	Sets General User ID and password for the security.
		Image Parameter	Sets White Balance. You can lock the Pan/Tilt and/or Brightness Control feature.
		Multi-Camera	
Image Transfer	The Alarm mode		
		The Timer mode	
		The Record mode	
Video/PTZ Setup	Video Channel		
		P/T/Z Control	
Others Setup	Restart		
		Reset to Factory Default	
		Firmware Version	

## 2.3.1 Network

Network window can set up the each parameter. Please restart the Video server when making the parameters effective.

Network Name	4 to 15 English letters, 2 to 7 Chinese characters
Port No.	Set to 80. (Default)
IP Address and Subnet Mask	Check Static and set Static IP address and Subnet Mask.
DHCP	Please check DHCP when the ISP uses the DHCP server function that assigns an IP address to the Video server automatically.
Default Gateway	Enter it in this data field.
DNS	You must enter the proper address when use the Host name of the e-mail or FTP function.
Video server Manage Server	Surf on—line
Max. Bandwidth Usage	It can restrict the transmit bandwidth. Select from 0.1 to Unlimited Mbit/s.

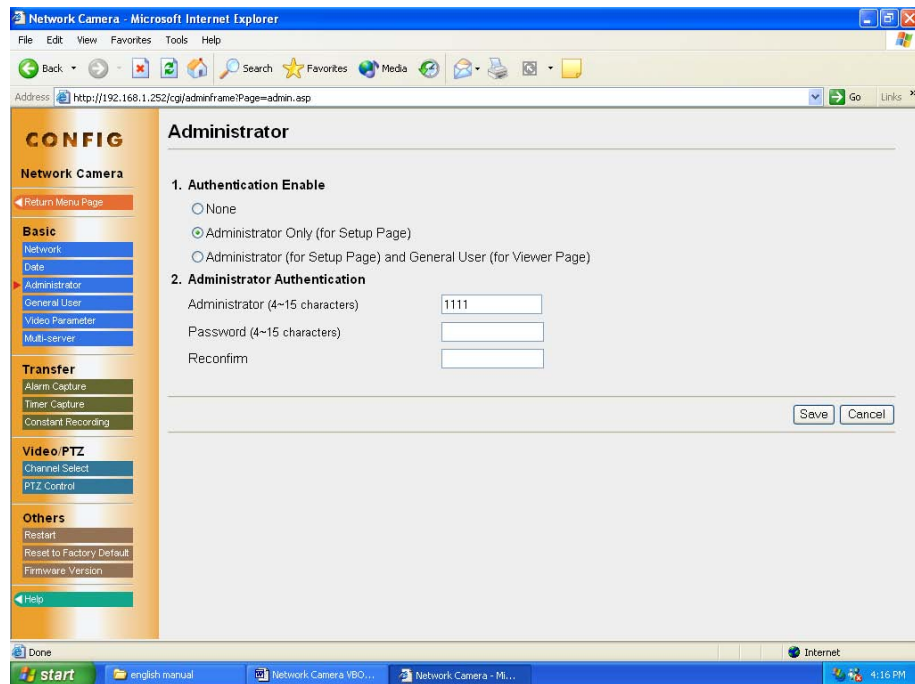
## 2.3.2 Date/Time



Item	Instructions	Limitation
<b>1.Current Date and Time</b>	Display current date and time.	
<b>2.Set Video server Date and Time</b>	Video server can adjust the internal clock.	
<b>(1)Synchronize With Current Computer Time</b>	Make the Video server the internal clock together current the calculator clock is synchronous	
<b>(2) Set Manually</b>	Set time to adjust the internal clock.	<ul style="list-style-type: none"> <li>• The date is from 1970 to 2039 , according to yyyy- mm- dd.</li> <li>• Time is format that 24 hours system, according to hh: mm: ss.</li> </ul>

## 2.3.3 Administrator

Administrator window allows the administrator to limit or exclude the access to selected Video server feature. Individual levels of access can be defined for multiple users.



The administrator can select one of three security levels:

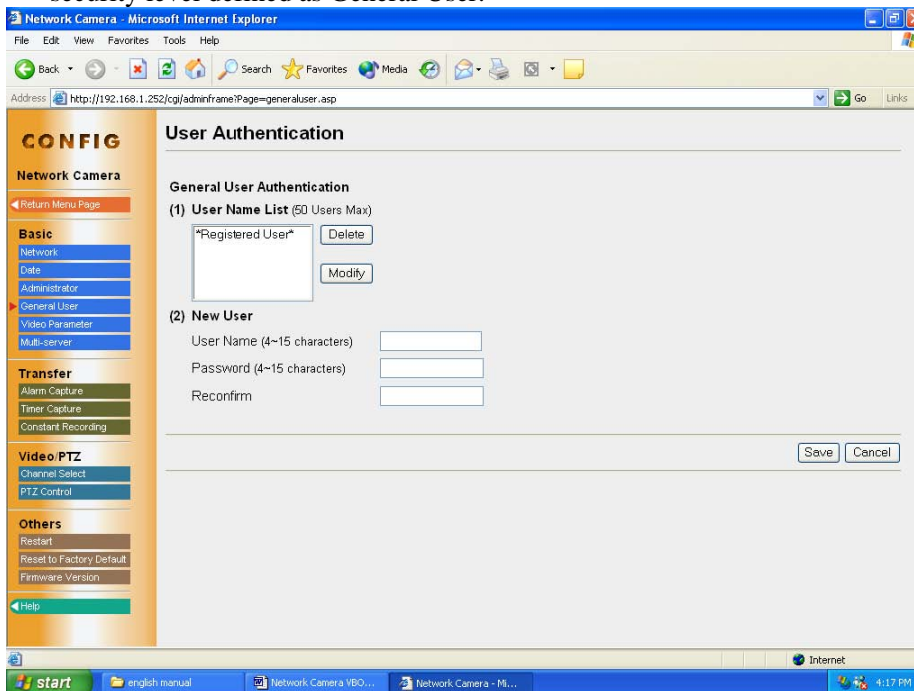
[None]

[Administrator only]: Setup Page for Administrator only

[Administrator and General User]: Setup Page for Administrator and Viewer Page for General User

### 2.3.4 General User

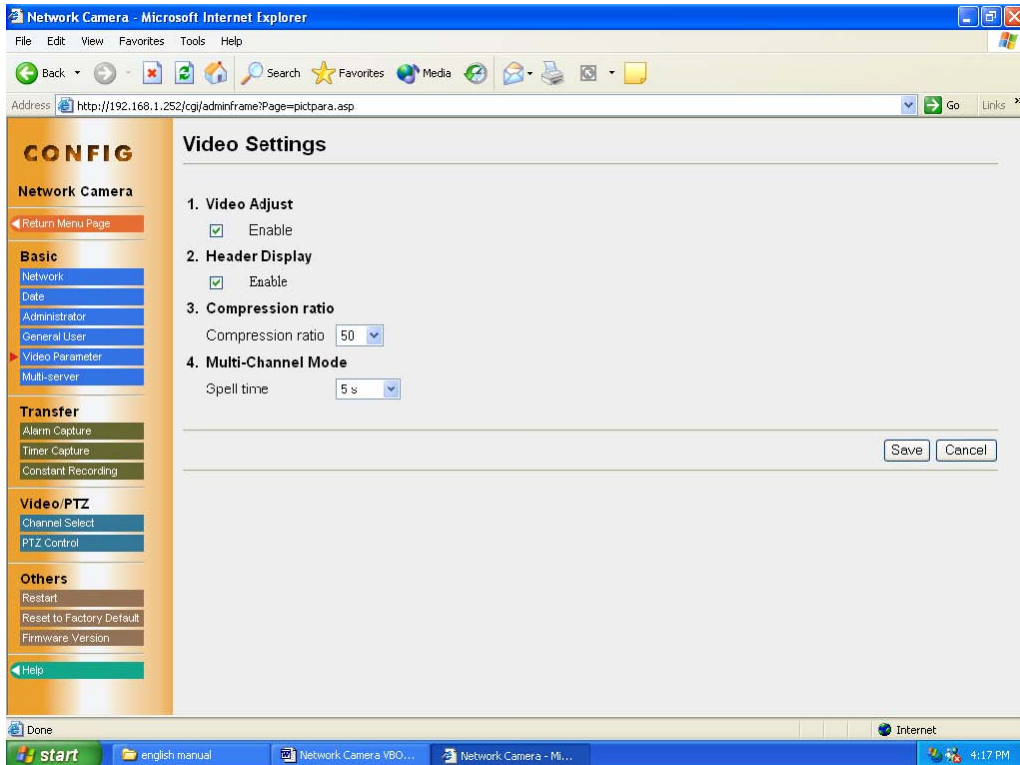
General User window allows the administrator to create the General User ID and password for the security level defined as General User.



User ID List: User ID List displays the registered user name.[Delete] and [Modify] deletes/modifies the General User in the list.

New User: Enter the General User ID, password to confirm.

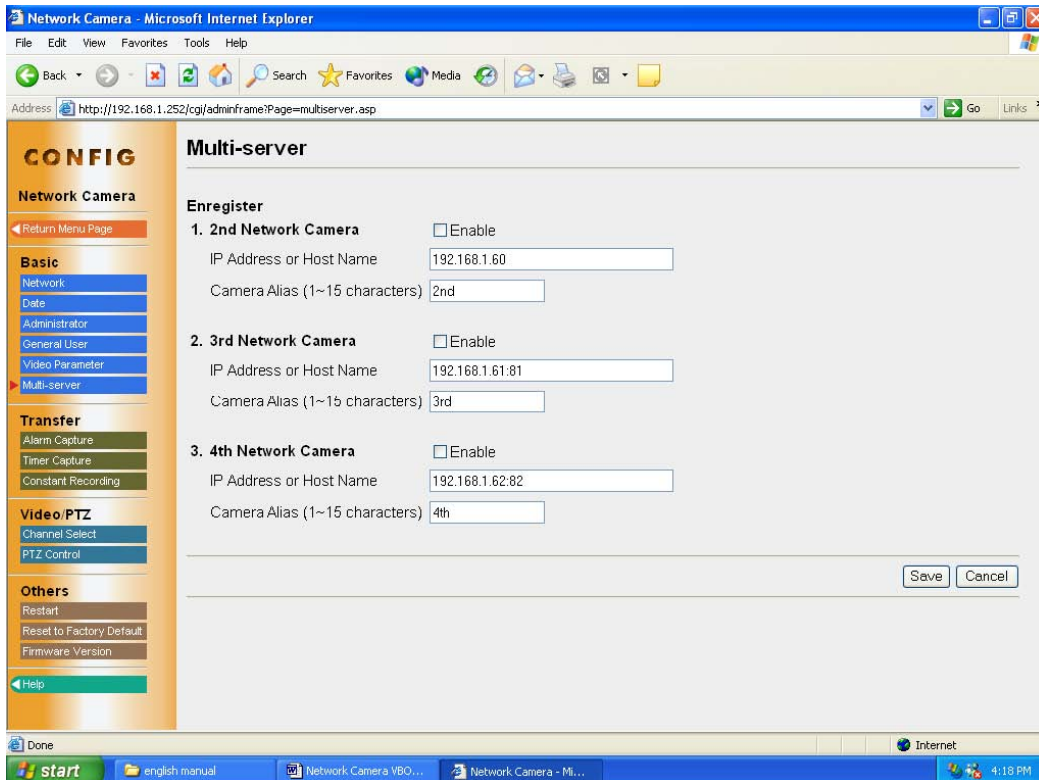
### 2.3.5 Video Settings



[Video Adjust and PTZ Control]: You can adjust the Video and the P/T/Z Control.  
[Header Display]: Display camera name.  
[Compression Ratio]: Compress the image and the ratio  
[Multi-Channel Mode]: Circuit spell time

### 2.3.6 Multi-Camera

Multi-Camera window enables the setting of Multi-Camera screen. 2nd to 4th cameras are named on this Multi-Camera window.



### 2.3.7 Transfer in the Alarm Mode

The Alarm mode can transfer the image via e-mail or FTP when the alarm trigger is

active. To activate the alarm trigger, the digital input terminal of the I/O Connector must be connected with the external sensors/devices. The Alarm mode can send the e-mail without transferring the image.

**CONFIG**  
Network Camera

Return Menu Page

**Basic**  
Network  
Date  
Administrator  
General User  
Video Parameter  
Multi-server

**Transfer**  
Alarm Capture  
Timer Capture  
Constant Recording

**Video/PTZ**  
Channel Select  
PTZ Control

**Others**  
Restart  
Reset to Factory Default  
Firmware Version  
Help

### Alarm Capture

- Alarm Capture**  
 Enable
- Alarm Occur Condition**  
Alarm occur condition: rising
- Image Setting**  
Image Resolution: 320x240  
Image Quality: Standard
- Image Buffer Setting**  
Image Buffer Frequency Setting: 01 Images per minute  
Before Alarm Occur: 01 Images  
After Alarm Occur: 01 Images
- Transfer Method**  
 FTP  
Server IP Address or Host Name:   
Port NO (Usually Use 21): 21  
FTP Method: PASV  
Login ID (0~15 characters):   
Password (0~15 characters):   
Upload File Path: /   
Upload File Name:   
Over write setting: append time(no cover)  
 SMTP Server require verify check
- Notification to be sent when Alarm occurs**  
 Enable  
 SMTP Server require verify check  
SMTP Server IP Address or Host Name:   
User ID:   
Password:   
To:   
From:   
Subject:   
Text:

Caution: Buffered images are erased when this page is saved.

Save Cancel

Sets the image resolution and image quality.

Image resolution: 640 x 480/320 x 240/160 x 120

Image quality: Favour Clarity/Standard/Favour Motion

Image Frequency: Sets the interval to send the image.

Maximum number of images per each trigger:

Selects the number of buffering frames from numbers 1 to 20.

Selects Transfer Method.

FTP: Enters the server address or Host Name, Port no. (1-65535), Login ID and password to access the FTP server and upload file name including full path.

Mail: Sets the server address or Host Name.

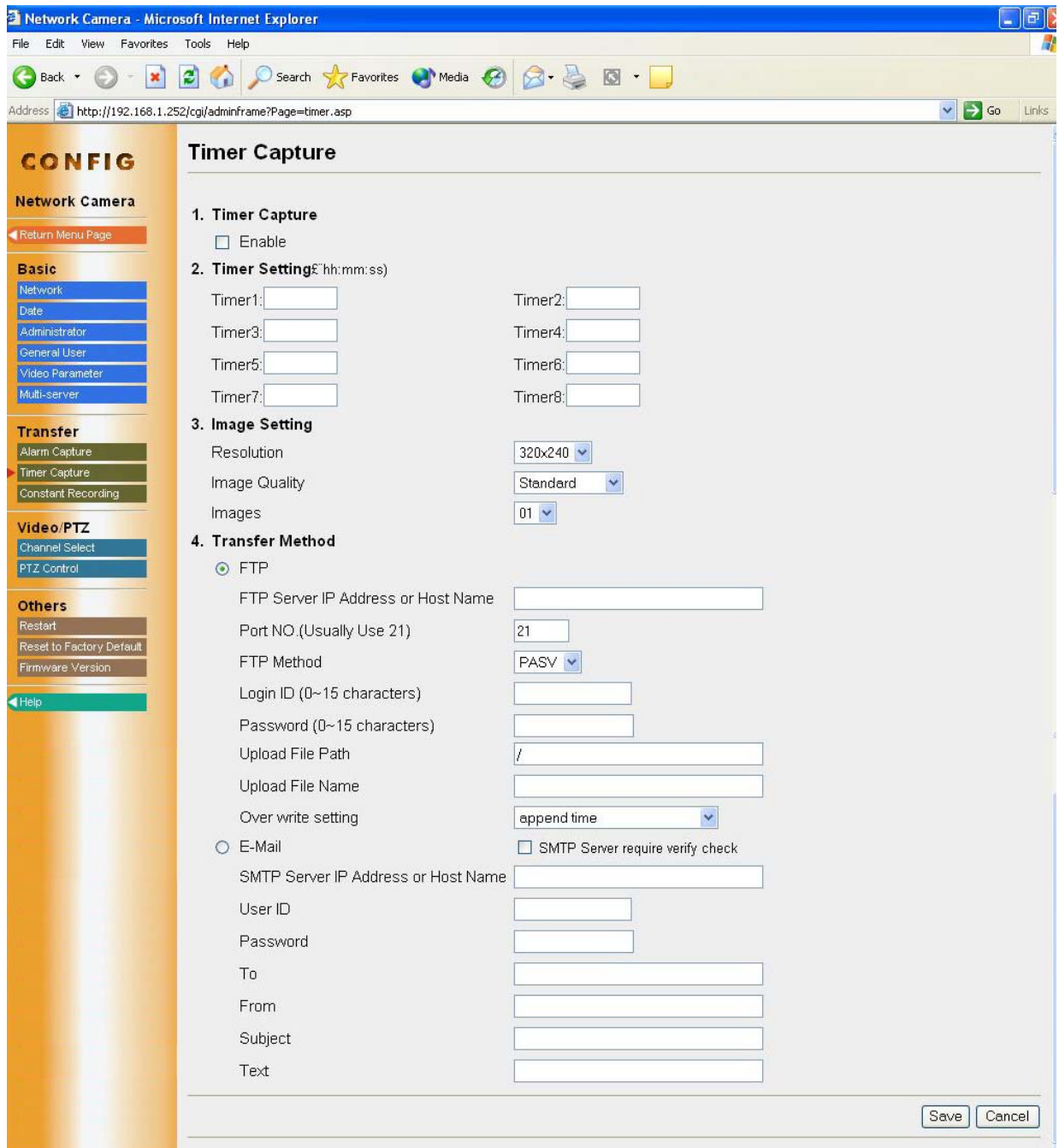
From (Reply): Enter the e-mail address of [Reply-to]. [To] can be the same address as From (Reply).

To : Enter the e-mail address of receiver. Subject & Text : Sets the subject and text of the e-mail.

### 2.3.8 Transfer in the Timer Mode

The timer mode can be activated by entering the active time, the image setting, frequency setting and the transfer method on the Image Transfer window. Buffered

Image can also be transferred via e-mail or FTP.



Sets the image resolution and image quality.

Image resolution: 640 x 480/320 x 240/160 x 120

Image quality: Favour Clarity/Standard/Favour Motion

Image Frequency: Sets the interval to send the image.

Selects Transfer Method.

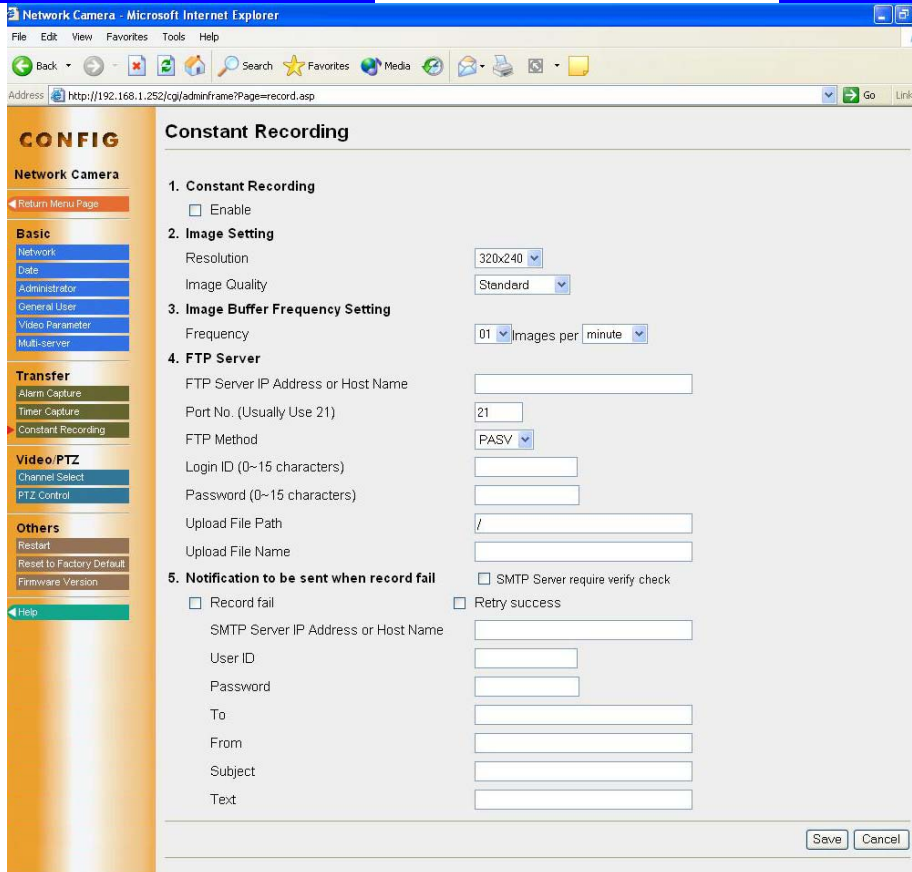
FTP: Enters the server address or Host Name, Port no. (1–65535), Login ID and password to access the FTP server and upload file name including full path.

Mail: Sets the server address or Host Name.

From (Reply): Enter the e-mail address of [Reply-to]. [To] can be the same address as From (Reply).

To : Enter the e-mail address of receiver. Subject & Text : Sets the subject and text of the e-mail.

### 2.3.9 Transfer in the Record Mode



Sets the image resolution and image quality.

Image resolution: 640 x 480/320 x 240/160 x 120

Image quality: Favor Clarity/Standard/Favor Motion

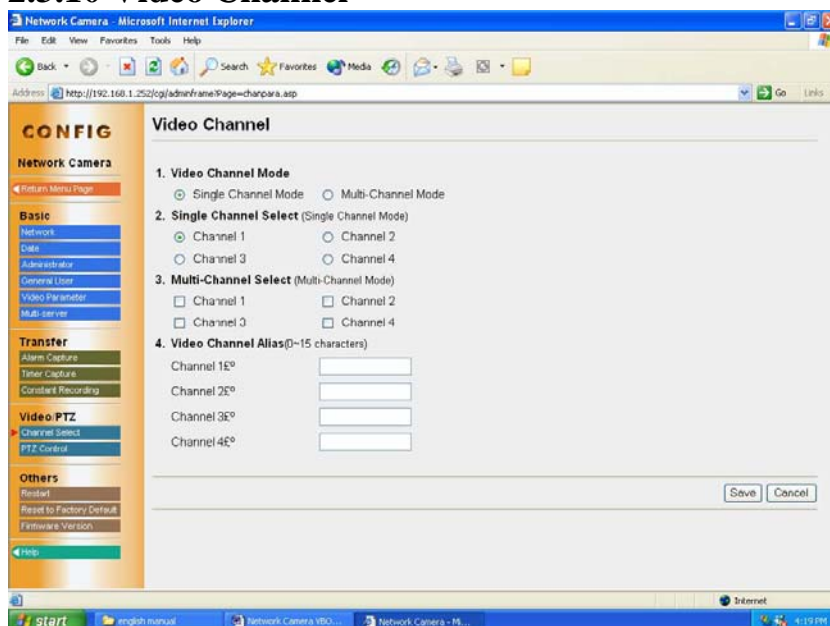
Image Frequency: Sets the interval to send the image.

Selects Transfer Method.

FTP: Enters the server address or Host Name, Port no. (1–65535), Login ID and password to access the FTP server and upload file name including full path.

Notification to be sent when record fail: Activates the only notification.

### 2.3.10 Video Channel



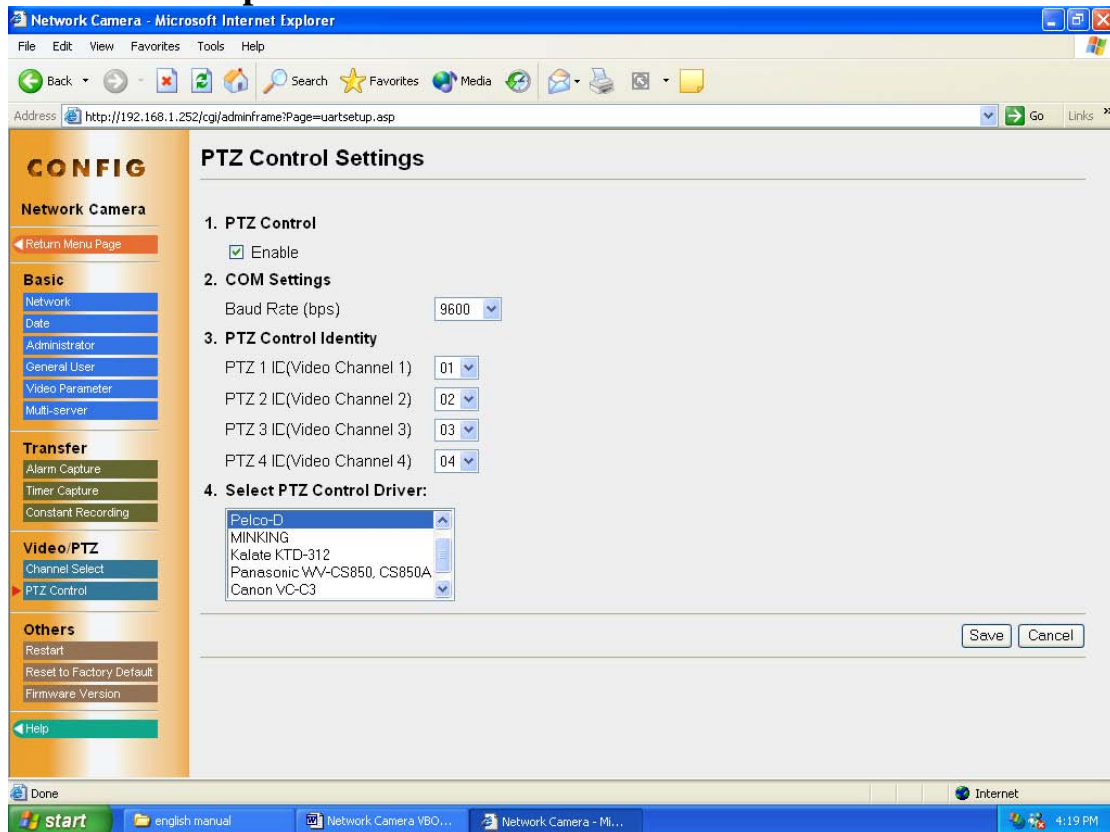
[Video Channel Mode]: Select single-channel mode or multi-channel mode.

[Single Channel Select]: There are four channels.

[Multi Channel Select]: There are four channels.

[Video Channel Alias]: Alias the channels.

## 2.3.11 P/T/Z Operation



[COM Settings]: Sets baud rate.

[PTZ Control Identity]: Sets PTZ ID.

[Select PTZ Control Driver]: There are some PTZ protocols.

## 3. Technical Guides

### 3.1 Maintenance

To keep the Video Server in the good condition, maintenance plays an important part. Please keep maintenance when using the Video Server.

#### Video Server

- Video Server is intended for indoor use only. Prolonged exposure to direct sunlight or halogen light may damage the CMOS sensor.

#### The Fixed Focused lens

- Do not touch the movable lens part around the Fixed Focus Lens even in the power off state. If you touch the movable lens part in the front of the Video Server, it may damage the Video Server.
- Do not touch the Fixed Focus Lens. It may leave a fingerprint and can cause the image to be out of focus. This can also take away the protective coating on the Fixed Focus Lens.
- Clean the lens with a Lens Cleaning paper.

### 3.2 Interfacing to the I/O Connector

The Alarm mode in the Image Transfer feature requires the external sensors/devices to be connected to the digital input terminal of the I/O Connector. The sensor is customer provided and can be a door sensor or infrared ray intruder sensor. In most applications a simple contact closure is all that is required.

#### Explanation of I/O Connector

Pin	Function
1	AGND
2	485B(RXD VBOX )
3	485A(TXD VBOX )
4	DGND
5	+12V
6	IO/OUT
7	IO/IN
8	LINE IN

## 4. Specifications and Troubleshooting

### 4.1 Video Server reset procedure—default settings

If the user forgets the settings or passwords, the Video Server can be easily reset to the default settings.

### 4.2 Specification

Item	WB4 - I Network Video Server
Network Protocols	TCP/IP, HTTP, FTP, SMTP, DDNS, DNS, DHCP
Network Connection	MODEM, ISDN, XDSL, LAN
Video source	4-channel analog video signal input(BNC)
Hardware	One RS-485 Serial port for PTZ camera control One RJ-45 for 10 Mbps Ethernet One I/O in and one I/O out
CPU	32bit, RISC CPU
FLASH	2MB
RAM	16MB
Operation system	Embedded real time operation system
Network port	Ethernet (10Base-T)
Install mode	IP install: use ARP
Image Compression	JPEG, MOTION-JPEG
System Requirements	standard browser such as Microsoft IE4.x ; IE5.x or Netscape Navigator 4.x above, can perform in Win95/98/NT, Linux, MAC, etc.
Image adjust	Adjust Brightness, Contrast, Saturation, Quality
Performance	25(SIF), 12.5 (VGA)
Event trigger & Action	Triggering: I/O, timing or multi-event reaction setting (1GPIO input), Motion Detection Reaction mode: image store in buffer, FTP image to remote. E-mail image to designated address, permeate replay to output warning. P.S: can store 40 frames images before and after event happening
Resolution	640×480, 320×240, 160×120
Alarm image buffer	40 frames
Security	Double-deck password to protect
indoor/outdoor	indoor
Serial port	RS232
LUX	Snap with camera
P/T/Z	RS485
Size	198X117X30 mm
Power supply	12DC/5W
Operating Temperature	(-20℃) —— (+50℃)

### 4.3 Troubleshooting

Problem	Cause and Remedy
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<p>When the Top Page does not appear.</p>	<ul style="list-style-type: none"><li>• Enter the correct IP address set up to the Video Server.</li><li>• IP address of the PC and the Video Server must be in the same class of the private IP address on the LAN.</li><li>• Confirm if the Ethernet, the hub and the LAN card indicators are on. If any indicator is off, check the network connections.</li><li>• The network congestion prevents the Top Page from appearing quickly. Please wait for a while.</li><li>• The proxy server may prevent you from connecting directly to the Video Server, please set up not to use the proxy server.</li></ul>
<p>When forgetting the password to access the Setup Page.</p>	<ol style="list-style-type: none"><li>1. Reset the Video Server by pressing the CLEAR SETTING button.</li><li>2. Reconfigure the Video Server.</li></ol>

**WARNING**

TO PREVENT RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.