CHANNEL VISION™

User Manual

4-Channel Video Server

W-4001

WARNINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.
DO NOT INSERT ANY METALLIC OR ELECTRIC CONDUCTIVE OBJECTS THROUGH THE VENTILATION GRILLS.

CAUTION

	CAUTION	
	RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK: DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

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THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.

Content

I. Preface

This is a 4-Channel H.264/ MJPEG Video Server with a web server built-in.

It encodes analog signals of traditional cameras to digital signals, allowing the users to monitor real-time video via IE Browser. The H.264 and MJPEG compression format supports smooth video quality. It also supports SD Card backup and 2-way audio, which enables the user to have a video conference. In addition, the user can control the Video Server with a user friendly interface via IE Browser to build a home surveillance system.

II. Product Specifications

FEATURES:
- H.264/ MJPEG compression formats
- RS-485 Control Interface (PTZ)
- RS-232 Interface
- SD Card backup
- Wireless network connection (802.11 b/ g) - Optional
- 2-way audio
- 4 video input
- 4 alarm input
- 4 relay out

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| Hardware	4-Channel Server
CPU	ARM 9, 32 bit RISC
RAM	256MB
ROM	16MB
Video Input	BNC x 4
Input Video Looping	BNC x 4
Audio In/Out	4 in / 1 out (RCA type)
Alarm Input	4
Relay Out	4
RS-485	X1, for PTZ control
Power	DC 12V, 630mA
Dimensions (WxHxD)	218x44x202mm
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP
Wireless (optional)	
Wireless Type	802.11b/g
Security	WEP,WPA-PSK,WPA2-PSK
System	
Video Resolution	NTSC: 720x480 , 704x480, 352x240, 176x144 PAL: 720x576 , 704x576, 352x288, 176x144
Video Adjust	Brightness, Contrast, Saturation, Hue
Image Snapshot	Yes
Full Screen Monitoring	Yes
Compression Format	H.264/MJPEG
Video Bit Rate Adjust	CBR, VBR
Motion Detection	3 Areas per channel
Triggered Action	Mail, FTP, Save to SD storage, Relay
Pre/Post Alarm	Yes
Security	Password protection
Firmware Upgrade	HTTP mode, can be upgraded remotely
Simultaneous Connection	Up to 8
Audio	Yes, 2-way (Duplex Support)
SD Card Management	

Recording Trigger	Motion Detection, IP check, Network break down (wire only), Relay
Video Format	AVI, JPEG
Video Playback	Yes
Delete Files	Yes
Browser Requirement	
OS	Windows 2000, XP, 2003, IE 6.0 or above
Hardware	
Recommendation	Intel Dual Core 1.66G,RAM: 1024MB, Graphic card: 128MB
Minimum	Intel 2.8G, RAM: 256MB, Graphic Card: 32MB

III. Product Installation

A. Monitor Setting

i. Right-Click on the desktop. Select "Properties".
Change color quality to highest (32bit).
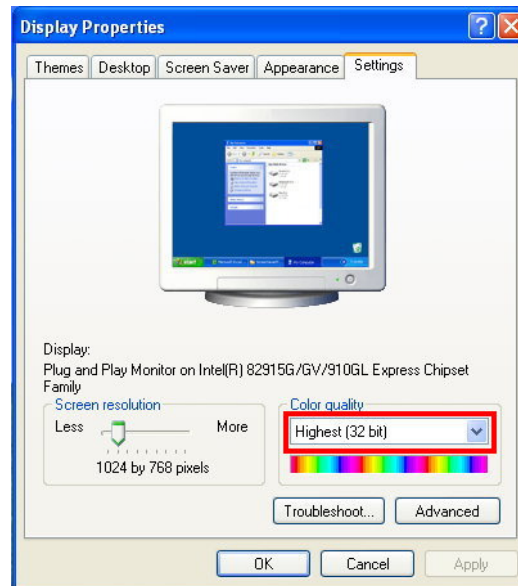
ii.

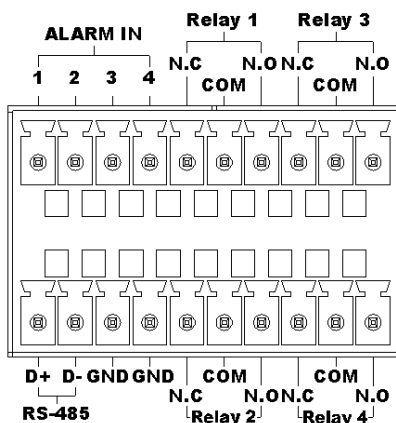# B. Hardware Installation

    i.   Connect power adaptor.

    ii.   Connect Ethernet Cable to Video Server.

    iii.   Connect Video Server to a computer or Local Network.

Ｂ-1 I/O Control Instruction:

I/O Terminal Connector – used in application, for e.g., motion detection, event triggering, and alarm notifications. It provides the interface to:

- Digital Input (GND+Alarm) – An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received, the state changes and the input becomes active.

- Relay Output (COM +N.O. / COM + N.C.) – An output to Relay Switch, for example: LEDs, Sirens, etc.

Digital Input
Alarm Input
1. GND (Ground): Initial state is LOW
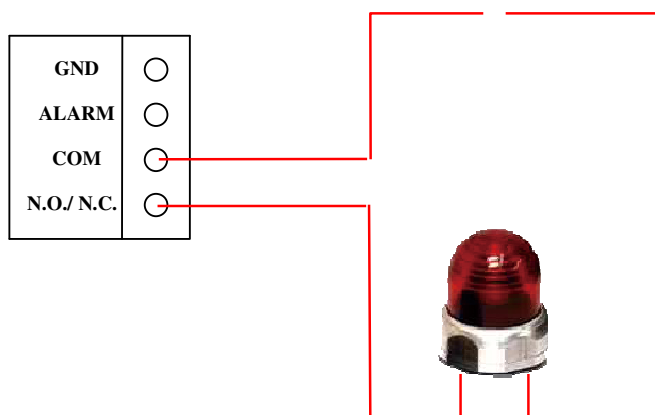2. Alarm: Max. 50mA, DC 3.3V

Relay Output
1. COM: (Common)
2. N.O. (Normally Open) / N.C. (Normally Close): Max. 1A, 24VDC or 0.5A, 125VAC
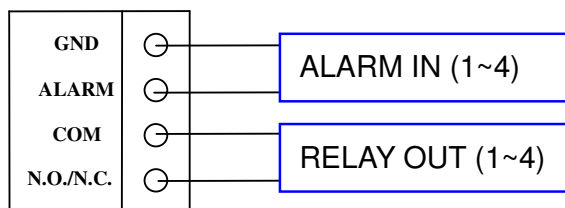
B-2. Relay Connection:

Digital Input connection

GND	○	**Door/Window**
ALARM	○	**Contacts**
COM	○	
N.O./ N.C.	○	
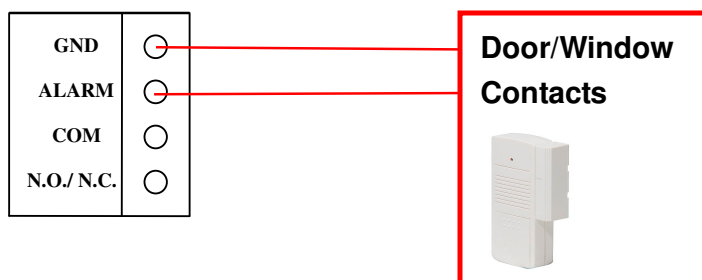
Relay Output Connection

GND	○
ALARM	○
COM	○
N.O./ N.C.	○

# C. IP Assignment

   i.   Use "IP Installer", which comes with a CD, to assign the IP Address of VIDEO SERVER.

  ii.   There are two languages for the IP Installer:

      a.   IPInstallerCht.exe: Chinese version

      b.   IPInstallerEng.exe: English version

 iii.   Three different IP configurations based on different environments:

       a.   Fixed IP (Public IP or Virtual IP)

       b.   DHCP (Dynamic IP)

       c.   Dial-up (PPPoE)

  iv.   Execute IP Installer

  v.   Use Windows XP SP2 or newer version. If the following message pops up, please click "Unblock."

  vi.   The GUI of IP Installer:
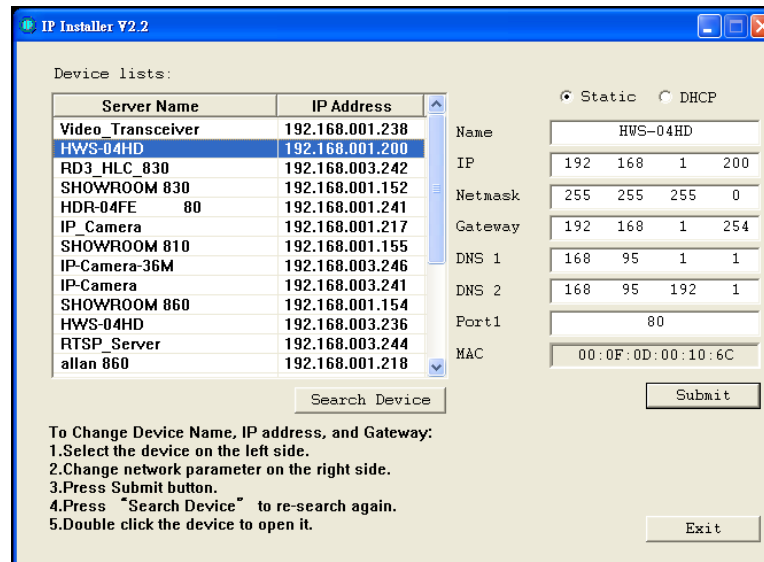
  vii.   IP Installer searches all IP deceives which connect with the internet and it lists all of them on the left side or the user can click "Search Device" to search again.

  viii.   When the user clicks on each IP device listed on the left side of the IP Installer, the network configuration of the IP device will show on the right side. The user can change the parameter and click on "Submit". When the following message pops up, click on "OK" to reboot VIDEO SERVER.
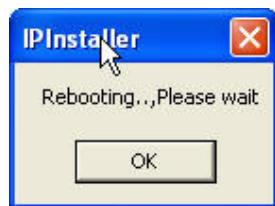
ix.   Please make sure the Subnet of PC IP Address and VIDEO SERVER IP Address are the same.

The Same Subnet:
VIDEO SERVER IP Address: <u>192.168.1</u>.210
PC IP Address: <u>192.168.1</u>.100
Different Subnets:
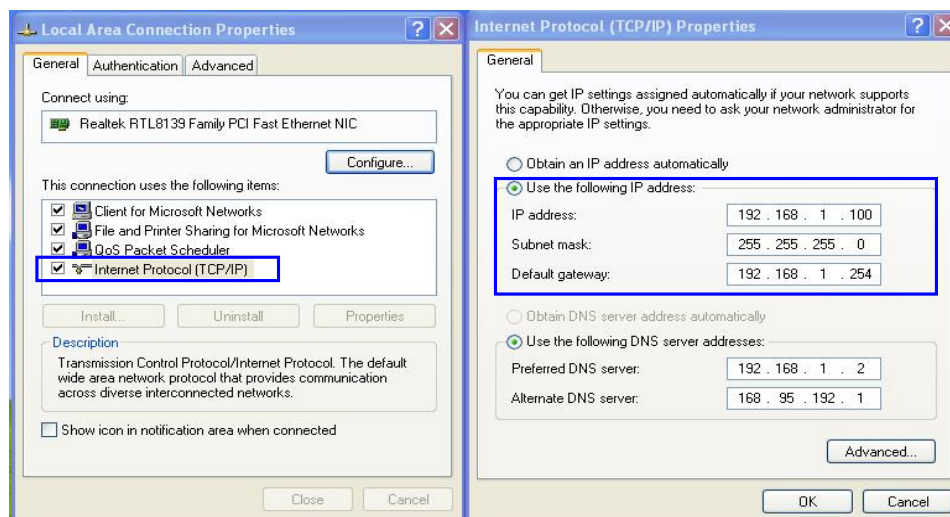VIDEO SERVER IP Address: <u>192.168.2</u>.210
PC IP Address: <u>192.168.1</u>.100

To Change PC IP Address:
Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties
Please make sure your Video Server and PC have the same Subnet. If not, please change Video Server Subnet or PC IP Subnet accordingly.

x.   A quick way to access remote monitoring is to left-click the mouse twice on a selected Video Server listed on "Device list" of the IP Installer. An IE Browser will then be opened.

To Change Device Name, IP address, and Gateway:
1. Select the device on the left side.
2. Change network parameter on the right side.
3. Press Submit button.
4. Press "Search Device" to re-search again.
5. Double click the device to open it.

xi.   Then, please key in the default User name: "admin" and Password: "admin".

xii.   After VIDEO SERVER reboots, click "Search Device" to research VIDEO SERVER and use the IE Browser for live viewing.

D.   Install ActiveX control (set up once only):

When viewing the VIDEO SERVER for the first time via IE Browser, it will request the user to install ActiveX.
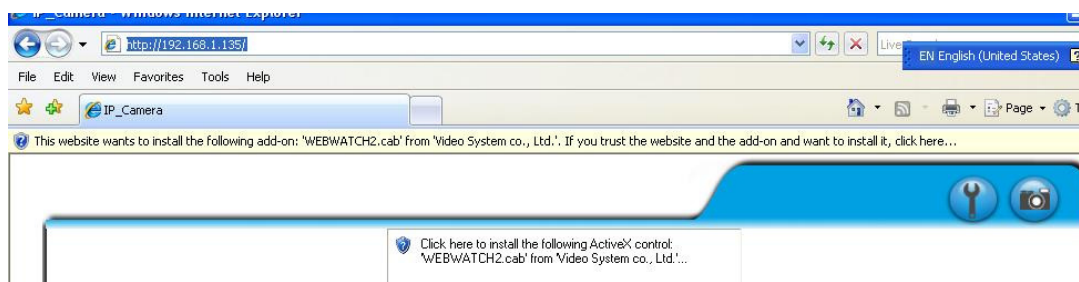
Also, check the Security Setting is as follows:

i.   IE → Tools → Internet Options… → Security Tab → Custom Level → Security Settings →Download Unsigned ActiveX Controls → Select "Enable" or "Prompt" (Recommended).

ii.   IE → Tools → Internet Options → Security Tab → Custom Level… → Security Settings → Initialize and Script ActiveX Controls Not Marked As Safe → Select "Enable" or "Prompt" (Recommended).
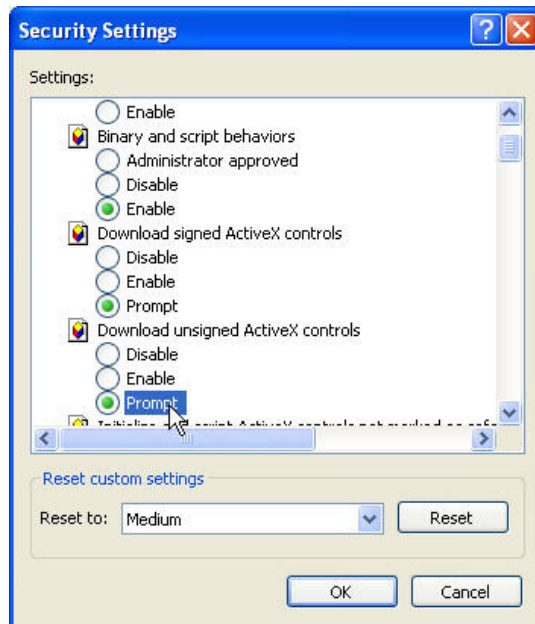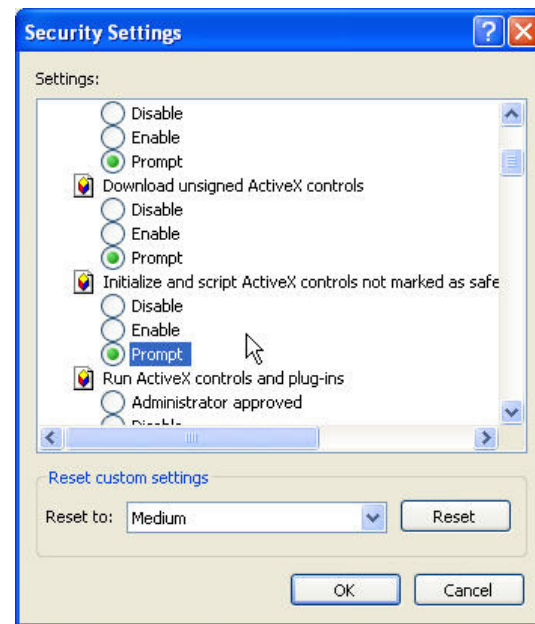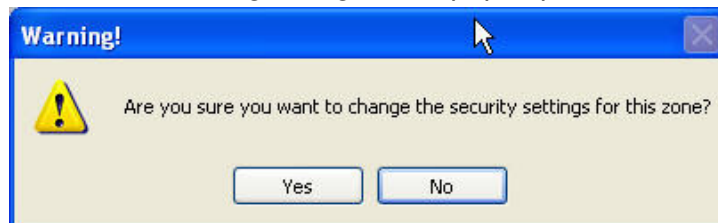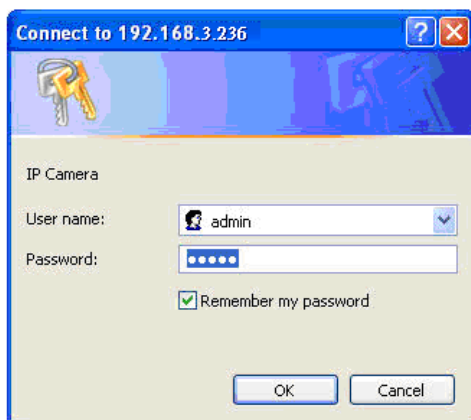
1.
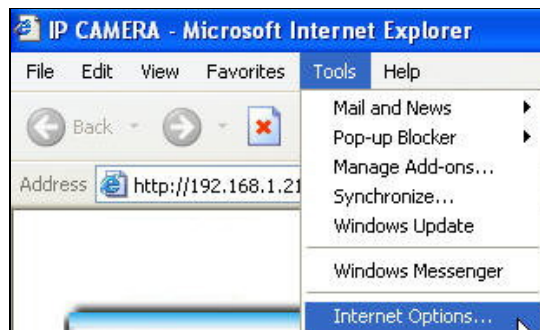
2.
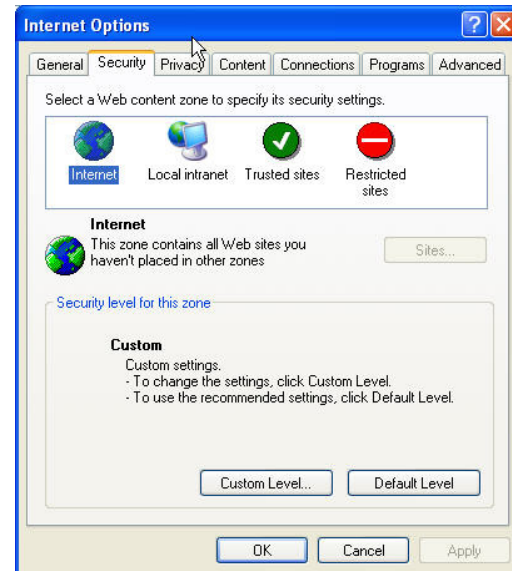
3.

4.

5.

When the following dialogue box pops up, click "Yes".

IV. Live Video

After executing the IE Browser and typing the IP Address of VIDEO SERVER, the following message will pop up and request the user to input the User name and Password. The default User name and Password are "admin" and "admin".

When the User name and the Password are correct, it will connect to VIDEO SERVER via IE Browser. The GUI will display as follows:
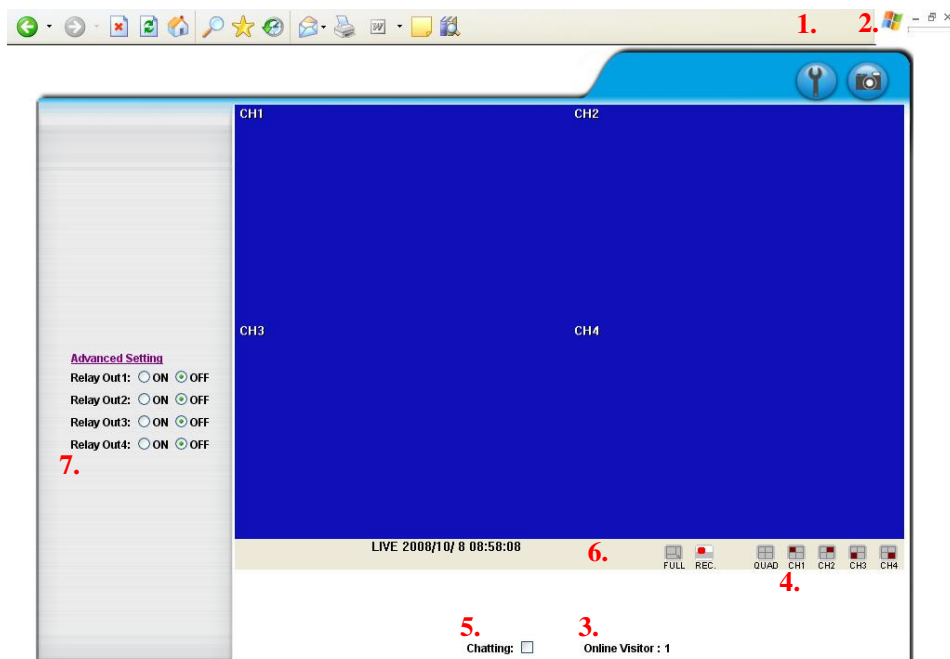
1. ： Get into the Administration page.

2. ：Video Snapshot.

3. Shows how many users connect to this VIDEO SERVER.

4. Live Video. The user can click on each channel for single

channel format.

5. VIDEO SERVER supports 2-way audio. After click on "Chatting", the user can use the microphone, which connects with the PC to talk to the server side.

6. Status and Function keys:

A · Monitor with full screen. Click on again to return to normal mode.
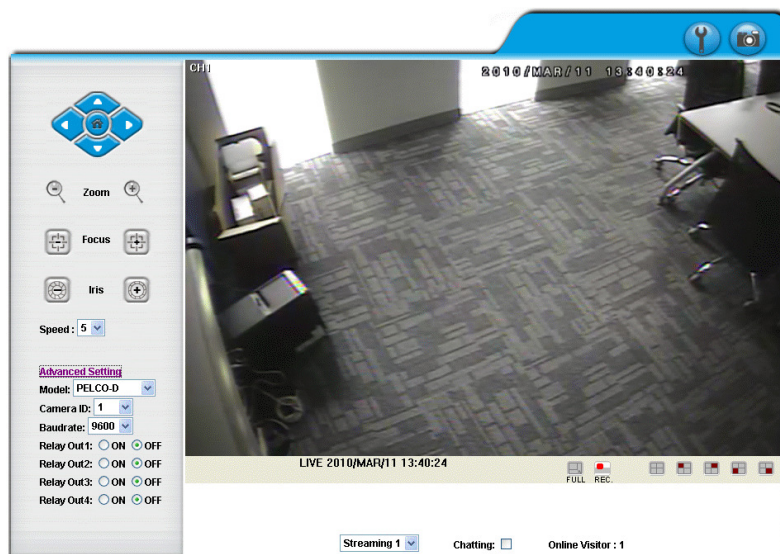
B · Record with AVI file.

C · **2007/ 1/ 8 09:22:32** Date and Time is displayed.

7. Relay Output Control (Video Server supports 4 Relay Output)

8. PTZ Control. When the user clicks on a certain channel and if it connects with the PTZ Camera, the user can click on "Model" to select protocols and use the PTZ function to control the camera.

V. VIDEO SERVER Configuration

Click [wrench icon] to get into the Administration page and click on [camera icon] to return to the live viewing as follows:

System Information

Server Information

Server Name: Video_Server_04

MAC Address: 00:0F:0D:00:23:93

Language :   ⦿ English   ◯ 繁體中文   ◯ 简体中文

Time Setting

Server Time: 2010/3/11 13:41:55 Time Zone: GMT+08:00

Time zone: GMT+08:00

◯ NTP :

   NTP Server :   time.stdtime.gov.tw

◯ Synchronize with PC's time

   Date :   2010/3/11

   Time :   13:41:44

◯ Manual

   Date :   2010/3/11

   Time :   13:41:24

⦿ The date and time remain the same

[Apply]

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A. System

i. System Set-up:

Set up the Video Server Name, Select Language, and the Time on this video server:

a. Server Name: This is the video server name for the user to search on the IP Installer.

b. Select Language: There are English, Traditional Chinese, and simplified Chinese. When a certain language is selected, the following message will pop up and ask the user to confirm the language will be changed:

c. Server Time Setting: Select options to set up time - "NTP", "Synchronize with PC's Time", "Manual", "The date and time remain the same".

ii. User Management:

Supports three authorities: administrator (the highest), user, and anonymous user.

Default User name and Password: "admin"/"admin"

18/35

a. Anonymous User Login:

Yes: Allows anonymous log in.

No: Requires User name and Password to log in.

b. Add User:

Type the User name and Password and then click on "Add/ Set".

c. Click on "Edit" or "Delete" to modify the user.

iii. System Update:

a. To update the firmware online, click "Browse…" to select the

firmware. Then click "Upgrade" to proceed.

b. Reboot System: re-start the Video Server

c. Factory Default: delete all the settings and restore the default system.

d. Setting Management: User may download the current setting to PC, or upgrade from the previous saved setting.

1. Setting Download:
    Right-click the mouse button on Setting Download → Select "Save AS…" to save current Video Server setting in PC → Select Saving Directory → Save

2. Upgrade from Previous Setting:
    Browse → Search Previous Setting → Open → Upgrade → Setting Update Confirm → click **index.html**. to return to main page

B.Network

    i.   IP Setting:

VIDEO SERVER supports static IP and DHCP.

    a.   DHCP: Use Dynamic Host Configuration Protocol to get all network parameters automatically.

    b.   Static IP: Type IP Address, subnet mask, gateway, and DNS.

    c.   DNS:

             With DHCP: DNS will be assigned automatically.

             Static IP: Based on the network environment.

    d.   Port: If the user uses the Router, some ports will have to be adjusted to avoid conflict.

    ii.   PPPoE:

If the user wants to use ADSL, please select "Enabled".

User name: User name for ADSL connection.

Password: Password for ADSL connection.

Send mail after dialed: After this function is enabled, it will send an email to a specific mail account. For the mail setting, please refer to IV. "Mail and FTP" Settings.
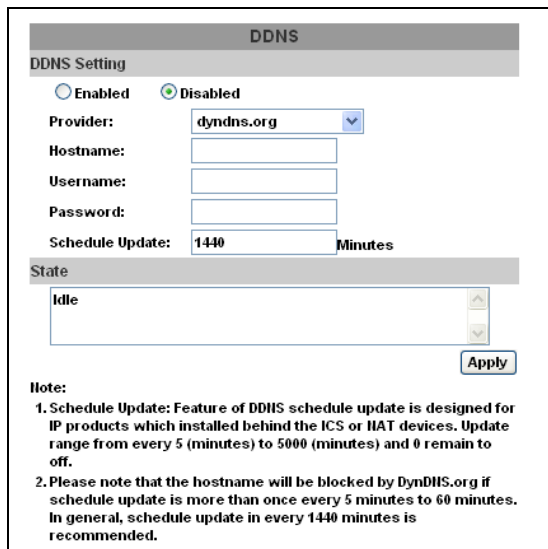
    iii. DDNS:

VIDEO SERVER supports DDNS. It uses dynamic IP to redirect IP and connects with the video server.

VIDEO SERVER supports three kinds of DDNS servers, including: www.dyndns.org, www.ddns.camddns.com, and www.ddns2.ydsdvr.com.

a. DynDNS:

1. DDNS Setting: Enable or Disable DDNS Setting.
2. Input the DynDNS's Host name, User name, and Password.
3. Schedule Update: Default is set at 1440 minutes.
   * www.dyndns.org: If the user's schedule update is too often, it will be blocked. Recommend the user to update once per day (1440 minutes per day).
4. Click on "Apply" to save.

b. Camddns:

1. Input User name.
2. Schedule Update: Default is set to 1440 minutes.
3. Click on "Apply" to save.

    c.   DDNS State:

1. Updating: Information Updating.
2. Idle: Stop Service.
3. DDNS registration successful, can now log in by:
   http://<username>.ddns.camddns.com: Register successfully.
4. Update Failed, the name is already registered: The User name has already been used. Please change to another one.
5. Update Failed; please check your internet connection: Network connection failed.

   iv.   Wireless Setting:

VIDEO SERVER supports 802.11b/g wireless connection. **(Notice: while using the wireless setting, the user has to unplug the Ethernet Cable because they both use the same IP. If the user doesn't unplug the Ethernet Cable, the wireless setting cannot be executed).**

Wireless Setting			
Status of Wireless Networks			
SSID	Mode	Security	Signal strength
RHOSON	Infrastructure	WEP	13
SinoStar	Infrastructure	WEP	12
Default	Infrastructure	WEP	73
3Com	Infrastructure	OFF	35
7F-2-2	Infrastructure	WEP	4

Wireless Setting

MAC Address: 00:11:E2:03:37:48
Mode: Infrastructure
Operation Mode: Auto
SSID: Default
Security: None

Apply

a.   Status of Wireless Networks:

It can scan all wireless services.

b.   Wireless Setting:

1.   **Mode:** There are two options: Infrastructure and Ad-hoc. Infrastructure is for connecting with the Router. Ad-hoc is for connecting with the PC. When the user uses Ad-hoc mode, the "Channel" option can be selected.

E.g. If one PC's channel is 1, the other's channel is also 1.

Wireless Setting

MAC Address: 00:11:E2:03:37:48
Mode: Ad-hoc
Operation Mode: Auto
SSID: Default
Channel: 6
Security: None

2.   **SSID:** Based on AP setting.

3.   **Channel:** This is only used when the user selects Ad-hoc mode in order to avoid conflict.

4.   **Security:** It supports "None", "WEP", and "WPA-PSK" security encryption based on the setting of the Router.

『WEP』

● Authentication: There are two options: Open System and Shared Key; it is based on different encryptions. This has to be the same as the Router's setting.

● Encryption: There are 64 bits and 128 bits. This is based on the Key Type, which is based on the Router's setting.

● Key Type: There are HEX and ASCII. When selecting HEX,

the user can only input 0~9 characters and use A, B, C, D, E, and F. When selecting ASCII, the user can input any character (upper case/ lower case sensitive).
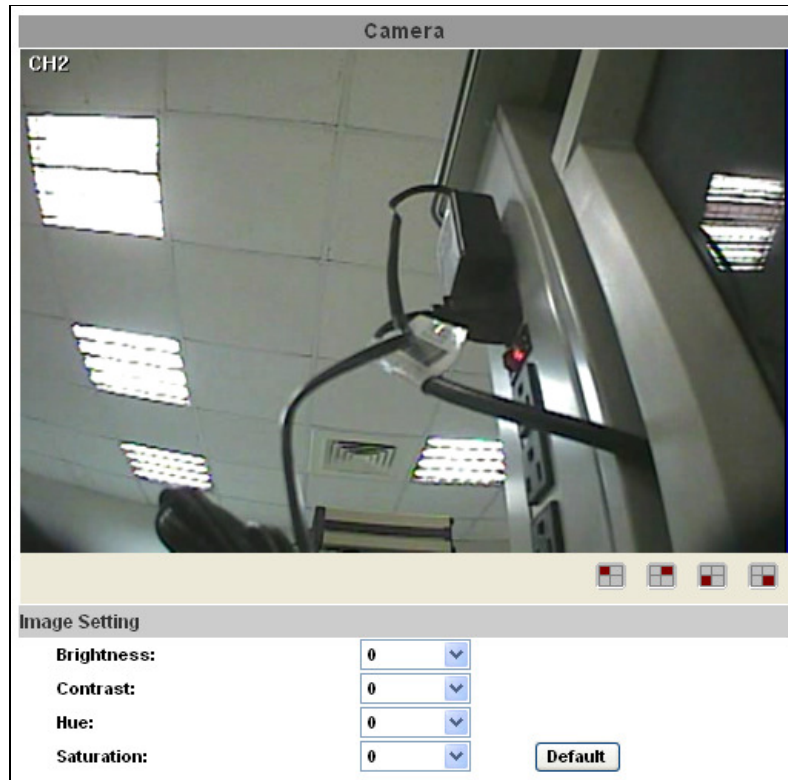
- Key 1~4: Based on Key Type to input characters.

『WPA-PSK』:

- Encryption: There are TKIP and AES.
- Pre-Shared Key: Allows any characters (upper case/ lower case sensitive).

C.Multimedia

i. Image Setting:

ii.   Select each channel to control.

iii. Adjust "Brightness", "Contrast", "Hue", and "Saturation".

iv. Video Setting:

You can adjust the settings for each camera that is plugged into the Four (4) Channel Video Server.
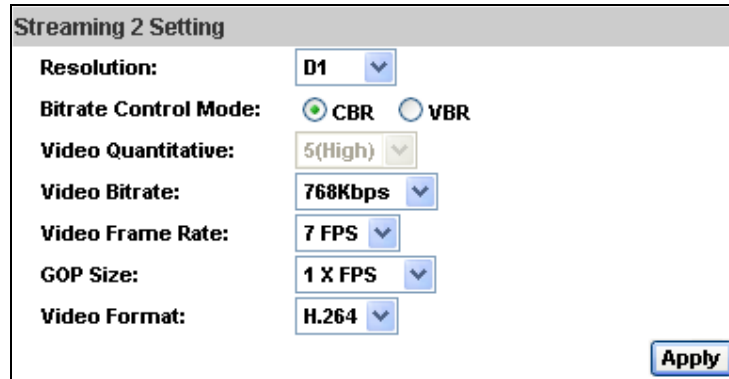

a.   Streaming 1 Setting:

1.   Resolution:

There are four resolutions to be adjusted.

D1

VGA

QVGA

QCIF

2.   Bit Rate Control Mode:

There are two options to use: CBR (Constant Bit Rate) and VBR (Variable Bit Rate).

CBR: 64Kbps~1.5Mbps (the higher the CBR is, the better the video quality is).

VBR: 1~5 (Compression Rate).

3.   Video Quantitative:

There are five qualities to be adjusted. The higher the quality is, the bigger the file size is.

4.   Video Frame Rate:

The Video Frame Rate is the video refreshing rate per second.

5.   GOP Size:

GOP means "Group of Pictures". The higher the GOP is, the better the quality is.

6.   Video Format: H.264 or JPEG.
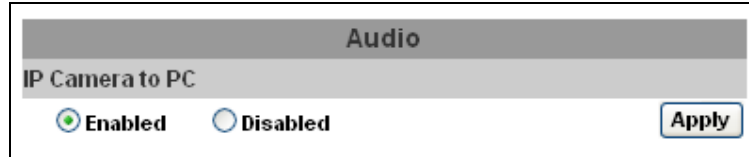
b. Streaming 2 Setting:

1. Resolution:

   There are three resolutions to be adjusted.

   VGA

   QVGA

   QCIF

2. Bit Rate Control Mode:

   There are two options: CBR (Constant Bit Rate) and VBR (Variable Bit Rate).

   CBR: 64Kbps~1.5Mbps

   VBR: Q=1~5

   If the bandwidth is smaller than the CBR or VBR set up, it will cause lagging and incomplete images.

3. Video Quantitative:

   There are five qualities to be adjusted. The higher the quality is, the bigger the file size is. Please note that the larger the file, the slower it will stream.

4. Video Frame Rate:

   The Video Frame Rate is the video refreshing rate per second. The highest Frame Rate is 30/FPS.

5. GOP:

   GOP means "Group of Pictures." The higher the GOP is, the better the quality is.

6. Video Format: H.264 or JPEG.

v. Audio:

VIDEO SERVER supports 2-way audio.

a. To enable the video server to a local PC, select "Enabled" to enable this function.

b. To enable a local PC to the video server, click on "Chatting" on the IE Browser.

D.Event

VIDEO SERVER provides multiple event settings.

i.   Event Setting:

VIDEO SERVER supports three motion detection areas on each channel. When the motion is triggered, it can send out the video to a certain email address or upload the video to a FTP site. If the user has a SD Card, they can also do SD backup. The user can click on

 to select channels and use the motion detection

function.

Drag the mouse over the desired area of motion detection and then click on "Apply" to save.

Record Time Setting: Pre Alarm and Post Alarm set-ups are for video start and end time when motion is detected, I/O, or other devices also get triggered.

Network Disconnected:

When the network is down, it will save the video to a local SD card.

This function is only enabled in wire connection.

ii. I/O Setting:

a. Input Setting:

1. Input 1 Action: E-mail/ FTP/ Out1/ Out2/ Out3/ Out4/ Save to SD Card.

2. Input 2~4 Action: The same as Input 1.

3. Subject: Default GPIO is Detected!

4. Interval: Default 10 sec.

5. Click on "Apply" to save.

b. Output Setting: Mode Setting: On and Off Switch or Slide Switch. Click on "Apply" to save.

iii. Mail and FTP:

Mail & FTP		
Mail Setting		
Mail Server:		
Username:		
Password:		
Sender's Mail:		
Receiver's Mail:		
Bcc Mail:		
FTP Setting		
FTP Server:		
Username:		
Password:		
Port:	21	
Path:	/	
		Apply

To send out the video via e-mail or FTP, please set up the configuration first.

iv. Log List:

Log List	
System Logs	
	Logs
Motion Detection Logs	
	Logs
I/O Logs	
	Logs
All Logs	
	Logs

Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

v. SD Card:
Please Insert a SD Card before use. Make sure to push the SD Card into the slot completely.

Note: The use of the SD Card will affect the operation of the Video Server slightly, such as affecting the frame rate of the video.

a. Playback:

Playback				
19700101	20060417			
SD Card: << 878M / 982M >>				

1. It will show the capacity of the SD Card. Click the date listed on this page. It will show the list of the videos.

2. The video format is AVI. To play the file, click the video to start Microsoft Media Player.

3. To delete the video, check it, and then click Del. When the SD Card is full, it will remove the oldest video automatically.

vi. Log List:

Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

VI. Factory Default

i.   Unplug the power of the Video Server.

ii.   Please refer to the above RS232 interface image to connect Pin 2 to 3.

iii.   Turn on the Video Server and wait for few minutes until IP Installer can search for the video server.

iv.   Please remove Pin 2 and 3 connections.

v.   All the settings will be restored to the Factory Default.

vi.   Default IP Address is http://192.168.1.210. User name and Password are "admin".

VII. Package Contents

1.   4-Channel Video Server
2.   Adaptor
3.   Ethernet Cable
4.   CD (User Manual, IP Installation Utility).

Appendix I

SD Card Recommended:

SanDisk 128M	SanDisk 16GB
SanDisk 256M	SanDisk 32GB
SanDisk 512M	Transcend 4GB
SanDisk 1G	Transcend 8GB
SanDisk 2G	Transcend 16GB
SanDisk 4G	Transcend 32GB
SanDisk 8GB	Apacer 4G

CHANNEL VISION™

1 Year Limited Warranty

Channel Vision Technology will repair or replace any defect in material or workmanship which occurs during normal use of this product with new or rebuilt parts, free of charge in the USA, for one year from the date of original purchase. This is a no hassle warranty with no mail in warranty card needed. This warranty does not cover damages in shipment, failures caused by other products not supplied by Channel Vision Technology, or failures due to accident, misuse, abuse, or alteration of the equipment. This warranty is extended only to the original purchaser, and a purchase receipt, invoice, or other proof of original purchase date will be required before warranty repairs are provided.

Mail in service can be obtained during the warranty period by calling (800) 840-0288 toll free. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

Channel Vision products are not intended for use in medical, lifesaving, life sustaining or critical environment applications. Channel Vision customers using or selling Channel Vision products for use in such applications do so at their own risk and agree to fully indemnify Channel Vision for any damages resulting from such improper use or sale.

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